

EMBODIED TASTES: FOOD AND AGROBIODIVERSITY IN THE COLOMBIAN  
ANDES

by

JUANA CAMACHO

(Under the Direction of Virginia Nazarea)

Through an examination of food production, perception and consumption, this dissertation explores how Colombian Andean peasants use and conserve agrobiodiversity for their diets, and the social implications of their food practices and tastes. It interrogates normalized assumptions about the simplicity and monotony of the peasant diet. Premised on the assumption that food has the ability to tie the private and mundane with larger socioeconomic and cultural processes, this dissertation explores aspects of the evolution of the Andean diet in regards to agricultural modernization, food and nutrition policies, and social discourses on peasant foods in Colombia. Based on ethnographic fieldwork and a mixed-methods approach, this dissertation examines dislocations, contradictions, and paradoxes between peasant cultural and embodied relationship to food and the disembodying effects of food and nutrition policies and market forces. The importance of peasant foods and food practices to cultural and alimentary diversity in Colombia is underscored.

INDEX WORDS: Food, Agrobiodiversity, Embodiment, Andes, Peasants,  
Colombia

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## DEDICATION

To my family Alvaro, Nora, Carlos, and Julia: the roots, the stem, and the flower.

For their unconditional support and love.

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## CHAPTER 1

### THEORETICAL AND METHODOLOGICAL FRAMEWORK

#### Introduction

This dissertation examines how Colombian Andean peasants use agrobiodiversity in their diets, and the social implications of their food practices and tastes. At the turn of the second Millennium, food emerged as a total social phenomenon (Mauss 1990). Food touches on social, political, economic, and environmental institutions and domains of life. The industrialization and globalization of food have generated unprecedented impacts worldwide. Recurrent world food shortages and soaring food prices have increased the number of food insecure people leaving more than one billion hungry (FAO 2009, 2010, 2011). Chronic diseases related to increasing consumption of saturated fat, sugar, and refined foods and low fiber have become pressing public health issues in most countries (WHO 2004). Agricultural and livestock production account for high levels of greenhouse-gas emissions (McMichael et al. 2007), water pollution, deforestation, biodiversity loss, and climate change. Complex forms of agriculture (Higgins and Lawrence 2005, Llambi 1995, Li 2011, Shiva 1993), food (Phillips 2006) and nutrition (Dixon 2009) governance beyond nation states have emerged with increasing corporate control of the agricultural and food system (Magdoff, Foster and Buttel 2000). Diverse cultural, sensory, and aesthetic experiences with food have become central to the contemporary cultural politics of taste, identity and social distinction. Politically, food

has also become a matter of mobilization and contestation by producers and consumers as more sustainable, democratic, and healthier food futures are pursued (Belasco 1989, Desmarais 2002, Guthman 2004, Leitch 2003, Nestle and McIntosh 2010, Watson and Caldwell 2005).

In this complex scenario, agrobiodiversity has increasingly emerged as an option for nutrition, health, and agriculture alternatives (FAO 2000, Frison et al. 2006, MEA 2005, UNEP 2005, WHO 2004). Agrobiodiversity refers to the use and management of different species and varieties of crops, livestock, semi-domesticates and wild relatives for agriculture, food, health, and livelihoods (Brookfield and Stocking 1999, Brookfield and Padoch 1994, Garí 2001). Agricultural diversity provides food variety which can enhance the nutritional value of foods (Frei and Becker 2004, Haddad 2000) and reduce the rates of chronic degenerative diseases (Johns 2001, 2003, 2005, Johns and Eyzaguirre 2002, 2006, Johns and Sthapit 2004, Maunder et al. 2001, Tucker 2001, Wahlqvist and Specht 1998). When incorporated into agricultural systems, agrobiodiversity can improve productive, environmental, and livelihood sustainability (Thrupp 2000) and resilience (Vernooy and Song 2004).

The social emergence of food and agrobiodiversity takes place in a scenario in which *campesinos*, translated here as peasants, smallholder or small farmer, continue to play an important role. This is especially true in developing countries where most food security rests on small scale diversified agricultural and livestock production. According to the World Development Report 2008, three out of every four people in developing countries depend on agriculture for their livelihoods (World Bank 2008). Peasants are by definition primary food producers; they have historically modeled agricultural

landscapes, sustained the domestic food supply, and contributed to the national economy (Altieri 2002, Brookfield et al. 2002, Holt-Gimenez 2009).

Peasants in Colombia are no exception. Colombia is a megadiverse country with high levels of endemic agrobiodiversity and landraces that have been nurtured and adapted by rural communities to local conditions (PNUD-MAVDT 2009). Colombia is an urbanized country where more than 75% of its 44 million inhabitants live in cities. Although the Colombian rural population is only one fourth of the total national population, peasants constitute 87% of the country's producers and contribute approximately 41% of the agricultural gross domestic product (Pesquera and Rodríguez 2009). As a historical trend peasants have played a central role supplying the domestic market. Data for the 20<sup>th</sup> century indicate that on average they have produced approximately 67% of direct consumption foods, 35% of milk, 5% of poultry, 30% of export coffee, and 14% of grasses (Salgado 2004). At present and under precarious conditions, limited market access, and on holdings that average about 2.9 ha, small-scale peasants supply from 40% to 60% of the national food basket (Corrales 2002a, Forero 2002a, 2007, Mondragón and Montoya 2010, Rodríguez and Pesquera 2009). The family food basket includes the basic products that make up the regular diet of a population in sufficient amounts to cover adequately the energy requirements of each member of the family (Flores and Bent 1980). The food diet reflects national tastes and preferences and indicates the cost of satisfying basic needs. The money value of the family food basket is used to establish minimum wages and to determine the national poverty line.

Although peasants are the primary food producers, paradoxically many peasant households in Colombia experience malnutrition due to insufficient diets. Malnutrition is

a result of structural land concentration, poverty, social exclusion (Bejarano 1950a, Vallejo 2008), and has been exacerbated by recent neoliberal macroeconomic measures (Ruíz and Ruíz 2007, Morales and Mantilla 2007) and the agroindustrial entrepreneurialization of agriculture in Colombia. In the period between 1996 and 2002 the rate of growth of hunger and hungry people surpassed that of sub-Saharan Africa (Morales and Mantilla 2007:58). Rural chronic malnutrition of children under five is 17%. In addition to energy and protein deficiencies, micronutrient deficits are acute with respect to vitamin A, C, iron and calcium (ICBF 2006). Environmental degradation and agricultural restructuring are also direct causes of rural food insecurity (Grupo Semillas 2007, 2009, Morales 2007). While higher malnutrition-related deaths are more prevalent in territories of agroindustrial, mining, and oil extraction activities, more rural municipalities contribute to basic local consumption (Ruiz and Ruiz 2007).

Nutritional problems have also been historically attributed to backwardness, lack of hygiene, ignorance, and poor cultural food habits by researchers, nutrition and health experts, government authorities, and development practitioners (Álvarez and González 2002, Bejarano 1950a, 1950b, Calvo and Saade 2002, Currie 1951, ICBF 2006, Suárez 2004). As scholars have noted (Calvo and Saade 2002, Escobar 1995, Pedraza 1999) nutrition interventions and discourses have been distinct institutional mechanisms deployed to shape peasant and subaltern cultural food and other bodily practices in the name of modernity, progress and development. Yet understandings of peasant food ideas and practices are fraught with ambivalence and prejudice intersected by long-term colonial legacies and modern concepts of nutrition and health. Nutrition professor Sara

del Castillo's testimony below illuminates how urban biases towards peasants permeate representations of their diets:

We have been told lies all the time about the peasant diet; what we think about peasants is an urban reading... With respect to food, peasants are in a limbo that is neither Indian nor urban. We see traditional food habits among indigenous cultures as exotic and in need to be preserved. Our lecture on peasants is that they are poor, they lack understanding, they sell everything [that could be used] for their food security in order to survive and are left with their mono-calorie diets; there is no diversity... *Campesinos* are pushed to a diet of cheap food by an economic condition of misery, poverty, and marginality. Environmental, social, economic, and cultural threats make them lose that diversity, not their diets or dietary preferences. When you go and look for peasants [those who have not been displaced], and you work on gastronomic memory recall you find wonderful things; a diversity that they somehow preserve... Peasants argue that from the moment they recuperate their gastronomic memory, they are recuperating and building their sovereignty and their autonomy. Vindications in the food realm are very different indeed. To me peasants have the virtue to survive, they survive!<sup>1</sup>

As suggested by the previous testimony, a deeper examination of peasant agriculture, food practices, knowledge, and discourses reveals a more complex scenario where food and agricultural diversity, emotion, memory, autonomy, sovereignty, and dignity are deeply imbricated.

Based on three years of ethnographic research in two communities of the Colombian Andes with different productive and culinary histories, I found that peasants' relation to food is mediated not only by history, economy, ecology, and culture, but by embodied experience. This is expressed in the existence of a long-term *mestizo* (mixed indigenous-Spanish) food structure sustained by cultural and sensory principles and meanings that persist because of the active bodily involvement with the production, transformation, and consumption of food. As direct producers of food, in their everyday agricultural practices peasants are deeply attuned to the flavor, texture, appearance, and

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<sup>1</sup> Personal translation of an oral testimony obtained in 2011, originally in Spanish.

overall quality of crops and foods. These lived experiences, material practices, and sensorial engagements with food are part of what has been conceived as an embodied relationship with food (Carolan 2011). The embodied experience of food is also a result of wider historical, cultural, social, and political relations (Farquhar 2002, Lock and Farquhar 2007, Scheper-Hughes 2007).

In the Colombian Andes, embodiment is expressed in preference for a diet composed by a predominance of foods of vegetable origin, mostly starches (cereals and tubers) and legumes, over animal proteins, fats, and sugars. Starches, represented by New World crops and varieties complemented by a few Old World landraces<sup>2</sup>, are *mantenimientos* (maintenance foods) meaning core foods and nutrients that sustain daily human activity, and give a sensation of satiety. Contrary to characterizations of peasant diets as simple, plain, monotonous, and unbalanced in both settings there is a tendency towards diversification with respect to meal composition, cooking techniques, and the use of different food groups. Variety and diversity are associated with a cultural principle eating and planting in a mixed manner. In Garagoa this is called *cateo* (to mix), and in Alban it is expressed through the term *revuelto* (scrambled). In both cases this concept is manifest in agricultural intercropping and in dishes containing different foods.

Concern with nutrition, good health, bodily strength and balance are manifest in cultural and taste preferences for peasant crops and freshly cooked salty foods (*comidas de sal*) seasoned mildly with natural ingredients. Variety and balance are also achieved by the combination of distinct textures, flavors, and temperatures: liquid (soups) and dry

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<sup>2</sup> Landraces, also known as folk varieties (Brookfield 2001) or farmer varieties (Zimmerer 1996) are local crop varieties of domesticated animal or plant species that have adapted by natural and cultural processes to the environment where they live (Zeven 1998).

meals (*secos*), sweet and salty preparations, and hot and warm foods. Consumption of nourishing foods (*comida de alimento*), bland and soft textures for ease of digestion, and use of natural and home remedies such as medicinal plants, herbal infusions, and fruits indicate a close association between food and medicine for health and well being.

Agricultural and dietary simplification is a factor of national and regional economic, social, and environmental dynamics rather than attributable to peasant cultural poverty, ignorance, or laziness.

My observations in the Colombian Andes share similarities with those of Zimmerer's (1996) on the environmental, social, and cultural roles of diverse crops in peasant communities in Peru. Andean peasant agronomic, economic, cultural, and taste preferences play an important part in the maintenance of local and regional agrobiodiversity to meet individual and family food and nutrition expectations. In Colombia this is particularly evident in settings with a longer history of diversified agriculture for domestic markets such as Garagoa (Boyacá), than economies specialized in cash crops for the international market such as the coffee region of Alban (Cundinamarca). Throughout this dissertation I examine these findings in greater detail by exploring the particular productive trajectories of each site with respect to integration into markets and national rural development. Zooming into the details of daily life I describe the textured and layered cultural perceptions, classifications, meanings, and sensory dimensions of food that intersect with notions of identity, sense of place, emotion, and the senses. My findings contrast the endurance of peasant tastes and cultural meanings with the simplifying and homogenizing logics of agricultural modernization and nutrition policies and discourses implemented during the 20th century in Colombia.

In a country where food has not played a central role in nation building and where food is becoming a point of convergence of various social sectors with the potential to propose changes and alternatives to the global food system, an anthropological examination of food and its meaning is relevant and timely. If power inhabits meanings and meanings are a primary source of social power (Escobar 2008:14), this work seeks to foreground the cultural meanings of food and the cultural and material importance of the embodied and enskilled practices of those who produce it. At a time when the possibility of launching a UN Declaration on the Rights of Peasants that recognizes the legitimate and autonomous right to choose their economic and environmental model (Edelman and Carwil 2011) is being advanced by peasant organizations, this dissertation offers insights on the currency of peasant culture and agriculture for food and nutritional security, agrobiodiversity, and cultural memory.<sup>3</sup>

### Research questions and research areas

This dissertation addresses some of the complexities behind the apparent simplicity, backwardness, and inadequacy of peasant food ideas and practices. It does so by investigating the connections between culture, food, and agrobiodiversity. More specifically, this research examines Colombian Andean peasant use of agrobiodiversity in their diets, and the social and implications of their food practices and tastes. In a country where food policies have not been a State priority, diversified peasant agriculture is key for national food security because it supplies an important part of the domestic food basket with fresh, affordable, and culturally acceptable crops and foods. Based on

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<sup>3</sup> In this research the term peasant is used interchangeably with smallholder, small farmer, and *campesino* to refer to a heterogeneous and socially differentiated rural population that practices a diverse range of agricultural activities for subsistence and the market.

ethnographic research in the Colombian Andean highlands my main theses are that 1) Peasant food production and consumption are shaped by socioeconomic and agroecological forces but culture also plays an important role in the formation of rural diets and tastes; 2) the persistence of certain peasant food structures and practices are embodied responses to various forms of power in Colombia; and 3) food has the ability to tie the private and mundane with larger historical processes, political economic structures, and cultural meanings. Consequently, the main questions that guide my inquiry are:

1) How does peasant food operate as a social, political, and cultural discourse and practice in contemporary Colombia and what is the particular role of peasant foods in this context?; 2) What are the main factors that account for the persistence of peasant crops and peasant foods as central to food production and consumption in Colombia? More particularly how has the relation between food and agrobiodiversity been developed and maintained by Andean peasants?; and 3) How is the relationship between meaning, power, and sensory experience manifested in the peasant food practices of Andean peasants?

Theoretically this ethnographic study draws on ideas from the anthropology of food, political economy, ethnoecology, sensory anthropology, and peasant studies. It addresses a gap in studies of food, agrobiodiversity, and peasants in Colombia by focusing on the material, perceptual and emotional embeddedness of embodied peasant food practices. Embodiment is understood here as a “site of cultural-historic intersections and a formation of everyday practice” (Farquhar 2002:25); that is, the body is a material expression of broader social history and cultural meaning. The centrality of embodiment

for the present work contrasts with political economy analyses of peasants and folkloric descriptions of rural food habits in Colombia. This study of the interrelations between cultural perceptions and bodily-emotional experiences attempts to clarify how tastes are shaped by cultural learning and social history (Anderson 2005, de Garine 1997, Drewnowski 1997, Mintz 1985, Rozin 1987), and how the sensory-perceptual dispositions embedded in foods (Seremetakis 1994) play a role in peasant resistance against the forces that threaten their lives and livelihoods. Ultimately, my concern centers on the cultural and political potential of the embodied experience of food for thinking and advancing alternatives to the current global agrifood system.

This research investigates and compares the agricultural and food trajectories of two diversified subsistence and cash crop coffee communities located on the eastern and western slopes of the Eastern Cordillera; the Garagoa and Alban municipalities, respectively, Figure 1.1. The Eastern Cordillera is one of the three mountain ranges into which the Andes branches out in Colombia. Since prehispanic times the Eastern Cordillera has conserved most agricultural production, crop diversity, and dietary variability due to geographic and ecosystem heterogeneity (Etter and Villa 2000, Palacios and Safford 2002). These characteristics make it a privileged region to address the relationship between food and agrobiodiversity. The study of diets in communities located at similar elevations but different ecosystems, settlement histories, and distinct production emphases presents an interesting possibility for comparing to what extent subsistence and market priorities contribute to a wider use and conservation of agrobiodiversity.

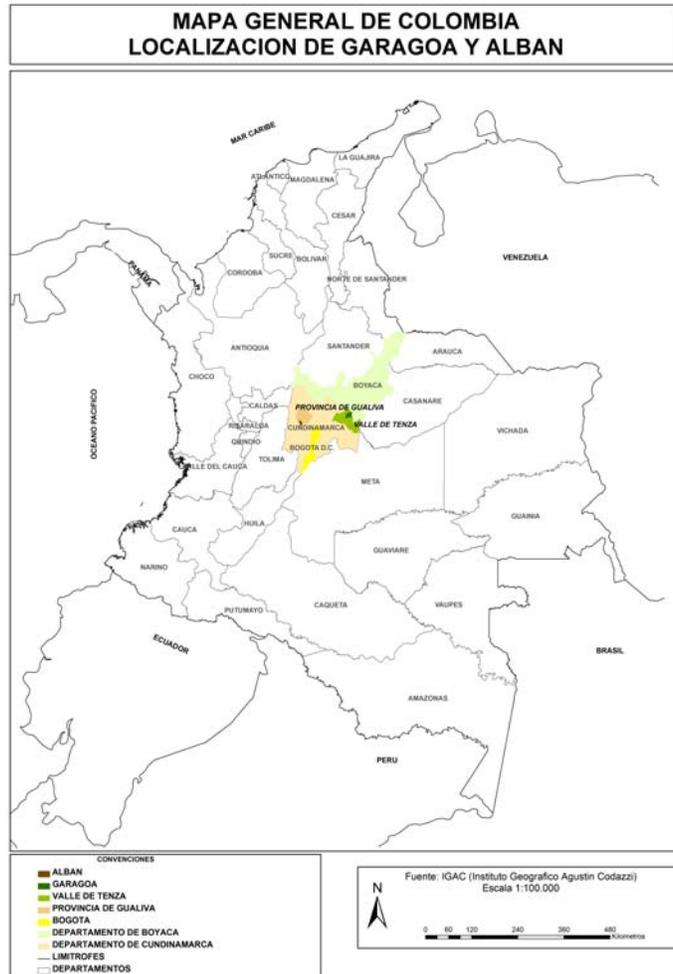


Figure 1.1 Map of Colombia with Cundinamarca and Boyacá departments and the capital city Bogotá on the Eastern Cordillera. Prepared by Bladimir Rodríguez.

Historically Andean peasants have supplied food and raw materials for the domestic and international market. Peasant flexibility, versatility, and the unpaid family work that subsidizes a significant portion of production costs, account for their productive resilience. The use of microverticality, or cultivation in different agroecological zones (Etter and Van Wyngaarden 2000, Langebaek 1995), has enabled Andean peasant economies to fill production and consumption needs that commercial lowland agriculture cannot meet. The region remains the national pantry; it supplies the country's capital market from which food is then redistributed to different regions in the

country. Andean farmers produce approximately 60% of the capital city's family food basket (*canasta alimentaria familiar*); namely, the foods most frequently consumed by Colombian families (Forero 2002a, 2007, Mondragón and Montoya 2010, Pesquera and Rodríguez 2009).

Despite steady deceleration in agricultural production in Colombia, some Andean peasant crops such as corn, potatoes, manioc, *arracacha* (*Arracacia xanthorrhiza*), beans, plantain, fruits and vegetables, have retained their relative importance in national food and processing markets (Robledo 2010). In some instances urban demand for affordable and fresh food has led to processes of “re-peasantization” in areas close to Andean capital cities, in particular Bogotá (Mondragón and Montoya 2010). However, participation in international markets as promoted by government and institutional discourses is far from the productive and export possibilities of small producers and peasants (Camacho and Rodríguez 2010).

Through manifold practices Andean peasants have been able to maintain food diversity and agrobiodiversity, but their ability to do so has been systematically shaped by structural unequal land distribution, poverty, social exclusion, displacement, and cultural evaluation of peasant life. The full-fledged adoption of a neoliberal economic agenda in the 1990s has been coupled with the elimination of previous protectionist measures, the reduction of infrastructure and public rural institutions, flexibilization of labor, and state facilitation and encouragement of transnational private capital investment in agricultural and extractive activities, mining and forestry (Robledo 2006). The promotion of expanding large-scale agroindustrial value chains and intensive commercial production of export tropical commodities, including agrofuels, has occurred at the

expense of annual crops (cereals and oilseeds) and peasant production for the national market (Robledo 2010). Until 1990 national production supplied a significant portion of the domestic market (Garay and Rodríguez 2005, Machado 2003). In 2007 more than eight million tons of foods were imported, including wheat, corn, rice, oilseeds, and coffee (Robledo 2010). National self-sufficiency was partially maintained with respect to certain peasant crops such as fruits, vegetables, milk, eggs, meat, and tubers (Forero 2006, 2007). Large, medium, and small farmers unable to comply with entrepreneurial imperatives of efficiency, competitiveness, and profits have been forced out of the productive sector.

Rising rural unemployment, poverty, and malnutrition in Colombia (Forero 2010, Garay and Rodríguez 2005) contradict claims that state promotion of competitive public-private agribusiness partnerships can generate new labor and market opportunities for peasants and rural workers (World Bank 2008). Penetration of narcoparamilitary structures, with strong interests in the control of rural territories and resources, in all levels of government has exacerbated the precariousness of rural and peasant life (Acemoglu, Robinson and Santos 2009, López 2010).

Peasant economies and rural livelihoods are further threatened by recent sanitary norms and seed legislation. In agreement with economic integration trends, implementation of free trade agreements with Europe, Canada and the US has forced compliance with World Trade Organization standards of food, animal and plant health and safety. A direct consequence has been the prohibition, by the ministries of Agriculture and Social Protection, of marketing unpasteurized milk and dairy (Decreets 616/2006, 2838/2006) and the establishment of stringent sanitary and phytosanitary

requirements for the production, processing and transport of meats (Resolution 4287/2007), chicken (Decrees 1500/2007, 2985/2008), and *panela* (brown sugar) (Resolutions 779/2006, 3462/2008, 3544/2009). These measures seek to regulate and standardize artisanal production by means of infrastructural investments that peasants cannot afford to make. A wide range of peasant products and foods with distinct sensory characteristics and cultural meanings that are consumed by rural and urban populations, often at cheaper prices than imported foods, are jeopardized with these measures. Experts (Garay and Rodríguez 2005, Garay, Barberi, and Cardona 2010, Pesquera and Rodríguez 2009) coincide in that free trade treaties will not bring any benefits to peasant production and the Colombian economy and society in general.

Furthermore, since 2003 the Colombian Agricultural Institute (Instituto Colombiano Agropecuario, ICA) authorized cultivation of genetically modified carnations, cotton, and corn produced by Monsanto (Agro-bio 2010). In 2010 ICA also passed resolution 970/2010 restricting the production and commercialization of traditional seeds, which evidently affects peasant seed saving and exchange practices. The legislation only enables the commercialization of certified seeds. These provisions are clearly biased towards the interests of transnational food and seed companies in the control of the entire food chain at the expense of agrobiodiversity, peasant economies, and food practices. In this rapidly changing scenario everyday peasant agriculture and food practices acquire special significance as forms of material and cultural resistance. Understanding how and why they continue to produce and consume certain crops and foods in the midst of increasingly constraining circumstances will help explain how

agrobiodiversity has been developed and maintained in the context of Andean peasant agriculture.

I conducted research between 2006 and 2008 in the Alban and Garagoa municipalities, located in the Cundinamarca and Boyacá departments respectively, Figure 1.1. Alban is located on the western slope of the cordillera and Garagoa on the opposite flank of the Cordillera Oriental. In chapter two I detail the region's geography and history; here I briefly review each site's most salient features. The areas were chosen for their distinct location and productive trajectories; Alban specialized in coffee production for international trade since the mid 19<sup>th</sup> century whereas Garagoa has a long history of diversified production for subsistence and regional markets. The Cundinamarca and Boyacá departments have the largest amount of smallholdings or minifundia which in the Andes range from 0 to 5 ha approximately. Minifundia are an expression of the highly unequal land distribution in Colombia. Alban and Garagoa represent this reality; holdings sampled in this research averaged 2.2 ha in Garagoa and 0.8 ha in Alban. Land is the main asset for peasant families; landholdings are essential to economic security, territorial attachment, and to the development of community nets among relatives and neighbors. All peasants in this research were land owners. In terms of main crops and foods produced, Alban can be broadly characterized as the land of coffee and plantains while Garagoa is the land of corn and tubers. Yet both areas share an underlying food structure composed by New World crops such as corn, potatoes, various roots and tubers, legumes, cucurbits, and fruits, combined with Old World additions like plantains, vegetables, fruits, dairy, and meat. These are combined with cheap processed foods such

as rice, sugar, pasta, oil, and bread. A more detailed description of each area is the subject of chapter two.

### Peasants: old and new issues

The role and fate of peasants vis-à-vis the forces of capitalism and modernization has been a central topic in peasant and agrarian studies and development agendas. But are peasants really disappearing or are they just fading from social science scholarship and policy priorities? As peasant scholars (Bryceson 2000, Llambí 2000, Wolford 2010) have suggested, theoretical misconceptions, political frameworks and economic biases shaping peasant historiography have obscured public, academic, and political recognition of peasant heterogeneity, tenacity, and vitality. In the twentieth century peasants were one of the main categories for thinking about politics and economics (Tsing 2003). The century opened with peasant revolutions in Mexico, China, and Russia and innumerable debates on the nature and prospects of peasant economies in land and agriculture collectivization (Chayanov 1986). In the Third World during the period between the 1960s and the 1980s peasants again captured considerable academic and political attention because of their articulation with urban industrial production and large-scale commercial farming (Archetti 1978, Moore 1966, Bengoa 2003, De Janvry 1981, Edelman 1999, 1999-2000, Fals Borda 1979, 1961, Otero 2004, Shanin 1972, 1987, Wolf 1966, 1969). Marxist political economy and mainstream perspectives dominated national development and modernization debates. In the next two decades, discussions examined the effects of structural adjustment and neoliberal policies following the 1980s economic crisis. Attention shifted to issues of agrarian change (Bernstein and Byres 2001) given

global reorganization of agriculture in the new international division of labor within the agro-food system (Borras 2009, McMichael 1994, 1998, 2005).

In the twenty-first century the countryside has become a scenario of new global-local articulations and social dynamics associated with opportunities and constraints of productive diversification and extractive development (Borras 2009, Giarraca 2002, Giarraca and Levy 2004, Kay 2006, McMichael 2006). The new agriculture includes the convergence of a variety of governmental and private actors, small producers and large scale value agroindustrial chains. These chains include a series of interrelated activities, from production, processing, and marketing of specific agricultural products based on high technological and capital investment which increase their productivity, competitiveness, and market value. Acknowledgement of other rural actors such as women (Agarwal 1992, Deere and León 1987, 2001, Jackson 1993, Phillips 1990, Razavi 2009a, Razavi 2009b) and ethnic groups with different subject positions and political consciousness (Chaves 1998, Guha 1982, Escobar 2008, Mallon 1995, Otero and Jugenitz 2003, Spivak 1988) has illuminated the countryside's social and cultural heterogeneity. Contrary to earlier beliefs of imminent social disintegration (Foster 1965, Lewis 1959, Redfield 1956), and the residual nature of rural communities under capitalist modernity, peasants have not only not disappeared but are fully globalized as they participate in diverse economic activities, circulate between urban and industrial settings, use different technologies, and engage in transnational networks and new agrarian movements (Bengoia 2003, Brass 2002, Desmarais 2002, Edelman 1999, 2008, Kearney 1996, Mayer 2001). Peasants move and maneuver between hybrid and contradictory

identities as they focus on their survival and reinvent themselves constantly with dignity and autonomy (Edelman 1999, Wittman, Desmarais, and Wiebe 2010).

In contrast to rural, agrarian, and peasant dynamism, contradictory representations and narratives of rural landscapes and peoples continue to permeate public imaginaries, academic scholarship, and development interventions (Handy 2009). Enduring imaginaries of poverty, traditionalism, and ignorance still underlie peasant allegories (Tsing 2003) or ways of thinking about peasants in the global rural South. With peasants becoming more elusive than ever (Bryceson 2000, 2002), there is a need to expand theoretical and methodological frameworks to address frictions (Tsing 2005) between cultural diversity and global connections in persistently unequal rural settings. We need to explicate how the multiple and conflicting interactions between state, capital, and society are shaped by cultural contexts. For instance, how the global forces of capital unfold and play out differently in national contexts and locales, and how local actors experience, interpret, and reconceptualize them according to circumstances, interests, and available material and social resources. In the case of rural and agrarian landscapes, persistent inequality in access and control of basic resources for peasant livelihoods (land, water, seeds) are exacerbated by new forms of land dispossession and governance associated with the penetration of capital in rural areas via mining, infrastructure megaprojects, agribusiness, timber extraction, agrofuels, privatization of land and water, tourism and urbanization (Borras 2010, Borras et al. 2011). National level policies mediating these dynamics generally favor private capital through administrative, legal, and labor regulatory flexibilization. Local-level responses vary from personal resistance to social mobilization to accommodation according to cultural perceptions, different

notions of land and nature, and livelihood expectations. While large scale political economy and ecology frameworks are useful for mapping broad agrarian and food trends, anthropologists (Phillips 2006) have noted their shortcomings when accounting for diverse and particular cultural and historical trajectories of rural food producing communities.

A recent study on academia and the rural sector in Colombia in the 1986-2003 period (Machado and Salgado 2004), concluded that political economy, political science, and sociological analyses take precedence over other theoretical and disciplinary optics. Topics tend to revolve around land reform and conflict, institutions and neoliberalism, environment and territory, the structure of production, competitiveness, and macroeconomic policies. Colombian peasant scholars have made significant contributions to dispel enduring beliefs about the inefficiency, irrationality, and unsustainability of peasant economies (Corrales 2002a, Forero 2002b, 2009, Monsalve 2005, Salgado 2004). In doing so they have demonstrated the economic and social contributions of peasants to society in the midst of structural and conjunctural exclusion and violence (See the collection *Cuadernos Tierra y Justicia 2002- 2010* by ILSA, Forero 2010, ILSA 2002, 2005, Machado and Salgado 2004). Studies of violence, conflict, and displacement have also been prominent topics of contemporary peasant literatures (See reports by Grupo de Memoria Histórica 2010, Osorio 2009, Reyes 2009).

Albeit underrepresented with respect to the production of academic writings on peasant matters compared to sociologists and economists, Colombian anthropologists have opened new theoretical and methodological ground for addressing rural and peasant studies from renewed cultural perspectives that move understandings of peasants beyond

economic and productive categories. Arturo Escobar (1995), for instance, has argued for the need to infuse political economy analyses with perspectives that consider the diffuse role of knowledge and power in rural development interventions. Anthropologists have also insisted on discussing peasant identities with respect to state policies and multicultural frameworks (Bolívar 2006, Camacho and Rodríguez 2010, Tocancipá 2005). In this regard a study of the political transformations and democratization processes that took place with the passing of the new constitution in 1991, indicate a pervasive lack of social and political recognition of peasants and a precarious notion of citizenship rights for this population (Rubio 2002, Salgado 2002). This situation contrasts sharply with that of ethnic minorities which gained unprecedented prominence under the multicultural and pluriethnic definition of the Colombian nation. On the basis of ontological differences supported by representations of ethnic communities as closer to nature and possessing special traditional cultural knowledge, ethnic minorities entered the stage of a politics of difference. The construction of new orders of alterity led to a recognition of special territorial, cultural, and citizenship rights to indigenous and afrocolombian groups, thus broadening their political and cultural identities (Asher 2009, Chaves 1998, Escobar 2008). Lack of political and cultural recognition and absence of affirmative action dispositions for peasants has reinforced their vulnerability and has made them dependent upon ethnic alliances for protection of their rights against regressive state policies<sup>4</sup>.

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<sup>4</sup> This was the case with the Forestry Law (Law 1021 of 2006) and the Rural Development Statute (Law 1152 of 2007) which were challenged and legally sued by indigenous and Afro-Colombian communities on the grounds that they had violated the International Labor Organization convention 169 which requires previously consultation of indigenous and tribal peoples whenever consideration is being given to legislative or administrative measures which may affect them directly. The constitutional court declared the bills unconstitutional. Had it not been for the special rights of ethnic peoples, peasants and other rural workers would probably have not had the same legal support.

This situation is illustrated by Bocarejo (2009) in her analysis of multiculturalism, territory, and violence in the Sierra Nevada. In an ethnographic study of land tenure in an area occupied by indigenous communities, peasants, guerrilla and paramilitary forces, she demonstrates how differential citizenship status among peasants and indigenous groups reifies distinctions leading to further economic, political, and territorial marginalization of peasants. In her study of the coca growers' mobilizations in the Colombian Amazon, María Clemencia Ramírez (2001) explains how a political strategy of this stigmatized and criminalized population consists of appealing to transnational human rights discourses in order to legitimize their claims for citizenship rights vis-à-vis an authoritarian state. These works have in common an interest in local-global interactions but recognize the role of the state and national policies in articulating and shaping economic and cultural processes. My investigation is informed by these contributions as part of the theoretical and ethnographic landscape of peasant studies in Colombia. It shifts, however, to a distinct and much less explored topic that continues to escape the gaze of scholars and activists. This is the mundane peasants' food practices and diets where I search for neglected dimensions of cultural meaning and power that nurture peasant livelihoods and resistance.

The Andean peasants in this research define themselves as such based on their rural roots, their engagement with agricultural activities, and their attachment to the land and the landscape. Peasants do not depend entirely on agriculture; rural livelihoods are partly subsidized by off-farm agriculture, wage labor, urban services, and proscribed activities such as coca growing. They wish to remain in the countryside and identify as *campesinos*. They want, however, economic and social conditions that enable them to

lead a peaceful, sovereign, and dignified life. The aspirations of peasants in Alban and Garagoa resonate with those of the Agrarian Mandate (Mandato Agrario 2003). The Mandate is a document elaborated in 2003 by a national coalition of peasant, indigenous, and Afrocolombian organizations as a contribution to the construction of public policies, strategies and alternative programs for national agricultural reconstruction. Among the main points considered are the right to life, land and territory, and social, economic, and cultural rights for men and women. Equally prominent are demands for food security, food sovereignty, and alternatives to free trade agreements that affect national agriculture and food, the environment, and the nation's cultural and genetic heritage.

Peasants also claim political recognition as differentiated social actors with pluricultural identities. The “culturization of peasants” (Edelman and Carwil 2011:95) has become part of a wider strategy of the Via Campesina to legitimize their Peasants' Rights Convention campaign at the UN. The use of cultural difference and identity to appeal for rights in the context of multicultural politics, however, runs the risk of reifying older notions of culture that can essentialize or folklorize peasant practices.

Although new problems and issues have emerged in the rural scene, current peasant vindications are still very much those addressed in the previous 1971 Peasant Mandate (Mandato Campesino) of the National Association of Peasant Users (Asociación Nacional de Usuarios Campesinos - ANUC), the then largest national peasant organization (Salgado 2004). The Mandate advocated the elimination of existing patterns of land ownership and tenancy, among the most unequal and inefficient in the region. It also proposed cooperative forms of land use, production, and commercialization and requested state investment in rural development (Zamosc 1986). At present these

demands are seen as mechanisms to halt persistent social conflict, illicit crop cultivation, and internal displacement due to inequitable distribution of rural assets and failed redistributive policies of previous decades (Fajardo 2002, 2009, Forero 2010, ILSA 2002, Machado and Salgado 2004, Valencia 2010). Current peasant demands, however, are voiced in new languages of human and citizenship rights, democracy, social justice, ecology, autonomy, and cultural pluralism (Ramírez 2001).

The inclusion of food security and sovereignty in the 2003 Mandate marks a turning point in formal peasant politics. I argue that in a scenario of rural exclusion and invisibility, the emergence of food as a social, cultural, ecological and political phenomenon, brings new possibilities for the re-inscription of peasants in a scenario where they play a key role not only as producers but as consumers. Food is a unique and powerful cultural field with the potential to enrich peasant and rural discourses and scholarship that tend to privilege political economy and productivist optics. Food studies along the cultural and sensory lines that I propose are an integral part of the current renewal of the peasant question. Peasants are by definition primary producers for subsistence and the market; food is deeply imbricated with their social, economic, and political identities. Peasant foods are the foundation of regional and national food habits, cuisines, and tastes. They embody national identity and symbolize the nation's rural and agrarian roots. Yet, since colonial times, indigenous crops and foods and subsequently *mestizo* (mixed blood) peasant crops have been represented as culinary and nutritionally inadequate (Saldarriaga 2007, 2008). Peasant production has provided cheap foods for the urban working classes, which in turn, has helped to maintain wages low and reduce social unrest. Despite their economic contribution to the national economy via the

production of food and raw materials, peasants and their economies have only received partial and temporary state recognition (Fajardo 1986, 2002, Forero 2010).

Although populist political rhetoric has posited peasants as paving the road for development, this has not translated into tangible benefits for the rural masses.

Agricultural modernization has benefited large flatland commercial production of permanent crops and raw materials at the expense of small scale mountain agricultures and rural workers (Garay and Rodríguez 2005, Kalmanovitz and López 2006, Suárez 2007). Attempts at land reform in the past 40 years have not changed the structure of rural property or the dynamics of poverty and marginality (Balcázar et al. 2001). On the contrary, rural land dispossession has reached unprecedented proportions in the past decade (Grupo Memoria Histórica 2010d, Reyes 2009).

More than ever agricultural liberalization, privatization, and increasing import of cheap and subsidized foods threaten peasant economies and food production in Colombia. The food-related demands of peasants and rural communities such as those of the Agrarian Mandate resonate with global concerns over the corporate control of the agro-food system and its impacts on agriculture, small scale farmers, food, and the environment. Drawing from discourses of food-based movements such as the food sovereignty movement and, to a lesser degree, Slow Food allows peasants to reframe and legitimize old and new struggles under novel discourses and issues. These two movements, which are increasingly visible in Colombia, coincide in their defense of small-scale agriculture, agrobiodiversity, artisanal food processes, and regional culinary cultures. By placing food at the heart of their vindications they politicize eating and taste. In distinct ways both production and consumption trigger social mobilization and cultural

reflection around food. Slow Food, however, appeals more to urban middle and upper class consumers as it puts more emphasis on the aesthetic dimension of consumption, symbolized by the pleasure of eating and the education of good taste (Leicht 2003, Lotti 2010).

The food sovereignty movement on the other hand originated as a Third World peasant force advocating the right of peoples and nations to define their own agricultural and food policies according to the needs of local communities over profit and trade imperatives. It emerged in conjunction with the Via Campesina, a transnational peasant coalition that opposes the unequal power and trade relations in the current food system (Borras 2010, Desmarais 2007, Holt-Giménez 2010, McMichael 2008, Patel 2009, Teubal 2009). The food sovereignty movement provides Colombian peasants and activists a new political and knowledge framework to situate food, culture, agriculture, and rural development in the transnational language of human rights, democracy, social justice, and environmental sustainability. Upscaling demands is a means to gain the political and social visibility and legitimacy they lack at home (Ramírez 2001).

Twenty-first century food-based agrarian movements have sparked academic and public interest in the theoretical and practical potential of food sovereignty. Epistemological shifts in the way we think about food, food politics, and capitalist modernity are in great part triggered by the emergence of peasant actors, discourses, and knowledges (Desmarais 2007, McMichael 2008, Patel 2009, Wittman, Desmarais, and Wiebe 2010). McMichael (2008:215) has noted that reformulation of the agrarian question as a question of food “shifts epistemological gears, switching focus from production to social reproduction.” Peasant demands for the right to food and the right to

produce food autonomously and under conditions that enable them to combat rural hunger and malnutrition affecting most small food producers worldwide seek to defend their own social reproduction and continued self-defined existence (Edelman and Carwil 2011). By centering on farmer's subsistence production for domestic consumption, McMichael argues, the peasant and food sovereignty movement detracts from the role of the market as the sole regulator of social relations and underscores other social, ecological, and cultural meanings of food. Consideration of social reproduction means addressing "the fleshy, messy, and indeterminate stuff of everyday life" (Katz 2001:711). It means moving past production in order to focus on the practices involved in the physical, material, and social reproduction of people and communities. As feminists (Bezanson and Luxton 2006, Katz 2001, Laslet and Brenner 1989) have pointed out, these include the provision of food and shelter, the care and socialization of children, and the cultural transmission of knowledge and skills -- largely feminine responsibilities occurring in private spaces. Their domestic, ordinary, and gendered nature often keeps them invisible and marginal to formal politics and public concerns. The same is true for food; when naturalized as an everyday private matter, it can obscure understandings of food as a product of social history, power relations, and cultural systems of meaning. Peasant vindications of food and family farming seek to connect simultaneously production and reproduction, discourse and practice, gender, culture, and politics.

Nowhere are production and social reproduction more closely linked than in peasant societies where family production is directed to its own reproduction. And no activity is more immediately tied to biological and social reproduction than food and eating. Although an imperative to life food remains very much an intimate practice and a

matter of domestic gastropolitics (Appadurai 1981). Confinement of certain foods and practices to the private sphere is sometimes an outcome of their historical devaluation as Indian and poor people's foods. Interiorization of pejorative rhetoric is reflected in peasants hiding what they eat to avoid revealing shameful and wretched consumption (Mora de Jaramillo 1974, Patiño 1990). A frequent comment when serving food to a guest or a person of higher status is to apologize for its amount, composition, and quality, "perdone lo poquito, lo pobre, lo malo" (forgive the small amount, its poorness, and if it is bad).

At present, when peasants demand the right to food and sovereignty to decide what to grow and what to eat; when they defend the environments in which they produce and the crops and varieties that structure their diets, cuisine, and tastes; and when they speak about how they produce food with their bodies and hearts, they are speaking largely from the ambit of reproduction, their own and that of those who depend on peasant economies and landscapes. Reclaiming the space of reproduction implies what McMichael (2008:224) calls a politicization of subjectivity or a visceral ground of activism (Hayes-Conroy and Martin 2010:278) where the subject takes precedence over the interests and priorities of the state and the market. The following comment by an Andean peasant illustrates this point: "We continue to produce food because the State tries to prevent peasants from producing [so that] they depend on purchased food. That is why we insist in producing for self provisioning and [for] peasant markets [in order to] commercialize directly and strengthen the peasant economy" (Valencia 2010:22). The politicization of subjectivity enables the articulation of private concerns about peasant social reproduction with the reproduction of society in general; it connects everyday

micro-scale peasant politics (Kerkvliet 2009, Scott 1985, 1990) with broader formal politics.

Using some of the arguments of peasant and agrofood movements and academic debates about their emancipatory potential as a background, this work focuses on the potential politicization of subjectivity of Andean peasant food practices. Set in a context where the countryside has been historically and systematically depicted as the place turning people poor, brutish, and black (*el campo empobrece, embrutece y ennegrece*), this work attempts to understand peasant practices of reproduction from the actors themselves. In doing so it aims to make visible a misunderstood and undervalued space of diversity, resilience and dignity.

#### Anthropology of food and body

In the present instance, the prosaic quality of the subject matter is inescapable, what could be less “anthropological” than the historical examination of a food that graces the modern table’ And yet the anthropology of just such homely, everyday substances may help us to clarify both how the world changes from what it was to what it may become, and how it manages at the same time to stay in certain regards very much the same.  
Sidney Mintz, *Sweetness and Power*. 1985: xxvii

Food is a culturally patterned and multifaceted phenomenon that continues to feed academic theorization and social action. The omnivorous and biocultural nature of humans is expressed in the diversity and variability of human diets, food systems, and cuisines across space and time. Diets are not just biological adaptations or material answers to physiological and nutritional needs; they are outcomes of historical social and cultural processes of selection, classification, manipulation, and ranking of food according to multiple criteria (Messer 1989, Nazarea 1998). As Margaret Mead (1943) noted early on, food habit resilience is due to the deeply engrained emotional and cultural

content of food. The anthropology of food (Counihan and van Esterik 1997, Mintz and Du Bois 2002) has made explicit the close connection between food, identity, and difference. Food brings people together and draws boundaries and hierarchies along class (Bourdieu 1984), gender (Kahn 1993), ethnic (Weismantel 1988), racial (Mintz 1997), regional (Wu and Cheung 2002), religious (Khare 1976, 1992), and national (Onhuki-Tierney 1993, Pilcher 1998) lines. Powerful social messages of inclusion and exclusion are communicated through the language of food. In the contemporary cultural, political economy of consumption (Carrier and Heyman 1997, Guthman 2002, 2003), individual and collective identity, social distinction, and cultural capital are manifested in the differential consumption of cheap mass produced processed goods or luxury items for select tastes (Johnston and Baumann 2007, Roseberry 2002, Warde, Martens and Olsen 1999). The power of food relates not just to its material importance for life processes but also to its capacity to condense history (Dove 1999, Warman 1988, Zimmerer 1996), cultural meanings and memories (Nazarea 2005, Holtzman 2006, 2009, Sutton 2001, 2010), sense of place, identity, sensuousness, and emotion (Carolan 2011, Law 2001, Seremetakis 1994).

Food is a material and sensory domain par excellence. Taste, smell, and texture affect food selection at a most basic level (Macbeth 1997, Mela and Catt 1997, Messer 1989, Rolls and Mcdermott 1991, Rolls 1997). Sensory perceptions are rooted in human physiology but are also shaped by individual experience and culture (Shepard 2004, Sutton 2001). Although a few innate flavor predispositions might influence food likes and dislikes, these are largely acquired in social contexts through cultural learning, cuisine, and history (Anderson 2005, Birch 1999, Bourdieu 1984, Drewnowski 1997,

Rozin 1982, Rozin 1987). Food preferences are ruled by deep personal sensory perceptions, emotions, and memories as well as collectively shared experiences. Sutton (2001, 2010) sums up the complex sensory and affective embeddedness of food as embodied experience. The theoretical relevance of bodily sensations and embodiment was discussed by Maurice Merleau-Ponty (1962) in his work on the phenomenology of perception. In opposition to the Cartesian rationalist tradition, Merleau-Ponty argues that the body is the primary medium for perceiving and experiencing the world. But basic corporeal perception is refined and directed by lived experience and culturally learned skills. Perception and cultural skills shape our understanding of the world (Dreyfuss 1996).

Further elaboration of embodiment can be found in Pierre Bourdieu's (2003) concept of habitus. Habitus is a scheme of bodily dispositions acquired in particular fields. Through social learning and interaction in structured spaces, such as the home and school, individuals learn to embody the structures of the world; that is, to appropriate the world through the body and incorporate the principles of culture (2003:89). Posture, gesture, walk, talk, and eating are different manifestations of embodied practice. Embodiment is how social history is inscribed in the body. As such, the body is a bearer of social values and hierarchies. Practices of food consumption and taste for instance, are fields through which class distinctions are reproduced; embodied tastes are learned social behaviors that distinguish individuals in different social positions. Embodiment therefore has sociopolitical significance in the reproduction of society.

Understanding of the dynamic, historical and cultural nature of perception and embodiment is an important contribution of anthropology. Investigation on different

modalities of sensory perception suggests that different cultures may be more sensitive to other sensory registers for understanding the surrounding world. An illustrative example is Feld's (1996) exploration of acoustemology or auditory knowledge among the Kaluli in New Guinea. Sound is the medium by which the Kaluli apprehend their surroundings and transmit knowledge and experience. This phenomenological and sensory experience differs from the modern Western emphasis on vision as the sense of reason, knowledge and civilization (Classen 1997, Howes 1991, Porcello et al. 2010). Proponents of sensory and embodied perspectives concur that embodiment aptly captures the interplay between cognition, perception, and the senses underlying everyday practice, social relations, and cultural identities (Csordas 1990, Geurts 2002, Howes 1991, Ingold 2000, Porcello et al 2010, Seeger 1981, Stoller 1989, 1997).

Food is a particularly privileged domain to examine the material, bodily, and cultural connections embedded in the notion of embodiment. Discussing food and the senses, Sutton (2010:219) argues that perception and sensation are socially cultivated and extend beyond the Western five-sense model. Drawing on ethnographic accounts he notes that different societies elaborate on particular flavor principles such as sweetness (Mintz 1985) or bitterness (Farquhar 2002) that speak about broader political economic and social processes. While sweetness serves as a metaphor for the history of modern capitalism, bitterness is associated with historical narratives of hardship and hunger in China. Sutton also notes that the cultural act of eating is best expressed in the concept of synesthesia or the simultaneous coming together of the senses involving multiple bodily sensations such as temperature, fullness, moisture, among others. "Synesthetic bundling" is how Meneley (2008) describes the sensuous materiality of olive oil and the particular

material qualities such as luminosity, liquidity, spreadability, that make it a special substance with historical, nutritional, and symbolic relevance. Food's ability to condense different modalities of bodily perception, aesthetic sensation, memory, and emotion is described by Holtzman (2009) as uncanny. These deep and simultaneous connections are what make food such a powerful material, social, and political fact.

Contrary to epicurean emphasis in sensuous approaches to food (Holtzman 2006:373), the entanglements of the body, the senses, food, and politics have been the subject of recent ethnographic reflection. Farquhar (2002:47) has labeled this theoretical lens as a political phenomenology of eating. In contrast to the political economy of eating, which focuses on the uneven distribution of food, a political phenomenology of eating is concerned with the social practices that make eating an experience infused with power. A common thread in these literatures is the interweaving of the material, the mundane, and power. Material life, represented by food and body, is the basis for theorizing the connections between embodiment, discourse, history, and memory. The everyday is a site for the exploration of lived experience, cultural practice, and power in its multiple and often diffuse manifestations.

The historical, plural, and political nature of embodiment is a central trope in Judith Farquhar's work on appetite in China. Appetites and bodies, she argues, are not natural or neutral but molded by ideologies, discourses, and practices. Through a description of lived mundane practices and embodied habits of Chinese citizens she illustrates different ways in which varied political and social projects of Maoist hegemony converge in particular embodied events. Under the Maoist regime embodiment was constructed and naturalized through moral ideologies of the collective will.

Thriftiness and self-sacrifice guided personal behavior and social interactions. In post socialist China, urban middle-class concerns with bourgeois individualism, hedonism, and social differentiation stand in stark contrast with Communist Party rhetoric on food, body, self, and society. When seen against the backdrop of food collectivism and historical narratives of hunger, the self-indulging gustatory and bodily pleasures and anxieties associated with neoliberal capitalist consumption acquire a politically transgressive edge. Farquhar's work is illuminating with respect to the distinct and contradictory ways in which power gets muddled in everyday practice.

Farquhar's rendition of the embodied practice of eating as a particular site where power is produced, sustained, and contested suggests analytical possibilities for the study of a peasant politics of consumption and taste. Like Chinese citizens, Colombian peasants' bodies and practices are intersected by history, culture, and power. They have been subject to ambivalent discourses and practices by powerful forces such as the state, the Catholic Church, the education system, and development interventions. Historically, Colombian peasants have been the main source of food, raw materials, and labor in the country's rural and urban accumulation processes. Yet they have also been vilified because of their social and cultural underdevelopment, physical appearance, aesthetics, and bodily smell. Peasants are the rural Other against whom the urban, modern, and "white" Colombian citizen has been constructed. As processes of nation formation have imposed particular models of modern society, repeated institutional interventions have sought to transform peasant agriculture, eating, and drinking in accordance to hegemonic notions of socioeconomic, biological, and moral progress, self-regulation, nutrition, and

hygiene (Escobar 1995, Pedraza 1999). I argue that the persistence of peasant food structures and practices are embodied responses to forms of power in Colombia<sup>5</sup>.

The disappearance of regional varieties of crops and foods in Greece is Seremetakis' (1994) point of departure for examining the political connections between the senses, history, food, and memory. For Seremetakis the senses in Greece are deeply implicated in regional epistemologies, material sensibilities, and collective memory. Everyday material items, such as crops and food, are cultural elements that enable a sensory and emotional experience of history. The tastes, aromas, and associated emotional meanings of foods are part of a people's shared sensory-perceptual experiences and identities. They embed sense of self and shared history that stem from human-environmental interactions and local material cultures of production and consumption. The disappearance of foods as a consequence of macroeconomic and sociocultural changes brought by utilitarian modernity and free market rationalities has material implications for the personal and social experience of history. Replacement of regional food diversity by imported surplus over-production entails a "resocialization of consumer cultures and sensibilities as well as a reorganization of public memory" (1994:3). Examination of ongoing everyday social practices, however, reveals spaces of incomplete articulations with macrolevel processes where long-term structures of resistance persist (Seremetakis 1991).

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<sup>5</sup> Studies of the body are a field of recent research in Colombia. Works have focused on topics such as everyday life, race and ethnicity, sex and gender, nation, citizenship, health, government, modernity, and biopower (García 2009, Pedraza 1999, 2004, Reyes 2009, Viveros and Garay 1999). Escobar (1995) indirectly touches on peasant bodies in his discussion of nutritional policies. More specific scholarship on peasant bodies has been marked by profound and detailed analyses of violence and terror techniques applied to political enemies and antagonists ever since the period of La Violencia, a bipartisan civil war lasting from 1946 to 64 (Guzman, Fals Borda and Umaña 1964, Uribe 1990, 2004). Practices of corporeal violence associated with generalized conflict waged by the military, guerrillas, paramilitaries, and narcotraffickers have given way to a considerable production within academic circles and for public debate (García 1996, Grupo Memoria Histórica 2010a, b, c, Guerrero 2010). For theoretical and methodological reasons their content and analysis is beyond the scope of this study.

Nazarea's (2005) cross-cultural analysis of small scale conservation makes explicit the connections between food, senses, memory, and agrobiodiversity. Like Seremetakis she focuses on marginal agricultural spaces, invisible to macroanalyses, where farmers cultivate and nurture an array of crops with different sensory, cultural, emotional, and nutritional attributes for utilitarian and aesthetic purposes. Farmers' agricultural and seed saving practices stem from an embodied conservation ethic and way of life that defies the hegemonic linearity of modern development and profit-driven agriculture. These marginal yet sovereign spaces where cultural and genetic diversity flourish are fundamental to the persistence of material culture and cultural memory. They are also crucial to cultural and political autonomy and food sovereignty. They represent sites of counterhegemony and countermemory (Nazarea 2005:14) that contest the logic of agricultural and cognitive monocropping; they embody worlds and knowledges in peasant agriculture. This study draws on Seremetakis and Nazarea's theoretical footings to examine embodiment as an interface between agrobiodiversity, culture, and social history in the Colombian Andes.

## Methods

I conducted research in the Alban and Garagoa municipalities of the Cundinamarca and Boyacá departments respectively. I made initial contacts in Alban through personal acquaintances that introduced me to a couple of peasant families who agreed to lodge me and help me in my research. Fieldwork in Alban focused on the *vereda* Chimbe (*veredas* are the smallest administrative subdivisions in a municipality) but I also visited neighboring *veredas* at upper and lower altitudes: Los Alpes, Namay, Pantanillo, and El Entable. In Chimbe I stayed with one of the most traditional and wealthier families who had available space in their home. The wealth of this family illustrates rural community socioeconomic differentiation. Their wealth does not come from the land since they own less than two hectares where they grew coffee, but from the diverse economic activities they are engaged in. Poultry production is the main source of income in this household. Ownership of one of the few trucks in the area for the provision of transportation services is another source of income that enables this family to pay for their children's urban education.

Through visits to neighbors and friends of neighbors I slowly became familiar with those who later agreed to participate in the survey and in the 7-day food frequency logs. During my first visits I was accompanied by a sociologist, Ana Camila García, whose undergraduate thesis focused on rural economic diversification and who was seeking fieldwork experience. She served as my research assistant for two months.

Fieldwork in Garagoa was facilitated by Dora Monsalve, a local anthropologist whose undergraduate thesis provides a detailed account of the complexity of peasant agricultural knowledge and practices in Garagoa. I hired her for the first two months of

research. She introduced me to local peasants in various *veredas*, lodged me in her family's house in the urban center, and helped me with fieldwork activities. Her deep knowledge of the area helped me to build trust faster in the different *veredas* where ethnographic work took place. Some of these are Resguardo Mochilero, Bancos de Páramo, Bojacá, Guánica, and Hipaquira, located at high, medium, and low altitudes. While working with me Dora was also organizing a local seed and food fair; this activity enabled me to see and try foods and dishes that are no longer consumed or are restricted to domestic consumption only. Bringing my family to the field facilitated addressing issues of food, body, and gender more easily as local people saw me not just as an urban professor, which is the closest identity they could associate with anthropology, but a woman with shared family responsibilities and concerns.

Prior to fieldwork and during the research process I devoted time to find and consult secondary data on the history of each region both in Bogotá and in the municipal capitals. During fieldwork I also talked to various institutional actors such as municipal workers in Coffee Committees, Agricultural Technical Units, Colombian Institute of Family Well-Being, and health services about socioeconomic, agroecological, and nutritional information.

The emphasis of this research is primarily ethnographic although in the field I also used other mixed methods including a survey, a 7-day food frequency log, free listings, and body mapping. (See Appendices A and B). Ethnographic methods covered open-ended interviews and participant observation in kitchen conversations, farm-walks, sharing of meals and food gifts with men and women of different age groups. Most work was done with women who were the most available and interested in talking about food.

Visits to markets, food stores, and restaurants were also conducted in Alban and Garagoa and used to complement the above information.

I conducted the socioeconomic, demographic, and productive survey (Appendix A) in 40 households (20 households in each site). I selected a sample size of 20 household based on Sobo and de Munck's (1998) assertion that an ethnographic sample of 20 is sufficient to obtain confidence on agreements and variation in a cultural domain among members of a particular group. I sampled the households based on referrals by local anthropologist Dora Monsalve in Garagoa and in Alban by the Quevedo family where I lodged. Upon referral I conducted the survey opportunistically according to respondent time availability and willingness to participate. Sampling criteria were also farm size up to 3 ha approximately and landownership; landownership is a basis for a more stable agricultural production. I followed the definition of the National Statistics Department (Departamento Nacional de Estadística, DANE) whereby a household, (*hogar*), is a person or group of persons that occupy a living premise, or part of it, and share food and/or shelter. They can be family members or not (DANE 2006).

Anthropologically, households are a socially and symbolically significant group of people sharing socially differentiated activities and resources (Hendon 1996, Mula 1999, Netting, Wilk, and Arnould 1984). They are a suitable level to study daily individual and family behaviors and practices involving the use of the environment for subsistence and the market, and the effects of wider economic, social, and environmental processes on local livelihoods and life support systems (Zimmerer 2004).

In the first section of the survey I included demographic (household composition, division of labor), and socio-economic information (main occupation, income, education,

access to basic services, land tenure). The second section included access to rural public services (technical assistance, organizations and networks) and means of production (land, tools, appliances). The third section focused on production systems (kinds and location of crops and trees planted and inputs used, livestock, water sources, seeds used).

The next section addressed health and food. Health information included access to basic health services, used of wild foods and remedies, and concepts related to food and well-being. Food information explored preferences of most and least liked foods, strength foods, specialty and luxury foods, and poor people's foods.

In both sites I personally conducted the surveys in order to have a firsthand knowledge of the person and the household for future interviews. Ninety percent of survey respondents were female, 30 years or older, native to the municipality or the department.

I entered survey results in an Excel spread sheet. Juan Camilo Sanchez, a biologist, assisted me in this labor. Socioeconomic and demographic survey data provided a framework to understand the local context and guide further research and interviews. Production systems information served as a basis for comparison of peasant production and domestic agrobiodiversity between Alban and Garagoa. I used the information to identify a basic list of the different kinds of crops and trees planted in each household in fields and in homegardens (Appendices C, D, E discussed in chapter four). I also generated a list of uses of these crops for the market and self-provisioning (Appendix F).

I classified crops listed according to the seven food groups employed in the official food guidelines of the Colombian Institute of Family Welfare (ICBF 1999).

National food guides are based on FAO/WHO guidelines and take into consideration food habits, epidemiological and nutritional profiles, and national food availability. Table 1.1 summarizes the seven main food groups and the official justification for such division. Nutritional recommendations stress variety and proportionality of foods to prevent malnutrition and micronutrient deficiency<sup>6</sup>.

Table 1.1 Colombian food groups as per the Colombian Institute of Family Welfare

| Food group  | Characteristics and functions  |
|---|--|
| 1. Cereals, roots, tubers, and plantains                  | Core of the national diet. Starches compose about 50% of the daily calories recommended.                                       |
| 2. Vegetables, includes green legumes                     | To be promoted given its limited intake.   |
| 3. Fruits   | To be encouraged for more micronutrient intake.  |
| 4. Animal & vegetable protein, vegetable mixes and flours | Prevalence of iron-deficiency <i>anemia</i> in almost 1/3 of the Colombian population requires increasing protein consumption. |
| 5. Dairy products   | Calcium intake must be promoted in all age groups.   |
| 6. Animal and vegetable fats and oils                     | Consumption to be controlled to prevent public health diseases.  |
| 7. Sugars and sweets                                      | Consumption to be controlled against to prevent dental caries, diabetes and obesity, especially among women                    |

The reason for such classification was to have comparable categories with national food and nutrition classifications. I also used this classification in the Food Frequency Logs discussed below. In this way I had a consistent approach to the data. I

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<sup>6</sup> The Colombian seven food groups are not organized according to a pyramidal structure but as a “food train” in which every wagon represents a food group. The wagons are organized by size, from largest to smallest, and according to the food group that should be consumed in most or least quantity. The first wagon contains starches and is followed by vegetables, fruits, proteins, dairy, fats, and sugars. The first and largest wagon contains starches because they are the basis of the Colombian diet and are an important source of calories. Vegetables and fruits follow because they are not widely consumed and should be encouraged. Proteins are fourth in line because they contain iron, a mineral that is deficient in the Colombian diet. Dairy are fifth in place and recommended for the calcium content. Oils and sugars, whose consumption is recommended in moderate amounts are last and have the smallest wagons. The ICBF groups foods according to foods rather than nutrients. Each wagon depicts a variety of foods that are cultivated in the different regions of Colombia as a means to emphasize regional food availability. Among the main ICBF food recommendations are: the consumption of all food groups during the entire week; the use cooking techniques such as boiling, roasting and baking; the consumption of water and reduction of salt intake; the use of a small piece of meat to add substance rather than just the bone; to eat a small meal in the evening; to eat slowly and chew well; to avoid going hungry for a long period; never to skip breakfast; and to eat in the company of family. Another important message is to avoid the consumption of alcohol and cigarettes which do not provide nutrients. To discourage the consumption of alcohol, alcoholic substances are not included within the seven food groups.

added an additional category named “grasses” to include all crops that are not considered in the official food and nutrition categories such as sugar cane and grasses cultivated for pasture for cattle (Table 4.1).

Dietary diversity in this research constitutes the nexus between agrobiodiversity, food and nutrition. Drawing on survey information on crops produced and the lists that resulted from survey analysis, together with participant observation I elaborated a food frequency log (FFL) for a household dietary diversity count (Appendix B). This list organized by the food groups described above and divided by mealtimes, was provided as a guide to each household (Henry and Macbeth 2004).

I administered the FFL for 7 consecutive days to 14 households, 7 in each research site. Seven days is considered an adequate period to calculate household food diversity and provides more accuracy on the representativeness of the weekly diet than 24 hr recalls (Ruel 2002). Consumption of different food across food groups is also considered a better indicator of dietary diversity than consumption of different foods within a single food group (Hoddinott and Yohannes 2002, Rouel 2002). FFL are a relatively simple and inexpensive tool for inferences on household food behaviors and food diversity. They provide information about the number of times a particular food is consumed by itself or in a meal and indicate the importance of a particular food in the diet. FFL do not measure quantity or volume, periodicity or seasonality nor do they estimate nutrient intake or quantity of food consumed because they do not measure portion sizes (Ibid 2002). I sampled the FFL during the post harvest season, May-June in Alban, and October in Garagoa, when people had more time availability. I instructed a literate member of each household to write down the foods consumed during main meals

(breakfast, lunch, dinner) and to specify the meal composition in order to have a record of daily food combinations. After each log was completed, I visited each household to retrieve the FFL and discuss its contents with the household.

I consulted all grouping procedures with Nancy Millan a nutritionist and anthropologist working at ICBF. After consultation, I did not take into account non-foods such as alcohol, fermented beverages, and processed seasonings because they are not considered a food group by the ICBF. As noted above (footnote 6) the ICBF discourages the consumption of alcohol because it does not provide the same nutrients that a whole food does; this institutional message aims to prevent further malnutrition among vulnerable populations. Seasonings are not considered whole foods in Colombian official food guidelines (ICBF 1999) due to the minute quantities consumed, which do not provide all the benefits of whole portions. In this research I did not include natural seasonings such as garlic, and cilantro within the vegetables group although they add diversity to the diet, and their regular consumption provides small amounts of nutrients and vitamins and minerals for nutrition and health (Mintz and Schlettwein-Gsell 2001, Pieroni and Price 2006). Garlic and cilantro, for instance, are sources of official recommended nutrients (ICBF 1999:11) such as calcium, phosphorous, vitamin C, magnesium, and vitamin A (USDA 2010). Mid morning and mid afternoon snacks were not consistently reported by subjects and therefore I did not consider them.

I broke down FFL preparations or meals into single ingredients which were then included in a particular food group. For instance, porridge was broken into oats, viscera and listed into the starches, protein, and vegetable groups respectively. The Sugar and Sweets group included foods with high sugar contents such as chocolate, coffee,

*guarapo*, and soda. I grouped bones and beef feet in the Fats/Oil group. Each time a food or ingredient was broken down it was marked as a frequency. With the assistance of Juan Camilo Sanchez I entered and organized data into an Excel spreadsheet.

I created a food group composition table comparing Garagoa and Alban and showing for each site the diversity within each food group (Table 6.1). I also created consumption frequency tables for the major food groups comparing Alban and Garagoa (Tables 6.2 to 6.5).

I elicited peasant perceptions of local foods and diet through free listings. I employed free listings to identify foods with higher cognitive salience according to frequency of appearance (Blum et al. 1997). Free listings provided a basic inventory of foods consumed, their names and categories, relative importance, and frequency (Ibid). I randomly selected fifteen people, mostly women of different ages in each location, and asked them to list the main 20 foods consumed locally.

I entered the data obtained from the listings into an Excel spreadsheet and organized it for basic descriptive statistics. Juan Camilo Sanchez systematized the results and organized frequency graphs that presented the information visually (Figure 6.1., 6.2). Free listings provided information on variation between the two rural communities.

To assess local perceptions and explanations on the relation between body, food, nutrition, and health I used body mapping (Cornwall 1992). Body mapping is a participatory method by which local people make explicit their own concepts and terms pertaining to the body and bodily processes. Body mapping has been used in the context of applied medical and reproductive health research by anthropologists trying to find ways of bridging local knowledge and Western medical understandings of body and

health. Representing information visually on human-scale, body maps provide a common ground for exploring nutrition and health issues collectively without assuming a shared understanding of Western medical concepts of anatomy or physiology (Cornwall 1992:1).

Like other participatory methods, body mapping has been conceived as a less authoritative form of addressing medical problems and concerns because it takes into consideration people's perceptions, concepts, and opinions. This is a versatile technique with great pedagogic potential for making rapid, concrete, and visual connections between environmental, agricultural, nutritional, and health issues. I had first heard of this technique from an activist friend, Jeannette Rojas (pers. com), using it in health workshops with Afrocolombians to map the relationship between women's bodies and the wider "natural body" or the territory from which they had been displaced.

The activity was done in a focus group of 5 to 7 adult women in each research site. I only conducted body mapping with women. I did not pursue this technique with men because I was told by the women that men would probably be uncomfortable discussing certain bodily matters with a female researcher. I asked a volunteer to lie on the floor over a long sheet of paper and have another woman draw the silhouette of the volunteer. Then, with the body sketch hung on a wall, I asked them to draw the internal and external body parts according to their own perceptions and knowledge, Figures 3.1 and 3.2. I also requested that they mention the foods or plants associated with each body part and that would be beneficial or harmful. Oral histories, anecdotes, comments and expressions that emerged during this activity were written down by me and the field research assistant.

For each of the body maps obtained I analyzed the information concerning the body parts and bodily function mentioned to understand local notions of anatomy, physiology, and body image. I also looked at the illnesses, food, and remedies associated with each organ. Information was condensed in a table (Table 3.1) according to main organs mentioned, the associated functions, illnesses, food, and remedies. Comparison of similarities and differences in each research site revealed shared cultural notions of body and embodiment that are discussed in chapter three.

Interviews were done in an opportunistic basis with different local actors of all ages and genders. Interviews with women predominated given their direct responsibility and gendered knowledge of food and health in this cultural context. I also conducted open-ended interviews with different local actors such as municipal employees, store and restaurant owners, and food vendors.

General topics included food production and consumption, related cultural beliefs, patterns of food use, food preparation and storage (Hubert 2004, Macbeth and MacClancy 2004, Pelto, Pelto and Messer 1989, Quandt 1996, Quandt and Ritenbaugh 1986). Given women's role in food procurement, preparation, and distribution (Howard 2003, Magde 1994), considerable time was spent with women in different activities, in homegardens, and kitchen settings. Specific topics included their own experience of enskillment and socialization with food, culinary knowledge, food sharing, and embodied relation to food. Interviews with health and nutrition personnel centered on the local health and nutrition situation.

In Bogotá I also conducted open-ended interviews with food critics and chefs, and nutrition and health experts.

I transcribed, classified and coded interviews and relevant written materials according to standard anthropological approaches (Sobo and de Munck 1998). I identified and compared key words, salient categories, and thematic patterns in written data.

In each setting my ethnographic analysis focused on the examination and comparison of variation in cultural perceptions and classification, lived experiences, material practices, sensorial and emotional engagements with food.

### Structure of the dissertation

This dissertation is divided into 7 chapters. The present introductory chapter presents the research problem, the main research questions and an overview of the general theoretical frame of reference. A general discussion of the methods employed is included. The second chapter describes the research areas with respect to geography, history, demography, and productive trajectories. It also discusses local developments in light of national modernization, rural development, and livelihood diversification. The third chapter focuses on food and nutrition policies and practices with respect to expanding industrial capitalism, modernity, and scientific thought. A central argument in this section is that there has been a mutual influence between government policies and peasant practices on policies, social discourses, and notion of food, nutrition, and body. This chapter also discusses tensions and disjunctures between peasants' embodied relationship to food and the dis-embodiment effects of food and nutrition policies and market forces. Chapter four describes and compares local enskilled knowledge, agrobiodiversity management, and uses of agriculture for household income and self-provisioning. Findings of complex intercropping practices in subsistence agriculture in

Garagoa and cash-cropping in Alban are discussed in regards to historical processes of agricultural modernization and cultural improvement.

The relationship between taste, cuisine and identity is the focus of chapter five; food structures are explored with respect to taste biases and culinary practices. This chapter explores cultural taste by examining the complex relationship of peasants with food at material, cognitive, emotional, and sensory levels. Perception of the local diet, cognitive salience of native crops and foods, classification of foods and food groups, taste preferences, and gastronomic aspirations in each site are discussed. Chapter six examines peasant food consumption and the relation between diet, agrobiodiversity, and food diversity. Analysis of the food logs demonstrates the existence of a long-term underlying food structure, similar to other agrarian societies, composed mostly by energy-giving starches, combined with smaller intakes of proteins and vegetables. Findings suggest consumption of a diverse diet which contrasts with generalized depictions of culturally poor food habits. Chapter seven summarizes the findings and presents conclusions of this study.

## CHAPTER 2

### THE RESEARCH SITE: ALBAN AND GARAGOA

#### Introduction

This chapter describes and compares the distinct histories and productive trajectories, livelihoods, and food practices of peasants in Alban and Garagoa. In chronological order and through a series of vignettes it illustrates each region's different modes of integration into the market economy. In doing so it also points to the effects of modernity, rural development, and cultural improvement schemes (Li 2007) on peasant material and cultural practices related to food and agrobiodiversity. Drawing on field interviews, two socioeconomic surveys, and secondary sources the chapter points to the interplay of economics, politics, nature, and culture on distinct forms of landscape appropriation, natural resource use, and uneven access to and control over resources (Bryant and Bailey 1997, de Walt 1998, Escobar 2008, Greenberg and Park 1994, Leatherman and Thomas 2001, Leatherman 1996, Peet and Watts 1996, Robbins 2004, Stonich 1993). After a brief overview of the regions' biogeography and socioeconomic characteristics, the first section focuses on Garagoa's case with emphasis on indigenous and Spanish colonial legacies in the configuration of agrarian and food structures. The second section discusses Alban's cash cropping history in light of post Independence economic modernization via coffee production. In each case this chapter addresses peasant responses to current socioeconomic and environmental challenges. Information

for this chapter draws on primary sources, interviews and informal conversations, ethnographic work, and secondary sources.

### The Colombian Andes, an environmental and socioeconomically complex region

Colombia is the northernmost country in South America where the Andean mountain range divides into three independent chains: the western, central and eastern cordilleras. The cordilleras cross the country in a north-south axis and are separated by the Magdalena and Cauca river valleys. The Colombian Andes comprises an area of 280.000 kms<sup>2</sup>. Mountain landscapes dominate over 85% of the region, followed by piedmont, hills, and valleys crossed by a multiplicity of rivers springing at high elevations. Surface soils are sedimentary rocks (33%), volcanic ash deposits (25.6%), and igneous rocks (25%) (Rodríguez et al. 2006). This complex terrestrial region is characterized by diverse and unique ecosystems resulting from a variety of climates, geology, geomorphology, and soils. Climate is tempered by the topography; valleys, slopes, and canyons account for a variety of microclimates. Considerable numbers of habitats favor plant and animal diversity and endemism, and make Colombia one of the five megadiverse nations in the world. Altitude and topography are associated with various climates and vegetation covers. Tropical, sub Andean, Andean, and unique *páramo* ecosystems host ecorregions that have become priorities for biodiversity conservation. Historical human intervention is a prime cause of drastic landscape and ecosystem transformation (Mittermier et al. 1999, Olson and Dinerstein 2002). In 1993 Etter estimated that only 27% of Andean montane forests' original cover is left. A recent examination of land cover change during the 2000 – 2007 period reported dramatic losses

in forest cover in the country's central region from 56% to 46% of its surface (Dávalos et al. 2011:1221). Forty percent of the estimated 9,000,000 ha of this understudied tropical ecosystem are in the eastern slope of the eastern Cordillera (Rodríguez et al. 2004). At present the region hosts approximately 70% of the national population. Peasant economies are the most affected by the expansion of the agricultural frontier, timber production, and use of firewood (Corrales 2002b, Etter and van Wyngaarden 1998, Fandiño and Ferreira 1998).

Soils, geomorphology, and climate govern Andean agriculture and the evolution of crops and wild relatives. Rain fed agriculture depends on seasonal rains, generally occurring between April and October. These are interspersed with a short mid-year summer and longer summer at the end of the year. Frosts (*heladas*), and prolonged heat are major causes of crop loss, hunger and disease as documented for the 18th and 19<sup>th</sup> century (Herrera 2002). In the past few years agriculture has been increasingly affected by the irregularity of El Niño and La Niña phenomena and general weather pattern disturbances. According to the Colombian Hydrology and Meteorology Institute (IDEAM) the country has not had normal weather conditions since 2007 (Semana 2010).

The current Andean agrarian structure is best described by Forero (2009) as a multipolar structure of socio-environmental mosaics given the coexistence of various environmental, productive, and socioeconomic forms and networks. These range from large-scale capitalist agro industries with ties to transnational capital and differential access to markets, credit, technology, and services, to mid-size commercial family businesses, and small-scale peasant farming. Demographically the Andean peasant population is also internally diverse due to socioeconomic, cultural, and productive

differentiation. Concentration of the most productive low and flat lands in the hands of white and *mestizo* elites for agriculture and extensive cattle grazing is a colonial legacy that accounts for the current predominance of minifundia in more fragile hillsides. Dispossession by privatization and violence is a historical constant that accounts for millions of landless and displaced peasants and rural inhabitants in Colombia. National land distribution is among the most unequal in the world: 60% of the land is in the hands of 0.5% of the population and the rural land concentration Gini Index is 0.875, close to 1, the maximum inequality (Ibáñez and Moya 2009). Land concentration is a primary cause of rural poverty, exclusion, unemployment, and conflict, limiting the possibilities of peasant agricultural expansion, the stabilization of rural populations, and sustainable resource use (Fajardo 2009, Forero 2010, Machado 2011).

Andean peasants produce what are commonly known as peasant crops (*cultivos campesinos*) for domestic and international markets. These include traditional corn, potatoes, tubers, legumes, fruits, plantains, vegetables, sugar cane, coffee, and cocoa. Small-farmers in the Andean lowlands produce modern commercial varieties such as soybeans, sesame, rice, and vegetables to diversify and expand market participation. Peasants in the highlands and the lowland also participate in the production of livestock: cattle, poultry, small animals, and fish (Forero 2003, Garay, Barberi and Cardona 2010, Pesquera and Rodríguez 2009). Production constraints include poor transportation infrastructure, limited marketing for trade, low market prices, and reduced State and institutional support. Access to land, labor, and capital influence productive decision-making but personal choice also shapes economic diversification. Contrary to arguments about the marginal role of peasant economies, Andean peasants supply local, regional,

and national markets through formal and informal distribution chains with fresh and affordable produce all year round. They also support processes of capital accumulation by providing cheap food, raw materials, and flexible unskilled rural and urban labor. The region's agriculture accounts for 64% of the country's total cultivated area and contributes 85% of the total national agricultural value (Corrales 2002a, Forero 2009).

Colombian Andean peasant responses to agricultural decline, rural poverty, and unemployment have included agricultural intensification, outmigration, and productive diversification. As revealed for other rural populations off-farm work is an important survival strategy and complementary source of income (Bryceson 2002, Scoones 1998, 2009). To cover the rising costs of living household members engage in a series of informal, flexible, low-paid, and unregulated activities that have been termed productive bricolage (Batterbury 2001). In colloquial Colombian terms livelihood diversification strategies are known as *rebusque* (to search for). Off-farm work further reduces scarce family farm labor but partially subsidizes peasant economies and agriculture (Camacho and Rodríguez 2010).

#### Garagoa: an agricultural community on the Tenza Valley

The Garagoa municipality is located in the southeastern corner of the Boyacá Department (Figure 2.1). It is part of the lower Tenza Valley, a region with a rugged landscape with elevations spanning from 1,250 to 3,000 m. There are three major climate zones: middle (1,000-2,000 m), cold (2,000-3,000 m) and *páramo* (3000 m). Average temperature is 19 °C at mid elevation (1600 m). Climate is also influenced by the trade winds (*vientos alisios*), from the Eastern Plains. The municipality has a population of

16,520 inhabitants, 12,390 of whom are urban and 4,130 live in rural areas (Dane, 2005). Paved roads connect Garagoa to Bogotá and the departmental capital, Tunja, located at 136 km and 86 km respectively. Daily buses run to and from Garagoa to Bogotá and other major destinations. Primary economic activities are agriculture and livestock production. Rural settlements are dispersed and all economic, education, administrative, and health services are concentrated in the municipal town. Municipal land tenure Gini coefficient is 0.58 which accounts for a relative land concentration and a prevalence of minifundia. Unsatisfied Basic Needs (UBN) are 40.4 in a scale score with values between 15.9 and 100 (Incoder 2004). UBN measures the degree of satisfaction of basic housing, water and basic services, education, and income needs. It is used by the national government as an indicator of poverty. Children's morbidity is associated with respiratory illnesses, parasites, skin problems, and fever. Most prevalent adult illnesses are gastritis, arthritis, aches, and diabetes mellitus in people over 60 years old. Main causes of death are respiratory and cardiovascular problems and cancer (ICBF 2008a, PAB 2004, PBOT 2002).

Garagoa's history is shaped by indigenous Muisca heritage. The Muisca were the largest group in the Colombian territory at the time of the Spanish conquest. They occupied an extensive region in the central Eastern Cordillera covering mountains, valleys, and the fertile Cundinamarca-Boyacá plateau. Sociopolitically they were organized into major confederations composed of several chiefdoms related through a complex system of tributes and long distance trade with Muisca and non-Muisca groups. These networks provided access to various agricultural and luxury goods that contributed to diversity their diet (Langebaek 1987). The Muisca were primarily farmers; they relied



Figure 2.1 Map of Colombia with the Alban and Garagoa municipalities on the Eastern Cordillera. Source: Google maps.

on microverticality or the control of different climate zones and ecological niches to minimize the risk of crop loss and expand the food repertoire (Langebaek 1995). They also built agricultural terraces, crop ridges, and drainage ditches; common cropping patterns were crop rotation and intercropping (Langebaek 1987, Rodríguez 2006). In the

sixteenth century the Tenza Valley was densely populated and had with fertile and bountiful agriculture, crafts, cotton textiles, ceramics, and gold (Sáenz 1986).

Rojas de Perdomo (1994) has commented on the paucity of Spanish chroniclers' details with respect to Muisca indigenous foods, culinary forms, and tastes compared to their descriptions of gold and emeralds. Colombian researchers, however, agree that the alimentary scenario consisted of a variety of wild and domestic products (Langebaek 1987, Patiño 1990, Rodríguez 2006). Corn's productivity, efficiency, versatility, and ease of storage made it the staple diet and the center of ritual activity and indigenous identity. Yellow, white, and black varieties were cultivated and consumed at different stages of maturity in soups, *tamales*, cakes, and drinks (Ocampo 1977, Rojas de Perdomo 1994). Corn was complemented with quinoa (*Chenopodium quinoa*) and tubers such as potato (*Solanum tuberosum*), *hibia* (*Oxalis tuberosa*), *cubio* (*Tropaeolum tuberosum*) and *chugua* (*Mellocos tuberosus*). Potato varieties were yellow, white, big, large, purple, purple inside, small, and mealy (Rojas de Perdomo 1994). Root consumption was also prominent and included: *arracacha* (*Arracacia xanthorrhiza*), manioc (*Manihot esculenta* grantz), *batata* (*Ipomea batatus*), *malanga* (*Xanthosoma* sp), *bore* (*Alocasia macrorrhiza*), and *achira* (*Canna indica*) (Langebaek 1987, Rodríguez 2006). Vegetable protein consisted of beans (*phaseolus*), *balú* (*Erythrina edulis*), lima beans (*Phaseolus lunatus*), and peanuts. *Guatila* (*Sechium edule*), squash (*Cucurbita ficifolia*) and pumpkin (*Cucurbita maxima*) were commonly associated with lower rank people (Rojas de Perdomo 1994).

Fruits were abundant and varied: pineapple, blackberry, avocado, soursop, guava, *papayuela* (*Carica pentagona*), papaya, cocoa, *lulo* (*Solanum quitoensis*), *uchuva*

(*Physalis peruviana* L), *chontaduro* (*Bactris gasipaes*), and *curuba* (*Passiflora tarminiana*). Herbs like *guascas* (*Galinsoga parviflora*), *lengua de vaca* (*Rumex* sp.), *verdolaga* (*Portulaca oleracea*), and watercress (*Nasturtium officinale*) were consumed in addition to peppers, roots, leaves, buds, and bark of palms (Cárdenas-Arroyo 1996, Patiño 1990). The diet was largely vegetarian but there was occasional intake of animal protein although larger animals were often restricted to people of high rank (Rodríguez 2006). Deer (*Odoncoileus virginianus* and *Odoncoileus mazama*), peccary (*Tayassu peccary*), weasel (*Mustela* sp.), birds, rabbits (*Sylvilagus* sp.), *borugo* or mountain *paca* (*Caniculus taczanowskii*), armadillos (*Dasypus novemcinctus*), mice, ducks, foxes (*Vulpes cinereoargenteus*), various kinds of fish e.g. (*Eremophilus mutissi*), shellfish, turtles and freshwater algae, eggs, snails, lizards, and insects (ants, worms) were part of the diet. Guinea pigs (*Cavia porcellus*) were the only domesticated animal (Langebaek 1987). Non-foods such as coca not only suppressed hunger and increased vigor but supplemented minerals and nutrients.

Preservation and processing techniques included boiling, drying, salting, fermenting, smoking, grilling, toasting, roasting, and grinding (Cárdenas-Arroyo 1996, Rodríguez 2006, Rojas de Perdomo 1994). Meals were seasoned with *achiote* (*Bixa orellana*), wild plants, salt, and various peppers. Meats and fish were salted for preservation. Abstaining from salt and pepper was part of ritual sacrifices by religious authorities and common people (Rojas de Perdomo 1994). For the most part food was consumed fresh and seasoned with salt, pepper, annatto, and herbs. Muisca preference for liquid foods was expressed in the various soups consumed as porridges made from ground grains and clear soups with additions of tubers, vegetables and legumes (Patiño

1990). Other liquids were fresh and fermented drinks made with fruits, palms and roots. *Chicha* made from fermented corn was an important beverage in ritual celebrations. They also employed specialized cooking utensils such as clay pots, strainers, wooden spoons, gourds, and grinding stone tools for culinary, funerary, and religious activities.

The Muisca gastronomic vocabulary differentiated among tastes, aromas, and transformation techniques; they developed specific words for good and bad flavor, smelly, sour, sweet, tasteless, thick, raw, different qualities of meat, and hunger (Rojas de Perdomo 1994). Dietary composition, intake size, and total nutritional value of the diet are not fully known but experts agree that it was balanced and sufficient (Cárdenas-Arroyo 2002, Rojas de Perdomo 1994), contributing to health and demographic growth.

The Tenza Valley was home to some of the earliest 16<sup>th</sup> century Spanish settlements in the Nuevo Reino de Granada. Towns were built over indigenous settlements to appropriate resources and labor for mining and agriculture. Spanish colonial institutions and administrative forms set a new social, racial, legal, and spatial logic in the Andean region. The best lands were appropriated by the Catholic Church and Spanish elites for mining, agriculture, and cattle grazing. Indigenous groups were reduced into politico-administrative institutions such as *encomiendas* and *resguardos* and forced to pay tribute in the form of cotton blankets, chickens, peanut kernels, sacks of cotton, and labor to a Spanish administrator or the Church in charge of their religious education (Melo 1977, Zapata 1964)<sup>7</sup>. Segregating natives into a singular colonial and racial

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<sup>7</sup> Colonial *resguardos* were a protectionist institution that recognized native collective territorial rights, socioeconomic organizations, and authorities. *Resguardos* paid tribute to Spanish authorities and supplied food to urban centers. In 1810 the newly independent Republican government authorized the sale of *resguardo* lands as part of a politics of national integration. Modern *resguardos* are legal and sociopolitical entities recognized by the state as part of ancestral indigenous rights over communally occupied lands. They are governed according to their own legal system, *fuero indígena*. They are inalienable, imprescriptible and not subject to seizure. Constitution of modern *resguardos* began in

“Indian” category eliminated cultural differences and simplified their subordination and domination. Violence, disease, and forced labor in agriculture and mining caused rapid indigenous decimation (Colmenares 1984).

“Free people of all colors” (Herrera 2002: 88), was a category used for “peoples of different cultures” that were neither Spanish nor indigenous (Bonnett 2002) but a group of landless poor whites, *vecinos* (neighbors), *libres* (free men), *mestizos* (indigenous-Spanish mixed blood), and blacks settled in areas surrounding urban towns and indigenous territories. *Mestizos* were ruled by a special legal code that prevented them from owning land and occupying public offices, a measure aimed at controlling *mestizo* access to sources of power given their rapid demographic growth. Paradoxically these landless farmers were the first free peasants supplying the main urban markets (Bonnet 2002). By the 18<sup>th</sup> century they had become the new force for agrarian development (Ibid) purchasing land from dissolving *encomiendas* and *resguardos* that were sold to stimulate and intensify agricultural production and commerce (Bejarano 1987, Colmenares 1983, 1984, Corrales 2002b). The Tenza Valley was one of the earliest cases of land fragmentation into minifundia (Fals Borda 1979), a phenomenon noticed by 19<sup>th</sup> century travelers (Ancízar 1942, Codazzi 1958, Hettner 1976).

The Spanish presence also transformed food production systems, eating codes, and culinary traditions. Food also became an instrument of social and economic distinction. Early colonizers were impoverished peasants with relatively monotonous and unelaborated diets based on cereals, some vegetables, and occasionally meat. In the New

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mid 1960s and has continued with the amplification of indigenous rights in international and national legislation such as Article 169 of the International Labor Organization.

World they emulated the Iberian model by transplanting Old World crops such as wheat, barley, grape vines, sugar cane, and livestock. The Spanish and Creole aristocracy ate imported luxury foods such as olive oil, wine, spices, and cheeses (Rojas de Perdomo 1993:18). The Spanish rejected and stigmatized indigenous peoples and their foods as uncivilized, amoral, irrational, and filthy (Saldarriaga 2007, 2008). Use of wild foods or resources not involving human labor, as well as ingestion of maize beer (*chicha*) was considered "filth" (*porquería*) and reinforced the idea of Indian foods as socially and nutritionally inappropriate (Saldarriaga 2005, 2008). According to Antúnez de Mayolo (1978 cited by Patiño 1984), in Peru 75 years after the Spanish arrival the *layu pita* (poor people's foods) concept was used to refer to the contempt towards people who ate foods produced by the land without human intervention.

Climatic diversity, soil fertility, and agroecological diversity made Garagoa a privileged agricultural region. Old World crops adapted and were incorporated into mixed cropping arrangements in fields and home gardens. The main crops introduced were wheat, barley, chickpeas, peas, fava beans, celery, turnips, plantain, aniseed, sugar cane, cabbage, broccoli, eggplant, onion, garlic, lettuce, spinach, parsley, mint, apples, citrus, plums, and mangoes (Codazzi 1958, Rojas de Perdomo 1993). All of these, plus cotton and sisal were cultivated regularly until the 20<sup>th</sup> century (Contraloría 1936). Sugar cane in particular turned the region into an important producer of brown sugar (*panela*), and syrup for *guarapo* (Sáenz 1986) a fermented drink made with brown sugar and still widely consumed by peasants.

The new crops added dietary diversity but also displaced important and nutritious foods such as quinoa, whose cultivation was prohibited because it competed with wheat

and barley for space and labor (Patiño 1990). Jesuit estates in particular stimulated the production of wheat to satisfy Spanish and Creole demand for bread. Spanish pressure to grow the new crops was met with indigenous and *mestizo* resistance; native crops were more efficient, productive, and part of a deep-seated gastronomic tradition.

With time, native and Iberian traditions fused and gave way to the formation of a *mestizo* cuisine characterized by the predominance of foods of vegetable origin, mostly starches (cereals and tubers) and legumes, over animal proteins, fats, and sugars. These starches became the main *mantenimientos*, a term employed by 16<sup>th</sup> century Spaniards for maintenance or core foods that provided calories and a sensation of satiety (Warman 1988:18). Indigenous soups blended with the Spanish *olla podrida* (rotten pot), a stew containing grains, tubers, vegetables, and occasionally meat. Stone ground wheat and barley were used to make popular porridges known as *cuchucos* with tubers and vegetables. Milk and fresh cheese were added to corn dough preparations adding protein and taste. Strong flavors became attenuated and fresh foods gained wider acceptance over preserved and spiced products and meals (Chapter Five discusses peasant cuisine in detail).

Colombia is a country marked by profound regionalisms (Cinep 1998, Jimeno 1994, Silva 1994). Geographic complexity, precarious transport and communications, and administrative centralism kept territories and peoples isolated physically, economically, and politically from one another and from Bogotá, until the mid-twentieth century (Palacios and Safford 2002). Geographical segregation led to the formation of relatively self-sufficient regional agrarian economies, societies, diets, and cuisines. In light of Zimmerer's (1996) findings for 18<sup>th</sup> and 19<sup>th</sup> century highland Peru, it can be

argued that during this period of relative isolation, agrobiodiversity in Colombia was used and recast according to agronomic, cultural, and culinary preferences. The lower Tenza Valley was one such region in which Garagoa played a central role given its location as a crossroad for regional trade routes and religious pilgrimages (Ferro 2003). A major trade route communicated Garagoa with the Eastern Plains, *Llanos Orientales*, a vast flat grass area that stretches from the skirts of the Eastern Cordillera to the Orinoco River on the Venezuelan border. This was a route employed by the Muisca to trade highland food crops for feathers, fish, mollusks, honey, and medicinal plants with lowland ethnic groups such as the *Tegua* (Langebaek 1996). (*Tegua* is still a term employed to designate Plains people.) A second trade route connected communities from the high and low Tenza Valley. Highlanders were known as *reinosos* (belonging to the Kingdom of Spain), a term used for people in areas surrounding the city of Tunja, seat of Spanish colonial authorities and aristocracy of the Nuevo Reino de Granada. *Reinosos* specialized in the production of clay pots, potatoes, and tubers which they traded for low valley cotton fabrics, manioc, *arracacha*, corn, fruits, plantains, citrus, and sugar cane. During the expansion of the colonial hacienda in the highlands, *reinosos* were part of the many dispossessed peasants forced to seek work in the Garagoa sugar cane mills. Current day use of colonial terms such as *tegua*, *reinoso*, and *guate*, the designation used for lower valley residents meaning proud people, underscore other categories different from *campesino*, which configure distinct local and regional identities on the basis of geographic, socioeconomic, and productive difference.

Trade took place by horses, mules or on foot. Journeys lasted weeks especially during the rainy season. Precarious roads restricted the volume and intensity of trade.

Most peasant production remained for household consumption and local exchange.

Agricultural diversity, production, and trade estimates are indeterminate given the paucity of sources available and the lack of clarity whether numbers refer to gross production or market surpluses (Melo 1987). In the mid 19<sup>th</sup> century Italian geographer Agustin Codazzi noted that Garagoa produced and traded wheat, corn, potatoes, cassava, beans, chick peas, celery, turnips, plantains, cotton, aniseed, and sugar cane for making alcoholic beverages such as *guarapo* and *aguardiente* a stronger distilled sugar cane drink. Other artisanal products included cotton ponchos and blankets, and sisal sacks, ropes, and bags (Codazzi, 1958: 100). Cotton and sugar cane remained prominent commercial crops in Garagoa until the 1930s when urban imports started to displace local goods (Contraloría 1936).

At the end of the 19<sup>th</sup> century and during the first four decades of the 20<sup>th</sup> century, the Garagoa highlands underwent a process of colonization and expansion of the agricultural frontier. Urban land owners and better-off peasants cleared primary forests to expand cattle ranching. Direct appropriation and privatization of commons is a historical practice often encouraged by the state to expand control over the territory and as a means to circumvent agrarian reform (Molano, Fajardo and Carrizosa 1989, Palacio 2008). Modern haciendas in Garagoa differed from colonial estates and agricultural plantations in size and in that they were not intended for the production of export commodities or guided by a modern capitalist entrepreneurial logic. They were a strategy of local elites to acquire economic power, social prestige, and control over the land. To tie peasant labor to the land, Garagoa hacienda owners instituted the obligation system, a labor arrangement whereby tenants received a meager salary, from which land rental fees were

discounted. Labor obligations included clearing forests, establishing pastures with introduced grasses such as kikuyu, tending to dairy production, growing sisal, and performing domestic work for periods of seven to twelve years (Fals Borda 1979, Monsalve, 2005). Laborers were also forced to plant pine trees, an exotic species, for wood and posts in unique *páramo* ecosystems that play an important role in hydrological regulation. These practices drastically transformed the native landscape, contributing to current deforestation and soil erosion, reducing wildlife habitat, and legitimized livestock farming in fragile and strategic lands.

Labor was provided by landless agricultural workers and mid-elevation minifundia peasants seeking to secure additional land in the cold zone. Throughout the 19<sup>th</sup> century the population had gone from 4362 inhabitants in 1835 to 7079 in 1851 and peasant parcels were insufficient (Contraloría 1936:136 -137). Years later, families from neighboring regions displaced by *La Violencia* (1948-1957) also migrated to Garagoa to *descumbrar* (to “break the forest”) in search for land. *La Violencia*, the Violence, refers to a period of bipartisan civil war claiming over 200,000 lives and leaving millions of peasants displaced (Guzman, Fals Borda and Umaña 1964, Sánchez and Meertens 1984). In their parcels tenants experimented with and adapted crops and varieties to higher elevations such as corn, beans, potatoes, tubers, peas, and fava beans. Productivity was high because it was virgin land. Tenants also kept a few chickens and a couple of cows for household use and the market. Older peasants remember this period as one of great suffering, indignity, and humiliation because of the slave-like treatment to which they were subject. Landowners were addressed as master (*amo*) and could not be looked directly in the eye (Monsalve 2005:46).

Dissolution and fragmentation of the hacienda was accelerated by the Law 200 of 1936 (*Ley de Tierras*) the first and most serious attempt at modifying land tenure and addressing the profound rural unrest produced by the unjust living and working conditions of peasants and rural workers throughout the country (Vega Cantor 2002). The law partially transformed the existing agrarian structure and labor relations by the expropriation of idle lands (Berry 2002, Legrand 1986). In Garagoa some peasants were able to purchase parcels of the hacienda or acquired land titles by proving that they had made improvements to the land by felling forests and turning it into a productive landscape. Highland peasants specialized in dairy production and at present they represent some of the largest and wealthiest peasants in the area: a “rich” family may own 5 hectares and 20 cows. Medium and low elevations are more densely populated and have smaller holding but also host the highest agrobiodiversity levels because of topographic diversity and agricultural intensification expressed in dense intercroppings of several food crops in small plots of land.

In the 1940s, the much longed-for road for motorized traffic was built connecting Garagoa and Bogotá. Up to then communications and transport in the eastern side of the eastern cordillera had remained confined to bridle paths. Most 19<sup>th</sup> century infrastructural developments had focused on the western flank in order to access the Magdalena River, the most important navigable artery connecting the Andean hinterlands to the Atlantic Ocean. The road integrated the Tenza Valley region to the national market economy via agricultural production and labor migration as large numbers of unskilled peasants went to work in construction, factories, and domestic service in the capital city. Ground transportation opened new marketing options beyond the Tenza Valley. Different

seasonal climate patterns of those of the Boyacá-Cundinamarca plateau, the region that supplies most urban markets in the capital city, gave the region a competitive edge: when the urban markets experienced food shortages in the summer months, Tenza Valley peasants provided fresh and diverse produce. Trade, however, consisted of small surplus peasant products (Martínez 2005). Although coffee was planted in Garagoa, it never gained much prominence as the coffee growing areas on the western slope of the Cordillera. The road stimulated the influx of new commodities: foods, agrochemicals, tools, seeds, clothing, and domestic goods were introduced by traders, shopkeepers, middlemen, and the peasants themselves.

Prior to the construction of the road in the 1940s, the Tenza Valley region had remained isolated from the first systematic state-led economic, technical, and legislative measures for national capitalist development. Economic modernization and diversification were subsidized by capital accumulation from coffee exports during the late 19<sup>th</sup> and early 20<sup>th</sup> century. Following the country's "natural agricultural vocation", state efforts focused on the production of tropical commodities and raw materials for exports mostly in fertile valleys and flatlands. Coffee, banana, cocoa, tobacco, copra, cotton, and cattle benefited from mechanization, credit, agrochemicals, improved animal breeds, exotic seeds, and grasses (Bejarano 1987, Melo 1987). Commercial production of transitory crops such as rice, corn, potato, wheat, barley, sugarcane, and oil seed were encouraged to buffer the country from international food market oscillations and to expand the emerging domestic market (Bejarano 1987, Ocampo 1987). Low agricultural productivity had forced the government in 1927 to issue an emergency law allowing agricultural imports to attend to food scarcity (Suárez 2007, Kalmanovitz and Lopez

2006). Emphasis on cereals, oils, and meat also addressed nutritional caloric and protein deficits in the country (Bejarano 1950a). Although most large scale commercial production was in the hands of landed national elites, peasants also cultivated them in smaller amounts and adopted and adapted principles and practices of modern agriculture such as the use of agrochemicals as part of their diversified production strategies (Arango and Cardona 1987, Arango 1993, Forero 1999).

Eventually the so-called traditional sector became the focus of national and international interventions to rationalize and improve the productive process, reduce rural poverty, and insert peasants into the capitalist market economy (Kalmanovitz and Lopez 2006, Ocampo and Bernal 1987). From the 1970s through the 1980s, Garagoa peasants, like counterparts in other Third World countries, became the specific target of agricultural modernization by means of Integrated Rural Development (IRD) programs and adapted Green Revolution technological packages. In 1950 the Currie Mission (Currie 1951), the first comprehensive World Bank mission in a developing country, had already noted the effects of historical deforestation, runoff, grazing, and unequal land tenure in the Colombian eastern Cordillera, and more specifically in Boyacá. The Tenza Valley was one of the first areas to host IRD programs in an attempt to redress some of these problems through technical assistance, infrastructure development, marketing, and low-interest credit for the purchase of land, animals, agrochemicals, and improved high yielding cash crop seeds (Ballesteros 1998, Fajardo, Errázuriz and Balcázar 1991).

According to local peasants, the main commercial seeds introduced in Garagoa were the *pastusa* potato, beans, the *charalá* and *pira* hybrid corn varieties which were used for household consumption and chicken feed. Since the 1940s agronomic

experimentation with corn, beans, potato, wheat, forage plants, rice, and cattle had been sponsored by the Rockefeller Foundation. Up to 36 improved hybrid varieties of corn were developed in national universities to increase productivity (Bejarano 1987:202). In Garagoa *técnicos* (technical extension workers) set up experimental parcels to conduct trials with the modern corn varieties and then gave them to peasants who would first cultivate them separately and eventually intercropped with other crops. Wealthier peasants often took more risks with innovations but poorer ones resorted to different economic and labor associations to try out commercial varieties. In one of our conversations, *Don Gustavo*, an advocate of local agriculture, noted that technical learning such as grafting stimulated peasant experimentation and innovation eventually contributing to crop diversification. Emphasis on agronomically and nutritionally improved varieties was coupled with a disregard for local crops and landraces which were either ignored or rejected for lack of economic and social value by extension workers and institutions. Peasants conserved and nurtured them because of their agronomic and productive advantages, and to satisfy family and personal consumption aspirations.

As has been noted for other peasant areas in Colombia, the introduction of commercial crops stimulated a shift from intercropping to monocropping; it also stressed production of cheap food for the expanding urban market and the food industry over production for self-provisioning and local markets (Arango et al. 1991). Another important change was the emergence of new forms of economic relations and rationalities with the introduction of wage labor to the peasant farm and the full integration into the market economy. Peasants were obliged to consider new labor costs as well as

oscillations in the price of crops, transport, and external inputs. This implied incorporating new economic logics to household production (Forero 1999). A guiding economic logic among peasants in the Andean highlands is the reproduction of the base (*la base*); namely, material products (earth, crops, animals, tools), cash, and reserves necessary to support an independent life (Gudeman and Rivera 1990). When sale prices do not match the capital and labor investments it is said that *no da la base* (it does not cover the base). Full participation in the market economy and systematic use of external inputs made peasants make other kind of *cuentas* (budgets) which peasants generally did not consider.

Rural development interventions have been highly contentious on economic, social, political, and environmental grounds (Arango et al. 1991, Escobar 1995, Fajardo, Errázuriz and Balcázar 1991, Leon 2007). Peasants in Garagoa are critical of state development programs because of their short-lived and disparate nature, coupled with the corrupt and politicized use of public resources. In retrospect, however, they agree that the period of IRD implementation brought certain benefits to farmers due to the existence of an array of rural institutions that provided low-interest loans, marketing support, and educational opportunities. During this period, there was also trust (*confianza*) between institutions and peasants. In the 1970s, during the IRD boom the Agrarian Bank made access to credit easy, not demanding much *papeleo* (paper work), meaning bureaucratic and legal requirements to prove the debtor's and the guarantor ability to pay. This was interpreted as a manifestation of trust that in turn led peasants to pay their debts on a timely basis. Trust, they say, is necessary for social relations to grow and prosper especially because mistrust runs deep in rural relations. People from Boyacá, *Boyacos* as

they are called, are considered *taimados*, meaning astute, sly, cunning, and tricky, hiding everything under their poncho. The previous credit conditions contrast with current stringent bank loan requirements and high interest rates which have resulted in peasant loss of land due to their inability to pay. Farmers have resorted to informal and trust-based credit relations with wealthier acquaintances for loans or cash advances.

From the 1980s onwards a succession of commercial crops and agrochemicals continued to be introduced by development institutions, municipal programs, middlemen, and peasants themselves with various degrees of success. *Lulo* (*Solanum quitoensis*), green house tomatoes, string beans, *bolo rojo* beans, blackberries, and homegarden vegetables have been cultivated in small parcels of less than a hectare next to diversified subsistence crops (Monsalve 2005, Silva 2010). Through commercial crops peasants have maintained market participation despite the structural difficulties of peasant agriculture.

Modern development, anthropologists have argued, is not just an economic, technological, and administrative project but a cultural and discursive one dispersed in the practices of an array of state, private, and civil actors (Escobar 1995, Ferguson 1994, Gupta 1998, Li 2007, Tsing 2003). In Colombia one of the most important national programs of directed rural cultural change was the Cultural Popular Action Program (ACPO). Founded in 1947 by Monsignor José Salcedo under the auspices of the Catholic Church, ACPO was an innovative pedagogic initiative for peasant integral development conducted through radio schools aired by Radio Sutatenza located in the Tenza Valley. Complementary printed materials included booklets and the weekly newspaper *El Campesino* covering a wide range of topics such as agriculture, arithmetic, and spiritual values. In later years, and under the influence of the Alliance for Progress it was turned

into a strategy against communism, channeling support from the Colombian government, the General Electric Corporation, the World Bank, the Inter-American Development Bank, and UNESCO (Gómez 2007, Rueda 1999). ACPO also collaborated with Peace Corps volunteers who worked in agriculture, home gardens, and education in Garagoa's rural households. The program ended in 1989 but its influence was long lasting in the region.

In consonance with the prevailing spirit of modernization and progress, Salcedo believed that development was a mental state and that only cultural and educational transformation would bring integral development and social change. To overcome cultural backwardness and underdevelopment it was necessary to modify peasant bodies, minds, and public and private behaviors (Cabrera 1976). ACPOs' mixed and emotional messages resonated with intersecting social and medical discourses on nutrition, health, hygiene, work, and spirituality directed at educating and transforming the Colombian people, and most notably their bodies, into a biologically and socially appropriate population for national development and progress (Pedraza 1999, 2004). In dietary terms, ACPO echoed prevailing discourses stressing individual and family responsibility for consumption of healthy, clean, and nutritionally balanced foods for health and proper physiological functioning (Pedraza 1999). Among its various activities ACPO encouraged the cultivation of varied fresh vegetables in home gardens for dietary and nutritional diversification. "They did not manipulate seeds or bring any new seeds; their objective was to improve what people had, to improve their identity" (*perfeccionar lo que tenían, perfeccionar la identidad*) asserts Don Gustavo. Consumption of *chicha* and *guarapo* was strongly discouraged because as the anti-alcoholic campaigns of the time

argued, these two popular beverages were believed to be directly responsible for the degeneration and weakening of the “Colombian race” (Bejarano 1950a, Calvo and Saade 2002).

ACPO exemplifies what Li (2007:5) calls schemes of improvement, a hybrid form of politics and government seeking to “shape human conduct with the purpose of securing the welfare of the population” not by coercion but by “educating desires, configuring habits, aspirations, and beliefs”. Improvement is achieved through multiple tactics, some of which even challenge the status quo in their intent to bring social welfare to the poor (Ibid:8). ACPO had a transformative and empowering dimension in that it democratized adult education by means of an innovative, holistic, and free informal continuing education program for a traditionally marginal and excluded population (Cabrera 1976, Sarmiento and Rubens 2007). To present-day Garagoa peasants, ACPO achieved what no other rural development program has been able to address and accomplish: it focused on peasants and opened their eyes to the world. By encouraging reading and learning it created opportunities for socioeconomic mobility, community solidarity and action, and fostered a sense of pride and dignity peasants never had.

ACPO was also a project directed at disciplining and governing peasants according to a model that combined cultural ideals of Catholic paternalism and the modern urban citizen (Mejía and Londoño 2007). Turning peasants into a model rural citizen contributed to neutralize social discontent during a period of considerable rural unrest and violence. By conceptualizing agrarian and rural problems as educational issues and situating them in the field of cultural change, ACPO de-politicized the foundations of rural socioeconomic exclusion. The simultaneous empowering and domesticating nature

of ACPO illustrates the multiple and contradictory facets of rural development and its cultural workings shaping peasant bodies, minds, and every day practices.

In the 1970s Garagoa gained national attention with the construction of the first major national hydroelectric plant. The project had been conceived in the 1950s as a complement to the Alternate Road to the Plains and was believed to turn the region into a development pole. The plan was originally called “Proyecto Gustavo” after the president Gustavo Rojas Pinilla (1953-1957), Boyacá engineer and strong supporter of public works and infrastructure. The scale of the operation captured international attention in engineering circles but its high costs led to its postponement until the 1970s when a loan from the World Bank was obtained. The first phase (1969 -1975) cost 200 million dollars and the second phase (1978-1982), financed with a second loan, cost 195 million dollars (Sanclemente 1999). When completed in 1978, the dam was awarded the national engineering award. In 1998, as part of electric privatization policies, the hydroelectric was privatized and now belongs to AES Gener S.A., one of the largest global energy enterprises.

Workers from all over the country migrated to Garagoa in the 1970s. The municipal center had to expand its infrastructure and services to accommodate the newcomers. The flow of cash turned Garagoa into a recreational and tourist site for workers and emerald traders from the neighboring Muzo and Coscuez mining areas. With “volunteer” peasant labor the bishop built an imposing cathedral to symbolize the town’s progress and power. In the end, however, development projections turned out to be mirages; the modern Alternate Road was never built because the government opted for a more direct road connecting Bogotá to the Plains whose rice and cattle production

supplied the capital city food market. In consequence, once the dam was finished, employment fell and a new wave of outmigration ensued. In lieu of the promised regional welfare, the dam brought profound and unforeseen environmental changes. Increased moisture levels contributed to the emergence of a cooler and damper regional microclimate that altered production cycles, local productivity, and agrobiodiversity. Once reputed for its temperate climate and the quality of its fruits and agricultural products, the region lost the conditions necessary for trees to fruit. Crops have also become more vulnerable to diseases, fungi, and recurrent frosts. As a result, peasants lost important sources of nutrition and income.

The combined effects of regional weather transformations, global climate change, soil nutrient depletion, and pest resistance have made agriculture riskier in Garagoa. Rural and urban residents alike comment and complain about the harmful landscape and environmental changes on agriculture, food, and health over which they have no control. As *Doña* Helena, a reputed farmer from the Resguardo Mochilero *vereda* notes:

The weather has changed; it is colder and damper after they built the dam. The days are hot and the nights get very cold. There is more *yelo* (*hielo*, a combination of frost, cold dew, and fungi), crops take longer to grow and ripen; when you harvest them they are still green, unripe (*chure*). Fruits are burned and they just fall off the tree on the ground. Sometimes the roots just rot.

As the development (Edelman and Haugerud 2005, Escobar 1995, Ferguson 1994) and environmental justice literatures have shown (Johnston 2000, Stonich 1995), infrastructure and development projects can bring more problems to local communities who must face the unforeseen social, economic, and environmental consequences on their livelihoods with few possibilities of compensation or reparation.

Unequal land distribution, structural poverty, and lack of economic opportunities have been push factors behind rural outmigration since colonial times. In the 20<sup>th</sup> century industrialization and urbanization were major pull factors for large numbers of unskilled peasants joining the formal and informal sector. Rural destinations included the flower, vegetable, poultry industries, and dairy industries. The emerald zone was a preferred destination for young Garagoa men hoping to find a way out of poverty. The emerald zone hosts the most important emerald mines: Chivor and Gachalá, and Muzo and Coscuez, in the Cundinamarca and Boyacá departments respectively. Colombia is one of the largest emerald producers in the world and is reputed for the quality of its green stones. This zone was one of the most violent areas in the country because of the disputes for the control of these resources, and was home to some of the earliest paramilitary groups in the country (Gutiérrez and Barón 2008). In Garagoa neither guerrilla nor paramilitary groups have had permanent presence in the region although paramilitaries linked to narco-trafficking activities have made periodic incursions to assert territorial control by conducting “social cleansing” activities. Social cleansing (*limpieza social*) refers to the physical elimination of those considered helpers of the guerrilla, delinquents, or simply “undesirable” to society.

In the past two decades, since the mid-1980s, the most recent destination for Garagoa youth have been the lowland coca growing areas where men and women work in cultivation, processing, and commercialization activities. Agricultural skills are valued assets in this new form of multinational commercial agricultural enterprise which involves constant observation, experimentation, and innovation with plants, soils, and chemicals. Despite the illicit nature of coca, the hard and precarious working conditions,

and the risks involved, workers see it as a legitimate occupation due to the lack of economic and work opportunities. Working in coca plantations is an option vis-à-vis traditional peasant agriculture, the latter which does not generate the same wages and has a stigmatized backward peasant identity (Ramírez 2001). Coca plantations are also positively valued as new spaces for socialization, learning, and cultural expressions for rural youth (Ferro et al. 1999). Coca plantations are a new form of type of re-agrarization that partially subsidize peasant economies and livelihoods in areas, like Garagoa, characterized by poverty, unemployment, labor shortages, de-agrarization, and rural aging. Given the continued deterioration of rural livelihoods, this new form of rural *rebusque* (search) remains an occupational alternative.

In sum, as described in this section, Garagoa is embedded in long-term settlement processes and relative regional isolation shaping agricultural and food structures since pre-colonial times. A different situation is that of the western slope of the cordillera, home to the Alban municipality where we now turn.

#### Alban: A frontier for national development

The Alban municipality is located on the Cundinamarca Department on the western slope of the Eastern Cordillera. The region is characterized by a rugged landscape with elevations ranging from 1,500 m to 3,100 m. Demographically Alban has a population of 5,820 inhabitants of which 1,557 reside in the municipal capital and 4,263 in rural areas (Dane 2005). A paved road connects Alban and the capital city located at a distance of 59 km, and the city of Facatativá at 18 km. Rural settlements are connected through a network of intermunicipal unpaved roads crossed by daily public

transportation. Land tenure is predominantly minifundia with a few large livestock estates in the highland areas, a situation reflected in the municipal Gini Index of 0.68. The Unsatisfied Basic Needs score is 33.8, lower than Garagoa, given the region's better access to housing, water and basic services, education, and income. Infant morbidity is associated with respiratory-related illnesses, gastrointestinal parasites, and skin problems. Adult illnesses include hypertension, gastritis, lumbago, arthritis, headache, urinary infections, and diabetes mellitus in people over 60 years old. Respiratory, cardiovascular problems and cancer are the main causes of death in the municipality (PDM 2004, 2008). Main municipal economic activities are small-scale agriculture: mixed cold weather crops and livestock at higher elevations, and shade coffee and sugar cane at mid elevations. The upper elevations were declared a forest reserve in 1996 because it supplies water to several community aqueducts in the lower areas.

The Alban region was a forced crossing point for commerce between the national capital and the international market since the 16<sup>th</sup> century and until the mid 20<sup>th</sup> century. The need to connect the highland centers of power with the exterior world stimulated the opening of colonial roads (*caminos reales*), towards the city port of Honda on the Magdalena River. This fluvial artery flows northward between the eastern and central cordilleras crossing the entire country about 950 miles and draining into the Caribbean Sea. Paved royal roads and adjacent settlements were built over existing indigenous Panche trails. The Panche were the main indigenous group inhabiting the western slope of the eastern cordillera and parts of the Magdalena Valley. Described as a warring and cannibalistic group they posed fierce resistance to Spanish rule (Velandia 1979). Demographically less numerous than their Muisca neighbors, the Panche were also

confined to politico-territorial institutions: *resguardos* and *encomiendas* where they had to paid tribute to Spanish authorities in charge of their religious education and who controlled their labor. Wars of resistance, labor abuse, and disease led to their extinction in the late eighteenth century (Franco 2009b).

The main royal road, known as el Camino Nacional de Honda, streamlined communication and transport of people and goods from Europe and the rest of the country. Transport was done by mules, horses, and on the backs of indigenous and slave porters. Until 1850 major exports were gold and tobacco; imports consisted of food, tools, luxury items, equipment, among other supplies. Internal trade of cold weather products (salt, potatoes, legumes, cattle) from the highlands and tropical foods such as plantains, fruits, manioc, and cattle also took place (Franco 2009b). Sugar cane plantations in the lowlands also produced *panela* and *guarapo*, principal sweeteners in the colonial world. Main sources of labor were indigenous Panche, poor *mestizos*, and Black slaves (Bernal 1946). The western slope remained economically marginal and sparsely populated with considerable unexplored portions of land until the mid 19<sup>th</sup> century when massive expansion of the agricultural frontier for coffee began. Colonization of public lands was a means to reduce pressure for land from the growing landless population and in response to the international demand for tropical commodities (Legrand 1986). A combination of several geographic, climatic, and topographic characteristics were advantageous for the production of a mild, low acidity, and flavorful coffee on Andean slopes between 1,300 and 1,900 m and with temperatures ranging between 19 and 21.5 °C.

A defining aspect of the transition from the colonial to the republican economy was the passage from an extractive economy to the development of capitalist agriculture for the international market. Tobacco, quinine, cotton, indigo, cocoa, sugar cane, hides, and cattle had been exported since colonial times, but coffee and bananas defined a new role for the nation in the world market economy. National history is inextricably tied to these two commodities; their booms and busts have brought prosperity and misery to large sectors of the rural population. Introduced in Colombia in the 18<sup>th</sup> century by travelers and Jesuit priests, coffee influenced national development, economic diversification, social history, infrastructure improvement, commercial networks, rural landscapes, agrobiodiversity, and food habits throughout the 20<sup>th</sup> century. Starting in 1870 the African crop expanded rapidly in the western slope of the eastern Cordillera where fertile and productive forest lands boosted agricultural productivity. Proximity to the Magdalena River facilitated its transport to European markets. Extension of the road network and construction of the first steam railroad from Bogotá to the nearby town of Facatativá (1889) and to the municipal capital of Alban (1929) also contributed to this process (Velandia 1979). The rise of US consumption of this stimulating and hunger suppressant was concomitant with industrial capitalist growth (Jiménez 1995), a phenomenon similar to Mintz' (1985) description of sugar in Britain. The general growth of the world economy at the end of the 19<sup>th</sup> century and desire for the new commodity boosted national revenues in Colombia.

The frontier expansion involved new spatial and labor logics that transformed the socio-economic and productive landscape of the Andes. Unlike other coffee regions, such as the Antioquia department where most production fell in the hands of small farmers, in

Cundinamarca it was controlled by national landed and business elites and foreign capitalist entrepreneurs. Although the haciendas in Alban were never as large or productive as in other neighboring municipalities, El Descanso and Campohermoso estates possessed up to 97,000 and 80,000 coffee trees respectively. Campohermoso even coined its own currency for internal monetary transactions. Other haciendas in Alban were more modest with 1,000 to 2,500 plants (Franco 2009b).

Prior to coffee colonization, sugar cane and livestock had brought considerable environmental changes to the lower areas. Sugar cane caused extensive deforestation because of the crop's full sun exposure requirements, and the demand for firewood by sugar mills. Pastures for cattle and transport animals led to further forest clearing. The 1882 testimony of German geographer Alfred Hettner in a small sugar cane village on the road from Alban to Honda gives an idea of what the area looked like:

The lower region was presented to us as covered by thin and short forest, we could see larger real and true forest areas on the roadside and at the height of Agualarga [Alban], although most of the region within our view is free from any forest, exhibiting only solitary trees such as orange, mango, calabash, ceibas ... and others that shade scattered ranches in the landscape and surrounded by small crops of corn, plantains, sugar cane, coffee and other crops, as well as pastures of a slightly larger extension, where cattle, horses and mules graze (Hettner, 1976:167-168).

Shade coffee changed forest composition but enabled structural complexity through intercropping with native hardwood, nitrogen fixing species, fruit trees, epiphytes, and food crops. Intercropping in Alban consisted of Arabica coffee, *guama* (*Inga* sp.), plantains, avocado, *balú* (*Erythrina edulis*), a few citrus, and timber species. Fallen leaves contributed to natural mulching, soil quality and protection against runoff. Shade coffee also provided habitat for wildlife, birds, reptiles, and insects. Don Nemesio, a former woodcutter, recalls that albeit landscape modification in the 1940s and 1950s it

was still possible to find mountain lion, monkeys, deer, armadillos, birds, and rabbits as well as native trees such as *nogal* (*Juglans neotropica*), *cedro rosado* (*Cedrela odorata* L), *ocobo* (*Tabebuia rosea*), *molle* (*Schinus molle*), *totumo* (*Crescentia cujete*), and *lombricero* (*Macaglia quebracho*). *Quina* (*Cinchona pubescens*) and *encenillo* (*Weinmannia tormentosa*) two species intensively used against malaria and for tanning leather respectively were occasionally observed.

By the end of the 19<sup>th</sup> century a small class of independent coffee producing peasants had developed around urban centers and estates. But they did not constitute a significant force to meet the intensive labor demands of coffee estates. Most local labor was a sparse population of dispossessed indigenous, Black, and *mestizo* populations who, according to prevailing ideologies of geographical determinism, were prone to vagrancy, banditry, play, drinking, and diseases characteristic of warm weather lands (*tierra caliente*) (Jiménez 1990). The association between climate, disease, and poor health led economic historian Antonio García (1937:214) to assert that “The path of tropical diseases is the path of coffee and of the small coffee grower without financial resources. Anemia and malaria, as endemic diseases, are framed within the geography of coffee”. Fear of vegetation, climate, and disease deterred owner’s permanent settlement in the estates. Ruling elite discourses expressed a central concern of the times: the physical and mental conditions and abilities of the Colombian “race” vis-à-vis the challenges posed by modernity, capitalist development, and progress. The following testimony from a report by the Agricultural Commissioner to the National Congress in 1880 best captures these concerns:

When I hear it said that the cultivation of coffee should bring great prosperity to our country, I am happy and wish that it could be so. But then I recall our distance from the sea, the oppressiveness of government, the scarcity of labor, the laziness of our workers, the dearness of money and tools, the insecurity in which we live (waiting for revolution, if not in the middle of one), our backwardness in mechanical skills, time, and capital –which are in addition to hard work- integral to the success of any coffee enterprise. Thus I shelter great fears that all this prosperity will only be wishful thinking (Jiménez 1989: 185).

Consequently landowners and administrators opted for recruiting *mestizo* workers among the growing poor, unemployed, and landless class of men and women from *la tierra fría* (cold lands) in Cundinamarca and Boyacá. Cold weather peasants were thought to possess the most desirable traits of a cheap and disciplined labor force: serious, hard working, quiet, and obedient, qualities demanded in highland haciendas (Jiménez 1990). Coffee estates instituted various kinds of labor arrangements such as sharecropping, daily wage labor, and tenancy. *Agregados* (tenants), became the principal work force in charge of crop expansion, maintenance, productivity, and harvesting manually grain by grain to insure quality against competing Brazilian production (Deas 1987). Tenants were given a parcel of land for living, cultivating domestic crops, and tending a few animals. But they had the obligation to work for a certain number of days out of the month in the hacienda, for which they received a small salary. Noncompliance with the obligation was grounds for eviction (Deas 1987). While women and children washed, cooked, and cleaned for hacienda administrators and day laborers, men worked the coffee fields. They established coffee plantings obtained from a centralized nursery. Main Arabica varieties grown were *típica* and *borbón*, also designated by the terms *común* (common), *nacional* (national) or *pajarito* (little bird). These are tall, robust, and

flavorful varieties required shade but not fertilization. They also have long productive lives.

Working conditions in coffee estates were miserable and even compared to disguised forms of slavery (Franco 2009b). Workers were addressed with derogatory terms such as “Indian” or “mules” and were treated as work beasts. Labor payments were sometimes made in the form of food (corn, salt, sugar cane syrup) whose amount varied considerably depending on food price oscillations due to high transportation costs and scarcity during the civil bipartisan war period known as the Thousand Day War (La Guerra de los Mil Días 1899 - 1902). Workers favored daily cash over in-kind remuneration, which allowed them to leave whenever they wanted or when other opportunities arose. Frequently they were indebted with the hacienda because they were forced to make their purchases in the hacienda store or because they requested advances for special expenditures. Tenant families and sharecroppers sometimes opted for tending their own parcels to supplement their income with the sale of food and crops to hacienda administrators who generally needed cheap food to feed and pay workers (Deas 1987). But the prices set by the haciendas were generally low and tenants faced severe restrictions for selling their crops outside the estate, especially at harvest time. Labor shortages sometimes gave workers some negotiating power especially at harvest time when administrators were desperate for labor.

Most haciendas enforced the prohibition for tenants and sharecroppers to grow coffee in their plots. There were two major reasons for this restriction: first, to prevent workers from stealing coffee from estate trees and claiming it as if it was from their own harvest; second, to avoid tenant economic or land claims on the grounds of

“improvements,” (*mejoras*), made to the land by the cultivation of a permanent and profitable crop (Deas 1987). Peasant resistance to abject salaries, the obligation system, and the prohibition to plant coffee fueled extensive rural uprisings and labor strikes in the late 1920s and 1930s. Andean coffee workers and agro industrial banana workers in the Caribbean region mobilized for better labor conditions and agrarian reform in a context of capitalist industrialization and modernization (Archila 1992). With support from middle-class activists concerned with the feudal and backward nature of the hacienda system (Jiménez 1989), and nurtured by the Russian and Mexican Revolutions as well as communist and socialist ideologies, these early social movements triggered unprecedented labor and land reforms (Vega Cantor 2002). In the 1930s, after more than 40 years of conservative hegemony, Liberal governments initiated some social and modernization legislative reforms to address social unrest.

The Law 200 of 1936 drew on the principle of the social function of land to alter land tenure concentration. It allowed titling of public lands to settlers in good faith and state expropriation of idle lands for redistribution. The law also prohibited eviction of small peasants that had invaded or colonized land. To stimulate productive use of land it legitimized large concessions for economic exploitation and ultimately set the grounds for modern agriculture based on the incorporation of public lands into the national economy on a persistently unequal land structure (Legrand 1986). The law temporarily appeased social unrest but it also led to the eviction of tenants, sharecroppers and settlers in Cundinamarca and Tolima estates by landowners fearing territorial fragmentation of their properties due to peasant land claims (Fajardo 1986). Land reform, in conjunction with rising labor, production, and export costs, low domestic capital, and rural

devastation after the civil war, contributed to the decline of coffee estates. Falling coffee prices forced already indebted owners to sell the land to pay creditors or to partition it for sale among workers. On occasion land sales benefited hacienda owners who were exempt from paying accumulated labor benefits to workers, some of whom had been tied to the hacienda for 20 or more years. In other cases *hacendados* (hacienda owners) paid these debts with parcels of land.

Fragmentation of estates made possible the emergence of a demographically significant landed peasantry closely tied to national and international markets and the object of distinct agrarian and social policies. Average peasant farms, such as those in Alban, ranged between 1 and 2 ha of which 70% to 90% was dedicated to shade coffee. Coffee made possible the intensive and permanent use of the land without significant technical requirements or exclusion of subsistence crops for household food security and nutrition. Coffee booms also contributed to peasant wellbeing and stability.

Like other regional peasant diets and cuisines in Colombia, Alban's shares a *mestizo* origin adapted to the particular conditions of warm weather areas. Highland settlers also left an imprint on local food ideas and practices. Nineteenth century migrants from the cold lands brought with them grains (corn, beans, wheat, barley, peas, fava beans) to eat toasted with salt or ground as flours in soups. When taken to the fields and consumed in the form of flour, it was combined with *guarapo* to prevent choking, or it was mixed with this beverage in the form of a paste. Descendants of those early laborers say that their ancestors not only were poor but cheap; they sustained themselves with grains and did not spend much money on food hoping to save money to purchase a piece of land in their place of origin. Tenants transplanted cold weather crops as well as

cooking and eating patterns. Barley, wheat, corn, peas, and fava were adapted to the new climate and environment albeit with smaller yields. They developed different cropping arrangements according to soil conditions and personal preferences but tended to intercrop to create agronomic synergies and maximize limited space.

Peasants born in local haciendas recall growing household crops such as manioc, *arracacha*, peas, squash, *balú* (*Erythrina edulis*), *guatila* (*Sechium edule*), sugar cane, and fruits. Fruits included: *guama* (*Inga* sp.), oranges, tangerine, lemon, cocoa, guava, *pitahaya* (*Hylocereus* sp.), *zapote* (*Quararibea cordata*), and avocado. They also had several varieties of corn: *cacao* (yellow), *yucatán blanco*, *yucatán Amarillo*, and pop corn, and beans. Finally bean types included: *garrapato*, *hueso*, *bolorojo*, *quinchoncho*, *tabla frijol*, and *guisante*. Sugar cane varieties were *piojota* and *pielroja*. Roots such as *batata* (*Ipomoea batata*) and *chonque* (*Xanthosoma sagittifolium*) grew spontaneously in humid places. There were also several varieties of plantain including *bocadillo* or *manzano*, *caribe*, *pineo*, *dominico*, *guineo*, *habano*, and *pacífico* also known as *popocho*, *topocho*, or *tres filos*. Leaves of *bijao* (*Heliconia biha*) and plantain were sold for wrapping food, as in the case of corn wraps, *tamales*, and adding taste.

Tenant livestock enabled consumption of animal protein including milk, fresh cheese, and eggs. Chickens and pork were for special occasions. Meat was purchased in local markets according to family means. Daily laborers were given meat on a daily basis as part of their food ration. All domestic animals were Creole races (*razas criollas*) which were fed local resources -- often the same foods as those consumed by people. Cattle included *ganado antioqueño* (Antioqueño cattle) and *blanco orejinegro* (white with black ears); hogs were black and yellow breeds (*zungo*) and *casco ´e mula* (mule's hoof).

Complementary sources of meat were wild animals such as squirrels, birds, rabbits, and *boruga* (*Cuniculus paca*). Main food purchases were meat, salt, green onions, potatoes, and sporadic luxuries such as rice and salted fish for Easter. Other special foods were chicken, turkey, pork, and *tamales*, and corn wraps. Chocolate and coffee were for the rich only; peasants drank *agua de panela*, *guarapo*, and occasionally *chocula*, a nutritious beverage of mixed ground grains with cocoa, brown sugar, and spices known as the chocolate of the poor.

Cooking and eating patterns followed the soup/dry meal (*sopa/seco*) structure, and drew primarily on boiling and roasting techniques. Soups and stews included variations of highland wheat, barley, and corn *cuchucos* (cracked grain porridges) and *mazamorras* (cereal-flour soups) as well as clearer soups with additions of manioc and plantain that gave way to kinds of hearty soups like *ajiacos*, *enteros* and *sancocho*. Flavorings were natural herbs and spices. Meals included boiled starches, legumes, and eventually meat. A salient feature in Alban's cuisine is the prominent role of plantains; different varieties of plantain were consumed almost daily at different meal times, in distinct forms, and according to the stage of ripeness for dietary variety: roasted, boiled, fried, in soups, and deserts. Together with corn, roots and tubers, plantain became part of the local core foods for energy and strength.

Colombian coffee history cannot be divorced from the National Coffee Federation (FNCC in Spanish), a mixed public-private, non-profit institution in charge of orienting the national coffee policy and working on behalf of its members' well-being. Since its creation in 1927, the FNCC has been an important force in the formation of the Colombian nation and has influenced economic and commercial policy, infrastructure

improvement, and rural development. Close to half of Colombia's municipalities grow coffee, about two million people depend on coffee, and about 30% agricultural jobs are related to this crop which contributes 12.4% to the country's agricultural gross domestic product (FNCC 2010). The bulk of Colombian coffee production is in the hands of close to 500,000 ethnically, culturally, and regional diverse hillside families in farms averaging two hectares (FNCC 2010). Peasants participate in most stages of the coffee process: growing, hand harvesting, picking and selecting, and sun drying -- all of which directly affect quality. The FNCC is involved in every step of the process.

FNCC policies and interventions exemplify Li's (2007) improvement schemes: hybrid forms of government that in the name of its members' welfare also seek to shape and control their conduct and aspirations. For instance, the FNCC's federate structure and redistributive policies introduced a democratic and empowering edge to rural development interventions in contrast to the authoritarian, centralized, and bureaucratic nature of the Colombian state. The FNCC operates through a federate structure with municipal, departmental, and national level institutional representation. Federation members identified with the *cédula cafetera* (coffee identity card) can elect representatives at the municipal level and delegates to the National Coffee Congress the highest decision-making level. Affiliates are also entitled to benefits such as technical support, credit, special training, and are guaranteed the purchase of their harvests at prices fixed according to market conditions.

Simultaneously and through manifold discourses and interventions at the family, community, and national level, the Federation has attempted to discipline and regulate peasants' material and social practices as well as their subjectivities, behaviors, and

aspirations. A way to do so has been the configuration of a coffee culture that revolves around a capitalist and entrepreneurial work ethic and traditional Catholic and patriarchal family ideologies. Family integrity and wellbeing are concomitant with stability, productivity, and competitiveness. Family life, hard work, loyalty, sacrifice, simplicity, discipline, honesty, creativity, responsibility, leadership, and commitment to quality, team effort, and solidarity are the foundations of this coffee culture (FNCC 2010, 2011). An embodiment of these cultural and economic values is Juan Valdez, the publicity icon created by the FNCC in 1959 to promote Colombian coffee. Juan Valdez represents an ideal *mestizo* cultural identity that nurtures a rural imaginary at home and abroad. The enduring popularity of this icon and its association with Colombian coffee was used by the FNCC in its international expansion strategy. In 2002 the FNCC created Procafecol, a company for the promotion of gourmet coffee through the Juan Valdez® coffee brand and retail stores now present in various Latin American countries, the US, and Spain (Tocancipá 2010). According to the official Juan Valdez website, he

Represents more than 500,000 coffee-growers. Born in the heart of the mountains of Colombia where the sun and the secrets of the soil, combined with the passion and hard work of those "cafeteros", nurture each coffee bean to the peak of perfection. With his trusted friend Conchita always by his side, his mission is to symbolize the proudly kept traditions of those hard working men and women, who pick every bean by hand and are 100% committed to their families, their communities and the environment... Juan's amicable figure transcends because he represents the values of endurance, authenticity, passion and perseverance of the "cafeteros". No matter what he is engaged in, he never stops being Juan: the pleasant and affable spokesperson of every "cafetero" who lets Colombian coffee speak for itself.<sup>8</sup>

FNCC policies evoke Shore's (2010) arguments about public policies; namely, that they are not just instruments for the administration of resources and norms but are

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<sup>8</sup> [http://www.juanvaldezcoffee.com/EN/who\\_is\\_juan\\_valdez.html](http://www.juanvaldezcoffee.com/EN/who_is_juan_valdez.html)

socio-cultural and political practices by which the state molds social subjects, identities, and regulates social relations. The Alban case illustrates how this phenomenon unfolds in the Colombian Andes. Coffee growers in Alban joke about the Juan Valdez character that obliterates the internal socioeconomic, cultural, and ethnic heterogeneity of the “great coffee family”, and they also comment on the fact that Conchita is his sole company. Yet they tend to identify with the cultural and ethical values promoted by the FNCC and take pride in them. Peasants acknowledge the economic and social role played by the Federation in rural development, education, and training opportunities. But they are also critical of its productivism, paternalism, and client-based politics which have generated peasant dependency on a sole crop and a sole institution, leaving them unprepared to deal with upcoming crises.

The Federación initiated its work in Alban in the 1930s as the coffee estates began to dissolve. Its main role was to purchase coffee and select the best quality for export. At the time all coffee was good quality and all seeds were good seeds according to Alban peasants. Technical visits did not exist then and peasants simply followed customary management practices. In fact the first 1932 FNCC technical manual was a compilation of traditional peasant practices and a few scientific recommendations for managing temperature, shade, and humidity (Cifuentes 1994). Until the 1950s the FNCC encouraged the multiple use of the landscape for forest, soil, and water conservation, and emphasized the integral, diversified, and sustainable use of the farm for domestic self-provisioning. Organic agriculture, green covers, living fences, and nitrogen fixing shade trees were recommended. The only external means for pest and weed control were low-toxicity solutions such as lime, copper solutions, and domestic soap. By the mid 20<sup>th</sup>

century this model started to change with new priorities for higher productivity and short-term gains inspired by US industrial agriculture. Implementation of a new technological package was slow and contradictory because of persistent concern with soil and environmental protection. A credit line opened for agrochemical purchases but peasants in Alban relied on their traditional knowledge and practices until the 1970s when a productivist model introduced drastic transformations.

National coffee production expanded considerably in the 1970s as a result of agricultural modernization. Productive rationalization, intensification, and technified agriculture were pillars of the new agenda. The introduction of *caturra*, and later *Colombia* hybrid coffee varieties, enabled intensification and densification. These were smaller, more productive, and resistant to the coffee leaf rust, *roya* (*Hemileia vastatrix*), a fungus that periodically attacked and devastated coffee fields. Technical production implied the purchase or use of select, healthy, whole, and good quality seeds and addition of chemical fertilizers. Low interest credits made productive transformation possible. Plant density in Alban increased from close to 1000 Arabica plants per hectare to 4,000 *caturra* plants per ha (Franco 2009b)<sup>9</sup>. Productivity increased because whereas Arabica varieties yielded 1500 kilos per hectare, *caturra* plants exceeded 3,700 kilos per hectare (Fajardo 1986:147). The new varieties, however, demanded full sun exposure and regular fertilization, which meant the elimination of many shade trees to reduce humidity and the chances of fungi proliferation. According to discussions with *Don Aquileo* and other Alban growers the new varieties were productive for the first five years but after that productivity was irregular and unpredictable requiring the constant renewal of plants.

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<sup>9</sup> Intensive production in the Colombian coffee belt can reach up to 10,000 plants per ha, six times more dense than the traditional Arabica variety.

Despite Federation pressure and incentives to introduce *caturra*, some growers refused to abandon entirely their robust Arabica varieties which had been central to productive stability and moderate income rather than short-term productivity. Some peasants, like *Don Nemesio*, already in his 80s, say that these old plants remind them of their own situation: despite government and market attempts to eliminate them and their livelihoods they are still strongly rooted in place. In a similar vein Nazarea (2005: 44) argues that the persistence of old crops and landraces such as these “calls into serious question the inevitability of surrendering all options to modernity.”

Productive increases coincided with a period of high coffee prices. This economic bonanza contributed to national capital accumulation, rural development investments, and living standards improvements. The national government and the Federation sponsored rural electrification, waterworks, sanitation, road expansion, health and education services while granting subsidies for improving housing, health services and training. In collaboration with the local government and the municipal coffee committee local, Alban residents worked to expand basic service coverage, communications, and transport. According to the 1997 national coffee survey (FNCC 1997) 90% of coffee producing households in Alban had electricity, 64% had running water, and 4.2% had sewage. Only 8.4% lacked these services. This situation contrasts with Garagoa where most rural houses are mud brick, do not have access to treated water, and dirt roads are unkept and often impassable. A few households however were affected by infrastructure development as the opening of roads divided their lands; easier access to transportation was their compensation was the answer offered by local government officials. Coffee revenues and low-interest credits enabled some rural socio-economic mobility in Alban.

Some farmers purchased land, improved their living premises, and a couple of better-off families even sent their children to urban centers for higher education. During good years itinerant and landless coffee pickers from the neighboring Caldas and Boyacá departments traveled to the Alban region in search of seasonal work.

Intensification and the ensuing coffee boom generated socioeconomic benefits but also brought significant environmental changes to the Andean mountain landscape and agrobiodiversity. Elimination of shade and nitrogen-fixing trees led to a reduction of soil fertility, wildlife habitat, and the regulatory capacity of water streams. Competition for limited farming space reduced fruit trees and subsistence crops and varieties, which affected domestic self-provisioning leading to a progressive market dependency. The predominance of *dominico* and *colisero* plantains, for instance, displaced other varieties of plantain driving genetic erosion of native varieties and landraces. In interviews farmers recall how even the garden was planted with coffee. “We cut shade trees and food plants to plant coffee, and then we became lazy, we did not want to plant anything else. We have to purchase everything now” says *Doña Cecilia* as she signals the pantry where bags of rice, beans, bread, a few onions, tomatoes, and potatoes lie. Lucia, another coffee farmer, interrupts to say that “peasants were not stupid and hid their crops within the plantation.” But she acknowledges that with purchasing ability local food growing traditions were weakened and some crops were lost; in particular, roots like *malanga* (*Xanthosoma sagittifolium*), *chonque* (*Colocasia esculenta*), and *batata* (*Ipomoea batatas*) which were seen as weeds by coffee extension workers. Higher purchasing power and proximity to urban centers granted access to novel commodities fostering new aspirations and tastes: rice, pasta, bread, oil, and crackers became ubiquitous foods. Beer

and carbonated beverages replaced *guarapo* and artisanal *aguardiente*. Dietary composition was modified with the inclusion of more processed starches, sweets, and fats but the basic structure did not change substantially. Starches remained at the core and rice gained cultural prominence as a high-yielding, palatable, and versatile maintenance food. Better-off households adopted new production and consumption patterns but cultural changes were not shared equally. Conscious of the seasonality and unpredictability of coffee, several families continued to grow a few central food crops for domestic consumption. “Even if we have money, we have never abandoned plantain, manioc, *guatila*, *sancocho*, *colisero* soup which give us the strength to work” *Doña Cecilia* adds with a grin.

The 1980s was a period of in-farm diversification and further landscape transformation. Dairy livestock was strongly stimulated by agrarian institutions as a complimentary source of nutrition and income. The Agrarian Bank made available low interest loans for cattle purchases and introduced new grasses such as kinggrass. The establishment of pastures resulted in landscape fragmentation. Dairy livestock, however, was a wishful illusion, because only a few wealthier families had the economic means and the land for grazing animals. Another alternative was poultry production which had been promoted by the government in the mid 1970s to broaden agriculture and national protein deficiencies (Mora 1982, Uribe 1987). It became one of the most dynamic agricultural sectors and an important source of low-cost animal protein. In the past two decades domestic production it has increased almost fourfold and the per capita consumption of egg and chicken tripled. Poultry currently accounts for 40% of total domestic meat consumption (Gómez, Sierra, and Rodríguez 2003).

As large poultry farms were established in rural areas of the Cundinamarca department, don Benito, an adventurous and better off peasant attempted his own poultry business. With a credit from the Agrarian Bank he ventured with 500 broiler chickens. After a couple of years of intermittent successes and failures, *Don Benito* and a neighbor opted for a subcontracting deal with *Pollos Vencedor*, a large poultry company. According to local peasants and company employees this new form of agricultural industrialization and rural subcontracting is a convenient arrangement for both parties. Peasants provide the land, infrastructure, labor, and services (water, energy, gas); the company provides the chicks, feed, medicine, transportation, technical support, and a salary for the owner. Having a fixed monthly pay and not incurring major risks is positively valued by peasants who must also give the company some form of guarantee, such as the title of the land. Households must also comply with biosafety regulations which restrict certain activities or practices such as having other domestic animals in the premises. The company also benefits from these arrangements because it bypasses the more expensive monetary, environmental, and health costs. Although the environmental and health consequences of these medium size operations (4,500 to 6,000 chickens) has not been estimated for the Alban area, studies of concentrated animal feeding operations (CAFOs) indicate that they are an important source of soil, water, and air pollution because of the hormones, antibiotics, and different chemicals fed to chickens and excreted in chicken manure (Dickson-Hoyle and Reenberg 2009, Donham et al. 2007, Striffler 2007). Local authorities ignore the impacts of these externalities for fear of the economic and political consequences of running against a powerful economic sector that contributes 10.5% to the gross domestic product (Gómez, Sierra and Rodríguez 2003)<sup>10</sup>.

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<sup>10</sup> When I stayed in *Don Benito*'s house during fieldwork, I experienced the noxious odors, dust, flies, and air pollution

On the other hand, massive access to affordable animal protein is viewed as an important nutritional gain and an indicator of economic development.

The 20<sup>th</sup> century closed with an enduring crisis in the coffee sector and profound repercussions on the national economy that was highly dependent on coffee revenues. The end of the International Coffee Agreement (ICA) in 1989, which had set production quotas and controlled prices between producing and consuming countries, brought coffee prices down in highly volatile markets (Lanzetta 1991). Reorganization and liberalization of the coffee market and the expansion of coffee production in Brazil and Vietnam saturated the international market contributing to keep prices down (PNUD 2004). Old plant age, soil fertility decline, and unpredictable and irregular climate also account for the critical productive and economic situation of coffee farmers. Prolonged rains prevented coffee flowering with the disastrous consequence of a significant reduction of national coffee production. To redress the effects of the crisis the Federation launched an intense marketing campaign for an array of select and specialty coffees for national and international niche markets. This strategy involved the creation of Juan Valdez coffee stores which have proliferated in Colombia. It also concentrated coffee technification and intensification only in a few areas of the country (Guhl 2004). A few in-farm diversification programs for economic and food security alternatives were advanced but systematic budget cuts reduced most FNCC social investment, research, and training.

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emanating from the chicken farms. As I inquired about the development of poultry in the Alban region, I was warned by a local leader and former municipal council member not to ask too many questions about the thorny topic of water pollution. The political connections between the poultry industry and state officials are plain in the case of Leonor Serrano de Camargo and her husband Gabriel Camargo, former governors of the Cundinamarca and Tolima departments respectively, owners of one of the largest poultry companies in the country, Incubacol.

Alban farmers kept their coffee fields because of lack of other productive alternatives. Coffee remained an agricultural source of cash: in good years the annual harvest covered the debts incurred during the year, and the midyear (*mitaca*) harvest could bring additional income for end of the year expenses. Coffee was also part of their cultural tradition, cultural memory, and social history. As the crisis exacerbated rural poverty, unemployment, and food insecurity, peasants turned to flower plantations, commerce, construction, road work, woodwork, sales, transportation, restaurants, and domestic service. During the two administrations of Alvaro Uribe (2002-2010), government cash subsidies and food aid became important sources of rural household income for families with children and the elderly<sup>11</sup>.

The economic crisis of the 1990s was coupled with a series of events that peasants describe as the true *roya*, alluding to coffee leaf rust which has become a popular term to express bad luck. By the mid-1990s the Alban region became a strategic corridor for the FARC guerrilla group, which was part of its new war strategy aimed at taking hold of the capital city. As the guerrillas controlled the territory they also demanded *vacunas*, “vaccines” consisting of money, food or goods, from peasants, tourists, and merchants. They even kidnapped a relative of a wealthy store owner from Facatativa. During the first administration of Alvaro Uribe (2002-2006) government reaction was a violent military counterinsurgency strategy by the national army. Paramilitaries soon appeared to support army efforts to curb guerrilla expansion: the area became a scene of death threats and selective murders of those considered to be collaborators of either side. A few properties

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<sup>11</sup> The subsidies were strategic to the populist politics and Uribe’s reelection campaigns. In 2006 Alvaro Uribe modified the National Constitution to insure his first reelection. In 2009 a similar attempt took place but was declared unconstitutional by the Constitutional Court frustrating his aspiration for a third term.

along the royal road were mined by the rebels to prevent military persecution. Several families fled in fear, and returned when the violence subsided. Locals recall the period as one of fear, isolation, and hunger. Older peasants were reminded of the bipartisan mid-twentieth century civil war, *La Violencia*, which also brought death and displacement in the region. Just like during the *Violencia*, the local stores were emptied and it was impossible to transport many supplies out of fear of being considered a collaborator. In some cases the rigors of food scarcity prompted cultivation of a few food crops for domestic consumption. By 2004 the area was cleared of armed conflict, and economic and social life slowly regained its pace. At present “liberals and conservatives eat in the same dish,” note Alban peasants.

### Conclusions

Several decades ago Margaret Mead (1943) pointed out the depth and persistence of food habits and the importance of cultural meanings and emotional rootedness in diets and tastes. More recently Zimmerer (1996) noted the links between the cultural principle of good living and the historic conservation of agricultural biodiversity by farmers in the Peruvian Andes in order to meet food and culinary aspirations and desires. The present examination of two farming communities on the Colombian eastern cordillera attempted to illustrate these scholars' arguments: On the one hand the existence of an embodied long-term food structure resulting from the merging of indigenous and Spanish agricultural and culinary traditions adapted to particular economic, environmental and cultural contexts. On the other, the sustained efforts of Andean peasants to maintain crops and varieties for food security and variety despite uneven access to land and other

resources, and major economic, social, and environmental transformations in mountain landscapes over time. As has been noted by Latin American scholars in different periods (Castro-Gómez 2010, Quijano 2000, Warman 1988) hegemonic colonial ideas about European and white superiority have proved long lasting and harmful; but as I have tried to argue, indigenous and peasant food ideas and practices have also endured over time.

As noted for other rural and peasant communities (de Walt 1998, González 2001, Leatherman 1996), productive trajectories of Alban and Garagoa, revealed that agrobiodiversity and diet are culturally constituted and politically, economically, and environmentally mediated. Agrobiodiversity and diet are inextricably linked to each region's distinct modes of integration into the market economy and national society. In Garagoa agricultural and food diversity developed in relation to relative regional isolation and specialized in food production for local and national markets. Microverticality expanded the use of different microclimates for fostering a wider range of food crops. Historical patterns of uneven access to land and minifundia contributed to productive diversification through multicropping in both sites. Specialization in a cash crop made Alban peasants and landscapes more vulnerable to international market dynamics and to the imperatives of productive intensification.

Regional and extra-regional economic, social, and environmental dynamics are important forces affecting rural landscapes and livelihoods. Modern development offered mixed possibilities with different outcomes in each place. Like farmers elsewhere (González 2001, Gupta 1998), Andean peasants engaged with development through partial incorporation of new technologies and modern varieties. In Alban productive intensification curtailed local agrobiodiversity but brought some prosperity at times of

coffee booms. In Garagoa new varieties also helped to diversify local food production. A clear example of the uneven consequences of development on peoples' lives and livelihoods (Ferguson 1994, Johnston 2000, Stonich 1995) was the climate change brought by large infrastructure construction in Garagoa.

Improvement schemes (Li 2007) also had multiple and contradictory facets shaping peasant bodies, subjectivities and every day practices. While turning peasants into modern citizens, institutions like ACPO and the National Coffee Federation (FNCC) also generated opportunities for social, economic mobility, and pride in peasant culture and identity. The configuration of new cultural habits and consumption aspirations is more notorious in Alban where the FNCC has systematically promoted a coffee culture rooted in a capitalist and entrepreneurial work ethic with traditional family, and modern consumption ideologies.

Consideration of regional histories in relation to national and international dynamics, provide a more nuanced perspective on the evolution of Andean peasant agriculture, agrobiodiversity, and diets. Farmers' historical social practices and efforts at maneuvering to sustain small-scale agriculture and livelihoods in the midst of changing scenarios warn against simplified narratives of cultural poverty as a cause of de-agrarianization, environmental change, or rural food insecurity.

## CHAPTER 3

### FOOD AND BODY: POLICIES AND PRACTICES

#### Introduction

The previous chapter provided a general overview of Andean peasant productive trajectories with emphasis on the effects of 20<sup>th</sup> century agrarian modernization and development. Through a historical overview of food and nutrition discourses and policies in Colombia, this chapter discusses some of the effects of state and market dynamics on peasant diets and bodies. National social discourses and policies on food and nutrition are presented in light of the expansion of industrial capitalism, modernity, and current neoliberal policies. Policies, however, are not understood here solely as technical, coherent, systematic, and top-down processes but as sociocultural activities immersed in everyday life and within worlds of meaning (Shore 2010:21). This chapter discusses different and sometimes paradoxical ways in which peasants, and the social imaginaries about their bodies and practices, have influenced and inspired food and nutrition policies and discourses. It examines how concern with the racial and social degeneracy of the Colombian people gave rise to early anti-alcohol campaigns against consumption of popular and culturally significant beverages like *chicha*. This chapter also explores how in the second half of the century, food and nutrition policies promoted calorie-rich diets as peasant bodies were literally turned into the engines of development. More recently, food imports have introduced an array of new commodities that introduce new

consumptions and tastes while jeopardizing peasant food production. While advocating nutritional education and improvement, poverty-related malnutrition problems persist, aggravated by temporary-turned-permanent targeted food aid policies that circumvent more permanent redistributive measures.

Although local diets are shaped by manifold institutional health and nutrition discourses and interventions, this chapter argues that in different ways peasants reframe, resignify, and rembody such constructions in their daily lives and even under constraining circumstances. Peasant agency, rooted on embodied practices, and partially alternative understandings of food, body, and health, plays an important role in their ability to craft culturally meaningful food choices and alternatives through the use and conservation of local agrobiodiversity. Based on body mapping with adult women in Garagoa and Alban, it presents local perceptions on the relation between body, food, nutrition, and health, which do not always agree with biomedical models of the public health system. This chapter suggests some of the dislocations, contradictions, and paradoxes between macroeconomic policies, expert knowledge, social imaginaries, and on-the-ground embodied peasant food and nutrition practices underlying the food and nutrition problem in Colombia.

#### Food, nutrition, and “the degeneration of the Colombian race”

Food and nutrition policies are a relatively recent phenomenon in Colombia. State food concerns have been addressed primarily from the perspective of provision, via agricultural production. They have also been addressed from the optics of nutrition, in which case governments have focused on food fortification, health and hygiene

education, and nutritional supplementation programs for the most vulnerable sectors of the population. At the state level, however, production, distribution, and consumption issues have not been a part of a sustained multi-sector institutional development or a coordinated integral agenda (Machado 2003). Systematic government interest in food and nutrition began to take shape during the second half of the 20<sup>th</sup> century in conjunction with the emergence of these topics as matters of public interest and a function of state regulation and planning (Escobar 1995). Prior to this, a few government and private social welfare initiatives had been implemented to alleviate malnutrition by means of food fortification, charities, and distribution of school lunches to children and students. Most importantly, however, were efforts geared to transform the cultural food and nutrition ideas and behaviors of the Colombian people in order to adapt them to the new economic, social, and cultural demands of modern, industrial, and capitalist society.

Government and private initiatives developed within a cultural matrix that would have an enduring influence in the Colombian social imaginary and food and nutritional policy rationalities. This cultural matrix revolved around a set of discourses that stressed the imperfect nature of the Colombian *mestizo* race (Pedraza 1999). Underlying these discourses were 19<sup>th</sup> century ideas of climatic determinism linking tropical areas to dark-skinned, unhealthy, and backward people unfit to meet the requirements and expectations of modernity. Endowed with negative attributes stemming from a colonial ideology of white racial superiority and supported by a Hispanic, Catholic, and vertical class structure (Castro-Gómez 2010), the peasant and working class body crystallized these 19<sup>th</sup> and early 20<sup>th</sup> century evolutionist and eugenic preoccupations with the configuration of a socially legitimate body suitable for social advancement. Dirt, backwardness, bad odors,

sweat, and poverty were associated with peasant and low class bodies in a rhetoric that looked up to the European race as symbol of civilization. Public attention to the body of the Colombian people stimulated campaigns in education, hygiene, and food/nutrition which were regarded as cornerstones for the civilizing, disciplining, and regulating the national population (Pedraza 1999).

National health and nutrition considerations resonated with larger international public health concerns involving lack of sanitation, hygiene, and nutrition as primary causes of economic and social backwardness. In the aftermath of WWI, international agencies such as the League of Nations, the International Labour Office, and the International Institute of Agriculture turned to the economic, social, and cultural problem of nutrition (Barona 2008). Widespread rural malnutrition prompted studies on the physiology of nutrition, optimal diets, the nutritive value of local foodstuffs, and the elaboration of standard dietary guidelines. In the name of public and national interest, Colombian governments during the Liberal Republic Hegemony period (1934 – 1946), focused on the regulation of populations prone to racial degeneration, poverty, disease, malnutrition, and moral weakness. Despite medical and public considerations prejudices against the peasant and working class diet, medical doctor Jorge Bejarano, architect of the first food and nutrition policies of the 1930s and 1940s, publicly acknowledged the adequacy of the indigenous diet and the nutritional value of autochthonous foods. Bejarano also recognized land dispossession, poverty, and social inequality as structural causes of the economic, social, and political problems affecting indigenous and rural populations since the colonial period. Yet, he also believed that food customs and food consumption differences in Colombia were the result of work activities and biological

instincts; this explained why manual workers preferred carbohydrates whereas intellectual workers consumed meat -- the food of the brain and thought (Bejarano 1950a). Amidst the different interpretations surrounding food and nutrition circulating at the time, there was a general consensus that the primary causes of malnutrition were ignorance and poor ancestral cultural habits. Bejarano (1950a: 8) himself stated that “The Colombian people have food but do not know how to eat.” In this context, the peasant diet was discredited as unbalanced, monotonous, and inadequate. Paradoxically, urban upper classes shared some of the same products, dietary habits, and cooking styles with peasants: corn, plantain, potatoes, and manioc consumed in stews and soups were common in both high and low class kitchens. Yet urban elites’ eagerness to emulate European behaviors, tastes, and manners stimulated them to distance themselves from perceived peasant and low class habits and behaviors. The belief that the countryside made people darker, ignorant, and poorer (*el campo ennegrece, embrutece y empobrece*) was a widely held appreciation reinforcing urban prejudices against rural life.

Nutrition literacy became a government imperative aimed at forging new food consumption rationalities with nutritional criteria. Mass education was the avenue to instill new cultural and food habits based on a notion of personal responsibility and discipline. Proper nutrition was indispensable for the correct functioning of the body which, like a machine, required fuel to attain higher productivity and to reproduce itself. The 1943 Cultural Village Campaign (1934-1936) aimed at transforming the popular mentality by exposing rural populations to Western ideas to elevate the nations’ cultural level. A variety of topics including sanitation, hygiene, and nutrition were covered in the *Biblioteca Aldeana*, Village Library, a serial publication directed to rural users (García

Prada 1938, Herrera and Díaz 2001). The issue dedicated to nutrition provided detailed descriptions of nutritional physiology in a language that shunned Hippocratic or humoral explanations in order to avoid all associations with folk health models of peasants (Pedraza 1999:136). As will be discussed ahead in the body mapping section, peasant perceptions of body, food, and health are still influenced by hot/cold principles. Public food and nutrition recommendations also stressed the consumption of fresh, natural, healthy, palatable and digestible foods, and a varied and balanced diet including wheat bread, meat, fruits and vegetables. The disposition with which food was approached: positive attitude, good temper, and self-control were also considered important to improve height, weight, vigor, appearance, and skin color (Biblioteca Aldeana 1935, Pedraza 1999).

Sustained on the authority of the medical and dietetic sciences, and on the socioeconomic transformations of capitalist industrialization, the nutritional discourses and policies of the first half of the 20<sup>th</sup> century initiated the restructuration of long-term cultural practices, tastes, and gastronomic identities. The rationalization of food and nutrition of the rural and urban working classes became a priority to overcome malnutrition, increase productivity, wealth, development, and democracy. In the book *Food and Nutrition in Colombia*<sup>12</sup>, Jorge Bejarano considered a series of medical, nutritional, geographic, economic, and sociological arguments to assess and offer solutions to what he thought were the most pressing problems: rural malnutrition due to poverty and social inequality; ignorance; lack of sufficient food crops; lack of regional food commerce; and alcoholism. He also stressed the production of more food – not just

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<sup>12</sup> The 1941 version was published in Bogotá by Editorial Cromos but it is unavailable for consultation. I have used the 1950 version, 3<sup>rd</sup> edition by Editorial Iqueima.

coffee for the market or grass for cattle--, the implementation of agricultural schools and homegardens, and the unification and regularization of food prices to prevent speculation. Bejarano also proposed the passing of legislation forcing urban and rural patrons to supply a sufficient and “rational” ration to workers and peasants given that on average rural laborers had rations ranging from 1,120 to 1,500 calories per day only. The rationale for this reasoning was that “A better fed worker is not just an element of wealth to the employer, but a loyal and enthusiastic collaborator” (Bejarano 1950a:170). Ironically, the average height and weight of the Colombian population at the beginning of the 20<sup>th</sup> century was only slightly inferior to that of USA and European counterparts (Sáenz 1997: 82-83).<sup>13</sup>

Based on the notion of the optimum diet as composed of protective (proteins, vitamins) and supplementary energy food (starches, sugars, fats), Bejarano devised nutritionally mixed and balanced food ration for different kinds of workers in Colombia. He adapted the basic “sustenance” daily ration of 2,400 cal recommended by the Sanitary Committee of the League of Nations on popular food and nutrition in the 1930s. The League of Nations’ recommendations were based on several advances in nutritional science: the adoption of the calorie as the unit of measurement of human energy requirements to facilitate nutritional standardization and the role of protein as a vehicle of human growth (Barona 2008, Dixon 2009). The Sanitary Committee recommended the inclusion of milk in worker’s rations. Milk, Bejarano commented, had enabled the US to

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13 Barona’s (2008) descriptions of 1939 reports to the League of Nations on “European dietaries”, bears some resemblance to the situation of Colombian peasants. Peasant diets were overall monotonous, with a primacy of starches and deficient consumption of fruits, fresh green vegetables and animal foodstuffs. Proteins were rare luxuries, and generally sold as market goods. Although seasonal variation added diversity on a daily basis household only used a limited number of foodstuffs. This constituted a nutritional drawback that hindered the intake of minerals and vitamins and making the population prone to pellagra, scurvy, night-blindness, and rickets. The advantage of rural diets, however, was that food was generally fresh and natural. In Colombia seasonality was attenuated by tropical conditions enabling two harvests a year.

fulfill its “destiny of virile and democratic people” (Bejarano 1950a: 63), alluding to a widespread association between protein, masculinity, and strength. In Colombia Bejarano devised three different kinds of worker’s rations taking into account regional variations in health, nutritional status, climate, salary, and food availability. Bejarano’s rations included customary peasant foods but balanced the nutritional composition stressing the need for good quality meat. Although meat was not entirely absent from peasant and rural diets it was not always fresh and clean due to lack of refrigeration. Salted meat or even decomposing meat, handled under poor hygienic conditions, was frequently consumed (Flórez-Malagón 2008). Notably Bejarano did not include other foods such as milk, butter, eggs, and fruits in the prescribed ration, because he acknowledged that these were luxury items from which peasants and workers abstained due to lack of money. The three rations were based on workers’ salaries and purchasing possibilities.

An additional proposition of Bejarano was that the state monitored the proper investment of workers’ salary to prevent the wasteful and noxious consumption of alcohol, cigarettes, and lottery. Control options included access to affordable and hygienic food in popular restaurants, school lunches, food cooperatives, and community kitchens. These options would attempt to change poor food habits such as excess carbohydrates and sugar, and would include more fruits, vegetables, and proteins. More importantly Bejarano strongly advocated for restricting alcoholic consumption, in particular the much vilified *chicha*, an originally ceremonial indigenous fermented corn beverage that was regularly consumed by peasants and the urban working class.

The battle to eradicate *chicha*, sometimes called “the mother of all evils,” represents one of the most systematic efforts to change peasant and working class dietary

habits and social life in the name of hygiene and national progress. Although *chicha* was consumed privately by urban upper and middle class men and women, *chichismo* or excessive drinking was viewed as a social pathology of peasant and popular sectors. Since the late 19<sup>th</sup> century discourses of social and racial degeneracy associated with *chicha* had circulated widely among national elites and health experts who depicted consumers as “Degenerate, lacking love for work, sad-looking, stupid, with dry hair, and almost African skin color” (Zerda cited by Calvo and Saade 2002:45). Degenerate theory was part of Victorian and European ideas surrounding the moral and physical effects of alcohol on evolutionary regression and the overall failing of the nation (Valverde 1998:51). *Chicha* was an important source of calories and nutrients in the popular and peasant diet. But to capital city elites its consumption, in conjunction with unhealthy climate, poverty, and poor nutrition, exacerbated the racial, physical, moral, and intellectual weakness of the Colombian people. Bejarano also stated that *chicha* was the most important medical and hygiene problem affecting peasants and workers in the Andean regions of Boyacá, Cundinamarca, and Nariño (Bejarano 1950b:15). In 1948, when Bejarano became Minister of Hygiene, he passed legislation prohibiting its production.

*Chicherías* or *chicha* bars were the most important places for leisure and socialization in rural and urban areas for peasants, workers, prostitutes, artisans, and all kinds of subaltern populations. They were also associated with the consumption of popular foods such as *piquetes* (include boiled potato, manioc, plantain, meat). *Chicherías* were regarded by political and health authorities as places of idleness and potential social and political unrest. *Chicheros* (*chicha* consumers) were not only

stigmatized but criminalized in a crusade with strong moral, economic, and political overtones due to the conflicting interests over the rents perceived by the state from alcoholic beverage production. *Chicha* taxation was an important source of departmental revenues. But, as noted by Calvo and Saade (2002), the anti-alcoholic campaign that started at the end of the 19<sup>th</sup> century cannot be interpreted simply as the result of economic interests of the nascent beer and soft-drink industries. It entailed a reorganization of society seeking to overcome its perceived pre-modern social conducts.

Social restructuring involved an array of actors with different economic, political, and cultural interests represented by the state, the Catholic Church, the medical establishment, intellectual elites, entrepreneurs, *chicha* producers, and workers. Even workers supported the anti-alcoholic campaign on moral and political grounds because it hindered their social advancement and furthered their exploitation (Archila 1983). Ending the consumption of *chicha* was concomitant with undergoing other personal, bodily, and aesthetic transformations. Most notably, it meant the advancement from a peasant condition to that of urban citizen. In this regard Bejarano (cited by Calvo and Saade 2002:318) declared that:

All of those who change their clothing do not enter *chicherías* ever again. There is from that moment, a kind of repugnance, a certain demureness and decorum that prevent the worker from entering again the infamous tavern. The poncho (*ruana*) and the hat (*jipa*) have thus, certain attractiveness, certain positive quimiotaxia with *chicha*.

As will be discussed ahead, clothing, bodily aesthetics, and consumption of certain foods have been strong markers of rural and urban distinctions.

The abolition of *chicha* culminated a long history of social sanction against a nutritious indigenous ritual beverage that the Spanish colonial authorities had stigmatized as a beverage of the devil (Saldarriaga 2007). These campaigns were more effective in

the capital city with stronger government and industrial presence and growing social pressure to conform to new city ways and abandon peasant and rural customs. With *chicha* gone, experts and authorities argued, national nutrition levels would improve as peasants and workers would spend their money on food and nutrition. The reality was different; *chicha* did not entirely disappear but went underground or remained a private activity. The taste for *chicha*, and its counterpart, *guarapo*, a fermented sugar cane beverage, however, was replaced by industrial beverages such as *aguardiente* (sugar cane alcoholic drink), beer, and soft drinks. Beer and soft drinks were promoted by the government and the industry alike on the grounds of their hygienic, health, and taste qualities. Beer was advertised as the traditional drink of the German people -- a superior European race to be emulated. To stimulate mass consumption these two beverages were exempt from sales taxes (Calvo and Saade 2002). Once the highest *chicha* drinking department, Boyacá became the highest consumer of beer in the country.

Despite the hegemonic imposition of industrial beverages peasants and popular sectors were able to re-embed them with new cultural meanings and forge novel embodied tastes. For instance beer is known as *agria* (sour), *amarga* (bitter), *fría* (cold), *pochola*, and *pola*. *Pola* was the name of a low cost beer produced by the main beer company in 1911 in honor of Independence heroine Policarpa Salavarrieta, known as “la pola”, in an attempt to establish a patriotic association with beer consumption. Mixed with the popular soda called *Colombiana*, in allusion to national symbolism, it makes a popular drink called *refajo* consumed across the national socioeconomic spectrum. Beer is also considered nutritional, medicinal, and a symbol of sociality.

The battle against *chicha* is a prime example of how social discourses and government policies were able to disembody a cultural and nutritional practice that was central to the diet, social life, and cultural identity of peasants and low-class populations. Although the practice was not entirely eliminated, its cultural meaning was transformed as an unclean, anti-hygienic and backward food. At present *chicha* is consumed on special occasions in rural settings. In the capital city it has become a new cultural symbol and practice. Beginning in the 1990s an annual *chicha* festival was instituted in the Perseverancia neighborhood to revive and legitimize a popular working class tradition. Ironically this neighborhood was originally settled by the workers of the Bavaria beer industry. Urban consumption of *chicha* has also become an expression of counter-culture among youth who meet in the colonial Candelaria neighborhood where *chicha* bars have become common. *Chicha* prohibition was uplifted in 1991.

During the first half of the 20<sup>th</sup> century, food and nutrition policies and discourses were shaped by the configuration of a modern urban and industrial society. During the second phase of national modernization, from the 1950s onwards, national food and nutrition matters took a different turn with agricultural modernization, food imports, and the increasing presence of processed foods and goods.

#### Agricultural modernization and food and nutrition planning

Agricultural modernization was a pivot for the consolidation of the modern Colombian nation during most of the 20<sup>th</sup> century. A function of modern agriculture was the production of tropical commodities for export, raw materials for the national industry, and an abundant and affordable supply for the domestic food market to workers' salaries

low, reduce the costs of production, and contribute to capital accumulation, economic development, and growth (Machado 1986, Salgado 2004). From the 1950s to the 1980s, agriculture benefited from a development model that included technological changes, public investment, protectionist measures, and credit for commercial production (Kalmanovitz and López 2006). Whereas prior to the 1950s production growth was tied to the expansion of the agricultural frontier, with the advent of capitalist agriculture, capital and technology became the main factors of production (Suárez 2007). Between 1946 and 1982 monetary and technological investment contributed to an unprecedented expansion and productivity (crop yield per unit area) of modern crops (cotton, sugar cane, rice, soy, sorghum, and oil palm) and other commercial food crops (coffee, corn, potatoes, wheat, and banana). With the exception of wheat, this trend continued until 1984.

Modern agriculture not only shaped ecological and social landscapes but forged new consumption practices and alimentary subjectivities. Wider availability of commercial staples contributed to configure a new diet that came to symbolize a modern urban way of eating and taste. This diet, known as ACPM stands for *Arroz, Carne, Papa, and Maduro* (rice, meat, potato and ripe plantain). ACPM is also the Spanish word for diesel (*Aceite Combustible Para Motores*, combustible oil for motors). The modern diet was literally fuel for the workforce. And if the popular saying “you are what you eat” is right, urban workers were that: the motors, the engines of national development. The ACPM diet also gained prominence among the urban middle classes who could afford to eat meat and purchase vegetable oil for frying. Andean mountain peasants slowly adopted rice into their diet as a complement to other traditional roots and tubers.

A combination of factors facilitated the acceptance of rice: affordability, yield, storability, ease of transportation, digestibility, and palatability. The filling, bland, and soothing qualities of rice turned it into an indispensable food at almost every meal in all regions and across the socioeconomic scale; once a symbol of wealth and elegance, by the 1980s rice had become a rural and urban staple. The consumption of meat was promoted and reinforced by nutritional and cultural discourses on the importance of beef as a protective protein. National discourses on meat emanated primarily from the US<sup>14</sup> which had also expanded livestock production considerably (Flórez-Malagón 2008). Meat, however, was predominantly for the urban middle and upper class phenomenon. The expansion of vegetable oil production encouraged the consumption of fried foods. Paradoxically, while trying to overcome calorie-protein malnutrition problems, government policies promoted and legitimized a simplified starch-rich diet based on a few number of foods. In 2005 it was estimated that 40.6% of the population consumed more than 65% of their calories from carbohydrates (ICBF 2006). Five years later it was found that 92.5% of the Colombian population ate rice and pasta daily, with higher consumption in rural areas (ICBF 2011). Although these consumptions are due to a series of interrelated economic, environmental, and social factors; they are also an outcome of the incorporation of foods, which are coherent with a cultural taste for bland and soft starches. These data suggest how the interplay of state agricultural policies and market dynamics can be conducive to the transformation of dietary structures and the homogenization of tastes.

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<sup>14</sup> Since the 1950s global meat consumption increased fivefold, leading to what has been called a “livestock revolution” (Dickson-Hoyle and Reenberg 2009:105).

Ironically, while commercial agriculture thrived the peasant economies that supplied part of food diversity stagnated because of uneven access to land, capital, and resources. The mid century civil war, *La Violencia*, also prompted rural outmigration in the Andean region furthering peasant impoverishment and a reduction of the area dedicated to traditional and mixed crops. While in the 1950s peasant crops represented 63% of cultivated crops, by the 1970s they were less than one third (Suárez 2007:36). The fate of peasant agriculture was partly reversed with the implementation of Integrated Rural Development programs (IRD) in the 1970s<sup>15</sup>. The incorporation of agrochemicals and high yielding varieties led to higher productivity levels for potatoes (97%), corn (75%), sugar cane (73%), beans (145%), manioc (89%), plantain (41%), peas (100%), and tomato (68%) during the 1975 to 1987 period (Arango et al. 1991). Productivity helped to narrow the gap between the modern and the traditional sectors opening a space for small and medium scale agriculture in the national economy and the agro-food sector (MESA 1990). By 1975 peasants and small farmers supplied 55% of direct-consumption foods in Colombia and by 1989 they supplied more than 50% of the urban food market (Salgado 2004). Peasant production also contributed to diversify national food availability which from 1964 to 1995 increased in almost all food groups: roots, tubers, cereals, dairy, eggs, fruits, and vegetables (ICBF 1999). Albeit the statistical relativity of peasant production, these data contrast with generalized representations of peasant agriculture as inefficiency and non-viable.

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<sup>15</sup> IRD programs have been analyzed in detail by a multiplicity of scholars. See Arango (1987), De Janvry (1981, 1991), Escobar (1995), Fajardo, Errázuriz and Balcázar (1991), Forero (1999), Vargas (1997). For economic and social analyses of the costs of technological changes in modern Colombian agriculture see Misas and Henao (1986) and Perry (1983).

Despite government protectionism, food imports grew steadily from the 1950s. Gradual removal of trade barriers facilitated the continued import of wheat, barley, cocoa, beans, manioc, and occasionally chicken, milk, potato, and corn (Suárez 2007). Under US Public Law 480 excess US agricultural production motivated US food commodity exports to developing countries facing hunger, malnutrition or natural disasters (Machado 2003). Posited as humanitarian aid, this was a strategy to literally get rid of surplus US food and broaden agricultural trade (Doughty 1991, Friedmann and McMichael 1989, Friedmann 1993, MacMichael 2009). Food aid started in Colombia in 1954, peaked during the 1960s, and ended in the mid 1970s in the midst of an intense food crisis. The following statistics provide a perspective on the extent of food aid received: in 1958, 1962, 1966, 1970, and 1974 Colombia received 10,026; 47,138; 20,439; 9,926, and 1,248 tons of food respectively (Machado 2003: 18). Free and low-price food benefitted consumers and enabled the government to keep wages low. Yet imports also had damaging effects on domestic agriculture. As wheat imports rose from less than 100,000 tons in 1950s to approximately 400,000 tons in 1976, national wheat production declined from 100,000 tons in 1950 to half that volume in 1975 (Machado 2003:17). National wheat producers included Andean peasants who were forced to devise alternatives for their livelihoods.

Upon termination of the food aid program in 1974, Colombia had become increasingly dependent of foreign food imports. Food aid had also created a market and a taste for more costly and sometimes less nutritious processed foods such as wheat products, milk powder, and canned goods. But it also democratized certain consumptions through the popularization of higher status food such as white bread, which had

historically been a symbol of a food exclusive to Spaniards and white urban elites as opposed to the peasant wheat bread (*mogolla campesina*) consumed by the populace. The flexibility and fragmentation of the food market, however, soon gave way to the production of different kinds of bread to cater to consumers' taste and purchasing ability. What is interesting in this fragmentation is the stratification and cultural resignification of bread which was labeled according to sale price: thus the emergence of the *pan de a peso*, (one peso bread), two pesos bread, and so on. Throughout the years the name of the bread has changed continually with inflation; the price is a popular indicator of the rising cost of living. At present the cheapest bread is the 200 pesos bread. As with other high status foods, once they circulate into new social and economic circuits, and especially among popular sectors, their meanings also change (Mintz 1985, Appadurai 1986). In the case of bread, like rice, its symbolic value became more ambiguous, oscillating between a cheap commodity and a culturally meaningful food.

Higher yields obtained in commercial and peasant agriculture as a result of modernization improved national food security (Suárez 2007) and food self-sufficiency, i.e. the ability to fulfill national food needs with internal production (Machado 2003). Food aid also contributed to national food availability, necessary in light of steady demographic growth which rose from 11.1 million in 1950 to 18.3 in 1964, and from 20.6 million to 29.9 in 1985 (Dane 2007). Increasing food availability, coupled with other modernization measures (expansion of health, education, and public services) contributed to a secular trend in national nutrition improvement (FAO 2001). More abundant food supply, however, did not always equate to actual access to food; severe income disparities created a nutrition gap across the population and within geographical regions.

The emergence of food and nutrition as a matter of state planning and national development began in the 1960s and 1970s (Escobar 1995). Reduction of food assistance forced the national government to reorient its agro-food policies. Institutionalization of food and nutrition policies was formalized with the creation the National Food and Nutrition Council (NFNC) in 1975. In an ambitious and multifaceted strategy the NFNC developed the National Food and Nutrition Plan (PAN) (1976-1981) (DNP 1975) and structured the complementary Integrated Rural Development Program (1976-1996) with resources and loans from various multilateral agencies<sup>16</sup>. PAN objectives were to reduce child mortality and malnutrition, produce and distribute subsidized and fortified foods, and promote education in nutrition and health (Machado 2003). The Plan also involved the coordinated effort of several government agencies. The inclusion of the food industry in the production of nutritional and low cost food intended to bring together the public and private sectors in an effort to substitute external food aid with national production (Machado 2003:21). The combined strategy enabled the government to maintain monopoly control of imports and plan for the domestic food market. State-private industry contributed to processing of cereals, sugar, chocolate, dairy, and vegetable oils (ANI 1964, Gómez 1988) which became part of the national family food basket. Peasants slowly integrated some of these modern products but also held onto other culturally meaningful foods for nutrition, health, and emotional well-being.

In spite of intense and comprehensive efforts by PAN and IRD to overcome hunger and malnutrition they were unable to meet their development goals. By 1980 it

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<sup>16</sup> Comprehensive studies of PAN are found in Escobar (1995). A compilation of papers written over a 20 year by Absalón Machado, one of the most prolific scholars of the agro-food and nutrition topic in Colombia, is found in Machado (2003).

was estimated that between 20% and 30% of Colombian households were below dietary recommendations and 40% at risk of food insecurity (Uribe 1987). In 1981 consumption habits were characterized by a high cereal (28%) and sweets (sugar and *panela* 19%) intake, a relative low fat intake (12%), and low legume consumption (3%) (FAO 2001:3). Despite their shortcomings, PAN and IRD were instances of broad and intense government involvement in food and nutrition matters from integrated perspectives that set the foundations for a secular trend of nutritional improvement and demographic growth. Some analysts have argued that they were palliative measures with respect to the severe economic adjustments during the 1980s and the imminent reorientation of the development model in favor of financial and speculative sectors over productive and manufacturing ones (Zuleta 1985 cited in Gómez 1987). Persistent malnutrition supported the argument that increased production was not a guarantee for food access by the neediest and that the protectionist model had failed to consider the high cost of food due to elevated and inefficient national production and distribution systems. The solution was to increase food imports on the grounds that foreign competition would improve the quality of domestic products and lower their prices thus benefiting consumers (Hommes, Montenegro and Roda 1994). In a nutshell, this was the rationale behind the *apertura económica*, economic opening, the term used for the country's integration into the global economy and the neoliberal policies implemented from the 1990s onwards.

The 1990s marked the beginning of a drastic and ongoing process of agricultural restructuring. Priorities shifted from the production of annual food crops (cereals, oilseeds, potatoes, beans) to the entrepreneurialization of tropical export agroindustrial chains (fruits, flowers, coffee, livestock, shrimp, agrofuels) (Jaramillo 2002, Robledo

2010). Agricultural reorientation was matched by a drastic reduction of sectoral policies, agrarian infrastructure and government spending. Most public investments in credit, research, and technological development was destined to the promotion of agroindustrial chains. To incentivize private foreign rural investment, labor and financial flexibilization legislation was passed (Fajardo 2009, Robledo 2000). Agricultural restructuring also exacerbated the continued decline of overall planted and harvested area. Agricultural participation in the gross domestic product has experienced a steady decline: from 33,6% in 1955, and 22,5% in 1984, it has gone down to 14, 6% in 1995 and less than 11% en 1995 and 2006 respectively (Suárez 2007:120). Expansion of livestock and capital intensive permanent monocultures have reduced rural employment, increased land concentration, and intensified rural displacement (Garay and Rodríguez 2005). It is estimated that 38,7 million ha are used for livestock production of which only 14,7 million ha are suitable for this purpose (Pesquera and Rodríguez 2009).

A significant change in the new model has been the adoption of a new definition of food security: instead of an issue of national production for domestic demand, it is regarded as a global problem to be solved through purchases of cheaper foreign goods. This premise guided the 1990s generalized import of processed and direct consumption foods, which was facilitated by the globalization of food and food consumption. From 1990 to 2008 food imports rose from 700.000 tons to 10 million tons (Pesquera and Rodríguez 2009). The continued import of processed and direct-consumption foods has reduced national production, food self-sufficiency while compromising national food security (Machado 2003, Robledo 2010). It is estimated that while in 1989 the food supply satisfied national demand, in the mid-2000s Colombia imported more than 50% of

protein and calories consumed and 33% vegetable oils (Suárez 2007:107). Since 2004, Colombia has also imported coffee from Peru, Ecuador, and Brazil averaging 400.000 60 kg sacks a year (Ibid). Imports have not always been cheaper for consumers; further, they have stimulated new needs, tastes, and desires whose fulfillment often occurs at the expense of healthier nutritional options.

Peasants and medium size food producers have been among the most affected by the new policies. They have lost most state support for production and have seen social services curtailed by cuts in social spending (Robledo 2010). According to the General Accounting Office (Contraloría 2008), entrepreneurial imperatives have ignored rural productive diversity and heterogeneity contributing to the deterioration of rural socioeconomic indicators as well as unemployment, poverty, and food insecurity. National nutrition indicators corroborate the high levels of rural food insecurity (58.2%) compared to urban households (36.5%). Chronic malnutrition, an indicator of a long period of deprivation manifested in stunting or insufficient height, affects 17.1% of rural children (ICBF 2006). According to the 2005 the National Survey of Food and Nutrition Situation, ENSIN 2005, all nutritional deficiency indicators point to structural poverty, social iniquity, and social exclusion of peasants (ICBF 2006). A reaction to the corrosion of peasant economies and overall rural living conditions has been an emergence and proliferation in the past decades of a variegated peasant and agricultural food-based projects, initiatives, and campaigns rallying around a platform centered on food security, sovereignty, and autonomy. At the heart of these social processes and civil society coalitions are demand for the right to food and specifically the right of peasants and small farmers to produce and access safe, healthy, and culturally meaningful foods for their

social reproduction (Correa 2009, Mondragón and Montoya 2010, Suárez 2010).

Although not explicitly voiced in those terms, what these organized forms of resistance are about is new forms of re-connecting with productive processes, re-embedding them with cultural meanings, and re-embodiment the peasant relationship to food and agrobiodiversity. They are counter-forms of resisting the dis-embodiment effects of the manifold forces that threaten their lives and livelihoods.

Government reaction to the growing public concern with food insecurity and malnutrition and has been addressed through the enactment in 2008 of the National Policy for Food Security and Nutrition (PSAN) (DNP 2007). PSAN's main goal is to guarantee that the entire Colombian population has, accesses, and consumes food on a permanent and appropriate manner in sufficient quantity, variety, quality, and safety. Its political and legal framework takes into account national commitments to FAO Food and Nutrition Summits (1996, 2002) and UN Millennium Development Goals. Cast in a language that combines technical efficiency with social responsibility, a progressive element of the policy is its acknowledgement of the constitutional right to food and the state's responsibility in its fulfillment. On the other hand, its definition of food and nutrition security is framed as an issue of social risk management, meaning that while all people and communities are at risk of hunger and malnutrition, state and social actions should be targeted to the most vulnerable sectors of the population. Targeting is an anti-poverty strategy proposed by the International Monetary Fund and the World Bank (1990) on the grounds that concentrating social services and subsidies expenditures on the neediest could increase the efficiency of transfers, save money, and achieve higher

equity (Grosh 1994: 1). It one of a series of social program reforms aimed at mitigating some of the nutritional and social impacts of macroeconomic policy.

Critics of targeting have noted that it fragments the universal welfare system and collective citizenship rights into selective social rights for distinct population segments: children, youth, women, senior citizens, and as per special needs (health, nutrition, education) (Adelantado and Scherer 2008, Hall 2006). In the food and nutrition ambit, focalization in Colombia has meant addressing hunger and malnutrition largely through the distribution of food aid and monetary subsidies to extreme poverty and high-risk sectors. A consequence of these measures has been the configuration of new social identities for the welfare-dependent populations distinguished only according to the social program to which they belong. For peasants this has meant becoming part of the mass of undifferentiated poor without a real change in the conditions that would enable them to be independent and dignified producers and consumers. As peasants often comment, these are “little government help (*ayuditas del gobierno*) that help us some, but we also need land, credit, markets” making reference to the partial benefit of these subsidies that do not address more permanent solutions.

Resources for PSAN operation, however, were severely curtailed by parallel food and nutrition programs implemented during the two administrations of Alvaro Uribe (2002-2010) through the Presidential Program for Social Action (Programa Presidencial Acción Social). This program centralized and controlled international cooperation funds for the discretionary use of the president in various social programs among which were the Food Security Network (Red de Seguridad Alimentaria RESA) and Families in Action (Familias en Acción). RESA was designed to improve rural household food

security and self-sufficiency through cultivation in home gardens; one-time beneficiaries were given corn, bean, and vegetable seeds in addition to a couple of chickens for domestic consumption. Families in Action consisted on the direct distribution of food and cash transfers for education and nutrition to indigenous or displaced families, or families in extreme poverty. As part of family-government co-responsibility, beneficiaries agreed to send children to school and take children to growth and development monitoring appointments (Acción Social 2011). Conditional cash transfer (CCT) programs of this sort have been premised on the cost-effective and flexible family-government co-responsibility in human capital formation and family responsibility (Hall 2006: 69). They have also been justified as a means to halt traditional paternalistic and patron-client social assistance relations (Ibid: 692). In Colombia, however, Families in Action were not just a means to circumvent more permanent redistributive measures but were fundamental to bolster Uribe's popular and political support. The political use of food is not new; food clientelism has been a widespread and openly recognized practice in the country. An irony of these presidential programs was that a considerable portion of their budget went to the growing numbers of displaced populations forced out of their lands as a result of complex forces and interest that configure Colombian rural conflict over the control of land and territory<sup>17</sup>. Even more ironic is that in many cases peasants do not spend cash transfers on food but on other pressing expenses.

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<sup>17</sup> According to the monitoring commission to forced displacement, 83% of displaced people registered in the Unique Registry of Displaced Population (RUPD in Spanish), lost some kind of property, excluding household furniture: 72% animals, 50% equipment and machinery, 42% land, 32% crops, 24% productive infrastructure, and 19% non-rural real estate. Between 1998 and 2008 the total land dispossessed was close to 5.3 million ha and 0.35 million h in the period 2009 and 2010 (CSPPDF 2010:3).

### A sacred government superfood

Food scholars have argued that the field of nutrition provided the scientific and technological rationale for new forms of modern social engineering in the name of human welfare and new ways of thinking about food, health, and the body (Coveney 2000, Ilcan and Phillips 2003). A concrete example of how nutrition policies in Colombia have influenced diets, bodies, and tastes is through the distribution of food supplements and more specifically *bienestarina*. This is a nutritious vegetable flour mixture containing fortified starches (wheat, corn, rice), soy flour, powder milk, minerals, and vitamins and free of additives, preservatives or artificial colors. *Bienestarina* is distributed freely to official public schools and vulnerable populations, i.e. pregnant and breastfeeding women and children under 7 years of age. It is produced by the Colombian Family Welfare Institute (Instituto Colombiano de Bienestar Familiar, ICBF) the government body in charge of the implementing, centralizing, and rationalizing food and nutrition assistance policies and programs. When foreign food aid dwindled in the 1970s, ICBF was in charge of producing a national substitute.

The term *bienestarina* alludes to *bienestar* (well-being) and *harina* (flour) meaning well-being flour. To encourage consumption and consumer acceptance ICBF has conducted several taste trials in addition to workshops on its nutritional benefits for child growth and development. It has also published guides and recipes instructing users on how to handle and prepare *bienestarina* to make it more appealing and beneficial. Recipes have taken into consideration cultural food and culinary habits such as the use of flours for soups and porridges, cakes and breads, and cereal drinks. Originally conceived as a nutritional complement in emergency situations, *bienestarina* has become a

permanent food, sometimes a primary meal. For the past 35 years Colombian rural and urban poor have been eating *bienestarina* in multiple forms in daycare centers and school lunches where it is complemented with snacks donated by the food industry such as milk and cookies<sup>18</sup>. *Bienestarina* is also consumed at home in households that receive food aid packages which also include pasta, lentils, oil, rice, *panela*, and bouillon cubes. According to the latest National Food and Nutrition Survey (ENSIN 2010) 31.6% of all age groups in Colombia's population consume *bienestarina*, predominantly among children ages 5 to 8 years (46.5%) and 9 to 13 years (37.7%). Daily and weekly consumption is almost twice as high in rural than urban areas (ICBF 2011). Recently ICBF (2009) labeled *bienestarina* public good and a sacred food (*alimento sagrado*) whose improper use is considered a crime. Recasting *bienestarina* as a non-material supernatural good produced for the general welfare and common well-being appeals to a moral and religious dimension of food that also attempts to prevent repeated mishandlings and wasteful use. Misuses of *bienestarina* include hoarding it for political clientelism, personal benefit, and even for animal nutrition.

That *bienestarina* has become a widely consumed food has been possible by the nutritionalization of the modern food system (Dixon 2009:321). That is, the process involving the “enumeration, enrichment and promotion of single foods and national food supplies in terms of a nutrient values profile (amounts and types of energy, protein, fats, etc.)” (Ibid). *Bienestarina* concentrates, in one substance, among the most important

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<sup>18</sup> In the past years food aid has been questioned for introducing culturally foreign foods, in particular industrially processed commodities, to ethnic communities. In response in 2009 ICBF initiated research on autochthonous foods consumed by indigenous and Afrodescendent populations in order to design ethnically differentiated nutritional guidelines. The Agricultural Center for Tropical Agriculture (CIAT) was in charge of conducting chemical analysis of ten of the most prominent foods found (ICBF2009b). The newly documented foods were included in the Colombian Food Composition Tables. Peasants, who have not been subject to special rights within the multicultural state, are considered part of the homogenous mass of vulnerable populations.

nutrients for health (carbohydrates, proteins, fats, vitamins, minerals). It should be noted, however, that official ICBF nutritional messages place a strong emphasis on the consumption of foods rather than single nutrients, and more notably customary, direct-consumption, Colombian foods. As a free food for children *bienestarina* it is welcome by adults, especially mothers concerned with their children's nutrition and health. It is also accepted as nourishment for the elderly who often need bland and mild meals.

*Bienestarina* is a cultural food for children and the term *colada*, sweet soup or porridge, has become synonymous with a sweet porridge made with it. Adults are more reluctant to consume it; first, because it is associated as a poor people's food or to government food, *comida del gobierno*. For peasants, whose identity lies largely on their independence and their ability to provide for themselves, this emergency-turned-permanent food aid sometimes is viewed as a loss of autonomy and food choice that undermines their dignity. Second, *bienestarina* is not considered a food in that it is not satiating or filling like rice or potato despite its nutritional value. Psychologically and socially for some people it is undesirable and even degrading to eat it. What these ambiguous perceptions suggest is the disembodied effect of food aid policies; even though peasants consume them, they do not provide the cultural, emotional, and physiological effect of other foods. As a peasant in Alban noted, "*bienestarina* may be nutritious, but it is not nourishing, de *alimento*" meaning that even containing all the nutrients it is said to have, it lacks a culturally significant dimension which is to be nourishing and sustaining.

*Bienestarina*'s unusual powers have given rise to a variety of mixed perceptions: it is said to provoke male impotence and infertility; to work as an aphrodisiac and can lead to the procreation of twins; and that it is a cure for cancer (ICBF 2009a). More

distrustful and pessimistic views hold that that it may be a government tactic to debilitate and undermine the populace. Interestingly enough, negative perceptions of *bienestarina* were exacerbated by findings in the early 2000s that it was being produced with genetically modified soy and corn from imported foods and food aid provided by the US to the World Food Program's Global Food for Education Program (Bravo 2001, Vélez nd). This situation was denounced in Ecuador and Bolivia as well. As has been discussed for beer, bread, rice, the coding and recoding of *bienestarina* is a way in which people attempt to make cultural sense of new foodstuffs as they are incorporated into the diet and into the alimentary structure.

ICBF and *bienestarina* have been object of multiple debates ranging from the real impact of social assistance programs given the increasing levels of malnutrition in the country, to critiques of its role creating nutritional dependency at the expense of deeper and more permanent solutions, social investment, and redistribution measures. The following comments by nutrition and public policy expert Sara del Castillo touch on some the complex and ambiguous role of public nutrition policies and the effect of *bienestarina* on the modernization and homogenization of food practices and tastes:

Those of us in public health and public service have to transmit precise messages that are useful not just for poor people but for the entire population. That is the duality of public policy and how we achieve the goals of public policy... Nutrition policies homogenize the strategies because we need something that is useful for everybody. ...The Colombian food guides could be a universal message that appeals to health food principles but that also [includes] the recuperation, conservation, and growth of gastronomic memory and food diversity as a health component. Public policies should be responsible for compensating the diet with all of those things which people cannot include in their basic food basket in the diet. But do public policies give? A bunch of starches! What do the institutions in theory in charge of serving [peasants and poor people] and generating public policy for them: we give them *bienestarina*, which is the only thing that the state gives to people. Our institutions have

been guilty of the modernization of tastes with foods such as *bienestarina*. We have raised new generations in poor communities whom we have taught to eat those those *coladas* (*bienestarina* soups)! ... It is our own absolute ignorance about where the legacy and that gastronomic memory lie in this country<sup>19</sup>.

Anthropologists (Shore and Wright 1997:3) have examined how public policies construct subjects and shape subjectivities. To the extent that food is literally incorporated through consumption, food and nutrition policies have direct material and symbolic implications for populations and individual bodies. Food choices may be affected by socioeconomic and environmental factors but diets are not entirely dictated by policies or structural forces; they are also shaped by people's agency. By agency I mean "practice invested with subjectivity, meaning, and to a greater or lesser extent power" (Comaroff and Comaroff 1991:10). In regards to food, agency involves being able to choose culturally appropriate foods that make up their customary diets and bring health and well-being even in the midst of constraints. Culturally meaningful foods are those that satisfy physiological needs as well as psychological and emotional desires. They are part of people's ordinary affects which as Kathleen Stewart (2007:1-2) notes, are "the varied, surging capacities to affect and be affected that give everyday life the quality of a continual motion of relations". Ordinary affects, she adds, are both public and private feelings whose "significance lies in the interstices they build and in what thoughts and feelings they make possible" (Ibid: 3). Approaching peasants' food ideas and practices from the perspective of ordinary alimentary affects clarifies peasants' tenacious drive to craft meaningful food options and livelihoods amid constraining conditions. The intensity of these embodied and affective alimentary resistances is what holds their

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<sup>19</sup> Personal translation of an oral testimony originally in Spanish (2010).

political dimension in a world that is progressively out of touch with production processes.

### Peasant bodies and embodied food and health practices

Peasant food ideas and practices are material expressions of social history, cultural learning, and embodied practices. The previous section of this chapter addressed political economic, social, and institutional factors influencing peasant production and consumption. This section introduces a complementary understanding of how peasant diets are configured materially and culturally by means the on-the-ground approximation to their embodied or lived experience with food and health. This is intended to contrast the abstract, detached, and disembodied concepts of food contained in policies to the concrete local understandings of the body and its processes. Information presented was produced through body mapping (Cornwall 1992) with adult women in Alban and Garagoa. Body mapping is a useful participatory method to gain knowledge of cultural notions of the body by making explicit people's perceptions of the body and body-related issues. Body mapping has been used in the context of applied medical and reproductive health research by anthropologists trying to find ways of bridging local knowledge and Western medical understandings of body and health. Representing information visually on human-scale, body maps provide a common ground for exploring nutrition and health issues collectively without assuming a shared understanding of Western medical concepts of anatomy or physiology (Cornwall 1992:1). Like other participatory methods, body mapping has been conceived as a less authoritative form of addressing medical problems and concerns because it takes into consideration people's perceptions and concepts. I had

first heard of this technique from an activist friend, Jeannette Rojas, who used it in health workshops with Afrocolombian women to map the relationship between women's bodies and the wider "natural body" or the territory from which they had been displaced. This is a versatile technique with great pedagogic potential for making rapid, concrete, and visual connections between environmental, agricultural, nutritional, and health issues.

In the past three decades the body has become a topic of scholarly interest as a multifaceted source of knowledge and lived experience. It is now recognized that the body in its material and symbolic dimension is a cultural and historical product whose particular trajectories make it a compelling domain for the study of culture and society (Counihan 1999, Csordas 1994, Lock and Farquhar 2007, Lock and Schepher-Hughes 1987). Embodiment, the lived experience of bodily processes, has also become a lens to inquire about the way people "inhabit" (Schepher-Hughes 2007:461) their bodies; that is, how they experience them in mundane practices and a result of wider cultural, social, and political relations. Embodiment is both a site of cultural-historic intersections and a formation of everyday practice (Farquhar 2002:25). As noted by Carolan (2011:2), in the realm of food constitutive elements of embodiment are lived experiences, material practices, and sensorial engagements with food. For peasants who are directly involved in the production and consumption side of food, embodied experience of food brings together all of these aspects in distinct ways.

In focus groups of 5 to 7 adult women in each research site, I asked a volunteer to lie on the floor over a long sheet of paper and have another woman draw the silhouette of the volunteer. Then, with the body sketch hung on a wall, I asked them to draw the internal and external body parts according to their own perceptions and knowledge,

Figures 3.1 and 3.2. I also requested that they mention the foods or plants associated with each body part and that would be beneficial or harmful. This was intended to elucidate the connection of body, health, and agricultural diversity. As one or two women filled the body, the others contributed their knowledge and expressed their opinions, often with great sense of humor. My closer relationship with women prompted them to participate and to be at ease while drawing. I chose settings where they would feel comfortable, a school classroom and a private home. I did not work with men following warnings about their possible intimidation discussing bodily issues with a female researcher. A very mischievous woman in Alban said that the difference with men is that they are taller, stronger, eat more, and have a couple of uninteresting “things” hanging between the legs. Women, on the other hand, are more “complete” because they carry life inside; they also know more about food and health because those are their main responsibilities.

Since women and their bodies have been part of health and reproductive health interventions, participating women in Alban and Garagoa did not find this activity entirely foreign. They viewed it as a sort of health workshop. The difference was that being able to draw and fill up their own silhouettes created a situation in which they were not just listeners or passive receivers of expert knowledge; here they engaged more freely in discussions about the body’s anatomy and physiology, what the organs looked like, their function, and associated foods or plants. As noted by Cornwall (1992) body mapping provides a unique chance for women to represent and reflect about their internal anatomy and bodily functioning. All comments and expressions during this activity in Alban and Garagoa were written down by me and the field research assistant. Body maps revealed a complex peasant understanding of the body, its processes, and the connection

between foods, herbs, nutrition, and health. Women's gendered perspectives and knowledge (Rocheleau et al. 1996), and the gendered dimension of body politics (Elmhirst 2011, Hartcourt 2009,) have been recognized in feminist scholarship. Albeit some differences between the two research sites, ideas about body and health in Alban and Garagoa resonated with each other.

Common general perceptions were that a good and healthy body is necessary for performing hard physical work. Strength and health bring independence, self-sufficiency, and reduce visits to the medical establishment -- often an unfriendly place. In their own words, a good body is "neither too thin, nor too fat, a body well kept with exercise". In describing the ideal female body they mentioned that it should have "good cheeks, broad hips, big breasts, and thick thighs" indicating good health, strength, plumpness, and fertility. In Alban a woman's comment that a nice body would be that of a "wasp body with long hair" stirred much laughter at the idealized commercial female imagery that bears no resemblance to their own bodies or their notion of desirability. Older women remarked that displaying the body and wearing tight clothes is a "modern and recent thing"; in the early days peasants were raised with very strict Catholic rules about overall body modesty. Corporal chastisement such as beating, slapping, flogging, and hitting was a normal and socially accepted occurrence. As children their bodies were pretty much undifferentiated until they were about 10 years old because both sexes wore long tunic-like cotton dresses. During puberty some women were even forced by their parents to wrap their breasts tightly to prevent their development and exposure. They also had to wear long skirts, hat, and shawl. Women in Garagoa mentioned that it was also common

for women to tie their hair in braids. They also commented that a frequent practice among peasant women who migrated to the capital in search for work was to cut their hair.

Women in Alban mentioned that young men, approximately 50 to 60 years ago, wore tight long underwear and long pants. In the Garagoa highlands the use of the *ruana* (poncho), hat, and *alpargatas* (sisal sandals), was a distinctive marker of peasant identity. At present, in Garagoa adult men and women still wear *ruana* and hats as part of their everyday dress and distinctive identity. *Alpargatas* have been replaced by rubber boots. In Colombia the peasant *ruana* has often been associated with the sly and cunning character of highland peasants who have a public face but hide their true sentiments and actions under this garment. Slyness is also designated as *malicia indigena* (indigenous malice), a concept that resonates with descriptions of manifold forms of everyday peasant resistance (Kerkvliet 2009, Scott 1985). At present, in Alban older women do not wear hats. In both sites older women tend to wear skirts but pants are also common. Observance of younger women's attire in both places indicates that they have replaced long skirts for short skirts or tight jeans, t-shirts, and sneakers or sandals. Young peasant men wear nylon or jean jackets, cotton caps, and fix their hair with lots of gel in imitation of urban and modern styles. The transformations of the lived experiences of body and bodily aesthetics mentioned by women during body mapping, and observed during fieldwork are reminiscent of theoretical propositions that the body in its material and symbolic dimension is a cultural and historical product (Counihan 1999, Csordas 1994, Lock and Farquhar 2007, Lock and Scheper-Hughes 1987)<sup>20</sup>.

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<sup>20</sup>Scholarship on body and gender is prolific, more notably among feminist scholars. See Lamb (2000), Lambeck and Strathern (1998), Martin (1987), Lock and Farquhar (2007) for a gamut of approaches. Examination of the embodied experiences of gender and development are discussed in Hartcourt (2009).

During the description of the body's internal structure and composition in both places there were repeated allusions at its similarity with animal bodies, in particular pigs. This is only natural since an important source of peasant knowledge comes from their intimate and permanent interaction with nature and observation of natural processes. Correspondingly, knowledge about the body is acquired through peasant interaction with animals, study of their behavior, and inspection of their inner constitution when they are butchered and dissected for eating. Everyday language is also full of expressions alluding to animals, animal attributes, and behaviors. The women also were aware that pig organs and tissue are used in human heart valve transplants. Participants commented that human and animal organs were similar in form and function and often equated the terms for both such as *columna* (human spine) and *espinazo* (animal spine), or *cuello* (human neck) and *pescuezo* (animal neck). The most important organs mentioned were: brain, lungs, heart, stomach, liver, kidneys, intestine, bladder, and uterus. As they discussed organ functions they related them to two of the major bodily substances: urine and blood. They also drew the spine which supports the body by means of rings (*anillos*) or vertebrae. The spine starts at the neck and goes down to the hips and legs. The hip joint is called *aldabas*, (knockers). Other bones included were the ribs, the arms and the legs. Bones require milk, cheese, green onion leaves, and oats for calcium. The herb *suelda con suelda*, mistletoe (*Phoradendron* sp.), mixed with ground eggshell and consumed with chocolate, milk, or *agua de panela* (brown sugar drink) also gives strength to the bones.

In descending order, from the head down, some of the major organ functions, ailments, and remedies listed were: the brain, used for thinking, an activity demanding a lot of energy and special foods like cow's brain, brandy with milk, nutritional



a decoction of *guatila* (*Sechium edule*) also called poor people's potato (*papa de pobre*) before breakfast. Hot beverages with cinnamon or strong liquors like whisky are convenient for low blood pressure. In the peasant model of the body organs help each other; they cooperate with one another to perform their functions. In Garagoa the women expressed that if the liver gets ill, the entire body gets ill because this organ governs with, (*manda con*) eleven body parts –which were not detailed. The liver must be kept clean through the consumption of bitter herbs like wormwood (*Artemisia absinthium*) and marigold, and avoidance of excess sweets, starches, salt, fats, and spices. Purging with bitter herbs such as wormseed (*Chenopodium ambrosioides*), is a common practice for liver detoxification and deworming. Too much bitterness, however, may be harmful to the eyes, in which case carrots are highly recommended for visual accuracy.

According to participants in Alban kidneys “expel the *corriente* (current/stream), to urinate”; proper liquid elimination is achieved through consumption of diuretic infusions made with corn hair, onion; dandelion (*Taraxacum officinale*), field horsetail (*Equisetum arvense*), papaya skin, and barley. Drinking a lot of juice and eating watermelon were also mentioned. The stomach is the organ of digestion. One woman in Garagoa called it the *trapiche* (sugar mill) a very explicit description of the stomach's operation. Participants agreed that most foods are good to eat but may not be recommended if the person has an ailment such as hypertension or diabetes. Acid foods, for instance, are not convenient because they irritate the stomach. To aid digestion a wide variety of herb teas and home remedies were listed: basil, spearmint, marjoram (*Origanum majorana*), celery, lemon balm (*Melissa officinalis*), pennyroyal (*Mentha pulegium*), English plantain (*Plantago lanceolata*) oats, and flax. Foods such as *malanga*

(*Xanthosoma sagittifolium*) were mentioned to heal stomach ulcers but *arracacha* and manioc are not advisable when a person is ill. The seasonal wild tuber *maravilla* (*Tigridia pavonia L.F.*), a consumed in Garagoa, is considered a recommended food for diabetes because it does not have a diet (*dieta*), meaning contraindications. Squash and *guatila* help to lose weight and get thinner. Antiparasitic remedies include *paico* with garlic for worms; *aguardiente*, liquor, and garlic for amoebas; and hot *agua de panela*, crushed garlic, lemon juice, and a shot of *aguardiente* for most parasites.

Next to the stomach is the intestine whose job is to eliminate everything that is eaten and thus help overall body functioning. The colon according to women in Alban is a “tripe of the stomach”, located close to the “noble part”. Plantain, milk, meat, and acidic foods are prohibitive for the colon because they are difficult to digest. Papaya, on the contrary, is very good. Next to the colon is the bladder; this organ is in charge of “depositing” urine (*depositar la corriente*). Finally the ovaries were drawn but the women avoided the “noble parts” which they thought were not relevant to the conversation. The ovaries are related to the uterus; this is the organ where babies are formed and which protects them until birth. In Garagoa they used the expression *tizón* (undefined) for the fetus and *criar* (to grow, to raise) for nurturing/strengthening. The use of the term *criar* has also been used to describe the benefits of *guarapo* for blood strength in other regions of Boyacá (Ávila 1970). Rue (*Ruta graveolens*) is recommended during menstruation for cramps and pain, but not during pregnancy because can produce miscarriages. Cleaning the uterus after birth is important; marigold is an appropriate plant due to its antibiotic and anti-inflammatory properties.

Women in Alban said that the first 40 days after childbirth women were “open” and prone to cold since the uterus has not gone back to its normal size. During this period, known as *la dieta* (the diet), women should eat hen soup and nutritious foods, drink hot beverages, and avoid *sereno* (cold night air). A woman who has worked as a health promoter in Alban indicated that for women’s good health and vitality, folic acid found in spinach, vitamin C, ferrous sulfate, and calcium are recommended, especially during breastfeeding which can last up to two years. Older women in Alban commented that they were never told that they would go through menopause; this period can produce headaches, simultaneous heat and cold sensations in the body, nervousness, and weakness because of hemorrhages. Spleen soup (*caldo de pajarilla*) is a prime remedy to replenish the loss of blood. Among Andean peasants consumption of offal or the internal organs of animals is not only due to lower price but they are cheaper to nutritional properties. Viscera, the women in both places noted, give *fuera* (strength) and *aliento* (breath, energy), to blood and the body in general. Although increasingly socially devalued by urban upper and middle classes<sup>21</sup>, viscera are important sources of iron, vitamins, and minerals that help counteract nutritional deficiencies. Weekly consumption of viscera is recommended in the Colombian dietary guidelines.

Andean peasant food and health ideas and practices have often been dismissed as folkloric, irrational, superstitious, and even noxious by the official health establishment. Indeed not all peasant practices are effective or inherently benign and should not be romanticized. Many peasant health practices are informed by a blend of humoral (hot/cold beliefs), natural medicine, and syncretic folk-scientific medicine. Healing

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<sup>21</sup> An examination of mid 20<sup>th</sup> century Colombian cookbooks, influenced by European cuisine, revealed the inclusion of a variety of recipes for making distinct viscera as part of the regular diet: tongue, brain, kidneys, liver, tripe, and bull’s testicles. In current Colombian cookbooks viscera are notoriously absent.

practices are also the result of people's constant experimentation; as women in Garagoa said "when it comes to health, we try different things until something works." An aspect of this knowledge is that it does not establish a stark separation between food and medicine. Andes peasant food practices are not guided by purely gustatory or hedonistic experience but are also associated to moral and health principles and prescriptions. That "health and illness enter through the mouth", meaning that food can play a positive or negative role is a common perception in Garagoa and Alban. Many peasant practices are directed at achieving nutrition and health by means of combining salt and sweet foods; eating fresh, cooked, bland, and warm filling meals in the company of others; sitting down while eating to let the food settle in the stomach (*reposar la comida*); consuming herbal and home remedies; and purging to cleanse the body from parasites and other cultural maladies. Other embodied practices include exercising, excreting, and resting.

For peasants health and nutrition are not just about what is ingested but how it is consumed. If a person is angry, sad, or anxious, food will not nourish nor will it sit well, (*no le sienta, no le cae bien*), and can even make a person ill. Moral and social prescriptions include sharing food and not wasting. Until a few decades ago in Boyacá blessing the seeds, the hearth, and the food was a regular practice to give thanks to God and to keep the devil away (Ávila 1970). In Garagoa it is still common to refer to food, seeds, and the earth as holy (*santa*) (Monsalve 2005).

Table 3.1 Andean peasant perceptions of body organs, functions, illness, food, and health from body mapping exercises

| Organs           | Function  | Illness  | Food  | Remedies  |
|------------------|---|--|---|---|
| Head and brain   | Thinking, talking, seeing.  | Headache.                                      | Carrots for eyes. Cow's brain, vitamins, brandy with milk, nutritional supplements.   | Lemon grass; comfrey with <i>agua de panela</i> . Bitter herbs can harm the eyes (chamomile, wormwood).   |
| Lungs            | Look like little gourds. Take oxygen needed by the body. Used for breathing. Delicate.  | Phlegm, cough, respiratory problems            |   | Milk with thyme; bougainvillea and <i>agua de panela</i> .  |
| Heart            | Heart: suffers because of love. Regulates and pump blood through thick veins. Pumping blood is a function of the heart, the liver, and the lungs. If blood does not work, neither does the heart. | High and low tension                           | <i>Guatila</i> : high tension, diabetes. Whiskey lowers high tension. Liquor and hot beverages mixed with cinnamon for low tension.                           | Marigold; comfrey ( <i>Symphytum officinale</i> ) with <i>agua de panela</i> for tension. Wormwood ( <i>Artemisia absinthium</i> ) with liquor for strength.  |
| Stomach          | Regulates digestion. Also called the <i>trapiche</i> or sugar mill.   | Stomach aches, poor digestion, parasites, gas. | Squash to lose weight; <i>Malanga (Xanthosoma sagittifolium)</i> to prevent ulcers, and heal stomach ulcers.  | Herbal infusions for digestion: chamomile, aloe vera, lemon grass, celery, lemon balm, basil, spearmint, wormwood ( <i>Artemisia absinthium L</i> ), oats, flax, English plantain, marjoram, pennyroyal. Antiparasitic formulas: Wormseed with garlic; <i>aguardiente</i> and garlic; <i>agua de panela</i> , garlic, lemon juice, <i>aguardiente</i> . |
| Liver            | Intervenes in the functioning of blood and lungs. Governs over eleven body parts. If the liver is ill, the entire body gets ill.  |  | Avoid: sweets, starches, salt, fats, and spices if diabetic or with high blood pressure.  | Wormwood for cleansing.   |
| Intestine, colon | Eliminates everything that is eaten. Helps overall body functioning. The colon is a tripe of the stomach.   |  | Avoid: plantain, milk, meat, and acidic foods. Consume papaya.  |   |
| Kidneys          | Eliminate liquids; expel the "juice/current", urine.  |  | Watermelon.   | Herbal infusions: corn hair, onion, dandelion, barley, field horsetail, papaya skin. Juice.   |
| Bladder          | Collects the juice/current; deposits urine.   |  |   |   |
| Uterus, ovaries  | Uterus: holds and protects the baby.  | Hemorrhages, menopause, cramps.                | Cows' spleen soup for blood loss. For health and strength: folic acid (spinach), vitamin c, ferrous sulfate, calcium. Eggs with rue for cleansing the uterus. | Marigold: heals wounds, cleans the uterus, natural antibiotic. Avoid wormwood and rue during pregnancy. Rue for menstrual cramps and for preventing ulcers ( <i>mal de madre</i> ) in men.  |
| Spine            | Supports the body, like a worm. Composed of "rings".  |  | Milk, cheese, calcium, green onion leaves, oats.  | <i>Suelda con suelda (Phoradendron spp.)</i> mixed with ground eggshell and chocolate, milk or <i>agua de panela</i> for bone strength.   |

Present peasant understandings of nutrition and health reflect public concern with cancer, diabetes, and hypertension which have become the most recent public-health concerns in the country. In fact in 2009 the Ministry of Health passed the Obesity Law (Law 1355) which makes obesity and associated non-transmissible chronic diseases public health priorities and adopts prevention, attention, and control measures in particular in regards to food consumption. At present ICBF is working on the formulation of a National Food and Nutrition Education Plan. While these problems have been on the rise in rural areas among older adults, the countryside is still more affected by malnutrition and poverty-related illnesses. According to the 2010 National Survey on Food and Nutrition, ENSIN 2010, rural consumption of dairy products, meat, poultry, egg, vegetables, and fruits is lower than in urban areas. Rural poultry consumption is in the form of giblets primarily. On the contrary, consumption of rice, pasta, legumes, tubers and plantains, and sweets (*panela*) is higher in the countryside (ICBF 2011). Peasants testimonies indicate that they are conflicted by admonitions of health workers about restricting the habitual foods consumed and including others, such as vegetables and fruits, which contradict some of their core ideas of body, nutrition, and health. That crops and foods that have been considered nourishing and health-giving, can be harmful is a disconnect that peasants find hard to understand. “What is there left to eat? We have eaten like this all of our lives, our parents did and they led long and healthy lives!” is a common statement of peasants who see their food practices and tastes destabilized and undermined in the name of health and nutrition. In a more humorous vein they say that “before all these new diseases, no one got sick from eating pork rinds” referring to the very much liked deep fried skin.

In Garagoa women diagnosed with diabetes mentioned that a person become ill from mixing too many starches (*catear muchas harinas*) doctors and health personnel have told them. When restrained from eating the usual foods, peasant feel deprived from the pleasure of eating the habitual foods; life loses meaning. In this respect *Doña Oliva* commented “what is life without salt?” expressing her longing for the comfort provided by salty foods. A few older peasants hide from their children to eat corn bread or corn cake because as one lady told me in a whisper: “my body demands it” (*el cuerpo me lo pide*). Men in both places often simply disregard nutritional and medical restrictions, especially with respect to alcohol and *guarapo* on the argument that life and death are godly decisions. In Garagoa restrictions on *guarapo* consumption are met with ambivalence because of the centrality of this fermented beverage. Although discourses on the degeneracy of the race are no longer prevalent, *guarapo* is often scorned for its association with malnutrition, violence, and cancer. Yet *guarapo* is socially acceptable in Garagoa and contrary to medical perceptions, for peasants it is a strength-giving food. (*Guarapo* is further discussed in chapter five).

As with most public authorities and institutional discourses, peasants are mistrustful of the official rural medical and health system which has always treated them as second-class citizens with poor quality health services. Dramatic stories of abuse and mistreatment on the part of medical personnel are part of social commentaries. The inefficacy of public health services is voiced by people’s complaints about doctors and nurses’ solution to most health problems through pills: “they just formulate pain killers and maybe a couple more pills and they send you home.” This is one of the reasons why when peasants can afford it they resort to private urban doctors who often formulate

natural medicines, vitamins and supplements. Peasants relate better to these treatments which resonate with their own medical practices and home remedies.

A prominent finding of this body mapping exercise is that, except for a mention of a few vitamins and minerals for the brain and the uterus, most of the foods and remedies mentioned by women in both places they kept referring back to the crops and foods that constitute the majority of the diet. Although commercial processed foods are a regular part of the diet, they do not figure prominently when women are left to discuss their body and notions of food and health in their own terms. This finding hints at the fact that the relationship between food and agrobiodiversity in the Andes is mediated by the health benefits associated with the use of customary foods, plants, and animals. During the body mapping event and throughout many fieldwork conversations, women in Alban and Garagoa stressed the importance of having a variety of culturally and bodily meaningful foods for nutrition and health, Table 3.2. Food grown in the countryside is fresh, *sana* (healthy), without hormones or so many chemicals, women argue. Food gives energy and strength to work; fresh tender food (*tiernita*), is also tasty (*sabrosa*). Medicinal herbs provide relief (*alivio*), and are at hand-reach. Plants and animals nourish and heal because of the personal, intimate, and affective relationship of peasants to them. A reason why peasants, especially older ones, dislike going to the city is that food must be purchased, it is expensive, and the personal tie to food is lost. During holidays or festivities, when relatives visit them, peasants send all kinds of fresh produce and homemade foods; they say that city food is never as fresh and flavorful and that urban consumers do not know the origin of the food or how it was grown.

Women's descriptions of body, bodily process, and aesthetics during body mapping, and field observations of women in different work, private, and public settings, stand in stark contrast with early 20<sup>th</sup> century national elite discourses of racial degeneracy and representations of peasant bodies as dark, sick, and filthy. Negative representations of peasant bodies have been nuanced with positive notions of peasant vitality and hard work in cultural improvement programs such as ACPO in Garagoa, and notions of peasants as the motors of development during the peak periods of agricultural modernization (1970s). Peasant bodies have been further resignified with exaltation of coffee growers in discourses and ideologies promoted by the National Colombian Coffee Federation.

Although prejudices against peasants still prevail, attention to peasant voices reveals more nuanced definitions of self that invite further reflection on the extent to which social discourses, policies, and power relations construct subjects and normalize subjectivities. Although more in-depth studies would reveal more complex findings, body maps in Alban and Garagoa suggest an uneven and incomplete incorporation of ideologies of body and embodiment.

### Conclusions

Ambiguous and contradictory perceptions of peasants and peasant foods run deep in Colombian social imaginaries and food and nutrition discourses and policies. Peasant crops and foods are the foundation of Colombia's diets and cuisines and constitute the core of the national food structure, regional gastronomic identity, and embodied taste. Yet, just as they have been both exalted and stimulated, they have also been vilified as

socially and nutritionally unfit. As noted by Pilcher (1998:5) for Mexico, this ambivalent elite “mixture of nostalgic love and aristocratic scorn” drove much of 20<sup>th</sup> century public and private efforts to preserve some and eradicate other peasant and popular food practices and social tastes seemingly contrary to civilization, capitalist development, and progress.

This chapter explored how peasant food practices have been problematized in terms of poor cultural habits and their effect on the rural nutrition and health situation. In connection to cultural and political economy processes discussed in previous chapters, it analyzed the emergence of food and nutrition policies intended to deal with the peasant food problem. Voiced in terms of racial degeneracy, backwardness, and filth, early 20<sup>th</sup> century policies eventually led to an array of state policies sustained on expert knowledges to this date. Through a discussion of *chicha* prohibition and nutrition education campaigns, this chapter described distinct discourses and practices by which the state has attempted to transform and normalize peasant cultural food ideas and practices. The war on *chicha* is an clear example of how social discourses, government policies, and market forces were able to disembody a cultural taste and nutritional practice that was central to the diet, social life, and cultural identity of peasants and low-class populations. Although the practice was not entirely eliminated, its cultural meanings were transformed and its consumption marginalized, leading to the erasure of an important social and sensory memory which anthropologists have recognized as central to the embodied and affective human experience to food (Farquhar 2002, Holtzman 2009, Nazarea 2005, Seremetakis 1994, Sutton 2001, 2010).

Discussion of other food and nutrition measures to address rural malnutrition, such as agricultural modernization, nutritionalization, and targeted food aid, reveal contradictory effects. Although some 20<sup>th</sup> century modernization measures contributed to national food security and self-sufficiency, food and nutrition problems persist. Government encouragement of certain crops and foods for nutritional purposes has produced equally mixed results: while contributing to national food security, economic imperatives have taken precedence over agricultural diversity, ecological integrity, and culturally meaningful local food options (Correa 2009, León 2007, Flórez-Malagón 2008). This phenomenon has been deepened with neoliberal agricultural restructuring for agroindustrial chains of export commodities and agrofuels (Forero 2010, Garay and Rodriguez 2005). Peasants and medium size food producers have been among the most affected by entrepreneurial imperatives, having lost most state support and left faced with rural unemployment, poverty, and most basic needs unmet (Robledo 2010). De-agrarization and marginalization of peasant production are other forms of disembodiment that reduce peasant consumption options and restrain culturally meaningful food practices. However, despite generalized assumptions of the inefficiency of peasant economies, small-farmers and peasant crops have played a role providing affordable and diverse number of direct-consumption products and foods that commercial lowland monocultures and industrial foods cannot furnish (Forero 2010, Mondragón and Montoya 2011, Pesquera and Rodriguez 2009, Suárez 2007). Continued demand for a variety of products from peasant holdings and kitchens (Suárez 2011) point to deep-seated food patterns and tastes among rural and urban consumers.

Peasant “poor cultural habits” is a pervasive trope running deep in national food and health improvement schemes that attempt to affect food ideas and practices in the transition to modernity and to ever widening European and US influences. Ignorance and lack of nutritional education has justified repeated nutrition interventions that have not yet been able to overcome the food and nutrition problem. Policy shortcomings reveal both the state’s inability and unwillingness to deal with the more structural causes of persistent inequality of food distribution, dietary simplification, and loss of national food self-sufficiency (Suárez 2007). Among government remedial solutions is the continued distribution and dependency on *bienestarina*. Ingesting and in-corporating this government food is not exempt from consumers’ mixed perceptions and emotions. Its acceptance as a children’s food is partly because of its nutritional qualities for child growth and development. The unsatisfactory physiological and psychological effects hinder its social recognition as a culturally acceptable food for adults. Ambiguous responses to *bienestarina* reveal some of the complexities of the bodily experience in mundane food practices (Carolan 2011, Farquhar 2002, Scheper-Hughes 2007).

Among the ironies of nutritional interventions is the continued promotion and legitimization of certain foods with lower nutritionally qualities and the increased consumption of carbohydrate-rich diets in the name of hygiene, modernity, and progress. Such is the case of the diesel diet and other processed foods. Acceptance of these foods responds in part to their symbolic identification with new forms of social distinction (Bourdieu 1984) and modern and urban tastes. Acceptance of new foods is facilitated when they are coherent with previous cultural tastes for certain flavors and textures, as occurred with beer, rice, pasta, and bread. New forms of consumption and food practices,

however, do not occur automatically or passively: they involve complex processes of cultural resignification as people try to re-embodiment and re-embed them with new meanings in their alimentary imaginaries (Onhuki-Tierney 1993, Weismantel 1988). Description of various codings and recodings of food (beer, bread, *bienestarina*) suggest different ways in which peasants attempt to resignify and re-embodiment their experience with food. As anthropologists have amply noted, eating is not just about the material ingestion of food but also about its associated social, cultural, and affective meanings (Lévi-Strauss 1997, Messer 1984, Mintz 1985).

The recent passing of a comprehensive multi-sector national food and nutrition security plan (PSAN) in 2008 constitutes an important effort towards a more complex understanding of the food and nutrition problem and the role of the state in the fulfillment of the right to food. A stark incongruity lies in its ratification of palliative targeted poverty alleviation measures and circumventing more sustainable agro-food policies and socioeconomic redistribution measures. The passing of PSAN occurs at a conjuncture in which rising levels of rural poverty and malnutrition coincide with unprecedented food imports that compromise diversified national food production, food security, and food sovereignty (Correa 2009, Suárez 2007).

In contrast to the more abstract and detached concepts of food contained in government policies, examination of local everyday understandings of body and its processes in Alban and Garagoa, suggests the existence of continued forms of embodiment. Some of these continuities involve the lived experiences, material practices, and sensorial engagements with agrobiodiversity mediated by local cultural of food and health. Andean peasant women's body mappings reveal that the peasant body is an

important site of gendered knowledge, meaning, and affect. It is also a locus of power where notions of body image and self intersect. The existence of distinct local models of body, health, and embodiment, that do not conform entirely to Western understanding of anatomy and physiology, suggest the uneven incorporation of peasants into modern forms of body discipline and normalization. Oral histories and anecdotes of body and bodily experience generated during body mappings resonate with Farquhar's (2002) contention that embodiment is both a site of cultural-historic intersections and a formation of everyday practice. Peasant embodied alimentary resistances, represented by the continued use of peasant crops, animals, and local plants for food and health, in Alban and Garagoa can be interpreted as forms of everyday visceral politics (Hayes-Conroy and Martin 2010) whose ordinariness and informality often escape the gaze of scholars, activists, and public officials.

At a more formal and public level, and in reaction to the corrosion of peasant economies and overall threats to their lives and livelihoods, Colombian peasants have engaged in a new forms of food politics that seek to challenge regressive national agricultural, socioeconomic, and food policies, and offer alternatives to the current global food system. Echoing wider transnational peasant movements such as the Via Campesina, and in alliance with other civil society coalitions, they rally around the principles of food security, sovereignty, and autonomy (Correa 2009, Mondragón and Montoya 2010, Suárez 2010). The different ways the body and embodiment have contributed to nurture various forms of peasant resistance in Colombia confirm anthropological assertions (Counihan 1999, Csordas 1994, Lock and Farquhar 2007,

Lock and Scheper-Hughes 1987) that in its material and symbolic dimension and its particular trajectories the body a compelling domain for the study of culture and society.

CHAPTER 4  
PRODUCTION, ENSKILLMENT, AND AGROBIODIVERSITY  
MANAGEMENT

We plant as we eat, *todo catiado* (everything mixed). It is best for the crops and for the tripe (stomach). We have always cultivated that way be it the in the highlands or the lowlands. But we don't grow as many crops as before. In the past, we used to have abundant harvests, the seeds were beautiful and the crops produced a lot! The problem is that we cannot grow anything without chemicals now, especially the crops that go to the market. But since we started to use pesticides and fertilizers everybody and everything has become weak and ill.  
*Don Pedro, Garagoa.*

The caturra coffee variety produced wonderfully well for a few years, the land was good, the seeds were new, and the soils were rich. There was money and everyone was busy with the abundant harvests. We forgot about the crops and lived off coffee sales. People stopped growing food, not even manioc! With the money we bought potatoes, onions, meat, grains, rice, and pasta. Coffee made us stupid; as my father used to say: when the money runs out, the Indian remains. What saved us was our stubbornness because we continued to plant a few crops for household consumption (para el gasto de la casa): plantain, manioc, guatila.  
*Doña Edelmira, Alban.*

Introduction

This chapter describes different ways in which peasants in Alban and Garagoa strive for productive diversification and how, in doing so, they contribute to Andean agrobiodiversity. Agricultural biodiversity refers to the variety and variability of animals, plants and micro-organisms, resulting from the interaction between the environment, genetic resources and human management systems and practices (FAO 1999). It encompasses the wild and cultivated plants and animals that have been combined,

modified, and managed across place and time, in complex and diverse agricultural systems. Agrobiodiversity has increasingly been recognized because of its multiple linkages to food and livelihood security (Thrupp 2000), health (Johns and Eyzaguirre 2006), economic development (Kontoleon 2008), environmental conservation (Amend et al. 2008, Perfecto, Vandermeer, and Wright 2009), and climate change (Costello et al. 2009). Loss of agricultural biodiversity has been recognized as a contemporary global problem. A major threat to agrobiodiversity is the expansion of industrial agriculture in the form of agrochemically-dependent uniform high-yielding varieties and livestock. These standardized crops, marketed as cheap commodities, have tended to simplify and homogenize diets and create increasingly vulnerable food futures.

A substantial portion of agrobiodiversity is found in complex agricultural arrangements in developing countries' small farming systems that maintain local varieties that remain central to livelihoods, diet, identity, and culture. As a center of origin and domestication of numerous crops species, and still holding a small farming majority, the Andes is a particularly important region for the study of agrobiodiversity. Like neighboring Andean countries Peru and Bolivia (Apffel-Marglin and PRATEC 1998, Rojas et al. 2009, Zimmerer 2010a, 1999, Zoomers 1998), and Ecuador (Sarmiento 2008, Skarbo 2006), the relationship between peasant farming, local knowledge, and Andean agrobiodiversity (Corrales 2002b, PNUD-MAVDT 2009) is emerging as a topic of academic and public interest in Colombia.

Peasant agriculture relies on syncretic or hybrid set of knowledges and practices resulting from a combination of local and modern knowledge systems that are used selectively and flexibly according to needs and possibilities. This chapter attempts to

address how Andean peasants have interacted with global trends in modernization and development, and how this has played out in local agricultural management and agrobiodiversity conservation in the Colombian Andes. Historical trajectories and different forms of articulation to larger socioeconomic processes have shaped local responses to rural modernization but in neither place have peasant economies been subsumed by the forces of capitalism, globalization, and urban culture. This is manifested by the coexistence of landraces and traditional varieties next to modern ones in complex arrangements that involve mixing and diversifying. Agricultural and livelihood diversification involves the flexible and creative combination of local enskilled and embodied knowledge with modern understandings and technologies to maneuver and forge options in a context of ever changing agricultural and economic conditions. However, recent neoliberal macroeconomic policies seeking to mainstream agriculture (and culture) under the principles of productivity, profitability, and competitiveness, bring new uncertainties to rural landscapes and communities.

Information for this chapter is based on socioeconomic surveys, interviews, and participant observation. It starts with a brief discussion of local knowledge and enskillment followed by a description of the peasant concept of the base (land, labor, material goods). It describes different aspects of agriculture in each research site: from planning to planting and harvesting and examines the uses of agricultural production for the market and for self-provisioning. Recent national legislative measures that threaten peasant economies and the country's food security, and the recent victories of peasant resistance to neoliberal dairy policies are also discussed.

### Mixed knowledges and enskilled practices

Contrary to predictions, rural landscapes have not been fully homogenized or dismantled by capitalist forces nor have peasants been subsumed under market forces or urban culture. Peasant social and agricultural practices in the Colombian Andes are reminiscent of local science (González 2001), the hybrid condition (Gupta 1998), or what Escobar (1995, 2008) calls alternative modernities to describe the incomplete processes of development and modernity in developing countries. In these contexts, tradition and modernity, urban rural, high and popular cultures coexist in the midst of the forces of globalization and neoliberal policies. An aspect of how elements of tradition persist and are constitutive of modernity is peasants' insistence on growing crops and landraces that are meaningful on ecological, economic, and cultural grounds. *Don Pedro* and *Doña Edelmira*'s testimonies quoted reveal patterns of permanence and change in Andean peasant knowledge, agriculture, and livelihoods. Both stories speak of peasants' decision-making regarding production for domestic consumption and the market which ultimately affect agrobiodiversity and food security. Their ambivalence on the adoption and adaptation of modern farming techniques and reductionist practices point to some of the outcomes of the unfinished and incomplete processes of rural development and modernization in the Andes. As has been noted (Escobar 2008, Gupta 1998, Richards 1985, Zimmerer 1996) these hegemonic processes are simultaneously desired and resisted, demanded and contested by peasants who incorporate, adopt, and adapt technical discourses and recommendations but retain customary practices. *Don Pedro*'s intercropping arrangements are long-term features developed over time by Garagoan peasants. Through modifications in crops, arrangements, and planting sequences, the

cultural principle of *cateo* (to mix), is present in most agricultural fields and homegardens except in a few commercial varieties. *Doña* Edelmira's account stresses the mixed effects of agricultural intensification on local livelihoods, but hints at the continued practice of multistory intercropping in Alban's shade coffee system by means of the planting of species with different habits and characteristics such as plantain, coffee, manioc, and *guatila*. Stubbornness, the term employed by *Doña* Edelmira, has often been used by elites, government officials, and development practitioners to describe peasant conservatism as a negative expression of their unwillingness and inability to change. Here stubbornness is seen as a manifestation of peasant agency which builds on accumulated knowledge, long-term food habits, and tastes to resist rural policies that threaten local ways of eating, living, and knowing.

Alban and Garagoa farmers employ a mixed, syncretic, or hybrid set of knowledges resulting from a combination of local and scientific/technical knowledge systems that are used selectively and flexibly according to needs and circumstances. Much of their practices, however, are informed by local knowledge acquired through practical engagement with nature and agriculture. Despite generalized beliefs in the inadequacy of peasant knowledge, ethnoecological studies (Conklin 1954, 1957, Berlin 1992, Brush 1980, 1992, 2004, Toledo 1992) have amply demonstrated the complexity and internal logic of local knowledge systems emerging from people's particular perceptions of and experiences with nature. Recent scholarship concurs in that local knowledge is practical, culturally situated, shared but asymmetrically distributed, internally differentiated, fragmented, and dynamic (Ellen 1993, Nazarea 1998, 1999). Local knowledge systems, involve a "complex combination of ideas, artifacts and

institutions that have traveled rough temporal and cross-cultural trajectories” (González 2001:12). It has also become clear that they are embedded in wider socioeconomic, political, and environmental relations, in which knowledge is produced, contested, and negotiated (Ellen, Parkes, and Bricker 2000). Here, the concept of Andean peasant local knowledge has both a dynamic quality and connection to its historical roots.

Knowledge acquisition in the Colombian Andes occurs in multiple forms. The primary is family socialization. Socialization consists in participating in daily activities that foster autonomy, independence, and responsibility. Children learn with parents, relatives, and peers. At an early age boys and girls are assigned farming and food-related chores that contribute to the household’s operation: feeding animals, sorting seeds, taking care of younger siblings, cooking, cutting and peeling food, shelling corn, fetching and carrying tools, food, firewood, and running a variety of errands (*mandados*). Many of these are perceived as games that children do in the company of siblings and peers. Boys and girls are also taught to work hard, build strength, and withstand hardship and pain. They must endure rain and sun (*llevar sol y agua*). Laziness and weakness are frowned upon.

Environmental and agricultural knowledge is passed on orally and is shaped by enskillment. Skills are capabilities of action and perception acquired through training and experience in the performance of particular tasks and within communities of practice (Ingold 2000, Palsson 1994). On occasion children are given a small piece of land to start their own crops. *Don Helí* recalls this experience: “As a boy I used to go with my parents to work, I used to look. I asked my father: would you leave me a little corner to plant? And he gave me a *retazo* (a piece of land). I grew plantain, manioc, *arracacha*. I was so

proud of my field!” In this logic children are taught to love work (*cogerle amor al trabajo*); that is, to learn a trade properly, to handle tools correctly, to plant at the right time, to select the best seeds, to know the best planting distance and cropping arrangements. Enskillment involves mind, body, and the senses. Daily engagement with altitude, weather, water, soils, seeds, plants, animals, and insects contributes to the development of perceptual and sensory sensitivities that make up peasants’ embodied knowledge. Children are taught to observe and experiment. In face of agricultural hardship, poverty, and limited economic and productive options in the area, loving one’s work and craft is fundamental to rural household livelihoods. It sustains peasant work, identity, sense of place, and sense of self; *Don Alvaro*’s testimony is a case in point “One grew up honest and learned to love [agriculture] (*le cogió amor*). One is here and nobody will remove me even if I am not profitable.”

Enskilled and embodied knowledge is reenacted and refined over the years and updated in the performance of everyday activities and according to circumstances. As González (2001:70) has aptly described it in his discussion of Zapotec peasant farming: “campesinos themselves become precision instruments with senses and skills sharpened over the course of a lifetime... they rely more on sensory information and their own bodies.” But with increasing children’s participation in formal education and new economic and cultural aspirations, agricultural enskillment has declined. In Garagoa, for instance, it is unusual to see a child or young adult in rural settings since families with children tend to move to the municipal capital in search of better education and economic opportunities for their children. Labor shortages are among the main constraining factors in Andean peasant agriculture.

### Peasant agriculture in the Eastern Cordillera: cultivating diversity

In their study on peasant domestic economies in Boyacá, Gudeman and Rivera (1990) noted that a primary goal of Andean domestic economies is to maintain and reproduce itself physically and socially. This is achieved by increasing the base (*la base*) namely, material products (earth, crops, animals, tools), cash, and reserves necessary to support an independent life. The term *base* is more commonly employed in Garagoa but the concept of focusing on domestic production for self sufficiency and economic independence is also present in Alban. *La base* literally means the foundation, which also stands for peasant investment in a crop or an animal prior to its sale. When sale prices do not match the capital and labor investments it is said that *no da la base* (it does not produce the base). Land and labor are the material foundations of the base, all of which are limited in peasant households.

In the Andes the primary source of labor is the nuclear family. The family is also the main unit of consumption and the center of agricultural decision-making. Families and households are used interchangeably in this research to refer to family members sharing a roof and bowl. Household demographic composition influences the volume of production, income, and domestic consumption. All household members are expected to work hard and contribute to the family's wellbeing. Tasks are divided by gender and age but men and women are knowledgeable of most agricultural and domestic chores. Men are responsible for preparing and keeping the fields, including application of agrochemical fertilizers and pesticides. Planting, weeding, hilling, and harvesting are done by the couple and other family members or hired workers. Women are in charge of household animals, the garden, and all domestic chores: cooking, cleaning, washing, and

looking after the children. In female-headed households women undertake both household and farm tasks but generally receive help from their children, relatives or neighbors. If economic means allow, laborers are hired for the most difficult and strenuous chores. Children participate in all tasks when they are not in school. With the spread of children's rights such as mandatory education and protection against mistreatment and physical abuse, child labor has considerably diminished. These rights are viewed with ambiguity by elders and some adults who had to work hard at a very early age and consider that these measures are making the new generations lazy and weaker. The elderly work according to their capabilities and stay physically active until old age. An important role of elders is the transmission of history and knowledge by means of stories, sayings, and practical lessons to the youngest ones. Grandparents are often in charge of children; teaching by example and learning by repetition contributes to the process of intergenerational learning and enskillment.

To maximize time, labor, and capital peasants engage in cooperative and reciprocal labor arrangements. Labor is one of peasant's main assets. Through variously called *mano prestada* (lent hand), *fuerza ganada* (earned force), and *vuelta de mano* (returned hand), parties help each other in different tasks whenever needed and according to prior agreements among participants. In Garagoa the *patrón* (boss) summons *obreros* (workers) that work for wages or not, in a determined activity, generally what is called a *tarea*. A *tarea* is what can be accomplished during a work day, generally estimated as the entire planting of an area equivalent approximately to 20 m<sup>2</sup>, or 10 *varas*. *Varas* are measuring sticks 1 m long. Later on, the worker becomes a patron and summons his former patron and other workers for a different activity, generally involving clearing land

for planting or harvesting. *Patrones* and *obreros* are relatives and neighbors that assume either role during the specific task. In Garagoa most community members are related through kinship ties and there is a high degree of endogamy. This facilitates labor exchanges and social control of those who do not cooperate as expected. Collective work of this type enables farmers to consult with one another, exchange ideas and experiences, and observe each other's fields and animals. Other associative forms employed in Alban and Garagoa are *compañías* (company) *ambías* (together) or *al partir* (split). These deals involve two or more people who share the costs of planting or raising livestock, including labor, according to each other's possibilities and split harvest revenues or sale earnings proportionately. Other peasant strategies to compensate for the lack of land, labor, and capital to meet the base are to increase working loads, reduce agricultural parcel size, or shift to livestock production. These strategies are more common in Garagoa where agriculture rests on diversified production of transitory crops demanding constant adjusting to market demands. Productive specialization and parcel size limit agricultural flexibility in Alban.

Parcel size is also a limiting factor in Andean agriculture. The Boyacá and Cundinamarca departments have among the highest concentration of peasant population and highest levels of minifundia in the country. Households surveyed in this study (40) are representative of this situation: average family holdings in Alban were 0.88 ha and 2.2 ha in Garagoa. Strategies to broaden access to land are purchase, rental, marriage, or fictive kinship relations. Credit for land purchases is not easily available. Rental is used for transitory crops or pastures; land is not leased out for permanent crops because it might be subject to legal claims by the renter on the grounds of improvements that add

value to the property. Marriage and social kinship through *compadrazgo* (god-parenting), are institutions commonly used in Garagoa to access parcels of land in areas with different climate and soil conditions in order to broaden the environmental and altitudinal agricultural spectrum.

Rural wages in Colombia are lower than urban ones in general. In 2007 the daily wage ranged from 6 to 9 dollars when the official minimum daily salary was 8 dollars a day. Rather than work for such low wages, sometimes peasants choose to work in their own land to strengthen their own base. Peasant household income estimates are difficult to ascertain given the seasonality and irregularity of agricultural and wage labor, the diverse tasks performed within and outside the farm, and farmer's reluctance to disclose assets and income. The practice of not remunerating family and domestic labor, and the various non-monetary sources of resources and goods entering the house also pose challenges to economic calculations.

In 2007 I estimated that the average monthly family income in Garagoa was 121.842 pesos (US\$ 62) or 28% of the nationally legislated minimum monthly salary which was 433.700 pesos (US\$ 222.4)<sup>22</sup>. Considerable internal socioeconomic and productive heterogeneity, a trend more accentuated in Alban, revealed large income disparities: highest income was 450.000 pesos and lowest 15.000 pesos. Alban's monthly family income averaged 286.211 pesos (US\$ 146.7) or 65.9% of the minimum official monthly salary. Income ranged from 50.000 to 800.000 pesos. Income estimates in Alban did not include coffee harvest revenues; growers were reluctant to estimate production volumes or sale revenues given annual oscillations in coffee prices and yields. Price

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<sup>22</sup> Dollar exchange rate for 2007 were 1US = 1950 Colombian pesos.

oscillation pushes farmers to search for the best selling prices; middlemen often pay more than the Federation, and are not so demanding in terms of quality. In gross terms, half a hectare planted with *caturre* variety produces approximately 125 kilos the price of which can range from US\$ 92 to US\$ 250.

When contrasted to monthly household expenditures (food, transportation, utilities) income estimates rarely cover these costs. Monthly food expenditures in Alban were US\$ 88, equivalent to 60% of the monthly income (US\$ 146). In Garagoa monthly expenditures were US\$30 equivalent to 49% of the monthly income (US\$ 62).

Purchasing ability is one of the main limiting factors in the acquisition and diversification of food. Yepes and colleagues (2005) noted for Colombia that lower income households spend a larger proportion of income on food than wealthier ones who invest in other expenses (Yepes et al. 2005). A partial answer for understanding how peasants make ends meet given monetary disparities lies in the multiple exchanges of labor, land, goods, capital, and food among family members, relatives, and neighbors (Forero 2002b, Torres 2001). Another partial answer is the conservation of agrobiodiversity to supplement household incomes and provide nutrition and health resources. What is cultivated and how is the focus of the next section.

Harvest planning begins in January with the observance of the *cabañuelas*. This is an ancient Spanish method to forecast yearly rain and dry patterns. The climatic behavior of the first 12 days of the year is a guide for agricultural and livestock planning during the next 12 months. Each day represents a month. Weather conditions during the first day of the year will indicate the weather pattern during the month of January, and so on for every month. If, for instance the first of January is a sunny day then the entire month is

expected to be sunny; if the daily weather changes, the monthly weather will be variable. In Garagoa the *cabañuelas* help farmers plan the agricultural year according to perceived monthly behavior. Agricultural cycles are patterned according to rain and dry seasons. The main harvest cycle, *año grande* (big year), starts with the first rains of the year in February and March which last five to six months. High altitude fields are cultivated in February and March; growth and maturation take longer because of the colder climate. Plots at lower altitudes are cultivated between March and May. Annual or transitory crops include several varieties of corn, potatoes, tubers, legumes, fruits, and squash. The term *comida* (food) is used broadly to mean those food crops, but it is also used selectively and interchangeably with *duras* (hard ones), to refer to roots and tubers. (Chapter five provides more details on local classifications.)

The shorter harvest, known as *mitaca* or *guayome* (mid-year) cycle begins in July or August in the highlands and runs through October in lower elevations. Mid-year crops include varieties with shorter maturation cycles which ripen with the arrival of the warmer and sunnier months at the end of the year. These include legumes such as beans, peas, and fava beans which fall under the category of *recao*. They complement *comida* (roots and tubers) and both are added to a hearty hominy soup called *mute*. Planting requires a lot of planning because of each crop's growth habits, harvest time, nutrient, and labor requirements.

In Alban *cabañuelas* are used to ascertain the quality of the harvest according to rain and sun patterns. Younger farmers no longer take this forecasting practice into consideration on the grounds that they are older people's beliefs. Older farmers, however, still are attentive to the weather during the first twelve days of the year but note that

climate unpredictability has made agricultural planning more difficult. Peasants also maintain close observance of lunar cycles which influence a variety of activities, among which are sowing and harvesting, which must be done in the wane. Consultation of the Bristol almanac, a small yearly publication containing weather forecasts, lunar cycles, agricultural tips, tide tables, national holidays, and jokes, is also common. The Bristol almanac is a popular publication because in previous years rural families with numerous children used it as a source of inspiration for their children's names; parents would use the name of the saint, whose holiday coincided with the child's birthday, often leading to uncommon and even funny names.

Material agricultural tasks are complemented by other rituals for successful outcomes. Farmers, older ones in particular, pray for crops to be healthy and productive and occasionally take seeds to church to be blessed. On occasion they make promises to the patron saint for harvest success. In addition, every year peasants participate in the festivities held in honor of San Isidro Labrador, patron saint of peasants and agriculture. This celebration is known as *el día del campesino* (peasant's day), a date that has been often used for political demagogery by local politicians and public officials. Crops, animals, food, and timber are some of the offerings to the saint; the money obtained from the sale of these goods is used for church expenses. For centuries the Catholic Church and religious authorities have taken advantage of free peasant labor and produce (Bonilla 1969, Fals Borda 1961, 1979).

Microverticality and intercropping are important features of Andean peasant agriculture. Microverticality or the use of plots in different altitudinal and climate zones (Langebaek 1987, 1995) is an indigenous form of agriculture and resource use practiced

by peasants in Garagoa. Intercropping is the planting of two or more crops simultaneously in the same plot. Intercropping is an underlying agronomic, ecological, and cultural principle in Alban and Garagoa farming. According to local peasants this is a defining feature that distinguishes peasant agriculture from modern technical agriculture (*agricultura tecnificada*), characterized by symmetrical planting of monocultures and heavily dependent on agrochemicals, technology, capital, and wage labor. The benefits of intercropping have been amply shown (Altieri 1994, 2002) for preventing the spread of pests and diseases, protecting soil runoff especially in sloping areas, maximizing soil nutrients, and reducing the risk of crop failure.

In Garagoa peasants strive for accessing land with different ecological, soil, and climate conditions to grow different crops. Parcels or plots range from one hectare to various *retazos*, literally snippets of land intensively cultivated with diverse and efficient polycultures following the principle of *revuelto* or *cateado* (to mix). Agricultural mixing is the combined planting of several seeds of roots, tubers, legumes, and grains with different maturation periods in a single hole (*mutal*) or in the same plot. A furrow includes several *mutales* or holes where seeds of grains and tubers are planted together. *Mutal* is associated with *mute*, a hearty soup previously mentioned made with hominy, tubers, and green legumes. A furrow can include one or two kinds of beans and peas, tubers, and corn on the sides (Monsalve 2005:313). Each parcel is unique with respect to the crops and varieties used, planting arrangements, and spatial disposition of crops according to the main productive orientation: commercial or subsistence. Uniqueness demands individualized and independent management. The generic term *siembros* (crops), is applied to all plots but commercial parcels are known as *tablas* (tables); they

tend to have a single crop or a combination of two or three crops only. Associations vary in complexity but peasants acknowledge their advantages of intercropping for soil fertility, crop protection and yield, and labor reduction. Polycultures take advantage of agronomic characteristic of individual species for productive synergies with neighboring plants; some crops like (*les gusta*), certain plants better than others.

As suggested in previous chapters, Andean agrobiodiversity has been shaped by long-term human-environmental interactions and recent processes of landscape transformation. Crop prices, market demand, national agrarian policies, and international trade are some of the extra-regional dynamics affecting local agricultural decision-making. Agroecological and socioeconomic factors are important for the conservation of plant and animal species but cultural and subjective factors such as regional traditions, family preferences, and personal tastes also play a role. A particularly diverse parcel at 2350 m in *Don Pedro* and *Doña Helena*'s farm, included *arracacha*, beans, corn, sugar cane, manioc, *lulo*, fava beans, squash, and peas, Figure 4.1. Manioc, *arracacha*, and sugar cane are typically cultivated in lower and warmer areas. "We just grow them together and see what happens and how they get along; it might take them a little longer though" *Don Pedro* and *Doña Helena* say with a chuckle. This sophisticated and versatile arrangement exemplifies how Andean peasants use knowledge and skills to experiment and to play with the plasticity of crops and adapt them to different altitudes and climate conditions in ways that enhance agronomic, nutritional, and genetic diversity. In the Andes, similar practices have been recorded by Zimmerer (1996, 1999) and Skarbo (2006) in Peru and Ecuador respectively. Practices like these contradict arguments about the irrationality and inadequacy of peasant agricultural knowledge.

Growing food involves complex agronomic, ecologic, and economic decisions regarding what, where, when and how to plant (Barlett 1980). Peasants must consider multiple factors to insure the regular availability of different crops and foods, not all of which can be stored and saved for future use. In addition to weather, soil and seed quality are important factors in planting frequency. To let the soil rest parcels must be rotated; rotation and renewal of intercropping arrangements can also reduce the impact of pests and pathogens and restore productivity. According to length of fallow, a piece of land might be burned, ploughed, or simply “scraped” with a hand plough. Often topography does not allow for mechanization. In regards to tools and implements employed in Garagoa and Alban, these are few and simple: machetes, shovels, plow, hoes, and coffee *despulpadoras*, which remove the pulp of coffee beans. The most expensive and modern tools use the single-man cropper and the chain saw.

#### Shade coffee agroecosystems and other management practices

Alban’s cash crop specialization and intensification has meant that 80% to 90% of the family farm is devoted to coffee. A few better off peasants with more land may devote some of it to pastures or sugar cane. As a permanent crop, coffee is less labor intensive: it does not require rotation and fallow periods, demands little weeding and coffee trees must be renewed only every few years. In the case of older Arabica varieties trees can be up to 30 years old. Renovation consists of selectively pruning a few branches to facilitate harvesting in a process called *agobio*, or a more drastic operation involving the cutting of the coffee tree about 20 to 30 cm from the ground for it to grow strong again. This procedure is called *zoca*; it is done after the harvest, every four to six years

depending on the age and variety of the plant: the traditional Arabica, or the improved *caturra*, *colombia*, and *castillo* varieties. When starting a coffee plantation, the saplings must be planted during the rainy or humid season and intercalated in such a way that they prevent runoff and erosion in slopping areas. Saplings are often bought from the local coffee federation committee's nursery, which sells them with a discount to federation members.



Figure 4.1 Garagoa: Polyculture with *lulo*, corn, *arracacha*, sugar cane, beans,

In other cases farmers themselves select the best seeds and plant them in plastic bags containing fertile soils; they are kept in the shade in a warm and humid area until they reach the adequate size to be transplanted. Planting density varies according to the coffee variety: taller Arabica varieties require more space to expand; old coffee trees about 40 to 50 years old sometimes require a ladder to harvest the beans from the tallest branches (Figure 4.2.). When growing these varieties approximately 2 m are left between plants. Shorter varieties like *caturra* and *colombia* which produce smaller and lighter

beans can be planted more closely together. Once again, depending on the variety, the first harvest can occur at a year or two after planting, once the tree has flowered. At harvest, only the red beans are picked. Production peaks between the fourth and sixth year after which it is necessary to renovate again. Pruning is done progressively to avoid leaving farmers without any production for a year or two. Areas containing the oldest trees are selected first, and after a couple of years another area is renewed. This contributes to higher and better quality yields. Although permanent crop maintenance is not as labor intensive, farmers must constantly inspect the trees and leaves for signs of coffee rust, bean borers, or diseases affecting the harvest.

In a “traditional” system as it is called to differentiate it from the full-sun exposure system, coffee is intercropped with a variety of trees, plants, and transitory crops. Interspersed crops can include plantain, citrus (oranges, lemon, tangerine), *guanábana* (*Annona muricata*), banana, avocado, beans, *balú*, *arracacha*, squash, *guatila*, corn, and beans. As has been noted (Cifuentes 1994, Perfecto et al. 1996) in this type of system, the structural and floristic complexity of shade trees offers vegetation diversity which protects plants against too much sun and rain, regulates the understory microclimate, prevents runoff, and adds biomass to the soil by means of fallen leaves. Although crop-tree associations predominate in shade coffee agroecosystems Andean farming systems manage a variety of native and exotic trees for fruits, timber, firewood, fences, and shade. In this research a total of 64 species of trees were reported in fields and homegardens: 37 of them in Alban and 40 in Garagoa.



Figure 4.2. Alban. Doña Josefina picking coffee from old and tall Arabica tree (note the size of tree and beans).

The list is not exhaustive but draws on peasant reports obtained in the survey (See Appendix C for a complete list of reported trees). Some of these species have been introductions of state environmental and agrarian institutions as well as the national coffee federation according to distinct economic and agronomic rationalities. Crop-tree associations generally enhance local ecological processes, protection against soil erosion, agrobiodiversity, and household self provisioning. One of the most conspicuous species in both areas is the native *quiebrabarrigo* (*Trichanthera gigantea*), widely promoted for

its multiple functions: it is used as living fence in 70% of peasant households and around water springs because it helps to control landslides and stabilize soils in sloping areas which is why it is also called *nacedero* or *madre de agua* (mother of water). It also provides medicine and animal fodder.

In the highlands pine and eucalyptus are the most prominent exotic species; they are used for timber and fuel. These exotic species were promoted in Colombia in the 1970s as part of government production-protection forest watershed protection campaigns (Devia 2000). Reforestation campaigns coincided with the start of commercial forestry monoculture by logging companies and paper industries demanding pine and eucalyptus eventually causing negative impacts on natural ecosystems, water sources and soils (Hofstede et al. 1998). According to several farmers in Garagoa National Institute of Renewable Natural Resources (Inderena), promoted reforestation with species that were foreign to the region such as: *cipres*, (*Cupressus sempervirens*), *candelabro* (*Pinus radiata*), eucalyptus, *ocobo* (*Tabebuia rosea*) and *gualanday* (*Jacaranda mimosifolia*). After incentivizing deforestation in the highlands for farming, “state entities gave us *huesos* (bones)” peasants say; meaning hard to chew gifts which were useless because they were distributed during the summer months when there was not rainfall. Peasants in Alban and Garagoa complain about these species drying up the land and affecting the soil; eucalyptus in particular damages crops with the oil it exudes. Soils are one of the most important elements affecting agricultural performance; its proper knowledge and management is a matter of considerable attention by Andean peasants.

Soil quality is fundamental for plant productivity and stability. Many agricultural decisions are made with respect to edaphic characteristics. The capacity of agricultural

soils to function depends on how they are managed with respect to water, nutrients, erosion, and fertility. Mountains are particularly prone to erosion and washing by rain due to intense deforestation, agriculture and livestock use. Andean mountains are young and soils are still unstable. Historical deforestation, runoff, production, grazing, and human settlements have worn and depleted the local soils in the Andes (Etter and van Wyngaarden 2000). In 1950, the World Bank mission for development (Currie 1951) pointed to the situation of soil erosion and loss of vegetable cover on the eastern side of the Eastern Cordillera as an agronomic limitation to production. By contrast the good quality of clay soils on the western slope, the Mission noted, was due to shade coffee practices promoted by the Coffee Federation. To counteract soil erosion and low crop productivity the Mission suggested the use of agrochemicals.

According to the Colombian Geographic Institute (IGAC 2006), the characteristics of soils in the Eastern Cordillera, coupled by steep slopes affect use and management. Geomorphologic and edaphic conditions in the Eastern Cordillera indicate that land use in elevated areas in Garagoa, which account for 50% of the municipality, should be destined for conservation because of steep slopes. The remaining mid and lowland areas should be used for agroforestry but actual use is agriculture and livestock. Livestock contributes directly to soil erosion and fertility loss. In Alban current land use in low and mid elevations coincides with official recommendations: agroforestry (40% of the municipality's area) and agriculture (40%). The highlands (15%) have been designated for conservation and water production but wealthy urban land owners have set up extensive dairy livestock operations there. This poses a land use conflict between owners and environmental authorities (IGAC 2006).

As has been noted for agricultural societies elsewhere (Rengifo 1987, Sillitoe 1998, Talawar and Rhoades 1998), peasants' long-term involvement in agriculture, observation of natural processes, and constant experimentation endow them with firsthand embodied knowledge of local soils and their behavior. Farmers watch, touch, smell, and sometimes taste the soil in order to get a better feel for its characteristics and quality. Andean landholdings in Alban and Garagoa often have more than one type of soil. Peasants classify good soils as those that are black, brown, dusty or lumpy and are found in lowlands and sloping ridges or hills. Flatter lands tend to have the best, black, dusty, "thicker" soils. Steeper hillsides hold less fertile and "thinner" red or yellow soils. Peasants in Alban and Garagoa, however, do not always consider local soils to be poor or bad per se; each soil is good for a particular crop or purpose. Not all crops "like" all soil types and not all soils are appropriate for agriculture. For instance, yellow soils are good for *arracacha* and manioc, and the crops like these particular types of soils. Other soils are good for forest conservation only. Peasants consider local soils, productivity, and harvests to be good partly due to peasant cultural practices and agricultural routines which can include: fallow periods, intercropping, crop rotation, green covers, mulching, and use of organic fertilizers which help to preserve soil organic matter, improve soil structure, aggregation, and overall productivity. All households recycle and add in-farm organic matter such as harvest and crop residues, animal manure, ashes, sawdust, coffee pulp, sugar cane bagasse, and kitchen scraps that add nutrients to the soil.

In Alban, chemical fertilizers are used sporadically because the agroecological system and in-farm organic recycling practices contribute to soil fertility. On the contrary, Gargaoa peasants declared that in addition to the use of organic or black

fertilizers (*abonos negros*), they depend on white or chemical fertilizers (*abonos blancos*). According to Monsalve's (2005) extensive interviews with older farmers, approximately 70 years ago even manure was scarce because peasants did not own cattle or horses. Main fertilizers were chicken manure, ashes, and harvest residues. In interviews conducted in this research the first chemical inputs employed beginning in the 1950s were phosphorous fertilizers and lime. After that other commercial products combining nitrogen, phosphorous, and potassium appeared in the market. Despite negative perceptions of agrochemicals, 80% of peasants in Garagoa use them, albeit selectively. Household crops are generally fertilized with organic matter but commercial crops such as potatoes, *lulo*, *bolo rojo* beans, and string beans inevitably require chemical inputs. Pesticides and herbicides or *remedios* (remedies) to control the proliferation of pests and fungi arising from microclimatic changes associated with the Chivor dam, have also become widespread. Similarly, they are used selectively according to peasant assessment of crop development and weather patterns. Some of these products that are sold freely in Colombia and which peasants use without any bodily protection have been proven to be highly noxious to health and the environment such as parathion and furadan. In other cases they have been severely restricted in the US like manzate (León 2007: 79). The cost of inputs coupled with ecological and health concerns have prevented the generalized use of agrochemicals; peasants use them in moderation because they note how these substances have burned and weakened the soil. They have also weakened people and caused health problems; as *Don Pedro's* initial testimony indicated, the natural body represented by the soil and crops, and the human body are affected by these new substances. They can also affect the quality and taste of food: "Chemical fertilizers

burn the vegetation and if one uses too much they burn the crops, potatoes for example are yellowish and sometimes do not taste good; some crops may look ripe but they are hard inside” says *Don Julio*. Similar comments have been expressed by Indian farmers (Gupta 1998, Vasavi 1994). Despite peasants’ mixed feelings about agrochemicals they cannot abandon them completely if they want to participate in the market.

The mixed nature of peasant practices is evident in the manner in which they combine customary cultural knowledges with modern technologies and practices. The following quote in Monsalve’s ethnography (2005:215) illustrates how Garagoa peasants express this condition in the ambiguous term *montaño* (hillbilly). *Montaño* can be used as a derogatory word expressing backwardness and ignorance. But here it is used to mean old ways and tradition, which are also respected and valued because despite the suffering and poverty experienced they are associated with strength and independence:

People don’t go to the *técnicos* (technical experts) because each parcel is very small. Each one cultivates *a lo montaño* (in the old way). Back then, our grandparents and parents used to say, they only used black fertilizers, they had not released the fertilizers that are available today... Today we are here almost in the *montaño* way, one plows the land, breaks the earth with the hoe, looks for the seed, selects it, then get ready the black fertilizer. Today we don’t use black fertilizer anymore, only the chemical one. We have to buy pesticides for insects and everything is more “technified.” But we don’t rely on an agronomist to tell us ‘this soil needs this.’

The previous testimony also illustrates how rural technical consultations and interventions are structured in a way that presupposes a set of deficiencies, either of people, plants, soils, or animals, waiting for a more knowledgeable outsider to suggest a technological or commercial solution. These conceptions assume the lower status and inadequacy of local knowledge in face of that of the educated professionals. Peasants, however, often see it the other way around: *técnicos* and professionals, though well

intentioned, do not always understand how rural life works because they do not even live in the countryside, they lack the practice, and their visits are sporadic and hurried.

Under the influence of sustainable development discourses, in the past decades local and regional rural institutions and programs have encouraged reforestation with native varieties, composting with earthworms, green covers, and in-farm recycling. In 1995, Integrated Rural Development programs and demonstration parcels were established by the municipal agricultural technology unit in farmers' fields in Garagoa to incentivize a series of green practices, nutrition training to change food habits, and technical livestock management practices (El Tiempo 1995). But as municipal employees acknowledge, the projects were short-lived and finally came to an end due to lack of funding and the privatization of agricultural technical services. Throughout the 1990s, various rural institutions were eliminated such as IDEMA (food marketing institute), or restructured such as the National Institute of Agrarian Reform (INCORA), which merged with the National Institute of Land becoming the present Colombian Institute of Rural Development (INCODER in Spanish). In the 2000 - 2010 decade many rural technical services were privatized and oriented to the promotion of agro-entrepreneurial production of promising crops. In Garagoa selected crops were coffee, blackberries, and medicinal herbs, which have not taken off. On the contrary, a recent trend has been the reduction of annual or transitory crops and the rise of annual multipurpose crops such as corn because of its higher productivity, better storage qualities, and greater market demand.

Seed saving is one of the oldest agricultural traditions. Seed selection and saving helps to sustain genetic diversity and cultural memory over time and against the homogenization of modern commercial agriculture (Nazarea 2005). Seventy five percent

of farmers surveyed in Alban and Garagoa save seeds, many of which are heirlooms that have been in the families or the area for generations selected for advantageous traits and performance under local conditions. In Garagoa, when anthropologist Dora Monsalve (Pers. Com.) took a few farmers for a seed exchange meeting in another Andean region, *Don Jorge*, a very conservative farmer, refused to introduce corn seeds from a place that he did not know for fear of cross-pollination with one of his old corn varieties with which he makes a special *chicha*. This variety has been in the family for years and he did not want to expose it to any changes. As in most agricultural systems, a few crop varieties have been lost because of soil degradation, pests, and competition with commercial ones with higher market value. This is the case of various potatoes and *arracachas* in Garagoa and certain roots in Alban like *chonque* and *batata*.

In Garagoa, to prevent a seed from becoming vulnerable to local conditions and losing desired traits or productivity, peasants acquire or exchange seeds from distant but environmentally similar places such as the neighboring Pachavita municipality, reputed for good quality of corn (Monsalve 2005:404). According to interviews in this research, Gargoa peasants exchange seeds regionally with farmers within the larger Tenza Valley. Corn is one of the most malleable crops; it is constantly experimented with and exchanged among neighbors and friends. The practice of establishing broad seed exchange networks over a regional territory has also been reported by Zimmerer (2003) who argues that Peruvian male and female farmers' dependency on multiscale seed networks has important implications for considerations of scale in conservation policies. According to Zeven (1998), one of the reasons why peasants introduce new materials, whether landraces or cultivars, is to increase yield stability. Landraces, also known as

folk varieties (Brookfield 2001) or farmer varieties are local varieties of domesticated animal or plant species that have adapted by natural and cultural processes to the environment where they live (Zeven 1998). Here landraces are also called Creole or *criollo* varieties which is the term employed in Colombia. Contrary to Green Revolution beliefs that high-yielding agricultural varieties would replace native crops and landraces, old and new varieties coexist in farmers' parcels for income and dietary diversification. In fact, farmers interviewed comment that in some crops present day diversity may be higher than several decades ago due to the constant flow of crops, seeds, and foods introduced by institutions and farmers themselves.

Purchase of seeds is a regular practice that takes place in agronomic stores, nurseries, or in the local markets when farmers need to replace or renew crops or want to experiment with other varieties. Middlemen also play an important role in the acquisition and introduction of commercial seeds and varieties. Those who transport and commercialize produce lend money for new agricultural ventures and then purchase the entire harvest at the price they set up. Middlemen are often people of rural origin knowledgeable of the produce market in urban centers; they possess information that peasants ignore and are very astute in commercial dealings. Under precarious transportation conditions, unpaved winding roads, and long distances to markets, peasants depend upon middlemen and have very little room for negotiating more favorable deals. Middlemen are ambiguous figures: they are blamed by consumers for increasing the cost of food and speculating with food prices, and they are also blamed by peasants for setting low prices and controlling transportation and markets. Yet these

actors sometimes take significant chances with harvest risks and oscillating crop prices. They are key actors in a complex and uneven network of economic exchanges.

Donation of commercial seeds or plants by government and non-government institutions has been a common component of poverty alleviation and improvement of economic opportunities, nutrition and health for rural households. Certified commercial seeds, plants, and small domestic animals (chickens, pigs, fish) are also distributed in connection with political campaigns or the launching of new governmental rural development or nutrition projects. One of the earliest campaigns of this sort was launched in 1947 under the administration of Mariano Ospina Perez, and introduced 16 different crop species in 14.000 homegardens for local household consumption (Bejarano 1987:203). Unfortunately, these short-lived initiatives are used as indicators of rural social investment policies.

The National Coffee Federation has been one of the most active seed distributors. In the mid 1990s it launched a large campaign in response to an acute coffee crisis that was followed by severe rural unemployment and food insecurity. To buffer the effects of the crisis and redress some of the errors committed in previous coffee intensification policies, sustainable diversification programs were implemented. Transitory crops (corn, beans, fruits, homegarden plants), grasses, and livestock (cattle, chickens, pigs, and fish) were distributed to small coffee farmers. In 2007 the Federation launched the Coffee Renewal Plan aimed at renewing 300,000 ha of coffee with the rust-resistant *castillo* variety. This initiative, which has been compared to a Marshall Plan, is financed by the government, the National Coffee Fund, and growers themselves through soft loans (El Tiempo 2007). Renewal is taking place very gradually first because small farmers can

only leave a portion of the land unproductive for two to four years until the plants go into full production, and second because some farmers are not willing to take the risk of trying a new variety whose advantages have not been demonstrated.

Native seed saving and protection is a significant and relevant matter in face of the growing pressures of transnational seed corporations to pass legislation authorizing the introduction of genetically modified organisms in Colombia. As stated by Agro-bio, a nonprofit association supported by Monsanto, Bayer Cropscience, Syngenta, and DuPont for the promotion and diffusion of agricultural biotechnology in Colombia, in 2002 the country jumped a step into modernity (*nuestro país dio un salto hacia la modernidad*) (Agro-bio 2010) when the first officially approved GMO, blue carnations were planted for export to US markets. In 2003 Colombian Agricultural Institute (Instituto Colombiano Agropecuario, ICA) authorized Bt cotton to be cultivated; Bt is genetically modified with the Bt delta endotoxin produced by soil bacterium *Bacillus thuringiensis* which offers resistance against insect pests. In 2007 ICA passed Resolutions 464 and 465 allowing cultivation of Bt corn (Yieldgard and Herculex varieties), Roundup Ready corn (RR corn), tolerant to the herbicide glyphosate, and Bt/RR corn. Bt-11 corn was approved in 2009. All of these seeds are produced by Monsanto (Agro-bio 2010). Simultaneously ICA passed resolution 970/2010 that restricts seed production and commercialization of certified varieties, jeopardizing customary peasant seed saving and exchange practices. The introduction of GMOs seriously threatens national agrobiodiversity, food security, peasant knowledge, and livelihoods as has been amply documented by Elizabeth Fitting (2006, 2010) in her compelling accounts of Mexican neoliberal agrarian and food policies associated with genetically modified corn imports. But whereas a coping strategy of

Mexican households is transnational out-migration, in Colombia lack of rural opportunities has been a major factor pushing rural youth into guerrilla and paramilitary groups as well as illicit activities such as coca cultivation (Ferro et al. 1999, Ramírez 2001, Specht 2006).

*Sementeras, huertas, and potreros: sites of agrobiodiversity for livelihoods*

Agrobiodiversity in Alban and Garagoa is not evenly distributed nor is it stable. Crops and varieties are transient and change over time and across space. To understand where agrobiodiversity is located and concentrated it is necessary to clarify what are the main agricultural spaces and how they are defined. The broadest agricultural land divisions in Alban and Garagoa are fields, pastures, and homegardens. *Sementeras* (fields), *parcelas* (parcels), *tajos* (cuts), and *retazos* (snippets), are some of the terms employed to denominate fields, parcels, pieces, and snippets of land for commercial and subsistence crops. *Sementeras* and *parcelas* are generic terms for any agricultural space; *tajos* and *retazos* are smaller plots, which can be a few square meters only. All of these lands are used for subsistence and commercial crops. The smallest plots are generally intercropped.

Fields are used to grow cereals, tubers, roots, legumes, cucurbits, fruits, and plantains. Pastures or grazing lands are called *potreros*. Pastures are monocultures which may hold a few trees or bushes (Figure 4.3.). Agricultural specialization and land shortages in Alban limit the presence of pastures and cattle. In contrast, pastures are more common in Garagoa where livestock has been a strategy to cope with labor shortages; there, in the higher lands, pastures can take up to 70% of farmland. Fields and pastures

range from one to two hectares to a few square meters and most have some degree of slope. They are generally located further away from the house.



Figure 4.3 Garagoa: Cow and chicken grazing in pasture with live fences.

A comparison of the number and type of crops cultivated in fields and pastures in Alban and Garagoa, which includes the kinds of crops mentioned by peasants in the socioeconomic and productive survey, suggests that in Garagoa peasant production is more diverse than in Alban as seen in Table 4.1. This finding reflects differences in social and agricultural histories and productive trajectories between the two communities. Diversity in Garagoa is an outcome of a long tradition of diversified agricultural production and the use of plots of land in different climate zones for agricultural diversification. In Alban agricultural diversity has been curtailed by coffee specialization which occupies most of the land. Diversity is more obvious in the larger number of

starchy crops reported in Garagoa (31) compared to Alban (23). The starches category below refers to cereals, roots, tubers, and plantains. As discussed in the methods section (Chapter One), I grouped the crops according to the official food guidelines by the Colombian Institute of Family Welfare (ICBF), in order to ascertain how they compared with national nutritional categories. The prevalence of starches concurs with a national tendency in the consumption of a carbohydrate-rich diet. In descending order, fruits follow in number and are evenly distributed in each place, with a predominance of citrus (Appendix D). Vegetables and proteins are considerably less and less varied.

The list of crops mentioned by peasants reveal an important and often unacknowledged aspect of peasant agriculture and agrobiodiversity in Colombia. This is the presence of crop varieties or landraces: 7 varieties of *arracacha*, corn (8), plantain (13), and manioc (7) were reported (Appendix D). Generalized assumptions about the simplicity or poverty of peasant fields often ignore or downplay important and considerable diversity because crops are generally referred to by the generic name, i.e. manioc, rather than by the specific variety, i.e. *zata* manioc. When infraspecific varieties and as semi-wild plants that are tolerated and encouraged for sporadic consumption are taken into consideration, a more complex notion of agrobiodiversity emerges. The existence of these varieties with differentiated names is indicative of the dynamism of peasant agriculture and the ability of farmers to incorporate, adopt and adapt crops and varieties for multiple purposes. Varieties are maintained because color, shape, size, and taste indicate relevant agronomic, ecologic, and culinary characteristics. Zimmerer (1996:26) notes that Quechua and Aymara lexicons have specific names for each crop and landrace. In addition to generic terms for crop or food plant, central Andes peasants

use specific plant names which convey multifaceted agroecological, culinary, nutritional, and cultural features.

Table 4.1 Different kinds of crops in fields and pastures in Garagoa and Alban, as per socioeconomic survey

| <b>FIELDS</b>                                     | <b>Garagoa</b>                     | <b>Alban</b>                       |
|---|------------------------------------|------------------------------------|
| Food group  | Number of different kinds of crops | Number of different kinds of crops |
| Starches<br>Cereals, roots, tubers, and plantains | 31                                 | 23                                 |
| Fruits  | 24                                 | 25                                 |
| Vegetables<br>includes green legumes              | 8                                  | 8                                  |
| Proteins<br>includes dry legumes                  | 4                                  | 3                                  |
| Grasses<br>Includes sugar cane                    | 6                                  | 3                                  |
| Total   | 73                                 | 62                                 |

A somewhat similar situation occurs in the Colombian Andes with the existence of varieties whose vernacular or local names allude to different traits such as morphological characteristics, uses, or place of origin as is the case of as the *yuca llanera*, (manioc from the Llanos), the *arracacha pan de trigo* (wheat bread *arracacha*), and *frijol arbolito* (tree bean). The same is true for a variety of plants and trees (Bernal et al. 2006). While some names refer to old varieties such as the *maíz pollo* (chicken corn), in some instances vernacular names result from peasant renaming of varieties introduced by agrarian development programs, by farmers themselves, or by traders according to certain characteristics or particular uses as is the case of *arracacha marranera* (*arracacha* for pigs) which was renamed for its use as pig feed. The terms *criollo* (Creole) and *castilla* (from the Spanish region of Castilla) have been used for centuries to differentiate native varieties from Old World introductions. Castilla refers to the region of origin of many colonizers who brought produce from Spain to the Americas. Nowadays *pajarito* (little bird, smaller), *comun* (common), and *nativa* (native) are expressions that

distinguish older varieties from modern ones which are conserved because of their high capacity to tolerate biotic and abiotic stress, which can result in high yield stability or an intermediate yield level if in a low input agricultural system (Zeven 1998: 11).

In Garagoa some local varieties are denominated *nativas* (native), to distinguish them from introduced ones called *extranjeras* (foreign). Such is the case with some plantain varieties called *huerta extranjera* (foreign plantain) and the *pastusa* potato. This potato, once unknown in Garagoa, has become one of the most widespread and preferred potato types in the region and the country. High yields and strong culinary appeal have turned this commercial variety into a national staple. The *pastusa* potato has a soft consistency and “opens up” (*florece*), when cooked; it is ideal for soups, stews, or just boiled with salt and a hot pepper sauce. Names of crops and varieties are significant because they represent social history, cultural meanings, embodied knowledge, and memories associated with agrobiodiversity.

Wider, more popular, and celebratory cultural expressions of agrobiodiversity are found in the multiple fairs, festivities, and beauty pageants associated with crops, foods, and animals that are celebrated regularly in different regions in Colombia. Festivals for rice, sugar cane, mango, and pineapple, in addition to donkey, cattle, fish, and horses are widespread and popular. Literature has conveyed this more gracefully as is plain in Colombian writer Gabriel García Márquez’ book *Big Mama Funerals* (1974) in which he describes a series of beauty queens that attended the funerals of a matron called Big Mama. The beauty queens represent different local crop varieties such as *mango de hilacha* (fiber mango), *ahuyama verde* (green squash), *guineo manzano* (*manzano*

plantain), *yuca harinosa* (floury manioc), *guayaba perulera* (*perulera* guava), *coco de agua* (water coconut), and *frijol de cabecita negra* (black head bean).

Grasses, which include sugar cane, are more abundant in Garagoa. They include kikuyu (*Pennisetum clandestinum*), which was introduced in the 1930s from Kenya adapting so well that it became an invasive species. At present it is the most common species in cold climates. Other varieties are *brachiaria sp.*, sweet vernal grass or *oloroso* (*Anthoxantum odoratum*), Guatemala grass (*Tripsacum laxum Nash*), imperial grass 60 (*Axonopus scoparius*), and *pelo de burra* (unidentified).

Homegardens are the spaces surrounding the household. These are also referred to as *huertas* (orchards), *patios* (patios) or *corrales* (corral, yards). They fall under the responsibility of women and are a central aspect of women's identity. The role of women's gendered environmental knowledge and gardening skills for multiple economic, nutritional, health and livelihood benefits has been documented (Aguilar-Stoen, Moe and Camargo-Ricalde 2009, Finerman and Sackett 2003, Howard 2003, Oakely and Momsen 2007, Rocheleau et al. 1996). In Garagoa, *huerta* is used to designate plantains and bananas as well as the spaces where these particular crops are grown. Although native to Southeast Asia, plantains were introduced early by the Spanish colonizers and adapted well to the tropical conditions where they became a staple. Homegardens host a variety of legumes, vegetables, fruits, medicinal herbs, and flowers for convenience and pleasure. Species and plants are selected also according to personal needs and preferences. Many of these plants are propagated by cuttings, which facilitates plant dispersal. Homegardens are spaces for experimentation, climatization, and adaptation of species which can be more closely watched and cared for. Fields and homegarden spaces host crops with

different growth habits such as vines, roots, tubers, bushes, grasses, shrubs, and trees in various planting arrangements that range from planned polycultures to spontaneous plants. Crops in fields are dealt with as populations whereas in homegardens crops are generally managed as individuals and its importance often rests on their uniqueness.

Homegardens are also privileged spaces for agrobiodiversity and in situ conservation (Eyzaguirre and Linares 2004). A comparison of homegardens in Alban and Garagoa also reported a higher diversity of plants and crops in Garagoa, Table 4.2. The composition, however, varied (See Appendix E). Medicinal plants make up the majority of garden plants. In rural areas with precarious health services and a long tradition of herbal medicine usage, the spaces surrounding the house are literally green pharmacies that can provide relief for common minor ailments. The consumption of medicinal plants in the form of herbal teas, denominated *aromáticas* (aromatics), is widespread in the Andean region. In both sites homegardens are also used for cultivating vegetables and fruits. In Alban, however, the number of fruits is smaller than in Garagoa because most fruit trees are interspersed in coffee fields. In Alban spaces surrounding the house are employed for growing some of the starchy crops that cannot be grown in coffee plantations such as corn and manioc.

Although not all reported crops and plants are necessarily consumed, the persistence of a broad spectrum of plants in Andean fields and homegardens suggests the economic, agronomic, nutritional, and cultural relevance of these plants. Maintenance of diverse crops and varieties contradicts the logic of simplification and homogenization that is generally associated with modern monocultures. Abundant and healthy fields are part of farmers' well-being and social prestige; they stand as symbols of hard work,

independence, and self reliance. They also endow peasants with income options as well as a sense of sovereignty and control over their crops and fields. In some cases crops are compared to cows in that both are a source of food and income. A young peasant remarked that “I don’t end my crops because they are a milk cow”, in reference to the fact that both can be “milked”. When asked about what drives peasant to keep agricultural diversity, Don Jorge answered simply and directly: “If there are people who live to sell poisons why can’t I live to sell food?” This persistence is what sustains peasants’ provisioning of 40% to 60% of the national food basket (Mondragón and Montoya 2010, Pesquera and Rodríguez 2009).

Table 4.2 Different kinds of crops and medicinal plants in homegardens in Garagoa and Alban, as per socioeconomic survey

| <b>HOMEGARDENS</b>                                | <b>Garagoa</b>                     | <b>Alban</b>                       |
|---|------------------------------------|------------------------------------|
| Food group  | Number of different kinds of crops | Number of different kinds of crops |
| Starches<br>Cereals, roots, tubers, and plantains | 10                                 | 11                                 |
| Fruits  | 20                                 | 5                                  |
| Vegetables  | 17                                 | 12                                 |
| Proteins<br>Includes green legumes                | 1                                  | 4                                  |
| Medicinal herbs                                   | 21                                 | 18                                 |
| Flowers   | 1                                  | 0                                  |
| Total   | 69                                 | 50                                 |

Peasant livelihoods and identities cannot be fully understood without an examination of livestock practices. Livestock is closely coordinated with crop management in peasant societies. Although not systematically and formally quantified, peasant livestock production has been and continues to be economically significant in the national agricultural gross domestic product (van Ausdal 2008, Robledo 2009). Animals are an important part of agrobiodiversity for the multiple services they perform. Domestic animals provide food, income, labor, manure, company, entertainment, and help to in-farm nutrient recycling. Domestic animals also operate as piggy banks and safety nets. In

this regard peasants aspire to have animals because they are a medium and long-term investment. As one farmer noted; “I had blackberries there but I got rid of them and planted grass to have a few calves. Calves are more comercial. They are easier to sell. Practically speaking, they are my pension and if I don’t pay attention to my pension I am lost.” Peasant identity is also shaped by people’s relationships with animals: a house without animals is sad and lonely: animals are not pets: they have a role to perform. Dogs, for instance, must watch over the house and provide company to owners. In addition to dogs, the most common animals kept in Alban and Garagoa are hens, cattle, pigs, chickens, rabbits, horses, and to a much lesser extent goats, fish, ducks, and geese. Cattle have a larger presence in Garagoa while commercial broiler chickens and laying hens predominate in Alban. With the exception of the guinea pig (*Cavia porcellus*), which was the main domesticated animal prior to the Spanish conquest, most domestic animals were introduced in the 16<sup>th</sup> century. Early breeds were Andalusian or Spanish which adapted and developed particular characteristics in the new tropical environment. At present most peasant households have livestock landraces (*criollo*) and crossbreeds. Landraces are more resistant to tropical topographic and climatic conditions. They are also thought to be smarter and more resilient; they withstand hardship: “*criollo* animals are stronger and do not get sick as often. They are like us, if there is no food they search for it, se *rebuscan* (they search for). They don’t let themselves die”.

Chickens are the most common house yard animals; they are important sources of eggs, meat, and manure. Eggs are a source of income for women who sell when in need. *Campesino* eggs are highly valued for their taste and nutritional qualities; they are distinguished for the bluish, greenish, and pinkish tones of their shells. Peasants make a

clear distinction between chickens (*pollos*) and hens (*gallinas*); the latter are synonymous with nutritious food and taste; they are considered a delicacy and a treat for special occasions. Hens are one of the main foods recommended for women during the postpartum diet as a source of protein and fat. Chickens and hens are women's responsibility and very much like homegardens, closely tied to a feminine identity. Lucía, who produces commercial broiler chickens, says that what she misses the most is having her own *criollo* chickens; biosafety measures prohibit other domestic animals around commercial chicken premises. Peasants also differentiate *criollo* from *purina* chicken; Purina being the name of commercial poultry feed. *Criollo* chickens are raised in the *campesino* manner: free-range, without antibiotics or hormones, and fed with corn, fodder, harvest leftovers, and kitchen scraps. Commercial feed may be given at the beginning for starting but then they are fed corn and left to find their own food; they help to keep the yard clean from insects. Frequently a few broiler chickens will be raised in the *campesino* style, but they are kept in confinement, to be sold as *criollo* chickens. These are highly appreciated for quality, taste, and health and have higher value in urban and rural markets.

Other popular domestic animals are pigs. In both communities, two to four are the regular number of pigs kept, generally in confinement to prevent crop damage or prevent them from being stolen. Darker and smaller *criollo* landraces were popular until the 1970s when European and US varieties became more common. Larger and improved crossbreeds such as Yorkshire, Jersey, Duroc, Hampshire, and Pietrain were introduced and generalized because of higher yield of lean meat. Piglets are given commercial feed supplemented with in-farm resources such as kitchen leftovers, crop residues, and whey.

According to peasants, key to their quality and taste are the natural products they are fed<sup>23</sup>. Since colonial times cattle ranching has been considered a profitable activity that does not demand considerable labor or capital investment (Rojas de Perdomo 1993). Extensive grazing has historically been a form of territorial expansion and control of the best lands by regional elites who have amassed considerable political power and social prestige (Flórez-Malagón 2008). Cattle are an important prestige symbols and peasants aspire to own at least a cow for household milk consumption and for sale. They are one of the most important forms of capital investment and savings; a young peasant commented that “cattle are my base for my studies.” Land shortages limit livestock. The ability to maintain cattle depends on the amount of land owned and the quality of grass in pastures. A cow eats approximately one hectare of grass every three months, after which it is necessary to rotate that parcel to let it rest. Those who do not have land for pastures, rent or borrow parcels from relatives and neighbors, or keep the animals tied up and feed them grass, sugar cane stalks, and banana trunks. This is the case of *Doña* Josefina in Alban who insisted that I take a picture of her husband and her cow eating cut-up plantain trunks (Figure 4.4.). In Alban only a few peasants own cattle and grazing lands. By contrast, in Garagoa most households have at least one cow while the richest cattle owners living in the higher areas have between ten and twenty.

Tropical countries economic, geographic, and social conditions and needs have led to crosses of European (*Bos taurus*) (Holstein, Ayrshire, Normand, Jersey) and Indian (*Bos indicus*) (Zebu, Brahman) breeds with *criollo* races for the development of double purpose cattle: milk and meat. Just as they experiment with crops, peasants also

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<sup>23</sup> The recent swine flu scare brought economic losses to farmers as market prices went down and customers were reluctant to take risks eating pork.

experiment with cattle, selecting for particular traits depending on where animals will be kept: in the highlands or the lowlands. In general highland cattle have more European and North American traces and are mostly for dairy production. Mid elevation and lowland cattle are *criollo* breeds with Indian traces. Oxen are still used for plowing since only a few areas are arable with tractors. This traditional method is performed by specialists called *gañanes*, who are highly respected for their specialized knowledgeable of the land, topography, soils, and contours<sup>24</sup>. *Gañan* is also a term that is often used pejoratively to designate someone as rude, uneducated and who performs tasks of little value.

Men and women share the responsibility of taking cattle or all livestock to graze, bringing them back home in the afternoon, and feeding them (salt, molasses, grass). Washing cows with disinfectant to manage tick borne disease is a male job. Milking is generally done by women. Milk is used for domestic consumption or the production of baked goods or cheese for the market. Revenues from those sales are controlled by women who used them for various household expenses.

Rural food availability in Alban and Garagoa is affected by seasonality, the economic orientation of production, and crop productivity. Food availability shapes people's perceptions of scarcity and abundance, wealth and poverty, hunger and plenty. Diversified production is a protective mechanism against scarcity and hunger. In Garagoa, for instance, there is not a clearly identifiable lean period because food is generally available given the two harvests that insure *comida* (roots and tubers), and *recao* (corn and legumes). The most abundant period starts in September after the main

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<sup>24</sup> They must also have a very good knowledge of the oxen in order to obtain the desired results.

harvest and lasts until the end of the year when a series of festivities involving food and drink begin such as the *novena de aguinaldo* and end-of-the year celebrations.



Figure 4.4 Alban: Don Nemesio Jr. feeding plantain trunks to his cow. In the back are coffee trees and plantains.

The *novena* (advent prayers), is a Catholic celebration consisting of daily prayers next to the nativity scene during the nine days prior to Christmas from December 16 to the 24. The novena is both a family and social event accompanied by carol singing with guitars, maracas, tambourines, and whistles. Special foods include *buñuelos* (deep-fried cheese fritters), and *natilla*, a flan-like dessert made with cornstarch, milk, molasses, cloves, and cinnamon. In Garagoa the *novena* involves a procession that in the past two

decades has become more festive deriving in a carnival-like celebration with increasingly elaborate parades and costumes. In rural *veredas*, this is a period when relatives visit and are expected to eat special meals.

In Alban, reliance on a cash crop makes people more vulnerable to crop loss, price fluctuations, and climate change. This is manifest in the clear identification of scarcity and abundance periods: the months of April to June are perceived as bountiful because of the coffee harvest season and when employment and income opportunities are available. The harvest is a time to pay accumulated debts, make special purchases, and eat better: “we eat more, we eat better, and we eat more meat and special treats” says Catalina, a young single mother of two. The remaining months present some degree of hardship requiring families to look for other kinds of wage work. In good years the mid-year coffee harvest (*traviesa* or *mitaca*) taking place in November can bring some relief to end-of-the-year expenses. Despite market oscillations, coffee growers do not abandon coffee; it is part of an economic and cultural tradition requiring less labor and for which there is always market demand: *el café no se come pero da de comer*, (coffee is not food but enables us to eat) is a common saying in Alban.

A defining feature of Andean peasant economies is that a portion of what is produced goes to the social reproduction of the family (Alberti and Mayer 1974, Gudeman and Rivera 1990, Mayer 2001). In this logic, in Alban and Garagoa certain crops are cultivated almost exclusively for domestic consumption synthesized in the expression: *para el gasto de la casa* (for household use or *para el come* (to eat). They are also used for seed and for exchanges with neighbors. These products, which do not circulate in commercial venues, are not valued solely in economic terms but for their

nutritional, social, and cultural value. As indicated in Table 4.3 reported products for self provisioning in Alban and Garagoa add a combined total of 104 different items (See Appendix F). The main food categories contain a considerable amount of foods that can contribute to household nutrition and health. When combined with plants available, Again, Garagoa has a larger and more diverse self provisioning capacity than Alban given its agricultural trajectory and the diversified nature of production.

In Alban and Garagoa the most commonly bartered products are starches and vegetables which are the most commonly produced and are more readily available. Products with higher market and social value, such as meat, eggs, and cheese, are generally not exchanged but saved for special occasions or gifts.

Table 4.3 Number of products for self provisioning in Garagoa and Alban, as per socioeconomic survey

|         | <b>Starches</b> | <b>Vegetables</b> | <b>Fruits</b> | <b>Protein</b> | <b>Medicine</b> | <b>Grasses</b> | <b>Other goods</b> | <b>Total</b> |
|---------|-----------------|-------------------|---------------|----------------|-----------------|----------------|--------------------|--------------|
| Alban   | 9               | 10                | 13            | 7              | 2               | 1              | 0                  | 42           |
| Garagoa | 16              | 17                | 17            | 8              | 1               | 2              | 1                  | 62           |

Peasant self-provisioning studies in the Colombian Andes provide important points of comparison with respect to the advantages of diversified subsistence over specialized cash crop economies. A study in a coffee growing area in the Cundinamarca department, found higher market dependency and lower self provisioning levels, ranging from 13% to 36% (Amaya 1998) than subsistence economies (Forero et al. 2000). Research in other diversified cash crop communities in the Cundinamarca highlands, revealed that non-monetary income obtained from self provisioning and exchanges, averaged 28% of household total net income and 55% of the basic breadbasket (Torres 2001). Self provisioning levels amounted to approximately 80% of food expenditures.

These studies suggest that self provisioning is important to household food security, family income, and autonomy from the market; it broadens people's possibilities for engaging in social networks and reciprocal relations. In the case of poor or single-headed households self-provisioning and exchanges are strategic for survival (Torres 2002).

Another key dimension of self-provisioning is that peasants have more control over food sources and food quality; peasants value how food is produced because it affects the sensory and nutritional properties of food. Notions of quality differ from those of urban consumers who consider price and appearance as major criteria in choosing food. Farmers in Garagoa consider food that is not produced by them or that they know has chemical inputs to accelerate growth to taste like *magué*, which is the soft inner matter of the sisal trunk, or *bagazo* (bagasse), the fiber remaining after extracting the juice of sugar cane. Broiler chickens, in particular, are tasteless (*desabridos*), colorless (*descoloridos*), and watery (*aguachentos*), say peasants in Alban. Food that are not allowed to take the necessary time to grow and develop flavor, are not just tasteless but can be harmful to health. Andean peasant persistent cultivation and consumption of subsistence crops and varieties is a powerful statement about sovereignty and resistance in view of the unfulfilled and incomplete premises and promises of rural development's socioeconomic prosperity.

The previous sections described some of the ways in which peasant agriculture and livestock management practices contribute to livelihood diversification and Andean agrobiodiversity. Agricultural diversification has the potential to broaden nutrition options, social networks, and market participation for household income (Scoones 1998). Andean peasants have long been articulated to the market economy via agriculture and

petty-trade (Forero 2002b). A considerable portion of farm production goes to the market. Agricultural specialization can bring benefits at times of high prices as in the case of coffee in Alban. But it also entails more vulnerability and market dependency. On the contrary, productive diversification is a strategy that expands economic possibilities. Table 4.4 below compares the quantity and type of peasant products for market sale in each research site. Garagoa commercializes more than twice the agricultural and livestock products than Alban, which represents a source of small but continuous income in a municipality with lower socioeconomic indicators and incomes than Alban.

Garagoa, and a few Alban farmers, sell their goods in weekly municipal capital markets or regional markets. They also sell directly to middlemen, neighbors, shopkeepers, or urban clients with whom they have contacts (*contratas*). Urban markets are a chance to stock up, run errands, socialize, learn about supply and demand dynamics, and have a few drinks. In Garagoa middlemen also go directly to the fields for harvest pick up when they have encouraged a particular crop. Market demand stimulates peasant economies but lack of transportation, marketing mechanisms, stable price structures, price information systems, and productive government support are a factor in deagrarianization and depeasantization, and overall rural livelihood hardship. Low prices do not cover investment costs and it is not uncommon for peasant to let certain crops rot, especially fruit, because sale prices do not compensate the time, labor, and transportation costs. Peasants refer to the low social and economic value of their produce and work, and the overall lack of social recognition of their contributions to society in the following terms: *nuestro trabajo no vale, lo del pobre no vale* (our work is worth nothing, poor

people’s work is worth nothing). In regards to the lack of government support for the peasant economy and the biases of agrarian policies a farmer commented that:

We don’t have anything permanent; every time the president sneezes everything goes to the floor... They want to say that they generated an impact of 10,000 or 20,000 tons or 10,000 or 20.000 ha and here we only work a small quarter of land. We are producing two maniocs, two potatoes for the local market. That is insignificant; it is of no interest to the government.

*Campesino* and *criollo* labels have commonly been employed to differentiate peasant crops or artisanally produced foods from commercial and industrial ones. In some instances they have acquired added value due to the association of *campesino* and *criollo* with freshness, local produce, and tradition. Current consumer concern with the food quality, safety, and the ecological implications of commercial agriculture have expanded possibilities for certain peasant products which have acquired new and positive meanings as well as higher value in niche markets. Industrial brands have also used these labels to cater to consumer preferences, most notably with *campesino* cheeses and dairy products sold in large-chain supermarkets and popular neighborhood stores (*tiendas de barrio*).

Table 4.4 Kinds of products for sale in Garagoa and Alban

|         | Starches   | Vegetables  | Fruits   | Protein  | Other goods         | Grasses and flowers                      | Total |
|---------|--|---|--|--|---------------------|--|-------|
| Alban   | 3<br>Plantain,<br><i>arracacha</i> ,<br>corn   | 1<br>Squash   | 3<br>Coffee,<br>banana,<br>oranges   | 5<br>Chicken,<br>milk, pigs,<br>fish, eggs   | 0                   | 2<br>Grass,<br>sugar<br>cane             | 14    |
| Garagoa | 8<br>Potato,<br>corn<br>manioc,<br>plantain,<br><i>arracacha</i> ,<br><i>cubio</i> ,<br><i>hibia</i> | 8<br>Cabbage,<br>peas, string<br>beans, green<br>beans,<br>tomato,<br>squash,<br>cilantro,<br><i>pepino</i> | 8<br><i>Lulo</i> ,<br>coffee,<br>plums,<br>blackberrie<br>s, banana,<br><i>granadilla</i> ,<br><i>papayuela</i> ,<br><i>curuba</i> | 7<br>Eggs, milk,<br><i>cuajada</i> ,<br>beans,<br>pigs,<br>chicken,<br>cheese,<br>cattle | 1<br>Baked<br>goods | 3<br>Grass,<br>flowers,<br>sugar<br>cane | 35    |

Peasant agriculture and livestock are also being threatened with recent legislation that restricts peasant, artisanal, and petty commodity production. Given the signature of free trade agreements with the European Union, the imminent treaty with the US, and imposition of World Trade Organization standards on food, animal and plant health and safety, have led the Ministries of Agriculture and Social Protection to approve resolutions 779/2006, 3462/ 2008, and 3544/2009 which establish stringent sanitary requirements for *panela* (brown sugar) production. Decrees 1500/2007 and 2965/2008 also regulate the production, processing, transport, and commercialization of meat products for human consumption. Resolution 427/2007 extends these dispositions to all chicken operations. These measures involve costly expenses that peasants and small producers cannot afford. A wide range of peasants' products and artisanal foods that are consumed by the national public, at much cheaper prices than processed and imported foods, are jeopardized with these measures which clearly favor the interests of large sugar cane producers, dairy and meat industries, and transnational food and seed companies. Peasant resistance to neoliberal policies and agricultural restructuring, however, has brought some recent victories and hope in the food chain.

On March 9, 2011 after a series of civil resistance protests by thousands of small and medium producers, marketers, of milk and dairy industry in different regions of the country demanding the overhaul of state dairy policy, the government agreed not to pass decree 3411 of 2008 prohibiting marketing unpasteurized milk (Robledo 2011). This was an important victory for small producers and peasants who market unpasteurized milk in canisters or canteens to rural and urban consumers and markets. Restrictions to this widespread practice would have favored large pasteurizers and transnational dairy

industries searching to eliminate peasant and popular sector production and consumption practices. Protests by large agroindustrial and small producers have been occurring in the past few years due to the continued decline of milk prices, associated in part with official imports and contraband powder milk and whey. These products are used by the dairy industry to make commercial dairy beverages at much lower costs and without the nutritional benefits of whole milk.

When asked whether they think that peasants might disappear in face of these measures, peasants wisely respond: “the problem is not whether peasants will disappear but what will happen to the people in cities if peasant disappear.”

### Conclusions

In this chapter I examined different agricultural and livestock practices by which subsistence and commercial crop peasants in the Colombian Andes attempt to meet the base. I also examined these practices contribution to agrobiodiversity conservation. Both communities illustrate patterns of stability and dynamism in Andean mountain agriculture. Historical trajectories and different forms of articulation to larger socioeconomic processes have shaped local responses to rural modernization but in neither place have peasant economies been subsumed by the forces of capitalism, globalization, and urban culture. This is manifested by the coexistence of landraces and traditional varieties next to modern ones in complex arrangements that imply mixing and diversifying. Agricultural and livelihood diversification involves the flexible and creative combination of local enskilled and embodied knowledge with modern understandings and technologies to maneuver and forge options in a context of ever changing agricultural and

economic conditions. Peasant agricultural practices and decisions are guided by a logic in which different productive, economic, ecological, cultural, and aesthetic elements overlap. Agrobiodiversity prevails in subsistence agriculture because of farmers' efforts to spread risk, enhance crop genetic diversity (Bellon 1991, Brush 1988, 2004), increase and diversify production (Conklin 1954, 1957, Monsalve 2005, Netting 1993), and satisfy nutritional needs and culinary desires (Nazarea 2005). Expansion and reduction of crop diversity is a coping mechanism of rural Andean households in view of market demands, as well as farmland, labor, transportation, and capital constraints. Garagoa's higher diversity levels in fields and homegardens for self-provisioning and the market are associated with the region's historical trajectory of diversified subsistence agriculture. Agricultural intensification in Alban disrupted a food-growing tradition but the persistence of intercropping and desire for culturally meaningful crops and foods has sustained the cultivation of crops and varieties that are part of the basic Andean food structure. As noted for other agricultural societies, these are crops that embody local epistemologies and shared social memories (Dove 1999, González 2001, Seremetakis 1994).

Local knowledge, peasant livelihoods, and agrobiodiversity are vulnerable to rural youth's diminishing interest in an activity that involves hard work, risk, and little socioeconomic relevance. With continued outmigration some rural areas are left with an aging population that is not being replaced. Such is the case of Garagoa where according to *Doña* Helena, who participated in the preliminary assessment of the 2010 municipal health plan, not only are children almost absent in rural areas but many elderly men and women living alone are malnourished because they are no longer able to lead a healthy

life on their own. Once the older generation is gone so will be a portion of their embodied and enskilled knowledge. In Alban the death of *Doña Aguedita*, the last one to grow fava beans in her garden, brought an end to a practice that she had inherited from her family who had migrated from the Boyacá in the early 20<sup>th</sup> century. The uniqueness of this material practice is that fava beans are cold weather crops and do not grow well in tropical coffee areas. *Doña Aguedita*'s taste for fava was an expression of ordinary affect (Stewart 2007) for a crop that embodied social history, cultural meanings, and sensorial engagements with food. Uneven maintenance of crop agrobiodiversity contributes to the risk of extinction; although processes of change and loss are inherent to agriculture, several varieties of *arracacha* and potatoes are almost extinct in Garagoa and peasants in Alban have reported the almost total disappearance of roots and tubers that were previously commonly consumed. Older landraces are vulnerable to displacement by newer varieties that can be more appealing to younger generations attempting to cater to changing urban demands and tastes.

Climate change is an increasingly powerful force challenging peasant local knowledge, livelihoods, and agrobiodiversity (Berkes and Jolly et al. 2001, Zimmerer 2010b). While coffee growers have seen their crops unable to flower due to prolonged rains, dairy farmers have been affected by prolonged summers that dry the pastures that feed cattle. How will peasants cope with these changes and to what extent local knowledge and practices will prove to be effective to insure their continued reproduction is still unclear.

Finally neoliberal macroeconomic policies seeking to mainstream agriculture (and culture) under the principles of productivity, profitability, and competitiveness, bring

further uncertainties to rural landscapes and communities. Legislative measures restricting peasant, artisanal, and petty commodity production, on the one hand, and opening the door to GMOs by transnational agrochemical corporations, on the other, deepen the dislocation of two radically different approaches to food, its production, and its meaning. Victories, though temporal and small, like the one of dairy farmers who market unpasteurized milk, are politically and culturally significant in that they represent peasant social agency and organized resistance to state policies and globalization processes that put their lives and livelihoods in jeopardy.

## CHAPTER 5

### CUISINE, TASTE, AND IDENTITY

The mission that has been imposed is difficult because cuisine is not the forte of Boyacá. I have toured around this place many times and this beautiful and peaceful department has nowhere to eat. To search autochthonous and good *boyacense* food on these trips is frustrating. I come to Fogón Boyacense without much hope of finding an unknown facet of the cuisine of the region .... because despite the region's poor cuisine, a good cook can rescue the incipient manifestations of its cuisine. If you eradicate from your mind any gastronomic temptation and think of something elemental and filling ask for the *piquete*... but do not expect surprises.  
D. Buenavida, food critic, El Espectador 2009a.

#### Introduction

This chapter examines the relationship between taste, cuisine, and identity in Alban and Garagoa. As described in chapter four, a portion of the food consumed by peasants originates in local agrobiodiversity concentrated in crops and varieties that have been preserved to meet agronomic, economic, and culinary needs and expectations. What deserves clarification now is how agrobiodiversity is transformed into socially meaningful edibles through cultural perception, embodied tastes, and cuisine. Anthropologists have noted that diets are not just biological adaptations or material answers to physiological and nutritional needs; they are outcomes of cultural processes of selection (Messer 1989, Nazarea 1995, 1998). The connections between cuisine, taste, and identity have also been amply recognized: identity and identity differences are associated with what, where, and with whom one shares or does not share food (Counihan 1998, Mintz 1997). Individual and collective identities are associated with the cultural codes by which culinary practices are systematized into cuisine and high or low

tastes (Ferguson 2004, Goody 1983). Taste is understood here both in a physiological sense as the “complex sensory cues including those from olfaction, taste, and touch” (Birch 1999: 42), and in a sociological sense to refer to the socially constructed cultural and aesthetic codes that shape food behaviors and social distinctions (Bourdieu 1984, Messer 1984). Innate predispositions for certain flavors may play a role in taste preferences, but these are given form in social contexts through cultural learning (Anderson 2005, Rozin 1987, Rozin and Fallon 1987). The social and shared experience of eating is relevant to the acquisition of taste because people associate foods to the social context in which eating takes place (Birch 1999). As a social phenomenon, taste is also historically and geographically contingent (Mennell 1985).

As Bourdieu (1984) remarked, the education of taste through cultural discourses and practices that legitimate certain foods, cooking styles, and modes of consumption, is a powerful vehicle to define social identities and distinctions. In stratified societies consumption of high-status foods is a form of cultural capital. Tastes can be hegemonic and used to make people conform to certain flavors and eating behaviors but they are also vehicles to express nonconformity (Stoller 1989), resistance (Law 2001, Leicht 2003), and social change (Holtzman 2009, Wilk 2006). Culinary codes also convey messages about social difference and power (Counihan 1998, Douglas 1975). Taste and cuisine can bring people together or create boundaries and hierarchies along class (Bourdieu 1984), gender (Counihan 1998, Kahn 1987), ethnicity (González 2001, Harbottle 1997), and national lines (Bestor 2001, Ohnuki-Tierney 1993, Pilcher 1998, Wilk 2006).

In light of comments such as those of food critic under the D. Buena Vista (2009a) pseudonym quoted above, which reflect a common urban contempt for peasant and

popular food's lack of culinary elaboration and gastronomic value, this chapter attempts to provide a grounded perspective on the complex peasant relationship with food. This chapter is premised on the notion that peasant categories and concepts of food are rooted in socio-ecological relations, everyday material practices, and cultural and sensorial engagements with food (Carolan 2011, Farquhar 2007, Messer 1984, Nazarea 2005). I draw on the idea that the perceptual and sensory discrimination of foods involves not only the coming together of taste, texture, smell, and vision but that food connects mind, body, and emotion. This multilayered fusion of sensory and cognitive processes is what Sutton (2001, 2010) calls embodied synesthetic experience, and Meneley (2008) summarizes as synesthetic bundling. For these food scholars the sensuous materiality of food has the ability to simultaneously stimulate various modalities of perception. Food, cooking, and eating are prime vehicles for developing synesthetic experience. Through the description of peasant cuisine I seek to argue that a satisfactory and pleasurable relationship with food is not confined to a purely hedonistic experience.

First I present a general overview of the literature on food in the Colombian Andes. It is followed by a brief discussion of culinary experts' taste biases and the use of peasant foods and agrobiodiversity in current cultural politics of taste. Next, echoing Orlove's (1997:243) call for examining the historically specific local meanings of foods, I describe the culinary structure of peasant diets, taking into account peasant food perceptions, classifications, and rankings according to multiple criteria. Data for this chapter are surveys, ethnography, interviews, conversations, and participation in multiple food-related events.

### Scholarly and culinary biases

In contrast to the Central Andes for which there is a considerable body of anthropological literature on peasant diet, cuisine, and identity (Archetti 1997, Bourque 2001, Corr 2002, Ferraro 2008, Graham 2003, Paulson 2006, Weismantel 1988), Colombian scholarship on this subject is limited and unsystematic. Studies of Andean peasant diets have largely been descriptive (Fals Borda 1961, Mora de Jaramillo 1974), folkloric (Ocampo 1977), or mentioned briefly with respect to peasant domestic economies (Gudeman and Rivera 1990) and health (Barajas 1998, Suárez et al. 2004). Andean food practices have been considered within general historical works on food (Patiño 1990, Rojas de Perdomo 1994) and nutrition (Bejarano 1950a), in academic theses on peasant production and food habits (Ávila 1970). In some instances they are part of gastronomic compilations of traditional recipes (Montaña 1994, Restrepo and Saavedra 2004, Romero 1992, Sánchez 2001). Early accounts of rural Andean food habits and cuisine are found in 19<sup>th</sup> century European travelers whose ethnocentric gaze reinforced ambivalent depictions of local food practices as unsanitary, monotonous, and distasteful yet exotic and varied (Hettner 1976 [1859-1941], Holton 1981 [1857], Reclus 1958 [1893]). More nuanced depictions are found in recent works by historians Restrepo (2008, 2009) and Saldarriaga (2005, 2006, 2008) for the colonial period, and Martínez (1985) for 19<sup>th</sup> century British and French influences on urban cuisine and manners. References to rural consumption are also found in Flórez-Malagón et al. (2008) examinations of 20<sup>th</sup> century meat consumption, and Calvo and Saade (2004) analysis of *chicha* prohibition. Regional explorations in Antioquia (Estrada 1995), and the Cauca Valley (Barney 1979, Patiño 2007) complement works on regional Andean highland and

lowland cuisines. Political economy's emphasis on the production side and the economic role of peasants as producers rather than consumers (Forero 2002a, Suárez 2010) has limited finer understandings of peasant relationships to food. This study addresses a gap in the literature on the anthropology of food in Colombia.

Food critics, chefs, and food historians have often regarded Colombian cuisine with ambivalence and contempt due to its apparent absence of gastronomic “vocation” and culinary sophistication<sup>25</sup>. Colombian cuisine and more notably that of the Andean region has been described as “discrete”, with attenuated flavors, and less colorful than in the Caribbean (Moreno 2000). According to Montaña (1994) cuisine in the Colombian Andes is not sophisticated and not too spicy; simplicity is what makes it so special. For D. Buenavida (2009a), it is poor and elemental. These perceptions are reinforced when Colombian cuisine is compared to European, Mexican, and more recently Peruvian nouvelle cuisine, which has become increasingly globalized and symbol of good taste and cosmopolitanism. Food scholars and Colombian chefs agree that French cuisine continues to be a primary referent for cooking techniques, formal rules, aesthetic presentation, and professional training. It also stands as an icon of high cuisine, cultural and gastronomic refinement, and civilization. In Colombia, Spanish cuisine is also a point of reference of good taste, symbolized by dishes like *paella* (rice with various meats and seafood) or *callos a la madrileña* (tripe stew). Mexican food, on the other hand, stands as an example of an artful blending of Old and New World ingredients and flavors in a colorful national and popular cuisine with international presence. Increasingly global and

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<sup>25</sup> The term vocation is widely used in Colombia to refer to an inclination as if a “natural” destiny. This is visible in the constant allusion to the country's agricultural vocation as a “natural” and predetermined destiny rather than a historical outcome of larger socioeconomic developments. In the case of food, the country's “lack of gastronomic vocation” is yet another expression of national elite's ambiguities towards Colombian foods and food habits when compared to cuisines seemingly “superior” and more elaborated.

upscale, Peruvian cuisine is also valued for the fusion of ancestral indigenous culinary traditions and cultural mixing with Spanish and Asian migrations. In these countries national foods such as corn, chili, potatoes, wine, bread, and olive oil, have become part a narrative of national identity and social distinctiveness with important economic repercussions as sources of revenue via national gastronomic tourism. Although a few regional dishes and foods have gained national prominence, Colombia remains a country of largely unexplored *mestizo* regional cuisines rooted in local ecologies and rural and popular cultures.

As discussed in previous chapters, biases in the perceptions of native foods must be situated within a social history forged by colonial tensions with Spanish aversion for Indian foods stigmatized as dirty, ugly, and miserable (Montaña 1994, Saldarriaga 2007). Although the cuisine of the first Spaniards was also of peasant origin and subject to seasonality, poverty, and scarcity, differential assessment and ranking of foods served to reinforce social distances between Spaniards, Indians, and African slaves. Native foods were unpalatable to those who had inherited from the Arabs the use of spices for food preservation, and who had developed a taste for strong, aged, cured, and stale foods. In reaction to perceived irrationality and indolence of natives, agricultures, foods, and diets were subject to a civilizing process according to the Iberian model consisting of "carbohydrates and proteins, grown and raised in a civilized environment" (Saldarriaga 2007:7). Regional cuisines draw from indigenous, peasant, and popular traditions (Estrada 1995, Montaña 1994, Patiño 2006). As has been suggested for European cuisines (Capatti and Montanari 2003, Mennell 1985) peasant and low-class women have been important cultural mediators in the formation of regional food traditions and tastes

leaving their distinct culinary imprints on upper and middle class kitchens. In Colombia this includes indigenous and black women who have historically worked in domestic service. Contrary to other Latin American countries where national cuisines were influenced by successive waves of foreign immigrants creating local fusions and broadening the gastronomic repertoire, restrictive immigration policies limited the influence of foreign cuisines in Colombia. Most culinary differentiation has taken place in localized regions with ethnic communities like the Germans in Santander (Garnica 1992), Middle Easterners in the Caribbean (Fawcett de Posada and Posada 1992), Japanese in the Cauca Valley (Patiño 1992), and other smaller foreign communities in larger urban centers (Martínez 1985).

In the past few years the country has experienced a gastronomic boom manifest in a proliferation of restaurants, cooking schools, festivals, publications, and food-related movements and events associated with the phenomenon of cultural omnivorousness (Johnston and Bauman 2007, Warde, Martens, and Olsen 1999). This concept refers to the broadening of the cultural repertoire as a constitutive dimension of the contemporary cultural politics of taste, identity, and social distinction (Johnston and Bauman 2007). A unique aspect of this trend is that status and cosmopolitanism is sought not in snobbish gastronomic consumption of French gourmet food but includes a broad range of cuisines that are valorized on the grounds of authenticity and exoticism (Ibid). A consequence of this omnivorous desire for new diverse cultural, sensory, and aesthetic experiences with food is the current interest in so-called native, traditional, popular comfort foods and cuisines.

In Colombia increasingly an array of chefs, business entrepreneurs, private institutions, NGOs, and official entities such as the Presidency of the Republic through the program native cuisine (Culinaria Nativa, CUNA), and the Ministry of Culture with its annual gastronomic awards, are participating in the exploration, discovery, rescue, and revitalization of the nation's gastronomic heritage. Inspiration is found in local, regional, ethnic, and popular traditions and practices which are appropriated and inserted in a new mode of production and cultural consumption based on the commodification and patrimonialization of cultural and natural diversity. Colombia's nouvelle cuisine incorporates foods or ingredients perceived to have an ethnic or exotic touch which are selected, re-estheticized, and resignified to appeal to modern urban cosmopolitan consumers seeking autochthonous and "authentic" experiences. Dishes originally from the Pacific and the Caribbean made with coconut, fish, roots, and seafood appeal to imaginaries of exoticism and eroticism associated with the black and mixed populations of these regions. Sauces and juices involving tropical fruits from Amazonian or Andean indigenous agrobiodiversity motivate associations with health, ecologism, and traditional knowledge. Socially and economically undervalued peasant foods such as tubers (*hibias*, *cubios*, *rubas*), considered Indian foods acquire new class status and become legitimate new food choices when integrated into upscale dishes as decorative accompaniments or side dishes<sup>26</sup>. In other cases they are refashioned with novel aesthetics or flavorful guises that facilitate their entrance into select economic and cultural circuits.

To food scholars and culinary authorities like Lácýdes Moreno (personal communication 2010), the current culinary fusion is only a confusion motivated by fast

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<sup>26</sup> The low status of these tubers in Colombia contrasts with the popular appeal they have in New Zealand where they are regularly cultivated, consumed, and exported (Sperling and King 1990).

economic profit and snobbish fads. Food critics such as D. Buenavida (2009b) also scorn the very uncommon and intricate combinations of some dishes of prominent chefs which sometimes do not even lead to satisfactory culinary and gastronomic results. Ironically, these upscale urban reinterpretations and fusions are marketed as typical Colombian food for cosmopolitan tourists. Their value and meanings, as we will see, differ from those held by in their original settings.

### Peasants and food: more than simple meals

The historical food-producing role of the countryside and the rural populations therein underlies place-based peasant notions of self. The word *campesino* derives from *campo*, countryside. In the Andes peasants are also known as *montañeros* (mountain people, hillbillies). According to Andean farmers, *campesinos* are by definition producers of food and they do so in the countryside. The countryside is diametrically opposed to the city and to urban life; cities can be intimidating and disorienting with noise, traffic, pollution, and crowds. When peasants migrate to the city the absence of familiar referents and a clear social role often produces a loss of sense of place and sense of self: “*uno se siente perdido, desorientado, sin oficio*” (one feels lost, disoriented and without an occupation). This is a repeated comment by peasants in Alban and Garagoa. The food producing role of peasants has often confined their social identity to an economic category; this limits more nuanced understandings of peasant identities, livelihoods, and culture. On the other hand, the food-producing role of peasants has also been at the heart of their social, economic, and political struggles. Recently it has served to renew and relegitimize peasant demands for social, economic, and cultural rights not only in

Colombia but globally (Borras 2010, Desmarais 2007, Edelman and Carwil 2011, Holt-Giménez 2010, McMichael 2008, Mandato Agrario 2003, Patel 2009, Valencia 2010). What the new food-based peasant claims seem to overlook and understate in favor of other seemingly more legitimate economic and environmental arguments, is peasant cultural notions of food and the bundle of cultural and symbolic meanings of *campesino* crops and foods.

As producers farmers have a personalized relationship to crops and foods; they have created culinary repertoires based on a variety of products, substances, and ingredients which contradict notions of peasant foods as simple and ordinary. Over time and by force of regularity and familiarity peasants have also developed sensitivities enabling them to discriminate flavors, appearances, and textures that indicate quality and taste. Andean *campesinos* not only notice changes in the sensory qualities of food according to the way in which it was produced, but distinguish specific sensory characteristics among crop varieties which is a reason why they continue to grow them. *Colisero* plantain is different than the *hartón* variety, and *pastusa* potato does not compare with the yellow *criolla*. In regards to food perceptions and preferences Anthropologists working in agrarian societies with “simple” meals and tastes (Goody 1982, de Garine 1997, Holtzman 2009, Spittler 1999), have noted that foods that may appear monotonous, insipid, or part of primitive and underdeveloped cuisines to the European palate, are not so for natives. African farmers are not only satisfied but are able to distinguish subtle variations in the smell, color, and texture of ingredients and dishes. Culinary gratification comes from food’s association with strength, health, digestibility, and taste. In fact, dietary and culinary changes associated with a more developed and

modern lifestyles are often a source of distressful ambiguity (Holtzman 2009). As noted by Spittler (1999:35) what constitutes a simple or a diverse meal is culturally relative; for the Bemba European culinary variety is confusing and superfluous, sometimes compared to the “unselective pecking of a bird.” Whereas the cultural omnivore seems insatiable in the search for gastronomic diversity, an important aspect of farmer’s pleasure with food is its familiarity and regularity which provides emotional comfort and bodily satisfaction.

In Alban and Garagoa *comida* is the generic term for food. It is related to the verb *comer* (to eat) but it is also synonymous with meal. *Alimento*, on the other hand, refers to nourishment. For peasants food means more than just eating and is not coupled only to taste or pleasure; food has to be nourishing (*comida de alimento*). Another manner in which this nourishing aspect of food is expressed is through the concept of *provecho* (benefit). A nourishing food is said to be *de provecho* according to the benefits it brings to the body. Nourishment is not the only criteria for defining food. In the Andes food is cooked and salty (*cocinada y de sal*). It is also associated with fresh and warm meals, preferably seasoned mildly with natural ingredients. When asked for explicit definitions of *comida*, peasants in Alban and Garagoa mention: life, bodily requirement, variety, strength to work, and well-being. A few people talk about foods with special nutritional properties such as proteins, milk, and vegetables in allusion to foods promoted by health and nutrition authorities. Finally, other people refer to specific everyday crops and foods in connection to food and place. Peasants in Alban and Garagoa express a preference for soft textures over crunchy, crispy, or chewy ones. Softness and ease to cut with a spoon are arguments for the widespread acceptance of certain commercial varieties such as *yuca Armenia* and *papa pastusa*. According to cultural ideas of food, health, and well-being,

bodily energy and temperature balance must be maintained by combining liquid or water-based foods (soups, drinks) and dry meals (*secos*); salty and sweet edibles; and warming and cooling foods. These concepts are further detailed below.

Peasant cooking and eating are domestic activities associated with family and personal relationships primarily. In this domestic mode of provision (Warde and Marteen 2000) most food processing and consumption processes occur within the household and with the family. This differs from the market mode where food becomes a commodity and most food-related processes occur outside the home. According to the gender division of labor, cooking is fundamentally a feminine activity constitutive of women's gendered knowledge and social identity. Learning to flavor food (*dar sazón*) and to add variety to the diet are central to a woman's skills and prestige. Among women's quotidian obligations and material practices, cooking is one of the most demanding. In the midst of the sounds and vapors of boiling pots, fire and smoke from the wood stove, and the aromas of coffee, soups, and stews, throughout the day and every day women repeat multiple operations to feed their families, workers, and guests if necessary. Even what might appear a simple food such as corn cake, *arepa*, involves a variety of steps: soaking the corn in lye, grinding it into flour, grating cheese to mix with the flour, kneading, and finally grilling. This process is more common in Garagoa where corn is regularly planted. Here women generally devote one or two days a week to make different kinds of corn preparations to last for a couple of days. In Alban women use commercial corn flour and make them fresh every time they are going to be consumed. Women's everyday dietary decisions and practices have been described by Appadurai (1991: 211) as improvisational aspects of domestic subsistence. Calculating food

availability, meal composition, portion size, number of meals per day, and making sure that no one goes hungry or without his or her share involves a series of decisions and strategies that cannot be entirely routinized.

Starting at an early age, peasant girls begin the process of enskillment into the art of culinary decision-making with their mothers, grandmothers, older sisters, or other relatives. Learning by doing is important since peasant cooking is largely empirical knowledge; there are no written recipes, precise measurements, rigid or formalized procedures. Mastering the use of the knife is fundamental since most kitchen operations in the Andes require peeling, cutting, chopping, and mincing. Potatoes, roots, plantains, vegetables, and legumes must be processed in different ways because of their distinct textures, peels, and culinary characteristics. Peeling properly can be a matter of great debate; for instance, some women peel green plantains with their hands or with the handle of a spoon to prevent plantains from becoming black, meaning the oxidation and darkening of the flesh that occurs when foods are cut and exposed to air.

Proper knowledge about each crop is required when making dishes with several ingredients because some take longer to cook and others might break apart or dissolve. In Garagoa, where several dishes involve corn, cooks must be careful because corn is a “jealous” (*celoso*), food; it can ferment easily and spoil a meal. When cooking corn soups, cooks must be even tempered because anger or sadness can affect taste, texture, and the digestive effects of food. People with strong vision (*mirada muy fuerte*) can curd a corn soup. Cooks must also learn to light a wood stove and handle the correct kind of wood to avoid smoking the kitchen and ruining the food. A steady flame is essential, for slow cooking enables foods to release and develop more complex flavors while the less

expensive and harder meats become tender, and roots and tubers soften. Doña Olga recites what her grandmother used to tell her as a young woman: “a good cook must keep the food clean, well peeled, fresh, and never burnt.”

Boys and men also know the basics of cooking; they must be able to take over kitchen routines at times of need within and outside the household. Men and women are expected to be independent and fend for themselves early in life and in all circumstances of life. There is pride in being able to make things with one’s own hands and labor, especially producing and making one’s own food. Some men cook for their wives after they have given birth or when they are ill. Many learn during military service as is the case of Don Gustavo who became so fond of cooking that he ended up taking baking classes and setting his own bakery upon returning to Garagoa. A few men acquired cooking skills while performing different labors away from home. Don Heli proudly tells that he learned to cook at age nine when he went with his father to colonize lands in the Llanos piedmont in the 1940s: “I had to invent how to cook. I used lard, salt, plantain, and manioc. The men hunted and I used that *marisco* (meat from wild animals is often called that for its peculiar smell) to “decorate” the *sancocho* (soup with plantain)” Ultimately, however, cooking is still considered a demeaning activity for men.

Food sharing is positively valued and much attention is placed on offering something to eat to visitors and serving food to all those present at a meal. This is a sign of deference, generosity, and respect. In Alban and Garagoa, as has also been reported for the Peruvian Andes (Graham 2003), intrahousehold allocation of food is generally equitable among men and women; both genders are entitled to similar food intake because of their contribution to household well-being. Men and children are generally

served first but in general women tend to favor their husbands and children with larger portions while reducing theirs. Men might be served more because they are more (*garosos*), they eat more<sup>27</sup>. Women in turn might snack on food while cooking. Children are generally prioritized when serving food although poorer households entitled to state food subsidies will sometimes reduce child feeding at home.

Improvisational and coping strategies in the kitchen are necessary in societies where people expect an abundant meal. A common expression *plato con morro* (dish with promontory), is suggestive of the portion size expected for workers who perform physically demanding work. Eating little is associated with poor health, poverty, or stinginess but eating too much and not spending that energy in a productive manner is also a cause of illness (Barajas 1998). Small portions are also a distinguishable characteristic of class differences: the urban rich do not eat much because they never get their hands dirty (*no se ensucian las manos*), they way peasants do. As has been noted among Mexican peasants (González 2001), in Alban and Garagoa rejecting food or not eating the whole portion served is a gesture of disrespect that can be interpreted as rudeness or dissatisfaction with the food or treatment of the host. This is especially true when such behavior comes from high status people who despise peasant foods. When a guest cannot finish a meal or wants to take some home, the food is carefully wrapped in a bag or container. Leftovers never go to waste; everything is fed to pigs, dogs, and chickens. My permanent requests to be served smaller portions lead to comments about

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<sup>27</sup> The term *garoso* is also employed to talk about sexual desire, a drive that is also considered to be stronger in men. The relation between food and sex has been a subject of anthropological exploration (Counihan 1999, Counihan and Kaplan 1998, Farquhar 2002, Khan 1986, Liechty 2005). It has also gained considerable media attention as exemplified in the films such as *Like Water for Chocolate*, *Babette's Feast*, *Chocolat*, and *Eat Drink Man Woman*.

the risks of being thin and the implications for health: *Tan poquito? Se va a enfermar, se va a acabar*, (Such small portion? You will become ill, you will waste away). Plumpness is a sign of health, strength, and beauty; thinness is negatively perceived as has also been noted in the Peruvian highlands (Orlove 1987).

Food processing and cooking entails an important social responsibility with respect to food procurement and distribution. But it also endows women with the power over food, which as anthropologists (Appadurai 1981, Stoller 1989, Weismantel 1988) have noted, is a vehicle to express feelings and emotions in multiple ways. In the Colombian Andes contact with food has also been an avenue for social control by means of witchcraft; events interpreted as signs of witchcraft are often attributed to substances added to foods and beverages by those with access to food (Ávila 1970, Barajas 1998). Stomach aches, indigestion, reactions to food, and pains can be attributed to witchcraft. Although women are not the only ones in contact with food or accused of witchcraft, constant involvement with food can make them prone to suspicion and gossip about their powers or intentions. In Garagoa beliefs in witchcraft were widespread and more prevalent in years past; present day peasants in Alban and Garagoa disregard them as old peoples' superstitions but acknowledge that witchcraft should not be taken lightly either. They all agree with the popular saying: *yo no creo en brujas pero que las hay, las hay*, (I don't believe in witches but there are, there are).

#### Culinary structure and classifications of food

The structure and composition of the rural diet in Colombia, like in the Central Andes, varies with seasonality, income, and food availability (Leonard 1991). Eating

three meals a day is the ideal but this pattern is flexible and can be reduced or expanded according to time of the year, food availability, and labor demands. In everyday speech a meal in Colombia is called a *golpe* (hit). The daily meals are known as the three hits. The meal pattern is roughly as follows: the day starts early, at four or five in the morning. Women get up before everyone to make *agua de panela* to sweeten black coffee known as *tinto* (dark). *Tinto* is the first hot beverage consumed to awaken and warm the body. In the old days, workers occasionally had a shot of *guarapo* to do the same. An early *puntal* (small meal) prior to breakfast may be consumed in Garagoa although this was more frequent in the past when most households worked in agriculture. Breakfast (*desayuno*) is served later, at about 7 or 8 am after a few tasks around the house have been performed. The first meal consists of potato broth with green onion, cilantro, and beef rib or fleshy bone for substance (*sustancia*); this is served with corn cakes (*arepa*), or white bread. Beverages include *café con leche* (coffee with milk), *agua de panela*, or chocolate. In Garagoa broths are always served with corn bread (*pan de maíz*); white bread is generally reserved for chocolate or coffee with milk. Breakfast variations include: eggs, oatmeal, or *changua*, a broth made with green onion, cilantro, bread, a little milk, and occasionally an egg. Other clear soups with rice or pasta are also served, always including green onions and cilantro. On occasions leftovers are used for a *calentado* (warm up). When eligible for subsidized school breakfasts or snacks, children of poorer households might be sent to school without breakfast where they are given *colada* (sweet soup) made with *bienestarina*.

Lunch generally consists of a meal, *seco*, containing rice, boiled potatoes, manioc, plantain, *arracacha*, and eventually a vegetable such as squash, *guatila*, green beans,

peas, or fava beans. On occasions a meal will be served with a soup. Depending on availability and economic means, some kind of protein like meat, chicken, eggs, fresh cheese, beans, or lentils will be added. The most common beverage is lemonade which is *agua de panela* with lemon; occasionally natural fruit juices or soda are consumed. The evening meal may be leftovers from lunch, a soup, a sweet porridge, or a hot drink with bread or *arepa*. Elderly people tend to eat lighter meals. Mid-morning snacks (*medias nueves*), are sometimes consumed by workers at home or in the fields but mid-afternoon, (*onces*), and snacks are less frequent. Midmorning and mid afternoon snacks, also called *merienda* (snack), *avio* (take out meal), or *puntal* (light meal) can include a hot or cold beverage like coffee, *agua de panela* or lemonade and a starch such as corn cakes, bread, or potatoes. *Guarapo* is the main refreshment of workers in Garagoa; it is carried to work in plastic containers. At time of harvest when people spend most of the time in the fields, lunch is brought in tin or plastic containers. In the old days, lunches were wrapped in a plantain or *bijao* (*Heliconia bihai*) leaves or taken to the field by the wife or a younger son or daughter.

At home people eat separately sitting in chairs or stools in the kitchen or in a hallway. Food must be eaten warm, eaten slowly, and properly chewed giving it time to reach the stomach. After eating it is necessary to *reposar la comida* (let the food rest); otherwise it can produce indigestion and will not nourish. Nutrition and health are not only about what is consumed but how it is ingested. Eating is not only a matter of filling the belly; overeating or rushing can produce gastritis and gas. The stove is generally located inside the kitchen but in a few households it is outside in a more ventilated area to prevent the concentration of smoke from the wood stove. In Garagoa all households

surveyed still employ wood stoves because most foods are boiled and cooked until all ingredients are tender. Gas stoves are used in a few instances to heat something rapidly. In Alban only a few wealthier households use gas on a regular basis but most women employ wood stoves. Food cooked in wood stoves (*fogón de leña*) however, is preferred for the smoky flavor. To attract consumers rural and urban restaurants and roadside restaurants make it a point to advertise that their food is cooked in a wood stove. According to women disadvantages of wood stoves are that they are bad for health and stain the aluminum pots. Keeping pots bright and shiny is of outmost importance for women; their domestic diligence is judged by how they care for their pots, which are generally visible to the public eye. Until aluminum pots, pewter, glass, and plastic containers, ceramic dishes, and metal cutlery became widespread, peasants employed clay pots to cook and wooden dishes and spoons to eat, in particular in Garagoa where pottery was a regional tradition. In this region a wide variety of kitchen utensils employed were made with local products such as wood, sisal, horse hair, hides, and locally woven cotton. In recent decades locally made containers, strainers, baskets, and bags have been replaced by plastic utensils.

The omnivorous nature of humans and the variability of diets and food habits suggest that there is not a unique and perfect diet (Armelagos 2010, de Garine 1997). Human flexibility and plasticity have enabled human populations to adapt to different environments and use and consume very different combinations of plants and animals (Farb and Armelagos 1980). Yet human beings do not eat all potential edibles from the environment; there is always a cultural process of selection, classification, and ranking of foods into most valuable, desired, preferred, and avoided (Messer 1989, Rozin 1987,

Rozin and Fallon 1987, Simoons 1994). In the Colombian Andes local farmers classify and categorize crops, foods, and meals according to various and often overlapping morphologic, agronomic, culinary, and sensory criteria. The following ethnographic section describes food categorizations in Alban and Garagoa that illuminate how they merge material, cognitive, emotional, and sensory dimensions. By cognitive I mean processes of perception and knowledge that influence food classifications (Nazarea 1998). Sensory refers to psychophysical and affective factors involved in taste discriminations and preferences (Messer 1984) of food's organoleptic attributes. As has been noted (Holtzman 2006, Law 2001, Nazarea 2005, Seremetakis 1994, Shepard 2004, Sutton 2001, 2010) bodily-emotional experiences with food and the sensory-perceptual dispositions embedded in foods play a role in diet, cuisine, and identity.

The principle that structures food preparations and national cuisine in Colombia, are liquid dishes, soups, and *secos* (dry meals) (Figure 5.1.). In structuralist parlance (Lévi-Strauss 1997:29) dry and wet are the main culinary binary oppositions. This dual structure is common throughout other countries of the Andean region where food is synonymous with cooked food (Archetti 1997, Pazzarelli 2010) and boiling is synonymous with cooking (Weismantel 1988:127). Only fruits and a few vegetables are eaten raw. Among the adaptive advantages of cuisine, it has been noted that processing and cooking techniques can reduce the ingestion of toxic compounds (Dufour 1995, Johns 1996), enhance the nutritional value of food (Katz 1987), increase palatability and taste (Rozin 1982), facilitate digestion, and diversify the diet (Armelagos 2010). At high altitudes, consuming watery meals is also nutritionally advantageous because boiling eliminates potential sources of gastrointestinal parasites, warms the body up, and

provides hydration (Orlove 1987:488). In the Colombian Andes, slow and thorough cooking also satisfies peasant preference for warm and softly textured food, facilitates digestibility and requires less mastication, which is an advantage for children or adults who have lost their teeth, or the as an old lady in Garagoa called them, the tools of the face (*las herramientas de la cara*).

Soups are a defining feature of Colombian regional culinary diversity. Soups are long-term foods rooted in indigenous and Spanish culinary traditions. Hot and liquid foods are an indigenous legacy given the native preference for soups, refreshments, and ferments (Patiño 1990). According to chroniclers and historians, indigenous soups contained roots, tubers, legumes, and vegetables (Patiño 1990, Rozo 1998). This culinary and cultural matrix was fused with the famous European “rotten pot” (*olla podrida*) or soup/stew made with various roots, tubers, vegetables and meat. For centuries peasants and wealthier classes in Colombia have consumed variations of this popular dish with the latter adding special or more expensive ingredients and aesthetic presentations (Montaña 1994, Restrepo 2010). A similar process is described by Capatti and Montanari (2003) for Italy and medieval Europe when peasant products, tastes, and culinary techniques entered the kitchens and cuisine of elites, and underwent a process of sophistication and symbolic reclassification. The addition of spices or other luxury items that embellish and ennoble the dish, place it in a new culinary and gastronomic system. This is the case with several emblematic *criollo* or *típico* (typical) dishes, which are more elaborate urban and upper class versions of peasant and popular meals. Such is the case of the *ajiaco santafereño*, one of the most prominent regional dishes in the Central Andean highlands of Colombia. *Ajiaco* is a generic term for various kinds of soups consumed by peasants in the Andean

highlands. Derived from a soup made with different kinds of potatoes, corn, and *guasacas* (*Galinsoga privaflora*), it was turned into a distinguished dish with the addition of chicken, cream, capers, and avocado (Duque and Van Ausdal 2008).

Soups in the Colombian Andes are classified according to texture and the presence or absence of additions or *recao*, cut up or chopped starches, cucurbits, and grains that are added to hearty soups. They range from simple broths to watery *sancochos* and to thicker *cuchucos* and *mazamorras*. Main soup categories are *caldos* or broths made with water, potatoes, green onions, cilantro, and if possible fleshy bones or chicken giblets for *sustancia* (flavor). Central to peasant identity is the consumption of potato broth (*caldo de papa*) for breakfast. It is important to put something warm and salty in the body (*tener sal en el cuerpo*). Some people in Garagoa call the first morning broth the *pringatripas* (tripe burner). Clear soups are strategic food resources at times of scarcity because they are simple and satisfying; they are also considered medicinal for those requiring a bland but nourishing diet. *El Estuche*, one of the first recipe books originally published at the end of the 19<sup>th</sup> century in Colombia, describes bull broth as “the soul of home cooking. It constitutes the most essential and really the most nutritive part of daily nourishment.” (Moreno 2000: 26). Broths are consumed by those in need of hydration and salt after a night of drinking and partying in which case they are called *caldo levanta muertos* (to wake the dead). The most effective are those made with bull’s testicle and penis (*caldo de raiz*) or bloody viscera such as the spleen (*caldo de pajarilla*).

*Sancocho* is a generic term for watery soups that have local variations such as *ajiacos*, *pucheros*, and *enteros*. A distinguishable feature of *sancocho* is the presence of green plantain, which is why this soup is associated with warmer climates where plantain

proliferates like Alban. *Sancochos* include roots, tubers, vegetables, plantains, and some type of animal protein: beef, chicken or fish. They are topped with finely minced cilantro and can be served with avocado and rice on the side, or with chile (*aji*), made with green onions, cilantro, tomato, and chili diluted in salty water. That texture is very important is the difference between *enteros* (whole) and *sancochos*. The former are less dense (*espesos*). Even in hot weather a hot soup with some chili is recommended to cool the body. *Sancocho* broth is also recommended for those with hangover (*guayabo*). Another watery soup popular in the highlands and Garagoa is *mute* made with *maíz pelado*, (hominy), green legumes, potatoes, and tripe or towel meat as it is colloquially called. This soup is also known as *mazamorra chiquita* to distinguish it from a sweet dessert made with hominy, milk and *panela* also called *mazamorra*. A variation of *mazamorra* is a soup made with similar ingredients but with corn flour.

Thick soups refer to porridges are made with cracked corn, barley or wheat are called *cuchucos*, an indigenous Muisca word meaning stone ground grains. It refers to the remnants of cereals that were ground in the mills and which peasants and lower class people purchased at lower prices to make soups with potatoes, meat, green legumes, carrots, and seasoning herbs. Although considered second class foods, they were also consumed in wealthier households. At present they are part of the repertoire of *platos típicos* (typical dishes) served in restaurants featuring Colombian cuisine. *Cuchucos* are more common in Garagoa although in Alban descendants of highlanders sporadically consume them. Sweet soups (*coladas*) are made with corn flour or oats, sugar or *panela*, milk, cinnamon, and cloves. They are especially suited for children and the elderly. Elderly women in Alban like to eat coladas in the evening because the sweet taste makes

them sleep better. As per chapter three, the term *colada* has become synonymous with the government mix *bienestarina*.

*Secos* are non-liquid dishes containing roughly the same ingredients as soups, in addition to rice and pasta. In Garagoa *seco* is synonymous with *piquete* (boiled roots, tubers, legumes, meat). An intermediate category between soups and *secos* are stews known as *sudados* or *cocidos*. Stews are generally cooked with a sauce made with fried tomatoes, onions, and garlic called *hogao*. The savory broth or gravy that remains after cooking is served over white rice. One of the most famous stews from the Boyacá department is the *cocido boyacense*, whose main ingredients are various kinds of tubers: *hibia*, *ruba*, and *cubios*. Cooked vegetables may be served as side dishes.

The bulk of the peasant diet in Garagoa and Alban consists of salty foods but peasants combine salty and sweet foods in their meals. Sweetness is obtained in drinks, sweet porridges, and occasional treats like cookies, candy, soda, or home-made desserts. Children are breastfed for one to two years, but during the first year of life they are given salty and sweet foods to have them “get the taste for with salt and sweet foods (*para que le cojan el gusto a la comida de sal y de dulce*). The expression *coger el gusto* means both to taste and to like. Unrefined brown sugar (*panela*) is the most popular sweetener among the rural and urban low classes. *Agua de panela* is consumed hot to warm the body or cold as a refreshing drink. It is also the base for other beverages such as coffee, chocolate, lemonade, and *guarapo*.



Figure 5.1 Soup and *seco* on a wood stove in Garagoa. On the left is a *piquete* containing squash, corn, potato, *guatila*, manioc, *arracacha* and meat. Rice and chicken stew are served with *piquete*. Note the shine of the pots.

*Panela* is the main ingredient of *melado* (syrup), which in combination with fresh cheese is a popular Andean dessert. This sweet product is also used to caramelize (*calar*), a variety of fruits for desserts: plantains, figs, and coconut. Hot with lemon, *agua de panela* is considered an effective remedy against colds. Made with cooked sugar cane juice *panela* is a symbol of Colombian popular culture and national folklore; politicians, poets, and writers have exalted *panela* as a powerful food providing endurance and strength to the working classes (Robledo forthcoming). During the 2010 award for Best Athlete of the Year, President Juan Manuel Santos exalted the triumphs of Colombian cyclists conquering summits by means of *panela* and, above all, the strength of their hearts (Presidencia de la Republica 2010). Among Colombia's most famous cyclists are

peasants from the Boyacá highlands, whose main training consisted of pedaling through steep roads with almost no government support. The direct and metaphorical association of strength with *panela* was also expressed by school children in Garagoa who said that to be stronger and develop good *panelas* (muscles), they needed to drink *agua de panela*.

Until the industrialization of sugar cane production in Colombia, *panela* was regularly consumed by the upper and middle classes. After the mid 20<sup>th</sup> century, sugar became popular, facilitating the development of sweet foods industries and soft drinks which have become part of the official food basket. Rising sugar consumption in the country is one of the leading causes of diabetes, a public health problem, especially in urban populations and among females (Ensin 2005, 2010).

*Amasijos*, literally kneaded goods, are baked, grilled, or deep-fried preparations made with corn, wheat, and *achira* (*Canna indica*) flours. They include breads, *tamales* (boiled corn wraps), *envueltos* (steamed corn wraps), *garullas* (type of bread), *almojabanas* (corn bread with cheese), *arepuelas* (wheat cakes), *hojaldras* (wheat fritters), and other dough-based goods. These are consumed with coffee, chocolate, or *guarapo* at any time of day. *Arepas* (corn cakes) are the nations' cultural bread. Of indigenous origin, they are found throughout the territory in a variety of forms. *Arepas* are a staple in many regions where wheat bread has not been able to displace them. Made with corn and water they can be plain and simple, or can be filled with various kinds of cheese, meat, pork rinds, and eggs. Different kinds of corn at different maturation stages are used to make distinct types of *arepas*. In Garagoa, the land of corn, there are the thin and dry *arepas carisecas* (dryface *arepas*), *arepas de choclo* (sweet corn *arepas*), and *arepa de guiba* (*arepa* filled with a ground paste made with green legumes, squash or

*guatila*). The famous *arepa de gañan* (plough-person *arepa*) was a large corn cake made for those who plowed the fields and who were given the best food for their important and specialized work. In Alban, the desire to eat special *amasijos* such as corn wraps during end-of-the-year celebrations drives people to cultivate three-month corn in September (Figure 5.2.).

Deep fried foods are favorite foods. They include stuffed dough patties made with ground manioc, and *arracacha* filled with meat and vegetables called *pasteles*. When made with corn and deep fried they are called *empanadas*. Fried green plantain (*tostones* or *patacones*) and ripe plantain (*tajadas*), are common side dishes. *Fritanga* (deep fried food) from the verb *freir* (to fry) includes various kinds of meats, yellow potato, and corn kernels. Until the popularization of vegetable oils in the 1970s and 1980s, all frying was done with vegetable and animal lard. Fried foods are more common in Alban and among the better-off peasants. Fried foods are consumed at home but are also common avenues to make additional money by women who sell them on the street or at public events. This is one of the most widespread forms of rural and urban livelihood diversification for women who are literally *en la olla* (in the pot), meaning out of money, unemployed, or in bad shape. Vending food is also a central part of fund raising activities for school funds, collective works, and emergencies. According to the last national demography and health survey, ENDS 2010, sales are the main source of employment for women regardless of their wealth or education level (Profamilia 2011). These informal economy activities support a large number of Colombian households, in particular those headed by women. Women headed households rose from 24% to 34% in the period 1990 - 2010 (Profamilia 2011).

The perception of peasant foods as bland and tasteless contrasts with a rural tradition of consuming fermented foods and drinks. *Chicha* (maize beer), *guarapo* (sugar cane drink) and artisanal fermented and distilled alcoholic drinks also known as *tapetusa*, *pirrín* or *chirrinche* made with sugar cane, fruits or flours, is still common in rural Colombia. Despite attempts at eradicating *chicha*, it continues to be consumed in rural areas on special occasions such as local festivities and in the capital city it has become associated with a counter-culture practice. *Guarapo* is a traditional fermented drink consumed for refreshment, energy, and against hunger pains. In many rural areas it has fallen into disuse as industrially distilled beverages have become available. This is the case in Alban where *guarapo* used to be the primary drink of coffee plantation workers until the 1970 coffee boom when they became *refinados* (refined), and switched to beer, soda, and *aguardiente* (stronger industrially made alcohol). On the contrary, in Garagoa *guarapo* continues to be the everyday drink among men, women and children who are given sips of *guarapo* during the first years of life. It is also used for cooking meats and sweet soups.

*Guarapo* remains an inexpensive and affordable beverage with strong cultural and emotional meanings. Each household makes its own according to family tradition and lets it ferment in accordance with personal preference: women, children, and the elderly drink it when it is sweeter and milder; men drink it in a more fermented stage. *Guarapo* is consumed at home where it is offered to visitors as a welcome gesture. Workers in the field expect to have at least a jar of it because it is considered nutritious and necessary for work performance. Based on her work in Villa de Leyva in Boyacá, Ávila (1970) found that peasants considered *guarapo* to strengthen blood and muscles.



Figure 5.2 Alban: making tamales with ground corn, chicken, carrots, onions and chickpeas. Tamales are wrapped in plantain leaves and steamed until fully cooked and firm.

Historically, *guaraperías* (*guarapo* bars) were common rural road stop places for peasants traveling long journeys on foot or mules to markets, municipal towns, or on religious pilgrimages. In Garagoa's municipal town they are still important urban cultural and social places where men and women meet to comment on local politics, conduct business, laugh, and relax. An unemployed man remarked that *guaraperías*, of which there are several, were vital for people like him who would otherwise be depressed and isolated at home watching television. In these bars *guarapo* is consumed in combination

with pieces of smoked and salted beef lung whose extreme saltiness stimulates continuous demand of the sweet beverage, a sales strategy of bar owners, who are often women. Brothels are euphemistically and humorously called *guarapotecas*, in allusion to the rural nature of these “discotheques.” Playful recoding of *guarapo* with new meanings is also evidenced when peasants recommend the consumption of *guarapeitorade* evoking and invoking the rehydrating properties of the highly publicized commercial beverage Gatorade. The dark side of continuous *guarapo* consumption is its association with alcoholic cirrhosis (Olarde et al. 2007), gastric cancer, (Bermudez, Insuasty, and Gamarra 2006), alcoholism, violence, and malnutrition. Gastric cancer has a high prevalence in the Colombian Andes and in particular in the department of Boyacá, where it is attributed to diets containing smoked and salted meat, fava beans, and tubers with complex starches (Suárez et al. 2004).

Taste for fermented foods and drinks is not restricted to beverages. In some areas of the Boyacá department, including Garagoa, peasants still consume *jutes*. *Jute* is a Muisca term for muddy water but also for a dish made with fermented corn or potatoes. These crops are placed in mud for several weeks until they ferment and acquire a strong smell and taste. When ready, they are washed thoroughly before grinding and cooking them into a soup with meat and vegetables. Corn *jutes* known as *maíz de agua* (water corn), can also be made into a sweet, in which case they are cooked with *guarapo*, fresh cheese and an aromatic herb, spearmint or rue, to reduce the strong taste and smell. Potato *jutes* are reported in 1789 historical records but have also been witnessed among contemporary peasants in Boyacá according to Muisca historian Rozo (1998), who argues that water conservation could have been a form of preserving crops for considerable

periods of time. British anthropologist Ann Osborn (1995) also documented this practice among the U'wa, a Muisca group living on the Sierra Nevada del Cocuy.

For Rozo (1998) *jutes* represent a long-term taste custom originating in indigenous preferences for strong tastes. In effect, appetite for strong flavors could have been a way to enrich, diversify, and make more complex the dietary and taste repertoire. Nutritionally, fermentation also offers additional nutritional and antioxidant qualities by promoting beneficial microorganism growth in food. The calories of corn combined with alcohol also provide a sense of energy. This would explain why elders in Garagoa attribute special nutritional and medicinal properties to *jutes*. The strong taste and smell, however, discourage youth from trying a dirty and backward recipe. Those who have grown up with this practice and have seen their grandparents and parents cherish it as a special and traditional dish are less reluctant to consume it. The sensory-affective attachment to certain foods and tastes like *guarapo* and *jutes* illuminates how taste structures are transmitted culturally over time and make up the historical memory of social groups. It also hints at how particular sensory qualities of food shape tastes and identities.

In Alban *jutes* were known as *maiz embuchado* (stuffed corn) or *sopa de piste* (*piste* soup). *Piste* means sour. The soup, however, was not as common as in Garagoa. The corn was not left in the water for too long to ferment, maybe a week recall Doña Edelmira and Doña Carmen. They also recall that fermented corn flour was used to make *arepas*. Doña Edelmira and Doña Carmen describe in detail how they used to harvest the corn, shell it, grind it, and let it stay in a ventilated area for two days until it became a little sour and you could smell the difference.

It was different but good, soft and tasty, even better with a little cheese; a fine accompaniment for coffee, *agua de panela* or chocolate. “But that was when chocolate was chocolate and *arepas* were *arepas*” they add, meaning when foods were made from scratch and smelled and tasted differently. Chocolate, for instance, was cooked together with cow’s feet (*chocolate de pata*), for grease and taste. With nostalgia they comment that flavors like those are long gone because commercial corn flour and industrial chocolate are increasingly used. This instance of the coming together of sensory perception (taste, smell, vision, and texture), memory, and emotion is what food scholars have conceptualized as embodied synesthetic experience (Sutton 2001, 2010) or synesthetic bundling (Meneley 2008). By this they mean the simultaneous stimulation of various modalities of perception triggered by the sensuous materiality of food. This uncanny (Hotlzman 2009) ability, is what makes food such a powerful and meaningful material, social, and political fact. An explicit and immediate intersection of the physiological, emotional, and symbolic satisfaction produced by food is captured in the popular saying "full belly, happy heart" (*barriga llena, corazón contento*).

*Comida* in the Colombian Andes is not only a generic concept meaning food and nourishment (*alimento*). For *campesinos* in Garagoa and Alban *comida* is a category encompassing the crops that make up the bulk of their diet: cereals, tubers, cucurbits, roots, legumes and plantains. In Garagoa a *comida* also refers specifically to crops that are planted by vegetative propagation such as roots and tubers. These are also called *duras* (hard ones). The complement of *comida* is *recao*, a generic term referring to grains, vegetables, and green and dry legumes, which add variety, taste, and strength to soups. *Recao* also refers to solid foods, cut up or chopped starches, cucurbits, legumes,

vegetables, that are found in hearty soups. *Recao* is what is left after the broth and the meat are consumed. At an agronomic level in Garagoa *recao* refers to crops whose seeds are planted on the outer sides of a furrow such as corn, peas, beans, fava and chickpeas. Roots are planted in the center of the furrow (Monsalve 2005: 262). Morphologically, *recao* overlaps with another broad category: grains, which includes fresh and dry cereals and legumes that share a granular shape. According to peasants in Alban and Garagoa *granos* include “everything that is like a pit, round and small” (*todo lo que es pepita, redondo y pequeño*).

The *verduras* category includes green legumes, squash, and vegetables also called *hortalizas*. Whereas some legumes and squashes are vines, the latter grow above the ground like lettuce, spinach, and onions. Vegetables are eaten in very small quantities; most commonly small amounts of chopped vegetables (carrots, string beans) and green legumes are added as relishes to soups and stews. Green legumes are considered vegetables and are liked because of their tenderness and digestibility. For the most part vegetables are cooked and salads consist of cooked vegetables served as relishes or side dishes. Unlike protein and starches vegetables are not filling (*no llenan*) or strength-giving (*no mantienen*). They do not constitute a meal because they are rapidly digested and hunger soon returns. Only a few vegetables are eaten raw: onions, tomato, cucumber, and lettuce are prototypical raw salads. According to peasant hot-cold beliefs raw vegetables are cold or cooling.



Figure 5.3 Alban: gastronomic display served over plantain leaves. Green corn *arepas* with cheese, deep fried corn patties with sugar, cow feet used to make chocolate, *tamales*, *arracacha* patties filled with peas, chocolate cooked with cow's feet.

Most vegetables consumed in the Colombian Andes are of temperate origin which is why their cultivation and consumption is more frequent in the highlands of Garagoa than in Alban. Wild plants are not commonly consumed except for rebancá (*Brassica olerosa*), *guacas* (unidentified), and *guascas* (*Galinsoga parviflora*). In Garagoa one of the last wild roots seasonally consumed is the *maravilla* (*Tigridia pavonia* L.F.).

Distaste for vegetables runs across all socioeconomic strata in Colombia and clashes with current discourses on the health benefits of vegetables. This is one of the primary causes for rural micronutrient deficiencies. Expressions such as “vegetables, like grass, are for ruminants only” or “nature is better seen than eaten” condenses popular cultural perceptions of vegetables as foods with limited appeal. The recent food and nutrition survey (ENSIN 2010) reported that most consumption of salads and vegetables is found among young urban women; this fact reveals the influence of contemporary Western cultural politics of body size (Gremillion 2005), gender ideologies of thinness, and prescriptions for eating light in name of nutrition and health (Bordo 1993, Counihan 1999). As has been discussed, thinness is not yet an aesthetic ideal in Alban and Garagoa.

Another food category is *pepas*, a term applied to rounded foods with pits or seeds and often used synonymously with fruits and cucurbits. Fruits are not considered strength foods because of their digestibility and rapid elimination. They do not constitute a meal but a snack or a treat. A favorite seasonal activity of children in the countryside is to pick fruits from trees and bushes. Before commercial candy became widespread, fruits were among the main sweets available and most desserts were fruit-based. At present, fruits are consumed in the form of juice or between meals. They are one of the few foods eaten raw and are therefore considered cold or cooling. This quality makes them appropriate during the day but not at night, when hot meals are recommended. Fruit salads are also perceived as luxury foods that wealthier urban residents consume. Proportionately, fruits are more expensive than other more filling and yielding products such as rice or legumes which are prioritized in family purchases. In Garagoa, regional climate change has affected fruit production and limited fruit intake. In Alban, old age of

trees and changes in weather patterns is mentioned as an argument for reduced production and consumption of fruit. Although the past is not idealized in peasant accounts, farmers in Alban and Garagoa concur in that fruits used to be more abundant and beautiful (*una belleza, una hermosura*), two frequent terms to express admiration for fields, animals, crops, and foods.

Despite low fruit intake, peasants recognize and value the nutritional and medicinal virtues of fruits that are often consumed as remedies for colds, digestive and kidney problems, anemia, and overall weakness. Citrus, papaya, pineapple, watermelon, blackberries, and banana are recommended for these maladies. In recent years and under the influence of natural medicine and institutional medical and nutritional advice, fruit consumption has increased among elders with high blood pressure and diabetes. Papaya, for instance, has become among the most popular fruits for its antioxidant, digestive properties, and low-calorie content. Agro-industrial production of commercial fruit varieties has displaced landraces that are marginalized because they are not as colorful, evenly shaped, and lustrous (because of the wax coating).

Beef, pork, and chicken are foods covered by the generic term *carne* (meat). *Carne*, however, is used primarily for beef or red meat (*carne roja*) the preferred and most common type of meat in Colombia. Although meat is costly, peasants in Alban and Garagoa attempt to eat small amounts of meat or other kinds of proteins (i.e. eggs, cheese, chicken, beans, lentils) during the week for strength, sustenance, and flavor<sup>28</sup>.

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<sup>28</sup> The common public association between protein and meat can obliterate the human consumption of different forms of protein (animal and vegetable) or animal substances such as fat, viscera, and blood which are important sources of nutrients, strength, and flavor. In the official Colombian food groups, proteins include all animal and vegetable proteins except dairy and fats which are under other categories. See footnote N. 6. The evolution of the human diet, and in particular the role of protein and meat, has been the subject of considerable discussion from political economy, political ecology, archaeological, evolutionary, and nutrition perspectives. For a thorough cross-cultural and cross-disciplinary overview see Harris and Ross (1987).

Due to lack of refrigeration in rural areas there is a marked preference for fresh meat; it is bought the same day of slaughter or in the days immediately after. In Garagoa a few households still consume salted and smoked meat that is hung in the rafters of the kitchen over the smoke of the stove, or in a ventilated hallway. Vegetable proteins are called the meat of the poor (*la carne de los pobres*) and are not as prestigious and desired as animal protein. Animal protein is one of the highest valued foods and an important marker of socioeconomic distinction. As illustrated in the heartfelt testimony by Milton, a Garagoa farmer, peasant hardship, frustration, humiliation, and exclusion is expressed in the language of food:

I wish I could have lived to be a *campesino* in another way: [to] dress with old but clean clothes, to have my rights respected selling my products like they are sold in large chain supermarkets, not live from appearances. I would have liked the food for the visitors to be the same that we ate every day... The best was always given to visitors [...] in order to present a small world that is not the reality of the countryside which is to eat meals without meat. Pepper is the meat, *guarapo* is the juice or the soda, *cuajada* (fresh cheese) is for sale in town -- given away because we are not paid what is worth. Chicken is to be cooked in December when those who live in the city come to visit. All year long we take care of an animal for those who come in December! ... I wish that the treatment of the shopkeepers would have been better, not mocking at you, without indifference, without discrimination. We were always the last to be served. I would have liked that the meat that was sold to us was not bone but lean, because money is the same for everyone. We *campesinos* were never sold lean meat.<sup>29</sup>

Asymmetrical access to food, and in particular protein, marks implicit and explicit material, social, and spatial boundaries that are resented by peasants who even having purchasing power are denied access to prestige foods. Giving the best food to visitors, perceiving lower prices for their produce, and receiving a discriminatory treatment of

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<sup>29</sup> This quote was obtained in 2009 by Nurys Silva, a student of anthropology conducting fieldwork for her MA thesis in Garagoa.

shopkeepers are powerful reminders of the subaltern condition of peasants and its expression in the politics of everyday food in Colombian society. These complaints evoke the Chilean urban food riots described by Orlove (1997) for the beginning of the 20<sup>th</sup> century when workers protested not over staples but for the social and moral right to eat meat, a luxury food that was a small part of the diet.

The high value of meat reaches back to cultural models of food consumption introduced from Spain where meat was a symbol of power, strength and virility; only warriors, knights and the elites had access to meat (Cabañas 2006). Spanish peasants ate cereal, vegetables and wild foods (Rodríguez 2006). This pattern was transplanted to the New World (Archetti 1997, Patiño 1990) where regular meat consumption was a practice of white and Creole elites seeking to emulate the behaviors of the European aristocracy. In Colombia meat did not become a regular part of the rural diet until the second half of the 20<sup>th</sup> century when meat became more available with expanding livestock production. Peasants found cheaper and more accessible options with local crops, wildlife, and domestic animals. After 1950, in the context of state-led agricultural modernization and food regulation, arguments on the benefits of meat for health, nutrition, hygiene, moral development, and social progress were espoused by national and regional political elites, state officials, technical experts, and public health authorities (Flórez-Malagón 2008). These developments led to the consolidation of meat as a model of cultural consumption that was more notable in urban centers and among the middle and upper classes (Flórez-Malagón 2008).

Most meats consumed by peasants are fleshy boned, hard meats or viscera which require lengthy cooking. Leaner meats of higher commercial value are sold in urban

markets to restaurants, local elites, or are taken to larger regional markets. Fleshy and porous bones are used to give flavor, and fat, *sustancia*, to broths and soups. Cattle and pig organs and viscera are appreciated for their special flavor and texture; those containing more blood are believed to concentrate strength and energy necessary for good health and vitality. Liver, lungs, tripe, mouth, cheek, guts, tail, feet, ears, and head are consumed in various stews called *pelanga* or *chingarria*, and *chanfaina*. They are also used in deep fried preparations like *fritanga*, a popular dish composed of various kinds of sausage (*chorizo*, *longaniza*), blood sausage, in addition to ribs, heart, kidneys, lung, intestines, and pork rinds. They are served with boiled manioc, salted boiled potato, and fried ripe plantain. These fried foods are generally sold in local markets and road stops and people refer to them jokingly as cholesterol palaces (Figure 5.4.).



Fig 5.4 Garagoa. Market stall with with deep fried sausages, viscera, pork rinds, and *criollo* potatoes. Boiled manioc and chile sauce are served on the side.

The influence of *Llanero* (Plains) culture is felt in Garagoa in the consumption of meat cooked in the smoked *Llanero* style (*carne oreada* or *carne a la llanera*) during important social events in Garagoa. Smoked meat can also be purchased on the market plaza where vendors located on one corner specialize on this kind of cuisine while on the opposite side are *fritanga* (deep fried meats).

During colonial times and later in the Republican period, a form of peasant access to meat was through wage work, when laborers were given meat as part of their daily food ration (*ración*). Dry and salted meat was part of the ration supplied by patrons to workers in plantations, mines, and agricultural estates (Deas 1987, Jaramillo 1987, LeGrand 1986, Patiño 1990). As mentioned in chapter three, in the 1930s the League of Nations' Sanitary Committee on popular nutrition determined the basic food ration for a working adult (*ración de sostenimiento*), to be 2400 calories, to be supplemented accordingly to the task performed (Bejarano 1950a:158). The contemporary meaning of *ración* refers to animal protein (meat, chicken, egg, and cheese) and more specifically the portion of protein that is served to workers. A person, e.g. a patron hiring workers, is judged by the quantity and quality of the food given to workers, who are often relatives and neighbors. Serving them everyday low-value foods such as *guatila*, also known as poor people's potato, without any animal protein is a motive for comments on stinginess and poverty. In small communities food gossip is a powerful mechanism of social control. Fair treatment and well seasoned and abundant food are fundamental avenues for social prestige and balanced reciprocity. With the humorous spark that characterizes him and using changes in technology as a referent, *Don Carlos Julio* comments that in past

years workers were fed round corn cakes the size of a long-playing record alluding to the old vinyl records. At present they are like CDs, he chuckles.

According to men and women in Alban and Garagoa, food must not be dull or insipid but mild and agreeable to taste, smell, and texture. Each ingredient should serve to enhance the flavor of food without overwhelming the palate or causing indigestion. People should be able to distinguish the particular taste of each of the foods being consumed which is why the main seasonings used are natural such as salt, garlic, green onions, and cilantro. Pepper, cumin, laurel, thyme, and semi-domesticated herbs like *guascas* and *guacas* are sometimes added to soups and stews. Annato, commercially known as *color*, is employed for adding color to stews and meats. Homemade chile sauce is served on the side. Lemon is the main salad dressing. Commercial seasonings like bouillons are used sparingly because they are considered noxious for health and digestion, irritating (*irritantes*). In Alban some women use bouillon sporadically for flavor and to “fool the appetite” when meat or fleshy bones are lacking. The use of industrial flavorings is more common among women who have worked in urban kitchens as maids or cooks and have been exposed to other cooking styles characterized by spicier flavors found in *comida típica* (typical food) or *criolla* (Creole). The term *criollo* was used during the Colonial period to designate those born in the New World from parents of European origin. At present the term is synonymous with “national origin” and *comida criolla* stands for national cuisine. A distinctive aspect of this style of cooking is the use of a sauce made with fried green onions, tomato, and salt while cooking soups and stews (*hogado*). This sauce is also added as a relish on top of boiled roots and tubers. The use of tomato is a relatively recent phenomenon; peasants do not recall using much

tomato in their cuisine until its production became widespread. In Alban *Doña Cecilia* remembers eating from time to time eggs with wild tomatoes, similar in size to cherry tomatoes and sweet, but leaving a tart aftertaste. These tomatoes have long disappeared from Alban.

### Preferences, rankings, and embodied likes and dislikes

Likes and dislikes are shaped by sensory perceptions, the physiological effects of food, and the physical and emotional pleasure of eating (Messer 1989, Macbeth 1997). Tastes are subjective and physically embedded; by force of repetition, preferences are also patterned into broader cultural codes and ranked according to specific scales of values (de Garine 1997). Rankings of food greatly influence what people choose to eat and the ways in which they define themselves as individuals and collectivities (Ohnuki-Tierney 1993, Wilk 2006). Based on observations and interviews in Alban and Garagoa a single food can be embedded with different meanings and rankings. This categorization overlap is a partial reflection of individual preferences and idiosyncratic associations with food, a situation that makes local classification categories with porous boundaries. Perceptions and categorizations are not rigid structures but the result of multilayered personal and social criteria (Nazarea 1998). Foods have relative meanings and values depending on circumstances, contexts, and use. For instance, plantain in Alban is considered a strength food, a special, a most liked, a least liked, and poor person's food. Plantain is prominent in the landscape and the diet in Alban. A similar situation was found in Garagoa with *arracacha*, a widely consumed root there. These crops share in common that they are representative of peasant foods, are central to the rural diet, and are

part of the long-term Andean food structure. They are cognitively, sensorily, and emotionally charged because they are materially and culturally significant; they underlie local food security, peasant identity, and sense of place at the most basic level.

Familiarity and repetition is also a source of security and gratification which can explain why these foods are simultaneously perceived as liked and disliked.

Foods do not need to be fancy or costly to be honored; everyday peasant foods are special because they are familiar and comforting, like soup. Yet special foods also include foods that are less frequently consumed because of cost or that are reserved for special occasions like *chicha*. They are part of a social imaginary that situates them as markers of social distinction or high nutritional value such as fish. Historically, peasants in the highland Andes only consumed fish in the form of dry cod or canned sardines during Lent, in observance of abstinence from meat. Fresh fish are occasional treats consumed when peasants go to a restaurant or they visit lowland riverside areas where fishing takes place. Fish head and eyes are highly esteemed as nourishment for the brain and the eyes. A few special edibles are considered nostalgia foods either because they have been socially marginalized or are harder to find like *batata* (*Ipomoea batatas*) or greens. For a few older peasants these crops bring back personal and social memories that activate the mind and heart in ways similar to those described by Sutton (2001), Seremetakis (1994), and Holtzman (2009) for Greece and Africa respectively.

Some socially devalued foods are those that are the most abundant and less labor demanding crops such as cucurbits, roots and plantain. Although rice is devalued because it fills the belly, it does not produce the same sensation of satiety as certain peasant crops. Strength is an important concept in the northern (Gudeman and Rivera 1990) and central

Andes (Orlove 1997). It refers simultaneously to the physical strength, vital energy, and life force that are shared by the natural world and humans. For Colombian peasants, food is a primary nexus in the human-nature interface as the strength of nature and the earth are passed onto crops via agriculture (Gudeman and Rivera 1990:28). Through food, nature in the form of earth, water, wind, and energy is literally ingested and incorporated into the body. In Alban and Garagoa men and women note that bodies, especially hard working peasant bodies, need foods that are nourishing (*comida de alimento*), foundational (*de fundamento*), and sustaining (*comida que mantenga*). Food must be beneficial (*de provecho*). Strong and healthy bodies are necessary for the continued production of nourishing food. The nourishing properties of food makes them strength foods par excellence; they are physiologically and psychologically satiating and sustaining as is the case of proteins. Stimulating sweet drinks such as *guarapo* and chocolate and hot hearty soups also endow the body with vitality and strength. Staples like corn and *arracacha* in Garaoa and plantain in Alban give life force (*aliento*) and energy (*ánimo*) for endurance and strength to work.

The power of the mundane and ordinary (Carolan 2011, Farquhar 2002, Stewart 2007) rests on a deep seated material and cultural attachment to these crops and foods. Not having these everyday comfort foods is also a cause of economic, nutritional, and emotional distress. For people who have experienced hunger, scarcity, or hardship, food is overall good, enjoyable, and respected. In their opinion "there is no bad food; food is holy and everything we eat we like."

## Conclusions

In this I chapter explored the relationship between taste, cuisine and identity among Colombian Andean peasants. I clarified how cultural perception, embodied tastes, and cuisine transform agrobiodiversity into socially meaningful foods. Findings indicate that peasants' relation to food is mediated not only by history, economy, ecology, and culture, but by embodied experience. Ethnographic examination of peasant food perceptions and tastes in Alban and Garagoa, reveal that behind the apparent simplicity of peasant meals there is significant cultural and culinary elaboration. Likes and dislikes are rooted in deep-seated tastes and gastronomic identities, acquired in social contexts through cultural learning. Findings confirm that in the Colombian Andes the peasant diet is composed predominantly by foods of vegetable origin, mostly starches (cereals and tubers), followed by animal and vegetable protein, and a smaller amount of vegetables. This structure is an outcome of a long agrarian and culinary history rooted in indigenous and Spanish legacies. Indigenous consumption of a largely vegetarian diet composed of cereals and grains (corn, potato, roots and tubers, beans, squash) was fused with the cereal and protein-based Iberian diet (wheat, barley, legumes, meat and dairy). Indigenous consumption of liquid-based foods (soups, beverages, maize beer, *chicha*) also merged with the Spanish rotten pot dish giving way to a variety of soups that are emblematic of the Andes.

Findings also suggest that for Andean peasants, definitions of food require that it is nourishing and strength- giving. It also has to provide a sensation of satiety. Starches are filling and sustain daily human activity, which also makes them necessary and liked. Proteins endow with strength, a quality that makes them among the most special and

liked foods, especially animal protein and dairy. Vegetables and fruits are not filling. This is why they do not constitute a meal in itself but are served as relishes or a side dish in the case of vegetables, and snacks in the case of fruits. Further findings are that nourishment is not the only criteria for defining food. According to cultural and humoral (hot/cold beliefs) ideas of food, health, and well-being, bodily energy and temperature balance must be maintained by combining liquid or water-based foods (soups and drinks) with dry meals, *secos*. The culinary *sopa/seco* binary also structures the broader Colombian national cuisine. In the Andes food must also be cooked and salty. It is also associated with freshly made and warm meals, preferably seasoned mildly with natural ingredients. Blandness, as opposed to spicy and hot, is a quality of Andean peasant foods. Bland foods may be combined with a chile sauce that is served on the side. Salty meals are also combined with beverages are sweetened with brown sugar. Raw food is associated with coolness according to humoral (hot/cold beliefs). Raw fruits and vegetables are considered cool. Texture is also an important consideration shaping cultural taste. Peasants in Alban and Garagoa express a preference for soft textures; softness is achieved by the lengthy cooking of most foods and meals. Texture is a significant criterion for classification of soups which range from broths to hearty soups to thick porridges.

Contrary to characterizations of peasant diets as simple and plain, findings also suggest that diversification is achieved through meal composition and cooking techniques. Main cooking techniques are boiling and stewing. Boiled food is complemented with baked and grilled corn-dough foods (*amasijos*) and fried foods. The combination of distinct textures, flavors, and temperatures also prevent palate fatigue (Armelagos 2010) and bring variety. Cooking is the gendered responsibility of women

who are enskilled at an early age in the performance of a variety of culinary tasks and mastering the art of culinary improvisation. Women's identity is inextricably connected to the act of cooking. Although the structure and composition of the rural diet varies with seasonality, income, and food availability eating at least three meals a day is expected. Abundant and generous portions are central to definitions of what constitutes a proper meal. Offering food to guests, sharing food, and giving food as gift are part of peasant notions of decency, amiability, generosity, and reciprocity. Both stingy and wasteful behaviors are frowned upon. In peasants households, leftovers never go to waste; they are given to the animals.

Preference for bland foods contrasts with the cultural taste for fermented foods such as *chicha* and *guarapo*. This is most salient in Garagoa where *guarapo* is still regularly consumed by men and women. Taste for ferments in Garagoa is associated with an indigenous Muisca legacy of consumption of foods made from fermented corn such as *chicha*, and *jutes* (fermented corn soup). As discussed in chapter three, *chicha* was associated with ideologies of racial degeneracy and decay and was finally prohibited in 1948. In Alban consumption of *guarapo* fell in disuse when agricultural modernization and the rising cost of coffee brought new tastes and consumption possibilities for more expensive fermented drinks like beer. As mentioned in chapter two, ideologies of modernity and progress emphasized by the National Coffee Federation also contributed to the marginalization of *guarapo* for consumption on occasions only.

Another finding of this ethnographic exploration is that a satisfactory and pleasurable relationship with food is not confined to a purely hedonistic experience. Foods and meals classified in consonance with cultural notions of strength, balance,

aesthetics, morality, nutrition, and health. To portray a peasant cuisine as simple and unelaborated and to judge it from ethnocentric gastronomic logics is to ignore its complex and textured nature. In connection to this finding, a feature unveiled in close examination of peasant cuisine is the dense and polysemic characteristic of foods and drinks. A single crop, food, or meal can be perceived, classified, and valued in different ways. This density results from the distinct economic, perceptual, and symbolic values with which food is endowed at the personal and collective level. The multilayered nature of peasant foods in the Colombian Andes is reminiscent of the thickness attributed to symbols and metaphors. According to symbolic anthropologists (Geertz 1973, Onhuki-Tierney 1993, Turner 1967, 1975) symbols are endowed with complex associations and ambiguity because they embody several dimensions of social life: they are not entirely coherent and timeless abstract entities but are anchored in the dynamic and informal logic of everyday life, social action, and relationships of power. Symbols, like food, are rooted in the mundane, the material, and the sensuous; they appeal not to rationality but to emotion, memory, and sensation. These qualities make them powerful articulators of multiple changing cultural meanings. The cultural-symbolic importance of peasant crops and foods motivates their consumption and conservation in the midst of globalized foodscapes.

In her discussion of rice in Japan, Onhuki-Tierney (1993) notes how foods, most notably staples, are often selected by people as symbols and metaphors for representing self. Staples bring people together for commensality and community and serve as vehicles for articulating peasant identities in relation to others. A similar situation occurs in the Andes where peasant crops and foods incarnate deep social histories and culturally

shaped tastes that differentiate them from others, such as the urban rich. Peasant appreciation of and desire for products and flavors that are personally and collectively significant has implications for the preservation of local agrobiodiversity for regular consumption of the familiar crops and foods that constitute the food repertoire.

Anthropologists are known for the study of the exotic and foreign but also for being able to exoticize and denaturalize the common and the ordinary. The regularity and routinization of food facilitates its naturalization and taken-for-grantedness. Food scholars, however, have increasingly clarified the multifaceted nature of food. They have further suggested how the centrality of food to life makes it a powerful vehicle for conveying meaning and mediating social relations (Mintz 1985, Counihan and Van Esterik 1997, Counihan and Kaplan 1998, Weismantel 1988). Taste in Alban and Garagoa is a site where memory, sensuous perception, affect, and identity come together in personal and shared experience. *Jutes*, *guarapo*, corn cakes, broths, and stews are materially and symbolically constitutive of peasant bodies. People's strength and vitality derives from the fresh and natural crops with which these foods are made; other daily staples such as rice do not provide the same quality of strength. As Gudeman and Rivera (1990) and peasants testimonies heard in Alban and Garagoa, strength comes from nature, the earth, and human labor via agriculture; this is partly why access to land, water, and seeds remains so central to the peasant cause and to current food-based peasant mobilizations for food security, autonomy, and sovereignty in Colombia and in many parts of the world. As Milton reminded us in his heartfelt testimony, being able to eat culturally meaningful foods is a legitimate and deeply political claim for a dignified existence.

## CHAPTER 6

### FOOD CONSUMPTION AND DIETARY DIVERSITY

#### Introduction

The previous chapter described how peasants' cultural perception, embodied tastes, and cuisine transform agrobiodiversity into socially and culturally meaningful food and meals. This chapter focuses on actual consumption through an examination of the peasant diet in Alban and Garagoa. It explores how peasants from communities with distinct productive systems use agrobiodiversity in their diets and how this contributes to diversify their food repertoire. Contemporary concern with chronic health problems associated with poverty-related undernutrition and obesity linked to diets high in processed sugars and carbohydrates, and saturated fat (Bermudez and Tucker 2003, Finucane et al. 2011, Popkin 2001), have led to an increased interest in traditional diets and food cultures for nutrition and health options (Etkin 2009, Frison et al. 2004, Johns 2001, Pieroni and Price 2006, Vorster et al. 1999). Traditional diets and cuisines are largely based on agrobiodiversity, which provides a range of domesticated and wild resources for food and nutrition variety (Frei and Becker 2004, Garí 2001, Johns 2005, Kunhein and Receveur 1996). While there is no agreement on what a perfect diet is, it is agreed that diversification can enhance the nutritional value of foods and reduce the rates of chronic degenerative diseases (Johns and Eyzaguirre 2002, Johns and Sthapit 2004, Johns 2005, Maunder et al. 2001, Tucker 2001, Wahlqvist 2003, Wahlqvist and Specht

1998, WHO/FAO 1996). Dietary diversity can also be an indicator of dietary quality, nutritional status, and household food security given its positive association with child growth and development (Hoddinott and Yohannes 2002, Ruel 2002). Improvement in dietary diversity has also been associated with household economic status and ecosystem diversity and integrity (Frison et al. 2004, Goodman and Leatherman 1998).

Paradoxically, rural households in biodiverse Andean countries like Colombia experience macro and micro nutrient deficiencies due to the prevalence of starchy staples in the diet and a reduced consumption of animal products, fruits, and vegetables (Cincotta and Engelman 2000, ICBF 2006, Larrea and Freire 2002, Leatherman 1996).

Malnutrition affects strategic food-producing areas such as the Boyacá and Cundinamarca departments where Garagoa and Alban are respectively located. In this Andean region it is estimated that more than 42.4% households are food insecure (ICBF 2006). Although there is considerable inter-municipal variation official sources (ICBF 2008) indicate nutrient consumption deficits for protein (39.8%), calcium (80%), zinc 9 (63%), vitamin C 916.7%), and vitamin A (38%). They also reveal excess consumption of starches (55.8%) and saturated fats (17%). Although prolonged lactation periods, up to 15 months, is a strategy that reduces malnutrition and offers numerous benefits for child development and health, prevalence of anemia among women between 13 and 49 years old is 29.4% and 28.8% among children ages 5 to 12 years old. Malnutrition in Colombia has been attributed to structural land inequality, social exclusion, poverty, environmental degradation (Morales and Mantilla 2007, Ruiz and Ruiz 2007, Vallejo 2008), as well as cultural preferences for carbohydrate and energy-rich diets (ICBF 2006).

In consideration of these nutrition data and social discourses on the poor cultural food habits of peasants, this chapter looks at food consumption in Alban and Garagoa drawing from a seven-day food frequency log in 14 households, 7 in each research site. The first section situates the Andean diet in light of Mintz's (2001) core-fringe-legume (CFL) hypothesis. Then it proceeds to present and contrast perceptions of the local diet in both research sites. Next, foods consumed in each place are examined for proportionality and variety. Emphasis is placed on the different ways in which diversity is expressed in the diets and the potential implications for health and nutrition. The primary sources of data for this chapter are free listings of local foods consumed, seven-day food frequency logs (FFL), participant observation at various eating times, and open-ended interviews with men and women.

#### Andean peasant diets: cores and fringes

The Andean peasant diet shares structural features with other agrarian societies. According to Sidney Mintz, long standing agricultural societies have a similar food pattern that corresponds to what he terms a core-fringe-legume (CFL) prototype (1985, 2001, Mintz and Schlettwein-Gsell 2001). Mintz hypothesizes that agrarian diets are characterized by a core that contains one or more locally grown complex carbohydrates, tubers or cereals, which are cooked and generally relatively soft, bland, homogeneous in color and texture, and generally palatable. Cores are eaten in most meals, in bulk, constitute a meal by themselves and are synonymous with food. They are the main source of calories for people engaged in physically demanding activities. Cores are combined with fringes, which are either a protein or a vegetable relish that add taste and variety to

the meal and thus facilitate the ingestion of larger quantities of carbohydrates. Fringes, whether fresh or cured, hot or cold, liquid or solid, are eaten in lesser amounts. Legumes or pulses are a substitute for animal protein, which has been relatively scarce for farming populations. In Alban and Garagoa cores are roots, tubers, corn, and plantains; fringes are cooked vegetables used as relishes in soups, stews, or *secos*.

From an anthropological perspective Mintz focuses on what people consider food, meals, and appetite and argues that people attempt to eat “culturally hedonically and nutritionally coherent complexes of foods” (Mintz and Schlettwein-Gsell 2001: 51). The model does not account for other important sources of nutrients such as fruits, fat/oil, and sweets, which have become increasingly important in contemporary rural diets, nor is it formulated with nutritional considerations in mind. Yet the CFL triad represents a food structure that allows for broad cross cultural comparisons of shared agrarian dietary patterns within Western nutrition classificatory schemes. Situating the Andean peasant diet within the perspective of the CFL hypothesis provides more nuanced understandings of how peasants and farmers across time and space have configured food systems to meet food and nutritional needs, and in the process developed particular ideas about food and diet.

In addition to observing and participating in food events, an initial step to approach the peasant diet in Alban and Garagoa was to elicit a basic inventory of foods consumed. I employed free listings to identify foods with higher cognitive salience according to frequency of appearance (Blum et al. 1997). A total of 30 women, 15 in each field site, were asked to list the 20 most consumed foods in the locality. Free listing results indicate a shared peasant food structure which a primacy of starches (Figures 6.1,

6.2). They also suggest that people associate the local diet with peasant crops and foods, some of which are cultivated locally and with symbolize Andean peasant identity. Finally, they also hint at a cognitive discordance with foods that although regularly consumed are not prominent in local listings such as rice and pasta.

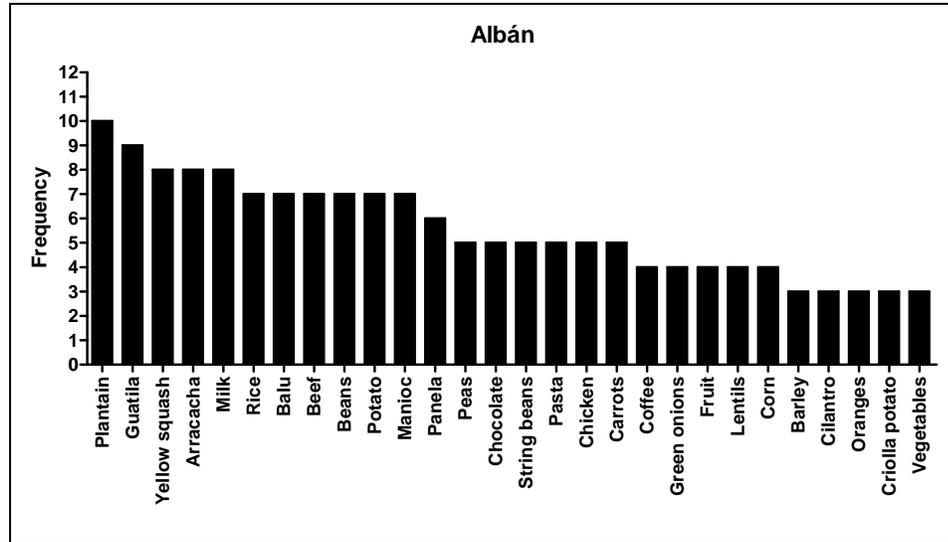


Figure 6.1. Women's reports of most consumed foods in Alban. N=15

Listings in Alban totaled 59 foods but only the 28 with two or more frequencies, are considered here (A complete list is found in Appendix H). Of these, 10 are starches, 2 animal proteins, 3 legumes, 7 vegetables, 1 dairy, 2 fruit, 1 sweet and two beverages. Eight of these crops are indigenous to the Americas. At present eight of the crops cited are cultivated in this coffee area.

In Garagoa (Figure 6.2), people listed twice as many foods than in Alban. Individuals mentioned a total of 119 unique items but here I also list only on those that were named by two or more individuals, 29 total food items (A complete list is found in Appendix I). This list includes 15 starches, 1 animal protein, 3 legumes, 2 dairy products,

6 vegetables, and two locally made starchy beverages (*chicha* and *masato*). Fruits are absent. In contrast to Alban, listings encompass foods and food preparations or dishes made with corn due to its agricultural and historical relevance. Here too, locally grown starches have cognitive prominence. Like Alban, rice and pasta have low cognitive salience despite being regularly consumed.

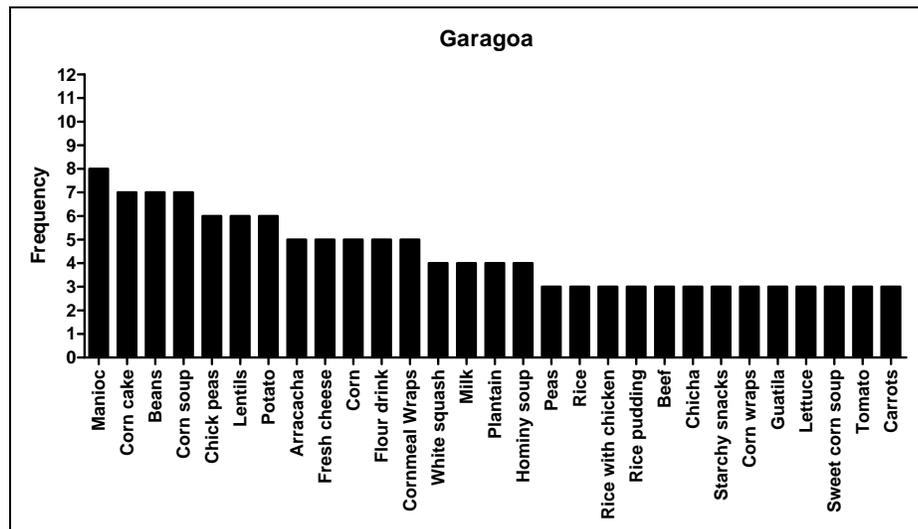


Figure 6.2. Women’s reports of most consumed foods in Garagoa. N=15

An important difference between the two sites, which is an expression of local diversity in Garagoa, is the prominence of crop varieties or landraces. While in Alban only the main plantain varieties were mentioned: *colisero* and *dominico*, in Garagoa varieties of several crops were listed. For instance, manioc had 4 varieties: *puentuna*, *socorrana*, *coneja*, and *palinegra* varieties; *arracacha* also had 4 varieties: *cabezona*, *zarca*, *amarilla*, and *fenzana*; potatoes had 6: *quina*, *pastusa*, *criolla*, *monserrate*, *punto rojo*, and *meringue*; and corn had three: *blandito blanco*, *blandito amarillo* and *maíz arroz duro*. This diversity suggests farmers’ manipulating and nurturing agricultural

diversity, adapting crops and varieties of different shape, form, color, taste, and agronomic characteristics. Intraspecific variation is strategic for broadening the diet, harvest security, genetic diversity, and for culinary and sensory variety. For instance, *zata* manioc is very soft whereas white manioc is a little harder. These findings highlight the continued and strategic relevance of peasant knowledge and cultural tastes for the conservation of agricultural and cultural diversity.

Also significant is the cognitive salience of corn in Garagoa as evidenced in the various corn preparations reported: soups (*sopa de dulce, sopa de mazorca, sopa de mute*), beverages (*chicha*), corn cakes (*arepas*), snacks (*colaciones*), and cornmeal wraps (*tamales, envueltos*). Corn was the main food of the Muisca (Langebaek 1987, Rojas de Perdomo 1994). Corn, tubers, and roots also were prescribed for fasting and abstinence practices of chiefs and priests during propitiatory agricultural rituals and female rites of passage (Saldarriaga 2007). Although the Spanish introduced cereals and grains such as wheat, barley, sorghum, chickpeas, and lentils expanding the agricultural and culinary repertoire and building new food traditions, corn was not displaced from the local diet. In time it was assimilated by whites and *mestizos* and tailored into their culinary structures (Saldarriaga 2005). The indigenous idea that prosperity and sustenance depended on corn permeated Hispanic and peasant cultural schemes and facilitated the popularization of corn dishes such as *mazamorra* (corn porridge) which was given to the sick and convalescent because of its medicinal properties (Saldarriaga 2005). In Garagoa corn soups and drinks are still attributed special medicinal and nutritional benefits as in the case of fermented soups.

Corn has several advantages over other cereals: it is a high yielding permanent and storable crop that can be consumed at different ripening stages and in various forms: liquid, solid, hot, cold, salty and sweet. Cooking of corn with an alkali solution (generally ashes) to remove the outer bran or pericarp has several advantages: it helps liberate essential amino acids which enhances its nutritional value, facilitates grinding, reduces food loss, and increases flavor and the efficiency of energy consumed (Katz, Hediger and Valleroy 2000). As many scholars have noted (Armelagos 2010, Levi-Strauss 1979, Rozin 1982), cooking and cuisine not only have made foods more palatable, digestible, and nutritious but have added variation to diets that rely on a limited number of foods selected from the environment. Rozin and Rozin (1981) have suggested that different preparations and use of flavorings can create “themes and variations” that enhance the eating experience. Diverse preparations also indicate a long-term refinement in cultural knowledge and local sensory elaborations on taste, smell, and texture around a versatile crop that remains a central referent of Andean peasant identity.

The relatively low cognitive salience of rice, pasta, and eggs in both places is also meaningful: rice and pasta are staples but are not locally produced or associated with traditional peasant crops. Rice is a commercial crop cultivated in the lowlands and pasta is an industrial food. In the Colombian Andes rice is consumed in most meals, in soups and *secos*, in salt and sweet dishes, and in beverages such as *masato*. It is also used for digestive problems and as medicine: a warm beverage made with toasted rice is recommended in cases of diarrhea. Popularly it is said that once a woman learns to make rice she is ready for marriage. Rice is central to the diesel diet or the rice-meat-potato-ripe plantain combination that was associated with the urban working class in the 1970s

and 1980s. Like other commercial and processed foods that entered the national diet in that period of agricultural modernization and industrial production of food (noodles, white bread, sugar, vegetable oil, seasonings) rice sometimes stands as a higher status food because of symbolic associations with urban tastes and purchasing power but it is also considered part of poor people's filling starches as evidenced in the previous chapter. The same occurs with pasta which is an enriched, convenient, palatable fast-cooking affordable food. Eggs, on the other hand, have been one of the most common sources of proteins for peasants. As mentioned in chapter two, the increasing intake of eggs and chicken is a national trend resulting from the rise of the national poultry industry, the most dynamic livestock sector in the past three decades (Balcázar, Vargas and Orozco 1998). The lower cognitive salience of eggs, which are the most consumed animal protein, can be due to the fact that they do not have the same economic and symbolic prominence of meat.

#### Food frequency logs in Alban and Garagoa

Once the basic repertoire of foods was established based on free listings and participant observation, I proceeded to look at actual consumption by means of a 7-day food frequency log. A total of 14 households, seven in each location were selected. FFL are considered a suitable method to capture dietary diversity (Ruel 2002, Hodinott and Yohannes 2002). Frequency does not consider volume or weight, but frequency of foods consumed (Ruel 2002). Dietary diversity, dietary variety, or food variety, is defined as the number of different foods or food groups consumed over a given reference period (Ruel 2002). Dietary variety constitutes the nexus in the relationship between

agrobiodiversity, food, and nutrition. The underlying principle of dietary diversity holds that eating a variety of foods within and across food groups is more likely to provide the necessary nutrients and substances for good health (Arimond and Ruel 2004, Johns and Sthapit 2004, Maunder et al. 2001, Tucker 2001). It must be kept in mind that in peasant societies dietary diversity is not permanent or constant. It is not evenly distributed but spread across the population and through time; it varies according to geography, seasonality, physical availability of foodstuffs, market integration, socioeconomic possibilities, and household preferences (Berti et al. 2010, Berti and Leonard 1998, Leonard and Thomas 1989, 1988, Moreno-Black and Guerron Montero 2005, Zimmerer 1996).

Consumption frequencies in 14 households over a 7-day period were distributed as follows: 31% starches, 21% vegetables, 14% sweets and sugars, 13% fruits, 9% proteins, 6.6% oils and fats, and 4.6% dairy. In this research every time a food item was reported, it was counted as a frequency. The predominance of starches coincides with the national trend of a carbohydrate rich diet (ICBF 2006, 2011). According the national data, carbohydrates supply 50% of the daily calorie recommendation which is equivalent to 2250 kcal for adult women and 3000 for adult men (ICBF 1999:9). In a country where vegetables are insufficiently consumed and not a central part of the daily diet (ICBF 2006, 2011), vegetable frequencies were relatively high. Vegetables and green legumes, however, are consumed in smaller amounts as side dishes or chopped as relishes or garnishes in soups, rice, and stews.

Consumption of sugar and sweets in Alban and Garagoa (14%) originates in beverages sweetened primarily with *panela* or sugar. Rising consumption of sugar and

sweet foods has been associated with rising levels of obesity and diabetes in Colombia, especially in urban populations and among women (ICBF 2006, 2011). This led to the passing of the Obesity Law in 2009 (Law 1355, 2009). According to personal communications with local health officials in Alban and Garagoa, rural diabetes has been diagnosed among the elderly in association to consumption of starches.

Fruits (13%) are sparsely consumed in Alban and Garagoa, a trend similar for the national rural population which tends to be significantly lower than in urban areas (ICBF 2011). In rural areas consumption of local fruit is affected by seasonality but changes in the local climate have hindered fruit production in the two sites. Fruit purchases depend on income availability; peasants interviewed, however, mentioned that they attempt to eat fruit, especially when the elderly are diagnosed with diabetes or hypertension.

Protein frequencies (9%) concur with national trends regarding low protein consumption, especially animal protein among rural populations (ICBF 2006, 2011). Milk and dairy products are also sparsely consumed (4.6%), a situation common in other rural areas in Colombia (ICBF 2011). Consumption of oils and fats (6.6%) is sparse in part due to boiling and stewing cooking techniques, and to the high cost of oil. Recent national data indicate that rural consumption of fried foods is higher among men (ICBF 2011), a trend that cannot be ascertained from this research.

Qualitative description of FFL food group composition facilitates visualization and comparison of the nature and distribution of dietary diversity in each site. Table 6.1 foods presents all the different foods reported in the FFL. Foods were grouped according to the seven food groups defined by the Colombian Institute of Family Welfare (See table 1.1).

The presence and consumption of the seven food groups in Alban and Garagoa suggests dietary diversity. Consumption of different foods increases the potential for distinct combinations of macro and micronutrients in daily meals and throughout a week. In 14 households 96 different foods were reported. The most important food groups present a range of different foods which constitute consumption and nutrition options: starches include 29 different foods, followed by 20 vegetables, 21 proteins, 9 fruits, 9 sweets, 5 sources of fat, and 4 dairy products. The table also suggests the importance of direct consumption foods such as tubers, roots, fruits, vegetables, meat, and dairy over processed foods. Although processed foods are consumed like chocolate, rice, and pasta, heavily processed fats, sugar, and refined foods are fewer: crackers, sausage, white bread, and soda. Consumption of natural foods contributes to the quality of the diet. Another relevant aspect evidenced in the FFL is the larger food variety in Garagoa compared to Alban. Highest food variety in Garagoa is due to a combination of factors: data collection in households with access to land in different climate zones and during the post harvest period when a wider variety of crops are abundant. A historical trajectory of diversified agricultural production in the municipality also accounts for higher food variety and consumption. FFL also indicate household consumption of *bienestarina* in Alban, probably due to a stronger state presence manifested in the distribution of food aid to children and in particular to the elderly.

Finally, results reveal that despite relative low cognitive salience in free listings, corn is also important in Alban where a number of corn preparations are consumed: corn cake, corn flour, corn wrap, tender corn, cracked corn, hominy, and pop corn.

Table 6.1. Food group composition with different kinds of foods in Alban and Garagoa as per 7-day FFL

| Food groups   | Total diversity                          | Alban   | Garagoa  |
|---|--|---|--|
| Starches:<br>Cereals, roots,<br>tubers,<br>plantain           | Total: 29<br>different kinds of<br>foods | Potato, rice, manioc,<br><i>arracacha</i> , <i>dominico</i><br>plantain, pasta, white bread,<br><i>arepa</i> , corn flour, <i>colisero</i><br>plantain, oats, crackers,<br>cracked barley, corn wrap,<br>tender corn, cracked corn,<br>hominy, <i>calado</i> bread,<br><i>arepuela</i> , pop corn | Potato, rice, manioc, <i>arracacha</i> ,<br><i>dominico</i> plantain, pasta, white<br>bread, <i>arepa</i> , corn flour, <i>colisero</i><br>plantain, oats, crackers, cracked<br>barley, corn wrap, tender corn,<br>cracked corn, hominy, corn bread,<br><i>nabos</i> , <i>malanga</i> , <i>ruba</i> , <i>hibia</i> ,<br><i>batata</i> , <i>criollo</i> potato, cracked<br>wheat, <i>masato</i> (rice beverage) |
| Protein: meat,<br>eggs, dry<br>legumes,<br>vegetable<br>mixes | Total: 21<br>different kinds of<br>foods | Egg, beef, beans, lentils,<br>pork, chicken, giblets, <i>balú</i> ,<br>beef viscera, blood sausage,<br>tuna, sausage ( <i>salchicha</i> ),<br>fish, <i>bienestarina</i> , stuffed<br>pork   | Egg, beef, beans, lentils, pork,<br>chicken, giblets, <i>balú</i> , beef viscera,<br>blood sausage, tuna, fava beans,<br>sardines, hen, chick peas, cured<br>sausage ( <i>salchichon</i> ), soy milk   |
| Vegetables<br>and green<br>legumes                            | Total: 20<br>different kinds of<br>foods | Green onions, peas, carrots,<br>tomato, onions, yellow<br>squash, string beans,<br><i>guatila</i> , lettuce, cucumber,<br><i>guasacas</i> , celery, parsley,<br>sweet pepper,   | Green onions, peas, carrots,<br>tomato, onions, yellow squash,<br>string beans, <i>guatila</i> , lettuce,<br>cucumber, <i>guasacas</i> , white squash,<br>avocado, parsely, <i>col</i> , greens,<br>cabbage  |
| Fruits  | Total: 9 different<br>kinds of foods     | Lemon, tangerine, banana,<br>orange, papaya, tree tomato,<br>blackberries   | Lemon, tangerine, banana, orange,<br>papaya, tree tomato, blackberries,<br><i>guava</i> , <i>lulo</i>  |
| Sugar and<br>sweets   | Total: 8 different<br>kinds of foods     | <i>Panela</i> , <i>agua de panela</i> ,<br>coffee, sugar, chocolate,<br>candies, soda   | <i>Panela</i> , <i>agua de panela</i> , coffee,<br>sugar, chocolate, candies, soda   |
| Fats and oils   | Total: 5 different<br>kinds of foods     | Oil, bone, beef feet, pork<br>rind, butter  | Oil, bone, beef feet   |
| Dairy   | Total: 4 different<br>kinds of foods     | Milk, cheese  | Milk, <i>cuajada</i> , yogurt  |

The centrality of corn in the peasant diet, and in the Colombian diet in general, contrasts with the omission of corn in the definition of the national food basket in the latest national food and nutritional policy (Política Nacional de Seguridad Alimentaria y Nutricional, PSAN 2008) (DNP 2008). The policy document, which draws on a FAO report, lists only four cereals (rice, wheat, barley, and oats) as the major cereals consumed in Colombia<sup>30</sup>. Such a lapse is particularly notable at a time when corn has

<sup>30</sup> According to FAO, the Colombian food basket includes: cereals (rice, wheat, barley, and oats); legumes (beans, peas, lentils and others); vegetables and fruits; vegetable oils (palm and soybean); carbohydrates (plantains, manioc, and potato); stimulants (cocoa); meat (beef, chicken, fish, and pork); milk and eggs; and sweeteners (sugar and *panela*)

become one of the most salient food imports in the country. The oversight is even more paradoxical as the current Ministry of Agriculture has proposed the “Plan Maíz Número Dos”, Corn Plan N. 2, to recuperate previous national self-sufficiency in regards to a cereal whose yearly imports amount to 3.5 tons. An aspect of the Plan is to promote intercropping of yellow corn and coffee in areas that are renewing coffee trees as a means to promote food security and income to coffee growers who have experienced the hardships of a continued coffee crisis (Ministerio de Agricultura 2011).

A more detailed examination of food group consumption frequencies reveals that most consumption is concentrated in a relatively few foods that make up the core of the diet. Other foods such as oats and crackers, are consumed a couple of times during the week; some are seasonal food such as cold weather tubers (*hibia, cubios*) or luxury foods occasionally purchased. Table 6.2 lists the most consumed starches, over a seven-day period for the total frequencies reported for both sites. Foods with combined frequencies lower than 20 are not listed but are detailed in Appendix G. Potato and rice are the most salient and common starches. Potato is particularly important in Garagoa where it has been cultivated for centuries: of a total of 564 frequencies for starches in Garagoa, 137 were potatoes, equivalent to 24%. Rice follows at a distance rice with 70 frequencies or 12%. In Alban of a total of 325 frequencies 72 (22%) were potatoes and 62 or 19% rice. The next most consumed starches are manioc, *arracacha*, and plantain, and pasta. All these products are considerably more prominent in Garagoa. The importance of corn-based products is confirmed by the presence of corn bread, *arepa*, and corn flour whose combined consumption adds to 8% in Alban and 13% in Garagoa. A salient difference

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(DNP 2008: 9 footnote 9). To corroborate whether corn or maize was classified as other than cereal, I consulted FAO's definition of corn and it is considered a cereal grain and included under the category cereals and cereal products.

between the two sites is the total absence of corn bread in Alban where white bread is consumed instead.

Table 6.2. Frequency of starches consumed in Alban and Garagoa based on 7-day FFL

| <b>Starches</b>          | <b>Alban</b> | <b>Garagoa</b> |
|--------------------------|--------------|----------------|
| Potato                   | 72           | 137            |
| Rice                     | 62           | 70             |
| Manioc                   | 21           | 67             |
| <i>Arracacha</i>         | 11           | 48             |
| <i>Dominico</i> plantain | 26           | 35             |
| Pasta                    | 17           | 33             |
| White bread              | 34           | 14             |
| <i>Arepa</i>             | 24           | 21             |
| Corn bread               | 0            | 31             |
| Corn flour               | 5            | 24             |
| <i>Colisero</i> plantain | 12           | 14             |
| Other                    | 41           | 70             |
| <b>Total 7-day FFL</b>   | <b>325</b>   | <b>564</b>     |

Vegetable frequencies in Alban (255) and Garagoa (353) are considerable lower than starches. Table 6.3 details the more salient vegetables; foods with combined frequencies lower than 20 are not included but are contained in Appendix J. As before, the values reflect the total frequencies reported for both sites over a seven-day period. The most popular vegetable is green onions which represent 30% of the vegetables consumed in Alban and 31% in Garagoa. Peas, yellow and white are salient in Garagoa where they are regularly cultivated. A category chopped vegetables includes a combination of finely cut vegetables that are added to soups as relishes; these can include carrots, string beans and yellow squash. Except carrots, onions, and tomato, which are sporadically consumed raw, all vegetables in Table 6.3 are eaten cooked in soups, stews, relishes, chile sauces, or garnishes.

Table 6.3. Frequency of vegetables consumed in Alban and Garagoa based on 7-day FFL

| Vegetables             | Alban      | Garagoa    |
|------------------------|------------|------------|
| Green onions           | 79         | 112        |
| Peas                   | 29         | 51         |
| Carrots                | 32         | 32         |
| Tomato                 | 31         | 30         |
| Onions                 | 22         | 22         |
| Yellow squash          | 6          | 32         |
| String beans           | 23         | 11         |
| <i>Guatila</i>         | 8          | 20         |
| Chopped vegetables     | 10         | 13         |
| White squash           | 0          | 20         |
| Other                  | 17         | 10         |
| <b>Total 7-day FFL</b> | <b>255</b> | <b>353</b> |

In regard to animal and vegetable protein consumption, Table 6.4 illustrates a progressive reduction in consumption frequencies represented by the seven-day FFL's total frequencies (126 for Alban and 138 for Garagoa). Appendix K provides a more detailed list of foods with combined frequencies lower than four. Lower consumption is expected due to the higher density of these foods and the highest economic cost. A main source of protein in both sites is eggs: in Alban they amount to 26% of total protein consumption and in Garagoa they total 23.9%. The second most important animal protein is beef with 20% consumption in Alban and 22% in Garagoa. A noticeable difference between the two municipalities is the importance of beans in Garagoa (20%) where several bean varieties are cultivated. Lentils, chicken and *bienestarina* are more prominent in Alban. Although in both places women tend to keep chickens for eggs, the existence of poultry farms in Alban and Garagoa makes commercial eggs and chicken more accessible and affordable. A noticeable fact is that all types of meat (beef, pork, chicken), in addition to viscera, are consumed.

Table 6.4. Frequency of animal protein consumed in Alban and Garagoa based on 7-day FFL

| <b>Proteins</b>        | <b>Alban</b> | <b>Garagoa</b> |
|------------------------|--------------|----------------|
| Eggs                   | 34           | 33             |
| Beef                   | 26           | 31             |
| Beans                  | 8            | 29             |
| Lentils                | 14           | 8              |
| Pork                   | 8            | 12             |
| Chicken                | 10           | 4              |
| <i>Bienestarina</i>    | 11           | 0              |
| Balu                   | 2            | 7              |
| Giblets                | 5            | 4              |
| Beef viscera           | 4            | 5              |
| Blood sausage          | 1            | 3              |
| Other                  | 5            | 10             |
| <b>Total 7-day FFL</b> | <b>128</b>   | <b>146</b>     |

Fruit frequencies (Table 6.5 showing total values for seven-day FFL) are concentrated in a few fruits of which citrus (lemon, tangerine, and orange) constitute the largest consumption equivalent to 52% in both cases. Guava and *lulo* were only reported in Garagoa.

Main sweeteners in the two study communities are *panela* and sugar; they are the basis for all sweet foods and beverages. In Alban, of 158 total sweet frequencies, *panela* has 118 which are equivalent to 74%. The remainder 23% corresponds to sugar, and the rest to soda. In Garagoa 174 of the total 252 frequencies are *panela* (69%), 52 are sugar (20%), and the remainder are candies and soda. *Panela* prevails over sugar because of its longer customary consumption. In Garagoa it is still produced locally at more affordable prices. Nutritionally *panela* is considered better than refined sugar because it has most of the compounds present in sugar cane in addition to various minerals among which are potassium, calcium, phosphorous and magnesium (Guerra and Mujica 2010). Several medicinal properties are also associated with this whole food: antitoxigenic, anticarcinogenic, and antioxidant (Ibid). It is also used for medicinal purposes against

colds, to drink after purging the body, and applied over cuts and scrapes to heal. But as noted in a previous chapter, it is also associated with alcoholism and cancer.

Table 6.5. Frequency of fruits consumed in Alban and Garagoa based on 7-day FFL

| <b>Proteins</b>                            | <b>Alban</b> | <b>Garagoa</b> |
|--|--------------|----------------|
| Lemon                                      | 36           | 49             |
| Tangerine                                  | 22           | 36             |
| Banana                                     | 16           | 37             |
| Orange                                     | 20           | 32             |
| Papaya                                     | 32           | 13             |
| Tree tomato ( <i>Cyphomandra betacea</i> ) | 12           | 21             |
| Blackberries                               | 10           | 22             |
| Guava                                      | 0            | 13             |
| <i>Lulo</i>                                | 0            | 2              |
| <b>Total 7-day FFL</b>                     | <b>148</b>   | <b>225</b>     |

Vegetable oil is the prime source of fat in Alban with 64% (or 44 out of 68 frequencies) and 82% in Garagoa (or 102 out of 123 frequencies). Fleshy bones are the second source of fat: 23% in Alban, and 14% in Garagoa. The next source of fat is cow's feet. Pork rind and butter are fats consumed sporadically. Dairy consumption is concentrated in milk, generally locally produced. In Alban milk amounts to 95 % of total dairy consumption and 77% in Garagoa, where it is combined with fresh cheese (*cuajada*). Cheese and yogurt are occasional treats.

Food and meal diversification benefits from cuisine. In Alban and Garagoa peasant women are constantly thinking about how to vary everyday meals and combine foods to avoid repetition and boredom. Doña Rubi in Alban comments that knowing how to mix and modify ingredients is part of a woman's skill: "You have to be creative and resourceful: one day a *sancocho* and in the evening some rice with egg, the next day a *seco* with chicken with potato. You cannot eat the same everyday; variety is pleasure goes the saying." Sensory perception and meal presentation are also significant with

respect to dietary variety: cleanliness, aesthetic organization, proper temperature, and appealing smell open the appetite and make people want to eat everything. Cuisine also enables distinct elaboration of the same ingredients that are regularly consumed into new dishes. This is the case of the *empedrao* or *guisao de olla*, a pot stew that women in Garagoa claim as their latest recipe created for when there are workers at home and women must increase the amount of food. This recipe takes into consideration the cooking qualities, yield, and requirements of each ingredient while making an efficient use of time and fuel. “An *empedrao* includes peeled manioc, *arrachacha*, plantain, potato, lentils, and oil. These are slowly cooked in a large pot with some water. Then rice is added and everything is cooked together. It is a *seco*, it is our invention” *Doña* Oliva tells with satisfaction for their creativity.

Other forms of diversifying the diet, as mentioned in chapter four, are social networks, exchanges, and gifts, are important means for accessing different food and strengthening reciprocal relations. Peasant women readily acknowledge that sharing food is not only common but mandatory and expected. A scene observed repeatedly in peasant households is that of the mother sending a child to take cooked food or crops to a neighbor or a relative’s house to share (*compartir*) or as gift (*presente*). Food gifts are common among parents who send food to their children in urban areas. These, in turn, send money which is often spent for food purchases. Sharing with family and friends is a normal socialization practice. A common saying among children when someone is not sharing is: *el que come solo muere solo* (the one who eats alone dies alone). As mentioned in previous chapters upon arrival at a peasant house, food or drinks are

immediate offered to the visitor. Failing to offer is interpreted as a sign of stinginess or poverty.

### Dietary diversity, nutrition and health

Alban and Garagoa municipal employees, health workers, and cooks in school canteens with whom I talked concur that malnutrition is not a widespread phenomenon. In 2004 in Garagoa 1% of rural children were at risk of malnutrition and 1% had chronic malnutrition (PAB 2004), a similar situation reported for Alban (PMAS 2004). In both municipalities a very small number of cases of overweight children have also been reported. Recent official data on the local nutritional situation is less clear since most recent municipal government planning documents such as Municipal Development Plans and Territorial Ordinance Schemes (ICBF 2008, PBOT 2002, PDM 2008) only provide very general information or none at all on this topic<sup>31</sup>. According to municipal health workers malnutrition or low weight cases are found in some female-headed households with small children, and displaced families that have arrived seeking refuge in each municipality and do not own land. The elderly who live alone are the most affected by

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<sup>31</sup> Changes in institutional competences regarding food aid distribution, which has been one of the main sources of anthropometric data, have made access to this kind of data more difficult. Despite having letters that credited me as a researcher of a public entity, during several visits to municipal offices in charge of social and nutrition programs, I was sent from one office to the next only to be told that data were not available yet or that some other office or person was in charge of that matter. Inefficiency, coupled with political management of public information and resources, are impediments to finding reliable data. A brief personal story illustrates the unintended consequence of fieldwork. During a trip to Garagoa, some of the women with whom I was working thanked me because after one of my visits to the municipal office demanding information on nutrition programs, they had been included in a food subsidy program for the elderly. Gossip was that municipal employees mistook me for a national level government *doctora* conducting some kind of audit and they decided to include them in this program. *Doctor* is a title used to address professional or people perceived to be of higher-rank; its use is not based on a persons' medical or academic training. Whether my visit coincided with the expansion of government subsidies or not, the incident hints at how people perceive the allocation of public resources and the functioning of the state.

malnutrition because they can no longer feed themselves properly. A few “neglectful” and very poor families may also experience malnutrition.

Local nutrition and health workers agree that the main causes of malnutrition or low weight are poverty, unemployment, agricultural decline, and the ever rising costs of food which force people to “tighten the belt” (*apretarse el cinturón*) and purchase the most basic food products such as rice, pasta, oil, salt, *panela*, pasta, and chocolate. They note that portions of fruits and vegetables are obtained in snacks and lunches served in public schools and day care centers that receive government food subsidies. These are prepared according to weekly or monthly menus (*minutas alimentarias*) designed by Colombian Institute of Family Welfare (ICBF) specialists taking into consideration food groups, portion size, cooking methods, and local food habits (Figure 6.3.)<sup>32</sup>. School lunches, however, can be affected when companies subcontracted by the ICBF to supply food and *bienestarina* to local schools do not comply with the original terms and fail to provide the foods in the quantity and quality stipulated. When this occurs, school cooks note, “we have to juggle and devise ways to feed the children, sometimes bringing food from our own home or asking the parents to contribute.” Local nutrition and health workers comment that despite possible imbalances in the diet there are advantages in the freshness and naturalness of the foods consumed and the fact that meals are home-made. These contribute to food quality and general well-being. In both sites health workers and peasants alike stated that in the Alban and Garagoa countryside *nadie se muere de hambre* (nobody dies of hunger); there is always something to eat and neighbors still look out for each other, a fact that makes rural livelihoods enduring.

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<sup>32</sup> A paradox of ICBF food and nutritional interventions is that as it attempts to adapt the school lunches to local food habits, it also reinforces them as well as the consumption of starches.

FFL results in Alban and Garagoa suggest that inter and intra food group diversity provides a set of possibilities and options to consume different foods for nutrition and health. This data contradicts notions of the Andean peasant diet as simple and monotonous and offers a more nuanced perspective of official assessments of nutritional deficiencies for the Boyacá and Cundinamarca region where Garagoa and Alban are located. Disparities arise partly as the result of intra and intermunicipal and local variations and the scale at which data are gathered. In the Boyacá and Cundinamarca departments certain municipalities are associated with high poverty, unemployment, and malnutrition. The scale at which municipal data are gathered does not compare with the reduced sample of this research.

INSTITUTO COLOMBIANO DE BIENESTAR FAMILIAR  
REGIONAL BOYACÁ- CENTRO ZONAL GARAGOÁ

**MENUS DE ALMUERZO EN RESTAURANTES ESCOLARES  
SEGUNDA Y CUARTA SEMANA**

| LUNES<br>6  | MARTES<br>7   | MIERCOLES<br>8   | JUEVES<br>9                                 | VIERNES<br>10   |
|---|---|--|---|---|
| <b>NUEVES</b><br>Colada de Bienestarina   | <b>NUEVES</b><br>Colada de Bienestarina   | <b>NUEVES</b><br>Colada de Bienestarina                              | <b>NUEVES</b><br>Avena con leche            | <b>NUEVES</b><br>Agua de Panela con leche   |
| <b>ALMUERZO</b><br>Carné salada   | <b>ALMUERZO</b><br>Carné deshachada o mólida                                    | <b>ALMUERZO</b><br>Frijol seco con carne                             | <b>ALMUERZO</b><br>Huevo                    | <b>ALMUERZO</b><br>Lenteja con carne  |
| Arroz blanco  | Pasta salada  | Arroz blanco   | Arroz blanco                                | Arroz blanco  |
| Papa salada con pellejo   | Papa frita porción grande (Lo que corresponde a dos unidades mediana)           | Papa salada  | Papa oñada (o calequiada)                   | Papa al vapor o rascón de papa  |
| Piñano frito  |   | Arepas   | Arepuela de Bienestarina                    | Piñano Asado o cocido   |
| Verdura cocida: Zanahoria y remolacha ó Zanahoria con Habichuela y cebolla cabezona | Verdura cruda: Lechuga o espinaca+ tomate de guiso+ Cebolla Cabezona+ Zanahoria | Verdura cruda: Ensalada de repollo+zanahora+Tomate +Cebolla cabezona | Verdura cocida: Pepino de guiso+ arveja vie | Verdura cruda: Ensalada de Lechuga o espinaca + tomate de guiso+ zanahoria+cebollaC |
| Jugo de frutas  | Jugo de frutas  | Jugo de frutas   | Jugo de frutas                              | Jugo de frutas  |

NOTA: Para jóvenes de 13 a 18 años debe aumentarse al almuerzo sopa todos los días una porción pequeña (8 onzas) o en su defecto aumentar las porciones dadas en ésta minuta

La verdura cocida o cruda se sugiere variar preparación o clase de verdura de acuerdo a las que están en cosecha. Los jugos se harán de la fruta que este en cosecha para que se pueda tener suficiente fruta y a bajo precio

SI EL PRESUPUESTO LO PERMITE REFORZAR LAS NUEVES CON PAN, GALLETAS, TORTAS, AREPAS, ETC.

Figure 6.3. Weekly school lunch menu in Garagoa.

With these arguments I do not intend to romanticize peasant livelihoods, diets, food habits, or overlook the historical and structural condition of malnutrition, poverty, and social exclusion experienced by Andean rural populations. But what the data in this sample suggests is that even in constraining land, labor, and economic conditions peasants strive to diversify their diets for nutrition, health, and cultural taste. Findings of 96 different foods in 14 peasant households in Alban and Garagoa contrast with those of communities in the Bolivian highlands where among 2,000 24-h recalls only 92 different foods were observed (Berti et al. 2010). The number and variety of foods consumed in tropical Andean mountain also contrast with those of the semi-nomadic Samburu pastoralist diet which according to Holtzman (2009:2) is structured around three main “culturally salient and nutritionally superior” foods: meat, milk, and blood complemented with a few cereals and vegetables. Further, Andean peasant diets share features with other traditional diets which have been found to have nutritional advantages and protective factors against disease (Kuhnlein and Receveur 1996, Nabhan 2006), such as coarse grains, fresh picked whole foods, fiber-rich crops, free-range animals raised with a varied diet. Also, many foods in the Andean diet are of vegetal origin. The benefits of plant biodiversity for micronutrient deficiency and bioavailability, nutrition and disease and the nutrition transition (Etkin 2009, Frison et al. 2004, Grivetti, and Ogle 2000, Johns 2001, 2003, Pieroni and Price 2006) have increasingly been acknowledged. Nutrition experts have even suggested that diverse diets should contain several biologically distinct types of food for a week, mostly from vegetable sources (Solomons 2000, Wahlqvist and Specht 1998).

Based on conversations with nutrition expert Maria Teresa Barón, with whom I discussed FFL results, suggests that although intake may not always follow nutritional recommendations regarding the number of servings suggested for each food group, i.e. protein (2-3 servings/day), milk (3), fruits (3-5) vegetables (2-3), carbohydrates (3-5), certain combinations of starches, legumes, and vegetables can create potential synergies among nutrients. She stressed that food and nutrition diversity is enhanced by cuisine and taste. For instance, a breakfast containing a potato broth made with fleshy bone topped with onion and cilantro, corn cake, and *agua de panela*, contains proteins, fat, vitamins, minerals and liquids. Based on her experience working with Andean peasants, Barón argued that peasant diets have “some wisdom with respect to food and culinary diversity; people have survived on that type of diet in a relatively healthy way.” For instance, cooking vegetables may be a form of facilitating digestion and reducing the risk of pathogens in raw foods. Physical activity, consumption of herbs for seasoning and medicine, she added, also contribute to a healthier lifestyle. The arguments proposed by Barón are reminiscent of Mintz and Schlettwein-Gsell’s (2001:51) assertion with respect to peasant diets that “people eat culturally, hedonically and nutritively coherent complexes of foods.”

In the opinion of medical doctor and food scholar Juan Carlos Morales, whom I consulted on FFL findings, the composition of food groups in Alban in Garagoa reveals a diverse repertoire compared to diets in other regions of the country and in other areas within the Boyacá and Cundinamarca departments. He concurred with nutrition researcher Eloisa del Castillo in the existence of a knowledge gap regarding the nutrition and health value of some traditional foods and crop varieties which may have the same

protective mechanisms found in better known fruits and vegetables. These foods and varieties are not included in the official ICBF food guidelines or the list of 50 priority foods for the Colombian population (ICBF 1999) which are a reference point for nutritional recommendations, interventions, and design of public school lunches. Although these guidelines are only a sample of some of the most common foods consumed, and are adaptable to the particular setting or need, they do not reflect the country's national or food diversity. For instance, the list leaves out several regularly consumed foods reported in the FFL such as *arracacha*, *colisero* plantain, squash, oats, viscera and giblets. Tim Johns (2003) has voiced a similar argument regarding the diverse nutrition and health functions of plants and crop varieties found in local and traditional cultures which are still unrecognized, unknown, and undervalued. Their cultural, nutritional, and economic devaluation of some traditional foods has contributed to their marginalization or loss with a consequent reduction of food options. Loss of dietary diversity has direct implications not just for the nutritional situation of rural populations but for their culinary traditions and gastronomic memory (Nazarea 2005).

For Barón, Morales and del Castillo “diversity must be diverse,” meaning that dietary diversity should not be a hegemonic message for eating an array of different foods or nutrients for the sake of nutrition and health only (personal communication, 2010). Dietary diversity must take into consideration social and ecological differences, regional culinary traditions, and cultural tastes, among others. Based on their experience working with rural communities, they suggest that recommended foods should also appeal to social history and cultural identity. Crafting public messages that encourage dietary diversity while addressing cultural and culinary diversity they note, is a challenge for

public health and nutrition policies, and nutrition experts in general that tend to homogenize strategies for whole populations. In our discussions surrounding the Andean peasant diet Baron, Morales and del Castillo hinted at the potential continued devaluation of peasant food habits for failing to include more fruits and vegetables, at a time when these foods have become imperatives for health. These experts agree on the importance of bringing dietary diversity to a public discussion among different institutional and social actors involved in the food and nutrition ambit.

### Conclusions

This chapter interrogated generalized assumptions about the simplicity and monotony of the peasant diet through the examination of dietary diversity in Alban and Garagoa. Through free listings and 7-day Food Frequency Logs it explored the role of agrobiodiversity in the dietary repertoire and its contribution to dietary diversification. Qualitative and quantitative data ratified that despite differences in ecologies, settlement histories, and production systems, there is an underlying common food structure that resembles Sidney Mintz's CFL triad. As has been discussed in previous chapters, in the Colombian Andes this food structure is shaped by a long history of relatively stable patterns of food consumption and taste preferences for bland and palatable meaningful starchy cores, enhanced by smaller amounts of fringes; namely, vegetables, animal and vegetable protein, dairy, and fruits. The diet also contains crops and foods that incarnate peasant identity because they have been traditionally cultivated or consumed by rural populations. Of these several are native to the Americas or represent landraces adapted to local conditions over time such as plantain. Crop varieties contribute to dietary

diversification although the specific nutritional contribution of these varieties is not yet clear. As described in chapters two and chapter four, historical agricultural diversification and use of microverticality broaden self-provisioning and the dietary repertoire.

A contribution of this chapter has been to contest generalized notions of the simplicity and monotony of the diet. Presence of the seven main food groups and 96 different foods in 14 Andean households suggests dietary diversity. Although dietary quality cannot be inferred from this data, consumption of different foods within and across food groups daily and weekly suggests potential nutrient synergies which may account for low municipal malnutrition numbers. From the perspective of consumption Andean peasant food practices can provide options for food, nutrition, and health in a country where rural malnutrition, poverty, and food dependency persist. Contrary to ideas among many health and nutrition practitioners, the Andean peasant diet is not just a “bunch of starches to fill the belly.” Peasants resort to manifold food strategies to broaden food variety and enhance the sensory experience of food. These everyday embodied practices challenge social imaginaries and public discourses about peasant laziness, plainness, and lack of gastronomic sensitivity. The use of methods that capture weekly household consumption, such as the 7-day FFL, complemented with on-the-ground ethnography can illuminate the complexity more nuanced understanding of Andean peasant diets with respect to the relation between food, culture, agrobiodiversity, and dietary variety.

## CHAPTER 7

### CONCLUSIONS

This dissertation interrogated normalized assumptions about the simplicity, monotony, and inadequacy of the peasant diet. Through an examination of peasant food production, perception and consumption, I explored how Colombian Andean peasants use and conserve agrobiodiversity for their diets, and the social implications of their food practices and tastes. Premised on the assumption that food has the ability to tie the private and mundane with larger socioeconomic and cultural processes, this dissertation examined aspects of the evolution of the Andean diet in regards to agricultural modernization, food and nutrition policies, and social discourses on peasant foods. In previous chapters and by the means of food, I have attempted to argue that in manifold ways peasants strive to diversify and give meaning to their lives and livelihoods.

This final chapter summarizes and presents the major findings of this research. In regards to the historical evolution of Andean peasant diets, I found that there is a shared long-term food pattern rooted in indigenous and Spanish agrarian and culinary traditions. The fusion of these traditions gave way to the formation of a *mestizo* diet composed of a starchy core complemented by vegetable and animal protein, vegetables, and fruits. Representative cores are native cereals, tubers and roots among which corn, potatoes, manioc, and *arracacha* are the most emblematic. The core also contains Spanish introductions such as wheat, barley, and plantain. Animal protein was a major Iberian

contribution; main proteins are eggs, various meats, beef being the most noticeable and symbolic of social distinction and strength-giving food. Milk and fresh cheese are also important foods in the Andean diet. Vegetable protein: beans, *balu* (*Erythrina edulis*), lentils and chickpeas, supplement starches. Green legumes, cucurbits, and vegetables are consumed in smaller amounts as fringes. A variety of native and introduced fruits are also eaten seasonally. Main beverages include *panela* (brown sugar) based drinks such as *agua de panela* (panela water), chocolate, and *guarapo*.

Through time, the diet has been modified with additions and losses. One of the most culturally and nutritionally significant losses being *chicha*, a traditional and very nutritious indigenous drink made with fermented maize. Its consumption was eradicated in 1948 after a long anti-alcoholic campaign. Significant additions have been coffee and rice, and an array of processed foods and drinks since the second half of the 20<sup>th</sup> century.

With respect to peasant production, the examination of the productive trajectories in Alban and Garagoa revealed that food and diet are culturally constituted and politically, economically, and environmentally mediated. Crops and foods are inextricably linked to each region's history, and distinct modes of integration into national society and the market economy. Indigenous Muisca legacies in Garagoa, such as the simultaneous use of different microclimates, have fostered productive and dietary variety. The principle of *cateo* (producing and eating in a mixed and diverse manner), also contributes to the existence of a wider range of crops and varieties. The region's relative regional isolation and focus in food production for local and national markets contrast with Alban's more recent history and specialization in coffee production for the international market. The agronomic characteristics of coffee encouraged the

development of complex agroecosystems and allowed the incorporation of different food crops for household consumption. The notion of “scrambled” or mixed (*revuelto*) in Alban also captures the practice of mixed planting and eating.

In both places historical patterns of uneven access to land and minifundia pushed farmers to make the most use of space through intercropping. This situation partly contributed to intensify and diversify the productive repertoire. In Alban some of the crops planted were brought by peasants from the highlands, including the Boyacá department, who also recreated some of their agricultural and culinary patterns in the new setting. This is partly a reason for the existence of similarities in cuisine and diet in the two areas. Cash-crop specialization in Alba, however, made peasants and landscapes more vulnerable to international market dynamics and to the imperatives of agricultural modernization.

Comparison of regional histories in the eastern and western side of the eastern Cordillera reveal that regional and extra-regional economic, social, and environmental dynamics are important forces at play shaping rural landscapes and livelihoods. This situation is particularly noticeable with respect to the multifaceted effects of national modernization and rural development policies. Modern development offered mixed possibilities with different outcomes in each place. Like farmers elsewhere (González 2001, Gupta 1998, Zimmerer 1996), Andean peasants engaged with development through partial incorporation of new technologies and modern varieties. This implied simultaneous gains and losses regarding agrobiodiversity. In Garagoa new varieties (corn, beans, potato, manioc) broadened local diversity. In Alban productive intensification curtailed local agrobiodiversity but coffee booms also brought socioeconomic prosperity

and a considerable investment in public services and infrastructure. A major transformation in the diet in Alban was the wider prominence of plantain, the primary food crop associated to the new *caturra* coffee variety.

As suggested from ethnographic description of production practices in Alban and Garagoa, peasant agricultural practices and decisions are guided by a logic in which different productive, economic, ecological, cultural, and aesthetic elements overlap. Expansion and reduction of crop diversity is a coping mechanism of rural Andean households in view of market demands, as well as farmland, labor, transportation, and capital constraints. Climate change is an increasingly powerful force challenging peasant local knowledge, livelihoods, and agrobiodiversity in Alban and Garagoa. While coffee growers in Alban have seen their crops unable to flower due to prolonged rains, dairy farmers in Garagoa have been affected by prolonged summers that dry the pastures that feed cattle. In Garagoa local agriculture and food security are also at risk due to changes in regional weather patterns due to the construction of a large dam.

Agrobiodiversity prevails in subsistence agriculture because of farmers' efforts to spread risk, enhance crop genetic diversity, increase and diversify production, and satisfy nutritional needs and culinary desires. In regards to maintenance of agrobiodiversity the higher diversity levels found in Garagoa's fields and homegardens for self-provisioning and the market, are associated with the region's historical trajectory of diversified subsistence agriculture. Agricultural intensification in Alban disrupted a food-growing tradition but the persistence of intercropping and desire for culturally meaningful has sustained the cultivation of crops and varieties that are part of the basic Andean food structure. As noted for other agricultural societies, core crops embody local

epistemologies and shared social memories (Dove 1999, González 2001, Seremetakis 1994, Zimmerer 1996). They are also objects of people's ordinary affects (Stewart 2007). Farmers' historical social practices and efforts at maneuvering to sustain small-scale agriculture and livelihoods in the midst of changing scenarios warn against simplified narratives of cultural poverty as a cause of de-agrarization, environmental change, or rural food insecurity.

As noted above, Andean diets reveal patterns of continuity and change. Culture has played an important role in food patterns and consumption choices. Taste preferences are structured by social and cultural learning and the cultural attributes of food (Anderson 2005, Birch 1999, Bourdieu 1984, Drewnowski 1997, Rozin 1987, Rozin et al. 1997). Long-term peasant food habits and embodied relationship to food, have contributed to the persistent cultivation of culturally meaningful crops to fulfill consumption aspirations and desires. The existence of distinct varieties of corn, manioc, *arracacha*, beans, and plantains identified in this research, corroborate this fact.

Ambiguous and contradictory perceptions of peasants and peasant foods run deep in Colombian social imaginaries and food and nutrition discourses and policies. Peasant crops and foods are the foundation of Colombia's diets and cuisines. Yet they have been both exalted and stimulated, and vilified as socially and nutritionally unfit. A similar mixture of "nostalgic love and aristocratic scorn" found by Pilcher (1998:5) for Mexico, drove much of Colombia's 20<sup>th</sup> century public and private efforts to preserve some and eradicate other peasant and popular food practices and social tastes. Such was the case of the war against *chicha* discussed in chapter three. Perceived as a major cause of racial degeneracy, *chicha* crystallized Andean political and intellectual elites' prejudices against

peasant and popular behaviors believed to be contrary to modernity and associated notions of hygiene, civilization, and progress.

As discussed in this dissertation, peasant “poor cultural habits” is a pervasive trope in social discourses and national food and nutrition policies. Nutrition literacy has been justified on the grounds of transforming and disciplining peasant cultural food ideas and practices to overcome extended and pervasive rural malnutrition and poverty. As I have argued here, the rationalization and nutritionalization (Barona 2008, Dixon 2009) of diets has operated as a form of disembodiment of meaningful cultural tastes and food practices central to the diet, social life, and identity of peasants and popular sectors. Marginalization or erasure of an important social and sensory memory, such as *chicha*, evokes anthropological arguments about the centrality of embodied and affective human experiences with food (Farquhar 2002, Holtzman 2009, Nazarea 2005, Seremetakis 1994, Sutton 2001, 2010).

Diverse food and nutrition measures implemented to address rural malnutrition, such as agricultural modernization, nutritionalization, and targeted food aid, reveal contradictory outcomes. While agricultural modernization contributed to national food security and self-sufficiency, serious food and nutrition problems persist in rural Colombia. Encouragement of certain crops and foods for nutritional or economic purposes has also affected agricultural diversity and ecological integrity (Correa 2009, Leon 2007). This phenomenon has been deepened with neoliberal agricultural restructuring for agroindustrial chains of export commodities and agrofuels (Forero 2010, Garay and Rodríguez 2005). Although most agroindustrial chains are situated in the flatlands, Andean mountain farmers have been among the most affected by

entrepreneurial imperatives, having lost most state support and left faced with rural unemployment, poverty, and most basic needs unmet (Robledo 2010). De-agrarization, rural outmigration, and off-farm livelihood diversification observed in Alban and Garagoa are examples of this reality. Marginalization of peasant production is another form of dis-embodiment that reduces the range of livelihood options.

Neoliberal macroeconomic policies seeking to mainstream agriculture (and culture) under the principles of productivity, profitability, and competitiveness, pose new uncertainties to rural landscapes and communities. Increasing food imports in the past decade also jeopardize national production and competitiveness of peasant economies. Recent legislative measures restricting peasant, artisanal, and petty commodity production, on the one hand, and opening the door to GMOs by transnational agrochemical corporations, on the other, deepen the dislocation of peasant economies and foods.

Despite generalized assumptions of the inefficiency of peasant economies, small-farmers and peasant crops still play a role providing affordable and diverse number of direct-consumption products and foods to local, regional, and national markets (Forero 2010, Mondragon and Montoya 2011, Pesquera and Rodriguez 2009, Suárez 2011). Continued demand for a variety of products from peasant holdings and kitchens (Suárez 2011) point to the existence of deep-seated food patterns and tastes among rural and urban consumers.

An irony of nutritional interventions is the continued promotion of foods of lower nutritionally qualities and the increased consumption of carbohydrate-rich diets. Such is the case of the diesel diet examined here. State and market promotion of industrially

processed foods that come to represent symbols of social distinction and modernity such as the case of rice, beer, soda, and white bread, discussed in chapter three, have introduced new foodstuffs and cultural alimentary meanings to the peasant diet. Acceptance of new foods is facilitated when they are coherent with previous cultural tastes for certain flavors and textures. New consumptions and food practices, however, do not occur automatically or passively: they involve complex processes of cultural resignification as people try to re-embody and re-embed them with new meanings in their alimentary imaginaries (Onhuki-Tierney 1993, Weismantel 1988). Description of various codings and recodings of food (beer, bread, *bienestarina*) suggest different ways in which peasants attempt to re-signify and re-embody their experience with food. As anthropologists have amply noted, eating is not just about the material ingestion of food but also about its associated social, cultural, and affective meanings (Lévi-Strauss 1997, Messer 1984, Mintz 1985).

A paradoxical form of state-led disembodiment analyzed in this dissertation is the continued dependency on *bienestarina*. As suggested from testimonies and government publications, ingesting and incorporating this government food is not exempt from mixed perceptions and emotions. While its nutritional qualities make it an acceptable food for children's child growth and development, many adults find it physiologically and psychologically unsatisfying. These embodied effects hinder its social recognition as a culturally acceptable food. Consumers' ambiguous responses to *bienestarina* reveal some of the complexities of the bodily experience in mundane food practices (Carolan 2011, Farquhar 2002, Scheper-Hughes 2007).

In contrast to the more abstract and nutrition-based concepts of food contained in government policies, examination of local everyday understandings of body and its processes in Alban and Garagoa, suggests the existence of continued forms of embodiment. Continuities involve the lived experiences, the material practices, and sensorial engagements with agrobiodiversity mediated by cultural ideas of food and health. Andean peasant women's body mappings reveal that the peasant body is an important site of knowledge, meaning, and affect imbued with power relations. Andean peasant women's body mappings reveal that the peasant body is an important site of gendered knowledge, meaning, and affect. It is also a locus of power where notions of body image and self intersect. The existence of distinct local models of body and embodiment, that do not conform entirely to Western understandings of anatomy and physiology, suggest the uneven incorporation of peasants into modern forms of body discipline and normalization. Oral histories and anecdotes of body and bodily experience generated during body mappings resonate with Farquhar's (2002) contention that embodiment is both a site of cultural-historic intersections and a formation of everyday practice.

Peasant embodied alimentary resistances, represented by the continued use of peasant crops, animals, and local plants for food and health, in Alban and Garagoa can be interpreted as forms of everyday visceral politics (Hayes-Conroy and Martin 2010) whose ordinariness and informality often escape the gaze of scholars, activists, and public officials.

In regards to peasant food perceptions and tastes ethnographic examination in Alban and Garagoa revealed that behind the apparent simplicity of peasant meals there is

significant cultural and culinary elaboration. Findings suggest that for Andean peasants, definitions of food require that it is nourishing and strength-giving. It also has to provide a sensation of satiety. Starches are filling and sustain daily human activity, which also makes them necessary and liked. Proteins endow with strength, a quality that makes them among the most special and liked foods, especially animal protein and dairy. Vegetables and fruits are not filling. Further findings are that nourishment is not the only criteria for defining food. According to cultural and humoral (hot/cold beliefs) ideas of food, health, and well-being, bodily energy and temperature balance must be maintained by combining liquid or water-based foods (soups and drinks) with dry meals (*secos*).

The culinary *sopa/seco* binary also structures the broader Colombian national cuisine. In the Andes food must also be cooked and salty. It is also associated with freshly made and warm meals, preferably seasoned mildly with natural ingredients. Blandness, as opposed to spicy and hot, is a quality of Andean peasant foods. Texture is also an important consideration in the diet; peasants in Alban and Garagoa express a preference for soft textures; softness is achieved by the lengthy cooking of most foods and meals. Texture is a significant criterion for classification of soups which range from broths to hearty soups to thick porridges.

Diversification is achieved through meal composition and cooking techniques. The combination of distinct textures, flavors, and temperatures also bring variety. Cooking is the gendered responsibility of women who are enskilled at an early age in the performance of a variety of culinary tasks and mastering the art of culinary improvisation. Although the structure and composition of the rural diet varies with seasonality, income, and food availability eating at least three meals a day is expected.

Abundant and generous portions are central to definitions of what constitutes a proper meal. Offering food to guests, sharing food, and giving food as gift are part of peasant notions of decency, amiability, generosity, and reciprocity.

Preference for bland foods contrasts with the cultural taste for fermented foods such as *chicha* and *guarapo*. As discussed in previous chapters, ideologies of hygiene, modernity, and progress have attempted to control and discipline peasant consumption of artisanal fermented beverages. Normalization of popular drinking behaviors has only had partial success. Whereas in Alban *guarapo* fell in disuse as farmers became more “refined”, in Garagoa consumption continues to be a daily practice.

Another finding of this ethnographic exploration is that a satisfactory and pleasurable relationship with food is not confined to a purely hedonistic experience. Foods and meals classified in consonance with cultural notions of strength, balance, aesthetics, morality, nutrition, and health. In connection to this finding, a feature unveiled in close examination of peasant cuisine is the dense and polysemic characteristic of foods and drinks. A single crop, food, or meal can be perceived, classified, and valued in different ways. The multilayered nature of peasant foods in the Colombian Andes is reminiscent of the thickness attributed to symbols and metaphors (Geertz 1973, Onhuki-Tierney 1993, Turner 1967, 1975).

Regarding dietary diversity, the use of a seven-day Food Frequency Log in 14 Andean households revealed the presence of the seven main food groups defined by the national food guidelines and 96 different foods. Although dietary quality cannot be inferred from this data, consumption of different foods within and across food groups daily and weekly suggests potential nutrient synergies.

Peasant livelihoods and diets cannot be idealized or over-romanticized, especially in light of the historical and structural condition of malnutrition, poverty, and social exclusion they have been subject to. It is nevertheless important to acknowledge the different ways in which they strive for food and livelihood diversity. Peasants in the Andes constantly talk about being “with the batteries on” (*con las pilas puestas*) and searching for possibilities (*rebuscando*). Diversification is about crafting possibilities and options in the midst of constraints. Peasant food practices are an expression of this diversity and tenacity. Contrary to naturalized ideas of the cultural poverty of peasant food habits, peasant enskilled and embodied food practices are complex and deep; they are textured and culturally meaningful.

This dissertation has interrogated normalized assumptions about the notions of the simplicity and monotony of the Andean peasant diet. Anthropologists have long noted that food is a central expression of culture and cultural diversity. Food is culture. By focusing on the mundane topic of food, I have explored an important dimension of peasant culture and cultural practices. With respect to peasants, anthropologists have noted that enduring imaginaries of poverty, traditionalism, and ignorance still underlie ways of thinking about peasants (Bryceson 2000, Tsing 2003). Contradictory representations and narratives of rural landscapes and peoples continue to permeate public imaginaries, academic scholarship, and development interventions. As new social actors marked by ethnic and cultural difference have gained public and political visibility, peasants seem unable to move beyond economic and productive categories. An emerging trend in the recent “culturization of peasants” (Edelman and Carwil 2011:95) has been voiced in the language of food. Such is the case of food-based peasant movements in

Colombia, and in other parts of the world, demanding food security, sovereignty and autonomy. Situating food, culture and agriculture in the transnational language of human rights, democracy, and social justice, peasants are demanding the right to produce food under conditions that enable their continued self-defined existence. In Colombia the importance of these resistance initiatives is undeniable in a context of the extended food and agricultural crisis, and persistent aggressions against rural populations, their livelihoods, and their lands. If power inhabits meanings and meanings are a primary source of social power (Escobar 2008:14), this research has underscored the importance of peasants to cultural and alimentary richness, and to social mobilization around the right to food in Colombia.

In attendance to this fact, in this dissertation I have sought to foreground the cultural and material importance of the embodied practices of those who still produce part of their food. At a time when the industrialization and globalization of food have generated unprecedented social, ecological, and nutritional crises worldwide, diversified small-farming and agrobiodiversity have emerged as options for sustainable production and the progressive realization of the human right to adequate food (De Schutter 2010). Against this backdrop, I have evidenced that diversified Andean peasant food practices contribute to more diverse, healthier, and democratic agro-food scenarios in Colombia.

Theoretically, a contribution of this dissertation has been the use of a framework that integrates peasant studies, the anthropology of food and body, and the cultural dimensions of agrobiodiversity in tropical mountains. This combined approach has shed light into the largely unexplored interface between food, cultural meanings, and the socio-political ecosystems in which smallholders are embedded. The information

generated contributes to political economy/ecology oriented peasant studies, ethnoecology, and the anthropology of food and body by filling gaps in each one of these literatures. Of relevance to peasant studies is the exploration of the cultural, sensory, and affective dimensions of food and agrobiodiversity from the perspective of smallholder food and taste preferences. The study of the enskilled and embodied dimension of peasant food-related knowledge complements more conventional economic and agronomic studies of peasant production. A contribution to the anthropology of food and the body is the contextualization of sensory and embodied dimensions of food within a wider historical, environmental, and political economic framework. Through examinations of material and symbolic dimensions body and embodiment in regards to various forms of peasant resistance in Colombia, I have also argued that the body is a compelling domain for the study of culture, history, and society.

Through the articulation of economic, cultural, and ecological dimension of peasant cultures, this dissertation has made evident how political economic and environmental forces affect subsistence systems and tastes as well as the agricultural, nutritional, and political implications of smallholder embodied food practices. It has also made a case for the cultural and political potential of small-farming to advance alternatives to the current homogenizing and dis-embodimenting tendencies of the global agro-food system. In this sense it echoes some of the messages of emerging transnational peasant and agrarian movements with respect to their ability to produce food for their communities and the world in a sustainable and healthy way.

Finally, the social and political relevance of this study is that by addressing a topic that is so central to the reproduction of life and life-sustaining processes, it points to

possibilities of renewed dialogues and strategies of collaboration among academics, government officials, activists, and rural communities as food concerns intersect public and private agendas in Colombia. This compelling challenge demands critical awareness of our joint responsibility for crafting more diverse, whole, meaningful, and dignified relationship to food in the current context of capitalist modernity.

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APPENDIX A.

SURVEY FORM

Place: Date:  
Distance to main road: Road access:  
Respondent's name: Age:  
Place of origin: Length of residency in village:  
Household head:  
Responsibilities of the household head:  
Education:  
Work:  
Primary and secondary occupation (agriculture, livestock, wages work, services, sales, own business, crafts, migration):  
Urban Experience:  
Monthly household income:

I. DEMOGRAPHICS:

Number of permanent residents:  
a. Name: Sex: Age: Relationship to respondent:  
Place of origin: Marital status: Education:  
Primary and secondary occupation (agriculture, livestock activities, wages, services, sales):

b. a. Name: Sex: Age: Relationship to respondent:  
Place of origin: Marital status: Education:  
Primary and secondary occupation (agriculture, livestock activities, wages, services, sales):

II. HOUSING AND SERVICES:

House ownership: Rental: Inheritance: Purchase:  
House next to fields? # Rooms: Dining: Kitchen: Bathroom:  
Building materials. Floor: Roof: Walls:  
Electricity: Monthly cost:  
Cooking fuel. Gas Electricity: Firewood: Monthly cost:  
Water source. Aqueduct: Well: Monthly cost:  
Transportation: Public: Personal: Monthly cost:  
Home phone: Cell: Communal phone: Monthly cost:  
Annual property tax:  
Remittances (food, clothing, money) by a family member?

### III. RURAL INSTITUTIONS:

What local or municipal services do you use?

UMATA:      ICBF: Child Dining: School:      Health Ctr:      SISBEN:

RESA:

State projects: NGO projects:      Regional environmental corporation

Other:

### IV. MEANS OF PRODUCTION

Land property:      Rental      Borrowed:      Inheritance:      Sharecropping:

% arable land:      Pasture:

Tools (transportation, sugar mill, sheds, mowers, wheelbarrows):

Appliances:      Fridge:      Stove:      Blender      Radio:

TV video:

Debt or credit and with whom:

### V. PRODUCTION SYSTEMS

Permanent crops:      Annual crops:      Homegarden crops:

Planting and harvesting time:

Spatial distribution of crops:

Form of cultivation (monoculture, intercropping, tools used):

Seed origin (purchase, stored, exchange):

Varieties (old, new, hybrid):

Soil type and slope:

Use of external inputs (seeds, fertilizers, pesticides):

Use of in-farm inputs (green covers, manure, water / irrigation):

Use of a ritual or belief to plant or harvest (prayers, promises, *cabañuelas*, waning):

Trees:

Use of live fences or barbed wire:

Livestock:      Animal location:      Animal feed:

Use of external inputs (food, medicines, vaccines):

Use and access to technical vet services:

Who is responsible for managing each kind:

## VI. ORGANIZATION AND NETWORKS

Participation in any organization (church, community board, school board, production, marketing group):

In case of need who do you seek help from. Relative: Neighbor: Other:

Labor organization: Wage work: Exchange: Other:

## VII. HEALTH

Family illnesses.

Health services: Health Center: Hospital: Traditional healers:

## VIII: FOOD

What do you produce and eat:

What do you produce and sell and where:

What do you produce and exchange and with whom:

How often do you shop for food local market/plaza, store):

Average monthly food expenses:

Do you pay in cash or delayed pay:

Who cooks at home:

Number of meals a day:

Period of abundance: Time of scarcity or lean period:

Most liked foods: Least liked foods:

Luxury or prestige foods: Poor people's food:

Strength foods: Define food:

## IX. WELFARE AND WELLBEING

Define wellbeing

## XI: COMMENTS / ANECDOTES:

APPENDIX B

DAILY FOOD FREQUENCY LOG

Municipality

Household:

Date:

|                      | B | M | L | M | A | D |                | B | M | L | M | A | D |                    | B | M | L | M | A | D |  |
|----------------------|---|---|---|---|---|---|----------------|---|---|---|---|---|---|--------------------|---|---|---|---|---|---|--|
| Corn bread           |   |   |   |   |   |   | Green onions   |   |   |   |   |   |   | Guarapo            |   |   |   |   |   |   |  |
| <i>Arepa</i>         |   |   |   |   |   |   | Onions         |   |   |   |   |   |   | Chicha             |   |   |   |   |   |   |  |
| White bread          |   |   |   |   |   |   | Tomato         |   |   |   |   |   |   | <i>Masato</i>      |   |   |   |   |   |   |  |
| Potato               |   |   |   |   |   |   | Carrot         |   |   |   |   |   |   | Water              |   |   |   |   |   |   |  |
| Rice                 |   |   |   |   |   |   | Peas           |   |   |   |   |   |   | <i>Agua panela</i> |   |   |   |   |   |   |  |
| Plantain             |   |   |   |   |   |   | String beans   |   |   |   |   |   |   | Coffee             |   |   |   |   |   |   |  |
| Manioc               |   |   |   |   |   |   | <i>Guatila</i> |   |   |   |   |   |   | Coffe with milk    |   |   |   |   |   |   |  |
| Pasta                |   |   |   |   |   |   | Cilantro       |   |   |   |   |   |   | Milk               |   |   |   |   |   |   |  |
| <i>Arracacha</i>     |   |   |   |   |   |   | Garlic         |   |   |   |   |   |   | Chocolate          |   |   |   |   |   |   |  |
| Oats                 |   |   |   |   |   |   | Beans          |   |   |   |   |   |   | Lemonade           |   |   |   |   |   |   |  |
| Corn                 |   |   |   |   |   |   | Lentils        |   |   |   |   |   |   | Fruits juice       |   |   |   |   |   |   |  |
| <i>Nabo or cubio</i> |   |   |   |   |   |   | <i>Balú</i>    |   |   |   |   |   |   | Herb tea           |   |   |   |   |   |   |  |
| <i>Hibia</i>         |   |   |   |   |   |   | Yellow squash  |   |   |   |   |   |   | Soda               |   |   |   |   |   |   |  |
| <i>Ruba</i>          |   |   |   |   |   |   | White squash   |   |   |   |   |   |   | Beer               |   |   |   |   |   |   |  |
| <i>Batata</i>        |   |   |   |   |   |   | Cabbage        |   |   |   |   |   |   | Alcohol            |   |   |   |   |   |   |  |
| <b>OTHER</b>         |   |   |   |   |   |   | <b>OTHER</b>   |   |   |   |   |   |   | <b>OTHER</b>       |   |   |   |   |   |   |  |
| Beef                 |   |   |   |   |   |   | Orange         |   |   |   |   |   |   | Vegetable oil      |   |   |   |   |   |   |  |
| Bone                 |   |   |   |   |   |   | Banana         |   |   |   |   |   |   | Sugar              |   |   |   |   |   |   |  |
| Pork                 |   |   |   |   |   |   | Guava          |   |   |   |   |   |   | Salt               |   |   |   |   |   |   |  |
| Beef viscera         |   |   |   |   |   |   | Tangerine      |   |   |   |   |   |   | <i>Panela</i>      |   |   |   |   |   |   |  |
| Chicken              |   |   |   |   |   |   | Tree tomato    |   |   |   |   |   |   | Sugar cane "honey" |   |   |   |   |   |   |  |
| Giblets              |   |   |   |   |   |   | Blackberry     |   |   |   |   |   |   | Bouillon           |   |   |   |   |   |   |  |
| Egg                  |   |   |   |   |   |   | Papaya         |   |   |   |   |   |   | Crackers           |   |   |   |   |   |   |  |
|                      |   |   |   |   |   |   | Lemon          |   |   |   |   |   |   | Candy              |   |   |   |   |   |   |  |
| <b>OTHER</b>         |   |   |   |   |   |   | <b>OTHER</b>   |   |   |   |   |   |   | <b>OTHER</b>       |   |   |   |   |   |   |  |

B = Breakfast:

MM = Mid morning snack:

L = Lunch:

MA = Mid afternoon snack:

D = Diner:

APPENDIX C

TREES IN ALBAN AND GARAGOA

| Common name         | Scientific name                                 | Garagoa | Alban |
|---------------------|---|---------|-------|
| 1. Acacia           | <i>Leucaena leucocephala</i>                    | 0       | X     |
| 2. Aguacate         | <i>Persea americana</i>                         | X       | X     |
| 3. Aliso            | <i>Alnus sp.</i>                                | X       | 0     |
| 4. Araucaria        | <i>Araucaria sp.</i>                            | 0       | X     |
| 5. Balso            | <i>Ochroma pyramidale</i><br>(Cav. ex Lam.)     | X       | 0     |
| 6. Balú             | <i>Erythrina edulis</i>                         | X       | X     |
| 7. Bambú            | <i>Bambusa sp.</i>                              | X       | X     |
| 8. Cafetero         | <i>Paliocuria sp.</i>                           | X       | 0     |
| 9. Carbonero        | <i>Albizia carbonaria</i>                       | 0       | X     |
| 10. Caucho          | <i>Ficus andicola Standl. L</i>                 | 0       | X     |
| 11. Cedro           | <i>Juglans neotrópica. Dode</i>                 | 0       | X     |
| 12. Ceniza          | <i>Unidentified</i>                             | X       | 0     |
| 13. Chamuscado      | <i>Unidentified</i>                             | 0       | X     |
| 14. Cheflera        | <i>Schefflera sp.</i>                           | 0       | X     |
| 15. Chicala         | <i>Tecoma stans</i>                             | 0       | X     |
| 16. Churimo         | <i>Inga sp</i>                                  | 0       | X     |
| 17. Chirimoya       | <i>Annona sp</i>                                | X       | 0     |
| 18. Chizo           | <i>Myrcia sp.</i>                               | X       | 0     |
| 19. Chocho          | <i>Erythrina rubrinervia</i><br>Kunth           | 0       | X     |
| 20. Citricos        | <i>Various citrus</i>                           | X       | X     |
| 21. Cordoncillo     | <i>Unidentified</i>                             | X       | 0     |
| 22. Cucharo         | <i>Rapanea sp.</i>                              | X       | X     |
| 23. Drago           | <i>Croton sp.</i>                               | X       | 0     |
| 24. Durazno         | <i>Prunus persica</i>                           | X       | X     |
| 25. Ficus           | <i>Ficus sp.</i>                                | X       | 0     |
| 26. Encenillo       | <i>Weinmannia sp.</i>                           | 0       | X     |
| 27. Eucalipto       | <i>Eucalyptus sp.</i>                           | X       | X     |
| 28. Gaque           | <i>Clusia multiflora</i>                        | X       | 0     |
| 29. Granizo         | <i>Hedyosmum sp.</i>                            | X       | 0     |
| 30. Grao            | <i>Pterocarpus sp.</i>                          | X       | 0     |
| 31. Guadua verde    | <i>Bambusa sp.</i>                              | 0       | X     |
| 32. Guadua amarilla | <i>Bambusa vulgaris var.</i><br><i>vulgaris</i> | 0       | X     |
| 33. Guamo           | <i>Inga sp</i>                                  | 0       | X     |
| 34. Guaney          | <i>Erythrina poeppigiana</i>                    | X       | 0     |
| 35. Guayaba         | <i>Psidium sp.</i>                              | X       | 0     |
| 36. Guayacan        | <i>Tabebuia ochracea</i>                        | X       | 0     |
| 37. Jarillo         | <i>Ageratina ampla</i>                          | X       | 0     |
| 38. Lanzo           | <i>Miconia caudata</i>                          | X       | 0     |
| 39. Lechero         | <i>Ficus sp.</i>                                | 0       | X     |
| 40. Lombricero      | <i>Several species with same</i><br><i>name</i> | 0       | X     |

|                             |                                       |           |           |
|-----------------------------|---------------------------------------|-----------|-----------|
| 41. Lumbico                 | <i>Several species with same name</i> | 0         | X         |
| 42. Manzanillo              | <i>Several species with same name</i> | 0         | X         |
| 43. Manzano                 | <i>Malus sp.</i>                      | X         | 0         |
| 44. Mariposo                | <i>Steiractinia sodiroi</i>           | X         | 0         |
| 45. Mataleche               | <i>Unidentified</i>                   | X         | 0         |
| 46. Moho                    | <i>Cordia sp.</i>                     | 0         | X         |
| 47. Nacedero/quiebrabarrigo | <i>Trichanthera gigantea</i>          | X         | X         |
| 48. Nogal                   | <i>Several species with same name</i> | 0         | X         |
| 49. Palma real              | <i>Fam. Palmae</i>                    | 0         | X         |
| 50. Paloleche               | <i>Several species with same name</i> | X         | 0         |
| 51. Pino                    | <i>Pinus sp.</i>                      | X         | X         |
| 52. Pino patula             | <i>Pinus patula</i>                   | X         | 0         |
| 53. Pomarroso               | <i>Syzygium sp.</i>                   | X         | X         |
| 54. Roble                   | <i>Quercus sp.</i>                    | X         | 0         |
| 55. Salvio                  | <i>Cordia sp.</i>                     | X         | 0         |
| 56. Sauco                   | <i>Sambucus nigra</i>                 | X         | X         |
| 57. Siete cueros            | <i>Tibouchina lepidota</i>            | X         | X         |
| 58. Taras                   | <i>Caesalpinia sp.</i>                | 0         | X         |
| 59. Tibar                   | <i>Escallonia sp.</i>                 | X         | 0         |
| 60. Totumo                  | <i>Crescentia cujete</i>              | 0         | X         |
| 61. Tunchin                 | <i>Unidentified</i>                   | X         | 0         |
| 62. Urapan                  | <i>Fraxinus sp.</i>                   | X         | X         |
| 63. Yarumo                  | <i>Cecropia sp.</i>                   | 0         | X         |
| 64. Yopo                    | <i>Anadenanthera Peregrina</i>        | X         | 0         |
| <b>Total</b>                |                                       | <b>40</b> | <b>37</b> |

APPENDIX D

CROPS IN FIELDS IN ALBAN AND GARAGOA

| Field Crops in Alban and Garagoa                                 | Garagoa | Alban |
|--|---------|-------|
| <b>Starches: cereals, roots, tubers, plantains</b>               |         |       |
| Arracacha ( <i>Arracacia xanthorrhiza</i> )                      | X       | X     |
| Arracacha amarilla / yellow arracacha                            | 0       | X     |
| Arracacha guadeña / guadeña arracacha                            | X       | 0     |
| Arracacha marranera / marranera arracacha                        | X       | 0     |
| Arracacha pan de trigo / wheat bread arracacha                   | X       | 0     |
| Arracacha zarca / zarca arracacha                                | X       | X     |
| Arracacha zata / zata arracacha                                  | X       | 0     |
| Chuguas or rubas ( <i>Ullucus tuberosus</i> )                    | X       | 0     |
| Cubios ( <i>Tropaeolum tuberosum</i> )                           | X       | 0     |
| Hibia ( <i>Oxalis tuberosa</i> )                                 | X       | 0     |
| Maíz/ corn ( <i>Zea mays</i> )                                   | X       | X     |
| Maíz blanco / white corn   | X       | X     |
| Maíz cacao / cacao corn  | X       | 0     |
| Maíz chiratá / corn chiratá                                      | X       | X     |
| Maíz chocolate / chocolate corn                                  | X       | X     |
| Maíz de los perros / corn of the dogs                            | X       | 0     |
| Maíz pollo / pollo corn  | X       | 0     |
| Maíz rocolo / rocolo corn  | 0       | X     |
| Papa criolla/ criollo potato ( <i>Solanum phureia</i> )          | X       | 0     |
| Papa Monserrate / Monserrate potato                              | X       | 0     |
| Papa pastusa / pastusa potato                                    | X       | 0     |
| Papa quina / quina potato  | X       | 0     |
| Plátano aiiquero/ plantain ( <i>Musa paradisiaca L</i> )         | X       | 0     |
| Plátano barranquillo / barranquillo plantain                     | 0       | X     |
| Plátano bocadillo / bocadillo plantain                           | 0       | X     |
| Plátano colisero / colisero plantain                             | X       | X     |
| Plátano colorado / colorado plantain                             | X       | 0     |
| Plátano dominico / dominico plantain                             | X       | 0     |
| Plátano gobernador / gobernador plantain                         | X       | X     |
| Plátano manzano / manzano plantain                               | 0       | X     |
| Plátano pacifico / Pacific plantain                              | 0       | X     |
| Plátano pastuso / pastuso plantain                               | X       | 0     |
| Plátano popocho or topocho / topocho plantain                    | X       | X     |
| Plátano tresfilos / tresfilos plantain                           | 0       | X     |
| Yuca armenia/ Armenia manioc ( <i>Manihot esculenta Crantz</i> ) | 0       | X     |
| Yuca corriente /common manioc                                    | X       | X     |
| Yuca llanera / llanero manioc                                    | X       | X     |
| Yuca palinegra / palinegra manioc                                | X       | X     |
| Yuca santandereana / santandereana manioc                        | 0       | X     |
| Yuca vema de huevo / volk manioc                                 | 0       | X     |
| Yuca zata / zata manioc  | X       | X     |
| <b>Total starches</b>  | 31      | 23    |
| <b>Vegetables</b>  |         |       |
| Alveria calostrá/ calostrá green peas                            | X       | 0     |
| Auvama/ yellow squash ( <i>Cucurbita maxima</i> )                | X       | X     |
| Calabaza/ white squash ( <i>Cucurbita ficifolia</i> )            | X       | X     |
| Guatila ( <i>Sechium edule</i> )                                 | X       | X     |

|  |    |    |
|--|----|----|
| Habas / fava ( <i>Vicia faba</i> )                                   | X  | 0  |
| Habichuela / string beans  | 0  | X  |
| Frijol / green beans   | X  | X  |
| Frijol de año / year bean  | X  | X  |
| Pepino guiso / stuffing cucumber ( <i>Cyclanthera pedata</i> )       | X  | X  |
| Tomate / tomato  | 0  | X  |
| <b>Total vegetables</b>  | 8  | 8  |
| <b>Fruits</b>  |    |    |
| 1. Aguacate / avocado  | X  | X  |
| 2. Brea / fig ( <i>Ficus carica</i> )                                | 0  | 0  |
| 3. Café arábigo / Arabica coffee                                     | X  | X  |
| 4. Café caturra / caturra coffee                                     | X  | X  |
| 5. Ciruela / plum  | 0  | X  |
| 6. Curuba ( <i>Passiflora mollisima</i> )                            | X  | X  |
| 7. Durazno/ peach  | X  | X  |
| 8. Granadilla ( <i>Passiflora ligularis</i> )                        | X  | 0  |
| 9. Guamo ( <i>Inga sp</i> )  | X  | 0  |
| 10. Guavaba / guava ( <i>Psidium guaiava</i> )                       | X  | X  |
| 11. Habano / banana ( <i>Musa sapientum</i> )                        | X  | X  |
| 12. Lima / key lime ( <i>Citrus aurantifolia</i> )                   | X  | 0  |
| 13. Limón / lemon  | X  | X  |
| 14. Limón castilla / castilla lemon                                  | 0  | X  |
| 15. Limón dulce / sweet lemon  | X  | X  |
| 16. Limón mandarina / tangerine lemon                                | 0  | X  |
| 17. Limón tahiti / Tahiti lemon                                      | X  | X  |
| 18. Lulo ( <i>Solanum quitoensis</i> )                               | X  | X  |
| 19. Mandarina arravana / arravana tangerine                          | X  | X  |
| 20. Mandarina común / common tangerine                               | X  | X  |
| 21. Mandarina dulce / sweet tangerine                                | X  | 0  |
| 22. Mandarina triple a / triple A tangerina                          | X  | X  |
| 23. Manzana / apple  | X  | X  |
| 24. Mora / blackberry  | X  | X  |
| 25. Naranja común / common orange                                    | 0  | X  |
| 26. Naranja Tahití / Tahiti orange                                   | 0  | X  |
| 27. Naranja valenciana / Valencia orange                             | X  | X  |
| 28. Papayuela ( <i>Carica Pubescens</i> )                            | X  | 0  |
| 29. Piña / pineapple   | 0  | X  |
| 30. Pitava ( <i>Hylocereus Undatus T</i> )                           | X  | X  |
| 31. Tomate de árbol / tree tomato ( <i>Cyphomandra betacea</i> )     | X  | X  |
| <b>Total fruits</b>  | 24 | 25 |
| <b>Proteins</b>  |    |    |
| 32. Balù ( <i>Erythina edulis</i> )                                  | X  | X  |
| 33. Frijol bolo rojo /bolo rojo bean                                 | X  | X  |
| 34. Frijol rochela o sangretoro / bullblood bean                     | X  | X  |
| 35. Garbanzo / chickpeas   | X  | 0  |
| <b>Total proteins</b>  | 4  | 3  |
| <b>Grasses</b>   |    |    |
| 36. Caña san antoniana / san antoniana sugar cane                    | X  | X  |
| 37. Pasto imperial 60 / Imperial grass ( <i>Axonopus scoparius</i> ) | X  | 0  |
| 38. Pasto braquiaria /brachiara grass ( <i>brachiaria sp.</i> )      | X  | 0  |
| 39. Pasto kikuyu / kikuyu grass ( <i>Pennisetum clandestinum</i> )   | X  | 0  |
| 40. Pasto Guatemala / Guatemala grass ( <i>Tripsacum laxum</i> )     | 0  | X  |
| 41. Pasto oloroso / ( <i>Anthoxantum odoratum</i> )                  | X  | 0  |
| 42. Pasto pelo de burra (unidentified)                               | X  | X  |
| <b>Total grasses</b>   | 6  | 3  |
| <b>Total crops</b>   | 73 | 62 |

APPENDIX E

HOMEGARDEN PLANTS IN ALBAN AND GARAGOA

| Home garden plants in Alban and Garagoa            |                                      |                                       | Garagoa   | Alban     |
|--|--------------------------------------|---------------------------------------|-----------|-----------|
| Common name in Spanish and English                 |                                      | Scientific name                       |           |           |
| <b>Starches: cereals, roots, tubers, plantains</b> |                                      |                                       |           |           |
| 1.   | Arracacha                            | <i>Arracacia xanthorrhiza</i>         | 0         | X         |
| 2.   | Batata                               | <i>Ipomoea batatas</i>                | X         | 0         |
| 3.   | Bore                                 | <i>Alocasia macrorrhiza</i>           | 0         | X         |
| 4.   | Maíz / corn                          | <i>Zea mays</i>                       | 0         | X         |
| 5.   | Maíz amarillo / yellow corn          | <i>Zea mays</i>                       | 0         | X         |
| 6.   | Maíz blanco / white corn             | <i>Zea mays</i>                       | 0         | X         |
| 7.   | Maíz cacao / cacao corn              | <i>Zea mays</i>                       | 0         | X         |
| 8.   | Maíz chirata / chirata corn          | <i>Zea mays</i>                       | X         | 0         |
| 9.   | Maíz guatemán / guatemán corn        | <i>Zea mays</i>                       | 0         | X         |
| 10.  | Maíz pollo / pollo corn              | <i>Zea mays</i>                       | X         | 0         |
| 11.  | Maíz yucatán / Yucatan corn          | <i>Zea mays</i>                       | X         | X         |
| 12.  | Maravilla                            | <i>Phaedranassa sp</i>                | X         | 0         |
| 13.  | Plátano /plantain                    | <i>Musa paradisiaca</i>               | X         | 0         |
| 14.  | Plátano colisero / colisero plantain | <i>Musa paradisiaca</i>               | X         | 0         |
| 15.  | Plátano guahibo / guahibo plantain   | <i>Musa paradisiaca</i>               | X         | 0         |
| 16.  | Plátano pastuso / pastuso plantain   | <i>Musa paradisiaca</i>               | X         | 0         |
| 17.  | Plátano popocho / popocho plantain   | <i>Musa paradisiaca</i>               | X         | 0         |
| 18.  | Yuca armenia /Armenia manioc         | <i>Manihot esculenta</i><br>Crantz    | 0         | X         |
| 19.  | Yuca llanera / llanero manioc        | <i>Manihot esculenta</i><br>Crantz    | 0         | X         |
| 20.  | Yuca santandereana /Santander manioc | <i>Manihot esculenta</i><br>Crantz    | 0         | X         |
| <b>Total starches</b>                              |                                      |                                       | <b>10</b> | <b>11</b> |
| <b>Vegetables</b>                                  |                                      |                                       |           |           |
| 21.  | Acelga / Swiss chard                 | <i>Beta vulgaris var. cicla</i>       | X         | X         |
| 22.  | AjÍ / pepper                         | <i>Capsicum sp.</i>                   | X         | X         |
| 23.  | Alverja ojinegra /black eye peas     | <i>Pisum sativum L</i>                | X         | 0         |
| 24.  | Auyama / yellow squash               | <i>Cucurbita maxima</i>               | X         | X         |
| 25.  | Brócoli / broccoli                   | <i>Brassica oleracea var. italica</i> | X         | 0         |
| 26.  | Calabaza / white squash              | <i>Cucurbita pepo</i>                 | X         | 0         |
| 27.  | Cebolla cabezona / onions            | <i>Allium cepa</i>                    | X         | 0         |
| 28.  | Cebolla larga / green onions         | <i>Allium fistulosum L</i>            | X         | X         |
| 29.  | Col                                  | <i>Brassica oleracea</i>              | X         | 0         |
| 30.  | Espinaca / spinach                   | <i>Spinacia oleracea</i>              | 0         | X         |
| 31.  | Guatila                              | <i>Sechium edule</i>                  | X         | X         |
| 32.  | Haba / fava                          | <i>Vicia faba</i>                     | X         | 0         |
| 33.  | Habichuela / string beans            | <i>Phaseolous vulgaris</i>            | 0         | X         |
| 34.  | Lechuga / lettuce                    | <i>Lactuca sativa L</i>               | X         | X         |

|                           |                                       |                                |           |           |
|---------------------------|---------------------------------------|--------------------------------|-----------|-----------|
| 35.                       | Pepino cocombro / cucumber            | <i>Cucumis sativus</i>         | 0         | X         |
| 36.                       | Pepino dulce                          | <i>Solanum muricatum</i>       | 0         | X         |
| 37.                       | Perejil / parsley                     | <i>Petroselinum sativum</i>    | X         | X         |
| 38.                       | Remolacha / beets                     | <i>Beta vulgaris</i>           | X         | 0         |
| 39.                       | Repollo / cabbage                     | <i>Brassica oleracea</i>       | X         | 0         |
| 40.                       | Tomate / tomato                       | <i>Lycopersicum esculentum</i> | X         | X         |
| 41.                       | Zanahoria / carrots                   | <i>Daucus carota L</i>         | X         | 0         |
| <b>Total vegetables</b>   |                                       |                                | <b>17</b> | <b>12</b> |
| <b>Fruits</b>             |                                       |                                |           |           |
| 42.                       | Breva / Fig                           | <i>Ficus carica L.</i>         | X         | 0         |
| 43.                       | Chirimoya / cherimoya                 | <i>Annona cherimola</i>        | X         | X         |
| 44.                       | Durazno / peach                       | <i>Prunus persica</i>          | X         | X         |
| 45.                       | Feijoa /                              | <i>Feijoa sellowiana</i>       | X         | 0         |
| 46.                       | Frambuesa / raspberry                 | <i>Rubus idaeus</i>            | X         | 0         |
| 47.                       | Fresa / strawberry                    | <i>Fragaria vesca L</i>        | X         | 0         |
| 48.                       | Granadilla                            | <i>Passiflora ligularis</i>    | X         | X         |
| 49.                       | Guayaba / guava                       | <i>Psidium guajava</i>         | X         | 0         |
| 50.                       | Gulupa                                | <i>Passiflora ligularis</i>    | X         | 0         |
| 51.                       | Limón / lemon                         | <i>Citrus limonum</i>          | X         | 0         |
| 52.                       | Lulo                                  | <i>Solanum quitoensis</i>      | X         | X         |
| 53.                       | Mandarina / tangerine                 | <i>Citrus reticulata</i>       | X         | 0         |
| 54.                       | Mango / mango                         | <i>Manguijera indica</i>       | X         | 0         |
| 55.                       | Manzana / apple                       | <i>Pyrus malus L.</i>          | X         | 0         |
| 56.                       | Naranja / orange                      | <i>Citrus sinensis</i>         | X         | 0         |
| 57.                       | Níspero                               | <i>Manilkara huberi</i>        | X         | 0         |
| 58.                       | Pera / pear                           | <i>Pyrus communis L.</i>       | X         | 0         |
| 59.                       | Plátano habano / banana               | <i>Musa sapientum</i>          | X         | 0         |
| 60.                       | Tomate de árbol                       | <i>Cyphomandra betacea</i>     | X         | X         |
| 61.                       | Uchuva                                | <i>Physalis peruviana L</i>    | X         | 0         |
| <b>Total fruits</b>       |                                       |                                | <b>20</b> | <b>5</b>  |
| <b>Protein</b>            |                                       |                                |           |           |
| 62.                       | Balú                                  | <i>Erythrina edulis Triana</i> | X         | X         |
| 63.                       | Fríjol / bean                         | <i>Phaseolus vulgaris</i>      | 0         | X         |
| 64.                       | Frijol arbolito / tree bean           | <i>Phaseolus vulgaris</i>      | 0         | X         |
| 65.                       | Frijol garrapato / garrapato bean     | <i>Phaseolus vulgaris</i>      | 0         | X         |
| <b>Total protein</b>      |                                       |                                | <b>1</b>  | <b>4</b>  |
| <b>Medicinal/aromatic</b> |                                       |                                |           |           |
| 66.                       | Ajenjo                                | <i>Artemisia absinthium</i>    | X         | 0         |
| 67.                       | Albahaca / basil                      | <i>Ocimum basilicum</i>        | 0         | X         |
| 68.                       | Apio / celery                         | <i>Apium graveolens</i>        | X         | X         |
| 69.                       | Canelón                               | <i>Raponea lorentziana</i>     | X         | X         |
| 70.                       | Cidrón                                | <i>Lippia citriodora</i>       | X         | X         |
| 71.                       | Comfrey                               | <i>Symphytum officinale</i>    | 0         | X         |
| 72.                       | Destrancadera                         | <i>Unidentified</i>            | 0         | X         |
| 73.                       | Guacas /                              | <i>Acmella repens</i>          | X         | 0         |
| 74.                       | Hierbabuena / spearmint               | <i>Mentha piperita</i>         | X         | X         |
| 75.                       | Hinojo / fennel                       | <i>Foeniculum vulgare Mill</i> | X         | 0         |
| 76.                       | Laurel / laurel                       | <i>Laurus nobilis L</i>        | X         | 0         |
| 77.                       | Limonaria or limoncillo / lemon grass | <i>Cymbopogon citratus</i>     | X         | X         |
| 78.                       | Manzanilla / chamomille               | <i>Anthemis nobilis</i>        | X         | X         |
| 79.                       | Marihuana                             | <i>Cannabis sativa</i>         | 0         | X         |
| 80.                       | Mejorana / marjoram                   | <i>Origanum majorana L</i>     | X         | 0         |

|                                |                       |                                     |           |           |
|--------------------------------|-----------------------|-------------------------------------|-----------|-----------|
| 81.                            | Menta / mint          | <i>Mentha spicata</i>               | X         | X         |
| 82.                            | Ortiga / nettles      | <i>Urtica urens L</i>               | X         | 0         |
| 83.                            | Paico / wormwood      | <i>Telexys ambrosioides</i>         | 0         | X         |
| 84.                            | Poleo                 | <i>Mentha pulegium</i>              | 0         | X         |
| 85.                            | Romero / rosemary     | <i>Rosmarinus officinalis L</i>     | X         | 0         |
| 86.                            | Ruda / rue            | <i>Ruta graveolens L</i>            | X         | X         |
| 87.                            | Rudon                 | <i>Ruta graveolens L</i>            | X         | 0         |
| 88.                            | Sábila / aloe vera    | <i>Aloe vera</i>                    | X         | X         |
| 89.                            | Sándalo               | <i>Unidentified</i>                 | X         | 0         |
| 90.                            | Sauco                 | <i>Sambucus nigra L</i>             | X         | X         |
| 91.                            | Toronjil / lemon balm | <i>Melissa officinalis L</i>        | X         | X         |
| 92.                            | Verbena / verbena     | <i>Stachytarpheta jamaicensis L</i> | X         | X         |
| <b>Total medicina/aromatic</b> |                       |                                     | <b>21</b> | <b>18</b> |
| <b>Total homegarden crops</b>  |                       |                                     | <b>69</b> | <b>50</b> |

APPENDIX F

PRODUCTS FOR SELF PROVISIONING IN ALBAN AND GARAGOA

| Products for self provisioning in Alban and Garagoa | Scientific name                       | Garagoa   | Alban     |
|---|---------------------------------------|-----------|-----------|
| <b>Starches</b>                                     |                                       |           |           |
| 1. Arracacha  | <i>Arracacia xanthorrhiza</i>         | X         | X         |
| 2. Batata   | <i>Ipomoea batatas</i>                | X         | X         |
| 3. Chuguas or ruba                                  | <i>Ullucus tuberosus</i>              | 0         | X         |
| 4. Cubios   | <i>Tropaeolum tuberosum</i>           | X         | X         |
| 5. Hibia  | <i>Oxalis tuberosa</i>                | X         | 0         |
| 6. Maiz, corn                                       | <i>Zea mays</i>                       | X         | X         |
| 7. Maíz chirata / chirata corn                      | <i>Zea mays</i>                       | X         | 0         |
| 8. Maíz de los perros / corn of the dogs            | <i>Zea mays</i>                       | X         | 0         |
| 9. Malanga  | <i>Xanthosoma sagittifolium</i>       | X         | 0         |
| 10. Maravilla                                       | <i>Tigridia pavonia (L.F.)</i>        | X         | 0         |
| 11. Papa, potato                                    | <i>Solanum tuberosum</i>              | X         | 0         |
| 12. Papa pastusa                                    | <i>Solanum tuberosum</i>              | X         | 0         |
| 13. Papa quina                                      | <i>Solanum tuberosum</i>              | X         | 0         |
| 14. Plátano, plantain                               | <i>Musa paradisiaca</i>               | X         | X         |
| 15. Plátano colisero                                | <i>Musa paradisiaca</i>               | X         | X         |
| 16. Ruba or chugua                                  | <i>Ullucus tuberosus</i>              | X         | X         |
| 17. Yuca  | <i>Manihot sculenta Cranz</i>         | X         | X         |
| <b>Total starches</b>                               |                                       | <b>17</b> | <b>9</b>  |
| <b>Vegetables</b>                                   |                                       |           |           |
| 18. Acelga /swiss chard                             | <i>Beta vulgaris var. cicla</i>       | X         | X         |
| 19. Ajo / garlic                                    | <i>Allium sativum L</i>               | X         | 0         |
| 20. Arveja / peas                                   | <i>Pysum sativum L</i>                | X         | 0         |
| 21. Auyama / yellow squash                          | <i>Cucurbita maxima</i>               | X         | X         |
| 22. Brocoli / broccoli                              | <i>Brassica oleracea var. italica</i> | X         | 0         |
| 23. Calabaza / White squash                         | <i>Cucurbita pepo</i>                 | X         | X         |
| 24. Cebolla / onion                                 | <i>Allium cepa</i>                    | X         | X         |
| 25. Cilantro  | <i>Coriandrum sativum L</i>           | X         | X         |
| 26. Espinaca / spinach                              | <i>Spinacia oleracea</i>              | X         | X         |
| 27. Guatila   | <i>Sechium edule</i>                  | X         | X         |
| 28. Haba / fava                                     | <i>Vicia faba</i>                     | X         | 0         |
| 29. Hortalizas / vegetables                         | <i>Greens</i>                         | X         | X         |
| 30. Lechuga / lettuce                               | <i>Lactuca sativa L</i>               | X         | 0         |
| 31. Remolacha / beets                               | <i>Beta vulgaris</i>                  | X         | 0         |
| 32. Repollo / cabbage                               | <i>Brassica oleracea</i>              | X         | 0         |
| 33. Tomate / tomato                                 | <i>Lycopersicum esculentum</i>        | X         | X         |
| 34. Zanahoria / carrots                             | <i>Daucus carota L</i>                | X         | X         |
| <b>Total vegetables</b>                             |                                       | <b>17</b> | <b>10</b> |
| <b>Fruits</b>                                       |                                       |           |           |
| 35. Aguacate / avocado                              | <i>Persea Americana</i>               | X         | X         |
| 36. Banano / banana                                 | <i>Musa sapientum</i>                 | X         | X         |
| 37. Café / coffee                                   | <i>Coffea arabica L</i>               | X         | X         |

|  |                                    |                              |           |           |
|--|------------------------------------|------------------------------|-----------|-----------|
| 38.                                      | Chirimoya                          | <i>Annona cherimola</i>      | X         | X         |
| 39.                                      | Curuba                             | <i>Passiflora tarminiana</i> | X         | X         |
| 40.                                      | Durazno / peach                    | <i>Prunus pérsica</i>        | X         | X         |
| 41.                                      | Feijoa                             | <i>Feijoa sellowiana</i>     | X         | 0         |
| 42.                                      | Frambuesa / raspberrry             | <i>Rubus idaeus</i>          | X         | 0         |
| 43.                                      | Granadilla                         | <i>Passiflora ligularis</i>  | X         | X         |
| 44.                                      | Guayaba, (Psidium guajava)         | <i>Psidium guajava</i>       | X         | X         |
| 45.                                      | Gulupa                             | <i>Passiflora ligularis</i>  | X         | 0         |
| 46.                                      | Limon / lemon                      | <i>Citrus limonum</i>        | X         | 0         |
| 47.                                      | Lulo, (Solanum quitoense)          | <i>Solanum quitoense</i>     | X         | X         |
| 48.                                      | Manzana / apple                    | <i>Pyrus malus L.</i>        | X         | 0         |
| 49.                                      | Mora / blackberry                  | <i>Rubus glaucus</i>         | X         | X         |
| 50.                                      | Naranja / orange                   | <i>Citrus sinensis</i>       | X         | 0         |
| 51.                                      | Pitaya, (Cereus triangularis)      | <i>Cereus triangularis</i>   | 0         | X         |
| 52.                                      | Tomate de árbol (Solanum betaceum) | <i>Solanum betaceum</i>      | X         | X         |
| 53.                                      | Uchuvas (Physalis peruviana)       | <i>Physalis peruviana</i>    | 0         | X         |
| <b>Total fruits</b>                      |                                    |                              | <b>17</b> | <b>13</b> |
| <b>Protein</b>                           |                                    |                              |           |           |
| 54.                                      | Balu                               | <i>Erythrina edulis</i>      | X         | X         |
| 55.                                      | Cerdo / pork                       |                              | 0         | X         |
| 56.                                      | Conejo / rabbit                    |                              | X         | X         |
| 57.                                      | Cuajada / fresh cheese             |                              | X         | 0         |
| 58.                                      | Frijol / bean                      | <i>Phaseolus vulgaris L</i>  | X         | X         |
| 59.                                      | Gallina / hen                      |                              | X         | X         |
| 60.                                      | Garbanzo / chickpeas               |                              | X         | 0         |
| 61.                                      | Huevos / eggs                      |                              | X         | X         |
| 62.                                      | Pollo / chicken                    |                              | X         | X         |
| <b>Total protein</b>                     |                                    |                              | <b>8</b>  | <b>7</b>  |
| <b>Medicinal / aromatic herbs</b>        |                                    |                              |           |           |
| 63.                                      | Apio / celery                      | <i>Apium graveolens</i>      | X         | X         |
| 64.                                      | Guascas                            | <i>Galinsoga privaflorea</i> | 0         | X         |
| <b>Total medicinal / aromatic herbs</b>  |                                    |                              | <b>1</b>  | <b>2</b>  |
| <b>Processed goods</b>                   |                                    |                              |           |           |
| 65.                                      | Pan de Maiz / corn bread           |                              | 1         | 0         |
| <b>Grasses</b>                           |                                    |                              |           |           |
| 66.                                      | Caña / sugar cane                  | <i>Saccharum officinarum</i> | X         | X         |
| 67.                                      | Pastos / grasses                   |                              | X         | 0         |
| <b>Total grasses</b>                     |                                    |                              | <b>2</b>  | <b>1</b>  |
| <b>Total products for self-provision</b> |                                    |                              | <b>62</b> | <b>42</b> |

APPENDIX G

FREQUENCY OF STARCHES CONSUMED IN  
ALBAN AND GARAGOA BASED ON 7-DAY FFL

|                            | <b>Alban</b> | <b>Garagoa</b> |
|----------------------------|--------------|----------------|
| Potato                     | 72           | 137            |
| Rice                       | 62           | 70             |
| Manioc                     | 21           | 67             |
| <i>Arracacha</i>           | 11           | 48             |
| <i>Dominico</i> plantain   | 26           | 35             |
| Pasta                      | 17           | 33             |
| White bread                | 34           | 14             |
| Corn cake/ <i>arepa</i>    | 24           | 21             |
| Corn bread/pan de maiz     | 0            | 31             |
| Corn flour                 | 5            | 24             |
| Colisero plantain          | 12           | 14             |
| Oats                       | 12           | 7              |
| Crackers                   | 8            | 5              |
| Cracked barley             | 2            | 7              |
| Corn wrap/ <i>envuelto</i> | 2            | 7              |
| <i>Nabo</i>                | 0            | 8              |
| <i>Malanga</i>             | 0            | 7              |
| Green corn/ <i>mazorca</i> | 4            | 4              |
| <i>Ruba</i>                | 0            | 7              |
| Cracked corn               | 4            | 3              |
| <i>Batata</i>              | 0            | 6              |
| Mute (hominy)              | 2            | 2              |
| Criollo potato             | 2            | 3              |
| Calado                     | 2            | 0              |
| Cuchuco de trigo           | 0            | 2              |
| Arepuela/Wheat flour cakes | 1            | 0              |
| <i>Hibia</i>               | 0            | 1              |
| Maiz pira (pop corn)       | 1            | 0              |
| Masato                     | 0            | 1              |
| <b>Total frequencies</b>   | <b>325</b>   | <b>564</b>     |

## APPENDIX H

### WOMEN'S REPORT OF MOST CONSUMED FOODS IN ALBAN

#### AS PER FREE LISTINGS

|                               |                               |
|-------------------------------|-------------------------------|
| Swiss chard                   | Corn                          |
| Yellow squash                 | Green corn                    |
| <i>Ajiaco/ajiacó</i> soup     | Oranges                       |
| Alverja/peas                  | <i>Panela</i>                 |
| <i>Arepas</i> /corn cake      | Potato                        |
| <i>Arracacha</i>              | Pasta                         |
| Rice                          | Fish                          |
| Sugar                         | Dominico plantain             |
| <i>Balu</i>                   | Ripe plantain maduro          |
| <i>Bore</i> or <i>Chonque</i> | Chicken                       |
| Coffee with milk              | Cheese                        |
| Beef                          | Cabbage                       |
| Pork                          | <i>Sancocho</i>               |
| Barley                        | <i>Tinto</i> /black coffee    |
| Green onion                   | Tomato                        |
| Onion                         | Vegetables                    |
| Chocolate                     | Manioc                        |
| <i>Cuajada</i> / Fresh cheese | Carrots                       |
| Beans                         | <i>Cilantro</i>               |
| Fruit (other)                 | Fava                          |
| Hen                           | Lemon                         |
| Chick peas                    | Tangerine                     |
| <i>Guatila</i>                | Potato- <i>Criollo</i>        |
| Toasted fava                  | Potato-yearly                 |
| String beans                  | Papaya                        |
| Eggs                          | Pineapple                     |
| <i>Kumis</i> /curd milk       | <i>Colisero plantain</i>      |
| Milk                          | Manioc <i>lengua de pisco</i> |
| Lettuce                       | Manioc <i>yema de huevo</i>   |
| Stewed lentils                |                               |

APPENDIX I

WOMEN'S REPORT OF MOST CONSUMED FOODS IN GARAGOA

AS PER FREE LISTINGS

|                                    |  |                                    |  |
|------------------------------------|--|------------------------------------|--|
| <i>Agua de panela</i>              | Corn <i>blanco blandito</i>                    | <i>Malanga/taro</i>                | Rice with peas                           |
| <i>Arepas a la laja</i>            | Corn bread                                     | Manioc- <i>Coneja</i>              | Rice with sweet milk                     |
| <i>Arepas de pelao</i>             | Corn soup with fresh cheese                    | Manioc- <i>Palinegra</i>           | Roasted lungs                            |
| <i>Arepas/corn cake</i>            | Corn soup/Sopa de peto                         | Manioc- <i>Puentuna</i>            | <i>Rosca</i> bread                       |
| <i>Arequipe/candied milk</i>       | Corn soup/Sopa de pintado                      | Manioc- <i>Socorrana</i>           | <i>Ruba</i>                              |
| <i>Arracacha amarilla</i>          | Corn starch pudding                            | <i>Maravilla</i>                   | <i>Sancocho</i>                          |
| <i>Arracacha cabazona</i>          | Corn wraps                                     | <i>Masato de arroz</i> /rice drink | Sopa de indios/Cabbage wrap              |
| <i>Arracacha fenzana</i>           | Corn- <i>Blandito amarillo</i>                 | Milk                               | Sopa de Arroz                            |
| <i>Arracacha zarca</i>             | Corn- <i>Maiz arroz duro</i>                   | <i>Nabo-cubio</i>                  | Spinach                                  |
| <i>Arracacha soup</i>              | Cracked corn                                   | Oats                               | Stew with zucchini, fesh cheese and eggs |
| Rice varied/ <i>Arroz atollado</i> | Crackers and biscuits                          | Onions                             | Stewed fish                              |
| Avocado                            | Eggs   | <i>Panela</i>                      | Stewed peas & fresh cheese               |
| <i>Balu</i>                        | Fig dessert                                    | <i>Panela</i> with fresh cheese    | String beans & stewed carrots            |
| Bean stew                          | Fish   | Parsley                            | Sweet corn with fresh cheese soup        |
| Beans                              | Fresh cheese                                   | Pasta                              | Sweet potato                             |
| Beef                               | Fresh cheese with honey                        | Peas                               | Swiss chard                              |
| Beets                              | Fresh cheese with <i>panela</i>                | <i>Piquete</i>                     | Tamales/corn wrap                        |
| Blackberry dessert                 | Green corn                                     | Plantain                           | Tinto/black coffee                       |
| Bread                              | Green corn soup                                | Pork and beans                     | Toasted corn                             |
| Cabbage                            | <i>Guatila</i>                                 | Potato broth                       | Toasted fava                             |
| Carrots                            | <i>Guatila</i> with meat and fresh cheese stew | Potato- <i>Criollo</i>             | Tomatoes                                 |
| Celery                             | Hen  | Potato- <i>Merengue</i>            | Tripe soup                               |
| Cheese                             | Hen <i>sancocho</i>                            | Potato- <i>Monserrate</i>          | Tuna                                     |
| <i>Chicha</i>                      | <i>Hibias</i>                                  | Potato- <i>Pastusa</i>             | Vegetable salad (                        |
| Chicken                            | <i>Hibias</i> dessert                          | Potato- <i>Punto rojo</i>          | Vegetable soup & rice/pasta              |
| Chicken soup                       | Honey taffy                                    | Potato- <i>Quina</i>               | Water corn                               |
| Chickpeas                          | Kumis/curd milk                                | Powder milk                        | White squash                             |
| Chocolate                          | Lentil stew                                    | Rice                               | Yearly beans                             |
| Coffee with milk                   | Lettuce  | Rice with chicken and vegetables   | Yellow squash                            |
| Colisero soup                      | <i>Lulo</i>                                    | Rice with <i>lomitos</i>           |  |

APPENDIX J

FREQUENCY OF VEGETABLES CONSUMED IN  
ALBAN AND GARAGOA BASED ON 7-DAY FFL

|                               | <b>Alban</b> | <b>Garagoa</b> |
|-------------------------------|--------------|----------------|
| Green onion                   | 79           | 112            |
| Peas                          | 29           | 51             |
| Carrots                       | 32           | 32             |
| Tomato                        | 31           | 30             |
| Onion                         | 22           | 22             |
| Yellow squash                 | 6            | 32             |
| String beans                  | 23           | 11             |
| <i>Guatila</i>                | 8            | 20             |
| Chopped vegetables            | 10           | 13             |
| White squash                  | 0            | 20             |
| Lettuce                       | 4            | 3              |
| Celery                        | 5            | 0              |
| Cucumber                      | 3            | 1              |
| Avocado                       | 0            | 2              |
| <i>Guascas</i>                | 1            | 1              |
| Parsley                       | 2            | 1              |
| Sweet pepper/ <i>pimenton</i> | 2            | 0              |
| <i>Col/Brassica</i>           | 0            |                |
| <i>Greens/tallos</i>          | 0            | 1              |
| Cabbage                       | 0            | 1              |
| Total frequencies             | 255          | 353            |

APPENDIX K

FREQUENCY OF PROTEINS CONSUMED IN  
ALBAN AND GARAGOA BASED ON 7-DAY FFL

|                                  | <b>Alban</b> | <b>Garagoa</b> |
|----------------------------------|--------------|----------------|
| Eggs                             | 34           | 33             |
| Beef                             | 26           | 31             |
| Beans                            | 8            | 29             |
| Lentils                          | 14           | 8              |
| Pork                             | 8            | 12             |
| Chicken                          | 10           | 4              |
| Bienestarina                     | 11           | 0              |
| <i>Balu</i>                      | 2            | 7              |
| GIBLETS                          | 5            | 4              |
| Beef viscera                     | 4            | 5              |
| Blood sausage                    | 1            | 3              |
| Fava                             | 0            | 3              |
| Tuna                             | 1            | 1              |
| Sausage/ <i>salchicha</i>        | 2            | 0              |
| Sardines                         | 0            | 2              |
| Hen                              | 0            | 1              |
| Fish                             | 1            | 0              |
| Chick peas                       | 0            | 1              |
| Stuffed pig/ <i>lechona</i>      | 1            | 0              |
| Cured sausage/ <i>salchichon</i> | 0            | 1              |
| Soy milk                         | 0            | 1              |
| <b>Total frequencies</b>         | <b>128</b>   | <b>146</b>     |