The University of Georgia

Center for Agribusiness and Economic Development

College of Agricultural and Environmental Sciences

Collard Marketing and Processing Feasibility

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FR-01-29
July 2001

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Introduction

This study investigates the feasibility of marketing a brand name collard and processing collards for wholesale markets. The economic feasibility of operating a processing facility for collards in North Georgia is dependent on the certain factors including; supply of collards, equipment cost, marketability, and demand. Two different processing systems were investigated for profitability. This study will review the material needed to operate a processing line and calculate the breakeven number of boxes needed to make the packing shed sustainable. A section on marketing and branding is included in this study.

This study begins by examining the market, and all the relevant economic issues surrounding the likely success of processing collards in the North Georgia area as well as the potential effects on the community.

Purpose of Study

North Georgia Collard Growers believe their collards look and taste better then collards supplied to the market from other locations. North Georgia Collard Growers posses a competitive advantage because they are able to produce collards through out the summer months. South Georgia cannot produce collards during the warm summer season because of their climate. The North Georgia season begins in April and runs until October, providing them a window of opportunity. South Georgia collards are on the market from October to May.

North Georgia producers feel their collards taste better due to cool mountain nights and relatively high soil moisture. The reduced heat and dryness in the mountains also allows for reduced pesticide spraying, thus, saving the producers money and producing a product with lower chemical applications. This may be a bonus on the marketing side, if consumers are educated about the reduced sprayings and their effects on quality.

North Georgia Collard Growers also strictly use hand labor in harvesting. Their collards are not mechanically harvested. The hand-harvested labor allows for grading and sorting in the field with less debris reaching the market. Hand harvesting controls quality and provides consistency in shipments.

To test the claims of the North Georgia collard producers on the superiority of their product, the Center for Agribusiness and Economic Development contracted out a taste test with the Center for Food Quality and Enhancement at the University of Georgia's Griffin Experiment station. The taste test results will indicate what claims can be substantiated by the North Georgia Collard Growers in context of advertising and brand name creation.

In addition to establishing a brand name, the North Georgia group is also researching a central packing location. Centering the packing shed where it can be easily accessed will allow the growers to market large quantities of collards in semi-truck loads. Currently, the producers are not unified and several pick-up truckloads of collards are delivered to market weekly. The centralized location will have a packing line and the capacity to store multiple truckloads. The goal of this arrangement is to gain increased market share with large wholesalers. Also, the cooperative hopes to add value to the collards by cooling and packing in containers desired by the market. The following report will answer the questions on how to establish a brand name and what are the economics of operating a central packing shed.

Collards Market

The collard market has been difficult to research, but some relevant information about collards has been gathered. Collards are traditionally a food found in the southeastern United States. Consumers in northern states do not typically eat collards and are largely unfamiliar with collards. Researchers also found that collard consumers often come from smaller rural areas and are minorities. Collards are traditionally eaten on New Year's Day and through out the remaining winter months. If it is true that collards are typically eaten during the cool season, the North Georgia Collard Growers will need to address this demand issue

Collards on the market come in many different forms. Grocery stores carry bunched collards and bagged collards. Kroger personnel informed the researchers that the grocery store would like to only market the pre-bagged chopped collards, because this type of value added product, yields a higher return to the grocer. Still, bunched collards can be found in most stores.

Two styles of collards exist on the market depending on the season time frame. These styles differ in size when harvested. Baby collards are smaller collards, cut earlier in maturity, and can often be harvested two to three times. Larger collards are cut later in maturity and often yield only one cut, but two is sometimes possible depending on rainfall. It is important to note, however, that many of the South Georgia collards are often the baby collards and the North Georgia collards are the full bunch collards. The researchers hypothesize this difference may be due to the stem size of the collards. The warmer the season, the more likely the collards will have bigger stems. When preparing collards, the stems are usually cut off and only the leaf is used in the dish.

Collards are usually sold to the stores through a broker. Many stores and food service businesses indicate they do not use a large quantity of collards. One processor mentioned only using 30 bunches a day. Limited use of this commodity creates a situation for the North Georgia Collard Growers as to where to market large truckloads of collards. The large load consumers seem to be centralized around the Atlanta Farmer's market. In turn, these large buyers then break the shipments into smaller quantities and often sell the collards to food service processors, restaurants, or smaller grocery stores. The large chain grocery stores either have contracts with packagers or buy from the larger wholesalers. General Produce located in the Atlanta Farmer's Market, mentioned selling collards to some of the large chain store retailers. The researchers have not found any direct contracts between producers and stores. Del Monte contracts with collard producers but then packages under their name and sells them to store chains.

In order to meet the goal of marketing large semi-truck loads of collards, the North Georgia group needs to communicate with growers and wholesalers on delivery dates and quantity.

Creating a Brand

Vegetable growers in the Southeast have been exploring different methods to expand sales and increase profits. One of the proposed methods for accomplishing this goal is to establish brand recognition. The relative success of the Vidalia Onion in Georgia has created eagerness by many to produce a similar brand name.

Research is being conducted across the United States into the rewards of brand naming items. One such study was conducted on peaches that were guaranteed to be grown under integrated pest management techniques to ensure food safety. The study concluded that brand naming these peaches would not increase the value (in terms of a premium) but it would increase the market share commanded by the peach (Bagnara). The results of this study are important because they suggest that profits from the brand name may accrue from the ability to sell more collards, but not necessarily at a higher price.

What is a Brand?

A brand can be thought of as a collection of intangible, consumer-perceived product and organizational attributes and characteristics. More simply put, a brand is a product's personality. A brand cannot be created over night as it is a summation of consumers' interactions and experiences with a product, and with the product's are the parent company. Each time consumers have an interaction with a product (i.e., purchasing, being exposed to advertising and media coverage or through word of mouth) an impression is created and retained. Over time, these impressions and experiences form consumers' perceptions of a product, thus creating its brand. The image associated with a product's brand is the principle source of its competitive market advantage and is a valuable asset.

How to Develop a Brand

Conveying a consistent, clear, memorable and positive message to consumers is critical to creating a successful brand. It is very important that interaction between a product and its consumers or potential consumers have a consistent theme or message. This consistency must be present in the name, logo, slogan, advertising and promotional campaigns, product packaging, organizational culture, company actions and every other point of contact with consumers. If a mixed or inconsistent message is delivered, consumers may have difficulty in creating a positive and memorable impression. An inconsistent message detracts from creating a successful brand. If a company desires a brand associated with quality, they have to ensure they offer a quality product, their marketing mix delivers a message of quality and any consumer interaction with the product or parent company (i.e., customer service department) leaves them with the impression

of a quality organization. It may be easy to develop a memorable marketing mix stressing a quality product, but if the product is inconsistent or the customer service department is not responsive, the marketing strategy will most likely fail.

A company's actions are as important as more traditional marketing tools in creating a brand. For example, when a faulty product enters the market, a company may react by quickly recalling the defective or unsafe product. This action conveys an image to consumers that the company puts its consumers' health and safety above corporate profits. The company's actions will have a significantly larger impact on consumer perceptions than a multi-million-dollar advertising campaign directed at telling consumers the company is health and safety conscious.

Overall, a brand may be summed up as the one word or phrase consumers use to describe a product or company. Companies like Coca-Cola®, NIKE® and Xerox® have been very successful in branding their products. NIKE® invokes the image of athleticism while Xerox® is synonymous for photocopying. The NIKE® swish often appears alone in NIKE® advertising with no mention of the NIKE® name. The incredible branding of these products was not an accident and did not occur without significant planning.

Reasons for Creating a Brand

Branding a product provides a point of differentiation from competing products. Products are continually competing on price, quality and service. Over time, trying to differentiate a product based on one of these characteristics alone is very difficult. Branding on the other hand is a viable means of maintaining product differentiation over time. For example, *Sunkist*®. The name exudes confidence and trust as people rely on the consistent quality of the product. There may be a cheaper orange, but consumers have come to associate *Sunkist*® with quality and they trust that the brand will consistently meet or exceed consumer expectations. Consumers then ask themselves, it is worth taking a risk purchasing a cheaper orange when they know nothing about it or its company?

Branding has been shown to have a significant influence on consumer purchasing behavior. This is why branding is such a powerful marketing tool. Through effective advertising, a company is able to make consumers aware that they have a "need," whether real or perceived, for a product. Evoking the "need" in consumers is the first step in the purchasing decision process.

Effective branding can also impact the information search step in the consumer purchasing process. Because consumers are familiar with a brand, they trust the brand and know it stands for values. The brand alleviates their need to seek information on the product or company. If consumers are not familiar with a product's name, they are not sure if they are going to get a quality product and have to search for additional information about the product. A successful brand alleviates the need for consumers to investigate alternative brands or products. Branding also impacts consumers need to evaluate competing products, i.e., consumers are familiar with a brand's attributes while they know little about the competitor's attributes. Therefore, the brand has a significant impact on the purchase decision because consumers are more likely to buy products they are familiar with and trust.

Branding is an important ingredient in developing consumer loyalty. Brand loyalty can be thought of as a consumer's conscious or unconscious decision, expressed through intention or behavior, to continually repurchase a brand. A consumer repeatedly purchases a "brand" because they perceive it as being priced right and having the desired product features, image and level of quality they demand. Consumers are creatures of habit and become comfortable with things that are familiar and safe and a level of trust is developed. To entice consumers to break their habits, a company marketing a new product or marketing to new consumers has to convince them that their product offers greater value, encourage them to initially purchase it and convenience them to repurchase. Once a strong brand is created, competitors will have to entice loyal consumers to switch brands, which is not easy to accomplish.

A loyal consumer has fewer incentives to engage in an extended information search among competing products. Purchase decisions can even be simplified or even become habitual as brand loyalty increases. This is attributed to the level of satisfaction and perceived value consumers associate with the brand.

In addition, branding[1] 23, 1999.:

- Reduces marketing costs because of high brand awareness and loyalty among consumers.
- Provides leverage with distributors and retailers because consumers expect them to carry the brand. New brands are typically given a few months to prove themselves in the marketplace.
- Offers the opportunity to charge a higher price because of the product's perceived quality and value.
- Allows line extensions (introducing new products under the brand name) because new products using the brand name reflect the same level of quality and value that is associated with initial products.
- Provides some protection against price competition. There is a perceived value associated with a brand and therefore cheaper products may be perceived as being cheaper in quality and less of a value.

Consideration for Creating a Brand Name

The first step in creating a brand is name selection. A name ultimately becomes synonymous with the brand is the cornerstone for creating a strong brand. A product's name is often the first line of communication with consumers and triggers product recognition and recall (i.e., product attributes) creating an image in the consumer's mind. Therefore, name selection is extremely important in creating a brand. There are a number of considerations that should be evaluated before deciding on a "name."

The following provides some food for thought when selecting a product's name.[2] http://www.namestormers.com/namingguide.htm

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[1] Myron, Monique R. Brand Identify, Crucial to Sold Product Image, The Denver Business Journal, July

[2] A brief Checklist for DO-IT-YOURSELF" Name Development.

1. Verbally describe the product. Include the product's strengths (competitive advantages), key characteristics and other unique qualities associated with the product.

2. Determine the image the name should convey. Brainstorm to see how, or if, various names are easily associated with key features and/or attributes or desired images. The name should clearly describe the product to consumers. It is easier to promote a product that readily conjures a description of a product in consumers' minds than it is to promote a product whose name is not easily associated with its use. A name that does not allow consumers to associate it with a product will require additional advertising dollars to educate consumers on what the name means and what product it represents.

3. Make sure you have researched the product's target market. The product's name should be appealing to the target market. Ensure that the name evokes product features and/or attributes and images that are aligned with the market's perceptions.

4. The name should test the stand of time because packaging, slogans and advertising campaigns may change over time but the name has to remain the same or all brand equity may be lost.

Names may be derived from real-world places, events or phenomenons. The advantage of using real-world names is that they are generally descriptive and conjure specific images in consumers' minds. One problem associated with using a real-world name, is that in many cases these names have been previously trademarked. Using the name of an individual person or place may be limiting in the future, i.e., the person for whom the name was created, retires or is no longer associated with the business.

Another naming option is using acronyms. IBM® (International Business Machines) is a good example of an acronym name. When using an acronym, be careful that the name does not represent jumble. It is easy to develop acronyms that may make sense to you, but have no meaning to consumers or are not easily related to your business.

Advertising and Claims

The goal of advertising is often to create a need, increase consumer awareness and ultimately influence consumers purchasing decisions. Many advertisements rely on Puffery to get consumers' attention. Puffery is a term used in the advertising industry to describe the hype and exaggeration that may be present in advertising to grab consumers' attention. Advertisements need to stand out to create consumer awareness. Creating memorable attention grabbing advertisements are very effecting in catching consumers' attention and building awareness.

Puffery is generally not considered deceptive advertising because it is so exaggerated that no reasonable consumer would take the claims literally. It is not uncommon for an advertisement to exaggerate product features in order to elicit consumer attention, i.e., the world's best hamburger. This is a subjective claim that cannot be proven true or false. As a result, it is classified as puffery. Deceptive advertising, on the other hand is used to intentionally mislead or confuse consumers, i.e., a recent study reveals that this is the world's best hamburger, when in actuality, there was no study to substantiate this claim. The line between deception and puffery is not always

clear. Advertising claims including false product descriptions, absolute product characteristics, specific and measurable claims pertaining to the product and claims of superiority based on product testing are not considered puffery and must be substantiated.

According to Roscoe B. Starek, III of the Federal Trade Commission, there is a significant difference between deceptive and false advertising and puffery. According to Mr. Starek, "The FTC does not pursue complaints involving subjective claims or puffery-- *this is the best hair spray in the world*. However, if there is an objective component to the claim -- such as *more consumers prefer our hair spray to any other,* or *our hair spray lasts longer than the most popular brands* – then you need to be sure that the claim is not deceptive and that you have adequate substantiation before you make the claim. These requirements apply both to explicit/ expressed or implied claims. Also, a statement that is literally true can have a deceptive implication when considered in the context of the whole advertisement, even if that implication is not the only possible interpretation[3] Vegas, Nevada, October 15, 1996.."

The following information discusses common myths regarding "claims" in advertising and was taken from Prepared Remarks of Commissioner Roscoe B. Starek, III, Federal Trade Commission[1].

1. Myth #1 – A claim can be substantiated if a couple of studies support the claim. A claim may be **substantiated** by the studies if there is an absence of relevant studies contradicting the study results, the studies were scientifically controlled studies that support the claim in the view of experts in the field and the party conducting the study had no incentive to obtain particular results.

   An **unsubstantiated** claim may arise if other studies contradict or raise questions about the study findings, the study has a design flaw(s) or was conducted by persons with an incentive to obtain particular results.

2. Myth #2 – If your product has some benefit, the advertisement will not be challenged. Even real product claims must be substantiated with scientific evidence.

3. Myth #3 – Testimonials are substantiation. Testimonials are not considered to be substantiation for a claim. Even if the testimonials are backed up with affidavits from individual users stating the product performed as promised. The FTC does not consider anecdotal evidence

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[3] Myths and Half-Truths About Deceptive Advertising. Prepared Remarks of Commissioner Roscoe B.
Starek, III, Federal Trade Commission before the National Infomercial Marketing Association, Las

(i.e., testimonials) sufficient to support a claim. An expert endorser should be an expert in the area for which he is acting as a spokesperson and their message should be based on evaluation or tests that other experts in the field would find sufficient to support the expert endorser's statements.

4. Myth #4 – If endorsers actually use and like the product, it is safe to use their endorsements. Given that the endorser uses and is making truthful statements about the product, the claim must consider whether the results the endorser experienced are typical. If the results are not substantiated, then the claim needs to be qualified by a clear and prominent disclosure of the generally expected results for users of the product (i.e., results may not be typical).

5. Myth #5 – IF a deceptive claim is followed with a disclosure, liability is removed. If a claim cannot be substantiated do not make it. The claim may have to be narrowed down to what can be substantiated. A disclosure that flatly contradicts a deceptive claim, or purport not to make the claim does not remove liability.

6. Myth #6 – The use of a "results may vary" statement is not adequate to remove liability. Even if the "results may vary" disclosure is very prominent and obvious, it does not keep consumers from believing that these results are typical of what they can expect from using the product. Therefore, there is liability.

7. Myth #7 - Dietary supplement advertisements are not regulated. Both the FTC and Food and Drug Administration (FDA) regulate dietary supplement claims. The FDA is responsible for label claims while the FTC is responsible for advertising claims. The FDA is currently creating guidelines for substantiating labeling information. The FTC requires substantiation of all claims made in all dietary supplement advertising.

8. Myth #8 – Infomercial producers are not liable for deceptive claims. This is wrong! The FTC will determine whether the producer actively participated in creation of the advertisement with a deceptive claim and whether they new the claim was misleading, false or unsubstantiated.

9. Myth #9 – Advertising rules do not apply on the Internet. This is incorrect. The FTC standards that apply to more traditional advertising media also apply to Internet advertising.

Conclusion: A rule of thumb is to not make objective claims that cannot be scientifically substantiated. Subjective claims are generally considered to be puffery and cannot be substantiated.

Trade Marks

In many instances, discussions of new products, ideas, recipes and enterprises generally include discussions of patents and trademarks. In most cases, trying to protect a food recipe is a lost cause. Most food scientists can duplicate a recipe with supreme accuracy by making small changes to justify a different product. However, protecting a product name or label design should be considered. In the early stages of a product's life, you don't know the future success it might experience. A trademark can help decrease the chances of a competitor marketing a product with your logo or name. A trademark can protect the name or logo and prevent the use of the identical or similar name or logo by another company. A brief description of patents and trademarks is provided here. However, specific questions and concerns toward patents and trademarks should be addressed to the U.S. Department of Commerce, Patent & Trademark Office at 1-800-786-9199. Patents, copyrights, and trademarks are often confused. Although there may be some resemblance by the rights of these three kinds of intellectual property, they are different and serve different purposes.

What is a Trademark?

A TRADEMARK can be a word, phrase, symbol, design or combination thereof, which identifies and distinguishes a product or item from others. A service mark is the same as a trademark except that it identifies and distinguishes a service rather than a product. Normally, a trademark appears on the product or on it's packaging, while a service mark appears in advertising for the services. Marks are used to indicate the source or origin of the items they protect. Marks protect against others using a confusingly similar mark but not to prevent others from making the same goods or from selling them under a non-confusing mark. There are separate procedures for federal and state trademark registration. The procedure relating to the federal registration of trademarks and some general information concerning trademarks is given in a separate pamphlet entitled *"Basic Facts About Trademarks"* available from the Patent & Trademark Office in Washington D.C.

Federal Patent & Trademark Office

A complete list of fees levied by the Federal Patent & Trademark Office can be obtained from the office at http://www.uspto.gov/web/offices/ac/qs/ope/fees.html, 1-800-786-9199 or (703) 557-3158. As of October 1, 2000, the basic filing fee for a patent was $790 for Utility applications, $320 for Design applications or $490 for plant applications. The application for registering a federal trademark is $750 or $325 for a small entity (independent inventor, small business or non-profit organization).

Federal trademark rights can exist indefinitely if the mark is used on its products or services. A Federal Trademark lasts for 10 years and can be renewed every ten years. There is one catch, between the fifth and sixth year after the mark was initially registered, an affidavit must be filed containing certain information to keep the registration alive. Failure to file the affidavit will result in the cancellation of the trademark registration.

More detailed information of federal trademarks may be obtained at http://www.uspto.gov/web/offices/tac/doc/basic/basic_facts.html.
A federal trademark entitles the owner to use the mark nationwide. To search pending and registered trademarks visit http://www.uspto.gov/main/trademarks.htm and follow the instructions.

State Trademark Registration

Information concerning state Trademark registration can be obtained from the Secretary of State Office. For more information on Trade marking and Service Marking in Georgia, visit the following web site:
http://www.sos.state.ga.us/corporations/tmfaq.htm or call at (404) 656-2861 or FAX (404) 657-6380.

Georgia's designated Patent and Trademark Depository Library can be found at The Price Gilbert Memorial Library at the Georgia Institute of Technology. A state trademark registration only ensures against the same mark being registered in the state. There is $15.00 fee to register a trademark in Georgia. The state and federal trademark offices do not communicate registrations. Therefore, for the best protection, a trademark should be registered with the state and federal offices. To search Georgia's Trademark and Service Mark database visit the following web site:
http://www.sos.state.ga.us/corporations/marksearch.htm.

The trademark for the Vidalia Onion is actually held by the Georgia Department of Agriculture, which serves in a regulatory capacity. The Vidalia Onion Act established this role in 1986. The growing area for Vidalia Onions is laid out in the Act. This area was established based on the idea that the soil type in this region produces a sweeter onion than can be grown in any other region. Each producer must register with the Georgia Department of Agriculture in order to use the Vidalia Onion Trademark. Vidalia Onion producers have further formed several organizations to deal with the marketing of the onions.

The advantages to having the Georgia Department of Agriculture hold the trademark is a certain neutrality. Since the group itself does not hold the patent, disagreements about the trademark can be handled by a third party.

In the event that the North Georgia Collards Growers form a cooperative, a trademark can be acquired. The cooperative is not required to officially register a trademark with the United States Patent and Trademark Office. However, registering the trademark does provide benefits including the right to use the mark nationwide and assistance from the US Patent and Trademark Office in disputes with non-registered trademarks. The process of registration includes doing a search of existing trademarks (to avoid duplication) as well as filling out an application form. The application must contain a drawing of the proposed trademark. The application requires a description of

the item to be marked as well as a reason for the need for a trademark. In the case of the cooperative, the group may wish to consider filing for a collective mark. A collective mark, according the US Patent and Trade Office is "a trademark or service mark used, or intended to be used, in commerce, by the members of a cooperative, an association, or other collective group or organization, including a mark which indicates membership in a union, an association, or other organization. But cannot be used to market products only to identify something with a group or association." All the paperwork for filing for a trademark and more information can be found on the US Patent and Trademark Office's web site at www.uspto.gov.

Taste Test

To help in the creation of a brand for North Georgia Collards, a taste test was undertaken to identify any differences between the cooperative collards and competing collards. Two taste test took place during the North Georgia collards season, the first occurred July 11, 20001 the second occurred October 4, 2001 at the University of Georgia's Center for Food Safety and Quality Enhancement, in Griffin Georgia. The purpose of the taste test was to determine the sweetness of the various collards on the market and use this information in developing the cooperative brand.

Two different recipes were used with two different varieties of collards for a total of four samples. Chicken broth and bacon recipes were used to prepare the collard. The collard varieties used in the test taste were North Georgia collards and collards offered on the market during the two test time. The CAED asked sellers where collards originated to ensure they were not from North Georgia, but were both grown in North Carolina and South Carolina. The vendors were unable to provide an exact location. The collards used in the second taste test were grown in South Georgia.

The taste test hypothesis was that collards grown in North Georgia were sweeter and better tasting than non-mountain collards because of the cool nights, high soil moisture, and hand-harvested labor. The competing collards do not have the same environmental factors available for producing a similar tasting collard.

The first and second taste tests each included 55 participants. The participants were recruited from the Griffin area. They were asked to sign in, given a brief explanation of the process and provided with reimbursement incentive of $10. The respondents were asked to taste and then rate each of the four collards samples on seven product attributes; overall, color, aroma, flavor, sweetness, juiciness and mouth-feel using a nine-point scale. The panelists sampled each collard and then rated each sample on the seven product attributes. The scale ranged from Dislike extremely to Like Extremely (Appendix, enclosed survey).

Results

Summaries of the results of the taste test are found in table 1. Table 1 provides the mean rating for each of the seven product attributes for each of the four samples.

11-Jul-01

	Overall Acceptance	Color	Aroma	Flavor	Sweetness	Bitterness	Tenderness	Mouthfeel /Texture
A. Mountain with Bacon	6.0	**7.0**	6.3	5.9	5.4	5.1	6.3	6.2
B. Other with Chicken Broth	5.7	6.4	6.0	5.4	5.3	4.9	5.4	5.5
C. Mountain with Chicken Broth	6	6.5	6.2	5.9	5.5	5.2	5.9	5.9
D. Other with Bacon	**6.3**	**7.0**	**6.5**	**6.3**	**6.0**	**5.9A-C**	**6.5**	**6.5**

A-D Values are significantly different than corresponding value in Row A-D

4-Oct-01

	Overall Acceptance	Color	Aroma	Flavor	Sweetness	Bitterness	Tenderness	Mouthfeel /Texture
Mountain with Chicken Broth	6.1	6.8	6.2	5.8	5.5	5.4	6.3	6.2
Mountain with Bacon	6.8A-C	7.2	**6.9** A	**6.7**	**6.4** A-C	**6.3** A-C	**7.1** A-C	**7.0** A-C
Southern with Chicken Broth	6.0	6.8	6.5	5.9	5.5	5.6	6.4	6.2
Southern with Bacon	**6.9**A-C	**7.4**	6.6	6.6	**6.4** A-C	6.1	6.9	6.9 A-C

A-D Values are significantly different than corresponding value in Row A-D

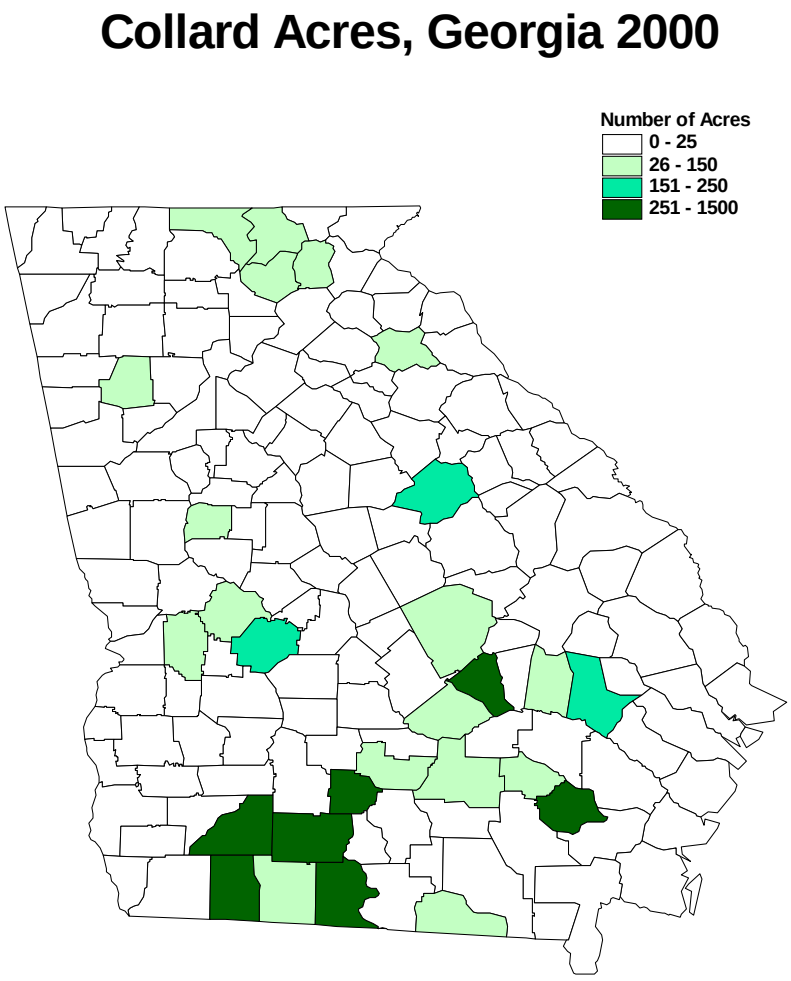
The above table shows the results of the first taste test did not reveal any significant difference in the overall acceptance of the four collard samples. A few issues were corrected that caused some of the bias away from the North Georgia collards in the taste test. In the first taste test, the four collard samples were cooked for the same length of time. This was a problem because the North Georgia collards were hand picked the previous day making them fresher and crispier than the competing collards. When cooking collards, it is important that they are cooked until they are no longer crispy. A problem arose that even though one variety of collards was fully cooked the other was not. The result ended in the panelists being served semi-crisp North Georgia collards.

The second taste test the cooking procedure was adjusted, allowing each variety to be cooked thoroughly using a tenderness test. This created a consistent tenderness among all four collard samples. It appears that the recipe has more of an impact on consumer preference than were the collards were grown. Collards cooked with the bacon receipt were rated significantly higher than those cooked with chicken broth. The bacon collards were rated sweeter than those cooked in chicken broth and these collards also had a better texture.

Collard Production in Georgia

Graph 1 shows collard acreage in Georgia based on the 2000 Farm Gate Value Report prepared by the Center for Agribusiness and Economic Development. The graph

shows the dichotomy of the North versus South Georgia collards. The greater acreage is located in South Georgia but a concentration of North Georgia collards is visible.



Other States

North and South Carolina compete in similar seasons and markets as the North and South Georgia growers. North and South Carolina collards, both packaged and bunched, have been found in the Atlanta market. Rawls from South Carolina appears to be the biggest supplier to the packaged market in Atlanta. The Hendersonville, North Carolina producers appear to be the largest supplier of the bunched collards.

It is hard to estimate the total acreage in each state because, like Georgia, different areas of the state have different seasons. The total state acreage would not be competition for Georgia producers; only a portion would directly compete with the North Georgia growers.

Collard Packing Line Feasibility

This section will explore the feasibility of operating a collard packing line in North Georgia. Two different packing line scenarios will be examined. One line has an automated washer and chiller. The second line is less expensive in regards to equipment, but hand labor costs may make an automated line more economical. The cost information below will be representative of the automated processing line with some mention of the hand labor processing costs. Some of the equipment quotes were provided by Jeff Partell of American Conveyor, Corporation, Miami Florida, 305-235-4190. The remaining cost data and equipment costs came from the University of Georgia's Food Science and Technology Department, the Department of Agricultural Engineering and the Agricultural and Applied Economic Department. All cost were considered relevant at the time this study was written. The profit/loss margin was calculated assuming all the collards were sold. No remaining inventory was held at the end of the season. Budgets detailing all cost and income for each scenario can be found in the appendix.

Income

The calculated income came from estimated yields for the total acres, multiplied by a marketable sales price. The estimated yield for 300 acres was 105,000 dozens or 350 dozen per acre. This was multiplied by a sales prices of $8.50 per dozen for a total gross income of $892,500. The cooperative also has potential to generate income from custom packaging work. Arrangements could be made for the packing shed to pack other vegetables for non-cooperatives members for a fee, particularly during the off-season of collards.

Equipment

Equipment prices came from various sources. The largest piece of the equipment cost came from American Conveyor Corporation out of Miami, Florida. This particular piece of equipment, the hydro washer, with installation, was $112,068. The remaining pieces of equipment ran for $48,000. This covered the cost of a forklift, trailer seals, and tables. The sales tax for the equipment was $11,205. The total cost for the hydro washer and equipment is $171,273. The hand sorting line equipment will be cheaper than this but the costs of hand labor equals out the total costs. The researchers feel it is better to purchase the automated line and spread the cost out over a period of years through financing and deprecation, rather then spending cash up front for labor. Spending cash for labor may create a cash flow problem if some of the collards are not sold. However, it is noted that fixed payments can create problems financially, especially if refinancing every few years needs to occur to cover the cash flow. The hand packing line operates with an ice machine estimated at $35,000, a conveyor system of $4,400, and a dual lined conveyor table at approximately $5,000. Thus, the total equipment cost for the hand packing line is $44,400.

Fixed Costs

Fixed costs associated with this packing shed include the depreciation on the building, equipment, and interest on the investment funds and working capital. The projected fixed costs for this project is $117,838 or approximately $1.12 per dozen of collards sold. The fixed costs for the hand operating grading and sorting line would be lower than the above figure, but again the labor costs would be higher. An estimated fixed cost for the hand line is $102,537.

Direct Costs

Direct costs stem from payments for the product used and delivery to the packing shed the growers suggested. The co-operative suggested paying farmers up-front regardless if the product was sold. The price chosen is less then what can be received on the market but high enough to help them cover expenses related to harvesting and delivery. A price of $5.00 per dozen multiplied by the approximate amount of delivered collards equals $525,000 for the direct cost.

Direct Labor

Labor cost calculations include both salaried and hourly labor used to run the hydro washing line and the hand labor line. The labor figures are automatically adjusted with an increase in dozens. The regular hours of operation are 8 hours per day, for 25 weeks of the harvest season. The wages for the laborers are calculated at $8.00 per hour for 25 weeks of fulltime (8 hour days). A shift supervisor will receive an hourly rate of $10.00. The cooperative manager/salesperson receives an annual salary of $35,000 with the potential of commissions. This person is responsible for scheduling delivery of the collards to the packing shed, ordering input supplies, and creating contacts for direct sales. The manager will be the only employee to receive benefits, estimated at $8,750. A part-time bookkeeper, with an estimated salary of $7,500, will be hired to assist the manager. The total labor cost for the hydro line is $129,525 or $1.23 per dozen. The labor cost for the hand packing unit totals $209,525 or $2.00 per dozen.

Variable Costs/ Other Direct Costs

Variable costs associated with this project include labor, utilities, insurance, repairs, rental agreements, disposal, and operating costs. Operating costs include: boxes, cleaning supplies, and chlorine. All of these costs will change depending on the number of dozens of collards processed. Positive relationships exist among the dozens processed and the variable costs. The total for this category is $73,825 or $.70 per dozen. The largest component of this cost is operating cost and miscellaneous costs. The boxes were quoted to cost $1.15 each. If the cooperative sells the finished product in bulk bins the operating cost will be reduced. Collards are often sold in bins to the market and will continue to be sold that way if the hand packing line is chosen.

Migrant Housing

To solve some of the labor issues in the surrounding area the North Georgia Collard Growers decided to consider building migrant labor housing. All requirements by the Department of Labor and OSHA should be followed to ensure limited liability from the government or laborers. Many of the regulations are common sense rules people should easily be able to obey such as, proper drainage on the property, distances away from livestock, cleanliness on the property, protection from the elements, safe drinking water, and proper sewage or septic. Other rules exist and should be followed prior to occupancy. A list of these rules can be obtained by contacting the Department of Labor or Occupation Safety and Hazard Awareness. The estimated total cost for building an all-metal building with bunks, kitchen, 2 bathrooms, and an adjacent laundry facility was approximately $36,000. This building will house 10 people.

Total Cost & Profit/Loss

Adding the variable and fixed costs together gives the total cost of operating the packaging line. The hydro washer line total cost is $846,188, while the hand packing line with ice machine total cost is $910,637. These cost cover the packing of 105,000 dozen per season. The difference between the two operations is the labor cost and slight operating cost. In order to break even, the packing shed operation needs to sell 99,552 dozen for the hydro washer and 107,134 for the hand packing line. The hydro washer processing line earns $46,312 or $.44 per dozen, while the hand packing line looses $18,137 or $.17 per dozen. Operating efficiency refers to the amount of the income kept in the company out of every dollar the packing shed earns. Agricultural-based products carry a benchmark of 20% for operating efficiency. Neither of these alternatives reached that mark. Both cases had operating inefficiencies not measurable in terms of actual dollars retained by the co-operative.

Income					
D.C.					
Var. Cost					
Total					
Profit/Loss					

Collard Packing Line Profitability

Profit versus Budgeted Cost

Assuming the figures used in the economic feasibility section accurately reflect the actual cost of operating a collard packing line, the next section will examine the profitability for both scenarios.

Budgeted figures include operating expenses (utilities, taxes, labor, and supplies), fixed costs (interest on start up cost, deprecation), and income from sales of processed collards. The costs are subtracted from income to derive the remaining profit or loss.

The following graphs show the relationship between budgeted cost and profit. Costs are increased incrementally at 5% intervals to see the effect on profitability.

Chart 1. Profit Versus % Change in Budgeted Cost for the Hydro Washing Line.

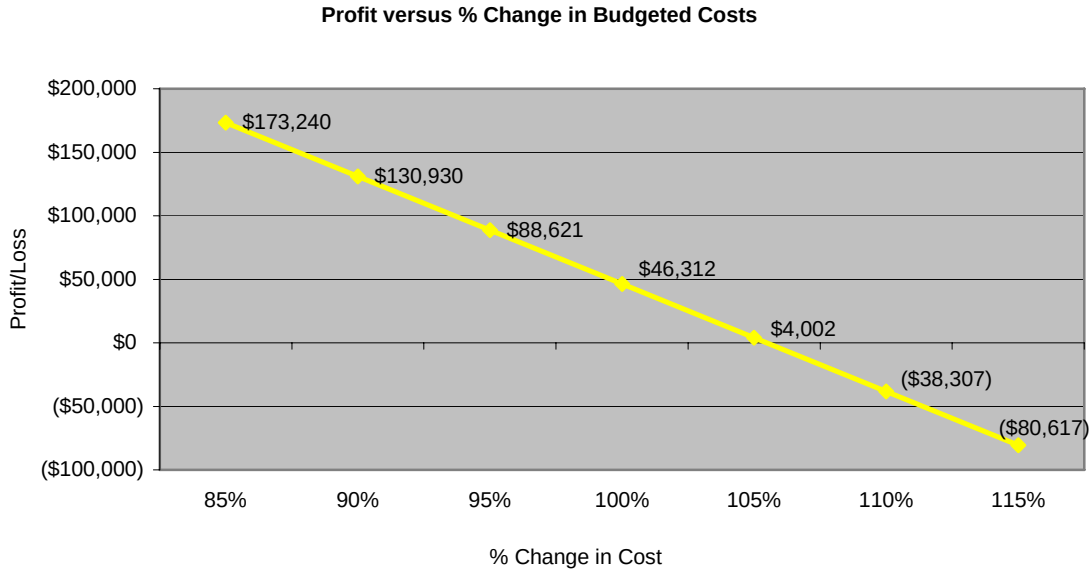
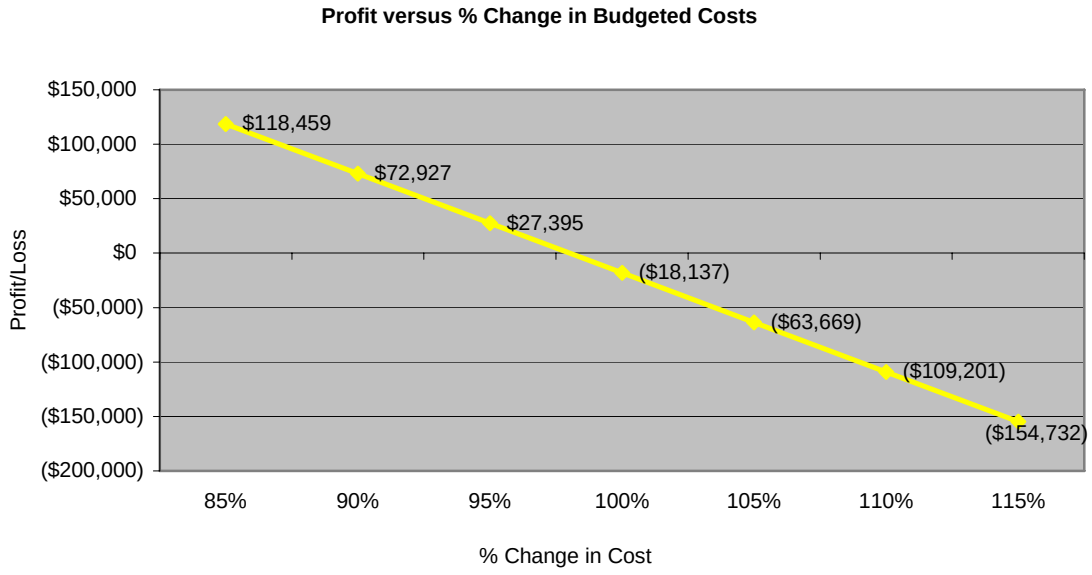


Chart 2. Profit Versus % Change in Budgeted Cost for the Hand Packing Line.



Profit versus Percent Over/Under Estimated Sales Price

This section shows how changes in the sale price of processed collards affects the profitability of the plant. The obvious result is as prices decrease profits decrease. The next graphs show at what point the sale price decreases enough to make the plant a risky (non-profitable) investment.

Chart 3. Profit Versus Change in Sales Price for the Hydro Washing Line.

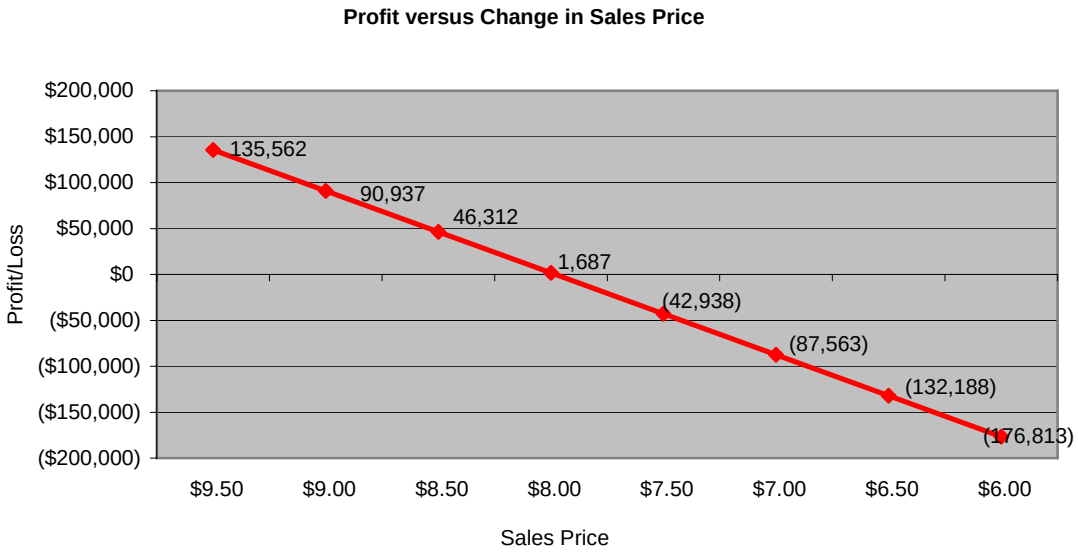
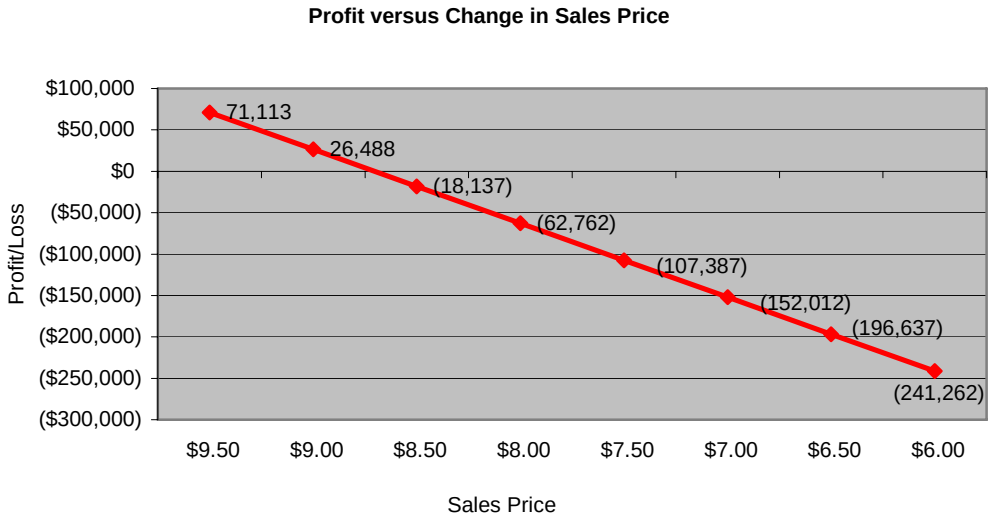


Chart 4. Profit Versus Change in Sales Price for the Hand Packing Line.



Financing, Operating, and Ownership Arrangements for a Institutional Quick Freeze Collard Packing Line

Presently only one financing and ownership structure is being considered for the packing shed in North Georgia, a marketing cooperative. The main purpose of co-operative is to sell collards in a larger market, share the cost of cooling and packaging, and purchase inputs in bulk for discounts.

Cooperatives

A special type of producer cooperative called a "New Generation Cooperative (NGC)" or a "closed cooperative" combines a solution to both financing and operating questions. Producers would raise an initial portion of the equipment and working capital cost through stock or options on stock sales. Each share of stock would provide the right and obligation to market 100 dozen collards through the processing line. The remaining capital could be raised through debt financing. Management for the operation of the packaging line would be the cooperative's responsibility. Collards could be priced to the producer through various arrangements including profit sharing of the final product. Any funds generated through an assessment per pound marketed through the packing shed would be used to retire debt and would increase the producer's equity in the operation.

The recommended organizational structure would be a collard packaging line cooperative formed as a value-added processing, closed cooperative of defined or selected membership whereby members invest through the purchase of shares of stock. These shares serve as a dual contract. Each producer has both the obligation and the right to deliver to the cooperative. Likewise, the cooperative is obligated to accept delivery given quality standards are met. These delivery rights and obligations are transferable. Each member is still granted only one vote regardless of the number of shares owned.

The basic concept of this new type of cooperative is that producers capture profits that occur beyond the farm-gate by owning and controlling the local businesses that are positioned to earn those profits. The motivation of new generation cooperatives is more offensive than defensive – take control of your own destiny and be proactive rather than reactive. The main emphasis in cooperatives of this type has been on value-added processing, niche marketing, and producer/members viewing themselves as producing a finished food product rather than a raw commodity.

Producers tend to take greater interest in operations developed as a producer cooperative since they are also investors. The typical amount of member equity required is 50-60% of the initial equity needed for the project. This gives potential lenders the security of sufficient producer commitment. Banks have been the primary institutions in financing the remaining 40-50% needed by new cooperatives. Many commercial banks are also funding cooperatives. The USDA also has numerous financial programs that can assist cooperatives that meet certain criteria. Credit unions and the Farm Credit System have also actively lent funds to farmers to invest in new cooperatives. Other helpful support systems in the development of these new cooperatives include communities,

regional economic development commissions, individual rural electric cooperatives, and university extension services.

New generation cooperatives retain many principles of traditional cooperatives such as democratic control through a one member, one vote policy; excess earnings are distributed among members as patronage refunds or dividends; and the board of directors is elected from the membership by the membership. The financing of NGCs allows for all, or almost all, net earnings to be returned to members at year-end since the members invest capital up-front. Future expansion is financed in the same way as original equity: members invest through the purchase of shares. In some instances, preferred shares may be offered to the community or general public. This allows communities to support the project while keeping control in the hands of the members. Some of the advantages of New Generation Cooperatives include the ability of producers to react quickly to opportunities, the collective response of members to problems or opportunities, the creation of wealth within a community and local ownership keeps it there, stability for producers and efficiency for the packing shed through the restricted membership, consideration of the interests of the community through a diverse set of stakeholders, and commitment to the quality of the product by both the producers and processor.

One of the keys to success of a New generation cooperative is producer commitment. The group of producers must be motivated, determined, and committed. Other keys to success include public policy that supports cooperative formation, financial institutions willing to finance the cooperative, and consultant or facilitators to help producer groups through the aspects of the process. These keys to success seem to be evident in Georgia. Georgia produce growers must take ownership of the concept and drive the investigation into the possibility of operating a functional value added packing shed in Georgia.

Financing in terms of shares is calculated by taking the total cost divided by the total number of estimated units needed for a standard operating year. This will yield a share price for 100% financing by the producers. If the producers wish to the lower their amount of equity the share prices will drop accordingly to the amount financed outside the operation.

Share Price

The next chart show the estimated share price at various financing scenarios, 100%, 75%, 60%, 50%, and 40% producer financing.

Chart 5. Share Prices at Various Financing Options for the Hydro Washer Unit.

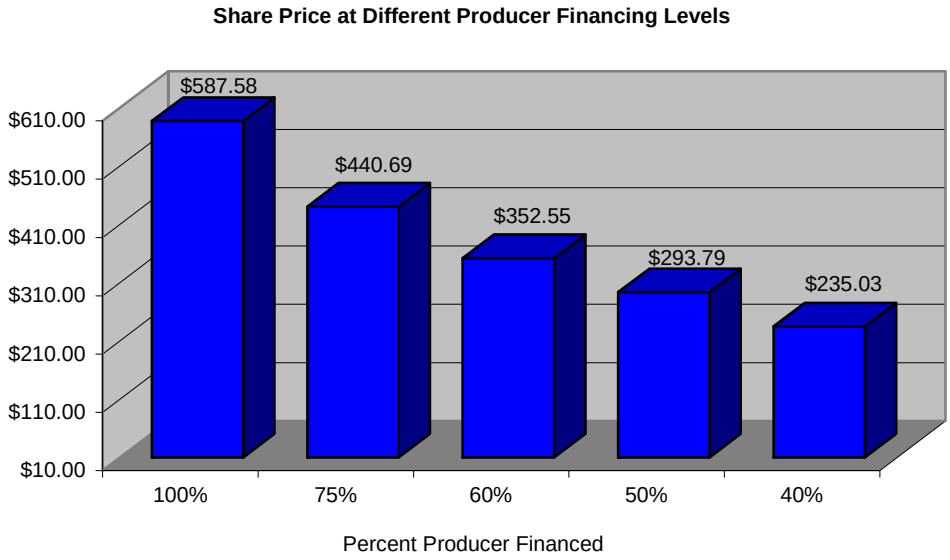
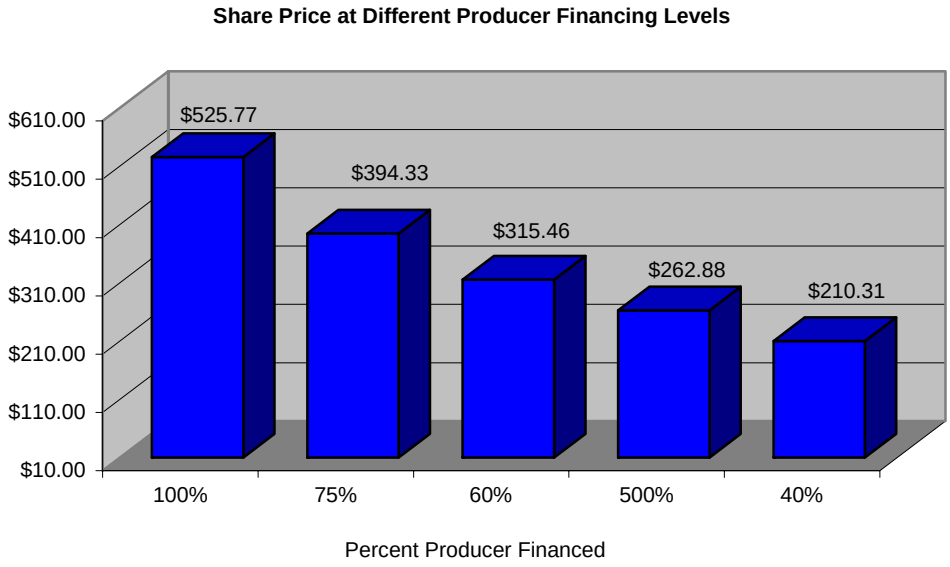


Chart 6. Share Prices at Various Financing Options for the Hand Packing Unit.



The main reason the two scenarios have similar share prices is the working capital and start up cost associated with the project. The researchers felt that even though the equipment costs were significantly different, the working capital and start up costs would

be similar. So the $70,000 difference between the two operations shows little effect in the share prices when added to the working capital and start up costs.

Other opportunities exist for financing the collard packaging line. Local development authorities will often assist in attracting funds for economic development in the area. Georgia takes requests for economic development and has many foundations or grants available. The University of Georgia Cooperative Extension Service county agents in the area can also assist in attracting money for suitable projects by writing a grant request to the One Georgia Authority.

Return Per Share

Each share shall receive a portion of the profits. These dividends or profit sharing will occur either quarterly or annually based upon the recommendation of the Board of Directors. The following charts show returns per share for two different scenarios. If custom vegetable handling or other products are packaged the returns will need to be recalculated. The North Georgia area has the opportunity to attract different producers for custom packing work.

Chart 7. Returns Per Share at Various Sales Prices for the Hydro Washing Line.

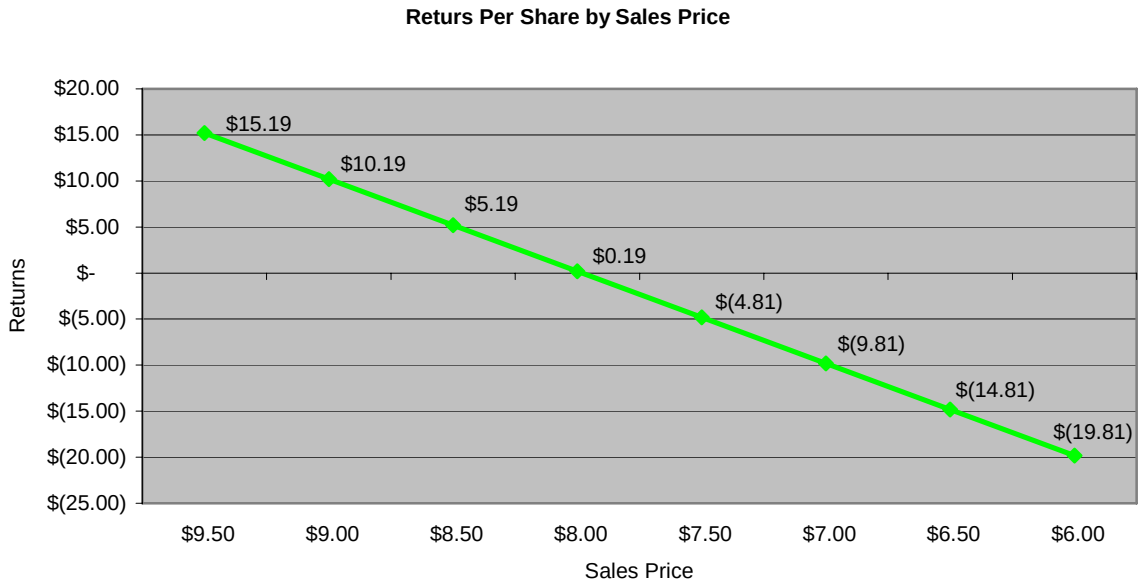
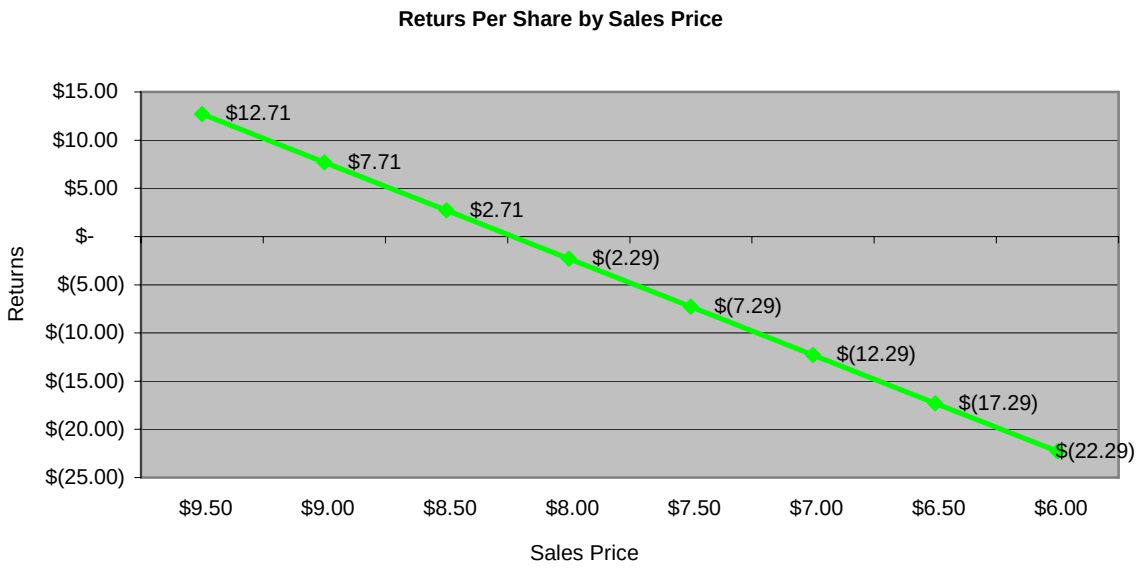


Chart 8. Returns Per Share for the Hand Packing Line.



Impact Analysis

Impact analysis is a key component of any feasibility study. An impact analysis shows the effect of a new venture on the economy. Building and implementing a collard packing facility in North Georgia will impact the economy in several ways. The new plant will generate output as it begins selling packed collards. These sales will, in turn, generate additional sales as the plant purchases inputs. The suppliers to the plant will increase the purchase of their inputs, thus increasing demand for those items. These increased sales will ripple through the economy. An input-output model will capture and quantify these effects.

The input-output model IMPLAN (Impact Analysis for PLANning, Minnesota IMPLAN Group) was utilized for this project. IMPLAN predicts the effects of a new venture on output (sales), employment and tax revenue. IMPLAN models can be constructed for a state, a region or a county. Input-output models work by separating the economy into its various sectors, such as agriculture, construction, manufacturing and so forth. A direct change in production, such as the construction of a new packaging line, can be entered into the model for a certain sector. IMPLAN then measures the changes in the other sectors that occur because of the initial change. IMPLAN captures the relationship between industries in the region and show how the change in one industry relates to the others. One limitation to this model is the backwards nature in which it calculates these figures. However, it is estimated this limitation is of minor significance to the overall model. Two models were run for this feasibility study, the hydro washing unit and the hand pack operation.

Estimating the potential impact of this particular project presents an interesting challenge. In this case, collards are already being harvested and sold. Adding the washing, cooling and packing facility will not directly increase revenue. This is because the collards will be marketed for the same value as they currently are sold. The benefits of this packing line exist in other areas, particularly in marketing. Thus, this section will use IMPLAN to examine the current impact of collard production and to examine the impact of the packing line. However, when interpreting the impacts of the collard packing line, one must remember the economic activity may not be completely new activity since collard sales are already occurring. New employment will be evident as the packing line will have new jobs.

Collard production has a positive impact on sales, employment and tax revenues in Georgia. For purpose of this report, the impact of 105,000 dozen collards will be examined. At a sale price of $8.50 per dozen, collard sales are $892,500. The associated employment is 21 jobs. This may be slight higher, however, as it does not fully account for part-time harvest labor. These are the direct effects shown in table 2. The production of 105,000 dozen collards, in turn, generates another $461,124 of activity in Georgia. This brings the total value of collard production to $1.35 million. The production of collards also adds an additional 6 jobs to Georgia's economy, bringing the total employment attributable to collards to 27. State and local government, non-education tax revenue is also affected by collard production. Roughly $63,000 of these tax revenues are due to collard production.

Table 2. Impacts of the Production of 105,000 Dozen Collards on Georgia's Economy

	Direct	**Indirect**	**Total**
Output (Sales)	$892,500	$461,124	$1,353,624
Employment	21	6	27
Tax Revenue	NA	NA	$62,599

In the first scenario, the new packing line handles 105,000 dozen collards with a hydro washer annually. The packing line itself directly employs 9 people and produces $892,500 worth of packed collards. As a result of the line's operation, another 7 jobs exist in the state. This brings total employment due to the packing line's existence to 16. The packing line also has impacts on output. The sale of collards is responsible for another $654,000 of economic activity in the state. This brings total economic output due to the plant to $1.5 million. Non-education state and local taxes are also dependent on the new packing line. IMPLAN estimates total tax revenues of almost $60,000 from the line. Table 3 shows this information in tabular form.

Table 3. Impacts of Hydro Wash Packing Line on Georgia's Economy

	Direct	**Indirect**	**Total**
Output (Sales)	$892,500	$654,100	$1,546,600
Employment	9	7	16
Tax Revenue	NA	NA	$59,775

In the second scenario, the new packing line hand packs 105,00 dozen collards annually. In this case, the packing line itself employs 14 people and produces $892,500 worth of packed collards. Due to the packing line's production, an additional 7 jobs are supporting the state. Thus, total employment created by the packing line is 21. In addition to the $892,500 of direct output, the packing line creates further economic output in Georgia. IMPLAN estimates this further output to be $648,126, bringing the total impact of the line to $1.5 million. State and local taxes for non-education will also increase because of the new packing line. An additional $60,000 of tax revenue will be generated at the state and local level.

Table 4. Impacts of Hand Wash Packing Line on Georgia's Economy

	Direct	**Indirect**	**Total**
Output (Sales)	$892,500	$654,100	$1,546,600
Employment	9	7	16
Tax Revenue	NA	NA	$59,775

Conclusion

Based of the economic analysis neither packaging line appeared to be a safe investment for the co-operative. However, if outside funding helps subside the project the feasibility becomes more positive. Increasing the number of collards or using the packing line to custom pack various vegetables through out the year also increases the profit of the packing line. The hydro washer line was more profitable but by a slim margin. The hand packing line had difficulty cash flowing due to the large labor cost. The packing line also used labor for the maximum capacity. Times when the packing line does not operate at maximum capacity the labor cost would be greatly reduced. The economic analysis also included migrant labor housing, which if not needed can reduce costs to the cooperative.

The Center for Agribusiness & Economic Development

The Center for Agribusiness and Economic Development is a unit of the College of Agricultural and Environmental Sciences of the University of Georgia, combining the missions of research and extension. The Center has among its objectives:

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>
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FR-01-29 **July 2001**

Issued in furtherance of Cooperation Extension Acts of May 8 and June 30, 1914, the University of Georgia College of Agricultural and Environmental Sciences, and the U.S. Department of Agriculture cooperating.

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