THE UNIVERSITY OF GEORGIA

COOPERATIVE EXTENSION

Colleges of Agricultural and Environmental Sciences & Family and Consumer Sciences

OUTLOOK 2012

TRENDS, ISSUES, AND RESOURCES

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State Issue: **Agribusiness Development/Value Added**

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State Issue: Agribusiness Development/Value Added *ANR*

Description

As consumer interest in locally produced food products grows, small to mid-sized producers find themselves in need of organizations that support them in more effectively marketing, processing, and distributing their products. These organizations typically originate at the producer level, arising out of a common need for assistance in all areas of business development, including selecting an appropriate business structure, financial and feasibility analysis, raising necessary capital, pricing, marketing, and distribution. In many instances, producers find that forming a cooperative provides them with the framework that they need to collectively achieve business objectives that they cannot achieve individually.

Trend

Small to mid-sized agricultural producers have begun to exhibit a renewed interest in the cooperative business model as a means of pooling the resources necessary to pursue agribusiness ventures such as value-added processing, food hubs, and farmer's markets. Much of this interest stems from growth in demand for locally produced food products as producers look for ways to organize in order to achieve economies of scale in marketing, value-added processing, and distribution. The Center for Agribusiness and Economic Development responds to this need by offering producers guidance in coop development, including facilitating producer interest meetings, assisting in developing articles of incorporation and by-laws, conducting feasibility studies, providing coop board of directors' training, and supplying references for coop related legal services.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Faculty/Staff Available to Support Programming

* **Wolfe, Kent L.**
* **Shepherd, Tommie**

Kane, Sharon P

State Issue: Agribusiness Development/Value Added *ANR*

Description

There is a need for small scale value-added processing facilities across the state

Trend

People are looking to produce local value-added food products but there is a lack of inspected facilities.

Resources Available to Support Programming

Individual Assistance / Consultations

Additional Resources:

There is limited resources in the State. The CAED an other units need to develop materials to help these folks move ahead.

Faculty/Staff Available to Support Programming

* **Wolfe, Kent L.**

State Issue: Agribusiness Development/Value Added *ANR*

Description

Local Farmers' Markets provide a low cost venue that enables producers of local food products to reach consumers when alternative methods of marketing prove too costly. Local markets are a natural fit with the current popularity of local foods and have the ability to be opened and operated at a relatively low cost. They require little or nothing in the way of startup costs and do not require permanent facilities, so that they may be readily shut down during the off season.

Trend

The number of local farmers' markets in the state has grown significantly over the past several years. Many agricultural producers, as well as local Chambers' of Commerce, Downtown Development Authorities, and other economic development entities view farmers' markets as a way to support local producers while simultaneously encouraging shoppers to spend their food dollars in the community and visit other local businesses. Famers' markets are often organized as cooperatives or non-profit businesses for tax purposes. The Center for Agribusiness and Economic Development has assisted numerous farmers' markets in organizing as a formal business entity and provides assistance to both start-up and ongoing markets. Farmers' markets are often the first step towards other related agribusiness ventures such as food hubs and value added processing operations.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Faculty/Staff Available to Support Programming

* **Wolfe, Kent L.**
* **Shepherd, Tommie**
* **Kane, Sharon P**

State Issue: Agribusiness Development/Value Added *ANR*

Description

Education of potential or expanding food business entrepreneurs, demand for which continues to be strong.

Trend

The adverse nation wide economic conditions, including increased unemployment, has not dampened the interest of those wishing to start new food businesses and all of the related information that is required in order to do so. Food and fiber related businesses employ over 13% of Georgia's workforce. Our Starting a New Food Business workshops, in which we educate potential or expanding food business owners, often have waiting lists and excellent reviews after completion. Demand for new Farm to Fork in collaboration with Center of Innovation for Agribusiness provides another educational opportunity.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Attendance at Starting a New Food Business Workshops; Resource notebook from SNFB Workshop; Feasibility studies; Economic Impact studies; Information/research on selling food products through various distribution channels;
Flavor of Georgia Food Product Contest (annual)
MarketMaker interactive website listing of food related businesses in Georgia - from producer/farmer to processing to wholesale to retail. Over 30,000 businesses listed;
Coordinated workshops with other departments/units (Dept. of Food Science, Small Business Development Centers)

Web Pages:

www.caed.uga.edu
www.efsonline.uga.edu

Faculty/Staff Available to Support Programming

* **Wolfe, Kent L.**
* **Mohan, Anand**
* **Kane, Sharon P**
* **Hurst, William C.**

State Issue: Agribusiness Development/Value Added *ANR*

Description

Growing interest in locally produced food products has led to development of the “food hub” business concept. A food hub is a physical location and organization that aggregates and distributes crops from small and mid-scale farmers so they can access wholesale markets such as restaurant and specialty grocery stores or institutional markets such as schools. A food hub might also market, store, or further process crops. Development of the food hub business model creates opportunities for producers interested in alternative methods of marketing their products, adding value to raw commodities through value added processing, and expanding production to reach a growing customer base. The number of food hubs in the U.S. has grown rapidly over the past few years. Food hubs have taken on different forms around the country depending on the needs of local producers, and offer services ranging from simple aggregation and marketing functions to value added processing, storage, and delivery.

Trend

In response to this growing trend, and in order to advance the food hub business model in Georgia, the University of Georgia, Fort Valley State University, the Georgia Department of Agriculture, Valdosta State University, Georgia Organics, Georgia Farm Bureau, Georgia Fruit and Vegetable Growers, Center of Innovation for Agribusiness, Macon Community Healthworks, USDA ARS, and the Georgia USDA NRCS have formed the Georgia Sustainable Agriculture Consortium. This consortium brings together the land- grant universities with other interested academic institutions and key governmental and non-governmental stakeholders to pursue science-based information to aid the development of these food hubs in Georgia.

The mission of the Georgia Sustainable Agriculture Consortium is to foster the development of sustainable agriculture systems and local/regional food hubs to improve rural economies and communities.

CAES is currently leading an effort to conduct a statewide needs assessment to determine farmer interest and to map existing food hub and food hub projects.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Faculty/Staff Available to Support Programming

* **Shepherd, Tommie**	Wolfe, Kent L.
* **Gaskin, Julia W.**	Kane, Sharon P

State Issue: Agribusiness Development/Value Added *ANR*

Description

There is a growing demand for locally produced food products. However, there is a lack of processing facilities for protein food products and certified kitchens for non-protein products.

Trend

There is a significant and growing demand for locally grown food products. This demand is seen at the consumer, retail and institutional levels.

Small producers are looking to market their products directly to consumers. However, there is a lack of distribution systems in place to effectively and efficiently deliver products to end consumers.

Small producers also do not have access to processing facilities to produce value-added products. There is a significant market for locally produced value-added food products at all market levels. However, there is a lack of processing capacity for these smaller producers resulting in inability to meet demand.

Resources Available to Support Programming

Faculty/Staff Available to Support Programming

* **Wolfe, Kent L.**

State Issue: Agribusiness Development/Value Added *ANR*

Description

Consumer demand for locally produced food products continues to grow. There is, however, a serious lack of processing facilities available to small producers for animal products and a shortage of certified kitchen facilities for further processing of fruit and vegetable products. This situation results in a disincentive for small producers to expand their operations, or for prospective producers to start new ones. Given the seasonal nature of local production, the inability to process products for storage and off-season consumption compromises the local food industry's ability to grow.

Trend

There is a significant and growing demand for locally grown food products. This demand is seen at the consumer, retail and institutional levels. Small producers attempting to market their products directly to consumers are constrained by a lack of processing and distribution systems necessary to effectively and efficiently deliver products to end users. The cost of constructing and equipping such facilities is almost always prohibitive for the small to mid-sized producers whose products are in demand by those consumers who seek out and are willing to pay a premium for local products. There is a significant market for locally produced value-added food products at all market levels. Unfortunately, there is also a lack of processing capacity for these smaller producers resulting in inability to meet demand. The Center for Agribusiness and Economic Development provides assistance in the area of business planning centered around developing and distributing value added agricultural products, including feasibility studies, business plans, market analysis, and cooperative development.

Resources Available to Support Programming

Individual Assistance / Consultations

Web Pages:

http://www.caes.uga.edu/center/caed/

Faculty/Staff Available to Support Programming

* **Wolfe, Kent L.**
* **Shepherd, Tommie**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

One of the major objectives of the farm bill is to provide a “safety net” for production agriculture. Commodity program payments are important to the economic viability of many Georgia farms. Another aspect of the farm bill is the conservation title which defines programs that provide incentives, through government payments, to farmers and landowners for conservation of natural resources. Programs are available for farmers interested in retiring land from agricultural production, keeping land in agricultural production for perpetuity, and adding conservation activities in conjunction with maintaining farm operations. The current (2008) farm bill will end after the 2012 crop season.

Trend

The major components of the farm income “safety net” provided for in the farm bill are the DCP Program (Direct and Countercyclical Payments) and the Marketing Loan which provides for Loan Deficiency Payments (LDP's) and Marketing Loan Gains. The DCP Program and Marketing Loan are important and beneficial income risk management tools for Georgia farmers. Changes are proposed and forthcoming in the 2012 farm bill that would eliminate the DCP program or replace it with a supplemental revenue-based type insurance program. Modifications are also expected in the marketing loan program. Such changes could have an adverse impact on Georgia farm income, agribusinesses, rural communities, and the state's economy. Producers will need to be knowledgeable of program changes, evaluate alternatives, and the impacts on their farm operation.

Farmers will need to be aware of any changes to conservation programs in the 2012 farm bill. Changes may include payment limits, eligibility requirements, new and/or renewed programs, and terminated programs.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Spreadsheet-based decision aids

Web Pages:

www.agecon.uga.edu

Faculty/Staff Available to Support Programming

* **Smith, Nathan B.**
* **Smith, Amanda R**
* **Shurley, W. Don**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Over the past six years there have been nine new runner-type peanut cultivars released for peanut producers to incorporate into their peanut production management system. These recent releases provide more opportunities for higher yield potential and increased profits.

Trend

As new peanut cultivars are released for producer adoption it is incumbent that these cultivars be evaluated for response to numerous agronomic and pest management inputs. These new peanut cultivar releases have much better levels of tolerance to spotted wilt disease, which allow flexibility in planting date options. The UGA Peanut Team works closely with County Extension ANR Agents to compare the nine cultivars to determine which ones have the best fit under various production scenarios. The exciting part of these releases is that yield potential for these cultivars is much greater compared to the previous standard cultivar, Georgia Green.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations

Web Pages:

www.ugapeanuts.com

Faculty/Staff Available to Support Programming

* **Tubbs, Ronald Scott**
* **Smith, Nathan B.**
* **Prostko, Eric P.**
* **Kemerait, Robert C.**
* **Harris, Glendon H.**
* **Beasley, John P.**

Adding Value to Cattle Through Advanced Management and Marketing Practices

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Increased feed and fuel cost have increased in recent years for beef producers. Subsequently, this has increased the breakeven price for their calf crop to the point some producers have exited beef industry. Those remaining are looking for ways to increase the value of their calf crop in order to maintain their operations. These practices consist of addressing the herd genetics and calving season length, but also managing the calf crop to improve their performance post weaning (e.g vaccination protocol and backgrounding) and utilizing marketing strategies to increase the price received for the cattle (e.g marketing as a group and participating in process verification programs).

Trend

The public is demanding to know more about their food sources and are generally willing to pay a premium for this information. As this demand grows, information is requested from county agents and producers on utilizing advanced management and marketing strategies to increase the value of their calf crop.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Decision-aids

Web Pages:

www.secattleadvisor.com
www.ugabeef.com
www.ads.uga.edu

Faculty/Staff Available to Support Programming

* **Stewart, Lawton**
* **Silcox, Ronald E.**
* **Lacy, R. Curt**
* **Knight, Carole Hicks**
* **Dyer, Ted G.**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Increasing numbers of consumers are looking for livestock products that are not considered “commodities”. In addition to organic beef, dairy, poultry and pork, other examples of these products include grass-fed beef, natural beef, pastured pork, lamb (grass-fed and grain-fed), chevon (goat meat), and free-range poultry.

Trend

As interest in locally-grown and “sustainable” livestock productions systems increases, requests from county agents, producers and lenders regarding economic and marketing considerations for meat and dairy products that can be marketed outside of the conventional outlets will continue to increase.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Printed and electronic budgets
Decision-aids

Web Pages:

www.secattleadvisor.com
www.ugabeef.com
www.georgiaforages.com

Faculty/Staff Available to Support Programming

* **Lacy, R. Curt**
Stewart, Robert L.
Shepherd, Tommie
Hancock, Dennis W
Getz, Will
Gaskin, Julia W.
Bernard, John K.

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Aquaculture interests include catfish, sport fish, tilapia, freshwater prawns, trout, alligators, koi carp, and ornamental fish. Catfish prices rose to levels that all profitable production when facing high feed prices. Drought during 2010 to 2011 has reduced the market for sport fish until rainfall increases. Producers are still seeking low input fish species or reduced feed costs.

Trend

High feed costs require examination of fish species that can utilize natural foods. Alternative feed ingredients and feed manufacturing processes should be investigated. Renewal of interest in blue gill sunfish as a food fish is a response to their ability to utilize natural food and to the fact that an effort to ease restrictions on open pond culture of tilapia failed to pass the Georgia legislature. Freshwater prawn and crawfish are still of interest as low input species.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Business plan development for new aquaculture enterprises.

Web Pages:

http://extension.uga.edu/agriculture/animals/aquaculture/

Faculty/Staff Available to Support Programming

* **Burtle, Gary J.**

Bean Plataspid Found on Kudzu in Northeast Georgia

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

The insect Megacopta cribraria (F.) (Hemiptera: Heteroptera: Plataspidae) was discovered in northeast Georgia in October 2009, and is the first report of this insect in the Western Hemisphere. Megacopta cribraria is a nuisance pest, because it aggregates on houses, and a potential pest of legume crops, including soybean. Eger et al. (2010) (see attached PDF) provides the most recent review of M. cribraria biology, host range, distribution, and taxonomy. Briefly, however, M. cribraria is native to Asia where its preferred host is kudzu (Pueraria spp.), a legume. It is considered a minor to major pest of numerous legume crops in Asia. It is likely to continue to spread and be a nuisance pest in areas where kudzu grows. As of December 1, 2009 M. cribraria had not been reported to have been found on any legume crops in Georgia.

Large aggregations of M. cribraria were discovered on outside, perimeter walls of houses, prompting homeowners to contact county extension agents (Gwinnett, Barrow, and Jackson counties) and pest management professionals to learn more about the insect or to rid the premises of the pest. The insect was flying from nearby kudzu patches onto houses, apparently in an attempt to locate overwintering sites. In its native Asia, M. cribraria's preferred host is kudzu, an invasive, leguminous vine found throughout the southeastern U.S. Before discovery in Georgia, M. cribraria was unknown from the New World. As of December 1, 2009, M. cribraria was known from eight counties in northeast Georgia: Barrow, Clarke, Gwinnett, Hall, Jackson, Monroe, Oconee, and Oglethorpe. November 2009 statewide surveys of kudzu patches outside this region were bug-free.

Trend

Given its propensity to fly and to land on vehicles, we suspect M. cribraria will continue to spread into most areas where kudzu grows. Its potential distribution northward is unknown, but may be limited by extreme winter temperatures. However, in the spring of 2010 M. cribraria was found on kudzu in numerous locations within the original counties where it was found. In Gainesville, GA (Hall county) there were 526 h of temperature at or below freezing between October 1, 2009 and March 30, 2010 (Georgia Automated Environmental Monitoring Network; www.georgiaweather.net). For the same dates and at the same location the number of hours at or below freezing for the three previous winters was 460 (2008 to 2009), 262 (2007 to 2008), and 257 (2006 to 2007). Clearly, M. cribraria exhibits some cold tolerance.

Although currently a nuisance pest, research is needed to determine M. cribraria's potential as a pest of leguminous crops, especially soybean. As noted in Eger et al. (2010) and by the APHIS-PPQ, future research efforts should include continued surveillance to further delineate the distribution and spread of M. cribraria, the screening of various legume crops for susceptibility, and development of various methods of control, both chemical and biological.

Resources Available to Support Programming

Fact Sheets / Departmental Publications

Additional Resources:

Go to www.gabugs.uga.edu to download a PDF publication by Eger et al. (2010) about the bean plataspid.

Faculty/Staff Available to Support Programming

* **Suiter, Dan**
* **Kemerait, Robert C.**
* **Jenkins, Tracie M**
* **Douce, G. Keith**
* **Buntin, G. David**
* **Ames, Lisa**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

As animal agricultural processes change, environments are created that allow resurgence of pests not seen in animal production for decades.

Trend

Animal agricultural management practices are changing. The public rejection of “factory farming” is leading to cage-free and free range conditions among poultry and similar “warm and fuzzy” options for livestock and other animals raised for food and fiber. As we return to situations similar to those used by farmers a century ago, we can anticipate that we will see pests that bedeviled our production animals a century ago, as well. Chickens raised on the ground will be exposed to parasites from which they were protected while caged. Cattlemen, dairymen and poultry producers need to be aware that changing production practices will bring with them some pests that they have not had to deal with for several decades.

Resources Available to Support Programming

Faculty/Staff Available to Support Programming

* **Hinkle, Nancy C.**

Development of Fungicide Resistance of Turfgrass Pathogens

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Dollar spot caused by Sclerotinia homoeocarpa and anthracnose caused by Colletotrichum cereale are ubiquitous diseases that affect almost all turfgrass species. Fungicide failures against dollar spot and anthracnose on bentgrass (Agrostis palustris) greens have been detected under field conditions. Laboratory analysis of several dollar spot and anthracnose isolates showed benzimidazole (thiophanate methyl), DMI (propiconazole) and strobilurins (Heritage) resistance. Fungicide resistance is likely to increase, threatening turfgrass production and management.

Trend

Development, adaptation and dissemination of new resistance management strategies will be needed. The need to evaluate new fungicides will increase and knowledge and additional fungicide chemistries will be imperative

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Plant Disease Clinics available through the Plant Pathology Department.

Web Pages:

Guide to Turfgrass Fungicides http://pubs.caes.uga.edu/caespubs/pubcd/B1316/B1316.html

Faculty/Staff Available to Support Programming

* **Martinez, Alfredo**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

New and emerging insect pests of forage grasses have become important factors threatening profitability of hay producers and cattlemen.

Trend

A newly discovered fly, Atherigona reversura, has been spreading and becoming more damaging to bermudagrass hay fields and pastures, with the potential to also infest turf bermuda. Little is known about the biology and damage potential of this insect, especially under conditions found in the southeastern U.S.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Faculty/Staff Available to Support Programming

* **Hudson, William G.**
* **Hancock, Dennis W**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Blueberries, blackberries, and wine grapes continue their expansion as major fruit commodities in Georgia. Several known and unknown viral diseases threaten these industries. Among these, blueberry necrotic ring blotch has decimated some blueberry varieties. Leaf curl has entered north Georgia wine grapes, and it is spreading throughout some vineyards, requiring destruction. Blackberries have a multitude of viruses, many of which can not currently be identified by any means.

Trend

Identification and prevention of viruses will be critical to the development of these industries.

Resources Available to Support Programming

Additional Resources:

Diagnostics for viral identification is available through the diagnostics clinic.

Faculty/Staff Available to Support Programming

* **Brannen, Phillip M.**

Evaluation of Fungicides for the control of Fusarium Wilt in Watermelons

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Fusarium wilt of watermelon is a soil borne disease that threatens the long term sustainability of watermelon production in Georgia. The reccomended rotaion is 7 years and there are no known fungicide programs that are effective against this disease

Trend

Some fungicides and a plant defense activator have shown promise in some of our prelimenary screening trials, and need to be tested further in field trials.

Resources Available to Support Programming

Faculty/Staff Available to Support Programming

* **Sanders, Floyd Hunt**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

The face of agronomic production practices for peanuts is changing, as new cultivars become available to growers. This impacts production practices for the year peanuts are grown, and also how crop rotations should be handled to manage for maximized profitability and sustainability.

Trend

Research is being conducted to answer numerous emerging questions about how peanuts will respond to various production practices and cropping systems. Some of these topic areas include fertility/inoculation issues, tillage practices, row patterns, row spacing, seeding rates, planter speed, cover cropping, intercropping, and years and types of crops in rotation with peanuts. In addition, the high disease resistance of new cultivars has given rise to the possibility of peanut production under organic management, so cultivar, weed control, and economic factors are being investigated to determine feasibility of this potential new market for Georgia peanuts.

The fluctuation in row crop acreage dedicated to other important agronomic crops will also play a major role in the long term yield potential for peanuts. Soybean acreage has increased while cotton acreage has decreased in recent years, which will put a strain on recommended peanut rotations and could increase pest incidence for both of these crops. In addition, more wheat has been grown in recent years, raising questions about the possibilities of double cropping wheat and peanut and to what benefit or detriment are various wheat-peanut cropping systems to alter for best management of either crop.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Faculty/Staff Available to Support Programming

* **Tubbs, Ronald Scott**	Harris, Glendon H.
	Beasley, John P.

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Pest problems change over time. In many cases this is owed to changing pesticide use patterns, while in other cases establishment of exotic pests can dramatically change the inputs required for commercial fruit growers to compete in the market place. Applied research plays an important role in helping farmers adapt to changing pest pressures.

Trend

Additional economic opportunity for GA growers, at least in export markets, are in some regards limited by insufficient taxonomic expertise. Over the long term expansion of our taxonomic expertise, likely within the GA Department of AG would facilitate export of GA products.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

web-based references and hard copies

Web Pages:

http://www.ent.uga.edu/fruit.htm

Faculty/Staff Available to Support Programming

* **Horton, Dan L.**
* **All, Terry J.**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Spotted wing drosophila (SWD) is a new, exotic fruit fly pest of soft skinned fruits. In 2012 GA growers first experienced damage (SWD maggots in fruit) in southern highbush blueberries & strawberries. Studies of SWD's host preferences (wild & cultivated) in GA and efficacy trials have been initiated with considerable help from Elvin Andrews, James Jacobs, John Ed Smith & Danny Stanaland. Hannah Burrack, NCSU small fruit entomologist, has assisted with grower education and is leading grant acquisition efforts.

Trend

Research is needed: to develop commercially reliable traps and treatment thresholds, evaluate cultivar susceptibility/potential host plant resistance sources, to determine larval SWD cold-sensitivity within infested fruit, study host plant succession year-long, and efficacy trials. Extension efforts are focusing on grower education to make diverse grower groups aware of SWD and to encourage implementation of preventative controls.

Resources Available to Support Programming

Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Web Pages:

Southern Region Small Fruit Consortium web page
[http://www.smallfruits.org/]
UGA Entomology Fruit Pest Management & Culture web page
[http://www.ent.uga.edu/fruit.htm]

Faculty/Staff Available to Support Programming

* **Jacobs, James L.**
* **Horton, Dan L.**
* **Andrews, Elvin L.**

Fungicide resistance development in pathogens of fruit commodities

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Resistance to DMI fungicides has recently developed for Monilinia fructicola (brown rot of peach). DMI resistance will likely develop or has developed for powdery mildew of grape. Resistance is also likely to develop soon for the strobilurin fungicides. This strobilurin resistance will impact diseases such as brown rot of peach, anthracnose of strawberry, and downy mildew of grape. Resistance issues will make introduction of new fungicides necessary, but these may not be available. Old, classic, broad-spectrum fungicides will likely take on new importance; this will be a challenge, as these are not the most environmentally nor human-friendly fungicides.

Trend

Due to resistance development and the lack of effective alternatives, production of fruits may be challenged by diseases which have been largely under control for the last 30 years. Resistance of Monilinia fructicola, the brown rot fungus, to DMI fungicides is being observed throughout the middle Georgia region. Adoption of resistance-management techniques will be critical to continued peach, wine grape, and other fruit production. As the Food Quality Protection Act (FQPA) has reduced the number of effective fungicides which are available for fruit production, the need to evaluate new fungicides will increase. The cost of production may go up, and disease management will likely become more difficult. It is even possible that the lack of disease control in wet years will result in downward trends in commodities such as peach and wine grape.

Resources Available to Support Programming

Additional Resources:

"Profile" Monilinia fructicola resistance monitoring kit developed by Clemson University and UGA. Survey help available to county agents in commercial peach counties.

Faculty/Staff Available to Support Programming

* **Brannen, Phillip M.**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Currently in Georgia there are 257 dairy producers. High costs, overabundant weather conditions, forage quality, waste management and poor animal fertility continue to effect management. Undergraduate enrollment in Animal & Dairy Science continues to increase.

Trend

Milk prices are average to above average when compared to the last 10 year prices. Milk price should remain around $19/cwt this year. Dairy cow numbers are stable with demand increasing. Milk is still short, but even less in surrounding states. Feed prices are more stable and rain has finally returned to the southeast. The production and utilization of high quality forage is essential to minimize production costs. Improving forage quality through the incorporation of legumes into pastures, use of improved forage genetics, controlled grazing and timely harvests are key to improving forage quality. Commodity feeds will continue to help lower feed costs when used correctly. Currently, herds in Georgia continue to strive to improve reproductive management as well as milk production. Our ability to evaluate herd performance and assist Georgia dairy producers in these efforts are essential. We must develop new educational programs and apply new technologies. Timed AI protocols have proven helpful in getting animals bred. Trends in poor heat detection levels and low conception levels continue to increase. Opportunities exist for livestock producers to participate in niche markets to produce branded or specialized products to meet consumers demand. Local on farm milk processing will continue to grow. Suitable waste management practices will remain a priority.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Publications and newsletters listed below on web pages.
http://www.extension.org/pages/Dairy_Cattle_Reproduction http://www.ads.uga.edu/extension/newsletters.html
http://www.caes.uga.edu/publications/subject_list.html http://www.extension.org/dairy cattle.

Web Pages:

http://www.extension.org/pages/Dairy_Cattle_Reproduction http://www.ads.uga.edu/extension/newsletters.html
http://www.caes.uga.edu/publications/subject_list.html http://www.extension.org/dairy cattle.

Faculty/Staff Available to Support Programming

* **Nickerson, Stephen C.**	Wilson, Melony L
* **Graves, William**	Smith III, Robert C.
* **Bernard, John K.**	Froetschel, Mark A.

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

In 2002, there were over 900 licensed greenhouses in Georgia. Many were small family operations that sold plants to local independent garden centers. A combination of droughts and economic downturns has caused most of Georgia's independent garden centers to close their doors. The resultring loss in market, and the cange-over of big box stores buying exclusively from regional growers cause a major upheaval in the greenhouse industry. Over 75% of the commercial greenhouses in Georgia have shut down. Remaining are the 86 large, incorporated, and/or specialized greenhouses, and a few small family-run operations, that are 50+ years old, are managed carefully and had little or no debt when the downturn happened.

Trend

Sales of flowers and greenhouse products for the majority of greenhouse business owners in Georgia is at a 10 year low, and sales are predicted to remain flat until the housing market and the overall economy improves. Consumers are not planting flowers in large beds but continue to buy garden vegetables and small combination pots for patios. Many large growers in Georgia have significantly reduced inventories, but remain in business. It is recommended that caution be exercised when considering entering into the greenhouse business until the US and local housing market improves. This may be 3-5 years from now. Bank loans for new greenhouses and crop fund for spring are non-existent in Georgia. Even Farm Credit and Credit Unions are reluctant to fund greenhouse operations in this economic environment. Growers must also reduce debt and minimize excess inventory to ride out the poor market situation.

Resources Available to Support Programming

Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Faculty/Staff Available to Support Programming

* **Thomas, Paul A.**

Growth Of Pasture-Based Enterprises Focues On Using Management-Intensive Grazing

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Dairy and beef prices will not sustain high-input systems that are poorly managed. High and/or volatile energy prices exacerbate this risk. Low-input systems are less risky. The current financial crisis has made credit nearly impossible to come by for dairy and beef producers, especially in our most rural communities.

Traditional dairy and beef farm numbers are likely to continue their substantial decline (perhaps even at a faster rate than that observed in the past 5-10 years).

Growth or transition to low-input but intensively-managed dairy and beef systems is expected to occur. Our ability to understand these production systems, act to educate these producers proactively, react to the problems that they may have, or develop sustainable solutions to issues within this production system is severely compromised by a lack of investment in research and extension infrastructure.

Trend

Dairy Trends:

There are already several thousand dairy cattle that are now in low-input, management-intensive grazing (MiG) systems. These operations have grown exponentially in the past 4 years and are expected to grow to represent ~ 20% of the total dairy herd in Georgia by 2013. Much of this growth has been in the Brooks/Thomas Co. and Jefferson/Burke/Jenkins Co. regions. This growth is largely being driven by foreign investment (e.g., New Zealand) but a significant and sizable amount is coming from conventional dairy producers who are transitioning to MiG or hybrid dairy systems.

Beef Cattle Trends:

Similar development in the beef cattle industry is expected in Georgia, as well. This growth is likely to be tied to increases in an emphasis on heavier weight stockers coincident with increases in grain prices. Shifts from Georgia's traditional cow-calf operations to cow-calf + stocker production systems can be expected. Further, consolidation of the beef cattle industry at all levels is incentivising larger (500 cow+) and diverse (cow-calf + stocker, cow-calf + stocker + retained ownership) operations. Combining these trends with input price risk and difficulties with credit, a trend toward larger, low-input, high-management beef cattle operations is anticipated to occur over the next 3-10 years. Initial trends in the purchase of large acreage (several thousand acres at a time) for the purposes of expanding or transitioning to pasture-based and MiG systems have already occurred.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Web Pages:

http://www.caes.uga.edu/commodities/fieldcrops/forages/ http://www.caes.uga.edu/topics/sustainag/grazing/index.html

Faculty/Staff Available to Support Programming

* **Hancock, Dennis W**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Honey bee populations have been declining since the 1940s. This trend is reflected in declining numbers of managed hives, reduced overwintering survival, and increased rates of queen loss or replacement. The causes include reduced bee forages, exotic pathogens and parasites, environmental toxins and pesticides, and stress-inducing commercial beekeeping practices. The most detrimental societal impact of bee decline is reduced pollination of bee-responsive crops. Pollination is a deliberate input in many agricultural systems, but there is a significant and largely unmeasurable benefit from background pollination provided by bees that are wild or kept by honey producers. Bee-pollinated crops virtually define the difference in diets between wealthy countries and poor. Bee-pollinated crops provide forage for meat and dairy animals as well as fruits, melons, vegetables, and berries that are luxuries, not staples. Hence, honey bee decline is a direct threat to our quality of life.

Trend

Bee decline in the winters between 2006-2011 hovered around 30%, a level thought by many specialists to be non-sustainable. An upturn to around 20% was detected following the winter of 2011-2012. Researchers are focusing on bee viruses and pathogens - alone and interacting, basic bee toxicology with new chemistries, Varroa mite IPM, genomics-based remedial technologies such as RNA silencing, and genetic improvement of bees employing the honey bee genome database and marker-assisted selection. Computer models suggest that viruses, Varroa mites, and environmental toxins have the strongest explanatory power describing bee decline, and education thrusts are reflecting these topical priorities. Since 2008 there are two nationally-coordinated research consortia, one of which, the Managed Pollinator CAP http://www.beeccdcap.uga.edu/, is managed by Keith Delaplane at the University of Georgia. One of the most active and visible outcomes of these consortia is the Bee Health Community of Practice, a part of the eXtension.org network, viewable at http://www.extension.org/bee%20health.

Resources Available to Support Programming

Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Our website lists Master Beekeepers, individuals throughout the state and region who are available for expert advice, lectures, or similar needs for beekeeping expertise. This site is maintained at http://www.ent.uga.edu/bees/master-beekeeper/masters.html

Web Pages:

http://www.ent.uga.edu/bees/index.html

Faculty/Staff Available to Support Programming

* **Delaplane, Keith S.**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Many provisions of current Federal income and estate tax legislation are currently slated to expire December 31, 2012 ("Sundown"). If these provisions are allowed by Congress to expire, affected sections of the Internal Revnue Code will revert to their language as of December 31, 2001. Even if Congress does act to extend these provisions, it is probable that the language of some sections of the Internal Revenue Code will be changed.

Trend

Uncertainty over future Federal income and estate tax provisions increases the difficulty of income tax manangement and long term financial planning for Georgia farmers and all other citizens.

Georgia farmers and other interested taxpayers will need to be aware of the current status of income and estate tax legislation, and of any and all changes which develop as a result of the current "Sundown" provision situation.

Changes may include changes in ordinary income tax rates, taxation of capital gains, estate and gift tax exclusion amounts and estate and gift tax rates.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Web Pages:

www.agecon.uga.edu

Faculty/Staff Available to Support Programming

* **Kightlinger, Keith D.**

Increased Nematode Attack to Turfgrasses and Loss of Nematicides

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Sting, Ring, Lance and Root-Knot nematodes are a continuous and dangerous threat to warm and cool season Turfgrasses. Disease incidence caused by these nematode species is on the rise in Georgia. Symptoms caused by nematodes include chlorosis, yellowing, thrift grass growth, diminished turf stand and grass loss. The uncharacteristic nature of nematode signs on plant canopies can be confused with fertility unbalance, drought, or poor cultural practices. These symptoms make turfgrass managers to implement a series of costly corrective turfgrass management strategies, which often result in unsatisfactory control. Only a couple of nematicides are available. In 2011, we successfully promoted a 24 (c) Special Need Label for Avid (abamectin) for nematode control on golf putting greens in Georgia.

Trend

Development, adaptation and dissemination of sound cultural practices including balanced fertility, core aereation, proper water management, relieve soil compaction, soil amendments etc, are imperative for nematode control. Biological nematicide products have been developed but their efficacy remains to be tested thoroughly. Development, adaptation and dissemination of these strategies will be needed, the need to evaluate new biological nematicides will increase and Knowledge and additional chemistries will be essential.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

UGA Nematode Laboratory through the Plant Pathology Department.

Faculty/Staff Available to Support Programming

* **Martinez, Alfredo**

Increased Xyllella diseases of blueberry, peach and wine grape fruit commodities

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Relative to total sales, blueberries are the number one fruit commodity in the state of Georgia, surpassing even peaches. Recently, a new disease has been identified in the Georgia blueberry production region which is rapidly destroying production. This disease has been named bacterial leaf scorch, and it is caused by the bacterium Xylella fastidiosa. In addition, other previously known Xylella-incited diseases (Pierce's disease of wine grape and phony peach) are increasing dramatically. The increase in Xylella diseases may at least in part be associated with climate change, as warmer winter temperatures increase bacterial survival in plants, as well as allowing for better survival of insect vectors (sharpshooters).

Trend

Recently introduced blueberry varieties may be susceptible to bacterial leaf scorch. As a result, massive replants with new varieties may be necessary, and new varieties will need to be screened against the Xylella pathogen. Replant disorders may be observed, and with the reduction in the use of methyl bromide, replanting may be problematic. Use of insecticides to manage vectors may be increased in all fruit commodities. Wine grape production with the susceptible vinifera grape may become untenable unless insecticides and other management techniques are successfully adopted. Replanting with French-American hybrids, natives, or other hybrids from Florida or other breeding programs may become necessary, but the wine market may not accept the wines produced from these grapes. Likewise, peach production could become much more problematic, with annual tree losses exceeding the profitability of the crop.

Resources Available to Support Programming

Additional Resources:

Testing of plants for Xylella diseases, available through the Plant Pathology Department.

Web Pages:

Bacterial Leaf Scorch of Blueberry C922

Faculty/Staff Available to Support Programming

* **Brannen, Phillip M.**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Georgia row crop farmers must continually look for ways to improve profitability. Financial success often depends on making good decisions in regards to crop management and understanding production costs and markets. Recently, markets have been charcterized by increased volatilty in both commodity and input prices. Profit margins are thin and unpredictable. Enterprise budgets are an important tool to aid in decision-making. Budgets enable farmers to estimate expected income and expenses, evaluate cropping alternatives and calculate breakeven price and yield.

Trend

In recent years, farmers have experienced volatility in prices for their crops and the inputs used to grow them such as fuel and fertilizer with price increases over 100%. Volatility is expected to continue. Market price outlook is important to decision making. Tools such as enterprise budgets and comparisons of net returns for alternative crop decisions can improve decision making and profitability. Crop producers should develop budgets and net returns for their specific operation.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Computer-based decision aides

Web Pages:

www.agecon.uga.edu

Faculty/Staff Available to Support Programming

* **Smith, Nathan B.**
* **Smith, Amanda R**
* **Shurley, W. Don**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Eonomic thresholds and scouting procedures have been developed for common insect pests of cotton and soybeans. However, there are some growers who do not have their cotton and soybeans scouted for pest insects on a regular basis.

Trend

Profitability and economy of insect control are based upon making good decisions. Proper insect management decisions can only be made when fields have been thoroughly scouted. Unneeded insecticide applications may result in additional costs of production and more importantly may disrupt natural processes resulting in secondary pest outbreaks. Failure to properly time a need insecticide application may result in even greater losses. The value of IPM (integrated pest management) needs to be reemphasized to growers and appropriate training for scouts should be made available. This is true for all row crops.

Resources Available to Support Programming

Additional Resources:

Cotton Scout Handbook

Web Pages:

ugacotton.com (Cotton Pest Management Newsletter)

Faculty/Staff Available to Support Programming

* **Roberts, Phillip Marion**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

The kudzu bug has proven to be an economic pest of soybeans. Questions remain as to its importance in edible beans and peas, which are a potential host for this pest. It has the potential to be a direct pest in these crops, but also may be a contaminant in the crop at harvest.

Trend

The kudzu bug has recently spread into areas of Georgia with large commercial producers of beans and peas. Whether this potential pest will present a problem is unknown and needs to be evaluated and results shared with producers of these commodities.

Resources Available to Support Programming

Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Web Pages:

A kudzu bug web page has been recently added to the Entomology Departments web site.

Faculty/Staff Available to Support Programming

* **Sparks, Alton N**	Roberts, Phillip Marion
	Buntin, G. David

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Kudzu bugs, Megacopta cribraria, were first observed in northeast Georgia on kudzu during the fall of 2009. Economic infestations were first observed infesting soybean in northeast Georgia during 2010. Field trials conducted during 2010 and 2011 have documented a 20 percent yield loss (range 0-47 percent)when kudzu bugs are not managed. Kudzu bugs have spread rapidly, infesting all of Georgia and South Carolina and much of North Carlina. Infestations have also been observed in Alabama, Florida, Tennessee, and Virginia. Research is currently underway to define economic and action thresholds and to learn more about their biology.

Trend

Kudzu bugs often infest soybeans in high numbers. We would anticipate kudzu bug to be a potential economic pest on all soybeans produced in Georgia. Once research establishes a threshold, educational programs and verification of the threshold will be needed. Additionally, periodic monitoring of other crops, especially legumes, will be needed to determine pest status in these crops.

Resources Available to Support Programming

Speakers and Presenters for County Based Training Opportunities

Web Pages:

http://www.caes.uga.edu/commodities/fieldcrops/soybeans/

Faculty/Staff Available to Support Programming

* **Roberts, Phillip Marion**

Sparks, Alton N
Gardner, Wayne Allan
Buntin, G. David
All, John N.

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

A recent economic study by the UGA Center for Agribusiness and Economic Development (CAED) reported turfgrass production, ornamental horticulture, landscape services and related industries contributed $7.8 billion dollars to the Georgia economy in 2010. The industry as a whole seems to have survived a severe economic recession and the extreme drought of 2007-2009. Some businesses closed while others opened. Many survived by diversifying and offering new services, such as hardscapes, gutter cleaning, pressure washing and landscape lighting. In 2010, the industry also directly and indirectly accounted for a total of nearly 87,000 full- and part-time jobs.

Trend

Landscape businesses have low barriers to entry, requiring only a business license and some basic equipment. Most new start-ups focus on maintenance since installation businesses require more equipment and more workers. Because of the low barriers, many people are attracted to the landscape profession from other sectors of the economy; training is needed on basic cultural practices as well as business management practices. New business owners need to be encouraged to consider becoming Georgia Certified Landscape Professionals. Worker safety continues to be an issue. According to a 2008 Center for Disease Control and Prevention report “Although landscape services workers make up 0.8% of the U.S. workforce, they experienced 3.5% of the total occupational fatalities.” Outdoor water use and restrictions remain as a critical issue for this industry as landscape water use is often considered non-essential in times of drought. Soil erosion and sedimentation is the number one cause of water pollution in Georgia. Water efficient landscapes are one of the most cost effective methods of soil stabilization. Lastly, immigration and guest worker bills continue to be hotly debated at the state and national levels as landscape businesses struggle to find experienced employees willing to work in this hard labor field.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

- Online Certification Courses and Webinars
- Landscape Alerts and Urban Ag Q/A Listserv• Georgia Certified Landscape Professional
- Georgia Certified Plant Professional
- Landscape Employee Safety Training
- Sustainable Turfgrass Education for Professionals
- Super Crew Employee Training Videos for Landscape Professionals
- Cost Estimating and Job Bidding Excel Spreadsheets
- Various publications

Web Pages:

http://www.hort.uga.edu/
http://ugaurbanag.com/certification

Faculty/Staff Available to Support Programming

* **Pennisi, Svoboda**
* **Hurt, Todd**

Griffin, Becky
Braman, Susan K
Bauske, Ellen M.

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Locally grown food and fresh is increasingly harder to access, especially for low income families. Vacant land in urban and peri-urban areas could provide opportunities for food production and economic development.

Trend

Families are interested in producing their own food as well as purchasing food directly from producers. Urban and peri-urban farming can provide locally grown food and provide economic opportunities for low-income families and minority producers.

Resources Available to Support Programming

Fact Sheets / Departmental Publications
Speakers and Presenters for County Based Training Opportunities

Additional Resources:
Georgia Organics (statewide association)

Faculty/Staff Available to Support Programming

* **Berle, David Christian**
Westerfield, Robert
Gibson, Sharon M
Gaskin, Julia W.

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Georgia tobacco production continues to decline since the 2004 quota buyout program.

Trend

This decline is related to consistant losses to tomato spotted wilt virus, reduced profitability of tobacco due to reduced yields and quality of those yields produced. and excessive rainfall which has contributed to yield loss. In addition, contracts offered by buying companies continued to be reduced as inventories are being reduced in anticipation of possible regulations to be announced by FDA. Extension programming will focus on recommending proven production and management practices which will allow growers to maximize both yield and quality of Georgia flue-cured tobacco and maintain the profitability and viability of tobacco production.

Resources Available to Support Programming

Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Web Pages:

http://www.GeorgiaTobacco.com

Faculty/Staff Available to Support Programming

* **Moore, J. Michael**

More Labeled Herbicides are needed for Small Fruit, Tree Fruit and Nut Crops.

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

There is a need for more herbicides in small fruit, tree fruit, and nut crops. These crops have very limited herbicide arsenal, and all of these crops suffer from limited herbicide availability which leads to weeds that cannot be controlled and loss of profitability due to weed competition.

Trend

The small fruit and tree fruit/nut industry accounts for nearly 500 million dollars in sales in the state of Georgia. If more herbicide tools are not put into the hands of growers, difficult to control and resistant weeds will continue to erode farmer profits. Steps are currently underway to work with IR-4 and agricultural chemicals companies to identify herbicides that can be added to the available herbicide pool to help mange weeds and prevent plant and yield losses. A more multi-state approach is needed to confirm safety to these crops in different soil conditions as well as confirm adequate control of different weed spectrum's.

Resources Available to Support Programming

Web Pages:

www.smallfruits.org/

Faculty/Staff Available to Support Programming

* **Czarnota, Mark**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

With reproductive traits being the number one most economically improtant trait in raising beef cattle, cattlemen must improve efficiency to remain profitable. Over the past several years producers have been selecting for growth and carcass merit rather than becoming more efficient in other areas of production such as reproduction. Reproductive management is the combination of using proven beef cattle management skills and practical economical principles to attain the most economically efficient operation possible. Improvements must be made in shortening the anestrous period of the beef cow after calving plus improving the conception rate at estrus.

Trend

Efficiency has become the new buzz word in the beef industry. Recgnizing the economical importance of reproducive efficiency in beef herds could very well be the most important aspect of a beef operation. Superior genetics and sound management decisions become insignificant if you do not have a calf to market. Establishing reproductive goals within the beef herd is the first step in improving reproductive efficiency. Cattle producers will be seeking proven ways to improve efficiency in their herds. This can be accomplished by limiting the anestrus period and getting the cow to cycling and breed as soon after calving as possible. Cattlemen must focus on the body condition score of the cow, the age of the cow, the number of days since calving, birthing difficulties, calving season, and general health of the cow. Participation in Master Cattlemen programs, workshops, seminars, and proven development programs (bull and heifer) would be a great benefit to producers.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Georgia Master Cattlemen Program
Georgia Bull Evaluation Program
Georgia Heifer Evaluation and Reproductive Development Program
Georgia Beef Quality Assurance Program

Web Pages:

www.ugabeef.caes.uga.edu
www.caes.uga.edu/commodities/animals/beef

Faculty/Staff Available to Support Programming

* **Dyer, Ted G.**

Silcox, Ronald E.

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Environmental issues are a critically important area for the poultry industry. The future growth and viability of this industry very much depends on its' ability to address important environmental issues related to poultry waste utilization, water quality, and air quality. Management of poultry litter nitrogen and phosphorous concentrations as they relate to water quality will continue to receive increased attention from regulators for the foreseeable future. As the cost of energy continues to climb with corresponding increased in fertilizer prices, the use of organic fertilizers such as poultry litter will also increase. Assuring the proper use of the material to meet crop production needs while not increasing environmental pollution potential will continue to be a challenge for the industry.

Trend

Training the poultry industry on effective environmental management practices and educating the general public concerning the issues of nutrient management, nutrient balance, and sustainable water quality continue to be of high priority. Poultry growers and industry representatives continue to need training in order to emphasize the importance of proper soil and manure sampling procedures, calibration of manure application equipment, erosion control strategies, mortality disposal practices and nutrient application and storage Best Management Practices (BMPs).

With assistance from county agents and extension specialists, the industry-implemented nutrient management planning program will continue to have a positive impact on the environment by helping farmers develop and implement nutrient management plans designed to protect Georgia water quality and to enhance environmental stewardship efforts.

Resources Available to Support Programming

Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Web Pages:

www.poultry.uga.edu

Faculty/Staff Available to Support Programming

* **Ritz, Casey W.**

Dunkley , Claudia

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Both commercial producers and home gardeners continue to show increased interest in organic techniques. Readily available information on the internet has probably fueled concern about pesticide residues on food. Even if consumers do not understand the technical aspects of pesticide risks, they are left with an uneasy feeling about the food their family consumes.

Trend

According to Business News Daily (4/23/12), the organic food industry continues to grow at about 10% per year, outpacing the growth of conventional agriculture. The organic sector has surpassed $30 billion/year.

Although organic production in Georgia has increased, growers are probably missing economic opportunities.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Web Pages:

http://www.caes.uga.edu/extension/clarke/anr/documents/Organicgardening.pdf

http://extension.uga.edu/agriculture/organic/

organic.uga.edu/

Faculty/Staff Available to Support Programming

* **Guillebeau, L. Paul**	Little, Elizabeth L.
	Gaskin, Julia W.

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

The number of local fresh market fruit and vegetable growers who use organic production methods has increased exponentially in Georgia over the past ten years. Some crops can be grown with few pest problems while other crops are presenting a challenge under Georgia conditions. Cucurbits and tomatoes are high value spring/summer crops for the local fresh market, but a complex of pest problems are limiting production of each. Improvements are needed in the recommendations for organic pest management under Georgia conditions.

Trend

Organic growers often cannot produce a satisfactory yield in certain crops due to pest constraints. Opportunity exists to refine and improve organic pest management methods under Georgia conditions through experimentation and observation, combined with refinement of existing information. The availability of information on organic pest management is limited, especially under southeastern conditions. Publications with management schedules and recommendations that reduce pest impact are needed to improve grower profitability.

Resources Available to Support Programming

Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Faculty/Staff Available to Support Programming

* **Little, Elizabeth L.**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

The cost of producing peanut has continued to escalate. The price producers receive for a ton of peanuts is set at $355, unless they can get a contract for a better price. The best contract price is most years is only about $400-425 per ton. Several production inputs have a significant cost increase associated with them.

Trend

Most of the more recently released peanut cultivars have larger seed than the cultivar that was planted from the mid 1990's until 2009. It takes approximately 30-40 pounds more seed per acre for these new cultivars. The additional cost per acre for seed alone is about $25. These new cultivars also have a higher calcium requirement, which means a needed application of calcium sulfate. This additional cost is about $30 per acre. Therefore, the new cultivars cost producers, on average, about $50-55 more per acre to plant. Profit margins are already razor thin. We have initiated applied research trials to fine tune the seeding rate and caclium requirement for these new cultivars in an effort to help producers increase their profit potential.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Faculty/Staff Available to Support Programming

* **Beasley, John P.**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Two years of record high pecan prices have led to a pecan acreage increase of 10,000 acres or more since 2010. While much of this planting involves existing large producers, there are many new producers who are planting smaller acreages as well.

Trend

Cultivar selection, fertilizer and irrigation management,tree spacing, and weed managemnt are keys to successful development of the orchard planting into a productive pecan orchard. Several tools are available for use in providing producers with this information including extension bulletins, handbooks, and videos.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

A DVD of the recent Beginners Pecan Production Course will be available in late 2012.

Web Pages:

http://www.caes.uga.edu/commodities/fruits/pecan/

Faculty/Staff Available to Support Programming

* **Wells, Marvin Leonard**	Hudson, William G.
	Brock, Jason H.

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

The current economic boom in the pecan industry brought on by the emerging Chinese market has generated great interest in pecan production. This, in turn, has led to an increase in the planting of new pecan orchards in the past 2-3 years. A 2010 survey indicates that from 3000-5000 new acres of pecan have been planted throughout the state during the 2009/2010 winter alone. Much of this planting has been done by individuals who have never grown pecans before or by those who have not planted new trees in many years. As a result, there is a need to disseminate information on proper care and management of new pecan trees to those attempting to plant new orchards.

Trend

In order to enhance profitability, growers must utilize the best available management practices to enhance growth and production of young trees. Many pecan cultivars under current management regimes now reach bearing age relatively early (4-6 years) as compared to the cultivars and managment practices in place 20 years ago. We have initiated research to evaluate the best methods of orchard establishment including planting nursery trees vs. transplanting large trees, fertilizer management, spacing, irrigation, etc. This information can be of benefit to new and experienced pecan growers alike in enhancing their profitability.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Web Pages:

http://www.tifton.uga.edu/ugapecan/

Faculty/Staff Available to Support Programming

* **Wells, Marvin Leonard**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Participation in nationally recognized Quality Assurance programs is being required of swine producers wishing to sell product to various packers and of youth wishing to participate in many swine shows. These programs continue to evolve and producers need to make sure they stay current with the latest version of the program.

Trend

Packers continue to expect an increased level of participation in the National Pork Board (NPB) quality assurance programs. Some of these program have very specific training, testing, and verification requirements. Participation in these programs, while voluntary, will be necessary for producers who wish to market product to the major packers. Producers are expected to renew their certifications every 3 years.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Web Pages:

http://www.pork.org/certification/default.aspx

www.ads.uga.edu

Faculty/Staff Available to Support Programming

* **Dove, C. Robert**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Organic production has increased 10-fold since 2001 with increased interest among consumers. It used to be organic food consisted of a few items in the produce section. Now just about every aisle in the supermarket has some item that is organic. This includes canned items, herbs, fresh produce, dairy products, and the list continues to grow. As an example, last year it was estimated that 450 acres of organic Vidalia onions were produced in the state.

Organic production and agricultural sustainability present a myriad of problems. This includes new production practices including fertilization, weed control, pest management, labor, and marketing.

The increased interest in organic and sustainable production has led to greater funding opportunities for research, extension, and education. The federal government has committed more resources in this area. There are a wide array of problems that need to be addressed in this area.

Trend

The University of Georgia has undertaken to increase capacity among a selection of county agents so they may act as regional specialists in organic production. Publication updates and new publications addressing specific issues in sustainability and organic production have been developed or need to be developed.

There is a wide array of research projects that need to be addressed to increase organic and sustainable agricultural production. One of the most limiting factors to adoption is weed control. Precluding the use of herbicides requires the need to develop new systems and methods of production. Soil productivity can suffer without timely application of fertilizers. Improving overall soil fertility over the long term by changing the soil's characteristics is a challenge particularly in the warm humid conditions of Georgia and is further exacerbated when attempting to make these changes over a large area.

The organic certificate program and the newly proposed urban agriculture certificate program should help train new students in this emerging area. Organic and sustainable production is still in its infancy and will take many years to reach its full capacity. This is evident when comparing the number of organic acres to the number of vegetable acres in the state (˜3,000 acres versus ˜150,000 acres).

Resources Available to Support Programming

Individual Assistance / Consultations

Web Pages:

http://www.caes.uga.edu/topics/sustainag/
http://www.ams.usda.gov/AMSv1.0/nop
http://attra.ncat.org/
http://www.georgiaorganics.org/

Faculty/Staff Available to Support Programming

* **Gaskin, Julia W.**
* **Boyhan, George E.**

Hartel, Peter Gary

Risk-Efficient Fumigant-Mulching System Alternatives for Bell Pepper Production

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Methyl Bromide (MB) was undeniably one of the best compounds/products used for integrated pest management. In 1992, however, it was defined as an ozone depleting substance. The production of MB and all ozone depleting substances was to be discontinued by January 1, 2005 except for those states or countries that were granted a Critical Use Exemption (CUE).

Trend

Fruit and vegetable production is a $1.3 billion industry in Georgia. Fruit and vegetable growers need to seek the best substitute and alternative production practices including fumigant-mulch systems to replace methyl bromide that increase both yield and profitability and also manage risk.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Faculty/Staff Available to Support Programming

* **Fonsah, Esendugue Greg**

Escalante, Cesar L.
Culpepper, Stanley

Stated Effectiveness of Tomato-Spotted Wilt Virus Management Tactics

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Tomato spotted wilt virus (TSWV) is a major disease affecting tomato and pepper production in the Southeastern US. Multistate survey results show that 61% of tomato producers and 78% of pepper producers experienced TSWV on their farms during the past five years. Losses in tomato production in Georgia over the past decade is estimated at over $300 million.

Trend

Research is needed to investigate management regimes to effectively control TSWV including reflective mulch, resistant cultivars, imidacloprid, and Actiguard use in pepper and tomato production. Education is needed to translate research to workable on-farm solutions for producers.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Faculty/Staff Available to Support Programming

* **Riley, David G.**
* **Fonsah, Esendugue Greg**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

World grain production causes price flucuations from year to year that make it difficult for Georgia grain producers to consistently produce grain at a profit and sustain enough grain production to meet market demands for local markets.

Trend

Wheat and corn will continue to experience price flucuations as world use (other than the U.S.) and production vary with world market prices. The trend of increasing irrigation use in corn has significantly improved the yield stability of corn in Georgia though disease pressure continues to reduce the profit potential. Increasing purchases of corn for use in ethanol production both in the U.S. and in Georgia will sustain the local basis and give growers the opportunity to store corn in the short term and sell corn during a better pricing environment. Recent studies in Georgia are providing data on the effects of using pesticides and biological control agents to reduce the impact of biotic stresses such as disease, insects and particularly Aspergillus, the fungus responsible for aflatoxin. In addition, the development of water sensor technology promises to improve the efficiency of irrigating corn in Georgia.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Web Pages:

www.georgiagrains.com

Faculty/Staff Available to Support Programming

* **Lee, R. Dewey**

Yager, Radford T.
Kemerait, Robert C.
Buntin, G. David

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Feed costs remain high in the southeast. Many swine producers are finding that they can reduce feed costs by using alternative feed ingredients. While these ingredients will reduce feed costs, there are some risks and special considerations that producers need to be aware of. Several of these ingredients can only be used in limited amounts and some of them contain potentially toxic compounds. Swine producers should request an analysis of these feed ingredients prior to using them in their diets. Swine producers need to use extra care when feeding alternative feed ingredients.

Trend

Swine producers are relying more heavily on distillers dried grains and solubles (DDGS) and a number of other by product and co-product feed ingredients. Each of these products has specific limitations as to dietary inclusion rates and cost benefits. Some of these products have the potential to be variable in quality and may contain anti-nutritional factors. Nutritional quality varies depending on the plant it is produced at. Some plants have started further processing DDGS in an effort to capture more value from the product. These plants are removing significant amounts of oil from the product, thus making it less attractive as a feed ingredient. Producers need to be aware of quality and nutrient makeup of these products when using them as feed ingredients.

Resources Available to Support Programming

Fact Sheets / Departmental Publications
Individual Assistance / Consultations

Web Pages:
www.ads.uga.edu

Faculty/Staff Available to Support Programming

* **Dove, C. Robert**

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Due to several economic, social, and climatic factors, input cost for cattle have increased significantly in recent years. This has forced beef producers to reevaluate their operations to maintain economic livelihood. One of the largest costs associated with these operations is the feed bill. Many producers are looking for alternative feeding strategies, such as utilizing byproducts to decrease the cost associated with feeding cattle. Byproduct feeds are readily available in Georgia due to the close proximity of several industries (e.g. ethanol, corn milling, and cotton).

Trend

Beef producers are exploring alternative methods of feeding cattle to minimize feed cost. These producers want to blend rations, themselves or through a feed mill, utilizing byproducts. Byproducts vary greatly in nutrient and moisture content. As the interest in byproducts grows, county agents and producers are requesting information and decision aides to assist in the selection and formulation of rations containing these products.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Decision-aids

Web Pages:

www.secattleadvisor.com
www.georgiaforages.com
www.ugabeef.com
www.ads.uga.edu

Faculty/Staff Available to Support Programming

* **Stewart, Lawton**
* **Bernard, John K.**

Silcox, Ronald E.
Lacy, R. Curt
Knight, Carole Hicks
Hancock, Dennis W
Dyer, Ted G.

State Issue: Agricultural Profitability and Sustainability *ANR*

Description

Winter cover crops are a recommended agronomic practice to greatly reduce soil erosion, and to recycle nitrate, potassium, and other nutrients left over from the previous crop, thereby reducing fertilizer needs for the next crop. Winter cover crops also reduce nutrient runoff from crop production fields by protecting the soil surface from eroding rains and by increasing soil organic matter to greatly improve water infiltration and storage due to better soil quality. In addition, legume cover crops have the additional benefit of fixing additional plant available nitrogen for the following crop. The nitrogen that becomes available for the summer crop as the winter cover crop decomposes in the soil has been difficult to estimate. Recently, a new nitrogen availability calculator has been developed by UGA that predicts the amount of nitrogen that will be available to the following crop. This nitrogen availability calculator has the potential to predict more accurately how much additional nitrogen fertilizer will be needed from other sources to ensure adequate nutrition for the next summer crop.

Trend

Fertilizer prices for nitrogen, phosphorus, and potassium have increased more than 100% in the past five years. About 1.4 million tons of fertilizers are sold in Georgia. Assuming a retail price of $500 per ton, the total fertilizer cost to Georgia farmers is $700 million. Reducing the nitrogen needed by 40 pounds per acre (easily possible for a cover crop) for one million acres of cotton would save Georgia farmers 20 million dollars at today's fertilizer costs. Because fertilizer is the major cost for producing most crops, producers will seek new ways to reduce their fertilizer inputs, but being careful to ensure that crop nutrition needs are adequately met. Because cover crops can reduce both the loss of nutrients by leaching and losses due to erosion of soil, we can expect producers to increase the use of winter cover crops. The nutrients phosphorus and potassium will cycle relatively efficiently as cover crops decompose, but the availability of nitrogen from decomposing cover crops is more complex and difficult to estimate because it depends on many interacting factors. The nitrogen availability calculator takes into account the set of interacting climatic, cover crop properties, and soil properties to estimate the amount of plant available nitrogen that is released over time and becomes available for the summer crop. This amount of nitrogen is then considered to directly reduce the amount of nitrogen needed from other nutrient sources. In order to use the calculator, properly obtained samples of cover crop and soil must first be submitted to the laboratory for analysis of inputs needed for the calculator.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Web Pages:

http://aesl.ces.uga.edu/mineralization/

Faculty/Staff Available to Support Programming

* **Gaskin, Julia W.**

Kissel, David E.

State Issue: Animal Production and Protection *ANR*

Description

The Cooperative Extension Service is usually the first point of contact for pond and lake owners and local governments seeking technical assistance for water management. Fish kills, aquatic vegetation control, pollution abatement, and fish population management are the major issues brought to the Extension Service by Georgia producers and the extension agents who assist those producers. Specialized information on aquatic animals and plants, and the water they live in is needed to make rapid responses to their clients. The Georgia climate may be changing from drought to a period of more rainfall. Fish pond water levels fluctuate causing changes in management requirements. Support is also needed for private pond consultants and aquatic herbicide applicators, including training and referrals.

Trend

Problems or cases are recieved by electronic media including the Distance Diagnostic system, samples for analysis, and site visits. Workshops were held to educate County Extension Agents, pond consultants, herbicide applicators, and private pond owners about fish diseases, sportfish pond management, and aquatic weed control. Publications are updated or developed to be distributed through the Extension system and a web site is maintained to direct clients to information and a pond consultant list.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

The Distance Diagnostic System is available for county agent use to request information about individual cases.

Web Pages:

http://extension.uga.edu/agriculture/animals/aquaculture/

Faculty/Staff Available to Support Programming

* **Burtle, Gary J.**

State Issue: Animal Production and Protection *ANR*

Description

The availability of incandescent bulbs may be reduced in the near future in an effort to encourage consumers to utilize bulbs that are more energy efficient. It is not as simple as just putting a newer bulb, because bulbs differ in lumen output and dimming ability which can negatively impact bird performance.

Trend

Lighting in the broiler house can account for 15-30% of a producers energy consumption in a given house. It is of interest to utilize light bulbs that are more energy efficient. Light intensity at bird level, cost of the bulbs and bulb life will impact both bird performance and the poultry farmer's net income. Therefore, poultry producers should choose a bulb that will give them the proper light intensity at floor level, is energy efficient, can dim well and has a long life in the poultry house environment.

Field evaluations are underway to determine which kinds of bulbs will meet the lighting demands of a poultry house. Extension offices would need materials on hand to explain which bulbs are best and the positive and negative issues that are associated with each.

Resources Available to Support Programming

Web Pages:

www.poultryventilation.com

Faculty/Staff Available to Support Programming

* **Worley, John W.**
* **Fairchild, Brian D.**
* **Czarick, Michael**

State Issue: Animal Production and Protection *ANR*

Description

Dogs and cats are becoming more valued by Americans, incorporated as family members. As these animals join our households, they bring with them their pests, including fleas and ticks.

Trend

Pet-owners will discover that suppressing fleas and ticks is more challenging than anticipated, requiring understanding of life cycles and pest ecology to adequately address the problem. After trying all the Web-recommended folk remedies, people eventually contact their Extension office for help. Being human, they want quick and simple solutions, so are frustrated when flea and tick control turns out to be more complicated and involved than they anticipated. Extension can assist pet-owners by providing clear procedures for flea and tick elimination, along with realistic outcome expectations.

Resources Available to Support Programming

Faculty/Staff Available to Support Programming

* **Hinkle, Nancy C.**

State Issue: Conservation & Management of Natural Resources *ANR*

Description

In a case filed before the CO Pueblo County District Court 10th JD, Filing ID: 43626926, 401 certification/antidegradation regulations were used to deny a water withdrawal permit on the Arkansas River, thus linking instream flow to water quality regulations. Reduced stream flows have water quality impacts by reducing the ability to assimilate (dilute) pollutants.

Trend

Reduced stream flows have been linked to water quality regulations because withdrawals can reduce the ability of a stream to assimilate (dilute) pollutants. Agricultural water withdrawal permits could be regulated for impacts on water quality.

Resources Available to Support Programming

Faculty/Staff Available to Support Programming

* **Henning, Frank P.**

State Issue: Conservation & Management of Natural Resources *ANR*

Description

Georgia is the 9th most populous state in the US, with a population of 9.5 million people and that population is expected to grow to 16 million by 2030. This population increase is putting increasing pressure on our natural resources which provide numerous critical ecosystem services including food and fiber production, maintenance of water quality and quantity, air quality and wildlife and biodiversity. Farms and woodlands are key to maintaining these services and economic sustainability in Georgia.

Trend

Increases in impervious surfaces due to poorly planned development leads to losses in water availability to farmers and foresters both due to changes in water quality and quantity. Local governments have the opportunity to better plan for growth and the protection of critical green infrastructure which include working landscapes. By working with local governments to identify and target natural resource restoration and protection, land owners and local governments can enhance and protect water resources and minimize costs of providing these services to communities. Land use data and planning tools are available to assist communities with their planning efforts.There are a number of funding opportunities for land owners through the farm bill that can use to help maintain agricultural and forest landscapes and protect water quality and biodiversity.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Web Pages:

http://narsal.uga.edu
http://landuse.uga.edu

Faculty/Staff Available to Support Programming

* **Kramer, Elizabeth A.**

State Issue: Conservation & Management of Natural Resources *ANR*

Description

Water resources in Georgia is a commodity that we all take for granted. Many Georgia residents, including farmers, do not always treat water as a limited resource until that resource is in limited supply. In the farming community, water is one of the items needed to produce a viable crop. In situations where irrigation is available, management of that water can be beneficial to the farmer as it relates to: 1) conservation of water, 2) proper use of water and 3) proper placement of water.

Trend

Water management in irrigation situations can potentially save the farmer water resources, nutrients and distribute water where it is needed. Soil moisture sensors have been used for many years to monitor water in the soil profile. As we look at ways to better manage water resources, these same and newer type soil moisture sensors can be used to help farmers of vegetable crops as well as open field commodity field crops know where the water is in a soil profile. Soil moisture sensors can be placed in fields at and in various configurations to provide the farmer with information that can help them better manage water resource in the soil profile.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Individual Assistance / Consultations

Faculty/Staff Available to Support Programming

* **Hawkins, Gary L.**

State Issue: Conservation & Management of Natural Resources *ANR*

Description

Proposed water quality standards set numeric limits on the amount of nutrient pollution allowed in Florida's inland waters. These regulations include downstream protective values that may increase regulation on waters that flow from Georgia into Florida.

Trend

As a water body becomes impaired, the existing aquatic ecosystem changes for the worse, fish or wildlife habitat is degraded, and in extreme cases public health may be threatened. Water body degradation and Nutrient regulations may expand the need for water quality education in Georgia.

Resources Available to Support Programming

Additional Resources:

http://edis.ifas.ufl.edu/pdffiles/SS/SS52800.pdf

Web Pages:

http://waterquality.ifas.ufl.edu/NNC/nnc.html

Faculty/Staff Available to Support Programming

* **Henning, Frank P.**

State Issue: Conservation & Management of Natural Resources *ANR*

Description

Considerable interest has developed in the U.S. and particularly in Georgia in reducing our dependence on foreign oil. There are many processes (most untested) that convert biomass to some type of energy. The environment in Georgia is well suited for biomass production. Current biomass of interest (excluding wood) includes miscanthus, switchgrass, napiergrass, energycane, bermudagrass and others. However the question remains, can Georgia producers grow the biomass profitably and sustain the emerging industry while at the same providing the public with a cost reasonable form of energy.

Trend

Current estimates to produce cost competitive bioenergy demonstrate that price paid per ton of feedstock may well be below the cost of production of many of the potential feedstocks. The challenge will be to produce enough feedstocks at a profit to sustain the bioenergy industry over time to allow the industry to mature. Studies in Georgia have begun to determine the production practices that generate maximum economic yield of feedstocks such as switchgrass, miscanthus, napiergrass and energycane.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Speakers and Presenters for County Based Training Opportunities

Faculty/Staff Available to Support Programming

* **Lee, R. Dewey**	Buntin, G. David

State Issue: Conservation & Management of Natural Resources *ANR*

Description

Concerns about water quality and quantity continue to impact urban agriculture. Outdoor water use issues will continue to be of critical importance to the industry.

Trend

The Georgia Water Stewardship Act which went into effect statewide on June 2, 2010 appears to have addressed many of the industry's concerns by allowing outdoor watering for purposes of planting, growing, managing, or maintaining ground cover, trees, shrubs, or other plants. However, given the industry's high visibility and public concern for high quality plant material and landscapes, the industry will look toward Extension for unbiased information on outdoor water use, irrigation, BMPs, and applied research on urban water issues.

Resources Available to Support Programming

Fact Sheets / Departmental Publications
Individual Assistance / Consultations

Web Pages:

www.gaurbanag.org
www.ugaurbanag.com

Faculty/Staff Available to Support Programming

* **Hurt, Todd**
* **Bauske, Ellen M.**

Landry, Gil W.

State Issue: Conservation & Management of Natural Resources *ANR*

Description

Electricity is an integrated part of our daily lives. Farmers needing water in remote locations, away from a power line, may have limited access to powerlines and therefore electricity. In situations such as water for livestock in remote locations, farmers typically would use a gas or diesel powered generator to provide power for pumps supplying water to livestock. The operation of such a generator cost money and possibly more importantly – personnel time - to provide water to the livestock. To supply needed water supplies, alternative energy in the form of solar power can be used to supply the needed electricity to pump water into water storage vessels. The solar powered pumping system operates without fuel and frees the farmer from having to either haul water to the livestock or manually operate generators to pump water.

Trend

Electricity from solar photovoltaic cells (solar electric power) as a whole only produces about 2% of the total power in the US. It is generally thought that there is not enough solar power available in Georgia. However, in situations where electricity is needed and there are no powerlines in the general area, solar power can potentially supply the needed electricity for purposes such as livestock watering, irrigation or other water needs. Solar power systems are designed like any other power supply, but there are some limits that have to be accounted for in the design of the pumping system. For livestock watering systems, when the number of livestock is known, the pressure head required and other information specific to water pumping, a solar powered system can be designed. In remote locations, solar powered systems may pay for themselves as soon as the initial switch is "flipped".

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Individual Assistance / Consultations

Faculty/Staff Available to Support Programming

* **Hawkins, Gary L.**

State Issue: Conservation & Management of Natural Resources *ANR*

Description

Proper management of water resources is critical for all sectors of Georgia's economy. Protection of our existing water resources, conservation and efficient use, and maintenance of the environmental flows needed to sustain wildlife and aquatic plants are all issues that Georgia is trying to address through Statewide water planning process. This planning process is being implemented regionally and will require that all stakeholders have access to scientifically sound information on which to make decisions.

Trend

While Cooperative Extension has provided programming in the water resource management area for decades, it is imperative that we continue to aid in public education in a number of areas including:

Water Conservation: While conservation has always been important during droughts, the growth in population has stretched our ability to maintain consistent supplies in several areas of the State. In addition, new state policy including recently passed water conservation legislation, the State Water Conservation Implementation plan, and the need for regional water planning councils to balance water supply with demand, will all create demand for improved technologies and educational programs to conserve water. Extension has much of this type of information related to household, agricultural, and industrial water use. Master gardeners and others working with Extension are ideal conduits for implementing educational programs related to conservation.

Water Quality: The state water planning process also addresses water quality and increasing emphasis is being placed on protecting water from non-point sources or pollution including urban and suburban runoff, agricultural and forestry activities, and runoff from impervious surfaces. Extension must be ready to help local governments and others to develop sound policy and to educate the public on protecting water resources from pollutants such as sediment, nutrients, pathogens, and other contaminants. Non-regulated sources such as runoff from farms, yards, and gardens, seepage from septic tanks, and animal feeding operations will require increasing educational and technical assistance. Low impact development and green building will help to enable continued economic develop in areas where waters are impaired.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Agent training through regional programs

Web Pages:

www.srwqis.tamu.edu
Water banner program website

Faculty/Staff Available to Support Programming

* **Risse, L. Mark**

Poultry Processing and Safety Training for small, medium, and large poultry processors in Georgia

State Issue: Food Processing, Protection & Safety *ANR*

Description

Animal agriculture is the largest sector of agriculture, contributing over $5.8 billion to Georgia's farm gate value (2010 Georgia Farm Gate Value Report, CAED, 2011). On an average day, Georgia produces 24.6 million pounds of chicken, giving poultry an economic impact of almost $4.6 billion in 2010. Assuring that the poultry sector remains healthy and productive is one of the top priorities.

Post-harvest meat quality defects and bacterial contamination are two of the biggest problems for Georgia's poultry processors. Poultry meat products are sensitive to processing technology, ingredient formulations, and micro¬organism contamination by bacteria, viruses, and parasites. In recent years there has been a growing demand from consumers for minimally processed, high quality and wholesome meat products to consumers.

For the production of high quality and wholesome poultry meat products, poultry processors in Georgia depend largely upon the training and educational needs of their employees. Although, other programs such HACCP provides tools for monitoring the safe production of food, adequate training and education serves as pillar for success of Georgia's poultry food operations. In addition, government regulations have required poultry meat processors to have comprehensive food safety plans for nearly 15 years. New regulatory requirements for intermittent evaluations of foodborne pathogens such Campylobacter and Salmonella will force poultry processors to invest in extensive training and employee education to meet these goals.

Trend

Poultry Processing and Safety Training for small, medium, and large poultry processors in Georgia

State Issue: Food Processing, Protection & Safety *ANR*

Unlike the production of ready-to-eat (RTE) product in which a lethality treatment destroys pathogens of public health concern, slaughter and dressing operations do not have treatment interventions capable of destroying all pathogens. Salmonella species alone are responsible for an estimated 93.8 million cases of foodborne disease in humans and an average of 155,000 deaths annually worldwide. Poultry and poultry meat products are considered one of the main carriers of this organism and represent a significant share of the attributed sources of salmonellosis in humans.

USDA/FSIS expects plants to have food safety systems designed to ensure birds are processed in a manner that reduces possible contamination during slaughter and dressing. FSIS also expects plants to have treatment interventions in place to reduce the level of incoming contamination on the exterior and interior of the birds throughout the operation. The procedures and treatments the plants use to reduce contamination should be documented as part of their food safety systems. A comprehensive Food Safety education and training program to control Salmonella spp. and Campylobacter spp. in poultry meat may play a pivotal role in the poultry production facilities in Georgia for successful implementation of food quality and safety initiatives, and reduction of foodborne disease.

Our Poultry Processing and Safety workshop offers education and training in the latest developments in poultry processing, stimulates innovative approaches for improving poultry safety, and highlights cutting-edge technologies in poultry processing and ingredient technologies to improve the safety and quality of poultry meat products. Knowledge gained from this workshop can assist in new product development, quality and safety enhancement, obtaining SQF/GFSI certification, increasing profits with alternative markets, and maximizing the productivity of poultry processing facilities. Special topics for this new event include the new FSIS regulations pertaining to poultry slaughter and safety, the environmental impact of poultry processing, and using poultry protein in wet pet foods.

Participants of this workshop will have opportunity to examine a wide range of topics including basic processing technology, poultry meat chemistry, and product development. The program consists of a series of lectures, demonstrations and panel discussions to provide participants with information about novel technologies, equipment and ingredients for the development of new poultry-based, value-added products. The course content has been designed to deliver different components of poultry processing, processing methods, food safety practices, marination techniques, novel technology, and alternative markets for poultry products. Nationally and internationally- recognized poultry scientists and industry specialists will provide information about the latest poultry processing technology, ingredient technology, product quality, meeting federal and state regulatory requirements, and processing techniques. This program is designed for poultry processors, plant managers, quality assurance personnel, production supervisors, field inspectors, marketing directors, and anyone responsible for designing and implementing with poultry processing and safety programs.

Resources Available to Support Programming

Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:
Workshop and Training

Faculty/Staff Available to Support Programming

* **Singh, Rakesh K.**
* **Mohan, Anand**

Hurst, William C.

State Issue: Food Processing, Protection & Safety *ANR*

Description

Concern over foodborne diseases, such as the outbreak of Salmonella in peanut butter (2007, 2009) and Salmonella contamination in pecan pieces resulting in a recall (2010), has prompted the passage of the Food Safety Modernization Act, (FSMA) by Congress on January 4, 2011. This new legislation represents the most significant expansion of food safety requirements in the U.S. since the original enactment of the Food, Drug and Cosmetic Act in 1938. The focus of this new law will be to concentrate FDA's resources on the prevention of foodborne diseases, rather than reacting to food safety outbreaks.

Trend

Salmonellosis in peanut butter produced by the Peanut Corporation of America in Blakely, Georgia, in 2009, became one of the nation's worst outbreaks of foodborne disease in recent years. Nine people are believed to have died and an estimated 22,500 were sickened by eating this contaminated product. The contaminated peanut butter was also used by dozens of food manufacturers to make hundreds of other products, which then had to be located and recalled.

With the passage of FSMA, peanut and tree nut (pecan) growers, warehouses, shellers, hullers, dehydrators, processors (blanchers) and manufacturers must begin to establish a Hazard Analysis Risk-based Preventive Control Plan (HARPC), essentially a HACCP-based program, for their operations to be in compliance with this new law.

Facilities must identify all potential hazards, designate and implement control measures to minimize or prevent the risk of health-threatening hazards from occurring, and have a plan in place to take corrective actions when necessary. Facilities must also validate that the control measures they are using are appropriate for their operations, before implementing their HACCP-based food safety plan. The culmination of this work will include a written food safety plan that is made available to FDA and state regulators during inspection activities.

However, before nut handlers and facilities can create a HACCP-based food safety plan that is specific for their operations, they must receive appropriate training to develop a product-specific as well as plant-specific food safety plan. To meet this challenge, the Food Science Extension Outreach Program has developed and held a 2½ day, prevention-oriented HACCP workshop for nut processors, beginning in 2009. Participants learn the mechanics of how to put their product/ plant-unique plan together – something that can be taken back to their own facilities for implementation. The success of this workshop can be measured by consistently high ratings on the evaluation forms over the past three years, and the fact that the fourth consecutive program will be held here at UGA in August 2012.

While efforts to train nut processors (blanchers) and ingredient manufacturers (peanut butter, etc.) have been successful over the past three years, there is a need to create a more specific program for nut growers, warehousers and shellers, which are Georgia county agents' traditional clientele.

Therefore the goal of Food Science Extension is to expand this HACCP-based workshop to encompass the needs of this area of the nut industry. The primary role of the county agent will be to ensure that these groups are effectively using GAPs (Good Agricultural Practices) and GMPs (Good Manufacturing Practices) in their operations. These two areas are important prerequisites to the HACCP-based food safety plan.

State Issue: Food Processing, Protection & Safety *ANR*

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Annual HACCP training for Nut Processors workshop

Web Pages:

http://www.caes.uga.edu/departments/fst/extension/EFS_training.html

Faculty/Staff Available to Support Programming

* **Hurst, William C.**

State Issue: Food Safety *ANR*

Description

The USDA-Food Safety Inspection Service has announced its intention to institute a new Campylobacter regulation for raw broiler chicken carcasses. This regulation requires that individual poultry processing plants keep the prevalence of Campylobacter on chicken carcasses to less than 46.7%. This will be difficult as Campylobacter is readily found in poultry flocks and is difficult to eliminate entirely during processing.

Trend

Companies will begin to have difficulty meeting this requirement. Many of the interventions used to control Salmonella on poultry, such as vaccines or bacteriophages, are not effective against Campylobacter. This means that the companies will need assistance in trying to develop interventions specifically designed to control Campylbacter.

Resources Available to Support Programming

Fact Sheets / Departmental Publications

Faculty/Staff Available to Support Programming

* **Russell, Scott M.**

Food Safety Training for Small to Medium Food Processors in Georgia

State Issue: Food Safety *ANR*

Description

According to the 2009 U.S. Grocery Trends prepared by the Food Marketing Institute, consumers view food safety as their most serious health concern. Over 53% of the people surveyed said that pathogenic bacteria or germs were their most serious health threat. Consumer confidence in the safety of our food can be bolstered by consumer awareness and educational programs on safe handling practices. New government regulations are requiring all food processors to have a comprehensive food safety plan for their operations, but many processors do not have the expertise to prepare this written plan.

Trend

Recent foodborne illness outbreaks include the 2009 Salmonella outbreak in products containing peanuts and pistachios, potential inputs of the 2008 melamine-contaminated infant formula and related dairy products from China, and the 2008 Salmonella outbreak in peppers and imported cantaloupes. Government and the food industry are researching comprehensive ways of detecting or preventing such problems before the food arrives at the consumer's table.

Establishment of written standard operating procedures, comprehensive sanitation programs and employee hygiene training can help to prevent potential contamination of most food products. Our food safety workshops offer hands-on training in preparing a comprehensive food safety plan that is tailored specifically to a food commodity plant or operation.

More and more food product buyers are requiring food safety audit documentation and HACCP certification from their processors. The UGA Extension Food Science faculty are certified lead instructors with the International HACCP Alliance and have more than 10 years experience in such training. Commodity-specific HACCP training are offered annually for fresh and fresh-cut produce, meat and poultry, and peanut/pecan/ tree nut processors.

Resources Available to Support Programming

Fact Sheets / Departmental Publications
Individual Assistance / Consultations

Additional Resources:

Training courses presented annually

Web Pages:

www.EFSonline.uga.edu - click on calendar link

Faculty/Staff Available to Support Programming

* **Mohan, Anand**
* **Hurst, William C.**

State Issue: Housing and the Near Environment *ANR*

Description

Some people experience sensations of insects crawling on or burrowing in their skin. Typically they also see tiny specimens that they credit as the agents causing these feelings. Although they claim that millions of these creatures are attacking them, they are unable to provide diagnosticians with samples of the pest. This condition is known clinically as Ekbom Syndrome (colloquially “delusory parasitosis”) and is a psychological condition with an unknown etiology.

Trend

'Mystery bugs' is one of the most frustrating situations encountered by Extension personnel. Despite the agent's best efforts, the client is never cured and the case is never resolved. This is a situation in which Extension must recognize its limitations and, after providing the client with appropriate assistance, refer the individual for medical follow-up.

This condition is most prevalent in middle-aged and older individuals, with female sufferers outnumbering males approximately two to one. Onset appears to be precipitated by a major life event (job loss, death in the family, financial pressure, etc.) causing psychological trauma, stress, anxiety, or depression.

Thus, it can be anticipated that Ekbom Syndrome cases will increase in prevalence as our population ages, as the economy stagnates, and as veterans and their families deal with post-traumatic stress and challenges of reintegrating families. Currently it is estimated that over 5,000 Georgians suffer from Ekbom Syndrome.

Cooperative Extension offices need to be aware of this condition and prepared to assist sufferers while recognizing limitations of Extension in dealing with a psychological problem.

Resources Available to Support Programming

Faculty/Staff Available to Support Programming

* **Hinkle, Nancy C.**

State Issue: Other Issue *ANR*

Description

Prior to 2010, the predominant cotton variety grown in Georgia was DP 555 BR. This variety or cultivar was widely adopted and produced on approximately 85 % of Georgia's cotton acreage since 2003, largely due to its indeterminate or full-season growth habit and its consistently high yield potential and stability in both irrigated and dryland environments, but especially in dryland environments. The EPA registration for the Bollgard technology expired during the summer of 2010, therefore this variety has not been grown since 2010. Due to the widespread adoption of this variety and its consistent performance, variety selection has largely been ignored for several years prior to 2010. Research and Extension efforts among the UGA Cotton Agronomists (Collins and Whitaker) are largely focused identifying replacements for DP 555 BR, evaluating yield stability and growth characteristics of new varieties, and the associated changes in management required for optimizing yield potential of these newer varieties that are planted on Georgia 1.4 million cotton acres in 2012.

Trend

The transition to newer varieties that Georgia producers are facing is still continuing despite the fact that DP 555 BR has not been planted since 2010. The release of new varieties (and the subsequent removal from the marketplace) is much more rapid due to increased competition and more rapid advancement of modern varieties. Several practices have been noted as a result of such rapid transition. First, variety diversification is becoming a standard practice by more and more producers. As our research and extension programs are currently geared toward addressing these issues, placement of cotton varieties in the appropriate environment (with regard to growth characteristics, maturity, stress tolerance, etc) has become extremely important for reaching optimal yield and fiber quality. Additionally, many of the newer varieties are accompanied by various herbicide and insect-tolerant technologies and traits which may assist or offer growers a new tool in managment of glyphosate-resistant Palmer amaranth, which has been a significant pest challenge for several years. In certain areas of Georgia, it appears that technology choices are driving variety selection over yield and quality, however yield potential and stability largely drives variety selection for most cotton acres in Georgia. We are now seeing multiple varieties comprising the cotton acreage in Georgia versus a single-variety approach that was previously used.

Many of the newer varieties appear to be slightly earlier maturing and do not appear to grow as aggressively as DP 555 BR did in the past. Growth management is now becoming more important, as a very broad aggressive management system was utilized for most acres for the past several years. DP 555 BR had the tendency to grow very vigorously despite a short-lived dry spell and a boll load. Newer varieties planted in a similar environment appear to react much differently, with less aggressive growth. Our research efforts are strongly focused on this issue, to develop tools for growers to use to maximize yield potential while avoiding both excessive growth or a premature application of plant growth regulators. Additionally, the fruiting characteristics of these newer varieties will likely have significant impact on fertility (especially nitrogen and potassium) and insect management (thrips, aphids, spidermites, caterpillars, plant bugs, stink bugs) than before, and research efforts are also focused on these aspects.

Additionally, water management of modern cotton varieties has proven to be another important challenge. Due to the large variability in fruiting characteristics, yield stability, and response to water as well as episodic drought, there is clearly a need to evaluate cotton variety response to water management and irrigation strategies in order to determine how varieties should be positioned in particular environments. Although there have been a few stable varieties identified, there still appears that there will be no "single" variety adopted on such a large acreage as DP 555 BR did, and the "lifespan" of most varieties will likely become shorter, as seed companies are now in a race to develop in release newer varieties and technologies each year.

State Issue: Other Issue *ANR*

Resources Available to Support Programming

Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:
Guy Collins and Jared Whitaker

Web Pages:
www.ugacotton.com

Faculty/Staff Available to Support Programming

* **Collins, Guy D**
Whitaker, Jared R

State Issue: Other Issue *ANR*

Description

With the recent ban on horse slaughter coupled with the down turn in the national economy, the price of horses has dropped sharply, leading to an overpopulation of horses in both the state and nation. Horse rescue groups have been on the rise attempting to place unwanted horses in permanent homes. Horse owners/breeders are less able to sell their horses to make a living, and the price of horses has become so cheap that many people are taking horses that ordinarily they would not have considered buying. As a result, there is a rise in the number of people in the state who now house horses but have very little education on how to properly care for these animals.

Trend

As horse prices continue to plummet, as both a state and a nation we are faced with an increasing population of horses with very little economic value. Horse rescue groups have attempted to fill the gap left by the closing of horse slaughter facilities; however, these organizations are not regulated by the government in any manner. Breeders and trainer who need to sell horses to have an income are no longer able to make a profit, and recreational horse owners who need to sell their horses due to tough economic times are often not able to even give their horses away. As a result, horse abandonment is on the rise as well as the placement of horses into homes of people with little to no horse experience.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Web Pages:

http://www.extension.org/horses
http://www.caes.uga.edu/publications/subjectList.html

Faculty/Staff Available to Support Programming

* **Duberstein , Kylee Jo**

State Issue: Other Issue *ANR*

Description

Because of rising food costs, environmental safety issues and a general trend towards health consciousness, people have had a renewed interest in growing their on produce. The public needs good, sound basic advice on how to garden properly and avoid the common errors that can lead to failure.

Trend

More people will seek advice and non-biased information on home gardening. Many will look for organic alternatives in preventing common problems of insects and disease in the garden. Information on vegetable varieties, cultural practices as well as truths and myths of organic gardening need to be taught to the general public. Information delivery can occur in the form of on-line publications, webinars, public meetings as well as media delivery in newspapers, radio and television. Continued agent training updates will be needed to keep personnel informed of the latest information.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Power points on home gardening, phone consultations and county programs by state specialist. Continued training for in-house personnel.

Faculty/Staff Available to Support Programming

* **Westerfield, Robert**

State Issue: Other Issue *ANR*

Description

Although the safety of drinking water for public water supplies is regulated and ensured under safe drinking water act of 1974, the safety of drinking water for private wells is the responsibility of well owners. About 95% of the 1.8 million rural Georgians rely on around 650,000 private wells for their domestic water needs including drinking water. The UGA Cooperative Extension has a significant role to play to ensure safe drinking water for these 1.8 million Georgians.

Uranium and arsenic are naturally occurring elements in some aquifers that can contaminate drinking water. The EPA's maximum contaminant levels (MCL) for uranium is 30 ppb and that for arsenic is 10 ppb. Drinking water with high uranium over a period of years can impair kidney function; arsenic in drinking water above 10 ppb is toxic and according to the USEPA, can be carcinogenic if consumed for a long time. The public health goal for both uranium and arsenic is zero, emphasizing that there is no safe level of these contaminants in drinking water. Because of this, several states have lowered their own arsenic MCL down to 5 ppb for better protection of public health.

Trend

The UGA Agricultural and Environmental Services Laboratories (AESL) recently measured uranium and arsenic at concentrations above EPA's maximum contaminant level (MCL) in some drinking water wells in Georgia. Uranium in well water originates from naturally occurring granitic bedrock located primarily in the Piedmont and Blue-Ridge regions and supplied by deep wells. Arsenic is also naturally occurring in some aquifer sediments located primarily in the coastal plain region.

In response, UGA Cooperative Extension developed and delivered special price testing (monitoring), public education, and mitigation programs for well owners. This program encouraged well owners to test their waters for uranium and arsenic. By June/07/2012, the total number of water samples tested for uranium was 898. Of these, 109 had detectable level of uranium (above 10 ppb) with 45 being above the 30 ppb MCL. One of the wells contained uranium as high as 1549 ppb, which is more than 50 times higher than EPA's MCL. All of the 45 samples exceeding the MCL for uranium were from the Piedmont and Blue-Ridge regions above the “Fall Line”. A total of 711 samples were tested for arsenic with 131 having detectable level (above 5 ppb) and 43 being above 10 ppb MCL. Of these 43 samples exceeding MCL, 41 were from the coastal plain region of the state.

Information about the existence of arsenic and uranium in Georgia well waters, their health consequences, and treatment systems to remove these contaminants from drinking water were incorporated in three water quality circulars.

The AESL's uranium testing program is in collaboration with the Department of Community Health (DCH), Department of Natural Resources/Environmental Protection Division (DNR/EPD), and US Environmental Protection Agency (USEPA). If strengthened and extended further into other counties that have potential for uranium and arsenic contamination in drinking water wells, this program would benefit well owners, UGA-CES, and concerned state and federal department/agencies (DCH, DNR/EPD, EPA) to accomplish a better protection of public health.

State Issue: Other Issue *ANR*

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:
Agent Training by AESL Faculty and Staff

Web Pages:
http://aesl.ces.uga.edu

Faculty/Staff Available to Support Programming

* **Saha, Uttam Kamar**
Sonon, Leticia S
Mowrer, Jason E.
Lynch, Dana R.
Kissel, David E.

Providing Digital Resources to Cooperative Extension County Agents and Commercial Horticulture Producers

State Issue: Other Issue *ANR*

Description

The University of Georgia, like many public universities across the U.S., lags behind the private sector in disseminating information via new technologies (e.g. web blogs, 'apps', online books). The result is that much of the information generated at the university level is not widely viewed and/or accepted, despite the importance of information derived from research and extension activities.

Trend

In 2012, myself and many colleagues across the southeastern U.S. have pushed to “saturate 'new' media avenues with university-based horticulture information”. We have developed a series of online/real-time resources dedicated to commercial ornamental horticulture production and landscape-based businesses. These resources have been or will be made available to Cooperative Extension agents and producers not only in GA, but nationally and internationally. Dr. Matthew Chappell is directly responsible for constructing and launching the Southeastern Ornamental Horticulture Production and Integrated Management Blog (http://blog.caes.uga.edu/sehp) (Launched January 1, 2012); the first university-hosted blog in the nation directed at commercial horticulture production issues. This blog features content provided by nine land-grant universities across the U.S. and a non-profit research organization (The Center for Applied Nursery Research). Additionally, Dr. Chappell has worked with Dr. Kris Braman (Entomology), Dr. Jean Williams-Woodward (Plant Pathology), and 20 other researcher and extension faculty from 8 southeastern states to construct the IPMPro Android/iPhone/iPad app (http://www.ipmproapp.com/) (Launched May 25, 2012); the first ornamental horticulture integrated pest management application app in the world. Also, Dr. Chappell has authored three chapters in the (free) online textbook 'IPM for Select Deciduous Trees in Southeastern U.S. Nursery Production' (http://wiki.bugwood.org/IPM_book) (Launched June 1, 2012 on Bugwood – will be available on iBook and Kindle Summer 2012). Finally, Dr. Chappell has co-produced with Dr. Gary Knox (University of Florida, IFAS) and released 12+ videos on sustainable nursery production that will be released in conjunction with a 'Sustainable Nursery Production Practices Website' on July 1, 2012.

Impact:

Impact for various technology-based factors is measured in the number of times a program is downloaded or webpage is accessed. These measurements are listed below:

- Southeastern Ornamental Horticulture Production and Integrated Management Blog (January 1, 2012 – June 1, 2012); 1,859 visits from 1,326 unique visitors. Projected 2012 visits are 4,461 visits from 3182 unique visitors.
- IPMPro app (May 25-June 8) 41 downloads. Projected first year downloads 1,069.
- IPM for Select Deciduous Trees in Southeastern U.S. Nursery Production free online textbook (June 1-June 8) 87 downloads. Projected first year downloads 3,969.
- Sustainable Nursery Production Practices Website and videos. Launch date July 1, 2012. No data received.

Resources Available to Support Programming

Faculty/Staff Available to Support Programming

* **Chappell, Matthew**

State Issue: Other Issue *ANR*

Description

Urban agriculture industry strongly supports the use of technology to efficiently deliver training and information to its members.

Trend

Urban Agriculture is loosely organized into several associations. Many companies work across county lines. Travel even short distances in urban areas can be time consuming and difficult. Many business owners seek educational programs and up-to-date information delivered via technology. They seek on-line resources, increased use of Internet Training Technology, and delivery of highly targeted and timely unbiased information. Extension programs adopting these technologies will be well received.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Web Pages:

www.gaurbanag.org

www. ugaurbanag.com

Faculty/Staff Available to Support Programming

* **Hurt, Todd**
* **Chance, Willie O.**
* **Bauske, Ellen M.**

State Issue: Plant Production and Protection *ANR*

Description

Rusts are the most economically important group of wheat diseases. More than $5 billion is lost to cereal rusts (leaf rust, stem rust and stripe rust) worldwide each year. The capacity of rusts to develop into widespread epidemics is well documented. Rusts have complex life cycles that involve alternate hosts and several spores' stages. Adding to this complexity are the numerous “physiological races” separable by patterns of pathogenicity and virulence on differential hosts. New races continually surface due to the rusts' ability to mutate and sexually recombine.

Stripe rust (Puccinia striiformis f. sp. tritici) is an important disease of wheat (Triticum aestivum L.), especially in cool climates. Evidence of increased aggressiveness of the disease in the United States has been reported recently. Stripe rust is an emerging disease in the state of Georgia and has been more prevalent in the southern part of the state since 2003. Leaf rust and stem rust are re-emergent destructive wheat diseases worldwide. They are likely to increase in incidence and aggressiveness.

Incidence and prevalence of leaf diseases such as Powdery mildew (Erysiphe graminis) in 2011-2012 on winter wheat was early, and high throughout Georgia. Incidence of Stagonospora nodorum (Formerly Septoria nodorum) and Drechslera/Bipolaris leaf spot are expanding.

Trend

Due to the importance of safeguarding wheat yields there will be a need to become proficient on rapid and accurate leaf and rust identification and disease management strategies.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Plant Disease Clinics available through the Plant Pathology Department.

Web Pages:

Stripe (Yellow) Rust of Wheat http://pubs.caes.uga.edu/caespubs/pubcd/C960/C960.htm

Faculty/Staff Available to Support Programming

* **Martinez, Alfredo**

State Issue: Plant Production and Protection *ANR*

Description

A recent survey estimated that the professional turfgrass and landscape industry has an annual economic impact of $3.7 billion in our state. There are approximately 1.8 million acres of turf in Georgia. Disease losses and control costs account for over $220 million annually. Due to the changes in the turf-growing environment including the climate, the root zone, nutrient use, cultural practices, fungicides available, as well as changes in the pathogen; several pathogens are in the increase in Georgia.

There are several emergent turfgrass diseases including Bipolaris, Fairy ring, Fusarium spp, Colletotrichum spp and Ophiosphaerella spp. Rhizoctonia spp causal agent of brown patch, large patch and yellow patch has been prevalent.

Trend

Due to the size and the high aesthetic standards demanded by the growing turf industrythe diseases will likely to increase in severity and incidence. Therefore there will be a need to become proficient on rapid and accurate pathogen identification and disease management strategies.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Plant Disease Clinics available through the Plant Pathology Department.

Web Pages:

Turfgrass Diseases in Georgia: Identification and Control http://pubs.caes.uga.edu/caespubs/pubcd/B1233/B1233.html ;
Turfgrass Diseases Quick Reference Guide http://pubs.caes.uga.edu/caespubs/pubcd/C891/C891.html

Centipede Decline: http://www.caes.uga.edu/Publications/pubDetail.cfm?pk_id=7946&pg=dl&ak=Plant%20Pathology
Identification and Control of Spring Dead Spot: http://www.caes.uga.edu/Publications/pubDetail.cfm?pk_id=7983&pg=dl&ak=Plant%20Pathology

Faculty/Staff Available to Support Programming

* **Martinez, Alfredo**

State Issue: Plant Production and Protection *ANR*

Description

Relative to total sales and acreage, blueberries are the number one fruit commodity in the state of Georgia, surpassing even peaches. Recently, several newly identified diseases have been identified in the Georgia blueberry production region, and these are impacting potential production. One of the diseases has been named bacterial leaf scorch, and it is caused by the bacterium Xylella fastidiosa, and is spread by sharpshooter insects. A new viral disease has also been observed, blueberry necrotic ring blotch, and it is also likely reducing yields through premature defoliation; an established viral disease, red ringspot, has been increasing in importance due to propagation from infected cuttings. The ring nematode has been newly identified as a pathogen of blueberry replant sites, and a new fungal pathogen, Exobasidium leaf and fruit spot, has now been observed as a major pathogen in numerous sites.

Trend

These diseases are either newly introduced or the result of a maturing monoculture fruit production regimen. Without regard, they need to be addressed through education and on-farm research projects.

Resources Available to Support Programming

Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Diagnosis through the disease diagnostic clinic in Athens, GA.

Web Pages:

Bacterial leaf scorch fact sheet
Blueberry nematode newsletter article (SRSFC)
Blueberry Exobasidium newsletter article (SRSFC)
Blueberry necrotic ring blotch newsletter article (SRSFC)

Faculty/Staff Available to Support Programming

* **Brannen, Phillip M.**

State Issue: Plant Production and Protection *ANR*

Description

Downy mildew is a devestaing disease of cucurbit crops such as cucucmbers and watermelon. Over the past few years, resistance has developed in some of the standard fungicde treatments that commercial growers use to control downy mildew of cucurbits, and growers now have relatively few pesticide options for controlling the disease.

Trend

In the near term, fungicde resistance is likely to continue to develop in downy mildew of cucurbits as growers rely more heavily on fewer fungicdes for disease control. In the longer term, several new fungicdes that show good activity against downy mildew are being developed by industry and should be available to growers in the next several years. The introduction of these new products should help growers to control downy mildew and help with pesticde resistance in the products that are currently available.

Resources Available to Support Programming

Speakers and Presenters for County Based Training Opportunities

Faculty/Staff Available to Support Programming

* **Sanders, Floyd Hunt**

Increase of Fungicide Resistance On Turfgrass Pathogens

State Issue: Plant Production and Protection *ANR*

Description

Dollar spot caused by Sclerotinia homoeocarpa and anthracnose caused by Colletotrichum cereale are ubiquitous diseases that affect almost all turfgrass species. Fungicide failures against dollar spot and anthracnose on bentgrass (Agrostis palustris) greens have been detected under field conditions. Laboratory analysis of several dollar spot and anthracnose isolates showed benzimidazole (thiophanate methyl), DMI (propiconazole) and strobilurins (Heritage) resistance. There are reports of boscalid resistance in other fungi; boscalid is a widely used fungicide against dollar spot. Fungicide resistance is likely to increase, threatening turfgrass production and management. New fungicides with high risk for resistance are being developed and therefore fungicide resistance is likely to increase, threatening turfgrass production and management.

Trend

Fungicide resistance is likely to increase, threatening turfgrass production and management. Therefore development, adaptation and dissemination of new resistance management strategies will be needed. The need to evaluate new fungicides will increase and knowledge and additional fungicide chemistries will be imperative.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Plant Disease Clinics for sample submission are available through the Plant Pathology Department.

Web Pages:

Guide to Turfgrass Fungicides http://pubs.caes.uga.edu/caespubs/pubcd/B1316/B1316.html

http://www.caes.uga.edu/Publications/pubDetail.cfm?pk_id=7149&pg=dl&ak=Plant%20Pathology

http://www.caes.uga.edu/Publications/pubDetail.cfm?pk_id=7983&pg=dl&ak=Plant%20Pathology

Faculty/Staff Available to Support Programming

* **Martinez, Alfredo**

State Issue: Plant Production and Protection *ANR*

Description

Turfgrass production and management is a significant and growing industry in the state. Disease losses and control costs account for over $200 million annually. New turfgrass varieties of recently introduced turfgrass species are now used in Georgia. Examples of newly introduced varieties include Seashore paspalum's Sea isle 1, Sea isle 2000 and Supreme. Zoysiagrass use has been on the rise in Georgia and acreage production increased 48% from 2009. New bermudagrass varieties are also available including Tifeagle and Tifgrand. Favorable environmental conditions for disease and the use of new turfgrass species and varieties will likely to stimulate prevalent diseases and bring about new pathogens. For example in the last two years we have documented three new disease; Rhizoctonia zeae on ultradwarf bermudagras called mini-ring or Leaf and sheath Rhizoctonia spot; Ophiosphaerella korrae in Zoysia matrella (manilagrass) and Phyllachora paspalicola

Trend

Increase in the incidence of these new diseases is likely. Due to the size and the high aesthetic standards demanded by the growing turf industry there will be a need to become proficient on rapid and accurate pathogen identification and disease management strategies.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations

Additional Resources:

Plant Disease Clinics available through the Plant Pathology Department

Web Pages:

Turfgrass Diseases in Georgia: Identification and Control http://pubs.caes.uga.edu/caespubs/pubcd/B1233/B1233.html ;

Turfgrass Diseases Quick Reference Guide http://pubs.caes.uga.edu/caespubs/pubcd/C891/C891.html

http://www.apsnet.org/edcenter/intropp/lessons/fungi/ascomycetes/Pages/Anthracnoseofturfgrass.aspx

http://www.apsnet.org/edcenter/intropp/lessons/fungi/ascomycetes/Pages/DollarSpot.aspx

Faculty/Staff Available to Support Programming

* **Martinez, Alfredo**

State Issue: Plant Production and Protection *ANR*

Description

Recertification training and training for private pesticide applicators has fallen behind in terms of utilizing technology to enhance delivery to our clientele. Access to materials and training programs is limited and requires coordination across several levels (secretary, agent, pesticide coordinator). This is an inefficient method of delivery requiring numerous mailings.

Trend

The Pesticide Safety Program will be converting recertification videos into an online format. All videos will be captioned to maintain ADA compliance. Videos will be accessible through the UGA E-Learning Commons (ELC) once the program has been completed. Additionally, the private applicators CD-ROM, which has had significant problems with printing of completion certificates, will also be converted to an online format and will be made available through the same system. These changes will give real time access to these materials in the extension offices, thus improving our overall customer service to our clientele. Notification of these changes will be made through e-mail as soon as they are available.

Resources Available to Support Programming

Individual Assistance / Consultations

Additional Resources:

ELC training and account creation assistance will be provided to county offices to access training materials.

Web Pages:

Will be added once available

Faculty/Staff Available to Support Programming

* **Smith, Paul F**

State Issue: Plant Production and Protection *ANR*

Description

Resistance to several fungicides has recently been identified for Monilinia fructicola (brown rot of peach). In addition, fungicide resistance to numerous fungicides has been identified for Botrytis species found in strawberry production sites. Potential downy mildew resistance has been observed in wine grapes, and the potential for antibiotic resistance has been made all too real as a result of fire blight (Erwinia amylovora) resistance confirmation in numerous apple producing states.

Trend

Adoption of resistance-management techniques will be critical to continued peach, wine grape, and other fruit production. As the Food Quality Protection Act (FQPA) has reduced the number of effective fungicides which are available for fruit production, the need to evaluate new fungicides will increase. The cost of production may go up, and disease management will likely become more difficult. It is even possible that the lack of disease control in wet years will result in downward trends in commodities such as peach and wine grape.

Resources Available to Support Programming

Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Faculty/Staff Available to Support Programming

* **Brannen, Phillip M.**

Transitioning to Non-Fumigant Alternative for Vegetable Production

State Issue: Plant Production and Protection *ANR*

Description

The phase-out of methyl bromide has caused a void in plasticulture vegetable production that is forcing growers to use new fumigants, nematicides and herbicides to control diseases, nematodes and weeds. New regulations that call for fumigant management plans for existing fumigants are forcing growers to limit the land they can use to grow vegetables, transport fumigants, and effective meet new safety standards. Many growers are having difficulty meeting these new challenges and are having difficulty complying to new regulations. Using newer fumigants also requires the use of non-standard plastics that may not form to beds properly and have been shown to break down more rapidly than the plastics previously used with methyl bromide. Newer fumigants also have longer plant-back intervals which reduces planting flexibility. Fumigants are typically more difficult top apply and are very expensive.

Trend

Growers are looking for non-fumigant options that negate the need for buffer zones, specialized equipment, specialized safety equipment, special licenses, fumigant management plans and so on. Also, non-fumigant pesticides are easier to apply, have little to no plant-back period, and tend to be less expensive. However, the non-fumigant pesticides are not as broad-spectrum as fumigants are are generally less effective on first-crop plastic. However, non-fumigant pesticides are the only options growers may legally be able to use on multiple cropping systems in plasticulture.

Extension programming that helps growers transition to non-fumigant pesticides is needed. On-farm demonstrations, field days, and tradition production meetings will be useful tools in helping growers understand and implement new non-fumigant pesticide tools.

Resources Available to Support Programming

Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Faculty/Staff Available to Support Programming

* **Langston, David B.**	Ji, Pingsheng
	Grey, Timothy Lane

State Issue: Plant Production and Protection *ANR*

Description

Grape leafroll virus has been introduced to many Georgia wine grape vineyards through recent replants. Spread through mealy bugs, this group of viruses, along with several others, has become a real threat to the health of the wine grape industry.

Trend

Surveys to identify the disease are necessary, and if producers act quickly, they do have opportunity to remove diseased vines before spread can occur. This will require educational efforts to recognize viral symptoms.

Resources Available to Support Programming

Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:
Disease diagnosis and confirmation through use of PCR.

Faculty/Staff Available to Support Programming

* **Brannen, Phillip M.**

Horton, Dan L.

State Issue: Poultry Production and Protection *ANR*

Description

As with all livestock operation, the poultry farmer has to decide on the method of daily mortality disposal he/she will use in their operation.

Trend

Disposing of daily mortality is an issue that is faced by all livestock producers. For the poultry producer in the state of Georgia, there are five options, the most common being burial and incineration.

For the poultry producers in South Georgia, the option of burial is no longer available due to the level of the water table and soil types. The majority of the poultry farmer in south Georgia use incinerators as there method of bird disposal.

Over the past several years there has been a growing need for an alternative method due to constantly rising fuel prices. Incinerating is a fuel intensive process which cuts deeply into the growers' profits each year and growers have been seeking education and training in composting dead birds.

Daily mortality composting workshops have been proposed but due to the nature of the poultry industry and for biosecurity reasons, it is improbable to get poultry farmers together to hold teaching sessions. Currently one-on-one sessions are held for growers who specifically request these sessions.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Composting 101 (Extension Bulletin EB103)
Poultry Mortality Composting Management Guide (Extension Bulletin B1266)

Faculty/Staff Available to Support Programming

* **Dunkley , Claudia**	Ritz, Casey W.

State Issue: Urban Agriculture *ANR*

Description

With a difficult economy and an ever-increasing concern over environmental safety issues, there has been a dramatic trend towards health-conscious consumers growing their own vegetables and fruit.The public needs good, sound, basic advice on how to garden properly and avoid the common errors that can lead to failure. Consumers also need to learn the truths, advantages, and limitations of gardening organically.

Trend

Consumers will seek advice and non-biased information at an increased level on home gardening. Many will look for organic alternatives in preventing common problems of insects and disease in the garden. Information on vegetable varieties, cultural practices, as well as truths and myths of organic gardening need to be taught to the general public. Delivery of gardening information will occur in the form of online and printed publications, web-based seminars, gardening workshops, as well as media delivery in newspapers, radio, and television. As more new county agent faculty are hired, updates will be needed to keep personnel informed of the latest information, trends, and practices.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

PowerPoints are available on home gardening as well as updated publications. State Consumer Vegetable Specialist is available for phone consultation as well as site visits when necessary. Agent training in the form of face-to-face in webinars in the area of home gardening will continue.

Faculty/Staff Available to Support Programming

* **Westerfield, Robert**

State Issue: Urban Agriculture *ANR*

Description

Turfgrass maintenance without the use of synthetic pesticides is increasingly being requested. There is minimal research demonstrating efficacy or viable options. Studies that have been performed occurred in the northeastern and western United States where cool-season turfgrass species (e.g. Kentucky bluegrass, bentgrass, fescue, etc.) predominate. Considering high expectation for turfgrass maintenance, results have not been encouraging. Furthermore, extrapolating results from these trials to conditions of the southeastern U.S. are difficult and inappropriate due to physiological difference among species and climatic variances. In the Southeast warm-season species (e.g. bermudagrass, seashore paspalum, zoysiagrass, etc.) are the primary turfgrasses used throughout the region. There are few non-synthetic pesticides having shown promise in controlling common turfgrass diseases, insects, nematodes, and weeds. Additionally, the companies that manufacture and market these type of products are small, incapable of supporting replicated field trial research, and tend not to remain in the market long enough for research results – assuming they are favorable – to be effective in promotion and sales.

Trend

County Agents, landscape professionals, sports field managers, and golf course superintendents are being asked to provide "organic" turfgrass management options. As a result of aggressive marketing, the public is aware of these "organic" options but there is little research based information to substantiate these marketing claims. Similarly, little educational information has been developed specifically to the Southeast. Agrichemical companies will continue to promote products, specifically to the homeowner market. Agents and professionals need to be aware of options.

Resources Available to Support Programming

Faculty/Staff Available to Support Programming

* **Waltz, Freddie Clinton**

State Issue: Worker Education and Safety *ANR*

Description

Farming is one of the most dangerous industrial occupations in the US and the world. It is second only to mining in the rate of fatalities and serious injuries in the US (USDOL, 2007). It is also one of the few dangerous occupations that include children as a part of the workforce and has a substantial number (25%) of the workforce over 65 years of age(McLaughlin and Sprufera, 2012). The large number of elderly farmers is increasing yearly and the average farmer is currently over 57 years of age (USDA Census, 2007). The number of elderly farmers is expected to increase in the foreseeable future.

Trend

As a consequence of the dangerous nature of farming, the aging population, and the continued presence of youth around large equipment, the accidents and fatalities associated with equipment is expected to continue.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations

Additional Resources:

Georgia has an on-going program funded by the USDA-NIFA to assist farmers with disabilities. This program is called Agrability in Georgia and will assist farmers with disabilities to continue farming safely through technical assistance and connections to financial resources.

Web Pages:

www.farmagain.com

Faculty/Staff Available to Support Programming

* **Rains, Glen C.**

State Issue: Civic Engagement for Youth *4H*

Description

Service-Learning (SL) is defined as “a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities.

Service-learning has become a guiding philosophy for a majority of elementary, middle, high schools, and colleges. 4-H is embracing SL as it provides an ideal framework for integrating the essential elements of 4-H, Mastery, Belonging, Generosity.

Trend

According to the report from the National Commission on Service-Learning, Learning in Deed, “Studies show that when service-learning is explicitly connected to curriculum, young people make gains on achievement tests, complete their homework more often, and increase their grade point averages. Service-learning is associated with both increased attendance and reduced dropout rates.” This report also found that, “In comparison with peers, students who engage in SL show less alienation and exhibit fewer behavior problems.” “Students who engage in SL activities increase their knowledge of community needs, become committed to an ethic of service, and develop a more sophisticated understanding of politics and morality.” Research shows that youth improve academically when provided with the opportunity to participate in high quality SL activities that are youth led and connect classroom learning to real life situations. Furthermore, research shows that the opportunity to provide service to their community has a positive impact on their attitudes towards their community.

4-H distinguishes between SL which takes place in a school setting from that which takes place in an informal educational setting. Academic Service-Learning describes SL activities that take place in partnership with a school and connect with specific learning standards, like the Georgia Performance Standards. Community Service Learning describes SL activities not directly tied to schools or school standards.

Whether coordinating Academic SL or Community SL, Georgia 4-H uses the IPARD Model for SL, which is also recognized by the Georgia Dept. of Education. The key steps in the model include Investigation, Planning, Action, Reflection and Demonstration.

Service Learning is becoming increasingly poplular amongst grant making organizations and is a well respected educational methodology that fits very well with current 4-H delivery practices. Furthermore, it builds on and higlights the type of community connections that are a strength of County Extension Offices.

State Issue: Civic Engagement for Youth *4H*

Resources Available to Support Programming

Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Georgia Learn and Serve Grants, administered by Georgia 4-H
Online Training on Service Learning by State 4-H Staff

Web Pages:

http://www.servicelearning.org/
http://www.georgia4h.org/servicelearning/

Faculty/Staff Available to Support Programming

* **Buckley, Jeffrey D.**
Marable, Mandy B.
Jordan, Jennifer W.
BIERSMITH, MELANIE M.

State Issue: Financial Literacy for Youth *4H*

Description

Decision-making and money management skills are important topics for young people that are frequently overlooked in school and at home. Yet the ability to make good decisions, especially in relation to earning, spending, saving, and borrowing money, has significant longterm benefits. Knowledge helps young people to maximize earnings potential, spend wisely, save for long-term goals, and minimize borrowing. Teaching kids to make good decisions and to effectively manage their financial resources increases the likelihood that in later life they will avoid money problems and experience financial success.

Trend

Too many Georgia children fail to finish high school, effectively guaranteeing a lifetime of low wages and long periods of unemployment. Instead of company or government provided benefits, today's middle school youth will be responsible for financing their own retirement. They'll pay more for college, and pay a larger portion of their health care cost.

Resources Available to Support Programming

Additional Resources:

Your Money Your Future 2.0: A ten-lesson financial management and decision-making activity-rich curriculum intended for delivery via school clubs over two years. Available from the 4-H staff-only web page

Web Pages:

http://www.fcs.uga.edu/ext/econ/financial_literacy.php#youth

Faculty/Staff Available to Support Programming

* **Rupured, Michael**

State Issue: Financial Literacy for Youth *4H*

Description

In a recent study (Garton, 2007), it was reported that approximately 15 million people had been victims of identity theft in the 12 month period that ended August 2006. According to the FTC, this number is estimated at nearly 9 million. Since law enforcement around the country does not often collect statistics about identity theft, there is no one conclusive answer. Of these, many victims are teens who have their identify stolen via the internet and email or a stolen/lost cell phone. Teen identity theft is rising rapidly due to their increased presence online. The Federal Trade Commission reports that young people make up 31% of reported cases of identity theft each year. This is because they have "unblemished" credit records (indeed, they have no credit records at all!). Once their identity is stolen, it can go undetected for months, if not years, and teenagers and children are likely to be ignorant to any signs that their identity has been compromised. Not only are victim numbers growing but the criminals are getting better at stealing information and using it.

Trend

The true definition of identity theft is when a criminal (or unauthorized person) uses personal identifying information to start new credit accounts, commit crimes in another persons' name, get loans and even perhaps a job. A broader definition includes the use of an existing credit card or bank account. A few examples of how thieves obtain information include dumpster diving, shoulder surfing, phishing and scams, stolen mail, and stolen cell phones. Financial impact may include: denied credit, lost job and wages, higher interest rates and low credit scores. Emotional reactions to identity theft include: anger, frustration, powerlessness, hopelessness and loss of trust.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

New resources and lesson plans are currently being developed by Georgia 4-H
Your Money Your Future Curriculum

Web Pages:

http://www.qwest.com/highwayqwest/identitytheft/index.html
http://www.idtheftcenter.org/index.html
http://www.identitytheft.org/
http://www.privacyrights.org/
http://www.ftc.gov/bcp/edu/microsites/idtheft/

Faculty/Staff Available to Support Programming

* **Varnadoe, Cheryl R.**

State Issue: Healthy Lifestyle Choices for Youth *4H*

Description

Bullying and Cyber Bullying are no longer a rite of passage. Across the country, bullying, Cyber bullying and theeir consquences are becoming a topic of interest and action. By the time children enter elementary school, bullying has often become a normal occurance. Studies suggest that 9 out of ten elementary youth report having been bullied. A recent survey found that 42% of kids have also been bullied while online. 1 in 4 have had it happen more than once. 35% of kids have been threatened online, and nearly 1 in 5 have had it happen more than once. In addition, 21% of kids have received mean or threatening e-mail or other messages. 58% of kids admit someone has said mean or hurtful things to them online. Both Bullying and Cyber bullying is on the rise. 4-H and FACS agents need methods and materials to use in educating and helping teens protect themselves as well as how to prevent bullying as well as cyber bullying while being a good cybercitizen.

Trend

Recognizing the types and degrees of bullying behavior is very important. these include physical agression, social alienation, verbal aggression, intimidation, racial and ethnic harassment, and sexual harassment. In comparison, cyber bullying, also known as electronic bullying or online social cruelty, is defined as bullying:

- through email
- through instant messaging
- in a chat room
- on a website or gaming site
- through digital messages or images sent to a cellular phone

Although sharing certain features in common with traditional bullying, cyber bullying represents a unique phenomenon that has only recently begun to receive attention in both the popular press and in academic circles. Cyber bullying not only looks and feels a bit different than traditional bullying, but presents some unique challenges in dealing with it. But the damage done by bullying or cyber bullies is no less real, and can be equally painful.

Whole organization anti-bullying policies are important and must be created and maintained for the entire organization or school.

Cybercitizenship -- is responsible cyber social behavior -- in other words, what people do online when no one else is looking. As youth go online in increasing numbers, cyber ethics is a critical lesson, especially since poor e-habits can start at an early age.

State Issue: Healthy Lifestyle Choices for Youth *4H*

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Georgia 4-H State Farm Mobile Technology Lab
Georgia 4-H Communications and Technology Team
Programs conducted through Georgia 4-H State Farm Cyber Security Initiative

Web Pages:

National 4-H Guide to Bully Prevention Programs - National 4-H Curriculum Working Group - 2012 by Allen, Lewis, Roper, and Varnadoe.
Cyber bullying and Cybercitizenship presentation
by Cheryl Varnadoe
Georgia 4-H Youth Communications and Technology Team -
http://www.georgia4h.org/public/edops/techteam/default.htm
Resources:
http://www.georgia4h.org/public/more/facsprojectsissues/Internet%20and%20Social%20Networking%20Safety/internetsafety.htm

Faculty/Staff Available to Support Programming

* **Varnadoe, Cheryl R.**

Health Rocks! Helping Teens Make Good Decisions and Avoid Risky Behavior

State Issue: Healthy Lifestyle Choices for Youth *4H*

Description

A tremendous number of Georgia teens engage in the high risk behaviors of smoking tobacco, underage drinking and abusing drugs. The Health Rocks program esaddress these behaviors and impresses upon the youth of Georgia the importance of healthy living and making good decisions.

Trend

Approximately 23,000 (6%) Middle school student and 81,000 (19%) high school students in Georgia smoke cigarettes. In fact, over 11,000 adult Georgians die every year from tobacco-related illnesses – that is one out of every six deaths in adult Georgians. According to the Centers for Disease Control, tobacco kills more Georgians than alcohol, AIDS, drug overdoses, auto accidents, suicides, handgun murders, and fires combined. In addition, over $1.8 billion in healthcare costs is spent annually for adults ages 18 and older related to tobacco in our state. An additional $3.4 billion in lost productivity costs in adults aged 35 years and older is contributed to tobacco use.

In addition, the state of Georgia ranks 39th highest among the 50 states for the cost per youth for underage drinking at a cost of $1,832 per year for each youth in the state, translating to $1.5 billion. Young people who begin drinking before the age of 15 are four times more likely to develop alcohol dependence. A shocking 32% of Georgia youth admit that they had their first drink before the age of 13.

The number of American youths who used illicit drugs within the last year continues to inch downward, but stubbornly high levels of prescription-drug abuse persist.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Grant Funds / Stipends to counties
Health Rocks Ambassador Training
Health Rocks Beginner, Intermediate and Advanced curriculums;
Health Rocks incentive items

Web Pages:

Health Rocks web page - State and National

Faculty/Staff Available to Support Programming

* **Varnadoe, Cheryl R.**

State Issue: Healthy Lifestyle Choices for Youth *4H*

Description

Research indicates that obesity and the problems associated with childhood obesity have reached epidemic proportions. According to the American Academy of Pediatrics, the increase in childhood obesity represents an “unprecedented burden” on children's health.

Today 25 million children aged 17 and under are considered obese or overweight - a number that contributes to an estimated 100 billion dollars of healthcare expenditures in America.

The mission of 4-H Healthy Living is to:

To engage youth and families through access and opportunities to achieve optimal physical, social, and emotional well-being, defined as “the state of being comfortable, healthy, or happy”. This includes avoiding risky behavior, forming and maintaining satisfying relationships, and being able to handle normal levels of stress, relationships.

By utilizing research-based information and practices, the mission helps create supportive communities that provide access and opportunities through the acquisition of knowledge, skills, positive attitude, development of positive relationships, and engagement in behaviors that enable them to thrive.

Trend

For more than 108 years, 4-H has been a leader in addressing America's relevant food and nutrition challenges.

Today, the 4-H Healthy Living Program reaches approximately 2.5 million youth in 50 states – having the capacity to mobilize young people and implement sustainable strategies that will create healthy lifestyles for America's families.

Over the next five years, the 4-H Healthy Living Program will strategically address America's critical health. This public-private program will include:

Reaching over 20,000 Georgians with the 4-H Health Rocks program;

• Reaching 500,000 new youth and families through Youth Voice, Youth Action: A National Conversation on Healthy Living.”

• Engaging 3 million youth in local 4-H healthy living programs.

• Improving nutrition and physical activity of program participants.

• Reaching minorities and their families with relevant programs.

• Developing statewide healthy living strategies.

• Engaging youth to become healthy living advocates.

State Issue: Healthy Lifestyle Choices for Youth *4H*

Resources Available to Support Programming

Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

National 4-H Healthy Living Resource Guide; National 4-H Healthy Living Strategic Plan; National 4-H Healthy Living Mission Statement; Georgia 4-H Eat Well Friends Curriculum; CHOP Grant; The Power of Choice Curriculum; Health Rocks Curriculum; Georgia 4-H Health Officer Handbook; Utilize 4-H Cotton Boll and Consumer Jamboree contest, study guides and materials and compete in area contest

Web Pages:

Georgia 4-H Health Rocks
National 4-H Healthy Living task Forece Documents: http://4-h.org/b/Pages/Layouts/hlteamdocuments.html
Georgis 4-H Healthy Living Website: http://www.georgia4h.org/public/more/healthylifestyles/default.htm
Georgia 4-H Cotton Boll and Consumer Judging

Faculty/Staff Available to Support Programming

* **Varnadoe, Cheryl R.**

Increasing Science, Technology, Engineering, and Applied Math (STEM) Skills of Tomorrow's Workforce

State Issue: Other Issue *4H*

Description

The United States faces a critical challenge in that many young people do not have the science, technology, engineering and applied math (STEM) skills necessary to be successful in the workplace, while demand for STEM careers is on the rise. These same STEM abilities are also crucial for a meaningful understanding of our natural world. The ability to reason, think critically, and question our surroundings are paramount as our nation progresses through the 21st century. In order to remain competitive and in a leadership role worldwide, the United States must continue to fill the SET fields with highly trained and highly skilled workers. In their 2006 report, Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future, The National Academies identified two factors that determine America's ability to compete globally: 1) a population that is well trained and technically competent, and 2) the scientific and technological innovations they produce. With both interest and proficiency in SET on the decline, action must be taken immediately to reverse this trend.

Trend

The National Assessment of Educational Progress reports that in both the 2000 & 2005 assessment results, only 18% of high school seniors are considered proficient in science. Additionally, only 5% of college undergraduates earn degrees in science and engineering, according to Rising Above the Gathering Storm (2006). The Trends in International Mathematics and Science Study (TIMSS) reported by the National Center for Education Statistics tells us that in the last three assessments (1995, 1999, 2003), the United States is consistently behind 5-10 other countries in science scores (4th & 8th grades). 4-H has its roots in science and works with the age group that stands to benefit from an intense focus on STEM. Many students lose interest in science during the middle school years, when science is not considered interesting or relevant. However, 4-H's unique approach and ability to connect the science and research of land-grant colleges and universities to local communities, allows for an opportunity for 4-H to focus on its successes of over 100 years of youth programming.

By lifting up Science, Technology, Engineering, and Applied Math as a Mission Mandate, Georgia 4-H (as well as National 4-H) looks to address the critical shortage of a competent STEM workforce in the United States. Through the state 4-H and county 4-H offices, by partnering with local school systems, and through the environmental education programs at our five 4-H Centers, Georgia can significantly contribute to the goal set by National 4-H to involve and engage 1 million new youth in SET programming by 2013.

Resources Available to Support Programming

Individual Assistance / Consultations

Additional Resources:

National 4-H has developed curricula and activities that are available for use by County 4-H Programs.

Web Pages:

www.georgia4h.org/set

Faculty/Staff Available to Support Programming

* **BIERSMITH, MELANIE M.**

State Issue: Positive Development for Individuals, Families and Communities *4H*

Description

The 2005 round of Base Realignment and Closure authorized and implemented by the US Secretary of Defense and the US Congress resulted in the recommendation of closing three military installations in the state: Fort McPherson, Naval Air Station Atlanta and the Navy Supply Corps School in Athens. While the geographic areas surrounding these installations transition to the lack of these powerful economic engines, thousands of new families will transition to other military installations in the state, causing stress and strain on individuals, families and communities.

Trend

The Armor School currently located at Forts Campbell and Knox, Kentucky will relocate to Fort Benning, GA. Additional relocations at this installation will relocate over 7,000 soldiers to the Columbus Tri-City area with their family members and other civilian civil service members and contractors. Estimates range the area will add 30,000 to 45,000 new individuals between 2010 and 2012 as the relocations occur. Growth at other installations will also occur including Moody AFB, Robins AFB, Fort Gordon and Fort Stewart/Hunter AAF.

Active duty military families are transient, moving every 2-3 years typically. The need for local resources to connect these families to local support networks is essential to developing a vibrant community.

The Department of Defense / National Institute of Food and Agriculture partnership provides resources to military families through educational programs, staff members on loan to the military from land-grant universities and increased visibility to military families of the Cooperative Extension system.

Opportunities exist for collaboration and partnership as military members, civilians and families seek additional resources to assist with their transition to the new community, meet increased capacity requirements, and serve more effectively.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Web Pages:

www.4-hmilitarypartnerships.org

Faculty/Staff Available to Support Programming

* **MULL, CASEY DOWNS**	McGonagill, Brandi Susanne
	EASON, MARCUS DARLINGTON
	BOSWELL, BROOKE RENE

Lack of youth development programs for transient, military youth

State Issue: Positive Development for Individuals, Families and Communities *4H*

Description

The Overseas Contingency Operations (OCO), formerly known as the Global War on Terrorism (GWOT), has members of the US Military deployed to over 82 countries around the globe.

Frequent relocations, deployment and the high operational tempo of the US Armed Forces lead to greater stress placed on children, youth and family members. Family members left at home during a deployment lack positive youth development programs and seek local resources to decrease the stress of the youth and families and increase the access and availability of family related support networks.

Throughout relocations of military members (permanent changes of station), youth need consistency in order to build their resiliency.

Trend

The length and scope of deployments during OCO has not occurred since the Vietnam War and use of the National Guard and Reserve component services has not been as high since World War II. Communities in Georgia are impacted by residents relocating to other locations where support networks, oftentimes other relatives, live. Communities face police officers, teachers, county extension agents and other civilian members of the community deploying when their reserve units are federalized and deployed.

Individual families face greater stress with the lack of high quality childcare and youth programs in communities to build resiliency and support among military youth and families.

When the Department of Defense examines installations for increased military missions (growth), it looks at quality of life around the installations. Strong, effective youth development programs and family support mechanisms can result in additional growth and missions relocating to the state as well as a vibrant and engaged civilian-military community designed to support military families through the deployment cycle.

Cooperative Extension in Georgia has an appropriate structure to provide knowledge to military caring professionals, volunteers and families in fields related to youth development and family sciences.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Funding through grants such as Operation: Military Kids, 4-H Military Clubs and other DoD/Extension funds
National and regional training programs coordinated by the 4-H/Military Youth Development Projects

Web Pages:

www.georgia4h.org/omk
www.georgia4h.org/public/edops/militaryprogram
www.4-hmilitarypartnerships.org

Faculty/Staff Available to Support Programming

* **MULL, CASEY DOWNS**	McGonagill, Brandi Susanne
	EASON, MARCUS DARLINGTON
	BOSWELL, BROOKE RENE

State Issue: Positive Development for Individuals, Families and Communities *4H*

Description

The Overseas Contingency Operations (OCO), formerly known as the Global War on Terror (GWOT), has members of the US Military deployed to over 82 countries around the glob. Frequent relocations, deployment and the high operational tempo of the US Armed Forces, particularly the Guard and Reserve populations, lead to greater stress on children, youth and family members. Family members left at home during a deployment lack access to high quality and affordable youth and family programming leading to increased stress. Additionally, with the end of several high profile operations, the reintegration of service members into families leads to turmoil and additional stress.

Trend

The length and scope of deployments during OCO has not occurred since the Vietnam War and use of the National Guard and Reserve component services has not been as high since World War II. Communities in Georgia are impacted by residents relocating to other locations where support networks, oftentimes other relatives, live. Communities face police officers, teachers, county extension agents and other civilian members of the community deploying when their reserve units are federalized and deployed. Individual families face greater stress with the lack of high quality childcare and youth programs in communities to build resiliency and support among military youth and families. When the Department of Defense examines installations for increased military missions (growth), it looks at quality of life around the installations. Strong, effective youth development programs and family support mechanisms can result in additional growth and missions relocating to the state as well as a vibrant and engaged civilian-military community designed to support military families through the deployment cycle. Cooperative Extension in Georgia has an appropriate structure to provide knowledge to military caring professionals, volunteers and families in fields related to youth development and family sciences.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Funding through grants such as Operation: Military Kids, 4-H Military Clubs and other DoD/Extension funds
National and regional training programs coordinated by the 4-H/Military Youth Development Projects and the DoD/Extension Projects

Web Pages:

www.georgia4h.org/omk
www.georgia4h.org/public/edops/militaryprogram
www.4-hmilitarypartnerships.org
www.extension.org/militaryfamilies
www.extension.purdue.edu/Adventure_camps/campsloc.html

Faculty/Staff Available to Support Programming

* **MULL, CASEY DOWNS**	McGonagill, Brandi Susanne
	Gibson, Sharon M
	EASON, MARCUS DARLINGTON
	Bower, Don W.

State Issue: S.E.T. - Science, Engineering, and Technology *4H*

Description

The United States faces a critical challenge in that many young people do not have the science, technology, engineering and applied math (STEM) skills necessary to be successful in the workplace, while demand for STEM careers is on the rise. These same STEM abilities are also crucial for a meaningful understanding of our natural world. The ability to reason, think critically, and question our surroundings are paramount as our nation progresses through the 21st century. In order to remain competitive and in a leadership role worldwide, the United States must continue to fill the STEM fields with highly trained and highly skilled workers. In their 2006 report, Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future, The National Academies identified two factors that determine America's ability to compete globally: 1) a population that is well trained and technically competent, and 2) the scientific and technological innovations they produce. With both interest and proficiency in STEM on the decline, action must be taken immediately to reverse this trend.

Trend

There is a concern that the United States is not preparing a well-trained and highly prepared workforce to work in the fields of science, technology, engineering , and mathematics (STEM). Several studies and databases have highlighted the plight from elementary students to the university level students.

According to the recently released Nation's Report Card for science (National Assessment of Educational Progress, 2009, http://nces.ed.gov/nationsreportcard/), American students are still struggling with science proficiency. At grade 4, 34% of students are considered proficient in science (proficient represents solid academic performance and the demonstrated competency over challenging subject matter), 30% of 8th graders are considered proficient, and only 21% of 12th graders are considered proficient. In fact, 60% of 12th graders performed at a basic level (denoting only partial mastery of fundamental knowledge and skills). The 2009 NAEP data also shows us that 4th grade students in Georgia are performing at a lower level than the national average, our 8th graders are performing on par with the national average, and a comparison of Georgia 12th graders against the national average is not available.

Information allowing for the comparison of U.S. students and other international students is available from Trends in International Mathematics and Science Study (TIMSS - http://nces.ed.gov/timss/). In the most recent study of 2007, 4th grade students scored lower in science than those in 4 other countries (all in Asia) and 8th grade the students scored lower in science than those in 9 other countries (all in Asia or Europe).

The Program for International Student Assessment (PISA, http://www.pisa.oecd.org) also implements an assessment that measures the competency of 15 year old students around the world (this would be an average of the end of compulsory education). The 2009 PISA results indicate that U.S. high school students scored behind those in 22 other countries.

National Science Board (http://www.nsf.gov/statistics/seind10/) released the Science and Engineering Indicators of 2010 report which states that of the first university degrees awarded in science and engineering in 2006, only 11% were earned in the United States. This is compared with 21% in China and 19% in the European Union. Additionally, of the degrees earned around the world in 2002, the average international percentage of STEM first university degrees is 26.4% while the U.S. percentage of STEM first university STEM degrees earned is only 16.8%.

In response, 4-H has set about to engage one million new scientists in STEM programming by the year 2013 to contribute to global competitiveness and prepare the next generation of scientists, engineers, and technology leaders.

State Issue: S.E.T. - Science, Engineering, and Technology *4H*

Resources Available to Support Programming

Web Pages:

www.georgia4h.org/set

Faculty/Staff Available to Support Programming

* **BIERSMITH, MELANIE M.**

State Issue: Economic Well-being for Individuals and Families *FACS*

Description

Estate planning is part of planning for the future and is an important part of financial planning. It deals with accumulating, protecting, and distributing assets. One important aspect of estate planning is creating appropriate documents such as wills, financial powers-of-attorney, health care powers-of-attorney and living wills.

Trend

According to a Wills and Estate Planning study conducted with a national sample of adults 18 and older in 2009 by Harris Interactive for Lawyer.com, many people fail to create important estate planning documents. The results indicated that only 35 percent of Americans have wills, only 29 percent have either a financial or health care power of attorney, and only 18 percent have a trust. The percentage of people having these documents has declined drastically since 2007 when 45 percent had wills, 46 percent had a financial or health care power of attorney and 31 percent had a trust. Although not everyone's situation calls for a trust, everyone could benefit from a will and power of attorney.

Source

Lawyers.com Wills & Estate Planning Survey Key Findings (n.d.). Retrieved May 31, 2012 from http://wills-probate.lawyers.com/wills-probate/Lawyerscom-Wills-and-Estate-Planning-Survey-Findings.html

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations

Additional Resources:

Estate Planning: Don't get Buried in the Paperwork PowerPoint with Notes
Estate Planning Millionaire Game PowerPoint
Have Your Property Handout
Your Property Transfer Handout
Heirs Flow Chart
Rules of Inheritance Handout

Web Pages:

http://www.fcs.uga.edu/ext/econ

Faculty/Staff Available to Support Programming

* **Koonce, Joan**

State Issue: Economic Well-being for Individuals and Families *FACS*

Description

A slow recovery from the Great Recession in Georgia and across the country means that many individuals and families continue to struggle to make ends meet. Persistent unemployment, stagnant wages, and the rising cost of food, energy, and other commodities challenge Georgia households to do more with less. Extension financial management programs help participants to reevaluate and prioritize spending decisions to improve economic well-being.

Trend

Georgia's ranking for the unemployment rate has risen from 14th worst among the states (10.5% in June 2009) to 8th worst (9.6% in June 2012).

Real Median Family Income for Georgia peaked in 2007 ($62,414) and declined to $55,209 in 2010.

Retail credit card balances reached $51.5 billion in July 2012. Delinquency rates and write offs have declined, but remain at historic high levels.

Georgia's high school graduation rate (based on the number of students who graduate within four years, plus one summer) is 67.4%. Workers with less than a high school education are significantly more likely to experience multiple and extended periods of unemployment than more educated workers.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations

Additional Resources:

Georgia Consumers Acquiring Saving Habits (CASH) brochures and database
Financial Literacy Toolkit (Training Required)
How You Spend Makes a Difference fact sheet & PPT (FACS web site)
Your Good Credit fact sheets & PPT (FACS web site)
How to Get Out of Debt fact sheet & PPT (FACS web site)
Personal Financial Choices Bankruptcy Education (Training required)
When Your Income Drops fact sheets & PPT (FACS web site)
Money Matters PPT (FACS web site)
Take Charge of Your Finances (FACS web site)

Web Pages:

http://www.fcs.uga.edu/ext/econ/index.php

Faculty/Staff Available to Support Programming

* **Rupured, Michael**

State Issue: Economic Well-being for Individuals and Families *FACS*

Description

The financial landscape in Georgia has changed on several fronts over the last several decades. The shift from defined benefit retirement plans (pensions) to defined contribution retirement plans; the proliferation of complex financial products for saving, investing and borrowing; and the increasing cost of health care, education, housing and transportation point to a greater need for Georgians to develop saving habits. In addition to setting money aside for a future purpose, saving habits include reducing the cost of routine expenses, comparison shopping, using credit wisely, managing risk and investing for long-term goals. Georgians who acquire and practice saving habits over the long term significantly enhance prospects for improved economic well-being and quality of life.

Trend

The U.S. personal savings rate has historically been low relative to other nations, and this trend provides cause for concern. The personal savings rate (savings as a percent of disposable personal income) approximately 3.8% in the first quarter of 2012 (“Bureau of Economic Analysis,” 2012). Given the current situation and historical trend, there is little reason to believe that the personal savings rate outlook is positive. This is especially alarming considering that previous research has shown that how much a person saves has little to do with their income and more to do with choosing to save. According to a study conducted by economists Venti and Wise (2000), saving has more to do with whether a person wants to save and is willing to reduce current consumption to be able to save. In their study, it was noted that low-income persons were able to save more than some middle-income persons (Venti & Wise, 2000). Given the results of this study, the fact that Georgia had a median household income of $47,469 in 2009 (Bachtel, 2010) should not be a barrier to their ability to save for the future. Therefore, individuals and families in Georgia and the U.S. need positive incentives to reverse the trend from a consumption-oriented society to a savings-oriented society.

Sources

Bachtel, D. (2012). The Georgia County Guide. Athens, Georgia: University of Georgia. Retrieved May 31, 2012 from http://www.countyguide.uga.edu

Bureau of Economic Analysis. (2012). Personal Income and Outlays, March 2012. Retrieved May 31, 2012 from http://www.bea.gov/newsreleases/national/pi/pinewsrelease.htm

Venti, S. F., & Wise, D. A. (2000). Choice, Chance, and Wealth Dispersion at Retirement, NBER Working Paper No. 7521, Retrieved Mary 31, 2012 from http://www.nber.org/papers/w7521, Cambridge, MA: National Bureau of Economic Research.

State Issue: Economic Well-being for Individuals and Families *FACS*

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Before You Invest PowerPoint with Notes
Before You Invest Fact Sheet
Before You Invest Exhibit
Investment Jeopardy Game PowerPoint with Additional Slides and Notes
Investment Jeopardy Exhibit or Board Game
Retirement: Dream or reality PowerPoint with Notes
Do You Plan To Retire?: Key Issues To Consider Fact Sheet
Do You Plan To Retire?: Ways To Save For Retirement Fact Sheet
Retirement Words PowerPoint Game
Retirement Squares PowerPoint Game
Retirement Budget Example and Blank Retirement Budget
Time Value of Money Handout
Are You Smarter Than the Average Person in Financial Planning Game PowerPoint

Web Pages:

http://www.fcs.uga.edu/ext/econ

Faculty/Staff Available to Support Programming

* **Koonce, Joan**

Rupured, Michael

State Issue: Food Safety *FACS*

Description

According to the Dietary Guidelines for Americans Americans are encouraged to consume more fruits and vegetables as part of a healthful diet are likely to have reduced risk of chronic diseases. As produce consumption has increased in the U.S., however, there has been a significant increase in foodborne disease outbreaks associated with fresh produce. A summary of data from the Centers for Disease Control and Prevention (CDC) indicate a steady increase in the number of produce-associated outbreaks since 1987, with a variety of fruits and vegetables involved. As a result, there is growing consumer concern over the safety of foods, especially fresh produce, in the marketplace. There is increasing demand for locally grown produce. However, there may still be risks involved unless the proper measures are taken to keep produce safe.

Trend

Recent widespread outbreaks of foodborne illness from fresh produce and imported foods have increased consumer concern over the safety of the food supply. A 2007 study by the National Marketing Institute (NMI) looked at trends driving consumer behavior. The overriding theme identified was “consumers in control.” Nowhere is this trend more evident than in the explosion of the organic food industry and the increased interest in locally grown foods. Organic sales are estimated to have increased by 20% annually since 1990, with estimates of $26 billion in sales in 2010. In 2008, produce accounted for more than 37% of organic food sales. USDA's “Know Your Farmer, Know Your Food” iniative introduced in 2009, is an effort to better connect consumers with local producers and to support local food systems. The demand for locally produced food can even be seen in the nation's school nutrition programs with farm to school and farm to preschool initiatives. Although consumers perceive locally grown products as being healthier and safer for them, small farms that typically supply these products may lack personnel and training to develop HACCP plans and to be GAP-certified. Consumers may pay higher prices for these foods and still be at risk. In addition, foodborne illness outbreaks can be liability issues for farmers and markets.

Cooperative Extension's program goal is to help consumers, producers and retailers acquire knowledge about safe produce handling that could help them: understand causes of foodborne illness; prevent contamination and cross-contamination; identify appropriate ways to clean, handle and store produce; compare organic versus conventionally grown products; identify safe sources of produce; make informed decisions about produce safety and the safety of imported products and identify reputable sources of information about problems that may arise in the food supply.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Enhancing the Safety of Locally Grown Foods - Two curriculum packages: 1) On the Farm - for small to medium-sized farms and 2) At the Market - for farm market managers have been developed as part of a USDA grant. Factsheets, Instructor Guide, slide presentations, video segments, evaluation tools.

Faculty/Staff Available to Support Programming

* **Harrison, Judy A.**

State Issue: Food Safety *FACS*

Description

Food safety and government regulations are primary concerns to anyone wishing to put their trademark food product on the market.

Trend

The Extension Food Science (EFS) office has provided food safety training for more than 10 years. We have also worked closely with the Georgia Department of Agriculture's Consumer Protection Division to certify that the procedures that Georgia food entrepreneurs use to prepare their products meet food safety regulations and requirements. The Georgia Department of Agriculture requires a Process Approval before a low-acid or acidified food product, such as BBQ sauces with vinegar and pickles, can be placed on the market. The UGA EFS office does a review of processing procedures and product pH testing, for a nominal fee.

The U.S. Food and Drug Administration (FDA) requires that anyone processing low-acid or acidified foods (such as pickles or BBQ sauce) have training in the proper methods for canning or bottling such products. This four-day Better Process Control School is offered each spring by EFS, with a two-day BPCS for acidified products in the late fall.

A Nutrition Facts Panel (NFP) on a food product label is not required by federal regulations, but many major retail buyers want this panel included on the label. EFS staff prepare the NFP using FDA-certified software for a nominal fee (much less than would be charged by a product testing lab).

The "Starting a New Food Business in Georgia" one-day seminar is presented in conjunction with the Center for Agribusiness and Tourism in Athens. It is held several times per year, at locations around the state.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Handouts for getting a Nutrition Facts Panel prepared
Handout for having a food product classified
Handout for getting a process approval

Web Pages:

Starting a New Food Business website at www.EFSonline.uga.edu

Faculty/Staff Available to Support Programming

* **Mohan, Anand**
* **Hurst, William C.**

State Issue: Food Safety *FACS*

Description

Preventing foodborne illness is a goal that does not lessen. More than 250 foodborne diseases have been described and present a significant public health challenge. In the U.S., per year, foodborne disease results in an estimated 48 million persons with gastrointestinal foodborne illnesses, 128,000 hospitalizations, and 3,000 deaths. A study released in 2010 by PEW Charitable Trusts indicated that Georgia ranks 9th in the nation in the number of estimated cases of foodborne illness annually, having more than 2.5 million cases at a cost of $4.7 billion. The estimated cost per case is over $1,900. The American public continues to eat away from home in large numbers. Georgia has over 16,000 inspected foodservice establishments and an industry that employs over 374,000 people (10% of the employment in Georgia) and generates over $15.2 billion in sales (National Restaurant Assn. projections for 2012). The National Restaurant Association has estimated that the average cost of a foodborne illness outbreak to an establishment is about $75,000. Lawsuits usually result in the greatest associated cost. An ever-increasing diversity in the food supply and diversity among types and sizes of foodservice establishments and community-based food assistance programs present challenges to food safety and keeping a knowledgeable workforce.

University of Georgia Extension has been offering ServSafe® programs since 1996 and is a recognized provider in the state. It also has had a consistent reputation for food safety education for organizations such as child care facilities, personal care homes, and other types of group homes. Benefits to Society: Food handler education can save money. Prevention of just one case of foodborne illness can save at the rates listed for each of the following illnesses for medical expenses, lost productivity, etc.: Vibrio vulnificus $3,045,726; Botulism $726,362; E. coli O157:H7 $14,838; Salmonella $9,146; Campylobacter $8,901, and Listeria monocytogenes $1,695,143.

Trend

1) Both the Ga. Dept. of Human Resources (as of 12/07) and the Ga. Dept. of Agriculture (as of 2005) have required food safety manager certification in their food codes. The Georgia DHR foodservice regulations also mandate that managers provide documented employee food safety training. 2) All Georgia foodservice establishments were required to be in compliance with having certified food safety managers by December 2009, and new applicants must receive training within 90 days before being licensed. 3) The employee turnover in the foodservice industry is extremely high, producing a continual need for training. 4) Increased use of, and community interest in, local food banks and other assistance programs are yielding additional needs for food safety programming and/or foodhandler certification programs. 5) Some types of foodservice require more specialized and tailored assistance than ServSafe® can provide to interpret and fulfill regulations given their types of operations (e.g., family day care, group homes, food banks and community/civic organizations and churches). 6) Schools participating in USDA programs are required to have food safety programs based on HACCP and Extension is called on to provide food safety training annually in some counties. 7) It is costly for small, independent foodservice operators to attend trainings far from home, so local opportunities that do not require overnight travel and expenses are needed.

State Issue: Food Safety *FACS*

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

ServSafe® program of the National Restaurant Association for manager certification and employee trainings.
In-state curricular-type resources for specialized audiences, such as: School nutrition lesson plans.

Web Pages:

ServSafe:
http://www.fcs.uga.edu/ext/servsafe/

FACS Extension Internal Menu for Food Safety Resources (password-protected):
http://www.fcs.uga.edu/ext/outcomes/3.php

Faculty/Staff Available to Support Programming

* **Andress, Elizabeth L.**
Harrison, Judy A.

State Issue: Food Safety *FACS*

Description

Home food preservation remains an important and popular cultural activity. The University of Georgia is home to the National Center for Home Food Preservation and thus hosts an extremely popular website used internationally. National Center correspondence as well as Georgia county Extension requests for information and other national societal indicators reveal that consumer interest in preserving food at home is continuing to increase. Media and educators around the country are reporting renewed interest, also. As of 2012, interest in community canneries and processing centers (community kitchens, etc.) is high and local/regional government officials as well as food systems advocates are pushing for their re-invention and seeking funding for such centers. It is critical that those who practice preserving and processing foods at home have access to the most reliable information available concerning food safety and food quality. Cooperative Extension and USDA have long been recognized as credible sources for science-based recommendations, yet national surveys conducted by our department as well as botulism outbreaks recorded by CDC reveal that many people are still using unsafe canning practices despite the availability of sound, scientific methods. Additional educational efforts are needed to stop this. Improving the safety of home food processing methods can save money as well as prevent other losses from illness. Small entrepreneurs also need to understand the differences between preserving food at home and preserving food for commercial ventures. Botulism is one of the more dangerous and expensive types of foodborne illness and is a major risk from improper canning of low-acid foods. Prevention of just one case of botulism can save an average of $726,362 in costs related to medical services, deaths, lost work and disability. Increased awareness of foodborne illness and the consumer's role in food protection can translate to improvements in other food handling situations and save the country additional dollars spent on illnesses.

Trend

1) Increasing current interest in preserving food at home (as well as growing it) due to food security concerns over imported foods and disaster preparations. 2) Increasing current interest in preserving food as a way to support local growers by buying locally when in-season and then having to store it for use later in the year. 3) High interest in processed foods as an entrepreneurship activity to make money. 4) High interest in acidified foods such as salsas and other condiments or specialties, which present the need for controlled canning processes and procedures for safety as a shelf-stable food. 5) Unsafe home canning practices that need educational attention and that have been documented in national surveys include underprocessing of low-acid foods resulting in high risk for botulism, failure to have dial gauges on pressure canners tested and using historical yet unsafe methods for canning. 6) The UGA "So Easy to Preserve" book and videos are used as primary references in the majority of other state Extension programs. The book has been known to sell out in two summers, so at least 6,000 copies are now printed per year. This interest demonstrates popularity of the content, as well as the need to make sure our own statewide faculty are kept up-to-date on a program with such national visibility. 7) Requests for demonstrations and workshop programs as well as Master Food Preserver programs in Georgia are higher than ever as of 2012.

State Issue: Food Safety *FACS*

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Video series (8 shows), Book-So Easy to Preserve, Online self-study for agents and the public, Three-panel exhibit for So Easy to Preserve, Three-panel exhibits on canning and on freezing, Two window-shade floor exhibits on So Easy to Preserve resources, Dial Gauge testers.

Web Pages:

FACS Extension: http://www.fcs.uga.edu/ext/food/safety.php
and
National Center for Home Food Preservation:
http://nchfp.uga.edu (www.homefoodpreservation.com)

Faculty/Staff Available to Support Programming

* **Andress, Elizabeth L.**
Harrison, Judy A.

Reducing the Risk of Foodborne Illnesses – Implications of Healthy People 2020 Objectives

State Issue: Food Safety *FACS*

Description

At 10-year intervals, the U.S. Department of Health and Human Services (HHS) uses current knowledge of data, trends, and innovations along with lessons learned from the past decade to develop guidelines for health. The Healthy People 2020 Initiative is based on assessments of major risks to health and wellness, changing public health priorities, and emerging issues related to health preparedness and prevention. Several proposed objectives for 2020 in the area of food safety have implications for Extension Food Safety Education initiatives and programs.

Trend

Trend: 1) Reduce severe allergic reactions to food among consumers with a food allergy diagnosis. Extension will see increased emphasis on education for consumers, teachers, school foodservice personnel and child care food preparers for preventing food allergy events. 2) Reduce infections commonly transmitted through food. Extension food safety education programs will continue to focus on strategies to help prevent illnesses from organisms including Campylobacter, E. coli O157:H7, Listeria, Vibrio, Yersinia, Salmonella and Norovirus. This includes renewed emphasis on the importance of proper handwashing. 3) Prevent an increase in the proportion of bacterial isolates from humans that are resistant to antimicrobial drugs. Extension food safety education programs will need to address issues related to proper use of antibiotics. 4) Increase the proportion of consumers who follow key food safety practices. Extension food safety education programs will continue to focus on the recommended steps of clean, separate, cook and chill and will expand messages as appropriate. 5) Reduce the number of outbreak-associated infections caused by food commodity group. Extension will see increasing demand for safe food handling education for specific commodities (ie. materials for produce handling, materials for meat handling, etc.) 6) Increase the number of states prohibiting sale or distribution of unpasteurized dairy products (as defined by FDA, unpasteurized liquid milk and cheeses aged < 60 days). Extension food safety educators will continue to see issues related to unpasteurized milk and the need for education in this area.

Benefits to Participants: Through Family and Consumer Sciences Extension programs in Food Safety Education, participants enjoy better health because they are able to reduce their risk of foodborne illnesses. As a result of these educational interventions, Georgians:

- Gain awareness of the need for food safety education and safe food handling practices in a variety of food handling environments.
- Increase their knowledge of cleaning, separating, cooking and chilling practices to keep food safe.
- Improve food handling practices in the home, in volunteer food handling situations and in foodservice.

Benefits to Society: Food handler education can save money. Prevention of just one case of foodborne illness can save at the rates listed for each of the following illnesses for medical expenses, lost productivity, etc.: Vibrio vulnificus $3,045,726; Botulism $726,362; E. coli O157:H7 $14,838; Salmonella $9,146; Campylobacter $8,901, and Yersinia $7,227.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Posters for handwashing education, exhibits and kits for check-out, printed curriculum materials

Faculty/Staff Available to Support Programming

* **Harrison, Judy A.**

Andress, Elizabeth L.

Georgians are suffering more morbidity and mortality from chronic diseases.

State Issue: Food, Nutrition and Health *FACS*

Description

Currently 72.9 percent of Georgia men and 58.7% of Georgia women are obese or overweight. This compares to 71.2% of men and 57% of women in the USA as a whole. The number of obese individuals has increased yearly and most Georgia counties have obesity rates of at least 30%. Obesity and overweight contribute to the development of cardiovascular disease, hypertension, diabetes, cancer and other chronic diseases.

Cardiovascular disease (CVD) continues to be the number one cause of death in Georgia. The Georgia Division of Public health reported in 2008 that 30% of deaths in this state were due to CVD. CVD death rates were 9% higher in Georgia in 2007 than the national average. Total hospital charges for CVD-related treatment increased from $3.4 billion in 2003 to $5.5 billion in 2010.

The percent of Georgian with high blood pressure rose from 26% in 1999 to 31% in 2009. In 2007, Georgia's stroke rate was 17% higher than the national rate. In 2008, total hospital costs due to stroke in Georgia were $718 million. A third of Americans have hypertension or about 67 million people. Half of those individuals are not adequately controlled. Forty percent of those individuals are not even aware they have high blood pressure and 16% are aware but are not on hypertensive medication. This is true despite the fact that 90% of these individuals have a regular source of medical care. Hypertension contributes to heart disease and stroke.

The incidence of diabetes continues to soar in Georgia and across the country. The percentage of adults with diabetes increased from 7% in 2000 to 10% in 2010. About 79 million individuals in the United States aged 21 years and older have prediabetes.

Cancer remains the second leading cause of death in Georgia. During 2001-2005, about 35,537 cases of cancer were diagnosed each year. Risk for two out of three cancers could be reduced with lifestyle changes such as eating a healthier diet, not smoking and being more physically active.

According to the Mayo Clinic, celiac disease is four times more common that it was in 1950. Many people with gluten intolerance go undiagnosed. Celiac disease is a genetic disease and autoimmune disease that is commonly associated with type 1 diabetes and thyroid disease. Celiac disease is associated with certain cancers, osteoporosis, infertility, skin rashes and joint pain. A longitudinal study of men with celiac disease found that they had a fourfold higher death rate compared to men of a similar age without gluten intolerance.

Trend

To address the trend in cardiovascular disease: An educational program and media campaign will be developed for FACS Agents to deliver to those at risk for high blood pressure or that already have high blood pressure to inform them about risk factors such as obesity and inactivity, the importance of screening, and interventions that can reduce blood pressure so fewer people will be unaware and inadequately treated. Individuals with hypertension that want to lose weight after this program will be directed to the Walk-a-Weigh program and Walk Georgia since weight loss and physical activity can improve blood pressure.

To address the trend in type 2 diabetes: Extension agents can help people at risk for developing type 2 diabetes by offering the Road to Health Program from the CDC and by using the 12 Walk-a-Weigh lessons based on the Diabetes Prevention Program. If people enrolled in these programs lose 5-7% of their current body weight and begin to do 150 minutes per week of physical activity, incidence of diabetes may decrease 58-70% depending on the age of the participants.

To address the trend in cancer, new educational materials will be developed so FACS Extension agents can provide programming in cancer prevention not only to at risk women, but to men who may also be at risk. This programming can focus on lifestyle factors and screenings that reduce morbidity and mortality from lung, prostate, colorectal cancer, bladder cancer and skin cancer which are the major types of cancer men develop.

To address the trend in celiac disease, a program will be provided for FACS Extension agents to present on what gluten intolerance is and how it can be treated.

State Issue: Food, Nutrition and Health *FACS*

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Exhibits on diabetes prevention, hypertension, weight control, and physical activity.

Web Pages:

http://www.fcs.uga.edu/ext/pubs/food.php?category=Diabetes
http://www.fcs.uga.edu/ext/pubs/food.php?category=Foods%20and%20Nutrition%20for%20Seniors
http://www.fcs.uga.edu/ext/pubs/food.php?category=Special%20Nutrition%20for%20Disease
http://www.fcs.uga.edu/ext/pubs/food.php?category=Weight%20Control%20and%20Exercise

Faculty/Staff Available to Support Programming

* **Crawley, Constance C.**

Georgia's Children and Adolescents are becoming overweight and obese due to poor eating habits and inactivity.

State Issue: Food, Nutrition and Health *FACS*

Description

Poor eating and activity habits are contributing to our skyrocketing overweight and obesity problem in children and youth and their increase in elevated cholesterol levels, high blood pressure, and diabetes. They also contribute to the two primary killers of Georgia's citizens – cardiovascular disease and cancer. It is estimated that by mid-century, most people will be overweight or obese resulting in even higher numbers of chronic diseases. Medical experts predict that this generation may be the first one that has a shorter life span than their parents and grandparents. Extension is in a key position to educate children and youth to improve their eating and physical activity habits to stem this tide.

Trend

To combat this trend, an intervention in Colquitt County Schools will investigate whether teaching elementary school age children how to select healthier food and be more active will influence their weight gain over time. If the results of this intervention are positive, this program can be distributed to other counties through FACS Extension agents.

The Walk Georgia program is also proposing to create a special game-based Website for children to encourage physical activity.

Family and Consumer Sciences teachers in middle and high schools will be offered a workshop taught by an Extension specialist and a dietetic intern on how to teach obesity prevention and control to their students.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Exhibits on diabetes prevention, cancer prevention, weight control, walking, eating out

Web Pages:

http://www.fcs.uga.edu/ext/pubs/food.php?category=General%20Health

http://www.fcs.uga.edu/ext/pubs/food.php?category=Foods%20and%20Nutrition%20for%20Seniors

http://www.fcs.uga.edu/ext/pubs/food.php?category=Weight%20Control%20and%20Exercise

http://www.fcs.uga.edu/ext/pubs/food.php?category=Nutrition%20for%20Families

Faculty/Staff Available to Support Programming

* **Crawley, Constance C.**

Hanula, Gail M

Rising Prices Impact Access to Nutritious Foods for Georgia Families

State Issue: Food, Nutrition and Health *FACS*

Description

US retail food prices are predicted to rise as much as 4% in 2013. This is higher than the past 20 year annual average of 2.5-3%, and reflects higher commodity prices, the severe drought in the Midwest, and higher energy costs. Increases are predicted to be centralized in high quality protein foods, including eggs, meat, and dairy.

Trend

The Dietary Guidelines' 2010 Call to Action includes ensuring that all Americans have access to nutritious foods as one of the 3 guiding principles. There is a need for nutrition education to insure that Georgia families know how to select foods that will help them meet their nutritional requirements within their budgetary constraints. Education on the variety of foods in the Protein group of MyPlate, along with information on selecting and preparing these foods, is essential, and how limiting portions to recommended levels can help families save money. Currently 14.5% of US families are food insecure, defined as uncertain of having or unable to acquire enough food to meet the needs of all their members because they had insufficient money or other resources for food. This is a staggering statistic. Educational efforts through Cooperative Extension can help Georgia families eat well on a budget. (Written by Gail Hanula and Elizabeth Ripberger, Dept. of Foods and Nutrition, UGA)

Resources Available to Support Programming

Additional Resources:

Expanded Food and Nutrition Education Program (EFNEP)

Web Pages:

www.ugaefnep.com

Faculty/Staff Available to Support Programming

* **Hanula, Gail M**

State Issue: Healthy, Safe and Affordable Housing Environments *FACS*

Description

The housing market is showing signs of slowly recovering; however, the demand for housing is not yet strong enough to consume the existing inventory. In the current market, individuals and families are faced with rising costs for electricity, water, gasoline, food and other necessities while their income has remained stagnant or decreased. This combined with more stringent mortgage underwriting and weak consumer confidence has kept potential home buyers from taking advantage of the low interest rates.

Georgia has a home ownership rate of 67%, which is slightly above the national rate (Census, 2010). Over the past 5 years property values have fallen significantly. The median value of a house in Georgia is $156,200, with large variations between rural and urban communities (Census, 2010). Owning a home remains out of reach for many Georgians because of price and/or poor credit. The other option is renting. Rental units in Georgia vary greatly by price and quality. The median rent in Georgia is $808, which exceeds some social security and disability payments (Census, 2010).

Foreclosure remains a major concern in Georgia. In September 2011, one out of every 352 homes in Georgia was in active foreclosure proceedings (FHLB, 2011).

For the housing market to improve, we need stronger job and population growth, which should help improve consumer confidence and stimulate consumer spending.

Trend

Barriers like poor credit and lack of traditional credit continue to present challenges to many potential home buyers. High unemployment and underemployment, and foreclosure have contributed to credit problems for many homeowners. Homeowners who lost their home often face credit challenges when trying to find a place to rent. There is a great need for education and information on rebuilding credit and finding a place to rent.

The University of Georgia Consumer Sciences Cooperative Extension is approved by the U.S. Department of Housing and Urban Development to provide housing education and counseling in Georgia. Seven FACS Extension Agents provide housing and financial counseling and education in their counties. Programs include buying a home, renting, maintaining one's home, and preventing foreclosure. There are curricula available on buying a home, renting a home, and home maintenance.

State Issue: Healthy, Safe and Affordable Housing Environments *FACS*

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Housing and financial curricula and related resources are available on the internal website under Focus Outcome #10 - http://www.fcs.uga.edu/ext/outcomes/10.php.
Curricula include:
(1) Steps on the path to home ownership
(2) Smart budgeting for home owners
(3) When your income drops
(4) Renting 101: leasing smart in Georgia
(5) Healthy homes and home maintenance

Web Pages:

http://www.fcs.uga.edu/ext/housing/
http://www.hud.gov/
http://www.dca.state.ga.us/

Faculty/Staff Available to Support Programming

* **Turner, Pamela R**

State Issue: Healthy, Safe and Affordable Housing Environments *FACS*

Description

Linkages between housing and health are well established. Health hazards in one's home can come from the air residents breathe as well as the physical environment. Most individuals spend close to 90% of their time indoors, about two-thirds of which is spent in their home (EPA, 2008). Indoor environment problems are associated with lead-based paint; radon; mold; pests; dust mites; inadequate ventilation; particulate matter from fuel-burning devices; tobacco smoke; formaldehyde from pressed wood products; volatile organic compounds from things like household cleaners, pesticides and air fresheners; pesticides; and trips and falls. Health concerns associated with indoor environmental hazards include asthma, respiratory problems, lung cancer, poisonings, trips and falls.

ASTHMA: The occurrence and severity of asthma is linked to exposure to cockroaches, dust, mold, dust mites and pet dander (Institute of Medicine, 2004). Approximately 21% of the current asthma cases in the U.S. are linked to exposure to dampness and mold in homes, resulting in an annual cost of $3.5 billion (Mudarri and Fisk 2007). In 2011, Augusta and Atlanta were ranked among the top 15 most challenging places to live with asthma. Asthma is one of the leading causes of school absenteeism. According to data collected by the Centers for Disease Control (2003) 12.8 million school days were missed among the over 4 million children reporting at least one asthma attack in the preceding year. Missed school and work days translate into billions of dollars in medical care plus lost productivity. In Georgia 12% of children ages 0-17 and 9% of adults have asthma (Georgia Department of Public Health – DPH, 2008). Among the adults with asthma 45% reported being unable to work or carryout usual activities on one or more days in the past year. In 2007, 10,000 Georgians were hospitalized for asthma, with costs totaling over $132 million, about half of which were for ER visits (DPH, 2008).

MOLD: Studies show an association between damp or moldy houses and negative health effects. Excessive moisture in the home also supports the growth of dust mites, and infestations of roaches, rats, and mice — all of which produce allergens that exacerbate respiratory conditions (Institute of Medicine, 2004).

RADON: Radon is a radioactive gas that seeps into your home through cracks and crevices. Exposure to radon can lead to lung cancer. It is the leading cause of lung cancer among nonsmokers, resulting in an estimated 21,000 lung cancer deaths each year (EPA, 2008). In Georgia over 800 people die each year of radon-related lung cancer.

LEAD: Each year over 1 million children are affected by lead poisoning which results in damage to their brain and nervous system, and behavior and learning problems. The most common source of lead poisoning is from paint in homes and buildings built before 1978 when lead was still used as an additive in residential paints. Other possible sources of lead exposure in the home include lead water pipes and solder; some pottery and cooking utensils; some types of candy; folk remedies; and some imported toys and jewelry.

VOLATILE ORGANIC COMPOUNDS (VOCs): Exposure to contaminants is influenced both by the physical environment of the home and by the behavior of the people living in the home.

TRIPS & FALLS: Each year one out of three adults age 65 or older fall. Medical costs associated with these falls totaled over $19 billion in 2000 or $28.2 billion in 2010 dollars (CDC, 2012). Falls are the leading cause of injury death among adults 65 and over.

Trend

State Issue: Healthy, Safe and Affordable Housing Environments *FACS*

Most of the negative health effects from exposure to indoor environmental hazards can be prevented or the severely lessened. All Georgians benefit from healthier homes. Increased attention to reducing indoor contaminants results in reduced health care expenditures and improved well-being of individuals and families. As a result, there are fewer lost work days and children are less likely to miss school from complications associated with asthma and allergies.

Exposure to contaminants is influenced both by the physical environment of the home and by the behavior of the people living in the home. FACS educational programs can increase consumer knowledge about the hazards in their home and what action steps they can take to reduce their exposure and make their home healthier and safer. Workshops provide information about green cleaning, reducing contaminants by adding a doormat, cleaning more often, testing for radon, eliminating lead hazards, and removing tripping hazards.

Nationally, the increased focus on healthy housing and environmentally friendly products has resulted in an increased number of products and services making false and misleading claims. Extension Agents provide consumers with research based information to help them make sound decisions when selecting products and services to improve their indoor environment.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Curricula and resources to support programming are available on the internal website under Focus Outcome #9 (http://www.fcs.uga.edu/ext/outcomes/9.php).
Curricula include:
(1) Living Greener: Healthy people, healthy homes, healthy communities
(2) Green cleaning
(3) Leave it at the door
(4) Rethink waste: reduce, reuse, repair, recycle

(5) Home safety curricula is available at http://www.fcs.uga.edu/ext/outcomes/10.php

Web Pages:

http://www.fcs.uga.edu/ext/housing/
http://www.ugagreenway.com/

Faculty/Staff Available to Support Programming

* **Turner, Pamela R**

State Issue: Positive Development for Individuals, Families and Communities *FACS*

Description

Since 2001, over 2 million U.S. Service Members have been deployed. Repeated and prolonged deployments, dangerous work environments, and extended family separation has put increased strain on Service Members and their families. Returning Veterans, Active Duty Service Members, Georgia National Guard, Reservist and their families face all the challenges civilian families do but with the added stress of military life. Because an effective military is critical for national security it is necessary that Military Families have access in their home counties to Extension's evidence based resources to assist them in maintaining strong resilient families.

Trend

The 2005 BRAC base realignment alone brought an increase of over 6,500 Army Families to Muskogee County, while across Georgia there are over 40,000 Military Children. Those numbers along with the 1,441 Army Survivor Families coping with the loss of their Soldier illustrate the need for Family and Consumer Sciences programming for Veterans, current Military Family Members, and those Military Families who has lost their Service Member. As Georgia's Veterans and Service Family Members return to their home counties they will have need of programming from all three Extension units. Military Families will benefit from programming in effective money management, family communication skills, adapting their homes for Veterans with combat injuries, nutrition education, caregiver support, supporting children and youth during family reunification, building healthy relationships, home gardening and food preservation, support for Military Youth and Children through 4-H programs, educating child care providers to support Military Children and their families, Agribility for returning Veteran Farmers, and building community capacity to support Georgia's Military Families and Veterans.

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Support and training for agents working to create relationships with Military Installations and Georgia National Guard and Reserve Units and assistance in identifying and connecting with Military audiences.

Web Pages:

http://www.operationmilitarykids.org/public/home.aspx
http://www.fcs.uga.edu/ext/
http://militaryfamilies.extension.org/
http://learn.extension.org/events/443
http://fcs.tamu.edu/families/military_families/
http://homemods.jevs.org/federalprograms.asp

Faculty/Staff Available to Support Programming

* **Gibson, Sharon M**	Bower, Don W.
	Bales, Diane W

State Issue: Positive Development for Individuals, Families and Communities *FACS*

Description

For the state and local taxpayers of Georgia, divorce and unwed childbearing costs $1.46 billion each year – almost 8% of the 2007 state budget of $19.2 billion. The costs incurred by the state of Georgia make it the 9th highest of all 50 states. As well, it is estimated that teen childbearing in Georgia costs taxpayers (federal, state, and local) at least $465 million in 2008. These costs were associated with public health care, child welfare services, incarceration and decreased earnings and spending. Healthy relationships and marriages, and resulting family stability specifically, benefit the physical, social, and emotional well-being of adults and children as well as the community. Couples in healthy marriages enjoy greater financial wealth, exhibit more positive parenting practices, have stable employment, and are less likely to be victims of domestic violence. When a higher percentage of couples have healthy marriages, communities tend to have lower crime rates, lower rates of juvenile delinquency, and lower teen pregnancy rates.

The elements of a healthy couple and marital relationship can be learned, and thus, educational programs focusing on communication, conflict management, interpersonal skills, and information regarding healthy relationship development can improve the well-being of individuals, couples, and families. As well, research has shown that youth-focused relationship and marriage education can help adolescents develop skills that will reduce their risk for intimate partner violence and teen pregnancy, and increase their chances for establishing future healthy relationships and stable marriages.

Trend

Adults & Children. Consistent with national trends, the marriage rate in Georgia continues to decline (10.3 per 1000 total population in 1990 vs. 6.6 in 2009), and nearly half of all marriages in a year are remarriages. Nationally, the lifetime probability of divorce or separation remains near 50% and the risk is higher for remarried couples. In Georgia, estimates suggest that nearly 1 divorce occurs annually for every 2 marriages. Of most concern, the percentage of children who grow up in fragile – typically fatherless and poor– families has grown enormously over the past four decades. This is mainly due to increases in divorce and out-of-wedlock births. Estimates suggest that nearly 65% of couples who divorce have children, and since 2000, the percent of all births in Georgia to unmarried mothers has increased each year (37% in 2000 vs. 46% in 2010); a higher proportion of these out-of-wedlock births occur among African American (72%) and Latina (53%) females compared to White females (27%). In 2010, 38% of Georgia's children lived in single-parent homes. As a consequence of these dramatic shifts in family structure, more children are exposed to the risk of poverty: In 2010, 10% of married-couple families with children under age 18 lived in poverty compared to 39% of female-headed households with children under age 18.

Youth. Consequently, an increasing number of youth are exposed to unhealthy models of relationships which increase their chances of forming unhealthy relationships. For example, approximately 1 out of every 3 adolescent girls in the US is a victim of physical, emotional or verbal abuse from a dating partner. In 2009, 32% of GA High School students were in a physical fight one or more times during the past 12 months and 16% reported that they were hit, slapped, or physically hurt on purpose by their boyfriend or girlfriend during the past 12 months (compared to 10% Nationally). As well, it is estimated that nearly 50% of all teenagers in grades 9-12 have had sex. US teen birth rates per 1,000 adolescent girls aged 15-19 continued to decrease from 1991 (61.8) to 2007 (41.5) and 2010 (34.4). In GA, the teen birth rate in 2010 was 41.2 per 1,000 15-19 year old adolescent girls, and GA has the 13th highest teen birth rate in the nation.

State Issue: Positive Development for Individuals, Families and Communities *FACS*

Resources Available to Support Programming

Fact Sheets / Departmental Publications
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Relationship Smarts (for youth)
Healthy Relationship and Marriage Education Training (for professionals working with individuals, couples, and families).
PREPARE program (for Engaged/Married Adult Couples)
Smart Steps for Stepfamilies
Intentional Harmony: Managing Work and Life
Together We Can: Creating a Healthy Future for our Family
Married and Loving It

Web Pages:

www.gamarriages.com
www.nermen.org
https://healthymarriageandfamilies.org

Faculty/Staff Available to Support Programming

* **Futris, Ted G.**

State Issue: Quality Caregiving for Children and Youth *FACS*

Description

In 2007, 63.7% of children under age 6 lived in a family where all adults in the home work full-time. Some form of child care is needed while those parents are at work.

Children in high-quality child care programs learn valuable motor, language, cognitive, and social-emotional skills in child care that contribute to their school readiness, social skills, and emotional well-being in elementary school and beyond. Unfortunately, a new Georgia child care study has shown that most child care in Georgia is only of marginal or poor quality. Child care providers with more education and ongoing training provide better-quality learning experiences and are more responsive to young children's needs.

Trend

Ongoing education of child care providers is one important way FACS Extension can help improve child care quality in Georgia. Through child care provider education programs in Family and Consumer Sciences Extension, child care providers learn the skills and information they need to provide more sensitive, responsive, and developmentally appropriate care and educational experiences that meet young children's needs.

BENEFITS TO PARTICIPANTS: Through child care provider education programs in Family and Consumer Sciences Extension, child care providers learn the skills and information they need to provide more sensitive, responsive, and developmentally appropriate care and educational experiences that meet young children's needs. As a result of these educational programs, child care providers learn the importance of quality child care, age-appropriate expectations and activities for young children, ways to support early brain development in child care, and strategies for guiding and nurturing children and handling misbehavior; meet their annual training requirements for state child care licensing; make changes in their program and practices to improve the quality of young children's experiences in their child care program; and improve practices that promote children's health, safety, learning, relationships with adults, and school readiness.

BENEFITS TO SOCIETY: Child care has an enormous impact on Georgia. The child care industry generates about $2.4 billion in gross receipts each year, and employs more than 61,000 people directly. Parents with young children are able to earn between $13.6 billion and $32.7 billion each year because child care is available. Increasing the quality of child care in Georgia offers long-term benefits by helping children develop knowledge and skills that will enable them to be ready for school, be better students, more likely to complete high school, less likely to be in costly special education programs, less likely to commit crimes, and more likely to be productive members of our future workforce.

State Issue: Quality Caregiving for Children and Youth *FACS*

Resources Available to Support Programming

Digital Slide Show (PowerPoint) Presentation
Individual Assistance / Consultations
Speakers and Presenters for County Based Training Opportunities

Additional Resources:

Child Care Lesson Plans; Eat Healthy, Be Active curriculum and resource kit; Teaching Basic Health and Safety curriculum and resource kit; Better Brains for Babies trainer resources; eXtension Alliance for Better Child Care searchable databases of hands-on activities, story stretching activities, and fingerplays and songs; Child Care Quality Matters interactive website

Web Pages:

http://www.fcs.uga.edu/ext/outcomes/1.php
http://www.fcs.uga.edu/ext/internal/childcare/
http://www.extension.org/child_care
http://www.extension.org/pages/25442/hands-on-activities-for-child-care
http://www.extension.org/pages/54461/story-stretching-ideas-for-child-care
http://www.extension.org/pages/62935/fingerplays-and-songs-for-child-care
http://www.fcs.uga.edu/ext/ccqm/
http://www.bbbgeorgia.org

Faculty/Staff Available to Support Programming

* **Bales, Diane W**