



THE UNIVERSITY OF GEORGIA

# COOPERATIVE EXTENSION

Colleges of Agricultural and Environmental Sciences & Family and Consumer Sciences

## OUTLOOK 2010

TRENDS, ISSUES, AND RESOURCES

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## Description

Current interest and incentives in the renewable energy arena coupled with the economic impact of fluctuating energy prices will continue to create issues and opportunities for focus on the economics of renewable energy in the short and long term.

## Trend

Issues in the short-run include assessments of the current agronomic practices and conditions—crop rotations, various feedstock supply/demand, poultry and livestock feed demands, etc. Also of interest in the short-run is an assessment of current renewable energy practices employed in the state, assessment of new opportunities, and examination of market potential for various by-products produced in the production of renewable energy. Increased direct costs of production, including fuel and fertilizer, provide opportunities for agribusinesses to focus on new technologies to improve efficiencies and provide cost savings to producers. The feasibility of production and implementation of new technologies must be considered.

Intermediate or medium term issues related to renewable energy include the impact from the shifts in crop acreage and the potential stress placed on existing infrastructure in the state as these changes occur. As the fuel and food industries find a balance, possible solutions must be considered to best fulfill the needs of grain producers, consumers, and, at the same time, enhance Georgia's economy.

Economic analysis of alternative feedstocks must be considered as well as cooperative efforts of local communities to meet energy needs from alternative sources.

As farm bill policy shifts to a more “green focus” and renewable energy interest shifts toward “advanced biofuels” there will be a need to focus on maximizing opportunities for producers and agribusinesses to capitalize on potential income streams for conservation and natural resources. What do individuals need to know to maximize these opportunities? What, if any, new business opportunities exist? Are businesses currently overlooking opportunities to enhance their bottom line? It will also be of great importance to separate fact from myth, especially related to economics and to provide sound, unbiased research assessing the likelihood of profitability and success of new ventures.

## 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:**

[www.caed.uga.edu](http://www.caed.uga.edu)

### **Web Pages:**

[www.caed.uga.edu](http://www.caed.uga.edu)

## Faculty/Staff Available to Support Programming

**Luke-Morgan, Audrey S.**

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## **Description**

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As more agricultural producers transition into entrepreneurs, or “agripreneurs,” there is an increased need for an educational series focused on financial management.

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## **Trend**

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Most agricultural producers are experienced on the production aspect of their operation and often leave the financial analysis up to their accountants or financial planners. However, as more producers develop into “agripreneurs”, often out of necessity, a financial management educational series with a focus on new and expanding agricultural related businesses would be beneficial. The platform would be to build on the success seen with the direct marketing of livestock and starting a new food business programs, but with greater focus on the financial management—from feasibility analysis, to record keeping, to preparing financial statements and understanding financial ratios, to tax implications. A portion of this program would provide an educational series related directly to QuickBooks. The purpose would be to provide the tools required to increase the likelihood of success of the new agricultural ventures.

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## **Resources Available to Support Programming**

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

### **Web Pages:**

[www.caed.uga.edu](http://www.caed.uga.edu)

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## **Faculty/Staff Available to Support Programming**

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**Luke-Morgan, Audrey S.**

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## **Description**

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Education of potential or expanding food business entrepreneurs, demand for which has not decreased with adverse economic conditions.

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## **Trend**

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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. 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.

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## **Resources Available to Support Programming**

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- 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](http://www.caed.uga.edu) [www.efsonline.uga.edu](http://www.efsonline.uga.edu) [www.marketmaker.uga.edu](http://www.marketmaker.uga.edu)

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## **Faculty/Staff Available to Support Programming**

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**Kane, Sharon P \* Martino, Karina G \* Wolfe, Kent**

*Hurst, William C.*

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

**ANR**

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**Description**

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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.

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**Trend**

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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.

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**Faculty/Staff Available to Support Programming**

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**Wolfe, Kent**

### **Description**

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Current economic conditions require that agricultural producers seek opportunities for value added agriculture to enhance profitability and economic sustainability rather than relying on commodity based agriculture. Producers need to be aware of the economic feasibility of new ventures as well as funding sources available to help analyze and implement the ventures.

### **Trend**

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As changes in agricultural policy continue to affect southern agriculture, traditional commodity producers and rural communities will have to seek innovative ways to transition from primarily commodity based to more value-added focused agribusinesses. These changes provide opportunities for CAED to be at the forefront to provide services to evaluate opportunities and their impact, as well as, educate individuals of potential opportunities and the importance of being better agribusiness leaders. Now is the time to broaden the mindset of agricultural producers and provide leadership in developing programs to help further rural economic development. As new agribusiness opportunities continue to arise and potential entrepreneurs pursue new ventures, a focus on potential funding sources and grant opportunities needs to be explored and educational programs designed and delivered. Focus needs to be placed on not only sources available, but also on assistance on how to apply and steps to take to maximize opportunities.

### **Resources Available to Support Programming**

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

#### **Web Pages:**

[www.caed.uga.edu](http://www.caed.uga.edu)

### **Faculty/Staff Available to Support Programming**

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**Luke-Morgan, Audrey S.**

### 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. For the state, commodity payments totaled \$208 million for FY2009. Government payments from all sources for 2008 were over \$300 million.

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.

Farm bill legislation also includes policy on food safety. This includes COOL (Country of Origin Labeling) requirements. COOL is mandated for fruits, vegetables, and livestock.

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. DCP payments are received on a percentage of historical acres planted or “Base” acres. There are 3.0 million cropland Base acres in Georgia and DCP payments made on 2.5 million acres. Georgia's two largest row crops in acreage and value are cotton and peanuts. These two crops alone account for 1.9 million acres or 63% of the state's DCP Base acres.

The DCP Program and Marketing Loan are important and beneficial income risk management tools for Georgia farmers. Changes could be proposed and forthcoming in the 2013 farm bill that would alter the DCP program or replace it with a different type of “safety net”. 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.

Conservation programs appropriated in the 2008 farm bill will expire in 2012. Farmers will need to be aware of any relevant changes to conservation programs in the 2013 farm bill. Relevant changes may include payment limits, eligibility requirements, renewed programs and terminated programs.

There are over 337,000 acres of fruits and vegetables in Georgia generating a combined farm gate value of \$1.28 billion. The total cost to producers, intermediaries, processors, and retailers of implementing the mandatory COOL is estimated at \$763 million and could adversely impact the states fruit and vegetable industry.

### 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](http://www.agecon.uga.edu)

### Faculty/Staff Available to Support Programming

**Shurley, W. Don \* Smith, Nathan B.**

*Fonsah, Esendugue Greg \* Smith, Amanda R \* Stegelin, Forrest Eugene*

# 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](http://www.secattleadvisor.com) [www.ugabeef.caes.uga.edu](http://www.ugabeef.caes.uga.edu)

## Faculty/Staff Available to Support Programming

**Dyer, Ted \* Hicks, Carole \* Lacy, Curt \* Silcox, Ronald \* Stewart, Lawton**

## 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, 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

## Faculty/Staff Available to Support Programming

**Lacy, R. Curt**

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

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## **Description**

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Georgia fish farmers continue to respond to the high cost of feed and energy in 2010. Catfish processing in South Georgia continued to grow due to demand for high quality fish, however pressure from imported fish and other meats continues to put downward pressure on fish prices. Fish hatcheries in Georgia have had reasonable success after rain has returned to the region, filling ponds and encouraging re-stocking. Renewed interest in freshwater and marine shrimp production has occurred due to problems with the Gulf of Mexico fishery.

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## **Trend**

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Producers are changing to fish species that do not require as much manufactured feed as catfish do, such as fish that can eat plankton or forage fish. Other species that forage for food include crawfish and prawns. New interest in tilapia culture has increased because of the increasing demand for locally produced products and the suitability of tilapia for tank culture or aquaponic culture. Largemouth bass and sunfish hatcheries have the opportunity to expand to meet stocking demand.

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## **Resources Available to Support Programming**

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- 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://www.cpes.peachnet.edu/aquaculture/>

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## **Faculty/Staff Available to Support Programming**

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**Burtle, Gary J.**

## 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](http://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.

### **Additional Resources:**

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

## Faculty/Staff Available to Support Programming

**Ames, Lisa \* Buntin, David \* Douce, Keith \* Jenkins, Tracie \* Kemerait, Robert \* Suiter, Dan**

## Description

Over the past several years the number of beef cattle producers in the state of Georgia that have completed and maintained their Beef Quality Assurance certification has declined dramatically. With the emergence of new and well-funded animal rights groups, producers must maintain vigilance and do everything possible to guarantee consumers that they are producing a safe, consistent and high quality product in a wholesome and humane manner utilizing environmentally sound practices. In addition, becoming BQA certified and maintaining that certification can assist in opening a variety of marketing channels for beef producers and help increase their profit potential.

## Trend

New national programming has been developed to help state coordinators get more producers BQA certified and to help educate the industry of proper BQA practices and guidelines. Online trainings and certification and face-to-face trainings and written exams are available to help facilitate this process.

## Resources Available to Support Programming

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

### **Additional Resources:**

National Beef Quality Assurance Web-based training and certification

### **Web Pages:**

Georgia Cattlemen's Association [www.gabeef.org](http://www.gabeef.org) UGA Beef Team [www.ads.uga.edu/extension/beefteam/index.html](http://www.ads.uga.edu/extension/beefteam/index.html) NCBA BQA Training Modules and Test [www.animalcaretraining.org](http://www.animalcaretraining.org)

## Faculty/Staff Available to Support Programming

Hicks, Carole

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### **Description**

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

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### **Trend**

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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.

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### **Faculty/Staff Available to Support Programming**

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Hinkle, Nancy C.

## 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**

## 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. There are several emergent turfgrass diseases including *Curvularia* spp., *Colletotrichum* spp and *Ophiosphaerella* spp which are destructive in warm season grasses are likely to increase in these newly developed grasses. Incidences of *Gaumannomyces graminis* (GGG) the causal agent of take-all root rot have increased in the state of Georgia. St. Augustine grass was traditionally the species most susceptible, and the disease seemed to be confined to South and Coastal Georgia. Appearance of GGG in several turfgrass species and in northern areas of the state will likely to increase. *Rhizoctonia* spp causal agent of brown patch, large patch and yellow patch is on the increase. Several new diseases are now found in Georgia including *Rhizoctonia zeae*, *Pythium volutum*, *Phyllachora* spp.

## Trend

Due to 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
- 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>

## Faculty/Staff Available to Support Programming

**Martinez, Alfredo**

### 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.

### Trend

Due to the importance of safeguarding wheat yields there will be a need to become proficient on rapid and accurate 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**

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### **Description**

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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.

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### **Trend**

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

### **Additional Resources:**

Diagnostics for viral identification is available through the diagnostics clinic.

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### **Faculty/Staff Available to Support Programming**

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**Brannen, Phillip M.**

# Evaluation Of Fungicides For The Control Of Fusarium Wilt In Watermelons

**State Issue:** Agricultural Profitability and Sustainability

**ANR**

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## **Description**

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

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## **Trend**

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

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## **Faculty/Staff Available to Support Programming**

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Sanders, Floyd Hunt

# Fluctuations In Agronomic Trends For Peanut Production

**State Issue:** Agricultural Profitability and Sustainability

**ANR**

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## **Description**

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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.

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## **Trend**

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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.

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## **Resources Available to Support Programming**

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

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## **Faculty/Staff Available to Support Programming**

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**Tubbs, Ronald Scott**

*Beasley, John P. \* Harris, Glendon H.*

**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**

All, Terry J. \* Horton, Dan 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.

### **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.**

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## Description

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Currently there are over 260 dairy producers in Georgia. High input costs, forage quality, milk quality, waste management and poor animal fertility continue to effect productivity and profitability. Undergraduate enrollment in Animal & Dairy Science continues to increase.

Response

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## Trend

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Milk prices have begun to recover after a record drop when compared to the last five years. Dairy cow numbers are stable with demand increasing. The southeast does not produce enough milk to meet fluid demands. Other than Georgia and Florida, most southern states has experienced significant declines in milk production. Feed prices are more stable and growing conditions have been more favorable. Improving forage quality through the incorporation of legumes into pastures, use of improved forage genetics, controlled grazing and timely harvests are key to controlling production costs. 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. Many producers now qualify for milk quality premiums or face penalties, so additional efforts are needed to decrease somatic cell counts and reduce preliminary incubation (PI) counts in milk. 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. Also, improving handling of dairy cull cows will also prove beneficial. Suitable waste management practices will remain a priority.

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## Resources Available to Support Programming

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- 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.

### Web Pages:

[http://www.extension.org/pages/Dairy\\_Cattle\\_Reproduction](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.caes.uga.edu/publications/subject_list.html) [http://www.extension.org/dairy\\_cattle](http://www.extension.org/dairy_cattle)

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## Faculty/Staff Available to Support Programming

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**Bernard, John K. \* Gilson, Warren D. \* Graves, William \* Nickerson, Stephen C. \* Wilson, Melony L**  
*Froetschel, Mark A.*

**State Issue:** Agricultural Profitability and Sustainability

**ANR**

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### **Description**

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Glyphosate-resistant Palmer amaranth has essentially eliminated conservation tillage cotton production and will cost Georgia growers over \$90 million in control costs during 2010.

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### **Trend**

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UGA, NRCS, and USDA are working to implement new programs that may allow growers to return to conservation tillage cotton production and reduce grower production costs.

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### **Faculty/Staff Available to Support Programming**

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Culpepper, Stanley

# Growth Of Pasture-Based Enterprises Focuses 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

### Additional Resources:

Individual consultations and county-based programming in this regard are severely limited by a lack of personnel and funding.

### 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

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**Description**

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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.

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**Trend**

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Bee decline in the three winters between 2006-2009 hovered around 30%, a level thought by many specialists to be non-sustainable. This phenomenon triggered political pressure to increase federal research and extension funding in hopes of reversing bee decline. 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. 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>.

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**Resources Available to Support Programming**

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

**Web Pages:**

<http://www.ent.uga.edu/bees/>

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**Faculty/Staff Available to Support Programming**

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**Delaplane, Keith S.**

*Berry, Jennifer A*

# Increased Nematode Attack To Turfgrasses And Loss Of Nematicides

**State Issue:** Agricultural Profitability and Sustainability

**ANR**

## **Description**

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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. Additionally, no nematicides are now available.

## **Trend**

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Development, adaptation and dissemination of sound cultural practices including balanced fertility, core aeration, 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**

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- 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**

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**Martinez, Alfredo**

# Increased Xylella 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.

### **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.**

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## **Description**

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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 characterized by increased volatility 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.

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## **Trend**

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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.

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## **Resources Available to Support Programming**

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- 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](http://www.agecon.uga.edu)

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## **Faculty/Staff Available to Support Programming**

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**Shurley, Don \* Smith, Amanda \* Smith, Nathan**

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## **Description**

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The professional landscape industry in Georgia, like many other industries, is struggling as a result of the economic downturn and drop in new construction. Commercial landscape companies report that there are very few new installations going in. Most business now is in retrofits of existing landscapes and maintenance of existing landscapes.

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## **Trend**

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Landscape companies are diversifying and offering new services, such as hardscapes, gutter cleaning, pressure washing and landscape lighting. Despite the lack of business, there is a growing number of new landscape companies started by individuals laid-off from other professions. It is an easy business to start, requiring a business license and some basic equipment. Most new start-ups are in maintenance since installation requires more equipment and more workers. Since many persons are new to the landscape profession, 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.

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## **Resources Available to Support Programming**

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○ Speakers and Presenters for County Based Training Opportunities

### **Additional Resources:**

Employee Training Videos for Landscape Professionals  
Cost Estimating and Job Bidding Excel Spreadsheets  
Various publications

### **Web Pages:**

<http://www.hort.uga.edu/extension/programs/hortmanage.html> <http://www.supercrew.caes.uga.edu/>

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## **Faculty/Staff Available to Support Programming**

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**Pennisi, Svoboda Vladimirova**

*Wade, Gary L.*

**State Issue:** Agricultural Profitability and Sustainability

**ANR**

### **Description**

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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**

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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**

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

#### **Additional Resources:**

Georgia Organics (statewide association)

### **Faculty/Staff Available to Support Programming**

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**Berle, David Christian**

*Gaskin, Julia W. \* Gibson, Sharon M \* Westerfield, Robert*

# Maintaining The Quality And Yield Of Georgia Flue-Cured Tobacco

**State Issue:** Agricultural Profitability and Sustainability

**ANR**

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## **Description**

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

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## **Trend**

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This decline is related to consistent 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.

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## **Resources Available to Support Programming**

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

### **Web Pages:**

<http://www.GeorgiaTobacco.com>

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## **Faculty/Staff Available to Support Programming**

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**Moore, J. Michael**

# Mastitis In Dairy Goats Lowers Milk Quality, Milk Production, And Farm Profitability

**State Issue:** Agricultural Profitability and Sustainability

**ANR**

## Description

Mastitis in dairy goats, or bacterial inflammation of the mammary gland, continues to result in monetary losses to the dairy goat industry in terms of lost milk production; discarded abnormal milk; reduced milk quality; veterinary fees; costs of medicine, labor, and replacement animals; and reduced salvage value of the diseased animal. Control programs for the milking goat herd need to be improved as Georgia and the rest of the southeastern states continue to compete with the rest of the United States in the area of milk production.

## Trend

As milk processors and consumers of dairy goat products demand higher quality products, pressure will be placed upon Georgia producers to lower the level of mastitis and improve raw milk quality on the farm. Thus, lowering the level of mastitis will reduce the somatic cell counts and increase milk quality. This is a challenge in all southeastern states where heat and humidity are counterproductive to producing large quantities of high quality milk, because these environmental factors favor the development of mastitis. New goat dairies constructed in this State as well as existing operations need to have an effective mastitis control program in place in order to comply with present and future changes in legal milk quality standards as well as the demands of processors and consumers.

## Resources Available to Support Programming

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

## Faculty/Staff Available to Support Programming

**Nickerson, Stephen C.**

*Kautz, Felicia*

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**Description**

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Milk quality continues to be a significant issue for the industry. The European Union (EU) recently increased the standards for exporting milk to the EU. They have effectively lowered the somatic cell count (SCC) allowed on milk by requiring all of the milk to be below the threshold eliminating the blending of milk with high and low SCC's. Somatic cell counts are an indirect measure of the level of mastitis and is an internationally accepted procedure. Much of the milk produced in Georgia will not meet the more rigorous standards. This limits potential markets to processors who only process milk for the domestic market. Many domestic processors may also adopt these standards further limiting market access.

Decreased productivity and increased health care costs are also the result high SCC's.

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**Trend**

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Milk quality has been steadily improving but at a very slow pace. Quality will need to be improved more rapidly to meet developing standards. Improving quality will help maintain potential markets.

Decreasing SCC's can increase productivity and reduce the health care costs associated with mastitis.

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**Resources Available to Support Programming**

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

**Additional Resources:**

DHIA provides a means of monitoring udder health through somatic cell counts. Herds not on official testing programs can also have this test performed.

Limited culture work can be conducted which is helpful in developing mastitis control programs.

**Web Pages:**

[http://www.extension.org/dairy\\_cattle](http://www.extension.org/dairy_cattle)

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**Faculty/Staff Available to Support Programming**

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**Gilson, Warren D.**

*Nickerson, Stephen C.*

### Description

With reproductive traits being the number one most economically important 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. Recognizing the economical importance of reproductive 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 anestrous 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

#### **Web Pages:**

[www.ugabeef.caes.uga.edu](http://www.ugabeef.caes.uga.edu)

### Faculty/Staff Available to Support Programming

**Dyer, Ted G.**

*Hicks, Carole \* Silcox, Ronald E. \* Stewart, Robert L.*

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## **Description**

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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.

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## **Trend**

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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 calcium requirement for these new cultivars in an effort to help producers increase their profit potential.

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## **Resources Available to Support Programming**

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

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## **Faculty/Staff Available to Support Programming**

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**Beasley, John P.**

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## **Description**

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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.

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## **Trend**

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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 management 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.

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## **Resources Available to Support Programming**

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- 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/>

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## **Faculty/Staff Available to Support Programming**

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**Wells, Marvin Leonard**

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## **Description**

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The Georgia Pomegranate Association is comprised primarily of growers wishing to diversify their operation and produce an alternative high-value crop with good profit potential. However, numerous basic questions regarding pomegranate cultivation, handling and processing specific to Georgia have yet to be answered, and must be addressed in a timely manner in order to keep pace with the rapidly expanding industry.

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## **Trend**

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Pomegranate acreage in Georgia has increased dramatically, rising from essentially nil three years ago, to over 4000 trees in ground, with current expansion limited only by the availability of rooted cuttings. Tremendous interest from a diverse group of growers, from blueberry and pecan growers, to entrepreneurial businesspeople, has result in an increased effort by the college to address the concerns of the industry. However, there still remain numerous research opportunities. Essentially all aspects of pomegranate production require attention, from land preparation and cutting production through to postharvest handling and processing.

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## **Resources Available to Support Programming**

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

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## **Faculty/Staff Available to Support Programming**

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**MacLean, Daniel D**

**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 the state swine project.

### Trend

Packers continue to expect an increased level of participation in the NBP quality assurance programs. Some of these programs have very specific training, testing, and verification requirements. Participation in these programs will be necessary for producers who wish to market product to the major packers.

### 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>

### Faculty/Staff Available to Support Programming

**Dove, C. Robert**

## Description

In various commodity groups of Georgia agriculture, use of plastics is an economical and beneficial part of production. Vegetable growers use plastic mulch to lengthen growing seasons and reduce weed competition. Hay growers use plastic film to protect hay bales. Nursery growers use plastic pots, trays and films for shipping and plant protection. All of these materials are relatively cheap to purchase given the greater ease of management they provide. However, disposal of these materials is incredibly problematic for growers. Some landfills may not accept the materials at all or charge tipping fees for only a limited amount. Burying and burning of plastics is illegal due to health and environmental risks.

## Trend

Unlike recycling of post-consumer waste plastics which has become more common for municipalities and counties, recycling of agricultural plastics has not developed (aside from chemical container recycling). Several issues make recycling of these plastics more difficult, including cleanliness, ease of transportation, various colors and types of plastics and location. Successful efforts have been made in other areas that focus on recycling of these various materials and reuse in various products. Efforts need to be made to attract businesses that would be interested in recycling these materials. Research needs to be done to determine the actual amounts of these materials discarded each year. Education is needed on the proper handling and storage of materials for later recycling to reduce some of the problems previously mentioned. Efforts can also be made at the county/regional level to facilitate collection of these plastics to reduce transportation issues.

## Resources Available to Support Programming

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

## Faculty/Staff Available to Support Programming

**Speir, Robert Adam**

## 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

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

*Hartel, Peter Gary*

## Description

Dairy and swine producers operating large-scale confinement operations are looking for ways to handle and dispose of manure that are sustainably cost effective and efficiently meet odor and waste water pollution policies. Biogas recovery systems are known to help control methane emissions. Methane is an odorless gas that can be used to generate electricity, develop fiber products and potting medium as a soil or peat replacement, recycle livestock bedding, establish carbon credits, or provide other value-added products such as fertilizer and raw gas or transport fuel. Methane from biogas recovery systems, therefore, has marketability and economic value. Substantial environmental benefits exist, as well, including water quality and resource protection, watershed management, greenhouse gas reductions, manure management, and odor control.

## Trend

“Methane to Markets” (M2M) is a partnership of governments, agencies, private and non-government participants working together to facilitate methane reduction projects in agriculture. Collaboration is yielding important benefits, including enhanced economic growth and energy security, improved air quality and industrial safety, and reduced greenhouse gas emissions. US government involvement includes the Department of State (DOS), Department of Energy (DOE), US Trade and Development Agency (USTDA), US Agency for International Development (USAID), Environmental Protection Agency (EPA), and US Department of Agriculture (USDA). A resource facilitating the livestock industries is the AgSTAR program, a voluntary outreach effort jointly sponsored by EPA, USDA, and US DOE that encourages the use of methane recovery (biogas) technologies at the confined animal feeding operations that manage manure as liquids or slurries. Many of the operational, planned and under construction digester systems were funded in part by the USDA Rural Development through the 2002 and 2008 Farm Bills, including those in Georgia.

Four potential advantages have been documented to installing and utilizing a biogas recovery system: economy of scale for dairy herds of 1000 head or more; marketing leverage of by-products and co-products of methane (including carbon credits); financing (avoided costs, added revenues, covered lagoon payback = 12.5 years, simple rate of return = 8%, net present value = \$600,000, benefit-cost ratio = 4.1, and internal rate of return = 25%); and environmental benefits (water quality protection, greenhouse gas reduction, and odor control).

## Resources Available to Support Programming

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

### **Additional Resources:**

Electronic Spreadsheets

## Faculty/Staff Available to Support Programming

**Stegelin, Forrest**

*Lacy, R. Curt*

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### Description

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World grain production causes price fluctuations 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.

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### Trend

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Wheat and corn will continue to experience price fluctuations 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.

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### Resources Available to Support Programming

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- 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](http://www.georgiagrains.com)

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### Faculty/Staff Available to Support Programming

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**Lee, R. Dewey**

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

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### **Description**

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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 need to use extra care when feeding alternative feed ingredients.

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### **Trend**

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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. Producers need to be aware of the limitations when utilizing these products.

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### **Resources Available to Support Programming**

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- Fact Sheets / Departmental Publications
- Individual Assistance / Consultations

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### **Faculty/Staff Available to Support Programming**

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Dove, C. Robert

## Description

Due to several economic and social factors, feed 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](http://www.secattleadvisor.com) [www.georgiaforages.com](http://www.georgiaforages.com) [www.ugabeef.caes.uga.edu](http://www.ugabeef.caes.uga.edu)

## Faculty/Staff Available to Support Programming

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

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

### Description

The economic risk to producing bioenergy feedstocks can significantly be reduced if multiple uses can be developed. One of the greatest such opportunities is for a perennial, low-input bioenergy crop is in switchgrass. Unlike other perennial bioenergy crops, switchgrass can be grazed and/or cut for biomass for biofuel. This opportunity as a dual-use crop makes it incredibly appealing for us in the Southeast.

Though there have been no large scale grazing trials that examine the potential of this production system in Georgia, recent research in Tennessee and Oklahoma indicates that it has tremendous potential for cattle gains. Presumably, its best fit would be in a system where stocker calves or brood cows coming off of winter annual pastures in April/May could be turned into switchgrass fields to graze for a period of up to 60 days. During this time, high-quality grazing provides as much as 3 lbs/hd/day, according to preliminary reports for TN and OK. These animals would then be removed and the regrowth from the switchgrass would be harvested for either a biomass for biofuel fate or baled as hay for use in the beef production system.

### Trend

Growth in switchgrass plantings has proceeded at a slow pace, as of the present. This slow growth has been the result of a virtual absence of market. However, significant market development in the realm of pelleting facilities, co-firing in coal-burning power plants, and projected growth in cellulosic-ethanol plants may result in substantial growth in this region over the next 5-15 years.

### Resources Available to Support Programming

○ Fact Sheets / Departmental Publications

#### **Additional Resources:**

Individual consultations and speakers for county-based programs is currently severely limited due to the lack of sufficient personnel and funding

#### **Web Pages:**

<http://www.caes.uga.edu/commodities/fieldcrops/switchgrass/index.html>

### Faculty/Staff Available to Support Programming

**Hancock, Dennis W**

*Lee, R. Dewey*

## Description

Hispanic employees are a valuable resource to dairy farms in Georgia. However, due to language barriers, these employees are under utilized in some areas of dairy farming, in particular, animal waste management systems. Permitted dairy farms have many inspection, maintenance, and record keeping requirements that are extremely important for proper nutrient management and environmental protection. All of these responsibilities fall to the certified animal waste systems operator at these operations. Although, the responsibility is ultimately the certified individuals', Hispanic employees could assist in many of these tasks if they had access to proper education and tools.

## Trend

Extension agents and specialists are working to determine priority areas of concern in regards to translation of current extension literature and development of new materials to educate Hispanic workers. Efforts are being made in areas of concentrated dairy production to educate Hispanic workers, with plans to expand this training to the rest of the states dairy workers.

## Resources Available to Support Programming

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

### **Web Pages:**

[www.agp2.org/aware](http://www.agp2.org/aware)

## Faculty/Staff Available to Support Programming

**Bosques Mendez, Jonael \* Smith III, Robert C. \* Speir, Robert Adam \* Wilson, Melony L**

## 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.

## 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.**

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## **Description**

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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.

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## **Trend**

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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.

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## **Resources Available to Support Programming**

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

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## **Faculty/Staff Available to Support Programming**

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**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](http://www.gaurbanag.org) [www.ugaurbanag.com](http://www.ugaurbanag.com)

### Faculty/Staff Available to Support Programming

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

*Landry, Gil W.*

## 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](http://www.srwqis.tamu.edu) Water banner program website

## Faculty/Staff Available to Support Programming

**Risse, L. Mark**

**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 Campylobacter.

### Resources Available to Support Programming

○ Fact Sheets / Departmental Publications

### Faculty/Staff Available to Support Programming

**Russell, Scott M.**

## 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](http://www.EFSonline.uga.edu) - click on calendar link

## Faculty/Staff Available to Support Programming

**Hurst, William C. \* Martino, Karina G**

## Description

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The Cooperative Extension Service is usually the first point of contact for water 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. Support is also needed for private pond consultants and aquatic herbicide applicators, including training and referrals.

## Trend

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The Distance Diagnostic System was used, when possible, to increase the efficiency of case submission and response. 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.

## Resources Available to Support Programming

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- 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://www.cpes.peachnet.edu/aquaculture/>

## Faculty/Staff Available to Support Programming

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Burtle, Gary J.

## 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 for the past 5 to 6 years, largely due to its indeterminate or full-season growth habit and its consistently high yield potential 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 can not be grown beyond 2010. Due to the widespread adoption of this variety and its consistent performance, variety selection has largely been ignored for several years. Now that Georgia's cotton acreage is up to 1.25 million acres (2nd in the nation), the limited amount of DP 555 BR available for planting in 2010 has left us with an estimated 900,000+ acres being planted to new varieties, most of which we have very little experience producing. Losing DP 555 BR as an option has caused significant anxiety among growers, as a suitable replacement has not clearly been identified. Research and Extension efforts among the UGA Cotton Team are largely focused identifying replacements for DP 555 BR and the associated changes in management required for optimizing yield potential of these newer varieties.

## Trend

There are several preliminary observations that have been made, regarding the current variety transition phase that Georgia producers are facing. 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 management 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. 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 cessation of fruiting. 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.

Two issues that will likely become more apparent over time include changes in fiber quality / marketability of Georgia cotton, and variety adoption. DP 555 BR often expressed poor fiber length uniformity which impacted textile mills' perception of, or preference for Georgia cotton. The current variety transition will likely solve some of the problems with fiber quality. In addition, it is expected that the adoption of a particular variety will become more and more shortlived. It appears that there will be no "single" variety adopted on such a large acreage as DP 555 BR did, however 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.

## Resources Available to Support Programming

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

### Web Pages:

[www.ugacotton.com](http://www.ugacotton.com)

## Faculty/Staff Available to Support Programming

Collins, Guy D

### 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

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## **Description**

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

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## **Trend**

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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.

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## **Resources Available to Support Programming**

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- 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.

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## **Faculty/Staff Available to Support Programming**

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**Westerfield, Robert**

**State Issue:** Other Issue

**ANR**

### Description

Mobile technology is becoming an important aspect for communication. Advanced cellular phones are equipped with applications that can be useful references and tools for people in the green industry. Turfgrass Management was the first application specifically designed for practitioners and new opportunities are available to expand this technology.

### Trend

Members of the CAES at UGA are currently developing new applications with research and extension material. This trend will continue in the industry but UGA will continue to be the leader in developing applications for students, extension agents, and practitioners.

### Resources Available to Support Programming

○ Digital Slide Show (PowerPoint) Presentation

### Faculty/Staff Available to Support Programming

McCullough, Patrick E

**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](http://www.gaurbanag.org) [www.ugaurbanag.com](http://www.ugaurbanag.com)

### Faculty/Staff Available to Support Programming

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

**State Issue:** Other Issue

**ANR**

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### **Description**

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Web CT Distance Training Class - In January 2009 use of WebCt MG training was initiated and facilitated by the candidate in order to modernize/economize, and response to faculty retirements. MG class teaching based on traditional methods, was broadcast from 4 sites simultaneously by candidate and 3 other instructors to 12 different Georgia locations (25 counties) reaching a total of 165 MG Interns

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### **Trend**

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The trend is to continue to expand and improve on the use of distance training to conduct MG regular training maximizing existing faculty specialists from Athens, Griffin and Tifton.

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### **Resources Available to Support Programming**

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○ Digital Slide Show (PowerPoint) Presentation

#### **Additional Resources:**

Archive web Ct presentations

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### **Faculty/Staff Available to Support Programming**

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Fonseca, Marco T.

### 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 popular 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 highlights the type of community connections that are a strength of County Extension Offices.

### 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.

*Biersmith, Melanie M. \* Jordan, Jennifer W. \* Marable, Mandy B.*

### 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.

**Description**

A recent survey found that 42% of kids have 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. More than 4 out of 10 say it has happened more than once. 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 cyber bullying while being a good cybercitizen.

**Trend**

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 cyber bullies is no less real, and can be infinitely more painful.

Cybercitizenship refers to 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.

**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 Youth Technology / PR Team  
 Programs conducted through Georgia 4-H State Farm Cyber Security Initiative Grant

**Web Pages:**

Cyber bullying and Cybercitizenship presentation <http://www.georgia4h.org/staffonly/more/4hupdates/pastupdates.html>  
 Georgia 4-H Youth Technology Leadership 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 addresses 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.

### 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 100 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 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.

### 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:

National 4-H Healthy Living task Force Documents: <http://4-h.org/b/Pages/Layouts/hlteamdocuments.html> Georgia 4-H Healthy Living Website: <http://www.georgia4h.org/public/more/healthylifestyles/default.htm> Georgia 4-H Cotton Boll and Consumer Jamboree:

### 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](http://www.georgia4h.org/set)

## Faculty/Staff Available to Support Programming

**Biersmith, Melanie M.**

## 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](http://www.4-hmilitarypartnerships.org)

## Faculty/Staff Available to Support Programming

### **Mull, Casey Downs**

*Boswell, Brooke Rene \* Eason, Marcus Darlington \* Mullins, Brandi S.*

# 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](http://www.georgia4h.org/omk) [www.georgia4h.org/public/edops/militaryprogram](http://www.georgia4h.org/public/edops/militaryprogram) [www.4-hmilitarypartnerships.org](http://www.4-hmilitarypartnerships.org)

## Faculty/Staff Available to Support Programming

### **Mull, Casey Downs**

*Boswell, Brooke Rene \* Eason, Marcus Darlington \* Mullins, Brandi S.*

### 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 compared to other nations. According to the Bureau of Economic Analysis, the personal savings rate (savings as a percent of personal disposable income) was approximately 4% in the 4th quarter of 2009. If Georgians are not saving, they will not be prepared for emergencies and are obviously not investing to achieve their future financial goals. Without saving, the financial well-being of Georgia's individuals and families will not improve, and may decline. In order to achieve the goals of homeownership, paying for college, retirement or other future goals, individuals and families need to reverse the trend from current consumption to saving.

Through the Georgia CA\$H (Consumers Acquiring \$aving Habits) UGA Cooperative Extension will educate Georgians on the importance of saving and ways to save to achieve their short-term and long-term financial goals. By providing clear, simple and motivational educational materials, UGA Cooperative Extension can raise awareness and improve savings rate of individuals and families 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

**Additional Resources:**

Georgia Consumers Acquiring Saving Habits (Georgia CA\$H) newsletter  
 activities  
 exhibits  
 news articles

**Web Pages:**

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

### Faculty/Staff Available to Support Programming

**Koonce, Joan \* Rupured, Michael**

### Description

According to the Dietary Guidelines for Americans 2005, those who 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 \$23 billion in sales in 2009. In 2008, produce accounted for more than 37% of organic food sales. USDA's “Know Your Farmer, Know Your Food” initiative 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 initiatives. Although consumers see these products as being healthier 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.

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.

#### **Additional Resources:**

Training materials for small to medium-sized farms and for farm market managers are being developed as part of a 3-year federal grant. Some materials are currently available with more on the way in 2012.

### Faculty/Staff Available to Support Programming

**Harrison, Judy A.**

### 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](http://www.EFSonline.uga.edu)

### Faculty/Staff Available to Support Programming

Hurst, William \* Martino, Karina

### 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. An estimated 76 million persons per year experience gastrointestinal foodborne illnesses in the U.S. An estimated 325,000 serious illnesses per year result in hospitalizations in the US. An estimated 5,000 deaths per year result from foodborne illnesses in the U.S. The American population continues to eat out in ever-increasing amounts. Georgia has over 22,000 inspected foodservice establishments and an industry that employs over 385,000 people and generates over \$14.4 billion in sales (National Restaurant Assn. projections for 2010). 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 *Yersinia* \$7,227.

### 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.

### 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: Smart Caregivers Fight BAC! for In-Home Child Care Providers. 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.*

### 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 2010, interest in community canneries is high and national projects as well as Georgia Organics Association are pushing for their re-invention. 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. Botulism is one of the more dangerous and expensive types of foodborne illness. 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. 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 2010.

### 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, Three-panel exhibit for So Easy to Preserve, Dial Gauge testers, and Most likely ready to pilot in 2011, Master Food Preserver program.

#### Web Pages:

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

### 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 Not Meeting The Recommended Dietary Guidelines Or The Goals For Healthy People 2010.

**State Issue:** Food, Nutrition and Health

**FACS**

## Description

Americans are not meeting the recommended Dietary Guidelines or the goals of Healthy People 2010. The USDA found that milk consumption has dropped from 34 gallons per person annually to about 24 gallons per year and a greater proportion is highly sweetened flavored milks. Concurrently intake of cheeses high in saturated fat and cholesterol has tripled. Instead of milk, consumers are drinking about 34 gallons of soft drinks per person a year. This intake of sodas is contributing to the consumption of about 95 pounds of sweeteners like high fructose corn syrup and table sugar per person per year. We now consume twice the amount of meat, fish and poultry as we did before World War II. The Behavior Risk Factor Surveillance Survey found that 75% of Georgians do not consume at least 5 servings of fruits and vegetables per day and only 42% report that they get at least 30 minutes of moderately intense physical activity or 20 minutes of vigorous activity 5 or more days per week.

## Trend

These poor eating and activity habits are contributing to our skyrocketing overweight and obesity problem in adults (64.7% of the population) and our increase in elevated cholesterol levels (37% of the population), high blood pressure (30.4% of the population) and diabetes (10.3% of the population). 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 at risk individuals of all ages to improve their eating and physical activity habits to stem this tide.

## 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*

# Georgians Are Suffering More Morbidity And Mortality From Chronic Diseases.

**State Issue:** Food, Nutrition and Health

**FACS**

## Description

Currently 64.7% of Georgians are obese or overweight. This is up from 59.4% in the year 2000. 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 32% of deaths in this state were due to CVD. CVD death rates were 9% higher in Georgia in 2006 than the national average. The percent of Georgians diagnosed with high cholesterol rose from 24% in 1997 to 37% in 2007.

In 2007, 30.4% of adults in Georgia were diagnosed with hypertension. This is 2.9% higher than the national average. That is up from 26.9% in 2001 and 19.7% in 1995. In 2006, Georgia's stroke rate was 16% higher than the national rate.

The incidence of diabetes continues to soar across the country. In 1995 only 28,000 new cases of diabetes were diagnosed in Georgia and the incidence rate was 5.5% of the population. In 2007, that rate went up to 10.3% (one of the highest in the nation) and the number of new cases rose to 64,000. About 54 million individuals in the United States aged 21 years and older have prediabetes, 12 million of whom are overweight and between the ages of 45–74.

Cancer remains the second leading cause of death in Georgia. During 2000-2004, annually about 34,500 cases of cancer were diagnosed. Thirty to thirty-five percent of cancer cases have been attributed to poor diet and physical inactivity.

## Trend

Weight control using a combination of diet modification and regular physical activity can reduce risk for and improve the management of cardiovascular disease, hypertension, diabetes, cancer and most other chronic diseases. Modifying fat intake to reduce saturated and trans fats and limiting dietary cholesterol can reduce risk for cardiovascular disease. The DASH Diet which includes plenty of vegetables, fruits, whole grains and non-fat and low fat dairy foods has been clinically proven to reduce blood pressure, especially when combined with a sodium restriction. A plant-based diet that is lower in red and processed meats, sodium and alcohol has also been associated with a reduction in cancer. Control of carbohydrate and calories improves diabetes management. Extension programs on weight control, diabetes management, reduction and control of cardiovascular disease and cancer prevention can help to lower risk for chronic disease and assist individuals already suffering with these conditions to manage them better.

## 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, hypertension, weight control, physical activity, and cancer prevention and control.

### 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.**

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## Description

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Economic turmoil, job losses and a collapsing housing market have impacted every corner in the U.S. and abroad. According to Realty Trac, foreclosure rates remain high, with one in 45 housing units receiving at least 1 foreclosure notice during 2009. Georgia remains among the top ten states with a foreclosure rate of 2.68%, accounting for 106,110 foreclosure filings in 2009. This represents about a 25% increase from 2008 and an 80% increase from 2007. People with low-household incomes, the elderly, people with disabilities, and minority populations are less likely to have access to safe, affordable and accessible housing. Close to 18 million Americans spend over 50% of household income for housing costs. This means they often cannot cover other needs such as medical care, childcare, heating and gasoline, and food. These individuals may be forced to move often, resulting in housing instability that can contribute to adverse health outcomes, including increased asthma morbidity, tuberculosis, and developmental delay, as well as school failure and delinquency.

Limited financial resources may also result in limited care and maintenance of homes, ultimately leading to structural and safety defects that can lead to housing-related accidents or health conditions. In 2005, 6% of all U.S. residents and 14% of low-income renters lived in homes with severe or moderate physical problems, such as water leaks that can cause mold growth and trigger allergic reactions and asthma attacks. During this same year close to 2 million people in the U.S. lived in severely inadequate homes, which are homes without heat, hot water or electricity, or a house with significant upkeep problems and structural defects. Historically, the housing stock in the South is more likely to be substandard, have defects, or aging. Structural defects in homes often contribute to falls, which accounted for 53.7% of all unintentional home injury deaths.

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## Trend

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Federal and state programs have been put in place to help homeowners refinance or modify their delinquent mortgage loans. The programs are still evolving and changing, resulting in much confusion for homeowners who find themselves in a very stressful situation. As a HUD approved housing counseling agency, UGA Cooperative Extension is responding to the housing needs of Georgians. Extension Agents work with Georgians to provide counseling, education and resources on purchasing and maintaining housing, both rented and owned. Working with individuals before they purchase or rent a home UGA Cooperative Extension FACS Agents provide financial education to help them make informed housing decisions. As a result of participating in home buyer education, participants will increase their knowledge about the purchasing and maintaining a home.

Participants will learn the importance of conducting regular home maintenance and eliminating safety hazards in their homes. Everyone in society benefits when homeowners remain current on their mortgage payments and in their home. Educating property owners to inspect and repair their home annually helps to reduce health and safety hazards along with costly repairs that could lead to a property becoming abandoned.

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## Resources Available to Support Programming

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

### Web Pages:

<http://www.fcs.uga.edu/ext/housing/>

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## Faculty/Staff Available to Support Programming

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**Turner, Pamela R**

## Description

The connection between housing and health is well established. People spend close to 90% of their time indoors where they are exposed to numerous pollutants, such as particulate matter from fuel burning devices; tobacco smoke; molds; formaldehyde from pressed wood products; radon; lead; dust mites; pesticides; and volatile organic compounds from household products. These irritants can trigger asthma attacks or contribute to allergies, airway infections, hypersensitivity, and possibly lead to cancer. Asthma is a major concern in Georgia. In 2009 Atlanta and Augusta ranked in the top ten U.S. asthma capitals. Home environmental factors contribute to the occurrence and severity of asthma. Among these factors are exposure to cockroaches, pet dander, dust, dust mites and mold. Studies indicate that 63% of homes in the U.S. have levels of cockroach allergens that contribute to asthma and allergies. 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. 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.

Radon and lead are two additional indoor environmental hazards. Radon is the leading cause of lung cancer among nonsmokers resulting in an estimated 15,400–21,800 people dying from lung cancer each year. In Georgia an estimated 600 people die each year of radon-related lung cancer. Exposure to lead is very dangerous and has many negative health effects, especially for children. In the United States in 2000, an estimated 1.2 million housing units with lead-based paint hazards were home to children younger than 6 years of age. Other possible sources of lead exposure in the home include lead water pipes and solder; some pottery and cooking utensils; some types of candy; traditional or alternative medicines; and some imported toys and jewelry. In Georgia 1,177 children under age 6 were found to have elevated blood lead levels.

## Trend

Most of the negative health effects from exposure to indoor environmental contaminants can be prevented or the severely lessened. Reducing exposure results in direct health cost benefits and reduced time away from work for many Georgians with allergies and asthma. Exposure to contaminants is influenced both by the physical environment of the home and by the behavior of the people living in the home. Educational programs increase participant's knowledge about the contaminants in their homes and how to reduce them. Through Extension programs, consumers increase their knowledge about how to reduce indoor contaminants by implementing things like green cleaning, adding a doormat, cleaning more often, testing for radon, and removing lead 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 can provide consumers with research based information to help them make sound decisions when selecting products and services to improve their indoor environment.

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 (decreased productivity) and children are less likely to miss school from complications associated with asthma.

## 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.fcs.uga.edu/ext/housing/> <http://www.fcs.uga.edu/green/>

## Faculty/Staff Available to Support Programming

**Turner, Pamela R**

### 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 \$344 million in 2004. 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 youth 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 (6.7 per 1000 total population in 2007 vs. 10.3 in 1990) 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 (43% in 2008 vs. 37% in 2000); a higher proportion of these out-of-wedlock births occur among African American (70%) and Latina (50%) females compared to White females (26%). As a consequence of these dramatic shifts in family structure, more children are exposed to the risk of poverty: In 2007, 6.6% of married-couple families with children under age 18 lived in poverty compared to 39.6% 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 2007, 34% of GA High School students were in a physical fight one or more times during the past 12 months (up from 31% in 2003) and 16% reported that they were hit, slapped, or physically hurt on purpose by their boyfriend or girlfriend during the past 12 months (up from 14% in 2003). 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 increased in 2007 (42.5) following declines from 1991 (61.8) to 2005 (40.5); the GA teen birth rate in 2007 was 54.8 per 1,000 15-19 year old adolescent girls, following declines from 1994 (70.6) to 2005 (52.3).

### Resources Available to Support Programming

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

## Strengthening Couple And Marital Relationships

### **Additional Resources:**

Relationship Smarts (for youth)  
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](http://www.gamarriages.com) [www.nermen.org](http://www.nermen.org)

### **Faculty/Staff Available to Support Programming**

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**Futris, Ted G.**

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## Description

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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 study has shown that most child care in Georgia is only of marginal or poor quality. Child care providers with more education and training provide better-quality learning experiences and are more responsive to young children's needs.

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## Trend

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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, activities, and curriculum 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 curriculum, interactions, and other practices to improve the quality of young children's experiences in their child care program
- 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.

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## Resources Available to Support Programming

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

### Web Pages:

<http://www.fcs.uga.edu/ext/outcomes/1.php>

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## Faculty/Staff Available to Support Programming

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**Bales, Diane W**