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INTRODUCTION TO THE CENTER

The Georgia Center for Urban Agriculture was formed within the University of Georgia College of Agricultural and Environmental Sciences in 1998. Its concept and mission began to formalize in 1996 from discussions among faculty, county agents, administrators, industry, regulatory agencies and other stakeholders. Dr. Gayle Buchanan, then dean and director of the College of Agricultural and Environmental Sciences, and his administration envisioned the Center as an efficient and effective integration of extension, research and instruction to address the needs of the growing environmental horticulture, turfgrass and associated industries in Georgia and the Southeast. The Center was recognized as an official university center in 2007 by the University of Georgia.

The concepts on which the Center was founded are of national concern and well stated in the Council for Agricultural Science and Technology Report (2002) which begins, “Agriculture is an integral part of urban growth and population change. This fact is frequently unrecognized by the general public, mainstream agricultural interests, and political leaders.” The intent of the report was to “…identify components of contemporary agriculture that can be a resource to civic leaders and planners who are challenged by issues of sprawl, vacant city lots, public desire for safe local food and community livability.” The report concludes, “Agriculture must be redefined in the context of urbanization. The wealth of knowledge associated with the agricultural sciences can be put to valuable use in helping to meet the challenges of urbanization.”

Because of its history of research and extension in turfgrass management, environmental horticulture, plant breeding, soil sciences and integrated pest management, the UGA Griffin Campus is an ideal headquarters for the Center. The campus is in a unique location as some six million Georgians live within 60 miles of the campus. Coordinators of the Center have included Dr. Wayne Gardner (1998-2002), Dr. Mel Garber (2002-2003) and Dr. Gil Landry (2003 to present).

The Center initially focused on improving the delivery of science-based information to stakeholder groups. This work continues today but as the Center has evolved, its mission has grown to include urban county agent program planning and training, professional proficiency certification, World Wide Web educational programming and support, regional educational programming and related grant management.

MISSION STATEMENT AND OBJECTIVES

The Center for Urban Agricultural and Environmental Sciences will provide leadership through research, teaching and extension to sustain urban ecosystems, enhance economic development, and improve the quality of life in urban settings. The following objectives support this mission:

• Provide an organizational structure that facilitates interdisciplinary scientific cooperation among investigators and educators within and beyond the college and university, industries, and consumers;
• Improve the University of Georgia’s state, federal, and private research and education funding. The Center provides a more recognizable organizational structure which improves funding opportunities beyond those available to individual investigators or departments. The Center will become the natural catalyst for large grant proposals involving multiple investigators seeking funding for infrastructure, training and collaboration;
• Serve as a resource for the development of white papers to guide policy decisions with sound science regarding the complex environmental and natural resource issues resulting from urbanization;
• Attract students to the CAES by fostering the development of programs that will increase the visibility and relevance of the college to urban students;
• Develop leadership in urban agriculture industries and be a resource for industry organizations.
HIGHLIGHTED ACTIVITIES
Dr. Gil Landry, Center Director

The Center was approved by the University. In May 2007, the request to establish a Georgia Center for Urban Agricultural and Environmental Sciences was approved by the University Faculty Council and Administration.

Georgia's water situation has influenced recent Center activities. As needs are presented by industry, regulatory agencies, and government, the Center has coordinated UGA/Extension responses.

The drought energized the Georgia Urban Agriculture Council (UAC). The Center has worked closely with the Georgia Urban Agriculture Council (UAC). The UAC is an association of associations (MALTA, GGIA, GSP, GTA, GIA and CLTPA) representing most of the industries in urban agriculture. The water crisis helped galvanize the UAC into an effective voice for these diverse industries. And with significant budget limitations, the UAC relied on volunteers, including most council members and the Center, to develop some very successful actions.


"Position Papers" coordinated by the Center clarified many of the key issues and questions raised by the drought and subsequent water restrictions. They include:

• Economic Impact of the Drought and Subsequent Water Restrictions
• Layoffs Increase and Losses Accelerate in Response to the Drought
• Problems Associated with “Drought Tolerant” Plant Lists
• Best Management Practices for Landscape Water Conservation

The Center became a member of the Environmental Protection Division multi-agency team established to lead the development of the Water Conservation Implementation Plan as dictated by the Statewide Water Management Plan. The Center was invited to become a member of the team and will lead the development of municipal outdoor water conservation section.

The Center was instrumental in developing the State Outdoor Water Use Program in close cooperation with the Georgia Urban Agriculture Council and Environmental Protection Division. The Center identified existing UGA resources which met the needs of the program, worked with specialists adapting the resources and provided valuable expertise in the technical aspects of program implementation. In addition, extensive training programs are in progress to educate county agents and relevant staff on their role in this process.

The Education Building in the UGA Research and Education Garden was completed. The building, which has a classroom that seats 50, provides opportunities for indoor and outdoor educational programming. The building was dedicated on June 27, 2008.

The Urban Agriculture Leadership Institute was particularly appropriate, focusing attention on collaboration and common issues in the urban ag green industries. Attended by 12 industry leaders, this program helped them see the value and potential of the Georgia Urban Agriculture Council and provided an educational experience which was highly regarded.
The Center continued to work with the 31 designated urban agriculture county agents located across the state. In quarterly trainings, via the Web (www.gaurbanag.org), and through project support, the Center fostered issue identification and management of the following Extension Issue Teams: Turfgrass and Landscape Management, Information Technology, Urban Water Issues and Urban Forestry.

Successful program efforts include:

- Improved availability of Center resources for county agents and industry through Web site development and use of Web CT Horizon Winma for statewide broadcasting.
- The Landscape Line, a quarterly electronic newsletter.
- The Georgia Certified Landscape Professional (GCLP) program has grown and enjoys new Web resources. There are more than 227 graduates and approximately 676 applicants.
- The Georgia Gems Garden Design Contest promotes new UGA ornamental plant releases from the UGA Agriculture Research Foundation.
- Train-the-Trainer Urban Forestry Education program was implemented in four surrounding states, training 89 county agents.
- The Center has developed many new educational programs including one of the first statewide Internet broadcasts through WebCT. This broadcast saved $6,000 in travel expenses, 200 hours of employee time and 617 gallons of gas or the emission of 12,340 pounds of carbon dioxide.
- The OSHA-approved Hispanic Safety Training program trained 579 Hispanic landscape workers.
- The Center continued to move forward the Urban Water Resource Initiative involving On-site Waste Water Management (new web page), Soil Erosion and Sediment certification training (350 trained), and Storm Water Management.
CENTER RELATED PUBLICATIONS


Wang, Y. 1996. Identification of azalea genotypes resistant to azalea lace bug (Heteroptera: Tingidae) and possible resistance mechanisms. MS Thesis, University of Georgia, Athens.

AWARDS


First Place, Communications Award, Team Newsletter. GACAA. Nov. 12-14, 2007 West Georgia Tech College, Thomas Murphy Conference Center, Waco, GA. Chance III, W.O., Bauske, E. M., Hurt, R.T., and Landry, G. W. The Landscape Line Online Newsletter. (abstr.).

First Place, Agriculture Education Poster Contest, GACAA Poster Session. Nov. 12-14, 2007 West Georgia Tech College, Thomas Murphy Conference Center, Waco, GA. Hurt, T., Mickler, K., Abreu, M., Martinez-Espinoza, A. Virtual Conferencing in Extension: Reaching Audiences, Saving Resources and Impacting the Environment.


Third Place, Agriculture Education Poster Contest, GACAA Poster Session. Nov. 12-14, 2007 West Georgia Tech College, Thomas Murphy Conference Center Waco, GA. Mickler, K. D. and Hurt, T. Winterschool on the Road “Rome’n the Green”.

ACTIVE GRANTS


SELECTED FACULTY IMPACT STATEMENTS

Garden Design Contest Promotes UGA Plant Cultivar Development Programs. E. Bauske, 2007

To promote UGA plant material, a garden design contest for Master Gardeners featuring ornamental cultivars released by plant breeders at UGA was implemented. In preparation for the contest the Office of the Vice President of Research created a Web site for the Georgia Gems (http://www.ovpr.uga.edu/georgiagems/index.html) showcasing the plant material. The Web site not only met the needs of the contest, but continues to advertise the Gems to potential propagators seeking licensing opportunities. The winning gardens were spotlighted on the Web site: http://apps.caes.uga.edu/urbanag/Home&Garden/gardens. All gardens feature a large blue sign identifying the UGA Georgia Gems Collection.

UGA Urban Forestry Issue Team Takes its Expertise Region-wide. E. Bauske, 2007

A team of UGA Cooperative Extension agents trained 89 agents in Alabama, South Carolina, North Carolina and Virginia in urban tree care and introduced them to local efforts fostering green infrastructure and sustainable community forests. Response to the trainings was excellent and the pre- and post-training test scores clearly indicate that the learning objectives were met. The average pre-training test score was 56 percent and the average post-training test score was 86 percent.

Master Gardeners Guide the Public in Sound Gardening Techniques at the South East Flower Show. E. Bauske, 2007

The Center for Urban Agriculture coordinated the efforts of the 10 counties with 10 agents and 40 Master Gardeners who manned the display at the South East Flower Show in Atlanta. Some 969 visitors talked to Master Gardeners and 20 percent (193) filled out impact cards. As a result of their conversation with the Master Gardeners, almost all respondents (96 percent) felt they learned something new and 90 percent said they would change a gardening practice as a result of the conversation. Respondents estimated a savings of $19,712 as a result of their interaction with a Master Gardener. Extrapolating this value to the 969 people who interacted with the Master Gardeners and county agents results in an estimated $98,968 savings to the public.

Internet Program Delivery Reduces Carbon Emissions and Travel Expenses. T. Hurt, 2007

A series of four, one-hour workshops were held using Horizon Wimba, a live Web-based classroom software. Workshops were broadcast to 17 counties representing all four Extension districts. Some 349 people attended the series. Conservative estimates suggest the following savings: $6,000 in mileage reimbursement, 200 hours of UGA employee time, and 3,400 less pounds of carbon emissions. A total of 197 respondents (93 percent) indicated they would attend future sessions given in this format. The sessions rated 82 out of 100 as to personal value.

Landscape Safety Training Taught in Spanish. E. Bauske, 2007

Thirteen trainings targeted both traditional workers and Hispanics in middle management positions. Some 248 people were trained. Pre- and post-training test scores were used to assess training effectiveness. The average score prior to the training was 69 percent and after the training it was 89 percent.

UGA Urban Agriculture Leadership Program. E. Bauske, 2007

The Center for Urban Agriculture's Leadership Program provided training to leaders in the urban agriculture industry. Evaluations made by participants in the program assessing achievement of program goals and instructor quality were very high, ranging from 89 to 96 percent. Jenny Hardgrave, president of Simply Flowers, said, "Once again, Gil and the UGA team, thank you for the excellent leadership training course."
Landscape Contractors Receive Certification through UGA.

Since the Georgia Certified Landscape Professional program’s inception in 1994 there have been 676 applicants. The program has had 227 graduates, a 34 percent success rate. This indicates the program’s intensity. The future of the GCLP program includes offering more targeted study resources and reviews, continuing education programs, graduate networking, and a public awareness campaign. Negotiations with Florida and Alabama are in the final stages for reciprocal agreements on landscape contractor certification among the three states. More information can be found at http://gclp.info.

‘Rome’n the Green’. K. Mickler, 2007

There were 107 and 121 attendees in 2006 and 2007 respectively. Combined survey results from both years indicate that 100 percent of attendees thought that the program was helpful and would attend future programs. Ninety percent said they would implement the principles they learned.


This report found that sod had the best turfgrass coverage and hydroseeding coverage, though not statistically different from the sod coverage, was 20 percent less than sod. Straw mulch and erosion blanket treatments were significantly different from the sod soil coverage and were much poorer in coverage.

Onsite Wastewater Management System Training Program.
L. West, 2007

Twenty, eight-hour continuing education sessions have been offered in all parts of the state, and more than 1,100 onsite professionals have attended. In general, each session includes discussions of the basics of wastewater management, basic hydrology, the function and design of onsite system components, and basics of soil evaluation and function.

Landscape Line E-newsletter Connects Landscapers to the Resources of UGA Extension. E. Bauske and Willie Chance, 2006

The Landscape Line E-newsletter delivers timely information via the county delivery system and direct email to 1,112 urban agricultural industry contacts. Fifteen Extension specialists and county agents contributed to the Landscape Line this year. The newsletter has generated a 288 percent increase in the number of page views on the Center Web site and doubled the number of first-time viewers. Via survey, 63 percent of respondents said the newsletter was ‘very helpful’ and 37 percent said it was ‘somewhat helpful.’ One hundred percent indicated they ‘learned something they plan to use’ as a result of the newsletter. Eighty-one percent indicated they would change their behavior as a result of something they learned in the Landscape Line.

Cooperative Extension Provides Guidance and Training in Erosion and Sediment Control Certification in Georgia.
R. M. Seymour, 2006

More than 900 professionals involved with soil disturbing activities were trained in workshops organized and taught by UGA county agents and specialists. This training certified these individuals as erosion and sediment control professionals in Georgia to comply with new requirements in House Bill 285. Approximately 85 percent (about 774 professionals) of those receiving training from courses with Extension faculty trainers passed the exam and became certified.

Clean Water Campaign Collaboration. E. Bauske, 2005

The Center for Urban Agriculture works with the Atlanta Regional Commission’s Clean Water Campaign to coordinate educational efforts and messages with UGA Cooperative Extension. County agents conducted 28 programs on water-wise landscaping, integrated pest management, composting, rain gardening, tree care, and lawn management in which a total of 601 people participated. ARC polls determined that awareness of stormwater runoff as a primary source of water pollution increased by 12 percent or about 600,000 people in the metro area.
Turfgrass Team Receives Funding. E. Bauske, 2005

The UGA turfgrass program received a $338,000 subcontract through North Carolina State University as part of a $700,000 grant to both universities through the EPA Star Grant program. The Center for Urban Agriculture manages this grant that involves 10 UGA faculty working on 10 separate projects which encompass turfgrass breeding, the environmental fate of pesticides applied to turf, soil erosion control methods, exploration of new turf diseases, and biological control of turfgrass insects.

Urban Ag Issue Teams. E. Bauske, 2005

The Center for Urban Agriculture creates and fosters Urban Ag Issue teams. These teams combine resources and expertise to find solutions to urban ag Extension challenges. Urban Extension agents work with very large populations. Gwinnett County has a larger population than the state of North Dakota. Agents address the needs of homeowners, large multimillion dollar urban ag businesses (nurseries, landscape design, installation and maintenance companies), and county park and recreational facilities. The Center facilitated a planning process to enhance the impact of urban programs by developing a mechanism to consolidate educational resources across county lines and Extension district lines. Four critical issue teams were identified: turfgrass management, water quality and quantity, urban forestry, and landscape management. The Center helped three of the teams acquire and manage grants totaling $146,690. The turfgrass management and urban forestry issue teams used the funds to develop train-the-trainer programs and subsequently trained 75 county agents.

Development of Training Programs and Published Material for the Georgia Green Industry’s Hispanic Workforce. A. Martinez, 2005

A series of statewide pilot trainings and educational materials were developed in Spanish on turf and ornamental production and management, proper handling of pesticides and general worker safety. Programs were attended by 300 individuals. Indirectly, an estimated 10,000 Hispanic green industry personnel have benefited from these published materials which have been available in several journals and magazines with statewide circulation. This result represents an outstanding first step breaking language and cultural barriers and opening up venues of cooperation and networking and the availability of high quality and diverse educational materials.

CURRENT RESEARCH PROJECTS IN THE UGA RESEARCH AND EDUCATION GARDEN

St. Augustinegrass Cultivar Evaluation. Dr. Kris Braman (Entomology) and Dr. Clint Waltz (Crop and Soil Science)

Eleven cultivars of St. Augustinegrass are being assessed for host plant resistance to chinch bug and other insect pests. Corollary studies are assessing the usage of natural enemies and other IPM control tactics in managing chinch bugs in these turfgrass cultivars.

Seashore Paspalum Cultivar Evaluation. Dr. Kris Braman (Entomology) and Dr. Paul Raymer (Crop and Soil Sciences)

Eight cultivars of seashore paspalum turfgrass are being assessed for host plant resistance to fall armyworm larvae, Japanese beetle and other white grubs, two-lined spittlebugs, and other insect pests. Natural enemy interactions with these target pests as influenced by grass cultivar also are being quantified.

Development of Biologically-Based Turfgrass Pest Management. Dr. Kris Braman (Entomology), Shimat Joseph (Entomology, Ph.D. Student), Dr. Wayne Hanna (Crop and Soil Sciences, Tifton Campus), Dr. Ronny Duncan (industry), and Dr. Milt Engelke (Agronomy, Texas A&M)

Three cultivars each of zoysia and bermudagrass with demonstrated varying levels of host plant resistance to fall armyworm larvae are being used in collaborative projects with industry for new product development for Japanese beetle grub control and to assess ground-dwelling carabid beetles as predators of turfgrass pests. These studies are further defining IPM practices and tactics that might be used in maintained turf areas.
Blueberry Yield Evaluation. Dr. Scott NeSmith (Horticulture)
Two newly-released varieties of blueberry will be compared in terms of fruit set and fruit production.

Canna Cultivar Evaluation. Dr. Kris Braman (Entomology) and Evelyn Carr (Entomology, M.S. Student)
Twenty-two canna cultivars have been planted in replicated field plots and will be used in studies to identify relative susceptibility of cultivars to canna leaf rollers and Japanese beetle adults and to identify any parasitism or predation by natural enemies on these pests.

Leaf Rust Management. Dr. James Buck (Plant Pathology)
Several cultivars of daylilies are included in a replicated field study assessing cultivar tolerance and resistance to the leaf rust that is attacking these popular plants in southern landscapes.

Evaluation of Christmas Trees for the Southeast. Dr. Mark Czarnota (Horticulture)
A series of small tree species are being evaluated for use as Christmas trees grown in the southeastern U.S.

Ornamental Grass Cultivar Evaluation. Dr. Wayne Hanna (Crop and Soil Sciences, Tifton Campus) and Dr. Kris Braman (Entomology)
Experimental and commercially available cultivars of ornamental grasses which have been evaluated in south Georgia are now being evaluated at the garden for adaptability to conditions in central Georgia. One cultivar from this collection has already been submitted for release.

Fall Herbicide Applications for Control of Dallisgrass. Dr. Tim Murphy (Crop and Soil Sciences).
A replicated field study is being conducted in bermudagrass turf in the garden to assess the efficacy of herbicidal materials applied in the fall to control dallisgrass.

Azalea Screening and Breeding Program. Dr. Carol Robacker (Horticulture) and Dr. Kris Braman (Entomology)
Various sites within the garden are being used for screening azaleas for lace bug resistance and for tolerance to sun. Selections are being combined with those stocks that have desirable horticultural characteristics.

Demonstration Vegetable Garden. Bob Westerfield (Horticulture)
An area of the garden remains dedicated to demonstration of vegetable varieties and growing practices for the homeowner. For the past three years, this garden has yielded 1,500 pounds of produce that has been donated to a local food pantry. This year, a newly-developed low volume drip irrigation system will be evaluated, and newly-released sweet corn varieties will be planted and compared.