

From the Director



Dr. Freddie Martin

The School of Plant, Environmental, and Soil Sciences (SPESS) was created in the spring of 2007 through the merger of the departments of 'Agronomy and Environmental Management' and 'Horticulture'. As with most mergers there were challenges; however, thanks to the efforts and patience of the faculty, staff, and students, the transition has been smoother than most expected. Day-to-day faculty activities associated with teaching, research, and extension by-in-large have not been affected by the merger. For instance we continue to have the Agronomy (AGRO), Environmental Management Systems (EMS), and Horticulture (HORT) rubric for classes in the respective areas. We continue to operate under the Environmental Management System and Plant and Soil Systems undergraduate curricula. While we continue to have the separate Agronomy and Horticulture graduate programs, our graduate programs committee is exploring the possibility of forming a Plant, Environmental, and Soils graduate program. Research and Extension projects and programs continued without interruption.

With the improved 2007-2008 budget and our faculty's success at generating grant funds, we have been able to address critical personnel and equipment needs. I am very proud of the student, faculty, and staff accomplishments that are reported in this newsletter. We have excellent extension, research, and teaching programs in the School of Plant, Environmental, and Soil Sciences, and I am extremely optimistic about our future.

Spring Garden Show



The Spring Garden Show had a record setting attendance of over 5,000 guests. Our vendors enjoyed two terrific days with an educational lounge and a children's activity area. We want to thank all who assisted with the show and all who attended. (Article on page 3)

Romanian Agricultural Scientists Visit SPESS



In early August, the School of Plant, Environmental & Soil Sciences was pleased to host a delegation of seven visiting agricultural scientists from the University of Agricultural Sciences and Veterinary Medicine (USAMV) in Cluj-Napoca, Romania. (Article on page 3)

The School of Plant, Environmental
& Soil Sciences has a new website.
www.SPESS.LSU.edu



Thai Connections

SPESS professor Dr. Carl Motsenbocker taught a Study Abroad class for College of Agriculture students this summer. The LSU in Thailand class provides an opportunity for students to study agriculture, travel and experience the culture of Thailand, one of the most exciting countries in the world to visit. The objective of the three-week program is to provide students an opportunity to learn abroad the issues involved in agricultural development and provide cultural and intellectual enrichment.

The course allows participants to appreciate and apply the academic course work they have taken at LSU to real world situations in a rapidly developing industrialized country with a strong agricultural economy.

The sites in Thailand were selected because of their diverse agricultural development projects and activities. Students traveled to several areas, visiting research and outreach stations, private agricultural enterprises and cultural sites. The Study Abroad class is part of an informal exchange program with Kasetsart University, considered to be one of the premier agricultural universities in Thailand. As part of the exchange, during the summer months Kasetsart University graduate students are provided an opportunity to study and work as interns with agriculture faculty in the LSU AgCenter.



Graduate Students

The School of Plant, Environmental and Soil Science (SPESS) continued its excellence in graduate student recruitment and training throughout 2006 and into 2007. Dr. Hua Zhang, former graduate student of Dr. Magdi Selim, was honored by winning the Prentiss Schilling Outstanding Dissertation Award. In a similar vein, Sreedhar Alwala, graduate student of Dr. Collins Kimbeng, was awarded a Graduate Student Fellowship from the Graduate School. Sreedhar is also a finalist for the Mott award, one of the highest honors bestowed by the Crop Science Society of America. Recruitment of graduate students was further enhanced by Dr. Prasanta Subudhi, who recently won an Economic Developmental Assistantship Award from the LSU Graduate School to recruit meritorious graduate students. The award is for four years with an assistantship of \$25,000 annually.

Research related to the award will be for utilization of genes from *Spartina alterniflora* to improve salt tolerance in rice.



Graduate student Mary Beth Robichaux receives an LNLA scholarship for 2007 from Dan Gill, a Professor in the School of Plant, Environmental & Soil Sciences.

Romanian Agricultural Scientists Visit SPESS

In early August, the SPESS was pleased to host a delegation of seven visiting agricultural scientists from the University of Agricultural Sciences and Veterinary Medicine (USAMV) in Cluj-Napoca, Romania. Members of the visiting delegation included Professor dr. Rotar Ioan – Dean of Agriculture, Conf. dr. Rusu Teodor - Vice-Dean of Agriculture, Professor dr. Drocas Ioan – Agricultural Mechanization Department, Professor dr. Vidican Roxana – Mountain Sciences Department, Professor dr. Muste

Sevastita – Food Quality Control Department, Professor dr. Pacurar Ioan - Soil Science Department, and Professor dr. Gavrilă Morar - Plant Technology Department.

Building on an earlier agreement between the LSU AgCenter and USAMV which resulted in a joint research project on soil temperatures in Romania, the delegation met with Dr. Freddie Martin (Director, SPESS), Dr. Kenneth Koonce (Dean, College of Agriculture) and Dr. Lakshman Velupillai (Director, LSU AgCenter International Programs

Office) to discuss strengthening research ties, student and faculty exchange opportunities. The Romanian visitors toured university labs, research facilities, AgCenter field research stations, LaHouse, and went on a four-day field tour of agriculture and environmental issues in Louisiana and eastern Texas. Dr. David Weindorf (Assistant Professor of Soil Classification/Land Use), presented research at USAMV in Cluj this past July while collecting data with two LSU graduate students for the soil temperature study.

Gulf States Horticultural Expo

About 700 exhibitors and 4,200 people participated in the 2007 Gulf States Horticultural Expo held in February 2007 at the Arthur Outlaw Convention Center in Mobile, Ala. This annual green industry trade show was hosted by the nursery and landscape associations in Louisiana, Alabama and Mississippi. Cooperating educational partners are the LSU AgCenter, Auburn University and Mississippi State University. AgCenter presenters included Hallie Dozier, Don Ferrin, as well as SPESS faculty members Ed Bush, Charlie Johnson and Jeff Kuehny. Retired LSU AgCenter horticulturist and former head of the LSU School of Landscape Architecture, Neil Odenwald, was a presenter. Moderators from the LSU AgCenter assisting at the educational programs were Dan Gill from SPESS, as well as Allen Owings and Regina Bracy from the Hammond Research Station, along with Annie Coco from Tangipahoa Parish. The Louisiana Nursery and Landscape Association also presented a scholarship to Mary Beth Robichaux, a graduate student in the School of Plant, Environmental & Soil Sciences.

5th Annual Baton Rouge Spring Garden Show Breaks Records

The 5th annual Baton Rouge Garden Show hosted by our faculty at the LSU AgCenter was held March 24-25, 2007 at Parker Coliseum. Record attendance and a record number of exhibitors participated. Home and gardening vendors, as well as AgCenter experts, filled the venue to showcase their stock and answer questions. “We’re selling plant and garden-related products exclusive to yard and patios as an outlet to the entire Baton Rouge community,” reported professor and show coordinator David Himelrick. “Our plan is to make (this show) the premier springtime event for the city.” According to Himelrick, the purpose of the event was to provide



information as well as products for those interested in gardening. Alan Morgan, professor of entomology, said many people had questions. “We had a lot of people bring by pictures of plants with either disease

or insect problems on their plants,” Morgan said. “The purpose of our plant health clinic is to diagnose the symptom and offer advice on how to remedy it.”

Research and Grantsmanship



Dr. David Picha



Dr. James Oard



Dr. Steven Harrison



Dr. Don Labonte

Faculty in the School of Plant, Environmental and Soil Science continue to win grants that significantly contribute to the economic well-being of Louisiana's agricultural economy.

Dr. David Picha received a grant from the USDA Agricultural Marketing Service in cooperation with the Louisiana Department of Agriculture & Forestry entitled, "Enhancing EU Export Market Penetration for U.S. Sweet Potatoes." Exports of U.S. sweet potatoes to the United Kingdom and other European Union countries have significantly increased during the last several years. Identification of the importers, sweet potato quality/ packaging requirements and market demand analyses among the wholesale and retail market sectors will be determined in each of the EU countries. The results and information obtained from the research will benefit Louisiana sweet potato growers by helping to expand market opportunities and increase export market penetration.

Dr. James Oard, along with other LSU Ag Center scientists, are participating a multi-institutional USDA-NRI-funded project referred to as RiceCAP. The purpose of the RiceCAP project is to develop and transfer biotechnology tools for rice improvement programs in the U.S. The project is in its third year of a four-year program. Researchers from all U.S. rice-producing states are involved, as well as four additional states (Colorado, Kansas, Ohio and Pennsylvania). The LSU AgCenter is a key leader in this project by providing research direction and germplasm.

Scientists in our facility have continued their valuable contributions of providing our clientele with improved varieties.

Dr. Steven Harrison released two oat varieties (LA976GBS-22 and LA966SBS-270) in the summer of 2006. These became the fifth and sixth oat varieties released since 1997. Both lines were licensed for exclusive distribution by Plantation Seed of Albany, Georgia. Variety LA966SBS-270 will be marketed as Horizon 270. The small-grain breeding program also released another wheat variety, LA95135, which will be marketed as LA95135 by Ragan & Massey Seed Company of Ponchatoula, Louisiana.

Louisiana's sweet potato farmers will benefit from the release of variety "Evangeline" by **Dr. Don LaBonte**. In 26 trials to date, Evangeline has been a consistent performer. Compared with the older variety Beauregard, Evangeline is sweeter and has excellent quality as a baked and canned product. Another advantage for the new variety is that texture, flavor and overall quality after baking are not compromised when roots are harvested under adverse conditions such as water stress.

Service to the Public

Besides being involved in research, scientists in the School of Plant, Environmental and Soil Sciences are active in supporting clientele professional groups, tours, fairs and expositions. This is an excellent way of demonstrating to the public what our mission is and what we have to offer them.

Geologic Collection

Soil and Mineral Exhibit, Room 330, Sturgis Hall

The School of Plant, Environmental, and Soil Sciences houses an impressive collection of geologic specimens, soil monoliths and historical soil surveys.



Joe Bradberry A Tribute

Joseph F. Bradberry passed away on August 1, 2006. The School of Plant, Environmental & Soil Sciences is appreciative of the generous support Joe Bradberry and his family have provided to LSU.

Joe graduated from Louisiana State University with a baccalaureate in horticulture. After moving to San Antonio, Texas, Joe began a long and distinguished career as a leader in the horticulture industry. With the help of friends and colleagues, Joe cofounded Milberger Landscaping and eventually created Lone Star Growers, which became one of the prominent growing nurseries in the United States as well as being active in many professional organizations

In 1994, he became a board member of the San Antonio Live Stock exposition Coliseum Advisory Board and was appointed chairman of the board from 1999-2003. Joe was also instrumental in cofounding the Sequor Foundation for at-risk children and was its first executive director.

Memorial gifts may be made to:
**Louisiana State University
Agriculture Scholarship**

**Joseph Bradberry
Undergraduate Scholarship
Fund for the LSU
Foundation**

**LSU College of Agriculture
Development Office
110 Agriculture
Administration Building**

Environmental Science and Management A · c · t · i · v · e · L · e · a · r · n · i · n · g

The goal of the Environmental Management Systems curriculum is to provide students with a background in physical and biological sciences as well as coursework in the application of scientific information, integrated with social and political realities, to work on environmental problems and solutions.

To meet these goals, service-learning has been incorporated as an integral component of several classes in order to reinforce class content. This also helps students understand the importance of social as well as scientific considerations in environmental protection.

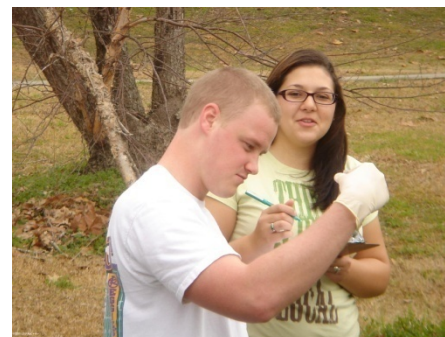
Active hands-on learning is incorporated in the Environmental Management Systems classes, and small class sizes encourage collaborative learning. Classes in Environmental Management Systems, offered through the School of Plant, Environmental, and Soil Sciences, include Environment and Technology (EMS 1011), Soil Science (EMS 2050), Applied Environmental Management (EMS3040), Soil Conservation (EMS 3045), Environmental Regulations and Compliance (EMS 3050), Applied Ecology (EMS 4010), Quantitative Risk Assessment (EMS 4020), Environmental Permit Writing (EMS 4030), Environmental Instrumental Analysis (EMS 4040), Chemical Properties of Soil (EMS 4055), Microbial Ecology and Nutrient Cycling in Soils (EMS 4056) and Environmental Soil Physics (EMS 4077).



Environmental Management students on the "Green Team" help with waste management at Baton Rouge Earth Day 2008. Pictured are Blake Phillips and Kim Buchanan.



Jacob Morrison and Zachary Buck, students in Applied Environmental Management (EMS 3040), work on the erosion control and bike path improvements they helped design for the BREC Hooper Road Park as their service-learning activity.



Water quality in the stream behind Sturgis Hall is tested by Environment and Technology (EMS 1011) students Christopher Whittaker and Brooke Giraldo.

Environmental Management students can choose an area of concentration of **environmental analysis & risk management, policy analysis, or resource conservation**. Students interested in **Agronomy** can focus on areas of concentrations such as crop management, or soil science. Students involved in **Horticulture** can choose a concentration of **environmental horticulture, landscape management, turfgrass management, or horticulture science**.

Louisiana State Horticulture Society Events and Officers



Dr. Ed Bush

The Louisiana State Horticulture Society elected officers at its recent board meeting held in Baton Rouge. Serving the association in 2007 and 2008 are Ed Bush, president; Stuart Gauthier, vice president; Dan Gill, secretary; Robert Turley, treasurer; Allen Owings, newsletter editor; and Sid Guedry, journal editor. Annie Coco recently completed a four-year term as president. The main summer activity for the group will be a professional development tour to Washington in late July/early August. The 2008 annual conference has been scheduled for January 9 at the ULL Ira Nelson Horticulture Center in Lafayette.

Graduate Studies

Facilities includes 59 research laboratories, plus numerous student and faculty offices, eight classrooms, and teaching laboratories. All laboratories are equipped with state-of-the-art multimedia facilities. Both teaching and research assistantships are offered by the department. Students holding teaching assistantships may assist in the teaching of a course, or teach one to two laboratory sections. Get more information at our website at www.speps.lsu.edu.

Louisiana Chapter – Azalea Society of America

LSU AgCenter horticulturists Allen Owings and Regina Bracy are currently serving as president and secretary, respectively, of the Louisiana Chapter of the Azalea Society of America. A new azalea garden at the Hammond Research Station named in honor of local nursery woman Margie Jenkins is being supported by the chapter.

Horticulturalists from the SPESS also hosted the annual state FFA Floriculture and Nursery Crops contest at the Horticulture Hill Farm Teaching Facility and University Gardens. Approximately 200 high school students across the state came to LSU to compete for a chance to go to the National FFA contest. Students take a written exam and a plant ID exam. Faculty, staff and students worked together to prepare exams and administer them to the students.



AgCenter, Southern agents attend sustainable Ag tour in North Carolina

The Louisiana Sustainable Agriculture Research and Education (SARE) Professional Development program sponsored a four-day field trip in April to attend the Carolina Farm Stewardship's Annual Piedmont Farm Tour. A total of 21 persons participated in the tour, including 10 county agents from the LSU AgCenter and Southern University. The group, led by Carl Motsenbocker with the LSU AgCenter and Owusu Bandele of Southern, visited eight sustainable farms in the Burlington-Pittsboro area of North Carolina.

The farms were small to medium scale farms that use direct marketing primarily and were a good demonstration of how to sustain family farms and communities and remain stewards of the land while making a living in agriculture. In addition to the farm tours on Saturday and Sunday, the group toured the Carrboro and Durham farmers markets on Saturday morning and also visited urban agriculture projects in Atlanta, Georgia. The sustainable agriculture training program is expected to have another farm tour next year in North Carolina.

SPESS Launches New Concentration in Landscape Management



To better prepare students who are entering positions in the landscape industry, SPESS has added a new concentration in Landscape Management to our curriculum. The new concentration includes a number of new course offerings including arboriculture, installation and maintenance and landscape construction. In addition, three new plant material courses will be offered to better cover the

wide variety of woody and herbaceous plant materials. Although courses have been offered in the past in these areas, the new courses will allow the faculty to go into greater depth and provide the student a higher level of understanding and hands-on experience.

The department is also working with Baton Rouge Community College to create an associate of science degree with a concentration in Landscape Management. Besides attracting new students, the department encourages industry professionals to recommend employees to take these new courses. For more information on the new curriculum and opportunities in Landscape Management, contact Dr. Don Labonte at 225-578-2158 or e-mail at DLabonte@agcenter.lsu.edu.

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Oats and More Oats

Steve Harrison attended the American Oat Workers Conference in Fargo, North Dakota in July 2006. The American Oat Workers is an organization of oat research scientists, millers and seedsmen for North and South America. Approximately 150 scientists attended this meeting, which is held every four years. Steve was elected chair of the American Oat Workers and will host the 2010 meeting in Baton Rouge.

Speaking of oats, the LSU AgCenter released two oat varieties in the summer of 2006. LA976GBS-22 and LA966S-BS-270 became the fifth and sixth oat varieties released since 1997. Both lines were licensed for exclusive distribution by Plantation Seed of Albany, Georgia. LA966S-BS-270 will be marketed as Horizon 270. The small grain breeding program also released wheat variety LA95135, which will be marketed



Left to right: Bruce Roskens (Quaker Oats), Steve Harrison (LSUAC), Deon Stuthman (University of Minnesota), Ron Barnett (University of Florida), José Antônio Martinelli (Federal University Rio Grande de Sol), a Brazilian farmer and his son and Luis Federizzi (UFRGS).

as LA95135 by Ragan & Massey Seed Co. of Ponchatoula, La.

Steve visited oat breeding and genetics programs in Brazil from October 7-14, 2006 along with breeders from the University of Florida (Dr. Ron Barnett), Minnesota (Dr. Deon Stuthman), and Quaker Oats Research Coordinator Bruce Roskens from Chicago. Steve and Ron coordinate a Quaker International Oat Nursery for exchange of breeding material

among North and South America oat breeders.

The group toured Brazilian oat research plots of breeders from the Federal University of Rio Grande de Sol (Dr. Luis Federizzi) and the University of Passo Fundo (Dr. Elmar Floss). They discussed germplasm exchange and ways to develop resistance to new diseases of oats. Steve also spent a day with the EMBRAPA (USDA counterpart) wheat research program in Passo Fudo.

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Dr. David Weindorf, LSU graduate student Beatrix Haggard, and others discussing soils at an intercollegiate soils judging in San Luis Obispo, California

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