With the beginning of the fall semester, CAFNR has a total enrollment of 3,072 students, a record. Our Plant Sciences undergraduate program currently has an enrollment of 97 undergraduate students and the Plant, Insect and Microbial Sciences graduate program has 78 MS and PhD students. This makes PIMS the largest individual graduate program in the college. These student numbers represent a 12% increase in graduate enrollment and a 5% increase in undergraduate enrollment over the prior year. I believe that the quality of our programs and the efforts faculty, staff and students are putting into our recruitment efforts are beginning to pay off in undergraduate student numbers. If you are not already, I encourage you to get involved in our student outreach and recruiting efforts so we make our academic programs the very best they can be.

Also, it is very rewarding to see objective external verification of what we already know about the quality and productivity of Mizzou’s programs, including Plant Sciences. That confirmation came recently when we received communication indicating that Mizzou ranked 8th in the US and 15th throughout the world in terms of the influence of our plant and animal science research as reflected by journal citations. Thomson Reuters prepared the Essential Science Indicators assessment using data from 1999 to 2009. Almost 89,000 institutions were surveyed to obtain the data. Other institutions in the top 20 include the Max Planck Society, UC Berkeley, the University of Wisconsin, Purdue University, and INRA in France.

Anne McKendry and her wheat breeding crew are highlighted in this issue’s “Know Your Colleagues” section (pages 7 & 8). Also, be sure to take a look at some of our several recent award winners (page 2) and read about Dale Blevins, Arun Chatterjee and Dave Sleper who are retiring during this period. The cumulative experience and tremendous contributions of these three faculty members will be missed (page 3). Adam Leonberger will join us shortly as Director of the Plant Diagnostic Clinic and Melissa Remley is joining the Division in an Instructor role next month.
Awards & Honors

Sites receives Study Abroad Award

Dr. Bob Sites will receive the Award for Excellence in Short-Term Study Abroad Programming during a reception for Faculty Program Leaders to be held on November 19, 2010. The selection for the recipient of this award is based on the demonstration of the Standards of Good Practice for Short-Term Education Abroad Programs developed by the Forum on Education Abroad, in the provision of study abroad courses.

Sites is being recognized for his impressive ways in which he has strengthened the program, his on-going commitment to running the program in Thailand, and the high degree to which his program promotes student engagement with the host culture.

International Education Week will be held November 15-19, 2010.

Voothuluru receives Best Student Paper Award

Priya Voothuluru, doctoral student in Bob Sharp’s lab, received the Best Student Paper Award for her talk “Abscisic Acid and Apoplastic Reactive Oxygen Species: Regulators of Root Growth at Low Water Potentials,” which was presented in a symposium on “Root Growth” at the 37th Annual Meeting of the Plant Growth Regulation Society of America held in Portland, Oregon, on August 8-12.

Undergraduates receive scholarships at banquet

Five Division of Plant Sciences undergraduate students received a $1,000 scholarship on October 7 at a banquet for the Missouri Seedmen’s and Southern Seedsmen Association. The scholarship is awarded to students studying field crops; based on scholastic record and college activities. We should recognize and congratulate these students, pictured from left to right: Derek Cottrill, Brenna Buford, Spencer Riley, Michael Frank, and Emily Brunk.

Graduate Students win awards at ASA-CSA-SSSA Meetings

Two Plant Science graduate students received awards at the 2010 ASA-CSA-SSSA meetings held in Long Beach, CA, October 31-November 3. Julian Lenis received first place in the C01 Graduate Student Poster competition for his poster entitled, “Soybean Seed Lipoxygenase Genes: Molecular Characterization and Development of Molecular Marker Assays”. Ryan Dierking received third place for the Robert F Barnes Graduate Student Oral Presentation in Section C6 (Forage and Grazinglands). Congratulations to these graduate students.

Remley to join Plant Sciences as Instructor, December 1

Dr. Melissa A. Remley will join the Division of Plant Sciences as an Instructor effective December 1, 2010. Melissa received the BS and MS degrees at Missouri State University before earning the PhD Degree here at Mizzou last year, under the direction of Dale Blevins. She currently works with Dr. Fritschi’s program in a Post-Doctoral Scholar role. During her studies, Melissa was awarded First and Second place in the Robert F Barnes Graduate Student Paper Competition in 2006 and 2007, respectively, as part of the American Society of Agronomy Annual Meeting. Teaching experience includes guest lectures in Plant Structure and Function and service as Laboratory Instructor for the same Mizzou course. At MSU, she served as Laboratory Instructor in Plant Physiology and Plant Propagation. Her new assignment will begin with teaching PS 2125, Plant Structure and Function, this spring semester and Forage Crops next fall. In addition, she will take an active role in our student outreach and recruiting efforts.
Retiring Faculty Members:

Dale Blevins

Dr. Dale Blevins joined the University of Missouri on January 1, 1978 and has held the rank of professor for approximately 26 years. Dale’s research focused on plant nutrition and plant physiology, with an emphasis on the role of boron and its effect on ascorbate metabolism and magnesium uptake. He also researched the effects of phosphate nutrition on magnesium uptake and transport. Researchers in his laboratory used the techniques of molecular biology to study plant nutritional problems.

Dale taught courses in plant physiology and plant nutrient uptake/metabolism. And his teaching has been outstanding, as evidenced by his numerous awards as both an outstanding teacher and advisor. One of these awards was the W.T. Kemper Teaching Excellence Award in 1993; a more recent award was the Crop Science Teaching Award, given this year by the Crop Science Society of America.

Dale is recognized as outstanding in his field and was elected fellow to both the Crop Science Society of America (CSSA) and to the American Society of Agronomy (ASA) in 1992. He served the University, the College and the Department/Division in many capacities over his term at MU. Dale has been on countless committees, served as the Director of Graduate Studies, and been a top teacher and researcher. His retirement from Mizzou becomes effective January 1, 2011.

Arun Chatterjee

Dr. Arun Chatterjee joined the University of Missouri on June 15, 1987 and has held the rank of professor for approximately 23 years. Chatterjee’s research program focused on plant pathogenic bacteria and factors that induce symptom development or trigger non-host resistance. Three specific areas he investigated include 1) factors that determine virulence and elicit host resistance, 2) regulatory systems that control expression of genes for virulence and elicitors of defense responses, and 3) functional genomics of Pseudomonas syringae pv. tomato, a pathogen of tomato and Arabidopsis thaliana.

Dr. Chatterjee has been recognized as an outstanding researcher over his career. He was nominated as a fellow to the American Phytopathological Society in 1986 and to the American Academy of Microbiology in 2002. Over the years he has served in an editorial capacity to Current Microbiology, Applied & Environmental Microbiology, the European Journal of Plant Pathology and Molecular Microbiology. His retirement from Mizzou was effective November 1, 2010.

David Sleper

Dr. Dave Sleper joined the University of Missouri on October 1, 1974 and held the rank of professor for approximately 26 years. Dave’s research focus was on the breeding and genetics of soybean. His primary objectives included breeding for resistance to the soybean cyst nematode, Phytophthora rot, and other biotic and abiotic stresses. His program emphasized identifying new sources of resistance and mapping QTLs for resistance to the soybean cyst nematode. It also emphasized the breeding and genetics of modifying oil and protein in soybean.

Sleper is renowned in his field and served as President to the Crop Science Society of America (CSSA) in 2000 and the American Association of Agronomy (ASA) in 2006. As a passionate teacher, he taught one or more courses in plant breeding each year during over his entire career. He is coauthor of “Breeding Field Crops” the most successful undergraduate text in the world on plant breeding. His retirement from Mizzou was effective October 1, 2010.
Plant Diagnostic Clinic Director: Adam Leonberger

Adam Leonberger will join the Division of Plant Sciences in the role of Plant Diagnostic Clinic Director effective December 1, 2010. Adam completed an M.S. Degree in Plant Pathology at Purdue University, where he also completed the B.S. Degree in Plant Biology and Horticultural Production/Marketing in 2008. This unique program prepared him well for our position by allowing him to work as a graduate intern in Purdue’s Plant Diagnostic Clinic since 2008. Adam’s thesis title is “Identification and host range of Phytophthora species in Indiana nurseries, greenhouses, and landscape plantings”. Responsibilities of the position include management of the day-to-day operations of the MU Plant Diagnostic Clinic. The Director receives plant disease, weed and insect samples for identification and consults with appropriate specialists as needed, handles phone inquiries and walk-in requests for diagnostic assistance, collaborates with State Extension Specialists to diagnose plant health problems and prepares written responses describing the diagnosis and the appropriate management recommendations. The Director provides plant disease training assistance to the Master Gardener program, Pesticide Applicator Training and other programs as requested by extension colleagues. Additional responsibilities include management of the database for plant disease, insect identification and weed identification, and interfacing with counterparts in the North Central Plant Diagnostic Network. Adam will represent the Plant Diagnostic Clinic at the annual meetings of the North Central Plant Diagnostic Network, part of the National Plant Diagnostic Network, and the American Phytopathological Society. Adam’s email is leonbergera@missouri.edu.

ICCVE Presents Sustainable Viticulture Workbook

Designed to increase vineyard sustainability and the adoption of environmentally-friendly vineyard management practices, The “Ozark Mountain Vineyard Sustainability Assessment Workbook: A Self-Assessment of Management Practices,” developed by the Institute of Continental Climate Viticulture and Enology at MU is now available on-line and in print format. Vineyard managers can use this resource to develop and implement self-assessment of vineyard practices to improve practices for managing vineyard canopies and crop load, pests and weeds.

The project measures progress in adopting grape best management practices (BMP) while identifying constraints to implementation in Arkansas and Missouri. Its content covers site selection, soils, site preparation, soil and vine nutrition management, cultivars and rootstocks, canopy management, crop load management, fertilizer storage, irrigation, weed management, pest management, disease management, pesticides and safety, pesticide application and pesticide equipment.


Rice Taste Preference Test held October 26

Missouri produced medium grain Rice Taste Preference Test was conducted on October 26th. The project was led by Dr. Won K. Jung of the University of Missouri Delta Research Center. Over 270 people participated in the study, a record for the University’s food sensory lab. Various Asian and American groups were targeted for the study in hopes of being able to identify varieties of U.S. grown rice that they prefer. Imports into the U.S. continue, around 18% of U.S. rice consumption. As well as the day of testing at the lab by Dr. Jung participants were given a minimum of 2 lbs of each tested variety to take home to continue the test along with an pre-stamped evaluation sheet to mail in after home testing. Dr. Jung will publish the study after all the data is collected. Chris Berry a member of the Missouri Rice Council said: “This is exactly the kind of research that needs to be done. The farmers are out here growing the rice to make a living and we need to be growing what these target groups want to eat or we are spinning our wheels”. The project was funded by the Missouri Rice Research and Merchandizing Council.

Harvest 2010

Undergraduate Research Assistant Cole Hoelscher helps with the harvest of Chardonel grapes in an ICCVE central Missouri viticulture experiment.
New Website
The Division has a new website that has a listing of available awards for faculty, staff and students. The list is not complete and we will be adding awards as we are made aware of them. If you see an award that you believe should be included, please email the award name and a website that includes award criteria to Kate Riley at rileyka@missouri.edu. The design of the page may be changing as things are added so please continually check back for new additions and possibly a new layout. The new site can be found at this URL: http://plantscionly.missouri.edu/awards.cfm

Laptop Update Open House
In the hopes of getting all the Symantec AntiVirus software replaced Gary and I are having a “Laptop Update Open House” November 15-18. Please put it on your calendar so you do not forget to bring in ALL of your University owned laptops. You can bring your equipment to either Gary’s office, 1-87 Agriculture, or to my office, 203 Waters Hall. This would also be a good time to drop off any old, unused equipment that you would like for us to surplus.

Free Software
The University of Missouri offers selected licensed software titles to faculty, staff, and students at no charge via MyServices (http://myservices.missouri.edu). These titles were previously available through the online Software Distribution Center. Software access is based on the user’s campus affiliation (MU, Hospital, UMKC, etc.) and designation (student, faculty, staff). The software available for download includes:

- Fetch FTP for Mac
- Secure CRT/Secure FX for PC
- Symantec Antivirus for Mac
- EndNote for Mac and PC (MU students only)
- Microsoft Security Essentials
- Stuffit Standard for Mac
- VPN for Mac and PC
- Reference Manager (MU students only)

Voice Over IP Phones are Back
The University has worked out a new contract for Voice over IP (VoIP) telephones. VoIP phones run using the same wiring that brings network access to your computer. This lack of additional wiring may lead to savings for the Division and for your program. The new phones will be offered campus wide starting at the beginning of 2011. The handful of you currently using VoIP phones will be receiving a new phone in the next few months.

Scientists Explain Biotechnology to MU Journalism Students
The National Center for Soybean Biotechnology (NCSB) and the Missouri School of Journalism co-sponsored Biotech University, a workshop that is geared towards Missouri Journalism Students and Missouri Agriculture Journalism Students, on October 15-16, 2010 held at the Reynolds Journalism Institute at the University of Missouri.

Biotech University was sponsored and funded by the United Soybean Board (USB). The Board is composed of 68 farmers and directors who oversee the investments of the soybean checkoff, which is a research and promotion program funded by the U.S. soybean farmers.

Special keynote speaker, Dr. Roger Beachy, Director of the National Institute of Food and Agriculture (NIFA), U.S. Department of Agriculture in Washington, DC presented a talk on “Ag Biotechnology –Who, What, How, Why”. Dr. Beachy explained the controversies with science and the progress that is being made in biotechnology. Other guest speakers were Mark Winkle, Senior Director of Domestic Program, United Soybean Board; Susan Luke, Associate Director, Osborn & Barr; Kelly Gillespie, Executive Director, Missouri Biotechnology Association (MOBIO); and professional journalists which included Bill Lambrecht, Washington Bureau Chief St. Louis Post-Dispatch; Julie Harker, Reporter, Brownfield Network; and Greeley Kyle, Associate Professor, Missouri School of Journalism-University of Missouri.

The students started their, day-two, with hands-on experiment of extracting DNA from a banana with Dr. Shari Freyermuth, Associate Dean of Academic Programs, College of Agriculture Food & Natural Resources. She stated that she “Enjoys teaching non-science majors and helping them realize the importance and relevance of biotechnology.” Then lab demonstrations were performed by Dr. Kristin Bilyeu in which she explained the importance of improving soybean seed composition for enhanced nutrition for food and animal feed; Dr. Zhanyuan Zhang demonstrated the “Gene Gun” which is used to transfer genes in plants; Dr. Henry Nguyen, Theresa Musket, and Jill LeRoy demonstrated molecular breeding. Last stop was at the MU Bradford Research Center for a tour by Superintendent, Tim Reinbott, and, Kelly Forck, Farmer and President of Missouri Soybean Association. Kelly discussed why biotechnology was important to him as a working farmer.

Scientists Explain Biotechnology to MU Journalism Students
eRecruit – What is it and what does it mean to you?

eRecruit is a People Soft recruitment module that HR will be implementing in two stages. The goal is for the recruiting of both staff and academic positions to be processed through one module, instead of the two systems we currently use. The first phase of this implementation will affect staff positions. Effective November 1, 2010, Human Resource Services will be using the eRecruit Hiring Manager module to process all staff positions. Academic positions will migrate to the eRecruit Hiring Manager module at a later date.

The personnel requisition, how you review your applications, and the selection documentation you are required to fill out after hiring someone have changed.

The personnel requisition can still be found at the HR website under the forms, hiring section, but it definitely looks different. To post a position you will need to fill out the form to the best of your ability, and then forward it to me as an e-mail attachment. The two most important things you can fill out on the form are the job description, and the preferred qualifications sections. I will review the requisitions and fill in any of the areas that you might not know. I will then forward the requisition to Ag Business Services and they will review, give approval for the Dean, and forward to HR for posting on the HR website. A positive improvement in this new module is the preferred qualifications section. If you have preferred qualifications you are looking for, we can enter those on the requisition, and then when HR screens applicants, they will screen out those that do not meet your preferred qualifications, as well as those that do not meet the minimum qualifications for the job.

Changes in how you review applications and process the selection documentation will require additional instruction from our office. When you are ready to review applications for a position, either Jean or I will work with you in the new system. We are working on simplified instructions that we will make available to make the process go as smoothly as possible.

New Students Welcomed at Orientation

Thursday, August 28, the Division of Plant Sciences hosted a Student Welcome Orientation for students new to Plant Science, which was held in Room 39 of the Agriculture Building. Afterwards, a picnic honoring new students was attended by faculty and returning students. During the orientation, Dr. Reid Smeda, Director for Undergraduate Programs, and Dr. Mary Ann Gowdy, coordinator of undergraduate student recruitment, passed out T-shirts and provided an overview of the DPS

5th Annual Millikan Memorial Lecture

The 5th Annual Millikan Memorial Lecture, “Elicitation and suppression of plant immunity by Pseudomonas type III effectors AvrPto and AvrPtoB,” was given by Gregory Martin, PhD. Professor at Cornell University on October 13, 2010.

The Martin laboratory studies the molecular basis of bacterial pathogenesis, plant disease susceptibility, and plant immunity. Most of their research focuses on bacterial speck disease which is caused by the infection of tomato leaves with the bacterial pathogen Pseudomonas syringae pv. tomato. This is an economically important disease that can decrease both the yield and quality of tomato fruits. It also serves as an excellent model system for understanding plant-pathogen biology because much is known about the molecular biology of this pathosystem and many genomics resources are available for both tomato and P. s. pv. tomato.

Gregory Martin’s work in the tomato-Pseudomonas syringae pv. tomato system was some of the first to demonstrate the molecular mechanisms of disease resistance in plants and is pivotal to our current understanding of plant-microbe interactions.

Preview Mizzou 2010

The Division of Plant Sciences hosted 42 students at Preview Mizzou on Monday, October 4. This is an annual recruiting event sponsored by CAFNR, where prospective high school students and their parents can visit Mizzou and learn more about undergraduate studies in the 19 different majors offered by CAFNR. Dr. Reid Smeda and Dr. Mike Collins provided an overview of Plant Sciences with input from Dr. Mary Ann Gowdy. Examples of some of what the students might see during a lab were shown and those interested in the Horticultural emphasis area of the DPS sat with Dr. Gowdy and performed a fun experiment.

Student Michael Frank and Graduate student John Haguewood assisted in the presentation and answered questions from the future students about programs from their own perspectives.

We hope we see a few of these bright faces back on campus next year!
KNOW YOUR COLLEAGUES:
Anne McKendry

Anne McKendry, Ph.D. is an Associate Professor in the Division of Plant Sciences. She grew up near Kingston, Ontario Canada and received both a B.Sc. in Honours Biology and a Bachelor’s degree in Education from Queen’s University in Kingston. Following her undergraduate work, she joined the Canadian University Services Overseas (the Canadian equivalent of the Peace Corps) and worked for three years teaching secondary school biology and chemistry on an island in the Niger Delta in Nigeria, West Africa. It was there that she became interested in agriculture and decided to switch gears and do graduate work in plant breeding. She completed her M.Sc. at the University of Manitoba and her Ph.D. in Plant Breeding and Genetics jointly between the University of Manitoba and the University of Minnesota in St. Paul. Anne has a teaching/research appointment in Plant Sciences. She currently teaches Field Crop Breeding 4325/7325, Sophomore Seminar 3130 (team taught with Dave Trinklein), the Genetics of Agricultural Plants and Animals 3213 (cross-listed in Animal Sciences and team taught with Gavin Conant and Bill Lamberson) and, with Dave Sleper’s retirement will be taking over Plant Breeding and Genetics 3225.

Wheat Breeding Program:
Anne and her group develop and release soft red winter wheat varieties with improved grain yield, grain quality, and resistance to diseases and abiotic stresses relevant to the soft red winter wheat region. Disease resistances for Septoria tritici blotch, barley yellow dwarf virus, the rusts (including stem, leaf, and stripe rust), and Fusarium head blight are particular foci of the program. Varieties of note released from her program include: Ernie, Truman, and Bess which have all gained wide acceptance in Missouri and surrounding states. Notable among these is Truman which is grown from southeast Kansas to New York State. Milton, released in 2009, and named for her predecessor J. Milton Poehlman promises to be another widely adopted line. It has excellent grain yield and test weight, extraordinary milling and baking quality, and a good disease resistance package. It carries the Ppd-D1a marker conditioning photoperiod insensitivity and has proven through cooperative nursery testing to be adapted from Missouri to the east coast, north to Michigan and south to Georgia.

Fusarium Head Blight Research:
For the past 10 years, much of Anne’s research within the wheat program has focused on Fusarium head blight (FHB or scab), caused by Fusarium graminearum Schwabe (teleomorph Gibberella zeae (Schwein.), which is an increasingly important problem in Missouri and throughout the hard red spring and soft red winter wheat regions of the US. Historically, losses resulting from FHB occurred on an 8-10 year cycle but with reduced tillage and changes in weather patterns, widespread losses are now occurring every two to three years. Losses not only include reduced grain yield but also result from mycotoxin (principally deoxynivalenol or DON) contamination of the harvested grain which renders it unmarketable. Over the past decade, losses are estimated to have exceeded $5 billion. Host resistance is considered the most practical and effective means of control but breeding has been hindered by a lack of effective resistance genes and by the complexity of the resistance in identified sources. Despite global research efforts over the past 75 years, no source of complete resistance is known, and current sources provide only partial resistance. In 1998, Anne was one of 13 founding members of the US Wheat and Barley Scab Initiative, which has evolved into a major funding source for FHB research in the US, providing over $60 million in USDA-ARS funds for FHB research nationally. Since 1998, Anne’s FHB resistance program has been funded through competitive grants from this initiative. Her program has focused on the identification and genetic characterization (both conventional and molecular) of new sources of

Julie Solomon inoculating in the scab nursery
Around the Division

resistance to FHB. The Missouri program has become nationally recognized for the high levels of ‘native’ resistance she and her group have incorporated into Missouri wheat varieties. These resistances are all broad-based and appear to be conditioned by unique alleles.

Ernie was the first soft red winter wheat released with broad-based, levels of FHB resistance. Former doctoral students Dr. Shuyu Liu and Dr. Zewdie Abate characterized the 4 components of resistance in Ernie and found them to be unique. The major QTL they identified are now being used in winter wheat programs nationally that are focused on pyramiding resistance genes through marker-assisted-selection. Truman, released by Missouri also has broad-based FHB resistance that is now considered the gold standard for FHB resistance in winter wheat. It serves as a full season check variety in two of the national winter wheat scab nurseries. In fact, all of the resistant check varieties in regional winter wheat scab nurseries originate from the Missouri program. Although Anne and her group continue to chase after complete resistance (immunity) through discovery of novel alleles which are then pyramided into Missouri cultivars, her program has been recognized for the job it has done in reducing the threat of catastrophic losses due to FHB through the public release and adoption of FHB resistant winter wheats.

David Tague

David Tague is a Senior Research Specialist who has been with the program for 22 years and serves as an assistant breeder, overseeing all aspects of the wheat breeding effort. He has responsibility for the crossing and field evaluation programs at locations throughout Missouri. Additionally, he has responsibilities for data collection and analysis and in collaboration with Anne, aids in making selections during advanced yield testing.

Julie Solomon

Julie Solomon is a Senior Laboratory Research Assistant who has been with the program for the past 6 years. She works primarily in the Fusarium resistance component of the program but also assists with the breeding program when necessary, principally during planting and harvest seasons.

Brendan Craughwell

Brendan Craughwell is a Research Specialist who has been with the program for 3 years. He has a leadership role managing the greenhouse and field Fusarium resistance screening nurseries.

Sarif Islam

Md Sariful Islam, joined the program in May of 2009 as a doctoral student. His dissertation research involves mapping the four components of FHB resistance in Truman and characterizing (through molecular analyses) the diversity of FHB resistance within Missouri breeding germplasm.

James Gillum

James Gillum is the newest member of Anne’s lab. He joined the program in September 2010 to pursue doctoral studies in plant breeding after having been the Miscanthus Coordinator for Monsanto. James will continue to work for Monsanto while working towards his doctorate. Among other projects, he will be validating QTL from Truman and doing candidate gene analyses for the QTL identified by Sarif.
UPCOMING MEETINGS:

2010 Crop Management Conference, December 1-2, 2010
Columbia, Missouri
http://plantsci.missouri.edu/cmc

The Crop Management Conference will be held at the Hilton Garden Inn in Columbia, Missouri. Keynote Speaker will be Dr. Paul Esker from the University of Wisconsin. His seminar is entitled, “Understanding risk factors that drive response of foliar fungicide applications in field crops.” Go to the website for more details.

2010 National Fusarium Head Blight Forum, December 7-9, 2010
Milwaukee, Wisconsin

San Diego, California.

2011 APS Southern Division Meeting, February 6-7, 2011
Corpus Christi, Texas

RECENT FIELD DAYS

Greenley Field Day
The Greenley Research Center field day was held on August 10, 2010. Nearly 300 attendees were able to hear presentations on pest, crop, and livestock management. Some of the specific topics included managed drainage and integrated water management systems, rescue nitrogen applications for corn, greenhouse gas emission issues and enhanced efficiency fertilizers, cost-share opportunities through the Mississippi River Basin Initiative, fungicide and fertilizer interactions in corn, glyphosate-resistant weed management, and the use of dicamba for tough-to-control weeds.

Delta Center Field Day
On September 2, 2010 the Delta Research Center held its 49th Annual Delta Center Field Day in Portageville, MO. The field day included multiple tours of rice and cotton, soybeans, cotton soil fertility, and irrigation and disease. Dr. Jason Weirich made his debut at the field day after joining the team at the Delta Center in July. His presentation was on weed control in soybeans. Other presentations included profitability fertilizer recommendations from Dr. Gene Stevens and soybean nematode management from Dr. Allen Wrather.

Southwest Center Field Day
Every year a new tour is introduced at the Southwest Center field day and tips on building fences was the highlight of the new tour held September 10 in Mount Vernon. Regular tours were dairy, beef, agronomy, horticulture and grapes. In addition to the hourly tours, there were exhibits in the machinery shed and the large equipment and fencing materials were set up on the midway behind the headquarters.
### Recent Grants

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<td>YieldGard Corn Borer, and Bt11xMIR162 Deployed Against Corn Earworm,</td>
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<td>Fall Armyworm, and Other Southern U.S. Lepidoptera Larvae</td>
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<td>Decay in Soybean</td>
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<td>Compile estimates of Soybean Yield Suppression by Diseases in the US</td>
<td>Smith-Bucklin</td>
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