Current budget projections are somewhat more positive than we saw as the last issue of the Plant Sciences Quarterly went to press. Spring semester enrollment at Mizzou is up 5.1% over 2010 numbers and the revenue from these additional students has proven valuable in lessening the negative impact of reductions in state funding. The anticipated decline in enrollment in the near future has also been moderated, due in part to greater numbers of transfer students. The current total of 105 students in the Plant Sciences undergraduate program is the highest seen in a decade and, I believe, reflects our emphasis on recruiting. Still, this number remains well below our capacity to deliver quality programs.

I am especially impressed with the number and size of grants our faculty received during this period (pages 10 and 11). This external grant funding provides critical support for most of our staff and graduate students. Be sure to take a look at the Felix Fritschi group highlighted in this issues’ “Know Your Colleagues” section (pages 7 & 8). The number of students and staff in this very-productive program will keep the new DPS Space Committee busy. You can read more about the committee, for which Susan Lasley will serve as Chair, on page 5. Our students, staff, and faculty continue to receive important awards and other forms of recognition that reflect the high quality and effort that characterizes our division (pages 2 & 3). I am very happy to announce that Dr. David Mendoza will join DPS as Assistant Professor to contribute to our research and teaching programs in the area of plant stress biology (page 5). David comes to us from UC-San Diego, so he will have to get used to a little winter weather.

Field day season is coming with the Bobwhite Quail and Native Plant Day in June, the Pest Management Field Day in early July, and the Crop Injury and Diagnostic Clinic in mid-July, all at Bradford. The Turf and Ornamental Field Day is held at South Farm later in July. Many of the other outlying units have field days during the growing season. I encourage everyone to get out to some of these programs to learn more about your colleagues’ activities.
Arun Chatterjee was recognized for his pioneering research on a bacterium that causes disease in plants

The American Association for the Advancement of Science (AAAS) has awarded the distinction of Fellow to Arun Chatterjee, a Professor Emeritus of Plant Sciences. Chatterjee was elected for his “distinguished contributions to the field of plant bacteriology, particularly for global regulation of virulence factors by transcriptional factors, signaling systems, and RNA regulators,” according to an AAAS press release.

Election as a Fellow is an honor bestowed on AAAS members by their peers. This year, 503 members were awarded this honor. Chatterjee was the only MU faculty elected in 2010.

He was presented with an official certificate and a gold and blue rosette pin on February 19, 2011 in Washington, D.C.

The American Association for the Advancement of Science (AAAS) is the world’s largest general scientific society and publisher of the journal, Science.

Garnett awarded Above and Beyond Award

Justin Garnett was the November winner of the Above and Beyond Award. The Above and Beyond Award is designed to recognize CAFNR members who go that extra mile. One winner is selected each month and nominations can come from their peers or their supervisors. Garnett is a Research Lab Technician in Dr. Bob Sharp’s lab. Sharp says about Garnett that “in addition to being a hard-working and conscientious employee, he possesses an extraordinary skill-set and range of interests that make him an invaluable asset when there are needs for equipment design and development.”

Reinbott receives 2011 Citation of Merit

Tim Reinbott, Superintendent of Bradford Research and Extension Center was the recipient of the 2011 Citation of Merit Award for the College of Agriculture, Food and Natural Resources at their Celebration of Excellence awards banquet held April 7, 2011. This award is for professional attainment by a person in a field related to the academic curriculum of a division of the University of Missouri.

For the past 10 years, Reinbott has been superintendent of the sprawling research farm six miles east of Columbia. His everyday duties include supervising staff, planning and organizing a variety of field days, educational events and workshops, and coordinating hundreds of research projects.

“Although Tim is not directly involved in all of this research and his name doesn’t appear on all of the publications and presentations, the positive, productive atmosphere that he maintains at Bradford enables this research to be done,” says Laura Sweets, Extension Associate Professor of Plant Sciences.

For the full story on Tim Reinbott visit http://cafnr.missouri.edu/coe/alumni/11reinbott-t.php

Sleper awarded for Outstanding Service and Leadership

Former Associate Director of the Soybean Center and Professor from the Division of Plant Sciences at the University of Missouri, Dr. David Sleper, was presented with a plaque for his outstanding service and leadership in plant breeding research and education at the Soybean Biotechnology Symposium held April 6, 2011 at the Christopher S. Bond Life Sciences Center. Sleper retired in October 2010 and is now serving as an Emeritus Professor at MU.
Entomology students receive first place at North Central Branch-Entomological Society of America meeting

Entomology students, Andrew Fill, Elizabeth Long and Lauren Hart each were awarded first place for their presentations at the North Central Branch-Entomological Society of America meeting that was held in Minneapolis, MN, March 13-16, 2011. Fill won in the Undergraduate Student Poster Competition: “Non-target Non-consumptive Effects of a Natural Enemy on the Abundance of a Non-prey Herbivore.” Long won in the PhD Student Paper Competition: “Predator Identity, not Predator Diversity, Influences the Top-down Control of an Important Insect Vector of a Plant Pathogen in Wheat.” Hart won in the PhD Student Poster Competition: “Greater abundance and diversity of native coccinellids in agricultural grass dominated habitats than natural tallgrass prairies.”

MU also had a team compete in the Linnean Games. The Linnean Games is a quiz bowl-type competition of entomological knowledge.

The members of the team are: Lauren Hart, Elizabeth Long, Paul Botch, and Tamra Reall. Their coach (not pictured) was Richard Houseman.

Awards & Honors

Smeda awarded graduate research fellowship

John Smeda, senior Plant Sciences student, has been awarded a nationally competitive National Science Foundation graduate research fellowship to pursue his graduate studies at North Carolina State University. Smeda has worked in Dr. Melissa Mitchum’s lab for the past two years as an undergraduate research assistant. A reception was held April 6, 2011 to honor all students who have applied for nationally competitive fellowships.

Perry awarded 2011 Outstanding Freshmen

Plant Sciences and Agricultural Economics student Andrew Perry received the 2011 Outstanding Freshmen at the College of Agriculture, Food and Natural Resources’ Celebration of Excellence award ceremony held April 7, 2011 at the Reynolds Alumni Center. “Through his ability to multi task and put ample focus on the task at hand, Andrew Perry has strived to set the bar higher than almost any other freshman has ever hoped to do. His dedication, determination and willingness to help others is outstanding,” says Tyler LePage, President of MU’s Agricultural Economics Club. To read more about Andrew Perry visit http://cafnr.missouri.edu/coe/student/11perry-a.php.
2010 December Graduates

**Undergraduate Students**
- Daniel Brown, Landscape Horticulture
- Nathan Brown, Plant Sciences
- Emily Brunk, Crop Management
- Joshua Carter, Landscape Horticulture
- Katherine Cassmeyer, Landscape Horticulture
- Shaun Henry, Landscape Horticulture
- Cameron Horine, Crop Management
- Jordon Montgomery, Turfgrass Management

**Graduate Students**
- Kenton Binkholder, MS Horticulture, R. Smeda
- Ryan Dierking, PhD Crop, Soil & Pest Management, R. Kallenbach
- Brad Fresenberg, PhD Agronomy, R. Smeda
- Michael Gerau, PhD Plant Biology and Genetics, G. Davis
- Roland Holou, PhD Plant Biology and Genetics, G. Stevens
- Kristen Leach, PhD Agronomy, G. Davis

2010 Fall Dean’s List

- Adam Adair
- Joseph Bolte
- Helen Bosco
- Daniel Brown
- Emily Brunk
- Matthew Caldwell
- Erin Casey
- Chad Cook
- Cody Cornelius
- Derek Cottrill
- Eulynn Davis
- Heidi Davis
- Shelby Davis
- Adam Distler
- Stephen Dudley
- Garth Duncan
- Michelle Folta
- Michael Frank
- Nicholas Garst
- Sara Gerdeman
- John Gierer
- Staci Hentges
- Kelly Herrman
- Jacob Hueste
- Melissa Hunter
- Brett Jones
- Benjamin Kraemer
- Paul Kunkle
- Dalton Ludwick
- Shawn Martin
- Michael May
- Mason McCarty
- Andrew Meeds
- Karen Momper
- Jeb Newman
- Brandon Nystrom
- Casey Pearcy
- William Porter
- Claire Riaassetto
- Spencer Riley
- Steven Schlesselman
- John Smeda
- Douglas Spaunhorst
- Brandon Thiel
- Matthew Westfall
- Joseph Wiesehan
- Cary Yates
- Tracie Zimmerman

Adventures in Education

Division of Plant Science graduate students participated in Mizzou’s Adventures in Education on April 16, 2011. Children were able to explore about 30 different activities like science, art, music, engineering, computers, and animals. The activities at this free event were planned and taught by about 85 graduate students with 24 different exhibits. This event was a part of Graduate Education Week.

Some of the graduate students that represented the Division of Plant Sciences included: Dara Boardman, Deanna Boardman, Paul Botch, John Haguewood, Ashley Schlichenmayer, and Brock Wagner. For more information on Adventures in Education visit http://gradschool.missouri.edu/about-us/initiatives/graduate-education-week/adventures-in-graduate-education/index.php

New Addition to the Riley Family

Plant Science staff members Eric and Kate Riley welcomed their first child February 9, 2011. Their daughter Addison Ann Riley was born at University of Missouri’s Women and Children’s Hospital and weighed 7 lbs. 8 oz. and 21 inches long.
Annual Soybean Biotechnology Symposium hosted by NCSB

The 7th Annual Soybean Biotechnology Symposium was hosted by the National Center for Soybean Biotechnology which was held at the Christopher S. Bond Life Sciences Center at the University of Missouri on Wednesday, April 6, 2011.

There were approximately 100 people who registered and participated throughout the day's events. The symposium offered informational sessions and get-togethers for researchers and students from MU's Agriculture, Plants Sciences, and other Life Sciences disciplines.

Invited guest speakers were Dr. Anne E. Dorrance, Professor from the Department of Plant Pathology at The Ohio State University. The seminar title was “The Complexities of Partial Resistance to Phytophthora sojae in Soybean”; Dr. Gregory May, Ph.D., President and CEO of the National Center for Genome Resources in Santa Fe, NM. The seminar title was “Drinking from a fire hose in the era of next-generation DNA sequencing: Understanding Legume Genetic Diversity through Genome and Transcriptome Sequencing”; and Dr. Walter Fehr, a Charles F. Curtiss Distinguished Professor in Agriculture and Life Sciences at Iowa State University. Fehr was the Poehlman Lecturer Recipient. The seminar title was “The Genetic Transformation of Soybean Oil”.

This year’s event, as well as past symposiums, have been hosted by the National Center for Soybean Biotechnology along with sponsors and supporters by the University of Missouri, the Missouri Soybean Association, the College of Agriculture, Food & Natural Resources, the USDA Agricultural Research Service, the Christopher S. Bond Life Sciences Center, the Donald Danforth Plant Science Center, the Interdisciplinary Plant Group, and the United Soybean Board.

Notes from the DPS Space Committee

The DPS space committee was formed to advise the Director regarding the equitable and effective use of laboratory, office, teaching and storage space allocated to faculty, staff, post docs, adjunct faculty, emeriti and graduate students in the division. The committee consists of 6 voting members and an Ad hoc member that serves as the Chair. Current members of the committee are: Bill Wiebold, Rob Kallenbach, Qisheng Song, Chris Starbuck, Lee Miller, Felix Fritschi. Susan Lasley serves as the Chair of the committee.

The committee met for the first time on April 11, 2011 and all members were present for the meeting. One of the charges of the committee is to maintain a current and accurate inventory of the space occupied by DPS. This is a big assignment as the division occupies space in five buildings across campus. To familiarize the committee with DPS space a tour of Waters Hall and Mumford Hall was given by the Chair. While there are no current needs identified, the tour revealed some space that might be available for reassignment and some changes that could be made should space needs be identified.

Room 200 Waters Hall is a teaching classroom that is slated for renovation this summer. The plans for the room were outlined to the committee. Further discussion of this project is needed before plans are finalized. The space committee will be working closely with the Director of Undergraduate Programs on this project.

The next meeting of the space committee is set for May 5th when the committee will tour the DPS assigned space in the Ag Building and the Ag Lab Building. If a faculty member has a specific space need he/she may send a request to the Chair of the space committee at lasleys@missouri.edu, and the Chair will review the request with the committee before forwarding a recommendation to the Director.

Mendoza to join Division of Plant Sciences

Dr. David G. Mendoza-Cózatl will join the College of Agriculture, Food and Natural Resources’ Division of Plant Sciences in the role of Assistant Professor effective September 1, 2011. The position is a partnership between DPS, the Bond Life Sciences Center, and the Interdisciplinary Plant Group which is part of the Food for the 21st Century Program at the University of Missouri. The tenure-track position is 80% research and 20% teaching. Dr. Mendoza, a native of Mexico, will be located in the Bond Life Sciences Center where he will join three other DPS faculty in this highly collaborative atmosphere that brings together scientists from Biological Sciences, Animal Sciences, Biochemistry, Computer Sciences and many others.

Since earning his PhD in Biochemistry at the National Autonomous University of Mexico in 2005, Dr. Mendoza has been a postdoctoral scholar in the Division of Biological Sciences at the University of California-San Diego. His doctoral work, entitled “Mechanism of Cadmium Tolerance Mediated by Thiols in Euglena Gracilis”, received the Weizmann Award as the best PhD dissertation nationally in Natural Sciences, presented by the Mexican Academy of Sciences. David’s work at UC-San Diego has emphasized plant accumulation of metals such as cadmium, chromium, and lead. His 16 refereed publications appear in journals such as Plant Journal, the Journal of Biological Chemistry, and the Proc. of the National Academy of Sciences.

David’s position at Mizzou is part of an effort to expand upon our existing strengths in plant stress biology. David’s email is dgmen-doz@ucsd.edu, in case you want to contact him.
You are your own Best Line of Protection

When it comes to the security of your computer, you are your own best line of protection. With approximately 400 computers under our care, Gary and I are not able to constantly monitor the health of all the computers in the Division. We try to be sure to let you know of threats, and we push updates to those of you that are on campus. But the end user must still participate in the security of their machines.

Things you should do to help keep your system safe include the following.

When surfing the internet do not visit web sites that you are unfamiliar with. You should also steer clear of downloading unknown software from the internet. This is often the source of FAKE antivirus infections as well as other spyware software. Even up to date antivirus software can miss these types of infestations.

When your computer prompts you to install an update for Adobe Reader, Adobe Flash or Java please be timely in installing these updates. You should also install Microsoft updates and reboot your computer to finish any installs when prompted. If you are unsure as to whether something is for real or just a scam a simple phone call to Gary or myself could be very helpful in keeping your system safe. Ignoring these prompts can leave serious security holes unchecked.

If you are asked to follow a link in ANY email message that you are not expecting, think twice or double check with the sender to see if the email message is valid.

Finally, try to reboot your machines at least once a week and backup important files.

Check out these Links!
Free On Campus Computer Training for Faculty Staff and Students. • http://doit.missouri.edu/training/catalog.html
MU Technology Searchable Knowledgebase • http://help.missouri.edu

Plant Clinic is now open!

As the weather starts to warm up, many of us will start working in our gardens. Inevitably, some of your plants will get sick. If you have spots on your tomatoes, your trees are suffering, or any other plant health related issue, send your sick plant to the Plant Diagnostic Clinic. The PDC draws upon a network of experts. We aim to diagnose your plant related problems and provide accurate, timely answers and management recommendations. Submission forms can be found on-line at our website, http://plantclinic.missouri.edu.

It is easy to submit a plant sample. Send entire plants with roots intact (dug, not pulled) if possible. When you collect plants or plant parts, make sure a range of the symptoms is represented in your sample. For larger specimens, sample from the transition zone between healthy and symptomatic tissue. For suspected Tree wilts, like Dutch elm disease, oak wilt, or pine wilt nematode, submit live branches 1 to 2-inches in diameter, cut from branches that are beginning to show symptoms. For oak wilt detection, submit branches exhibiting streaking in the sapwood and keep samples cool during shipment by packing with ice packs.

For plant identification, place the sample flat between layers of dry paper. Try to prevent excessive folding of the leaves and place flowers so that you are looking into the center of the flower. Pack the wrapped bundle in plastic, preferably with a piece of cardboard to keep the sample flat. To make packaging easier, fold tall plants once or twice or cut into shorter lengths. For trees and shrubs, collect a terminal or end portion of a leafy branch with at least five leaves or buds.

For insect/ arachnid identification, place leak-proof bottle or box in sturdy shipping container with plenty of packaging material to prevent shipping damage. Preserve soft-bodied insects such as caterpillars, aphids, or mites in a leak-proof bottle with 70% alcohol, rubbing alcohol, or hand sanitizer gel. Do not submit insects in water, formaldehyde or without alcohol as they will readily ferment and decompose. Hard-bodied insects such as butterflies, beetles, or bees should be killed by freezing and cushion specimens in layers of tissue.

It is important to remember that a good diagnosis is dependent upon a good sample, so don’t let it go bad in the mail. Wrap samples with a few layers of a dry absorbent material, like paper towels or newspaper. Excess moisture will cause the sample to spoil during shipping. Don’t forget to use a sturdy box to send your plant in either. Mail the sample early in the week to ensure that the sample arrives by Friday. If you’re in town, feel free to stop by the clinic in person. You can mail samples or visit at 23 Mumford Hall, Columbia, MO 65211.

There is a small fee for general diagnosis, insect/ arachnid identification, and plant/ weed identification of $15. There is an additional $10 fee for additional fee for virus testing, bacterial or fungal isolation that is necessary for a diagnosis. Commercial turf and putting green fees are $25 and $50, respectively. It’s a small fee for a lot of information.
Felix Fritschi is an Assistant Professor in the Division of Plant Sciences with a research/teaching appointment. He teaches Grain Crops 3275 and Crop Physiology 4315/7315, and participates in teaching Research with Plant Stress Agents 8530. His research efforts are aimed at refining our understanding of crop responses to changing environments, and to exploit that knowledge to develop improved varieties and more efficient and sustainable cropping practices.

Post Doctoral Research Associates

Dr. Jimmy Houx is a Post-Doctoral Fellow and has been with Felix's crop physiology laboratory for three years. He conducts research on biomass cropping systems, corn nitrogen fertilization, and soybean micronutrient fertilization. Jimmy also provides support for all projects in the research group, mentors and advises the graduate students, and coordinates the student workforce.

Dr. Lakshmi Manavalan received her PhD in Crop Physiology from Tamil Nadu Agricultural University, India and the International Rice Research Institute, Philippines. In the Fritschi Lab she focuses on characterizing soybean germplasm for root architectural traits in relation to drought tolerance. Her long-term goal is to be involved in applied crop physiological research aimed at producing improved crop cultivars.

Dr. Shardendu Singh joined the Fritschi Lab in 2008 as a Post-Doctoral Fellow. He explores the potential of various techniques for their suitability for high-throughput phenotyping of soybeans under field conditions. In addition, he investigates the influence of nitrogen fertility on canopy reflectance characteristics.

Staff

Terry Woods, Lab Technician, supports various projects in the lab and assists in coordinating everyone’s efforts. His research emphasis is on the examination of soybean root growth under greenhouse and field conditions.

Visiting Scholars

Dr. Ho Le Thi is a Vietnam Education Foundation Visiting Scholar working on the purification of allelochemicals from Vietnamese rice varieties. She joined the Fritschi Lab for one year and is also working with Drs. Reid Smeda and Chung-Ho Lin.

Yunfeng Peng is a PhD student at China Agricultural University and joined the Fritschi Lab in May of 2010 as a visiting scholar for two years. He studies the influence of luxury nitrogen application on maize yield and carbon/nitrogen metabolism during reproductive growth.
Graduate Research Assistants

Dara Boardman is examining agronomic and environmental aspects of enhanced efficiency urea applications in no-till maize. She joined the Fritschi Lab in January 2010 to pursue a master’s degree.

Deanna Boardman is a third-year doctoral student advised by Bill Wiebold and Felix. She examines the effects of corn residue removal for biofuel on soil characteristics and plant development.

Janelle Donahue’s research includes the comparative analysis of mineral fertilizer and poultry litter applications on soybean physiology and yield. She also examines the influence of residual soil mineral nitrogen on nodulation and N-fixation of obsolete and modern soybean cultivars. She joined the Fritschi Lab almost 2 years ago to pursue a master’s degree.

Valerio Hoyos joined the Crop Physiology program in January of 2009 as a master’s student. His thesis research focuses on the development of high-throughput phenotyping tools to enhance yields in soybean. Valerio is a native of Colombia, South America, and joined the group after spending time at CIAT (International Center for Tropical Agriculture) and CIMMYT (International Maize and Wheat Improvement Center) in Colombia. Valerio plans on pursuing a PhD in plant breeding upon completion of his master’s degree.

Shengjun Liu characterizes genotypic variation in cotton seedling vigor among a broad range of commercial cultivars and plant introductions. His research involves screening as well as examination of mechanisms underlying differences in cotton seedling vigor. He began his master’s program in January of 2009 and plans to pursue a PhD after completion of his master’s.

Michael Maw, Master’s Student. With the push to develop new biofuel feedstocks and production systems, much data is needed to design best management practices. Michael’s research includes comparing switchgrass (perennial) with sweet sorghum (annual) with regard to soil carbon sequestration and yield.

Hien Nguyen is the newest graduate student in the Fritschi Lab. She joined the group to study the effects of elevated temperatures on soybean growth and development. Her research involves the examination of soybean plant introduction lines as well as the characterization of a single gene soybean mutant. Hien received her BSc from Vietnam National University of Science and received a Vietnamese scholarship to attend MU.

Brad Young joined the Fritschi Lab in 2009 after graduating with his bachelor’s degree in Plant Science from the University of Missouri. He is currently pursuing a master’s degree which involves modeling heat waves and global climate change scenarios in soybean.

Janelle Donahue

Valerio Hoyos

Michael Maw

Hien Nguyen

Brad Young
The Bradford Research and Extension Center will host a Bobwhite Quail and Native Plant Field Day from 4-8 p.m. on June 16, 2011. This field day is designed for landowners, students, quail & native plant enthusiasts to meet the experts, hear the latest information, listen to exhibitors, and see new products. There will be 6 all new one-hour wagon tours that will show research in progress and how native plants can be used for conservation. This field day is open to the public - no fee and no reservations required. To learn more visit http://aes.missouri.edu/bradford/events/quail-and-native-plant-fieldday.pdf

The annual Pest Management Field Day will be held at the Bradford Research and Extension Center on July 7, 2011. This is a collaborative effort among weed scientists, entomologists, plant pathologists, and others within the Division of Plant Sciences. It generally draws a crowd of more than 100 producers, crop consultants, agricultural retailers, and agricultural industry representatives from throughout the Midwest and beyond.

The MU Crop Injury and Diagnostic Clinic will be held July 12-13, 2011 at the Bradford Research and Extension Center. This clinic is designed to train or update agricultural professionals in the management of crop health and field crop diagnostics. Participants will have the opportunity to fine tune their skills in diagnosing crop production and pest problems.

The annual Turf Field Day will be held July 26, 2011 at the University of Missouri South Farms. The field day will show the latest in research and basic information surrounding the green industry, from golf courses and sports fields to lawn care and landscapes.

**FIELD DAYS**

**Bobwhite Quail & Native Plant Field Day**
June 16, 2011 - Bradford Research & Extension Center

**Pest Management Field Day**
July 7, 2011 - Bradford Research & Extension Center

**Crop Injury & Diagnostic Clinic**
July 12-13, 2011 - Bradford Research & Extension Center

**Turf and Ornamental Field Day**
July 26, 2011 - South Farms, Columbia, MO

**Greenley Center**
August 9, 2011 - Novelty, MO

**Graves-Chapple Farm**
August 23, 2011 - Rock Port, MO

**Delta Research Center**
September 2, 2011 - Portageville, MO

**Southwest Center**
September 9, 2011 - Mt. Vernon, MO

**Thompson Farm**
September 13, 2011 - Spickard, MO

**South Farm**
September 24, 2011 - South Farms, Columbia, MO

**State Grazing School**
October 4-6, 2011 - Linneus, MO

**Wurdack Farm**
October 7, 2011 - Cook Station, Crawford County, MO

**UPCOMING MEETINGS:**

http://ipg.missouri.edu/symposium.php

American Phytopathological Society,
August 6-10, 2011
Honolulu, HI

American Society of Plant Biologists,
August 6-10, 2011
Minneapolis, MN
## Recent Grants

<table>
<thead>
<tr>
<th>Investigators</th>
<th>Title</th>
<th>Sponsor</th>
<th>Amount of Funding</th>
<th>Dates</th>
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<tbody>
<tr>
<td>Fritschi, F.</td>
<td>Carbohydrate Dynamics in Cotton: Impacts on Early Vigor and Translation to Yield</td>
<td>Cotton Inc.</td>
<td>$31,151</td>
<td>1/1/2011-12/31/2011</td>
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<td>Gassman, W. Schoelz, J.</td>
<td>Vitis Gene Discovery 2010-2011</td>
<td>NIFA</td>
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<td>8/15/2010-8/14/2011</td>
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<td>Jones, A.</td>
<td>Additives for Increasing Phosphorus Fertilizer Efficiency in Cotton Production</td>
<td>Cotton Inc.</td>
<td>$12,560</td>
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<td>Jones, A.</td>
<td>Controlled Release N Fertilizers: Do they have a place in Missouri Cotton Production?</td>
<td>Cotton Inc.</td>
<td>$21,850</td>
<td>1/11-12/31/2011</td>
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<td>Jones, A.</td>
<td>Evaluating the Effects and Timing of a Side Dress Application</td>
<td>Cotton Inc.</td>
<td>$15,250</td>
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<td>Jung, W.</td>
<td>Difference in Agronomic and Quality Traits in Rice Grown</td>
<td>Cungcheongnam-do Agr Research and Extension Service</td>
<td>$33,400</td>
<td>10/1/2010-10/1/2012</td>
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<td>McKendry, A.</td>
<td>Improving barley and wheat germplasm for changing environments</td>
<td>UC-Davis</td>
<td>$14,906</td>
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<td>Mitchum, M.</td>
<td>Application of Biotechnology to Control the Soybean Cyst Nematode: SCN Parasitism Genes</td>
<td>Iowa State University</td>
<td>$278,181</td>
<td>10/1/2009-9/30/2012</td>
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<td>Mitchum, M.</td>
<td>Collaborative Research on Soybean Cyst</td>
<td>NC State University</td>
<td>$287,875</td>
<td>1/1/2009-1/1/2012</td>
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<td>Nguyen, H. Shannon, G.</td>
<td>Expedited Delivery of Phytophthora QTL and How They Impact Yield</td>
<td>Ohio State University</td>
<td>$125,310</td>
<td>10/1/2010-9/30/2011</td>
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<td>Scharf, P.</td>
<td>Climate Change, Mitigation, and Adaptation in Corn Based Cropping Systems</td>
<td>Iowa State University</td>
<td>$195,193</td>
<td>2/1/2011-1/31/2012</td>
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<tr>
<td>Stacey G.</td>
<td>BoardGY-10 Molecular Dissection of New Soybean Aphid Resistant Genes and SNP Markers for Marker Assisted Breeding</td>
<td>Department of Ag.</td>
<td>$70,000</td>
<td>10/1/2009-9/30/2011</td>
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</table>
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<td>Stacey, G.</td>
<td>Harnessing soybean innate immunity to reduce yield losses due to fungal pathogens</td>
<td>Smith Bucklin</td>
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<td>Stacey, G.</td>
<td>Systems View of Root Hair Nutrient Uptake</td>
<td>Dept. of Energy</td>
<td>$312,859</td>
<td>9/15/2010-9/14/2011</td>
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<td>Tindall, K.</td>
<td>Mite Thresholds</td>
<td>Cotton Inc.</td>
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<td>Tindall, K.</td>
<td>University Protocol for Evaluating Field Efficacy of Herculex I, YieldGard Corn Borer, and Bt I x MIR162 Against Corn Earworm, Fall Armyworm, and Other Southern U.S. Lepidoptera Larvae</td>
<td>Pioneer Hybrid Intl Inc.</td>
<td>$24,000</td>
<td>4/23/2010-4/23/2012</td>
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<td>Trinklein, D.</td>
<td>High Tunnel Production of High Lycopene Tomatoes Using a New Disease Resistant Rootstock</td>
<td>MDA</td>
<td>$10,500</td>
<td>11/30/2010-2/28/2012</td>
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<td>Warmund, M.</td>
<td>Disinfestation of Asian Chestnut Gall Wasp Larvae from Chestnut Scion Wood to Produce a Clean Source of Nursery Stock</td>
<td>MDA</td>
<td>$24,130</td>
<td>11/30/2010-12/31/2011</td>
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Recent Publications


