The soil moisture situation presents a significant question for Missouri’s farmers as we prepare for the coming growing season. As of October, 2011 the USDA had designated 101 Missouri counties as natural disaster areas due to drought. Still, the agricultural business sector remains one of the bright spots in the national economy. Our students are acquiring good positions in interesting areas. Graduate and undergraduate programs in the Division continue to grow. Enrollment in the Plant, Insect, and Microbial Sciences graduate program reached 86 students last fall and we have sixteen prospective new students slated to attend the upcoming recruiting event. Undergraduate enrollment in our recently-consolidated emphasis areas is nearing 120.

Among the important honors received by our faculty and students included receipt of the Fellow Award of the AAAS by Mike McMullen, ARS Research Geneticist and adjunct professor in the Division (page 2). Erin Casey and Jacob Rockhold both received Lobenstein Scholarships from the Missouri Turf & Ornamental Council at the Missouri Green Industry Conference in December. Other students also received important awards and Mizzou’s Taylor Stadium/Simmons Field was recognized as “Field of the Year” by the Sports Turf Managers Association, a national honor (page 2). Josh McPherson is the Director of Athletic Grounds and has a great partnership with Brad Fresenburg and others in the turf group, including a number of employees who are Plant Sciences graduates.

Please join me in welcoming Melissa Remley, who joins us as Assistant Teaching Professor (page 4). Melissa served as Instructor last year and took on important courses such as Plant Structure and Function and Viticulture. Anthony Peccou will also join us in March as Assistant Research Professor in the area of viticulture. Anthony will conduct research to address needs of Missouri’s growing grape and wine industry.
Casey and Rockhold receive Lobenstein Scholarships

The Missouri Turf & Ornamental Council (MoTOC) in conjunction with the Lobenstein Scholarship Fund awarded the Lobenstein Scholarship, a $1,000 scholarship, to juniors Erin Casey (left) and Jacob Rockhold (right). The Lobenstein Scholarship is awarded each year in honor of C.W. (Bill) Lobenstein to one Horticulture student and one Turf student. They received the award at the annual MoTOC business meeting that was held during the Missouri Green Industry Conference, December 6, 2011 at the St. Charles Convention Center, St. Charles, Missouri. Casey is studying Landscape Design and Greenhouse Production and Rockhold is studying Turfgrass Management.

Students receive scholarships at Weed Seed Association banquet

Reid Smeda accompanied two Plant Science undergraduate students to the Western Seed Association banquet in Kansas City on November 7, 2011. Both Michael May and Michael Frank, seniors in Crop Management, received scholarships.

McMullen named Fellow of AAAS

Michael McMullen, Research Geneticists with USDA/ARS and Adjunct Professor Division of Plant Sciences, was awarded the distinction of Fellow of the American Association for the Advancement of Science. McMullen was elected to the Section on Biological Sciences for distinguished contributions to the field of plant genetics and the application of molecular genetics to crop improvement.

Students awarded at North Central Weed Science Society

Tye Shauck (right) and Ashley Schlichenmayer (left) were recently awarded first place in poster sections at the 2011 North Central Weed Science Society meeting held December 12-15, 2011 in Milwaukee, WI. Reid Smeda is their advisor. Kristin Rosenbaum, advised by Kevin Bradley, was awarded second place in the Weed Biology/Ecology/Management paper contest for her presentation entitled, “Influence of Sterilized and Non-Sterilized Missouri Soil Collections on Glyphosate Resistance in Waterhemp.”

Fields of the Year

The Sports Turf Managers Association (STMA) recognized The University of Missouri Taylor Stadium/Simmons Field as the Baseball “Field of the Year” among other colleges and university in the country. The director of athletic grounds is Josh McPherson and his grounds crew consists of recent graduates or undergraduates of the Plant Sciences Division. Craig Barry, Chad Cook and Ben Kraemer were all on stage to help receive this prestigious award.

Another award winning field included the Maryland SoccerPlex in Boyds, MD. It is managed by MU Plant Sciences graduate Jared Minnick. The SoccerPlex won in the Soccer-Schools and Parks category.
Dr. Melissa Remley has joined the Division of Plant Sciences as an Assistant Teaching Professor. Melissa received BS and MS degrees at Missouri State University before earning her PhD degree here at Mizzou in 2010, under the direction of Dale Blevins. She then worked with Felix Fritschi as a Cotton Inc. Post-doctoral Fellow and subsequently served as an Instructor for the Division since Spring 2011 semester.

Nutrient Management Courses scheduled for 2012

Two nutrient management courses have been scheduled for winter 2012: the “Annual Advanced Nutrient Management Course” and the “Basic Nutrient Management Planning Course.”

These courses provide training for anyone with an interest in managing nutrients on farms, particularly farms using animal manure as a fertilizer and are highly recommended for people who write nutrient management plans in Missouri. These courses also provide training and continuing education credits for Certified Crop Advisors (CCAs) and Concentrated Animal Feeding Operation (CAFO) Operators.

Pre-registration is required for both courses. To register contact Christina George (573-884-6311; GeorgeCR@missouri.edu). For more information about either course contact John Lory (573-884-7815; LoryJ@missouri.edu). More details about the courses including agendas and a speaker list are available on line at http://nmplanner.missouri.edu/training/.

The “Annual Advanced Nutrient Management Course” is an annual course that will be held March 6-7 in 2012. There are no prerequisites for this course and it covers different topics each year.

The year's course includes sessions on:
- Changes in DNR regulations and the new NRCS 590 standard,
- Impact of compaction on soils and crops,
- Managing marginal soil conditions through tile drainage and managed wheel traffic,
- Advances in measuring and managing fescue forage.

Approved for 8.5 Nutrient Management and 3.0 Soil and Water CEUs for CCAs and approved for 12.0 CAFO Operator and 11.0 Wastewater Operator CEU's. The session will be held at the teaching facility at the University of Missouri Bradford Farm east of Columbia. The cost for the advanced course will be $185 and includes two lunches.

The “Nutrient Management Planning Course”

This course is highly recommended for anyone who plans to write nutrient management plans for animal feeding operations in Missouri. It also covers many need-to-know components for certified CAFO operators.

This is a two-part course:

Part 1: The classroom session will be March 20 to March 22, 2012. Topics covered in this part of the course include current NRCS and regulatory policies, water quality management, nutrient management calculations such as plant available nitrogen in manure, phosphorus-based management and manure economics.

Part 2: The calculation/field session is held twice (attendees chose one) either April 9-11, 2012 or April 11-13, 2012. These sessions include a field trip to the MU Dairy and swine teaching barn, hands-on calculations related to nutrient management and active discussion sessions.

We will apply for 7.5 Soil and Water and 23.5 Nutrient Management continuing education units (CUEs) for CCAs and 32.5 CEU’s for CAFO Operators and for 29.5 CEUs for Wastewater Operators.

The cost of the two-part course is $400 and includes the cost of three lunches. All sessions will be held at the teaching facility at the University of Missouri Bradford Farm east of Columbia.

Both courses are sponsored by the University of Missouri Commercial Agriculture Program, University of Missouri Extension, the Natural Resource Conservation Service, and Missouri Department of Natural Resources.
Faculty positions available for the Division of Plant Sciences

The Division of Plant Sciences seeks applicants for a 12-month, tenure-track Assistant Professor position as State Extension Specialist for Cereal Crops. The position is 75% extension and 25% research.

**Responsibilities:**

- Extension education on production of corn, wheat, and other cereal crops in Missouri—potential program areas could include, but are not limited to, sustainability and profitability of production systems, cultural practices, stress management, and grain quality and use
- Develop an applied research program to support the extension program
- Acquire extra- and intra-mural funding to support both extension and research programs
- Provide statewide leadership in issues pertaining to cereal grains
- Perform a needs analysis and develop focused programs to address those needs
- Develop active relationships with other faculty, regional extension specialists, cereal grain producers, and industry
- Participate in appropriate interdisciplinary programs and projects
- Advise graduate students
- Provide service to the division, college, university, and professional societies

The Division of Plant Sciences, University of Missouri, invites applications for a tenure-track position in forage physiology. The position is for an Assistant Professor with a 12-month appointment - 60% research, 40% teaching.

**Responsibilities:**

- The successful candidate will be expected to establish an innovative, extramurally funded research program on the biology, development, and physiology of forage and bioenergy crops. Research should focus on the physiology of both cool and warm-season forage crops used for pasture and/or stored feed in the Midwestern USA. Emphasis should be placed on understanding the critical physiological components that lead to improved forage-livestock or bioenergy crop production systems. The candidate will be expected to explore collaborative opportunities with the Interdisciplinary Plant Group and teams of scientists working on pasture-based dairies, the forage-based beef industry, and conversion of biomass into fuel. Accessible to the candidate are excellent laboratory and field research facilities (both on and off-campus research centers) within the Missouri Agricultural Experiment Station network.
- The successful candidate is expected to participate in the undergraduate and graduate teaching and service missions of the Division of Plant Sciences. Teaching responsibilities include a split-level undergraduate/graduate course in whole-plant physiology and another course in the area of biofuels and/or the candidate's area of expertise. The candidate will be expected to advise graduate and undergraduate students.

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**DIVISION TELECONFERENCING**

Teleconferencing is now available in room 200 Waters Hall. This is new technology for all of us. If you are interested in group training please let me know and I will try to set something up with Academic Support. Please use the Room Reservation system at http://PlantSciOnly.missouri.edu to reserve this room. Please include in the event details if it will be used for Teleconferencing.

**ANNUAL PASSWORD RESET – FEBRUARY 8 DEADLINE**

It's a new year, time for a new password! For 2012, all MU and UM employees must change their password by February 8. Changing your password is something you can expect to do at the beggining of each calendar year for as long as you work for the University. If you do not change your password you will be locked out of your university computer, payroll, email and countless other computer applications. You can easily find a link to change your password at http://doit.missouri.edu.

After you have changed your password you will need to update the cached password on your laptops. If you have one or multiple University laptops that use your university username and password at login, you will need to have a university network connection to apply your new password on the machine. There are two ways to do this.

1) Bring your computer to campus, plug it into an Ethernet port and login. Be sure you are using your new password.
2) VPN into the university network and you should be prompted in the bottom right corner to update your login credentials.

Directions on how to apply your new password for MizzouWireless and on Smartphones can be found at http://help.missouri.edu. Search for “update password.”

The mandatory password change does NOT apply to MU students or employees of University Hospital and Clinics and the Schools of Health Professions and Medicine.
UPCOMING FIELD DAYS

- **Turfgrass & Ornamental Field Day**
  
  **July 10, 2012 - South Farms, Columbia, MO**

- **Greenley Field Day**
  
  **August 7, 2012 - Novelty, MO**

- **Delta Center Field Day**
  
  **August 31, 2012 - Portageville, MO**

- **Graves-Chappelle Field Day**
  
  **August 28, 2012 - Rock Port, MO**

- **Hundley-Whaley Field Day**
  
  **August 29, 2012 - Albany, MO**

- **Southwest Center Field Day**
  
  **September 14, 2012 - Mt. Vernon, MO**

- **Wurdack Field Day**
  
  **October 5, 2012 - Cook Station, MO**

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**Truffle and Shiitake Cuisine class to be held Feb. 1 at CACC**

Register now for a one night only cooking class with the finest perigord truffles at the Columbia Area Career Center (CACC). This class to be held February 1 from 6-9 p.m., will be packed with recipes and samples of truffles and mushrooms. You will learn from a leading expert Johann Bruhn PhD who travels the world to bring you one of the finest culinary experiences and his greatest passion. For questions or to register for the $89 class please contact the CACC at 573-214-3803.

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**29th Annual IPG Symposium**

The 29th Annual IPG Symposium entitled, “Plant Physiology in the ‘Oomics’ Era” will be held May 23-25, 2012. Location TBD. For more information about the IPG Symposium visit, [http://ipg.missouri.edu/symposium/](http://ipg.missouri.edu/symposium/)

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**2012 Drainage Workshop scheduled for Feb. 21-23, 2012**

The workshop will be held February 21-23, 2012 in Macon, MO. Contractors, farmers, land owners, crop advisors, consultants, and water & land resource technicians will have an opportunity to learn about integrated water management systems, the latest subsurface tile drainage research results, drainage planning, design, economics, equipment, and installation. If you have questions or want to pre-register, give Debbie a call at 573-634-3001. Last year’s workshop sold out in 48 hours. For more information visit, [http://www.mlica.org/Drainage%20School/2012/2012_Drainage_Workshop_web.pdf](http://www.mlica.org/Drainage%20School/2012/2012_Drainage_Workshop_web.pdf)

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**8th Annual Soybean Biotechnology Symposium**

On April 11, 2012 the 8th Annual Soybean Biotechnology Symposium will be held at Christopher S. Bond Life Sciences Center. Attendance at the symposium is FREE and open to the public but registration is requested and required. Registration to the NCSB Symposium includes entry to all talks, morning reception, afternoon break, and closing reception. For more information about the symposium visit, [http://soybiotechcenter.org/symposium/](http://soybiotechcenter.org/symposium/)

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**Join us for Missouri Life Sciences Week 2012!**

MU’s premier science event, Life Sciences Week, is the week of April 16 – 21, 2012. It is the 28th annual celebration of life sciences research, education, outreach and economic development. Events during the week will include seminars by internationally acclaimed researchers, an impressive 2-day poster session and research competition featuring over 300 research projects, MU core facility and research center exhibits, scientific supply vendor show, career development opportunities for students — plus workshops and networking opportunities.

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### Recent Grants

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<tr>
<th>Investigators</th>
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<th>Sponsor</th>
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<td>Stamps, T.</td>
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<td>Keesey, I.</td>
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<td>Fritschi, F.</td>
<td>Carbohydrate Dynamics in Cotton: Impacts on Early Vigor and Translation to Yield</td>
<td>Cotton Incorporated</td>
<td>$46,692</td>
<td>1/1/2012-12/31/2012</td>
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<td>Jones, A.</td>
<td>Mite Thresholds</td>
<td>Cotton, Incorporated</td>
<td>$11,612</td>
<td>1/1/2012-12/31/2012</td>
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<tr>
<td>Jones, A.</td>
<td>Controlled Release N Fertilizers: Do They Have a Place in Missouri Cotton Production?</td>
<td>Cotton, Incorporated</td>
<td>$21,850</td>
<td>1/1/2012-12/31/2012</td>
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<td>Jones, A.</td>
<td>Evaluating the Effects and Timing of a Side Dress Application</td>
<td>Cotton, Incorporated</td>
<td>$15,250</td>
<td>1/1/2012-12/31/2012</td>
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<td>Kallenbach, R.</td>
<td>Regional Biomass Feedstock Partnership—Herbaceous Bioenergy Crop Field Trials</td>
<td>South Dakota State University</td>
<td>$30,823</td>
<td>10/1/2011-9/30/2013</td>
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<td>Nelson, K.</td>
<td>Evaluate the effectiveness of UAN treated with G77 to Reduce N loss in corn</td>
<td>Koch Agronomic Services</td>
<td>$4,620</td>
<td>8/1/2011-7/31/2012</td>
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<td>Nguyen, H.</td>
<td>High-Impact Research for Soybean Improvement Using Genetics and Genomics</td>
<td>Agricultural Research Service</td>
<td>$1,000,000</td>
<td>12/6/2011-9/30/2014</td>
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<tr>
<td>Nguyen, H. Shannon, G.</td>
<td>Partial Resistance to Phytophthora sojae, Pythium spp., and Fusarium spp.: Mechanisms, Markers, and Deployment</td>
<td>The Ohio State University</td>
<td>$89,512</td>
<td>1/3/2012-12/31/2012</td>
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<td>Scharf, P.</td>
<td>Reducing Phosphorus Runoff with On-Farm Response Testing</td>
<td>Dept of Ag.</td>
<td>$49,995</td>
<td>1/1/2011-12/31/2013</td>
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<td>Shannon, G.</td>
<td>Nested Association Mapping (NAM) of Genes controlling Soybean Yield and Other Key Traits</td>
<td>University of Illinois-Urbana Champaign</td>
<td>$1,500</td>
<td>3/1/2011-2/29/2012</td>
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<td>Shannon, G. Nguyen, H.</td>
<td>Breeding Productive Group III and IV Soybeans for North Missouri</td>
<td>Missouri Soybean Merchandising Council</td>
<td>$360,629</td>
<td>1/1/2012-12/31/2012</td>
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<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 Agriculture</td>
<td>$105,000</td>
<td>10/1/2009-9/30/2012</td>
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<td>Stamps, T. Barrett, B. Kesey, I.</td>
<td>Biology and Behavior of the Black Walnut Curculio</td>
<td>Missouri Department of Agriculture</td>
<td>$18,548</td>
<td>11/1/2011-12/31/2013</td>
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<td>Sweets, L.</td>
<td>Diagnostic Image Series Development for Supporting IPM in the North Central Region</td>
<td>Purdue University</td>
<td>$10,000</td>
<td>9/1/2011-8/31/2013</td>
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<tr>
<td>Warmund, M.</td>
<td>Developing and Disseminating Local Apple Cultivars and Rootstock Recommendations for Commercial Growers, Extension Educators, and Home Gardeners for the Humid Eastern U.S.</td>
<td>University of Minnesota</td>
<td>$10,845</td>
<td>9/1/2012-8/31/2013</td>
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<td>Warmund, M.</td>
<td>Elucidating the Role of Walnut Curculio (Conotrachelus retentus) and Bacterial Isolates Associated with Black Walnut Kernel Necrosis</td>
<td>Missouri Department of Agriculture</td>
<td>$15,095</td>
<td>11/1/2011-12/31/2013</td>
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Recent Publications


