FROM THE Interim Director  
JIM ENGLISH

I am writing to you after completing four months as the Interim Director of our Division. The time has flown by. There has been much to learn about the Division, beyond what I naively thought I knew after 25 years as a Division member. It is an honor to follow as the Interim in the footsteps of Mike Collins. Very quickly, I’ve come to appreciate the many contributions that Mike made during his seven years of leadership; contributions that range from improved facilities and infrastructure, to improved processes that support the day-to-day activities of our Division’s members.

As everyone is well aware, we are still in the midst of fiscal retrenchment. However, you only need to peruse this newsletter issue to realize that fiscal challenges have not held back our Division’s achievements and progress in teaching, research, and extension. As examples, at April’s CAFNR Celebration of Excellence gala, Anne McKendry was named Outstanding Senior Teacher, and David Mendoza-Cozatl received the Early Investigator Researcher Award (page 2). In addition, Melissa Mitchum received the Syngenta Award from the American Phytopathological Society, and Gary Stacey was named a “Top Author” by the American Society of Plant Biologists (page 4). Among our graduate students, Tamra Reall-Lincoln, who serves as student representative to the Entomological Society Board, was invited by ESA to attend the Council of Science Society Presidents in Washington DC in May (page 7).

We are proud of the many accomplishments of our graduates who have moved beyond MU to follow a variety of career paths. It is always our hope that graduate students find sparks of inspiration through their research training and classroom studies that will guide them towards new, and perhaps, unexpected horizons. Such has been the case for Floyd Shockley (MS, 2000). Floyd became enthralled with entomology during his studies in the Division. After completing his MS, he continued on to doctoral study at the University of Georgia. From there he followed his passion for insect systematics to become the collections manager in the Department of Entomology at Smithsonian’s National Museum of Natural History. Learn more about Floyd’s unique journey on page 9.

During the summer months, many of our faculty members, as well as students and staff members, contribute to field days that are presented around the state. These annual events provide important educational opportunities for farmers, home owners, agricultural specialists and professionals, and others. I invite you to take advantage of these events to get up to date on turf and ornamental research, crop injury assessment and pest management, the glories of tomato gardening, and other topics. On page 10, you can find an extensive listing of upcoming field day events.
Anne McKendry, Associate Professor, was named the Outstanding Senior Teacher. McKendry teaches plant science, animal science, plant breeding and genetics, advanced field crop breeding, and has been a mentor for four Borlaug Fellows. She has earned more than $1.5 million in competitive funding for wheat and barley breeding, and more than $1 million in royalties from various varieties and variety testing. “Two of my daughters have worked on Anne’s summer wheat crew. Although the work is hard, hot and dirty, both have appreciated the sense of work ethic that Anne instills by example,” said William Lamberson, professor of animal sciences.

David Mendoza Cozatl, Assistant Professor, received the Early Investigator Researcher Award. Mendoza earned the 2013 NSF Faculty Early Career Development (CAREER) Award, the Cozzarelli Prize from the National Academy of Sciences USA, a PEW Foundation Latin American Fellowship and the Weizmann Award for the best Ph.D. thesis from the Mexican Academy of Sciences. His research has appeared in 22 publications and he has one patent. “Another important indication of David’s research is his ability to attract extramural funding. His recent NSF CAREER award is a testament to his grantsmanship. It is noteworthy that David is frequently asked to serve as a reviewer of both grant proposals and manuscripts. Indeed, he has served as a panelist and reviewer for NSF as well as for a number of high impact journals such as Nature and The Plant Cell,” said Erin Connolly, professor of biological sciences, University of South Carolina.

Nominees for the CAFNR early career research award have demonstrated excellence in research performance that indicates a trajectory toward national or international recognition through individual research or contributions to research team efforts.

Excerpt from “Celebration of Excellence” by Eleia Yonke (http://cafnrnews.com/2015/04/celebration-of-excellence-4/).
Plant Sciences Graduate Student Association
Spring Banquet and Award Ceremony

Nearly 70 faculty and graduate students filled the Memorial Union’s Benton-Bingham Ballroom for the Division of Plant Sciences Graduate Student Association (DPS GSA) Spring Banquet on April 20th. The lunchtime event, now in its fourth year, offers a casual setting for students and faculty to break bread and celebrate the many achievements of our graduate community. DPS Interim Director Dr. Jim English opened the banquet and was joined by Dr. Jim Schoelz, director of graduate studies, in praise of the effort and special dedication shown by both students and their faculty advisors. Emceeing the event were the 2013/2014 DPS GSA officers: President Avinash Karn, Vice President Kathryn Ingerslew, and Secretary-Treasurer Zixiao Zhao. In addition to lunch catered by Jack’s Gourmet, attendees were treated to a year-in-review slide-show, Plant Science trivia contest, and the conferment of several graduate student awards:

Graduate Student Awards

The Daniel Millikan Award for Outstanding Research in Plant-Microbe Interactions: John Smith (upper left, pictured with Dr. Antje Heese, Assistant Professor of Biochemistry, John’s PhD supervisor). This award recognizes the accomplishments of a masters or doctoral student in the area of plant-microbe interactions.

The Division of Plant Sciences Award for Research in Plant Biology: Blake Barlow (lower left). This award recognizes the accomplishments of a masters or doctoral student in any area of plant biology.

AWARDS IN ENTOMOLOGY

Leonard and Elosia Haseman Memorial Scholarship Award in Entomology: Tamra Reall Lincoln. This annual award recognizes an outstanding entomology doctoral student based on scholarship and professional activities.

The Lloyd E. Adams and E.P. Meiner’s Doctoral Scholarship in Entomology: Kathryn Ingerslew. This award is available to an entomology doctoral graduate student and it is intended to improve the quality of the program’s doctoral students and their dissertations, and to enhance their professional credentials.

The Fred Clute Memorial Scholarship in Entomology: Kathryn Ingerslew and Hongwei Zhang. This award is available to an entomology master’s or doctoral student who has demonstrated excellence in an area of pest management in their research and outreach activities, both in agricultural and urban settings.

visit the Graduate Student Awards Page: http://plantsci.missouri.edu/graduate/awards/.
MELISSA MITCHUM
American Phytopathological Society's 2015 Syngenta Award

Melissa Mitchum, associate professor, has received the American Phytopathological Society's 2015 Syngenta Award for outstanding contributions to teaching, research or extension in plant pathology.

“This award is important to me because it is an award from my colleagues,” Mitchum said. “I’ve been blessed to have fantastic mentors, wonderful and supportive colleagues, and outstanding staff, students and post-docs throughout my career. None of these research discoveries would have been possible without them.”

The major focus of research in Mitchum’s lab is the molecular basis of plant–nematode interactions with an emphasis on the interaction between the soybean cyst nematode and its host plant, soybean. Soybean cyst nematode is consistently the most damaging U.S. soybean pest, causing more than $1 billion in crop losses annually.

Excerpt from “Big Honor for Study of Little Pest” by Michelle Hall (http://cafnrnews.com/2015/05/big-honor-for-study-of-little-pest/).

GARY STACEY
American Society of Plant Biologists Top Authors list (2009-2013)

Gary Stacey, Professor, was recently named one of 24 American researchers recognized by the American Society of Plant Biologists as a “Top Author” of the most highly cited papers published between 2009 and 2013 in the Plant Cell and Plant Physiology, two top journals in plant biology.

The ASPB Top Authors list includes 13 papers authored by Stacey. His research focuses generally on molecular aspects of plant–microbe interactions, including studies of the beneficial legume–rhizobium symbiosis and plant–fungal pathogen interactions. He has also been instrumental in the development of genomic resources for the study of soybean.

“This ranking was based on the number of citations that my papers received, which is a rough measure of whether people are reading my papers and finding them useful in their own research,” Stacey said. “Hence, it is gratifying to learn that people are making note of the work that we are doing.”

Excerpt from “Recognized for Visibility” by Michelle Hall (http://cafnrnews.com/2015/05/recognized-for-visibility/).
New MU Graphic Identity Standards

The University has released its new graphic identity standards. Please visit http://identity.missouri.edu/ for full and up to date information regarding these standards. Enforcement of these standards will begin Fall 2015. Please begin to implement these standards within your programs. The identity standards effect everything from social media to stationary, please take some time to review the website to become familiar with the new standards.

Please pay special attention to the following:

- All schools, colleges, offices, centers, institutes, programs and other units of the university with an academic, research or health care focus must use an approved unit signature as their logo.
- The Division of Plant Sciences signature should be as the official logo of Plant Sciences. Please include it on all publications, posters, etc.
- University units may not create new logos.
- The MU stacked logo is the official University of Missouri logo and should never be altered in any way. Please see the incorrect logo use section of the Identity Standards website for examples of what not to do.
- Truman artwork may be used but should not be altered, redrawn or re-created.
- Use of the Tiger head as a secondary logo may be used given permission from the Division of Marketing & Communications.
- The Mizzou Athletics mark featuring the tiger head in an oval is only for use in athletics communication or promotions.
- When multiple campus units require recognition, a university signature should be used as the logo, and individual units should be recognized in text elsewhere on the piece. Always maintain appropriate clear space around the MU logo and signature.
- Missouri policy prohibits combining the MU logo with other logos. When identifying event sponsors in brochures and on websites, recognize sponsors by name, not by logo.
- Please use the official MU color palette including MU Gold and Black. See the website for specific color information.
- Official MU Typefaces for print include Janson (not Jenson) and Gotham
- Official MU Typefaces for web include Janson (not Jenson) and Proxima Nova

Additional Resources


To Download Division of Plant Sciences official logos visit: https://missouri.app.box.com/identity/1/3571406335
Log in with your university pawprint and password. then navigate to:
Unit Signatures ➔ Schools and Colleges ➔ CAFNR ➔ Academic Units ➔ Division of Plant Sciences
Tim Schnakenberg serves as a University of Missouri regional extension agronomy specialist in six counties in southwest Missouri including Stone, Taney, Barry, Greene, Christian and Lawrence counties. Based in Galena, Missouri in the Stone County Extension Center, he conducts educational programs for farmers in the area of forages and crop production.

Tim grew up on a small farm at Neosho, Missouri where his parents were both educators. He always enjoyed the plant side of agriculture and early on aspired to seek a career in agronomy. He received an A.A. in agriculture from Crowder College, a B.S. in agronomy from Missouri State University and an M.S. in Plant Sciences from the University of Arkansas. Emphasis in his studies was on soils, forages and soybean physiology. He has devoted his entire career to extension work, having started in 1990 as a county agricultural agent in Mtn. View, Arkansas. He later worked as a University of Missouri extension agronomy specialist in Mississippi and Morgan counties and currently in Stone county.

Tim acknowledges that he has worked with a wide range of farm enterprises in his career, having conducted agronomy programming in forages, commercial horticulture, corn, soybeans, cotton and rice.

Areas of expertise include weed and brush control, pasture development, fertility management and crop, stored forage and grazing management techniques. He regularly assists with teaching regional grazing schools and helps to conduct six soils and crops and livestock and forage conferences each year along with a Dairy Day held in Stone County. He originated the first regional quality hay production schools in Missouri. He has conducted brush control demonstrations and has served as a resource for many producers in crop and forage management.

In addition to his agronomy responsibilities, Tim coordinates over one hundred master gardener volunteers for the university in Stone and Taney counties. He offers a training class each fall and assists the Master Gardeners of the Ozarks chapter with their many educational projects in the Branson area. These projects include fall and spring gardening workshops, summer garden tour, monthly garden seminars, a demonstration garden, weekly radio show and landscaping management for numerous non-profit organizations.

Tim and his wife D’anne live near Billings, Missouri. They have two sons. Cord is a recent college graduate and Collin will be a college senior this fall.

Tim believes that the university's support of agriculture on the local level through extension is crucial for bringing sound research-based information to those who are feeding the world. He is proud to have a small part in keeping the farm sector in our state strong and viable. Agriculture is continually changing and Tim sees extension’s role as a way of keeping farmers abreast of new information and technologies.
Tamra Reall-Lincoln was invited by the Entomological Society of America (ESA) to attend the Council of Science Society Presidents (CSSP) in Washington DC as an early career leader representative in May 2015. This meeting was full of seminars from all aspects of science from the future of science publication, enhancing public appreciation of science, and issues in climate and energy. Committee meetings were also held to find ways to unite the sciences in finding solutions to problems, helping scientists communicate with the public, and many other topics. Tamra says, “It was such a fascinating conference and an incredible experience to be surrounded by so many accomplished and diverse scientists.”
Gary Fredrick Krause died June 16, 2015, at home. A memorial service and celebration of his life will be held at 10:30 a.m. on Saturday, June 27 at Trinity Presbyterian Church, 1600 W. Rollins Road.

Gary was born in Waverly, Kansas to Fred and Melba Krause on January 29, 1934. He was raised on the Krause homestead farm, and was active in the "Best Ever 4-H Club" from a young age, winning numerous local and county awards for his livestock, including a grand champion Black Angus steer. In 1951 at the age of 17 he was selected as a Kansas delegate to the National "Who's Who" conference in Washington, D.C. and met President Truman. He graduated from Burlington High School in Burlington, Kansas in 1952.

He received a track scholarship to Kansas State University and enrolled in 1952. Later, Gary voluntarily enlisted in the U.S. Army (missile program). It was while he was stationed at Ft. Monmouth, New Jersey, that he met Janet Moyer, his future wife. Following his honorable discharge from the service, he completed his B.S. degree in Agriculture from Kansas State University in 1958, followed by his M.S. degree in 1959 in Agriculture and Statistics, at which time he was given the Research Excellence Award from the Society of Sigma Xi for the "best thesis in the field of science".

Gary went on to receive his Ph.D. in Statistics at Virginia Polytechnic Institute (now Virginia Tech) in 1963. He was recruited back to Kansas State University as an assistant professor in the Department of Statistics from 1963-1965. In 1965 he accepted a tenured position at the University of Missouri as Professor of Statistics and Agronomy, which he held for 35 years. He taught 2-3 courses per semester to graduate students, including Statistical Analysis, Analysis of Variance, and Experimental Design. Dr. Krause served on over 300 graduate student committees, about a third were Ph.D. candidates. He continued on as Professor Emeritus for several years following his retirement, continuing to guide and mentor graduate students.

While at the University of Missouri, Gary was a sought-after consultant across campus as well as nationally by both faculty and graduate students, and co-authored over 125 publications. His areas of specialization were in design of experiments, estimation and statistical genetics. Dr. Krause did research in plant and animal breeding, experimental technique, sample survey design and digital computing. He also served as Agricultural Experiment Station Statistician and Coordinator of Computing for the University.

Over the years, Gary received many honors and awards including the Gold Chalk Teaching Award, C.V. Riley Teaching Award, Faculty Alumni Award, Gamma Sigma Delta Graduate Teaching Award, Missouri State Fair Citation, and the Mid-Missouri Statistician of the Year Award by the American Statistical Association.

While Professor at the University of Missouri he traveled on several international work assignments to Tanzania (U.S. AID team member), Kenya, Tunisia, and New Zealand to share his knowledge of agricultural research methods. He also served as the university’s leader for research training methods for junior members of international Agricultural Ministries for 5 years.

Gary was a farmer throughout his life—growing soybeans and wheat on farms in Kansas and Missouri, and raising Black Angus livestock. He greatly enjoyed hunting and fishing with his son and grandson, and was the proud owner of many prize-winning hounds.

For over 50 years Gary was an active member of Trinity Presbyterian Church, serving as Elder, Chair of the Property Committee, and participating in the life of the church with his wife, Janet.

Gary was preceded in death by his parents. Survivors are his wife Janet Krause of 59 years, two daughters Karen Koepe and husband Robert of Ann Arbor, MI, and Heidi Krause-Steinrauf and husband Robert of McLean, VA, and a son Seth Krause and wife Donna of Columbia. He was immensely proud of his six grandchildren: Erika and Andrew Koepe, John and Anna Krause-Steinrauf, and Jacob and Chloe Krause. Other survivors include his sisters, Naida Jimenez and Carol Simmons.

Memorials may be given to either Loaves and Fishes (make checks payable to Trinity Presbyterian Church, 1600 Rollins Road, Columbia, MO 65203) or Re-Member (non-profit organization working with the Oglala Lakota people on Pine Ridge Indian Reservation, South Dakota): P.O. Box 5054, Pine Ridge, SD 57770-5054.
Somebody notify Nicolas Cage — the U.S. Constitution isn’t the only national treasure housed in Washington, D.C.

As acting collections manager in the Department of Entomology at the Smithsonian Institution’s National Museum of Natural History, Floyd Shockley, MS ’00, looks after one of the world’s largest collections of insects and arachnids. “The amount of science generated based on our 35 million-specimen collection is unfathomable,” Shockley says.

The ever-evolving collection’s oldest specimens date from the early 1800s. As new specimens enter the collection, scientists can investigate broad questions such as the influence of climate change and human-caused environmental destruction in ways that few other resources would allow, Shockley says. For instance, he says, “As global climate changes, not only do species distributions — where they are found — change, but some are at risk of extinction. We can see this change because we have a deep picture of insect biodiversity over the past 200 years.”

Shockley handles all aspects of department logistics, including purchasing supplies, overseeing collections improvement projects and contracts, and coordinating space and collection needs for more than 70 staff members from three federal agencies. Part of his role is to help decide which specimens remain in downtown Washington at the natural history museum (70 percent), which will be housed at the Museum Support Center in Suitland, Maryland (20 percent), and which will be housed at the Beltsville Agricultural Research Center in Beltsville, Maryland (10 percent).

Shockley began his graduate education looking at insect-plant interaction in a single model system: alfalfa and potato leafhopper. “That’s when I really learned how to do science and more importantly discovered my passion for insect diversity and taxonomy,” he says. A traditional path would have been to find work in the agricultural industry, but Shockley went on to earn a doctorate at the University of Georgia in insect systematics. “I felt a stronger draw to describing new species, studying aspects of their evolution and discovering new things about insect natural history,” Shockley says, “but I wouldn’t change a thing about my time at Mizzou. It gave me the opportunity to find my niche.”
Mizzou Pest Management Field Day

July 16th

The annual Mizzou Pest Management Field Day will be Thursday July 16th at the Bradford Research and Extension Center, approximately 8 miles east of Columbia, Missouri.

Registration will begin at 8:00 a.m. with opening comments by Dr. Bradley at 8:30. The morning will include guided wagon tours with stops that feature presentations of research results by university-trained scientists. Weed management research topics that will be discussed this year include the effects of soybean seed treatments on early season herbicide injury; Palmer amaranth and information related to the spread of this weed throughout the state; a variety of research results and topics pertaining to the management of resistant waterhemp and horseweed; the impact of different tillage systems on weed seed distribution in the soil; a comparison of herbicide programs for the effective termination of cover crops; the effects of common corn and soybean herbicide programs and their carryover on the successful establishment of fall planted cover crops; more research results and discussion pertaining to the new Enlist and Xtend (2,4-D and dicamba-resistant) soybean traits that will be introduced onto the market in 2016; and many other topics and periodic stops along the guided tour.

Lunch will be served at noon after which attendees will have the opportunity to view plots that showcase a variety of herbicide treatments and weed management programs for use in corn, soybean, or grain sorghum. These plots will be clearly labeled and mapped out so that they can be viewed easily.

Registration for the field day will be $10.00 to cover cost associated with lunch and refreshments. To register call 573-884-7945 or send an e-mail to chismt@missouri.edu by Thursday, July 9th.

For certified crop advisors, 2 CEU credits for this field day are pending.

The Bradford Research and Extension Center is located at 4968 Rangeline Road, Columbia, MO 65201. To learn more about the largest plant sciences’ research farm in the state of Missouri visit the Web site: Bradford.cafnr.org

To learn more about Mizzou Weed Science, visit the Web site at www.weedscience.missouri.edu or find us on Facebook and Twitter at Mizzou Weed Science.
Congratulations Jill Scheidt on being the quickest to Track Down Truman.

**Bradford Research Center**

**11th Annual Tomato Festival**  
**September 3rd**

The 11th Annual Tomato Festival is the premier event for gardeners and foodies alike. This year’s fest, held at Bradford Research Center in Columbia, will run from 4 to 7 p.m. on September 3. The public is invited to the annual free event for an evening of sampling tomatoes and tips to help improve your garden’s next harvest.

A cook-off contest for area chefs who will prepare tomato-based dishes. Festival attendees will then vote for the best entry and the winning recipe will be featured in an upcoming article in the Columbia Daily Tribune.

Free samples from more than 150 different tomato varieties and more than 100 different peppers grown at the research center will be offered. Several species of tomatillos also will be available to sample.

**Crop Injury and Diagnostic Clinic**  
**July 28-29**

The annual Crop Injury and Diagnostic Clinic will be held at Bradford Research Center July 28-29. The two day workshop features informational talks and field tours designed to inform the producer. This event is perfect for farmers and producers.

**Additional Research Center Field Days**

- Lee Greenley Jr. Memorial, Novelty, MO - Aug 4
- Graves-Chapple, Rock Port, MO - August 25
- Hundley-Whaley, Albany, Mo - August 26
- Fisher Delta, Portageville, MO - September 2
- Southwest, Mt. Vernon, MO - September 11
- Thompson, Spickard, MO - September 15
- Forage Systems, Linneus, MO - September 29
- Wurdack, Cook Station, MO - October 2

Get more details at: [http://cafnr.org/field-days](http://cafnr.org/field-days)
The 11th Annual Soybean Biotechnology Symposium, sponsored by the National Center for Soybean Biotechnology (NCSB), was held on April 8, 2015. As part of this year’s Symposium, Dr. J. Grover Shannon, NCSB Associate Director, was honored for his over 42 years of service in soybean research, his service at the University of Missouri and the NCSB, and his release of over 100 soybean varieties.

This year’s Symposium speakers included four outstanding scientists from different aspects of soybean research. Dr. Daniel Voytas, from the University of Minnesota, spoke on “Engineering plant genomes with sequence-specific nucleases”. Dr. Paul Chomet, the Marker Discovery and Development Lead at Monsanto, gave a talk titled “Partnering for Solutions in Agricultural Technology”. Dr. Roy Scott, the National Program Leader in the USDA Crop Productions & Protection unit presented “National perspectives on setting priorities for public research and impacts on the American public”. The annual Poehlman Lecturer was Dr. George Graef from the University of Nebraska. His seminar was titled “Evolution of Plant Breeding”.

The Symposium also included a poster and networking session where students had a chance to discuss their research with the speakers and other Symposium attendees. Over 100 people attended the Symposium including faculty, staff, and students from the University of Missouri. Representatives from the United Soybean Board and the Missouri Soybean Merchandising Council attended as well as others that traveled from the Donald Danforth Center in St. Louis, Missouri, and the University of Arkansas in Fayetteville, Arkansas.

Missouri’s commercial pesticide applicators will better understand the risk and benefits associated with pesticide use. Each year locations include Springfield, Columbia, Kansas City, Cape Girardeau and St. Louis. This year all locations, except Cape Girardeau, provided Certification Training for those wishing to become licensed applicators. Three-hundred & forty-seven individuals took this training over the four-week period. Recertification training for all locations totaled 1,706 participants. These individuals require a single day of training every three years in order to have their license renewed. That makes a total of 2,053 participants for the 2015 program. Several categories continue to dominate each year – Ag Plant (14%), Ornamental & Turf (34%), Right of Way (27%), and General Structure/Termite (18%). A special thanks goes to all instructors (University of Missouri, Missouri Department of Agriculture, Missouri Department of Natural Resources and Oklahoma State University) and the MU Conference Office for making this program a success.

The Commercial Pesticide Applicator Training Program in Missouri is mandated by the USA-EPA with the educational role provided by University of Missouri Extension and the enforcement role provided by the Missouri Department of Agriculture. Commercial pesticide applicators are provided with knowledge covering the “Best Management Practices” for the effective and safe use of restricted-use and non-restricted pesticides in Missouri.

American Society for Horticultural Science
Aug 4-7, 2015 | New Orleans, LA
http://www.ashs.org/

American Society of Plant Biologists
July 26-30, 2015 | Minneapolis, MN
http://plantbiology.aspb.org/

ESA 98th Annual Meeting
August 9-14, 2015 | Baltimore, MD
http://esa.org/baltimore/

Do you know about an upcoming event...

If you know of an upcoming event that DPS faculty and/or students are involved in or attending, please contact Jared Fogue at foguej@missouri.edu.
<table>
<thead>
<tr>
<th>Investigators</th>
<th>Title</th>
<th>Sponsor</th>
<th>Amount of Funding</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nguyen, H.</td>
<td>Phenotyping of transgenic soybean samples for response to soybean cyst nematode</td>
<td>Evolutionary Genomics, Inc.</td>
<td>$135,000</td>
<td>11/01/14-10/31/16</td>
</tr>
<tr>
<td>Jones, Andrea</td>
<td>Cotton Incorporated-Cotton Specialists Partnership: Large-Plot, Replicated Variety Evaluations</td>
<td>Cotton Incorporated</td>
<td>$8,000</td>
<td>01/01/15-12/31/15</td>
</tr>
<tr>
<td>Stevens, Gene</td>
<td>Seasonal Calibration of Active Soil Carbon</td>
<td>Cotton Incorporated</td>
<td>$10,000</td>
<td>01/01/15-12/31/15</td>
</tr>
<tr>
<td>Stevens, Gene</td>
<td>In-Field Tissue Testing Methods for Cotton</td>
<td>Cotton Incorporated</td>
<td>$15,000</td>
<td>01/01/15-12/31/15</td>
</tr>
<tr>
<td>Jones, Moneen</td>
<td>Missouri Soybean Commodity Survey</td>
<td>Missouri Department of Agriculture</td>
<td>$23,857</td>
<td>01/01/15-12/31/15</td>
</tr>
<tr>
<td>Xiong, X.</td>
<td>Bill bug Species Composition and Life Cycle on Missouri Zoysiagrass</td>
<td>MS. Valley Golf Course Superintendents Association of America</td>
<td>$10,000</td>
<td>05/01/15-04/30/17</td>
</tr>
<tr>
<td>Heiser, J.</td>
<td>BASF Testing Services: Protocol DEV-H-2015-LJ5-A</td>
<td>BASF</td>
<td>$5,400</td>
<td>03/19/15-03/18/16</td>
</tr>
<tr>
<td>Heiser, J.</td>
<td>BASF Testing Services: Protocol Mkd-H-2015-F01-A</td>
<td>BASF</td>
<td>$5,000</td>
<td>04/2/15-04/01/16</td>
</tr>
<tr>
<td>Zhanyuan, Z.</td>
<td>Development of transgenic maize (Zea mays) with candidate genes to test gene functions</td>
<td>Vestaron Corporation</td>
<td>$54,975</td>
<td>01/01/15-12/31/15</td>
</tr>
<tr>
<td>Sharp, R.</td>
<td>Acquisition of Goods and Services</td>
<td>Agricultural Research Service</td>
<td>$18,333</td>
<td>12/01/2014-09/30/2015</td>
</tr>
<tr>
<td></td>
<td>Improvement of Drought Tolerance in Cotton-Understanding Root Growth Responses to Water Deficit Stress</td>
<td>Cotton Incorporated</td>
<td>$5,000</td>
<td>01/01/15-12/31/15</td>
</tr>
<tr>
<td>Stevens, Gene</td>
<td>Soil Health in Cotton Fields with Wheat, Rye, Clover, Canola and Radish Cover</td>
<td>Cotton Incorporated</td>
<td>$13,900</td>
<td>01/01/15-12/31/15</td>
</tr>
<tr>
<td>Nguyen, H.</td>
<td>University of Missouri Core Facility for Soybean Cyst Nematode Phenotyping</td>
<td>Bayer Cropscience, LP</td>
<td>$135,000</td>
<td>02/01/15-01/31/16</td>
</tr>
<tr>
<td>Jones, M.</td>
<td>iPIPE: Missouri Soybean Component</td>
<td>NC State University</td>
<td>$39,742</td>
<td>03/01/15-02/29/16</td>
</tr>
<tr>
<td>Shannon, G.</td>
<td>Irrigation Water Management for Southern Region Soybean Growers</td>
<td>MS State University</td>
<td>$86,800</td>
<td>10/01/14-09/30/15</td>
</tr>
<tr>
<td>Barrett, B.</td>
<td>Evaluating Plant Volatile Organic Compounds as Potential Species-Specific Attractants in Spotted Wing Drosophila Monitoring Traps</td>
<td>Lincoln University</td>
<td>$10,296</td>
<td>02/01/15-01/31/17</td>
</tr>
<tr>
<td>Barrett, B.</td>
<td>Support For Graduate Student</td>
<td>Lincoln University</td>
<td>$3,000</td>
<td>01/01/15-08/31/15</td>
</tr>
<tr>
<td>Barrett, B.</td>
<td>Selection of insecticides applied at different timings for control of billbug species on Zoysiagrass fairways</td>
<td>USGA</td>
<td>$19,830</td>
<td>02/19/16-04/30/17</td>
</tr>
<tr>
<td>Investigators</td>
<td>Title</td>
<td>Sponsor</td>
<td>Amount of Funding</td>
<td>Dates</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------------------------------------------------------</td>
<td>------------------------------</td>
<td>-------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Bradley, K.</td>
<td>Testing Services Agreement</td>
<td>BASF</td>
<td>$17,500</td>
<td>02/15/15-12/01/15</td>
</tr>
<tr>
<td>Finke, D.</td>
<td>Support for GRA</td>
<td>Lincoln University</td>
<td>$18,500</td>
<td>01/01/15-12/31/15</td>
</tr>
<tr>
<td>Fritschi, F.</td>
<td>Carbohydrate in cotton: Impacts on Early Vigor and Translation to Yield</td>
<td>Cotton Incorporated</td>
<td>$44,585</td>
<td>01/01/15-12/31/15</td>
</tr>
<tr>
<td>Jones, A.</td>
<td>Evaluation of Cotton Yield, Quality, and Plant Growth Response to Soil-Applied Potassium</td>
<td>Cotton Incorporated</td>
<td>$8,000</td>
<td>01/01/15-12/31/15</td>
</tr>
<tr>
<td>Jones, M.</td>
<td>Historical Data For Future Projects</td>
<td>Cotton Incorporated</td>
<td>$11,000</td>
<td>01/01/15-12/31/15</td>
</tr>
<tr>
<td>Jones, M.</td>
<td>Susceptibility of tarnished plant bug to select insecticides and mixtures</td>
<td>Cotton Incorporated</td>
<td>$23,000</td>
<td>01/01/15-12/31/15</td>
</tr>
<tr>
<td>Jones, M.</td>
<td>Extension Model to improve Pest Monitoring in the Bootheel of Missouri Cotton</td>
<td>Cotton Incorporated</td>
<td>$22,800</td>
<td>01/01/15-12/31/15</td>
</tr>
<tr>
<td>Jones, M.</td>
<td>Insect Management in Mid-South Cotton: MO</td>
<td>Cotton Incorporated</td>
<td>$12,000</td>
<td>01/01/15-12/31/15</td>
</tr>
<tr>
<td>Nelson, K.</td>
<td>Managing Water for Increased Resiliency of Drained Agricultural Landscapes</td>
<td>Purdue University</td>
<td>$61,944</td>
<td>03/01/15-02/29/16</td>
</tr>
<tr>
<td>Shannon, G.</td>
<td>Improved Management of Charcoal Rot</td>
<td>Purdue University</td>
<td>$35,815</td>
<td>10/01/14-09/30/15</td>
</tr>
<tr>
<td>Zhang, Z.</td>
<td>Development of transgenic maize (Zea mays) with candidate genes to test gene functions</td>
<td>Lignolink, Inc.</td>
<td>$19,597</td>
<td>12/01/14-11/30/15</td>
</tr>
<tr>
<td>Stacey, G.</td>
<td>New Mesoscale Multi-Modal Imaging of Cellular communication Between Microbe and Plant in the Rhizosphere-A Pilot Project</td>
<td>Brook Haven National Lab</td>
<td>$86,302</td>
<td>09/05/14-08/31/15</td>
</tr>
<tr>
<td>Bradley, K.</td>
<td>Testing Services/Protocol DEV-H-2014-US-D03-B-1.0</td>
<td>BASF</td>
<td>$30,500</td>
<td>11/01/14-12/15/15</td>
</tr>
<tr>
<td>Bradley, K.</td>
<td>Agrochemical and Seed Evaluation Agreement</td>
<td>Dow Agroscience</td>
<td>$107,300</td>
<td>03/01/13-01/29/17</td>
</tr>
<tr>
<td>McKendry, A.</td>
<td>Improving barley and wheat Germplasm for changing environments</td>
<td>University of California-Davis</td>
<td>$64,173</td>
<td>02/01/15-01/31/16</td>
</tr>
<tr>
<td>Scharf, P.</td>
<td>Climate Change, Mitigation, and Adaptation in Corn Based Cropping Systems</td>
<td>Iowa State University</td>
<td>$185,127</td>
<td>03/01/15-02/29/16</td>
</tr>
<tr>
<td>Stacey, G.</td>
<td>Overcoming Metabolic Bottlenecks for Enhanced Vitamin E Production in Crop Plants</td>
<td>University of Nebraska-Lincoln</td>
<td>$188,311</td>
<td>02/01/15-12/31/17</td>
</tr>
<tr>
<td>McKendry, A.</td>
<td>Fusarium Head Blight Research in Winger Wheat</td>
<td>Agricultural Research Service</td>
<td>$91,159</td>
<td>05/27/15-05/26/16</td>
</tr>
<tr>
<td>Flint-Garcia, S.</td>
<td>Biology of rare alleles in maize and its wild relatives</td>
<td>Cornell University</td>
<td>$223,020</td>
<td>05/01/15-04/30/16</td>
</tr>
<tr>
<td>Shannon, G.</td>
<td>Characterization and Deployment of the High Stearic Acid</td>
<td>Agricultural Research Service</td>
<td>$31,007</td>
<td>09/01/14-08/31/15</td>
</tr>
<tr>
<td>Nguyen, H.</td>
<td>Phenotyping of Samples for SCN Resistance</td>
<td>Bayer Cropscience</td>
<td>$132,444</td>
<td>10/26/12-02/29/16</td>
</tr>
</tbody>
</table>


