Agronomy is in the midst of planning for our departmental review. Every 5 to 7 years, the department undergoes a review by a team of esteemed colleagues who we invite to provide feedback about our teaching, extension, and research programs. However, the real value of the review lies in the process of developing a shared vision and a road map for the department. This is the time we assess our accomplishments since our last review and develop new goals and strategies for the next 5 to 10 years.

Faculty have been engaging in intensive discussions around 6 grand challenges, defined as large scale problems that require multidisciplinary approaches and that have considerable economic or social implications. The grand challenges we have focused our attention on include:

- Predicting and Mitigating Climate Change
- Using Plant Breeding and Genetics to Optimize Crop Traits
- Developing Bio-Based Energy
- Reducing the Impact of Chemical and Biological Agents on Human and Ecosystem Health
- Improving the Quality of Life in Developing Countries
- Managing and Conserving Fragile Landscapes

Each of these grand challenges represents some of the most complex problems society has faced. Our ability to grow our economy and to maintain a high standard of living depends, to a great extent, on our ability to successfully address each of these issues. We can’t expect that solutions to these issues will be found quickly. These are long term problems, demanding a long term commitment by a society that is willing to stay the course. The citizens of Indiana look to the Department of Agronomy at Purdue to address these issues to help energize their state’s economy and to position Indiana to be competitive globally. For over 100 years, our disciplines have developed unparalleled expertise in the life and earth sciences. Our faculty are clearly leaders in their disciplines with purpose in mind and the confidence necessary to solve these problems. Investment in their research will require significant support from national, regional, and local agencies and organizations. However, our ability to deliver on our promises makes a strong case for sustained state and national support of our research efforts.

The Agronomy CSREES Review will take place February 2 - 6, 2009.

Review Team Members
Ken A. Barbarick  
Colorado State University  
Robert (Bob) Shearman  
University of Nebraska-Lincoln  
James P. Dobrowolski  
USDA  
Mary Wiedenhoeft  
Iowa State University  
J. Thomas (Tom) Sims  
University of Delaware

On the Cover

The cover features Kristen Rinehart a Ph.D. student with Herb Ohm.

To learn more about Kristen’s research go to page 13.

Mission Statement

The mission of the Agronomy Department at Purdue University is to serve our broad-based clientele by providing progressive undergraduate, graduate, and extension education programs; conducting innovative and relevant research in the crop, soil, and environmental sciences; and interacting with partners in the public and private sectors.
Study Abroad Trips Offer Great Opportunity to See the World
By Kelly Delp

Students can take Purdue Agronomy courses on campus and all over the world. In 2009, study abroad courses will be available in Guatemala, Honduras, Costa Rica, Romania and Hungary.

Guatemala and Honduras

This spring break 2009 experience is no vacation. Students will travel to Guatemala and Honduras and earn course credit.

Lori Snyder is organizing this trip so students can learn about tropical agriculture and food processing in Central America, tropical forestry and ecology, development in a third world country, and the cultures and histories of Guatemala and Honduras. Stops include coffee and orchid farms, plantations, the Mayan ruins at Copan, Manglar, and Chichicastenango.

Costa Rica

Students who want more than a week abroad can experience Costa Rica and attend EARTH University for four weeks, May 18 to June 14.

Lori Snyder is coordinating this trip with the University of Florida’s Department of Animal Sciences in partnership with EARTH University. Students will examine sustainable development from a multi-disciplinary standpoint and work with students and faculty from EARTH University. Practical labs and field experience with local farm operations will reinforce scientific concepts and give students opportunities to learn about tropical research methods.

Romania and Hungary

Students who prefer to travel to Europe can study in Hungary and Romania from May 18 to June 12. Phillip Owens from Agronomy and Mark Russell and Michael Schutz from Animal Sciences are coordinating the trip.

Students will get the chance to explore the animals, crops, and soils of Romania and Hungary. The trip includes visiting agricultural and veterinary universities, and animal agribusinesses. Students also will visit historical sites such as the Royal Palace and Revolution Square in Bucharest, monasteries and sites from the 13th century, and Transylvania and the Carpathian Mountains.

For more information about the Romania/Hungary trip visit:
http://www.agry.purdue.edu/romania-hungary/

For more information about Purdue Agriculture Study Abroad visit:
http://www.agriculture.purdue.edu/ipia/studyabroad/

For more information about Costa Rica and EARTH University visit:
http://www.explore.org/explore/costarica

Faculty Contact Information:
Lori Snyder lusnyder@purdue.edu
Phillip Owens prowens@purdue.edu
Gebisa Ejeta was appointed to Science Council for the Consultative Group on International Agricultural Research, CGIAR, the world’s largest publicly funded agricultural research organization. The Science Council advises CGIAR on research priorities, evaluates the quality of the research being conducted by the centers, measures the impacts of the centers’ work and mobilizes projects.

John Graveel, who has served as the NRES Director for the past 12 years, accepted a half time position as Assistant Dean of Academic Programs for the College of Agriculture.

Paul Schwab was named the new Director of the Natural Resources and Environmental Sciences interdisciplinary program. He also coordinates the Pre-Environmental Studies program with Linda Lee, which allows freshmen to take their first year at Purdue to explore the 16 academic majors that focus on the environment.

Jay T. Akridge was named Interim Dean of Purdue Agriculture in April. A search for the next Dean of Purdue Agriculture has begun with a committee led by Willie Reed, Dean of the School of Veterinary Medicine.

Rebecca Doerge has been named interim head of the Department of Statistics. Rebecca has a joint appointment in Statistics and Agronomy.

The Midwest Regional Turf Foundation (MRTF) Award of Achievement was presented at the William H. Daniel Turfgrass Research and Diagnostic Center during a reception on Monday, July 14, 2008 to (from left) Mike Brady, Pleasant Valley Golf Course, Payne, OH, Steve Christie, Automatic Irrigation, Fishers, IN, Fred Whitford, Purdue Pesticide Programs, West Lafayette, IN.

The award was established in 2005 to recognize those who unselfishly have given to the Midwest Regional Turf Foundation, the Turf Industry and Purdue University.

Memorials


Bob Armstrong passed away on April 4, 2008. Bob was an Agronomy alumnus, Agronomic Achievement Award recipient, Distinguished Agricultural Alum, and a past Agronomy Advisory Council member.

Florence Heath passed away on July 12, 2008. Florence was the wife of Maurice Heath who worked in the department from 1953-1975.

Lou Jones passed away on September 25, 2008. Lou was a secretary in the department from 1980 – 2002.
Cale Bigelow was promoted to Associate Professor.

Scott Jackson was promoted to Professor and named a Purdue University Faculty Scholar, which is a University-wide honor given to select mid-career faculty who are on an accelerated path for academic distinction.

Sandy Spitznagle was advanced to A/P Rank 5.

Marianne Bischoff was advanced to A/P Rank 6.

The Crop Diagnostic Training and Research Center (DTC) was awarded the Purdue Agriculture Team Award on May 1. Corey Gerber is the Director of the Center, the primary mission of which is to address important agricultural topics in a real-world setting, provide agriculturalists with opportunities to explore new and innovative crop production systems, sharpen their crop diagnostic troubleshooting skills, and evaluate new and alternative management strategies. Members of the team (from left) are John Obermeyer (Entomology), Keith Johnson (Agronomy), Corey Gerber (Agronomy), Gary Steinhardt (Agronomy), Glenn Nice (Botany and Plant Pathology), Robert Nielsen (Agronomy), James Camberato (Agronomy), Sylvie Brouder (Agronomy), Kevin Leigh Smith (Ag Communications), Russell Merzdorf (Ag Communications) and William Johnson (Botany and Plant Pathology). Not pictured: Chip Morrison (Ag Communications) and Gregory Shaner (Botany and Plant Pathology).

Visit the Purdue DTC Web site at: www.agry.purdue.edu/dtc

The Agronomic Achievement Award was established in 2000 to recognize and honor alumni and friends of the department for contributions to the profession or industry. The 2008 recipients received their award at the 2008 Harvest Reunion on October 25th.

Bob A. Brame graduated from Purdue Agronomy with a degree in Turf Science in 1972. Since 1994 he has been the Director of the North Central Region; USGA Green Section serving IN, OH, KY, MN, MI and WI, visiting courses in IN, OH and KY.

Jamie Bultemeier holds a B.S. in Soil and Crop Science and M.S. from the Agronomy Department. Since 2006 he has been a Product Specialist with Cropping Systems for John Deere and Company.

Brad Inman graduated with a B.S. from Purdue University in General Agronomy and Agricultural Education and an M.S. from Cornell University in Soil Science. Since January 2007 Brad has been a Senior Project Manager as an embedded employee for the Planning, Programs, and Project Management Division at the Army Corps of Engineers in the New Orleans District Office.

Jeff Nagel graduated with a B.S. and M.S. in Agronomy. Since 1996 Jeff has been an Agronomist for Ceres Solutions where he performs training and crop diagnostics for retail locations and growers.
2007-2008 Agronomy Donors

It is with many thanks that we announce the Agronomy Donors from the 2007-2008 fiscal year. Our research and scholarships are possible because of the generous contributions from so many of our Alumni and Friends. Every effort has been made to include all donors from July 1, 2007 to June 30, 2008 to the Agronomy Department; however, omissions may occur. Please accept our apology in advance if your generous contribution was not properly acknowledged. If you bring it to our attention we will be glad to correct it in the next edition. Thank You!

If you would like information on how you can contribute to the Agronomy Department, please call the Purdue Agriculture Development Office at 765-494-8672, or 800-718-0094.

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Jack Lew Colbert
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Keith Sheldon Cooper
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Regalrand Eugene Connett
Curtis Ray Craffon
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Bishop Jefferson Hankins
James A. Hankins
Kar l Stanley Harker
Kevin Lee Harner
David Joel Harris
Fred Harris
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Rebecca Hartigan
Dean Harvey Hartley
Scott Alan Hartwell
Joseph L. Hawkins
Shichuan He
Jeffrey B. Hebble
Kevin Alton Hemstock
Melva Doris Hemminger
Dean Louis Ralph Hesterberg
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Gary Lane Hudson
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Karen Lynne Huss
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Indiana Nursery & Landscape Assoc.
Indiana Professional Lawn & Landscape Assoc.
Indiana Urban Forest Council
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John Clinton Imman
Peter Michael Jacobs
Jasper Co. Soil & Water Conservation District
Eugene Duane Johannesmeier
Christian Jakob Johannsen
Leonard Charles Johnson
Randall Lee Johnson
Leonard Charles Johnson
When looking out across much of our Indiana agricultural landscape, you can’t help but notice the network of drainage ditches interspersed among the productive corn and soybean fields. Subsurface “tile” drains located 3 to 4 feet deep in these fields, lower the seasonally-high water tables in these fields and deliver the excess water to ditches and streams. Without these subsurface drains, many of our most productive soils in the state and region would not produce high yields due to delayed planting, poor aeration, and many other problems associated with wet soils.

Although drainage is necessary for highly productive agriculture and produces many environmental and agronomic benefits, subsurface drains also deliver significant amounts of nitrate to surface ditches and streams. High concentrations of nitrate can cause local water quality problems and contribute to hypoxia in the Gulf of Mexico. Research at Purdue and other Midwestern institutions over the past two decades has been studying strategies to reduce the movement of nitrate, pesticides, and other agricultural chemicals from the root zone into tile drains and ultimately surface waters. This work has included long-term studies at the Southeast Purdue Agricultural Center (SEPAC) and Water Quality Field Station (WQFS), and newer research and demonstration sites on farmer-cooperator fields as well as at the Davis-Purdue Agricultural Center (DPAC). More than 10 faculty members from the Departments of Agronomy and Agricultural and Biological Engineering have been involved in some of these studies, as well as collaborators from Iowa, Ohio, Wisconsin, Illinois, Minnesota, and North Carolina.

One of the unique contributions of the SEPAC study has been to document the losses of nitrate under different drainage intensities (drain spacings). Drain spacing is one of the main decisions a landowner makes when designing and installing a drainage system, yet there were no field data showing the impact of this decision on nitrate losses from the rootzone. Our long-term study found that as drain spacing becomes narrower (greater drainage intensities), the nitrate losses (lb/acre) from the field also increase. Although drainage models had predicted this type of behavior, field data to validate the prediction had not been available. This increased loss with greater drainage intensity is due primarily to the increased amount of water drained from the field, since the concentrations of nitrate were similar for all spacings. These data on drain spacing are unique and cited widely by drainage researchers, and they are having an impact on discussions of how to better design drainage systems to meet both agronomic/economic and environmental goals.

These results are particularly timely now with the general intensification of corn production for the biofuels industry. Many farmers have been improving their drainage systems by replacing old systems and installing drains at narrower spacings. Although high fertilizer prices are having a moderating effect, there is also the potential for higher Nitrogen application rates due to high corn prices. The combination of potentially more corn acres, potentially higher fertilizer rates due to higher grain prices or premiums, and the intensification of drainage, would suggest a greatly increased risk of excessive nitrate losses from Midwest cropland. In light of the trend for more intensive crop production, our work underscores the importance of following new approaches to manage nitrate losses.

We have worked on two such approaches for reducing nitrate losses from drained fields. Winter cover crops can “trap” significant amounts of nitrate from the soil during fall, winter, and early spring. Because much of our drainage occurs during this normally fallow season, the addition of a living crop to take up nutrients during this time can have a large impact on reducing losses. Drainage water management (“controlled drainage”) is another approach to reducing nitrate losses to ditches. A control structure inserted near the outlet of the drain reduces the total flow from the drain during periods when drainage isn’t needed for crop growth. Reducing the water flow reduces nitrate losses.
Identifying Genes for Improving Disease Resistance in Wheat
By Steve Scofield

My research program is focused on achieving two major objectives: (1) increasing our understanding of the molecular signaling pathways that lead to the activation of defense pathways in plants, and (2) applying this knowledge to improve disease resistance in wheat and other cereal crops. Our work is carried out in collaboration with the other researchers of the USDA-ARS Crop Production and Pest Control Unit and the Small Grains Research Group at Purdue who study a range of agriculturally significant fungal, viral, and insect diseases of wheat.

To achieve the first goal, my group first had to overcome a problem that has plagued wheat genetic research until very recently. Geneticists usually identify the function of genes by observing cases where they fail to function properly – when the gene has undergone a mutation. Most crop plants are diploid, meaning they have two sets of chromosomes and therefore have just two copies of each gene. In diploid plants, it is a simple matter to observe cases where both copies of a gene are no longer functioning and observe how the plant is affected by the absence of this gene. Wheat however, is hexaploid and so it has six of each chromosome and six copies of each gene. This makes it almost impossible to create plants where all six copies of a gene are mutant, and so the process of identifying gene function is vastly more difficult in wheat research.

My group has gone a long way to solving this problem by developing a system that can turn off or “knock out” all six copies of a chosen wheat gene, thereby permitting the determination of wheat gene function. We do this by a process called virus-induced gene silencing (VIGS).

An example is shown here where VIGS is used to knock out a wheat gene called phytoene desaturase (PDS). When PDS is knocked out, the chlorophyll breaks down forming white areas in the leaves.

We are now using this system to identify gene encoding functions required for disease resistance. An example is shown below where several genes, Lr21, RAR1, SGT1 and HSP90 where each knocked out in a line of wheat that is normally resistant to the fungus that causes leaf rust. After each of these genes are silenced, it easily can be seen that the plant becomes susceptible to leaf rust, indicating that these genes have essential functions in the leaf rust resistance pathway.

Our VIGS system is giving us a powerful new way to study the genetics of disease resistance. We are collaborating to employ this technique with a wide range of researchers here at Purdue and in our national and international institutions. Through these efforts we should soon gain the understanding of resistance mechanisms that will be necessary to engineer improved disease resistance in wheat.
Undergraduate Students

The Purdue Soils Team placed fourth at the American Society of Agronomy’s National contest in Rhode Island and at the North American College Teachers of Agriculture (NACTA) National Contest in Texas where Joyce Lok placed 3rd overall and Betsy Webb placed 8th overall. The team coaches are Gary Steinhardt and Kristi Linvill with assistance from Bill McFee.

Ben Campbell was selected as a 2008 Golden Opportunity Scholar and attended the Annual ASA/CSSA/SSSA meetings in Houston, Texas in October. The Golden Opportunity Scholars Institute was developed by CSSA as part of its 50th anniversary in 2005 and is supported by the Golden Opportunity Fund through the Agronomic Science Foundation. Ben also was recognized by the Purdue College of Agriculture as a member of the 400 Club, an elite group of students who have earned a cumulative grade point average of 4.0.

Joyce Lok was the 2007 Golden Opportunity Scholar and attended the Annual ASA/CSSA/SSSA meetings in Houston, Texas in October.

Julia Wickert was awarded the M.O. Pence Award.

May 2008 Graduation Reception
at the Ross-Ade Pavilion

May & August Graduates

Agronomy Bachelor of Science
Allen Hubert Bedel
Keith Richard Bower
Evan Price Buckley
Matthew Thomas Caldwell
Henry Logan Cass
Brian J. Chalifoux
Rebecca Renee Gearhart
Matthew Aaron Higgins
Austin Lane Mattern
Nicolas Alan Meller
James William Potter
Stephen Lee Ruckman
Christopher Patrick Ryan
Neal D. Sitzman
Jonah Johnhenry Snyder
Benjamin Allen Taylor
Chad D. Wagler
Robert Bradley Wichmann
Charles T. Zila

NRES Bachelor of Science
Rachel Leigh Rogers
Hayley Michelle Steele
Steven Michael Pappas
Betsy Louise Webb

Agronomy Associate in Agriculture
Christopher Allen
Jared Paul Brown
James Cody Davis
Jeffrey Andrew Gordon
Jared James Haughee
Jason Lee Hoffman
Seth Ryan Lawrence
Lee Andrew Martin
Wade Thomas Miller
Barton Gerald Phillips
Scott Michael Rudicel

Minors in Agronomy
Catherine Argadine
Allison Bechman

Three generations of Purdue Agronomy graduates; Bob, Greg, and Robert Wichmann
50 years of Purdue Soil Judging
By Kristi Linvill

The Purdue Soil Judging Team is gearing up for their 50th Anniversary. Under the leadership of Harry Galloway with help from Anson Bertrand and Herb Ulrich the Purdue Soils Team began in 1958.

“There were approximately 12 students on the team. They practiced hard and did quite well, but there was no organized Regional contest. So they attended several soils judging contests with High Schools in Indiana that first year,” says Anson Bertrand.

In 1959, Purdue sent two undergraduates, Dick Barnheisel and Richard Large, to Hickory Corners, Michigan where Barnheisel won first place individual honors. In the last 49 years students have participated at contests in 29 different states.

In 1961 the American Society of Agronomy (ASA) organized a collegiate Soil Judging competition to be held during the spring semester and since then the Purdue team has placed in the top five at the ASA national competition 18 times including five first place finishes. They have also had five members win first place individual honors and 27 receive top 10 individual honors.

Since 1993 they have also competed in the national NACTA (North American College Teachers of Agriculture) competition and have placed in the top five every year.

In the Regional competition the team has earned the first place trophy 21 times and have been in the top five 43 times. Students have captured individual top ten honors 102 times, including 14 first place finishes.

Today the team is coached by Gary Steinhardt and Kristi Linvill. To celebrate the accomplishments and longevity of the Purdue Soils Team a 50th Anniversary Soil Judging Reunion is being planned for October 2009. It will be held the same weekend Purdue will be hosting the Region III Collegiate Soil Judging competition. For more information and exact dates please check out our Web site at: http://www.agry.purdue.edu/SoilsTeam/

This collection of pictures features pictures from 1962, sometime in the early 1980s, and 2007. If you have pictures you would like to submit to the Agronomy photo collection, please e-mail them to kdelp@purdue.edu or you may mail them to:

Purdue Agronomy
915 W. State St.
West Lafayette, IN 47907
Attn. Kelly Delp

If your pictures need to be scanned they can be scanned and sent back to you.
Idris Amusan was selected as a Fellow for the Leadership Enhancement in Agriculture Program (LEAP) of the Norman E. Borlaug International Agricultural Science and Technology Fellows Program.

Christopher Boomsma was awarded the M. O. Pence Award and the 2008 Outstanding Graduate Student in Extension.

Eric C. Johnson was awarded the Joe L. White Graduate Student Award in Soil Chemistry and Mineralogy.

Pamela A. Obura was awarded the Joe L. White Graduate Student Award in Soil Chemistry and Mineralogy.

Kristen D. Rinehart was awarded the John D. Axtell Graduate Student Award in Plant Breeding and Genetics and the 2008 Outstanding Graduate Student in Teaching.

Joseph G. Alfieri was awarded the Wayne P. Rothgeb Memorial Scholarship and the 2008 Outstanding Ph.D. Graduate Student in Research.

Hans Edwin Winzeler was awarded the 2008 Outstanding M.S. Graduate Student in Research.

New Agronomy Graduate Student Representatives were recently chosen. They are: Ryan Edwards, Kristen Rinehart, Mary-Jane Orr, and Laurel Royer.

May and August Graduates

Jared Alsdorf, M.S.
Cagla Altun, Ph.D.
Roger Andrew Cohen, M.S.
Jason DeKoff, Ph.D.
Navdeep Gill, Ph.D.
Debra L. Foye, M.S.
Zenbaba Gutema, Ph.D.
Sofia Ingrid Lissbrant, Ph.D.
Adam Cory Moeller, M.S.
Deborah Elaine Morton, M.S.
Sayjro Kossi Nouwakpo, M.S.
Pamela Obura, Ph.D.
Timothy Patrick Porter, M.S.
Andrew Paul Robinson, M.S.
Hans Fredrick Schmitz, M.S.
Kristina Smith Walker, Ph.D.
Hans Edwin Winzeler, M.S.
Zenbaba Wordoffa, Ph.D.
Kimberly Young, M.S.
Wheat is one of the most important food crops grown on millions of acres across the United States and around the world. As the demand for and value of grain increases, the need for higher, more consistent yield increases. The yield and quality of the grain are at risk when diseases and insect pests are present during the growing season.

My research demonstrates the importance and value of utilizing grass species that are related to wheat as sources of novel resistance genes. New technologies, specifically molecular markers, enable plant breeders to effectively and efficiently introgress genes into common wheat. New resistance genes, made available to wheat growers in new wheat cultivars, will protect their crops from disease losses without the high cost of applying large amounts of fungicides and insecticides.

My research focuses on introgressing and combining in wheat, resistance to fungal and viral diseases, and an insect pest from certain grass species closely related to wheat. Hessian fly is an important and destructive insect pest common in wheat growing areas. New resistance to the most virulent Hessian fly biotypes was identified in a durum wheat line. This resistance was transferred through a series of backcrosses to wheat. Exposure to Hessian flies in controlled conditions revealed that two genes control the resistance that was transferred from durum wheat.

Fusarium head blight (FHB) caused by the fungus Fusarium graminearum, and Yellow Dwarf (YD) disease, caused by the luteoviruses BYDV and CYDV, are two destructive diseases that attack wheat. While there are wheat cultivars that have partial resistant to these diseases, the resistance is not strong. Therefore, new resistance must be identified and made available in commercial cultivars.

Resistant to FHB was identified in tall wheatgrass and resistance to YD was identified in intermediate wheatgrass. The FHB resistance is located more distal from the centromere than the YD resistance, so it should be possible to combine the two resistances in one plant or cultivar. The highly effective resistances were separately transferred to wheat by crossing each of the two related species to wheat. The respective introgressed segment of chromosome 7E carrying the resistance replaced the distal half of the long arm of wheat chromosome 7D, but in different wheat lines.

Current wheat varieties available to growers have varying levels of resistance to FHB, BYDV, and Hessian flies. The resistance that is present in today’s wheat will not be effective indefinitely. I am currently carrying out research to combine these resistances by crossing the two wheat lines with the introgressed segments. Molecular markers together with testing plants to both diseases are used to confirm the presence of the resistance genes. My research demonstrates the importance and the value of screening related species as novel sources of resistance genes. New resistance in wheat varieties available to farmers will help to protect their crops from devastating infections that could reduce yields and reduce the grain quality without the high cost of spraying large amounts of fungicides and insecticides.
Mike Popelka is a grad student in Plant Breeding & Genetics working with Mitch Tuinstra. He is shown here working with sorghum.

This picture shows student Ellen Pittsford working in the soybean breeding program.

The wheat crew working hard at the ACRE to harvest the wheat crop.

Jenny Campbell, Kyle Schwarzkopf, and Sam Ambrose represented Purdue Agronomy by displaying a booth at Purdue Day at the State Fair on August 15th.

Shane Gretencord is tying up new branches on young soybean plants. They were used for crossing in the germplasm development program.

The Beyrouty Family talking to Ellsworth Christmas in the Pioneer Village at the Indiana State Fair.

Mike Popelka is a grad student in Plant Breeding & Genetics working with Mitch Tuinstra. He is shown here working with sorghum.

The Purdue Turf Field Day was held on July 15th at the Daniel Turf Center with about 600 participants.

The field day included presentations by Agronomy professors and a trade show with 39 exhibitors from various turf companies.

The DTC Forage field day was held on September 4th at the ACRE.

Demonstrations with harvesting, fertilizing, and seeding were given at the field day.

Jeff Volenec gave a presentation on proper harvest management.

Keith Johnson talked to the attendees about legumes.
Agronomy welcomed students back to campus on August 28th. Andy Linvill, Brett Ochs, and Dan Emmert helped prepare dinner.

Agronomy Ambassadors, John Wood and Sam Ambrose, and Ambassador Coordinator, Kelly Delp, stop for a picture.

Agronomy Ambassador Phillip Fischer and Ambassador Coordinator Sherry Fulk-Bringman served food to the participants.

Chris Johannsen and Gary Steinhardt enjoyed conversation.

Students were able to converse with other students and professors while enjoying a beautiful evening outside.

Midwest Regional Turf Foundation (MRTF) Golf Day

This year’s MRTF Golf Day was on September 29th. There were 117 golfers that participated.

The outing was hosted by superintendent, Randy Brehmer, at The Fort Golf Resort in Indianapolis.

Some of the participants included (from left) Zac Reicher, Sam Detmer, and Randy Rogers.

This year marked the 11th time the MRTF has hosted a Golf Day, which raises money for turf research and education.

The first place team was (from left) Andy Kaler, Larry Wilts, Greg Fletcher, and James Brown.

We would like to thank everyone that participated and we hope to see you next year! For information about turf and the MRTF please visit: www.agry.purdue.edu/turf
The Agronomy Department and your colleagues want to hear what is happening with you. Please share your professional and personal accomplishments or news by completing and returning the form below or visit the Alumni/Friends section on our Web site and use the online form: www.agry.purdue.edu. If you know someone deserving recognition or are aware of an interesting storyline, please let us know that too.

Name: 

Degree(s) year(s): 

Address: 

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