Purdue Agronomy
Alumni & Friends
Newsletter 2011

Purdue Agronomy is Striving for Global Excellence
A Note from the Department Head

The Agronomy Department has a long history of excellent department heads and continuing this tradition is my responsibility and privilege as the new department head. I have been fortunate to follow Herb Ohm and have appreciated his advice during the past ten months as well as the enthusiastic support of the faculty, staff and students. While I have been affiliated with the Agronomy department as a USDA-ARS scientist and adjunct professor for 17 years, these past months have been filled with learning about the outstanding programs we have in discovery, education and outreach. This has been another banner year for the department as you will find when you read about the numerous accomplishments of the faculty, staff and students.

In our department we are extremely fortunate to have faculty with the depth and breadth of knowledge to address almost any aspect of the crop-soil-water-climate continuum. Our programs stretch across a wide range of disciplines from meteorology and climatology to hydrology and the fate and transport of chemicals in soils and the environment. In addition we study the plant-soil interface focusing on nutrient uptake and utilization and soil microbiology. Our faculty are also developing new genetic lines of maize, sorghum, small grains and soybeans; understanding the genetic mechanisms of cellular structures and plant growth as well as conducting research on the more applied aspects of crop, turf and bioenergy grass management. These Discovery programs help us offer the highest caliber education programs for undergraduate and graduate students in the classroom as well as adult learners in our outreach programs. Integrating our Discovery, Education, and Outreach land grant missions has been, and will continue to be, a significant strength for this department as we strive for global excellence.

The support the Agronomy Department has from our alumni and friends is tremendous and is a major reason why we are able to excel in so many areas. I would like to thank all of you who have donated your time, expertise and dollars. Your willingness to share your story and your success is what allows us to recognize and provide an array of scholarships and assistantships to outstanding undergraduate and graduate students. These funds have allowed us to reduce their tuition costs, and send students to regional and national meetings and contests, where they have the opportunity to begin networking by meeting experts in their fields and achieve valuable leadership experiences. Through your support we are training the next generation of leaders in the crop-soil-water-climate continuum.

The fall semester is here and it is a time to say hello to a new group of students that will join our Agronomy family. In addition to the students we welcome our new Turfgrass Extension Specialist Dr. Aaron Patton. Aaron is not a stranger to the department as he received his Ph.D. under Zac Reicher in 2006 after which he was an Assistant Professor at the University of Arkansas for four years until he joined our Agronomy faculty in July 2010. Aaron has quickly established his program and most recently led a very successful Turf Field Day at the Daniels Turf Center where there were over 500 participants. I am also pleased to announce that Dr. Katy Martin Rainey will join the faculty as an Assistant Professor in Soybean Breeding and Genetics in January 2012. She received her Ph.D. from Cornell University and comes to us from a similar position at Virginia Tech University. She will occupy a pivotal and coalescing position in our cooperative Purdue-USDA soybean team.

It is also a time to say goodbye to two of our colleagues, Tom Housley and Scott Jackson. Dr. Housley became an Emeritus Professor in May 2011. Tom joined the faculty in July 1975 and developed a strong plant physiology program which carried over into invaluable service in our crops teaching and teams programs through which he served as an advisor and mentor to numerous undergraduate and graduate students. Scott Jackson developed a world class program in soybean and rice genomics and will be joining the University of Georgia faculty as an Eminent Scholar in Crop Genomics. We wish Tom and Scott the very best and look forward to continuing our interactions with them.

The vision of this department is to put our collective expertise to work towards solving what we have identified as grand challenges in crop and earth system sciences that affect Indiana, our nation and the world. The daily interactions I have with our students, staff and faculty convince me that we have the capacity and drive to achieve great things. I am excited to be a part of this department and look forward to reporting to you about our progress in future newsletters.

Joe Anderson, Department Head
Jim Vorst Retires

Jim Vorst retired in December 2009 with a celebration in spring 2010. He joined the Department in 1969 with primary responsibilities in undergraduate teaching and student advising. Jim taught courses and short courses in Crop Production, Crop Adaptation, and Contemporary Issues in Agriculture. He was also actively involved with the Certified Crop Adviser program since its inception in 1994.

Tom Housley Retires

Tom Housley retired in May after 35 years. Tom was a teacher, mentor, and friend to many undergraduate and graduate students over the years. He taught several courses, most notably the World Crop Adaptation and Distribution class and the Seed Analysis and Grain Grading class. Tom was also the Agronomy Club Advisor and Crops Judging Coach for many years.

Retiree/Emeritus Faculty & Staff

Agronomy is lucky to have such a great group of retirees (pictured below). A retiree lunch was held this past spring and more than 25 retirees and retiree spouses attended. Retirees were introduced to Aaron Patton, the Turfgrass Extension Specialist, and mingled with faculty, staff, and the Department Head.

Three long-time Agronomy staff members (pictured above) retired in December 2010. Don Fassnacht was the Manager of the W.H. Daniel Turfgrass Research and Diagnostic Center since 1998. He supervised the 25-acre turfgrass research center where he trained and supervised undergraduate students and worked with turf faculty to help ensure successful completion of their research projects and Extension activities. Judy Lindell joined the Department in December 1992. She was a Research Molecular Biologist and provided technical and administrative support for several labs and programs. She also assisted with the K-12 outreach programs and provided educational support in laboratory portions of courses in the soils area. Dan McFatridge retired after 29 years as a Research Technical Assistant in the Small Grains Improvement and Genetics Program. He was responsible for greenhouse and field nursery management, seed handling, and the cataloging of thousands of wheat lines.
There have been so many accomplishments since our last Alumni Newsletter! We are excited to share with you some faculty and staff honors, and undergraduate and graduate student recognitions on the following pages. However, we are not able to highlight all recognitions here, so please visit www.ag.purdue.edu/agry/Pages/AlumniNewsletter.aspx for a complete list of accomplishments.

**Spirit of the Land-Grant**

*Sylvie Brouder* received the 2010 Spirit of the Land-Grant Mission Award. The Purdue University award recognizes faculty for excellence in integrating and promoting our core mission: discovery, engagement, and learning. The purpose of the award is to highlight and celebrate faculty who have successfully developed an integrated, comprehensive program that benefits agriculture nationally and/or internationally.

**From Purdue to the White House**

*Gebisa Ejeta* has been busy since being named the 2009 World Food Prize winner. He was appointed as a science envoy for the U.S. State Department in 2010. Gebisa is executive director of the newly created Purdue Center for Global Food Security and serves on the boards of the Consortium of the Consultative Group on International Agricultural Research, the Sasakawa Africa Association, and the Chicago Council on Global Affairs Agricultural Development Program. Most recently, he received a presidential appointment to the Board for International Food and Agricultural Development. The board advises the administrator of the U.S. Agency for International Development on agricultural development priorities and on U.S. universities’ involvement in Title XII (Famine Prevention and Freedom from Hunger) issues worldwide.

**Giving Back**

In recent years, our clerical staff have become the Agronomy department's ambassadors of giving. Last fall they coordinated a cereal drive for the Food Finders Food Bank Backpack Program that collected 284 cereal boxes to help feed hungry children of the Lafayette area. This spring they participated in the annual College of Agriculture food drive, which is a competition between all departments in the College. Agronomy came in fourth with 1,142 items donated to the Food Finders Food Bank in Lafayette. This summer the clerical staff hosted a reverse garage sale, where they asked faculty, staff, and graduate students to bring in items that were donated to the YWCA Women’s Shelter.

Want to learn more? Visit us on the Web at: www.ag.purdue.edu/agry/
Years of Service

Clerical, service, and A/P staff were recognized recently for their years of service. Brad Eisenhauer, a computer programmer, has been at Purdue for 10 years. Corey Gerber, Director of the Purdue Crop Diagnostic Training and Research Center (DTC), has been at Purdue for 15 years. Gregore Koliantz, a continuing lecturer, and Chuck Mansfield, Extension Agronomist, have been with Purdue for 20 years. Connie Foster, receptionist, has been at Purdue for 25 years. Judy Lindell, who recently retired as a research molecular biologist, was recognized for 30 years of service. Sherron Myers, in the business office, has been with Purdue for 35 years.

Promotions

Faculty members who earned promotion in 2010 were: Dan Szymanski to Professor, Laura Bowling to Associate Professor, and Qianlai Zhuang (EAS) to Associate Professor. Faculty who earned promotion in 2011 are: Yiwei Jiang to Associate Professor, Phillip Owens to Associate Professor, and Jianxin Ma to Associate Professor.

Agronomy A/P staff who were advanced in rank include: Steve Sassman, Patrick Rich, and Jane Wiercioch.

Recognitions

Agronomy faculty and staff have done well with awards and recognitions lately. Dan Weisenberger received the 2010 MRTF Award of Achievement from the Midwest Regional Turf Foundation. Sherry Fulk-Bringman received the 2010 Agronomic Achievement Award from the Department of Agronomy. Herb Ohm received the Genetics and Plant Breeding Award for 2010 from the National Council of Commercial Plant Breeders. Tony Vyn received the Werner L. Nelson Award from the Fluid Fertilizer Foundation. Jeff Volenec was named CSSA President-Elect. Cale Bigelow (pictured above) was the 2011 College of Agriculture David C. Pfendler Outstanding Undergraduate Counselor. Kelly Delp (pictured below) received the 2011 College of Agriculture Outstanding Service to Students Award. Other recognitions include Agronomy’s Department Head Joe Anderson, who was selected to participate in the 2011 CIC Department Executive Officers (CIC-DEO) Seminar. Aaron Patton, who joined the staff as an Assistant Professor and Turfgrass Extension Specialist in 2010, was elected to the American Society of Agronomy Board of Directors as Early Career Representative.

Purdue Agronomy is fortunate to have such great faculty and staff, currently there are:

48 Faculty
29 A/P Staff
17 Service Staff
11 Clerical Staff
When you see one of the 153 undergraduate Agronomy students walking the halls of Lilly you may stop and ask them how things are going. Their usual response is "busy," and after talking with them you learn why. Between classes, clubs, judging teams, and studying it is understandable why an Agronomy undergraduate is always busy.

Scholarships
Some of their hard work has led to scholarships and recognitions. In 2010, Agronomy awarded 53 scholarships to 25 individuals (see pages 10-11 for a description and list of all undergraduate and graduate scholarships awarded in Agronomy).

Judging Teams
There are many judging teams associated with the Agronomy Department, including: Crops Judging, Soil Judging, Sports Turf Competition, and Turf Quiz Bowl. In 2010, the Crops Judging team placed fourth at the Chicago crops contest and at the Kansas City contest. The Soil Judging team placed first team and group at the regional contest in fall 2010, and competed at national contests in spring 2011, placing fifth at the American Society of Agronomy Collegiate Soils Contest and fourth at the North American Colleges and Teachers of Agriculture Collegiate Soils Contest. The Sports Turf Managers Association (STMA) annually hosts a Sports Turf Competition and Purdue’s teams took first place this year (pictured below) and eighth place. Purdue also had four teams that competed at the Golf Course Superintendents Association of America Quiz Bowl competition. Those teams placed second, 23rd, 28th, and 33rd out of 88 teams from across the nation.

Agronomy Club
Like the judging teams, the Agronomy Club also competed in contests. There were 11 students that attended the Students of Agronomy, Soils, and Environmental Sciences (SASES) Annual Meetings that were held in conjunction with the ASA, CSSA, and SSSA Annual Meetings in Long Beach, California. The Purdue Agronomy Club served as voting delegates, competed in the Quiz Bowl, Manuscript, President’s Trophy, and Club Poster contests. Samantha Downey, Autumn Skellington, and Blake Stowers placed first in the Club poster contest. Jacob Harden was elected Manuscript Chair, and Adrianne Huber was elected Parliamentarian in addition to participating in the Golden Scholar program during the meetings.

Student Blog
Keeping up with undergraduate students is increasingly more challenging, but now, you can read about them, or at least some of them. The Agronomy/ NRES Ambassadors have been blogging about their experiences as Agronomy and NRES students. There are 14 Agronomy/ NRES Ambassadors for the 2011-2012 academic year. They have even started blogging about how their internships have been going over the summer. You can read the blog by going to our website (www.ag.purdue.edu/agry) or by going straight to the blog at: agronomyambassadors.blogspot.com
What Students Say

“I love being in the Agronomy department because there are so many people willing to help me with schoolwork.”

Sara Alford
Soil & Crop Science

“I really like being a Turf student because I have the opportunity to get involved in the Agronomy Club and Turf Club in addition to the Turf Industry.”

Cameron Cox
Turf Science

“The Agronomy department is great because everyone treats you like family. I can’t imagine being anywhere else!”

Kirsten Thomas
Plant Breeding & Genetics

“I love international agriculture and being a student in Agronomy has allowed me the chance to meet and learn from world-renowned international scientists like Gebisa Ejeta.”

Adrianne Huber
International Agronomy

Study Abroad

Traveling the country to compete in contests isn’t the only traveling Purdue Agronomy students do. Purdue Agriculture in known for encouraging students to study abroad, and many Agronomy students have embraced that opportunity.

Agronomy had 15 students study abroad in eight countries during the 2010-2011 academic year. Some of the countries include Costa Rica, Italy, Iceland, and Ireland. There were four agronomy students (pictured above) who spent their spring break studying in Ireland to learn about the country’s agriculture. While there, the students attended a St. Patrick’s Day parade (they were there on March 17), visited Bunratty Castle, had tea and scones at Lilly Mae’s Café, and hiked Wicklow Mountains National Park.

Saying Goodbye

Saying goodbye to Agronomy undergraduates is always bittersweet. There were 36 graduates in December 2010 and May 2011. Some have found jobs within the Turf and Agronomy industries for organizations such as the Milwaukee Brewers, AgReliant Genetics, Peterson Ag Services, The Andersons, Scotts Miracle-Gro Company, and Crop Guard Services. Others will pursue graduate school at various institutions, including Oklahoma State University, Pennsylvania State University, University of Washington, and Purdue University. For the May graduates 17 percent are continuing their education, 61 percent are employed, 13 percent are seeking employment, and 9 percent didn’t respond when asked.

About Agronomy/NRES Ambassadors

The Agronomy/NRES Ambassadors are students who represent the Agronomy Department and NRES Program to prospective students, distinguished guests of the department, and University faculty and staff. In the upcoming academic year there are 14 Ambassadors.

The photo on the right shows the Ambassadors from the 2010-2011 and 2011-2012 academic years. (Front row from left) Ashley Sheetz, Colleen Harvey, Maryellen Przybylinski, Adrianne Huber, Gabe Macke. (Second row from left) Kirsten Thomas, Melanie Jones, Justin Shirley, Ian Champ. (Back row from left) Sara Alford, Samantha Downey, Melissa McDonald, Alex Fiock, Joey Heneghan. (Not pictured) Daniel Bechman, Katheryn Best, Jacob Harden, and Megan Walters
Samantha Shoaf, a graduate student with Dr. Herb Ohm, participated in a four-month research internship this past spring with Dr. Johnathon Lynch’s lab from Pennsylvania State University at the Ukulima research farm in Limpopo Province, South Africa. While there she assisted with research involving diverse corn populations at varying nitrogen fertilizer rates. Samantha (pictured below) lived and worked with research technicians from IIAM in Mozambique and the University of Limpopo. The research farm is funded by the Howard G Buffett Foundation and hosts research teams from CIMMYT, the University of Missouri, Texas A&M, Ending Child Hunger Organization (ECHO) and the Danforth Plant Science Center, among others.

Agronomy has been very fortunate to have a great group of 83 graduate students for the fall semester, and those students are always on the go. From research and teaching, to national meetings and softball games, our graduate students know how to work hard and play hard.

Giving Back
Agronomy graduate students also know how to give back. Myriam Larose, Branly Eugene and Blucher Menelas in Agronomy, and Taisha Venort in NRES are all from Haiti. After the devastating Haiti earthquake, they joined forces to raise money by creating and selling bracelets. Branly returned to Haiti in March 2010 to distribute food to families displaced by the January disaster.

Awards
In addition to caring, there are also several accomplished students. Agronomy recently awarded the Outstanding Graduate Student Teaching Award to Anna Verseman and the Outstanding Graduate Student Ph.D. Research Award to Ignacio Ciampitti. In addition, there were various graduate scholarships awarded. Please go to pages 10-11 to find the complete list of Agronomy Graduate Scholarships and recipients.

Softball & Chili
Grad students know how to have fun, too! Shaun Casteel, Assistant Professor and Soybean Extension Specialist, hosted a chili cook-off at his house for graduate students, faculty, and staff. The winning chili chef was honored with his or her name engraved on a large chili spoon. The 2010 winners were Brenda Owens (first place), Sara Reagan (second place), and Peter Kovacs (third place). Purdue Agronomy graduate representatives sponsored a co-ed softball team named “High Yield Potential.” A majority of the team consisted of agronomy graduate and undergraduate students, but Agricultural Economics graduate students helped fill the roster. The team played in three regular season games, winning two of those games and qualified for the playoffs. However, the team did not advance out of the first round of the playoff bracket. This season was a huge success and plans have been put in place to continue for several more seasons.

Saying Goodbye
It’s always hard to say goodbye, but students graduate and move on; it is all part of the cycle. Since last August, 13 graduate students have earned their degrees (seven Ph.D and six M.S.). Some of the M.S. students are now pursuing a Ph.D., including Ricardo Arias at University of Wyoming. Some Ph.D. graduates are pursuing post-docs, including Bibi Naz at the University of Washington, Myriam Larose at the University of Michigan in Ann Arbor, and Elizabeth Buescher at Purdue University. Some students found industry positions, such as James Rutledge, a Ph.D. graduate who is a Product Development Manager for Bayer CropScience - Environmental Science, and Kristin Chandler who works for Pioneer Hi-Bred. Some graduates found academic positions. Shalamar Armstrong is an assistant professor at Illinois State University, and Pasjee Kong Sila has a faculty position in Thailand. Others returned to their home countries, like Mohammad Wali Salari and Mahboobullah Nang who returned to Afghanistan to teach. Another graduate, Patrick Woodson (along with his wife, Aubrey) are moving to Uganda to serve in the Peace Corps.

South Africa
Samantha Shoaf, a graduate student with Dr. Herb Ohm, participated in a four-month research internship this past spring with Dr. Johnathon Lynch’s lab from Pennsylvania State University at the Ukulima research farm in Limpopo Province, South Africa. While there she assisted with research involving diverse corn populations at varying nitrogen fertilizer rates. Samantha (pictured below) lived and worked with research technicians from IIAM in Mozambique and the University of Limpopo. The research farm is funded by the Howard G Buffett Foundation and hosts research teams from CIMMYT, the University of Missouri, Texas A&M, Ending Child Hunger Organization (ECHO) and the Danforth Plant Science Center, among others.
**Ignacio Ciampitti, Ph.D. Student**

*Major Professor: Tony Vyn*

**Briefly describe your research.**

The main focus of my Ph.D. thesis research is the study of nitrogen use efficiency (NUE) under different experimental sites (environment component), hybrids (genetic component), plant densities and N rates (management component factors) in high yielding maize production systems. It is crucial that the N responsiveness, NUE, and N stress tolerance of current maize germplasm continue to be investigated and improved because N fertilizer costs remain relatively high, environmental concerns over excessive N application are increasing, and recommended plant densities move progressively higher. Moreover, the size and complexity of the genetic x environment x management (G x E x M) interactions, although difficult to deal with, should be one of the ways to speed up the progress in maize productivity gains to help address the foremost grand challenge of our world (i.e. that of “global food security”).

**Why do you feel your area is important to research?**

Improved knowledge of plant nutrition and physiological relationships can be useful for developing superior maize management systems and for achieving not only short-term results, but long-term improvement of nitrogen use efficiency (NUE) through progress in breeding. Ultimately, I consider that this research is essential because it pursues the development and promotion of scientifically based understanding of the fundamental physiological processes governing plant N nutrition dynamics in modern maize hybrids grown at a range of plant densities.

**What are your future plans? What do you want to do after you graduate?**

I intend to apply for a faculty position at a university, or for a research scientist position (e.g. crop physiology or plant nutrition) in an international research institution. I’m excited about the possibilities this degree will enable in my foreseeable future. Furthermore, I strongly believe that a Ph.D. program in Agronomy in an institution of excellence such as Purdue University will be invaluable in helping me achieve my future goals.

---

**Ani Elias, Ph.D. Student**

*Major Professors: Mitch Tuinstra and Rebecca Doerge*

**Briefly describe your research.**

My research involves the application of statistical reasoning for evaluating variations in yield performance of maize crop across diverse environmental conditions in the United States Corn Belt. This research is a collaborative effort between the Agronomy department in Purdue University and Dow AgroSciences. The project concentrates on the estimation of genotype by environment interaction (GEI) and characterization of the reasons for it.

**Why do you feel your area is important to research?**

Most agronomically and economically important traits exhibit GEI irrespective of the type of crop, making GEI a challenge to plant breeders, agronomists, and crop producers. GEI reduces correlation between genotypic and phenotypic values, thus complicating selection of superior genotypes, and reduces the progress from selection. Cause, nature, and implication of significant GEI should be carefully considered for selecting the genotype. In addition, stability in performance of a variety is important for its commercial release. Statistical methods can be utilized to estimate and characterize GEI, and thus can tremendously aid breeders, researchers, and farmers. Being a model plant and a widely cultivated crop in the United States, maize fits best for this study.

**What are your future plans? What do you want to do after you graduate?**

My career goal is to use statistical knowledge in investigating problems in plant genetics, especially in field-oriented experiments. I would like to continue working on GEI and simulation of crop performance for better understanding the impact of interaction of environment on crop performance. My research will facilitate plant geneticists, breeders, and farmers in better utilization of their resources for best outcomes in this age of higher food demand, scarce natural resources, and global warming. The interdisciplinary nature of my research interests demand close collaboration with experts in diverse scientific fields. My proficiency in working with a multidisciplinary team suggests promise for success in future research activities.
Each year, Purdue Agronomy is fortunate to be able to give scholarships to many students. In 2010-2011, the department awarded $75,280 to its students. Below you will find a list with descriptions of all of the scholarships awarded by the Department of Agronomy with names of the most recent recipients. If you have questions about any or all of the scholarships please contact Karen Clymer at 765-494-4775. For information about donating to a scholarship contact the Agricultural Advancement office at 765-494-8672.

Undergraduate Student Scholarships

William H. Daniel Scholarship (for undergraduate or graduate students majoring in turf science):

Justin Shirley, Turf Science

Golf Course Superintendent Association Scholarships (awarded to undergraduate students in turf science by regional Superintendents Associations):

Michiana awarded to: Tony Feitz, Turf Science
Hoosier awarded to: C.J. Coy, Turf Science
Joe Cravens Memorial awarded by IGCSAA to: Chad Melton, Turf Science

Ozzie Luetkemeier Endowment in Agronomy (for the study abroad program and professional development activities):

Samantha Ambrose, Agronomic Business & Marketing

Charles and Rosalee Schmidt Scholarship (for students in the College of Health and Human Sciences or Agronomy):

Mitchell Hardy, Agronomic Business & Marketing

James J. Vorst Cropping Systems and Soil Science Scholarship in Agronomy (for students in cropping systems and soil science):

Donald J. Graper, Agronomic Business & Marketing

Beck Foundation Scholarships (awarded to the top overall freshman, sophomore, and junior in Purdue Agronomy):

Adrianne Huber, International Agronomy
Kirsten Thomas, Plant Breeding & Genetics
Melissa McDonald, Plant Breeding & Genetics

Keim Scholarship (awarded to a sixth semester junior majoring in Agronomy with professional interest in plant genetics):

Kirsten Thomas, Plant Breeding & Genetics
Daniel Bonamigo, Plant Breeding & Genetics
Woradee Werayawarangura, Soil & Crop Management

Turf Scholarships (for turf science majors):

Fassnacht Scholarship: Brittney Ray, Turf Science

Golf Day Scholarships

presented by Syngenta: C.J. Coy, Turf Science
presented by Bayer: John Thackery, Turf Science

Steve Frazier Memorial Scholarship:

John Thackery, Turf Science

Midwest Regional Turf Foundation Scholarship (MRTF) (for turf science majors):

Kurt Hockemeyer, Turf Science
Zak Peterson, Turf Science
Cody Whitis, Turf Science
Allison (Ruch) Lewis, Turf Science
Clayton Walters, Turf Science
Cameron Cox, Turf Science
Chad Melton, Turf Science

F.E. Robbins Scholarship (for juniors and seniors majoring in Agronomy or closely related fields):

Jason Geis, Soil & Crop Management
John Scott, Soil & Crop Management
Melissa McDonald, Plant Breeding & Genetics

Kenneth and Mary Cohee Crop and Soil Science Award (for juniors and seniors studying crop and soil sciences and who are interested in pursuing a career in the crop production industry):

Joseph Heneghan, Soil & Crop Science
Danielle Atkins, Soil & Crop Science
Rebecca Saucerman, Plant Breeding & Genetics
Lori Nussbaum, Soil & Crop Science
Adrianne Huber, International Agronomy
Daniel Bechman, Plant Breeding & Genetics
John Reiger, Soil & Crop Management
Hardy Scholarship (for Indiana residents studying crop science in Agronomy):

- Jacob Harden, Soil & Crop Science
- Sara Alford, Soil & Crop Science
- Kira Albright, NRES

M.O. Pence Scholarship (for both an undergraduate and graduate student with a career interest in agronomic extension or in applied agronomic research):

- Cody Fink, Soil & Crop Science
- Eric Miller, M.S. Student

Kenneth B and Mary Cohee Scholarship in Agronomy (for Agronomy students):

- Katheryn Best, NRES Student
- Chad Melton, Turf Science
- Cameron Cox, Turf Science
- Bradley Thomas, NRES
- Alexandro Bazen, NRES
- William Ritter, Soil & Crop Management
- Andrew Katz, Plant Breeding & Genetics
- John Reiger, Soil & Crop Management
- Brian Gault, NRES
- John Wanhainen, Soil and Crop Science

Hilst Scholarship (for students enrolled in Agronomy with an interest in soil and crop science):

- Kelsey Tuholski, Soil & Crop Science
- Martha Kille, Soil & Crop Management
- Uday Mitsuyasu, Plant Breeding & Genetics

Carol A. Thiele Memorial Scholarship (for women studying soil and water conservation, engineering, or agriculture):

- Adrianne Huber, International Agronomy
- Kira Albright, NRES
- Sara Alford, Soil & Crop Science
- Danielle Atkins, Soil & Crop Science

Max E. Slack Memorial Scholarship in Turf Management (for turf students):

- Tony Feitz, Turf Science
- Joseph Gerking, Turf Science

Mary Frances Seever Award (for freshman students from Sullivan, Vigo, or Knox counties):

- Amber Fowler, Animal Science

The following scholarships were not awarded this year:

- Gerald and Joan Gentry Scholarship (for students in agricultural science).
- Koknke Junior Award in Soil Conservation (covers travel expenses for juniors in soil sciences who participate in national professional meetings).
- Maurice B. Woodward Memorial Scholarship in Agronomy (for undergraduate Agronomy students).
- Emerson J. Kuhn Scholarship (for undergraduates seeking a degree in the Department of Agronomy or Animal Science).

Graduate Student Scholarships

Joe L. White Graduate Student Award in Soil Chemistry and Mineralogy (recognizes outstanding M.S. and Ph.D. students in soil chemistry and mineralogy):

- Kiran Rana

Dr. Wyman E. Nyquist Scholarship (recognizes graduate students in the disciplines of genetics, plant breeding, plant genomics, and/or related agronomic sciences that include a significant genetics component):

- Ani Elias

The Marvin and Barbara Phillips Scholarship (recognizes outstanding M.S. and Ph.D. students interested in extension):

- Chun Zhao
- Ignais Ciampitti

John Axtell Graduate Student Award in Plant Breeding and Genetics (recognizes outstanding M.S. and Ph.D. students in plant breeding, genetics, and genomics):

- Megan Gillespie

Loyal F. “Pete” Bauman Memorial Scholarship (recognizes and supports outstanding M.S. and Ph.D. students in plant genetics and breeding):

- Not awarded this year

Wayne P. Rothgeb Memorial Scholarship (recognizes outstanding M.S. and Ph.D. students in Agronomy):

- Not awarded this year

Agronomy Ambassadors and scholarship winners (front left) Samantha Downey, Megan Walters, Kirsten Thomas, (middle row) Samantha Ambrose, Katheryn Best, Adrianne Huber, and Melissa McDonald, (back row) Justin Shirley, Cody Fink, and Ian Champ.
It is with many thanks that we announce the Agronomy Donors from the 2010-2011 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, 2010 to June 30, 2011 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 about how you can contribute to the Agronomy Department, please call the Purdue Agriculture Development Office at 765-494-8672, or 800-718-0094.

Donor List

Individuals

Mrs. Janet Peddicord Adler and Mr. John W. Adler
Dr. Jack L. Albright and Mrs. Lorraine H. Albright
Ms. Melanie L. Allan
Ms. Bonnie M. Anderson Rons and Mr. Curtis H. Rons
Mr. Kevin A. Arnold
Mr. Jerry M. Arnold
Mr. Christopher P. Aulbach and Mrs. Sarah K. Aulbach
Mr. Michael J. Ault
Dr. Harold Shepherd Aycoc
Dr. Robert K. Bacon
Dr. Peter S. Baenzer
Mr. Tony R. Bailey and Dr. Kelley C. Bailey
Mr. Brian J. Ball
Mr. Alvin K. Balmer and Mrs. Paulette Maxine Balmer
Mr. Eric D. Band and Mrs. Judith E. Bandy
Mr. Stuart S. Bangs and Mrs. Sandra L. Bangs
Mr. Kevin L. Barber
Dr. Robert F. Barnes
Dr. Richard L. Barns
Mrs. Melissa J. Bauer and Mr. William Bauer
Mr. Darwin E. Bauer and Dr. Jean Warner Bauer
Mr. Winifred P. Bauman
Dr. Marion Baumgardner and Mrs. Maralee Baumgardner
Mr. Joseph E. Beale and Mrs. Jennifer J. Beale
Dr. James B. Beard and Mrs. Harriet Beard
Lt. James Robert Beatty
Mr. James J. Beatty III and Mrs. Janet H. Beatty
Mr. Ronald A. Bellinger and Mrs. Robin G. Bellinger
Mr. John R. Bernard and Mrs. Mary Ann Bernard
Mr. Robert B. Bevington and Mrs. Marilyn A. Bevington
Dr. Edgar H. Beyer
Mr. John L. Bieber
Mrs. Pamala A. Bied and Dr. Gary S. Buid
Ms. Joanna K. Billiard
Mr. B.J. Bingham and Mrs. Anne M. Bingham
Mr. James R. Blank and Mrs. Martha J. Blank
Mr. William A. Blank
Mr. Harold E. Bockelman
Mr. Thomas G. Bogenschutz
Mrs. Sharon A. Bohannon
Dr. Lawrence P. Bohl and Mrs. Lorraine H. Bohl
Ms. Elizabeth Anne Bower
Mrs. Bonnie L. Brauer
Mr. Joseph M. Braun
Mr. L. Randall Bremer
Mr. Robert L. Brewer and Mrs. Jane A. Brewer
Mr. Rex A. Brock and Mrs. Nancy J. Brock
Mr. Max E. Brock
Mr. Jarvis H. Brown
Mrs. Julia L. Brown and Mr. Jeffrey E. Brown
Mr. Virgil J. Bulach
Mr. Kurtis L. Bullard and Mrs. Elizabeth A. Bullard
Mrs. Mary A. Burget
Mr. Robert F. Burge
Mr. Virgil J. Bulach
Mrs. Julia L. Brown and Mr. Jeffrey E. Brown
Mr. Max E. Brock
Mr. Jarvis H. Brown
Mrs. Julia L. Brown and Mr. Jeffrey E. Brown
Mr. Virgil J. Bulach
Mr. Kurtis L. Bullard and Mrs. Elizabeth A. Bullard
Mrs. Mary A. Burget
Mr. W. Scott Calvert and Mrs. Julie Calvert
Mrs. Molly Cammerer and Dr. Richard C. Cammerer
Mr. Nahuel Lo Cane
Dr. Ronald P. Cantrel
Mr. Jeff Paul Cardinal
Mrs. Gail A. Carmody
Mr. Dennis D. Carnahan
Dr. Guthrie E. Carr and Mrs. Betty L. Carr
Mrs. Barbara M. Carter
Mr. Robert A. Chattin
Dr. Jin-Song Chen
Mr. Charles Chetwynd and Mrs. Sandra L. Chetwynd
Dr. Ellsworth P. Christmas and Mrs. Nancy Christmas
Mr. Philip L. Christie and Mrs. Mary K. Christy
Mr. Wayne D. Clark and Mrs. Wilma K. Clark
Mr. Jack L. Colbert and Mrs. C. Sue Colbert
Mr. Neil R. Collignon and Mrs. Allison M. Collignon
Ms. Megan C. Comerford
Mr. Fredrick L. Connelly
Mr. Daniel L. Conner
Mr. Keith Sheldon Cooper
Mr. Regaland Eugene Cortnett
Mr. Richard W. Coy and Mrs. Hortensia M. Coy
Mr. Curtis R. Craifton and Mrs. Michelle L. Craifton
Mrs. Helen E. Cramer
Mr. Harold E. Creech
Mr. Rodger Lee Creepe
Mr. Richard Dennis Cross
Mr. Gary B. Crum and Mrs. Lisa M. Crum
Dr. Donna P. Cummings and Mrs. Tanya L. Cummings
Mr. T. Michael Czaurnot
Mrs. Gwendolyn H. Daniel
Mr. James A. Daniels
Mrs. Lorri Dannemiller and Mr. Jeffrey A. Dannemiller
Dr. Craig Daughtry and Mrs. Phyllis Toebsh Daughtry
Mr. Steven E. Decker and Mrs. Darlene Decker
Mr. Jerry W. DeVore and Mrs. Shelly L. DeVore
Mr. Donald G. Dillabough and Mrs. B. Joyce Dillabough
Mr. James H. Dirlam and Mrs. Norma M. Dirlam
Mr. Glen Howard Doll
Mr. Maurice Douglas
Mr. David Vern Dunn
Dr. Gordon R. Dutt
Mr. N. Fay Earnhart
Mr. J. Ben Edmondson
Dr. Gebisa Ejejta and Ms. Senait Workalemu
Mr. Donald L. Ekstrom
Mrs. Margaret E. Eller and Dr. Jimmie L. Eller
Mrs. Karyn L. Emmons and Mr. Derek J. Emmons
Dr. Paul H. Everett
Dr. Steven Lewis Fales
Mr. Robert Fanning and Mrs. Sandra Ramsey Fanning
Mr. Paul L. Farris and Mrs. Rachel J. Farris
Mr. David W. Fears and Mrs. Lynn Fears
Mr. Jack R. Fenwick and Mrs. Ann L. Fenwick
Mrs. Jeslyn Ferguson and Mr. Willard Ferguson
Mr. Stephen E. Filder
Mr. Gerald M. Finney, Jr. and Mrs. Sydney L. Finney
Mr. Steven M. Fischer
Nancy Fitzgerald-Belovary and Mr. Daniel Belovary
Mr. Eugene D. Flaningam and Mrs. Angie Flaningam
Mr. Jerry L. Flint
Dr. Robert A. Floyd and Mrs. Marlene G. Floyd
Mr. Jeffrey A. Ford
Ms. Marilyn Fowler
Dr. Donald P. Franzmeier and Mrs. Karen E. Franzmeier
Ms. Sherry F. Fridgen-Brook and Mrs. J. Wayne Brooking
Mrs. Mary E. Fuller
Mr. Dan L. Gamble
Mrs. O. Jane Gemmecce
Mr. David A. George and Mrs. Lael A. George
Mr. David B. Glunt
Mr. Michael P. Goad and Mrs. Susan G. Goad
Mr. Morris Goodwin
Dr. Jack E. Goris and Mrs. Anita L. Goris
Dr. John G. Geavle and Mrs. Sheila F. Geavle
Dr. V. Steven Green
Mr. Gary J. Green and Mrs. Nell K. Green
Mrs. Helen Grenard
Dr. Gregory K. Grenz
Mr. Kenneth R. Grippenfrog
Mr. Dale E. Habenicht and Mrs. Wanda C. Habenicht
Mr. Michael A. Hacker
Mrs. Elaine K. Hale and Mr. Jimmy R. Hale
Mr. Robert W. Hancock
Mr. James L. Hanks and Mrs. Tess L. Hanks
Mr. Carl S. Hacker and Mrs. Kathy A. Hacker
Mr. Kevin L. Harner and Mrs. Elizabeth A. Harner
Dr. Fred Harris and Mrs. Pamela Barnes Harris
Ltc. Jack M. Hart (Ret) and Mrs. Margaret A. Hart
Mr. Scott A. Hartwell and Mrs. Melinda K. Hartwell
Dr. O. Elwood Hatley
Mr. Joseph L. Hawkins
Mr. Jeffrey B. Hebble and Mrs. Susan M. Hebble
Dr. Glen A. Hemstock
Ms. Nicole Hendrickson
Mrs. Tara Beth Henry and Mr. Jeremy C. Henry
Mr. Dean L. Herberger
Mr. John H. Hills
Mrs. Martha Kathyn Hilst
Mr. David Earl Hines and Mrs. Diann K. Hines
Dr. Teresa Katherine Hogue
Dr. Donald A. Holt and Mrs. Marilyn L. Holt
Dr. Eldon L. Hood and Mrs. Mary K. Hood
Mr. James A. Hopf and Mrs. Terry Darline Hopf
Mr. Oscar Hopkins Jr. and Mrs. Beverly A. Hopkins
Mr. William D. Hosteter
Dr. Chi-Hua Huang
Mr. Gary L. Hudson and Mrs. Sarah R. Hudson
Dr. Luther B. Hughes
Mr. Gary L. Hunter and Mrs. Paula J. Hunter
Dr. John C. Inman
Mr. Trent J. Innman and Mrs. Doreen M. Inman
Mr. Brad L. Innman and Mrs. Sandra Kay Innman
Mr. Clair C. Inniger
Ms. Elizabeth A. Iversen
Dr. Peter M. Jacobs and Mrs. Cassandra Jacobs
Mr. Chris D. Jeffries
Mrs. Catherine E. Jewett
Mr. Randall L. Johnson and Mrs. Vicki L. Johnson
Ms. Karissa B. Jones
Mr. Edward E. Jordan and Mrs. Diana R. Jordan
Mr. Rex L. Jourmay and Mrs. Carolyn A. Jourmay
Dr. Michael C. Karr
Mrs. Sue Kaminsky Kast and Mr. James L. Kast
Mrs. Joan Kauflman
Mr. Joseph W. Keachshall
Dr. Wayne E. Keim and Mrs. Joyce N. Keim
Mr. Eric T. Kelley
Mr. Lloyd W. Kennedy
Ms. Tammy G. Kettler and Mr. Bruce Kettler
Mr. John D. Kinney
Mr. Dana L. Kinney
Dr. Eileen J. Kladivko
Mr. Andrew Kleinschmidt and Mrs. Bobbi Kleinschmidt
Dr. Jill Wittbeck Knapp
Mrs. Sheila L. Koller and Mr. H. Ronald Koller
Mr. Anthony J. Kritsch
Mr. Norman W. Kuhn and Mrs. Jane A. Kuhn
Dr. William E. Kuhn and Mrs. Joyce M. Kuhn
Dr. Royce L. Lambert
Mr. Richard Lee Large and Mrs. Sally M. Large
Ms. Carol Jean Latowski
Ms. Dorothy D. Lawson
Dr. Jerry A. Leenheer
Mr. Stephen L. Legg
Mr. Roger D. Levy and Mrs. Susan Carol Levy
Mrs. Dorothy L. Light
Mr. Darrell R. Lind
Mr. James A. Linville
Meet Jianxin Ma, a faculty member for five years

Please briefly describe your research.

We have broad interests that span from comparative, functional and evolutionary genomics, and bioinformatics; to germplasm assessment and enhancement, with an emphasis on translational genomics for soybean improvement. One major objective of our research program is to transfer the knowledge gained in the model plants and other crop species to uncover the complex biological processes and basic mechanisms underlying important agronomic traits in soybean. We also strive to develop and utilize genomic tools and resources in soybean to facilitate the discovery of soybean genes underlying complex agronomic traits (for example, biotic and abiotic resistance, plant architecture and growth habit, maturity, domestication, and yield traits), and to develop a molecular marker for effective implementation of marker-assisted selection in various soybean breeding programs.

How did you get involved with that research?

Our research is actually driven by the needs of the soybean research community and end users. Shortly after my appointment as faculty at Purdue, our lab participated in the annotation and analysis of the soybean reference genome sequence. In particular, we were responsible for annotating the most abundant DNA components, which are generally called “junk” DNA, in the soybean genome. This work not only enhanced our understanding of the structure and organization of the soybean genome, but ensured more accurate annotation of the approximately 46,000 soybean genes. With the availability of a complete set of soybean gene sequences in hand, the next step for us and many other researchers is to figure out which genes are responsible for particular traits of agronomic importance, and to develop molecular markers to assist the selection of traits and genes of interest in soybean breeding.

Why do you feel your area is important to research?

Although the soybean genome has been sequenced recently, various genomics tools and resources available in model systems (for example, maize, rice, and Arabidopsis) remain to be developed in soybean. One of our research goals is to build such tools to translate the basic genomic information into tangible applications for soybean improvement. The long-term impact of our work will be felt by soybean producers (the end users) when genes and markers identified or to be identified in our programs are used by soybean breeders to develop new soybean cultivars.

What do you wish other people knew about your area of research?

Soybean genetics and genomics is an important area of research that has been revolutionizing soybean productivity and quality, though it may still be under-appreciated or unappreciated by many other people.

How do you feel your industry is changing? What will it look like in five years?

Soybean is the most valuable legume crop and has numerous nutritional and industrial uses. Over the past several years, great efforts have been made on soybean research that have helped (and will continue to help) soybean growers produce and sell the crop in greater quantities and at lower costs. However, soybean acreage in the United States appears to have reached capacity, and consumer demand for soybeans is limited by availability. Thus, it is critical to increase soybean yields to meet the growing demands for soybean production. Genomics and biotechnology have shown promise in helping to maximize soybean yielding potentials to meet the global needs.

What do you like about working in Purdue Agronomy?

Purdue Agronomy’s community is very inclusive and welcoming to everyone. As a relatively new faculty member, I particularly appreciate the friendship, guidance, and support of our colleagues. In addition, the internationally-recognized reputation of Purdue Agronomy enables me to lead or participate in several cutting-edge research projects and collaborate with scientists around the world.

What’s your favorite time of year?

I like the summer season, as it allows me plenty of time to enjoy the sunshine with our beans at the Agronomy Farm.

What might someone be surprised to know about you?

After studying soybeans for so long, it might surprise you to know that two years after joining the faculty, I had absolutely no idea when to plant soybeans.
Please briefly describe your research.

My research focus is to ensure that current nutrient management practices are sustainable in the long term. My current research projects include evaluating how phosphorus source, rate, timing, and placement impact phosphorus losses from soil to water, understanding the role of stream and ditch sediments as phosphorus sources and sinks to water bodies, and examining the relationship between soil test phosphorus and other soil properties to the amount of soluble phosphorus in soils. I work with colleagues in the Department of Animal Sciences to determine how diet manipulation impacts the excretion of specific manure phosphorus compounds and how these compounds are sorbed by soil. I am also evaluating why soil test potassium can change so dramatically when soils are dried prior to testing and I am doing some work with nitrogen again, as well. Nearly all of my research is really done by my graduate students, and I get the benefit of learning from all of them over time.

I spend most of my time developing software for crop and livestock producers who need to verify that their agricultural management practices protect water quality. This is a big job because we are doing this for the entire country and every state does things differently.

How did you get involved with that research?

Both my master’s and doctoral projects were in nitrogen, but we already had people in the department working on nitrogen, so I decided to work on phosphorus because I knew that it was important for water quality — I knew it caused algae blooms, which in turn impacts the aesthetics of the water because water clarity decreases and the water does not look very clean. When I first started working on water quality-related phosphorus research in the early 1990s, there were not very many other agricultural scientists working in this area. It is now a widely researched field.

The software development part of my job started as a way to help farmers keep their information and management practices in a more ordered system and to automate the calculations needed to determine manure and commercial fertilizer application rates. I didn't know it would turn into a big national project.

How do you feel your industry is changing? What will it look like in five year?

Like all fields, agriculture is changing as our farmers adopt and adapt improved technologies and management practices for crop and livestock production. We have seen numerous changes in feed management in the last decade as most pork and poultry producers now include phytase in their animals’ rations to both reduce feed costs and reduce phosphorus excretion in manure. We now have access to a tremendous amount of spatial information about our soils and landscapes and this should allow us to develop scientifically defensible site- and time-specific guidelines and recommendations that we can deploy directly to application equipment in the field via new technologies like smart phone applications. It is a very exciting time to be in agriculture!

What's your favorite time of year?

That's a tough question! I really like the fall because of the cool temperatures, the beauty of our trees as they put on their annual color show, and the bountiful harvest of our crop producers. I also like the spring and summer because I like watching our fields turn green as our crops emerge and I am just fascinated by how a tiny seed can produce so much in the course of a single growing season. I like winter too, but not here as we seldom have enough snow to really take advantage of winter sports and ice fishing can be pretty iffy around here.

What do you do when you are not working or researching?

Well I love to fish and I like sports cars and muscle cars, but in reality I have spent most of my spare time with our two kids. I coached soccer for about 10 years along with a little baseball and softball early on. My son will be a freshman at Purdue this fall and my daughter will be a sophomore in high school. Once the kids are on their way I hope to do more fishing and get my cars running!

What might someone be surprised to know about you?

I grew up in Chicago. When I started college I knew what corn looked like because there was a small sweet corn field near my high school. I also knew what wheat looked like because Orion Samuelson's Farm Report was on TV Saturday morning before the cartoons (he was our keynote speaker at my college graduation!). I had no idea how to tell the difference between wheat, oats, and barley and I had no idea what soybeans, potatoes, or other crops looked like.
Meet Phillip Owens a faculty member for 6 years

Please briefly describe your research.

Historically, the field of pedology has had a strong focus in descriptions, taxonomy, and mapping of soils as discrete elements of landscapes, delineated by sharp, distinct boundaries (map polygons), each related to soil architecture (taxonomic/morphologic differences). Traditional soil map products illustrate the form of soils without explicitly illustrating how soils function. Pedology has evolved with advances in the theoretical and computer technology. Among the new developments is the inter-disciplinary field of “hydropedology” that lies at the intersection of pedology, hydrology, and ecology, with applications in (1) large-scale (regional and national) assessment of soil/land resources as the support base for ecosystems; and (2) developing new understanding of co-evolution of spatial patterns of soils, vegetation, and drainage networks from field to watershed scales. My research integrates the new discipline of hydropedology with digital soil mapping to address environmental and agricultural problems that impact all of society. My research program utilizes traditional Soil Survey products to create a new product that is more applicable to end-users. These value-added map products are used to quantify ecosystem function at multiple scales and to predict ecosystem responses due to climate or human landscape changes.

How did you get involved with that research?

When I arrived at Purdue, there were many enthusiastic scientists that asked common questions such as: “How much water does the soil in specific areas store and how fast does water move? How do they function to store carbon? How do they function to produce crops?” There was a tremendous need for this digital information and there were not good methods to develop and improve this type of soil information to answer these questions. Since I was trained as a pedologist and a soil geomorphologist, which focuses on observing patterns in the landscape over broad areas, I began developing methods to utilize my training with extensive databases to provide soil predictions in the form of maps. I had been working with geostatistical approaches for predicting soil properties; however, there is a tremendous amount of data needed to make accurate predictions for some soil properties. I took a different approach that uses soil data combined with knowledge of landscape patterns to make predictions for estimating soil functionality.

Why do you feel your area is important to research?

Soils function to provide water and nutrients for plant growth, maintains air quality, stores soil carbon, serves as a construction medium and filters contaminants from our water. Societies depend on soils and how soils are managed can determine the long-term success or failure of society. Being able to predict how soils function for the specific purposes is crucial for the wisest management of our soil resources.

What do you wish other people knew about your area of research?

I think my research area is fundamental for taking lessons learned and knowledge accumulated and applying that information over large areas. Scientists work to understand processes in the lab or in small plot; however, in the past there have been difficulties in upscaling information so that the information can be applied over large areas. With the increased computing power, available data and new software, these limitations faced in the past will be solved.

What’s your favorite time of year?

I love the fall in Indiana. Thinking about the fall foliage and cool crisp air makes me smile. With classes going on, football and outdoor field activities, fall on campus is an exciting time.

What do you do when you are not working or researching?

When I am not working, I love spending time with my family (my wife Brenda who is an Agronomy Ph.D. student and 3 kids Ray, Laura and Robert ages 9, 7 and 5). We paddle rivers, hike and play outside as much as possible. I also love to hunt and fish which is something I did growing up in the hills of Arkansas. It provides a way to observe the outdoors and think without distractions.

What might someone be surprised to know about you?

I grew up in Havana, Arkansas (pop. 300) and I am the only person in the school history that has earned a Ph.D. Due to space contraints all faculty questions and answers were edited to fit on one page. To read the full questions and answers please visit: www.ag.purdue.edu/agry/Pages/AlumniNewsletter.aspx
Meet Tony Vyn a faculty member for 13 years

Please briefly describe your research.
I conduct intensive crop management and physiology research to recommend changes in Eastern Corn Belt cropping systems to help achieve improved economic and environmental sustainability. Essentially all of the corn research attempts to improve scientific understandings of Genotype by Environment by Management (G x E x M) interactions to (a) suggest ways that corn breeders can improve their phenotyping for traits of interest like nitrogen use efficiency, (b) help corn producers achieve higher yields in given production environments, and (c) reduce negative environmental impacts (e.g. greenhouse gas emissions and soil erosion) typically associated with, intensive corn production systems. My graduate students projects are focused on better understanding the interactions of two or more crop management factors like tillage, crop rotation, plant density and nutrient placement systems on corn response, soil/air quality factors or both.

How did you get involved with that research?
I have had a fascination with corn response to integrated management systems since my M.S. research on plant-to-plant variability in corn. My advisor (Dr. Terry Daynard) at the time was instrumental in encouraging me to explore the science behind the uniformity of plant community response to changing planting systems at progressively higher corn yield levels. My interest in tillage systems grew from my earliest experiences on the family farm near Ridgetown, Ontario, Canada (my father allowed me to moldboard plow fields near the farmhouse at the age of 11). However, that early exposure to “conventional” tillage transitioned to a career-long interest in expanded adoption of “conservation” tillage like no-till and strip-till systems in corn and soybean production.

Why do you feel your area is important to research?
National and global food security will not be achieved in the coming decades without an increased public - as well as private - investment in a more balanced crop research approach that integrates genetic, management and environmental conservation technologies to achieve corn yield levels closer to the potential yields in given soil/climatic environments. Training future scientists in cropping systems research is simultaneously my greatest challenge and my biggest fulfillment.

What do you wish other people knew about your area of research?
Cropping systems research, although very complex to undertake and difficult to fund, is perhaps the most rewarding area of research because it never analyzes new technology opportunities in isolation, is inherently multi-disciplinary, and has immediate relevance to other “basic” scientists as well as crop farmers. There are numerous and exciting job opportunities for graduate students in this field (e.g. seed industry and academic employment are common choices), and future career opportunities look more promising than for many other areas of science.

How do you feel your industry is changing? What will it look like in five years?
Government funding of cropping systems research has declined dramatically in the last 10 years, and public institution involvement in cropping systems research may have to become more and more dependent on financial support from corporations and agricultural commodity boards. Three of my four current graduate students (pictured below) are being supported by seed or agricultural equipment industry grants; a decade ago public sector support would have been much higher. In terms of the research itself, it is decidedly more data intensive now than in prior decades.

What’s your favorite time of year?
Fall, on a personal level primarily because of more moderate temperatures and lower humidity levels compared to the summer, but on a professional level it gets exciting when plot harvest proceeds with few complications and meaningful treatment responses.

What do you do when you are not working or researching?
Sleep. But I also relax by reading, hiking, camping, downhill skiing, teaching Sunday School to 9 and 10-year olds, and visiting with family members in Texas, Colorado and Ontario, Canada.

What might someone be surprised to know about you?
My first language was not English, but Dutch. My parents immigrated to Canada from the Netherlands, and I was the oldest of their 7 children.
Agronomy had a strong presence at Spring Fest again this year. The Agronomy club, with help from the ambassadors, grad students, and Staff hosted hands-on activities engaging children and adults in “What Plants Need to Grow”, “Corn Processing – Grinding and Shelling” and “Pop Corn Facts”, where they gave away popped corn which always draws a crowd. Fund raising activities included the Turf Club selling rounds on their putt putt course, Environmental Science Club selling cotton candy & drinks and the Agronomy Club selling their, always popular, elephant ears.

**Africa Class**

*Drs. Schulze* and *Van Scoyoc* taught a course in the Spring, 2011 titled “African Development Activities”. The purpose of the course was to increase student exposure to international perspectives. The course was a collaborative project between Purdue University and Ivy Tech Community College in Indiana, Chepkoilel University College of Moi University in Eldoret, Kenya, and the University of Fort Hare in Alice, South Africa. The course examined the agricultural, cultural, economic, environmental, and social aspects of sub-Saharan Africa with an emphasis on agricultural development activities in Kenya and South Africa.

**Crop Diagnostic Training and Research Center**

The Purdue Crop Diagnostic Training and Research Center (DTC) has been in full swing this summer. There were 19 DTC days scheduled; six of them were open to the public. Topics covered included weed management, corn growth and development, soybean stand establishment, fertilizer additives, disease identification, insect identification and management, nitrogen management, and forage management. Graduate student *Eric Miller* is pictured here with two attendees during one of the training days.
Distinguished Ag Alumnus

Agronomy was thrilled to recognize Vern Hawkins, president of Syngenta Crop Protection, as a 2011 Purdue University Distinguished Agriculture Alumnus this past spring. The award honors mid-career Purdue Agriculture graduates who have made significant contributions to their profession or society, and have a record of outstanding accomplishments. After graduating from Agronomy, Hawkins went to work for a company now owned by Syngenta, and 23 years later worked his way up to president of Syngenta Crop Protection. He is shown here with his parents and high school agriculture teacher.

Afghanistan

A Purdue University team helping Afghanistan build its agricultural economy by rebuilding its agricultural universities has received the Purdue Agriculture 2011 Team Award. Agronomy professor George Van Scoyoc is a member of that team. He is shown here teaching Afghan agriculture to the Indiana National Guard Agribusiness Development Team members deploying to Afghanistan. Purdue also provides master's-level education for Afghan junior faculty who graduate and return to their home country to teach crop and soil science courses.

Turf Field Day

The Purdue Turf program had a successful field day with 530 attendees and 32 exhibitors at the W.H. Daniel Turfgrass Research and Diagnostic Center in West Lafayette. The field day included golf and lawn research tours in the morning, two afternoon tours, and one afternoon workshop and addressed many current topics including new products, herbicide injury to trees and ornamentals, diseases, and more. To see a video slide show of field day check out Purdue Turf’s new Web site at www.agry.purdue.edu/turf.

Save the date for next year’s field day July 17, 2012.
The Legends of Agronomy award was established in 2007 to honor individuals who have made major contributions to the establishment, development, enhancement, or improvement of the Purdue Agronomy Department. These individuals may have been faculty, administrators, alumni, or others associated with the Department. It is expected that the individual has made an impact on the Department through service, administration, program development, or sustained activities that contributed to the success and reputation of the Agronomy Department.

Purdue Agronomy will induct a number of individuals into the Legends of Agronomy in the Spring of 2012. We welcome you to nominate individuals for this prestigious award. To complete a nomination go to http://www.ag.purdue.edu/agry/Pages/awards_dept.aspx to download a form or call or e-mail Kelly Delp at 765-494-6586, kdelp@purdue.edu.

Purdue University
Department of Agronomy
915 W. State St.
West Lafayette, IN 47907-2054

Address Service Requested