



PSS NEWSLETTER May/June 2007

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Top Story—Gerald Henry

We are delighted to announce that Dr. Gerald Henry has joined the Department of Plant and Soil Science as an Assistant Professor of Turfgrass Science. Dr. Henry and his wife Emily moved to Lubbock from Raleigh, NC in March of this year. Dr. Henry received his B.S in Plant Science from Rutgers University in 2000, his M.S. in Plant Biology from Rutgers in 2003, and his Ph.D. in Crop Science from North Carolina State University in 2007.



Dr. Henry will teach undergraduate and graduate courses in Turfgrass Science, advise graduate and undergraduate students, and will be the advisor to the GCSAA affiliated Tech Turf Club. He is a member of the Weed Science Society of America, Southern Weed Science Society, Golf Course Superintendents Association of America, Texas Turfgrass Association, West Texas Golf Course Superintendents Association, and Crop Science Society of America.

Dr. Henry's primary areas of research interest are: 1) turfgrass weed control, 2) turfgrass management 3) plant growth regulators, and 4) improved turfgrass cultivars.



PSS Dept. Chair
Tom Thompson

Chat with the Chair

"By three methods we may learn wisdom: First, by reflection, which is noblest; second, by imitation, which is easiest; and third by experience, which is the bitterest" (Confucius). Periodic times of reflection and rethinking of direction and focus are of great benefit for individuals and organizations. This week, our faculty will spend an entire day "retreating", to discuss in detail the future direction of our department. This is an exciting and challenging time for our department, with lower student enrollments than in the past, loss of federal research dollars, the upcoming hiring of a new Dean of CASNR, and ambitious plans for the growth of the university. I think that we are truly at a crossroads as a department, and the decisions we make now will have far-reaching impacts. At the retreat, our faculty will be discussing our undergraduate academic programs, how to

better attract and retain quality students, and how best to demonstrate the research strengths of our department. We will also be discussing the areas in which we need to bolster our research and teaching strength and productivity. This will help us to develop a strategy for hiring new faculty in targeted areas, as such opportunities become available. I am looking forward to a productive day with our faculty, and I think you'll soon hear about some new initiatives and directions. Stay tuned!

Faculty Corner

Ellen B. Peffley



My appointment is 75% teaching and 25% research. I was hired to teach the introductory horticulture class and to conduct research in vegetable crops. I teach Principles of Horticulture each fall and spring and organize the companion 12 lab sections, meeting weekly with the TAs; labs have been updated and revamped to include hydroponics and topiaries. I also teach Vegetable Crops, PSS2311, every other fall. Seeing that our students needed international exposure, I started a new summer Study Abroad course, Gardens of Europe, where students have traveled to England in 2004 and Italy in 2006. We go next to France and Belgium. This spring I developed and taught senior and graduate level students Greenhouse Crop Production.

This course was not your ordinary course – the students actually built a greenhouse in one semester out of a Quonset hut behind the Horticulture Gardens and Greenhouse complex. The students formed teams and were responsible for researching all the environmental parameters and getting bids on equipment, and gave oversight to their respective areas as required. They learned critical thinking, construction, teamwork, leadership, while growing class crops of tulips, callas, sunflowers, hydroponic strawberries, cucumbers, watermelon, tomato, and each student grew to market an individual crop of their choice. The class was fantastic – students have learned proper names for tools, we made decisions as a group based upon each team's recommendations. They still had exams and had academic classroom material they were responsible for. I think it was a positive experience for each of them and I know it was for me. This class has left a legacy that we hope will foster an eagerness for continued team efforts in growing greenhouse crops.

The focus of my research, graduate students, and my publication record has primarily been in the area of onion breeding, genetics, and cytogenetics, specifically development of and application of molecular markers for crop breeding. For the last 5 years I have been the Project Director for the Plant Biology group of a NASA-funded initiative that is in collaboration with colleagues in PSS, CASNR, and the Engineering and Arts & Sciences colleges; several publications have resulted from this work and we have an aggressive Outreach component; we are currently funded through spring of 2008. I have generated approximately \$3.5 million in funding while at Tech.



Peter Dotray received the 2007 Outstanding Service to Agriculture Award from the Texas Tech University chapter of Gamma Sigma Delta.

Cary Green will be promoted to Professor on September 1. Congratulations!!!

Cary Green is Chair-Elect for Division A1 of the American Society of Agronomy.

Faculty News

Tom Thompson is Chair-Elect for Division S-8 of the Soil Science Society of America.

Dr. Dick Auld was presented a "Big 12 Heroes Award for Research" on March 1, 2007 at the Big 12 CEDIC Meeting in Kansas City, MO. He was presented the award by Tom Osborne, former head football coach of the Nebraska Cornhuskers. Dr. Auld was recognized for his contributions to commercialization and research at Texas Tech University and the Department of Plant of Soil Science.



Student News

R.B. Shrestha (PhD student of Dr. Parajulee) is the first to develop microsatellite markers for *Lygus hesperus* under the direction of Dr. M.N. Parajulee. His work is accepted for publication in the *Molecular Ecology Notes* with co-authors from TTU, TAES, and USDA ARS.

Amanda Broome and Amber Bonds received the Belsterling Scholarship.

Sheyenne Scott (Junior majoring in Plant Biotechnology) was awarded the Dalrimple Conservation Scholarship.

Nithya Rajan, (Ph.D. student of Dr. Maas), won First Prize in the Agricultural Sciences and Natural Resources division of the Sixth Annual Graduate Student Research Poster Competition with her poster, "Estimation of Crop Water Use for Different Cropping Systems in the Texas High Plains Using Remote Sensing". The competition was sponsored by the TTU Graduate School.

Cory Mills was awarded the Preston Smith Endowed Graduate Fellowship

PSS hosted the State High School FFA Agronomy, Entomology and Cotton competitions on April 28.

Andrew Lutz, Senior horticulture major has been named the 2007 horticulture intern for the Andes to Amazon Biodiversity Program of the Botanical Research Institute of Texas and will travel to Peru this summer.

Chris Ortmeier, Senior in Horticulture and pitcher for the TTU baseball team received the Excellence Award at the Student Athlete Academic Awards Reception.

Congratulations to our students graduating in May!!!

B.S. in Agronomy: **Ellen Beaman, Brent Brown, Kyle Haralson, Michael Kermick, Nathan Klatt, Blair Large, Filiberto Nava**

B.S. in Horticulture: **Drew Bohannon, Leah Crosby, Ashley Hathcoat, Joshua Hill, Jennifer Landry, Christopher Ortmeier, Stephen Priest, Zachary Suther, Zachary Walsh** M.S. in Crop Science: **Adam Ford, Gene Maulding, Randall Montgomery**

M.S. in Horticulture: **Kara Howard** Ph.D. in Agronomy: **Ashley Basinger**

Staff News



Emily Saiz, Lead Account Processor for the Department of Plant and Soil Science, has received the Texas Tech University Quality Service Award for 2007. These awards recognized Texas Tech staff members who provide excellent service in support of the university's mission and vision. Their exemplary efforts and positive attitude serve as a reminder to all that can be achieved.

Emily also received the Quality Service Award in 2001. Emily has been working for Texas Tech University for 29 years and the last 12 years with Plant and Soil Science.

We are very proud of Emily and all she has accomplished. **Congratulations Emily!**



Accomplishments

Papers Published:

Noureddine Abidi, Eric Hequet, Sowmitri Tarimala, Lenore L. Dai. Cotton fabric surface modification for improved UV radiation protection using sol-gel process. *Journal of Applied Polymer Science*, 104 (1), (2007) 111-117.

E. Bechere, D.L. Auld, R.G. Cantrell, E. Hequet, M. Krifa, S. Misra, and C.W. Smith. 2007. Registration of TTU 0774-3-3 and TTU 0808-16-1 Upland Cotton Germplasm Lines with Improved Fiber Length and Fiber Strength. *Journal of Plant Registrations*, Vol. 1, May-June 2007.

Booker, J.D., K.F. Bronson, C.L. Trostle, J.W. Keeling, and A. Malapati. 2007. Nitrogen and phosphorus fertilizer and residual response in cotton-sorghum and cotton-cotton sequences. *Agron. J.* 99:607-613.

Jaynes, W.F., R.E. Zartman, and W.H. Hudnall. Aflatoxin B1 absorption by clays from water and corn meal. *Applied Clay Science special issue on clays and health.* 36(1-3):197-205.

Philipp, D., V.G. Allen, R. J. Lascano, C.P. Brown, and D.B. Wester. 2007. Production and Water Use Efficiency of Three Old World Bluestems. *Crop Science*, 47:787-794.

Allen, V.G., M.T. Baker, E. Segarra and C.P. Brown. 2007. Integrated crop-livestock systems in irrigated, semiarid and arid environments. *Agron. J.* 99:346-360 (Invited paper)



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Upcoming Events

- May 2 Faculty Retreat
- May 8 Semester Ends
- May 11 Graduate School Commencement - United Spirit Arena, 4:00 p.m.
- May 12 Undergraduate Commencement - United Spirit Arena, 1:30 p.m.
- May 14 PSS Social Hour - PS Bldg. Breezeway, 9:30 a.m.
- May 28 University Holiday (Memorial Day)
- May 30 Summer I Begins



Accomplishments Cont. from pg. 3:

Braden, K.W., J.R. Blanton Jr., J.L. Montgomery, K.R. Pond, V.G. Allen, and M.F. Miller. 2007. Tasco supplement: Effects on carcass characteristics, sensory attributes, and retail display shelf-life. *J. Anim. Sci.* 85:754-768.

Weixii Liu, Ellen B. Peffley, Ron J. Powell, Dick L. Auld, Anfu Hou. 2007. Association of seedcoat color with seed water uptake, germination, and seed components in guar (*Cyamopsis tetragonoloba* (L.) Taub). *Journal of Arid Environments* 70: 29-38.

Books: Chapters in:

Allen, V.G., R. Heitschmidt, L.E. Sollenberger. 2007. Grazing systems and strategies. In: *Forages: Volume II. The Science of Grassland Agriculture*. R.F. Barnes, C.J. Nelson, M. Collins and K.J. Moore (Eds.). Iowa State Press/Blackwell Publishing Company, Ames, Iowa. 6th Edition p. 709-729.

Presentations:

Bechere, Efreem., and Dick L. Auld. Development of okra-leaf cotton varieties for the Texas South Plains. Beltwide Cotton Conferences, New Orleans, LA, Jan 9-12, 2007.

Parajulee, M.N. How much early fruit loss can cotton tolerate? Invited presentation at the High Plains Association of Crop Consultants Annual meeting, March 6, 2007, Lubbock, TX.

Parajulee, M.N. Sampling basics: Sampling considerations in arthropod management. Invited presentation at the Texas Cooperative Extension Entomology Annual Retreat, March 29, 2007, New Braunfels, TX.

Parajulee, M.N., R.B. Shrestha, and S.C. Carroll. Intercrop movement of *Lygus hesperus* in the Texas High Plains: Potential for landscape level management. Invited presentation at the Second International Lygus Conference, April 16, 2007, Asilomar Conference Center, Pacific Grove, CA.

Parajulee, M.N. and R.B. Shrestha. Morphometry of *Lygus* bugs: Implications in pest management. Invited presentation at the Second International Lygus Conference, April 17, 2007, Asilomar Conference Center, Pacific Grove, CA.

Thompson, T.L. Nutrient and Water Management for Low-Flow Irrigation Systems, Invited seminar given at the USDA-ARS Cropping Systems Research Laboratory, March 6, 2007.

Grants Received:

Nithya Rajan "Comparative Evaluation of Actual Crop Water Use of Forage Sorghum and Corn for Silage". \$5,000 from the Texas Water Resources Institute.

Stephan Maas. "Site-specific Management Strategies for Efficient Cotton Production in the Texas High Plains." \$12,000 from Cotton Inc.

Steve Oswalt (Ph.D. student of Auld and Thompson). "Optimizing irrigation of oilseed crops on the Texas High Plains" \$5,000 from the Texas Water Resources Institute.