



ADVISING CENTER NEWS

by Paige Thomas

Registration for fall, 2007 classes is in full swing. If your advisees have not checked in with you lately, this is an excellent time to send them an email to encourage them to touch base with you.

It is time for students to apply for a College of Ag Sciences' / Department of Horticulture scholarship for the 2007-2008 academic year. The application form is on-line at: <http://scholarships.cas.psu.edu>. This is a quick and easy application process that will probably get them some scholarship money for next year. If students choose not to apply, they will NOT get a scholarship from the Department of Horticulture next year. PLEASE encourage your advisees to apply!

Deadline to drop classes for spring semester is April 13!

April

Calendar of Events

April 6

- Good Friday
- Social Hour 10:00, Rm 21 Tyson

April 8

- Easter

April 13

- Late Drop Deadline
- Pete Ferretti's Retirement Celebration

April 16

- Submit final thesis

April 22

- Earth Day



Pete's Retirement Celebration



We will be holding a retirement celebration for Pete's 46 years at Penn State on Friday, April 13, 12:30-4:30pm at Celebration Hall. Pete's long and varied career in the Department includes being an undergraduate student, Ph.D. student, vegetable & small fruit extension specialist, All America Selections judge, international consultant, photographer, developer of soil test recommendations, researcher, gourmet cook, 5 A Day judge, Hort Club advisor, presenter to grower and consumer groups, TV personality on PBS, diagnostician of production problems, & author of numerous extension publications. Please stop by 102 Tyson and RSVP if you haven't already.

Graduate Colloquium

Horticulture 590

Rm. 111 Tyson

4:00 - 5:00 PM

April 9	Graham Sanders, M.S. Candidate, Horticulture
April 16	NO SEMINAR
April 23	Beth Mathie, M.S. Candidate, Horticulture
April 30	Ben Hoover, M.S. Candidate, Horticulture

Congratulations!

Congratulations to **Dave Eissenstat** for being named Chair of the Intercollege Graduate Degree Program in Ecology, beginning July 1, 2007. The program has more than 50 faculty member participants and more than 40 graduate students are enrolled in the program.

Mike Orzolek was presented with the 2007 Tomato Industry Award at the Tomato Award Luncheon at the Mid-Atlantic Fruit and Vegetable Convention in February.

On March 24 the College held their second annual Ag Ball. Clubs and Individuals were reconized for 2006-2007, **Dan Stearns** was named "Advisor of the Year" for advising the Hort Club.

2007-2008 COLLEGE OF AGRICULTURAL SCIENCES SCHOLARSHIP APPLICATION DEADLINE: APRIL 30TH, 2007

Please submit your Scholarship Application for 2007/2008 online by April 30th, 2007. You are not eligible for scholarships unless you submit an application. Instructions on how to apply and the electronic application are available on our web site at: scholarships.cas.psu.edu

If you have any questions, please contact Kathie Alterio at ksh5@psu.edu or Denise Connelly at dcc6@psu.edu

Social Hour

THE DEPARTMENT'S SOCIAL HOUR FOR THE MONTH OF APRIL WILL BE HELD FRIDAY, APRIL 6 AT 10:00 IN ROOM 21 TYSON. OPEN TO EVERYONE IN THE DEPARTMENT INCLUDING FACULTY, STAFF, GRADUATE STUDENTS, POST DOCS, AND VISITING SCHOLARS. PLEASE ENCOURAGE OTHERS, WHO HAVEN'T ATTENDED IN THE PAST, TO ATTEND SO THAT THEY CAN MEET AND SOCIALIZE WITH OTHER COLLEAGUES IN OUR DEPARTMENT. SMALL REFRESHMENTS WILL BE PROVIDED BUT YOU ARE WELCOME TO BRING SOMETHING TO SHARE WITH EVERYONE.



Happy Birthday!

Glenna Malcolm April 17
Mike Orzolek April 23
Heather Merk April 23



Recycling and Recovery of Energy Stored in Used Plastics

William J. Lamont and Michael D. Orzolek Department of Horticulture, and James W. Garthe, P.E., and Matt Lawrence, Agricultural Engineer and Instructor and Graduate Student, Department of Agricultural and Biological Engineering

In the March 18, 2005 issue of the Centre Daily Times was an article "You Ought to Know About Recycling". In the article the author states "recycling is now an international commodities industry driven by market demand and labor costs." The author states "Often programs don't take materials that are available in large enough numbers to make reusing them profitable". The plastic code is typically identified as triangle of chasing arrows surrounding a number depicting the plastic resin type, such as #1, polyethylene terephthalate or PET, used for making soda and water bottles. The best market for recyclables is the #1 and #2. The demand for these products is insatiable at this point. The bottle caps used on these products are sometimes recycled but not always and these then enter the trash stream. These are a valuable source of fuel for us. Think about what you do with the plastic wrapper from your Thomas' English Muffins pack and the little plastic tab?

Think how many of those are used in Pennsylvania and then the United State each day? Where do they go? What about your plastic bread bags? Maybe they are recycled if you need to pick up after your pet.

Two fuel-saving technologies are currently being brought to commercial reality.

The First Technology: Plastofuel™

A simple process was invented at Penn State University in 1995 to densify waste plastics into a fuel nugget, called Plastofuel™. It works by forcing film plastic items, rigid plastic items, or both, through a heated dies, thus melting a thin jacket that encapsulates the pieces of plastic and dirt within the extruded material exiting the die. Sharp knives cut the extrudate into dense fuel nuggets that can be easily conveyed, stored and shipped. From an energy perspective, calculations reveal that less than one percent of the heat energy contained in the nugget (when combusted) will be used in the process to form the nugget.

The Second Technology: Korean High Temperature Combustion Manufactured by GR Technologies Company, Ltd., this hot water boiler heating system burns pea-sized pellets made from waste mulch film plastic. The system preheats a series of combustion chambers to 1650-2000 °F for 10-15 minutes using fuel oil or kerosene, then automatically switches to the plastic pellets. Field-testing of a 396, 850 Btu/hr. unit for heating high tunnels began at the Penn State Horticulture Research Farm in 2004. Eventually, the pellet-fueled unit will be modified to burn the larger and more energy efficient Plastofuel™ nuggets.

Air emissions

Stack testing conforming to U.S. Environmental Protection Agency (EPA) standards were conducted by an independent U.S. testing company in May 2005 that was funded by a grant from the American Plastics Council. The tests compared LDPE (#4) Korean pellets with granulated HDPE (#2) barrels, which had been discarded by a local firm. Three main groups of pollutants were analyzed:

- Gases (sulfur dioxide, oxides of nitrogen, carbon monoxide, carbon dioxide)
- Particulate matter
- Dioxins/furans

Test results proved that this is an extremely clean burning system in all three groups. The Pennsylvania Department of Environmental Protection (DEP) has reviewed the results, noting that combustion units with a heat input rating of 2.5 million Btu / hr. or less are exempt from the plan approval and operating permit requirements. This means the burner and associated boiler can be marketed in the Commonwealth of Pennsylvania now and without restraint. However, sites will still have to comply with the DEP opacity regulation, Section 123.41. According to the DEP standard, opacity, or visible air contaminants, cannot be equal or greater than 20 percent for a period or periods aggregating more than 3 minutes in any 1 hour, or greater than 60 percent at any time. For this extremely clean burning system, the opacity regulation testing will most likely not be an issue, hopefully merely a formality.

With the spotlight on global warming and energy self-sufficiency, it makes sense to capture the energy contained in waste plastics that are made from natural gas or petroleum that has already been brought to the surface, made into a product that has been used for the benefit of mankind and can now benefit mankind again by reducing our dependence on outside sources of energy while cleaning up the environment.

Please contact us if you are interested in leaning more about this exciting project or supporting this program or being a part of the program. Bill Lamont, wlamont@psu.edu or James Garthe, jwg10@enr.psu.edu.

Department Match

Match the fact with the correct department member. Facts may apply to more than one department member listed (and possibly others not listed). Some information can be found in the “Colleagues and Cohorts” feature in this issue, and the correct answers appear below. Permission to use facts and names is usually (OK, sometimes) obtained prior to publication.



A. Antique appliance collector	Elsa Sánchez
B. Looking for a good used kayak	Ron Shuey
C. Mustang owner	Graham Sanders
D. Found true love at UPS	Bob Oberheim
E. Held in Russia under armed guard for entering the country without a proper Visa	Bill Lamont
F. Loves to scuba dive	Ricky Bates
G. His/her dad raced cars against notables such as A.J. Foyt	

Larry Kuhns Retires.....

Dr. Larry Kuhns retired at the end of March 2007 after 30 years of service to the Pennsylvania nursery industry and students at Penn State. Larry grew up in Pennsylvania and majored in General Agriculture at Penn State. After serving in the U.S. Army, he started a graduate program in Horticulture at The Ohio State University, where he was the first graduate student of Dr. Tom Fretz, the Executive Director of the association of Northeast Research Administrators, and former ASHS President and Dean of Agriculture & Natural Resources at the University of Maryland. Larry’s dream of returning to Penn State materialized in 1977 when he was hired as Assistant Professor with a joint Extension/Research appointment and for 20 years he conducted educational programs for the nursery, landscape, and garden center industries, Christmas tree growers, and street tree managers. In 1998 he changed from an extension to a teaching appointment to develop the newly created landscape management option in the Landscape Contracting major. He taught courses on Landscape Establishment and Maintenance, Weed Control in Turf and Ornamentals, and Issues in Landscape Contracting. Larry has served the university, the nursery industry, and the Horticulture profession by volunteering his time to serve on many committees and as an Associate Editor. During his career Larry has received a number of awards, including the Kenneth Post Award for outstanding graduate student research in floriculture, ornamental and landscape horticulture presented by the American Society for Horticultural Science, the Mid-career Award from the Pennsylvania chapter of Epsilon Sigma Phi, national honorary extension fraternity for excellence in developing and presenting extension education programs, and the Outstanding Extension Educator Award, presented by the American Society for Horticultural Science for excellence in developing and presenting extension education programs. The annual Penn State Horticulture Show was dedicated to Larry in 2006. Larry also coaches the boys and girls Rugby teams at State College Area High School. As an emeritus faculty member, Larry will live in State College and continue some of his applied research and he will continue growing trees on his 40-acre Christmas Tree Farm and Nursery. To honor a long career of serving the nursery industry, the department has established the Larry Kuhns fund for extension and applied research excellence in landscape/nursery programs. Our goal is to raise \$25,000 to create a perpetual annual income devoted to the enhancement of extension and applied research in nursery crops. Checks should be made payable to: Larry Kuhns Endowment Fund

Answers: A – Graham Sanders; B – Elsa Sánchez; C – Bob Oberheim and Ron Shuey; D – Elsa Sánchez; E – Ricky Bates; F – Bob Oberheim; G – Bill Lamont



Elsa Selina Sánchez
202 Tyson Building
60% extension; 40%
teaching appointment
Joined the department in
Jan. 2002
Born in Bryan, TX; raised
in Las Cruces, NM

Elsa Sánchez is Assistant Professor of Horticultural Systems Management. She teaches Hort 232, Plant Systematics and Hort 431, Small Fruit Culture, and conducts applied research on organic and sustainable production systems with various commodities. She's also major advisor to 2 graduate students, Emily Cook and Graham Sanders.

Though her family owned a small pecan orchard, it was the Plant Science class that she took when she was a senior in high school, and related class work in the school's greenhouse that piqued her interest in horticulture. She earned a B.S. in Horticulture from New Mexico State University, and then went on there to earn an M.S. in Agricultural Biology. Her M.S. research was on phytophthora root rot on peppers. Her Ph.D. is from Washington State University where she worked on the potatoes investigating the interaction between calcium levels and diseases.

Elsa met her husband Chris at a UPS facility where Elsa was working part-time while earning her B.S. Where's her favorite place to spend time? "It doesn't matter where, as long as it's with Chris." They enjoy taking hikes with their dogs, Lewis N. Clark, a black lab, and Zia S. Sopapilla, a mixed breed. They'd like to expand their outdoor activities to include kayaking (anyone have a good used kayak for sale?). She also enjoys reading, and plays bells in a bell choir at Our Lady of Victory church. Her favorite food is red enchiladas, not to be confused with green. Tip from Elsa on how to tell if a Mexican restaurant is a good one... "Order enchiladas, and see if they ask if you want red or green." Elsa's favorite quote is "Hitch your wagon to a star" by Ralph Waldo Emerson. "I like the optimism in that quote – that anything is possible".



Graham Sanders
M.S. Horticulture student; anticipated graduation August, 2007
102 Tyson Building
6 years with the department;
earned BS in horticulture with
minor in plant pathology in 2005
Born in Lancaster, PA; raised in
Manheim, PA

As far back as Graham can remember he loved planting plants. As a child, he would help his grandfather garden. He transplanted fruit tree seedlings that his grandfather would have removed, and over 60 of those have now reached bearing age. He'd also ask his grandmother for a dollar when rose plant went on sale, and over time established a nice rose garden for her.

Ever since Graham was young he knew he wanted to study botany/horticulture. When the time for college came, he declared horticulture as his major. His grandparents have been very supportive and have a deep admiration for horticulture themselves as they both are from farming families. Graham's first two years in college were at the PSU Schuylkill campus. He then transferred to the University Park campus to complete his B.S. degree in horticulture. Graham enjoyed both campuses, but especially liked the small class sizes at the Schuylkill campus.

Graham's M.S. thesis project centers on raspberry production, specifically on managing gray mold. His interest in small fruit, and raspberries in particular, was cultivated in his grandparent's garden, where they had juice grapes, and a huge patch of everbearing gold raspberries. His grandfather also had a blackberry patch but, the canes were thorny and difficult to work with. So, when the opportunity for studying raspberry production presented, Graham welcomed it.

Graham hopes to graduate in this year. After that his plans are to continue on with this education because he likes what he's doing.

Homemade warm apple pie a la mode made by his grandmother from apples produced at his grandparent's home is Graham's favorite food. His favorite hobby is collecting antiques. Right now he's collecting vintage appliances and has a trip planned to Ohio to visit with a collector and see his collection. He enjoys meeting other collectors and researching new avenues to find antiques. He's also a member of a vintage appliance club. His favorite song is "Blame It on Your Lying Cheating Heart" by Patti Loveless.

When asked what events made a lasting impression, Graham said, "It's not really an event, but my grandparents telling how proud they are, makes me want to continue and to do the best I can".