



Dixon Springs Summer Internship Program Newsletter



Dixon Springs Summer Internship Program Begins its Fourth Year

The Dixon Springs Summer Internship Program started in summer 2008 with five student interns from NRES and the Animal Sciences Department under the sponsorship of the College of ACES Office of Research. In 2009, the number of internships increased from five to eight.

A total of 23 ACES undergraduates from five different disciplines have participated in the DSAC Summer Internship Program during the summers of 2008-2010. They conducted high-quality research on locally relevant problems that led to solutions with impact for the area, including:

- Using the drug Ivermectin to relieve the symptoms of fescue toxicity,
- Using a progesterone vaginal insert to synchronize cow calving and enable cows to breed within 60 days post calving,
- Identifying blueberry varieties that have a beneficial impact on reducing the blood sugar of people with Type 2 diabetes,
- Measuring ellagic acid content (a potent antioxidant) in berry based wines, which are important contributors to the southern Illinois economy.

On May 23, 2011, ten outstanding undergraduates arrived at Dixon Springs Agricultural Center to begin the experiential learning/research program. Working side-by-side with mentors at DSAC, they will gain valuable insights into how to conduct research. In this issue, we will tell you a little bit about them, their projects and the people who are supporting them. In subsequent issues, as their research progresses, we will describe what they are doing and what they are finding.

Crop Sciences



In photo left to right: Rachel Welch, Steve Ebalhar and Ron Revord. (Not pictured: Billy Assaranurak, Margaret Jodlowski,) in Crop Sciences.

Rachel is interested in sustainable agriculture. Under the supervision of faculty advisors Maria Villamil and Robert Darmody, she will observe how different land management systems affect soil quality through biological, chemical and physical indicators.

Seven of the interns are working in the DSAC Crop Sciences program. Four of them are working with DSAC mentor Steve Ebelhar.

Billy Assaranurak comes from Bangkok, Thailand, and will be a junior in Crop Sciences. He grew up on a small farm and loves nature and outdoor activities. He is interested in bioenergy plants and his research at DSAC, directed by faculty advisor Patrick Brown, will focus on sorghum architecture. He will plant out 192 varieties of sorghum and identify traits that contribute to high biomass.

Margaret Jodlowski, from Chicago, will be a senior in Agricultural and Consumer Economics, with a double major in history. She is interested in sustainable international development, environmental education, and biofuels. This summer, working with faculty advisors Pete Goldsmith and Madhu Khanna, she will look at the market structure and feasibility for *Miscanthus*, a grass that can be processed into biofuels. When she graduates, she plans to work towards a Ph.D. in Development Studies and, in the long-term, hopes to conduct research that will solve problems related to sustainable international development.

Ron Revord is from Frankfort, IL and will be a senior in Molecular and Cellular Biology. He will be working with D.K Lee on a study the effects of nitrogen on *Miscanthus x giganteus* biomass production. He is interested in sustainable agriculture and hopes to make a career in the area. He is also a competitive distance runner.

Rachel Welch, from Northbrook, IL, will be a junior in Natural Resources and Environmental Sciences, with a concentration in resource conservation and restoration ecology. She is interested in sustainable agriculture. Under the supervision of faculty advisors Maria Villamil and Robert Darmody, she will observe how different land management systems affect soil quality through biological, chemical and physical indicators. She is an active member of the U of I Club Tennis Team.

Ron is interested in sustainable agriculture and hopes to make a career in the area.



Three interns, all of whom will both be juniors in Food Science and Human Nutrition, will be working with DSAC mentor Jeff Kindhart. Two of them will conduct specialty crop research under the direction of faculty advisors Mosbah Kushad and Nicki Engeseth.



In photo left to right: Lily Benner, Jeff Kindhart, Carmen Au, Julie Zakes (Not pictured: Donny Kwandindo) in Specialty Crops.

Lily will be studying hydroponically-grown tomatoes, comparing their nutritional and physical quality to that of conventional field-grown tomatoes, with a focus on lycopene content.

Carmen Au, from Chicago, describes herself as artistic and says she disliked science in elementary school. To her surprise, she loved high school chemistry; this and her interest in cooking led her to food science. This summer, she will be comparing physical and chemical properties (size, color, pH, sugars, lycopene, antioxidants) of tomatoes grown in high tunnels and with those grown in traditional open fields to see how the different methods affect fruits.

Carmen says she disliked science in elementary school. To her surprise, she loved high school chemistry; this and her interest in cooking led her to food science.

Lily Benner, from Tuscola, IL, will be studying hydroponically-grown tomatoes, comparing their nutritional and physical quality to that of conventional field-grown tomatoes, with a focus on lycopene content. This fits well with her interest in food science and gardening. Lily participates in several food science organizations, works as a campus tour guide, and is a member of an honors fraternity. In her spare time she enjoys cooking, reading, knitting, and puttering around the house.

Donny Kwandindo, who will be working with faculty advisor Scott Morris, comes from Samarinda, Indonesia. He is interested in food science and food packaging and will be measuring the shelf-life and examining the biochemical qualities of tomatoes in packaging film coupled with potassium permanganate. He likes music, doing experiments in the kitchen and playing badminton on the club team at U of I.

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Animal Sciences

“I enjoy outdoor activities such as hunting, fishing, and trail riding.”

-Student Intern: Ashley Kloth

“I enjoy being outside, reading, bowling, and playing with my dog Molly.”

-Student Intern:
Lauren Welker



In this photo from left to right: Lauren Welker, Frank Ireland and Ashley Kloth in Animal Sciences.

Two of the interns are working in the DSAC Animal Sciences program under the mentorship of Frank Ireland:

Ashley Kloth, from Ellis Grove, IL (“a country girl from Southern Illinois”) will be a junior in Animal Sciences. She is interested in livestock nutrition and she will be studying, under the direction of faculty advisor Dan Shike, how feeding different levels of a co-product supplement to cows in their final trimester of gestation affects their performance, reproductive health, and their progeny. Ashley enjoys outdoor activities such as hunting, fishing, and trail riding.

Lauren Welker is from Mt Vernon, IL, and will be a senior in Animal Sciences. She is interested in beef cattle nutrition and her DSAC research, under the direction of Dan Faulkner, will compare the effects of two types of feed on beef cattle performance. Lauren enjoys being outside, reading, bowling, and playing with her dog Molly. She would like to attend Veterinary School at the University of Illinois after she graduates.

US Forestry Service

Annie Logisz, from Chicago, is a junior in Natural Resources and Environmental Sciences; she is interested in resource conservation and restoration ecology. She will be working with faculty advisor Jim Hayek and DSAC mentor Jim Kirkland on forest ecology, testing the efficacy of different herbicides on various invasive plant species in the DSAC Region. Annie is the youngest of five kids; she plays volleyball on the club team at U of I, and while in Chicago, works as a lifeguard and coaches volleyball camp. She is a Cubs fan, and enjoys being outdoors.

Annie Logisz is interested in resource conservation and restoration ecology.



In this photo from left to right: Jim Kirkland and Annie Logisz in the US Forestry Service.

Thank You

We are very grateful to the many people from the region who helped our interns to identify research projects of local relevance. Thank you very much to all of you.

For Crop Sciences: Grover Webb, Shelee Padgett, Eric Rund, JB Gates, Dayna Conner, Carl Deuwer, Keith Bell, and Carl Hart.

For Animal Sciences: Ron Duncan and Clint Smith.

For Forest Ecology: Chris Evans and David Allen.

Last but not least, thank you to the entire staff at Dixons Springs Agricultural Center for all of their effort in organizing the program and mentoring our students. We hope that the experience this summer will prove to be rewarding for everyone involved.

Sponsored by: The ACES Office of Research
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