

A Learning Experience

Students Get Hands-On Training In Dixon Springs Internship Program

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Animal science students enrolled in an Undergraduate Internship Program at Dixon Springs Agricultural Center are focusing this summer on the temperature monitoring of pregnant heifers while they're grazing in endophyte infected tall fescue.

Frank Ireland, research animal scientist with the University of Illinois animal sciences department stationed at the center, discussed the program during Beef Day held recently. In its first year, the program is funded through the Office of Research at the University of Illinois.

"They're very committed to providing an opportunity for students to get hands-on learning experience and experiential learning," he said. "A lot of our students are coming out of an urban background into agriculture and, while they get the bookwork at the main campus, we're finding there is a substantial benefit from some hands-on learning opportunities."

This year the "Learning by Doing" 11-week program has five paid internships at the center. Students are housed at Dixon Springs and they are paid for their involvement with the research projects.

"We make sure that every student is assigned to a research project and, in addition to doing hands-on work with that research project, they work on the day-to-day tasks that arise at a center like this," Ireland continued. "Livestock care, treatment of sick animals, vaccination, herd health, 4-H production and establishment have been some of the things they've worked on this summer. The particular research project this summer that the students in animal science have been assigned to is the temperature monitoring of pregnant heifers while grazing endophyte infected tall fescue."

The effort is to identify differences in animals in their tolerance to tall fescue endophyte. The data shows that while animals are grazing the same pastures, there are some tremendous differences in the body temperature between animals.

"We're hoping that with that identification we can develop genetic markers and determine the heritability, if there is any, to tolerance to tall fescue," Ireland said. "Maybe then we can come back with some information that will greatly help producers."

The tall fescue endophyte problem is a \$600 million a year loss for producers. The study is set up to identify ways to deal with it and select around it.

"So it's a great project involving students with their computer work, with the collection of the body temperature data every 30 minutes on the animals, and then checking the animals and seeing that they're cared for," he explained.

"We've also involved the students in some other activities. We've taken them to producer farms where they've been involved with some injecting of bulls, pregnancy checking cows and heifers, pelvic measurements of heifers for selection of replacement heifers, and we've done some cross departmental training where we've taken the animal science students to some vegetable production farms and they got to see strawberry and tomato production and talked to the producers about that."

One event involving the students was working with the Massac County Youth Fair and the young people who brought their vegetables in for exhibit at the fair.

"They got to visit with these university students and that, hopefully, will stimulate their interest and awareness of what they can do in the future," Ireland noted. "We've got one intern that's in her second year at the College of Veterinary Medicine and her involvement and awareness here at Dixon Springs was what lured her into going to veterinary medicine. She has plans of coming back to a rural setting even though she is originally from Chicago, so it's an eye-opening experience for the students and we hope that it continues."

Students selected for the program must first submit an application. The application is reviewed by faculty, and those selected are paid a substantial salary.

"The reason for that is we are wanting to compete with industry for interns and get the cream of the crop, the top quality students in our program," he said.

Initially, the program was set up as available only to students that were enrolled at the University of Illinois or, presently enrolled or had enrolled for the upcoming fall semester. Hopes are that this program expands because there are requests from other institutions, such as the University of Missouri, to bring students and interns to Dixon Springs.

"I've taken several calls from faculty members wanting to know if we had positions for their students," Ireland said. "The reason Dixon Springs is so attractive is we have a substantial number of animals, a larger research program in beef cattle than almost anyone in the nation. There are very few places where the students can get the day-to-day hands on experience with the numbers that they can at Dixon Springs."



Frank Ireland, Research Animal Scientist with the University of Illinois Animal Sciences Department stationed at the Dixon Springs Research Center, left, is shown with students in the Undergraduate Internship Program. Students are Katy Steller, second year vet student, Scott Michels, a senior in animal sciences, and Russ Chapple, animal science major. Photo by John LaRose Jr.

Ireland said he thinks there is room for the program to expand, however there is a time commitment delaying the program as well.

"I spent several hours in educating and seeing that the training of these students follows the curriculum that has been reviewed by the college," he said. "The assistant dean for the office of student instruction reviewed the curriculum that these students were to follow this summer to make sure it was a worthwhile and valid program and not just cheap labor with nothing for the students to gain from it, so it was set up with the idea that these students would get hands-on experience in a wide range of areas – animal reproduction, animal health, animal nutrition, equipment, operations. Students have operated pieces of equipment, skid loaders, disks, plows, tractors, mowing equipment that they might not have known before so we try to give them a wide range of experience. They tore out fences, built fences back and were instructed on how to put the brace posts in correctly, the spacing of the wire and things like that. So it's been a learning, teaching experience for these students and I think they'll go away from here with fond memories of how hard they worked all summer, yet also all the good times they had and how much they experienced."

Ireland said that the experience also gives him a chance to learn.

"Every time I visit the research center, take part in a field day or if I'm going to make a presentation at a meeting, I always learn something even if it's a topic that I have done research on for years and may have written numerous articles on it," he said. "I'm always refreshing my memory and experience every time. I think I learn as much from the students, from the producers that we work with, as they do and it's one of the things I like about the job."

Ireland has hopes that the internships in the future will not be limited to just the summer.

"I know that's an extreme challenge to work around because of classwork commitment at the institutions," he said. "I'd also like to see it opened up to any college student in agriculture from anywhere. And in fact we have international graduate students we work with here, so I'd love to have the opportunity to expand that."

"Our research is international and I think our teaching opportunities here at Dixon Springs have been international," he continued. "In fact we have discussions underway, international meetings this year at the U of I and Dixon Springs. My thoughts on the internship, not just the one this summer, stems from the fact that a lot of our reproductive work comes in the fall with our fall calving system and so our breeding, our synchronization of our cows, our pregnancy checking all comes in the fall and winter. I'd like to expand it into those areas."

"Now we're taking advantage of that with a different program in which I'm bringing community college students in for a lab recording on a weekly basis during the fall semester. Then the first of September I'm going to bring veterinary students here for two weeks for training on our cows. They'll be working with myself and our local veterinary service to pregnancy check cows, semen collect bulls and what have you. We'll bring them back again in March for pregnancy checking, so we are teaching students the rest of the year. It's just that our internship programs that we have every single day has to be worked around classwork," he summed. Δ