



University of Illinois

College of Agricultural, Consumer and Environmental Sciences
Dixon Springs Summer Internship Newsletter

July 23, 2010

2010 Interns

- Anita Lucius
Senior in FSHN
- Tessa Meyer
Senior in FSHN
- Whitney Hill
Junior in NRES
- Tim Ward
Senior in NRES
- Adam Schroeder
Senior in AnSci
- Emily Carson
Grad. in AnSci
- Kyle Vogelzang
Senior in AnSci
- Eric Schuler
Senior in ABE

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Dixon Springs Agricultural Center is one of seven field research and education centers operated by the College of Agricultural, Consumer and Environmental Sciences at the University of Illinois.

Animal Science at Dixon Springs Agricultural Center

Dixon Springs Agricultural Center (DSAC) is the largest experiment station of its kind east of the Mississippi River. Operating since 1934, DSAC is composed of 580 acres and manages 4,929 acres within the Shawnee National Forest under a special use permit from the USDA.

The center currently houses 850 beef cattle, which support unique experimental learning for researchers in the field of animal sciences.

Beef cattle research focuses on nutrition, genetics, grazing management, repro-

duction, and pest management. The research conducted by the 2010 Animal Sciences Summer Interns falls within several of these areas.

Under the direction of Frank Ireland, DSAC advisor, and faculty members Dan Faulkner and Dan Shike, these interns are learning about beef cattle and conducting important research. The data collected from this research will contribute to other projects and opportunities at DSAC.

The interns have developed individual research projects, formed working hy-

potheses and are collecting data at DSAC.

At the end of the internship these students will write individual reports and give presentations on their findings.

Along with research endeavors, the interns have had opportunities to work with local community members and have visited other beef facilities in the Southern Illinois region.

The interns are learning that research is hard work but also can be rewarding.

Fescue Toxicity: Meet Intern Kyle D. Vogelzang

Born and raised on a farm near Monticello, IL, Kyle Vogelzang is accustomed to working in agriculture and handling beef cattle. He has operated heavy machinery and has experience working with livestock. His faculty advisor is Dr. Dan Faulkner and his DSAC advisor is Frank Ireland.

The title of his project is *Effects of Ivermectin on Fescue Toxicity*. Kyle is researching the effects of Ivermectin® (a dewormer) on fescue toxicity in beef cattle.

The plant Kentucky-31, a tallgrass fescue, contains an endophyte, in this case a type of fungus, that accumulates in the plant. This can create a toxicity result when digested

by cattle. Issues in animals with fescue toxicity include lack of weight gain, reproductive problems, elevated body temperatures and loss of blood-flow.

There are 40 heifers for this study: 20 receiving Ivermectin® (randomly selected) and 20 receiving an alterna-



Kyle Vogelzang, speaking about his research project to a group of local 4-H students.

tive wormer as the control group. Temperature readings are taken from the heifers once the calves are born and serum samples are also collected.

Kyle predicts that the Ivermectin® will alleviate symptoms of fescue toxicity and hopes to see a correlation between taking Ivermectin® and a rise in prolactin levels and lower body temperatures.

Along with conducting research on his project, Kyle has been assisting the other interns with their research, working with the 4-H groups, and he recently toured a local beef cattle farm.

Feeding Cattle: Meet Intern Adam R. Schroeder

Raised on a farm and having competed on judging teams at U of I, Adam Schroeder is very familiar with cattle. He has a deep interest in ruminant nutrition, which is the main focus of his research. His faculty advisor is Dan Shike and DSAC advisor is Frank Ireland.

Adam is researching the effects of modified distillers grain on cow and calf performance. The title of his research project is *Short and Long term Effects of Supplementation of Modified Distillers Grain on Cow and Calf Performance*. Distillers grains are a by-product of the distilla-



tion process, usually produced during ethanol production. The nutrients in distillers grains are concentrated

threefold and can be used as fodder for livestock.

There are 260 cows in his study with 133 on distillers feed. The cattle have been weighed, evaluated and then separated by breed into differ-

ent groups (6 Angus groups and 6 cross-bred groups). Half of each group is fed 5 lbs. a day of distillers grain. Adam records progesterone levels, milk production levels and calving data.

He expects that using distillers grain will improve cow and calf performance. At the end of the summer he will compare the data of cows on and off distillers feed to make a final conclusion.

Adam has been busy doing research and assisting fellow interns with their research projects. He also has helped mow pastures, maintained fences and assisted with vaccinating cattle.

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Beef Cattle Research: Meet Intern Emily Carson

Emily Carson is a recent graduate from the Department of Animal Sciences. Having grown up on a beef farm and shown beef cattle in 4-H for eleven years, Emily has developed a passion for working with cattle. Her faculty Advisor is Dan Faulkner and DSAC mentor is Frank Ireland.

Emily's research project is titled: *Comparing Pregnancy rates in Beef Cows using Five vs. Seven Day CO-Synch + CIDR Protocol*.

CIDR is a progesterone vaginal insert used to synchronize estrus and hasten puberty or post partum cycles in beef cows/heifers. This allows for the cattle to be bred and then deliver in the same time frame.

The CO-Synch synchronizes ovulation in beef cattle and the two versions tested are the five and seven day CO-Synch.

There are 850 cows at DSAC; most of them are part of the study. Each of the two

treatment groups has 350 cows.

Emily expects the 5-Day CO-Synch + CIDR protocol to be more effective because it is closer to a cows' natural breeding cycle. The objective is for the cows to breed within 60 days post calving.

Along with working on her own research, Emily has helped to prepare DSAC for the AALAC Accreditation, 4-H group tour and other interns in their research.



Emily processing a calf, specifically tattooing one of its ears.

DSAC Research on the CIDR Implant

Dixon Springs Agricultural Center was involved in research on the early developments of a CIDR implant for estrus synchronization. The CIDR implant improves the

timing and efficiency of a beef cattle breeding program. According to DSAC staff member Frank Ireland, the research conducted was used to help get FDA approval of

the device. Other universities were also involved in the research. The CIDR is presently the most widely used form of estrus detection in beef cattle.

