

Farm Energy team is growing

SPRING is here and our team is growing. We recently hired an undergraduate student, Melissa Kroksh, to help us with farm energy efficiency outreach and communications at our field days this spring and summer at the Iowa State University research and demonstration farms.

Melissa grew up on a family farm near Akron in northwest Iowa and is a sophomore in animal science and ag communications at ISU. As a former 4-H'er, she has lots of practical experience from the farm, as well as communication skills from her work this semester with the *Iowa State Daily*. I asked her to share some of her thoughts with our readers.

How does energy management affect Iowa farmers?

Energy management affects farmers, consumers and the environment. Iowa farmers are using more renewable resources. By managing energy consumption and choices for fuel sources, they can strive for more sustainable production. Iowa is also on its way to ranking among the world's leading producers of wind-generated electrical energy. Iowa has many open farmland areas and very high wind velocities, making it an efficient focal point for wind energy development.



Farm Energy

By DANA SCHWEITZER

Why is ag communications your major?

I first chose to major in animal science because I was very interested in livestock production. I realized after my freshman year I wanted to take my career path in a different direction. I've always enjoyed informing others about agriculture, which is why I added the ag communications option. With experience in design, I realized I could also learn about advertising through ag communications. I'm combining the two things I love most, agriculture and art.

Why did you choose ISU?

Iowa State has a number of ag majors, a tremendous College of Ag & Life Sciences program, and I still get the small-town feel on campus and throughout the city of Ames. I've always appreciated how close everyone is at ISU. Whether it's being a part of Hilton Magic or attending an Ag Communicators of Tomorrow meeting, I can't imagine rocking anything other than Cardinal and Gold as a Cyclone.



MELISSA KROKSH

What's the most surprising/useful thing you've learned as a student?

Iowa State is a diverse university. One very useful skill I've learned is how to communicate with people who don't have an ag

background. I've learned how to relate and explain different aspects of agriculture through terms and concepts that are easier to understand.

What did you enjoy most about growing up on a farm?

It is something I'll always treasure. I've learned and done things most girls wouldn't imagine doing that will be with me the rest of my life, such as driving a tractor, leading a 1,300 steer around, power-washing stock trailers and cleaning pigpens. I learned the basics of raising beef cattle and pigs, which helped me excel in raising show stock and livestock judging. And how could I forget the best bonding time with my dad came from riding in the John Deere combine and riding the four-wheeler to pick out 4-H calves from our herd.

Would you like to return to the family farm in the future?

The family farm is a place I can always go back to and feel at ease. However, I don't think I'll take over the farm. With a huge passion for agriculture, I hope to explore different aspects of ag other than what I've already learned at home.

Schweitzer is program coordinator for ISU Farm Energy in collaboration with the Iowa Energy Center.

Hoops fit with manure management

AS long as there have been cattle and hogs, there has been manure. But change is occurring for livestock producers and manure management, specifically in controlling runoff.

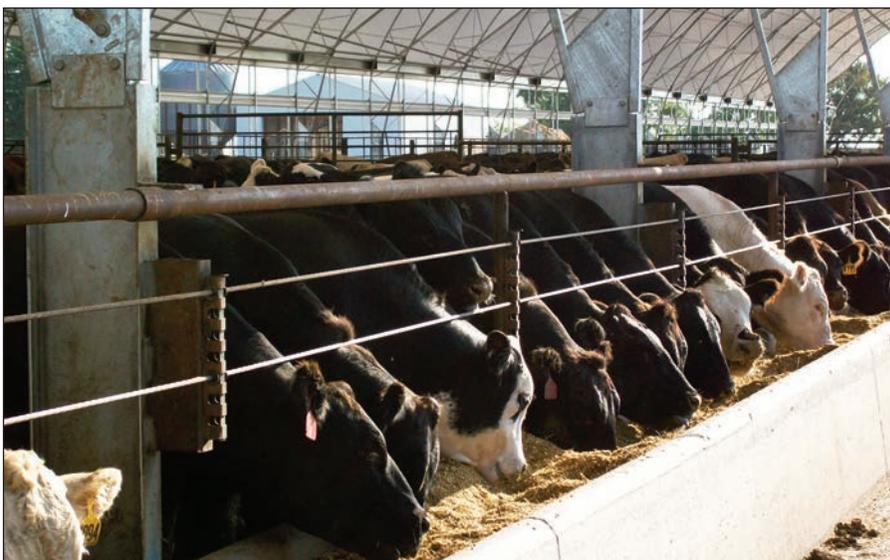
In an effort to comply with the National Pollutant Discharge Elimination System program requirements, the Iowa Department of Natural Resources, or DNR, has begun conducting on-site inspections for medium and large farms to ensure compliance with Iowa water pollution laws and the federal Clean Water Act. The work plan says feedlots that haven't been evaluated by DNR will receive an inspection within the next five years.

The goal is to help control water pollution by minimizing the potential for manure, nitrogen and phosphorus to run off farms and enter waterways. Iowa is of particular interest because of its location along the Mississippi River and possible effects downstream in the Gulf of Mexico. Pollutants entering streams and rivers are harmful to human health and cause toxic algae blooms and fish kills.

An ounce of prevention

Growing concerns about the environmental impact and potential for runoff from open feedlots and manure lagoons have prompted many livestock producers to adopt confinement feeding as a manure management tool. For the most part, confinement operations consist of buildings with concrete foundation walls that help control runoff by containing manure. Most livestock buildings offer an option of two main types of manure containment: deep pits and deep bedding packs.

A deep pit allows manure to fall through slats into a pit directly beneath the slotted



HOOP BUILDINGS: Increasing regulations on manure management have livestock producers switching from open feedlots to confinement facilities. Fabric covered buildings are an increasingly popular option.

flooring. The pit is pumped and manure applied to a field once or twice a year, depending on the pit's size. This option requires less daily maintenance and doesn't involve clearing manure with a skid loader.

A deep-bedding building consists of a solid concrete floor with corn stover, wood shavings or straw bedding added to help dry out the manure. Because new bedding is consistently being added, this option requires scraping behind the feed bunk once or twice a week and stockpiling manure until it can be applied to cropland. But with increased day-to-day labor comes an increased ability to monitor herd health.

"The deep-bedding pack allows most of the cattle to be at the feed bunk at one

time. If one stays back, that's a sign it may be sick and needs attention," says Shane Schechinger, vice president, agriculture sales, for Accu-Steel fabric-covered building solutions. "A pitted barn saves day-to-day labor, but you have to walk the building to see all the animals, because they are typically stocked at a higher density."

Not all are created equal

Of course, not all farm buildings with concrete containment walls are created equal in preventing runoff. Fabric-covered buildings offer a few distinct advantages compared to traditional and monoslope barns. First, fabric-covered buildings provide superior ventilation that aids in natu-

rally drying manure, decreasing moisture and ammonia in the cattle building. Dry manure doesn't run off into waterways. "If you can keep the building dry on the inside, you don't have to worry about waste seeping out of doorways or openings," says Schechinger.

Accu-Steel buildings feature Hydra-Loc technology, a watertight, woven polyethylene fabric that repels water while extended dual eaves direct rainwater away from the building. The state-of-the-art fabric is also thermally neutral, helping to regulate the building temperature. This controls another element that can affect manure management: condensation. "It eliminates all the variables that can cause manure runoff," says Schechinger.

Also, fabric doesn't rust or corrode, and a specialized UV coating used by Accu-Steel ensures longevity. The combination of natural light, ventilation and protection from weather elements makes it possible to store manure in a fabric-covered building, while other options may require a separate, permanent structure.

A fabric-covered building can also improve animal comfort and rate of gain. Before constructing an Accu-Steel fabric-covered building on his northwest Iowa farm, Jerome Kuyper's steers were gaining 3.2 to 3.8 pounds per day; now they gain 3.5 to 4 pounds per day. Heifers were gaining 2.3 to 2.8 pounds per day, and now 2.5 to 3.1 pounds. The gains have decreased Kuyper's time to market by around 30 days.

"Our cattle have a very consistent rate of gain and days on feed, which as a custom feeder makes my business more predictable," he says.

Visit www.asicoverbuildings.com.

Source: Accu-Steel