

Energy assessments work

SUMMERTIME always seems like a whirlwind of activities, one after another. Then August comes along and nearly bowls you over: field days, county fairs, Iowa State Fair, Farm Progress Show. Whew!

Last summer, several students at the ISU Ag 450 teaching farm set aside time to participate in a farm energy efficiency workshop. Many wanted to gather more information about energy consumption around the farmstead, including fuel, electricity and propane. This summer, before it got too darn busy and too darn hot, the ISU Farm Energy team — Mark Hanna, Jay Harmon and yours truly — collaborated with the Ag 450 farm to conduct an on-farm energy assessment.

Down on the farm

The Ag 450 teaching farm is south of the Iowa State University campus near Ames. Each year, students enrolled in the AgEds 450 course handle all the responsibilities of operating the farm, including all crop and livestock enterprises. Tom Paulsen, ISU Ag 450 instructor and assistant professor in ag education and studies, was eager to schedule our visit this summer. “I think the energy assessment will provide helpful information for our Ag 450 students,” said Paulsen. “We want them to have as many opportunities as possible to learn about on-farm energy management.”

In an effort to beat the heat, the group agreed to a morning site visit. Greg Vogel,



Farm Energy

By DANA PETERSEN

Ag 450 farm manager, greeted us as we arrived at the farm. The energy assessment team included farm energy specialists Fred Daniels and Steven Fredrick, as well as Hanna and Harmon, ISU Extension ag engineers.

The walk-through emphasized electricity consumption on the farmstead, including the Ag 450 classroom, farm shop and two hog buildings. As we evaluated each building, Vogel answered questions about the age and condition of the facilities, including fans, lighting and other equipment. He also highlighted one of the common concerns among farmers.

“In a barn, compact fluorescent bulbs should be protected by globes, but very few brands show on the packaging if the bulbs are rated for enclosures or not,” said Vogel. “It can be frustrating when you’re trying to find what you need.”

Which CFL bulbs are designed for enclosures? This is one of the many questions we hope to answer for Iowa farmers in the months and years ahead. This summer marks the beginning of a new collaboration for ISU Farm Energy and several of the ISU research farms throughout the state. With support from the Iowa Energy Center, ISU

Extension and Outreach, and ISU Research and Demonstration Farms, the ISU Farm Energy team will collect and analyze data regarding energy use for different types of farm facilities and equipment.

“We’re looking forward to gathering and evaluating data from different research farm locations around the state to better understand how their energy use varies over time,” says Hanna.

Next summer, look for ISU Farm Energy demonstrations and case studies during summer field days at the ISU research farms. In the meantime, if you have burning questions about farm energy assessments or energy efficiency, look no further than the Farm Progress Show.

Visit us at Farm Progress Show

Fred Daniels, Steven Fredrick and colleagues will be available to answer your energy efficiency questions later this month during the show. Daniels and Fredrick are part of a larger team of farm energy specialists working with electric utility companies to provide farm energy assessments in the field. Their work takes them to farms throughout Iowa and neighboring states. Look for them and one of their Iowa utility partners, MidAmerican Energy, in Booth 9715 at the Farm Progress Show’s Varied Industries Tent.

You’ll also find answers to farm energy questions from the Iowa Association of Electric Cooperatives in its tent at Lot 807 at the Farm Progress Show, as well as the



THE ‘E’ TEAM: A team of farm energy specialists conducted a farm energy assessment at the ISU Ag 450 teaching farm earlier this summer, including (from left) Steven Fredrick, Mark Hanna, Fred Daniels, Greg Vogel and Jay Harmon.

4-H Exhibits Building at the Iowa State Fair.

Back at the Ag 450 farm, new information must be reviewed by the undergrads and passed by a majority vote before changes are implemented. Following our assessment, Daniels and Fredrick compiled a summary and a list of recommendations, including specific calculations for the changes they are suggesting. This fall, we’ll be sharing the results of the farm energy assessment with the students and awaiting their decisions.

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

■ For more information about energy efficiency all around the farm, visit ISU Farm Energy online at farmenergy.exnet.iastate.edu or follow @ISU_Farm_Energy on Twitter.



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