



Finding Energy Efficiency and Savings on a Kentucky Farm

by Maya Payne Smart

Alvin Frogue of Frogue Dairy has been in the dairy business for 50 years and until recently one of his top challenges was managing 250 cows with individualized care.

Now \$80,540 worth of new dairy technology helps the Guthrie, Kentucky-based farmer keep a closer watch on the milk room--and conserve energy and money.

Through a \$10,000 Recovery Act grant, Frogue installed a variable-speed drive vacuum pump, which offers more accurate control of milking, reduces noise and improves udder health and milking quality. He also added a 16-unit automatic take-off milker system to prevent over-milking and reduce vacuum pump runtime and teat end damage.

"The grant definitely helped me make up my mind to do it," says the veteran farmer whose daughter-in-law, a computer skills instructor, helps him with new technology. "They pretty well told me that if I did such and such that I would qualify for the grant."

Sustainable Farming

Moreover, Frogue recognized a pressing need for better tools to manage a shrinking labor pool, protect animal welfare and bolster profitability.

"Anybody can put a milker on a cow, but it takes someone who knows what they are doing to take them off," Frogue says of the challenges of overseeing unskilled laborers.

"We put the technology in to protect the cows more than anything else," he explains.

"If they aren't milked right, you can mess up a cow really quick. It saves us a lot of worry and a lot of extra work with veterinarians and sick cows."

It also saves considerable electricity and labor. Together the technologies have reduced milking time for his 250 cows from four and half hours to three hours and 15 minutes. In all, the project is estimated to save 25,758 kWh of energy and \$2,432 in electricity costs annually.

Economic impact

Frogue's upgrades are among 82 on-farm energy efficiency and production projects receiving \$696,916 in Recovery Act grants through Kentucky's Governor's Office of Agricultural Policy and Department for Energy Development & Independence.

"Increasing producer awareness of opportunities to improve energy efficiency and opportunities for the production of energy crops within the Commonwealth are lasting investments that will have a direct impact on Kentucky's farmers, and the state as a whole," says Len Peters, secretary of Kentucky's Energy and Environment Cabinet.

Indeed, \$852,000 worth of energy savings and \$8.4 million of new investment in rural farm communities will be created in the first year alone if all approved projects are completed, estimates Tim D. Hughes, a senior policy analyst in the Governor's Office of Agricultural Policy.

"I've gone out and visited 40 of our projects, and we're helping companies outside of Kentucky that are selling major pieces of farming equipment," Hughes explains. "Local vendors are also benefitting from having salespeople and installers affiliated with getting these projects up and running."

And don't forget the direct financial impact for farmers like Frogue who wanted to make upgrades but needed an extra incentive to get it done now amid tough economic conditions in rural Kentucky.