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MEXICO, Mo. – Kenny Roth used to leave the lights on in his shop all the time. The aging metal-halide lights took 20 minutes to get up and running, and time is money in farming.

But that lag is no more.

MAESTRO, an energy conservation program, helped the livestock producer identify where he could save major money by upgrading aging equipment.

“With these new lights we get a lot better light, we can turn them off and on when we need and there’s energy savings,” said Roth, who uses the shop to house and repair equipment when he’s not caring for his cattle herd. “Your input is the only place you can control your cost, so paying less electric or less for fuel is a big savings.”

The process of saving money began with Leon Schumacher, a professor of [agricultural systems management](#) at the University of Missouri.

Schumacher is the principal investigator for [MAESTRO](#), the Missouri Agricultural Energy Savings Team: A Revolutionary Opportunity. In partnership with the Missouri Department of Agriculture, Schumacher and his team work to strengthen the financial viability and environmental soundness of the state’s livestock producers.

With Schumacher’s help, Roth received an on-farm energy audit that identified where he could save the most money and energy. Roth’s new lighting will end up trimming 30-50 percent off electricity costs over his old system.

“The single biggest bill that farmers faces every month is for the amount of energy they use, and there are many simple things they can do along the way to reduce that,” Schumacher said. “Our goal is to reduce energy use by 15 percent – which can save from \$150-\$600 any given month. In the end that reduces our dependence on things like oil overseas while making sure we have the energy that we need to drive this industry we call agriculture.”

Roth is one of 242 active clients in the three-year venture, which hopes to help many of the 2,400 small livestock producers in Missouri.

It is a joint program of the MU [College of Agriculture, Food and Natural Resources](#) (CAFNR), [MU Extension](#), [MU College of Engineering](#), [MU College of Human Environmental Sciences](#) (HES), the [Missouri Department of Agriculture](#), the [Missouri Department of Natural Resources](#), and the [Missouri Agricultural and Small Business Development Authority](#). [EnSave Inc.](#), part of the partnership, administers the farm energy audits and HES administers the home energy audits.

Assistance from MAESTRO can come in the form of reduced-cost energy management plans, free technical assistance, loan buy-downs or 75 percent loan guarantees (for the lender) up to \$50,000. The project provides 75 percent funding of project costs, up to \$5,000, for installation of equipment.

“MAESTRO, in some operations, could save \$300-\$600 per month on utility bills because of the wide variety of old energy-hogging equipment that could be switched out to new, efficient models,” said Sam Orr, MAESTRO project director. “We want to help those farmers invest now so they won’t get hit so hard when the cost of energy goes up in the future.”

These savings matter to many livestock producers, who face high feed prices and are struggling in the current economy.

“While diesel costs are out of your control, at least the amount of energy you use in your lighting, your pumps and your chillers is not, and that’s somewhere you can be more efficient and save money,” Orr said. “This is a normal application of the Extension mission—to take a new technology and extend that out to the farmers across the state to help them save money and improve their operations.”

Find more about MAESTRO at www.moagenenergysavings.org.