

Dodge County Success from the Field

Energy Conservation and Improved Herd Health

The Law of Conservation of Energy says energy can neither be created nor destroyed, only transformed from one form to another. This applies to light energy too. Energy Conservation means to reduce the consumption of energy by using less of a service or reducing the amount of service used. To conceptualize, think of turning off lights or replacing a lighting system with energy conserving models. That's what Royce and George, of Nehls Bros. Farms, LTD, in Juneau, Wisconsin, did when they took advantage of the Agricultural Energy Initiative, and partnered with the Natural Resources Conservation Service (NRCS) to conserve light energy.

"I was born on the farm," explained Royce. When his father passed away in 1976, Royce and his two brothers took over the farm. Royce was 16 years old, his brothers were ages 15 and 18. When his father operated the dairy, they milked 300 cows in a stall barn, cropped 2,500 acres and focused on selling high value genetics.

Today, Royce and his brother focus on commodity milk production. They own and operate over 3,900 acres and milk over 2,100 cows. They also operate several facilities to produce milk, supply replacements, manage crop and feed production and manage their herd's health.

The Nehls like the challenge of farming, growing their operation to produce high quality milk. They take pride in their farm and are equally committed to land management and conservation as well. When they learned of the opportunity to practice energy conservation, they were all in.

Working with Kathy Turner, Dodge County NRCS District Conservationist, they were able to complete an energy audit, which identified the potential for real energy savings in the form of light energy conservation. Replacing the current lights in the animal production areas meant an annual cost savings of over \$24K.

So, they went to work replacing their existing light system with LED lights. LED lights use approximately 1/3 of the energy of common wattage bulbs. In addition, they are low maintenance, have a long life, work well in extreme temperatures, which is important in Wisconsin, and have no toxic chemicals. LED lights don't shatter, they retain their brightness, they do not have ultraviolet rays so bugs are not attracted and they offer more directional light. Royce has noticed that they burn brighter and they turn on fast, for more instant



The new LED lighting enables staff to better manage herd health.



A happy cow on the Nehls Bros. Farm, LTD.

light. That means better herd health and improved worker safety. "My employees can see better to clean and the herd staff can notice sick animals sooner," explained Royce. Some studies have shown that improved lighting translates into increased cow productivity too.

"Working with Nehls Bros Farm, LTD, has been valuable. They are smart farmers, hard-working and conscientious, and I learned a lot about how light energy conservation is important and can benefit our participants," explained Turner. "It's rewarding to partner with producers who are as committed as Nehls Bros. Farms, LTD. We all benefit when good conservation is practiced."

**Wisconsin
Natural
Resources
Conservation
Service**

