

A Griesen Family Dairy: A New Beginning

CASE STUDY

After decades of dairy farming in the Netherlands, the Griesen family was ready for a change. Extensive research revealed that dairy farms in Europe and Canada came with high operational costs and limited milk quotas. The United States offered the Griesens a better opportunity.



The Griesen's freestall barns use energy efficient high-speed fans and lights.

The Griesens worked with New Horizons Agriculture to identify possible farm locations. New Horizons Agriculture is an agricultural consultancy company based in Madison Wisconsin. They offer relocation assistance to Dutch farmers who consider moving to the US.

With New Horizon's help the Griesen's made the decision to buy land in early 2004. They bought 40 acres of land in Sauk County, just north of Prairie du Sac, and built a completely new facility from the ground up. By starting fresh, the opportunities for energy savings were substantial. After consulting with Focus on Energy, Wisconsin's energy efficiency and renewable energy program, the Griesen's made the decision to maximize their return on investment by purchasing energy efficiency technology for every aspect of their operation.

The family incorporated a comprehensive list of energy saving equipment on their farm, which included:

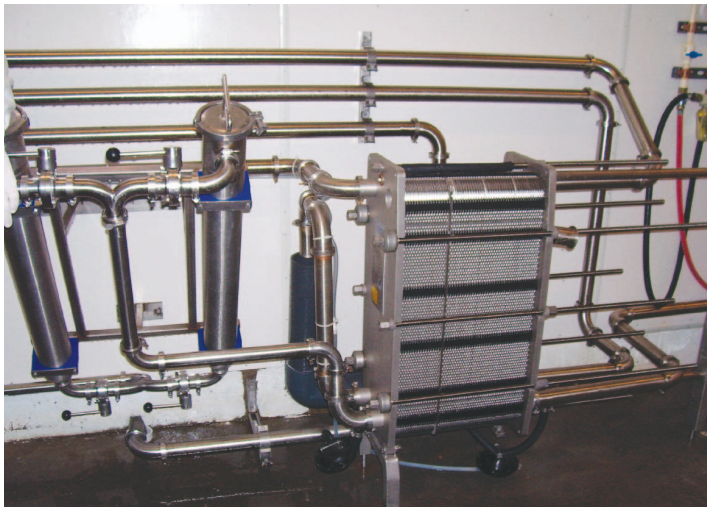
- Energy efficient lighting
- Milk cooling
- Variable speed vacuum pumps
- Energy efficient fans
- High efficiency water heating and space heating

In April of 2005, the Griesen family began milking cows. Since then, they have steadily expanded their herd to 450 cows, with plans to keep growing. Hans Griesen, son of Henk and Joanne said, "All of the equipment works well and the Focus on Energy program is a very good idea. We are happy with Redeker Dairy's, an agriculture dealer, work on the farm and they did a very good job. They are hauling out 30,000 pounds of milk per day."



The heat recovery tank captures heat from the Griesen's refrigeration system. This heat is used to reduce their hot water energy use and expands the capacity of their water heater.

To learn more about Focus on Energy,SM call 800.762.7077 or visit focusonenergy.com



The Griesens installed a plate cooler to save energy and increase the speed of the milk cooling process.

COST AND SAVINGS

The added cost of energy efficient equipment was minor compared to the cost of new equipment purchases, but the savings are substantial and will continually enhance their bottom line. By implementing energy efficient equipment the Griesens will save over 300,000 kWh in energy, which translates to saving over \$28,000 in energy costs annually.

If you are interested in learning more about energy efficiency opportunities on your farm, contact Focus on Energy at 800.762.7077 and ask to speak with an Agriculture and Rural Business Team Member. Or visit our Web site at focusonenergy.com.

ENERGY AND COST SAVINGS FOR GRIESEN DAIRY		
Technology	Energy Savings	Annual Cost Savings*
Plate cooler and VFD on milk jar (combined savings)	36,061 kWh	\$3,029
VFD on vacuum pump	41,177 kWh	\$3,459
Compressor heat recovery	2,614 therms	\$2,614
Scroll compressors	7,097 kWh	\$596
Space heating efficiency (combined savings)	2,398 therms	\$2,398
High efficiency ventilation fans	96,679 kWh	\$8,121
Energy efficient lighting	46,279 kWh	\$3,887
Total kWh	22,7293	\$19,093
Total therms	5,012	\$5,012

*Based on \$.084 per kWh and \$1.00 per therm.

"I feel that Focus on Energy is a real win-win situation for farms. The support from Focus to implement these energy efficient measures helped to reduce annual energy bills for the Griesen family. With these savings, they will notice it in their bottom line every year. I appreciate all the help that Rich Hasselman (a Focus on Energy Advisor) provided to make this happen."

- Case Dorresteyn of New Horizons Agriculture

Be sure to reference additional Focus on Energy facts sheets entitled, "Refrigeration: System Design, Operation and Maintenance" and "Ventilation in Animal Housing" for technology specific topics. Both can be found at focusonenergy.com.



The variable speed vacuum pump system maintains exact vacuum specifications and minimizes energy use from the vacuum pump.