



Skyridge Farms

Sunnyside, Wash.

Winner: Outstanding Dairy Farm Sustainability Award

Focus on Cow Comfort Delivers

Skyridge Farms, located in Sunnyside, Wash., was founded in 1997 by Dan DeGroot. In 2003, DeGroot recognized that if he wanted to continue to be successful in the future, he had to fundamentally remake his farm into a leading example of sustainability. His goal was to create a holistic, integrated environment that developed employees, increased cow comfort and restored the environment. DeGroot systematically analyzed the full range of systems and processes required to create a truly sustainable dairy and made well-researched changes to meet those goals.

His efforts have solved critical environmental and community challenges, including efficient use of water, energy, fuel, chemical fertilizer, pesticides and herbicides. He also improved tilling practices, restored soil health and increased recycling.

Today, the dairy employs 35 people and is home to 3,200 cows, 400 acres of corn, 160 acres of alfalfa, 30 acres of apples and 30 acres of cherries.

Best Practices

1 Technology Upgrades

Summary

Skyridge improved its technology base, including upgrades to controls, lighting, motors, fans, sensors and pumps, which aided in water and energy conservation. DeGroot also added a stationary feed mixer, which significantly decreased fuel usage and improves nutrition and cow comfort.

Key benefits

Significant savings in energy and water were seen after implementing energy efficient technologies:

- Programmable Logic Controllers (PLCs) were added to lighting, the soaker system used for cooling cows in freestall barns and fans in the parlor and holding pen - resulting in varying degrees of water and energy savings.
- Variable-speed drive (VSD) motors were used in ventilation fans, well pumps, vacuum pumps, milk pumps and in the deck flush and wash down pump - resulting in varying degrees of energy savings.
- Lighting was retrofitted in many of the barns and in the shop. T12HO fixtures were switched to T8s, 400-watt metal halide fixtures were swapped out for T5HO and 400-watt metal halide

(continued)



(Key benefits – continued)

fixtures were replaced with 40-watt T5 florescent. The dairy also replaced 400-watt metal halide fixtures with 40-watt T5 florescent bulbs. All of these changes resulted in energy savings between 50 percent and 75 percent.

- 16 occupancy sensors were installed, saving 30 percent in energy usage.
- The dairy installed 20-horsepower VSD Dual Splash lubrication vacuum pumps, which allowed the parlor expansion to take place with a 50 percent smaller pump size increase than previously required.
- A stationary electric drive feed mixer replaced the diesel engine feed truck previously used, reducing fuel costs by 80 percent.
- Energy efficient, high-volume, low-speed fans were 92 percent less expensive to run than the previous high-speed, low-volume fans.

Aside from saving energy and water, technology improvements also have reduced maintenance costs and time.

2 Recycling Programs

Summary

Virtually all manure at Skyridge is recycled on the farm. Manure solids are composted with used straw bedding from the dry lot areas and reused as bedding in the freestall barns. Approximately 12,000 to 13,000 yards of compost is sold to Organix for use in city landscaping. Lagoon water is reused multiple times, eventually fertilizing crops and enhancing soil health. DeGroot also implemented a self-sustaining recycling program for plastic from ag-bags, twine from hay bales, and other plastic and corrugated packaging.

Key benefits

Recycling manure into valuable compost reduced manure volume by 50 percent and will create additional revenue when sold to nurseries. Composting also saves on fuel and energy previously used to import straw bedding and decreases the number of truckloads previously required to move manure off the farm by more than 600 annually. Bacteria that live in lagoon water loosen the clay and loam soil, improving water penetration and soil health. Dan's aggressive land and manure management program enabled him to convert from deep plowing to low-till minimal impact plowing – saving labor, fuel, energy and money. Crop rotation and diversity improved soil health and reduced the need for chemical fertilizer, herbicides and insecticides – all of which cause damage to the environment.

DeGroot's motto for these sustainability projects has been, "You can't get new results with old thinking." He also asked questions of trusted experts, explored different angles and always kept cow comfort top of mind.

DeGroot's vision, leadership and results make Skyridge Farms a sustainable dairy model that other producers can replicate. In fact, since implementing the composting system, 25 other dairies in Washington have established composting programs. After installing the initial PLC unit at Skyridge, the electric company installed 20 additional units in the Northwest. The successes of Skyridge are fine examples of how a strong commitment to sustainability can result in a variety of economic, social and environmental benefits.



The Sustainability Awards are part of the U.S. Dairy Sustainability Commitment, an industrywide effort to measure and improve the economic, environmental and social sustainability of the dairy industry. The award program recognizes dairy farms, businesses and collaborative partnerships for their contributions to healthy people, healthy products and a healthy planet and showcases that sustainability makes good business sense. An independent panel of judges evaluate all nominations based on the program's or project's results as measured by triple-bottom-line success – economic, environmental and social. For more information, please visit USDairy.com/Sustainability/Awards.