

**Challenge:**

Provide comprehensive and controlled air circulation in new protective building to ensure the consistent comfort of replacement heifers during all seasons, as well as prevent surfaces and equipment from freezing in the winter.

Solution:

A total of 10 properly spaced and located 14-foot diameter Entrematic I-Class™ industrial HVLS (high volume low speed) fans operated via the fan network's iFAN® control system.

Results:

High volume of circulating air that keeps 700 replacement heifers cooler during hot weather and warm during the winter, which ensures healthier cows and ultimately, better milk production.

Application:

Strassburg Creek Dairy

Environment:

Dairy Farm Operation

Geography:

Wittenberg, Wisconsin

10 I-Class™ Industrial HVLS Fans in New Protective Building Recirculate Collective Heat Generated by 700 Dairy Cows

Back in 1886 when the Strassburg family farm was first established, Jeff Strassburg's ancestors might have milked five cows each day to meet their own needs. Today, as the fifth-generation owner/operator of Strassburg Creek Dairy and Land O'Lakes producer-member, Strassburg and his farm family proudly milk 170 times that many cows.

With 15 full-time employees milking 850 cows out of a total herd of about 1,550, Strassburg Creek Dairy's 3,200-acre operation now meets the dairy needs of families well beyond Wittenberg, WI. And to help protect the operation's replacement heifers from the elements, reduce the amount of labor required and address environmental concerns, Strassburg Creek Dairy recently constructed a new building.

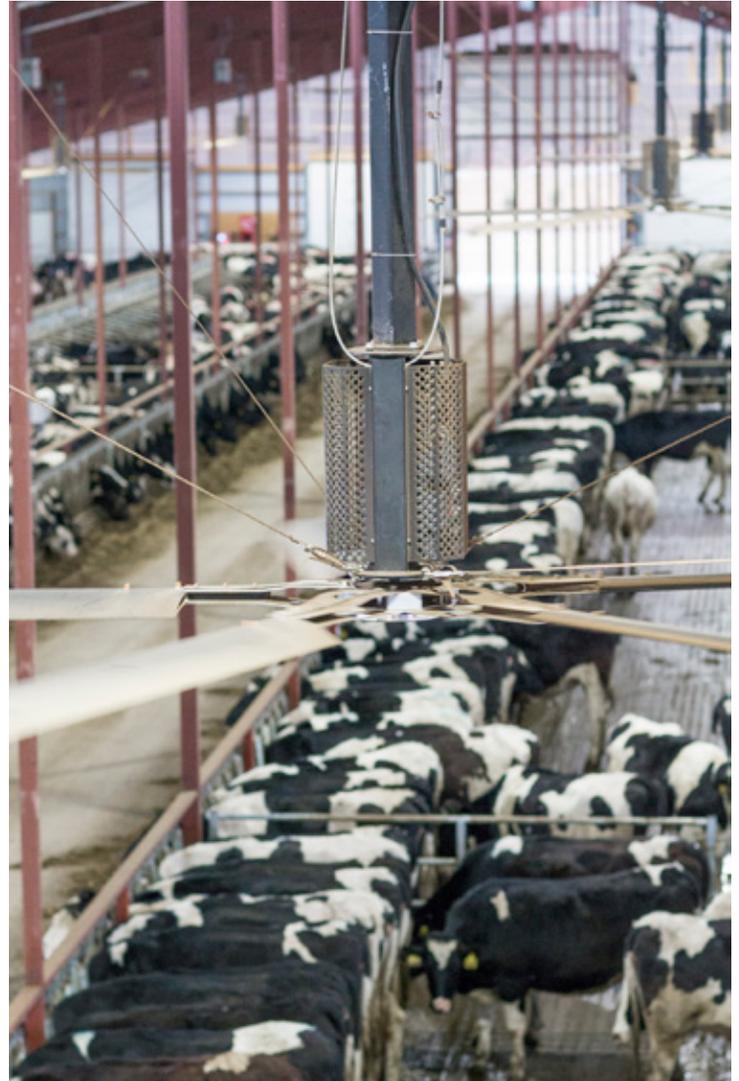
Approximately 700 heifers, ranging in age from four months to pre-freshening (22-24 months), now call the building home before becoming ready to make their first appearance in the milking line.

A more controlled environment

Before Strassburg Creek Dairy invested in the operation's 45,000 square foot (108 feet by 420 feet) structure, the farm's replacement heifers would stay outside year 'round in multiple outdoor lots. The new building has saved the farm significant amounts of time transporting feed and now provides a more controlled environment for the replacement heifers, especially during harsh Wisconsin winters.

"The building (completed the summer of 2016) has resulted in a tremendous labor and time savings for us," Strassburg emphasized. "We now spend only about an hour a day caring for the replacement heifers, in addition to two hours of feeding activity." The outdoor lots that previously contained the replacement heifers have been turned into growing fields for extra feed.

The building's latest enhancements include a total of (10) 14-foot diameter Entrematic I-Class™ industrial HVLS (high volume low speed) fans. Even though the building has curtain sidewalls that can be opened and doors at either end big enough for a large tractor to drive through, relying on those features for air movement is not enough. As a result, the building's HVLS fans help to keep the cows much cooler in the summer when air flow is stagnant and recirculate the warm air they collectively generate during the winter months.



"My philosophy has always been, 'take care of the cow and take care of the land, and those two will take care of us.' Our large fans help us to do just that."

– Jeff Strassburg, Owner/Operator, Strassburg Creek Dairy and Land O'Lakes Producer-Member, Wittenberg, Wisconsin

Healthy cows equal more milk

"For dairy farmers, animal health is the number one priority. We want to do the best for our animals every day of the year," Strassburg said. "If the animals are healthy starting as babies and beyond, they'll produce much more milk over the long-term. My philosophy has always been, 'take care of the cow and take care of the land, and those two will take care of us.' Our large fans help us to do just that."

Heat stress can decrease fertility and milk production in cows. Similarly, extreme cold conditions—while rarely deadly for cattle—cause increased maintenance energy requirements and feed intake, also resulting in decreased milk production.

With Entrematic's HVLS fans, Strassburg explained that his cows will stay much cooler and comfortable so that he can achieve the production gains expected from his dairy farm's size of operation.

During the winter months, when brutally cold pockets of air descend on Wisconsin from points north, the body heat that the cows generate acts as a thermal blanket to keep all of the cows warm. And as that collective heat rises toward the ceiling, the HVLS fans then help recirculate that air. This keeps the building's alleys, chain-operated alley scrapers (for waste removal), as well as other surfaces and equipment from freezing.

During a typical winter, and with the side curtains closed, the building stays about 20 degrees warmer than the outside air temperature. Strassburg stressed that "the building's aluminum-covered ceiling, which features six inches of insulation, works with the fans to help keep equipment and interior surfaces from freezing." That then translates to healthier cows and a safer working environment for family members and all employees.



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Precision individual fan control

Entrematic's HVLS fan specialists helped Strassburg lay out the fan locations and spacing. However, using a telescopic lift, he installed all ten fans himself, which took him about 40 hours for the entire project. He then relied on an electrician to handle all of the fan wiring.

"I've found iFAN® is great, that is, once my kids showed me how to use it," Strassburg laughingly admitted. Seriously though, Strassburg pointed out the iFAN system provides very easy fan control. Strassburg said he simply touches the iFAN screen to increase or decrease fan speed, or even reverse the fans when needed. "Plus, we can easily control which fans are moving at specific speeds; faster over larger cows and slower over smaller cows," he added, explaining that the younger cows need to retain as much body heat as possible.

From the start of his dairy farm's replacement heifer building project, Strassburg shared that he knew the structure would eventually need some kind of large industrial fans. That's due in part to the fact that environmental regulations for dairy farms prefer that cows are contained inside when they're not grazing pasture land. Once the farm made the decision to proceed, Strassburg said the search was on to find the best fan available and at a fair price.



“With the new building and our fans circulating the air, the herd is doing even better and we couldn’t be more pleased with the end result.”

– Jeff Strassburg, Owner/Operator, Strassburg Creek Dairy and Land O’Lakes Producer-Member, Wittenberg, Wisconsin

Strassburg has had absolutely no second thoughts about the decision he made about his newest building or his new HVLS fans. “There were times during the winter that you really felt for the cows when they were outside battling the elements, but they did fine,” Strassburg commented. “With the new building, and our fans constantly circulating the air, the herd is doing even better and we couldn’t be more pleased with the end result.”

For more information about Entrematic’s I-Class industrial HVLS fan products and features, log on to www.entrematicfans.com/industrial, or contact us at **866-696-2464**.

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