

TECH TALK

HVLS Fans: Big Energy Savings

HVLS (high velocity, low speed) fans provide an energy efficient alternative to standard box fans when ventilating freestall barns. These ceiling-mounted units range from 8 to 24 feet in diameter and each has ten, 10- to 12-foot aluminum fan blades. These long blades can move four times as much air as one standard 48-inch ceiling fan rotating at the same speed. One 20-foot diameter HVLS fan can circulate air over 15,000 to 20,000 square feet. HVLS fans use much less electricity than typical ventilation fans, last longer and require less maintenance. Recent studies show another very important benefit: even on hot summer days, HVLS fans keep cows cool and comfortable.

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“Big” and “slow” might not sound efficient. But, thanks to a unique design, new HVLS (high ventilation, low speed) fans offer excellent, energy efficient ventilation in freestall barns. Trent and Krishell Blumer, owners of Plainview Stock Farms in Albany, Wisconsin, raise custom Holstein heifers (1,300 in a typical season). They recently installed HVLS fans in their 48,000 square foot freestall barn and expect to save \$2,800 in annual energy costs and use 41,026 fewer kWh per year, compared with typical systems.

Like most Wisconsin farmers, the Blumers were looking for sensible ways to reduce operating costs. “We knew there were things we could do, but Focus helped answer our questions,” said Trent Blumer. He learned about Focus on Energy’s Agriculture Program at the Wisconsin Farm Progress Days.

“Fred Daniels of Focus came out and looked at my operation and made some recommendations, including HVLS fans,” said Mr. Blumer. “I’d heard about them from another farm operation. They were really happy with how they worked and the cows seemed more comfortable too.”

Mr. Blumer knows his animals will be more comfortable in July, but he also expects that the fans will make a difference during the winter months too. “I think it will help warm the barn in the winter, because the fans will push the heat that has risen to the ceiling back down into the open space,” he said.



When the Blumers decided to install the six HVLS fans, they worked with Focus on Energy to obtain an Implementation Grant of \$5,000 to offset the HVLS system’s higher cost.

“There’s no noise, which is a great thing,” noted Mr. Blumer. “Even though the fans are huge, they provide a real nice light breeze. You can’t tell where it’s coming from.”

PROJECT TECHNICAL SUMMARY		
<i>Plainview Stock Farm</i>	Annual Electricity Savings (kWh)	Annual Cost Savings
Install 6 HVLS ventilation fans in freestall barn	41,026	\$2,800
Total Savings	41,026 kWh	\$2,800