Solar Wall® Solar Air Heating for Agriculture



Solar Heating for Poultry

SolarWall® air heating systems have been used on hundreds of agricultural and animal buildings for poultry and hog ventilation. It reduces heating cost by up to 30% by using the sun's energy to heat incoming ventilation air, which also dramatically improves indoor air quality and decreases humidity.

Running the ventilation/exhaust system at an ideal level is an essential component to maintaining a high quality of bird health. The SolarWall technology presents an opportunity to reduce or minimize heating costs while continuing to run the ideal ventilation rate. Simultaneously reducing operating cost and increasing bird health will in turn increase yields and profits for producers.

A SolarWall system is typically all-metal and covers the south, west or east side of a barn over the winter air intakes. Air is heated on the surface before being drawing through thousands of micro-perforations in the surface. Once inside, the drier air is pre-heated and lower in humidity which makes it more effective on litter management.

SolarWall systems may be eligible for Federal and State incentives.

The SolarWall technology is easily integrated into conventional ventilation systems and preheats the incoming air by as much as 100°F (55°C). SolarWall systems will accommodate up to 1.25 cfm per square foot of barn floor (minimum ventilation).

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Typical SolarWall® Projects

Sheldon Martin Broiler Barn

This 16,800 ft² barn will accommodate up to 14,000 chickens. The chickens typically stay in the barn for 35-50 days until they are full grown, and require a consistent indoor air temperature that varies between 70-90°F, depending on the size of the chickens.

The SolarWall® system is 2,096 ft², and will heat up to 19,000 cfm of ventilation air.



Located in Minnesota, this 18,000 ft² brooding barn usually required heated air throughout the entire year to maintain the necessary indoor temperatures. During the first few days of brooding, the barn would require the indoor temperature to be around 96F, with an average temperature of 85F.

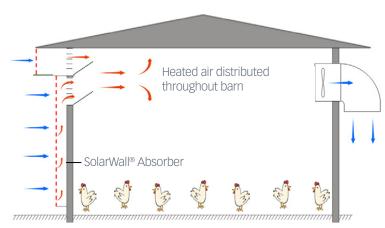
An 800 ft² SolarWall heating and ventilation make-up air system was installed on this barn and is projected to produce more than 60 mmBTUs per year plus additional savings through recaptured building heat loss.

Other Features

- Allows for increased ventilation without any additional energy costs
- Easily installed metal wall system
- Building integrated, no maintenance
- Available in multiple colours
- Installed over or around existing wall openings
- Double damper inlet eliminates cold drafts







Increased ventilation improves animal health

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