







# AGRICULTURAL

## Equipment & Rebate Information

### Agricultural Ventilation

#### Exhaust Fans \$15/each

Fan Size (in.)	Min CFM/watt req.	Actual CFM/watt	Quantity	Rebate

\*Actual CFM/watt > minimum CFM/watt (found on "Rules & Information" tab)

#### Circulation Fans \$25/ea

Fan Size (in.)	Min CFM/watt req.	Actual CFM/watt	Quantity	Rebate

#### High Volume, Low Speed (HVLS) Fans \$400/each

Old fan size (in)	Old quantity	HVLS fan size	New quantity	Rebate

### Rebate Information

Project Cost

Rebate

### Minimum Efficiencies

**Circulation Fans** generally used to regulate air flow and temperature. As the diameter of fan increases, so should the efficiency. These fans work best in free stall barns with two, four, or six rows and are generally located in 30-40 foot intervals over the feed alley and free stall area.

**Exhaust Fans** generally used for ventilation. To achieve cross ventilation, fans are installed on one wall to pull air from one side of the barn to the other. Exhaust fans also can be designed for tunnel ventilation where fans are installed on one end of the barn and move air across to the rest of the barn. generally thermostatically controlled to turn on banks of fans when the temperature hits the set point. Exhaust fans should be installed away from prevailing winds. Similar with circulation fans, when exhaust fan diameter increases, efficiency should also increase.

**High-Volume, Low-Speed (HVLS)** these fans move large volumes of air over a large area. They are available in a range of sizes, typically from starting around four feet and ranging up to 24 feet in diameter. Energy savings is achieved through use of fewer fans to move the same CFM with a more efficient design.

Exhaust	CFM/watt	Circulation	CFM/watt
16-23 in.	10.5	24-35 in.	11.9
24-35 in.	11.5	36-47 in.	15.5
36-47 in.	15.5	48-64 in.	17.7
48-51 in.	20.2		
52-59 in.	20.8	panel, box, and cage fans	
60-72 in.	21.1	static pressure 0.10	

#### HVLS

HVLS fans should be fewer in quantity than the old fans

Through the mass & tunnel ventilation static pressure 0.10

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### Hog Farrowing Mats

For the new construction barn using electric hog farrowing heated mats or replacement of heat lamps with heated mats with automated climate controls in an existing barn. Using heat mats significantly reduces heat lost to ambient air by providing direct heat transfer to the piglets. Replacement of heat mat to heat mat does not qualify for this rebate.

#### Equipment Information

Existing barn retrofit

**Rebate: \$50/crate**

New construction barn

**Rebate: \$30/crate**

#### Existing Lamp Information

(if retrofitting existing barn)

	lamp watts	quantity
Type 1		
Type 2		
Type 3		
Example	175	60

#### Mat Information

(required for both retrofit and new construction)

	mat watts	quantity
Type 1		
Type 2		
Type 3		

total number of crates

#### Rebate Information

Project Cost

Rebate

### CONTACT US

For any questions, please contact your energy expert at:

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### Engine Block Timer

This rebate is for the installation of a plug-in timer that controls the operation of an engine block heater timer to modulate operation

#### Equipment Information

Quantity of timers

#### Rebate Information – \$5/timer

Project Cost

Rebate

### Livestock Waterer

This rebate is for the installation of insulated or energy free livestock waterers in place of standard electric waterers

#### Equipment Information

New Construction

Electric Heat Replacement

Quantity of waterers

\*quantity based on insulated or energy free waterers

#### Rebate Information – \$75/waterer

Project Cost

\$75 / Waterer

### Irrigator VFD

Installing a variable frequency drive (VFD) allows the pump to speed up or slow down to provide uniform application of water and maintain correct pressures throughout the irrigations system. Typically, a VFD will be most beneficial for a system that has end guns or swing arms, precision application packages or one pump supplying water to multiple irrigation systems.

#### Irrigator Information

Motor HP

Annual Hours of Operation\*

\*typically 600-900 hrs/year

#### Rebate Information – \$10 / HP

Project Cost

\$10 per Horsepower