Livestock Industry Facilities and Environment: Swine Cooling Methods—Sprinkling

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Swine Cooling Methods -

Sprinkling

Description: Sprinkling is a cooling method in which pigs are sprinkled with water and then the water is allowed to evaporate. Evaporation of water removes heat from the skin surface of the animals, thereby making them feel cooler.

Probable Uses:
- Finishing Pigs
- Penned Gestating Sows
- Crated Gestating Sows
- Boars

Advantages:
- Simple
- Low cost
- Relatively trouble-free
- Effectively cools animals
- Settles dust

Disadvantages:
- Water is added to the manure collection system
- Floors may be slick when wet
- Equipment may get wet and corrode prematurely

Design Information
Sprinkling systems should be set up to wet animals and then allow them to dry off before wetting them again. To accomplish this use a solenoid valve on the sprayer line that is controlled by a thermostat and cycle timer in series, figure 1. Nozzles should be provided to deliver about 1 gallon of water per hour per 10 pigs. Place the nozzles over the pen dunging area. Use solid cone, low drift nozzles that emit large droplets.

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1 By Jay D. Harmon, Ph.D., PE., Extension Agricultural Engineer, Iowa State University. September, 1997. AEN-182
The thermostat should be set to trigger the system at temperatures above 82 F or when pigs exhibit discomfort from heat. The cycle timer should be initially set to open the solenoid for five minutes per hour. If pigs dry more quickly than this the on time may be increased. Cycle timers that operate in 15 minute intervals may be used but care should be taken to allow the water to evaporate before pigs are re-wet. Animals that continuously stay damp may actually become insulated and lose heat less quickly than those in a wet-dry cycle.

**Further Information:**

For further information see “Heating, Cooling and Tempering Air for Livestock Housing”, MWPS-34. This 47 page handbook is available for $6 plus handling from county Extension offices or by calling 1-800-562-3618.