



## Avoiding Mistakes in Ventilation

We all know there are three main inputs into raising pigs. Feed, water, and air. We have done a good job of getting feed and water correct.

Running the ventilation system to optimize health and doing it economically can be quite challenging. I believe there are many opportunities to save cost in this area of pig production. The following is a very short list of ventilation mistakes I commonly see in wean-to-finish barns and how to avoid them.

1. Heater offsets. The heater offset temperature is the temperature at which the heater shuts off and should be some number below temperature setpoint. Set the heater offset to prevent temperature setpoint overshoot. This can cost a lot of money, but is easy to fix. If you have heaters equipped with a variable output valve, turn it down to the minimum BTU setting. Remember, if the heater shuts off on the coldest day of the year, then you are generating enough heater BTUs to keep the pigs within their thermoneutral zone. If your controller is equipped with a heater run time function, look at it daily and think of ways to minimize heater run times without affecting pig comfort.
2. Setting up a temperature curve.

Most controllers are equipped with a temperature curve function. This should be set up before the pigs are placed. The controller will do a better job of transitioning the temperature down consistently. There are times when the pigs will tell you the curve is not working well, so we need to go back and re-evaluate/reset the curve. In the long run, however, setting the temp curve prior to pigs being placed will save you money, and the pigs will perform better.

3. Getting minimum ventilation correct. When starting pigs in a wean-to-finish barn, I usually unplug at least half of the pit fans outside and gradually replug them in after a few weeks. Midwest Planning Service recommends only 1 cfm per pig in cold weather. On a 1,200 head room, running a 24-inch fan at approximately 20% continuously will theoretically accomplish that. However, most fans will not generate enough static pressure if the controller is sending less than 30-40% voltage to that fan motor. A better solution would be to run a smaller pit fan like an 18-inch fan at 50% voltage.
4. Make sure emergency systems are functioning. This includes emergency thermostats in the

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barn, emergency curtain drops, and generators. Have a checklist at the barn to show that the emergency equipment was checked on a weekly basis. This may prevent disasters in the future.

5. Seal the box. Be constantly looking for ways to seal up a barn including fixing holes in curtains, making sure pit fan lids are sealed tight, and keeping interior doors closed. Fans will operate most efficiently at 0.05 to 0.10 static pressure. Correct the little things that rob fans of efficiency.
6. Curtain movements. In natural or natural-tunnel barns, make sure curtains do not move too far too fast. My rule of thumb on curtain movement up or down for pigs less than 100 pounds is less than 2 inches per move every three minutes. Three minutes is generally enough time to allow the temperature probes to communicate temperature changes within the barn back to the controller.

Paying special attention to some of these items may help you save money this fall and winter. Best of luck!

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