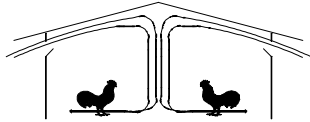




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Poultry Housing Tips

The importance of proper inlet adjustments

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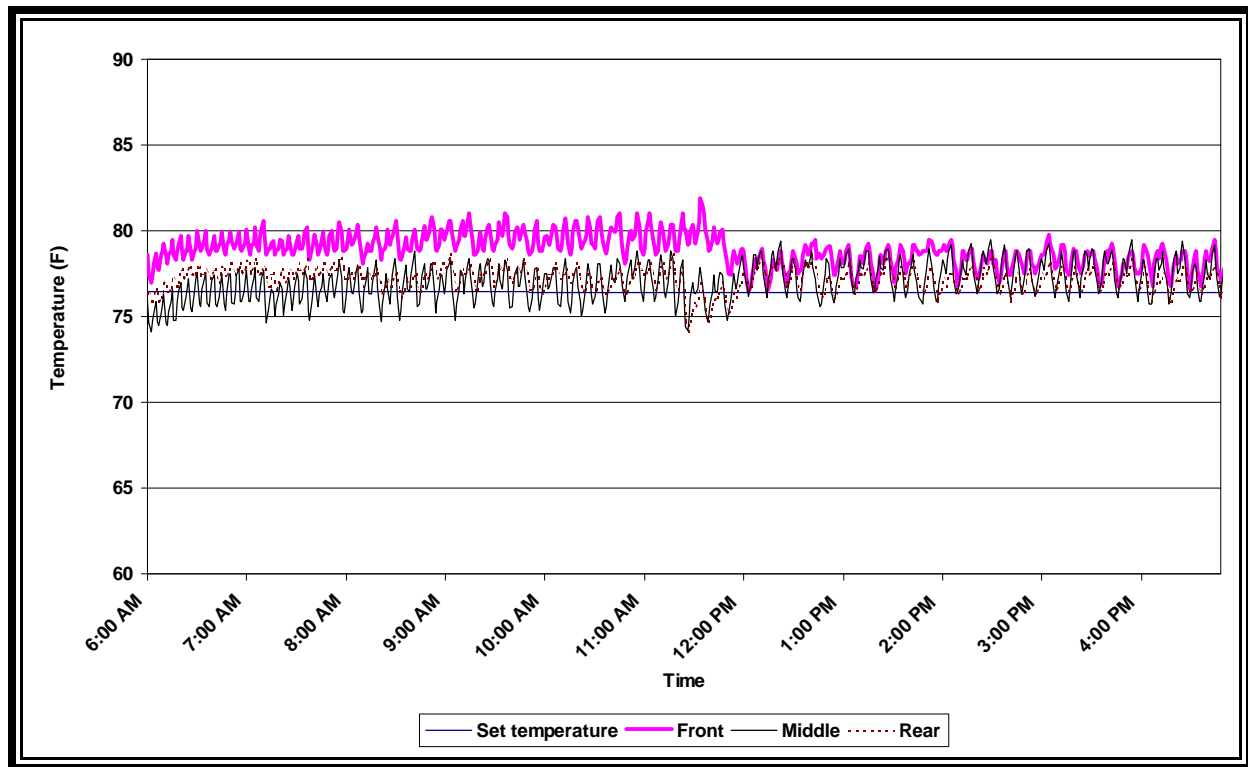


Figure 1. House temperatures before/after inlet adjustment.

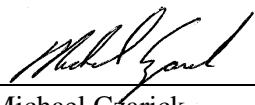
Making sure that your side wall inlets are properly adjusted during cold weather is very important, both in terms of maximizing broiler performance as well as minimizing energy usage. This is because it is the side wall inlets that primarily determine air temperature as well as air quality uniformity throughout a house, not exhaust fan placement. Or in other words, it is how close a bird is to a fresh air source that determines the quality of the environment it is living in, not how close it is to where stale air exits a house.

If the side wall inlets are opened too much or if there are too many inlets opened in one area of the house, the birds in that area of the house will receive an excessive amount of fresh air and most likely excessively low temperatures. The low air temperatures in this area of the house can lead to poor feed conversions (as birds eat more feed to keep themselves warm), caked litter, and high fuel costs as brooder/furnaces come on to try to keep the house temperature

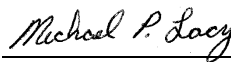
up. Making matters worse is the fact some birds may be getting excessive fresh air at the expense of other birds which may not be receiving sufficient fresh air. In addition, these other birds are likely subjected to higher house air temperatures and poorer air quality.

This very situation can be seen in Figure 1. The front of the house (near the tunnel curtain) was running a few degrees warmer than the tunnel fan end of the house and was a little stuffier. The elevated temperatures were due to approximately five of the inlets in this area of the house being latched closed earlier during the grow-out and not unlatched. At approximately 11:30 p.m., the grower noticed the temperature/air quality difference and unlatched the closed inlets. Immediately the front of the house started to cool off and the air became fresher. Since all the inlets were controlled by an inlet machine, the opening of the five inlets in the front of the house decreased the static pressure enough that the inlet machine closed all the inlets a little resulting in less air entering the middle and rear of the house. The net result was that not only did opening the inlets in the front of the house decrease the air temperature in the front, but also increased temperature in the middle and rear of the house making the house more uniform. If this situation had occurred early (in this particular situation the birds were about seven weeks old) in the grow-out when the furnaces/brooders were set to come on a couple of degrees below the set point and the exhaust fans to come on a couple of degrees above the set point, there could have been fans trying to cool one end of the house while brooders/furnaces operated to heat the other end.

Though it is true that for the most part the number and size of inlet opening should stay consistent from the front to the rear of a house, keep in mind that from time to time some of the inlets may need to be closed in spots and additional inlets opened in others to maintain uniform house temperatures and air quality. This is because no house is uniformly tight nor are birds ever perfectly spread out. As a result, if there is a spot in the house where there is a leak, a couple of inlets in this area may need to be closed to prevent “over-ventilation”; or if the birds are particularly thick in another area, an additional inlet opening may be required to make sure there is enough fresh air for the birds present. It is important to note that “tweaking” individual inlets is a temporary solution. If inlets need to be closed because of leakage, the leakage should be fixed. If additional inlets need to be opened because of too many birds are in one area of the house, the birds should be moved.



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