

Minimum Ventilation For Broilers

1. Minimum Ventilation

- ◆ Minimum ventilation is recommended any time the house temperature goes below the set point (bird comfort) temperature.
- ◆ The purpose is to keep the birds at their comfort temperature, and provide acceptable air quality.



2. Minimum Ventilation Rates

- ◆ Minimum ventilation is a timer not temperature driven process.
- ◆ Recommended minimum ventilation rates for minimum ventilation are:

Live weight (kg)	Live weight (lbs)	Minimum ventilation rates (m ³ /hr)	Minimum ventilation rates (ft ³ /min)
0.050	0.11	0.080	0.047
0.100	0.22	0.141	0.083
0.200	0.44	0.258	0.152
0.400	0.88	0.435	0.256
0.600	1.32	0.589	0.347
0.800	1.76	0.731	0.430
1.000	2.20	0.864	0.509
1.400	3.09	1.112	0.654
1.800	3.97	1.343	0.790
2.200	4.85	1.561	0.919
2.600	5.73	1.769	1.041
3.000	6.61	1.969	1.159
3.400	7.50	2.163	1.273
3.800	8.38	2.352	1.384
4.200	9.26	2.535	1.492

3. Ensure House Is Tightly Sealed

- ◆ The better/tighter the house is sealed, the better the ventilation system will work.
- ◆ Any leak in the house will effect the inlet operating pressure of the entire house.



4. Uniform Air Inlet Openings

- ◆ Not all inlets are used during minimum ventilation.
- ◆ For optimum air flow, the inlets in use should be open at least 3-5 cm.
- ◆ Negative pressure should be adequate to throw the air to the apex/middle of the ceiling.
- ◆ Air direction plates

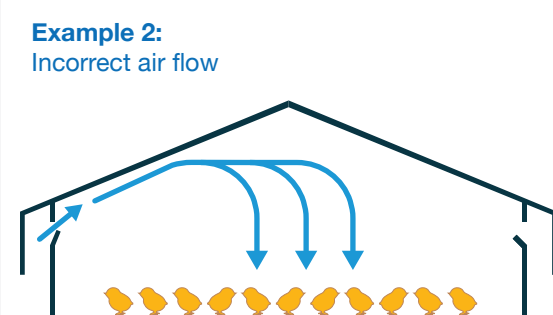
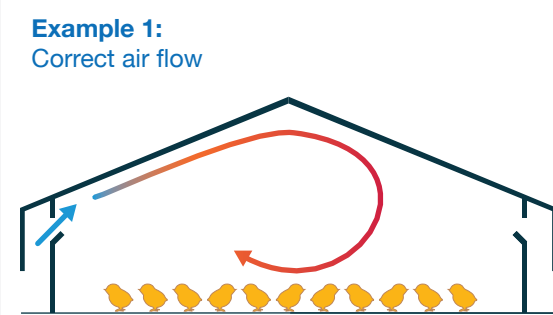
should be set to direct the air appropriately.

- ◆ Inlets must be evenly distributed throughout the bird area.



5. Achieve Good Airflow And Volume

- ◆ Incoming air should flow up and away from the birds.
- ◆ The air should flow to the apex/middle of the ceiling where warm air accumulates.
- ◆ If the inlets are not set correctly, cold air may flow directly onto the birds.



6. Monitor And Evaluate Regularly

- ◆ Smoke test or use plastic strips hung from the ceiling to check the air flow.
- ◆ Monitor RH and air quality at least once per day.
- ◆ If air quality deteriorates or RH exceed 60%, increase the minimum ventilation.
- ◆ **Monitor bird behavior.**
- ◆ Complete regular evaluation of:
 - air quality

- relative humidity
- signs of condensation
- dust levels
- litter quality



Library photographs for teaching purposes.

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