

Winter ventilation for broilers

1. Purpose of winter ventilation

- Ventilation for some minimum amount of time is required no matter what the outside weather is to:
 - maintain good air quality
 - remove excess moisture
- Minimum ventilation is recommended during cool/winter weather.



2. Minimum ventilation rates

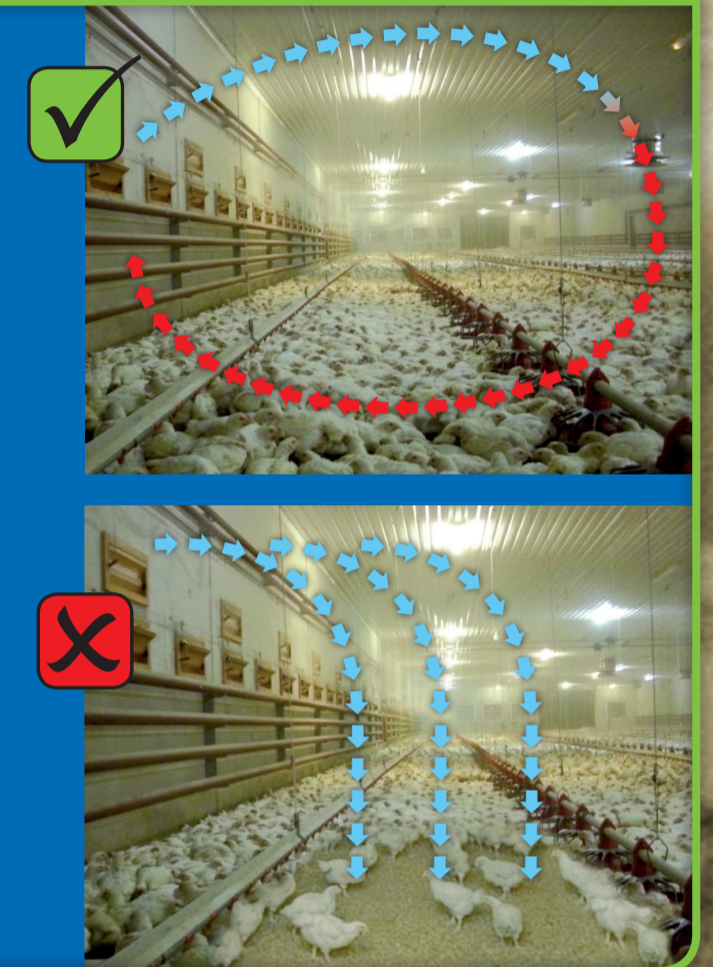
- Recommended minimum ventilation rates for winter ventilation are:

Minimum ventilation rates (20,000 bird house)

Bird age (days)	Cubic meters/hour/bird	Total cubic meters/hour
1-7	0.16	3,200
8-14	0.42	8,400
15-21	0.59	11,800
22-28	0.84	16,800
29-35	0.93	18,600
36-42	1.18	23,600
43-49	1.35	27,000
50-56	1.52	30,400

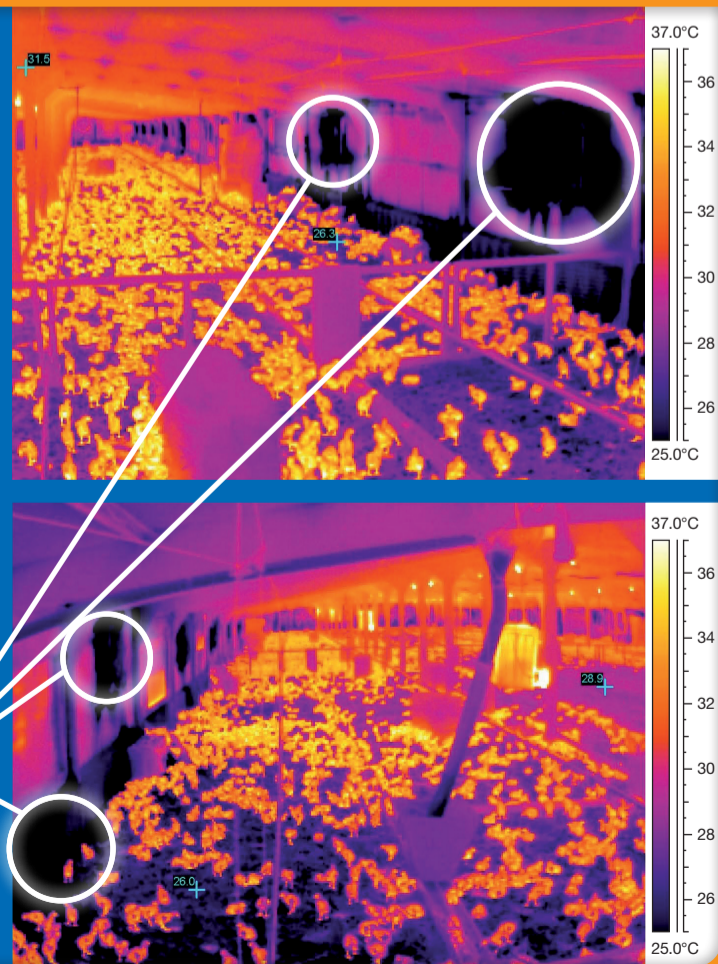
3. Achieve good airflow and volume

- If incoming air flow speed and volume is too low:
 - cold air will drop directly on to the birds/litter
 - litter will become wet and birds may get chilled



4. Ensure house is tightly sealed

- Ventilation only works effectively if the house is adequately sealed.
- This ensures the speed at which air enters the house is controlled.
- Avoid air leaks.



Air leaks.

5. Uniform air inlet openings

- Open air inlets must be evenly distributed through the house and be opened equally.
- At lower ventilation rates close some inlets to force the same volume of air through fewer inlets.
- This will create uniform:
 - volume of air flow
 - speed of air flow
 - direction of air flow
 - distribution of air flow



6. Monitor and evaluate regularly

- Monitor house pressure & air speed:
 - pressure should be 30-40 Pa depending on house width
 - air speed around 4 m/s measured at air inlet
- Monitor bird behavior and litter quality.
- Complete regular evaluation of:
 - air quality
 - relative humidity
 - signs of condensation
 - dust levels
- Use smoke tests to confirm if air flow direction and inlet settings are correct.
- If monitored levels deviate from expectations then take corrective action.

