Minimum Ventilation For Broilers

1. Purpose Of Minimum Ventilation

- To provide a minimum level of air exchange
- Ventilation for some minimum amount of time is required to:
  - maintain good air quality.
  - remove excess moisture.
- Minimum ventilation is recommended for younger birds and in cool or winter weather conditions.

2. Minimum Ventilation Rates

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

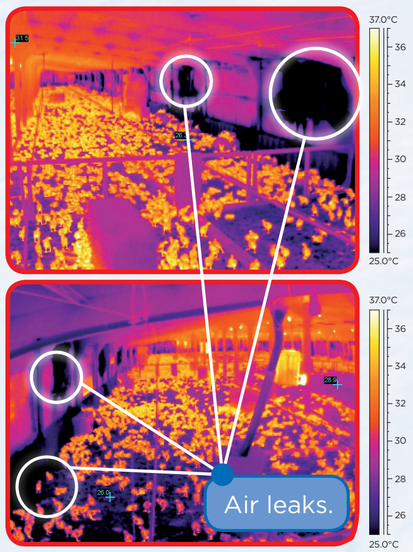
Live weight (kg)	Live weight (lbs)	Minimum ventilation rates (m^3/hr)	Minimum ventilation rates (ft^3/min)
0.050	0.11	0.080	0.047
0.100	0.22	0.141	0.083
0.200	0.44	0.258	0.152
0.400	0.88	0.435	0.256
0.600	1.32	0.589	0.347
0.800	1.76	0.731	0.430
1.000	2.20	0.864	0.509
1.400	3.09	1.112	0.654
1.800	3.97	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. Achieve Good Airflow And Volume

- If incoming airflow 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 and there are no air leaks.
- This ensures that airflow speed and volume entering the house are controlled and correct.



5. Uniform Air Inlet Openings

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

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Library photographs for teaching purposes.

6. Monitor And Evaluate Regularly

- Monitor house pressure & air speed:
  - For every increase in negative pressure of 3-4 Pa (0.012-0.016 inches of water column) air will travel ~ 1 m (3.3 ft) into the house.
  - Incoming air should be thrown into the centre of the house.
- Use smoke tests or cassette tape to confirm if airflow direction and inlet settings are correct.
- **Monitor bird behavior.**
- Complete regular evaluation of:
  - air quality
  - relative humidity
  - signs of condensation
  - dust levels
  - litter quality