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Brooding Management of Chicks During Winter Season

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Introduction

Brooding is the management practice optimal environmental conditions to newly hatched chicks to ensure proper growth, health, and survival until they can regulate their own body temperature. During the winter season, brooding management becomes more critical due to low ambient temperatures, which can adversely affect chick performance, immune development, and overall flock uniformity. Effective winter brooding focuses on temperature control, housing, ventilation, nutrition, and health management.

Objectives of Winter Brooding

- Maintain optimum body temperature of chicks
- Reduce early chick mortality and stress
- Promote uniform growth and feed efficiency
- Prevent cold-related diseases and immunosuppression

Brooding Period

The brooding period generally lasts:

- **1–4 weeks** for layer and breeder chicks
- **5–7 days** for broiler chicks

During winter, chicks may require **extended brooding** depending on climatic severity.

Temperature Management

Temperature is the most critical factor in winter brooding.

Recommended Brooding Temperatures

Age of Chicks	Temperature (°C)
0–7 days	32–35
2nd week	29–32
3rd week	26–29
4th week	23–26

- Temperature should be **reduced gradually by 2–3°C per week**.
- Floor temperature should be maintained at **28–30°C** during the first week.
- Sudden temperature fluctuations must be avoided.

Heat Sources

Common heat sources used during winter:

- Infrared bulbs
- Gas brooders
- Electric brooders
- Charcoal or kerosene stoves (used with caution)

Uniform heat distribution is essential to prevent crowding and chilling.

Chick Behavior as Temperature Indicator

Chick behavior is a reliable guide:

- **Cold stress:** Chicks huddle together, chirp loudly
- **Overheating:** Chicks move away from heat source, pant
- **Comfortable:** Chicks evenly distributed, active, normal feeding

Housing and Litter Management

Housing

- Brooder houses should be **draft-free**, dry, and well insulated.
- Curtains or polythene sheets should be used to reduce cold air entry.
- Cracks and gaps should be sealed to prevent heat loss.

Litter Management

- Use **dry, absorbent litter** such as rice husk or wood shavings.
- Litter depth should be **5–7 cm** in winter.
- Wet litter must be removed promptly to prevent chilling and ammonia buildup.

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Ventilation

- Adequate ventilation is required to remove moisture and harmful gases.
- Avoid direct cold drafts on chicks.
- Minimum ventilation should be maintained even during extreme cold.

Feeding and Water Management

Feeding

- Provide **high-energy starter feed** to meet increased energy requirements.
- Feed should be easily accessible and fresh.
- Increase feeding frequency during cold stress.

Water Management

- Supply **lukewarm water** during extremely cold conditions.
- Prevent water from becoming too cold or frozen.
- Clean and refill drinkers frequently.

Lighting Management

- Provide **23 hours of light and 1 hour of darkness** during the first week.
- Proper lighting encourages feed and water intake.
- Use energy-efficient bulbs to support both lighting and heat.

Health and Disease Prevention

- Ensure proper **vaccination schedule** is followed.
- Cold stress can predispose chicks to **respiratory infections**, coccidiosis, and yolk sac infections.
- Maintain strict biosecurity and hygiene.

Stocking Density

- Overcrowding should be avoided as it increases competition and disease risk.
- Recommended stocking density:
    - **30–40 chicks/m²** during brooding in winter

Conclusion

Successful brooding management during the winter season is essential for achieving optimum chick performance and minimizing early mortality. Proper temperature control, housing insulation, nutrition, ventilation, and health care are key components. Close observation of chick behavior and timely management interventions can ensure uniform growth and better productivity of the Flock.

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