

Overview of Broiler Production

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Key concepts, stages, and best-practice considerations for raising meat-type chickens

1. Introduction to Broiler Production

Aspect	Details
Definition	Commercial rearing of chickens (broilers) for meat, typically reaching market weight in 5–7 weeks.
Species/Strains	Primary breeds: Ross 308, Cobb 500, Hubbard Classic, etc. Selected for rapid growth, feed efficiency, and meat yield.
Industry Scale	Global production >130 million tonnes (2023). Integrated systems range from small family farms to large vertically integrated operations.
Economic Drivers	Low feed cost, high feed conversion ratio (FCR), short production cycle, and strong consumer demand for poultry meat.

2. Production Cycle – Step-by-Step

Phase	Duration (typical)	Main Activities	Critical Management Points
1. Hatchery	0–21 days (incubation)	- Egg selection & sanitation - Controlled temperature (37.5°C) & humidity (55–65%) - Candling & removal of non-viables	- Biosecurity (disinfect eggs) - Proper turning schedule (12 times/day)
2. Brooding	0–14 days	- Placement in climate-controlled pens - Starter feed (20–22% CP) - Heat source (30–32°C, reduced 2–3°C/week)	- Uniform temperature & ventilation - Clean water & dry litter - Monitoring chick vitality

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Phase	Duration (typical)	Main Activities	Critical Management Points
3. Grow-out	2–5 weeks	• Transition to grower feed (18% CP) • Stocking density 0.07 m²/chick (commercial) • Lighting program (16h light/8h dark)	• Adequate ventilation to control ammonia • Litter management (dry, <25% moisture)
		• Finisher feed (16–18% CP) • Target live weight 2.0–2.5 kg (varies by market)	• Health checks for leg disorders, ascites • Adjust feed to prevent overshoot (excess fat)
		• Pre-slaughter fasting (8–12h) • Transport to processing plant • Stun, bleed, eviscerate, chill	• Minimize stress to preserve meat quality • Maintain cold chain (4°C)

3. Nutrition Management

Nutrient	Role	Typical Inclusion (starter ? finisher)
Protein (Crude Protein, CP)	Muscle growth, enzyme synthesis	22% ? 18%
Energy (ME, kcal/kg)	Supports rapid weight gain	3000–3100 kcal/kg
Amino Acids	Lysine, methionine, threonine (limiting)	Balanced via synthetic AA
Vitamins & Minerals	Bone development (Ca, P), immune function	Vitamin D, E, B-complex, trace minerals

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