

Introduction to Pig Production

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Key concepts, production phases, management practices, and economic considerations

1. Overview of the Swine Industry

Aspect	Details
Global importance	5th most-produced livestock species; pork is the world's most-consumed meat.
Major producers	China, EU (especially Spain, Germany, Denmark), USA, Brazil, Vietnam. - Intensive (confined) : farrow-to-finish, farrow-to-finisher, wean-to-finish.
Production systems	- Extensive (outdoor) : pasture-based, free-range. - Hybrid : combination of indoor housing with outdoor access.
Key drivers	Consumer demand, protein security, price stability, animal welfare regulations.

2. Biological Basics

Topic	Main Points
Species	<i>Sus scrofa domesticus</i> – domesticated pig.
Reproductive traits	• Sexual maturity: 5–8mo (gilts), 6–9mo (boars). • Estrus cycle: ~21days; estrus lasts 2–3days. • Litter size: 8–14 piglets (average 10–12). • Gestation: 114±2days (3mo3wk3d). • Birth weight: 1–1.5kg.
Growth potential	• Weaning weight: 6–10kg (3–4wk). • Market weight: 100–130kg (5–6mo).
Feed conversion	2.8–3.2kg feed per kg gain (depends on genetics, diet, management).

3. Production Stages

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Stage	Objective	Typical Age/Weight	Key Management Actions
1. Breeding (Sow & Boar Management)	Maintain a healthy, fertile herd.	Sows: 1–5?yr; Boars: 1–4?yr	• Genetic selection (growth, carcass, disease resistance). • Health program (vaccination, deworming). • Nutrition (gestating/ lactating diets). • Farrowing crates or pens. • Warm, dry environment (28–30°C). • Colostrum intake within 12?h. • Cross?fostering to balance litter size. • Controlled temperature (20–26°C). • High?protein starter diet (20–22% CP). • Biosecurity (all?in?all?out). • Phase?feeding (3–4 phases). • Adequate floor space (0.8?m²/pig). • Environmental control (ventilation, ammonia <20?ppm).
2. Farrowing	Birth and early care of piglets.	0–3?wk	
3. Nursery	Grow weaned piglets to ~25?kg.	3?wk–10?wk	
4. Grow?Finisher	Build to market weight.	10?wk–5–6?mo	
5. Slaughter & Processing	Produce safe, high?quality pork.	100–130?kg	• Pre?