

Introduction to Pig Production

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(A concise, organized overview for students, extension agents, or new farmers)

1. Why Raise Pigs?

Benefit	Explanation
High Feed-to-Gain Efficiency	Pigs convert feed to body weight more efficiently than many livestock (2.5–3 kg feed per kg gain).
Rapid Growth	Market weight (100 kg) reached in 5–6 months with proper nutrition.
Versatile Market	Whole carcass, pork cuts, processed products, breeding stock, and manure for fertilizer.
Small Land Footprint	Intensive systems need <0.2 ha per 100 sows; suitable for mixed-crop farms.
Reproductive Potential	Sows can produce 2–3 litters/yr, 10–14 piglets/litter & high herd turnover.

2. Basic Pig Biology

Aspect	Key Points
Taxonomy	<i>Sus scrofa domesticus</i> – domesticated form of the wild boar.
Life Stages	1. Sow/Boar (Adult) – breeding animals.
	2. Gestation – 114 ± 2 days.
	3. Farrowing – birth of piglets.
	4. Weaning – 21–28 days old.
	5. Grow-out – 30 days to market weight.
Reproductive Traits	• Litter size: 8–12 piglets (average). • Ovulation rate: 12–16 ova per cycle. • Estrus cycle: 21 days (2 days of heat).
Physiology	• Thermoregulation: Neonates cannot regulate body temperature & need warm environment. • Digestive system: Omnivorous, simple stomach, well-developed cecum for fiber fermentation.

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Health Highlights	Major concerns: PRRS, swine influenza, African swine fever, porcine circovirus, gastro?intestinal parasites, and lameness. Vaccination and biosecurity are essential.

3. Production Systems

System	Description	Typical Stocking Density	Pros	Cons
Extensive (Free?range)	Pigs roam paddocks, forage on pasture & crop residues.	1–2?m ² per pig (very low)	Low feed cost, natural behavior, manure as fertilizer.	Slower growth, disease exposure, land?intensive.
Semi?intensive (Partially confined)	Sows housed in pens; piglets weaned to outdoor or indoor nursery.	0.5–1?m ² per pig (nursery)	Better growth rates, moderate land use.	Requires more management, partial biosecurity.
Intensive (Fully confined)	All stages housed in climate?controlled buildings; total feed control.	0.3–0.5?m ² per pig (grow ?out)	Highest productivity, uniform product, easier health monitoring.	Higher capital, feed cost, waste?management challenges.
Organic/Certified	Meets specific standards (no antibiotics, access to outdoors, organic feed).	Similar to extensive or semi?intensive.	Premium market price, consumer appeal.	Strict certification, lower yields, higher labor.