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SMALL SCALE POULTRY FARMING

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UNIT-III

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Why Poultry Housing Design Matters

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Temperature and Lighting Drivers

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Action Plan: Putting It Together



Professional Poultry Housing Training



01

The Core Challenge

Farming failures often stem from inadequate housing structures rather than the quality of the poultry breeds used.



02

The Opportunity

Effective and well-designed poultry housing can be achieved affordably, even for small-scale agricultural operations.



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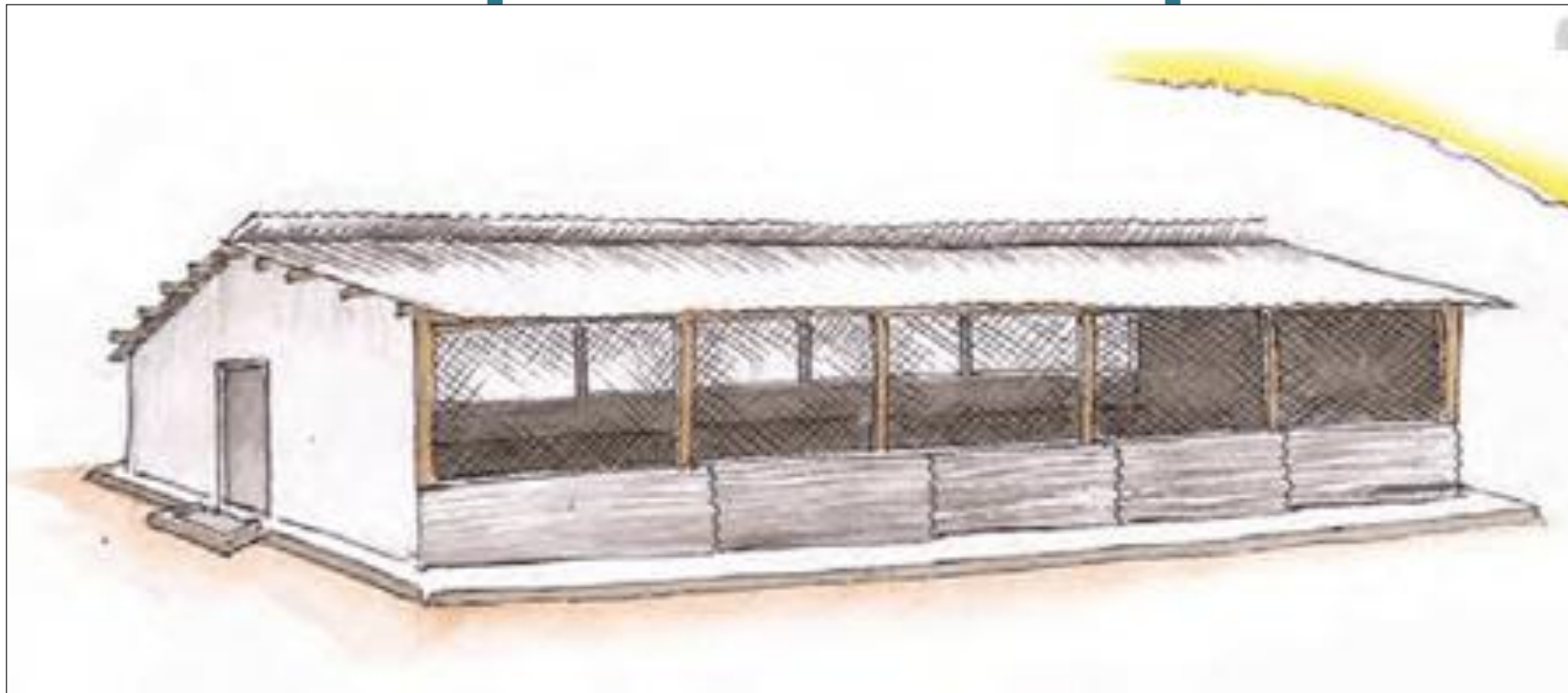
Training Promise

Master exact design principles and gain actionable guidelines to transform your farm productivity and animal health.



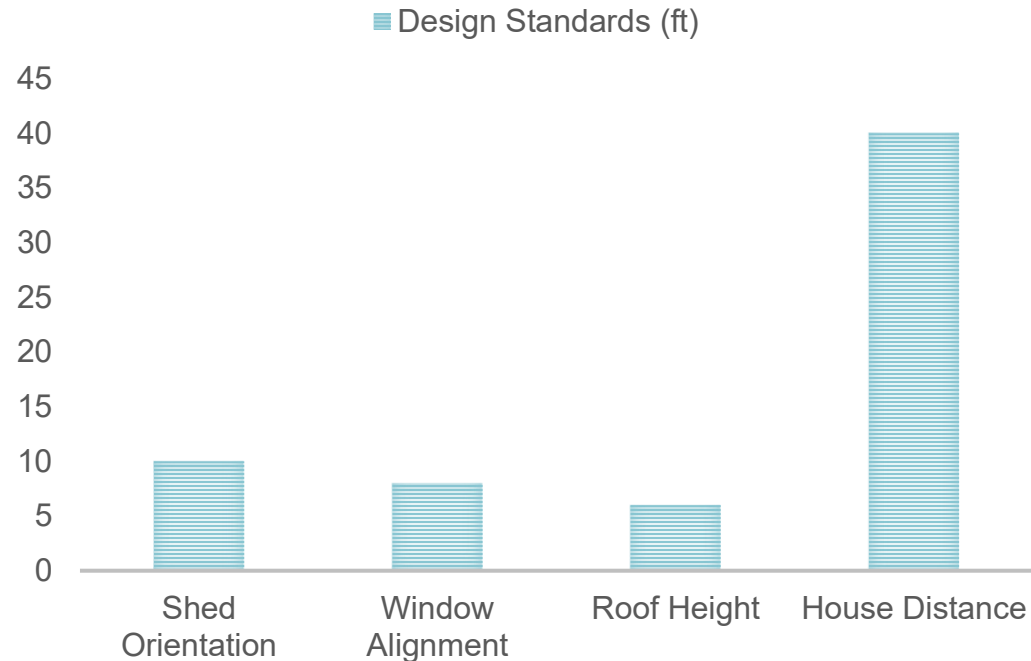
01

Poultry Housing: The Foundation of Success



Poultry Housing Design Rules

POULTRY HOUSING SPATIAL REQUIREMENTS



Critical Design Rules

Optimal poultry housing requires East-West shed orientation, North-South windows, and a south-facing build to ensure proper light and ventilation.

Essential Features

Infrastructure must be weatherproof and predator-proof with solid drainage. Systems range from free-range to indoor intensive or portable housing.



Chick Space Requirements by Age

Age (Weeks)	Floor Space (sq.ft)	Feeding Space (in)	Watering Space (in)		
Week 1	0.25	1.0	0.2		
Week 2	0.45	1.5	0.4		
Week 3	0.65	2.0	0.6		
Week 4	0.85	2.5	0.8		
Week 5-7	1.00+	3.0	1.0		

- ❑ Overcrowding causes stress, disease spread, and reduced production. Always scale your housing before expanding your flock to ensure birds have sufficient room.
- ❑ Proper spacing is essential for health. Maintain these standards throughout the growth cycle to maximize growth rates and minimize mortality within your flock.



02

Temperature & Lighting: Control Your Productivity



Chicken Temperature and Brooding Schedule

Brooding Period	Target Temp (°C)	Target Temp (°F)	Humidity	Status	Adjustment
Week 0-1	35.0	95.0	65.0%	Critical	Stable
Week 1-2	32.0	89.6	60.0%	Active	-3.0
Week 2-3	29.0	84.2	60.0%	Active	-3.0
Week 3-4	26.0	78.8	55.0%	Growing	-3.0
Week 4-5	23.0	73.4	55.0%	Standard	-3.0

- ❑ Adult Chicken Reference: Maintain body temperature at 105-107°F. The optimal comfort zone is 65-75°F. Watch for panting if the environment reaches 85°F to prevent heat stress.
- ❑ Seasonal Tips: In summer, ensure high ventilation and cool water. During winter, focus on insulation and draft prevention to maintain stable internal temperatures for the flock.



Poultry Lighting Schedules and Requirements



Golden Rule of Lighting

Implement 16 hours of light and 8 hours of darkness to ensure optimal immune function and health.



Practical Setup Tips

Use waterproof sockets, automatic timers, and solar backups with proper wattage for efficient operations.

Production Stage	Duration/Age	Light Hours	Requirement	Notes
Newborn Chicks	Day 1-3	24 Hours	Continuous	Initial Growth
Brooding Phase	0-6 Weeks	Continuous	Standard	Heat Support
Growing Phase	8-18 Weeks	10-12 Hours	Restricted	Delay Maturity
Laying Period	18+ Weeks	15-16 Hours	Maximum	Egg Production



03

Brooding Methods: Best Start for Your Chicks



Comparing Agricultural Brooding Methods

Method 1 — Natural Brooding



Use broody hens for 12-15 chicks capacity and fertile eggs.

Provide nesting materials and separate food/water sources.

Allow scavenging with mother hen and provide night shelter.

Method 2 — Artificial Brooding



Use heat sources like electricity, gas, wood, or Bukharies.

Maintain 95°F weekly reduced to 70°F with 2 watts per chick.

Setup 18-inch high chick guards placed 3 feet from hover.



04

Ventilation: Fresh Air Equals Healthy Birds



Livestock Ventilation Systems Guide

Ventilation Goals

Essential for removing excess moisture, heat, and ammonia while bringing in fresh air. Effective airflow prevents harmful gas buildup and maintains a healthy environment for livestock.

01

Artificial Systems

Implement mechanical systems for controlled airflow. Monitor moisture danger alerts strictly, as high humidity levels pose critical health risks that require immediate mechanical intervention.

03

02

Small Scale Farms

Utilize open windows and roof vents at 6 feet height for summer cooling. In winter, partially close windows and perform small air exchanges twice daily to balance warmth and air quality.



Practical Poultry Litter Management Guide

Litter Selection

01

Utilize high-quality materials like rice hulls and wood shavings. Alternatives include shredded newspaper, sand, or straw for bedding.

Core Standards

02

Maintain 20-30% moisture and 2-4 inch depth. Proper ventilation is essential for moisture control and overall bird health.

Health & Hygiene

03

Prevent disease by managing wet litter. Apply aluminum sulfate treatments and follow strict removal or reuse protocols.

Economic Value

04

Generate income from manure NPK nutrients. Process as organic fertilizer by-products for sustainable agricultural sales.





Start Building Your Better Farm

