SMALL-SCALE LAYER POULTRY FARMING

DR. MANDEEP SINGH AZAD

UNIT-VI

MODULES

01

Layer Poultry Farming

What It Is & Why It Works

02

Choosing Right Breeds

The Foundation of Production Success

03

Caring for Your Chicks

Early-Life Management for Future Yield

04

Vaccination Schedule

Protecting Your Flock from Day One

05

Beak Trimming Basics

A Simple Practice with Big Benefits

06

Feeding & Management

Fueling Maximum Egg Production Rates

Layer Poultry Farming Viability

Layer Poultry Definition

Raising specially bred hens for commercial egg production, with birds laying from 18-19 weeks until 72-78 weeks.

Financial Advantage Value

Hens produce 275-330 eggs annually with only 2.25 kg feed per 1 kg of eggs, ensuring a continuous income stream.

Sustainable Farm Insight

Proper management transforms low-cost inputs into high-value output, creating a reliable path to sustainable income.

Selecting Profitable Layer Breeds

Optimal Layer Breed Selection

Success in layer farming begins with choosing the right breed. Focus on productivity, local adaptability, and efficient feed-to-egg conversion to ensure long-term profitability and sustainable farm growth.

Top Commercial Breeds

Key commercial varieties include Leghorn, Minorca, Sussex, Plymouth Rock, and Ancona, each offering distinct advantages for professional egg production operations.

Profitability Traits

Select breeds capable of 275-330 eggs annually. Focus on high food-to-egg conversion efficiency and strong production traits to maximize your financial returns.

Selection Guidelines

Follow critical rules: prioritize breeds proven in local climate conditions and only purchase stock from certified hatcheries to guarantee bird quality.

Early Chick Hydration Guide

Transport Stress Factors

New chicks often face severe dehydration and transport stress, causing many to refuse water, which can permanently hinder their long-term growth and future farm productivity.

Immediate Arrival Actions

Prepare water stations before arrival by adding 5% glucose, multivitamins, and electrolytes to the water, ensuring every chick receives necessary nutrients and hydration immediately.

Benefits of Hydration

Proper early hydration effectively reduces fatigue, strengthens the birds' immune systems, and establishes a healthy foundation for consistent, high-quality future egg production.

Brooding and Growing Stage Management

BROODING PERIOD CARE

The phase from birth to 5 weeks is the most vulnerable stage for chicks. Success requires intensive management of environment, focusing on precise temperature control, ventilation, and strict hygiene.

GROWING STAGE FEEDING

Focus on feeding from 4-18 weeks using high-quality pellet feed. Proper nutrition during this phase is a high-return investment that directly determines the bird's future production and egg-laying capacity.

Vaccination: Key to Layer Success

Disease Resistance

Vaccination builds vital immunity, directly lowering mortality rates to ensure more birds reach the laying stage, ultimately driving higher farm profits.

Essential Vaccines

Key protections include Marek's, Ranikhet, Gumboro, and Fowl Pox vaccines, which are critical for maintaining a healthy and productive layer hen flock.

Protect Investment

Never skip a scheduled dose; consistent vaccination protocols safeguard your entire business investment and ensure long-term agricultural sustainability.

Professional Poultry Vaccination Schedule

Age (Days/Weeks)	Vaccine Name	Administration Route	Status/Purpose
Day 1-3	Gumboro Vaccine	Eye Drop	Initial Protection
Day 7	Lasota Vaccine	Eye Drop	Standard Protocol
Day 14	Gumboro Repeat	Eye Drop	Immunity Boost
Day 18	Marek's Vaccine	Injection	Disease Prevention
Day 21-23	IB + Lasota	Drinking Water	Dual Protection
Day 28-30	Gumboro Repeat	Drinking Water	Final Coverage
Day 42	Fowl Pox	Wing Prick	Specific Defense
Week 8	Lasota & Coryza	Eye Drop / Inj.	Maturity Phase
Week 11-12	IB + Lasota	Drinking Water	Health Stability
Week 18	Ranikhet Killed	Subcutaneous Inj.	Long-term Guard

Vaccination Safety and Procedure Rules

Pre-Vaccination Prep

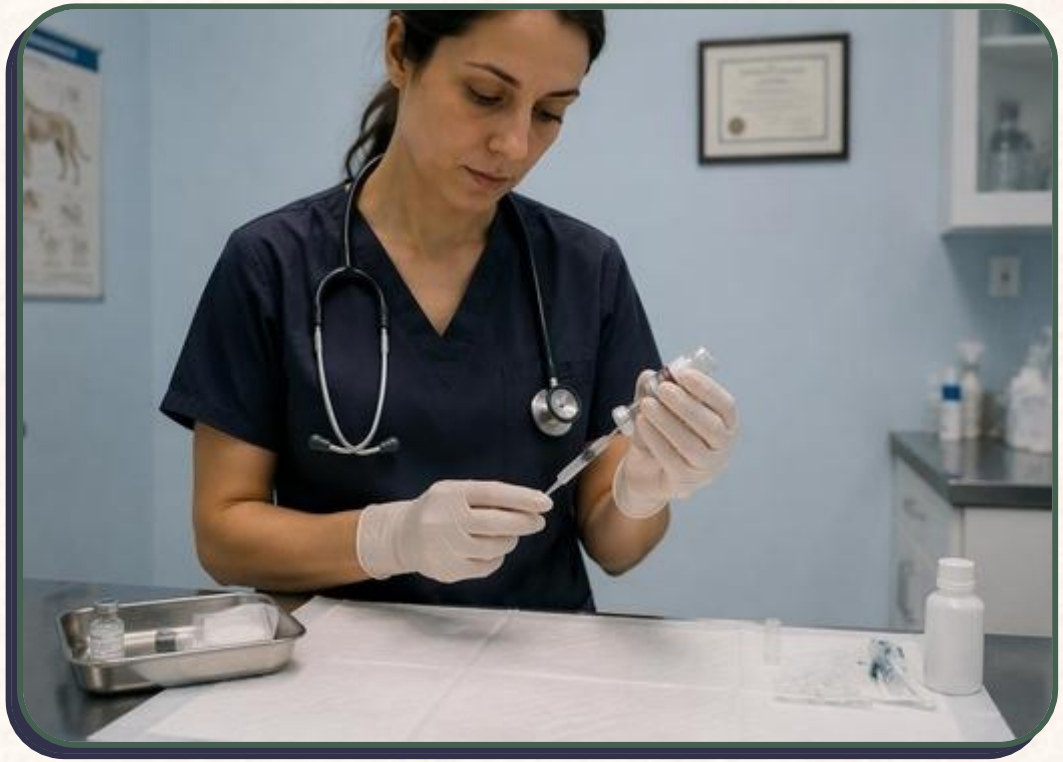
Handling birds carefully, vaccinating only healthy stock, sterilizing tools, and picking cool weather.

In-Session Protocols

Administering doses without strain, verifying correct routes, and ensuring expert technician supervision.

Post-Session Care

Monitoring for adverse reactions while avoiding stressful procedures or exposure to extreme weather.



Beak Trimming Procedures and Timing

Trimming Rationale

Essential for preventing aggressive pecking behaviors and reducing feed wastage to promote a calm, productive farm environment.

Correct Techniques

Measure precisely 0.2 cm for chicks and 0.45 cm for pullets, cutting beaks individually using a properly calibrated machine.

Process Schedule

Initial trimming occurs at 8-10 days for chicks, followed by a second procedure for growing pullets between 8-12 weeks of age.

Critical Prohibitions

Never trim within 2 days of vaccination, during illness, in adverse weather, or once the hens have already begun laying eggs.

Beak Trimming Safety Procedures

Equipment Preparation

Sterilize blades with antiseptic, test edges and heat, and ensure the machine is correctly calibrated.

During the Procedure

Protect eyes and tongue, work during cool weather, and ensure experienced supervision is present throughout.

Post-Trimming Care

Provide deep water pots, energy-enriched feed, monitor for bleeding, and allow birds adequate recovery time.

Maximizing Egg Production Output

Production Timeline: Layers begin at 18-20 weeks, reaching 10% by week 21. Peak production occurs between weeks 26-30, followed by a very gradual natural decline.

Physical Growth Milestones: Body growth continues until week 40. Egg weight and size steadily increase until week 50, requiring specific nutritional support to sustain development.

Management Insights: Normal laying pauses occur post-peak. Farmers must provide consistent care to optimize the production curve and ensure a sustainable, high-output flock lifecycle.

Egg Production Cycle Insights

High production results from excellent management, not just genetics. Hens may pause after peak laying, but consistent nutrition and care maintain output for the longest possible duration.

Essential Nutrients for Laying Hens

Protein Intake

Providing essential amino acids for egg white formation and maintaining the hen's overall body health.

Calcium Levels

Starting at 2% in early weeks to ensure strong eggshell formation and skeletal integrity for layers.

Micronutrients

Supplying phosphorus, vitamins, and minerals to optimize metabolic functions and bird immunity.

Premix Additives

Including vitamin and mineral premix in every feed batch to prevent deficiencies and boost output.

Layer Poultry Feed Formula Chart

Feed Ingredient	Starter (1-4 Weeks)	Growing (4-18 Weeks)	Egg Laying (18-72 Weeks)
Broken Wheat	36 kg	34 kg	32 kg
Wheat Chaff	10 kg	10 kg	10 kg
Broken Rice	10 kg	10 kg	10 kg
Rice Bran	8 kg	15 kg	10 kg
Sesame Cake	12 kg	12 kg	12 kg
Kipper Fish Dust	14 kg	10 kg	12 kg
Dried Molasses	2 kg	2 kg	2 kg
Oyster Dust	2 kg	3 kg	8 kg
Boiled Triticum	5 kg	3 kg	3 kg
Total Weight	100 kg	100 kg	100 kg

Essential Water Management for Poultry

Water Management

Layer hens consume large volumes of water daily, which directly affects egg output and health, making water quality as vital as feed quality for birds.

Practical Management

Ensure clean fresh water is always available; provide warm water in winter and cool water in summer, placed in easily accessible locations for the birds.

Purification Methods

Add 0.3g of bleaching powder per liter or use chlorine-based treatment; never allow birds to drink stagnant, dirty, or contaminated water from any source.

Profitable Layer Farm Best Practices

Hatchery Quality 01

Purchase chicks only from reputable certified hatcheries to ensure high productivity and foundational health for your entire flock.

Vaccination Plan 02

Strictly follow the full vaccination schedule without skipping any doses to protect birds from preventable viral and bacterial diseases.

Nutritional Care 03

Provide high-quality feed appropriate to exact age and weight; never reduce feed quantities during the critical egg-laying period.

Water & Brooding 04

Maintain clean fresh water supply monitored daily and ensure optimal brooder conditions for the vital first four to five weeks of life.

Growth Regulation 05

Use calcium, phosphorus, and essential vitamins to regulate weight while conducting proper beak trimming using sterilized equipment.

Expert Management 06

Consult animal sciences experts and keep detailed records of production, feed consumption, vaccination dates, and flock mortality rates.

Six Key Farmer Training Takeaways

1

Choose Right Breed

Select high-production breeds like Leghorn or Sussex suited to local environments for maximum output.

2

Strong Chick Care

Provide immediate hydration, energy, and supplements upon arrival to ensure healthy early development.

3

Timely Vaccination

Follow the full 18-week vaccination schedule strictly; protecting your birds is protecting your profit.

4

Targeted Feeding

Match specific feed formulas to Starter, Growing, and Laying life stages using proven nutrition charts.

5

Essential Watering

Supply fresh, purified, and temperature-adjusted water every single day as hydration is never optional.

6

Disciplined Records

Track health events and production inputs meticulously to identify successful patterns and improve.

Thank You — Start Your Layer Farming Journey with Confidence

You are now equipped with the knowledge to select the best laying breeds, care for chicks from day one, protect your flock through vaccination, apply proven feeding formulas, manage water effectively, and run a disciplined, profitable small-scale layer farm. A well-managed layer farm begins with a well-trained farmer. Thank you for your commitment to building a better, more productive farm.

KRISHI VIGYAN KENDRA,REASI