



# SMALL-SCALE POULTRY FARMING

DR MANDEEP SINGH AZAD,SMS, ANIMAL SCIENCES

**KRISHI VIGYAN KENDRA,REASI**

**UNIT-IX**

# TRAINING MODULES

---

01

## Small-Scale Poultry

Overview of farming opportunities

02

## Turkey Breed Basics

Key terminology and breed selection

03

## Housing Systems

Management and structural requirements

04

## Feeding Protocols

Nutritional standards and schedules

05

## Health Management

Vaccination and disease prevention

06

## Market Viability

Commercial strategy and sales

# Modern Poultry Farming Opportunities



## Market Opportunities

Turkey and emu farming serve as high-growth alternatives to chicken, leveraging India's climate for rearing success.

---



## Critical Knowledge Gaps

Farmers often lack practical protocols for breed selection and health, leading to high mortality and lost yields.

---



## Comprehensive Training

Our program provides step-by-step guidance on nutrition and marketing to build a sustainable poultry enterprise.

# Turkey Breeding and Management Guide

## Turkey Breed Selection

Successful turkey farming begins with choosing the right breeds and mastering specialized management practices to ensure flock health and productivity in various environmental conditions.

01

### Indian Breed Selection

Broad Breasted White suits hot climates, while Bronze is hardy and Bourbon Red offers quality meat for free-range systems.

02

### Essential Terminology

Farmers must identify Toms, Hens, and Poults, while monitoring snoods and caruncles which appear from the fifth week of age.

03

### Management Practices

Crucial tasks include debeaking to prevent picking, desnooding to avoid injury, and detoeing to stop scratching during growth.

04

### Secondary Breed Types

Other notable varieties for specific farm needs include Black Slate, Narragansett, Small White, and the classic White Holland.

# Turkey Housing Design Systems

## Free-Range System



Capacity 250-300 turkeys per acre fenced land.

Shelter space 3-4 sq ft per bird for night housing.

Ideal for low-input extensive farming models.

## Deep Litter System



Managed similarly to broiler chicken housing.

Greater control over environment and biosecurity.

Suitable for intensive commercial production.

# Turkey Nutrition and Productivity Guide



**Core Feeding Principle:** Turkeys require 3.25 kg of feed to gain 1 kg of body weight. Commercial poultry feeds are suitable but must be supplemented with extra protein.



**Feeding Best Practices:** Provide balanced nutrition across growth stages. Supplement protein sources and ensure fresh water is available on demand without letting troughs run empty.



**Product Nutritional Value:** Turkey meat is high in protein (24%) and minerals like Selenium. Hens produce 60-100 large eggs annually, starting from the 30th week of their life.

## Turkey Nutrition and Products

Optimizing turkey nutrition is vital for growth and yield. By balancing commercial feeds with extra protein and ensuring constant access to clean water, farmers can achieve superior meat quality and egg production levels.

# Turkey Vaccination and Disease Management

| Age           | Vaccine Type  | Disease Target | Method  | Schedule  | Notes     |
|---------------|---------------|----------------|---------|-----------|-----------|
| Day 1         | Newcastle B1  | Newcastle      | Live    | Initial   | Mandatory |
| 4th-5th Week  | Fowl Pox      | Fowl Pox       | Live    | Primary   | Crucial   |
| 6th Week      | Newcastle R2B | Newcastle      | Booster | Secondary | Booster   |
| 8th-10th Week | Cholera       | Fowl Cholera   | Killed  | Final     | Immunity  |

- ❑ Common turkey diseases include bacterial types like Fowl Cholera, Erysipelas, and Paratyphoid. Viral threats consist of Newcastle and Blue Comb, while protozoal concerns involve Coccidiosis and Arizonosis.
- ❑ General health rules require strict adherence to vaccination schedules and daily bird monitoring. Isolate sick birds immediately and utilize an all-in all-out system to ensure high-level biosecurity.

# Turkey Marketing and Commercial Viability



## Market Timeline

Males reach 15kg by 24 weeks. Growth rates are comparable to broilers, ensuring rapid commercial turnover.



## Market Channels

Supply local wet markets, retail chains, and restaurants. Prices peak during festive holiday seasons.



## Commercial Viability

Rising demand for lean protein and high egg yields make turkey farming a high-growth, low-competition sector.



## Farmer Guidance

Start with small batches, visit active farms, and track feed costs and mortality to ensure profit margins.

# EMU FARMING

Multiple High-Value Revenue Streams Beyond Conventional  
Poultry

PART. 02

# Emu Farming Fundamentals and Opportunities



## Economic Utility

Diverse revenue from meat, eggs, oil, skin, and feathers with a productive lifespan of over 30 years.



## Physical Traits

Large flightless birds weighing 60kg, featuring scaly leg skin and age-specific plumage transitions.



## Feeding Habits

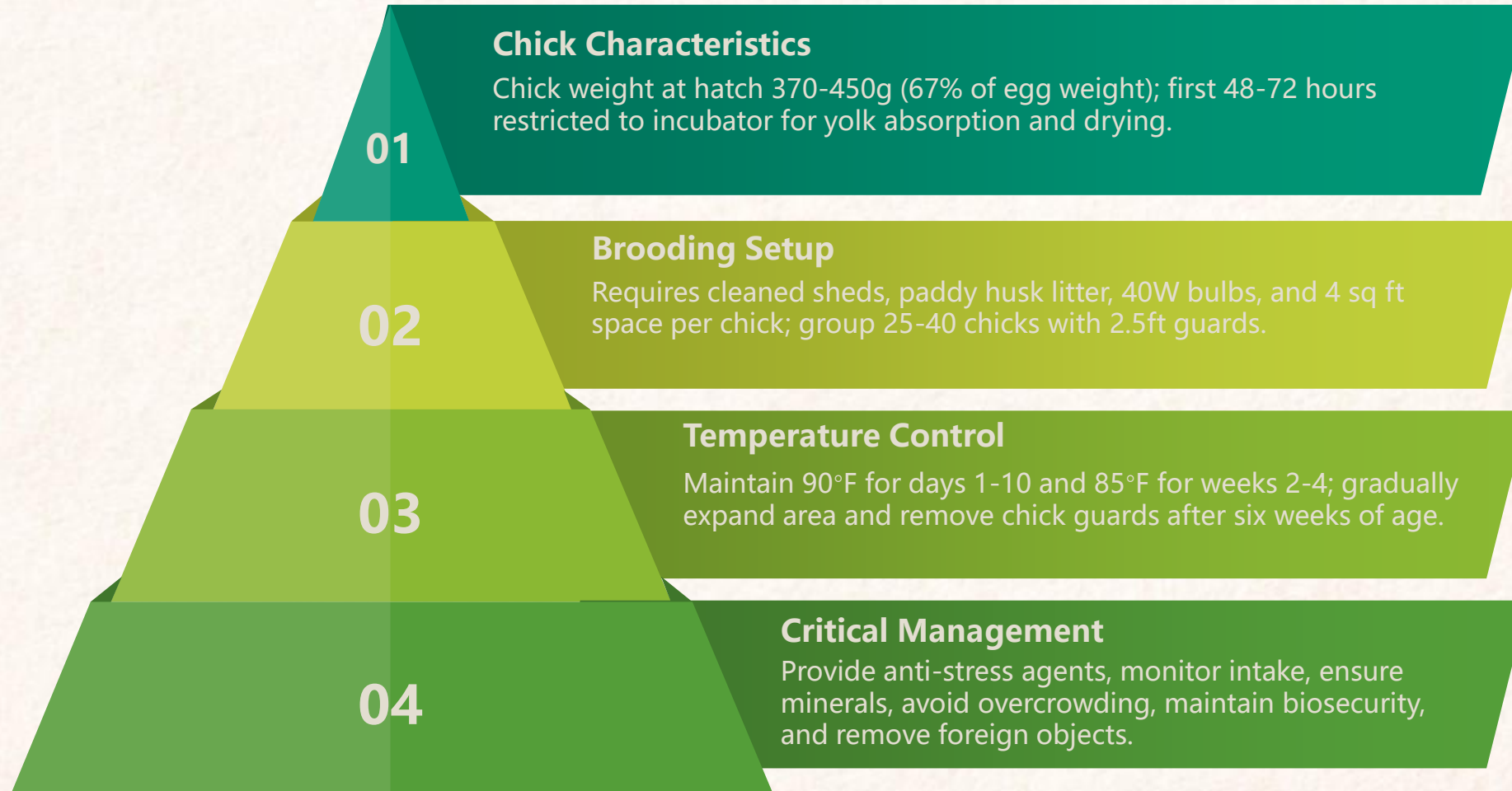
Adaptable diet of insects and vegetables, supporting high-fiber, low-cost ration design for farmers.



## Global Industry

Led by USA and Australia, while India shows massive growth potential due to ideal climatic conditions.

# Emu Chick Brooding Management Guide



# Emu Grower to Breeder Management

## Grower Stage Management



Upgrade to larger feeders and drinkers as birds grow quickly.

Separate sexes for monitoring and maintain dry paddy husk litter.

Feed grower mash and 10% greens while ensuring water access.

## Breeder Stage Management



Maintain 1:1 sex ratio in 2,500 sq ft pens with privacy trees.

Transition to mineral-fortified breeder diet before the season.

Monitor dark green eggs laid October-February in cooler months.

# Emu Incubation Requirements & Process

## Egg Collection and Storage

01

Collect eggs twice daily; clean gently with sandpaper. Store at 60°F for up to 10 days to maintain hatchability. Set eggs every 3-4 days.

## Incubation Setup and Process

02

Prepare incubator at 96-97°F with 30-40% humidity. Place eggs horizontally. Fumigate with potassium permanganate and formalin before use.

## Incubation Timeline & Success

03

Turn eggs hourly until Day 49. Hatching completes by Day 52. Dry chicks for 24-72 hours. Target a hatchability rate of 70% or higher.

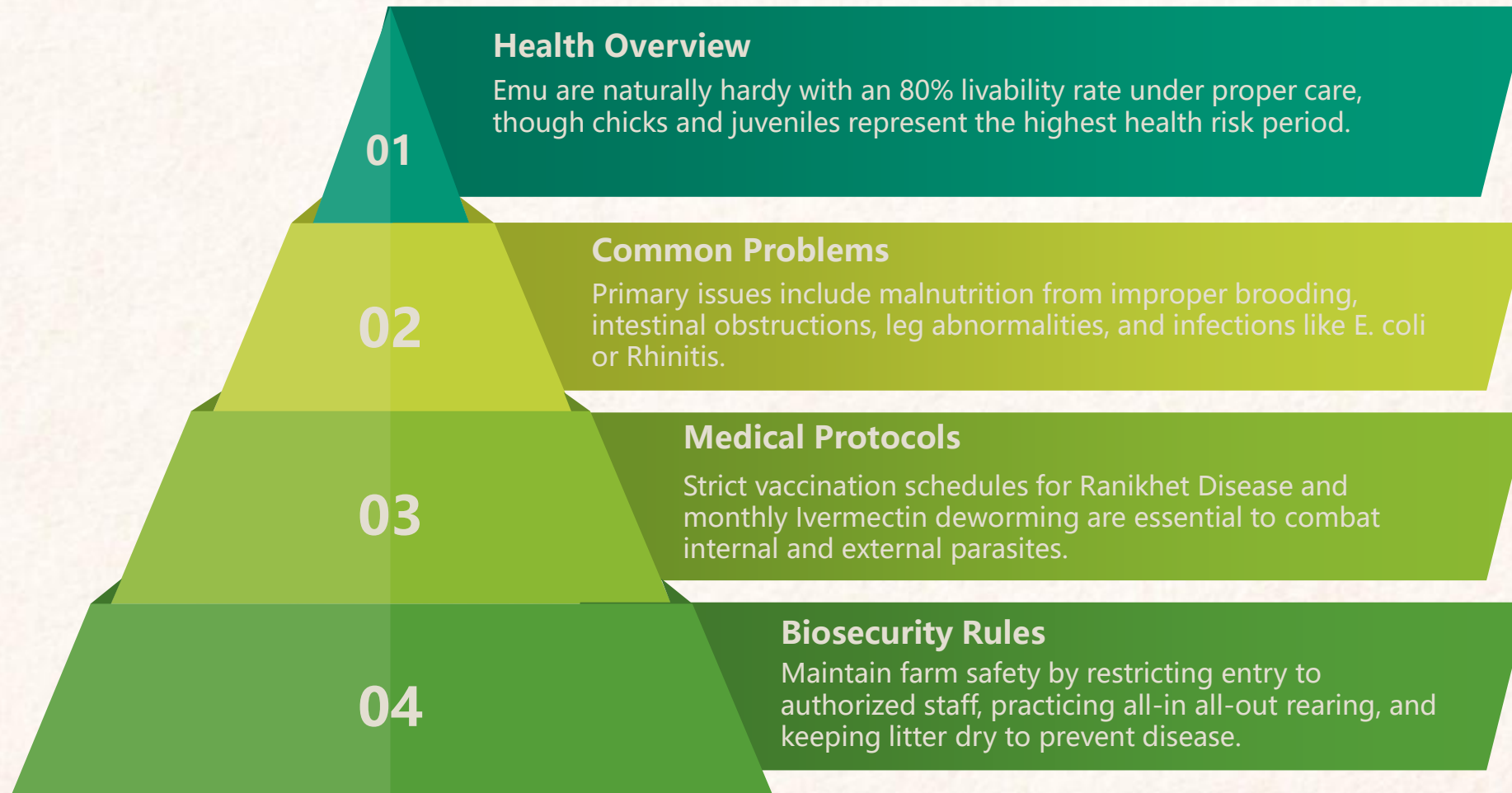
# Emu Nutrition and Feeding Requirements

| Parameter      | Starter (0-14w) | Grower (15-34w) | Breeder | Unit   |
|----------------|-----------------|-----------------|---------|--------|
| Crude Protein  | 20              | 18              | 20      | %      |
| Calcium (min)  | 1.5             | 1.5             | 2.5     | %      |
| Vitamin A      | 15,000          | 8,800           | 15,000  | IU/kg  |
| Vitamin D3     | 4,500           | 3,300           | 4,500   | ICU/kg |
| Vitamin E      | 100             | 44              | 100     | IU/kg  |
| Lysine         | 1.0             | 0.8             | 0.9     | %      |
| Methionine     | 0.45            | 0.40            | 0.40    | %      |
| Maize          | 50              | 45              | 50      | kg     |
| Soybean Meal   | 30              | 25              | 25      | kg     |
| Rice Bran      | 10              | 16              | 15.5    | kg     |
| Sunflower      | 6.15            | 10              | 0       | kg     |
| Dicalcium Phos | 1.5             | 1.5             | 1.5     | kg     |
| Shell Grit     | 0               | 0               | 6       | kg     |



- ❑ Feed accounts for 60-70% of total production costs; optimizing least-cost rations significantly improves farm profitability.
- ❑ Annual feed consumption per breeding pair ranges from 394-632 kg, with an average requirement of 527 kg per year.

# Emu Health and Biosecurity Management



# Emu Product Categories & Advantages



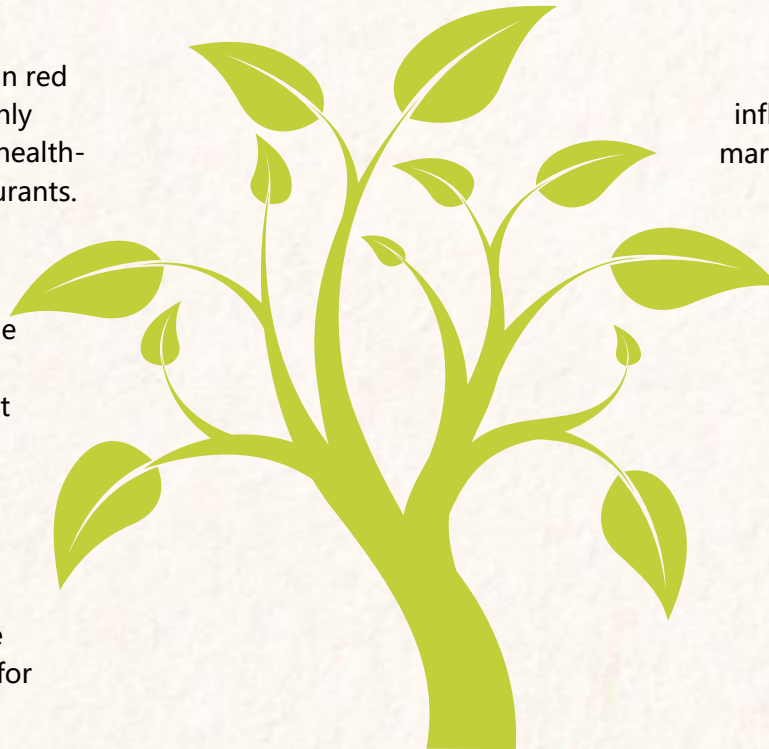
**Emu Meat:** Low fat, low cholesterol lean red meat with premium gamey flavor. Highly valued thigh and drum muscles serve health-conscious consumers and urban restaurants.



**Emu Eggs:** Hens produce up to 40 large dark green eggs annually. Weighing 560g, these distinctive eggs are perfect for direct retail sales and value-added culinary products.



**Emu Skin Leather:** Fine, strong leg skin with unique scale patterns. Among the most valued exotic leathers, it is used for high-end fashion and luxury leather goods.



**Emu Oil:** Rendered fat valued for anti-inflammatory and dietary uses. This high-market-value niche product is essential for cosmetic and therapeutic industrial formulations.



**Emu Feathers:** High-quality feathers harvested for the decorative and craft industries. They provide significant additional revenue streams with zero additional input costs.



# Core Lessons for Poultry Success

## Breed Selection

01

Choose Broad Breasted White turkeys and adapt your emu management strategies to suit local climate conditions and environmental factors.

## Housing Needs

02

Provide adequate space, ventilation, dry litter, and robust predator protection for every life stage of your poultry flock's growth.

## Feeding Strategy

03

Match nutrition to specific life stages from starter to breeder, optimizing least-cost rations to protect your business margins.

## Health Care

04

Follow vaccination schedules strictly, practicing daily monitoring and biosecurity protocols to ensure a disease-free production environment.

## Market Planning

05

Plan market channels before production begins and leverage multiple emu product streams to ensure long-term financial income stability.

## Final Summary

06

Consistent care, proper nutrition, and strict disease prevention remain the three essential pillars of a highly profitable poultry farm.

# Thank You for Participating

Together we can build sustainable and profitable poultry farming enterprises. Apply these skills consistently, seek guidance when needed, and remember that every successful farm starts with proper training and dedication.

KRISHI VIGYAN KENDRA, REASI