Course Title: Poultry Production & Management (Small-Scale & Commercial)

- **Duration:** 5 Days (approximately 35-40 instructional hours)
- **Course Goal:** To provide participants with the comprehensive knowledge, practical skills, and business acumen required to successfully plan, establish, and manage a profitable and sustainable poultry enterprise, covering both broiler (meat) and layer (egg) production for small-scale and semi-commercial operations.
- **Core Focus:** Mastering the key pillars of poultry management: breed selection, housing, nutrition, biosecurity, health, and business management.

Learning Objectives:

Upon successful completion of this workshop, participants will be able to:

- **Differentiate** between broiler and layer production systems and select the appropriate enterprise for their goals.
- **Select** suitable poultry breeds based on climate, market, and production system.
- **Design** and construct a functional and cost-effective poultry house that ensures proper ventilation, space, and biosecurity.
- **Implement** best practices for brooding and rearing day-old chicks.
- **Understand** the nutritional requirements of broilers and layers at different life stages.
- **Formulate** basic, balanced poultry rations using locally available ingredients.
- **Develop** and implement a comprehensive biosecurity and flock health management plan to prevent and control diseases.
- **Manage** layer flocks for optimal egg production, quality, and longevity.
- **Manage** broiler flocks for efficient growth, feed conversion, and meat quality.
- **Apply** effective record-keeping and basic financial analysis to manage a poultry business.
- **Create** a foundational business plan for a small-to-medium scale poultry enterprise.

Target Audience:

- Aspiring and current small-scale and commercial poultry farmers.
- Agricultural Extension Workers and Livestock Technicians.
- NGO staff and development practitioners working on livelihood and food security projects.
- Rural entrepreneurs interested in the poultry value chain.
- Anyone seeking a comprehensive guide to starting a poultry business.

Prerequisites:

- A strong interest in poultry farming.
- Basic numeracy skills for calculations.

Teaching Methodology:

This is a highly interactive and practical workshop. The methodology includes:

- **Interactive Lectures & Case Studies:** Introducing scientific principles using real-world examples from successful poultry farms.
- **Hands-on Practical Sessions & Demonstrations:** This is a core component. Activities include biosecurity protocols, feed mixing, and basic health checks.
- **Field Visit (if feasible):** A structured visit to a well-managed local poultry farm (broiler or layer) and possibly a feed mill or hatchery.
- **Problem-Solving Workshops:** Participants work in groups to solve common poultry management challenges.
- **Guest Speakers (optional):** Inviting a successful poultry farmer, a veterinarian, or a feed supplier.
- **Action Planning:** Developing a practical business plan for a new or existing poultry operation.

Materials Provided:

- Comprehensive digital or printed workbook with key concepts, practical guides, and data tables (e.g., breed standards, feed requirements).
- A "Poultry Farmer's Toolkit" with checklists for biosecurity, daily management, and a health plan template.
- Templates for a simple poultry business plan and record-keeping sheets.
- Guides for identifying common poultry diseases and nutritional deficiencies.
- Certificate of Completion.

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Detailed Day-by-Day Curriculum

Day 1: Foundations of Poultry Farming & Housing

- **Module 1: Introduction to the Poultry Enterprise (Approx. 2 hours)**
  - Welcome, introductions, and course objectives.
  - Why poultry farming? Opportunities and challenges.
  - **Broilers vs. Layers:** A detailed comparison of production cycles, economics, management, and markets.
  - Overview of production systems: Free-range, semi-intensive, and intensive (deep litter/cages).
  - **Activity:** "My Poultry Goal" – Participants define what they want to achieve with their poultry venture.
- **Module 2: Choosing the Right Breed (Approx. 2.5 hours)**
  - **Layers:** Characteristics of common breeds (e.g., Isa Brown, Lohmann, local dual-purpose breeds).
  - **Broilers:** Characteristics of common strains (e.g., Cobb 500, Ross 308).
  - Selecting breeds based on climate adaptability, disease resistance, and market preferences.
  - Sourcing quality day-old chicks: What to look for in a reputable hatchery.
- **Module 3: Poultry Housing & Equipment (Approx. 3 hours)**
  - The principles of a good poultry house: Biosecure, well-ventilated, comfortable, and easy to clean.
  - Site selection and orientation.
  - Housing design for deep litter systems and an introduction to cage systems.
  - Space requirements for broilers and layers at different ages.
  - Essential equipment: Feeders, drinkers, lighting, perches, and nesting boxes (for layers).
  - Using locally available materials for cost-effective construction.
  - **Workshop:** Sketching a layout for a simple, functional poultry house for 100 broilers or 100 layers.
  - **End of Day 1 Recap & Q&A.**

Day 2: Brooding, Rearing & Nutrition

- **Module 4: Brooding Management: The Critical First Weeks (Approx. 2.5 hours)**
  - The importance of brooding for chick survival and future performance.
  - Preparing the brooder: Cleaning, disinfection, litter management.
  - Setting up the brooding area: Brooder guard, heat source, feeders, and drinkers.
  - Managing temperature, humidity, and ventilation.
  - Receiving and managing day-old chicks.
  - **Demonstration:** Setting up a model brooder area.
- **Module 5: Poultry Nutrition Fundamentals (Approx. 2.5 hours)**
  - Key nutrients for poultry: Energy, protein (amino acids), vitamins, and minerals.
  - Nutritional requirements for different stages: Starter, Grower, Finisher (Broilers) / Chick, Pullet, Layer (Layers).
  - Understanding the role of water as a critical nutrient.
- **Module 6: Feeds & Feeding Management (Approx. 2.5 hours)**
  - Types of commercial poultry feed.
  - Identifying locally available feed ingredients (maize, soy, etc.).
  - Principles of on-farm feed mixing and formulation (introduction).
  - Feeding programs and techniques for broilers and layers.
  - The importance of Feed Conversion Ratio (FCR) in measuring efficiency.
  - **Hands-on Workshop (Calculators/Spreadsheets):** Developing a simple feed formula and calculating the FCR for a case study.
  - **End of Day 2 Recap & Q&A.**

Day 3: Flock Health Management & Biosecurity

- **Module 7: The Foundation of Health: Biosecurity (Approx. 3 hours)**
  - What is biosecurity? Why it's the most important investment.
  - The three key elements: Isolation, Traffic Control, and Sanitation.
  - Developing a practical biosecurity plan for a farm:
    - Farm layout and fencing.
    - Footbaths and vehicle disinfection.
    - Controlling visitors and pests (rodents, wild birds).
    - Proper disposal of dead birds.
  - **Workshop:** Creating a detailed biosecurity checklist for a poultry farm.
- **Module 8: Recognizing Common Poultry Diseases (Approx. 2.5 hours)**
  - Signs of a healthy vs. a sick bird.
  - Overview of major poultry diseases (viral, bacterial, parasitic) relevant to the region:
    - Newcastle Disease, Gumboro (IBD), Fowl Pox.
    - Coccidiosis, Salmonellosis, E. coli.

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        - Internal and external parasites.
    - Understanding transmission routes.
    - **Lab/Activity:** Using high-quality photos and videos to practice identifying symptoms of common diseases.
- **Module 9: Disease Prevention & Vaccination (Approx. 2 hours)**
    - "Prevention is better than cure."
    - Developing a vaccination schedule for layers and broilers based on local disease prevalence.
    - Proper vaccine handling, storage, and administration techniques (e.g., in drinking water, eye drop).
    - The role of vitamins and anti-stress agents.
    - Knowing when to consult a veterinarian.
    - **End of Day 3 Recap & Q&A.**

Day 4: Specific Management for Layers & Broilers

- **Module 10: Layer Flock Management for Peak Egg Production (Approx. 3 hours)**
    - Managing pullets from grower stage to point-of-lay.
    - Light management: The critical role of photoperiod in stimulating and maintaining egg production.
    - Managing nesting boxes to ensure clean eggs.
    - Key performance indicators for layers: Hen-day production %, egg weight, feed per egg.
    - Managing molting and end-of-lay flocks.
- **Module 11: Egg Handling, Quality & Marketing (Approx. 2 hours)**
    - Collecting eggs frequently.
    - Cleaning, grading (by size/quality), and packaging eggs.
    - Proper storage to maintain freshness.
    - Marketing strategies for eggs.
- **Module 12: Broiler Flock Management for Efficient Growth (Approx. 2.5 hours)**
    - Managing broilers from grower to finisher stage.
    - Feed and water management for optimal weight gain.
    - Ventilation and litter management to prevent health issues (e.g., respiratory problems, hock burns).
    - Key performance indicators for broilers: FCR, mortality rate, average daily gain.
    - Preparing for and managing the harvesting/processing of broilers.
    - **Field Visit (if feasible):** Visit a layer or broiler farm to observe management practices.
    - **End of Day 4 Recap & Q&A.**

Day 5: Business Management, Records & Your Poultry Plan

- **Module 13: Poultry Farm Record Keeping (Approx. 2.5 hours)**
    - The importance of records for profitability and decision-making.
    - Essential records to keep:
        - Production records (feed intake, mortality, weight gain/egg production).
        - Health records (vaccinations, treatments).
        - Financial records (all costs, all revenues).
    - Using records to analyze performance and identify problems.
    - **Hands-on Workshop:** Participants practice filling out sample record-keeping sheets.
- **Module 14: The Economics of a Poultry Business (Approx. 2.5 hours)**
    - Identifying all fixed and variable costs.
    - Calculating the cost of production (per bird or per egg).
    - Determining the break-even point.
    - Analyzing profitability and cash flow.
- **Module 15: Your Poultry Business Action Plan (Capstone) (Approx. 2 hours)**
    - **Capstone Workshop:** Participants synthesize their learnings to outline a simple but comprehensive Business Action Plan for a poultry enterprise (broiler or layer).
    - The plan will include:
        1. Business goal (e.g., 200 broilers per cycle).
        2. Housing & equipment plan.
        3. Sourcing plan for chicks and feed.
        4. Health and biosecurity plan.
        5. A basic financial projection (costs and expected revenue).
        6. Marketing plan.
- **Module 16: Course Review & Commitment to Action (Approx. 1 hour)**
    - Review of the key principles of successful poultry management.
    - Open forum for final questions.
    - Participants share one key action they will take to start or improve their poultry venture.
    - Course evaluation and closing.

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