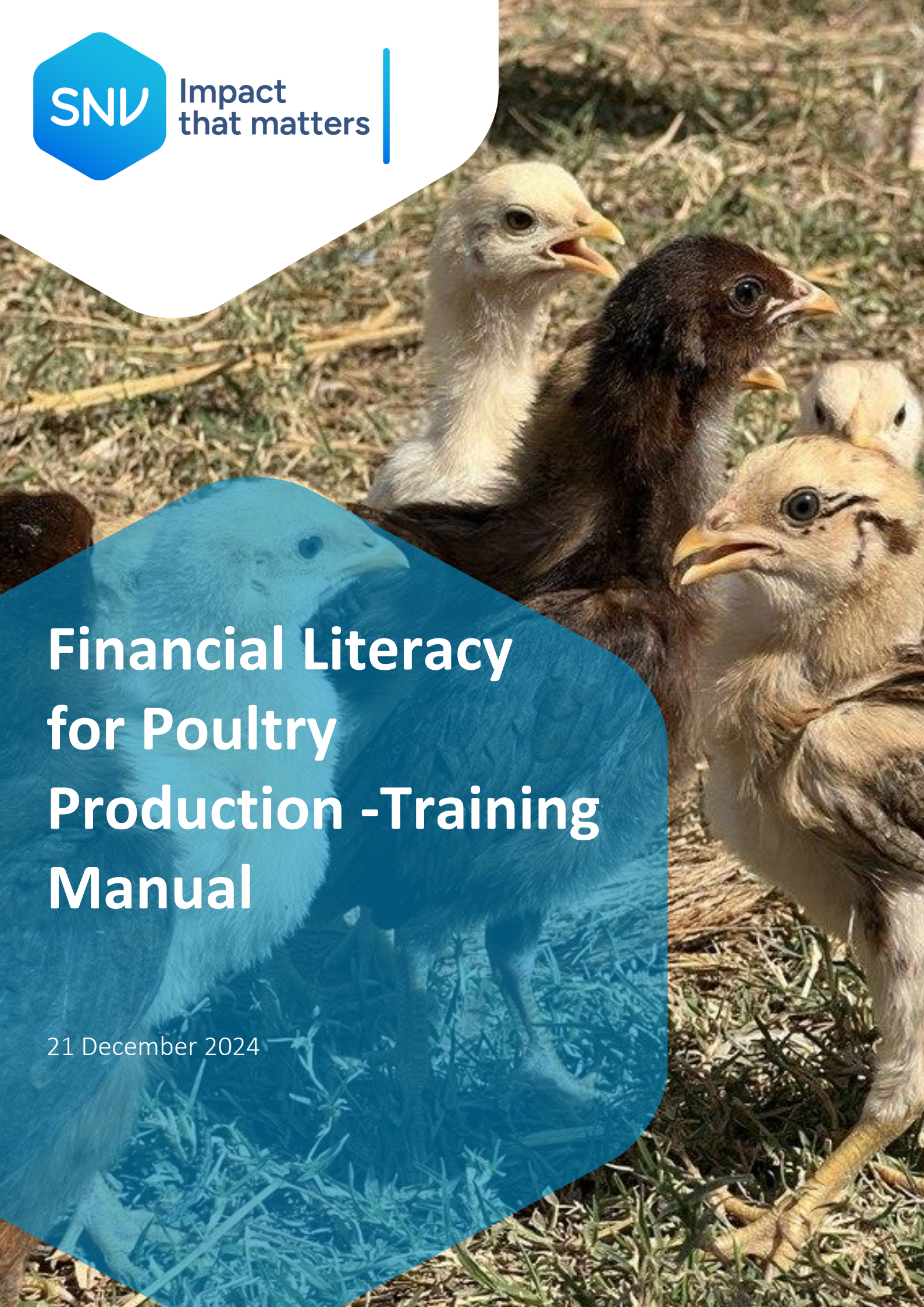

Financial Literacy for Poultry Production -Training Manual

21 December 2024

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List of abbreviations

3Es	Economy, Efficiency, and Effectiveness
CPET	Central Point of Expertise on Timber
DECC	UK Department of Energy & Climate Change
DFID	UK Department for International Development
DRC	Democratic Republic of the Congo
DSA	Daily Subsistence Allowance
EU	European union
FGMC	Forest Governance Markets and Climate
FLEGT	Forest Law Enforcement, Governance and Trade
FSC	Forest Stewardship Council
HR	Human Resources
ICF	UK International Climate Fund
IFSLUP	Investment in Forests and Sustainable Land Use Programme
InFIT	China-UK Collaboration on International Forest Investment and Trade
ISLA	Initiative for Sustainable Landscapes
ITT	Invitation to Tender
KPI's	Key Performance Indicators
M&E	Monitoring & Evaluation
ME&L	Monitoring, Evaluation & Learning
MFP3	Multi-Stakeholder-Forestry Programme Phase 3
MSP/IPs	Multi-Stakeholder or Industry Platforms
NGO	Non-Governmental Organisation
OVIs	Objectively Verifiable Indicator
PPP	Public Private Partnership
RBF	Results Based Financing
REAP	SNV REDD+, Energy and Agriculture Program
REDD+	Reducing Emissions from Deforestation and Forest Degradation
RSPO	Roundtable on Sustainable Palm Oil
RTRS	Roundtable on Responsible Soy
TA	Technical Assistance
ToC	Theory of Change
VfM	Value for Money
WWF	World Wildlife Fund

1. Introduction

Poultry farming offers a significant opportunity for small-scale farmers to improve their livelihoods. However, achieving success requires a combination of technical knowledge and financial skills. This manual integrates essential poultry farming practices with key financial literacy concepts, providing farmers with practical tools to make informed decisions, enhance productivity, and sustain profitability.

Designed for trainers, the manual supports the delivery of a comprehensive training program that blends poultry production techniques with financial management strategies. It equips participants with the skills to align their farming operations with sound financial practices, ensuring both technical and economic success.

2. Key Financial Literacy Concepts for Poultry Farming

1. Budgeting
   Plan for startup costs such as chicks, feed, vaccinations, and housing. Developing and following a budget ensures controlled spending and sustained profitability.
2. Record-Keeping
   Maintain detailed records of expenses, feed usage, and chick health. Effective record-keeping supports efficiency and highlights areas for improvement.
3. Cost-Benefit Analysis
   Evaluate the costs and benefits of using commercial versus home-made feed. Use this analysis to determine the most cost-effective option for chick survival and growth.
4. Risk Management
   Identify and prepare for potential risks, including disease outbreaks, high mortality, and fluctuating market demand. Implement contingency plans and allocate emergency funds to mitigate these risks.
5. Profitability Analysis
   Account for all costs, including feed, labor, and vaccinations, to calculate revenue and profit margins. Use this data to refine operations and focus on high-return activities.
6. Market Research
   Understand consumer preferences for chicken weight, size, and quality. Adapt production to meet market demand and maximize returns

3. Learning Financial Literacy Through Case Studies

This section applies financial literacy concepts to real-world poultry farming scenarios, enabling farmers to understand and improve their decision-making processes. By examining practical examples, participants will learn how budgeting, record-keeping, cost-benefit analysis, and other skills can directly impact profitability, operational efficiency, and risk management. These case studies provide clear insights into the connection between financial practices and successful poultry farming.

The data used in the case studies below is partly collected in Nov. '24 in Kampong Cham and partly assumed, so they may not be directly applicable for the specific situation, a specific flock of an individual farmer any time of the year. It is important therefore to use accurate prices and performances of chickens. Keeping records therefore is essential to maximise profit from your chickens.

3.1 Chick Rearing and Biosecurity

CASE STUDY 1: STARTING WITH 7-DAY-OLD CHICKS

Meet Srey, a small-scale farmer who decides to start her poultry farming journey with 50 chicks at just 7 days old.

With a plan in mind, Srey uses high-quality commercial feed during the chicks' critical early growth phase and later switches to a home-made mix to manage costs.

Thanks to proper care, vaccinations, and a solid plan, 47 of her chicks survive and reach a healthy market weight of 1.5 kg after 26 weeks.

How Srey Did It: Her Approach

1. **Early Growth Care:**
    - High-quality commercial feed for the first 4 weeks ensures strong and healthy development.
    - Vaccinations protect the chicks from common diseases.
2. **Cost-Saving Transition:**
    - After 4 weeks, Srey switches to a home-made feed mix of rice bran, broken rice, and maize. She adds 20% commercial feed to maintain balanced nutrition.

3. **Consistent Monitoring:**
    - Srey weighs the feed and tracks chick health weekly to stay on top of her flock's progress.

Srey's Financial Snapshot

Note: Other costs for maintenance, equipment etc are not calculated, because they are less significant and will vary a lot per farm.

Costs

Item	Price per Unit (Riel)	Quantity	Total (Riel)
Chicks (7 days old)	3,000	50	150,000
Vaccines	200 x 3	50	30,000
Commercial Feed (30 kg)	65,000	1 bag	65,000
Home-Made Feed (7.7 kg/chick)	1,600/kg	50	616,000
Total Costs:			**861,000**

Revenue

Item	Price per Unit (Riel)	Quantity	Total (Riel)
Chickens (1.5 kg each)	18,000/kg	45 Chicken	1,215,000

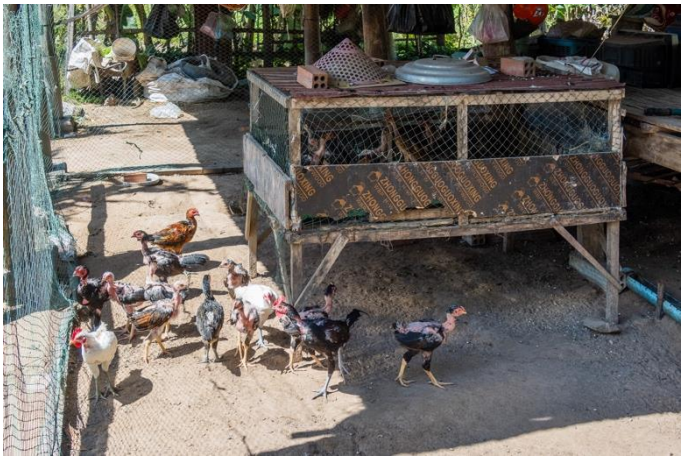
Profit Calculation
Revenue - Costs = 1,215,000 - 861,000 = 354,000 Riel.

Key Takeaway

Investing in proper early care, like high-quality feed and vaccinations, can boost profits even if it requires more effort upfront. Farmers should evaluate their capacity for early-stage care when choosing between younger or older chicks.

You may have a choice to buy chicks of 1 week old at Riel 3,000 each or chicks of three weeks old at Riel 5,000 each. Which is better? Chicks are more expensive, but you don't need to feed the birds during the first three weeks with expensive feed and they will be sold (partially) vaccinated. To find out which might bring you more profit, you should keep records, even though other factors are also important

CASE STUDY 2: BUYING 3-WEEK-OLD CHICKS TO IMPROVE RESULTS



Dara, a poultry farmer, considers switching to 3-week-old chicks instead of 1-week-old chicks. While the older chicks cost more upfront, they require less care and feed during the early weeks, saving time and effort. Let's explore how this choice affects Dara's profitability.

Dara's Approach

1. **Purchasing 3-Week-Old Chicks:**
    - Chicks cost Riel 5,500 each, but they come partially vaccinated and weigh approximately 175 g.
    - Dara verifies the chicks' weight and health to ensure they've been properly reared.
2. **Feed Management:**
    - Commercial feed is provided for just one week (11.25 kg for 50 chicks).
    - Afterward, Dara transitions the flock to home-made feed for cost efficiency.
3. **Reduced Early Effort:**
    - By skipping the intensive early-care period, Dara saves time and resources.

Financial Breakdown

Costs

Item	Price per Unit (Riel)	Quantity	Total (Riel)
Chicks (21 days old)	5,000	50	250,000
Vaccines	200 x 1.5	50	15,000
Commercial Feed (11.25 kg)	2,500/kg	1 batch	28,125
Home-Made Feed (7.7 kg/chick)	1,600/kg	50	616,000
Total Costs:			**909,125**

Revenue

Item	Price per Unit (Riel)	Quantity	Total (Riel)
Chickens (1.5 kg each)	18,000/kg	47	1,269,000

Profit Calculation
Revenue - Costs = 1,269,000 - 909,125 = 359,875 Riel

Comparison Analysis: 1-Week-Old Chicks vs. 3-Week-Old Chicks

Scenario	Total Costs (Riel)	Revenue (Riel)	Profit (Riel)	Rearing Time
Starting with 1-week-old chicks	861,000	1,215,000	**354,000**	26 weeks
Starting with 3-week-old chicks	909,125	1,269,000	**359,875**	24 weeks

Observations:

- Starting with 3-week-old chicks saves effort during the early weeks and results in higher profits per batch, as well as shorter rearing time (24 weeks instead of 26 weeks) allows for more batches per year, potentially increasing annual profitability
- However, the capital cost is slightly higher.

Poultry Technical and Financial Literacy Applications

- Technical Concepts:
  - *Feed Management:* The reduced need for early commercial feed and the transition to home-made feed help minimize overall costs.
  - *Health Management:* Partially vaccinated chicks reduce disease risks and simplify the vaccination schedule.
- Financial Concepts:
  - *Cost-Benefit Analysis:* Comparing the upfront costs and effort required for 1-week-old versus 3-week-old chicks.
  - *Profitability Analysis:* Understanding profits per batch and the ability to complete more batches annually.

Key Takeaway

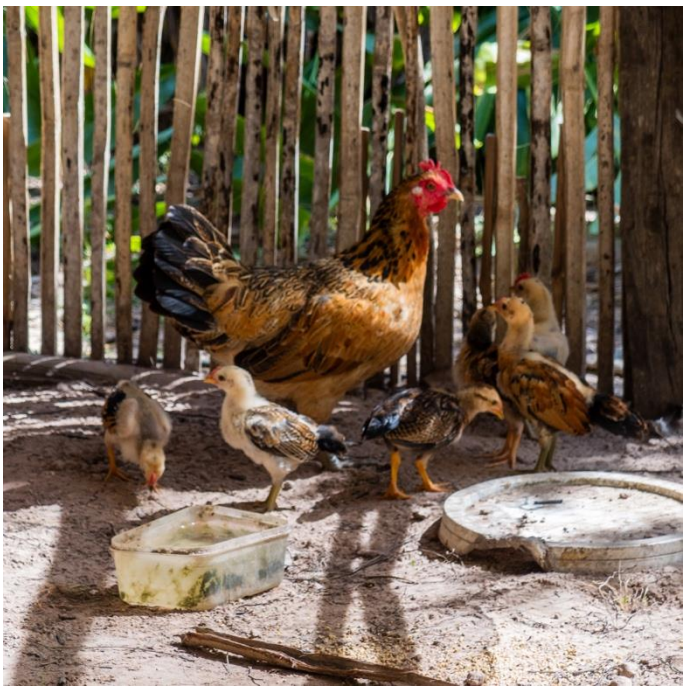
Choosing 3-week-old chicks simplifies early care and saves time but comes with higher costs. For farmers with limited resources, expertise or time for early-stage care, this option can be profitable

3.2 Feed Management

Feed is by far the highest cost in poultry farming, so many farmers limit the amount of feed they give to the chickens. That seems wise, but do realize that the longer the chickens live, the more they will have consumed.

In the examples above, we assumed chickens were fed on average 50 g per day. If chickens are fed 55g per day instead of 50g, they may reach the target weight of 1.5 kg in 22 weeks instead of 26. This affects home-made feed, but during the first month, feed should not be restricted. Over 18 weeks (after the first month), each chick would consume about 7 kg of feed, costing Riel 11,200. Despite feeding more per day, overall costs are lower because the chickens are sold sooner.

CASE STUDY 3A: FEEDING MORE TO REDUCE TIME TO MARKET



Lina, a poultry farmer, experiments with feeding her chickens more than the standard amount. By increasing the daily feed from 50 g to 55 g, her chickens reach market weight (1.5 kg) four weeks earlier, reducing the rearing time from 26 weeks to 22 weeks. This strategy helps Lina manage her costs effectively while increasing annual production capacity.

Lina's Approach

1. **Feeding Strategy:**
    - Chickens are given 55 g of feed daily, accelerating their growth.
    - Commercial feed is used for the first four weeks, followed by home-made feed for the remaining 18 weeks.
2. **Optimized Production Time:**
    - By reducing the rearing time, Lina can raise more batches of chickens annually.

Financial Breakdown

Costs

Item	Price per Unit (Riel)	Quantity	Total (Riel)
Chicks (7 days old)	3,000	50	150,000
Vaccines	200 x 3	50	30,000

Commercial Feed (30 kg)	65,000	1 bag	65,000
Home-Made Feed (7 kg/chick)	1,600/kg	50	560,000
Total Costs:			**805,000**

Revenue

Item	Price per Unit (Riel)	Quantity	Total (Riel)
Chickens (1.5 kg each)	18,000/kg	45	1,215,000

Profit Calculation
Revenue - Costs = 1,215,000 - 805,000 = 410,000 Riel

CASE STUDY 3B: FEEDING MORE BUT ACCEPTING LOWER MARKET PRICES

Lina learns that selling chickens at 22 weeks might result in a lower market price, as younger chickens are sometimes less desirable. In this scenario, she adjusts her expectations and calculates the financial outcome.

Financial Breakdown

Costs

Item	Price per Unit (Riel)	Quantity	Total (Riel)
Chicks (7 days old)	3,000	50	150,000
Vaccines	200 x 3	50	30,000
Commercial Feed (30 kg)	65,000	1 bag	65,000
Home-Made Feed (7 kg/chick)	1,600/kg	50	560,000
Total Costs:			**805,000**

Revenue

Item	Price per Unit (Riel)	Quantity	Total (Riel)
Chickens (1.5 kg each)	17,000/kg	45	1,147,500

Profit Calculation
Revenue - Costs = 1,147,500 - 805,000 = 342,500 Riel

Comparison Analysis

Scenario	Total Costs (Riel)	Revenue (Riel)	Profit (Riel)	Rearing Time	Annual Batches	Annual Profit (Riel)
Standard Feed (26 weeks)	861,000	1,215,000	**354,000**	26 weeks	2	**708,000**
Increased Feed, Full Price	805,000	1,215,000	**410,000**	22 weeks	2.3	**943,000**
Increased Feed, Lower Price	805,000	1,181,250	**342,500**	22 weeks	2.3	**787,750**

Observations:

The profit per batch in 3b decreases significantly compared to Case 3a and is Riel 11,500 lower than in case study 2. However, in the first case, the birds remained on the farm for 25 weeks, whereas in the last case, they stayed for only 21 weeks.

If one week is required for cleaning after each batch:

- In the first case, each batch takes 25 weeks to grow plus 1 week for cleaning, totalling 26 weeks. With 52 weeks in a year, this allows for 2 batches per year, resulting in a total profit of Riel 708,000.
- In the last case, each batch takes 21 weeks plus 1 week for cleaning, totalling 22 weeks. This allows for approximately 2.3 batches per year, leading to a total profit of Riel 787,750.

Therefore, while the profit per batch is lower when selling chickens at 22 weeks instead of 26 weeks, the overall annual profit is higher due to the increased number of batches per year.

Poultry Technical and Financial Literacy Applications

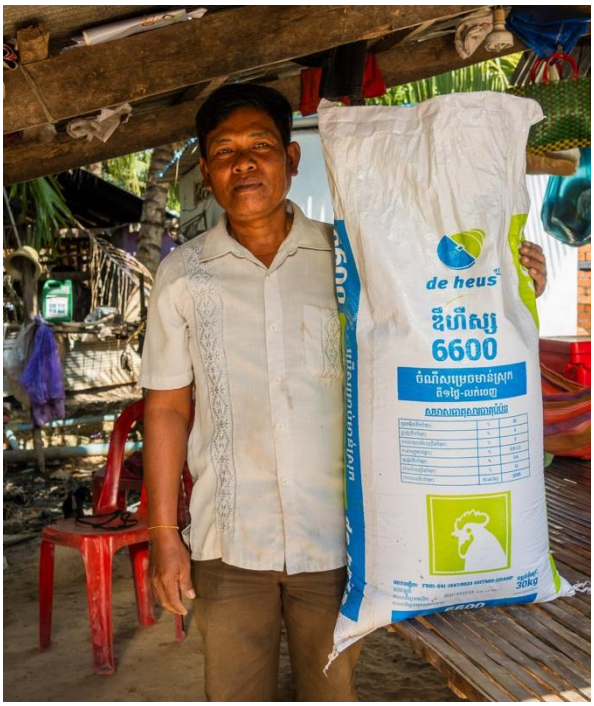
- Technical Concepts:
  - *Feed Optimization:* Balancing increased feed costs against reduced rearing time.
  - *Market Timing:* Understanding how age at sale impacts pricing and marketability.

- Financial Concepts:
    - *Cost-Benefit Analysis:* Evaluating the trade-offs of higher feed costs versus shorter rearing times.
    - *Profitability Analysis:* Comparing per-batch and annual profits to determine the best strategy.

Key Takeaway

Feeding more can lead to faster growth and higher profits, but farmers must balance feed costs with market conditions. Selling chickens earlier, even at a slightly lower price, can increase annual profitability by allowing for more batches per year.

CASE STUDY 4: USING ONLY COMMERCIAL FEED FOR FASTER GROWTH



Bora, a poultry farmer, decides to use only commercial feed for his chickens, eliminating the transition to home-made feed. This approach significantly shortens the rearing time, allowing the chickens to reach market weight (1.5 kg) in just 13 weeks. However, younger chickens may fetch a lower market price due to buyer preferences.

Bora's Approach

1. Feeding Strategy:
    - Bora feeds his chickens exclusively with commercial feed, requiring approximately 5 kg per bird.
    - This accelerates the chickens' growth to market weight in just 13 weeks.
2. Maximizing Annual Production:
    - With reduced rearing time, Bora can complete more batches annually, compensating for the lower profit per batch.

Financial Breakdown

Costs

Item	Price per Unit (Riel)	Quantity	Total (Riel)
Chicks (7 days old)	3,000	50	150,000
Vaccines	200 x 3	50	30,000
Commercial Feed (30 kg)	65,000	1 bag	65,000
Commercial Feed (5 kg/chick)	2500/kg	50	625,000
Total Costs:			**870,000**

Revenue

Item	Price per Unit (Riel)	Quantity	Total (Riel)
Chickens (1.5 kg each)	17,000/kg	45	1,147,500

Profit Calculation
Revenue - Costs = 1,147,500 - 870,000 = 277,500 Riel

Comparison Analysis

Scenario	Total Costs (Riel)	Revenue (Riel)	Profit (Riel)	Rearing Time	Annual Batches	Annual Profit (Riel)
Standard Feed (26 weeks)	861,000	1,215,000	**354,000**	26 weeks	2	**708,000**
Commercial Feed Only (13 weeks)	870,000	1,147,500	**277,500**	13 weeks	3	**832500**

Observations:

- Using only commercial feed reduces per-batch profit due to higher feed costs and lower market prices. However, the shorter rearing time enables more batches per year, resulting in higher annual profits.

Poultry Technical and Financial Literacy Applications

- Technical Concepts:
  - *Feed Optimization:* Exclusive use of commercial feed simplifies feeding but increases costs.
  - *Market Timing:* Selling younger chickens requires understanding and adapting to market preferences.
- Financial Concepts:
  - *Profitability Analysis:* Comparing batch and annual profits reveals trade-offs between rearing time and cost.
  - *Market Research:* Recognizing price impacts of chicken age helps balance faster growth with revenue potential.

Key Takeaway

Using only commercial feed accelerates growth and allows for more batches annually, increasing yearly profits. However, farmers must consider higher feed costs and potential lower market prices for younger chickens.

3.3 Mortality

CASE STUDY 5: THE IMPACT OF HIGH MORTALITY

In this scenario, Sita, a poultry farmer, experiences a significant challenge: a 30% mortality rate in her batch of 50 chicks. While fewer surviving chickens reduce feed costs, the overall profitability is heavily impacted. This case highlights the financial and operational consequences of high mortality and emphasizes the importance of early care, hygiene, and management.

Sita's Approach

1. Mortality Breakdown:
   - 10% (5 chicks) die during the early weeks, reducing feed usage for this period by 5%.
   - An additional 20% (10 chicks) die before reaching market age, leaving 35 chickens to be sold.
2. Adjusted Feed Consumption:
   - Fewer chicks result in lower feed consumption overall, but not proportionally, as feed is primarily consumed in the later stages of growth.

Financial Breakdown

Costs

Item	Price per Unit (Riel)	Quantity	Total (Riel)
Chicks (7 days old)	3,000	50	150,000
Vaccines	200 x 3	50	30,000
Commercial Feed (95% of 30 kg)	65,000/bag	1 bag	61,750
Home-Made Feed (7.7 kg/chick for 40 chicks)	12,320/chick	40	492,800
Total Costs:			**734,550**

Revenue

Item	Price per Unit (Riel)	Quantity	Total (Riel)
Chickens (1.5 kg each)	18,000/kg	35	945,000

Profit Calculation
Revenue - Costs = 945,000 - 734,550 = 210,450 Riel

Comparison Analysis

Scenario	Total Costs (Riel)	Revenue (Riel)	Profit (Riel)	Survival Rate	Marketable Chickens
Low Mortality (Case 1)	861,000	1,215,000	**354,000**	90%	45
High Mortality (30%)	734,550	945,000	**210,450**	70%	35

Observations:

- High mortality reduces costs but impacts revenue more significantly, cutting profits by over 50%.
- The reduced survival rate results in fewer marketable chickens, affecting overall profitability.

Poultry Technical and Financial Literacy Applications

- Technical Concepts:
  - *Hygiene and Early Care:* Proper management, clean water, and quality feed are critical for minimizing early mortality.
  - *Health Monitoring:* Early detection and prevention of diseases help improve survival rates.
- Financial Concepts:
  - *Risk Management:* Establish contingency plans to mitigate losses from high mortality.
  - *Profitability Analysis:* Calculate the financial impact of reduced survival rates to plan better for future batches.

Key Takeaway

High mortality rates drastically reduce profits and can compromise the health of surviving chickens. Investing in early care, quality feed, and good management is essential to prevent losses and ensure long-term success.

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4. Record-Keeping: The Foundation for Informed Decisions

Record-keeping is the backbone of successful poultry farming. By tracking data such as feed usage, vaccination schedules, mortality rates, and costs, farmers can make informed decisions to improve productivity and profitability. Without accurate records, it becomes difficult to analyze performance, identify inefficiencies, and implement changes effectively.

4.1 Why Record-Keeping Matters

1. Informed Decision-Making:
   - Provides a clear picture of costs, revenues, and profits for each batch.
   - Helps identify trends, such as feed efficiency or high mortality causes, enabling targeted improvements.
2. Efficiency and Profitability:
   - Tracks feed consumption and other expenses to minimize waste.
   - Calculates profitability per batch and annually to optimize operations.
3. Risk Management:

- Identifies patterns that may signal risks, such as disease outbreaks or feed inefficiencies.
- Allows quick responses to unexpected challenges, reducing losses.

4. **Planning and Scaling:**
   - Accurate records are essential for budgeting future batches or scaling up production.
   - Facilitates comparisons between different strategies, such as using commercial feed versus home-made feed.

Activity: Provide participants with a sample record-keeping sheet to practice entering production and financial data. Discuss how to interpret results to improve future performance.

Steps:

1. Provide participants with blank record-keeping sheets.
2. Walk them through filling in daily feed costs, vaccination details, and other expenses.
3. Practice calculating weekly and monthly costs, revenues, and profits based on their records.
4. Highlight the importance of maintaining accurate records for informed decision-making.

4.2 Comprehensive Record-Keeping Template for a Batch Cycle

This template is designed to track a single batch cycle from start to finish, capturing all critical data in one table. It is structured to include chick purchase, feed consumption, mortality, sales, expenses, and revenue, making it easy for farmers to follow and update regularly.

Batch Cycle Record Template

Stage	Date/Week	Activity/Details	Feed Used (kg)	Mortality (No.)	Expenses (Riel)	Revenue (Riel)	Notes
Start-Up	Jan 1, 2024	Purchased 50 chicks			150,000		Chicks vaccinated
	Jan 1, 2024	Bought 30 kg feed	30 kg		65,000		High-quality feed used
Week 1	Jan 7, 2024	Feed consumed	10 kg	2			Vaccines administered
	Jan 7, 2024	Maintenance (cleaning coop)			5,000		Hygiene improved

Week 2	Jan 14, 2024	Feed increased for growth	15 kg	1			Chick growth observed
Week 3	Jan 21, 2024	Feed consumed	20 kg	0			Optimal growth
	Jan 21, 2024	Repairs to coop			10,000		
Week 4	Jan 28, 2024	Feed consumption tracked	20 kg	0			Transition to home-made feed
	Jan 28, 2024	Purchased 50 kg home-made feed			80,000		Shift to cost-effective feed
Midpoint	Feb 4, 2024	Sold 10 chickens				180,000	Sold early at 1.5 kg
Week 5–22	Weekly	Weekly feed consumption	5 kg/week	1/week			Adjust feed levels as needed
End of Cycle	June 30, 2024	Sold remaining 37 chickens				666,000	Sold at 1.5 kg each
		Cleaning and maintenance			10,000		Prepared for next batch

Summary of the Batch

Metric	Total (Riel)	Notes
Total Expenses	150,000 (Chicks) + 145,000 (Feed) + 25,000 (Maintenance) = **320,000**	Includes all costs: chicks, feed, and coop maintenance.

Total Revenue	846,000	From the sale of 47 chickens.
Profit	526,000	Revenue - Expenses.

Keeping some data on expenses and sales doesn't have to be complicated and will help you to get better control of the profits or losses in chicken production and will also show you what may be done to improve financial results.

Key Takeaway

This one-batch template simplifies record-keeping by capturing all essential data in one place. Farmers can use it to monitor costs, manage feed consumption, track mortality, and analyse profitability for each cycle, helping them make informed decisions for future batches

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5. Annex: Learning Objectives

At the end of this training, farmers will be able to:

1. Technical Poultry Management
    - Identify the nutritional needs of poultry at various growth stages and apply effective feeding strategies.
    - Implement vaccination schedules and biosecurity measures to reduce mortality and improve flock health.
    - Manage poultry housing and hygiene to ensure optimal growth conditions.
2. Financial Literacy for Poultry Farming
    - Develop a budget for each batch, including costs for chicks, feed, vaccinations, and other inputs.
    - Use record-keeping tools to monitor feed usage, mortality rates, expenses, and revenues.
    - Analyze costs and revenues to calculate profitability and identify areas for improvement.
    - Conduct market research to understand consumer preferences and adjust production accordingly.
    - Develop contingency plans and risk management strategies to handle challenges like disease outbreaks or fluctuating market demand.
3. Integration of Technical and Financial Knowledge

- Align poultry farming practices with financial management to achieve sustainable profitability.
- Use case study insights to evaluate different approaches and select the most effective strategies for your farm.
- Apply record-keeping data to refine operations, plan future batches, and scale production responsibly.

Key Takeaway

This manual equips farmers with the knowledge and tools to combine technical expertise with financial literacy, creating a foundation for resilient, profitable poultry farming. By taking action and building on these skills, farmers can unlock the full potential of their farms.

Poultry farming, when combined with sound financial practices, can significantly enhance farmers' livelihoods.

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