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1.0 FEATHERS OF HOPE MODEL FARM PROJECT

Empowering Communities through Sustainable Chicken Farming

1.1 Introduction

The "Feathers of Hope" Model Farm Project is a transformative initiative aimed at empowering communities in Kinango through sustainable chicken farming. Driven by the training received at the Haller Foundation, this project introduces modern poultry farming techniques and infrastructure to uplift the community both economically and spiritually. Unlike traditional mud structures, the project will utilize two advanced poultry structures designed to enhance productivity and sustainability. Additionally, the integration of Azolla farming and solar power will further boost the project's efficiency and environmental impact. Local labor, guided by experienced workers, will be employed, ensuring community involvement and skill development.

1.2 Project Mission

Our mission for this project is to educate the community on modern chicken rearing for sustainable development and poverty alleviation.

1.3 Project Vision

The vision of "Feathers of Hope" is to be a transformative force, using chicken rearing to lift families out of poverty. This project envisions a community knit together by shared purpose, mutual support, and a commitment to uplift one another. As individuals and families care for their flocks, the vision extends beyond economic benefits to encompass holistic well-being. "Feathers of Hope" aims to empower individuals with both practical skills in poultry farming and enrichment. The project seeks to break the chains of generational poverty, creating a ripple effect of transformed lives throughout the community.

1.4 Project Overview

The "Feathers of Hope" project aims to alleviate poverty and empower communities through sustainable chicken rearing. The project will raise 300 chicks up to maturity. One hundred and fifty chickens will be sold to the market to generate income to sustain the project, while the rest will be left to lay eggs, which will be placed in an incubator. The hatched chicks will be distributed to community members, providing them with a means to generate income, improve

nutrition, and foster community resilience. Additionally, mature chickens and eggs will be sold in the market to sustain the project financially.

2.0 Key Components

2.1. Chick Distribution

- **Inclusivity and Prioritization:** Chicks will be distributed to selected community members, prioritizing those in need and demonstrating inclusivity.
- **Training:** Training sessions on proper poultry care, hygiene, and sustainable farming practices will be provided to ensure the success of recipients in rearing healthy chickens.

2.2. Community Empowerment

- **Sustainable Source of Income and Nutrition:** "Feathers of Hope" seeks to empower individuals and families by providing them with a sustainable source of income and nutrition.
- **Fostering Community Spirit:** The project will foster a sense of community by encouraging collaboration, mutual support, and shared responsibility in the care and management of the chickens.

2.3. Market-oriented Approach

- **Income Generation:** A portion of the distributed chicks will be reared to maturity by project participants, with the surplus intended for sale in local markets.
- **Reinvestment:** The income generated from selling mature chickens will be reinvested into the project, ensuring its long-term sustainability.

2.4. Training and Capacity Building

- **Skill Enhancement:** Ongoing training programs will be conducted to enhance the skills of community members in poultry farming, including topics such as disease prevention, feed management, and record-keeping.
- **Financial Literacy and Entrepreneurship:** Workshops on financial literacy and small-scale entrepreneurship will be offered to help participants maximize the economic benefits of chicken rearing.

2.5. Monitoring and Evaluation

- **Regular Monitoring:** Regular monitoring visits will be conducted to assess the health and well-being of the chickens and provide additional support as needed.
- **Impact Assessments:** Impact assessments will be carried out to measure the economic and social outcomes of the project, ensuring its effectiveness in poverty alleviation.

3.0 PROJECT SUSTAINABILITY

- **Income Generation:** The sale of mature chickens in local markets will generate income to cover operational costs, feed, and future chick distributions.
- **Replicable Model:** "Feathers of Hope" aims to create a self-sustaining model that can be replicated in other communities, contributing to broader poverty alleviation efforts.

4.0 INFRASTRUCTURE AND TECHNOLOGICAL INTERGRATION

4.1. Advanced Poultry Structures

The Feathers of Hope project will utilize two advanced poultry structures designed with insights gained from training at the Haller Foundation. These structures offer significant improvements over traditional mud structures, enhancing the health, productivity, and management of the chickens. The advanced design includes provisions for different growth stages and a dedicated breeding house for high pedigree selection and research.

a. Structure 1: Grower and Layer House

Purpose: To house chickens at different stages of growth, from chicks to mature layers.

Design Features:

- **Durability:** Constructed with robust materials, weather-resistant roofing, and concrete flooring to ensure longevity and stability.
- **Ventilation:** To maintain optimal air quality, reducing the risk of respiratory diseases.
- **Temperature Control:** Providing a comfortable environment for the chickens year-round.
- **Ease of Cleaning:** Smooth, non-porous surfaces and drainage systems for easy cleaning and waste management, promoting hygiene and reducing disease outbreaks.
- **Feed and Water Systems:** Feeding and watering systems to ensure consistent and adequate nutrition and hydration for the chickens.

Sections:

- **Brooding Area:** Warm, controlled environment for chicks to ensure healthy development.
- **Grower Section:** Spacious area for young chickens to grow and develop before moving to the layer section.
- **Layer Section:** Designed for mature hens, with nesting boxes and perches to support egg production.

b. Structure 2: Breeding and Research House

Purpose: To serve as a breeding facility where high pedigree chickens are identified, observed, and managed for the best breeding stock and research purposes.

Design Features:

- **Individual Cages/Partitions:** Separate compartments for each breeding chicken to monitor and control breeding activities accurately.
- **Breeding Records:** Integrated system for keeping detailed records of breeding patterns, genetics, and performance metrics.
- **Observation Area:** Designated space for caretakers to monitor and conduct studies on the breeding stock without disturbing the birds.
- **Advanced Lighting:** Good lighting to simulate natural daylight cycles, promoting healthy reproductive behaviors.
- **Biosecurity Measures:** Strict biosecurity protocols, including footbaths, protective clothing, and restricted access, to prevent the introduction and spread of diseases.

Benefits of Advanced Structures

1. Improved Health and Productivity:

- **Optimal Environment:** Better temperature control, ventilation, and hygiene conditions lead to healthier chickens and higher productivity.
- **Disease Prevention:** Reduced risk of disease outbreaks due to improved sanitation and biosecurity measures.

2. Enhanced Breeding Success:

- **Controlled Breeding:** Ability to monitor and manage breeding activities closely, ensuring the selection of high-quality pedigree chickens.
- **Data-Driven Decisions:** Use of detailed breeding records and research findings to make informed decisions and improve breeding outcomes.

3. Economic Efficiency:

- **Reduced Mortality:** Healthier chickens with lower mortality rates translate to higher returns on investment.
- **Increased Egg Production:** Better living conditions lead to higher egg production rates, contributing to increased income.

4. Sustainability:

- **Long-Term Durability:** Use of durable materials reduces the need for frequent repairs or replacements, ensuring the longevity of the structures.
- **Resource Efficiency:** Advanced systems for feeding and watering optimize resource use, reducing waste and operational costs.

c. Implementation Plan

1. Construction Phase:

- **Site Preparation:** Select suitable locations for the structures and prepare the sites.
- **Building Materials:** Source high-quality materials as specified in the design.
- **Construction:** Engage skilled labor for construction, ensuring adherence to design specifications.

2. Setup Phase:

- **Equipment Installation:** Install feeding, watering, and lighting systems.
- **Biosecurity Setup:** Implement biosecurity measures, including footbaths and restricted access areas.

3. Operational Phase:

- **Chick Placement:** Introduce chicks to the brooding area of the grower and layer house.
- **Breeding Operations:** Begin breeding activities in the breeding and research house, maintaining detailed records and observations.

4. Training and Capacity Building:

- **Staff Training:** Train staff and community members on managing the advanced structures, including biosecurity protocols, feeding systems, and record-keeping.
- **Continuous Learning:** Provide ongoing education and support to ensure optimal operation and management of the poultry houses.

4.2 Azolla Farming

Azolla a plant rich in essential nutrients, making it an ideal feed supplement for poultry:

- **Protein:** Contains 20-30% crude protein, which is essential for the growth and development of chickens.
- **Amino Acids:** Rich in essential amino acids like lysine and methionine.
- **Vitamins:** Contains vitamins A, B12, and beta-carotene.
- **Minerals:** High levels of calcium, phosphorus, potassium, iron, copper, magnesium, and manganese.
- **Carbohydrates:** Provides necessary energy through its carbohydrate content.

1. Achieving Goals through Integrating Azolla Farming in the Feathers of Hope Project.

a. Sustainable Chicken Nutrition

- **Action Steps:**

Introduce Azolla into the Poultry Diet: Start by gradually mixing Azolla into the chickens' existing feed to ensure they adapt to the new diet.

- **Optimize Nutritional Balance:** Regularly analyze the nutritional content of the feed mix to maintain a balanced diet for the chickens, ensuring they receive all essential nutrients.

Outcomes:

- **Enhanced Growth:** Chickens will benefit from the high protein content of Azolla, leading to faster growth and improved overall health.
- **Better Egg Production:** The enriched diet will contribute to higher egg production rates, boosting the productivity of the poultry.

b. **Reduction of Feed Costs.**

Action Steps:

- **Regular Harvesting:** Implement a schedule for regular harvesting of Azolla to ensure a consistent supply.
- **Feed Formulation:** Develop a cost-effective feed formulation that incorporates Azolla, reducing reliance on commercial feed.

Outcomes:

- **Cost Savings:** By replacing a portion of commercial feed with Azolla, the project will significantly reduce feed costs, making poultry farming more economically viable.
- **Increased Profit Margins:** Lower feed costs will lead to higher profit margins, allowing more funds to be reinvested into the project and other community initiatives.

c. **Improvement in Overall Productivity**

Action Steps:

- **Training and Capacity Building:** Conduct training sessions on effective Azolla farming and poultry management practices.
- **Health Monitoring:** Implement regular health checks and monitoring for the chickens to ensure they are benefiting from the Azolla supplementation.

Outcomes:

- **Higher Yield:** Improved nutrition will result in healthier, more productive chickens, increasing both meat and egg yields.
- **Sustainability:** The self-sustaining nature of Azolla farming will contribute to long-term productivity and resilience of the poultry operation.

d. **Community Empowerment**

Action Steps:

- **Distribution of Resources:** Provide Azolla seeds and initial setup materials to community members to encourage widespread adoption.
- **Collaborative Management:** Foster a community approach to managing the Azolla ponds and poultry, promoting shared responsibility and mutual support.

Outcomes:

- **Skill Development:** Community members will gain valuable skills in sustainable farming practices, enhancing their employability and entrepreneurial potential.
- **Economic Upliftment:** Increased income from poultry farming will contribute to economic upliftment, helping to break the cycle of poverty.

e. Sustainable Agricultural Development

Action Steps:

- **Environmental Stewardship:** Promote the use of organic practices and resource-efficient methods in Azolla farming.
- **Replication and Scaling:** Document best practices and develop a replicable model to scale the initiative to other communities.

Outcomes:

- **Eco-friendly Practices:** The project will serve as a model for sustainable agriculture, reducing environmental impact and promoting biodiversity.
- **Wider Impact:** Successful implementation in Kinango can inspire similar projects elsewhere, amplifying the benefits of sustainable agriculture.

2. Implementation Framework

Initial Setup Phase:

- **Pond Construction:** Build Azolla ponds using local labor and materials.
- **Azolla Introduction:** Start cultivating Azolla and monitor its growth.

Integration Phase:

- **Feed Trials:** Begin incorporating Azolla into chicken feed and observe responses.
- **Adjustments:** Fine-tune the proportion of Azolla in the feed mix based on the results.

Capacity Building Phase:

- **Training Sessions:** Educate community members on Azolla farming and poultry management.

- **Resource Distribution:** Provide necessary materials and support for individual farmers.

Sustainability Phase:

- **Monitoring and Evaluation:** Continuously assess the project's impact and make improvements.
- **Scaling:** Plan for the expansion of the project to other areas based on success metrics.

4.3 SOLAR POWER

Kinango being a semi-Arid area is exposed to a lot of sunshine making it ideal for integrating solar power into the Feathers of Hope project, this will significantly enhance the farm's operations, providing a reliable, sustainable, and cost-effective energy source. By ensuring continuous power supply for lighting, incubation, and essential equipment, solar power will improve the health and productivity of the chickens, contribute to the project's economic viability, and promote sustainable agricultural practices. Through careful implementation and energy management, solar power will help achieve the project's goals of community empowerment and sustainable development.

a. Purpose and Benefits of Solar Power

i. Energy Independence:

- **Sustainable Energy Source:** Solar power provides a renewable energy source, reducing reliance on the grid and fossil fuels.
- **Cost Savings:** Solar energy reduces electricity bills and operational costs, allowing more funds to be allocated to other project needs.
- **Reliability:** Solar power ensures a consistent energy supply, especially crucial in areas prone to power outages like kinango.

ii. Project Enhancements:

- **Lighting:** Solar power will provide reliable lighting for poultry houses, ensuring proper lighting cycles that are essential for chicken health and productivity.
- **Incubation:** Solar energy will power incubators, ensuring a steady temperature and environment for hatching eggs.
- **Equipment Powering:** Solar power will support various equipment enhancing overall farm efficiency.

b. Implementation of Solar Power in the Poultry Farm

1. System Design and Installation:

- **Solar Panels:** Install photovoltaic panels to capture and convert sunlight into electricity.

- **Batteries:** Use high-capacity batteries to store energy for use during cloudy days and at night.
- **Inverter:** Install an inverter to convert the direct current (DC) generated by the solar panels into alternating current (AC) used by farm equipment.
- **Wiring and Fixtures:** Set up wiring and electrical fixtures to distribute power throughout the farm.

2. **Energy Management:**

- **Power Allocation:** Prioritize essential systems like lighting, incubation, and water pumps to ensure they receive uninterrupted power.
- **Backup Power:** Ensure that the battery storage system can provide backup power during grid outages, maintaining continuous farm operations.
- **Energy Monitoring:** Implement an energy management system to monitor consumption and optimize the use of solar power.

c. **Achieving Project Goals through Solar Power**

1. **Energy Independence:**

- **Uninterrupted Operations:** Solar power will mitigate the impact of power outages, ensuring continuous operation of essential farm systems.
- **Reduced Costs:** Lower electricity bills will free up funds for other project activities, contributing to the financial sustainability of the farm.

2. **Enhanced Efficiency:**

- **Optimal Lighting:** Proper lighting cycles, powered by solar energy, will improve the health and productivity of the chickens, leading to higher egg production and growth rates.
- **Reliable Incubation:** Stable power supply for incubators will result in higher hatch rates and healthier chicks, supporting the project's breeding and distribution goals.

3. **Sustainability:**

- **Environmental Impact:** Utilizing solar power reduces the farm's carbon footprint, contributing to environmental sustainability and promoting eco-friendly practices.
- **Community Model:** Demonstrating successful integration of solar power can inspire other community projects to adopt renewable energy solutions, amplifying the positive impact on the environment and local economy.

5.0 LABOR AND COMMUNITY INVOLVEMENT

The FOH farm will require a lot of labor and this will come from different source, from skilled labor to unskilled labor and also experienced labor, the community will benefit from both since the project aims at uplifting the community. The CBO members will provide labor in voluntarily basis in case one is assigned a task.

- **Experienced Workers:** The project will hire experienced workers for critical tasks, ensuring high standards are achieved.
- **Community Participation:** Local labor will be utilized for various activities, with the community-based organization (CBO) team handling smaller tasks, fostering a sense of ownership and participation among community members.

6.0 MONITORING AND EVALUATION PROCESS

In order to measure the success of the project monitoring and evaluation is very important, the project will undergo monitoring and evaluation from the CBO members and from an external M and E.

1. Selection Criteria and Process.

- **Inclusivity:** The selection process will prioritize inclusivity, ensuring that the most deserving community members are chosen.
- **Transparency:** Clear and transparent criteria will be established for selecting beneficiaries, involving community leaders and stakeholders in the decision-making process.

a. Criteria for Selecting the Monitoring and Evaluation Team for the Feathers of Hope Project.

1. Relevant Experience

- **Minimum 2 years in M&E:** Team members should have at least two years of experience in monitoring and evaluation, preferably in agricultural or community development projects.
- **Project-specific experience:** Experience in similar projects, such as poultry farming or sustainable agriculture is highly desirable.

2. Educational Background

- **Academic success in relevant fields:** Team members should possess at least a diploma in fields such as Agriculture, Economics, Development Studies, or any other relevant field.

3. Technical Skills

- **Data Collection and Analysis:** Proficiency in qualitative and quantitative data collection methods and analysis.
- **Familiarity with M&E Tools:** Knowledge of and experience with M&E tools and frameworks (e.g., Logical Framework Approach, Theory of Change, Result-Based Management).
- **Technological Proficiency:** Ability to use data analysis software and other relevant technologies for monitoring and evaluation.

4. Soft Skills

- **Communication:** Excellent written and verbal communication skills for reporting and presenting findings.
- **Analytical Thinking:** Strong analytical skills to assess project performance and impact.
- **Attention to Detail:** Meticulous attention to detail to ensure accurate data collection and analysis.
- **Problem-solving:** Ability to identify and address issues that may arise during project implementation.

5. Interpersonal Skills

- **Team Collaboration:** Ability to work effectively as part of a team and collaborate with project staff and community members.
- **Religious Sensitivity:** Awareness and respect for the different religions.

6. Independence and Objectivity

- **Unbiased Perspective:** The team should maintain objectivity and avoid conflicts of interest. They should not have any direct involvement in the project's implementation to ensure unbiased evaluation.

7. Local Knowledge and Language Proficiency

- **Understanding of Local Context:** Knowledge of the local context, challenges, and opportunities specific to Kinango.
- **Language Skills:** Proficiency in local languages and Swahili to facilitate effective communication with community members.

8. Commitment to Project Goals

- **Alignment with Project Vision:** A shared commitment to the project's goals of community empowerment, sustainable agriculture, and Christian values.
- **Ethical Standards:** Adherence to high ethical standards in conducting evaluations and handling data.

9. Flexibility and Adaptability

- **Responsive to Changes:** Ability to adapt to changing circumstances and project needs, including unforeseen challenges and opportunities.

10. Recommendations and References Strong References: Positive references from previous employers or clients, indicating reliability, competence, and a successful track record in M&E.

11. Certification and Professional Memberships

- **Relevant Certifications:** Possession of certifications in M&E from recognized institutions.
- **Professional Affiliations:** Membership in professional bodies related to M&E, agriculture, or development.

By selecting a team based on these criteria, the Feathers of Hope Project can ensure that its monitoring and evaluation processes are thorough, objective, and aligned with the project's goals of community empowerment and sustainable development.

- **Composition:** A dedicated monitoring team will be established, comprising project staff, community leader, and external evaluators. A team of at least 5 people.
- **Responsibilities:** The team will conduct regular visits, assess the health and productivity of the chickens, provide support and guidance, and collect data for impact assessment. The team will be required to provide data to the external evaluator upon request

Evaluation Metrics

- **Economic Impact:** Metrics will include income generated, improvement in household nutrition, and overall economic upliftment of participants.
- **Social Impact:** Metrics will include community cohesion, participant satisfaction, and spiritual growth.
- **Project Sustainability:** Metrics will include the project's ability to generate income, maintain operations, and replicate the model in other communities.

7.0 Proposed Budget for the model farm of the pilot project (feathers of hope) Model farm – poultry farming, fencing, Azolla farming, solar power.

Project Title	Feathers of Hope			
Period	January 2024-December 2024			
Expenses	Item	Rate/Cost /Unit	Quantity	Total Cost (Kshs.)
Fencing Materials				
	4inch, SQUARE, 5ft long posts (13kgs per post)	650	30Pcs	19500
	Flanges to prevent uprooting	30	30 Pcs	900
	14G Galvanized Chain link – 5ft, 18m	6500	15 Rolls	97500
	Standard Galvanized double twist Barbed wire – 4 lines(610m)	7000	5 rolls	35000
	U-Nails 1.5inch	300	8Kg	2400
	4inch Straight Nails to fasten support braces	200	4kg	800
	Binding wire	250	8kg	2000
	Cement	750	10bags	7500
	Labor costs			20000
Two Poultry house structures(mud structure)	Poles standing poles	200	100 pcs	20000
	Thin across poles	1000	12 bundles	12000
	cement	750	30 bags	22500
	Roofing Timber	26	400ft	10400
	wall pass	200	8kg	1600
	Roofing nails	300	20kg	6000
	3inch nails	200	10kg	2000
	Iron sheets	1450	50pcs	72500
	4inch nails	200	10kg	2000

	Chicken link wire	7200	2roll	14400
	Wire mesh	7200	2roll	14400
	Labor charges to completion			25000
CHICKEN				
	Chicks	130	300	39000
	Chicken Drinkers	450	8	3600
	Chicken Feeders	150	8	1200
	Round feeders	450	8	3600
	Infrared bulb	750	4	3000
	Brooding Jiko	1500	2	3000
	Wood Shavings	200	8	1600
	500ml Noro cleanse disinfectant	450	2	900
Feeding Costs				
Chicken mash Stage (Day 1 to 8 Weeks)200 chicks will consume	1 chick consumes 2Kgs in 2 Months ,300 chicks will consume 600 Kgs i.e. 12 bags of 50Kgs Chick mash In 8 Weeks .A bag costs 3000,12 Bags will cost 36000			36000
Growers Stage 9weeks-20 weeks	1 chick consumes 7Kgs of Growers Mash, 300 birds will consume 2100 Kgs or 42 bags. A bag will cost 2600. 42 Bags will cost 109,200 NB Azolla feed formulation will cut the amount of feeds required by half.			54600
Miscellaneous				20000
Vaccination				
	Day 7	Gumboro vaccine	300 doses	500
	Day 14	Gumboro	300 doses	500
	Day 21	Newcastle Infectious bronchitis	300 doses	500
	Day 28	Gumboro	300 doses	500
	Day 35	Newcastle infectious bronchitis	300 doses	500
	8 Weeks	Fowl Typhoid	300 doses	1000

		Fowl Pox	300 doses	600
		Labour costs		3000
500 to 1000		73449	1	73449
Egg hatchery				
AZOLLA FARMING				
	Azolla seeds	2000	10kg	20000
	Pond construction labor			20000
	liner	230	100	23000
	Tank	70000	1	70000
	Shed net	20000	2 rolls	40000
	Pellet machine	125000	1	125000
SUB TOTAL				634549
3 KV SOLAR POWER	Solar panels batteries and inverter	211900	1	211,900
	Wiring	4000	3 rolls	12000
	Lights	3000	5	15000
Independent Consultant to evaluate the project		Stipend for one year.	quarterly	50,000
TOTAL BUDGET FOR FEATHERS OF HOPE PROJECT				Ksh.923449

CONCLUSION

The "Feathers of Hope" Model Farm Project represents a transformative approach to sustainable chicken farming, leveraging advanced infrastructure, innovative practices like Azolla farming, and renewable energy solutions. By empowering communities with the skills and resources needed for successful poultry farming, the project aims to create a lasting impact on poverty alleviation, community resilience, and environmental sustainability. The project's holistic approach, grounded in Christian values, ensures that it not only addresses economic needs but also fosters a sense of community and shared purpose.