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KC22087

PROJECT SCOPE AND DESIGN ASSESSMENT

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# PROJECT INFORMATION

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| 1. **Project information** | | |
| **Title of the project**  **EFFECTIVE ORGANIC FERTILIZER** | | |
| **Geographical coverage of the project (area)**  **Rwanda-Northern-Gicumbi-Byumba** | | |
| **Project duration (02/08/2023– 02/08/2024)** | **The total amount budgeted for =** 50,000$ | **Duration of the Project**  = 12 months |
| **Thematic Areas Covered** | Agricultural | |

|  |  |
| --- | --- |
| 1. **Applicant information** | |
| **2.1 Contact information** | |
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# Executive Summary

The project aligns with the vision and mission of the Africa Development Bank (AfDB) by contributing to the development and sustainable growth of the agricultural sector in the region. Here's how the project can assist the AfDB:

**Supporting Agricultural Development**: The project aims to enhance agricultural productivity and sustainability through the production of organic powder fertilizer. By promoting environmentally friendly and locally sourced fertilizers, the project aligns with the AfDB's mission to support agricultural development and improve food security in Africa.

**Sustainable Practices:** The use of organic powder fertilizer derived from locally available materials contributes to sustainable agricultural practices. This aligns with the AfDB's commitment to promoting sustainable agriculture and reducing the reliance on chemical-based fertilizers, which can have negative environmental impacts.

**Job Creation and Economic Growth:** The project's objective of providing vocational training and employment opportunities can contribute to AfDB's vision of inclusive growth and poverty reduction. By funding vocational programs and empowering individuals from marginalized communities, the project helps create employment opportunities, reduce unemployment, and stimulate economic growth (Niezen, 2021).

**Partnership and Collaboration:** The project's collaboration with local stakeholders, implementing agencies, and partner organizations demonstrates a commitment to fostering partnerships, which is a key aspect of AfDB's approach. By working closely with these stakeholders, the project can leverage their expertise, resources, and networks to achieve its objectives more effectively.

**Innovation and Knowledge Sharing:** The project's research and development activities in the field of organic fertilizer production contribute to innovation and knowledge sharing. This aligns with the AfDB's objective of promoting innovation in agriculture and facilitating the exchange of best practices and technologies among African countries.

Overall, the project's focus on sustainable agriculture, job creation, partnership, and knowledge sharing are in line with the vision and mission of the Africa Development Bank. It provides an opportunity for the AfDB to support and promote inclusive and sustainable agricultural practices, contribute to economic development, and improve livelihoods in the region. The Fertilizer Powder Project is set to improve Agriculture in Gicumbi District, Byumba Sector aims to establish a fertilizer production facility that utilizes hairs, feathers, egg shells, and bones to address the agricultural challenges faced by farmers in this specific region. The project's purpose is to improve soil fertility and promote healthy plant growth through the production and distribution of organic fertilizer powder. By repurposing animal byproducts, the project offers an environmentally friendly and cost-effective solution to enhance agricultural practices in the Gicumbi District, Byumba Sector.

Key objectives include developing an efficient process for collecting and processing animal byproducts, establishing a fully functional fertilizer production facility, ensuring the fertilizer powder meets industry standards, and implementing effective marketing strategies. The project's scope spans approximately 12 months, with milestones and activities managed using project management software.

The project's focus on the Gicumbi District, Byumba Sector recognizes the specific agricultural requirements and aims to contribute to sustainable practices, increased productivity, and food security. By utilizing animal byproducts and organic fertilizers, the project aims to empower farmers, improve crop yields, and support the agricultural development of the region.

# Project description

The Organic Fertilizer Powder Project for Agriculture in Gicumbi District, Byumba Sector is a transformative initiative that aims to enhance farming practices and improve agricultural productivity in the targeted region. By establishing a fertilizer production facility that utilizes hairs, feathers, and bones, the project addresses the specific challenges faced by farmers in the Gicumbi District, particularly in the Byumba Sector.

# 3.1 Problem analysis

**Why do I choose this project?**

**Farmer feedback:** Interviews and surveys conducted with local farmers reveal their increasing concerns about the negative impacts of chemical fertilizers on soil health, crop quality, and the environment. Many farmers living in the Gicumbi district express a strong desire for alternative organic fertilizer options that are effective, sustainable, and environmentally friendly (National Institute of Statistics of Rwanda, 2022).

**Environmental concerns:** Qualitative data collected from environmental studies and reports highlight the adverse effects of chemical fertilizers on water bodies, soil erosion, and biodiversity (National Institute of Statistics of Rwanda, 2022). This raises the need for organic alternatives that minimize these negative impacts and promote sustainable farming practices.

**Market demand:** Market research data indicates a growing demand for organic products, including fertilizers, due to increasing consumer awareness of health and environmental issues (Scribd, 2023). The data shows a significant market potential for organic powder fertilizers, with a projected annual growth rate of 10% over the next five years.

**Sales and revenue:** Quantitative data from market analysis demonstrates the financial viability of the project. It shows a positive correlation between the increasing sales of organic products and the revenue generated by organic fertilizer manufacturers, indicating a profitable market opportunity (Niezen, 2021).

By considering both qualitative and quantitative data, it becomes evident that the project addresses the concerns and needs of farmers, consumers, and the environment. The data support the importance of developing and promoting organic powder fertilizers as a sustainable and profitable solution in the agricultural industry.

1. ***References:***

National Institute of Statistics of Rwanda. (2022, December). Seasonal agricultural survey - 2022 annual report | National Institute of statistics Rwanda. National Institute of Statistics Rwanda. <https://www.statistics.gov.rw/publication/seasonal-agricultural-survey-2022-annual-report>

Niezen, R. (2021, March 8). Agricultural education to reduce poverty in sub-Saharan Africa. iAffairs. <https://iaffairscanada.com/agricultural-education-to-reduce-poverty-in-sub-saharan-africa/>

Scribd. (2023). Agriculture and food security in Gicumbi district, northern province of Rwanda.<https://www.scribd.com/document/334361300/Agriculture-and-Food-Security-in-Gicumbi-District-Northern-Province-of-Rwanda>

Seasonal agricultural survey (Season B, 2021). (n.d.). National Institute of Statistics Rwanda. <https://www.statistics.gov.rw/publication/seasonal-agricultural-survey-season-b-2021>

1. **Objective tree**

**HOW THE PROJECT SUPPORT THE STRATEGIC GOAL OF THE ORGANISATION**

The project's primary objective is to develop a sustainable solution for improving soil fertility and promoting healthy plant growth. Through the repurposing of animal byproducts, the project offers an environmentally friendly and cost-effective alternative to conventional fertilizers. Key activities include establishing an efficient process for collecting and processing the byproducts, setting up a fully functional production facility, and implementing effective marketing and distribution strategies.

By producing organic fertilizer powder rich in essential nutrients, the project aims to provide farmers with a high-quality product that enhances crop development. Educational campaigns and partnerships with local stakeholders will help promote the benefits of organic fertilizers and ensure widespread adoption in the region. Monitoring and evaluation will be conducted to assess the project's impact on soil fertility, crop yields, and agricultural practices.

The successful implementation of this project will contribute to sustainable agriculture, improve farmers' livelihoods, and support the overall agricultural development of the Gicumbi District, Byumba Sector. By leveraging the potential of animal byproducts and organic fertilizers, the project empowers farmers, enhances soil fertility, and fosters environmentally friendly farming practices.

The agricultural sector in the Gicumbi District, particularly in the Byumba Sector, faces several challenges that hinder optimal farming practices and agricultural productivity.

**A thorough problem analysis reveals the key issues that the Fertilizer Powder Project aims to address:**

**Soil Degradation and Nutrient Depletion:** The soil in the region has been subjected to years of intensive farming practices without adequate replenishment of essential nutrients. As a result, soil fertility has declined, leading to reduced crop yields and decreased agricultural productivity.

**Reliance on Chemical Fertilizers:** Farmers in the Gicumbi District often rely heavily on chemical fertilizers to supplement soil nutrients. This overdependence on synthetic fertilizers poses environmental risks, including water pollution and soil degradation, while also increasing production costs for farmers.

**Limited Access to Organic Fertilizers:** The availability and affordability of organic fertilizers, which are more environmentally friendly and sustainable, are limited in the region. Farmers often lack access to high-quality organic fertilizers, impeding their ability to adopt sustainable farming practices.

**Lack of Awareness and Education:** There is a need to enhance farmers' knowledge and awareness of sustainable agricultural practices, including the benefits of organic fertilizers. Many farmers in the Gicumbi District may not be aware of alternative fertilizer options or lack the necessary knowledge to effectively use them.

**Market Demand for Organic and Sustainable Products:** There is an increasing demand for organic and sustainable agricultural products both locally and globally. However, the Gicumbi District faces challenges in meeting this demand due to limited availability and access to organic fertilizers.

By addressing these key issues, the Fertilizer Powder Project seeks to overcome the challenges faced by farmers in the Gicumbi District, Byumba Sector. The project aims to improve soil fertility, provide access to organic fertilizers, promote sustainable farming practices, and meet the growing market demand for environmentally friendly agricultural products.

# General Objectives/Main goal

Firstly, the project aims to develop and launch an organic powder fertilizer product that meets the nutritional requirements of a variety of crops. This objective is measurable through the achievement of a production capacity of 10,000 kilograms per month by the end of the second quarter, ensuring an adequate supply for the market.

To make the objective achievable, the project will secure partnerships with at least three organic raw material suppliers. This will ensure a consistent and sustainable supply chain for the production of fertilizer. The relevance of the project is demonstrated by the target of capturing 15% of the organic fertilizer market within the target region within the first year of product launch, which will increase market share and contribute to agricultural sustainability specifically in Gicumbi district.

Lastly, the project is time-bound, with the objective of completing all formulation, production, packaging, and labeling processes and obtaining necessary regulatory approvals by the end of the third quarter. By setting these SMART objectives, the project team has a clear direction, measurable targets, and specific timelines, enabling effective planning, execution, and evaluation of the project to achieve its goals.

# Specific Objectives

**Develop an efficient process** for collecting, processing, and blending hairs, feathers, and bones into a fine fertilizer powder.

**Ensure that the fertilizer powder** meets industry standards for nutrient content and quality through rigorous testing and quality control measures.

Establish a fully functional fertilizer production facility with the capacity to meet the market demand for organic and sustainable fertilizers in the Gicumbi District, Byumba Sector.

**Implement effective marketing strategies** to promote the fertilizer powder and educate farmers, gardeners, and agricultural businesses about its benefits and proper usage.

**Foster partnerships and distribution channels** with local stakeholders to ensure widespread access to organic fertilizer powder.

**Monitor and evaluate the impact of the fertilizer powder on soil fertility**, crop yields, and overall agricultural practices in the targeted region.

**Contribute to the advancement of sustainable agriculture**, improve farmers' livelihoods, and support rural development in the Gicumbi District, Byumba Sector through the utilization of organic fertilizers.

**Empower farmers with knowledge and resources** to adopt sustainable farming practices and reduce dependence on synthetic fertilizers.

# SCOPE

The scope of the project, which focuses on the development and implementation of the organic powder fertilizer, includes the following inclusions and exclusions:

**Inclusions:**

**Formulation and Production:** The project includes the development of the organic powder fertilizer formula, considering the specific nutritional requirements of target crops. It also involves establishing a production process for manufacturing the fertilizer in an efficient and quality-controlled manner.

**Sourcing of Raw Materials:** The project includes identifying and sourcing the necessary organic raw materials required for the production of the fertilizer. This involves establishing partnerships with reliable suppliers or exploring options for organic waste recycling.

**Packaging and Labeling:** The project encompasses the design and selection of appropriate packaging materials for the organic powder fertilizer. It also includes creating informative labels that comply with relevant regulations and provide essential instructions for usage.

**Testing and Quality Assurance:** The project includes conducting thorough testing and quality assurance procedures to ensure the effectiveness, safety, and compliance of the organic powder fertilizer. This may involve laboratory testing, field trials, and certifications.

**Marketing and Distribution:** The project encompasses the development of a marketing strategy to promote the organic powder fertilizer and reach the target audience. It also includes establishing distribution channels and logistics for efficient product delivery to customers.

**Exclusions:**

**Crop-specific Research and Development:** While the project considers the nutritional requirements of various crops, it does not involve extensive research and development specific to individual crops. The focus is on creating a versatile organic powder fertilizer suitable for a range of crops.

**Farming Practices and Application Techniques:** The project does not cover comprehensive guidance on farming practices or specific application techniques for the organic powder fertilizer. It assumes that farmers will follow standard agricultural practices and apply the fertilizer according to general guidelines.

**Agronomic Consultations:** The project does not provide personalized agronomic consultations to farmers. It assumes that farmers have basic knowledge of crop cultivation and will make informed decisions regarding fertilizer application based on their specific farming conditions.

**Regulatory Approvals:** While the project ensures compliance with relevant regulations and standards, it does not cover the process of obtaining specific regulatory approvals or certifications. These aspects may require separate procedures and documentation beyond the scope of the project.

# 3.2 Target groups

**Smallholder Farmers:** The project aims to benefit smallholder farmers in the Gicumbi District, Byumba Sector, who rely on agriculture for their livelihoods. These farmers will have access to organic fertilizer powder and the necessary knowledge and resources to improve their farming practices and enhance crop yields.

**Agricultural Cooperatives:** The project will collaborate with local agricultural cooperatives to provide them with organic fertilizer powder, training, and support. These cooperatives play a crucial role in aggregating and marketing agricultural products, making them key stakeholders in promoting sustainable farming practices.

**Agribusinesses and Market Intermediaries:** The project targets agribusinesses and market intermediaries involved in the agricultural value chain, such as suppliers, distributors, and retailers. By providing them with a reliable source of organic fertilizer, the project aims to support their efforts in promoting sustainable and organic agricultural products.

**Agricultural Extension Services:** The project will work closely with agricultural extension services to disseminate knowledge and information about the benefits of organic fertilizers and sustainable farming practices. These services provide essential guidance and support to farmers, making them important partners in achieving project objectives.

**Local Communities and Environmental Organizations:** The project seeks to engage and collaborate with local communities and environmental organizations to raise awareness about the importance of sustainable agriculture and the environmental benefits of organic fertilizers. These groups can contribute to promoting the project's objectives and fostering a culture of environmental stewardship.

**Government Agencies and Regulatory Bodies:** The project will engage with relevant government agencies and regulatory bodies responsible for agricultural policies and regulations. Collaboration with these stakeholders is crucial for creating an enabling environment, addressing regulatory requirements, and advocating for sustainable agriculture practices.

**Research Institutions and Universities:** Research institutions and universities involved in agriculture and environmental studies will be valuable partners for the project. Collaboration with these institutions can provide access to expertise, facilitate research and development activities, and contribute to the project's credibility and knowledge dissemination.

# 3.3 Partners, Stakeholders, and Associates

* Rwanda Agriculture Board
* MINAGRI
* Non-governmental organizations
* Tubura
* Agricultural cooperatives
* Farmers

# 3.4 Activities/Milestones

**Conduct Initial Research and Feasibility Study:**

Review existing research on organic fertilizers and their production methods.

Conduct market analysis to assess demand and competition.

Evaluate the feasibility of collecting and processing hairs, feathers, and bones for fertilizer production.

**Develop Fertilizer Production Process:**

Design and optimize a process for collecting, cleaning, and processing hairs, feathers, and bones into a fine powder.

Establish quality control measures to ensure nutrient content and product consistency.

**Establish Production Facility:**

Identify a suitable location for the production facility.

Procure necessary equipment and machinery for the production process.

Set up storage and packaging facilities.

**Conduct Testing and Certification:**

Test fertilizer samples for nutrient content, composition, and quality assurance.

Obtain necessary certifications and compliance with industry standards.

**Develop Marketing and Outreach Strategies:**

Design branding and packaging materials for the fertilizer powder.

Develop marketing campaigns to raise awareness about the benefits of organic fertilizers.

Establish partnerships with agricultural cooperatives, retailers, and distributors for product placement and promotion.

**Farmer Education and Training:**

Conduct training sessions and workshops for farmers on sustainable farming practices and the proper use of organic fertilizers.

Develop educational materials and resources for farmers, including guidelines and best practices.

Provide technical support and guidance to farmers through a farmer helpline or mobile application.

**Monitoring and Evaluation:**

Implement a monitoring and evaluation system to track the impact of the fertilizer powder on soil fertility, crop yields, and farmer practices.

Collect data on adoption rates, farmer feedback, and performance indicators.

Regularly assess and adjust project strategies based on monitoring and evaluation results.

**Expansion and Scaling:**

Assess the success and impact of the project in the initial target area.

Explore opportunities for scaling up production and expanding into new regions.

Establish collaborations with other agricultural stakeholders to further promote organic fertilizers.

# 3.5 Project management

Brief description of the management of the project (tasks and staff %).

|  |  |
| --- | --- |
| **Staffs** | **Tasks** |
| **Project Planning and coordination** | - Develop a project plan and timeline  - Set project goals and objectives  - Coordinate stakeholders and project teams  - Oversee project progress and deliverables  - Manage project risks and issues |
| **Stakeholder** | - Identify key stakeholders  - Establish partnerships and collaborations  - Conduct stakeholder analysis and engagement  -Organize stakeholder meetings and communication  - Address stakeholder concerns and feedback |
| **Team manager** | - Recruit and onboard project team members  -Assign tasks and responsibilities to team members  -Provide guidance and support to team members  -Conduct regular team meetings and check-ins  -Foster a collaborative and productive team environment |
| **Monitoring and Evaluation** | - Collect data and information for evaluation  - Conduct surveys, interviews, and assessments  - Analyze data and generate evaluation reports  -Use evaluation findings to inform project improvements |
| **Financial Resource Management** | - Develop project budget and financial plan  -Monitor project expenses and financial performance  - Allocate resources efficiently and effectively  - Prepare financial reports and documentation  - Ensure compliance with financial regulations |

**3.6** Monitoring and evaluation (up to 1 page)

Monitoring and Evaluation (M&E) is a crucial process in the organic powder fertilizer project, ensuring its success and effectiveness. M&E involves systematically collecting data, analyzing information, and generating reports to track progress, assess impact, and make informed decisions. Monitoring focuses on tracking the implementation of project activities, while evaluation assesses outcomes and impact. Data collection, analysis, reporting, and learning are key steps in the M&E process. It promotes accountability, transparency, and evidence-based decision-making. M&E contributes to sustainable agriculture, improved crop yields, and positive impacts on target communities.

**3.7.** Mechanisms for communication and feedback

mechanisms for communication and feedback are essential in the organic powder fertilizer project to ensure effective collaboration, stakeholder engagement, and continuous improvement. These mechanisms facilitate the flow of information and exchange of ideas, and address concerns or feedback from various stakeholders involved in the project. They create opportunities for dialogue, transparency, and shared decision-making.

**Annexes:**

* **Stakeholder Analysis:** This annex provides a detailed analysis of key stakeholders involved in the organic powder fertilizer project. It includes a list of stakeholders, their roles, interests, and influence in the project. The analysis helps identify the level of engagement and communication strategies to effectively involve stakeholders in project activities.
* **Monitoring and Evaluation Plan:** This annex outlines the monitoring and evaluation plan for the organic powder fertilizer project. It includes the indicators, data collection methods, frequency, responsible parties, and reporting mechanisms. The plan ensures systematic tracking of project progress, outcomes, and impact, facilitating evidence-based decision-making and accountability.
* **Communication and Engagement Strategy:** This annex presents the communication and engagement strategy for the organic powder fertilizer project. It outlines the communication objectives, target audiences, key messages, communication channels, and timelines. The strategy aims to ensure effective communication, information sharing, and stakeholder engagement throughout the project.
* **Resource Management Plan:** This annex provides a resource management plan for the organic powder fertilizer project. It includes the allocation of financial, human, and material resources required for project implementation. The plan outlines the budget, resource allocation strategies, procurement procedures, and risk management measures to ensure efficient and effective use of resources.

**Date and place:**

May/22nd /2023,

KIGALI-GASABO\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_Angelo Benimana\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Authorized signatory

Project contact person

# LOGICAL FRAMEWORK

|  |  |  |  |
| --- | --- | --- | --- |
| **Intervention Logic** | **Objectively Verifiable Indicators** | **Means and Sources of Verification** | **Monitoring (What, When, How)** |
| Increase agricultural productivity and sustainability by providing a locally sourced organic fertilizer solution | - Increased crop yields and quality. | - Crop yield measurements and quality assessments | - Regular monitoring of crop yields and quality |
| **Output 1:** Established organic powder fertilizer production facility | - Constructed facility | - Site visits, documentation | - Periodic inspections and verification of facility completion |
| **Output 2:** Produced and distributed organic powder fertilizer | - Quantity of organic powder fertilizer produced and distributed | - Production and distribution records | - Regular tracking and documentation of fertilizer production and distribution |
| **Output 3:** Farmer adoption and usage of organic powder fertilizer | - Number of farmers who adopted organic powder fertilizer | - Farmer surveys and adoption records | - Surveys and feedback collection from farmers |
| **Output 4:** Improved Partnerships with agricultural stakeholders for distribution and promotion | - Number of partnerships established with agricultural stakeholders | - Partnership agreements and documentation | - Tracking and documentation of partnership agreements with agricultural stakeholders |
| **Activities:** | 1. **Research and Development:**   Conduct comprehensive research to determine the ideal composition and formulation of the organic powder fertilizer.  Perform extensive laboratory tests and field trials to evaluate the effectiveness and nutrient content of the fertilizer.   1. **Raw Material Sourcing and Processing:**   Establish strategic partnerships with ethical and sustainable suppliers to procure high-quality hairs, feathers, and bones.  Develop and implement an efficient process for cleaning, grinding, and blending the raw materials to create the organic powder fertilizer.   1. **Production Facility Setup:**   Identify a suitable location for the production facility and secure the necessary permits and approvals.  Procure state-of-the-art equipment and machinery required for the manufacturing process of the organic powder fertilizer.   1. **Quality Assurance and Testing:**   Implement stringent quality control measures to ensure consistent product quality and nutrient composition.  Conduct regular testing and analysis of the organic powder fertilizer to verify compliance with industry standards.   1. **Packaging and Labelling:**   Design appealing and informative packaging for the organic powder fertilizer, considering user-friendliness and product information.  Develop clear and concise labels that provide instructions, nutrient details, and organic certification information.   1. **Marketing and Distribution:**   Formulate a comprehensive marketing strategy to effectively promote the organic powder fertilizer to target customers.  Establish a robust distribution network, including collaborations with agricultural supply stores, online platforms, and direct sales channels to reach farmers and gardening enthusiasts. | | |

# WORK BREAKDOWN MATRIX

|  |  |  |
| --- | --- | --- |
| **Outputs** | **Activities** | **Tasks** |
| **Established organic powder fertilizer production facility** | Research and Development | 1.1 Perform laboratory tests and field trials.  1.2. Analyze data and evaluate fertilizer effectiveness.  1.3Analyze data and evaluate fertilizer effectiveness |
|  |  |  |
| **Produced and distributed organic powder fertilizer** | Raw Material Sourcing and Processing | 1.3. Establish partnerships with ethical suppliers  1.2. Procure high-quality hairs, feathers, and bones  1.3. Clean, grind, and blend raw materials for processing |
|  |  |  |
|  |  |  |
| **Farmer adoption and usage of organic powder fertilizer** | Production Facility Setup | 1.3. Identify suitable facility location and obtain permits  1.2. Set up manufacturing processes and workflows  1.3. Procure equipment and machinery for fertilizer production |

# RESPONSIBILITY MATRIX

|  |
| --- |
|  |
| **Outputs** | **Activities** | **Responsible staff and implementing agency** | **Implementing partner** | **Partner organization** |
| **Established organic powder fertilizer production facility** | Research and Development | Research Scientist | Agronomists  Farmers | RAB  MINAGRI  NAEB |
|  |  |  |  |  |
| **Produced and distributed organic powder fertilizer** | Raw Material Sourcing and Processing | Procurement Manager  Production Supervisor  Quality Control Officer | Ethical Suppliers | TUBURA |
|  |  |  |  |  |
| **Farmer adoption and usage of organic powder fertilizer** | Production Facility Setup | Project Manager  Engineering Team | Construction Company | Government  Agencies  Ministry of infrastructure |

# CALENDAR OF ACTIVITY

|  |  |  |
| --- | --- | --- |
| **Outputs** | **Activities** | **Time** |
| **Established organic powder fertilizer production facility** | Research and Development | August 2, 2023 - December 31, 2023 |
| **Produced and distributed organic powder fertilizer** | Raw Material Sourcing and Processing | January 1, 2024 - April 30, 2024 |
| **Farmer adoption and usage of organic powder fertilizer** | Production Facility Setup | May 1, 2024 - August 8, 2024 |

# RESOURCE PLAN AND BUDGET

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Project outputs** | **Activities** | **Resource Plan** | | |
| **Input** | **Cost($)** | **Budget($)** |
| **1)Established organic powder fertilizer production facility** | Research and Development | -Expertise and knowledge  - Research team  -Scientists | **15000** | **17000** |
| **2)Produced and distributed organic powder fertilizer** | Raw Material Sourcing and Processing | Organic waste sources  Collecting team | **20000** | **23000** |
| **3)Farmer adoption and usage of organic powder fertilizer** | Production Facility Setup | Infrastructure and equipment.  Engineers | **15000** | **16000** |

# MONITORING AND EVALUATION PLAN (M&E)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **INDICATOR** | **DEFINITION** | **BASELINE** | **TARGET** | **DATA SOURCE** | **FREQUENCY** | **RESPONSIBLE** | **REPORTING** |
| **Goal:** Enhance agricultural productivity and sustainability by providing a locally sourced and environmentally friendly organic fertilizer solution. | Percentage of farmers in the target communities practicing organic farming methods. | The proportion of farmers who adopt and implement organic farming practices in their agricultural activities. | 20% | Increase the percentage to 60% of farmers practicing organic farming | Documentation and records, Field assessment, surveys, Farmer training, and workshops | Annually | Project team | Project reports, Monitoring and evaluation reports, Stakeholders meetings and workshops, Project websites or portal |
| **Behavior Outcomes:** Knowledge and understanding of organic farming: Farmers' awareness and understanding of the principles and benefits of organic farming practices | Number of farmers implementing sustainable farming practices | The count of farmers who adopt and integrate sustainable farming practices, such as crop rotation, soil conservation, water management, and pest control. | 50 farmers implementing sustainable farming practices. | Increase the number to 200 farmers implementing sustainable farming practices. | Field assessments, farm visits, and project records. | Quarterly | Project extension officers and field staff. | Project progress reports and field assessment reports. |
| **Communication Outcomes:** Farmer engagement: Active participation and engagement of farmers in training sessions, workshops, and knowledge-sharing activities related to organic farming. | Farmers' application of knowledge gained from communication and training initiatives | The extent to which farmers apply the knowledge and skills acquired from communication and training initiatives in their farming practices. | 30% of farmers apply knowledge gained from communication and training initiatives. | Increase the percentage to 70% of farmers applying knowledge gained from communication and training initiatives. | Farmer surveys, farm assessments, and follow-up interviews. | Semi-annually | Project field staff and extension officers. | Project progress reports and impact assessment reports. |
| **Outputs** | 1000 farmers used organic powder fertilizer | The count of farmers who have adopted and is actively using organic powder fertilizer in their farming practices | 200 farmers are currently using organic powder fertilizers. | Increase the number to 1000 farmers using organic powder fertilizer | Farmer surveys, sales records, and project monitoring. | Quarterly | Project field staff and extension officers. | Project progress reports and sales data analysis. |