

BUGUNGU YP PRISON FARM

Re: Report on Bio Farm Fertilizer Trials on Cotton

(1 Acre Demonstration plot)

To: The commissioner General of prisons,

Uganda Prison Services, Kampala,

Through: The management of Bugungu YP Prison Farm.

From: Assistant In charge of Farm Bugungu YP Prison Farm

Date: 1st September 2025

Introduction:

In line with the directive authorizing Unode Agro Uganda Limited to carry out a demonstration trial of Bio Farm purely organic Liquid fertilizer on Bugungu YP Prison Farm, one (1) acre of cotton was allocated for the trial. Please refer to your authorization letter dated 9th April 2025 Ref. No FM/135/211/02 attached. This report presents findings from the trial period, covering fertilizer application, crop performance, challenges encountered and recommendations for future adoption.

Bio Farm Fertilizer is a purely organic liquid product formulated to improve soil fertility, improve plant growth, promote proper fruit development, improve ripening and increase crop yields while being environmentally friendly.

Trial details

- **Participating Institution:** Bogungu YP Prison farm.
- **Crop under trial:** Cotton
- **Total acreage of cotton on farm:** 70 Acres
- **Allocated acreage for trial:** 1 Acre.
- **Fertilizer product:** Bio Farm (Purely Organic Liquid fertilizer)
- **Implementing partner:** Unode Agro Uganda Limited

Fertilizer Application Record

1: First spraying:

- **Date:** 17th April 2025
- **Rate:** 50 ml Bio Farm/ 20 L pump.

- **Quantity used:** 500 ml.

(2: Second spraying:

- **Date:** 3rd May 2025
- **Rate:** 50 ml Bio Farm/ 20 L pump.
- **Quantity used:** 500 ml.

3: Third spraying:

- **Date:** 17th May 2025
- **Rate:** 50 ml Bio Farm/ 20 L pump.
- **Quantity used:** 350 ml.

Observations and crop performance

The cotton crop treated with Bio Farm fertilizer, exhibited outstanding results despite challenging weather conditions:

- **Improved vegetative growth:** Leaves developed a deeper green coloration, broader leaves, indicating healthy chlorophyll activity.
- **Improved boll development:** Cotton bolls appeared larger, well-formed and consistent.
- **Disease resistance:** Minimal incidence of leaf and stem diseases was observed.
- **Pest Repellency:** Plants under Bio Farm treatment showed lower pest infestation compared to the rest of the cotton crop on the farm.
- **Drought tolerance:** Despite low rainfall and prolonged dry spells, the treated cotton remained vigorous and resilient.

Cotton Harvest performance:

During harvest, Cotton treated with Bio Farm Fertilizer on the Demonstration plot, produced good yields, with.....Kilograms in an acre compared to the rest of the cotton on the farm with an average ofkilograms per acre, demonstrating the fertilizer's positive effect on productivity, in addition, the cotton harvested exhibited improved quality, characterized by:

- Well-formed and fully developed bolls.
- Clean, bright lint with uniform fibre length.
- Proper and timely boll opening, supporting easy picking.
- Higher weight of harvested cotton per plant.

This shows that Bio Farm Fertilizer not only improved the quantity of cotton harvested but also improved the market quality of the produce, which is important for value and profitability.

Acknowledgement of participation

The success of this exercise was possible due to the cooperation and dedication of both prison staff and Unode Agro Uganda Limited staff.

Prison Farm Management Team present during application:

- Mr Onyera James-Former OC, before he was replaced by Mr. Maximilian Byamugisha-the new OC
- Mr Kichoneko Chrispino – Deputy OC
- Mr Kiggundu Po1
- Mr Nalibada Bashil- Supervisor

Unode Agro Uganda Limited Staff on Site:

- Mr Muhuma Mukalazi Latim-Administrator
- Ms Namisango Barbra Esther- Agronomist

We extend our sincere appreciation to Unode Agro Uganda Limited for their technical guidance, regular monitoring and commitment towards making this trial a success.

Challenges faced

- Limited rainfall during the growing season.
- Prolonged drought and frequent dry spells.
- Lack of established irrigation or water harvesting infrastructure on the farm purposely installed for crop support during dry seasons.

Recommendations

- **Irrigation development:** Introduce simple irrigation systems to **support** crops during dry spells.
- **Water harvesting initiatives:** Construct production wells and rain water harvesting systems to ensure a steady water supply.
- **Fertilizer adoption:** Based on the observed effectiveness, Bio Farm Organic Fertilizer should be considered for large-scale adoption across prison farms to improve productivity and sustainability.

Conclusion:

The trial of Bio Farm Fertilizer on one acre of cotton at Bugungu YP Prison Farm demonstrated significant improvements in crop growth, boll formation and resilience to drought, pests and diseases, the product proved effective under challenging weather conditions and is strongly recommended for wider adoption within the Uganda Prison farms network.

We thank all those who participated and contributed towards the success of this exercise up to the harvest stage.

Signed by:

In charge of Shamba

Bugungu YP Prison Farm

a) Farm Location

- **Location:** The farm is Located in eastern region of Uganda
- **Village:** Bugungu
- **Sub County:** Nyenga
- **Division:** Njeru Town council
- **District:** Buikwe

(b) Participants from Unode Agro Uganda Ltd

The following staff members of Unode Agro Uganda Limited led the spraying exercise at the Prison Farm:

- Mr. 'Latim Muhuma Mukalazi
- Ms. Barbra Esther Namisango

(c) Contact persons on Bugungu Prison Farm.

- **Mr. Onyera James OC 0788 704360**
- Mr. Kichoneho Chispino Deputy OC 0789931310
- Mr. Kiggundu PO1 0752 618428
- We were reliably informed that Bugungu prison farm has been without a farm manager for some time.
- Mr. Nalibada Bashir store keeper/supervisor 0786 602600

The Farm is being run by the OC and his deputy.

(d)Crop summary:

- Farm Participating: Bugungu YP
- Crop under trial: Cotton
- Total acres of cotton: 70
- Allocated Area for trials: 1 Acre

First spraying

(e) Spraying activity summary:

The initial application of bio farm product was successfully conducted on one acre of cotton early morning of Thursday, 17th April 2025. The spraying was carried out during early morning hours of the day to avoid the high temperatures associated with direct sunshine.

**FIRST APPLICATION OF BIO FARM FERTILIZER ON COTTON CROP AT
BUGUNGU PRISON FARM- OC, HIS DEPUTY AND UNODE AGRO STAFF
POSE FOR A GROUP PHOTO AFTER SPRAYING**



Second spraying

The second spraying was done in the morning of 3rd May 2025, using the same doses 50 milliliters of bio farm fertilizer in 20 liters of water, .500 milliliters were applied on one acre of cotton under trials.

(f) Scope of work

Three laborers equipped with two knapsack sprayers, were deployed to fetch water and carry out the spraying exercise. The work progressed on well.

**SECOND APPLICATION OF BIO FARM FERTILIZER ON COTTON CROP AT
BUGUNGU PRISON FARM- STOREMAN AND UNODE AGRO STAFF POSE
FOR A PHOTO AFTER SPRAYING**



Third spraying

The third spraying was conducted on Saturday morning, **17th May 2025** using the same doses 50 milliliters of bio farm fertilizer in 20 liters of water, .350 milliliters were applied on one acre of cotton under trials.

THIRD AND FINAL FERTILIZER SPRAYING ON COTTON CROP AT BUGUNGU PRISON FARM- STOREKEEPER AND UNODE AGRO STAFF POSE FOR A PHOTO AFTER APPLICATIONS



Type of cotton planted

Variety: BPA 2015A

(g)Observation: Soil texture **and** general crop health were observed during spraying.

(h) Challenges:

- Bugungu received very little rain during the first spraying. The area experienced some rainfall during the second spraying but this was followed by a prolonged drought with persistent dry spells. By the time we went back for the third spraying, it had not rained for one week. The weather was hot from early morning till sun set. However, the cotton crop under trials, exhibits strong and healthy plants being supported by bio farm fertilizer.
- Most of the challenges encountered during the first spraying were urgently addressed and resolved.

(i)Recommendations

- Irrigation systems or watering may be recommended, if the drought persists in order to acquire high and quality yields.

(j)Activities yet to be completed:

- **Full cycle Monitoring:** Unode Agro uganda ltd shall compile all the necessary data collected during monitoring, on crop performance and yield for submission in a comprehensive report at the end of the harvest season and shall continue working together with the farm management team until the post-harvest time

(k)Expectations post-Trials:

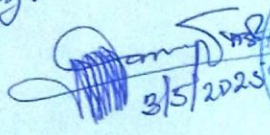
- The spraying exercise has been completed, we thank everyone who has participated in this exercise Unode Agro will present conclusive evidence on the benefits of Bio Farm organic fertilizer, including growth rate, pest resistance and yield impact, and shall submit a comprehensive report at the end of the harvest season, working hand in hand with Bugungu -farm -management team.

- Unode Agro uganda ltd has received strong recommendations at spraying stages from the management of Bugungu YP Farm, commending the impressive performance of bio farm fertilizer on their cotton crop, for ease of reference, both recommendation letters are attached to this effect.

FARM MANAGEMENT 3/5/2025
Comments - Bugungu
BULKWE DISTRICT

After the 1st spraying which was done on the 17th April 2025, we have witnessed a slight improvement on the crop though there was a bit^{er} sun shine for a period of about 2 weeks.

Today the 3rd May 2025, we have done the 2nd spraying and the 3rd will be after another 14 days.


3/5/2025



17/5/2025

BUGUNGU PRISON FARM - BUKWE DISTRICT

B10 FARM FERTILIZER TRIALS ON ONE ACRE
OF COTTON.

OBSERVATION REPORT ON THIRD TIME SPRAYING

The cotton crops look fairly ok although there is
little moisture in the soil due^{to} drought which seems
to be setting in.

More rain is needed for probably better results.
Of spraying pumps used in ~~the~~ 3rd phase

