Corn & Tomato Intercropping – Uganda – Dr. Esabu – 2025

Assessing the Impact of Kyminasi® Crop Booster™ on Growth and Yield Potential of Corn and Tomato Intercrop in Uganda

Scientist and Institute

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Objective of the experiment

- To assess the impacts of Kyminasi® Crop Booster™ (KCB) on tomato plants.
- corn and tomatoes are important crops in Uganda which are cultivated for their numerous nutritional and health benefits, as well as the provision of employment and income.
- However, climate change and climate variability have threatened food security in Sub-Saharan Africa (SSA) countries and mitigation measures are required from all stakeholders. Resilient agricultural innovations such as use of Kyminasi crop booster that can withstand climate change stress in developing countries in the present century should be adopted by smallholder farmers to improve crop productivity.

Location

- Buvuma District (an island east of Kampala), Uganda.
- Two experimental plots measuring 20mx10m were set up and both were intercropped with corn and tomatoes. One plot was tested with the Kyminasi crop booster while the other acted as Control.

Time

- Corn Planting Date: March 5, 2025
- Tomato Planting Date: March 20, 2025
- Report date: May 13, 2025

Crop

- Species 1 – Corn; variety – Longe 5
- Species 2 – Tomato; variety – Rio Grande

Treatments

- Fertilizer: NPK and nitrogen

Trial Details

Data was collected on plant height, leaf length, disease incidence, and yield.

Photo 1: Maize in the control plot after harvesting of tomatoe

Results

1. Plant height

The results presented in table 1 below show that KCB-treated corn attained 20% taller plants compared to Control plants, and tomato plants attained 15.3% taller plants.

Table 1: Plant height (cm) of Maize and Tomatoes under different treatments.

Data Collection Interval	**Kyminasi Treated**		**Control (No kyminasi)**	
	Maize	Tomatoes	Maize	Tomatoes
5 weeks after planting	142.7	22.8	107.4	19.8
7 weeks after planting	138.1	43.3	118.9	42.4
9 weeks after planting	154.1	58.5	136.5	46
Mean	**144.9**	**41.5**	**120.9**	**36.0**

2. Leaf Length

The results indicate that Kyminasi treated plants resulted in longer leaf length compared to the non Kyminasi treated plants.

The results presented in table 1 below show that KCB-treated corn plants attained 2.8% longer leaves compared to Control plants, and tomato plants attained **43.5% longer leaves**.

Table 2: Leaf length (cm) of Maize and Tomatoes under different treatments.

Data Collection Interval	**Kyminasi Treated**		**Control (No kyminasi)**	
	Maize	Tomatoes	Maize	Tomatoes
5 weeks after planting	67.2	8.5	68.3	7.8
7 weeks after planting	77.5	11.3	76.1	9.4
9 weeks after planting	88.2	33.8	82.3	20.1
Mean	**77.6**	**17.8**	**75.5**	**12.4**

3. Disease Incidence

Through observation there was a marked reduction of fungal such as tomato blight and corn ear rot diseases in Kyminasi treated plants compared to the non Kyminasi treated.

Photo 2: Rotten maize grains and cobs from the control plot

4. Fruit weight per plant

The results indicate that the highest fruit and grain weight was recorded from the Kyminasi treatment compared to the control. Corn treated with KCB attained 19.7% higher seed yield than Control, and tomato attained 8% higher seed yield.

Table 3: Effect of treatments on fruit and grain weight per plant (gms3)

Data Collection Interval	Kyminasi Treated		Control (No kyminasi)	
	Maize (1000 seed weight)	Tomatoes	Maize (1000 seed weight)	Tomatoes
One season only	380.7	305.2	318	282.6

Conclusions

Results from this study showed that Kyminasi treated maize and tomatoes exhibited least susceptibility to the most common fungal diseases at the site of the study. It also gave increased development parameters and better yield compared to the non Kyminasi treated.

Photos

Tomato Control Field

Tomato KCB Field

	
Tomato Control Field	Tomato KCB Field