



# Leaching Is No Longer An Issue For Maize Growing In Mtwara

29. Mtwara Girls

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## Introduction:

In mangamba village many people do not grow maize in their home stead(field).This was observed by students at mtwara girls secondary school.mangamba village surround our school. One day students asked some villager who live near the school about growing maize the villagers told students that their area do not support maize growth the soil has tendence of washing fertilizer away from maize plant during rain seasonal so when you plant maize they do not grow well hence no good yield. Student were interested to know why this happen. Students carried simple experiment on soil and discover that the soil has a problem of leaching.



## Method:

Dry grasses can stop leaching process by preventing nutrients not to go deep down the soil Can retain the nutrients on upper soil layer where maize root can reach. So the use of grasses together with fertilizer can help maize plants to get their nutrients for their growth and developments

### E. Review On Related Literature

Leaching is the loss of nutrients from the upper soil layer to the lower or deep soil layer .this process is much influenced by porosity soil include sand soil .

### F. Data Collection &Method Of Data Collection

Two garden are produced A and B.Where by A is a control and B is Variable .Both garden has equal square meter of about 20m<sup>2</sup>

At garden A fertilizer and seed are applied to the soil and start watering the garden

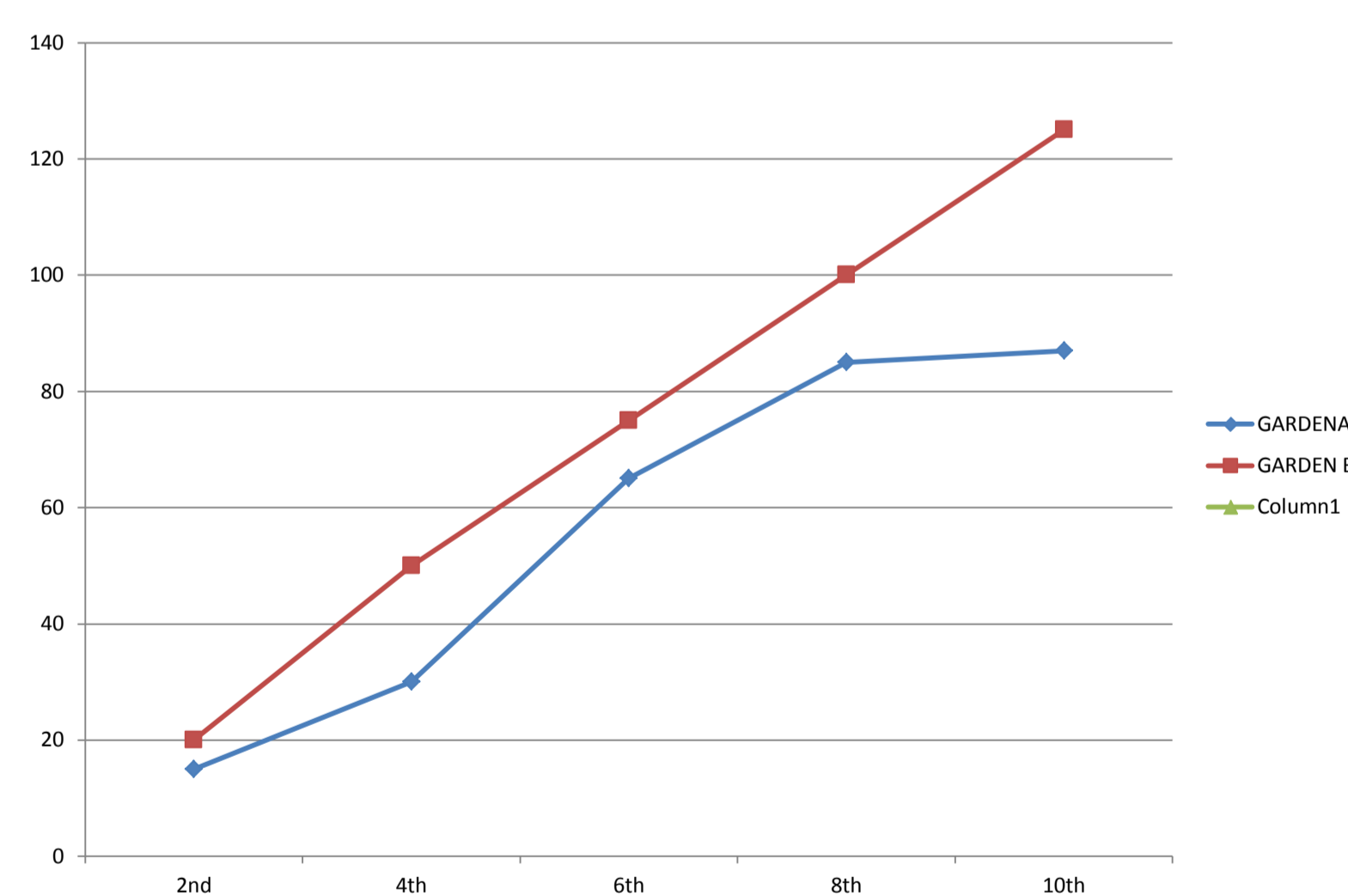
At garden B dry grasses, fertilizer, and seeds are applied and process of watering plants

Maize seed germinate after 5 days from the day they were sown. The data of interest that are collected are the color of leaves and heights of each individual plants



## Results:

From the graph above maize plants at garden B show geometrical growth whereby parameter(height) increases at certain interval progressively. These show that maize plants obtain essential nutrients for their growth and development. It means that grasses introduced at garden B helped to retain the nutrients at the upper soil layer and stop the leaching process. At garden A growth did not increase geometrically means plants did not get enough nutrients because most of them were carried away from the upper soil layer leaching has its effects on plants growth hence poor growth.



Farm A at Second week

Maize plats	01	02	03	04	05	06	07	08	09
Height(cm)	15	15.3	15.5	14.7	15.2	14.8	15.2	15.3	15.2

Average height = Total height/ number of plants = 15cm

Farm B at Second week

Maize plant	01	02	03	04	05	06	07	08	09
Height(cm)	20.1	20.3	20.2	20	20	20.1	20	20	20

Average height = Total height/ number of plants =20cm

2. Farm A at fourth week

Maize plats	01	02	03	04	05	06	07	08	09
Height(cm)	30.1	30	30	30.3	30.2	30	30	30	30.2

Average height = Total height/ number of plants =30cm

Farm B at fourth week

Maize plant	01	02	03	04	05	06	07	08	09
Height(cm)	50.1	50	50	50.3	50.2	50.1	50	50	50

Average height = Total height/number of plants =50cm

Time(Week)	2nd	4th	6th	8th	10th
GARDEN A	15cm	30cm	65cm	85cm	87cm
GARDEN B	20cm	50cm	77.5cm	100cm	125cm

## Conclusions

Leaching process can be overcome by introducing dry grasses during planting of seed hence we advice the farmer to apply this is not cost fully and that will make them to have high yield in their crops.

## References

Biological science D H Tylor 2010 Third Eddition, Cambridge University Press  
Understanding Biology by Glenn and Susan Toole

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