

Origin of Mangoes

Mango origin can be traced from India in Indo-Burma around 4000 years ago. Introduction of the mango to Africa and subsequently to Brazil is said to have occurred in the sixteenth century. Mangoes productivity holds a great potential to improve farmer's livelihoods. Depending on the variety, the time from flowering to maturity is 100-150 days. Under good management 400-600 fruits per tree per year can be produced. Yield range is 10-16 ton/ha depending on management, variety and age of orchard

Despite this potential, mango farmers in Kitui County; Kenya has not been able to exploit it together with various markets that exist for mangoes and its products. This background underscored the necessity of the intervention "Enhancing climate resilience and nutrition uptake through the fortification of corn flour with locally produced high nutrition value crops (mango)" been implemented in Kitui County by Green Africa Foundation in Partnership with NETFUND, funded by IGAD.

Facts:

Kenya tree cover stands at 6.2% (World Agro forestry Centre). Climate change effects in Kenya are evident. Poverty headcount ratio at national poverty lines stands at 45.9% (World bank). More than 1m people remain food insecure in Kenya. More than 242,046 children are suffering from moderate acute malnutrition (MAM) and severe acute malnutrition (SAM) (UNICEF). There is an opportunity for agro-industries to improve the above status.



The goal of this project is to improve quality of life for the dry lands communities in Kitui County through increased income earned from mango fruits and enhanced nutrition. The project purposes to improve value addition to mango fruit through mango powder technology while increasing tree cover to increase the surface for carbon sink. It follows to address mango value chain gaps identified during a baseline survey.

ENHANCING CLIMATE RESILIENCE AND NUTRITION UPTAKE THROUGH THE FORTIFICATION OF CORN FLOUR WITH LOCALLY PRODUCED HIGH NUTRITION VALUE CROPS (MANGO)

Achievements

Developed a Mango Best Practice Training Manual

600 Farmers Trained in Kitui Central, Mwingi West and Mwingi North Sub-Counties

Established 3 community nurseries & farmers trained on nursery establishment & management

Distributed 6000 grafted mango seedlings to farmers

Established 3 Mango flour processing plants/machines

First batch of Mango fortification flour produced



“Ann Mwikali Musyoka, a farmer from Manyanga Farmer Group says that the training came at a time when she needed it most. Her 200 Mango trees in a 3ha of land have recently dropped in production from 600 mango fruits per tree to an average of 150 mangoes. This has been as a result from high Infestation and infection from gall midges and powdery mildew. “I now know how I will manage them and get my Mango trees back to their higher productivity” She appreciates. She plans to plant more mango trees in her new 4ha of land.”

Nutritional Value of the Mango Flour

| | | |
|---------------------------|----------|-------|
| Calorific Value | (Kcal/g) | 6.41 |
| Vitamin C (Ascorbic acid) | (Mg/g) | 0.220 |
| Moisture | %(W/w) | 9.98 |
| Acidity (Acetic acid) | (gm) | 0.068 |
| Sugar | %(W/w) | 1.30 |
| Fibre | %(W/w) | 2.6 |



Malnutrition

Malnutrition is mainly a result of lack of enough proteins, carbohydrates, vitamins. Vitamins have the least options of storage. Vitamins mainly come from fruits and vegetable which are perishable. Most of Fruits are seasonal. Mango is a highly perishable and seasonal fruit. The Mango fortification flour therefore makes vitamins available throughout the seasons especially for the local community households.



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