

KITUI MANGO PROJECT

Introduction

Kitui is one of the semi-arid districts of Kenya. The district suffers from lack of sufficient rain, be it during the short or the long rains normally experienced in Oct-Nov and March to May, respectively. At times when the rains come they are heavy and only for a short time. Much run-off water is lost during this short period of heavy rains. The population is largely poor as it has no cash crops due to the rains pattern referred to. Much of the families' activities are largely subsistence. The soils are deep in several parts especially where erosion has not been serious. And holdings on average of 4 hectares and therefore it is possible to exploit commercially if water is available.

Five years ago a local Non-Governmental Organization (NGO): Sahelian Solutions (SASOL) came up with a revolutionary method of retaining much of the run-off water in the river valleys by constructing sub-surface dams. SASOL approached several donors to help in constructing these dams. After demonstrating their effectiveness, the NGO was able to attract the attention of several donors, among them:

- SIDA of Sweden,
- DAFID of the UK and,
- SMAVI of Netherlands

To date, SASOL has been able to construct 150 sub-surface dams with a recharge area of 37,000,000 square meters or 37,000 square kilometers.

Project Concept

The families living within reach of the dams use them for watering their cattle and for water for domestic use. This project seeks to commercialize the dam's utility by utilising the recharge area for growing mangos for sale in the local and export market. Mangoes can be said to be natural residents of the area wherever sufficient water is to be found. The primary outputs are:

- Introducing a sustainable economic activity through the cash crop
- Introduction of high yielding mango variety
- Sustainability of the dams through their demonstrable utility

Secondary benefits include:

- Increased supply of fruits to the families and to the country,
- A deterrent to soil erosion,
- Increased 'forest cover',
- Provision of shade where food crops can be grown,
- An additional source of foreign currency through export sales, and
- Employment opportunities.

The mango tree has a reasonably wide habitat as it can be found thriving in zone three and four. It is at its best in hot, reasonably wet lowlands. With the provision of water in the recharge areas, Kitui district qualifies to be within the belt where mango thrives. The value of the dams to the community is a function of the variety of ways that they can be used to enhance the economic life of the communities. This project seeks to bring in an additional and powerful way of utilizing this resource.

The project seeks to introduce high yield high price mango variety which take three years to start producing and seeks the partnership of donors or private sector investors to make the work already done to be an integral part of the economic life of the area. After the initial three years, the project is expected to be fully commercial.

The initial investments include training the opinion leaders of the community to become trainers in mango farming technologies and enhancing dams maintenance and expansion program currently in pace and in the hands of the local community

Management

The project proposes to engage one project manager who would be able to communicate to the grassroot level and contract with farmers to grow the mango trees on their land at a fee. The fees are calculated using GoK/World Bank poverty alleviation levels of income for each family. An agriculturist will also be hired to advise farmers on agricultural issues. A network of extension workers, drawn from the community is envisaged especially in early stages to teach individual families on husbandry of the crops in addition the food crop farming skills. This is especially important as the mango trees are not expected to replace food crop farming. The trees will be planted in a manner that allows for planting of local food crops within the same plot

During year two, marketing and contracting of buyers in foreign markets will be crucial. Since by this time much of the planting will have been done the responsibility of the Project Manager will emphasize marketing and contracting bulk buyers. During the early part of year three training in harvesting skills will be critical if high quality mangos are to be delivered to the market.

The indivisible unit in the project is a family, the families will later be organized into outgrowers associations etc. When fully operational, some 1500 families will be involved, each with an average of 1,000 mango trees. While families in the area are wont to use their children in the farms when they are out of school, one of the responsibilities of the extension workers is to educate the families on child about, to give childhood to the children.

Equipment

Two four wheel drive vehicles, two motorcycles and 10 bicycles will be purchased for use by management and extension workers. Four 8-ton refrigerated trucks (two to collect and two to deliver to the airport) and a cooling facility will also be added once production and marketing are under way.

Assumptions

Number of dams	150
Average length of each dam	500 meters
Average lateral recharge	500 meters
Total area of recharge (150 x 500 x500	37,000,000 sq. meters
Average yield per tree,	200 mangoes
Selling price per mango (f.o.b)	US\$.20
Mango spacing	4 per 100 square meters (10 x 10)
No. of mango tree to be planted	1,500,000 (1,000,000 Yr1, 500,000 Yr2)
Cost per tree (seedling)	US\$.50
Local sales/Wastage	30% of yield
HCDA gives price of Apple at US\$ 4 – 5 per carton of 10-12 mangoes	
Equipment and rootstock costs are to be written off in five years on a flat rate basis	
<u>The results of these assumptions give us filthy profits. Why wont' you join!</u>	