

Mbeere

Mbeere forms the lower part of Embu County, which is located approximately between latitude 0° 8' and 0° 50' South and longitude 37° 3' and 37° 9' East. The County borders Kirinyaga County to the West, Kitui County to the East, Machakos County to the South, Murang'a County to the South West, Tharaka Nithi County to the North and Meru to the North West. Embu County depicts two distinct areas with different agro-climatic and natural characteristics. The upper area around Mount Kenya consists of Runyenjes and Manyatta, while the lower part consists of Mbeere North and Mbeere South. Mbeere covers an area of 2092.5 Km². The rainfall pattern for Embu is bi-modal with two distinct rain seasons. Long rains occur between March and June while the short rains fall between October and December. Rainfall quantity received varies with altitude averaging to about 1,067.5 mm annually and ranging from 640 mm in lower areas to as high as 1,495 mm per annum in highlands. Temperatures range from a minimum of 12°C in July to a maximum of 30°C in March with a mean average of 21°C, with the high temperatures recorded in lowlands. It is this lower part where more of commercial mango farming is developed.

Survey in mango farms was done in Kamurugu area (00° 44' S; 37° 39' E) at elevation of 1120 m, Gitaru Dam (00° 46' S; 37° 43' E) at elevation of 956 m and Karurumo –Ishara (00° 28' S; 37° 41' E) at elevation of 1223 m. Mango farming in the area is typically commercial with farms ranging from one to 35 hectares. The widely grown varieties are Apple, Kent, Ngowe, Tommy Atkins, Van Dyke and Haden. In Karurumo some farmers have grown a few trees of Keitt and Gesine. Complete inventories of the most widely grown varieties in 2011 are summarized in Table 1 (ABD 2011).

Opportunities

Mbeere Sub-county has huge potential for further development of mango farming. The main opportunities lie on good climatic conditions suitable for quality mango production. The availability of large landholdings due to low population density is a factor in the expansion of mango farms. Many farmers in the area have also trained on mango tree management and establishment of fruit tree nurseries for additional income, which makes it much easier for interested investors to get quality improved planting materials. The network of rivers and water dams in the area also support establishment of tree nurseries. Finally, the proximity to many major urban centres with high population and hotel industries linked by an all weather road around Mt. Kenya offers reliable market.

Challenges

The most common challenges facing farmers were limited varieties, diseases and pests. The most widespread diseases were powdery mildew and black spot. Rust on Apple mangoes also require spraying as it lowers the attractiveness of the fruits in the market. Taste is not affected by the rust.

The pests of great economic importance were fruit fly, mango weevil and mango gall flies. Trees affected by these flies form galls that swell, deform and perforate the leaves before they fall-off thus reducing photosynthetic potential of the plant and can lead to total loss of a tree (Fig.1). The diseases and pests increase farmers' in-put costs as they require frequent spray which at times

complicates their marketing potential due to chemical residue level standards set for external market.

There are two channels for mango marketing, namely local and export market. The local market attracts local vendors who transport fruits to accessible urban centers. This market has not set high sanitary standards and most farmers do access it. However, this market is highly affected by glut, post-harvest handling and inadequate long storage facilities. Most mango varieties ripen within a short span of time. Long distance movement of mango away from the local market is also costly in terms of transport and loses due to fruit spoilage on transit. The fruits for external market are inspected for certain qualities which require more intensive management.

One of the major challenges noted in dry parts of Mbeere (Kamurugu) is the loss of trees through severe droughts. The effect can be severe that trees in the production age (8-10 years) also dry up during long dry spells.



Figure 1: Severe gall infestation on a mango tree