

Evaluation of the incidence of Anthracnose Disease of Mangoes in Tharaka South Subcounty in Tharaka Nithi County

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Abstract

Anthracnose disease that causes fruit rot is the most devastating fungal disease limiting the production and marketing of fresh mango fruits in Kenya and worldwide. Anthracnose is a major pre- and post-harvest disease on mango, causing direct yield loss in the field, quality and marketing issues thereafter. Anthracnose disease especially at the postharvest stage is a threat to production and marketing of fresh mango fruits in Tharaka south sub county. Systemic field surveys were conducted in Tharaka south sub county which falls in mango production belt in March 2017 fruiting season to determine the distribution and disease incidence of anthracnose and crop management practices. Thirty mango fields in ten villages were surveyed and all were infected by anthracnose. The surveyed fields were at one growth stage, which is fruiting. Data generated from the study areas on the plant part affected, general appearance of the plant part affected and the agronomic practices done on mango orchards like weeding and pruning was analyzed using SPSS software version 23. The results revealed that anthracnose was widely distributed in all villages, but the survey showed variations. Disease incidence was rated as a mean percentage of diseased plant within the field. The lowest mean incidence of 63.55% was recorded in village 1, while the highest mean incidence of 93.7% was recorded in village 9. From the result of the investigation, it was evident that anthracnose disease caused by *Colletotrichum gloeosporioides* was prevalent in all the ten study villages of Tharaka south sub county. Eighty four percent of mango trees surveyed were found infected with anthracnose and over 73.3% of fruits produced on those agronomical practices were found to be infected by the disease. The results showed that the most infected plant part was fruit (73.3%) and the most observed symptom was rot (50%). Farmers did not put into consideration the agronomic practices like weeding and pruning, factors which are responsible to spreading of the disease inoculums.

Keywords: Post-harvest diseases, Mangoes, Disease incidence, Disease abundance