

## Abstract

Passion fruit is of high economic importance in Kenya. In the recent past, diseases have led to decline in fruit production. This study aimed at identifying disease management practices that could be adopted to mitigate disease impacts. Passion fruit varieties used include purple passion (*Passiflora edulis* Sims) and the KPF hybrid. Field maintenance practices assessed include frequency of orchard sanitation through regular weeding and pruning, pesticide application, nutrient and water provision to plants during the dry season. Agronomic factors assessed include grafting, pruning and effect of wounding in increasing plants' susceptibility to dieback infections. Assessments were done on-farm and on station; 3 research sites were identified in the field and 1 site was set up on-station. For each of the 3 on-farm sites, a farmer's performance in orchard maintenance was rated for all the factors on a score of 1-5 and compared to disease severity (1-5 dieback scale ) and incidence (0-100%). Experiments were set up to assess role of grafting on 4 months old purple passion seedlings, while effects of pruning and wounding were assessed on 9 months old passion fruit plants of both varieties. Disease establishment was observed and severity was assessed based on the 1-5 dieback scoring chart. Results showed that proper field maintenance reduced disease incidence and severity (12% and 1.6, respectively) in site 1, while poor maintenance yielded higher levels (55% and 4.0, respectively) in site 3. Agronomic practices important in transmission of dieback pathogens on the purple variety were pruning, grafting and wounding. These were found to enhance disease establishment and severity ( $P \leq 0.05$ ) on the purple variety while KPF 12 was tolerant to dieback infections. The study established that proper agronomy and field maintenance practices are important and should be integral in control of dieback disease.