

MANAGING PASSIONFRUIT LEAFMINER IN THE CONTEXT OF INTEGRATED-PEST-MANAGEMENT IN THE HIGHLAND OF CENTRAL KENYA

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Abstract

As an initial step in managing the passionfruit leafminer in the highland areas of Central Kenya, a survey was conducted to establish the species of the pest associated with the crop. Two species of agromyzid leafminer; *Liriomyza trifolii* and *Liriomyza huidobrensis* had been identified as the pests damaging the crop. The objective of the study was to establish the leafminer populations associated with passionfruit damage in the target- areas of mid- and highland areas of Central Kenya. Each farm was divided into four equal quadrants and from each, 25 leaves were examined at random for leafminer infestation (100 leaves per field). Subsequently, destructive sampling of 100 leaves per field from 3 strata (upper, middle and lower strata) of the plants was employed with leaves being collected at random. Two to four sweep net samples of adult insects flying at different points of the field was taken. Data was collected, organized, and analyzed by use of SPSS (Version 22) and the means separated by use of Least Significant Difference (LSD). Results indicated that there were significant differences on the damage caused by *L. huidobrensis* on purple passionfruit. The study also noted that it was very mild in the cooler areas of Mathira, Naro Moru, and Imenti and preferred other crops such as; peas, irish potatoes, faba beans, and tree tomato seedlings neighboring the orchards. The study concluded that the integrated pest management approach, including target sprays, can offer a better alternative to conventional control methods which rely on broad-spectrum pesticides. One of the conclusions was that it is important to reconsider the management approach to this pest family on crops, especially in line with good agricultural practices.

Key words: Agromyzid-leafminer; *Liriomyza*; passionfruit; Central-Kenya; IPM-pesticides