

Evaluation of Cabbage Varietal Resistance against Diamondback Moth (*Plutella xylostella*) Infestation and Damage

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Date: 2010

Abstract

This field study was conducted to evaluate the varietal resistance of cabbage (*Brassica oleracea* var. capitata) against diamondback moth (DBM) (*Plutella xylostella*) infestations and damages at the University of Nairobi farm, Kabete Field Station in two relay cropping (rainy season, 2008 and dry season, 2009). Varietal resistance was compared with conventional spraying using a split plot design whereby spraying with dimethoate formed the main plot while varieties formed subplots. Cabbage varieties were Drumhead, Sugarloaf, Golden Acre, Gloria FI, Copenhagen Market, and Pruktor F I. Sampling was done by weekly counting of larvae and pupae, and scoring pest damage on five randomly selected plants per plot for 10 weeks from the third week after transplanting. The number of marketable and non-marketable cabbage heads was counted on all plants per plot at maturity stage. Results showed that dimethoate-sprayed and unsprayed plots had significantly ($P < 0.05$) different numbers of DBM stages (larvae and pupae). Copenhagen Market and Pruktor FI had the lowest mean number of DBM while Gloria FI had the highest records both in sprayed and unsprayed treatments. The highest marketable yield was obtained from Pruktor FI both in unsprayed and sprayed treatments. The study demonstrates that Pruktor FI can perform better in presence of DBM infestation and damage. This variety should be incorporated in an integrated DBM management strategy in Kenya. Its adoption will reduce costs of sprays and increase farm incomes.