

# INSECT PESTS' INCIDENCE AND DAMAGE ON *Cleome gynandra* IN DIFFERENT AGRO-ECOLOGICAL ZONES

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## Abstract

African leafy vegetables (ALVs) have a potential of contribution to food security by providing essential micronutrients especially among marginalized rural communities. ALVs, thought to be more tolerant to biotic and abiotic stresses, have received little scientific inquiry on insect pest dynamics, which would lead to low yields and poor quality under different agro-ecological zones (AEZs). Insect pests affecting crops usually vary with The overall objective of this study was to identify and determine the prevalence and nature of damage of insect pests on *Cleome gynandra*, one of the most popular ALVs. The studies were conducted in Lugari and Keiyo districts of Kenya falling under Upper Midland (Transitional) and Humid AEZs, respectively, during the long rains and short rains of 2002. The crop was planted following farmers' agronomic practices on plots measuring 18 x 2m and replicated four times. The plants grown in the drier Lugari and wetter Keiyo District were attacked by 8 and 7 insect species, respectively. Diamondback moth (*Plutella xylostella*), African bollworm (*Helicoverpa armigera*), black bean aphids (*Aphis fabae*), cotton aphids (*Aphis gossypii*) and Systates weevil (*Systates pollinosus*) attacked the crop in both AEZs. Leaf roller (*Sylepta derogate*), cabbage sawfly (*Athelia* spp) and chafer grub (*Schizonycha* spp) were detected at Lugari while cutworms (*Agrotis* spp), flea beetles (*Chrysomelidae* spp,) and cucurbit ladybird beetle (*Epilachna* spp) were found attacking the crop only in Keiyo district. Diamondback moth and aphids were more prevalent and caused more damage in Lugari, especially during the short rains. Helicoverpa was slightly more prevalent in Keiyo for a short period between 6-8 weeks after planting. There was no difference in prevalence and severity of systates between the 2 AEZs. The study results indicate that insect pests caused significant damage to *Cleome gynandra* and the presence and severity of damage varied with AEZ and season.

**Key words:** African Leafy Vegetables, *Cleome gynandra* (cat's whiskers), insect pests