

ABSTRACT

Common bean is the most important pulse crop in Kenya, though small scale farmers have limited access to pest resistant seeds. This has therefore made common bean yields remain below 1000kg/ha, while the potential is 2000kg/ha. However phenolics are secondary metabolites present in plants and this could be an attribute contributing to common beans resistance to bean fly infestation. The objective of this study was to devise effective ways of managing bean fly by use of phenolic content present in commercial varieties of common beans. This was achieved by determining the total phenol content of the beans. The bean varieties were; KK 8, Tasha, KK 15 (Resistant check), Chelalang, Wairimu dwarf, Ciankui, GLP 585, Miezi mbili, GLP 2 (Susceptible check), GLP 1004, GLP 24, and GLP 1127. Experimental design was RCBD with three replications. Data collected were subjected to ANOVA, mean values were separated using LSD at 5% level of significance. Chelalang, Tasha, GLP 1004, KK 8, GLP 585 and KK 15 showed resistance and high yields. Phenol content was significant ($P < 0.05$) in resistant common bean varieties (KK8, Tasha, Chelalang, GLP 585, KK15, and GLP 1004). The common beans which showed significant resistance to bean fly had significant ($P < 0.05$) high yields of above 1000kg/ha. Therefore from the study it was evident that presence of phenol content in common beans deters bean fly infestation.