

Evaluation of Botanical Plant Powders against *Zabrotes subfasciatus* (Boheman) (Coleoptera: Bruchidae) in Stored Local Common Bean Varieties

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Abstract : Common bean is one of the most important sources of protein in Ethiopia and other developing countries. However, the Mexican bean weevil, *Zabrotes subfasciatus* (Boheman), is a major factor in the storage of common beans that causes losses. Studies were conducted to evaluate the efficacy of botanical powders of *Jatropha curcas* (L.), *Neem/Azadirachta indica*, and *Parthenium hysterophorus* (L) on local common bean varieties against *Z. subfasciatus* at Melkassa Agriculture Research Center. Twenty local common bean varieties were evaluated twice against *Z. subfasciatus* in a completely randomized design in three replications at the rate of 0.2g/250g of seed for each experiment. Malathion and untreated were used as standard checks. The result indicated that RAZ White and Round Yellow showed high resistance variety in experiments while Batu and Black showed high susceptible variety in experiments. *Jatropha* seed powder was the most effective against *Z. subfasciatus*. *Parthenium* seed powders and neem leaf powders also indicate promising results. Common beans treated with botanicals significantly ($p < 0.05$) had a higher germination percentage than that of the untreated seed. In general, the results obtained indicated that using bean varieties (RAZ white and Round yellow) and botanicals (*Jatropha*) seed powder gave the best control of *Z. subfasciatus*.

Keywords : botanicals, malathion, resistant varieties, *Z. subfasciatus*

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