

# Effectiveness of Inated Pest Management on Bushitao (*Vigna unguiculata*) Cultivation

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The study on the effectiveness of IPM in bushitao cultivation was conducted in Batticaloa district to compare it with the chemical and botanical insecticides in terms of yield and populations of insect pests and natural enemies. Four bushitao plots were arranged in Randomized Complete Block Design (RCBD) with five replications and maintained separately to treat chemical insecticide, botanical insecticide, IPM and control. The recommended chemical insecticides Carbofuran (2, 3-dihydro-2, 2-dimethyl-7-benzofuranyl methylcarbamate) and Admire (nitramide) by DOA were applied to the bushitao plot when the crop in one week old and flowering stage respectively. The botanical insecticide Neem (*Azadiracta indica*) leaves soaked solution and mixture of leaves of Neem (*Azadiracta indica*), Adhatoda (*Adhatoda vasica nees*), Leucas (*Leucas aspera*), Lantana (*Lantana camera*), Erukku (*Calotropis gigantean*) soaked solution were sprayed to the plots in one week interval since the crop in one week old. Combinations of all possible pest control methods (cultural, biological and botanical insecticides) were applied to the IPM treated plot. The population of insect pests and natural enemies were counted in weekly interval from all treatment plots. At last the yields of crop were also calculated. Overall results revealed that insect pest populations significantly ( $P < 0.05$ ) reduced in IPM plot. Chemical and botanical insecticides initially reduced the pest population. However they failed to control continuously because of resistance development. Populations of natural enemies were significantly ( $P < 0.05$ ) high in IPM plot as the IPM has no any adverse effect on natural enemies. It was observed that the yield of IPM treated plots was significantly ( $P < 0.05$ ) higher than other treatment treated plots during this study period. Therefore from these findings it was concluded that IPM was the best practice in the Batticaloa district for bushitao cultivation.