



Research Article

Efficacy testing of indigenous materials and new insecticide molecules against pod borers of fieldbean (*Lablab purpureus*)

■ J. MALLIKARJUNA*, M.A. RASMI AND C.T. ASHOK KUMAR

Department of Entomology, College of Agriculture, Acharya N.G. Ranga Agricultural University, Rajendranagar, HYDERABAD (A.P.) INDIA

ARTICLE INFO

Article Chronicle :

Received : 19.10.2011

Revised : 03.12.2011

Accepted : 02.02.2012

Key words :

Efficacy, Indigenous materials, Insecticides, Pod borers, Fieldbean

*Corresponding author: mallihugar@gmail.com

ABSTRACT

A field evaluation of indigenous materials revealed that sprays of GCK (0.5%), GE (1%) and Panchagavya (3%) gave per cent larval reduction to the tune of 57.80 per cent, 58.86 per cent, 55.94 per cent and 59.45 per cent, 56.91 per cent, 58.22 per cent after first and second spray, respectively. GCK (0.5 per cent), recorded per cent pod and seed damage of 19.56 per cent and 28.11 per cent, respectively and recorded yield of 8.30 q/ha. Among the new insecticide molecules, flubendiamide 24 per cent + thiacloprid 24-48 per cent SC recorded highest per cent larval reduction of 79.42 per cent and 79.09 per cent after first and second spray, respectively. It also recorded lowest per cent pod and seed damage of 13.33 per cent and 18.41 per cent, respectively and pod yield of 16.35 q/ha.

How to view point the article : Mallikarjuna, J., Rashmi, M.A. and Ashok Kumar, C.T. (2012). Efficacy testing of indigenous materials and new insecticide molecules against pod borers of Fieldbean, *Lablab purpureus* L. (Sweet). *Internat. J. Plant Protec.*, 5(1) : 54-57.

INTRODUCTION

Lablab purpureus L. is an important pulse-cum-vegetable crop in India and cultivated for its tender pods, seeds and also for fodder. Pod borers have been considered to be most important and they appeared regularly causing crop loss to the tune of 80-100 per cent (Katagihallimath and Siddappaji, 1962). As the pods are consumed as vegetables and also as fodder for animals the pest management and especially the pod borer control has to be on organic basis. Unfortunately, so far no efforts have been made in the crop to utilize ecofriendly approaches for the pest management. Hence, the current research has been undertaken to find out cost effective and eco friendly management practices in fieldbean.

MATERIALS AND METHODS

The experiment was laid out in Randomized Block Design (RDB) with 12 treatments replicated thrice in 3 x 2.5 m plot size during 2008-09 at Zonal Agricultural Research Station, Gandhi Krishi Vigyan Kendra, University of Agricultural Sciences, Bengaluru. The fieldbean (HA-3 variety) was raised as per the recommended package of practices except plant protection measures.

The crop received a total of 2 sprays, the first being given after pod initiation (45 DAS) while 2nd spray was imposed at 15 days after first spray. The number of pod borers was counted on 5 randomly selected plants in each plot. The pretreatment count was made a day before each spray while, the post treatment counts were made on 2nd, 5th and 10th day after each spray and per cent larval reduction over pretreatment was calculated on same days. At each harvest, the number of healthy and damaged pods and seeds per 50 pods was recorded in order to determine the per cent pod and seed damage. Per cent pod damage and seed damage were calculated using the below given relations. Further, data were subjected to suitable statistical analysis.

$$\text{Per cent pod damage} = \frac{\text{Number of damaged pods}}{\text{Total number of pods}} \times 100$$

$$\text{Per cent seed damage} = \frac{\text{Number of seeds damaged}}{\text{Total no. of locules in 50 pods}} \times 100$$

Preparation of indigenous materials:

Neem seed kernel extract (NSKE) 5 per cent:

Fifty grams of neem seed kernels were taken and crushed into fine powder and then soaked overnight in little quantity