

RESEARCH ARTICLE

# Performance of different spray sequences in the management of pod borer, *Helicoverpa armigera* (Hubner) in chickpea ecosystem

■ I.U. SHIVALEELA\*, B.S. NANDIHALLI AND H.T. PRAKASH

Department of Agricultural Entomology, College of Agriculture, University of Agricultural Sciences, DHARWAD (KARNATAKA) INDIA

---

## ARTICLE INFO

**Received** : 13.02.2014

**Revised** : 09.03.2014

**Accepted** : 20.03.2014

---

## Key Words :

Pod borer, Chickpea ecosystem, Spray

---

## ABSTRACT

A field experiment was conducted to evaluate the performance of different spray sequences against *Helicoverpa armigera* (Hubner) infesting chickpea in the farmer's field at Kallolli village of Jamkhandi taluka, Bijapur during 2011-12. The results revealed that spray sequences, rynaxypyr 20 SC (0.2 ml/l), flubendiamide 480 SC (0.2 ml/l), emamectin benzoate 05 SG (0.25 g/l), profenophos 50 EC (2.0 ml/l), Bt (2.0 g/l) quinalphos 25 EC (2.0 ml/l) and neem oil 2 per cent (20 ml/l), flubendiamide 480 SC (0.2 ml/l), acephate 75 SP (1.0 g/l) were found most effective in reducing the *H. armigera* population and chickpea pod damage. The highest seed yield (9.33 q/ha) was also recorded in the spray sequences, rynaxypyr 20 SC (0.2 ml/l), flubendiamide 480 SC (0.2 ml/l), emamectin benzoate 05 SG (0.25 g/l) (9.33q/ha) with the highest cost benefit ratio(1:2.0) which was followed by profenophos 50 EC (2.0 ml/l, Bt (2.0 g/l), quinalphos 25 EC (2.0 ml/l) by recording seed yield of 6.67 q/ha with the cost benefit ratio of 1:1.7. The next best sequence was neem oil 2 per cent (20ml/l), flubendiamide 480 SC (0.2ml/l), acephate 75 SP (1.0 g/l) which recorded seed yield of 6.00 q/ha with the cost benefit ratio of 1:1.6.

**How to view point the article** : Shivaleela, I.U., Nandihalli, B.S. and Prakash, H.T. (2014). Performance of different spray sequences in the management of pod borer, *Helicoverpa armigera* (Hubner) in chickpea ecosystem. *Internat. J. Plant Protec.*, 7(1) : 192-195.

---

\*Corresponding author:

Email: madhuvinoda@gmail.com