



Research Article

Damage scenario of chickpea, caused by pod borer and termites, in major chickpea growing areas of Uttar Pradesh

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ABSTRACT

Gram pod borer poses serious threat particularly to pulse agroecosystem. In order to observe the incidence caused by pod borer and other insect-pests of chickpea, a survey was conducted in major chickpea growing areas of Uttar Pradesh. Observations revealed that pod borer alone caused 44-74 per cent plant damage / m², however, termite caused 25-26 per cent plant damage / m² at different locations surveyed. Nuclear Polyhedrosis Virus, *Campoplex chloridae* and *Goniophthalmus halli* were also observed as the natural enemies of pod borer.

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INTRODUCTION

Helicoverpa armigera (Hubner) (Lepidoptera: Noctuidae) is the key pest of chickpea throughout the country. Being polyphagous and highly mobile in nature, it survives round the year on a number of host plants. The estimated annual crop losses due to *H. armigera* is around Rs. 2000 crores despite of use of insecticides worth Rs. 500 crores (Pawar, 2004). However, monetary loss of Rs. 203 crores annually in chickpea has been reported in India. There are several factors for population persistence and increase including favourable weather conditions, crop phenology, excessive use of fertilizers, indiscriminate and injudicious use, with faulty application technology of pesticides, etc. In that way, surveillance and monitoring are the prime consideration for location specific successful pest management programme. Hence, an extensive survey was carried out to note the population dynamics of major insect-pests and their natural enemies particularly in major chickpea growing areas of a Uttar Pradesh

MATERIALS AND METHODS

The survey was conducted in the second fortnight of February, 2006 to observe the insect-pest infestation in chickpea fields in major chickpea growing areas of Uttar

Pradesh viz., Mahoba and Hamirpur. The observations were confined only to the insect-pests of major importance. The data were collected from four different fields at a location under three modes i.e., per cent pod infestation, per cent plant infestation per meter row and per cent plant infestation per square meter for gram pod borer and per cent plant infestation per square meter for termite. The data were analysed statistically under Randomized Block Design.

RESULTS AND DISCUSSION

Gram pod borer, *H. armigera* (Hubner) and termite, *Odontotermes obesus* (Ramb.) were recorded as the major insect-pests. However, semilooper, *Autographa nigrisigna* (Wlk), black aphid, *Aphis craccivora* (Koch) and mustard aphid, *Lipaphis erysimi* (Kalt.) were also observed at a few locations with scanty population.

About 12-40 per cent pod damage, 12-40 per cent plant damage/m row, 14-44 per cent plant damage/m² caused by *H. armigera* and 5-25 per cent plant damage/m² caused by *O. obesus* was recorded in Kanpur and adjoining areas. However, in Bundelkhand region about 20-65 per cent pod damage, 19-66 per cent plant damage/m row, 22-74 per cent plant damage/m² caused by *H. armigera* and *O. obesus* caused 6-26 per cent plant damage/m². The population of *H. armigera* varied