

Research Paper :

# Assessment of crop loss due to brinjal pest complex

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## SUMMARY

Brinjal pest complex reduced the number of leaves per plant by 22.98% on an average. Average per cent loss in number of branches per plant by brinjal pest complex was 15.54%. Pest infestation also affected number of buds per plant. Average per cent loss in number of buds was 16.58%. On an average, brinjal pest complex reduced the number of flowers by 32.99%. Average per cent loss due to brinjal pests in terms of number of fruits per plant was 40.35%. The loss in yield of brinjal due to brinjal pest complex was recorded to the tune of 23.49%.

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## Key words :

Brinjal, Pest  
infestation, Crop  
loss

Pest complex in brinjal is responsible for severe reduction in yield of brinjal. Shoot and fruit borer is considered to be the most destructive. The infestation on brinjal can be as high as 75 to 92% (Singh and Sindhu, 1988). Sucking pests suck the cell sap from the leaves and cause reduction in yield, as high as 15 to 20%. Shrinivasan and Krishnakumar (1983), Mote (1981) and Datar and Ashtaputre (1984) reported 48 – 57% losses in the yield of brinjal fruits due to infestation of *Leucinodes orbonalis* in Maharashtra. Per cent losses in terms of brinjal fruits and fruit weight loss were also estimated by Gangwar and Sachan (1981); Naresh *et al.* (1989); Islam and Quiniones (1990); Roy and Pande (1994). Most of the research work is carried on assessment of crop losses due to infestation of brinjal pest complex in terms of yield and yield components only. Therefore, present investigations were undertaken to assess the losses in brinjal due to pest complex in terms of biometric parameters as well as yield and yield components.

## MATERIALS AND METHODS

The experiment was laid out in paired plot technique with two treatments (*i.e.* protected with recommended plant protection

schedule and unprotected) each replicated thrice. The gross plot size was 5.2 x 3.75 m with net plot size 4.2 x 3 m. Row to row and plant to plant distance was 60cm. ABV – 1 variety was used. Le Clerg (1971) suggested paired plot experiments and multiple treatment experiments to know the increment of loss per unit increase of pest intensity and competitive or interaction effects of more than one pest on yield loss.

In this experiment, population of aphids, jassids, thrips, whiteflies, epilachna beetles and per cent infestation of shoot and fruit borer was recorded. For loss assessment, healthy fruits and fruits showing bore holes were kept separately and the extent of damage to the fruits was determined. Observations for the damage by shoot and fruit borer were recorded at each picking on the basis of number and weight of healthy and infested fruits. Plot wise yield of fruits was recorded at each picking from which yields in kg/ha and increase in yield over control were determined.

Judenko (1972) expressed the percentage yield loss per plant by the coefficient of harmfulness (C) :

$$C = \frac{(a - b) \times 100}{a}$$

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