

## Incidence of *Spodoptera litura* (Fab.) (Noctuidae: Lepidoptera) in tobacco nursery

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Tobacco (*Nicotiana tabacum*) is a leading commercial crop valued for its leaf containing nicotine and plays an important role in the socio-economic well-being of the people in India. Several biotic and abiotic factors contribute to low quality tobacco production, of which insect pests are the major component. *Spodoptera litura* (F.) commonly known as the tobacco caterpillar is a generalist herbivore infesting more than 290 species of plants belonging to 80 to 99 families (Wu *et al.*, 2004). It causes significant damage to different types of tobacco both in nursery and in field conditions. Damage due to *S. litura* in tobacco nurseries varied from 80 to 100 per cent (Chari *et al.*, 1986) and 10-25 per cent in the main crop, the leaf yield reduced up to 23 to 50 per cent (Patel *et al.*, 1971).

In the nursery, the young larvae of *S. litura* feed gregariously on leaves in the early stages. The first and second instar larvae (Fig. 1) scrape the epidermal layer causing papery leaves whereas, third and fourth instar larvae (Fig. 2) are particularly voracious feeders causing defoliation of leaves. They migrate to other seedlings as they grow in size and become solitary. In case of serious infestation, larvae destroy the seedlings necessitating resowing of the nursery. Hence, continuous monitoring and management is essential in the nursery ecosystem of tobacco. Severe defoliation was observed in experimental plots of tobacco nursery (Fig. 3) of All India Network Project on

Tobacco (AINPT), Zonal Agricultural and Horticultural Research Station, University of Agricultural and Horticultural Sciences, Navile, Shivamogga, Hence its incidence and damage were recorded.

We encountered the incidence of tobacco caterpillar, *S. litura* (Lepidoptera: Noctuidae) in tobacco nursery during *Kharif* 2021. The plot is located at All India Network Project on Tobacco, Zonal Agricultural and Horticultural Research Station, University of Agricultural and Horticultural Sciences, Navile, Shivamogga, Karnataka, which is located at 588 meters above mean sea level at 13° 58' North latitude and 75° 35' East longitude in the Southern Transition zone (Zone-7) of Karnataka. The seedlings were raised by following package of practices of UAHS, Shivamogga in raised beds of (1m X 2m). The maximum activity of *S. litura* larvae was noticed during the second fortnight of June with a maximum of 10.6 larvae per bed with an average seedlings foliage damage of 56.76 per cent (Table 1). Per cent foliage damage was calculated by counting the number of plants damaged by *S. litura* over total number of plants in each bed.

Favourable environmental conditions such as cloudy weather with continuous drizzling of rainfall during the month of June 2021 may be the reason for population increase. For effective management of *S. litura* in

tobacco, future planning of integrated pest management components is essential instead of only depending on chemical insecticides.

**Table 1: Incidence of *Spodoptera litura* and its foliage damage in tobacco nursery**

	Number of larvae per bed (1m X 2m)	Per cent seedlings (foliage) damage
Bed-1	9	39.26
Bed-2	13	71.42
Bed-3	8	37.30
Bed-4	11	66.41
Bed-5	12	69.41
<b>Average</b>	<b>10.6</b>	<b>56.76</b>



**Fig. I. Early instar larvae of *Spodoptera litura* in tobacco in tobacco nursery**



**Fig. II. Later instar larvae of *Spodoptera litura* larvae in tobacco**



**Fig. III. Defoliation of *Spodoptera litura* in Tobacco nursery**

### References

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