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**M. Sc. IV Semester Entomology**

***Earias vitella***

 ***Earias vitella* (Fab.) The Spotted Bollworm**



**Host:** **Main host is cotton** but also infests other malvaceous plants, namely, Okra, Hibiscus, Anthaea, Abutilon, Malvastrum etc. and is very common pest of ladyfinger.

**Damage:** Young larvae attack growing shoots leading to drooping and withering of the top shoot. In later stages buds, flowers and bolls are also damaged. Flower buds open up prematurely causing “flared squares”. In damaged bolls pulp is eaten up and lint is stained.

**Life cycle:** Adult has yellowish fore wings with elongated green streak in the middle. Hind wing is pale whitish. Oviposition takes place in the night, female deposits 2-3 eggs on leaf bract, flower bud or tender leaf, usually on the under surface. Fecundity is 200-400 eggs per female. Eggs are deep sky blue or greenish crowned and sculpted on the surface. Incubation period is 3-5 days. Full grown larva is about 2.0 cm long, brownish with white patches on the dorsal side of the body. There are 6 larval instars and the total larval development takes 12-18 days. Pupation takes place on the plant or rarely in the soil among fallen leaves. A boat-shaped greyish silken cocoon is constructed for pupa formation. Pupal period is 7-10 days.

**Distribution:** Widely distributed in tropics and subtropics of the old world and Australasia. In India it is more common in Punjab and Rajasthan.

**Control:** The following **cultural practices** help in reducing pest incidence, particularly when adopted on large scale on cooperative basis by farmers: After harvesting cotton plants should be cut at the ground level and refuse removed from the field. Sprouts from the harvested crop should be removed during March-April. Growth of malvaceous weeds should not be allowed in the neighbouring areas during non-cotton period. After picking of the lint, no crop should be allowed to remain in the field in the whole area.

Infested portions of the plants can be handpicked and destroyed. Infested bolls can be dislodged from the plants by passing a rope over the crop. Irrigation also destroys hibernating stages of the pest.

**Chemical control** involves timing of spray of insecticides with egg-laying or before larvae bore into the bolls. The following insecticides have been found to be effective: **Parathion 0.025%, Endrin 0.02%, Carbaryl 0.1%, Endosulphan 0.05%, Sevimol and** **Quinalphos 0.02%. These insecticides can be sprayed at the rate of about 2.0-2.5 litre/hectare of crop.**