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**M. Sc. IV Semester Zoology Entomology**

**Red Pumpkin Beetle (***Raphidopalpa foveicollis*)

 Synonym *Aulacophora foveicollis*

**Distribution, Life cycle and Control:**

**Systematic Position:**

Class – Insecta

Order – Coleoptera

Family – Chrysomelidae

Genus – *Raphidopalpa*

Species – *foveicollis*

**Distribution:**

The pest is widely distributed in different parts of the world, especially in Asia, Africa, Australia and South Europe. In India, it occurs throughout the country but is more common in north-western parts. Out of the several species of Aulacophora, the A. foveicollis is the commonest beetle found in India.

**Food Plants and Nature of Damage:**

It is the most destructive pest of all cucurbitaceous vegetables. It infests a wide variety of vegetables like pumpkin, tinda, melon, ghia tori, cucumber etc., but have special liking for pumpkin.

The damage to the plant is caused mainly by the adult insects which feed voraciously on the leaves, flowers and fruits. The beetle makes hole in the plant tissues, causing death or retardation of growth. The damage done to young seedlings is often devastating. The grubs of this pest remain in the soil and feeds on roots and stem of the plant.

**Marks of Identification:**

The dorsal part of the body of adult beetle is deep orange, while the ventral side is black. The beetle appears to be oblong measuring 5-8 mm in length and 3.5- 3.75 mm in width. The posterior part of the abdomen bears soft white hairs.

**Life Cycle:**

The adult weevils wake up after hibernation in the early March. After mating a female lay egg’s singly or in batches of 8-9 in the moist soil at the base of the host plant. As many as 300 eggs are laid by a single female. Eggs are elongated and brown in colour.

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Egg hatches into larva in 6-15 days (5-8 days in optimal conditions). The whitish grub with brown head bores and feed upon plant roots, fallen leaves and fruits lying on the surface of soil. Grub Moults four times during 13-25 days of their larval period.

Moulting occurs inside the soil. A fully grown grub moves deep into the soil (1.3-25.4 cms deep) and pupate within a water-proof, thick walled oval cocoon. Pupation period lasts for 7-17 days, after which it metamorphoses into adult beetle.

The adult comes out of the soil to feed upon the host plants and to breed. After about seven days of emergence beetle start laying eggs. Five generations are completed during March to October. A complete life cycle takes about 25-37 days. The adults hibernate in November inside soil or among dry weeds and appear again in March.

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**Prevention and Control:**

1. Trap crop. Few scattered plants should be grown early in the season. They should be treated with strong insecticidal spray. So, that the adults attracted towards plant will die and the subsequent will have pest free crop.

2. Mechanical Collection and destruction of pest. In the early hours of the morning the beetles remain sluggish. They can be collected by hand nets and killed in kerosene oil.

3. Repellents. The pest gets repelled by ash or mixture of ash and insecticidal dust.

4. The soil around the root of the plant should be sprayed with strong insecticides so that the developing grubs and pupa die before hatching.

5. The pesticides used are Lindane (0.1%) @ 200-300 liters/acre, methyl parathione (0.02%) or malathione (0.05%) or the plant can be dusted with carbaryl or pyretherum (5%).

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