Red Pumpkin Beetle (*Aulacophora foveicollis*): Identification, Damage and Management

Thalluri Revanth Sri[1], Anil Kumar Vasa[2], Rachapally Prashanth[3], Kanuganti Mahesh[4]

[1]Ph.D, Scholar, Ag. Entomology, SKNAU, Jobner, Rajasthan.
[2]Ph.D, Scholar, Vegetable science, OUAT, Bhubaneswar, Odisha.
[3]Ph.D, Scholar, Fruit science, SKLTGHU, Mulugu, Telangana.
[4]M. Sc, Scholar, Vegetable science, SKLTGHU, Mulugu, Telangana.

Introduction

The Red pumpkin beetle (*Aulacophora foveicollis*), belonging to the family Chrysomelidae. It is a foliar pest of members of the Cucurbitaceae, particularly the pumpkin. The beetles feed voraciously on leaves, flower buds and flowers which may reach up to 35- 75 percent at seedling stage. In some cases the losses of this pest were reported to 30-100 percent in the field (Rashid et al 2014).

ymptoms

Infestation of red pumpkin beetle is characterized by the appearance of large, uneven holes on leaves, often resulting in a skeletonization, where only the veins remain. Flowers and young fruits may also be damaged, causing poor plant growth, wilting and even plant death, particularly at the seedling stage. The damage is caused by adult beetles feeding on aerial plant parts, while the grubs remain in the soil and feed on roots and underground stems, leading to rotting. The presence of bright orange-red beetles on plants is a clear and typical sign of attack.

Fig 1 and 2: Red Pumpkin Beetle infesting cucurbit leaves

Life Cycle

- The female beetle lays orange-yellow, oval eggs in moist soil near the base of host plants.
- Eggs hatch within 7–14 days into creamy white grubs.
- The grubs feed on roots and underground plant parts for about 13–25 days.
- Fully grown grubs pupate in the soil, and the pupal stage lasts for 7–17 days.
- The complete life cycle is completed in about 30–45 days, and several generations occur in a year depending on climatic conditions.

Cultural & Mechanical Control

- **Cleanliness:** Keep fields free of weeds and alternate hosts (cucumbers, gourds).
- **Handpicking:** Collect sluggish beetles in the early morning.
- **Trap Crops:** Plant ribbed gourd or maize to attract beetles, then spray or use bait.

- **Seedling Protection:** Cover seedlings with polythene bags or netting.
- **Deep Ploughing:** Turn soil in summer to expose hibernating adults.

Biological & Botanical Control

- **Neem Oil:** Effective against the pest. Among the botanical treatments tested against *Aulacophora foveicollis* on cucumber, the lowest beetle population was recorded in plots treated with azadirachtin at 0.0006 per cent, which was statistically comparable with NSKE at 5 per cent and neem oil at 0.5 per cent. (Patel et al., 2022)
- **Fungi:** *Beauveria bassiana* and *Metarhizium anisoplae* are effective bio-pesticides. (Kamini et al., 2024)
- **Ash:** Dusting with wood or fly ash can act as a repellent/antifeedant.

Chemical Control

- **Deltamethrin:** Spray when beetles are detected in nursery or field.
- **Malathion:** Can be used in bait sprays.
- **Carbaryl:** An older, effective chemical option.
- **Imidacloprid, Cypermethrin**: Other synthetic options available.

References

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