LESSER PUMPKIN FLY (LPF)

Dacus ciliatus

Description:

Adults:

Adults are 4-6 mm in length, brownish orange in color with a yellow to orange scutellum and predominately yellow legs. Their head has a black spot in each antennal furrow on and wings have expanded anterior dark-brown band.

Eggs:

Eggs are laid below the skin of the host fruit in groups of 5-15, and hatch 3 days after oviposition.

Larvae:

Smooth, elongated, yellowish-white maggot varying in length from 9-10.5 mm at last instar.

Pupae:

After feeding inside host fruit, mature larvae emerge from the fruit and drop to the ground where they form a tan to dark brown puparium. Pupation occurs in the soil.

Distribution:

Significant and widespread pest of Africa, Indian Ocean islands, East and West Asia.

Hosts:

Cucurbits, including cucumber, gourd, melon, pumpkin, watermelon, marrows and others.

Damage:

- Eggs are laid below the skin of the host fruit and hatch within fruit before pupation.
- Attacked fruit will usually show signs of oviposition punctures around which necrosis may occur.
- In heavy infestations the fruit may collapse leaving just the skin.

Phenology:

- Eggs hatch 3 days following oviposition, larvae develop for 4-7 days, and pupation is completed in 7-14 days.
- Adults live for 13-27 days depending on environmental conditions.
- There may be as many as 8 to 10 generations per year.

Lure Type and Maintenance:

- PHEROCON® LPF controlled release septa lure.
- Replace PHEROCON® LPF lures every 4 weeks.

Lure Storage:

- Store in unopened factory sealed packages in a cool place (< 74° F or 24° C maximum).
- Refrigerate or freeze unopened packages to carry over for annual storage.

Top: Adult female (source: EPPO). Bottom: LPF larva (source: Neotropical Entomology 2017).

Trap Design:

- PHEROCON® AM/NB, PHEROCON® II, or PHEROCON® VI Delta.

Placement Time:

- Adults can be detected throughout the active growing season; therefore, traps should be used to monitor continuously.
- Traps should be placed in the field before the start of fruit ripening to detect flies.

Placement Pattern

- Place traps near the highest point of the plant using supporting posts.
- Traps should be set up in a grid pattern.

Trap Density

- Never use less than two traps.
- One trap per 2.5-10 acres (1-4 hectares).

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Trap Maintenance:

- Check traps weekly.
- Replace lures every 4 weeks.
- Replace trap liners monthly, or whenever fouled with dust or debris

Recommendations:

- When detected, all infested fruit should be gathered and destroyed.
- Adults are often found on low, leafy vegetation near cultivated areas. In hot weather, they rest on the undersides of leaves and in shady areas.
- Insecticidal protection is possible by using a full cover spray or a bait spray.

Source: Recommendations and certain other sections were sourced from CABI Invasive Species Compendium Dacus ciliates Datasheet and EPPO Data Sheets on Quarantine Pests Dacus ciliatus.

Note, always:

- Use only one lure per trap, change as recommended.
- Count and record captures as recommended.
- Change trap liners as needed.
- Discard lures in trash far from the area of use and remove trash afterwards.
- Follow recommendations.
- Contact local extension authorities and consultants for regional advice.

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