CIGARETTE BEETLE (CB) *Lasioderma serricorne*

Description:

Adults:

Oval shape, reddish-brown in color, and 0.07-0.16 in (2-4 mm), distinguished by the head being tucked under the neck shield. Females on average are larger than males. Adults are strong fliers.

Eggs:

Oval shape, cream to light yellow in color. Females lay single eggs in crevasses and nooks on or near a host, laying up to 100 eggs in her lifetime.

Larvae:

Pale yellow or cream colored with a light brown head and covered in very fine hairs. Larvae go through 4-6 instars, reaching a length of up to 0.16 in (4 mm).

Pupae:

Pupal casings are made of waste, food dust, and midgut secretions, and take on the color of the host on which they were feeding.

Above left: CB larva. Above right: CB adult. (Source: John Obermeyer).

Hosts:

Tobacco and tobacco products, rice, dried fruit, some spices and herbs, nuts, cocoa, raw commodities, and manufactured products.

Damage:

- Most economic damage is from the larvae directly feeding on commodities.
- Indirect damage is cause by adult females chewing holes into packaging for oviposition.
- Adults do not feed.

Phenology:

Life Cycle	40-70 days
Egg hatch	5-7 days
Larvae (while feeding)	16-70 days
Pupae	7-14 days
Mating/oviposition	1 week after eclosion
Adult lifespan	6-42 days
Threshold temperature	68-98.6°F (20-37°C)

Lure Type and Maintenance:

** Please note that the lure recommendations can change depending on the trap being used.*

- ***STORGARD® CB + K controlled release lure.***
  - Replace STORGARD® CB + K lures every 4-8 weeks or according to individual package instructions.
- ***STORGARD® ULTRA-COMBI™ QC MOTH AND BEETLE controlled release lure.***
  - Replace STORGARD® ULTRA-COMBI™ QC MOTH AND BEETLE lures every 6-12 weeks or according to individual package instructions.
  - Or replace traps and lures when traps are saturated with dirt or debris.
- ***STORGARD® ULTRA-COMBI™ (CB+K, CFB/RFB, KB/WB and 25 other stored product insects) QC controlled release lure.***
  - Replace STORGARD® ULTRA-COMBI™ (CB+K, CFB/RFB, KB/WB and 25 other stored product insects) QC lures every 6-12 weeks or according to individual package instructions.
  - Or replace traps and lures when traps are saturated with dirt or debris.

Lure Storage:

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

Trap Design:

- STORGARD® III trap, STORGARD® THINLINE™ III trap, STORGARD® DOME™ trap, or STORGARD® DOME™ QUICK-CHANGE™ trap.

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CIGARETTE BEETLE (CB), *Lasioderma serricorne*

Placement Time:

- When the commodity is in a location where the ambient temp is above 55°F (12.8°C).
- Monitoring should be conducted year-round in heated warehouses, warm climates (above 55°F or 12.8°C), or by machines that generate heat.
- Initiate monitoring program with a full-area survey for at least one month while there is insect activity.
- Monitor incoming commodities and off-loading areas aggressively.

Placement Pattern:

- In a grid pattern evenly spaced throughout building.
- Hang on walls or posts that are out of the way of human or machinery traffic.
- Can be placed under shelving when appropriate.
- Around processing, filling, and packaging equipment.
- NOTE:
  - Never place over any sort of conveyer.
  - Keep traps ways from water.
  - Use in closets and other residential areas.

Trap Maintenance:

- Check traps once a week
- In DOME™ Trap, remove captured insects and debris during counts.
- Replace traps and lures when traps are saturated with dirt or debris.

Recommendations:

- Mark trap location using a map and pinpoint areas of infestation for future reference.
- Few CB captured in scattered locations is a signal to increase attention to monitoring program.
- Monitor on a continuing basis, regardless of frequency and rate of capture.
- Use guidelines below as treatment thresholds to focus IPM treatment program:

Occasional Low Capture, IPM Protocol:

- Tighten STORGARD® trap-grid in areas showing marked or general increase.
- Check inventory for at-risk infested commodities.
- Remove/clean contaminated commodities.
- Check for outside sources of infestation.
- Review sanitation program and continue to monitor for infested commodities.

TREATMENT:

- Delay insecticide treatment until there is evidence of a significant population change.

Constant Low Capture, IPM Protocol:

- Tighten STORGARD® trap-grid areas of marked increase only.
- Check for at-risk infested commodities.
- Remove/clean contaminated commodities.
- Check for outside sources of infestation.
- Review sanitation program and continue to monitor for infested commodities.

TREATMENT:

- Initiate insecticide treatments in areas considered susceptible or especially valuable.

Constant Localized High Capture, IPM Protocol:

- Tighten STORGARD® trap-grid in areas showing marked or general increase.
- Remove/clean contaminated commodities.
- Review sanitation program and continue to monitor for infested commodities.

TREATMENT:

- Initiate insecticide treatments in areas considered susceptible or especially valuable.

Constant High Capture, IPM Protocol:

- Remove/clean contaminated commodities.
- Review sanitation program and continue to monitor for infested commodities.

TREATMENT:

- Initiate insecticide treatments immediately.

Source: Recommendations and certain other sections were sourced from Purdue University and University of Florida Extension guidelines.

Note, always:

- Use only one pheromone lure and oil based kairomone attractant per trap.
- Count and record captures as recommended.
- Change trap 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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