

# MONITORING GUIDE

## CIGARETTE BEETLE

*Lasioderma serricorne*

### Cigarette Beetle



### Suggested Traps

#### Delta 2 Trap



[Product No.2050202](#)

#### Diamond Trap



[Product No.2050204](#)

### GENERAL INFORMATION

The first thing to recognize when using monitoring traps is that every warehouse is subject to different conditions, and as a result there is no single recommendation to fit every situation. However, there are still a number of starting points and rules, to help the user to maximize the effectiveness of a warehouse-monitoring program

1. It is important to know which products in the warehouse could be attractive to the insect and where that product is stored. This information can be used to draw a plan of the warehouse that shows areas of insect interest.
2. It is then necessary to know what the stock movement is, how long the products are stored before shipment, whether products are always stored in the same areas, and whether some items are stored longer than others.
3. Is incoming product kept separately, or is it stored with other product of the same type. Are the pallets stored in the same building, for how long and are they cleaned thoroughly?
4. Are the temperatures the same throughout the building, or are there warmer areas that could be identified on the floor plan?
5. Is hygiene and sanitation good, or are there areas of spillage or broken packaging that are cleaned less frequently? Is the building insect-proof around doors, windows, ventilators and ducting?

These questions form the basis of any insect management strategy and should be incorporated into the floor plan to identify likely areas of insect activity.

Monitoring traps are only of value if the information gained from them is taken on a regular time interval (eg. every 7 days) and recorded alongside the location of the information.

### LIFE HISTORY

Information can often be found indicating that the life cycle of an insect depends on particular temperatures or humidity or that there is exact period of time in which each stage occurs. In reality it doesn't always occur that way, since different foodstuffs consumed by the insect may result in different development times and different mortality rates. Probably the best information about an insect is that which is gathered over a period of time, at the location being monitored.

The females usually lay about 100 eggs, which hatch into larvae after about 6 - 10 days. This larval stage lasts for 3-4 weeks before the larvae pupate and emerge a week later as new adults. The entire life cycle can take about 120 days at 20° C, but less than a month at higher temperatures. Development usually ceases at temperatures of around 17° C and adults are usually killed after a week at 4°C. Short exposure to cold-storage conditions (-20° C) will also kill the insect.

*Lasioderma serricorne* is generally found in warmer parts of the world and that means a wide range of foodstuffs can be damaged, including tobacco leaf, cigarettes, oilseeds, pulses, dried fruits, cereal products, spices and some animal products. As international trade develops, we begin to see possible insect 'strains'

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developing in different areas, often with dietary preferences. A strange example of this was seen when an infestation of Lasioderma beetles ate their way through a shipment of brassieres on their way from Hong Kong to Holland.

### **TRAP PLACEMENT**

The Cigarette beetle is a strong flier and therefore the placement height of the traps is of less importance to the insect than it is to the person monitoring them. Traps should be placed where they will not obstruct normal warehouse traffic. For example, temperatures near the roof may be higher and therefore encourage more insect activity, however these areas are difficult to monitor.

Due to the many variables present in a warehouse, it is preferable to start with traps evenly dispersed throughout the target area, at intervals of 10 and 20 metres. Based on the trap catch, this spacing can be changed to concentrate traps in areas of greater catch, and to reduce those in areas of no catch.

In order to keep a constant attraction pressure on the insects, each trap lure should be replaced every 6 weeks, since after this period the rate of release of pheromone from the lure slows down. Pheromone traps are the usual tool for monitoring, but light traps are also used in some warehouses.

### **WHAT DOES THE TRAP INFORMATION TELL YOU?**

By plotting the catch as a graph, you will see the periods of maximum insect activity and from this it will be possible to identify which areas within the building are showing more activity than others. Subsequent searching in those 'hot-spot' areas can usually lead you to the cause of the problem.

The causes of these problems may be poor sanitation, broken packaging, poor stock rotation or a recent arrival of contaminated product. From this point, good detective work is needed to identify the actual source of the problem. In order to tie in recent events that could have caused the problem, it is very important that the trap information is collected on a regular basis or else it will be difficult to identify those causes.

Over a period of time it will be possible to fine tune the placement of the traps in areas that are most vulnerable, but the main advantage is that the information gained will lead to better hygiene, sanitation and management practices - which in turn will lead to less insect product damage.

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