

Monitoring Lure and Trap for *Byturus tomentosus*, Raspberry Beetle

Pest Status and Damage



The Raspberry Beetle is a serious pest of Raspberries (field and tunnel grown) and other similar fruits such as Loganberry and Blackberry. The adult females are attracted by the colour and smell of the host plant's flowers. They feed, then lay eggs on their preferred hosts. The larvae feed on ripening fruits but can also damage buds and shoot tips. They burrow into the fruit berries to feed on the plug and often go undetected until the fruit is harvested. Sometimes localised areas of attacked berries become shrivelled, hard or distorted as a result of the larval feeding.

Adult beetles can cause damage early in the season by feeding on blossoms, buds or new leaves of host plants. This rarely causes serious problems unless beetles occur in large numbers, when significant crop losses and poorly developed, malformed fruits may result.

There is usually one generation each year in field grown crops. Adults emerge in April to early June but can be earlier in tunnel covered crops. With warm weather (above 13°C) the beetles mate from early June and in June/July. The eggs are laid in flowers. The local climate and cultivation method can affect emergence times and duration of attack.

Trapping

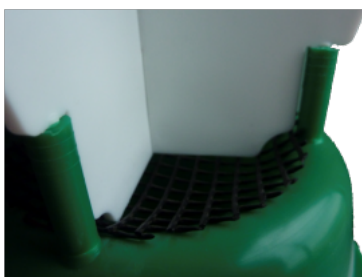
Raspberry Beetle Monitoring Traps should be placed in the field before the first beetles appear: typically, 4 to 6 weeks before first flower appears and the traps maintained until at least the end of the flowering period. This is normally between April and July but flowering can be longer in protected cropping systems or with autumn fruiting varieties. Where the crop has an extended flowering and fruiting season, it is beneficial to continue to trap beetles during the fruiting period. The exact time of insect emergence will vary with location and season.

The Monitoring Kit

The Sentomol Raspberry Beetle Monitoring Trap consists of a Green Funnel Trap adapted with tall white cross vane attachments. The attractant sachet can be placed on the vanes or under the lid using the sticky tab provided. The Funnel Trap is designed so that insects are attracted by both the white colour of the cross vanes (simulating a giant raspberry flower), and the chemical parapheromone dispenser. Beetles fly into the cross vanes and fall into the funnel shaped catchment area down into the bucket below, from where they can be regularly collected, counted and disposed.



Assembly



If bees are likely to be caught accidentally, place the mesh bee excluder between the lugs of the funnel section so that it sits over the funnel entrance. Securely clip the two cross vane members onto the lugs on the funnel base. The lid is then fitted and the funnel section locked onto the bucket. Open the pheromone foil sachet and remove the inner sachet. **DO NOT OPEN THE INNER SACHET.** The outer layer surrounding the dispenser is part of the controlled release mechanism that ensures the pheromone lasts for the required number of weeks. Attach the sticky pad to the lure and place on trap vane or under lid.

Technical Data Sheet

The bucket should be filled to about 5cm depth with soapy water to prevent insects from escaping. Ensure the water is topped up regularly. The lure should last about 4-6 weeks (depending on temperature and wind). Where extended cropping management is used or the season is longer than 6 weeks, the lure should be replaced.

Trap Placement

Traps should be placed 1m - 1.6m above ground. No higher. Use a secure stake. Attach the trap to the pole so the trap bucket can still be removed. Remove all surrounding foliage for at least 0.5m to ensure that the traps remain visible and not obscured. Place traps at a minimum density of 50 traps/ha. An additional 20 traps (approx) should be placed around the perimeter of the plantation (or each 1 ha block). The traps within the crop should be placed in a lattice (grid) pattern throughout the plantation. If alternate hosts such as wild Rubus (raspberry and blackberry) and plants such as hawthorn grow within 100-200m of the plantation, additional traps may be required to monitor beetle activity close to them. Catches should be recorded weekly. Open the trap by unlocking the bucket section from the funnel (it has a 4-point bayonet fit - so twist and pull apart). It is recommended that at each reading the trapped insects and any other debris be removed and the soapy water replaced to a depth of about 5cm.



Thresholds



As a general guideline, a trap catch of 5 to 10 beetles per trap per week in the period from beetle emergence until onset of first flowering should be used as a threshold. The traps will indicate beetle activity around and within the crop and if more than 5-10 beetles are found in the sampling period, then consider applying an appropriate approved insecticide or other approved control measure.

Non-Target Catches

Traps may also catch some non-target insects such as flies and small beetles (pollen beetles) and occasionally bees. The mesh is intended to minimise the catch of bees and can be inserted if the grower is concerned that bees will be trapped inadvertently. To avoid affecting the efficiency of the trapping system it is strongly recommended that traps be used for only the intended pest species, *Byturus tomentosus* (raspberry beetle). Never use the lures for other species in this trap.

Storage and Handling

The pheromone attractant dispensers from Sentomol are supplied in labelled and vapour proof sachets. The dispensers should be kept in good storage conditions at below 15°C where they will retain their activity and attraction for a minimum of 12 months. Dispensers can be kept for periods of up to 18 months by refrigeration at temperatures of 4°C or below. Do not freeze. Do not store dispensers for more than this time even in a refrigerator as they may lose efficiency. Sentomol Raspberry Beetle dispensers generally last from 4-6 weeks after opening, depending on temperature and wind. After this time the expired attractant dispenser should be renewed. The old dispenser should be completely removed from the area of use to prevent interference with the new dispenser.