

Controlling Raspberry Beetle without pesticides

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Raspberry production

In 2001, raspberry production in the UK was 31,000 tonnes, supplying fresh and processed markets. Consumer fears over pesticide contamination in the environment, EU legislation and possible health risk, has led to growers implementing measures that will reduce pesticide use through Integrated Pest Management (IPM).



The Raspberry Beetle

- The raspberry beetle, *Byturus tomentosus*, is a very important pest in the UK and Europe.
- Damage is caused by the adults feeding on the flowers and the larvae feeding on the developing drupelets.
- This feeding results in fungi colonising the berries, leading to blemished fruit.
- Larval contamination of the picked fruit is also a concern (Low damage threshold).

Work done so far

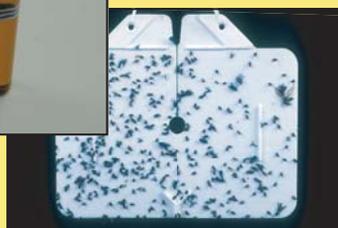
Sticky traps

- It is possible to monitor *B. tomentosus* with the aid of non-UV reflective, white sticky traps.
- The colour of the trap attracts the beetles, mimicking the raspberry flowers.
- By comparing the number of beetles caught with the amount of husk damage it was possible to obtain a threshold level below which no control measures are needed.
- For the fresh market, the threshold level is 5 beetles per trap.



Flower volatiles

- Identification of raspberry flower volatiles increased the effectiveness of the traps (GC - EAG, SCRI).
- These volatiles attract *B. tomentosus*.
- Vials containing a small sample of the identified volatiles were attached to the trap.
- The numbers of beetles trapped increased by 5 to 20-fold.



What's next

- Comparing the amount of damaged husks observed in plantations using the traps with and without lures.
- Identify the distance over which the lures are attractive.
- Changes in trap and dispenser design to improve volatile release.

Overall Aim

The aim is to use the traps to reduce the beetle population to below an economically damaging level, reducing the amount of pesticides needed.

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