

## **Annual report FV 254 – HDC Pest Bulletin**

### **Grower Summary**

#### **Headline**

#### **Background and expected deliverables**

The HDC Pest Bulletin was hosted by the Warwick HRI website for its second year and the link to the site was provided in the HDC weekly e-mails. The Bulletin consisted of a 'General summary' page with links to crop-specific pages for brassicas, lettuce, carrot/parsnip, alliums and narcissus. The main sources of information for the website were:

- A summary of the captures of pest aphids made by the network of suction traps run by the Rothamsted Insect Survey, accompanied by commentary relevant to horticultural crops
- Output from the HRI/HDC forecasting models for carrot fly, cabbage root fly, pollen beetle and large narcissus fly. The pest forecasts were run using weather data collated by the Met Office from a network of weather stations (from Jersey in the south, to the north of Scotland). A royalty was paid to the Met Office for use of the weather data.
- The ADAS cutworm forecast

Additional information provided in the Bulletin included:

- Information on the development of thrips populations in allium crops – from a Defra-funded project led by Warwick HRI
- Information on the resistance status of peach-potato aphids captured in suction traps – provided by Rothamsted Research
- Information on caterpillar and flea beetle activity where available
- Day-degree forecast for lettuce root aphid
- Feedback from growers (this was limited)
- Information on pest activity in the monitoring plots at Warwick HRI. This was mainly on carrot fly and cabbage root fly and was presented in conjunction with the appropriate forecasts.

The bulletin was also used to publicise the insecticide resistance testing facility at Rothamsted Research, part of which is funded by a Defra/HDC project on aphids in lettuce and Brassica crops.

### **Summary of the project and main conclusions**

#### Aphids

Initial predictions made by Rothamsted Research at the end of February 2005 indicated that it would be an average year for aphid flight activity, at least up to the end of June. In fact, the numbers of cabbage aphids captured in the suction traps were the highest since 1995 and peach-potato aphid numbers were also higher than average. At Wellesbourne, populations of cabbage aphid and peach-potato aphid on our Brassica plots crashed in July. Cabbage aphid numbers increased again subsequently on the plots but numbers of peach-potato aphid remained very low. The numbers of willow-carrot aphid caught in the suction traps were close to the 10-year average and lower than in 2004, which was an exceptional year.

#### Cabbage root fly

Egg-laying by the first generation of cabbage root fly started in mid-April at warm sites towards the south and the second generation started in late June. The occurrence of a third generation was predicted for sites in the south and Midlands. Reports of severe cabbage root fly damage/control failure were less frequent than in 2004. At Wellesbourne, the cabbage root fly forecast was used to time treatments in several insecticide trials and seedling counts made in treated and insecticide-free plots indicated that treatment timings had been accurate.

#### Carrot fly

Egg-laying by the first generation of carrot fly started in late April - early May at warm sites towards the south and the second generation started in mid-late July. Once again, third generation activity was predicted for sites in the south and Midlands, but the progeny of this generation were not expected to cause damage at all but the warmest sites.

#### Pollen beetle

The pollen beetle migration was forecast for late June-early July. However, there were no reports of infestations, possibly because weather conditions were less than ideal for pollen beetle activity. The prevalence of pollen beetles in horticultural brassicas depends also on their proximity to oil seed rape crops, which are a major source of infestation.

#### Large narcissus fly

The large narcissus fly forecast was run using weather data from sites in the main bulb-growing regions. The forecast indicated that conditions were less favourable for rapid egg-laying than in 2004. This is normal, as in most years, egg-laying is delayed by periods of cooler weather (the threshold for mating and therefore subsequent egg-laying is 20°C). There were fewer reports of narcissus fly damage in the south-west and Lincolnshire than in 2004, which supports the hypothesis that a delay in egg-laying due to cool weather is one of the factors that prevents large narcissus fly populations increasing in most years.

#### Grower feedback

All the pages of the bulletin requested feedback from growers, but this was limited once the season had started. This is partly because growers and consultants are so busy but possibly also because it was a relatively 'pest-free' year. There were relatively few caterpillars on Brassicas and lettuce (although cutworms caused problems in trials at Wellesbourne) and thrips were less damaging than in 2003. We received one criticism about the content and structure of the bulletin and will try to address this in the coming year.

The 2006 bulletin will have a similar format, but we will try to improve its presentation once more. We would hope to encourage more feedback from growers. Once pest activity begins, the link will be advertised in the HDC weekly e-mails.

In 2005, the pest bulletin was publicised through the HDC weekly e-mail, HDC news, HDC Vegetable Roadshows and other presentations made to the vegetable industry.

The HDC Pest Bulletin can be accessed via [www.warwick.ac.uk/](http://www.warwick.ac.uk/) A link to this is provided on the HDC weekly emails.

### **Financial Benefits**

Information on the timing of pest activity and pest abundance helps growers make significant improvements in the pest control decision making process.

### **Action points for growers.**

Access the 'HDC Pest Bulletin' regularly and feedback information to help make the bulletin as useful and effective as possible. Feedback by following the link to 'Rosemary Collier' on the site.