

TIO Growers Technical News No 5

TGTG Development program update

The four main strands of our development program are now underway. Here is a reminder of the agreed priority areas:

- Carrot fly management by fencing
- Weed control
- Variety improvement
- Bio controls

We have been fortunate to recruit Krzysztof Switek who will be operating the development program during the summer and autumn. Krzysztof (Christoph) obtained his PhD at the Sea Fisheries Institute Department of Oceanography and Sea Ecology, Gdansk, Poland and has also been working at the Marie Curie Fellowship FRS Marine Laboratory, Aberdeen, UK. He comes to us from temporary work in the entomology department of the University of Aberdeen.



Carrot fly – hot topic

We set the first traps in the second week in May expecting to catch a few flies at the warmer sites but I was astonished to find significant activity at the coldest sites in Aberdeenshire and literally 'masses' of flies from the emergence sites near Perth.

Whilst this is worrying and indicates a strong emergence of the first generation it is perhaps encouraging that this season in Scotland we may well miss the main activity of the first generation where crops have still to emerge.

Site name: Keilhill, Aberdeenshire

On average there have been seven flies per trap per week declining to five flies per trap per week recorded. There will be no carrots grown near this site in 2007 and we plan to monitor how this affects the survival of the pest which has built up over two seasons.

Site name: Little Keithick, Coupar Angus

Two fields monitored - an emergence site and a receiving carrot field. The emerging site is insect fenced to retard pests from migrating to other fields in the neighbourhood. Traps are placed outside the fence on the emergence site and on a carrot field which is approximately 150 metres away. Traps have been read twice so far and on average there have been five flies per trap per week on the emergence site and two flies per trap per week on the carrot field.

Site name: Blackruthven, Perth

Two fields monitored - an emerging site and a receiving carrot field. The carrot field was recently seeded and fenced and traps are located on both sides of the net. In addition to usual set of eight traps on the entrance to the field six traps were placed on different ends of the field. The number of flies is consistent over last three weeks - approximately 50 flies per trap per week on emergence site and five flies per trap per week on the carrot field which is 350 metres from the emergence site.

Site name: Mid Coul, Inverness

On average there have been two carrot flies per trap per week on the emergence site. The receiving site is yet to be seeded and fenced.



A nice exposed site to test the reliability and efficacy of the insect fence concept. The emergence traps are positioned 10m from the old crop. New crop is destined for the field on the RHS of the picture which was covered with black plastic for control of weeds.

This project is complimentary to the work by Rosemary Collier at HRI Wellesbourne near Warwick. She reported recently

‘We seem to be getting some quite interesting things out of the carrot trials so far:

- The fences appear to be keeping out 90% of the carrot fly population (based on trap captures inside and out). Remember that the area they enclose is very small though.....
- I had a look in the overhang at the top of the fences this afternoon and there are carrot flies (and all sorts of other insects) there.
- Carrot fly damage should start to become apparent soon.’

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Weeds

It has been evident that all growers are much more clearly focused this year on getting a minimum of two good burns before seeding carrots and one before emergence. This should give a much cleaner start and less handwork later.

Triple Greenburners have been modified and at last the two Hoaf triple bed machines have arrived and have been put into action. This week Colin and Krzysztof will initiate observations and record which should give a much clearer analysis of the success of the two machines.

Bio Controls

If in need of a control for caterpillar (leaf caterpillars or turnip moth (cutworm) larvae), use can now be made of DiPel DF bacillus thuringiensis var. kurstaki. The usual individual authorisation will be necessary for this intervention.



Cutworm larvae were present in crops as far north as Inverness last year and there is a risk that increased populations will be present in 2007.

Monitoring of cutworm adults by pheromone trapping has now commenced.

Although this pest is readily controlled by irrigation, the timing is vital. We will advise on the necessity and timing of any control treatments.

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