

CLA State Roundups

Queensland – John Duff, QLD DPI & F

CLA was detected in Bayside near Brisbane on field grown lettuce in October. As a result, all restrictions on lettuce and CLA host material entering Queensland have been lifted. Surveys conducted in the Lockyer Valley of lettuce and weeds failed to detect CLA.

South Australia – Greg Baker & Tony Burfield, SARDI

CLA has been identified at several locations in SA, but numbers and spread are so far very low. Local crop consultant (Domenic Cavallaro) says that no aphids are being found by his scouts and no growers are reporting problems. Everyone is using Confidor or NR varieties (most as trials).

Victoria – Dr Paul Horne, IPM Technologies

Very little has changed in this season compared to the last. There are growers who would have gone back to using IPM but have not been able to do so because of interstate restrictions on lettuce not drenched with Confidor. Although CLA has been found in Queensland, advance orders for lettuce seedlings in Victoria mean that most lettuce here will still be drenched. In the few current crops that are not drenched, beneficial insects and an IPM approach are controlling the aphids.

NSW – Dr Sandra McDougall, NSW DPI

CLA is now throughout the Sydney basin, parts of the central coast, central west and Norfolk Island. Hay and Cooma remain CLA free.

Western Australia – Dr Sonia Broughton, DAWA

WA is still free of CLA, with sampling of lettuce for area-freedom carried out every three months.

IPM Trials

Sydney Basin – Dr Sandra McDougall, NSW DPI

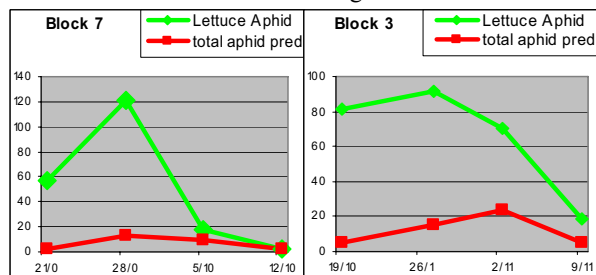
CLA arrived at Eddie Galea's farm near Camden in the Sydney basin in April 2006. He had been managing his pests with the assistance of Andy Ryland from Beneficial Bug Company using integrated pest management (IPM) principles. It has been a learning curve for both that was severely challenged by CLA. At the time, they had not realised that this was among the first Australian lettuce crops to be grown through winter using IPM to control CLA.

Eddie had been spraying the aphids with Pirimor® and Chess® hoping the beneficial numbers would build to assist in managing the rapidly expanding CLA populations. Unfortunately the beneficial numbers did not increase until the warmer conditions in spring. Eddie and his father Felix were harvesting and selling their lettuce, however the extreme CLA numbers in the 8th and 9th plantings meant much was ploughed in. In subsequent plantings CLA

numbers were still high but not nearly as bad and harvesting resumed. CLA numbers were highest closest to the farm road and furthest from the bushland.

The project began monitoring at Eddie's in his 17th planting. The trial/demonstration planting had a single Chess® spray prior to hearting. Just prior to harvest, temperatures began warming up and the hoverflies or Syrphids arrived and the larvae began eating with a vengeance. However they could not eat quite quickly enough and the harvest assessment had close to 300 aphids per lettuce! The aphid predators did succeed in cleaning up the lettuce in the following couple of weeks; however the lettuce was too mature to market.

A series of field days were held at Eddie's to follow the last of his CLA susceptible lettuce plantings through to harvest. Dr Paul Horne attended the first on Thursday 12th October and last on 9th November. The graphs below show the high numbers of CLA and then their decline over the last weeks before harvest. Seeing the high numbers of aphids in the crop was horrifying for many of the attendees at the field days and equally pleasing to watch their decline over a number of weeks and to see clean marketable lettuce at the end. NB. 3 of 30 harvested lettuce had 100-200 CLA/lettuce and the other 27 averaged 3.5 CLA/lettuce.



The lessons learnt are:

1. Beneficials do not come into the crop over winter. It is possible that cereals planted in early autumn may have attracted cereal aphid and allowed for beneficials to build up prior to the cooler months. These could then have moved into the lettuce to feed on CLA.
2. Spray applications need to be well targeted and properly applied. Insecticide application could be improved so that both of these products could achieve better results. Pirimor doesn't work well in cold conditions, and Chess works best if it can stay wet for a while hence applying after irrigation was most effective.
3. Cultural management and particularly removing weeds around the blocks could have prevented or slowed pests such as vegetable weevil and thrips from moving into the crop and then avoided the application of insecticides which probably slowed the build up of beneficials in the earliest warmth of spring. Similarly, weed control is a major factor in controlling thrips and tomato spotted wilt virus.
4. There is a learning curve when adopting new practices.

IPM Trials

Adelaide Plains — Greg Baker & Tony Burfield, SARDI

Victorian IPM consultant Dr Paul Horne recently visited two SA farms and gave a talk to lettuce growers at the VHC on IPM and lettuce aphid.

Paul explained the cycle of crop-pest-beneficial insect relationships with control really kicking in the last two weeks. While Paul affirms that there is no 'chemical comeback' at this late stage he has great confidence in IPM in lettuce for CLA. Paul advised that it is possible to shift the crop location at about 6-7 weeks to avoid a build up of aphids on older plantings becoming an excessive threat to new crops. After a short break (approx 4 weeks) to allow the beneficial insects to clean up on the older crops planting can resume and populations of beneficial insects should stabilise at an effective level. This is an untried approach that could be used by SA growers wanting to avoid the regular use of confidor drenches. The only way to test this approach is with regular (weekly) crop monitoring.

One grower will be hosting trials of two IPM strategies involving compost soil amendments and native vegetation. Compost will be added at the rate of 10, 25 and 50m³/ha to assess the impact on populations of predatory mites and plant health. A modest area of selected native vegetation will also be established adjacent to the cropping area to evaluate its impact on population levels and movement of flying beneficial insects (lacewings, ladybirds, hoverflies etc.). If either of these strategies are seen to have a major positive effect on populations of beneficial insects they will be implemented on a larger scale in the following season to determine their contribution to pest control, especially of aphids (CLA) and thrips (WFT). Unfortunately a second interested grower withdrew from trials due to concerns by his buyer.

Crop Management for Shelf-Life Training

An interactive training day is proposed and will be run by staff from Applied Horticultural Research in 10 regions across Australia. The course will present the research findings from a Horticultural Australia funded research project looking at optimum lettuce crop management to ensure maximum quality and shelf life. Each participant will receive a booklet summarising the key results from the project presented on the day.

The proposed training will occur as follows:

- March [Gatton, Hay]
- May [Cowra]
- June [Gippsland, Melbourne]
- July [Perth, Virginia]
- August [Stanthorpe, Sydney]
- September [Davenport].

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Downy Mildew

Dr Sandra McDougall, NSW DPI

Recently new strains of Downy Mildew (*Bremia lactucae*) have been found in the Sydney basin and in Melbourne metro areas highlighting that Downy Mildew has the ability to mutate and recombine to form new strains that may affect previously resistant varieties. At present the varieties that are DMR 1-25 resistant are still resistant to the new strains, however some of the older varieties with only partial DMR coverage are susceptible.

To minimise development of new forms of Downy Mildew it is recommended to monitor and treat with a curative and protective fungicide at first signs of Downy Mildew in the crop.

If you have a DMR variety and find Downy Mildew in your crop it is recommended that you contact your seed company or the project team about how to collect a sample for analysis.

See the lettuce variety resistance update (October 2006) at www.agric.nsw.gov.au/reader/culant-lettuce-aphid

Recent Reports to Download

Lettuce IPM Survey — Kathryn Bechaz, NSW DPI

A telephone survey of lettuce growers was conducted in April and May 2006. The aim of the survey was to ascertain the current pest management strategies of lettuce growers and to determine their level of uptake and understanding of (IPM). Lettuce growers from Tasmania, Victoria, NSW, SA, QLD and WA were surveyed.

Lettuce IPM Consultants Survey — Virginia Brunton, NSW DPI

Information was sought on how to best deliver support to agricultural consultants that would enable them to support the development of IPM skills among their clients. A telephone survey of consultant for the vegetable and lettuce industries was conducted in July 2006.

The survey questions were designed to elicit information on the skills and confidence levels the consultants may have in the three main aspects of IPM support; ability to identify problems at hand, providing suitable recommendations and providing information about the use of biocontrol agents.

Tasmanian IPM Report — Lionel Hill, DPI WE

A 45 page report is available on the 2005/06 lettuce IPM demonstrations/trials conducted by Lionel Hill. The trials were conducted on commercial plantings of baby leaf and head lettuce in southern Tasmania.

Lettuce Variety resistance update

An updated table is available which lists those commercial lettuce varieties which are resistant to CLA and their Downy Mildew resistance status.

Electronic copies are available from:

www.agric.nsw.gov.au/reader/veg-lettuce
www.ausveg.com.au

Printed copies can be sent, contact Robyn Troidahl
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