Issue No. 29 **Lettuce Leaf** July 2007

National Vegetable Industry Centre Newsletter

Weeds, weeds … gone

How many times have you heard that weeds need to be cleaned up around hydro tables or greenhouses and thought that you just don't have the time?

Weeds just regrow and it is a difficult job to keep on top of them especially when they are growing fastest when you are also busiest. The Revegetation by Design project in SA may have the solution.

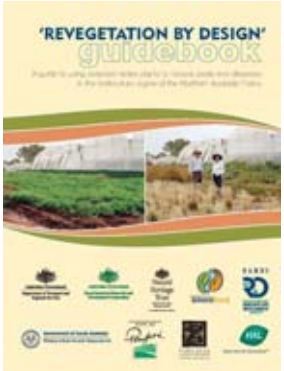
The concept is simple: plant hardy native perennial plants in the areas colonised by weeds. These establish, out-compete weeds and weed management is no longer necessary. The ideal species are ones that are not sources of pest insects or hosts of crop plant diseases, ones that are sources of Beneficials and in some situations plants that can tolerate some vehicle access. Then instead of the weeds contributing to the influx of pests and diseases such as TSWV they can be a source of beneficials to assist in pest management.

The Revegetation by Design project over 3 years has screened suitable species for the Northern Adelaide Plains. They have produced a guidebook that gives practical information on the selected grasses, saltbushes, an acacia, eucalypt and kunzea. Information includes the insect pests found on these species, relative numbers of WFT compared to Brassica weeds, whether they are TSWV hosts or not and costs of establishment compared to costs of keeping the area bare.

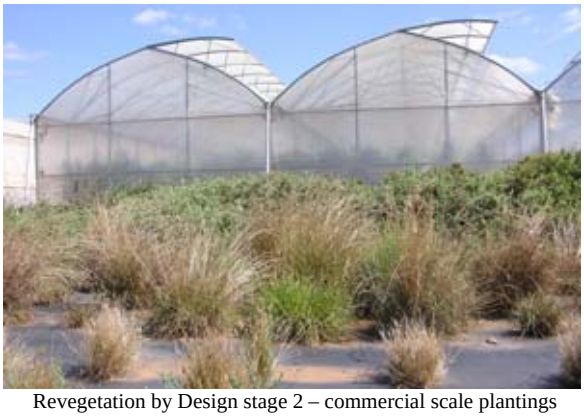
Further work establishing commercial scale plantings is underway as well as more detailed studies on whether WFT can breed on the selected plants. The original project leader Nancy Schellhorn of the Revegetation by Design project in SA is now leading a larger project based in the Lockyer Valley in Qld. looking at revegetation in field cropping situations that has both pest management and natural resource management benefits.

Although the project work is focused on the Northern Adelaide Plains and the Lockyer Valley the approach will have potential for all lettuce production areas. The suitable species for other areas may not be exactly the same but they are likely to be similar.

In the mean time enjoy the benefits of fewer thrips infesting and less chance of TSWV entering your crops by keeping annual weeds controlled. Reducing the source of infection/infestation is the basis for good crop protection.



For more information and a PDF copy of the guide book go to: www.sardi.sa.gov.au and follow the links Entomology – Horticultural Pests – Revegetation by Design.



Revegetation by Design stage 2 – commercial scale plantings

Glenys Wood (Project Leader) and Dino Musolino (Grower) speaking to University students about the Revegetation trial at Dino's.

Students studying CLA

Brendan Langfield is an honours student based at the University of Sydney. He will determine survival and reproductive rates of CLA on three endive cultivars, three petunia cultivars and three weed hosts. Tests will be conducted in a temperature controlled glasshouse at the University of Sydney.

Craig Feutrill has just begun his PhD studies on the movement and spread of CLA. This project is funded as part of the Biosecurity CRC. Craig is based at the University of Adelaide and will be investigating local movement, rates of development, and methods of dispersal of CLA

New Permit

PER10095 – Ridomil Gold 25G (metalaxyl-M) / field planted lettuce / Damping off [*Pythium* and *Phytophthora*)
Valid 22/6/07 to 30/6/09 All states
http://www.apvma.gov.au/permits/permits.shtml

IPM Case Studies

To understand in more detail why some growers adopt IPM and others don't a small number of case studies have been conducted as part of the Lettuce IPM project. The aim is to give a voice to IPM and non IPM growers about their choices for pest management strategies. Interviews were conducted by project team members from NSW DPI based at Yanco Agricultural Institute.

IPM or not in Cranbourne, Victoria

Adelle Dunn, NSW DPI

Paul Gazzola is an IPM grower, Glenn Favero is a non-IPM grower, and both grow lettuce in the Cranbourne area of Victoria. Here is a summary of why they choose to manage their pests in the way they do:

Paul Gazzola of Gazzola Farms P/L is an IPM grower who adopted the strategy 6 years ago with the help of Paul Horne a consultant from IPM Technologies Pty Ltd in Melbourne. The Gazzola family farms are located in Sommerville and Boneo on the Mornington Peninsula where they produce Iceberg and Cos lettuce for the fresh and processing domestic markets.

Glenn Favero is a conventional lettuce grower from the Cranbourne region where he produces cos and iceberg lettuce for the fresh domestic markets.

There are many similarities with the management techniques used by the two growers. Both growers use crop scouting to inform spray application decisions, both rotate with soft and biological chemistry, both choose resistant varieties where possible and use crop rotation planning and farm design tools to increase their overall viability and productivity.

Where they differ is that Glenn includes use of the older broad spectrum chemistries. These also kill beneficial insects therefore conflict with a biological IPM strategy. Glenn had previously participated in a celery IPM project but discontinued after he experienced two crop failures due to cutworm. He felt the IPM strategy could not control his cutworm problem because it did not include older chemistries. Glenn is now 100% happy with his current pest management strategies.

Paul utilises the expertise of a local IPM consultant who monitors for beneficial and pest insects and makes suggestions on how he might encourage beneficial populations on his farm, such as planting specific nursery crops.

Paul's family adopted the IPM management system because they saw it as a very good alternative for reducing costs. At the time he first adopted an IPM strategy he had a heliothis problem that he was finding hard to control conventionally. Paul has found IPM to be a much easier system to manage than conventional methods. He defines IPM practices as management methods using all available means to get the best outcome. Paul sees that there are many good reasons to go towards IPM including potential cost savings and decreased environmental and health impacts.

He can also see a lot of reasons why people don't choose to grow under IPM management systems i.e. growers believe that their current control is adequate and hence "why change if I don't have to". Coupled with this is the fact that non IPM growers perceive that adopting IPM is too complicated and risky due to the lack of consultant support available (this would be a particular problem for growers in some areas), lack of soft chemical options, the additional risks of secondary pests, possibilities of poorer quality product and the exclusion from markets due to regulations. Crisis situation pest control failure is also another important factor that he feels may discourage some growers from taking on the IPM management system.

IPM Success Story

Adelle Dunn, NSW DPI

Darren Schreurs of *Peter Schreurs & Sons*, Devon Meadows, Victoria has been operating their farms on an IPM system since 2000. Darren and his family decided to make the shift to IPM after they experienced an insecticide resistance issue with two spotted mites in their leek crop. Prior to the conversion they had a strict weekly chemical application program in place. When consultant Paul Horne began advising Darren his first move was to recommend that insecticide spraying should cease in order to enable a build up of predatory mites. Darren said that "in four weeks there was not a two spotted mite to be seen".

The main insect pests that the Schreurs' have had to deal with in their lettuce crops are lettuce aphid and heliothis. Other insect pests that have been of minor importance are Rutherglen bug, slugs/snails, redlegged earth mite, earwigs and leafminer.

The insecticides that he regularly uses include: Xentari®, Delfin®, Pirimor® and Chess®. Darren keeps Avatar® and Proclaim® as clean up chemicals. Because they are rarely used the risk of heliothis developing resistance is low. Darren relies on crop monitoring to indicate when the best time to spray. Darren said "…..you can't beat being out in the crop and monitoring."

Since adopting an IPM strategy they have observed reduced chemical and diesel costs, an improvement in marketable yield but also decreases in labour costs. They've also seen reduced OH&S concerns as well as decreased residue issues. The Schreurs are very happy with the conversion to IPM, and believe that their quality as well as profitability has increased following the changes.

Further articles relating to these case studies and ones conducted in Central Western NSW, including the economics will be in future Lettuce Leaf issues.

IPM Demonstration Growers Wanted

Contact Sandra McDougall if you are interested in cooperating in an IPM Demonstration/Trial

"This project is facilitated by HAL in partnership with AUSVEG and is funded by the National Vegetable levy. The Australian Government provides matched funding for all HAL's R&D activities." For editorial comment contact: Sandra McDougall, NSW DPI, Ph (02) 6951 2728, Fax (02) 6951 2692
email- sandra.mcdougall@dpi.nsw.gov.au www.agric.nsw.gov.au/reader/vegetables