



SERVE-AG RESEARCH

Newsletter

October 2003

Regional Highlight NW Tasmania

"A window of opportunity for late season trial work"

North West Tasmania grows a diverse range of annual crops, with a number of fresh market and processing companies based there. After a particularly wet August / September crop plantings are now in full swing. Crops such as poppies, onions, brassicas, barley and processing peas are still being sown in some areas. Growers are also busy planting processing potatoes and carrots at the moment, with summer crops such as beans and cucurbits still to be planted.

Some common pest / disease problems facing growers in the coming season are listed in the following table.

Due to later timings of some crops in Tasmania, relative to the major production regions in mainland Australia, we may be able to conduct 'late season' trial work in a wide range of crops. Contact Phillip Frost at the Devonport Office +61 3 6423 2044 pfrost@serve-ag.com.au if you've missed your window of opportunity on the mainland, and want to look at getting some late season work done on the NW Coast.

Crop	Pest / Disease
Beans	Sclerotinia
Broccoli, Cabbage, Cauliflower	Diamond Back Moth
Carrots	Sclerotinia
Cucurbits	Downy Mildew
Grapes	Botrytis Powdery Mildew
Poppies	Downy Mildew
Potatoes	Rhizoctonia Irish Blight Target Spot
Onions	Botrytis Downy Mildew Thrips
Spring Barley	Various foliar diseases Army worm



Broadening Horizons in Broadacre Research

It's not often that we get aerial shots of trial sites, but this one is thanks to Barry Kerr (Skyworks Victoria, 0418 681 891). Barry took this while ballooning over Katamatite, Victoria. This broadacre demonstration site is one of three that Serve-Ag Research planted in early spring. Other sites are located at Koonoomoo near Cobram, Victoria and near Walla Walla, SE NSW.

These demonstration sites exhibit wheat, barley and legume variety trials, fodder crop comparisons, and legume disease

management trials. They are testimony to the agronomic expertise of Serve-Ag's principal broadacre researcher, John Seidel. John has collaborated with Malcolm Taylor (Agropraisals Pty Ltd) in establishing these trial sites.

If you would like further information about broadacre research at Serve-Ag Research, please contact John Seidel +61 2 6029 2381 jseidel@serve-ag.com.au or Greg Barnes + 61 3 5825 4783 gbarnes@serve-ag.com.au.



Regional Highlight Western Australia

"From the bowling green to the vineyard"

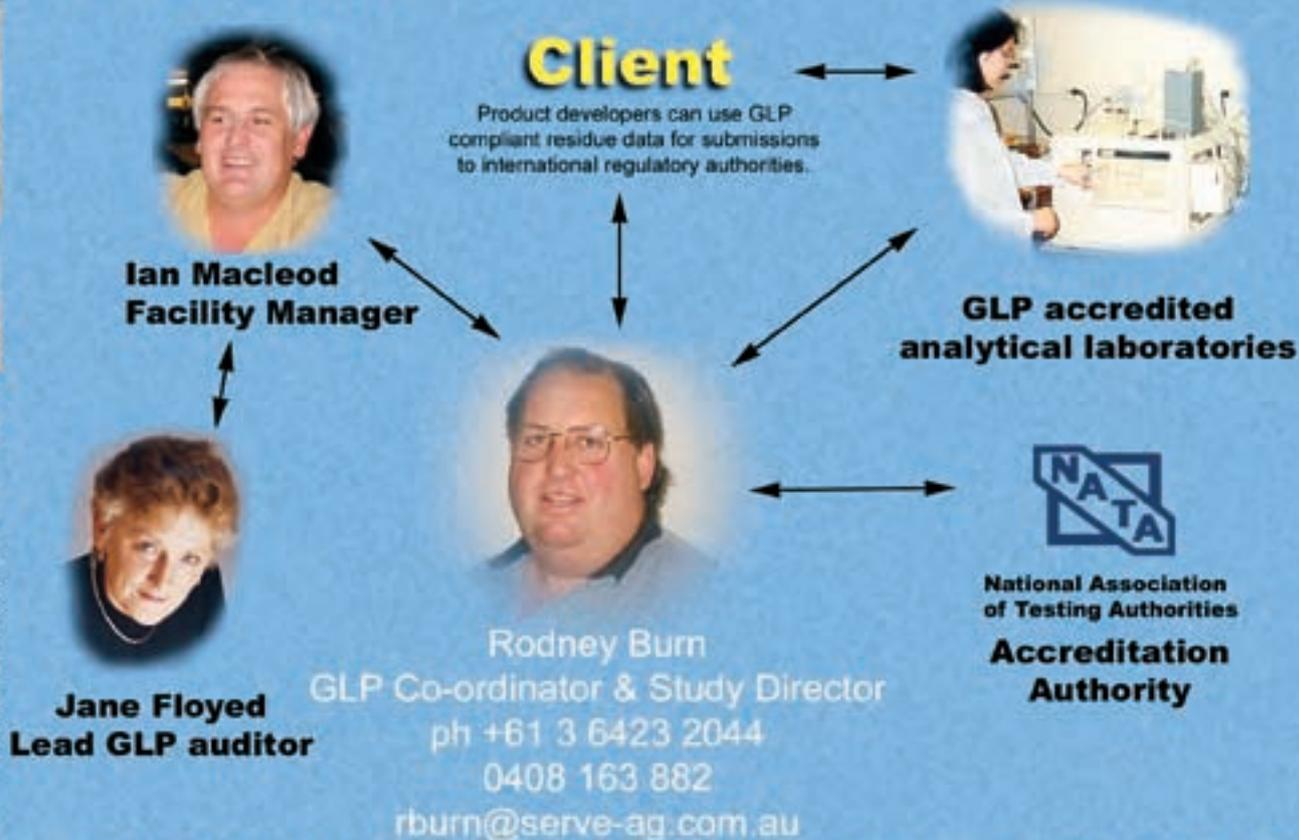
Serve-Ag WA is another Serve-Ag Research branch with access to a diverse range of crops. Mark Sumner, Serve-Ag WA Manager, has indicated that the following insect and disease pressures will be important in the coming months.

If you have suitable candidate products for inclusion in screening trials, or if you are looking for trial sites in Western Australia, please contact Mark Sumner +61 8 9367 1107 msumner@serve-ag.com.au.

Crop	Pest / Disease
Turfgrass	Cutworm African black beetle larvae Summer weeds Dollar spot (bent grass)
Grapevines	Powdery Mildew Botrytis
Cabbages	Diamondback moth

The GLP Team at Serve-Ag Research

Good Laboratory Practice is an internationally recognised quality assurance system for conduct of agricultural residue studies. The essence of GLP is excellent communication between all team members



National network of researchers conducting field trials compliant with OECD principles of Good Laboratory Practice. Lead auditor co-ordinates regular audits at all locations.





Crop focus - Cotton

The latest estimate for the 2003-2004 cotton season is:
80,000 hectares of irrigated cotton
20,000 - 40,000 hectares of dryland cotton

At the very best, total area may reach 150,000 hectares.

To think that only a few years ago the total area was close to 500,000 hectares!

In this time, the industry has seen relatively low heliothis activity, the introduction of Ingard® cotton and the rapid adoption of Integrated Pest Management practices that have tended to be most effective when used in an Area Wide Management plan. This has resulted in quite dramatic reductions in insecticide usage. Chemical suppliers to the cotton industry have needed to continually appraise the level of product support and development. The introduction of Bollgard® may see further reductions in heliothis insecticide use.

Brainteasers

1. A woman shoots her husband. Then she holds him under water for over 5 minutes. Finally, she hangs him. But 5 minutes later they both go out together and enjoy a wonderful dinner together. How can this be?
2. Can you name three consecutive days without using the words Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, or Sunday?
3. What is black when you buy it, red when you use it, and gray when you throw it away?

Answers

1. The woman was a photographer. She shot a picture of her husband, developed it, and hung it up to dry.
2. Yesterday, Today, and Tomorrow!
3. Charcoal

Why should companies keep developing products for cotton in Australia?

- The peak area of 500,000 hectares was attained when both cotton prices (\$AUS) and water allocations were high. These conditions can return with subsequent increases in area. The total market for chemicals will also increase, albeit a different mix of products.
- The basis of heliothis control is now Ingard® and this technology has underpinned the success of IPM. The industry needs alternatives for resistance management and of course a 'plan B' range of products for use in Integrated Pest Management systems. Companies have responded to market demands and the newer pesticides are more compatible with other IPM control measures such as the use of beneficial arthropods.
- Is the industry now experiencing abnormal seasons for heliothis or normal seasons under a different growing regime?
- The occurrence and levels of other pests appears to have increased with new growing methods. Pests such as mirids and green vegetable bug, incidentally controlled in the past with heliothis applications, are accumulating to damaging levels within the crop.
- Australia is a leader in cotton research. Development of product recommendations for the Australian cotton industry contributes to worldwide product knowledge, particularly the advanced cotton growing countries with similar problems.
- Are there markets for new or increasing problems in cotton? Disease control is becoming critical for some farms. The dry seasons have demonstrated the actual losses that do occur through boll rots in 'normal' summer rainfall seasons. Are there opportunities for products to minimise boll rots when 'normal' seasons return?



- There remain stable markets such as defoliant and some dressing components.
- The introduction of GLP residue trials means that data can be utilised in other countries for registration purposes. In some companies, the international significance of this data for a similar use pattern means the costs can be shared with the parent company or with other subsidiaries. An additional bonus is the data in Australia can be produced during the northern hemisphere winter. The result is two seasons of residue data produced in about one calendar year.

Serve-Ag Research is committed to assisting companies in producing data and information that leads to product registrations. Many Serve-Ag Research operators have worked for supply companies and understand what needs to be achieved by the client. Mike Hanlon +61 7 3843 4878 mhanlon@serve-ag.com.au co-ordinates project management at Serve-Ag Research. He is a good starting point if you wish to discuss integrated product development research.



New Turfmaster with Serve-Ag WA

The Serve-Ag WA turfgrass expertise has recently been greatly enhanced with the addition of Grant Chettleburgh to the team. Grant has worked at Sun City Country Club for the past seven years, spending the last four years as Course Superintendent. Grant's qualifications are in Turf Management where he also won an Apprentice of the Year award.



The Good, The Bad and The Ugly

Good: Your wife is pregnant.

Bad: It's triplets.

Ugly: You had a vasectomy five years ago.

Good: Your wife's not talking to you.

Bad: She wants a divorce.

Ugly: She's a lawyer.

Good: Your son is finally maturing.

Bad: He's involved with the Woman next door.

Ugly: So are you.

Good: Your son studies a lot in his room.

Bad: You find several porn movies hidden there

Ugly: You're in them.

Good: Your husband understands fashion.

Bad: He's a cross-dresser.

Ugly: He looks better than you.

Good: You give the "birds and bees" talk to your daughter.

Bad: She keeps interrupting.

Ugly: With corrections.

Good: Your son is dating someone new.

Bad: It's another man.

Ugly: He's your best friend.

Turfgrass Research or "A day on the golf course"?

When staff at Serve-Ag WA are asked "Do you want to spend a day on the golf course?" They know they are more likely to be swinging on the end of a hole corer than a golf club, yet they are always keen to work in the pleasant surrounds of a golf course.

One current project is looking at the control of adult African black beetles (*Heteronychus arator*) and is being carried out on two fairways at Melville Glades Golf Club. The beetles have a one year life cycle and overwinter as adults. The adults become active in late winter and lay their eggs in September and October. Female African black beetle lay about 20 eggs, and previous research shows that about 11 survive to pupation. The eggs develop through 3 instar or larvae stages during the October - January period followed by pupation. Young adults emerging from pupation appear in February, and are very active. These young adults fly and are attracted to lights, making them a particular problem for sports turf where night lighting is used.

Damage by African black beetles to home lawns and sports turf can be done in a number of ways. Adult beetles dig in and out of the soil, leaving mounds of sand that disrupt playing surfaces and cause scalping by lawn mowers. These adults may also be visually unacceptable. Larvae cause physical feeding damage to plant roots, increasing stresses such as water and nutrient stress. Larvae are also predated by birds, who can disrupt and damage turf surfaces by digging for beetle larvae.

There are a number of stages in the African black beetle annual lifecycle in turfgrass where they can be targeted for control. For example, the adults can be targeted as they emerge from over wintering and before they lay their eggs, larvae can be targeted in spring, or new adults emerging

from pupation can be targeted in late summer and autumn. Current research by Serve-Ag WA is looking at the effectiveness of controlling the beetles at these various stages, and finding the most effective fit for a number of insecticide candidates. The control of other pests such as cutworm (*Agrotis munda*) with similar treatments is also being investigated. During November and December insecticide trials will be set up to screen a range of insecticides for the control of African black beetle larvae and cutworm.

Melville Glades Golf Club has provided much assistance with the current research. Superintendent Brad Sofield is keen to support research and his committee and members are also very supportive. The golfers see the activity on the fairways and are always very inquisitive. When they discover that the research is into the control of African black beetle they usually want to chat about it, and often ask how to control the pest in their home lawns, as it is a pest that many people are familiar with in Perth.

Product development in turfgrass has always been a significant and growing part of the research carried out by Serve-Ag WA. The team in Western Australia is currently working on a number of projects in turfgrass that includes the development of insecticides, fungicides, herbicides and nematicides. Manager Mark Sumner has worked in turfgrass product research and development for over twenty years.





PEOPLE FOCUS - *Girls getting the work done!*

Good technical people are the basis of any research organisation. We've got some fantastic technical people at Serve-Ag Research. In this issue we would like to sing the praises of two of our hardest workers in the Devonport Branch. Pam Cox and Susan Cross are two of the most diligent and friendly technical officers you could ever hope to meet.

Pam's Story

27 Years of Experience in Agricultural Industries

Pam has been involved in the agricultural industry in one way or another for the past 27 years, from picking and packing bananas in North Queensland to running her own gardening business on the North West Coast of Tasmania. Pam has worked in the micro propagation area, mostly working on eucalypts and pyrethrum. Prior to joining Serve-Ag, Pam worked as quality control officer and harvest inspector for carrot and tulip production. In this job she was involved in setting up and maintaining the ISO9002 quality assurance system.

Pam has always been interested in diseases and quality problems with various crops so



while working as a quality control officer she kept her own records and observations on most paddocks that she visited. At the time, Serve-Ag Research was working on a carrot disease project and Pam assisted with collaborating information and observations - she was bitten by the research bug, and was keen to move to Serve-Ag when offered a full time job in 1997.

From carrots to truffles, corbies to downy mildew

Over the last 6 years, Pam has been involved in a diversity of projects, including carrot and pyrethrum disease surveys and local industry projects such as management of downy mildew in poppies and truffle production. She has also worked on a variety of product evaluation trials, and has a keen eye for counting mites, corbie grubs, armyworms and pest insects in brassica crops. Current projects include potato scab research, pyrethrum, truffles and evaluation of products for control of Sclerotinia in carrots and brassicas.

Being an outdoorsy girl, Pam loves fieldwork for the chance to be outside in the fresh air, and also for the camaraderie of paddock work. One of her best memories of fieldwork was a gourmet picnic lunch during a very physical potato harvest. Everyone bought a contribution to the feast, and proved that there is fun to be had in even the most mundane tasks.

A passion for the outdoors

On the weekends, Pam is still to be found outdoors, indulging her passion for camping, surf fishing, bush walking, gardening, orchids, catering and spending time with her family. Pam's jaunty little red Lada has made many trips down to the rugged West Coast of Tasmania. Pam is accompanied in all her weekend adventures by her retired racing greyhound, who is a source of much laughter.

Susan's Story

Local knowledge

Susan grew up on a mixed enterprise farm at Sassafras, NW Tasmania. After completing an Associate Diploma of Applied Science, Susan worked with a local agricultural company for 5 years doing laboratory quality assurance at their potato-processing plant. Susan worked for two summers in Serve-Ag's Analytical Sap Laboratory, with winters spent working in hospitality at The Mattaranka Homestead in the Northern Territory.

Having grown up in the area, Susan knows a lot of local farming families, and has a great relationship with local growers. A number of them are always on the outlook for practical jokes to keep her on her toes... although it's rare that Susan isn't wise to their ways!

Crop disease guru

Since joining Serve-Ag Research full-time in 1996, Susan has worked on a diverse range of projects, mostly in the area of crop disease management. She works closely with Dr Hoong Pung, Serve-Ag Research's plant pathologist. Susan has worked on disease studies in pes, potatoes, carrots, lettuce, pyrethrum, beans and broccoli - just to name a few! Susan assists in management of the Serve-Ag Research Diagnostics Laboratory, where she conducts soil nematode & onion seed tests, and assists with crop disease diagnosis.

Closet skydiver

Although she is reluctant to admit it, Susan has spent her fair share of time jumping out of planes and jumping off bungee towers. Ask her what she does on the weekends, and she will admit to enjoying spending time on her family's beef cattle farm with her many pets, bush walking, playing hockey and going to the gym.





National Network of Researchers

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