NSW Flower News

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Welcome to the second issue of Flower News – updates on research and advisory activities from NSW Agriculture plus news items of interest. Flower news is published on our website and sent to each industry association in NSW to be forwarded to members via the next mail out or included in your association's newsletter.

Research updates –
research in progress at NSW Agriculture –

Eriostemon, a new star on the world floriculture stage

NSW Agriculture, with funding from the Rural Industries Research and Development Corporation, has developed new commercial varieties of the increasingly popular *Eriostemon australasius*. With a projected annual value of one million dollars on the export market alone, eriostemon flowers are sought after in Asia and Europe. Local markets too are finding the attractive star-shaped flowers, with their long vase life and colours ranging from bright white to a very dark pink or purple, a welcome addition to the floral scene.

NSW Agriculture research horticulturist, Jonathan Lidbetter, said the release of these new varieties will create new horticultural opportunities for growers and reduce reliance on bush-picked blooms.

"Working closely with growers and exporters to select superior forms for the cut-flower trade, we were able to successfully graft onto both seedlings and cuttings of *Eriostemon australasius*. The end-result is a stunning range of varieties offering numerous new features - diverse stem characteristics, colour range, flower sizes and shapes."

Jonathan Lidbetter with one of the new forms of eriostemon he has selected.

Jonathan Lidbetter said the introduction of the new varieties would also triple the growing season with growers able to take advantage of an extended growing season from September until November. Clearly this will benefit the industry and provide the market greater access to a range of flower forms.

Researchers are now working to further improve propagation for *Eriostemon australasius*.

Contact Jonathan Lidbetter on (02) 4348 1900.

You will find a copy of the research report (in full and as a summary) on the RIRDC website – see www.rirdc.gov.au/fullreports/wnp.html

Rose and gerbera IPM group

NSW Agriculture has continued to host monthly meetings of rose and gerbera growers interested in learning more about adopting integrated pest management on their farms. The group has shortlisted key pesticides needed to maintain an effective IPM program in these greenhouse flower crops and growers will receive formal training in implementing IPM on their farms during November. The trainers are Stephen Goodwin, Marilyn Steiner and Len Tesoriero.

Nutrition trials

Dr Ross Worrall is currently doing hydroponic pot trials to look at phosphorus tolerance of Australian native Proteaceae, specifically *Telopea* (waratah), *Banksia* and *Hakea*. These plants are meant to be sensitive to phosphorus. The trial being conducted at the National Centre for Greenhouse Horticulture, Narara, is using nutrient solutions so that phosphorus tolerance levels of the test species can be finely pinpointed. So far, the plants are tolerating phosphorus levels typical for plants that lack P sensitivity, with no signs of ill effect. A parallel experiment is comparing nitrogen type and rate in the same three species.

The trials were begun in an attempt to clarify the ongoing apparent contradiction in this field, where plants like waratahs which have been classified as 'phosphorus sensitive' respond very well to often high rates of applied P. Such levels of P are within the range considered to cause toxicity problems in many P sensitive plants. On the other hand, applied P has been found to kill plants at even relatively low levels in some circumstances. This is especially true if P is applied immediately after transplanting into the field. There is also an interaction between applied phosphorus and applied nitrogen, which these trials are trying to unravel.

Flannel flowers all year round

Researcher Dr Ross Worrall reports that most growers participating in this project have now erected protective structures and planted flannel flowers in polythene bags on raised mesh benches. Already flowers are being harvested.

Mid north coast grower Brian Sundin reports that he is very happy with how his plants are performing to date. 'The plant loss rate is very low', says Brian. 'There is no comparison with our earlier efforts to grow flannel flowers in outdoor beds – these ones are better in quality and size and the Japanese market was rapt in the early shipments'.

Brian Sundin explained that several growers have pooled their efforts to purchase materials and to build the structures. 'It's been interesting that different growers in the project report different results in how their plants look and their stem length, probably due to differences in temperature and ventilation between our structures'. Brian sees a great future as a result of growers working together with NSW Agriculture to further improve quality and production methods, saying that it's great to have the help of researchers like Len Tesoriero and Ross Worrall to 'take

the guesswork out of identifying and managing diseases', a major cause of losses in this crop.

NSW Agriculture sponsors visit by visiting IPM researcher

NSW Agriculture recently hosted a three week mid year visit by Dr Karen Robb, Farm Adviser (Floriculture and Nursery Crops) with the University of California. Karen is based in San Diego County which boasts the largest ornamental plant industry (1, 500 growers) in the US. She is currently on sabbatical in Australia. During her NSW visit, Dr Robb met with researchers at Narara and EMAI, sharing her expertise in entomology, integrated pest management, environmental management and the US ornamental plant industry. She was a guest speaker at 4 grower meetings on the NSW North Coast, Orange and Sydney.

Dr Karen Robb with commercial gerbera growers at Olivieri Flowers who are members of the rose and gerbera IPM group.

Bettina Gollnow, Development Officer (Floriculture), EMAI who coordinated the visit, took Dr Robb to visit a number of commercial flower farms, including a number who are implementing IPM, as well as the Sydney Flower Market and Mt Annan Botanic Garden.

Successful 2003 What's New for Flower Growers day

The third annual update day for commercial flower growers was held at Dural on July 26 and attended by over 60 people. There were three guest speakers. Bill Yiasoumi (NSW Agriculture Irrigation Officer, Windsor) gave an overview of the basics needed to create an effective irrigation system for cut flower crops.

Vaughan Pierce from Agrihort Irrigation Systems presented a wealth of information on the latest water disinfestation technology available to growers at What's New 2003.

Dr Karen Robb (California) gave growers an insight into Californian water quality laws and explained how growers have had to adjust their environmental management or go out of business. Vaughan Pierce from Agrihort Irrigation Systems presented information about new technologies available for water disinfestation and hydroponic production.

The event was a joint activity of Bettina Gollnow (Development Officer, Floriculture, NSW Agriculture and Alan Merriman (Organic Fertilisers) and was also well supported by a number of trade exhibitors.

Central West Flower Industry Association meeting

NSW Agriculture's Len Tesoriero and Bettina Gollnow joined visiting US extension specialist Dr Karen Robb at a meeting hosted by the Central West Flower Industry Association in Orange on August 9 and 10. The topic was effective and legal pest and disease management. Len Tesoriero spoke about diseases of wildflowers and their

control while Bettina Gollnow talked about legal use of pesticides and explained how to use Infopest to find out what is available for you to use for a particular pest or disease problem. There was also a field visit to two wildflower plantations in the region.

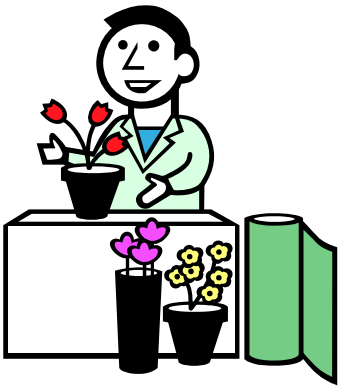
2004 Wildflower Conference

Planning is well underway for the next annual meeting of wildflower growers which will be held over the weekend of February 28 and 29, 2004. As in previous years, the focus will be on issues of concern to established industry members rather than prospective growers, and will include South African species as well as Australian native crops. For the first time, this meeting will be held in Coffs Harbour, allowing new farms to be visited and offering extended airline services via Virgin Blue.

The industry meeting on February 28 will include sessions on 'Back to basics' (covering water reforms, frost management, crop health and pesticides), 'Market review of the 2003 season' and 'New ideas' where current research and crop development programs will be highlighted. The farm tour on the following day will visit several commercial wildflower farms to see a range of crops in production. Registration details will be available shortly – if you are interested, please contact the Editor.

Tubb Farm at Coffs Harbour will be one of the farms featured on the farm tour. This farm grows a wide range of species native to Australia and South Africa.

Upcoming events:



Saturday February 28 and Sunday February 29, 2004.
NSW Agriculture Wildflower conference (6th Annual meeting of NSW wildflower growers). Coffs Harbour.

April 3-7, 2004.
12th International Protea Conference, Melbourne.

The 2004 IPA conference is co hosted by the International Protea Association, the Australian Flora & Protea Growers Association and the International Protea Working Group. The theme of the conference is 'Competing, cooperating and caring'.

This conference coincides with the 7th International Protea Working Group Symposium and the Melbourne International Flower & Garden Show.

More information is available from Conference Strategy Pty Ltd,
PO Box 1127 Sandringham Vic.3191
Phone: 03 9521 8881 or see
www.wildflowersaust.net/conference

Saturday July 31, 2004
What's New for Flower Growers 2004. Dural Country Club, Sydney. The theme for 2004 is 'What's new in postharvest care?'

Pesticide news

New law for training people who use pesticides in their work.

The NSW EPA has announced new rules from September 1 2003 under the Pesticides Act 1999 that make training compulsory for commercial users of pesticides. In summary, the new law says:

- People who use pesticides in their business or as part of their job must be trained in how to use those pesticides.
- You must not employ or engage a person to use pesticides unless that person is trained.
- A person who is 'trained' has a qualification that shows they have achieved a specific level of competency in pesticide use.
- Someone who has already done Farmcare, ChemCert or SMARTtrain training is already qualified.
- People who do not have the required qualification have 2 years to get trained or have their current skills recognised.
- People who are qualified have to be re-assessed every 5 years.

What sort of training is needed? Training is required in the use of all types of pesticides, including herbicides, insecticides, fungicides, bactericides, baits, lures and rodenticides (rat poison).

There is a range of training available to suit all types of pesticide users. In most cases the training involves a two-day course, based on the National Agriculture and Horticulture Training Packages. You can also become qualified by demonstrating to a registered training organisation that you know how to use pesticides in your job or business.

More information on training courses, providers and assessors is available on the EPA's website at **www.epa.nsw.gov.au/pesticides/trainers.htm** or by calling the EPA's Pollution Line on 131 555.

If you need help to organise training, please contact Bettina Gollnow.

APVMA suspends benomyl
The Australian Pesticides and Veterinary Medicines Authority has suspended the fungicide **benomyl** from October 20, 2003 until April 20, 2004. The reason for the suspension is concern that exposure by women of child bearing age to benomyl may result in birth defects. Benomyl is currently marketed as Farmoz Marvel Fungicide. This has no ornamental crop use patterns on the label but as some growers may still have older stocks of this fungicide, we have included this information in 'NSW Flower News'.

During the suspension the APVMA will re evaluate the existing toxicological data in relation to the reproductive risk, together with other OH&S risks, and the adequacy of the label Safety Directions.

While benomyl is suspended, it is still legal to use existing stocks. Suppliers such as resellers are required to provide to users a copy of the MSDS and a warning statement 'contains benomyl which causes birth defects in laboratory animals. Women of child bearing age should avoid contact with benomyl'.

As a grower, you need to have in your workplace an MSDS for hazardous substances such as benomyl and to make the MSDS available to anyone likely to be exposed to benomyl in the workplace. This is a requirement under the OH&S Regulation of 2001 of the OH&S Act 2000.

To avoid potential liability, it would be advisable that females of child bearing age not apply benomyl, not enter or harvest crops where benomyl has been applied, and not handle produce where benomyl has been applied as a postharvest dip.

Wildflowers NSW meeting held at Port Macquarie

wildflowers/nsw

Representatives of five of the eight member groups which make up Wildflowers NSW, the state peak body for the wildflower industry, held a one day meeting in Port Macquarie at the end of October. The meeting was chaired by grower Gordon Dick, and supported by Bettina Gollnow, Greig Ireland and Ross Worrall from NSW Agriculture.

A highlight of the meeting was discussion led by Alison George, national president of Wildflowers Australia (formerly the Australian Flora and Protea Growers Association) about the need for a national peak industry body.

Attendees at the recent Wildflowers NSW meeting were (back row, from left) Brian Sundin (Native Flower Growers Association, Mid North Coast), Jeff Eggins (Coffs Harbour Flower Exporters), Greig Ireland (NSW Agriculture), Terry Flanagan (Grandiflora Growers), Norm Pilgrim (Waratah Industry Network), Olga Blacha (Australian Native Flower Growers & Promoters), Gordon Dick (Chairperson, Wildflowers NSW), (front row, from left) Pat Sundin (Native Flower Growers Association, Mid North Coast), Bettina Gollnow (NSW Agriculture, Secretary), Alison George (Wildflowers Australia), Jonathan Steeds (Australian Native Flower Growers & Promoters). Ross Worrall was behind the camera.

Industry input into an upcoming meeting with the NSW National Parks & Wildlife Service about its Native Flora Management Plan through an industry consultative committee was also discussed. New group projects aimed at developing a NSW wildflower industry R&D plan and producing commercially relevant crop standards were proposed. Bettina Gollnow tabled her preliminary analysis of pesticide surveys received from growers, sorted according to pests and diseases crop by crop. The meeting also refined the draft constitution for Wildflowers NSW.

The group set the following industry goals for the 2003-2004 year:

- Develop a NSW industry research & development plan which will link with the national RIRDC R&D plan
- Complete the industry pesticide use survey and apply for any

permits required (more grower inputs are needed to progress this project)
- Complete registration of the name and logo of wildflowers NSW (see image above) as a trademark (an application has been filed by NSW Agriculture for and on behalf of the State of NSW)
- Maintain on going dialogue with agencies like NPWS and state land and water managers
- Develop a budget and funding model for Wildflowers NSW
- Collect data on the industry (such as grower numbers)
- Develop commercially relevant crop standards
- Finalise the Wildflowers NSW constitution
- Publish a calendar of events covering activities of all member groups

Growers are encouraged to talk to their group representative on Wildflowers NSW about current and future topics that the group addresses on behalf of the NSW wildflower industry.

What's new in publications

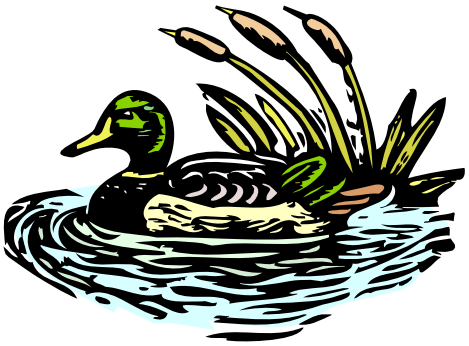
- *Agfacts*

'Aquatic weed control in small dams and waterways' by Bob Trounce. Agfact P7.2.1. (go to **www.agric.nsw.gov.au/reader/2100** to download your copy)

'Farm water quality and treatment.' 8th edition, by A. Awad. Agfact. (go to **www.agric.nsw.gov.au/reader/3825**)

- *New books*

'Managing waste water with a wetland' is a new book available free to growers from NSW Agriculture. Written by protected cropping specialist Jeremy Badgery Parker, the book gives growers a wealth of information about how to prepare their greenhouse or market garden for a sustainable future by managing waste water appropriately. Waste water is the water that drains away from your production area. It may contain a high level of nutrients especially phosphorus and nitrogen, some sediments and even plant pathogens. Nutrients and sediments in the waste water can affect the environment, clog and corrode irrigation equipment and damage crops.



While a wetland waste water treatment system is just one option available, it is a simple relatively low cost and convenient way of managing waste water. Combined with good farm planning and landscaping, a wetland adds to the biodiversity and aesthetics of your farm as well as proving a source of reusable water.

The book has details of how wetlands work, and how to design and build a system, and there are many useful diagrams and sample calculations to help you.

If you would like a copy, please contact Bettina Gollnow at NSW Agriculture.

'Constructing a reed bed to treat runoff water' has been written by John Dirou, Tom Headley, David Huett, Gordon Stovold and Leigh Davison. The book explains how a reed bed works, and tells you how to construct your reed bed. There is also advice about reed bed operation and maintenance. The book is the result of a project sponsored by the NSW

Agriculture's Centre for Tropical Horticulture, Alstonville and the Southern Cross University School of Environmental Science and Management. It was funded by the Nursery Industry and Horticulture Australia. Copies (free) are available from John Dirou, PO Box 72, Alstonville NSW 2477, phone (02) 6626 2435.

- *On the web*

An addition to the series of publications already published on the Departmental website, is **'Growing Australian native flowers commercially'**. The authors Bettina Gollnow, Jonathan Lidbetter and Dr Ross Worrall cover the development of the Australian native flower industry, with a focus on the NSW industry. A range of crops grown commercially in NSW are profiled. Also published recently is the second edition of the agnote **'Growing Blandfordia (Christmas bells) commercially'** written by Bettina Gollnow, Gordon Dick and Paul Dalley.

Go to www.agric.nsw.gov.au, then 'horticulture', then 'flowers and ornamentals' or contact Bettina Gollnow if you would prefer a print copy mailed to you.

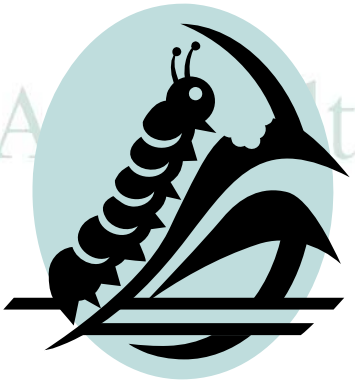
NSW Agriculture bookshop
For details of publications available to download or buy, see NSW Agriculture's website – go to the 'News and media' icon, then choose 'Bookshop'.

New industry magazines launched
Australian Flower Industry Magazine made its debut with its September 2003 issue. It aims to provide cut flower and foliage growers, propagators, wholesalers and allied industry traders with practical and up-to-date information about the industry. The magazine will be published 4 times a year. To subscribe, please contact the editor Shane Holborn, PO Box 327, Cleveland Qld 4163, phone 07 3824 9516, fax 07 3286 3094.
Also launched this spring was ***Irrigation and water resources***, a new quarterly magazine from Rural Press. Contact the Subscriptions Department, PO Box 999, North Richmond NSW 2754, phone 1300 131 095.

Doing your own on-farm trials

(some food for thought from Tony Wells and Bettina Gollnow)

Why would you as a grower do your own experiments? There are many reasons - to solve problems, to take local conditions into account, because there are fewer public resources for research and development, to build your knowledge and understanding, to improve your overall management, to give you more control over your production.



Rest assured, the effort is worthwhile and you may find some unexpected treasures along the way. Even a 'quick and dirty' experiment will give you new insights.

Why wouldn't you do you own experiments? Again, there are many reasons, from being too busy, to having too many other things to think about, to a lack of land, money or other resources, a lack of technical know how or a fear of the risks of doing it.

How do you do it?

- decide what to test – what is the 'problem'?
- decide what to measure – you could count something, weigh something etc – in preference to judging results by eye
- locate several trial areas that you can compare and make sure they have healthy plants in the same condition. The areas you are comparing have to be of relevant size. In general, the longer you expect your trial to run, the larger the trial area needs to be. You should have reasonable control over your trial areas so you can maintain the same climate, irrigation, fertiliser and pesticide applications.
- make sure you are comparing 'apples with apples' – compare trial treatments on the same type of plant, variety, age and history.
- you need to have something to compare the results against – a **control**. This is part of the trial and is the area where 'no change' has been brought in. **Without a good 'control' your trial will mean nothing. This area should be maintained under the same conditions as your trial treatment areas. The 'rest of your crop' should not be your control.**
- collect results over the full period of the trial – it might be after a few hours or days if you are testing a new insecticide, but it might be a year or more if you are testing a new pruning method.
- record conditions during the trial – such as weather conditions – they may help you to understand your results
- you need to get an idea of how 'real' the results are – by replicating or repeating the test a number of times and by repeating the replicates in a random arrangement rather than side by side
- you may need to cover different areas on your farm such as different soil types.

What are some of the difficulties in doing your own trials?

- working out what the problem really is – for example, poor crop growth may be due to a soil nutrient problem like incorrect pH, but it could also be caused by a physical soil problem like compaction or by a root rot disease which is limiting nutrient uptake
- it can be hard to understand how agricultural systems work
- results may be inconsistent and even contradictory because plant growth is affected by many factors – light, temperature, water, nutrients, cultivation methods etc. All these factors affect plant growth as well as each other. For example, higher light intensity may increase the ambient temperature and so create increased demand for water and nutrients. A change in one factor may change the outcomes for the other factors.
- it's a slow and tricky business, so limit yourself to looking at one thing at a time. If you change two or more factors, the results become uncontrolled and it can be impossible to know which changed factor influenced the outcome.
- remember that the results might not apply in other seasons and in other parts of your farm
- you might have to repeat a trial or do it over a longer period of time to make it possible to analyse your results.
- each plant variety, plant type, technique or product may have its own requirements regarding growing conditions or application technique.

Some advice:

- get advice and information to help you define your research question

(for example, soil tests, extension services, books)

- be sceptical – you need to see clear answers for yourself
- start small and keep practicing

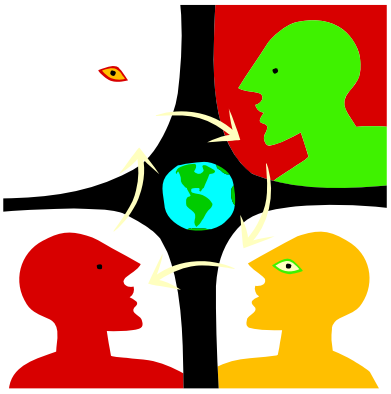
Water issues

The Department's Water Use Efficiency Advisory Unit has published an information package. 'Irrigation insights Number 5 – Water Use Efficiency – an information guide'. Authors Helen Fairweather, Nick Austin and Meredith Hope cover irrigation trends in Australia and define water use efficiency. They discuss water storages and distribution systems, field application and whole-of-system efficiency. A print version of the book can be purchased or it can be downloaded from **www.agric.nsw.gov.au/reader/i14-wueau**

Help in choosing farm trees

Farm Forest Line has a new section 'Tree species for farm forestry'. This will help you to choose the right tree species for your farm, depending on the condition of your land, your local climate and your objectives. Included in the site is a large species database that links to a wide range of online tree species 'fact sheets' that are currently available in Australia. Go to www.farmforestline.com.au/pages/10_species.html

Contact us



We welcome your feedback and suggestions for this newsletter. Please contact the Editor, Bettina Gollnow at Elizabeth Macarthur Agricultural Institute, PMB 8 Camden NSW 2570, phone 02 4640 6437, fax 02 4640 6300, email: **bettina.gollnow@agric.nsw.gov.au**

If you don't have access to the web, try your local library or contact the Editor for help.