



Newsletter of the Weed Society of Victoria Inc.

volume 21 issues 3&4 2010

Weedscene

2011 AGM Seminar: Contentious Weed Species

Thursday 14 April at DPI Attwood

The 2011 AGM seminar, Contentious weed species, will be held on Thursday 14 April in the Lecture Theatre, Department of Primary Industries, 475–485 Mickleham Road, Attwood; Melway reference map 5, J,K 2. Registration will open at 8 a.m. and the seminar will commence at 9 a.m.

The 45th Annual General Meeting will be held during the seminar, at 12.45 p.m. and everyone is invited to attend.

There will be space available for displays and posters. Please notify the Secretary in advance if you would like display or poster space.

- What are Contentious weed species? Come and join in the discussions and find out all about the species that some people consider to be weeds and others consider to be useful species.
- What are the characters that weedy species have that are considered beneficial by others?
- Are species that are poisonous considered herbal remedies by other people?
- Are wide spread pasture species always of benefit or just weeds to other people?
- When is a garden species a nasty weed?

- Are GM species beneficial or all problematical?
- Do all weeds only have a down side or are they of some benefit?

These are just some of the issues to be covered. Do you want to have your say? If so, would you like to be a speaker at this seminar or join in the discussion during the seminar? If so, please let the Secretary know as soon as possible.

Confirmed speakers include David Low, Department of Primary Industries who will talk on the philosophy of weeds and David Severino, Chairperson of the Victorian Apiarists' Association (Melbourne branch).

Email addresses

From time to time, usually between the quarterly Weedscene, the Society sends out eWeedscene and information we have been requested to send out. If you have not been receiving this information it means that the Secretary does not have your current email address.

If you wish to receive eWeedscene and other Society information please let the Secretary have your current email address.

Further information about the 2011 AGM seminar will be emailed as soon as the program is finalised.

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WSV Membership Rates 2010

Concession*	\$20.00
Ordinary	\$50.00
Corporate	\$120.00

* Students and Pensioners

WSV is not registered to collect GST

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Joining the Weed Society of Victoria

The benefits of membership to WSV include:

- Weedscene: newsletter packed full of information
- eWeedscene: regular electronic bulletin on weed news and events
- Discounts to WSV seminars, workshops, conferences and other events
- Opportunities to network with others.

To apply for membership, download and print the membership application form from the WSV website, www.wsvic.org.au, complete the details and mail to the WSV Secretary.

Weedscene Newsletter of the Weed Society of Victoria Inc.

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- Whole page 180 mm wide × 257 mm high \$450.00

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Design R.G. & F.J. Richardson, PO Box 42, Meredith Vic 3333
www.weedinfo.com.au

Printing Printscene, 12–14 Govan Street, Seaford Vic 3198

Printed on 100% recycled paper

Weeds in perspective

Clammy goosefoot – the old Australian making big strides worldwide

It seems that nearly every weed we find particularly invasive is a foreigner that just happens to be well adapted to a region of Australia with a climate not dissimilar to its own. There they all are, and some have names flying the patriotic weedy flag: Russian knapweed, Californian thistle, Italian bugloss, English broom, Indian hedge mustard, Mexican Tea, Maltese cocksbur.

Well we should be proud that we of the Antipodes, have successfully designed and exported a weed that now has global distribution. Never before has Australia produced such a persistent and objectional export. True to Aussie form we have given it an unassuming label: clammy goosefoot or crumbweed.

Clammy goosefoot (*Dysphania pumilo*, syn. *Chenopodium pumilo*) is a native of Western Australia, particularly its sandplains. It is a short-lived spring/summer germinating annual or short-lived biennial. It has a distinctive aroma and is often wrongly called 'mintweed'.

In WA, agronomists and researchers have confirmed it has a strong allelopathic capacity, in that its presence will greatly reduce the germination of large and small seeded crops and pastures. It is now evident that left uncontrolled, clammy goosefoot will result in very thin lupin, wheat, canola crops and pastures.

Beverly (WA) crop consultant Ralph Burnett identified clammy goosefoot as a problematic weed in cropping areas in 1990, because of its fast summer growth and fast, prolific seed set which drops readily to look like a mass of bread crumbs on the soil surface.

By 1999 clammy goosefoot was reported as an intruder in nurseries in Virginia, USA and thence to construction sites and farms.

From then on the Great Aussie Invasion had no limits; it appeared in the UK in the Golden Jubilee Year 2002 and Poland in 2010 faster than the Blitzkrieg.

How did the sandgropers disseminate their humble weed so effectively? Simply put, it was a freebee that was carefully secreted in wool, as those crumb-like seeds cling to sheep's wool so well some obviously survived scouring. The thin, drought-ravaged pastures of Australia's eastern half also got their fair dose, possibly transported in farmers' socks and sheep's hocks. The wet summer of 2009/10 resulted in a proliferation of clammy goosefoot in pastures and crop stubbles.

During that summer clammy goosefoot germinated early in November and grew quickly in the warm humid conditions, particularly in paddocks with low densities of perennial grass. It soon flowered and set seed in December, at the same time as fresh germinations began to emerge with ongoing summer rains.

There was only one report of stock being affected by eating clammy goosefoot. This was an occasion where sheep were forced to eat the weed in the absence of anything else. The symptoms were like those of a neuro-toxin and subsided once the sheep were removed from the paddock.

The biggest impact we saw with goosefoot is the poor germination of annual grasses and clovers the following autumn due to the presence of either growing or dead plant material. Cheam (1995) stated that between 50 and 100 mm of rainfall was required to leach the toxin from the topsoil and a period of two weeks to allow small seeded plants such as clover and canola to establish.

Thankfully, there are some selective herbicide options for use in pasture as well



Clammy goosefoot

as non-selective mixes for preparation pre-autumn sowings.

Experience has shown goosefoot is susceptible to phenoxy herbicides, so the use of 2,4-D, MCPA, dicamba has been very useful for selective work on pasture over summer.

Non-selective mixes that appear to work well are Sprayseed + 2,4-D, Ally + Surpass/2,4-D, glyphosate + Ally, glyphosate + Surpass, glyphosate + dicamba.

It is interesting to note that goosefoot is minimal where there are triazine residues such as in TT canola or lupin stubble. The use of atrazine with forage sorghum would be expected to do a thorough cleanup of goosefoot.

There is now a considerable seed burden of clammy goosefoot throughout grazing country of the central highlands of Victoria. With more ground cover than ever maybe the pastures will have the upper hand once summer rains arrive. Or will locust ravaged pastures be open to a proliferation of this unusual weed? Time will tell...



Agriculture

ECOPAR – a herbicide with many applications?

Sometimes a product comes along with potential for in-crop uses. There are few occasions a compound has possible applications for crop, pasture and knockdown applications.

Such a herbicide is Sipcam Ecopar, a herbicide currently registered for use in wheat, barley and triticale. The active constituent of Ecopar is 20g/L pyraflufen-ethyl, and is formulated as an odourless suspension concentrate which closely resembles a greyish cream.

Pyraflufen-ethyl (PFF) belongs to the aryl phenylpyrazole group (Group G) of herbicides, which act as a disruptor of chlorophyll production. Typically weeds show rapid onset of leaf whitening as a result of cell membrane necrosis.

PFF is very safe to cereal crops; it is rapidly absorbed into the leaf and then hydrolysed into its primary bioactive acid metabolite. This results in a nil withholding period for application to crop for harvest.

Another feature of PFF is its negligible environmental imprint. It degrades rapidly in both aerobic and anaerobic soil and water environments by hydrolysis. PFF has low application rates and binds to soil colloids and is not subject to leaching nor runoff losses.

User hazard is low. PFF demonstrates low acute oral, dermal and inhalational toxicity to mammals.

Sipcam is currently undergoing MRL tests with a view of seeking registration of PFF in pasture. Field trials have shown Ecopar in combination with MCPA is very efficacious on capeweed and Paterson's Curse. The most startling results have been on long storksbill (*Erodium botrys*), with trials regularly showing total annihilation of large flowering erodium. These same trials

also showed high levels of safety to many clovers, including subterranean, white, red, balansa and Persian.

Interestingly, pyraflufen-ethyl (PFF) is used in a chemical fallow product Sipcam Pyresta LV. Pyresta combines PFF and 2,4-D ethylhexyl ester as a spike to glyphosate for autumn pre-sowing for improved control of broadleaved weeds such as wild radish, chickweed, marshmallow, Paterson's Curse and therefore competing in the Hammer (carfentrazone) and Striker (oxyfluorfen) market.

But in addition to this Pyresta has important applications in the summer weed knockdown market again in conjunction with glyphosate for use on Bathurst

burr, portulaca, prickly paddy melon and Afghan melon. Field observations indicate rapid physical breakdown of these weeds, especially accelerated disintegration of the vines of both melons.

Due to the use constraints of products containing ester based phenoxy herbicides in horticultural sensitive areas, Sipcam is considering investigating the potential for using Ecopar with 2,4-D isopropylamine salt and glyphosate.

There are more submissions currently being made to the APVMA by Sipcam for mixtures and uses of PFF. No doubt time will see some interesting and highly beneficial outcomes of this work.



The effect of Ecopar on a phalaris/sub-clover pasture at Kyneton October 2010. The timing of spraying was actually past the recommended stage of capeweed and erodium, but the results were more than satisfactory. Photo courtesy Elders Kyneton

Chemical weed control research in chillies and capsicums



At its peak, the Australian chilli and capsicum crop covers an area of 2300 hectares with an eventual market value of \$47 million. Despite this, it is considered a minor crop with currently no registered herbicides, but as a summer crop it is vulnerable to summer active grass and broad-leaved weeds. Currently the most commonly used weed control strategies are combinations of plastic mulch, hand-weeding, selective herbicides and tillage.

Stomp (pendimethalin) is the most commonly used product as a pre-planting treatment to bare soil. Its activity on fat hen, wireweed and summer grasses of the *Eragrostis*, *Eriochloa*, *Panicum* and *Setaria* genera is extremely valuable. However, low cost pendimethalin may have gaps in its weed spectrum, particularly in relation to broad-leaved weeds.

Recent work by Phillip Frost and Tim Hingston of Serve-Ag identified potential in two herbicides currently used for other crops.

The researchers demonstrated that Command 480 SC (clomazone, Group F) applied at 480 g a.i./ha pre-plant exhibited almost no phytotoxicity symptoms to the one chilli and the one capsicum cultivar tested, and no imperfections detected in the marketable fruit compared to untreated.

Also tested was Raft (oxiargyl) which shows promise on amaranthus, fat hen and sow thistle, but most importantly 95% control of black nightshade (*Solanum nigrum*). This is a major breakthrough as normally it is very hard to remove Solanaceae weeds from a Solanaceae crop.

Naturally more work needs to be done in this area before permits or registrations from the APVMA are granted and commercial crops benefit from these products.



Solanum nigrum

It has been said...

‘Money won’t buy happiness, but it will pay the salaries of a large research staff to study the problem.’

Bill Vaughan, in 1977

‘Television? The word is half Greek, half Latin. No good can come of it.’

C.P. Scott 1846–1932

On being informed that several of his fly-buttons were undone:

‘No matter. The dead bird does not leave the nest.’

Winston Churchill 1874–1965

‘Politics is supposed to be the second oldest profession. I have come to realise that it bears a very close resemblance to the first.’

Ronald Reagan, in 1977



Get the drift about spray deposition!

One of the challenges for weed control in agriculture is the management of spray deposition. Now I prefer to use the term spray deposition because that is the ultimate aim of herbicide application, and given the right equipment and management that is precisely what will happen!

There is increasingly more responsibility for herbicide applicators to reduce off target drift due to the frequency of susceptible crop types in close proximity as well as protecting the interests of residents close to farming or environmental weed control activity.

In general, applicators are very aware of weather conditions such as wind speed and direction, as well as potential inversion layers, which are risks to be managed with herbicide spraying. There are also a number of adjuvants that increase droplet size and reduce evaporation which assists in eliminating off target deposition.

Even greater gains can be made with intelligent choice of spray nozzles that deliver a broader range of coarse and very coarse droplets. It is the fine and very fine droplets of 200 microns and less in diameter that are prone to drift because of their lack of mass for gravity to drag them to the ground.

The XR Teejet is a very standard economical nozzle common to most sprayers as standard equipment. The XR (or extended range) are a slight improvement over the old flat fan types in that they

Nozzle type 1.16L/min flow	% spray volume @1.5 bar	<200 um @3 bar
XR Teejet 110	14	34
DG Teejet 110	<1	20
AI Teejet 110	0	<1%

do not produce very fine droplets at the high (4 bar) pressure end of the spectrum. However, they still produce mostly medium droplets up to 1 bar and fine droplets from 1 to 4 bar pressure. These finer droplet spectrums are very good for contact herbicides and targeting grasses with upright and glossy leaf surfaces.

The DG (or Drift Guard) flat spray tip is a further improvement in spray deposition in that the nozzle includes a pre-orifice insert that creates larger droplets prior to the solution leaving the nozzle. This nozzle produces only medium sized droplets that are ideal for pre-emergent herbicides, systemic post-emergent herbicides whilst reducing drift.

As minimum till farming replaces mechanical fallow weed control with glyphosate and phenoxy mixes the need for accurate spray deposition has never been more important.

The AIC (Air Induction) flat spray tip uses either polymer, stainless steel or ceramic tips with a venturi air aspirator. This arrangement creates a high velocity liquid stream and then introduces air through the side venturi to create large air-filled drops which are then released at

low velocity. These are all very coarse droplets (300 um+) right up to 4 bar pressure which break down into smaller droplets just prior to reaching the target, be it plant or soil.

This breakdown can be reliably controlled through adjusting boom height to 50 cm above the target as normal. So in essence this type of nozzle delivers fine droplets to the target for greater spray retention. You need to see it to believe it! Just replace one nozzle with an AI and do a static test on a windy day over a range of pressures and you'll probably throw the old flat fans in the bin.

This sort of technology has been driven by regulatory authorities in the European Union that are balancing the use of crop protection chemicals and the environment as well as peri-urban interests.

The message here is that for most applications other than the most finicky contact herbicide jobs the AIs will replace other nozzles currently out in the field. This switch will be good for farmers, horticulturists, contractors, green-keepers, you name it, there are big benefits that will protect the interests of all industries. As an example, I have a customer with a polo field who can comfortably spray Amistar with Hardi ISO Minidrift 03 air inclusion nozzles in close proximity to his pastures without compromising grazing activity. How many situations can you think of where zero drift is advantageous?

The latest high tech sprayers from Nitro

Goes to show you still need good spray operators!



Source: Murray Mallee Machinery, Swan Hill

AI TeeJet® Air Induction Flat Spray Tips



Typical Applications:

See selection guide on pages 2 and 6 for recommended typical applications for AI TeeJet tips.

■ Depending on the chemical, produces large air-filled drops through the use of a Venturi air aspirator.

■ Automatic spray alignment with 25598*-NYR Quick TeeJet® cap and gasket. Reference page 63 for more information.

Features:

- Stainless steel insert produces a tapered edge flat spray pattern for uniform coverage in broadcast spraying.
- Polymer insert holder and pre-orifice with VisiFlo® color-coding.
- Larger droplets for less drift.
- Available in eight capacities with a recommended pressure rating 30–115 PSI (2–8 bar).



Tip Model	Pressure (bar)	Drop Size	Capacity One Nozzle (l/min)	l/ha 50 cm												
				4 km/h	5 km/h	6 km/h	7 km/h	8 km/h	10 km/h	12 km/h	16 km/h	18 km/h	20 km/h	25 km/h	30 km/h	35 km/h
AI110015 (100)	2.0	VC	0.48	144	115	96.0	82.3	72.0	57.6	48.0	36.0	32.0	28.8	23.0	19.2	16.5
	3.0	VC	0.59	177	142	118	101	88.5	70.8	59.0	44.3	39.3	35.4	28.3	23.6	20.2
	4.0	C	0.68	204	163	136	117	102	81.6	68.0	51.0	45.3	40.8	32.6	27.2	23.3
	5.0	C	0.76	228	182	152	130	114	91.2	76.0	57.0	50.7	45.6	36.5	30.4	26.1
	6.0	C	0.83	249	199	166	142	125	99.6	83.0	62.3	55.3	49.8	39.8	33.2	28.5
	7.0	C	0.90	270	216	180	154	135	108	90.0	67.5	60.0	54.0	43.2	36.0	30.9
	8.0	C	0.96	288	230	192	165	144	115	96.0	72.0	64.0	57.6	46.1	38.4	32.9
AI11002 (50)	2.0	VC	0.65	195	156	130	111	97.5	78.0	65.0	48.8	43.3	39.0	31.2	26.0	22.3
	3.0	VC	0.79	237	190	158	135	119	94.8	79.0	59.3	52.7	47.4	37.9	31.6	27.1
	4.0	VC	0.91	273	218	182	156	137	109	91.0	68.3	60.7	54.6	43.7	36.4	31.2
	5.0	C	1.02	306	245	204	175	153	122	102	76.5	68.0	61.2	49.0	40.8	35.0
	6.0	C	1.12	336	269	224	192	168	134	112	84.0	74.7	67.2	53.8	44.8	38.4
	7.0	C	1.21	363	290	242	207	182	145	121	90.8	80.7	72.6	58.1	48.4	41.5
	8.0	C	1.29	387	310	258	221	194	155	129	96.8	86.0	77.4	61.9	51.6	44.2
AI110025 (50)	2.0	XC	0.81	243	194	162	139	122	97.2	81.0	60.8	54.0	48.6	38.9	32.4	27.8
	3.0	VC	0.99	297	238	198	170	149	119	99.0	74.3	66.0	59.4	47.5	39.6	33.9
	4.0	VC	1.14	342	274	228	195	171	137	114	85.5	76.0	68.4	54.7	45.6	39.1
	5.0	VC	1.28	384	307	256	219	192	154	128	96.0	85.3	76.8	61.4	51.2	43.9
	6.0	C	1.40	420	336	280	240	210	168	140	105	93.3	84.0	67.2	56.0	48.0
	7.0	C	1.51	453	362	302	259	227	181	151	113	101	90.6	72.5	60.4	51.8
	8.0	C	1.62	486	389	324	278	243	194	162	122	108	97.2	77.8	64.8	55.5
AI11003 (50)	2.0	XC	0.96	288	230	192	165	144	115	96.0	72.0	64.0	57.6	46.1	38.4	32.9
	3.0	VC	1.18	354	283	236	202	177	142	118	88.5	78.7	70.8	56.6	47.2	40.5
	4.0	VC	1.36	408	326	272	233	204	163	136	102	90.7	81.6	65.3	54.4	46.6
	5.0	VC	1.52	456	365	304	261	228	182	152	114	101	91.2	73.0	60.8	52.1
	6.0	C	1.67	501	401	334	286	251	200	167	125	111	100	80.2	66.8	57.3
	7.0	C	1.80	540	432	360	309	270	216	180	135	120	108	86.4	72.0	61.7
	8.0	C	1.93	579	463	386	331	290	232	193	145	129	116	92.6	77.2	66.2

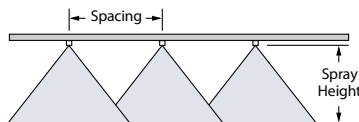
Note: Always double check your application rates. Tabulations are based on spraying water at 70°F (21°C).

● Coarse ● Very Coarse ○ Extremely Coarse

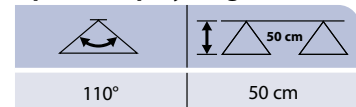


Note: Due to the pre-orifice design, this tip is not compatible with the 4193A check valve tip strainer.

CONTACT PRODUCT	SYSTEMIC PRODUCT	DRIFT MANAGEMENT
GOOD	EXCELLENT	EXCELLENT



Optimum Spray Height



Information courtesy Silvan Australia

Weeds: friend or foe?

Stinging nettle

Most people will recall stinging nettle (*Urtica dioica*) without fondness; maybe as being afflicted by its painful sting as a child walking through sheep pens or horse stables. Stinging nettle is common worldwide through Europe, the Americas and Asia, particularly in high rainfall regions and always in close proximity to human occupation where soil nitrogen and phosphorus have been heavily concentrated.

And because of its connection to human civilisation the plant has been long exploited for medicinal and culinary uses. Most cultures have some form of recipe and for good reason. Stinging nettle is high in calcium, magnesium, iron and potassium. It has high levels of B complex vitamins and at certain stages up to 25% protein.

The stinging nature of the nettle is not because of spines or barbs, but merely the release of organic acids and histamines by the leaf hairs or trichomes. Cooking processes such as boiling remove or break down these compounds and render the plant incredibly useful for cooking.

Basically stinging nettle can be used as an alternative to any leafy greens such as spinach or kale, and is probably nutritionally superior. Soups, pasta, lasagne, bread, quiche, pesto and meat dishes have benefited from the inclusion of stinging nettle.

It is widely believed that nettle recipes and medicines can stabilise blood sugar, improve the circulatory system, bolster the immune system and ease arthritis.

Back on the home front, a country based butcher (and obviously entrepreneur) Yvette McCormack-Hall of the Locky Meats in Lockington, northern Victoria came up with her own unique culinary invention.

Yvette developed a sausage with a secret combination of herbs, and the only ingredient she was prepared to reveal was stinging nettle. 'I wanted to create something special and a little unusual', Yvette remarked. 'I knew stinging nettle had been used before in pasta so I was determined to make a red meat based sausage with nettle as one of the ingredients'.

Called quite appropriately 'McStingers', these unique snags created a lot of interest locally and sold out very quickly. So much so that the attention was drawn from other country butchers whose reaction was apparently quite 'prickly'.



Two 'McStingers' sausages interviewed recently



Urtica dioica

Weed notes

Prairie ground cherry (*Physalis* species)

Status: Regionally controlled Mallee, North Central, Corangamite, Port Phillip and Westernport, Goulburn-Broken and North-East CMAs. Still very prevalent in the Bacchus Marsh area. In the north it is present in Gannawarra Shire and Numurkah area.

Prairie ground cherry (PRG) is spreading rapidly in the Bacchus Marsh area and disturbingly in the riverland of southern New South Wales. Now is the time to spray PRG before it flowers and sets seed. When it flowers it is obviously noticeable with its bright yellow bell shaped flower.

In an effort to co-ordinate control the Gannawarra Shire (5445 9333) have joined the Cannie Ridge Prairie Ground Cherry Action Group.

It is worth following the work of Drs Deidre Lemerle, Rex Stanton and Hanwen Wu of Charles Sturt University with regard to efficacy of knockdown herbicide and adjuvant mixes on PRG.

South African orchid (*Disa bracteata*, *Monadenia bracteata*)

Status: Not a proclaimed species; a New and Emerging Weed in the Wimmera Action Plan.

It could still be present in the Lake Eppalock area. Can anyone offer any insight to any changes in distribution of the weed and effective control chemicals? My instincts tell me Amitrole could be useful. Manual plant removal prior to seed set has been obviously effective in isolated infestations.

Rosinweed (*Cressa australis*)

Status: Not a proclaimed species. A native of Australia but a serious weed in fallow cropping land.

This is actually an indigenous plant to northern Victoria and the Riverina district of New South Wales. It is found on grey swampy clay soils usually associated with black box woodland. It has been observed to invade adjacent cropping land. It is a small innocuous perennial, but an aggressive moisture user. Yield penalties of up to 1.45t/ha in cereal crops have been measured where rosinweed is not managed. Glyphosate + dicamba mixtures have been good for short term maintenance and robust rates of dicamba for long term control have been common.



Physalis vicosa

Herbicide resistance

Managing herbicide resistance to support the success and benefit of no-till farming is now a cornerstone in decision making. Now, prior to harvest, is the appropriate time to assess the effectiveness of crop weed control and investigate why there are surviving patches of weeds. A sample of weed seeds sent for testing could prevent an expensive mistake in 2011.

Herbicide resistance tests

Plant Science Consulting, Dr Peter Boutsalis, Prospect, South Australia 0400 664460

1. Syngenta Quick Test: Using whole plants collected during the season following a herbicide application.
2. Seed Test: Using seed collected from plants just prior to grain harvest surviving herbicide application. Requires 8-12 weeks to break dormancy, grow seedlings and spray and rate herbicide effectiveness.

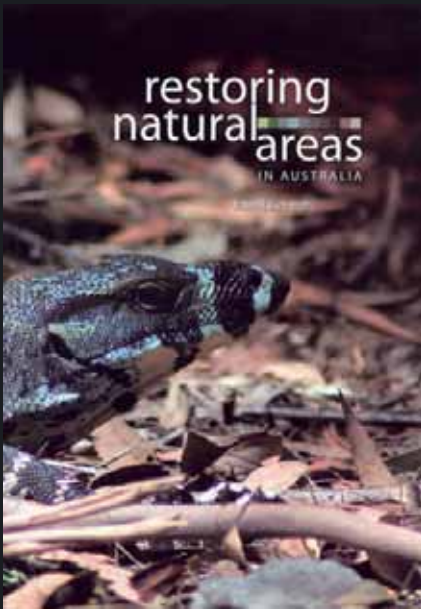
From \$130 per test for one herbicide.

Charles Sturt University Herbicide Resistance Testing Service 02 6933 4001

Seed testing service (annual ryegrass, wild oats, brome grass, wild radish). Individual herbicide test \$110, cross resistance test \$325.

Agrisearch Services, Seed testing service, Victoria/NSW contact Kathryn Adams 02 6362 4539

Pricing on current website \$116 for single herbicide test, \$253 for multiple herbicide resistance (\$319 to include glyphosate).



Restoring Natural Areas in Australia is a new, practical handbook for managing natural areas. It will introduce you to present-day practices of natural area restoration – a broad term that can include many activities. It draws on a wide range of skills, including plant identification, water sampling, soil analysis, plant management, mapping, landscape construction, planting and fauna management. It also has many unique elements, in particular an emphasis on site assessment and site resilience: the ability of the site to recover. A lavishly illustrated, full-colour publication, it covers all aspects of natural area restoration projects.

Books

Restoring natural areas in Australia

Robin A. Buchanan

264 pages, full colour, soft cover, ISBN 9780731306213

Published by NSW Industry & Investment in December 2009. Price \$A44.00.

Available from NSW Industry & Investment 1800 025520

CONTENTS

Introduction

Section 1 – Setting the scene

Describing natural areas
 Damage to natural areas
 Resilience
 Buffers and linkages (corridors)
 Approaches to selecting and restoring natural areas

Section 2 – Your site

Getting to know your site
 On-site decisions

Section 3 – Organising your project

Managing your project
 Estimating and costing a project
 Community involvement and funding
 Contracts
 Legislation and legal requirements
 Monitoring and evaluating
 Report writing

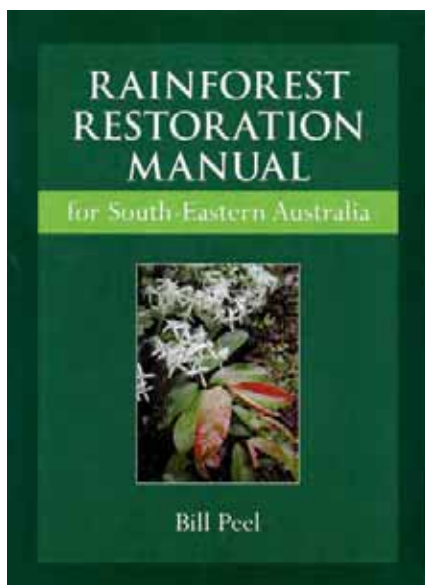
Section 4 – Working on your site

Preparing to work
 Soil management
 Water and aquatic area management
 Managing weeds
 Seed collecting
 Direct seeding
 Planting
 Transplanting and translocation
 Fire management – pile burns
 Visitors – tracks and signs

Section 5 – Appendices

Introductory site assessment sheet
 Detailed site assessment sheet
 Hazards, risks and safety measures associated with natural area restoration
 Sample pesticide usage record
 Sample pesticide storage inventory

Rainforest restoration manual for south-eastern Australia



Bill Peel

352 pages, full colour, soft cover plus CD, ISBN 9780643094710

Published by CSIRO Publishing in June 2010. Price \$A120.00.

Available from RG & FJ Richardson 03 5286 1533 www.weedinfo.com.au

Rainforests in south-eastern Australia are small island relics of a bygone era. They survive from a time of widespread rainforests that have been declining for millions of years due to continental drift and climate cycles. Now they survive in refuges sheltered from fire. However, they are still threatened by habitat loss and by more subtle changes to habitat brought about by climate change, weed invasion and pest animals.

This book is the definitive guide to the recovery

and restoration of subtropical, warm temperate, cool temperate, gallery, dry, dry gully and littoral rainforests from south-eastern Queensland to Tasmania. Restoration methods are described in detail, documenting research and trials undertaken during rainforest restoration over more than two decades. These experiments and their results will allow readers to solve many of the problems they could encounter in rainforest restoration.

Continued on page 11/...

Player profile

Chris Knight



Chris Knight can be contacted on 03 9879 5799, enquiries@lmsonline.com.au

Successful businesses always result from a sound idea serving a particular need, as well as providing a high level of technical skills to back up the service. A prime example of this is Land Management Systems, a company which provides asset (Land and Water) management and expertise. They not only control weeds, but do restorative work on landscapes and native ecosystems amongst other works. We tracked down Chris Knight recently to see if we could get an insight into his success, but more importantly to work out how his seemingly limitless mind ticks.

- Age:** $\frac{2}{3}$ of the way to my retirement date.
- Occupation:** Manager and Proprietor of Land Management Systems and on-line spraying (LMS), Mitcham.
- Position with WSV:** Co-opted Committee Member (and ex-President).
- Years with WSV:** 20 or so, and still involved. That coup to depose me should have made the News, but Edwin Maher didn't agree.
- In a previous life:** Environmental Officer with VicRail.
- Favourite food:** Stir fry.
- Favourite TV show:** ABC News. Big fan of Edwin Maher.
- Favourite movie:** The Battle of Britain.
- AFL team:** Essendon possibly. Have a vested interest in Rugby Union actually.
- Hobbies:** Work, work and more work. LMS is very rewarding. I try to do more vegetable gardening when time permits. My family enjoys camping.
- Phobias:** Not being able to effectively cope with the work load. And growing shabby zucchinis. And running out of spray on the job.
- Ambitions:** For the last 12 years LMS has grown and grown and I would like it to become global, it just hasn't left Victoria that's all. As far as the WSV is concerned I hope to promote the Society as a great vehicle to disseminate information and that the website grow in content and therefore value. I once approached Edwin Maher with a fistful of Paterson's curse, but that was ages ago so could he lift the restraining order?

.../continued from page 10

It is supported by a CD-ROM that provides important background information, with 32 appendices, a propagation manual for the region's 735 rainforest plants, an illustrated glossary and resources for teachers. Species lists and specific planting guides are provided for the 57 rainforest floristic communities that occur from the coast to the mountains. There are extensive colour photographs which illustrate the general principles and techniques described.

Specifically the book begins with an examination of the background to rainforest restoration, looks at understanding your rainforest and applying first aid both locally and in a regional context. Immediate actions and site planning are discussed followed by how to choose the method of restoration appropriate for your site. What resources are needed, how best to implement project planning and implementation and how to measure success in restoration is

examined. Lastly, now the site is restored how is it maintained and what ongoing ecological management is needed?

The supplementary material on the CD-ROM examine scope and history, why rainforests should be restored, social theory and philosophy, ecological theory, where your site sits in the landscape, general principles, managing disturbance, plant stock and planting and rainforest depletion in south-eastern Australia. The author Bill Peel is an ecologist who has worked across a wide range of community organisations as well as state and federal natural resource management agencies, local government and in many consultancies over the last 30 years. During that time he has been a survey botanist, mapped and supervised mapping of vegetation and old-growth forests as well as the identification of National Estate values for regional forest agreements. He began his first rainforest restoration site in 1987 and his passion

for restoration ecology has led to a region-wide research effort to document rainforest restoration techniques. He is a founding member of the East Gippsland Rainforest Conservation Management Network and is currently the municipal ecologist for Port Macquarie-Hastings Council on the Mid North Coast of New South Wales.

This is a well presented book. It is written in an easy to read style, and is supplemented with numerous examples. Abundant photographs illustrate the problems and processes involved and many photos are overlain with arrows to help the reader quickly locate key features. This is a book that is an essential part of any rainforest restoration project and distills the experiences of 30 years into one easy to use package. The general principles and techniques described will meet the needs of students and teachers, novices, experienced practitioners, community groups and agencies alike.

R.G. Richardson

18th Australasian Weeds Conference 2012



The Sebel and Citigate Albert Park,
Melbourne, Victoria, Australia
8 October – 11 October 2012



Weed Society
of Victoria

Developing Solutions to Evolving Weed Problems

18th Australasian Weeds Conference 2012

Destination and venue

Melbourne is a city with plenty to offer visitors. Share a drink while snacking on high end tapas in a laneway eatery, take on a Szechuan chilli dish in Chinatown, or break out of the CBD and discover the city's specialist eating destinations – Richmond for Vietnamese, Carlton's 'Little Italy', Fitzroy for Spanish and Brunswick for Lebanese or simply enjoy coffee and cake with a great view at the Observatory Café, Botanical Gardens. Melbourne features an ever-changing number of trendy clubs and bars and live music venues, as well as theatres and cinemas including Bennetts Lane Jazz Club, The Forum and Festival Hall. There are also a range of unique attractions to see such as Federation Square, cruising on the Yarra River, the Puffing Billy Steam Railway, Great Ocean Road and the Old Melbourne Gaol.

The Sebel and Citigate Albert Park is a stylish Melbourne hotel opposite picturesque Albert Park Lake, and minutes from Melbourne's CBD and one off Melbourne attractions.

Who should attend?

The program will provide valuable information and networking opportunities for anyone with an interest in aspects of weed legislation and development of practical solutions to evolving weed problems.

- Local, state and federal government employees
- Policy makers and planners
- Landowners and managers
- Natural Resource Management personnel
- Researchers, academics and students involved in weed issues
- Community groups including Landcare, Friends of Parks etc.
- Consultants and agricultural advisors

Call for Papers and online registration opening in early 2011
Visit www.18awc.com for Conference updates

For more information contact:

18th Australasian Weeds Conference Office
PO Box 3873, South Brisbane BC QLD 4101
Phone: 07 3334 4400 Fax: 07 3334 4499
Email: awc@eventcorp.com.au

