

THE WEED SOCIETY OF NEW SOUTH WALES - NEWSLETTER

P.O.Box K287, HAYMARKET N.S.W. 2000

President: Mr. A. McLennan
Hon. Secretary: Mr. W.J. Burke

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June, 1984

WORKSHOP

Workshop on *Chrysanthemoides monilifera* Bitou Bush and Boneseed

Biology, Impacts and Options for Control

Field Trip - 8 Aug Workshop 9 Aug

Organisation: Sponsored by the N.S.W. National Parks and Wildlife Service and N.S.W. Department of Agriculture.

Objectives:

1. To establish the current and potential environmental impact of *Chrysanthemoides monilifera* in Australia.
2. To establish options for control.
3. To establish a framework for improved control.

Location: Port Macquarie.

Programme and Registration: For further details contact organisers listed below. Registration closes July 20, 1984.

Organisers:

Ashley Love, N.S.W. N.P.W.S., P.O.Box 97, GRAFTON NSW 2460	Dr. Leon Smith N.S.W. Dept. of Agriculture, P.O.Box K220, HAYMARKET NSW 2000
Phone: (066) 420566	Phone: (02) 2175074

Supported by the Weed Society of N.S.W.

FUTURE OF WEED RESEARCH ORGANISATION IN U.K.

Did you read the editorial in the recent issue of "Australian Weeds" about the proposed closure of the WRO at Bedbroke Hill, Kidlington, Oxford in the U.K.?

W.R.O. has developed a world wide reputation for the excellence of its work in the Weed Science and was the leading authority of its type in the world. Its loss due to cut backs in funding of scientific research in the U.K. would be a big blow to Weed Science.

If you feel strongly about this decision then write to the Society or directly to W.R.O. the Executive will be considering what action to take at its next meeting.

PRIVET FIELD DAYS

A field-day held on 3rd May at Gosford Horticultural Research Station jointly by the Department of Agriculture and the New South Wales Weed Society was well attended by Metropolitan and Central and North Coast Weed Inspectors and Parks and Garden personnel. (Graham Mathews, Bellingen Shire even attended).

The Department (Jim Dellow, Barney Milne and Dr. Leon Smith) have been conducting privet trials for the last two seasons, with the excellent co-operation of Bill Trimmer, Manager, and his Staff.

Results have shown that the herbicides Roundup, Garlon and new Velsicol formulation of Dicamba, all gave good control when applied to the privet as a "cut stump" treatment.

Evelyn Hickey and Joan Larking of the "National Trust" spoke at the field day on the need to have an integrated approach to weed control in urban bushland. The main points stressed were:-

- Plan well before attempting any project.
- Know your objective and your desired results.
- Use control methods which create minimal disturbance.
- Do not destroy or unduly disturb desirable native species.
- Replace the weed with a desired and competitive species.

Urban bushland re-generation requires experienced operators and both Evelyn and Joan stressed that many people incorrectly become quickly frustrated if they cannot see large areas laid waste by their efforts. It is generally better not to undertake a project in a problem area if it cannot be correctly worked, managed and finalized - "leave sleeping dogs lay".

The field day was a tremendous success with about 70 attending. National Parks and Wildlife, Forestry and Public Works personnel, as well as Agricultural Chemical Companies attended. Doug Vickery (Gosford Shire) can be justifiably protective of his "sylvan" spot. Several speakers complained of having to "speak over" the bell birds.

STUDY GRANT

Applications for funds are invited from members for the Weed Society Travel Study Grant.

The purpose of this Grant is to assist members of the Society with travel to attend conferences, seminars or study tours connected with Weed Science.

The New South Wales Weed Society need not accept any or all applications in part or whole, but will consider any genuine requests.

Applications for the period August 1984 to February 1985 will be considered. The Australian Weed Conference in Perth is a major activity during this period.

The applicant is required to use the official application form which is available from the Secretary, Jack Burke (phone: work (02) 428 0436 / home (02) 808 3324) and to arrange for two confidential references to be forwarded direct to the Secretary. **The closing date for applications is 30th July, 1984.**

BLACKBERRY FIELD DAY, CASTLE HILL

On 1st June, 1984, John Toth held a very successful Field Day on his plots at Castle Hill. Over 90 people attended and saw the results of John's 1984 and 1984 trials. The special low-volume, gas powered spray gun developed by John and Alan Murphy formerly of the Department of Agriculture was demonstrated.

Johns trials conducted over the last 4 years have demonstrated that:-

- (i) The application equipment currently used is using far too much herbicide.
- (ii) None of the herbicides give 100% kill after one application.
- (iii) The second year application (regardless of equipment used) requires proportionately more herbicide to kill the small percentage of escaping runners. This is due to interfering old (dead) canes from the previous year and weed growth from under the bush. For example, for a very big bush, the first year's application was 50L spray (cost \$10.00) and regrowth prior to second application was about 5-6%. The re-spray volume required was 35L spray (cost \$7.00) and resulted in 2% regrowth 12 months later.
- (iv) Other means of destruction of the bushes after initial chemical treatments which need to be considered are: slashing, crushing and burning.
- (v) If high volume spraying equipment is used, at least with ROUNDUP (glyphosate) then reduce the nozzle size (D-4) and decrease the pressure (400 kPa) to effectively decrease the volume at least to half the conventional spray volume.
- (vi) The experiments with the new low-volume LPG powered spray gun indicate that up to 80% cost reductions can be achieved.

The special dye which is used in the spray solution is called "Bushranger". It is a titanium dioxide dye and is available from:-

C. Ruddick Pty. Ltd.,
93 Howard Street,
NORTH MELBOURNE.

AUSTRALIAN WEED SOCIETY

In the last issue of the Newsletter a proposal for the establishment of an Australian Weed Society was circulated. Members were asked for comment. To date only one reply has been received from the members. Please make an effort to comment. We want to raise this issue at the next CAWSS meeting in Perth in September and need the full support of all members if the item is to proceed. The executive of the Society will discuss the matter in detail on Tuesday 31st July, so please comment as soon as possible.

WEED SCIENTISTS HONOURED

At the 10th International Congress of Plant Protection, medals were awarded to six scientists who have made outstanding contributions to crop protection on a global basis for a number of years. Honored were:-

John Denny Fryer

Director, Weed Research Organization, Kidlington, UK, for his work on the application and long-term effects of herbicides and for his leadership and organizational contribution to the development of international weed science.

Douglas Frew Waterhouse

Former Chief, Division of Entomology, Commonwealth Scientific and Industrial Research Organization, Canberra, Australia for his contributions to insect physiology, to the development and application of novel approaches to the biocontrol of insects pests, and his leadership and organization of international research and surveys on the resistance of pests to pesticides.

NEWS OF MEMBERS

Dick Medd has advised that he is on his Churchill Fellowship to study weed seed dormancy in the U.K. and U.S.A. during June and July.

Warwick Felton will be leaving soon for an eight-week study tour on conservation - tillage practices overseas in Europe and U.S.A.

Welcome to **John Evans** a new member who is involved in machinery manufacturing for applying herbicide sprays.

SEVENTH AUSTRALIAN WEEDS CONFERENCE

Perth, 17-21 September, 1984. Registrations at \$170 close on 31st July, 1984. After that date it will cost \$190, so register as soon as possible.

Keynote speakers include:-

Dr. W.M. Blacklow, Dean of the Faculty of Agriculture, University of Western Australia. Has had a strong interest in weeds throughout his career and has promoted and supervised a number of research programmes at the University of W.A.

Mr. Roy Merrett, ICI Plant Protection Division, Fernhurst, England. Has had 20 years experience in pesticide-application technology in many parts of the world. The unit he leads at Fernhurst uses a wind tunnel with laser droplet-sizing equipment and high-speed photography to evaluate factors in spraying performance. He is involved in industry committees such as the British Standards Institution, the International Standards Organisation, the British Crop Protection Council and FAO. He is a Chartered Engineer.

Prof. E.G. McQueen, Professor Emeritus of Clinical Pharmacology, University of Otago, New Zealand. Is a former director of the NZ National Poisons Information Centre and of the NZMRC Toxicology Research Unit. He was also Consultant Toxicologist to the NZ Department of Health.

Mr. E.J. Bals, Director Micron Sprayers Ltd, Herefordshire, England. Is the inventor of controlled droplet applicator (CDA) spraying equipment.

Dr. Dale E. Wolf, Group Vice-president, Agricultural Chemicals, of the Du Pont Company. Was raised on a farm in central nebraska USA and is a graduate of the University of Nebraska. he gained his doctorate at Rutgers University, where he served on the staff before joining Du Pont as a research biologist in 1950. He was chairman of the National Agricultural Chemicals Association from 1981 to 1983 and remains a board member of the executive committee. He is the current president of the international agrichemical organisation GIFAP (Groupement International des Associations Nationales de Fabricants de Produits Agrochimiques).

WEED REPORTS

The 1983 results of the Weed Research and Demonstration Units at Orange and Glen Innes are now available. The trials conducted by the WR and DU's are designed to give District Agronomists, Council Weed Officers and hence the landholders, quick answers to problems that do not require in-depth research.

Copies of the results can be obtained from J.J. Dellow, Agricultural Research and Veterinary Centre, Forest Road, Orange or M. McMillan, Agricultural Research and Advisory Station, Glen Innes.

AN ITEM OF INTEREST FROM THE NEWSLETTER OF
THE WEED SOCIETY OF WESTERN AUSTRALIA

The Future for Agro Chemicals

by: Ralph Burnett
Crop Protection Consultants
Watheroo W.A.

The use of broadacre agrochemicals has expanded at an unprecedented rate in the past 5 years. Currently, there is \$150 million spent on herbicides throughout Australia, about \$47 million of this here in Western Australia. Add to this my estimate of the value of contract application, boomsprayer sales, repairs, maintenance and spare parts at \$20m, and we have a \$67 million industry.

Whilst farmers are paying more today in "real" dollars for almost every other commodity, their costs for chemicals are only equal to inflation (National Farmer February 27). In Western Australia, due to actual price falls in diuron and simazine, the actual "real" costs increase could be close to nil.

Notwithstanding prospects for even greater utilisation of chemicals, the industry has its problems. Farmers are in considerable need of both better and more extension of information on agrochemicals use. Government department budgets are shrinking for these uses. Chemical companies tend to only increase staff until the product is "launched", then they relocate or retrench. Farm management consultants are under increasing pressure to advise on chemicals selection and use - an area which most would prefer to avoid. If cloning were possible, our group could be trebled in size, tomorrow, and not be able to satisfy the demand for:-

1. Specialist "on farm" consulting to single farmers and groups.
2. Paid participation in seminars, field days etc.
3. Local field trials paid for by farmers.
4. Contract trials work for chemical companies.
5. Increased trials for farmer research funds such as wheat, grains and barley.

The lack of capacity to adequately service farmers and contractors is permitting:-

- (a) Too many farmers to be injured by chemicals - probably 95% goes unreported to PHD.
- (b) Too much environmental pollution by way of quite inadequate container disposal.
- (c) Too many mistakes in selection of the correct chemical, rates or timings. This is probably costing farmers 10-15% of their annual chemicals bill - \$5m to \$8m in Western Australia annually.

Why then is there reluctance amongst consultants and advisors to come to grips with this new marketplace of agrochemicals? Could it be because of the following:-

- (a) A basic fear of the personally injurious potential of chemicals?
- (b) A fear of failure due to lack of "hands on" experience?
- (c) An attitude that "all this is ephemeral" and that "tomorrow we'll be back to normal"?
- (d) A fear of being "used up" by multi-national chemical manufacturers and losing credibility in the farmers eyes?
- (e) A fear that professional liability could be an issue and that a mistake could lead to loss and consequent recovery of damages?

Whatever the reason, we in agricultural science are not really providing the farmer with what he needs. I submit that this is opening up the way for several other developments in the marketplace.

- (a) **Unsubstantiable claims of performance for both chemicals and spray equipment**

A "knee-jerk" reaction of rejection (before testing), then a panic programme of testing, is just not good enough. If we were up with the trends and development, then we would know the truth, or would be asked for opinion or help.

- (b) A group of **self-taught advisors/consultants/contractors** emerged generally with the financial interest of chemical sales in view. There is considerable variation in advice given here. Much of it is not accepted by traditional consultants/advisors but - who's correct? It may well be that these people are better experienced (though not formally trained) than most of us here? I submit that this is a most unsatisfactory situation in that it "splits" agrochemicals advice - and all this really does is confuse the farmer. Either agricultural science gets "with" these people by way of providing information, short courses, etc, or they will become an alienated group just as the Rural Technologists did a few years back.
- (c) An **emerging class of anti-farming or anti-chemical critics** is filling part of the area between science (= development) and the farmer. These people are not without a quite substantial level of support from farmers, and rural dwellers alike. Many of these, I suggest, a majority, are women.

Unless the extension of soundly based, simple to comprehend, information is improved and expanded, we must expect this lobby to continue growing.

- (d) **Farmers are becoming disenchanted with "official" advice and research**

There are many reasons for this, including the conservatism inherent in agricultural science, a decrease in funds and resultant extension activity, and the minute amount of research funding spent on agrochemicals. Further, the approach taken by advisors toward "absolute adherence to the label recommendations" has not been taken well by farmers.

Regardless or not of the legal niceties of Section 20C of the Pesticides Regulations, the fact remains that farmers will always want to use less chemical if they possibly can. For us, as their advisors, to be blind to the economic realities of farming smacks very much of big brother. Further it places us in a no win situation, with farmers, and with the "greenies" - who surely can see advantages in less, rather than more!

Part of the future may well be the court case where a farmer, who follows the label exactly, (by law), yet experiences a failure, wins a judgement against both the chemical manufacturer and the registering authority (separately or jointly). It would certainly appear unreasonable to argue against this on the basis of biological variation, weather effects, etc. when in fact these very same conditions indicate the necessity for greater flexibility in recommendations.

In any case, the continuing disagreement over the rights and wrongs of labels and laws can only serve to further disenchant the farmer from use of professional advisors, be they government or private.

BOOK REVIEWS

"Queensland Weed Seeds"

The Queensland Department of Primary Industries has produced a 217 page book to assist in the identification of weed seeds. This book illustrates and describes 343 species of seeds. Most of the species of seeds more commonly found as contaminants in the analysis of crop and pasture seeds at the Queensland Seed Testing Station are included.

Although called "Queensland Weed Seeds" most of the species included occur in the southern States as well as Queensland. In fact some are more common in southern States than in the Sunshine State because they depend on other States for ryegrass, lucerne and some other seeds. Hence it is expected that people throughout Australia will find this a most useful reference.

Some of the species illustrated are useful plants if growing in a pasture, but when found in crop seeds are reported as weed seeds in accordance with present seed testing practice. Some further species have been included because they are prohibited species under Commonwealth Plant Quarantine or under State legislation.

Each species of seed is illustrated with sufficient magnification to show the characteristics of the seed as seen through a simple binocular microscope. A drawing showing the actual seed size appears under each photomicrograph.

"Queensland Weed Seeds" is available from:-

Information Branch,
Queensland Department of Primary Industries,
G.P.O. Box 46,
BRISBANE Qld. 4001

at \$7 per copy - soft cover, \$10 per copy - hard cover; plus postage (Queensland \$2; Interstate \$4; Overseas \$5).

"POISONOUS PLANTS"

Did you know that a substance in some cultivars of subterranean clover can cause reproductive problems in ewes? Or that the Sugar Gum (E. cladocalyx) contains a cyanogenetic compound which can cause sudden death in sheep, goats and cattle after feeding on sucker or mature leaves, especially if wilted?

Many plants on farms, road sides and stock routes in South Australia can be harmful or fatal to stock. I am sure you are aware of many but there are bound to be a few which may surprise you. Information on 151 common plant species capable of poisoning animals is contained in the recent publication "POISONOUS PLANTS" by E.J. McBarron of the N.S.W. Department of Agriculture. Published by Inkata Press.

The book is well presented with illustrations of 140 species and a further 380 supplementary drawings of flowers, fruit and/or habit of the plant to allow identification of the species. Farmers, graziers, weeds officers, students can use this book to identify plants suspected of poisoning and can refer to the text for information on the species of animals affected, the type of poison involved, the signs of poisoning, the treatment and any preventive measures to be taken.

ITEMS FROM INFOLETTER (OREGON STATE UNIVERSITY)

Weeds are pests: term often misused

The term "pests", in the agricultural sense, has been utilized all too often in the past to describe organisms other than weeds. Now the distinction of weeds apart from "pests" has become archaic, outdated, and - in fact - incorrect.

Consider this definition provided by the Silwood Centre for Pest Management in the U.K., a reputable authority one would believe:-

pest n. **1.** a person or thing that annoys esp. by imposing itself when it is not wanted; nuisance.
2.a. any organism that damages crops, injures or irritates livestock or man, or reduces the fertility of the land. **b.** (as modifier): pest control.

Thus, "pest" is a basic, broad term referring to **any** organism causing undesired conditions. Nowhere is it written that "pest" equates exclusively with insects, or disease, or excludes weeds.

Phrases such as "pests and weeds ..." are redundant and symptomatic of failure to recognize basic definitions, not to mention actual conditions. **Eds. suggestion:** next time the phrase "pest and weeds", or similar misuse comes to your attention, take time to advise the offending author of her or his blunder.

"There is really no question as to whether weeds should be controlled; the only question is how best to control them". - C.M. Switzer, Canada.

"Training is necessary to provide leadership in instruction, research, and extension in weed control programs, and for other personnel to conduct and assist in research, extension, and training". - R.K. Nishimoto, USA, 1983.

Know your oats

Determining the stage, or maturity, of certain weeds, such as Avena fatua (wild oat), can make herbicide applications and economic success or a dismal failure, according to agronomists of Montana State University (USA).

During investigation of A. fatua control systems, these researchers found that very few people could correctly determine the weed's stage, and often waste herbicide by spraying too early or too late. The answer: the Wild Oat Staging Card, a tool to help correctly time herbicide application.

Drawings on the card show various leaf stages of A. Fatua. A grid system provides for recording in-field observations. The combined information suggests which (if any) herbicide would be appropriate.

Cards, in English, are free from: _

P.K. Fay,
Dept. of Plant/Soil Science,
MSU,
Bozeman MT 59717
USA

JOOBARA, GUNAWULA OR MILK??

NEW CROPS - FACTORS FOR SURVIVAL

ON FRIDAY 21 SEPTEMBER 1984

AT BOJOURE BOOSE UNIVERSITY OF NEW SOUTH WALES KEMBRIDGE

8.30 Registration

2.30

Chairman Michael Mulline Professor of Horticulture Sydney University

9.00 General Opening and Welcome

9.05 Historical Perspective Dennis de Koning, Sydney University

What significant crops have been introduced to Australia in the recent past? What factors have influenced their success or failure?

3.00

9.25 Field Crops Frank Cutting, NSW Dept Agriculture Triticale, Buckwheat, Lupine, Sesame

9.50 Industrial Crops A. Djodja, Ganyula Peter Millthorpe, NSW Dept Agriculture

Chairman Neil Inall Rural Press Group

10.10 H. Keanaf, Guat Ian Wood, CSIRO Cunningham Laboratory

4.00

10.50 Morning Tea

Chairman Nelson Johnston Consultant, Sydney

11.15 Horticultural Crops A. Fritle & Vegetables Don Batten, NSW Dept Agriculture, Altonville

5.00

11.45 R. Pharmaceutical, Kamaiti Oils Brian Small, Consultant, Sydney Tea Tree, Duboisia, Lemon Grass

5.30 Light Refreshments

12.15 C. Ornamentals and Australian Native Greg Lamont, Dept Agriculture, Gosford Proteas, Boronia, Maratah

12.45 Lunch

Chairman Tony Biggs Hawkesbury Agricultural College

2.00 Export Potential & Seed Production

Nick Defera, Consultant, Vice President, AIAS NSW Branch Which of the crops have export potential? How can this potential be realized? What scope is there for seed production?

2.30 Tissue Culture George Taylor, Managing Director, Burbank Nurseries

How will the technique affect the introduction of current and future new crops?

Marketing Rhonda Greenwood, Bureau of Ag. Economics

A product without a market is of no value. What are the market prospects for the new crops? How can they be assessed?

3.30 Planning & Investment Peter Sloane, Consultant, Peter Sloane, Cook & King Pty. Ltd. How to separate the wheat from the chaff. Planning under uncertainty, sources of finance, syndication & speculation.

4.00 A Practical Perspective. Four growers and/or managers will give short papers and respond to questions: Peter Elton Managing Director, Joooba Plantations

Berry Spooner Consultant, Tropical Fruit Crops, Lismore Geoffrey Davis Managing Director, G.R. Davis & Co (eucalyptus & tea tree oil) Ridley Bell Blueberry producer and consultant, Lismore

5.00 Overview Bruce Davidson Are there any common themes among the various crops? How can a grower or investor evaluate potential benefits or risks?

NAME
ADDRESS
PHONE

SEMINAR FEE AIAS NON STUDENT MEMBERS MEMBERS MEMBERS

IF paid before 14/9/84 \$50 \$60 \$15 after 14/9/84 \$70 \$80 \$20

INCLUDES: - Morning Tea - Buffet Lunch - Seminar Proceedings - Light Refreshments

Please make cheques payable to AIAS, complete this form and return to:

AIAS c/- Ian Harris, Faculty of Agriculture Sydney University, NSW, 2006

Further Information From: Ian Harris 02/6922936 Jon Cook 02/4391411 Grant Davies 02/2641047

AUSTRALIAN INSTITUTE OF AGRICULTURAL SCIENCE AUSTRALIAN ASSOCIATION OF AGRICULTURAL CONSULTANTS