THE WEED SOCIETY / OF NEW SOUTH WALES

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

NEWSLETTER NO. 1/80
Price - 10 cents.

FEBRUARY, 1980.

NOTICE OF 14th ANNUAL GENERAL MEETING

PLACE: CONFERENCE ROOM,
CIBA-GEIGY AUSTRALIA LIMITED,
14 ORION ROAD,
LANE COVE. (Enter by the Orion Road gate, park and follow sign to Conference Room.)

DATE: FRIDAY, 29th FEBRUARY, 1980.

TIME: 3.00 p.m.

AGENDA

1. Apologies.
2. Minutes 13th Annual General Meeting.
3. Business Arising therefrom.
4. Annual Report.
5. Business Arising therefrom.
6. Financial Statement.
7. Election of Office-Bearers.
8. Presidential Address.
   (Dr. Leon Smith will talk about his impressions on weeds and weed science gained overseas on his recent study leave in the U.K. and U.S.A.)
9. Other Business.

WEED SOCIETY FIELD TOUR OF SOUTHERN NEW SOUTH WALES

A very successful field tour of weed control trials in the Wagga Wagga area was held on the 3rd and 4th October. Although the weather was not kind to us, about 35 keen members attended.

The tour started at the Agricultural Research Institute at Wagga Wagga, with Andrew Leys showing his weed control trials in lupins. We then inspected some of his plots comparing the tolerance of wheat varieties to herbicides. Andrew outlined the results he had obtained last year where the varieties Shortim, Olympic, Egret and possibly Cook showed up to be much more sensitive to the growth regulator herbicides. Some plots supporting these findings were observed. The other result of Andrew's work which we saw was the greater susceptibility of the durum wheats to the post-emergence wild oat herbicides.

Next we inspected a trial of Jim Pratley's (a new member) comparing the various herbicides for control of amsinckia in wheat. Here terbutryne, methabenzthiazuron plus 2, 4-D, dicamba plus MCPA, bromoxynil and bromoxynil plus MCPA all did a good job, with the first three being best.

During the afternoon we visited a trial of Monsanto's (soursob control with glyphosate), and ICI work with herbicides in direct drilled wheat and lupins.

Thursday morning saw the convoy head out to Coolamon to inspect Monsanto plots on the use of glyphosate for direct drilling, and then on to Brian Scarsbrick's plots comparing herbicides for wild radish control. Brian is supervising these trials on wild radish, and details of the overall results can be obtained from him, however, in the plots we saw the bromoxynil/MCPA mixtures again proved their worth. Other treatments to perform well were methabenzthiazuron plus 2, 4-D (tank mix), linuron, dicamba plus MCPA, MCPA at low rates applied early, and the new DuPont product DPX-4189.

Next was another of Brian's trials, this time control of *Stuartina muelleri*. This and another species *S. hamata* have been common weeds handed in to District Agronomists over the past two years, from locations throughout central and southern New South Wales. Terbutryne was the best herbicide in the trial.

After some sandwiches and tea and coffee, graciously supplied by the Hart brothers, Bernard Hart described his farm operations for us. This was very interesting, particularly hearing a farmer's view of the advantages of direct drilling, and rotations including lupins and rapeseed.

The final stop was the "tramlining" fungicide trial conducted by Bob Colton on Hugh Roberts' property at Cootamundra. The drinks and hors d'oeuvres provided by Hugh were a perfect finale to the tour, and our thanks must go to Hugh and his wife for their generous hospitality.

All in all an enjoyable and rewarding tour, and we look forward to similar ventures to other parts of the State in future years.

Note - Andrew Leys, who organised this very successful tour, is off to the University of Illinois for the next three years to study for his Ph.D.

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W.A. WEED SOCIETY PROCEEDINGS

The first Conference of the Western Australian Weed Society, held on 3rd-6th September, 1979, drew several delegates from the eastern states and overseas, who contributed about 40% of the papers. Papers covered the following topics: Environmental aspects of weed control 2; Weed species 8; Minimum tillage 11; Herbicides 4; Spray equipment 3; Economics of weed control 5; Weed control in cereal crops 4 and Biological control of weeds 1. The Proceedings of 114 pages is now available for $5.00 per copy including postage from: P.A. Rutherford, Secretary, The Weed Society of Western Australia, P.O. Box 190, Victoria Park, W.A. 6100.

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AGRICULTURAL STUDY TOURS 1980

The Council of Australian Weed Science Societies, as a member of the Conference of Australian Agriculturalists (C.A.A.) will be offering their members several unique agricultural study tours in 1980. This has been made possible by the C.A.A. becoming closely associated with Hans H. Kristensen Pty. Ltd., one of the world's leading Agricultural Tour Operators and founder of the International Agricultural Exchange Association.

Tours to be offered will include a specialised Sunflower Conference Tour through Europe, and Tobacco Tour through Eastern U.S.A./Canada, as well as general agricultural and veterinary study programs through Israel and Europe, New Zealand, Western U.S.A./ Canada and Central U.S.A./Canada. These general tours are flexible and technical visits can be altered to cater for particular agricultural interests of the group members.

Dr. Graham Swain, Principal of Hawkesbury Agricultural College will be among the professional Agriculturalists leading these tours and in some cases stays with rural host families will be included.

Brochure with details is enclosed.

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LETTER FROM JOHN FRYER, DIRECTOR, WEED RESEARCH ORGANISATION -

"It is very kind of you to continue to send me copies of the Newsletter of the Weed Society of New South Wales. I find this of particular interest since I spent three weeks in New South Wales last Christmas during a visit to see my son who is working up in Queensland. I regretted very much that I did not have time to look up Australian weed colleagues during my visit, but at least I can now visualise much better the surroundings in which you all work, and some of the weed problems you face.

The Newsletter is widely read within the institute here and is retained by the library. Some of the news items contained in it are incorporated into Weed Research and possibly PANS. I should welcome it therefore if you are able to continue to send it.

If on our part there is anything we can do from this end by way of reciprocation please do not hesitate to let me know.

With kind regards, Yours sincerely, J.D. Fryer, Director."

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"Glossary of Terms Applicable to Agricultural and Veterinary Chemicals" - PB 354 is a 47 page booklet of phrases, words and definitions used in conjunction with the agricultural and veterinary chemicals published in 1979 by the Department of Primary Industry. A limited number of copies of the first edition are available free of charge from: Pesticides Section, Department of Primary Industry, P.O. Box 4002, Canberra, A.C.T. 2600.

"Computer Simulates Weed Growth" - Scientists have a computer programmed to predict response of weeds to various environmental conditions.

USDA-SEA agronomist Marvin M. Schreiber and his colleagues at Purdue University have simulated growth of robust white foxtail and robust purple foxtail in a computerized program or model. These weeds have become serious crop pests in eastern and midwestern states during the last two decades.

The model, named SETSIM, is the first weed growth model and may serve as a forerunner of models for other weeds. Dr. Schreiber says such models some day may help farmers determine when to apply herbicides most effectively. The models also may predict spread of weed infestations in new geographic areas.

Together with crop models, weed models may be used eventually to estimate yield reductions and harvest losses attributable to weeds.

Dr. Schreiber says that further refinement of the new weed growth model will help students and researchers improve their understanding of weed physiology as they compare simulated predictions with actual observations in the field.

(Extract from recent Farm Chemicals)

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"SQUIRT", "WIPE" and "ZAP" - New Terms in Weed Technology (from Infoletter, October, 1979)

SQUIRT The concept of spraying herbicide across and above crop rows and catching spray solution not intercepted by weed plants was developed by U.S. Department of Agriculture weed scientist C.G. McWhorter in 1964. But not until 1976, when tests using glyphosate in a recovery applicator were reported, did the method gain wide acceptance and become commercially viable.

Recovery machines direct spray streams horizontally toward a collector. The recovered solution - that not remaining on weeds - passes through a filter and returns to the sprayer's supply tank to be reused. The approach originated for treating tall weeds rising above a crop.

WIPE Wiper style applicators do just that - directly contact weed plants and wipe them with herbicide. This concept, too, has been around a long time, but, due to glyphosate and changing cultural practices, resurfaced in a new guise.

Wipers divide into the pad or "carpet" type, with herbicide delivered to an absorbent pad (or, individual mop-like applicators), or units that utilize a wick-rope. In the latter, the ends of a loosely woven nylon rope are secured inside a container with the majority of wick stretched across the container's front. Capillary action causes herbicide to saturate the rope. The impregnated wick brushes herbicide onto weeds as the applicator, mounted on a tractor, moves forward.

Proponents of wiping point out that the technique virtually eliminates chances of splashing, misting, dribbling, or spilling. Wipers are unaffected by wind. No pumps are needed on wick applicators; the single container stores and delivers herbicide to the wick. However, both carpet and wick wipers require more concentrated solutions than conventional sprayers.

The major difference between recovery or wiper applicators and conventional herbicide spraying is that the amount of herbicide used depends on the volume of weeds treated, not the ground area covered. Only targeted weed plants receive herbicide, not the crop nor surrounding area.

ZAP Another method of postemergence weed control, without use of chemicals, forces weeds' vascular systems to conduct high voltage electrical current thus rupturing cell walls, destroying tissue, and killing the plant. A tractor-mounted machine offered in the U.S. employs charged wire probes to contact weeds growing above the crop or between crop rows.

The plants act as a ground allowing the electrical energy to dissipate. Hence, this method causes little damage to underground plant parts. The technique works most effectively on broad-leaf weeds.

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N.S.W. WEED SOCIETY PROGRAMME, 1980

Advance notice is given of the following tentative programme arrangements for 1980:

24th June - Mr. Wapshere from the International Biological Control Unit, Montpelier, France, will be visiting B.C.R.I. Rydalmere, and arrangements are in hand for him to speak to the Society at Rydalmere that day.

11th April - - A Symposium by the Conservation Tillage Specialists from University of Nebraska, will be held at Sydney University and will be co-hosted by the Weed Society of N.S.W.

August 1980 - It is hoped to arrange a Northern Field Trip this year (Warwick Felton) similar to the one held last year in Southern New South Wales.

November 1980 - Annual Dinner.

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REPORT ON THE 7th CONFERENCE OF THE ASIAN-PACIFIC WEED SCIENCE SOCIETY

Under the auspices of the Council of Australian Weed Science Societies (CAWSS) the 7th Conference of the APWSS was held at the Boulevard Hotel in Sydney from the 26th - 30th November, 1979.

Because the conference was to be held in Sydney, members of the Organising Committee established in 1977 by CAWSS were drawn from the Weed Society of New South Wales. Mr. Allan Mears was elected Chairman of the Committee.

The two years of lead-up work for the Conference was assisted by the following members, Dr. L.B. Lowe (Deputy Chairman), Mr. A.B. McLennan (Treasurer), Dr. P. Michael, Dr. B.A. Auld, Dr. R.W. Medd and Mr. K.R. Green (Programme Committee), Mr. M.W. Barnett (Tours and Hospitality), Mr. J. Toth (Field Day) and Dr. R.W. Medd and Dr. B.A. Auld (Proceedings Editors). The Organising Committee was ably assisted by Marilyn Zweck (Conference Convenor) and her assistant Joan Hodge. Without their able assistance the organisation of the conference would have been more difficult.

The conference was opened on 26th November by the Honourable Mr. Don Day, Minister for Agriculture in the N.S.W. Government, this was followed by a welcome to delegates from Mr. Allan Mears. The President of APWSS, Dr. Peter Michael, then delivered his presidential address after which the conference got under way, with the presentation of papers covering a wide variety of subjects.

The arranged programme reflected the diversity of Australasia and South East Asia and a wide range of topics including new herbicides, new techniques for weed control, the physiology and residual effects of herbicides, weed control in horticultural and field crops, weed control in pastures and plantations, aquatic weed control, weed management and biological interactions, the ecology and biology of weeds and the introduction and spread of weeds, were covered by the papers presented.

The discussion which followed the formal presentations and the informal discussion outside the conference were stimulating and reflected the success of the programme.

On Wednesday, 28th November, a special symposium was organised to discuss "Weeds in Urban Bushland" and this was attended by 250 interested delegates. On the same day, 178 delegates visited Hawkesbury Agricultural College where the College staff, in conjunction with the Weed Society of N.S.W., had arranged a number of interesting demonstrations and exhibits.

On the social side a cocktail party was held on the evening of Sunday, 25th November, and the conference dinner at the Argyle Tavern on Tuesday evening, 27th November. At the dinner, overseas visitors were able to enjoy a typical Australian evening. In addition, other social activities were arranged for delegates and associates which included, a luncheon cruise on Sydney Harbour, a visit to Swane's nursery, a tour to the Eastern Suburbs and an evening at the Sydney Opera House.

The conference was attended by a total of 311 delegates, which came from all states of Australia, New Zealand, Japan, U.S.A., India, the Phillipines, Taiwan, Indonesia, Singapore, Thailand and Malaysia, thus indicating a truly international conference.

A feature of the conference was the first CAWSS oration which was delivered by Dr. S.C. Everist, whose subject was "Perspectives and Priorities in Future Weed Research and Control". Dr. Everist was Government Botanist in Queensland prior to his retirement.

The organisation of the conference was supported by many industries, organisations, individuals, and the Government of Australia. Special thanks should go to those companies who generously provided finance for the running of the conference. Also special recognition should go to Dr. Auld and Dr. Medd for an excellent job in handling the editing and printing proceedings.

Overall, the conference was very successful and the Organising Committee established by CAWSS should be well satisfied that they had honoured their obligation to the APWSS in both organising and conducting a successful conference.

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INTERNATIONAL NEWS

The 2nd International Parasitic Weed Symposium held in Raleigh, North Carolina, U.S.A., in July 1979 was attended by about 80 delegates from over 20 countries. At a special session a new International Parasitic Seed Plant Research Group was created with Mr. Chris Parker as Chairman, Dr. Lytton Musselman as Secretary, and a committee of eight to assist in creating the best possible communication between workers on parasitic plants. There is no subscription and all those on the mailing list of the newsletter "HAUSTORIUM" automatically become members of the group. The newsletter is produced two or three times per year under arrangements with Old Dominion University, Norfolk, Virginia. For further details, contact Dr. Musselman, Department of Biological Science, ODU, Norfolk, Virginia, 23508. U.S.A.

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NEW BOOKS

Pesticide Application Methods by G.A. Matthews. The introduction emphasizes the need for minimizing use of pesticides in integrated control systems. Hence the importance of the best application methods. The principles of formulation, droplet formation and nozzle design are discussed and different types of equipment are described including spinning disc sprayers, fogging devices, granule applicators, fumigators and injection equipment. Safety precautions are emphasized. There is a tendency for emphasis on insecticide application but herbicides are also covered. The 334 page book is published by Longman at 20 pounds.

Pesticide Manual - A World Compendium (6th Edition) by C.R. Worthing. This latest edition runs to 580 pages and costs 20 pounds. Copies are available from BCPC Publication Sales "Shirley", Westfields, Cradley, Malvern, Worcestershire WR13 5LP, England. British Crop Protection Council has many other publications available including 22 volumes in the BCPC Monograph series, being proceedings of BCPC Symposia. Also Proceedings of BCPC Conferences on Insecticides and Fungicides, and Weeds, Weed Control Handbook, Insecticide and Fungicide Handbook for Crop Protection, and The Pest War by W.W. Fletcher. Details of all these from address above.

Geographic Atlas of World Weeds by LeRoy G. Holm, Juan V. Pancho, James Herberger, and Donald L. Plucknett gives a comprehensive listing of more than 8000 plants which somewhere, sometime have been classed as weeds. A listing of countries in which each weed has been reported is given, along with an indication of the importance of that weed in that place. In order for users to obtain up-to-date information on each plant, the current scientific name is given, along with previously-used names. Key portions of the book are translated into a number of world languages so that the book can be used internationally. Plant scientists will find this atlas a handy desk reference. This 500 page book is available for $30 (tent.) from Wiley-Interscience, 1 Wiley Drive, Somerset, NJ 08873. U.S.A.

Introduction to Weed Science by Beatriz L. Mercado. Dr. Mercado is the leader of the weed science group at the University of the Philippines at Los Banos. This may be the first weed science textbook written in the tropics with tropical weeds and crops as examples. The emphasis is on the study of weeds and their effect on crops. However, there are chapters on herbicides and factors affecting them as well as a chapter on weed control in specific crops. This 292 page book is published by Southeast Asian Regional Center for Graduate Study and Research in Agriculture, College, Laguna, Philippines. No price given.

Common Weed Seedlings of the United States and Canada by a Weed Science Society of America Sub-Committee chaired by Extension Weed Scientist, James F. Miller. The paperbound volume presents brief descriptions and full colour photos of 76 broadleaf species seedlings, five of which were found throughout North America. In English, 32 pages, US $2 per copy from: WSSA, 309 W. Clark Street, Champaign, IL 61820. U.S.A.

VISIT BY CONSERVATION TILLAGE SPECIALISTS
FROM UNIVERSITY OF NEBRASKA

March 10th to April 11th,
1980

DRAFT ITINERARY

March 10 - Monday	Arrive Sydney
11 - Tuesday	Informal meeting with organisers and orientation.
12 - 16 - Wednesday - Sunday	Sydney to Moree. Moree, farm visits.
17 - Monday	Moree, Seminar for farmers.
18 - Tuesday	Moree, Seminar for research workers and farmers herbicide and machinery organisations.
19 - Wednesday	Moree (9-5) Workshop for conservation tillage researchers.
20 - 21 - Tuesday - Friday	Gunnedah, farm visits. Soil Conservation Research Station, Gunnedah. Seminar for farmers.
22 - Saturday	Gunnedah to Queensland.
23 - 29 - Sunday - Saturday	Queensland.
30 - Sunday	Queensland to Narrabri.
31 - 1 - Monday - Tuesday	Narrabri, farm visits. Seminar for farmers.
April 2 - Wednesday	Return to Sydney via Mudgee.
3 - 4 - Thursday - Friday	Rest days.
5 - 9 - Saturday - Wednesday	South and Central West, farm visits and Seminar for farmers at Wagga.
10 - Thursday	Return to Sydney.
11 - Friday	Symposium in conjunction with Weed Society of N.S.W. and A.I.A.S. on conservation tillage at University of Sydney (for general audience and senior students) at 3.30 p.m. in the Badham Lecture Theatre. 4.00
	6.30 p.m. Dinner at Staff Club. 7.30

THE WEED SOCIETY OF NEW SOUTH WALES

OBJECTS OF THE SOCIETY

(a) To promote a wider interest in weeds and their control.

(b) To provide opportunities for those interested in weeds and their control to exchange information and ideas based on research and practice.

(c) To encourage the investigation of all aspects of weeds and weed control.

(d) To co-operate and, where appropriate, affiliate with other organisations engaged in related activities in Australia and overseas. (Our Society is affiliated with State Weed Societies in Queensland, Victoria, South Australia and Western Australia, and it is a member of the Council of the Australian Weed Science Societies and the International Weed Science Society.)

(e) To encourage the study of weed science and the dissemination of its findings.

(f) To produce and publish such material as may be considered desirable.

FEES

Fees are currently $12.00 per year for individuals, and $25.00 per year for corporate bodies. There is no joining fee.

THE WEED SOCIETY OF NEW SOUTH WALES

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

The Secretary,
The Weed Society of N.S.W.

I wish to submit the following application for admission to ordinary membership of the Society.

NAME: (in full) _____

ADDRESS: _____

_____

_____

PHONE: _____

PRESENT OCCUPATION: _____

_____

INTERESTS IN WEEDS AND THEIR CONTROL: _____

_____

_____

ACADEMIC QUALIFICATIONS: (if any) _____

_____

_____

IF ADMITTED TO MEMBERSHIP I AGREE TO ABIDE BY THE CONSTITUTION AND BYE-LAWS OF THE SOCIETY IN EXISTENCE FROM TIME TO TIME.

SIGNATURE: _____

DATE: _____