

THE WEED SOCIETY / OF NEW SOUTH WALES

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

PRESIDENT Mr. M.W. Barrett

HON. SECRETARY Mr. W.J. Burke

SEPTEMBER, 1976.

NEWSLETTER

Price - 10 cents 5/76

NOTICE OF MEETING

The Society has arranged the following meeting:-

- WHERE: State Pollution Control Commission,
Conference Room,
5th Floor, Union Carbide House,
157 Liverpool Street,
SYDNEY.
- WHEN: Tuesday, October 5th, at 5.00 p.m.
- WHO: Mr. E. G. Cuthbertson,
Special Research Officer - N.S.W. Department of Agriculture,
A.R.I., WAGGA.
- TOPIC: "Changing Patterns of Weed Research"

Eric will be retiring soon and this talk should be of interest to all those concerned with weeds, weed problems and weed research over the years.

"HIGHLIGHTS OF AN OVERSEAS STUDY TOUR"

Summary of Talk Given to Weed Society Meeting by B. Auld

Bruce Auld described his year's study leave at the University of Reading, U.K., which was sponsored by the Australian Wool Corporation.

Bruce was working on mathematical models of growth and their use in describing the effects of temperature on leaf growth. The model used was a flexible logistic function first described by Richards in the Journal of Experimental Botany, 1959, but rarely used since. The particular advantage of this function are the biologically meaningful parameters which can be derived from it which are independent of the shape of the curve. There appears to be considerable potential for using the function to describe leaf area growth as the basis for studies of cell dynamics in leaves under varying environmental conditions.

Bruce went on to show some slides of a field trip to Soviet Armenia which was part of the International Botanical Congress which he attended.

"ROADSIDE VEGETATION CONTROL" - Summary of Talk Given to Weed Society Meeting
by R.W. MEDD.

In New South Wales there are about 209,000 kilometers of public road; 20% of which are controlled by the Department of Main Roads. The limited funds available to manage this vast network invariably restricts control attempts to "housekeeping" operations (e.g. mowing, grading and spraying of the immediate road verge). Therein lies the problem. Little attention is paid in most instances to the roadside beyond the verge except for the control of noxious weeds.

Mr. Medd outlined that clear objectives and a set of workable practices exist and are used by the D.M.R. for planning re-vegetation of roadsides. Implementation of their plan appears, however, to be restricted to newly formed road portions. Conversely, re-vegetation of Shire roads appears to lack planning and often fails due to unsuitable landscaping. He suggested that roadbuilding should at all times include a programme of planned re-vegetation.

Examples of a range of vegetation adapted to colonizing the disturbed and difficult roadside environment were given. In keeping with the desire for aesthetics, more species capable of forming climax communities are needed to minimise long-term management operations.

Mr. Medd concluded by discussing some data relating to long term management of non-grazed weed infested plant communities. Mowing continually for 20 years resulted in enhanced weed problems. Alternatively, an annual application of 2,4-D over 20 years markedly reduced undesirable species. However, replacement with a suitable dis-climax community, over the long-term proved to be the most desirable alternative in terms of cost of management.

WHO'S WHO IN WEED SCIENCE

BRIAN PIKE - President of the Weed Science Society of South Australia. For the past 12 years Brian has been the Local Government Weeds Officer, based at Woodside, serving the Angaston, Barossa and Mt. Pleasant Councils. He is primarily responsible for enforcing the South Australian noxious weeds legislation.

JIM ROBINSON - for 5 years Principal Officer, Agricultural Chemicals, Department of Agriculture and Fisheries. Jim's responsibility is the registration of agricultural chemicals in South Australia; part of his duties include being a committee member on the Standards Association of Australia; T.C.A.C. and the Agricultural Chemical Committee. Prior to this appointment Jim was employed as a Development Scientist with I.C.I. at Merrindale, Victoria for 17 years.

COMING EVENTS

The 6th Asian-Pacific Weed Science Society Conference will be held in Jakarta, Indonesia from July 11th to 17th, 1977.

The Conference will discuss weed science under 18 different topics, each with a session organizer: Ecology; Losses; Pest Management; Education and Training; Perennial Weeds; Parasite Weeds; Cereal Crops; Vegetable and Fruit Crops; Root Crops; Plantation Crops; Forestry; Aquatic Weeds; Mechanical Control; Biological Control; New Herbicide Development; Herbicide Physiology; Herbicide Residues; Alternative Utilization of Weeds.

A two day workshop on "Weed Control in Small Scale Farms" will also be held at the Conference.

Abstracts and papers must be submitted before 14th February, 1977.

Contact Dr. Peter Michael (692-1122 Ext. 3214) or Dr. Leon Smith (045-78 1333) for further information.

SHORT NOTES

1. The International Weed Science Society (IWSS) is a new, worldwide scientific society open to all who are interested in weed science, weed control, weeds and closely related topics. For information and brochure write to:

IWSS Secretariat,
Oregon State University,
CORVALLIS
OR 97331 U.S.A.
2. There have been several changes in the N.S.W. Department of Agriculture, Plant Industry Division recently. Jim Strang is now Principal Agronomist (Summer Crops) and Allan Mears, Acting Principal Agronomist (Weeds).
3. The C.S.I.R.O. have been actively releasing a weevil (Apion antiquum) for biological control of spiny emex at sites all over Australia. Eight field observation sites and two detailed experimental sites have been established in N.S.W. The weevil can be seen in action at Hawkesbury Agricultural College - contact Leon Smith if interested.

SOME THOUGHTS ON GRASS CONTROL FROM THE PRESIDENT

A fascinating area of Weed Science is the biology and control of our major perennial grass species. Over the last five years or so we have seen development of new herbicides which control many of these grasses. The herbicides range from 2,2-D PA and bromacil to karbutilate, glyphosate and tetrapion and others still under test. The significance of this plethora of grass killers is that they exhibit many different characteristics which, at least indirectly, enable us to better understand the behaviour of our major problem perennial grasses.

If we look at Paspalum dilatatum we can eliminate this and replace it with couch by careful use of karbutilate under Sydney conditions. If we wish to remove couch in an established Paspalum strand, bromacil is very satisfactory. We have found that 2,2-D PA in the late Summer - Autumn at high rates will usually give good control of established Paspalum plants, but results in a massive germination of seedlings in Spring. However, if this treatment is continued for a two year period no further seedling germination occurs, suggesting that the seed has only a short viability.

When a 2,2-D PA paraquat sequential spray was tested, the same result as regards Paspalum behaviour was found except that in this case the low rate of 2,2-D PA did not have any residual effect, so that Paspalum seedlings germinated in June instead of the Spring period where high rates were used. However, winter seedling germination was usually prevented by the broad leaf weed succession that occurred with the sequential spraying technique. Annual winter legumes were particularly effective in suppressing Paspalum seedling germination and growth.

Again, if glyphosate is used, particularly in the Autumn period, a complete new seedling Paspalum population may be established. By contrast, tetrapion can give longer term control of Paspalum seedlings but still allows weed succession. It is not known whether the use of glyphosphate over a two year period will prevent any further Paspalum seedling growth as with 2,2-D PA.

Regarding Johnson grass, both glyphosate and tetrapion will prevent seeding of perennial grasses and regenerative growth. This may offer some scope, possibly in conjunction with mowing.

Serrated tussock is proving very susceptible to tetrapion which may be applied at any time of year. Low rates will affect Tussock seedlings but also allow oversowing or a natural plant succession shortly after spraying. Tetrapion may also be used selectively to weed out Tussock from improved pastures.

These three perennial grasses seed vigorously, but seedlings are very susceptible to competition and do not have long seed viability. New herbicides enable us to exploit these factors in designing control programmes.

BOOKS AND PUBLICATIONS OF INTEREST

TASMANIAN WEED HANDBOOK

Brian H. Hyde-Wyatt and Dennis I. Morris.
(1975, Tasmanian Department of Agriculture)

An excellent illustrated guide to the identification of the main broadleaf weeds of crops and pastures in Tasmania. The book includes a glossary of anatomical/taxonomical terms, a key to the identification of seedlings, comparative characteristics of Rumex and Polygumn species, an adequate description of the listed species together with line drawings of each species. This is a valuable reference for all interested in the broadleaf weeds of Southern Australia.

Price \$2.50

WEED SCIENCE : PRINCIPLES AND PRACTICES

Glen C. Klingman and Floyd M. Ashton.
(1975, John Wiley & Sons, New York)

This text could form a basis for a new library on weed science. It is easy to read and understand. It would be useful as a classroom text, a research reference, an extension reference, useful to herbicide company representatives, farmers and government employees, alike.

Sections include weed biology; herbicide activity; formulations and application techniques; a description of current herbicides and crops.

Price About \$20.00

FUTURE PROGRAMME

- the Symposium on Equipment and Application Techniques has been held over until Autumn, 1977.
- The Annual Dinner has been set for Friday, 26th November at Len Evan's Wine Cellars (Tasting Room), 16 Bulletin Place, Sydney. Parking available at Grimes Garage, Arbitration Street. The cost will be \$11.00 single or \$21.00 double. This is an all inclusive charge (champagne, hot meal, wine, port, dessert and coffee). Further details will be available in the next Newsletter. Please keep this date free. Last year's dinner was a resounding success and this year's promises to be the same. Book early with Mike Barrett (2-0525).

REMINDER

Some 1976 subscriptions are overdue. To date, over 75 per cent of members have paid up. Are you one of the remainder? Please remit as soon as possible.

WHAT WEEDS ARE.....

Weeds are insidious thieves; they are robbers of water, of light, of nutrients, and often of natural beauty.
They are carriers of pathogenic pests, feeders of fires.
They are legion in number, numerous in kinds, variable in habit, often poisonous in character.
They are restless travelers that freely enter and tenaciously hold sites where plants have been exploited or foolishly neglected by man.
Weeds are crafty enemies, without senses, without mercy; they lurk everywhere throughout the civilized world and move about quietly, unobtrusively, seemingly endless in variety.
Weeds are successful competitors; that is why we generally define them as "plants out of place" or "unwanted" plants.

V.I. Cheadle.
Calif. Weed Conf.
1956