

R E S O L U T I O N S

(1) Conference agreed that studies of life history and ecology had assisted materially in the understanding of some weed problems and in the formulation of control measures. It was further agreed that the data provided by such studies were wanting for the great majority of the most serious weeds of Australia.

Conference resolved:-

(a) that life history and ecological studies would make an important contribution to the control of the most serious weed problems of Australia.

(b) that such work could appropriately be done by the Universities and C.S.I.R.O.

(2) Conference agreed that there was need for more precise data on the physiology of weed species. In particular, work was needed on the synthesis, translocation and utilization of food material in woody plant and herbaceous perennials.

(3) Conference agreed that dormancy of bulbs and corms presented a major difficulty in obtaining control of three serious weeds, viz. the Cape Tulips, and soursob, and most probably of other bulbous weeds.

It was also agreed that seed dormancy added to the problem of controlling annual weeds such as spiny emex and the various black oats. Attention was drawn to the fact that this latter aspect was being studied at Rothamsted and elsewhere.

Conference resolved that studies of dormancy of bulbs and corms should be undertaken to assist in the control of bulbous weeds and that this was an appropriate field of work for Universities and C.S.I.R.O.

(4) In experimental work on the control of woody perennial plants, a knowledge of the fluctuations in reserve food material is important in interpreting results. Where the storage product is starch, the iodine test is adequate for field testing, but tests for other storage materials are not generally available.

Conference resolved that:-

1. the attention of those engaged in research on weed control should be drawn to the necessity for determining the reserve status of the plant concerned at the time of treatment.

2. research should be directed towards developing simple field tests for storage products other than starch.

(5) This Conference has afforded an opportunity of correlating the work carried out on the tolerance of various crops and pasture species to herbicides and desires to draw attention to the need to extend this knowledge by further research to determine the tolerance of all varieties to the herbicides likely to be used with them. This work could appropriately be done by State Department of Agriculture.

The Conference also considered that the attention of plant breeders should be drawn to the desirability of breeding varieties incorporating tolerance to selective herbicides.

(6) The rapid adoption of herbicides as an economical means of controlling weeds on a large scale has been due in a large measure to the development of low volume spraying techniques soon after the discovery of the hormone-type herbicides. These techniques have made possible the economical application of herbicides over large areas, especially in districts where water supply is limited. It was apparent to the Conference that poor spray distribution may often seriously reduce the efficiency of herbicidal applications and restrict the adoption of chemical weed control on a number of crops.

The Conference agreed that many spray nozzles at present available were unsatisfactory and resolved that the Standards Association of Australia be approached to establish standards of nozzle design and performance concerning spray distribution and particle size.

(7) The Conference agreed that the functions of the six State Weeds Co-ordination Committees could be more efficiently performed by a single National Weeds Committee. In most States, intra State co-ordination of weeds research by State Weeds Co-ordination Committees had been superseded by other State bodies. It was further agreed that for the proper functioning of a National Committee, the secondment of a Commonwealth officer to act part time as an Executive Officer was desirable.

The Conference agreed that it should recommend to the Standing Committee on Agriculture that a National Weeds Committee be established, composed of State and Commonwealth weeds investigation officers. The Committee should meet once a year to define Australian weed problems, to co-ordinate the research activities of State and Commonwealth bodies and to exchange information on weed control.

(8) Conference wished to place on record the great value it attached to work on the biological control of weeds, and considered that too little research in this field was being undertaken. There were undoubtedly a number of weeds whose biological control should be attempted. Unfortunately, Conference did not have time to consider in detail the weeds for which biological control was most desirable. It recommended, therefore, that this should be done as soon as possible by the proposed National Weeds Committee. This Committee should consider all alien weeds and list, in order of priority, those weeds which, having regard to all ecological aspects of the problem, it would wish to have controlled by introduced insects.

(9) The Conference was concerned at the lack of appreciation of the extensive losses in agricultural production due to weeds. From American reports such monetary losses exceeded the combined losses due to all plant and animal diseases and insect pests. The Conference felt that the number of people engaged in full time or part time research on weeds in Australian governmental institutions was quite inadequate in relation to the magnitude of the weed problem. The Conference felt further that the multitude of extension and legislative duties of State weeds officers was detrimental to weeds research and such responsibilities should be separated from research duties.

The Conference agreed that State Organizations be urged, through the Australian Agricultural Council, to increase the number of officers engaged in weeds research, to allow officers to specialize on weeds research and to increase the status of weeds sections to levels comparable with those of Entomology and Plant Pathology.

(10) The degree of control of noxious plants actually achieved depends largely upon the effectiveness of noxious plants Acts within the State. Such legislation differs from State to State.

The Conference considered that a study of regulations relating to the control of noxious plants and registration of herbicides should be made by a small select committee comprising experts in the field of weed control, administration and local government. . . . This study should be aimed at determining the best features of each Act and at finding to what extent they might have failed in their purpose, and the reasons for any such failure. Consideration should be given to the framing of criteria by which plants might be adjudged noxious or otherwise.

The information so obtained would be most useful to States in framing or amending noxious plant legislation.

(11) As this was the first Australian Weed Control Conference it was desirable on this occasion to review the whole field of weeds research in Australia. The agenda was long and, through lack of time, the discussion was necessarily restricted on some agenda items. However, the Conference agreed that the exchange of information had been of very great value and it hoped that this would be a preliminary to meetings intended to deal in greater detail with particular aspects of the weed control problem.

(12) The Conference wished to record its appreciation for the hospitality extended to it by the Principal, Dr. McCulloch and the staff of the Roseworthy Agricultural College.