

WEEDS IN AGRICULTURAL CROPS OF WESTERN AUSTRALIA

Reviewed by

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SIGNIFICANCE OF WEEDS IN PRIMARY PRODUCTION

The most important agricultural crop in Western Australia is wheat, followed by barley and oats. Smaller areas of crops such as vetch, peas, linseed, rape, and subterranean clover (for seed production) are grown. At Kununurra the main crop is cotton and the important weeds are native to the district. Apart from cotton, the main weeds present in these crops include a fairly wide range of broadleaved weeds such as wild radish, wild turnip, and mustard, capeweed, and double gee (*Emex australis*) and annual grasses such as wild oats and Wimmera rye grass.

Approximately 9 million acres of cereals were sown in 1968 and more than 1.75 million acres were sprayed for weeds. The fact that such a proportion of the cereal crop is being treated for the control of weeds indicates their significance.

In 1969 the area sprayed from the air decreased from 1.5 million acres (1968) to approximately 600,000 acres, reflecting the influence of drought conditions and the imposition of wheat quotas.

Of the other agricultural crops, linseed would have the most important weed problem. Because of its poor performance as a competitor, weeds reduce crop yields to a greater extent than with most other crops.

PRESENT PRACTICES OF WEED CONTROL

More than 90% of the spraying undertaken for the control of weeds in cereals involved the use of 2,4-D ester. A similar proportion of the total is applied by aircraft as compared with ground application. While herbicides such as linuron, bromoxynil + MCPA, and dicamba are often more effective than 2,4-D for the control of many broadleaved weeds, their extra cost per acre has prevented their use on a scale similar to 2,4-D.

Barban and triallate are used for the control of wild oats in wheat and barley and the latter is also applied to control Wimmera ryegrass. The cost of the treatment appears to have restricted the area treated each year.

Trifluralin and diuron are the most widely used herbicides in cotton. Diuron is the most commonly used herbicide for weeds in peas, both as a pre- and post-emergence treatment.

**THE EFFECTIVENESS OF RESEARCH, EXTENSION AND LEGISLATION
IN CONTROLLING WEEDS**

Herbicides are available for the control of most broadleaved weeds in crops so that future herbicides will have to offer either a reduction in cost or a wider spectrum of weeds controlled. The outstanding need is for a selective herbicide to control annual grasses at a lower cost. Promising results are being obtained with some of the newer experimental chemicals available.

Although users often apply incorrect treatments to their weed problems, the extension activities of Government Departments and Commercial Companies appear to provide an adequate service.

Legislation in Western Australia related to weed control consists of the Noxious Weed Act, the Agricultural Protection Board Act and the Aerial Spraying Control Act. The Agriculture Protection Board administers the Noxious Weeds Act with a staff of Regional and District Weed Control Officers. A weeds tax and a contribution from the State Treasury provides the necessary funds. The effectiveness of such an organization is difficult to gauge as the eradication of many weeds is almost impossible and their activities concentrate to a large extent on the prevention of the spread of weeds.

The Aerial Spraying Act is designed to control the activities of Aerial Operators and prevent damage to susceptible crops.