THE WEED SITUATION IN VICTORIA

Reviewed by
J. McCann
Department of Agriculture, Victoria
W.T. Parsons
Department of Crown Lands and Survey, Victoria

SIGNIFICANCE

Weed competition or contamination are major factors in the production of agricultural crops in Victoria causing a loss estimated at about $2. per acre.

In horticultural crops, weeds compete for moisture, nutrients, and light particularly in annual vegetable and flower crops. They also harbour pests and diseases and can increase the risk of frost damage at critical times. Contamination of dried vine fruits with the burrs of some weeds is also important. No estimate has been made of the cost of weeds in horticultural crops.

The concept of weeds in pastures in Victoria has been changing over recent years and species once considered important weeds such as capeweed, erodium and barley grass are now recognized as possessing value as fodder plants if managed correctly. However, there are many pasture weeds in Victoria on which there is no doubt as to their significance as weeds, e.g. heliotrope, blackberries, rushes, sorrel. These cause considerable losses which are felt more in localized areas of the State than as overall State problems.

It has been estimated $1 mil.per year is spent in Victoria on herbicides for use on non-crop situations such as roadsides, railway lines, easements, industrial areas etc. and in addition up to $400,000 per year is spent on chemical weed control in the supply and drainage systems under the control of the State Rivers and Water Supply Commission. The total cost of weeds in both these areas would be much greater than this.

In forest areas there are considerable problems caused by weeds in the early stages of tree establishment. Native plants particularly acacias and eucalypts compete with young pines; mixed scrub hinders site preparation prior to sowing, and herbaceous weeds compete with transplanted pines and eucalypts.

Introduced woody weeds most of which have sharp spines or prickles invade grazing areas and occupy space which could be better utilized by fodder plants.

PRESENT PRACTICE

Cultivation and management are the principal methods of weed control in agricultural crops. Chemical control is used in only 10-20% of wheat crops and less in the other cereals. This figure is low because of the uncertainty of the value of spraying in many marginal situations. The introduction of wheat quotas has reduced further the amount of crop sprayed because of the farmer's desire to reduce cash outlay.

By contrast the use of chemicals for weed control in horticultural crops is increasing. In vegetable culture both pre-emergence and post-emergence materials are used and these have greatly reduced the dependence on hand labour for weed control. With fruit trees and vines both chemical and mechanical means of weed control are used effectively.

In Victorian pastures the method adopted to control weeds depends very much on the species involved. Bracken, rushes and some thistles are mown or slashed, grazing with sheep is used to control ragwort and other weeds and chemicals are used to suppress many broad leafweeds. The bipyridyls are being used to some extent for pasture renovation.

Residual chemicals are used extensively in non-crop situations, many in combination with other chemicals to ensure a rapid knockdown of existing vegetation. There is an appreciation of the need to watch for changing weed populations in treated areas and to vary the materials used to meet these situations.

Aquatic weeds are effectively controlled both mechanically and chemically but there is a need for improved methods of dealing with submerged weeds.

Woody plants are dealt with almost entirely by chemical means which are reasonably effective in most situations. However, there is need for improvement in the control of herbaceous weeds around young pines and eucalypts and in developing improved materials and techniques for some species and situations.

EFFECTIVENESS OF RESEARCH, EXTENSION AND LEGISLATION

Research and extension in Victoria at Government and University level has been reasonably effective in that the several important problems have been defined, investigated and recommendations made for their control through field days, literature, radio, and TV talks, and on farm visits. The adoption of the recommendations has been more rapid than with developments in other agricultural fields mainly because the results are so impressive.

Research and extension by commercial companies has been

effective in several fields and new procedures have been developed e.g. pasture renovation.

There are still many problems requiring attention and the procedure now being adopted is to first define the problem before embarking on an investigation of control methods. This approach can show that the problem is not as great as originally thought and it may be handled with slight modification of existing practices.

It is regrettable that there is no government body in Victoria involved in total vegetation control.

Noxious weed legislation in Victoria requires that control measures are taken against more than 90 weeds. In some cases it has not been possible to prevent the establishment and spread of certain weeds because effective measures were not available at the time e.g. skeleton weed in the 1940's and 50's. On the other hand, some weeds have been eliminated or kept well in check through the provisions of the noxious weeds legislation e.g. water hyacinth, serrated tussock, poverty weed, perennial ragweed and nodding thistle. In these cases the legislation has been very effective in controlling weeds.