WEEDS IN PASTURE AND GRAZING LANDS

Reviewed by
G.A. Pearce
Department of Agriculture, Western Australia

SIGNIFICANCE OF WEEDS IN PRIMARY PRODUCTION

In the sheep areas of the State the main weeds which cause a reduction in carrying capacity are double gee (*Emex australis*), docks (*Rumex* spp.), Cape Tulip (*Homeria* spp.), thistles, and native poison plants. Other weeds such as Patersons Curse (*Echium plantagineum*), and certain annual grasses occur, but these have little economic significance as they are readily controlled by increasing the stocking rate. The species of Polygonaceae and Cape Tulip not only provide strong competition for pasture species, but because of their unpalatability and toxic properties, have an unfavourable effect on the health of the grazing animals. Stock losses from native toxic plants are common, and a number of farmers have experienced a loss of several hundred sheep.

In the lower south-west part of the State, where cattle predominate, the more important weeds are docks, bracken fern, thistles, sorrel, and arum lily. Old pastures completely dominated by dock species are common, whereas bracken fern is a problem of newly developed or badly managed pasture areas. Both weeds can cause a heavy loss of pasture production on many of these farms.

PRESENT PRACTICES OF WEED CONTROL

In the past, most farmers have considered that spraying for the control of weeds in pastures has not been justified. In most situations, the chemicals recommended were costly, and affected the pasture species. In addition, the weeds would need further treatment the following year so that the farmer would not embark on a large scale spraying programme. The result has been that most farmers have concentrated on spot-spraying small infestations and preventing the spread of the weeds, rather than seeking eradication of large infestations.

The development of a spray-graze system for the control of weeds, in areas where sheep are available, has been widely adopted by farmers. The application of one pint of 2,4-D amine has little affect on pasture species and the cost enables the treatment to be repeated in successive years.

In cattle areas, present practices consist mainly of hand spraying individual plants in an endeavour to avoid pasture

damage. The result of this practice is a steadily increasing weed problem.

Annual grasses are selectively controlled in pastures by spraying with paraquat before the weeds are six weeks old.

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

Research has resulted in the development of cultural practices for a number of weeds which have enabled their virtual elimination as economic problems. Cotton fireweed (*Erectites quadridentata*) and native poison plants are two examples. The spray-graze technique has proved effective on a range of weeds including amsinckia, thistles, capeweed, docks, double gee, mustard, and Patersons Curse. One of the basic requirements is to have a good clover based pasture to take over from the weeds.

The effectiveness of extension for weed control in pastures is difficult to gauge because the cost of the recommended treatments is often sufficient to discourage their use. The ready acceptance of the spray-graze technique by farmers, would suggest that they are aware of recommendations being available even though they may not make use of them.

Legislation for the control of weeds in pastures consists of the Noxious Weeds Act administered by the Agriculture Protection Board. This has proved highly effective in controlling small or new infestations of certain weeds. The task of controlling weeds such as blackberry and Cape tulip has been much slower but the areas now infested are considerably reduced. Saffron thistle and Patersons Curse have been effectively controlled on roadsides; on many farms, however, little progress has been made.