

THE WEED SITUATION IN PASTURE AND GRAZING LAND IN QUEENSLAND

Reviewed by  
D.R. Bailey  
Department of Primary Industries, Queensland

There are some 360 million acres of grazing land in Queensland, and 99% of this, native grasses, herbage plants, and edible trees and shrubs provide livestock fodder. Introduced species have only been established on the remaining 1% (3.5 million acres).

WEEDS IN NATIVE GRASSLANDS

Major problems are:-

- (a) Timber regeneration (discussed by Henry and Diatloff (ibid.))
- (b) The replacement of palatable grasses by inferior species e.g. ingress of *Aristida* spp. into Mitchell grass (*Astrelba* spp.) stands.
- (c) The spread of Noogoora burr (*Xanthium pungens*) - in spite of efforts towards legislative and biological control this remains Queensland's most serious weed. Burr contamination in wool costs \$4 million annually to remove. Control is by hand pulling and 2,4-D spraying.
- (d) Poisonous plants - these cause most trouble during drought when other fodder is scarce, and are only economical to control if in isolated patches e.g. weir-vine (*Ipomoea calobra*) in the Maranoa district.

A solution to these problems will depend upon several integrated factors:-

- (i) better pasture management (b)
- (ii) pasture improvement (a), (b), (c), and (d)
- (iii) selective parasites (c) and (d)
- (iv) better law enforcement (c)
- (v) economical and effective herbicides (a), (c) and (d)
- (vi) a more favourable social and economic 'climate' (a), (b), (c) and (d).

A first step towards better understanding of pasture management has been the establishment of permanent transect

lines to record long term vegetation changes in far south-western Queensland. Nevertheless, it is disturbing to note that research facilities are so restricted that only woody species are at present being recorded. One might ask whether or not more emphasis should be placed on pasture research in western Queensland.

#### WEEDS IN INTRODUCED PASTURES

Two distinct categories are apparent:-

- (a) Short-lived species - these hinder pasture establishment and invade weakened pastures. They cause least concern where seed-bed preparation and fertilization have been adequate and where sound grazing management is practised. Usually control is by slashing and/or by restricting grazing. In a few instances overall treatment with 2,4-D, 2,4-DB and diquat is employed. Generally however there is a complacent acceptance that it may take a year or more before a new pasture reaches full productivity. However this is not the case with lucerne, particularly when it is being grown for hay.

Research has shown that Schofield stylo, greenleaf desmodium, and silverleaf desmodium have marked tolerance to 2,4-D and active extension is required to encourage the planting of these legumes in situations where 2,4-D-susceptible weeds such as wild tobacco-tree (*Solanum auriculatum*) are troublesome. Satisfactory herbicides (2,4-DB, 2,2-DPA, chlorthal and trifluralin) are also available to assist lucerne establishment and to control grasses in established stands (2,2-DPA). Extension could probably make more profitable use of this information.

- (b) Persistent perennials - species which form dense thickets and those which are poisonous to stock cause most trouble e.g. lantana (*Lantana camara*). As a rule satisfactory recommendations are available for their spot treatment but these are often labour demanding and are only adopted with reluctance. In some instances better law enforcement would help restrict the further spread of certain species e.g. knobweed (*Hyptis capitata*).

Blady grass (*Imperata cylindrica* var. *major*) and narrow-leaved carpet grass (*Axonopus affinis*) are common perennial weed grasses and are best controlled by cultivation and replanting.

Apart from timber treatment, herbicide usage in Queensland's grazing land and pasture is limited and it is perhaps time

that the effects of slashing were critically examined. Also in view of *Hyptis suaveolens* becoming a problem in Townsville stylo it would be advisable to study the tolerance of this legume to 2,4-D in some detail.

WEEDS OF NON CROP SITUATIONS IN QUEENSLAND

Reviewed by  
W.H. Haseler and A.J. Tomley  
Department of Lands, Queensland

Within this summary are included Industrial situations (Railways, Rights of Way, Irrigation, Factories, Main Roads, etc.), eradication programs and Government sponsored projects.

SIGNIFICANCE

In most cases this is difficult to assess in terms of economic loss as for railways, main roads, rights of way, etc., weed control is regarded as normal maintenance and is included in these costs. In most cases a budget allocation is made each year and is used to best advantage.

The total amount spent on these situations in Queensland is of course much less than in southern States, but the estimated proportions of this spent by the various authorities are:-

Railways	40%	(46% Southern)
Govt. Depts., Local and Public Authorities	42%	(18% " )
Irrigation etc.	10%	(20% " )
Roads	7%	(14% " )
Industry	1%	( 2% " )

Railways require total vegetation control and because of periodic treatments, weeds are mainly annuals. Weeds of main roads are mainly grasses and annuals, again due to control practices; specific weed treatment is generally only required for maintenance of signs, guide posts, culverts, etc., or for traffic hazards. Public Utility companies require control only of species which may endanger power lines along rights