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the basics of herbicide use.

I wish to acknowledge the assistance of Mr T. Byrnes in the preparation of material for this review.

## FORESTS AND WOODY WEEDS OF THE NORTHERN TERRITORY

Reviewed by

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### FORESTS

The industry is still in the early developmental stages, but a large expansion in the area under management is being planned. Weeds are problems in all phases of the industry, with the most concern being for the damage caused in the nursery and plantations.

In the nursery total herbicides are used for the areas not used as seedling beds, with weeds being controlled before planting by diquat. Research is being undertaken in the use of selective pre- and post-emergent herbicides.

In the plantation, the critical period is during the first 5-6 years before the canopy closes over. Research is being undertaken to determine the best selective herbicide to control the regrowth of the native vegetation cleared during planting operations. Grasses and herbacious weeds are controlled initially by the clearing and ploughing operations during planting. Scope exists for better vegetation control on areas such as fire breaks and under telephone lines, and other non-planted areas.

With the native forests use is being made of suitable aborcides in the culling of trees. Research has been undertaken to determine the best herbicides, methods, and time of treatment. Again problems of weed control on fire breaks, roadsides etc. exist.

### WOODY WEEDS

Woody weeds can be split into two groups. Introduced and native species. The approach to each group is basically different as with the introduced plants, eradication may be possible. With the native species, the ecological approach is

the best way of dealing with the problem.

Introduced species which have succeeded in invading various areas are *Calatropis procera*, *Parkensonia aculata*, *Mimosa pigra*, *Zizyphus Mauritiana*, *Embllica ossicimalis*, *Communis ricinus*, *Lantana*, *Camera*, *Jatropha curcase*, and *J. gossipifolia*, *Opuntia* spp. and *Prosopis juliflora*.

Plants such as *Parkensonia* and *Calatropis* are widespread. The others have established themselves in various sites, often in quite isolated areas. Many of these sites such as town sites, camps during the War, or old telegraph depots were disturbed at various times during their history.

An active eradication programme is under way against *Mimosa pigra*. *Calatropis procera* is very widely spread, and in some areas it has caused reduction in the pasture productivity, but, more important, it reduces the visibility during mustering. The plant has been eaten in some areas where the feed is short. A similar situation occurs for *Parkensonia*. This plant is eaten and occurs mainly along the rivers. The *Opuntia* spp. occurs on the beach above the high water mark at Port Essington. This infestation resulted from the introduction of the plant during the attempts at settlement there. In 130 years the plant has spread the full length of the beach but has not penetrated the hill slope behind the beach.

Some work has been done on *Calatropis*, but only to determine the best method of killing the plant.

Many native species have shown signs of increasing in density. Particularly the *Acacia* spp. *Acacia farnesiana* has increased in density to form a thicket of approximately 100 sq. miles on the Roper River system. Another species showing rapid increase in density is *Barantonia actangular*.

In many areas being developed for pastures without clearing, there has been a general increase in the density of the undergrowth. It appears that fires have a tremendous influence on the density of the undergrowth. The reduction of the fire frequency which occurs when the area is being developed appears to favour the development of a scrub understorey.

It is difficult to give a value to the costs caused by the development of a dense scrub understorey, but the main losses are during the mustering operation when there is difficulty in locating and driving the cattle. In the buffalo domestication experiments being undertaken by some of the stations there have been problems with the handling of the animals if there is a considerable amount of vegetation between 2 and 10 feet high.

The buffalo are easily scared if a person approaches them without warning and will bolt, even though they are quite tame.

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