

WEEDS IN THE NORTHERN TERRITORY

Reviewed by

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The major impact made by weeds in the Northern Territory is in the pastoral industry, in particular in areas of improved pasture. The area of cropping and horticulture is small, and although weeds have a much greater effect on these activities, their small size reduces the overall significance. Appreciation of social effects on non-agricultural land is increasing rapidly, especially in the wetter areas. Increased interest in the methods of controlling vegetation on roadsides, industrial sites and similar areas is being shown. The wide range of rainfall creates different problems in various areas, and allows different methods of control being used to deal with the problems.

In the arid regions, it is often difficult to determine the full impact of weeds, especially that of non-poisonous weeds in areas where soil erosion is a major problem. Any form of ground cover is better than none. Control methods are limited because of the low return from the area.

Where improved pasture can be established, weeds are much more important. Unimproved native pasture is subject to quite severe infestations of weeds in many places.

Townsville stylo is making a tremendous impact on the pastoral industry in the Top End. The carrying capacity is raised from one beast to approximately 80 acres, (32 ha) to 1 to 10 - 15 acres (4.5 - 6.8 ha) with 1-4 (1.9 ha) achievable in subsequent years. This can be done on areas using fire and aerial seeding and fertilizing techniques which do not require any land clearing.

Many of the weeds which are problems in the improved pastures are problems in the areas sown for T.S. seed production. These weeds have shown up as major problems especially in the production of certified seed. Some are on the noxious list. This has caused growers to begin to clean up the seed producing areas. Seed must be free of noxious weeds seeds to allow certification.

Except for the areas being used for seed production, the economics of production do not allow the use of chemicals, except the lowest cost types such as 2,4-D. But several of the important weeds are resistant to 2,4-D and holding operations such as pasture slashing are the only methods of control. Rigorous eradication of small infestations and the use of clean hay and seed will prevent the establishment of these weeds.

Weeds played some part in the problems of the establishment of a grain sorghum industry. Grass weeds were the main problem.

*Pennisetum pedicellatum* has dominated large areas of the crop. Control of the grass appears to be dependent on good management including good cultivation at planting with heavy grazing during the pasture phase. Crops of sorghum grown on other areas were less affected by this weed.

Research into the weed problems of sorghum has shown that many of the herbicides tested which appeared suitable in one season, are not suitable in others. Atrazine appears to be the most promising at this stage.

Observations of experiments and commercial crops show that attention to row spacing and population and selecting tall varieties will help in weed control.

The attempt to set up a rice industry failed, but research into it has continued. Weed control has been examined with great success. There are promising results from techniques involving minimum cultivation.

Horticulture is plagued with weeds and some progress is being made in the screening and recommendation of various herbicides.

In the wetter areas of the Northern Territory, increasing interest is being shown in the control of vegetation along roads, fences, railways, and similar areas. Several large contracts have been let by Government bodies this year for this type of work.

In the pastoral industry scrub invasion is becoming a problem in some areas. *Acacia farnesiana* has increased in density over a large area on the Roper River, perhaps due to upsets of the ecology caused by cattle grazing and changes of fire frequency and intensity. Most of the damage is caused by reduced visibility during mustering, reducing the numbers recovered.

Noxious weed control continues to be aimed at *Martynia annua* and *Mimosa pigra* and progress has been made. With the large areas involved it is very difficult to police entry of noxious weeds into the Northern Territory. Apart from the effect of the seed certification scheme and small eradication programmes little control on the spread of noxious weeds in the Northern Territory is being exerted.

Very low levels of return per unit area have reduced the options open to the producers, particularly Centralian pastoralists. Until changes occur, such as the introduction of improved pastures where possible, little application of conventional weed control methods beyond manipulation of grazing pressure, and use of fires will be seen. Weed research must be directed primarily at understanding the ecology of the situation, though it may be a long term approach.

With more intensive production, more intensive methods are economic, but these techniques are improved when incorporated into the ecological situation.