

## ABORIGINAL AND NON-ABORIGINAL RECOGNITION AND AWARENESS OF NOXIOUS PLANTS AND CONTROL MEASURES

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*Summary.* The purpose of the survey was to compare Aboriginal and non-Aboriginal respondents' recognition of and attitudes towards noxious weeds and their control methods. Three geographical areas, which consisted of diverse country, were selected for the survey. The survey drew upon 210 respondents, 70 from each of these areas in north-western New South Wales. Results of the survey indicated that Aboriginal and non-Aboriginal respondents do recognise noxious weeds and that overall 50 per cent of these weeds are not regarded as a problem. These patterns appear to be in conflict with proposed government noxious weed control management plans and strategies in which chemicals seem to continue to play a major role in the newly advocated integrated control system.

### INTRODUCTION

A comparison of Aboriginal and non-Aboriginal recognition of noxious weeds and preferred methods of control was chosen as a survey topic for it was an interest in my field of employment as a Chief Weeds Officer.

Aboriginal and non-Aboriginal landholders are subject to the same policies of noxious plant control. For this reason, the survey intended to compare experience and land ownership as well as related attitudes towards noxious weeds and control measures among Aboriginal and non-Aboriginal respondents.

### METHODS

On the basis of my knowledge as a weed officer, the survey was designed around various habitats of noxious plants. The three geographical areas chosen for the survey were Tenterfield, Inverell and Moree Plains Shires. Each shire is geographically different and contains different noxious weed species.

Respondents with rural experience were located through the use of weed officer network and contacts made from a pilot study carried out in 1991. The pilot study was used to test two instruments, a visual aid and a structured interview devised by myself. The visual aid was improved from 26 black and white line drawings of noxious weeds to 26 colour photographs from Agfact pictorial indexes. The aim of the visual aid was to draw upon respondents' past experience, recognition and opinion of noxious weeds in relation to very concrete examples. The questionnaire consisted of three sections. These included respondents' background, noxious weed recognition and attitudes towards noxious weeds. The interview groups included equal numbers of Aboriginal and non-Aboriginal people in each region.

### RESULTS

On average, participants in the survey indicated that they had been living/working on the land "all their lives". The correlation between age and experience accounted for higher proportions of non-Aboriginal respondents with experience on the land.

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The range of noxious weeds recognised shows that respondents identify the following species most frequently, Prickly pear (*Opuntia stricta*), Blackberry (*Rubus fruticosus*), Water hyacinth (*Eichhornia crassipes*), Pampas grass (*Cortaderia selloana*) (Fig. 1). Noxious weeds which are not recognised vary with area, although some plant species (e.g., Green cestrum (*Cestrum parqui*), St John's wort (*Hypericum perforatum*) and Nodding thistle (*Cardu nutano*)) are not commonly registered at all.

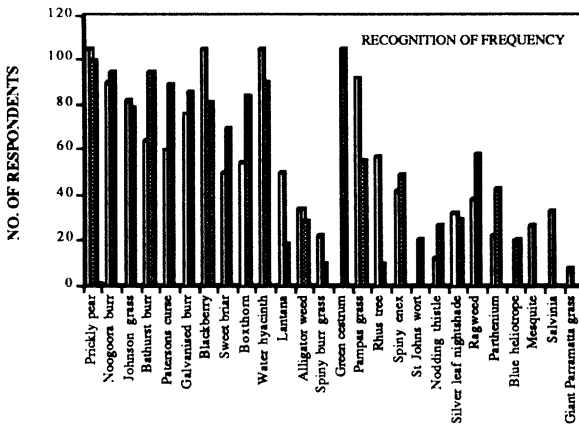


Figure 1. Recognition of noxious weeds Aboriginal versus non-Aboriginal respondents

In order to investigate why some noxious weeds were recognised more than others, weeds were classified into three categories. These categories included aquatic, garden escapes and common weeds.

For the purpose of the survey "common weeds" is a category devised for noxious plants which are common in all three areas. Focussing on these categories enables the survey to explain and compare noxious plant recognition. The only difference in weed recognition across these categories occurred for "aquatic weeds" where the level of recognition among Aboriginal respondents is significantly higher than among non-Aboriginal. Respondents were also asked to indicate whether they would classify any of the noxious plants as either fodder or food. Johnson grass (*Sorghum halepense*) was the only noxious weed recognised in the survey for its fodder qualities. Twenty per cent of the total number of respondents regarded Johnson grass as a useful fodder for stock, particularly in the western and central areas where its drought tolerant qualities act as an aid for stock survival. In the eastern area Aboriginal respondents less frequently recognised Johnson grass because a higher rainfall pattern reduced their dependence on the plant grass as fodder. Responses from all three areas however show that Johnson grass is thought to have positive and beneficial qualities.

One quarter of the total number of respondents recognised the food value of a fifth of the noxious plants in the survey. Aboriginal respondents more frequently recognised potential food

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plants than non-Aboriginal respondents. Blackberry and Water hyacinth proved to be particularly popular food plants among Aboriginal respondents.

Problems caused by noxious plants. Non-Aboriginal respondents prioritised problems caused by noxious weeds as:

1.	Stock	46%
2.	Crops	31%
3.	Man	14%
4.	Environment	9%

Aboriginal respondents prioritised the problems as:

1.	Stock	40%
2.	Crops	24%
3.	Environment	10%
4.	Man	26%

Thus Aboriginal and non-Aboriginal respondents appeared to hold similar views. Aboriginal respondents however, particularly females, displayed a greater concern for damage to the environment than non-Aboriginal respondents. Interviews indicated that the latter appeared to be more concerned about how their income would be affected by noxious weeds than about how they might harm the environment.

Noxious plants not seen as a problem. Noxious weeds regarded as non-problematic by Aboriginal respondents included Water hyacinth, Galvanised burr (*Sclerolaena birchii*), Sweet briar (*Rose rubiginosa*), Salvinia (*Salvinia molesta*), Patersons curse (*Echium* spp.), Silver leaf nightshade (*Solanum elaeagnifolium*) and Alligator weed (*Alternanthera philoxeroides*). Noxious plants regarded as non-problematic by both Aboriginal and non-Aboriginal respondents include Prickly pear, Johnson grass, Blackberry, Pampas grass and Rhus tree (*Toxicodendron succedaneum*). In total, 12 out of 26 noxious weeds in the survey, almost 50 per cent, were considered non-problematic. Thus an elderly Aboriginal woman explained why she does not regard the noxious plant Galvanised burr as problematic.

*Too much taken from the land caused this plant to fight back.*

Too often the weed is blamed rather than man's interference with the land.

#### METHODS OF WEED CONTROL

Methods of weed control used by Aboriginal and non-Aboriginal respondents were similar in pattern though differed in emphasis (Fig. 2). Chemicals have been used by 54 per cent of non-Aboriginal and 21 per cent of Aboriginal respondents. A definite preference was indicated by 84 per cent of all respondents for less use of chemicals (Fig. 3). More support was shown for alternative noxious weed control methods such as grazing and burning.

Respondents' preference for less or no chemical use is in contrast to governments' future control plans and strategies. Total Catchment Management, advocated in the National Weed Strategy (1) and the NSW Weeds Act, for example, combine an Integrated Pest Management program in

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which chemical application remains the dominant method of control. Alternative methods such as burning and grazing may not be as effective or efficient as chemical control. This would mean that Aboriginal and non-Aboriginal respondents could be liable under the Noxious Weed Act of 1993 (2). The Act states that failure to effectively control noxious weeds may result in a maximum penalty of \$10,000. Local authorities may also enter the land and chemically control the noxious weeds, and charge the landholder accordingly. Failure to pay the fine or to reimburse authorities for control measures may result in the sale of land to recover these costs.

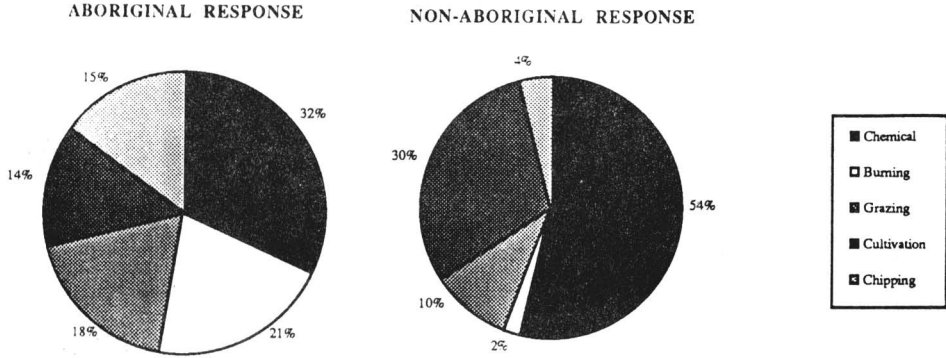


Figure 2. Methods of weed control used by Aboriginal and non-Aboriginal

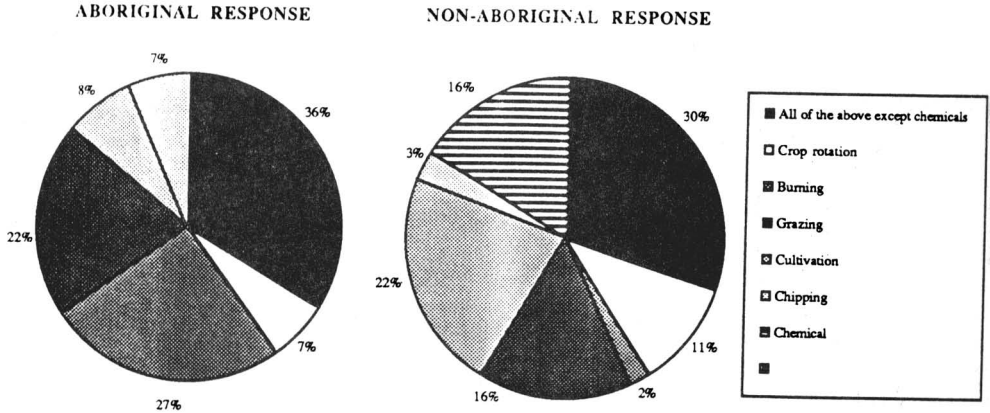


Figure 3. Methods of weed control preferred to be used more in the future by Aboriginal and non-Aboriginal

Given that Aboriginal people have used chemicals much less frequently than non-Aboriginal respondents in the survey, given that Aboriginal and non-Aboriginal respondents prefer other methods of control, and given that the National Weeds Strategy is proposing special legislation to address specifically Aboriginal people's approach to weed control, the new legislation at state and federal levels may in fact become a tool to constrain Aboriginal land ownership.

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2. NSW State Government 1993. Noxious Weed Act, G.P.S., Sydney.