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WOODY WEEDS IN CENTRAL WESTERN QUEENSLAND

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INTRODUCTION

The spread of woody weeds in central western Queensland concerns producers (1,2). Information exists on their biology and control (3) but there are few quantifiable data on the extent of the problem posed by specific weeds.

We surveyed graziers in the region with Mitchell grass downs, wooded downs and/or gidgee country to define the problem in terms of species and areas affected.

METHODS

A postal survey was sent in April 1989 to 650 landholders with properties of the required country type. Replies from 315 properties, representing 5.97 million ha, were received.

RESULTS AND DISCUSSION

The percentage of properties where species were present, their perceived status and average areas per property affected at different densities are shown in Table 1.

Gidgee (*Acacia cambagei*) creates difficulties for graziers in the region according to two scenarios. Gidgee invasion occurs particularly in the wooded downs where seedlings spread from scattered clumps of adult trees. Gidgee regrowth refers to its increased density, either from the germination of seed or from regrowth by broken stumps, specifically following mechanical disturbance.

Gidgee invasion was both more common than gidgee regrowth and it affected larger areas (Table 1). We consider that gidgee invasion has been facilitated by the increasing control of wildfires since settlement. Some of the older respondents to the survey said they first noticed the spread of gidgee following the above average rainfall seasons of the 1950s. This observation fits the pattern of a large scale germination of seedlings which established well in the absence of fire.

Sandalwood (*Eremophila mitchellii*) occurred on half the properties surveyed. It is most common in land systems which have gidgee and it can become a major problem after clearing. On half the properties that had sandalwood it was considered a problem and it was increasing.

Mimosa (*Acacia farnesiana*) was the most widespread species. Despite its increasing on one-third of properties only 10% of respondents considered it a problem. Droughts cause a high mortality in mimosa due to a combination of increased defoliation by stock and water stress. On open downs mimosa provides valuable shade.

Our concerns about the potential of prickly acacia (*Acacia nilotica*) to spread significantly beyond its current boundaries were reinforced by the fact that more than one-half of the properties have this species. However,

40% of those with prickly acacia growing on their properties do not consider it a problem. This perception often prevails in the early stages of its invasion.

The incidence of algaroba (*Prosopis pallida* syn. *limensis*) was surprisingly high. Few consider it a problem despite the experiences of producers in the north west and in the headwaters of the Bulloo river where algaroba has got out of control.

Table 1. The percentage of properties where species were present, their perceived status and areas affected

Species ^a	Percentage of properties where species was:			Av. area (ha) on properties where densities ^c were:		
	Present %	Problem ^b %	Increasing ^b %	Low	Medium	High
<u>Gidgee/wooded downs</u>						
Gidgee (I)	58	68	76	1178	2580	2562
Gidgee (R)	31	82	70	1350	1001	1876
Sandalwood	51	48	51	834	924	1014
<u>Open downs</u>						
Mimosa	89	10	33	4769	2943	1779
Prickly acacia	53	59	62	2821	992	939
Algaroba	22	16	19	1226	84	751
<u>Waterways</u>						
Parkinsonia	66	24	34	197	35	11
Coolibah	76	4	16	1144	453	81

^a Gidgee: (I) = invasion; (R) = regrowth

^b As a percentage of properties where species was present

^c Densities: low = scattered plants > 100 m apart; medium = plants 100 to 50 m apart; and high = plants < 50 m apart

Parkinsonia (*Parkinsonia aculeata*) was present on two-thirds of the properties and was considered a problem by a third of producers. It was increasing on a third of the properties. The relatively small areas affected reflect its preference for moist areas.

Coolibah (*Eucalyptus microtheca*) occurs on most creeks and drainage lines throughout the region. Only 8% of the survey properties did not have creek lines on them. Very few people considered coolibah a problem and this confirms our observations that its spread is confined to river channels and levees after floods.

These results quantify the nature of the problem that exists with woody weeds in the region and they signal the potential, particularly for the exotics, to expand in the future.

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