

FARMER ATTITUDES TO WEEDS AND WEED CONTROL IN WESTERN  
AUSTRALIA -- A PRELIMINARY STUDYK. Williams<sup>1</sup>, G. Syme<sup>2</sup>, L.J. Crackel<sup>1</sup> and E.J. Roberts<sup>1</sup><sup>1</sup>Agriculture Protection Board, Baron-Hay Court, South Perth W.A. 6051<sup>2</sup>CSIRO, Underwood Avenue, Floreat Park W.A. 6014

*Summary.* A preliminary survey of farmers' attitudes to weeds and weed control found that farmers perceive weeds to be a significant problem. As might be expected not all weeds rated by farmers as posing the greatest threat to their farming activities are currently declared under the Agriculture and Related Resources Protection Act (1976-83). The Agriculture Protection Board of W.A. (APB) is seen by this preliminary survey as providing valued weed and pest control services, and apart from developing better relations with the farming community and improved training for its officers, few other additional improvements were suggested.

## INTRODUCTION

This paper reports the results of a preliminary survey of farmer attitudes towards weeds and weed control in W.A. The survey is an early stage of a much wider study which will consider the issue of public versus private weed control. While the study has immediate relevance for the APB of W.A., the results will be relevant to policy makers in weed and pest control throughout Australia.

The survey aimed to assess, amongst other things, farmer attitudes towards: (a) weeds as a general management problem, (b) specific weeds and their effect, and (c) the role of the APB.

## METHODS

A sample of 12 farmers was randomly selected from within each of four shires -- Kellerberrin, Three Springs, West Arthur, and Lake Grace. Interviews were arranged by phone with the farmers, who were then interviewed by one of the study team members. One farmer was unavailable hence 47 farmers were interviewed.

A semi-structured questionnaire was developed, which allowed for both scaled and open-ended responses. This permitted a large amount of data to be collected without overly restricting the manner and content of farmers' responses.

## RESULTS AND DISCUSSION

Weeds as a general management problem. Initially, it was felt appropriate to subjectively assess the degree of significance of weeds compared to other farm management problems. The majority of farmers (81%) reported economic conditions to be the greatest management problem facing farmers today, whereas only 2% believed weeds to be one of the main problems. However, when asked directly to compare the weed problem to their other management problems, 67% of farmers reported weeds to be a significant problem.

Attitudes towards specific weeds and their effects. Farmer beliefs about specific weed species were then investigated, in particular whether any "weeds" were considered beneficial, and the impact of specific weeds in crop and pasture conditions.

Farmers were first asked if there were any weeds that had a beneficial effect on their property. Many farmers replied "well it depends if you call ryegrass and capeweed and clover a weed!" One farmer said he did not classify ryegrass, barley grass and spear grass as weeds as he was not in cropping, and they were good early feed.

Of 77 responses, 55 (or 71%) indicated that the majority of farmers believed capeweed, ryegrass and barley grass to have some beneficial effect on their properties (Farmers were allowed to nominate multiple weeds, therefore more than one response per farmer occurred in some cases).

Farmers were then asked to nominate three weeds they perceived as posing the greatest threat to their farming operations. Over half the weeds (54%) reported in response to this question are not declared on private land. That is, there is no requirement placed on private land owners to prevent, control, contain or eradicate 54% of the weeds considered by farmers to be potentially threatening.

Skeleton weed and doublegee were considered a major threat across all four shires. Of these, skeleton weed, a declared weed, has a levy imposed on grain-producing farmers which assists the APB's skeleton weed search programme. Not only do farmers report skeleton weed as a considerable threat, 71% would be in favour of an increase in the levy, if it resulted in eradication and control of this weed. Doublegee, however, is only declared on public land and only in the Lake Grace Shire. Other weeds reported most often were saffron thistle, cape tulip, dock and wild oats.

When farmers were asked which weeds currently not declared should be on the declared list, doublegee again was mentioned most frequently.

It was noticeable that very few farmers (9%) nominated a declared weed that could be taken off the APB's list.

Role of the APB. The majority of farmers surveyed felt that the APB was quite effective in the control of weeds in their district and also in the State (Table 1).

Table 1. Effectiveness of APB in preventing and controlling weeds.

Effectiveness	In the farmers' district		In the state	
	N	%	N	%
Extremely effective	2	4	2	4
Quite effective	25	53	22	47
Slightly effective	6	13	7	15
Neither effective nor ineffective	3	6	2	4
Slightly ineffective	6	13	5	10
Quite ineffective	3	6	3	6
Extremely ineffective	0	0	1	2
Missing	2	4	5	11
Total	47	99 <sup>a</sup>	47	99 <sup>a</sup>

<sup>a</sup>Total does not add to 100 due to rounding.

When asked specifically which services provided by the APB were most valued by farmers, control of, and inspections for, individual weed and pest species were mentioned most frequently (Table 2).

Table 2. Most valuable services currently provided by the APB

Services	N	%
Weed and pest control	26	27
Other single weed/pest programmes and/or inspections	12	26
Skeleton weed programme	5	11
Policing role	2	4
Don't know	1	2
Missing	1	2
Total	46	102

The enforcement of agriculture protection legislation by the APB was not frequently acknowledged as a "valuable" service. However, when asked what improvements to the services provided by the APB could be made 17% suggested increased enforcement powers (Table 3).

Table 3. Improvements in services provided to farming community by APB

Improvement	N	%
Nothing	10	21
Increased power to enforce weed control	8	17
Better public relations with farmer groups, e.g. P.I.A.	7	15
Better training for APB staff	3	6
Provide more information, increase education of farmers	1	2
Display live specimens of declared weeds/pests	1	2
Other	8	17
Don't know	9	19
Total	47	99

Most farmers were quite satisfied with the level of weed control they achieved in pasture (69%), and in crop (78%). As a result, many farmers did not believe the absence of the APB would affect weed infestation levels on their own property (72%) since they consider themselves primarily responsible for weed control on their own farms. However, it was interesting to note that 77% of total farmers believed that weed infestation levels on other properties in the shire would probably, or definitely increase (Table 4).

Table 4. Changes in weed infestation levels on own property and on other properties in district in the absence of the APB

	Own Property		Other Properties	
	N	%	N	%
Definitely increase	3	7	7	15
Probably increase	10	21	29	61
Would not change	33	72	4	9
Would decrease	0	0	1	2
Would change (unspecified)	0	0	5	11
Don't know	0	0	1	2
Total	46	100	47	100

Thus the APB is perceived by farmers as successfully fulfilling its role of enforcement of weed control regulations. Without the presence of the APB, weed infestation levels would rise on other properties through the relaxation of weed control by some farmers. However, on their own properties, weeds would continue to be kept under control, although this may required increasing effort and cost.