Attachment Report 7

TRUSCOTT
RESEARCH

197 Payneham Road
St Peters SA 5069
Phone (08) 8363 9399
Mobile 0416 020 555
Fax (08) 8363 1076
maggie@compunets.com.au

RURAL SOLUTIONS SA

UPPER SOUTH EAST LAND HOLDER SURVEY

EVALUATION OF REVEGETATION ENHANCEMENT PROGRAMS

RESEARCH REPORT

August 2002

N&M T Pty Ltd
ACN 082 514 967 atf
N&M Truscott Trust t/a
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INTRODUCTION

Truscott Research was commissioned to undertake a survey amongst landholders in the Upper South East to assist in the evaluation of revegetation programs currently and formerly operating in the sub-region.

The specific objectives of the survey were …

- to determine attitudes towards past and current revegetation and vegetation enhancement programs in the Upper South East;
- to identify perceived barriers to uptake;
- to establish ways to remove barriers in order to accelerate uptake.

Respondents were contacted by telephone, using a drainage levy database, in late July 2002. A total of 98 landowners and managers, all engaged in commercial farming, were interviewed by trained research interviewers.

The questionnaire underwent three drafts and a pilot test was conducted.

The information in this report summarises the data collected in this exercise. Some of the data is presented in aggregate form as tabulations. Other data, relating to specific projects on individual farms is contained in a spreadsheet. The spreadsheet is not to be made public as it would be possible to identify individual respondents .

The survey received some publicity on local radio on 18 July, the day before interviewing commenced.

This document reports the findings of this survey. In addition, selected results of other surveys are included for comparison purposes.

SAMPLING AND METHODOLOGY

A total of 98 farm managers/owners participated in this exercise.

A telephone methodology was selected as being the most effective way to reach the necessary number of respondents in the time frame.

A target sample size of 90 was arrived at as this yields a sampling tolerance of ±10% at the 95% confidence level. This means that if 50% of the sample gives a particular answer, you can be 95% certain that in the population as a whole, between 40% and 60% would give that answer. A 50% response is the worst case - with proportions larger and smaller than 50%, the sampling tolerance reduces further.

This calculation was based on a population of 1,500 – the approximate size of the database once all the readily identifiable duplications were removed. Given that the database was based on properties rather than land holders (and in our sample 29% had multiple property holdings), the sample size achieved quite easily satisfies the criteria.

An interval sampling methodology was followed to yield a random, statistically representative sample.

The database did not contain phone numbers. Phone numbers were appended to every fourth entry in the database, arranged in surname order. (Where numbers were not obtainable – for example nominee companies with no directory listing, the entry above or below was substituted). Numbers were called sequentially in a further round of interval sampling. This means that entries with phone number were transferred to another list and every fourth number was tried up to four times before substitution.

Interviewing took place between 19 July and 1 August. Interviewers mainly worked evenings and lunch times, including Saturdays and Sundays.

In some cases, respondents were interviewed during the first call when contact was made. In other cases, appointments were made by the target interviewee or other household members. Wherever possible, respondents were informed that they would need access to figures relating to environmental projects before the interview started. Most chose to rely on memory only, which may affect the accuracy of results for these questions.

BIBLIOGRAPHY

The following studies are quoted in the text of this report, to give context and provide comparisons wherever possible.

Results from these studies are presented in green print to distinguish them from original research.

SURVEY OF LAND MANAGERS – PIRSA 2002 [TRUSCOTT RESEARCH]

This is a statewide survey of 1005 land managers, covering a variety of land management issues, including salinity and revegetation. In this document we quote aggregate figures from the report and also give results for the Upper South East (167 responses identified by postcode and analysed separately for this report). This sub-group was not identified in the original survey report. This study followed a benchmark survey of 608 land managers, conducted in 2000.

PROMOTING REVEGETATION – LESSONS FROM THE UPPER SOUTH EAST OF SA – 1993 [ROB KING – MASTERS DISSERTATION]

This paper is based on desk research and face to face interviews with 21 landholders (acknowledged as a non-random sample). the Upper South East was chosen because of a perception that little revegetation had been carried out at that time and hence can be regarded as a benchmark survey.

The paper focuses on attitudes rather than practices. However, it estimates that approximately 50,000 trees had been planted on the 21 properties surveyed in the preceding decade. Assuming a survival rate of 50% and tree spacing of 3 m, this is calculated to equate to 50 hectares for the period. (Most of the interviewees were members of Trees for Life and there was a strong emphasis on trees in the study).

FARMER PERCEPTIONS OF WETLANDS AND WETLAND MANAGEMENT IN THE UPPER SOUTH EAST OF SA –1998 [SM WHITTEN & JW BENNETT – UNIVERSITY OF NSW – UNIVERSITY COLLEGE, CANBERRA]

This economic study focused on the tradeoffs land managers face in relation to the management of privately owned wetlands. It concludes that the type of benefits relate to the type of wetland (influenced by how it is managed) rather than directly by socio-economic characteristics of the managers.

This is subtitled Research Report No 2. It is not known whether other reports in the series may be relevant – or perhaps area reports were combined to give a national benchmark.

BENEFITS OF TREE ESTABLISHMENT ON FARMS – A SURVEY OF LANDHOLDERS' EXPERIENCES – 1988 [S HOWETT & A LOTHIAN – SA DEPARTMENT OF ENVIRONMENT & PLANNING]

This statewide survey of 260 farmers active in tree establishment (i.e. non-random sample from several sources) included 48 USE landholders.

UNTITLED FARMER SURVEY OF LANDHOLDERS' EXPERIENCES – 1992 [UNNAMED CONSULTANT & DR SLEE OF FLINDERS UNIVERSITY]

This involved telephone interviews with 50 farmers in each of the following localities – Flaxley, Lameroo, Kadina and Cleve.

This study led to the appointment of a revegetation officer in the South East in 1993.

UPPER SOUTH EAST REVEGETATION SURVEY – 1999 [AUTHOR UNKNOWN]

99 Upper South East farmers responded to a mail survey. This looked at revegetation practices in some detail.

EXECUTIVE SUMMARY

- A random sample of 98 USE landholders were interviewed by phone.
- Few (8%) consider that they have a salinity problem.
- The protection of native vegetation and revegetating with deep-rooted perennial pastures were included in the farm strategies of the majority of respondents, with revegetating with native species present in about half of all cases.
- 86% of those with wetlands have a protection strategy for this.
- The drains were generally seen as a partial solution or one of several methods that need to be employed (55%).
- 91% claimed to be aware that revegetating with deep-rooted perennials in addition to the drains can reduce salinity over a much greater area.
- Only 20% were aware that the effect of the drains on groundwater drawdown typically extends only 1-2 km on either side.
- 64% claimed to be aware that of the 680,000 hectares in the upper South East, 250,500 hectares is affected by dryland salinity.
- All except 8% consider protecting and planting native vegetation to be important – including 31% who deem it to be vitally important.
- The majority of landholders indicated that they expect to maintain their level of planted native vegetation activities in the coming 5 years, with 40% actually anticipating an increase.
- Landholders were asked whether anything restricts their efforts to increase perennial vegetation. *Overall cost* attracting most mentions (33%), followed by *time constraints* and a perceived *lack of suitable land.*
- Many respondents (up to 74% depending on the type of vegetation) were convinced that the costs of revegetation activities do not outweigh the benefits.
- 25% have accessed government assistance schemes.

- 20% claimed that financial assistance was a spur to undertake more revegetation.

- 33% would be willing to make an agreement to undertake certain environmental actions to offset any future drainage share costs.

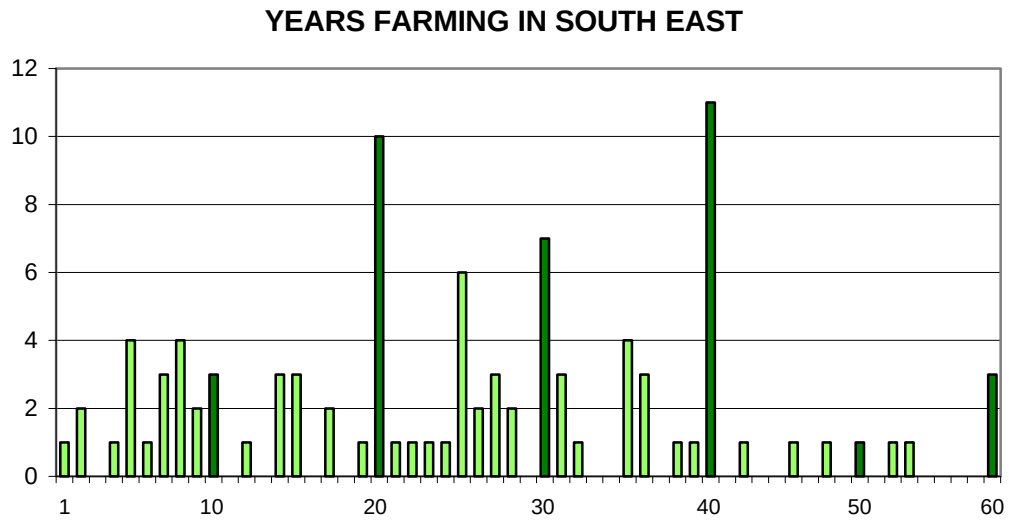
- 88% have undertaken activities with environmental benefits in the preceding 5 years. The major activities were:

49%	**planting native revegetation**
47%	**establishing lucerne or salt tolerant pastures**
38%	**pest management for wildlife purposes**
22%	**fencing off native & remnant vegetation**
20%	**managing remnant vegetation**

SAMPLE CHARACTERISTICS

Respondent Characteristics

The respondents in this survey had spent an average of 25 years farming in the South East. Three people had spent 60 years there, while three had spent less than three years farming in the region.



71% of respondents were responsible for only one property in the Upper South East. Most of the remainder (19%) were responsible for two properties. The average holding for the sample as a whole was 1.9 properties.

Property Characteristics

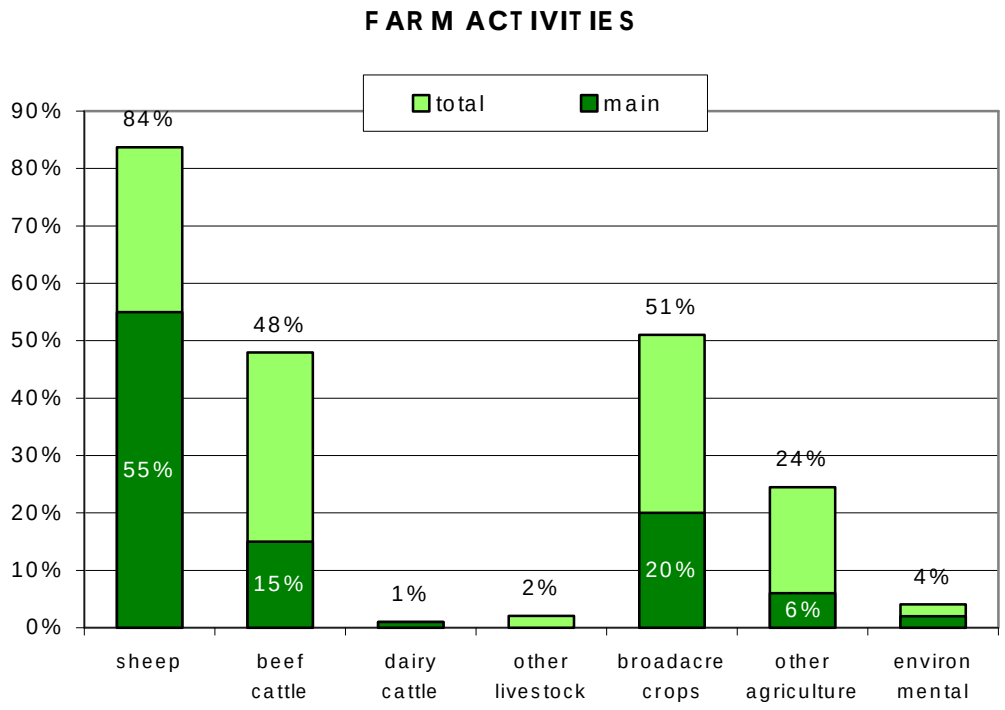
97 respondents gave estimates of the size of their properties. Where more than one property was held in the study area, combined totals have been calculated.

The landholdings of the 97 smaller respondents totalled some 76,000 hectares, with an average holding of 783 hectares. The median value was 450 hectares in a range that ran from 15 ha to 7,200 ha.

There are 36 hundreds which are wholly or partly included in the study area. The landholders interviewed represented properties in at least 27 of these hundreds.

Survey participants were mainly engaged in sheep farming. 55% listed this as the activity from which they derive most of their income and a total of 84% have some involvement in sheep farming.

Cropping (including cereals) and beef cattle were also major industries, as shown below.



Only 8 of the 98 respondents (8%) considered that they have a salinity problem on their property.

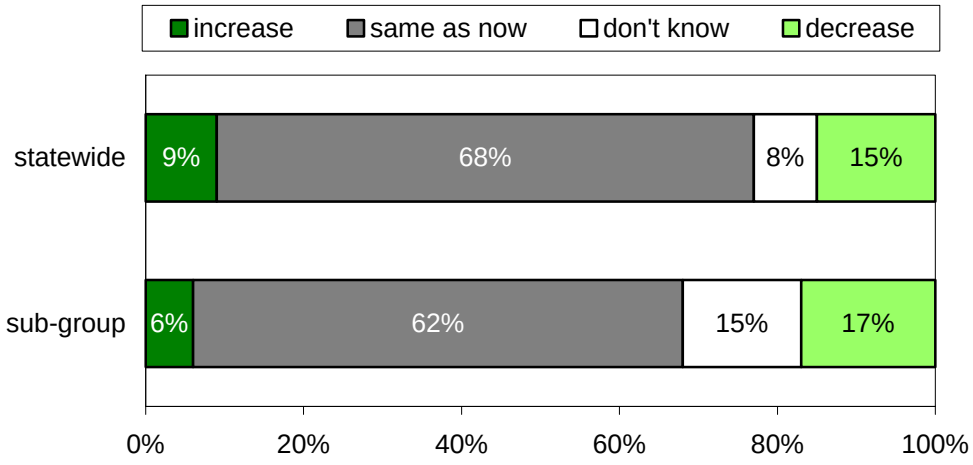
The affected land ranged in size from 10 ha up to 800 ha, with an average value of 17 ha being recorded for the sample as a whole (205 ha if we consider only affected properties).

This is not consistent with the 2002 Truscott Research Land Manager Survey - 37% of all land managers surveyed reported having some area of saline soil on their property, with the proportion in the Upper South East being similar (32%).

The areas involved averaged 106 hectares overall (78 ha in the Upper South East).

Asked to forecast the amount of saline land they will have in ten years' time, Upper South East farmers were in line with the aggregate, with only 6% anticipating an increase in saline land and 17% expecting a decrease.

EXPECTED SALINE SOIL ON PROPERTY - NEXT 10 YEARS
[data from 2002 Land Manager Survey - Truscott Research]



In the 2002 Truscott Research Land Manager Survey, soil salinity was ranked 4th out of twelve land management issues (which were read out to them) when asked to say which issues were of concern in their district.

41% cited salinity – including 35% of respondents from the Upper South East.

Are any of the following issues of concern in your district?	ALL REGIONS	Upper South East
Plant pests – weeds	83%	65%
Animal pests	65%	61%
Soil fertility/nutrition	60%	44%
Soil salinity	41%	35%
Water repellent soils	37%	42%
Waterlogging	33%	37%

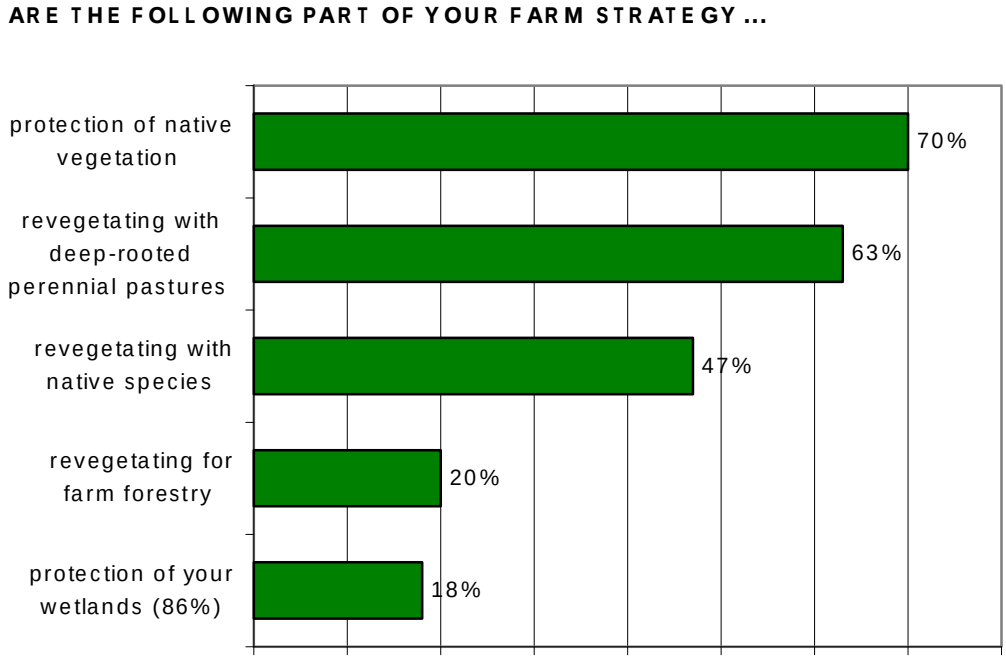
Elements of farm strategies

The accompanying graph illustrates how prevalent certain issues were in respondents' arm strategies.

The *protection of native vegetation* and *revegetating with deep-rooted perennial pastures* were included in the farm strategies of the majority of respondents, with *revegetating with native species* present in about half of all cases.

Only 20% include *revegetating for farm forestry* in their farm strategy.

Protection of your wetlands was also uncommon (18% overall). However, this question was only asked of the relatively small number who have wetlands and 86% of this group have a protection strategy for their wetlands.



99 Upper South East farmers responded to a mail survey in 1999. The proportions engaging in revegetation activities were:

19% - fodder shrubs

14% - agro-forestry

57% - native revegetation

37% - fencing remnant vegetation

17% - wetland rehabilitation (% with wetlands unknown)

Those who indicated that revegetating with deep-rooted perennial pastures is part of their farm strategy were asked to specify what they have planted and their reasons for doing so.

Lucerne had been planted by 50% of these landholders, making it the predominant response:

Deep-rooted perennial pastures - what types have you planted?	% of respondents who have deep rooted perennial pastures in strategy
lucerne	50
phalaris	18
tall wheatgrass	6
perennial veldtgrass	4
cocksfoot	4
clover	4
puccinellia	3
tagasaste	3
perennial ryegrass	1
other [residual – single responses]	7

Reasons for growing particular species are summarised below:

lucerne	**phalaris**	**tall wheatgrass**
good fodder [15]	suits conditions [8]	salinity control [4]
seed production [10]		
suits conditions [8]		
salinity control [3]		
deep rooted [2]		

All except 3 of those who claimed to have *protection of native vegetation* as part of their farm strategy actually have native vegetation on their property. These respondents constitute 70% of the total sample.

All except one was able to estimate the area involved. Estimates ranged from 1 ha up to 10,000 ha. The mean value was 221 ha but the median was much lower (22 ha) because of one outlying value. If this value is excluded, the mean drops to 75 ha.

74% of landholders *with any native vegetation* had less than 100 ha.

The 21 respondents with wetlands were asked to estimate the extent of such land.

All except one was able to estimate the area involved. Estimates ranged from 1 ha up to 10,000 ha. The mean value was 520 ha but the median was much lower (9 ha) because of one outlying value. If this value is excluded, the mean reduces to 21 ha.

73% of respondents in the Whitten and Bennett study had undertaken some measures to manage wetlands (notably control of weeds and feral animals as well as maintaining native vegetation).

The Wetlands Research used a written questionnaire. Useable responses were received from 51 land managers, out of a total population of 73 USE farmers with wetlands on their properties.

Details of the properties surveyed:

Total area = 223,117 ha (equivalent to 33% of total agricultural land in the region and 41% of total DSE)

Total wetland area = 30,475 ha

65% of wetland was classified as tea tree swamp and 26% as open water. 63% was regularly flooded pasture.

All respondents use their wetlands for some purpose – usually recreational use (e.g. hunting – 96%) or grazing (86% do this on a regular basis).

62% alter the hydrological regime by drainage or extraction of water.

Almost all (98%) acknowledged monetary and non-monetary costs associated with having wetlands.

In the 2002 Truscott Research Land Manager Survey, respondents with saline land were asked to describe the practices they were using on the affected land.

82% were taking some action and the most popular activity was tree planting, specified by 39%, followed by fencing/minimising use and planting saltbush/shrubs (25% and 20% respectively).

The emphasis in the Upper South East was different – the top responses were installing drains, planting salt tolerant pasture and planting perennial grass pasture (30%, 28% and 26% respectively).

What practices are you using on the saline land to manage the problem?

[Base = properties with saline land]	**ALL**	***USE***
Plant trees	39%	*15%*
Fence/minimise use	25%	*7%*
Plant saltbush/shrubs	20%	*0%*
Plant perennial grass pasture	15%	***26****%*
Plant salt tolerant pasture	15%	***28****%*
Install drains	10%	***30****%*
Plant lucerne	6%	*4%*
Mulch/manure	5%	*2%*
Plant barley	3%	*2%*
Mounding	1%	*0%*
Spread gypsum	1%	-
Other action	10%	*15%*
Total – taking action	**82**%	***80***
Don't do anything	**18**%	***20****%*

All respondents in the 2002 Truscott Research Land Manager Survey (including those who do not consider they have any saline land) were asked to describe the practices they were using elsewhere on their properties to manage salinity.

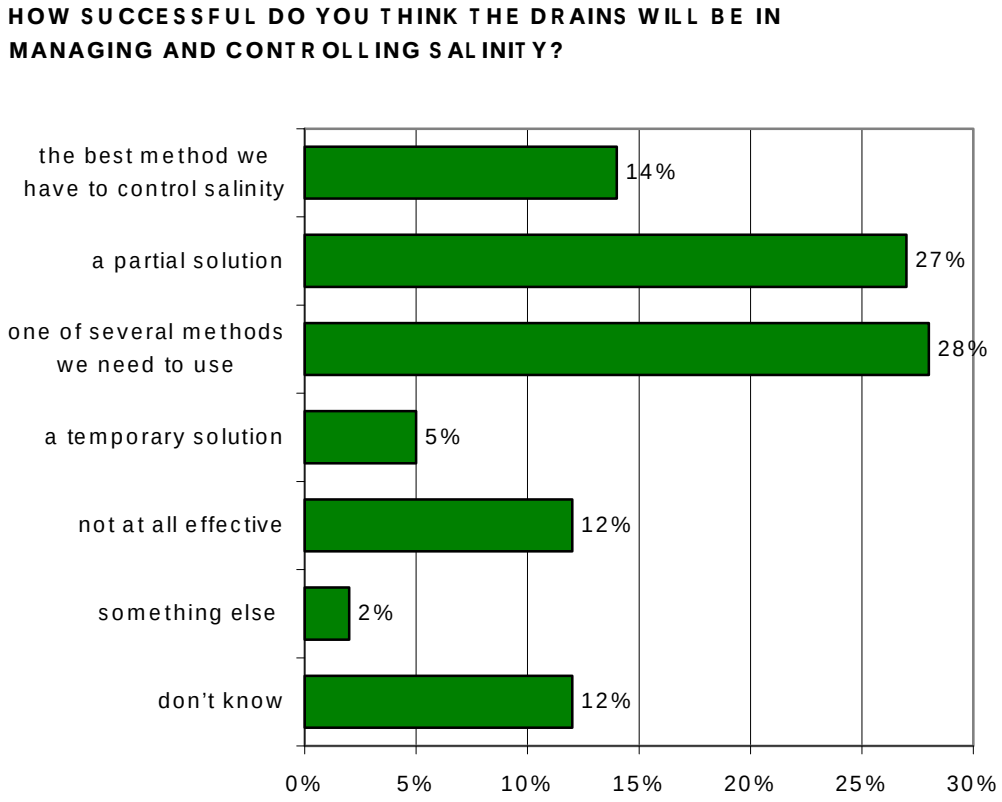
32% reported that they were taking some action, with the corresponding figure for the Upper South East being 40%

What, if anything, are you doing elsewhere on your property to manage salinity?

	ALL	***USE***
Revegetate surrounding area	**17**%	*15%*
Plant perennial grass pasture	5%	*10%*
Water efficiency	4%	*4%*
Install drains	3%	*10%*
Manage native pasture	3%	*3%*
Plant lucerne	3%	*6%*
Clay spreading	1%	*2%*
Other action [residual]	9%	*4%*
Total – taking action	**32**%	***40****%*
Don't do anything	**17**%	***19****%*
Salinity not a problem	**51**%	***41****%*

Attitudes towards mitigation schemes

A range of views was expressed on the perceived success of the drains:



Only 20% were aware that the effect of the drains on groundwater drawdown typically extends only 1-2 km on either side.

19% believed the benefit to extend further but the majority (61%) gave a *don't know* response.

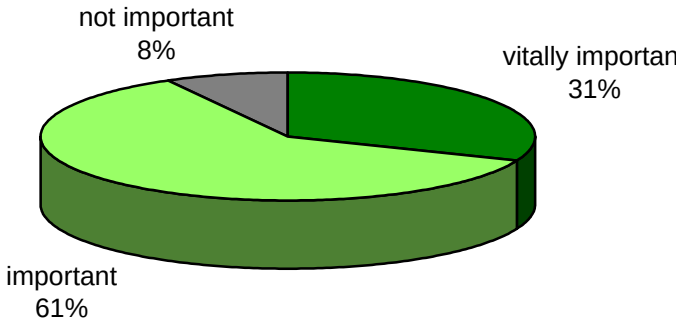
64% claimed to be aware that *of the 680,000 hectares in the upper South East, 250,500 hectares is affected by dryland salinity*.

91% claimed to be aware that *revegetating with deep-rooted perennials in addition to the drains can reduce salinity over a much greater area*.

Attitudes towards native vegetation /revegetation

All except 8% consider protecting and planting native vegetation to be important – including 31% who deem it to be vitally important.

PROTECTING AND PLANTING NATIVE VEGETATION IS ...

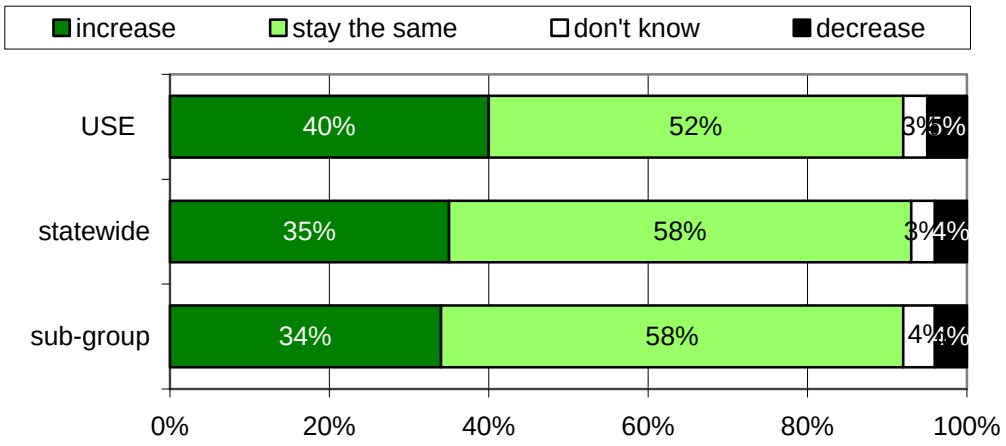


The majority of landholders indicated that they expect to maintain their level of planted native vegetation activities in the coming 5 years, with 40% actually anticipating an increase. Only 5% believe there will be a downturn in their own activities.

These figures paralleled the 2002 Truscott Research Land Manager Survey, which included the same question, as shown below.

[USE = this survey Also shown – statewide and USE sub-group results from the 2002 Truscott Research Land Manager Survey]

PLANTED PERENNIAL VEGETATION ACTIVITIES - NEXT 5 YEARS



Findings of the 1992 farmer survey include a perception from 81% that the overall level of tree planting and revegetation had increased in the previous two years (i.e. 1990 and 1991).

88% had planted trees in the previous 10 years and 76% planned to do so in the next two years.

Respondents were asked about the benefits of perennial vegetation. All except 10% were able to nominate what they perceived as benefits.

The leading response was *shelter breaks for stock*, given by 38%.

This was followed by *fodder* (28%).

A full listing is presented overleaf.

This table also includes results from the 2002 Truscott Research Land Manager Survey

When the present survey results are segmented according to whether respondents have accessed funds for vegetation/revegetation enhancement. the following differences emerge:

- All of those who have accessed funds were able to nominate benefits.
- In particular, relatively high proportions of this group mentioned *production/income* and *landscaping/amenity* (32% in each case).

51% of those surveyed by Howett & Lothian believed financial benefits accrue from tree planting.

Only 19% had experienced problems that discouraged further planting.

What benefits, if any, do you believe you gain from establishing perennial vegetation?

(inc multiple responses)	**USE**	**statewide**	**sub-group**
Shelter breaks for stock	38%	34%	44%
Fodder for stock	28%	22%	23%
Attracting native birds/wildlife	22%	11%	14%
Preventing erosion	18%	21%	10%
Landscaping/amenity	18%	15%	8%
Production/income	18%	8%	19%
Lowering water table	15%	5%	4%
Salinity control	14%	11%	11%
Shelter breaks for crop/pasture	11%	16%	12%
Increased biodiversity	11%	5%	1%
Reduced recharge for soil	6%	2%	0%
Increase in land value	5%	5%	1%
Control of spray drift	1%	1%	0%
Other	9%	4%	4%
Total – naming any	90%	84%	86%
None/don’t know	10%	16%	14%

To identify barriers to increasing perennial vegetation, landholders were asked whether anything restricts their efforts.

67% were able to blame something, with the *overall cost* attracting most mentions (33%), followed by *time constraints* and a perceived *lack of suitable land.*

Is there anything that restricts your efforts to increase perennial vegetation on your property?

(includes multiple responses)	**% of respondents**
Cost – overall	33
Lack of time	17
Loss of productive land/no more land	14
Cost - fencing	8
Have sufficient already	6
Cost - labour	4
Lack of rainfall/no water	3
Cost – seed/seedlings etc	3
Risk of planting failure	2
No benefit	1
Management of animal pests	0
Lack of markets for product	0
Lack of machines/materials	0
Other	7
Total – naming any	**67**
None/don't know	**33**

Those who have accessed funds for such activities were particularly likely to cite *overall cost* as a barrier (52%).

38% of the other group were unable to enunciate any barriers.

A similar question in the 2002 Truscott Research Land Manager Survey (which asked: What are the main barriers to increasing perennial vegetation on your property?) produced very similar results.

Next, landholders were asked to think about the costs and benefits of revegetation.

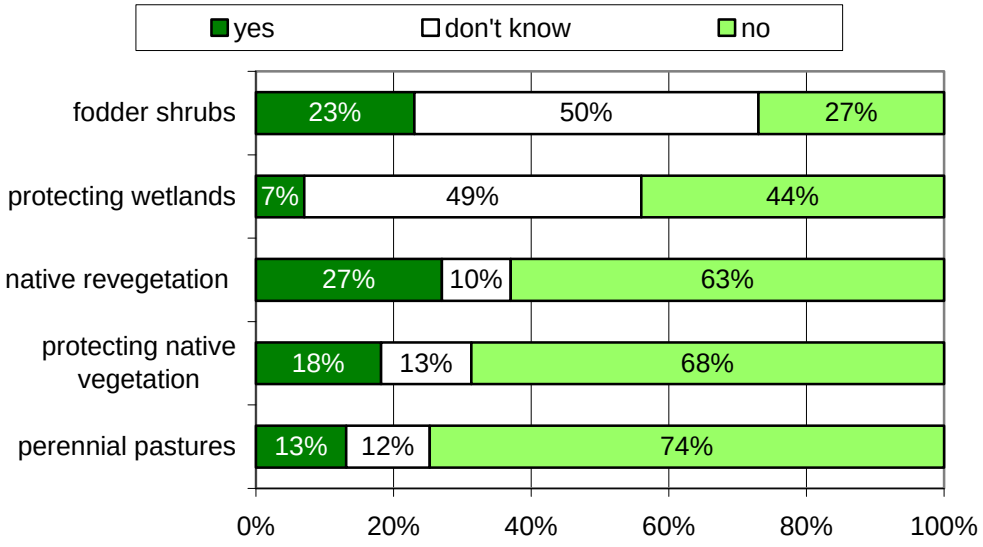
They were asked for their opinion on whether the costs outweigh the benefits in the case of five different types of vegetation/activity.

The majority of respondents were clearly not convinced.

Only 7% consider that the costs outweigh the benefits in the case of *protecting wetlands* – with 44% categorically stating that this is not the case.

The result was balanced in the case of *fodder shrubs*. Here the proportion who consider that the costs outweigh the benefits (23%) are only slightly outvoted by those with the opposite view (27%).

DO THE COSTS OUTWEIGH THE BENEFITS?



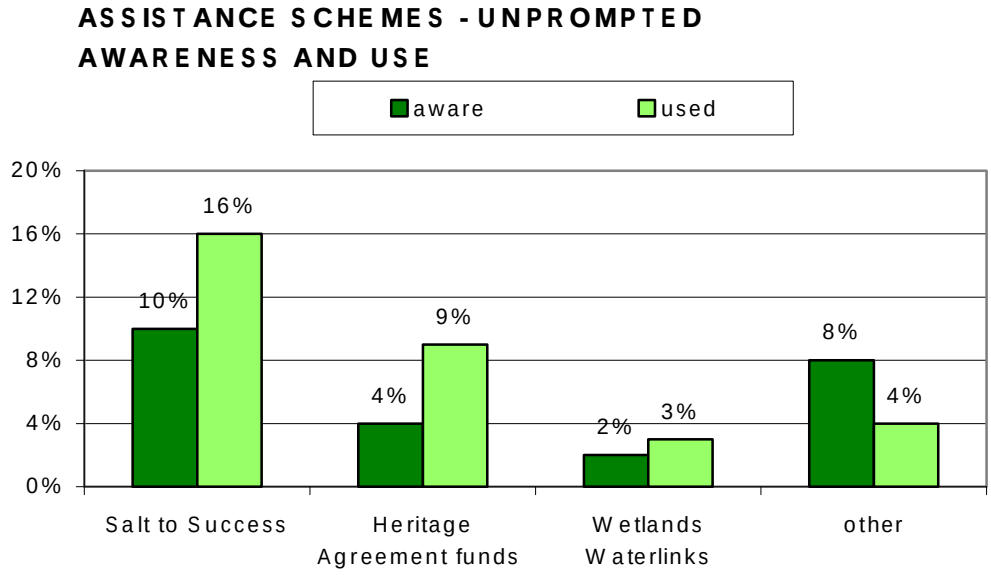
These questions were derived from one in the Howett & Lothian study (1988), which found that 43% were of the opinion that the costs of tree establishment are outweighed by the benefits (31% said no, 21% were undecided).

Government assistance – attitudes, awareness and use

Although 91% were aware that there are Government assistance schemes concerned with revegetating and fencing remnant vegetation, relatively few could actually name specific schemes. This is not of concern since the schemes were not promoted individually but as part of a package.

When prompted with the names Salt to Success, Heritage Agreement funds or Wetlands Waterlinks, a third of the sample (32%) recalled accessing funds from one or more of these sources.

Usage of these three schemes was higher than unprompted awareness rates, as shown below.



Where respondents had accessed these funds, they were asked to specify the amount of land covered.

Hectares covered	range	mean	median
Salt to Success	1 - 120	27	8
Heritage Agreement funds	1 – 400	90	15
Wetlands Waterlinks	25 – 30	28	28*

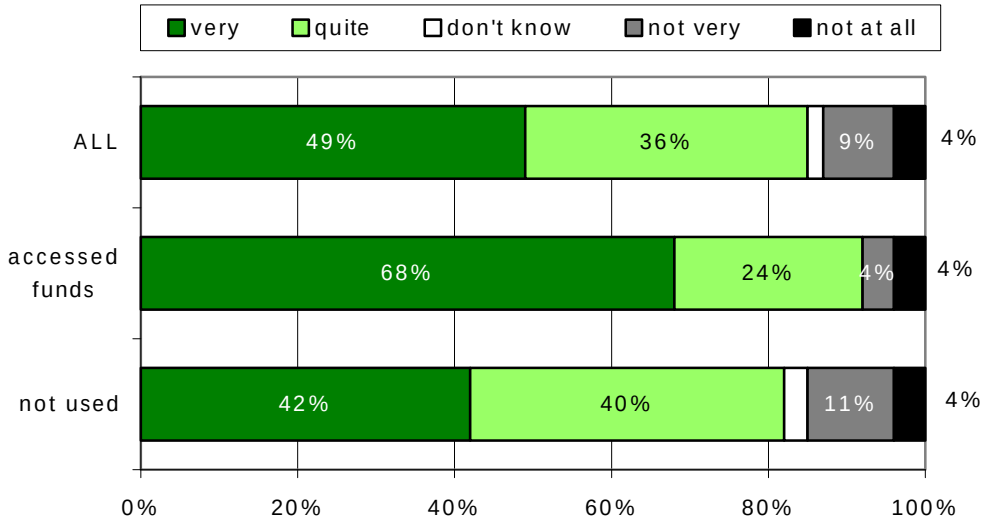
* based on 2 respondents.

Respondents were also asked to rate how valuable or otherwise they consider these types of funding programs in changing behaviour.

85% consider them to be *valuable* and this includes half the sample (49%) who consider them to be *very valuable*.

Only 13% categorised these types of funding programs as *not valuable*. As can be seen in the accompanying graph, almost all of these were people who have not accessed such funding.

PERCEIVED VALUE OF FUNDING PROGRAMS IN CHANGING BEHAVIOUR



56% of respondents were able to nominate changes that would have to be made so that they would undertake more revegetation on their property.

The most frequently nominated factor was *financial assistance* – 20% indicated that they would undertake more revegetation if the costs were shared in some way. (This encompasses payment for their own time, reimbursement of fencing costs and, in one case, 100% funding).

In fact, most responses related to funding in some way, as shown below.

What, if anything would have to change so that you would undertake more revegetation on your property?

(includes multiple responses)	**% of respondents**
financial assistance	20
money available earlier in project	10
need more info/should be promoted more	7
have enough already (would do more if had more land, if current veg died off etc.)	6
If farm was making more money	4
cover other activities	3
council rates rebates	2
if salinity/erosion got worse	2
if had water allocation	2
fewer conditions/restrictions	1
Other [residual – single responses]	5
Total – naming any	**56**
Nothing/don't know	**44**

The proportions nominating financial assistance were similar for those who have accessed funding and those who have not (16% and 21% respectively).

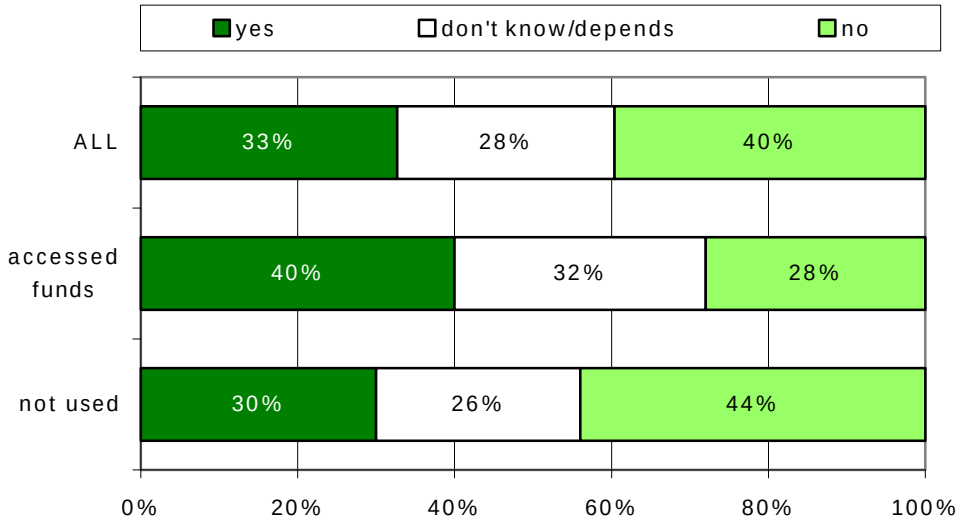
A proposition was put to respondents in the following terms:

A suggestion has been put forward that farmers may be interested in making an agreement to undertake certain environmental actions to offset any future drainage share costs. In principle, would you be willing to participate in such an agreement?

The response was mixed, with 33% saying *yes*, 40% saying *no* and the remaining 28% being non committal – even in principle.

However, as illustrated in the graph below, those who have previously accessed funding were more likely to be open minded about this concept:

WILLINGNESS TO PARTICIPATE IN OFFSET AGREEMENT



Some common themes mentioned by people saying **yes** were:

- *Beneficial to our property – drains are not*
- *More equitable*
- *Needed to combat salinity*

However, many were very guarded in their response.

Most of those giving a **no** response felt that they would not be affected by future drainage costs.

(Several people were puzzled by this question, as they believe there will be no levy in the future.)

Environmental activities

Respondents were read a list of 18 types of activity with environmental benefits and were asked to say which, if any, they had undertaken on their farm in the past 5 years. 88% had undertaken one or more of these activities and respondents nominated up to 9 different categories.

49%	**planting native revegetation**
47%	**establishing lucerne or salt tolerant pastures**
38%	**pest management for wildlife purposes**
22%	**fencing off native & remnant vegetation**
20%	**managing remnant vegetation**
15%	weed control, especially in native vegetation areas
12%	whole farm plan
8%	planting commercial trees
8%	linking native vegetation areas
8%	habitat protection
5%	revegetating drainage & creek areas
3%	establishing wetland areas
3%	fencing/protecting wetland areas
2%	rehabilitating wetlands
2%	establishing fodder shrubs
1%	fencing drainage/creek areas
0%	placing native vegetation under heritage agreement

In each case, respondents were asked to specify the following details:

- What year was this carried out?
- How many hectares were involved that were **covered** by government incentives?
- How many hectares were involved that were **NOT covered** by government incentives?
- Could you please tell me the total amount of the **capital** and **ongoing costs**?
- What was the **total value** of the government contribution?
- Was there any environmental benefit to you?

Results for the more common activity types are summarised below. This includes capital costs only. More detailed breakdowns (including maintenance costs) have been supplied in spreadsheet format to facilitate further analysis.

Planting native revegetation **[48 respondents]**

There were 89 instances where native revegetation had been planted over a 5 year period. A total of 635 hectares was involved and 55% of this attracted government funding. The total capital outlay was $285,460 of which 26% was recovered from funding sources.

Establishing lucerne or salt tolerant pastures **[46 respondents]**

There were 113 instances where lucerne or salt tolerant pastures had been established over a 5 year period. A total of 16,509 hectares was involved and 3% of this attracted government funding. The total capital outlay was $2,025,200 of which 1% was recovered from funding sources.

Pest management for wildlife purposes **[37 respondents]**

There were 105 instances where pest management for wildlife purposes had been undertaken over a 5 year period. On 17 properties, it was undertaken every year. A total of 35,655 hectares was involved and less than 2% of this attracted government funding. The total capital outlay was $54,140 of which 4% was recovered from funding sources. Feedback from interviewers suggests that a significant amount of the work detailed under habitat protection is double counted as it is also included in this category.

Fencing off native & remnant vegetation [22 respondents]

There were 28 instances where pest management for wildlife purposes had been undertaken over a 5 year period. A total of 1,052 hectares was involved and 64% of this attracted government funding. The total capital outlay was $89,800 of which 62% was recovered from funding sources.

Managing remnant vegetation [20 respondents]

There were 60 instances where pest management for wildlife purposes had been undertaken over a 5 year period. A total of 3,764 hectares was involved and less than 1% of this attracted government funding. The total capital outlay was $123,000 of which 18% was recovered from funding sources.

Landholders were also asked about their expectations for the coming 5 years. Two thirds were able to nominate any and the maximum number of project types specified was 6.

35%	**planting native revegetation**
35%	**establishing lucerne or salt tolerant pastures**
18%	**pest management for wildlife purposes**
9%	fencing off native & remnant vegetation
9%	managing remnant vegetation
7%	planting commercial trees
6%	linking native vegetation areas
5%	weed control, esp. in native vegetation areas
4%	whole farm plan
3%	revegetating drainage & creek areas
3%	rehabilitating wetlands
3%	habitat protection
2%	establishing wetland areas
2%	fencing/protecting wetland areas
2%	fencing drainage/creek areas
2%	establishing fodder shrubs
5%	other

Details concerning the number of hectares to be involved and how much of this was expected to be covered by government funding are presented in the accompanying spreadsheet. However, relatively few respondents had planned in any detail.

In the 2002 Truscott Research Land Manager Survey, land managers were asked about the total area of five types perennial pasture or vegetation currently existing on the property:

- Irrigated lucerne
- Dryland lucerne
- Other sown perennial pasture (e.g. perennial veldt grass, cocksfoot, phalaris)
- Moderate/dense native vegetation
- Planted tree/shrub species revegetation - for general conservation, windbreaks, fodder, flowers, timber etc.

Existing areas of perennial vegetation are tabled overleaf. The upper South East appears to contain a higher proportion of properties with lucerne and other sown perennial pasture. Because the averages include nil values, this means much higher average areas for these three types of vegetation.

Existing perennial vegetation Average (hectares)	statewide	sub-group
Irrigated lucerne	2.5	12.3
Dryland lucerne	36.9	82.3
Other sown perennial pasture	150.7	465.9
Moderate/dense native vegetation	164.4	91.2
Planted tree/shrub revegetation *	22.7	16.1

(* inc strips)

Existing perennial vegetation Incidence (% of properties)	statewide	sub-group
Irrigated lucerne	7%	22%
Dryland lucerne	23%	47%
Other sown perennial pasture	44%	74%
Moderate/dense native vegetation	71%	62%
Planted tree/shrub revegetation	57%	53%

Relatively few respondents had carried out perennial vegetation activities in 2001:

Perennial vegetation activities carried out in 2001 - AREA	statewide		sub-group	
	Average (hectares)	Incidence (%)	Average (hectares)	Incidence (%)
Remnant native vegetation fenced	5.72	11%	4.2	16%
Local native vegetation planted	1.92	14%	0.7	16%
Native but not local vegetation planted	0.36	11%	0.7	7%
Fodder trees and shrubs planted	0.94	7%	1.1	5%
Trees & shrubs planted for specific product	0.70	3%	2.0	5%

Perennial vegetation activities carried out in 2001 - STRIPS	statewide		sub-group	
	Average (km)	Incidence (%)	Average (km)	Incidence (%)
Remnant native vegetation fenced	0.23	5%	0.1	4%
Local native vegetation planted	0.09	4%	0.2	4%
Native but not local vegetation planted	0.07	4%	<0.1	3%
Fodder trees and shrubs planted	0.01	1%	0	0%
Trees & shrubs planted for specific product	0.01	1%	<0.1	1%

Further comments

At the conclusion of the interview, respondents were given the opportunity to make further comments or suggestions about the issues discussed.

39% availed themselves of this opportunity and their remarks are reproduced below.

- *Ask government to re evaluate the cost of fencing & put revegetation in their grants.*
- *Clay spreading is proving to be successful in controlling salinity.*
- *I have been cut back on my water license & they are still draining the water away in the drains so I'm losing out all ways.*
- *I think land clearing should be stopped. I have a pet hate of fertilizers because of soil acidity problems which is absolutely destroying things.*
- *I think the drains are the wrong idea. Planting deep rooted perennials & trees are far more effective.*
- *I think this country has been drained too much.*
- *I would have thought that it was absolutely mandatory that the drain itself should have been revegetated which has not been done on as widespread basis as it should have been.*
- *I would like the authorities to consult with all land owners more often.*
- *If the drains are not doing their job - where to from here? Depth of drains is of concern. Fresh water came out when they were dug is this being drained to the sea.*
- *If we get drainage we will solve the salinity problems.*
- *Just hurry up with the drains in Petherick & Willalooka area.*
- *Let us pump the water out so that the water table doesn't rise.*
- *More revegetation in the saline areas needed.*
- *Need more control gates or weir gates in the drains so that in Lower South East over draining doesn't happen. One landholder has pushed water into swamps & not allowed them to traditionally dry out & then complains that the swamps are dying.*
- *Need to have meetings about tree plantings in this area - that would be more effective than drains. We should replace the trees that were here.*
- *Needs to be replaced with native vegetation.*
- *One farmer is making it hard for everyone else.*
- *People in the Keith area are concerned with the affect the drains will have on the lucerne crops.*
- *Should be putting the water in reservoirs.*
- *Speak to the person who owns the property.*

- *Subsidise the planting of lucerne all over the South East. That is the best solution I can see.*
- *The drainage system is right in principle but this is not being carried out. The principle is to drain water from inland areas directly into the sea. This is not being done.*
- *The drains are ineffective. We need a better method to control salt.*
- *The drains should never have been put in. They have created the problem.*
- *The drains that go through need to be on land purchased by the government specifically for those drains. Upper South East projects needs to deliver on the original drainage scheme.*
- *The key issue is the mismanagement of the old drains by the National Parks to flood Bool Lagoon.*
- *The land shouldn't have been cleared in the first place it was always ti trees & salty land.*
- *The problem with heritage is that it is too restricted. If you choose to heritage protect land it becomes difficult to sell property when the time comes. Unless the agreement is changed farmers cannot afford to get involved in heritage.*
- *The whole drainage has been flawed. If they had spent as much money on educating the farmers to grow perennial pastures they wouldn't have the salt problem in the first place.*
- *There should be more trees & shrubs planted where there is a salt problem. Deep rooted lucerne & tall wheat grass.*
- *They are running saline water into create wetlands & this will inevitably destroy them.*
- *They should encourage a more holistic approach to salinity problem rather than just dig a drain.*
- *Things that are happening are quite beneficial. Planting deep rooted perennials is increasing the productivity of the land. Drains are not really helping in our situation. We are paying the levy but are seeing little or no return for this.*
- *We shouldn't have to pay a levy to fund farmers further south. We shouldn't be paying for them when they are making big money. The water should be dammed.*
- *Where salinity is BAD I feel that growing lucerne is probably better than growing trees. Deep rooted perennials can suck up more water & also provide good feed for stock. Clay spreading is another important option for draining land. Arrow is a deep rooted annual clover that can also be used & keeps growing for longer period of time.*
- *Why are the drains taking so long to be done?*
- *Yes I think you have done a great job & covered everything.*