



# The long term impact of Property Management Planning (Farming for the Future) in NSW

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“Agriculture not only gives riches to a nation, but the only riches she can call her own”

Samuel Johnson (1709-1784)



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We acknowledge too that producers are increasingly being asked to provide input to surveys, inquiries and other similar imposts. This is time consuming and often appears to attract little reward.

Without producer input it is impossible to accurately understand industry's interests and needs.

Thanks go to Professor Mark Morrison, Sub Dean (Research) in the School of Management and Marketing at Charles Sturt University. Professor Morrison provided extensive support in the design of the survey, selection of producers to receive the survey and interpretation of results.

Remy Van de Ven, Biometrician from DPI provided advice on the analysis of the data collected from the survey. Our thanks also go to him.



## EXECUTIVE SUMMARY

Farming For the Future (FFF) in NSW delivered Property Management Planning (PMP) training in two phases as:

*"... an ongoing process for the total management of a farm business which assists producers to improve their profitability and achieve more sustainable natural resource use" (Baker and McPherson 2000, p60).*

Phase 1's (1993-1997) aim was:

*"To assist farmers and their advisers improve their skills in property management planning, risk assessment and drought management and to allow producers to develop and implement their own property management plans" (Baker and McPherson 2000, p1).*

Phase 2's (1997-2001) objective was to achieve:

*"Farm business teams taking responsibility for making decisions that increase their capacity to maintain the condition of all their resources, return a profit and ensure the long term health of their farm business" (Baker and McPherson 2002, p1).*

This research surveyed PMP participant and non-participant producers in NSW. Two outcomes were expected from the survey:

1. An understanding of the efficacy of PMP style training compared to 'Other' training undertaken by the target audience; and
2. An appreciation of the target audience's interest in future training alongside their expectations on mode of delivery.

The findings contained in this report have been subsequently paralleled by Kaliber Group (2012a, 2012b). Kaliber's research surveyed a sample from their Rural Database as to perceptions of DPI and Catchment Management Authorities.

## Main Findings

The following are the findings in point form.

### Behavioural drivers

- 78% of respondents saw government policies (and many of their perverse outcomes) and regulations as being their major concern not farming issues per se; this has a negative impact on producers' preparation for and prevention of adverse events.<sup>1</sup>
- Economic drivers associated with cost structures and returns to capital which impact operations as well as capacity to change are the second concern; given market structures this is likely to remain.

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<sup>1</sup> Kaliber's survey (2012a, 2012b) showed this area to be significant, although not to the level of this survey.





## Interest in training

- 34% of respondents stated a definite interest in future training while 21% showed some interest. This represents a significant market for new and repeat sales; of concern though is the saturation of the market with training.
- Anecdotal evidence conveys producers' fatigue with training; cynicism is expressed about training that is seen as being merely ticking a box for regulatory purposes.
- 40% were not interested in training - this reflects: disinterest; other priorities are higher; or what is presented either lacks value or credibility.
- Reasons for not participating include: age and imminent retirement; training is not fully relevant; credibility of material and/or presenters is questioned; and volume of training on offer inhibits involvement.
- Training undertaken was viewed favourably.

## Drivers for involvement in training

- Segmentation of the training market for producers on the basis of past educational achievements of the potential clients needs to be considered as a possible method for identifying those likely to be interested in further training. PMP style training is more attractive to those at both extremes of past educational achievement (that is both high and low performers).
- Past education proved a determinant to engagement with management of personnel and utilisation of advisors.
- Age and gender showed correlations to profitability, independence, productivity and improving the state of the farm. These characteristics provide market signals for those likely to be interested in further training.
- Younger groups of producers are more responsive to initiatives such as PMP than other producers.

## Course design

- 83% of producers regarded the following as Important or Very Important:
  - 1 Planning options that improve self reliance and resilience;
  - 2 Enhancing physical assets or accumulating financial resources;
  - 3 Responding in a timely manner to events;
  - 4 Recovery planned before or during the event; and
  - 5 Managing time so as to be able manage the business.
- The top three choices in specific training deal with finding a future course of action and assessing its financial implications.

## Educational theory

- The pedagogy<sup>2</sup> behind training should consider the high level of need for assistance in preparation for adversity reported by respondents.
- The market is mature. There are a number of providers and the target audience shows fatigue and cynicism to mandatory training.

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<sup>2</sup> Pedagogy is the function of a teacher as well as the art and science of teaching/instructional methods.



- The development and use of self check tools which producers can use to assess objectively what level of preparation they have achieved will have traction in the market, these tools need to be based transparently on producers' experience.

### **Provision of training**

- There is support for a range of providers; DPI is heavily supported. Credibility and applicability of courses will encourage further demand for courses.
- Respondents support all day training to occur during the week. A proportion favour half-day training.

### **PMP compared to 'Other' training**

- The general evaluation showed no distinction between PMP and 'Other' training.
- Well designed and delivered training that is relevant to participants is valued by participants.
- There were differences in achievements that can be explained by learning preferences of those involved; adoption of tools that pay attention to learning styles will improve outcomes; specific activities that address the different learning styles of producers need to be included.



## Recommendations

The following is a synopsis of the recommendations provided on page 45.

- Producers' concentration on government policy and regulation rather than preparation for future adverse events needs to be addressed.
- There is a significant market for training amongst producers; concerns in relation to value and credibility of courses have to be addressed in order to meet this need.
- Sophistication in segmentation of the market for training provides an avenue for targeting training to the specific needs of individuals – NSW DPI needs to match that sophistication in its marketing.
- Respondents gave very clear feedback on what to include in training; whilst respondents saw specific areas of training being of value that response is not the same as asking whether those respondents would put time and money into such training.
- As stated the market is mature; pull strategies can address this situation – pull video marketing and blogging that enabled interaction with clients could provide a start point.
- Given the high level of preparation for adversity reported by a number of respondents, courses therefore need to accommodate multiple entry points according to the specific development needs of individuals.
- Producers' opinion is consistent with course design based on tools that deal with the learning styles of producers; the deliberate targeting of learning styles of producers will improve credibility.
- DPI is heavily supported as a provider of training; the Department can adopt an aggressive stance in pursuing a market.
- Well designed and delivered training that is relevant to participants is valued by participants; DPI can therefore have confidence that provided those conditions are met there is a strong market for the Department to pursue.



## INTRODUCTION

### Background

Baker and McPherson (2002) provide a clear overview of Farming for the Future (FFF) in the final report on the project in NSW. FFF was the name of the program in NSW while Property Management Planning (PMP) was the workshop series delivered within that program.

### Property Management Planning

A national campaign was launched in 1992 with a program based on the Land Management Task Force's definition of PMP:

*"... an ongoing process for the total management of a farm business which assists producers to improve their profitability and achieve more sustainable natural resource use" (Baker and McPherson 2000, p60).*

In 1993 the first phase of FFF was launched in NSW as a joint program of NSW Agriculture, the Department of Land and Water Conservation, NSW National Parks and Wildlife Service, NSW Farmers Association and the Natural Heritage Trust. The aim of FFF was:

*"To assist farmers and their advisers improve their skills in property management planning, risk assessment and drought management and to allow producers to develop and implement their own property management plans" (Baker and McPherson 2000, p1).*

Phase 1 (1993-1997) was managed jointly by NSW Agriculture and Department of Land and Water Conservation (DLWC), with a steering committee of major stakeholders, a management liaison group, operations group and area committees.

FFF was further extended into a second phase from 1997 to 2001 with funding from the Natural Heritage Trust with matching support from the NSW government. It had a changed objective of:

*"Farm business teams taking responsibility for making decisions that increase their capacity to maintain the condition of all their resources, return a profit and ensure the long term health of their farm business" (Baker and McPherson 2002, p1).*

FFF Phase 2 (1997-2001) was managed by a state coordinator reporting to a Board of Management comprising NSW Agriculture, DLWC, NSW National Parks and Wildlife Service, NSW Farmers' Association and the National Landcare Program (supported through the National Heritage Trust), with an independent farmer chair who also chaired the FFF state advisory committee (made up of other industry stakeholders), an operations group and area chairs group.

### Training Program

Phase 1 offered 18 discipline-focussed workshops already being delivered within the agencies. The integrated PMP workshop series was completed in



September 1997 and was based on a whole of farm approach to planning. The eight PMP workshops for Phase 2 were:

1. Creating your future
2. Your farm today: physical environment
3. Your farm today: assessing the natural resources
4. Your farm today: the farm management team
5. Your farm today: financial realities
6. Your farm today: enterprise evaluation
7. Your farm tomorrow: risk management and planning
8. Your farm tomorrow: making it happen (Baker and McPherson 2002, p22).

These workshops were accredited by the NSW Vocational Education Training Accreditation Board in 1999. Duffy and Currey (1997) provide an overview of the program.

## RESEARCH OBJECTIVES AND OUTCOMES

### Research Objectives

FFF finished operations in NSW as a single program in 2001. PMP and permutations of the program are still being offered by groups such as Catchment Management Authorities<sup>3</sup> and NSW Office of Environment and Heritage<sup>4</sup> and DPI through Tocal College.

This research involved surveying participant and non-participant producers in NSW to identify the long term benefits that came from the PMP which was run from 1993 to 2001 as part of FFF.

The objectives of this research can therefore be summarised as per the table below.

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<sup>3</sup> See for example “Property Management Plan 2012 Central West CMA 7 Wellington TAFE”  
<http://cw.cma.nsw.gov.au/LiteratureRetrieve.aspx?ID=107987>

<sup>4</sup> See “Planning for Biodiversity Management - a two-module workshop series for landholders “ @  
<http://www.environment.nsw.gov.au/cpp/PlanningBiodiversityManagement.htm>



**Table 1 Research Objectives**

Group	Main Objective	Subsidiary objective
1	Identify what long term benefits came from FFF when compared to 'Other' training or no training at all	Identify if long term benefits can be articulated
2	Compare benefits from FFF against 'Other' programs	Identify whether 'Other' programs are more efficacious
3	Identify what future training is requested by producers	Identify if training burnout is present
4	Identify what channels for delivery of training is supported by producers	Assess likelihood of DPI being accepted as a provider of such training

## Outcomes

Two outcomes were expected from the survey:

1. An understanding of the efficacy of PMP style training compared to 'Other' training undertaken by the target audience; and
2. An appreciation of the target audience's interest in future training alongside their expectations on mode of delivery.

Both are intended to give DPI an indication of training expectations of producers from the perspective of PMP style programs.

## Project Plan

### Overview

PMP finished in 2001. A database of the 4,150 clients who undertook PMP in NSW was available to this survey. That database also recorded the details of 64 facilitators, a further 371 who were recorded as contacts but not as a client or facilitator. There were 326 Id numbers without names recorded against them.

This survey was designed according to the Dillman Total Design Method (see Dillman 1978 & 2000). Masters (2001) provides a brief overview of this approach. Dillman's Total Design method recognises what motivates people to respond to surveys as well as creating an administrative process to ensure the intent of the survey is carried out efficiently and efficaciously.

Dillman balanced cost to the respondent against rewards the respondent may expect. That is set against the level of trust developed with the respondent.

Costs to the respondent consider:

- Time taken to complete the survey and return it,
- Physical or mental effort to complete the survey,
- Perceived risk associated with revealing personal information,
- Perception one may become subordinate to the researcher, and
- Direct monetary costs from being involved (postage etc.).



Rewards to the respondent depend on:

- Perceptual benefits from being regarded positively by another person,
- Verbal appreciation expressed to the respondent,
- Sense of significance generated from being consulted,
- Level of inherent interest in the survey, and
- Tangible rewards in the form of physical gifts and/or money.

Respondent's Trust comes from:

- Believing the other will discharge their obligation to return the favour on a quid pro quo basis,
- Token financial incentives which are a symbol of trust, and
- Tying the survey to a trusted company or university giving the study credence.

## Study Reliability

Reliability and validity of this research was achieved through a process of survey design, external critique and comparison to similar work conducted at Charles Sturt University as well as undertaking a pilot survey to assess efficacy of the survey instrument.

Colorado State University provide a succinct definition of the measures of reliability and validity (Colorado State University 2012)

**Reliability**                      The extent to which a measure, procedure or instrument yields the same result on repeated trials.

This survey was not in a position to be repeated at another time or with a different sample – by design the survey was similar to work conducted at Charles Sturt University which had demonstrated validity and reliability.

**Validity**                              The degree to which a study accurately reflects or assesses the specific concept that the researcher is attempting to measure. A method can be reliable, consistently measuring the same thing, but not valid. See also internal validity and external validity.

As with reliability comparison with Charles Sturt University surveys which had demonstrated validity was undertaken, questions for this survey (in areas such as demographics) were drawn from Charles Sturt University surveys.

**Internal Validity**                (1) The rigor with which the study was conducted (e.g., the study's design, the care taken to conduct measurements, and decisions concerning what was and wasn't measured) and (2) the extent to which the designers of a study have taken into account alternative explanations for any causal relationships they explore (Huitt, 1999).

The process of critique and piloting ensured internal validity was achieved. The survey instrument and responses were externally reviewed so as to meet these criteria.



External Validity	<p>The extent to which the results of a study are generalisable or transferable. See also validity.</p> <p>Questions were designed specifically to provide feed forward suggestions to the design and delivery of training programs of a similar kind; that is programs to assist producers understand farming as a business and its impact on the environment.</p>
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## Survey Design

The survey instrument went through stages of design, review, and test, adjust then utilise. Professor Mark Morrison from Charles Sturt University (CSU) provided significant input into this process.

Step 1: Areas of interest to the research were identified by the research team; these were subject to an internal review by DPI staff that had exposure to the PMP process. These staff commented on the questions chosen, the likelihood of producers being able to answer such questions given the lapse in time (11 years since the end of the program), the sensibility of the response scales provided and identification of other questions that may be of relevance.

Step 2: The draft survey was extensively reviewed by staff of CSU experienced in carrying on similar work. It was compared to surveys previously used with groups of producers; questions from those surveys were utilised as they had been shown to be efficacious in drawing the responses required (notably data on demographics).

Step 3: Draft survey was given to a small group of producers some of whom had undertaken PMP and others who had not. Feedback from this pilot was used to improve readability of questions.

Step 4: Adjustments were made to the survey instrument and again reviewed by CSU staff. Once changes were made the instrument was sent to those randomly chosen for the survey.

The survey has both open ended and multi choice questions covering:

1. Demographics – age, gender, educational level and nature of farm business;
2. Achievements of PMP and 'Other' training – outcomes achieved, management practices altered and evaluation of the program;
3. Future intentions – concerns, interest in further training and how such training should be delivered.

Ratings scale questions assessing programs used a 5 point scale: 1 Not at all true, 2 Slightly true, 3 Somewhat, 4 True, and 5 Very true. Other ratings scale questions gave a range of options with the ability to define alternatives in an 'other' option.

## Selection of producers to receive the survey

A random sample from the 4,150 clients who undertook PMP training was selected.





The Yellow Pages was used to identify farmers and graziers in NSW. 2,477 Graziers and 2,005 Farmers were identified as potential recipients of the survey. Approximately equal numbers were selected from each.

For both groups, at a confidence limit of 95% and confidence interval of 5, a sample size around 350 was required. Selection of sample size used an online formula provided by Creative Research System<sup>5</sup>.

177 Graziers and 168 Farmers were randomly selected to receive the survey. 331 PMP participants were selected to produce a representative sample of the group. These final numbers used were the closest approximation to the desirable sample size and were generated using the excel routine described below.

Random numbers between 0 and 100,000 were assigned to each name on the lists. Selection was based on identifying those that fell within a range +/- the mid point of 50,000. The value for the range was manipulated until the desired number of recipients was achieved by varying the value "Dif".

**Table 2 Excel formula for random selection of recipients**

Name	Random No. (X)	Selected
Person A	24745	0 (not selected)
Person B	53073	1 (select)
Person C	61231	0
	=INT(RAND()*100000)	=IF(AND (X>Mid-Dif, X<Mid+Dif), 1,0)
<b>Mid</b>	50000	
<b>Dif</b>	4000	

Response rate to the survey was:

- 131 (19%) surveys were completed and returned;
- 103 (15%) of the 676 surveys sent were returned as either undeliverable, no longer at the address or for an unstated reason;
- 67 (10%) surveys were completed and returned anonymously, as a result they could not be identified against someone on the mailing list and therefore couldn't be identified as a participant in PMP, a farmer or grazier amongst the random group chosen using Yellow Pages;
- 13 (8% from the Farmer list) and 19 (11% from the Grazier list) surveys could be identified as coming from firstly Farmers and then Graziers chosen using Yellow Pages; and
- 32 (9%) surveys were returned from people as being identifiable on the PMP list.

<sup>5</sup> <http://www.surveysystem.com/sscalc.htm>



## RESULTS

### Demographics

The age and gender of respondents are as follows.

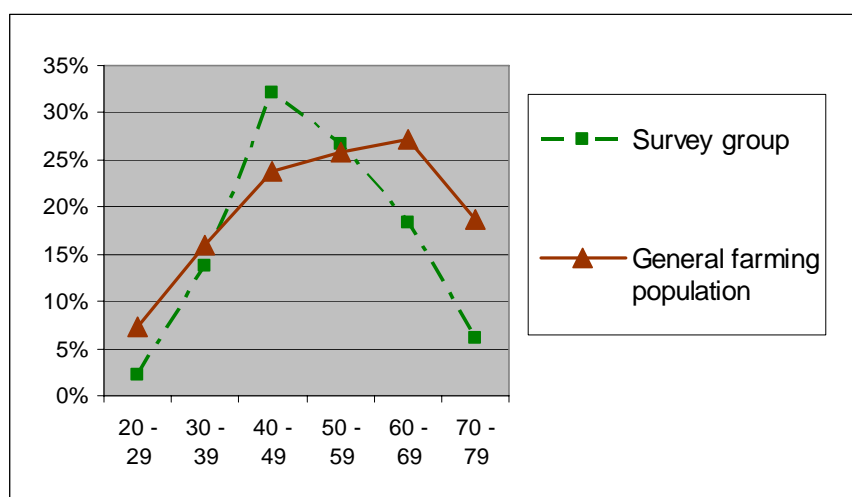
**Table 3 Gender of respondents and their age at time PMP finished**

Gender	n	%	Age Distribution	N of survey	% of survey	Age group as % of general farming population
Male	106	81%	20 - 29	3	2%	7%
Female	23	18%	30 - 39	18	14%	16%
			40 - 49	42	32%	24%
			50 - 59	35	27%	26%
			60 - 69	24	18%	27%
			70 - 79	8	6%	19%
Unstated	2	2%	Unstated	1	1%	
<b>Total</b>	<b>131</b>		<b>Total</b>	<b>131</b>		

Gender is skewed heavily to males as respondents as shown by the data above.

In essence gender differences identified as part of the survey will not be as significant given the small number of females involved in the survey. Differences will indicate areas of interest, they won't substantiate them.

**Figure 1 Age distribution of respondents as a percentage of the sample size at time PMP finished compared to age as a percentage of total general farming population**



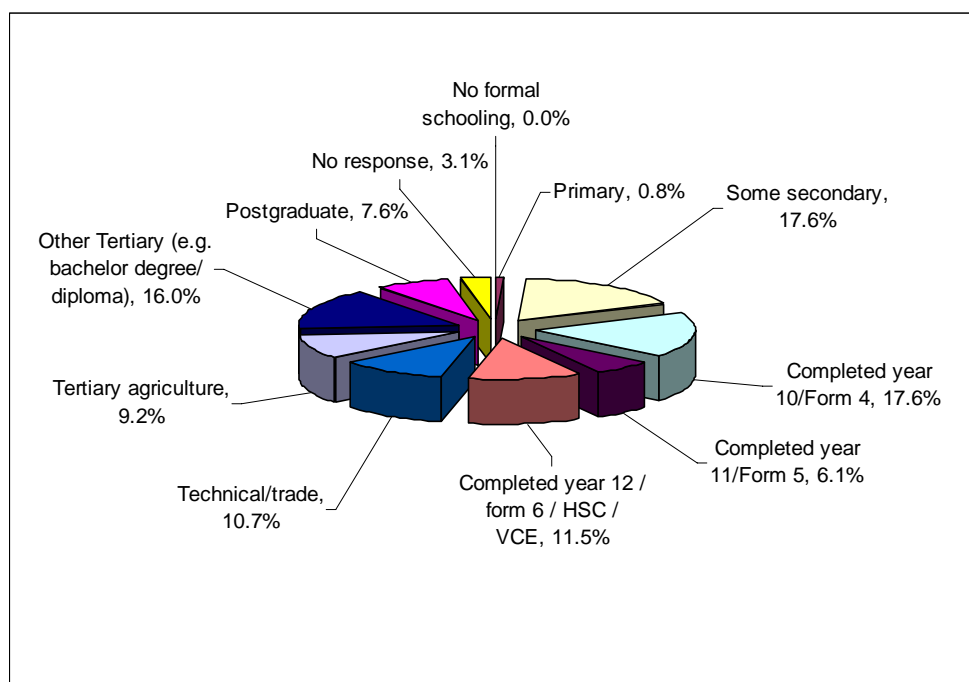
The ages of the respondents at the time of PMP expressed as a percentage of the respondents were lower than the general farming population by an average age of 2.6 years; this is approximately a 4% younger group. Observation of the above graph shows the age distribution of the sample



surveyed is to the left whilst the graph of the general farming population is to the right.

Given the skews illustrated by the above graph it can be deduced that younger groups of producers are more responsive to initiatives such as PMP (or this survey) than the norm. Capacity to target activities based on age segmentation may therefore enhance DPI penetration of the market.

**Figure 2 Highest level of education of respondents**



**Table 4 Education level of respondents by groups**

Stage	n	%
Year 10 or below	47	36%
Year 12 or trade	37	28%
Tertiary	43	33%
Skipped*	4	3%
Total	131	

\* Skipped means skipped the question

The responses regarding educational achievements were grouped into those completing education up to: the School Certificate (year 10 / form 4) level; the Higher School Certificate (year 12 / form 6) or trade training; and those competing tertiary education.

As can be seen from the above table, respondents were evenly distributed between the three groups.

The figure for completion of School Certificate or below at 36% is double the figure for those in the general population of NSW who choose to leave education at year 10, a figure of 18%, as recorded by the Board of School



Studies (p13, 2011). The figure for tertiary qualifications amongst respondents at 33% is more than the national average of 14%<sup>6</sup>.

The curve for educational involvement amongst the survey respondents is therefore flatter than the general population.

When comparing the educational achievement of the respondents against the educational achievement of the general population training such as PMP strongly attracted those with less formal education (year 10 finish and below) as well as those with higher achievements (tertiary). It may be inferred the former group's pursuit of training was triggered by need whilst the latter group's interest was triggered through interest in education per se. Messages promoting training may well benefit from promoting the acquisition or continued development of skills.

**Table 5 Respondents definition of themselves as a landowner/manager**

Definition	n	%
Full-time farmer	84	64%
Part-time farmer	20	15%
Semi-retired farmer	8	6%
Retired farmer	9	7%
Lifestyle	3	2%
Other	7	5%
Skipped	0	0%
Total	131	100%

79% of respondents identified themselves as being either full or part time farmers at the time of the survey. Only 7% defined themselves as landowners outside the descriptor "Farmer".

Given the low level of response from landowners outside the traditional descriptor of "Farmer" conclusions drawn against these criteria are indicative only. The "Farmer" group, however, remains the traditional market for training provided by DPI. It also indicates little may be gained in focusing training at lifestyles.

<sup>6</sup> 4224.0 - Education and Training in Australia , 1998  
<http://www.abs.gov.au/ausstats/abs@.nsf/0/383EE3532581477BCA2568A9001393D2?OpenDocument>



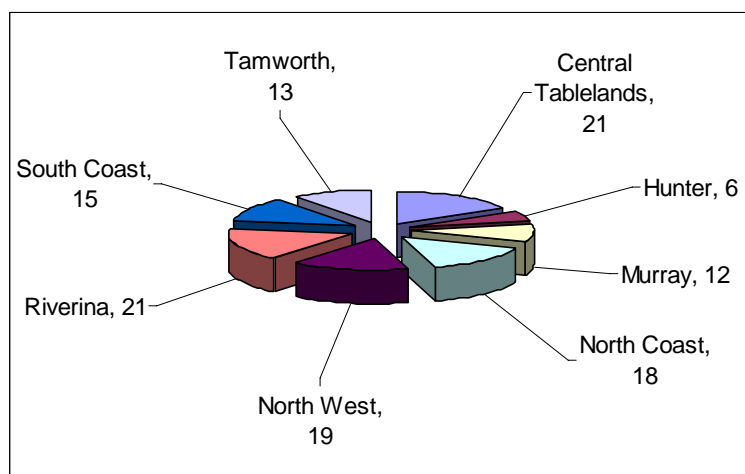
**Table 6 Number of properties having number of employees**

# of Employees	FT	PT
0	14	13
1	38	41
2	19	18
3	3	2
4	2	2
5	0	3
6	0	1
	76	80

The above tables show that most respondents had family farms with few employees. As such they can be regarded as being small businesses in the lower end of the SME sector. This fits to the general intent of the PMP program.

Limited corporate involvement in FFF can be identified from this sample.

**Figure 3 Regions of respondents**



Respondents came from a reasonable cross section of NSW. Views expressed are therefore reasonably representative of the views across the state.



## Comparing PMP to ‘Other’ programs

The numbers involved in the PMP and Other programs were as follows.

**Table 7 Numbers in PMP and ‘Other’ programs**

	PMP		‘Other’	
<b>Yes</b>	40	31%	31	24%
<b>No</b>	91	69%	96	73%
<b>Skipped</b>			4	3%
<b>Total</b>	131		131	

**Table 8 Gender split between PMP/‘Other’/those doing both programs and those not recording any training**

Program	Gender	n	%	%
<b>PMP alone</b>	Male	24	18%	
	Female	1	1%	19%
<b>Both</b>	Male	10	8%	
	Female	4	3%	
	Unstated	1	1%	11%
<b>‘Other’ alone</b>	Male	10	8%	
	Female	6	5%	12%
<b>None</b>	Male	62	47%	
	Female	12	9%	
	Unstated	1	1%	57%

A total of 56 respondents completed training, while 75 did not record any training. As can be seen from the above split, an equal number completed both PMP and ‘Other’ training as those who only completed ‘Other’ training alone. Female respondents were less likely to complete PMP alone but were more likely to do ‘Other’ training or both PMP and ‘Other’ training.

## Comparing contribution to achieving outcomes

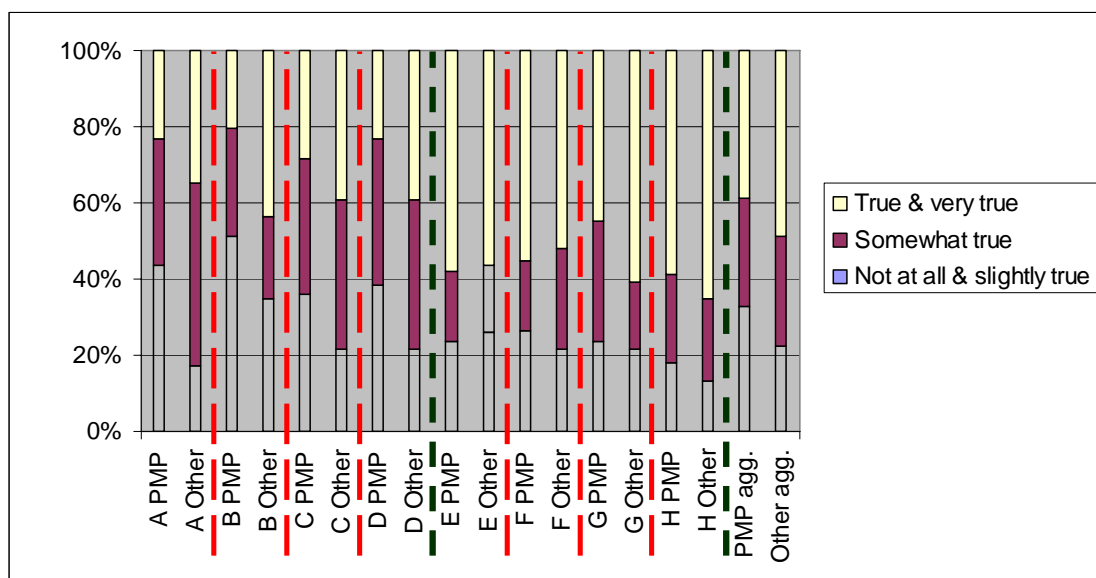
Questions 8 and 15 “Did PMP/‘Other’ program contribute to you achieving the following outcomes?” produced the results in Figure 4 below. In that figure outcomes were grouped into financial/business outcomes and physical outcomes.

There was approximately a 26% increase in True and Very true responses to improvement in outcomes in “Other programs” when compared to PMP. Similarly there was a reduction of 32% in Not at all and Slightly true responses. Given passage of time, this skew may not be as significant as indicated by the figures. The differences though cannot be ignored.

Amongst those who undertook both PMP and ‘Other’ training there was an 18% improvement in True and Very true with a 71% reduction in Not at all and Slightly true responses when comparing ‘Other’ training against PMP.



**Figure 4 Improvements in outcomes achieved - PMP beside 'Other' programs**



A	Greater personal resilience	Financial/Business outcomes
B	Reduced dependency on support	
C	Improved financial independence	
D	Improved profitability	
E	Reduced damage to resources	Physical outcomes
F	Improved natural resources	
G	Improved farm productivity	
H	Improved state of the farm	

It is notable that more was achieved in relation to physical outcomes (E, F, G and H above) than in relation to the financial/business outcomes (A, B, C and D above). Given the dominance of males in the sample areas of training which include concrete learning in areas that naturally fit male preferences were preferred. Training packages need to adopt such pedagogy that acknowledges these preferences; Bernice McCarthy's 4MAT leaning (1987, 1996) provides a model to achieve this.

### Comparing contribution to improving management practices

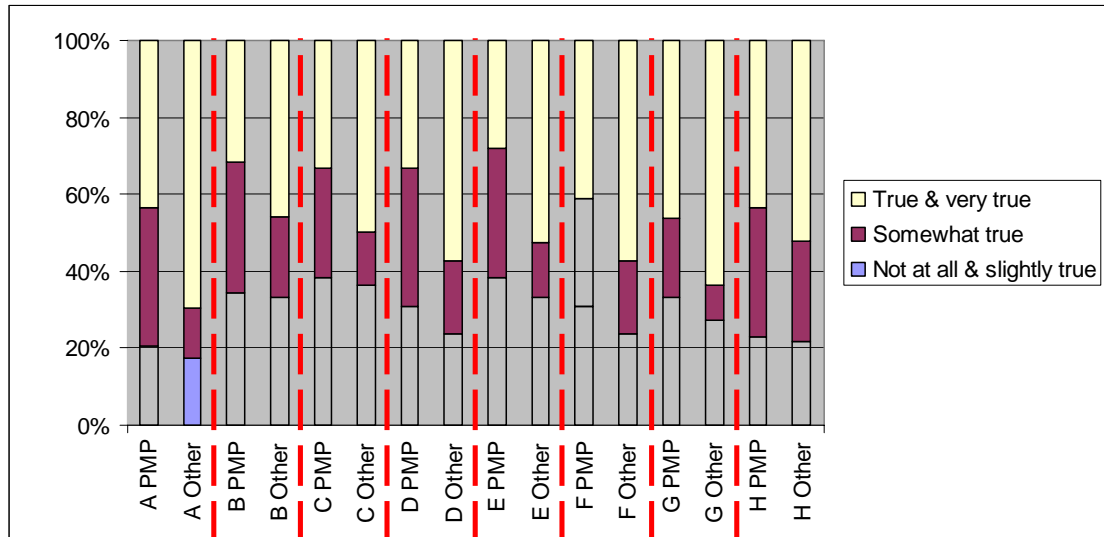
Improvements in management practices (see Figure 5 below) had a greater degree of variation between the named areas than improvements in outcomes (as shown in Figure 4 above). In general, 'Other' programs achieved a better level of change with an improvement by 21% in numbers reporting True and Very True, a reduction of 45% amongst those reporting Not at all true and Slightly true and a 71% reduction in those reporting Somewhat true relative to PMP.

However, these figures should be interpreted cautiously as there was a significant number of people who answered they had completed 'Other' training yet gave no assessment of that training. Approximately 33% of



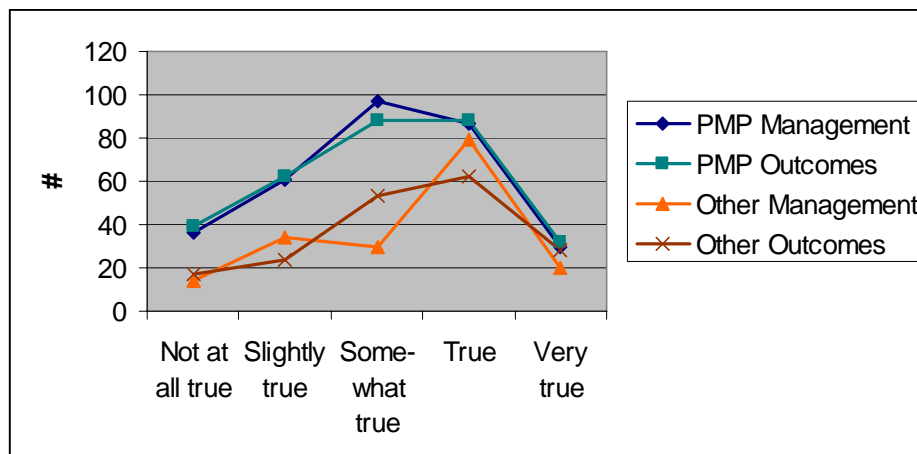
respondents who reported undertaking 'Other' training did not assess that training.

**Figure 5 Improvements to management practices achieved - PMP beside 'Other' programs**



A	Improved planning that adapts to conditions as they arise
B	Maintained accurate & up to date financial records
C	Understood financial figures and how to use them to improve planning
D	Recognised & used the skills of family/partnership members
E	Improved working relationships in the business
F	Improved networks to assist the producer in the future
G	Utilised advisors when required
H	Developed strategies to deal with adversity before the event

**Figure 6 Aggregate assessment of improvements against named Outcomes and named Management practices for PMP and 'Other' training**

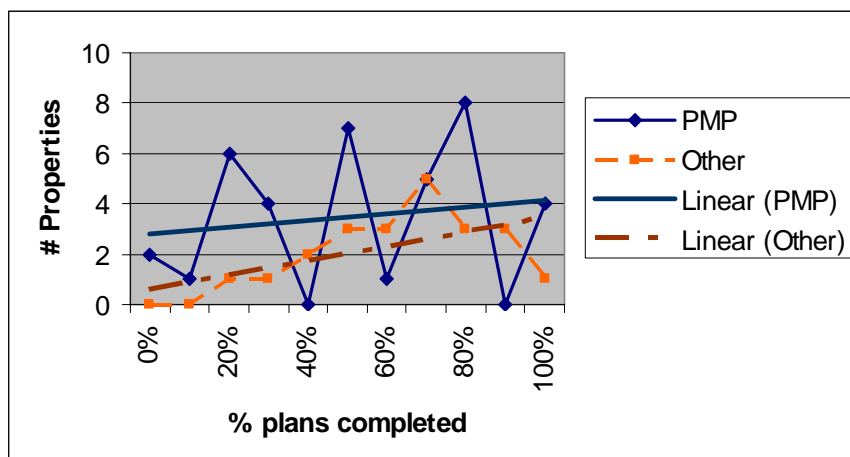




As can be seen from the above graph, assessments of the PMP program have a fairly symmetrical distribution.

The distribution for 'Other' training has a stronger skew to the left with the majority of rankings falling in the true segment.

**Figure 7 Number farms completing what % of plans**



Completion of plans developed as a result of training show a positive trend towards completion of all plans according to the trend lines above, although the median score for PMP was 49% and 62% for 'Other'. This is positive in terms of achievements in terms of plans carried out for both groups.

Again, however, 'Other' training achieved more in terms of plans completed.

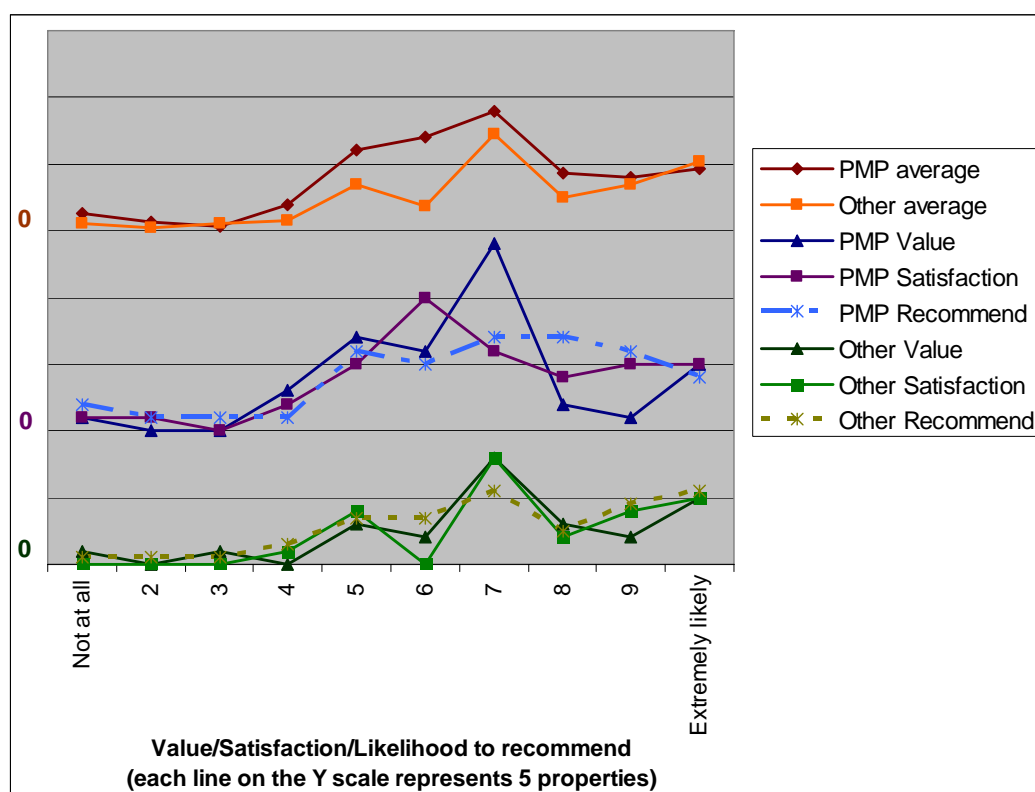
Figure 8, below, shows the shape of the value, satisfaction and likelihood to recommend curves for PMP and 'Other' programs. The curves have been put into three groups.

- The first pair of curves at the top of the figure (in dark red and orange) shows the average for value, satisfaction and likelihood to recommend for PMP and 'Other' side by side.
- The second trio of curves in the middle of the figure (blues and purple) shows the value, satisfaction and likelihood to recommend lines for PMP.
- The third trio of curves in the bottom of the figure (greens) shows the value, satisfaction and likelihood to recommend for 'Other' programs.

The shape of the curves is the focus of the graph. Note the similarities in shape of the curves between the three groups.



**Figure 8 Shape of the value/satisfaction/likelihood to recommend curves for PMP program and 'Other' programs**



In the table the values for PMP were perched so as to separate the PMP grouping from the 'Other' training grouping in order to clearly see the pattern of distribution for PMP and 'Other' for these three assessments. When interpreting the graph note that the origin (zero) occurs three times on the vertical axis which represents the number of properties who gave a specific response about the value of training, satisfaction and likelihood of recommending that training.

It is notable that the assessment provided by respondents in each of the three areas of value, satisfaction and likelihood to recommend were tightly aligned with each other.

The pattern of the curve is of greater interest than the values on the Y axis. The average scores across the three areas are drawn at the top of graph. The curve for PMP and 'Other' are closely aligned, however it is apparent that PMP generated a higher range of mid range rankings (5-7) and a lower proportion of higher rankings (9-10) as a proportion of total rankings.

Whilst specific evaluations for outcomes and changes in management practices favoured 'Other' training over PMP, the general evaluation of the programs shows little difference between the two. It is questionable whether any inferences can be drawn as the relative value of PMP to 'Other' training.

It is also notable the graphs show a skew to the left showing respondents viewed training favourably.

The following table explains those factors significant to the programs.



**Table 9 factors significant in relation to programs**

		Age		Education		Farmer type		Gender		University	
		PMP	Other	PMP	Other	PMP	Other	PMP	Other	PMP	Other
<b>Participate</b>		0.924	0.653	0.942	0.006***	0.018**	0.053*	0.332	0.014**	0.728	0***
<b>Did the program contribute to you achieving the following outcomes?</b>	Greater personal resilience	0.842	0.386	0.622	0.473	0.987	0.705	0.139	0.284	0.493	0.915
	Reduced dependency on support	0.184	0.64	0.691	0.333	0.129	0.653	0.585	0.091*	0.818	0.667
	Improved financial independence	0.742	0.681	0.605	0.216	0.706	0.063*	0.494	0.006***	0.415	0.791
	Improved profitability	0.421	0.019**	0.149	0.2	0.817	0.084*	0.287	0.077*	0.245	0.455
	Reduced damage to resources	0.98	0.824	0.204	0.399	0.945	0.523	0.419	0.115	0.429	0.902
	Improved natural resources	0.72	0.789	0.321	0.265	0.698	0.672	0.255	0.092*	0.37	0.988
	Improved farm productivity	0.93	0.02**	0.51	0.09*	0.97	0.074*	0.128	0.016**	0.331	0.622
	Improved state of the farm	0.957	0.629	0.404	0.147	0.886	0.156	0.488	0.013**	0.447	0.839
<b>Did the program contribute to you improving your management practices?</b>	Improved planning that adapts to conditions as they arise	0.428	0.989	0.565	0.029**	0.57	0.251	0.596	0.46	0.48	0.458
	Maintained accurate & up to date financial records	0.728	0.568	0.509	0.058*	0.307	0.211	0.552	0.191	0.202	0.569
	Understood financial figures and how to use them to improve planning	0.993	0.267	0.624	0.433	0.307	0.412	0.291	0.318	0.578	0.988
	Recognised & used the skills of family/partnership members	0.826	0.258	0.046**	0.041**	0.428	0.071*	0.336	0.095*	0.702	0.687
	Improved working relationships in the business	0.693	0.369	0.059*	0.014**	0.294	0.27	0.364	0.038**	0.125	0.729
	Improved networks to assist the producer in the future	0.948	0.676	0.03**	0.198	0.217	0.587	0.09*	0.955	0.365	0.456
	Utilised advisors when required	0.585	0.945	0.025**	0.147	0.452	0.399	0.109	0.602	0.468	0.602
	Developed strategies to deal with adversity before the event	0.706	0.773	0.515	0.141	0.878	0.383	0.789	0.279	0.697	0.708
<b>What percentage of your plans were carried out?</b>	0.551	0.546	0.626	0.517	0.317	0.701	0.406	0.545	0.617	0.614	
<b>How valuable to you was your participation in that program?</b>	0.651	0.659	0.476	0.099*	0.678	0.221	0.214	0.543	0.524	0.982	
<b>How satisfied were you with this program?</b>	0.981	0.765	0.53	0.221	0.486	0.103	0.196	0.194	0.797	0.388	
<b>How likely would it be you'd recommend [the program] to another?</b>	0.906	0.805	0.388	0.563	0.435	0.185	0.294	0.908	0.235	0.925	

0.01\* One star represents significant at the 10% level (less than or equal to 0.1)  
 0.05\*\* Two stars represents significant at the 5% level (<= 0.05)  
 0.01\*\*\* Three stars represents significant at the 1% level (i.e. <= 0.01)



Table 9 above indicates a series of significant relations for programs; 22 significant relationships existed for 'Other' programs with 7 for PMP (7).

The majority of significant relationships for 'Other' programs occur in Education, Farmer type and Gender; fewer exist against Age and University. In terms of promoting 'Other' programs these provide a potential source of information useful for planning and promoting programs.

- With education those whose previous formal education extended to year 10 or below can be seen as having pursued training for skills acquisition whilst those with tertiary training were accustomed to continuing education.
- Gender proved significant to those who completed 'Other' programs alone; females were a small minority amongst those who completed PMP or PMP and 'Other' combined (4% of those groups).
- Professional farmers as opposed to life style or retirement groups were most interested in the training

Fewer significant relationships existed for the PMP program; principally they occurred in relation to Education. Single significant relationships also occurred in relation to Farmer type, Gender and University. Educational background therefore may provide useful information for designing and promoting PMP style courses.

- As with 'Other' significance against education with those whose previous formal education extended to year 10 or below being seen as having pursued training for skills acquisition whilst those with tertiary training were accustomed to continuing education.
- Professional farmers were again significant in relation to PMP training.
- Whilst gender gave a significant result in the test the low numbers of females involved (4%) suggest this is not as significant as the result suggested.

These figures suggest the following are significant to the design and promotion of courses:

- Past educational achievements with those who completed year 10 or below being more interested in skills acquisition as a new initiative;
- Past educational achievement in terms of those with tertiary education being accustomed to ongoing training; and
- Professional farmers being the better target audience for training.

Using significance results from the 1%, 5% or 10% level could be debated. One argument is that the above table of results from One-Way ANOVA testing need to be viewed at the 1% level given a survey size of 131 and cross checking results to chi square tests. Given the survey size provided a representative sample of the target population it is defensible to use the 10% level.

*As a strategy and as discussed above segmentation of the market on the basis of educational achievements of the target audience needs to be considered as a driver of involvement in programs.*

*Similarly, being professional farmers as opposed to life style or retired provide a better tool for segmentation of the market and promotional activities.*



## FUTURE CONCERNS AND INTERESTS IN TRAINING

### Future Concerns

Those surveyed were asked to identify which issues would be of concern to them in their future operations.

### Future Environmental Issues

The majority of respondents continued training post PMP/‘Other’ training although only 43% of the respondents had completed training to begin with. The figures for participation in non-formal (that is not leading to an award) compares favourably to those recorded in ABS figures data on social trends in Australia (ABS 2008) as below.

Respondents were split three ways in relation to further training. Only 33% of respondents would like to pursue further training with a larger group stating they did not want any. It was significant that a similar sized group see training as no longer relevant given age and/or retirement. For planning purposes of those for whom training may be relevant half want training and a half do not.

Table 11 (below) show policies and government actions are seen as being the dominant concern into the future. Amongst those who selected the other option some 57% specified government policies and requirements as being the major concern (the items listed under other are in Appendix C). This group also selected specific responses such as “Policies such as the Carbon Tax potentially impacting the business”.

83% of responses believed government policies and/or actions favouring the environment would be the major environmental concerns of the future. Whilst this is a significant figure 71% chose at least one of the major environmental issues affecting agriculture; those being frequency of dry periods, access to water and climate variability. Only 14% chose all three whilst 20% chose a combination of two of the options.

More respondents chose government policies and actions favouring the environment over environmental events which producers could experience as being future concerns. Discussion with producers and DPI staff subsequent to the survey suggests the skew to seeing government policy as being producers’ major area of concern is heavier than that found during the survey – this, though, is purely anecdotal as no hard data was collected on this.



**Table 10 Future Environmental Issues and Production Challenges in descending order (respondents could select any combination of choices)**

Environmental issues	n	%	Production challenges	n	%
Policies e.g. Carbon Tax	100	78%	Capital requirements increasing faster than income	104	79%
Actions favouring the environment	78	61%	Reduced access to labour	68	52%
Climate variability	67	52%	Decreasing use of high cost inputs	68	52%
More frequent dry	52	41%	Other (please specify)	35	27%
Other	46	36%	Reduced access to businesses supplying my inputs	16	12%
Access to water	36	28%	Reduced choices of varieties/breeds to use	15	11%
Decreased opportunities to trade	35	27%			
Skipped	3	2%	Skipped	4	3%
No. respondents	131		No. respondents	131	

78% of respondents seeing government policies as being the major concern is diminishing attention paid to dealing with climate and other events as they unfold. This will have a negative impact on producers' preparation for and prevention of adverse environmental events. When policy becomes the focus of attention rather than the issue being dealt with then the policy becomes less effective as a tool to drive behavioural change. The social processes driving change are well recorded by Hogan et al (2011), Parnnell and Vanclay (2011) and Vanclay (2004, 2012).

Kaliber (2012a p18, 2012b p25) results showed government policies to be a significant factor, but not to the extent of this research.

### Future Production Issues

As can be seen from the above table respondents believe that the significant issue for production is capital requirements increasing faster than income. Returns to capital remain problematical in agriculture; for example returns to capital for broad acre farming in the 2002 to 2009 inclusive years averaged 0.55% with maximum of 1.3% and minimum of -0.8% (ABS A, 2012). These rates of return are symptomatic for agriculture in general.

Reduced access to labour and decreasing use of high cost inputs are equally weighted at 52% each. Of those who selected the 'other' option 51% listed economic factors (significantly cost structures), 37% listed political factors (again government policies were significant), whilst 17% mentioned production issues (weeds, water, weather etc.)

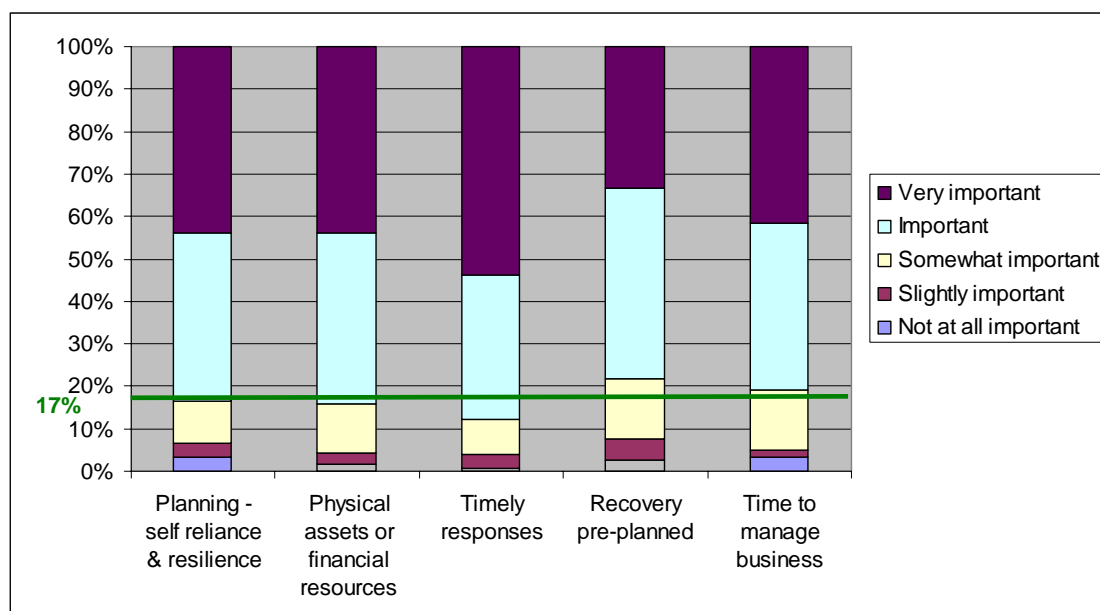


The major issues respondents identified with against both environmental and production areas were impact of government policies and regulations and economic drivers associated with cost structures and returns to capital. The dominance of policy and regulation as being the issue of concern rather than field practices is of concern.

## Prevention and Preparation

As shown in Figure 9 (below) some 83% of producers regarded all the nominated activities as being Important or Very Important in dealing with adverse events. All areas are therefore potential areas in which support could be provided. No area stands out; although pre-planned recovery received a slightly lower ranking to the others.

**Figure 9 Importance of management activities in dealing with adverse events**



## Training

The majority of respondents continued training post PMP/‘Other’ training although only 43% of the respondents had completed training to begin with. The figures for participation in non-formal (that is not leading to an award) compares favourably to those recorded in ABS figures data on social trends in Australia (ABS 2008) as below.

Respondents were split three ways in relation to further training. Only 33% of respondents would like to pursue further training with a larger group stating they did not want any. It was significant that a similar sized group see training as no longer relevant given age and/or retirement. For planning purposes of those for whom training may be relevant half want training and a half do not.



**Table 11 Continuation of development of skills post training and desire for further training**

Continued training	n	%	Like further training	n	%
Yes	86	68%	Yes	41	33%
No	14	11%	No	46	37%
Not applicable	13	10%	Not sure	39	31%
Other (please specify)	14	11%	Skipped question	5	5
skipped question	4				
No. respondents	131			131	

**Table 12 Comparing participation rates in learning from ABS Social Trends (ABS 2008) data to respondents' participation rates**

Age	Participation in non formal and informal learning			Did not participate in learning	
	ABS - Non-Formal learning	ABS - Non-Formal and informal learning	Survey - non-formal learning	ABS	Survey
25-29	31%	59%	<b>50%</b>	16%	<b>50%</b>
30-34	34%	66%	<b>75%</b>	18%	<b>25%</b>
35-39	33%	69%	<b>40%</b>	18%	<b>60%</b>
40-44	32%	69%	<b>50%</b>	21%	<b>50%</b>
45-49	32%	70%	<b>71%</b>	19%	<b>29%</b>
50-54	32%	70%	<b>50%</b>	22%	<b>50%</b>
55-59	27%	71%	<b>53%</b>	24%	<b>47%</b>
60-64	19%	63%	<b>54%</b>	34%	<b>46%</b>

Participation rates amongst respondents in non-formal education compares favourably against national statistics. However, when non-formal and informal learning is combined the difference in participation rate is not as favourable with less learning in the sample when compared to the population.

The table indicates an average doubling of non-participation rate amongst targets for PMP style training as compared to the population.



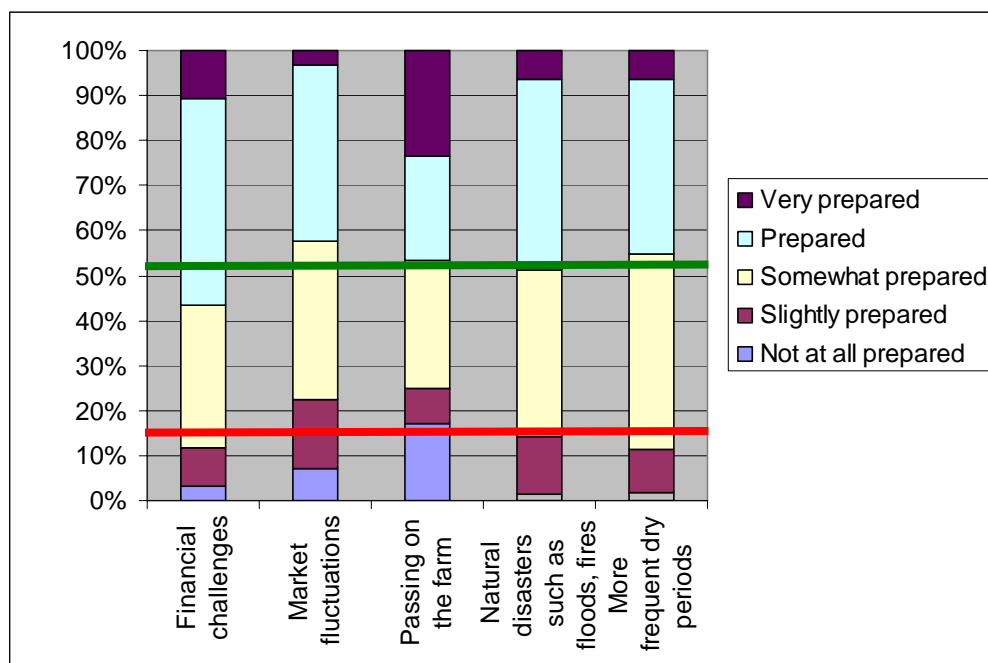


The group that did not participate in training as per the above table are of more interest to this research. Their reasons for not participating provide insight into how to design and deliver training. Comments given in open ended questions suggest reasons include: age and imminent retirement of respondent make training irrelevant; training is not fully relevant to the needs of the producer; credibility of presenters is questioned; and that the volume of training on offer inhibits involvement.

### Preparation for Adversity

Figure 10 (below) shows 48% (on average) of respondents are prepared or better for the identified adverse events, while approximately 83% are somewhat prepared or better. Having 83% of respondents believe they have prepared for adversity is significant.

**Figure 10 Graph of degree of preparedness for adverse events**



The style of training delivered must consider the high level of preparation for adversity reported by respondents. The style of training needs to be designed as being principally refresher work rather than training for novices. What would suit a novice is very different to what would suit a refresher course.

Training can provide self check tools to assess objectively what level of preparation is in place with such a tool being based on producers' experience before and after an event. Benchmarking against other producers provides concrete criteria of greater value to producers than purely theoretical ones.

### Likelihood of being involved in future training

Table 13 shows in terms of interest in future training only 34% are interested or definitely interested in being involved in future training while 55% are

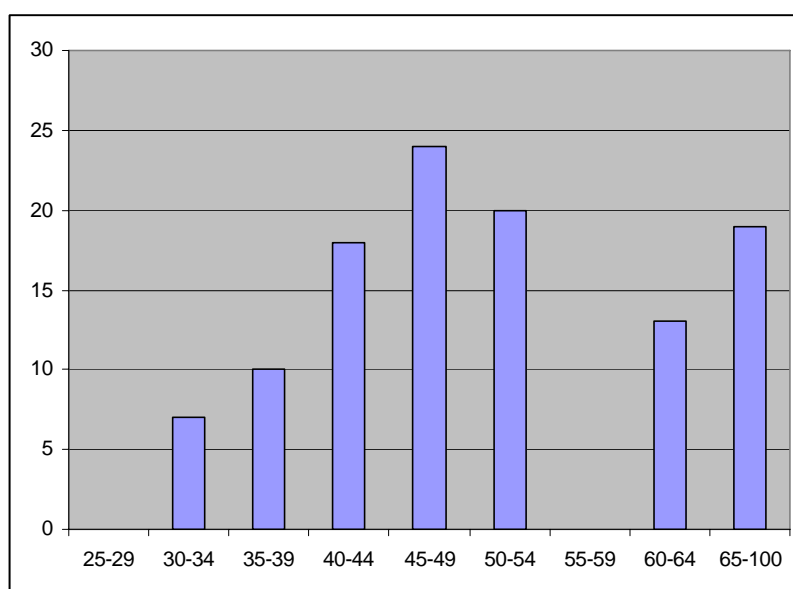


somewhat interested or better. The first figure represents a decline in interest in training that reflects the current age of respondents; see Figure 11 (below). A total of 24% of respondents are now above 60 years of age.

**Table 13 Interest in being involved in future training**

Interest in future training	n	%	Grouped %
Not interested	34	26%	
Slightly interested	19	15%	40%
Somewhat interested	27	21%	21%
Interested	33	25%	
Definitely participate	12	9%	34%
Skipped question	6	5%	
Total	131		

**Figure 11 Current age of respondents**



The reasons given for not being involved in training are given below and in Appendix E (p. 67).

**Table 14 Reasons for not being involved in training**

Answer Options	n	%
Skipped question	44	34%
Other (please specify)	35	27%
Won't have the time or resources	18	14%
Not needed	17	13%
Can't find suitable course/training	13	10%
Too much - tired of it	12	9%
Not found to be of value in the past	9	7%
They aren't of value	3	2%
	131	



The 34% of respondents who skipped this question relates to those who expressed no interest in training. Amongst those selecting 'other' comments reasons expressed included: age of respondent, relevance of further training given retirement or value of training to farming, or credibility of courses/presenters.

The number expressing an interest in future training represents a significant market for DPI training in these areas. Of concern though is the saturation of the market with training from Profarm, TAFE and private providers alongside mandatory training in areas such as ChemCert.

The lack of interest in training reflects respondents' relative disinterest in what is being presented; other unstated things are of higher priority. Clients do not see value in what is being presented and/or the presenters lacks credibility in the clients' eyes. These are critical elements for attracting and retaining an audience.

Design and delivery of courses therefore need to recognise the area as being a mature market and tailor products accordingly.

### Preparing for adversity

Figure 12 (below) shows what respondents believe to be the most important factors to consider when preparing for adversity. They are ranked in descending order from left to right by combining very important with important.

The first seven factors from the left are seen by respondents as being the most important in preparing for adversity. These can be described as developing the capability to identify and assess options for dealing with adverse events.



**Figure 12 Factors important to preparing for adversity (ranked by important and very important combined)**

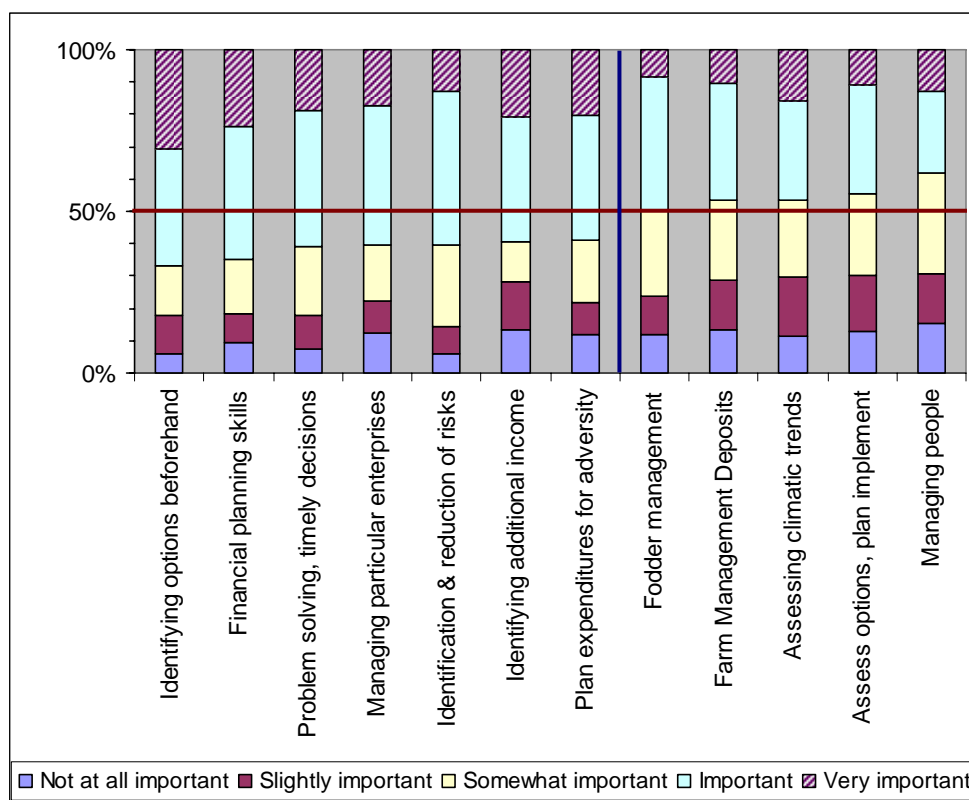


Table 15 below shows which factors are most important by listing the percentage of respondents who indicated an issue was important or very important.

**Table 15 Ranked list of training seen as desirable in preparation for adversity**

Rank	Training	% Important & Very Important
1	Identifying options beforehand	67%
2	Financial planning skills	65%
3	Problem solving, timely decisions	61%
4	Managing particular enterprises	61%
5	Identification & reduction of risks	60%
6	Identifying additional income	59%
7	Plan expenditures for adversity	59%
8	Fodder management	50%
9	Farm Management Deposits	47%
10	Assessing climatic trends	46%
11	Assess options, plan implement	45%
12	Managing people	38%

However, there appears some contradictions in the ranking of what is significant. The first ranked option is “Identifying options beforehand” with 67% thinking it was important or very important, whilst eleventh is “Assess options, plan implement” with 45% thinking it was important or very important.



The top three choices deal with finding a future course of action and assessing its financial implications. The difference, though, across the top 7 is minimal being 8%; training in all 7 areas is therefore supported if such training were to be provided.

The capacity to identify options and assess financial implications is therefore of most interest to producers.

Management of people was regarded as being the least significant factor in preparing for adversity. This is in marked contrast with Vanclay's social principles for agricultural extension (Vanclay, 2004) which stress management of people as opposed to solely providing technical solutions.

Of those mentioning specific enterprises to train in; 10 mentioned cattle, 10 sheep enterprises, five cropping being wheat, canola and barley, one pigs and one dairy. One respondent did not believe DPI should be involved in training for enterprises.

## PROVISION OF TRAINING

The next question was asked about who should provide training, see Table 16 below.

Those who selected 'other' predominantly chose a combination of all four listed providers. Those choices were added to the score for each provider to generate the column '% after distribution of other'.

The above table illustrates strong support for continued involvement of NSW DPI in the provision of training to producers, with 53% selecting DPI either on its own or in combination with another provider.

**Table 16 Who should provide training**

Provider	n	%	% after distribution of Other
NSW DPI	44	34%	53%
Other (please specify)	37	28%	
Private providers	17	13%	27%
TAFE	13	10%	19%
Consultants	8	6%	16%
Skipped question	12	9%	
Total	131		

There is clear support for maintaining a range of providers of training. DPI was supported by twice the number of respondents as the next highest provider. DPI is clearly seen as continuing with a role in training. Credibility and applicability of courses plays a critical role; pull strategies need to be developed to address this.



## Length and timing of courses

Respondents were asked about when they would like training to occur and for how long. Table 17 shows significant support for training to occur during weekdays. One in five, though, supports weekend training.

There is strong support for full day training although half day training remains significant at 39%.

For half day training there is an even split as to what time of day it should occur: morning, middle of the day or evenings.

**Table 17 Timing of delivery of training**

Timings	n	%
Full day	61	61%
Half Day	39	39%
Weekends	13	21%
Weekdays	49	79%
Mornings	25	38%
Middle of day	17	26%
Evenings	24	36%
skipped question	23	18%

The majority of respondents support full day training to occur during the week. There is a significant proportion who favours half day training with timing of training during the day being evenly split.



## DISCUSSION

Specific conclusions were made in each section based on the evidence presented. The following discussion is based on those comments.

### Behavioural drivers

In terms of prevention and preparation for adverse events, 78% of respondents saw government policies and regulations as being their major concern (Table 10 Future Environmental Issues and Production Challenges in descending order (respondents could select any combination of choices)). This focus on policy and regulation is diminishing attention paid to dealing with events as they unfold.

Policy as an impediment to desired outcomes is recognised in literature. Amongst that literature Kadushin and Buckman (1978) recognised how policy can be an impediment in social work; this directly parallels work with communities to prepare for adversity. Oleary stated “It [lack of knowledge and communication] illustrated the way public policy gets in the way of good patient care” (2006, p4). Productivity Commission and COAG’s work on reducing regulatory impact on operations is recognition of the negative impact policy has on society; regulations are the artefacts of policy.

Time and effort spent on dealing with government policies is time no longer available for other activities. The Productivity Commission (2007) argues as to the level to which time and effort is diverted to dealing with regulatory requirements. An inherent issue for government across all areas is “the difficulty in assessing (and quantifying) the costs and likely future benefits of government policies in this area [research]” (Hogan and Morris 2010, p14).

This will have a negative impact on producers’ preparation for and prevention for adverse events. When policy becomes the focus of attention rather than the underlying issue being dealt with, policy becomes less effective as a tool to drive behavioural change and can therefore become counter-productive.

Economic drivers associated with cost structures and returns to capital are the second major area of concern to respondents. These can be taken as an area of ongoing concern historically that will remain. Oligopsonistic<sup>7</sup>, if not duopsonistic<sup>8</sup> market conditions (the dominance of Woolworths and Coles) will continue pressures in this area. Kaliber’s (2012a p18-19, 2012b p25-26) comes to similar conclusions regarding cost structures and returns.

Vanclay (2004) listed 27 principles which impact on successful extension efforts (p70). Carruthers and Vanclay (2012) further describe the social process of bringing about change in Agriculture. Policy and regulatory tools are not included in lists such as these; they can be taken as being the antithesis of that which brings about change.

In similar manner Burns describes Hogan, Berry and Ng’s research (2011) as “The report highlights the need for policy makers to understand the

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<sup>7</sup> This is the market condition that exists when there are few buyers and many sellers, as a result they can greatly influence price and other market factors.

<sup>8</sup> This is the market condition that exists when there are only two buyers; in Australia Woolworths and Coles dominance of 80% of the supermarket sector can be described as being duopsonistic in character.



dynamics of farm decision making” (Hogan et al 2011, piii). Such dynamics are social process; what is logical against one set of assumptions is entirely illogical against another. Taking one set of assumptions contrary to those held by those subject to the outcomes will lead to conflict.

Taking Vanclay and Hogan et al as representing how decisions are made by producers means understanding the social processes and producers’ thinking rather than relying on policies and regulations becomes crucial. Wisdom is understanding how the world works and operating in that knowledge rather than ignore or oppose it.

## Interest in training

34% of respondents stated a definite interest in future training, while 21% showed some interest. The latter group’s eventual involvement with training will be determined by relevance and credibility of training provided.

This represents a significant market for DPI training in the areas dealt with by this survey. Of concern though the level of maturity in the market, such a market being one “whose growth has stopped and which is functioning without change or innovation.”<sup>9</sup> Such markets by definition face saturation; in the case of training in NSW suppliers include DPI’s Profarm, TAFE and private providers delivering voluntary courses alongside mandatory training, in areas such as ChemCert, required by legislation and regulation.

The market for Agricultural courses is thin; Education, Employment and Workplace Relations References Committee (2012) discuss the impediment to training developed through thin markets. Such markets are characterised by problems of dispersal of trainers, students and associated problems of provision. Discussions with district staff reported a number of producers expressed fatigue with training that was created by the amount on offer and the amount that is mandatory. Those staff repeated cynicism is expressed about training that it is seen as being merely ticking a box and required to be repeated to satisfy regulatory requirements alone. Pocock et al (2011) undertook research into VET training amongst lower paid and drew conclusions regarding the need for explicit value to be seen in training provided.

Some 40% of respondents were not interested in future training. The lack of interest in training was reflected in respondents’ comments; other unstated things can be taken as being of higher priority. Comments received expressed views that courses being presented either lacks value to respondents or the presenters lack credibility. Such sentiments conform to Pocock’s findings. These are critical elements for attracting and retaining an audience.

The group that did not participate in training as per Table 13 (Comparing participation rates in learning from ABS Social Trends data to respondents’ participation rates) are of greatest interest to this research. Their reasons for not participating provide insight into the how to design and deliver training. Comments given in open ended questions suggest reasons include: age and imminent retirement of respondent make training irrelevant; training is not fully relevant to the needs of the producer; credibility of presenters is

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<sup>9</sup> <http://www.businessdictionary.com/definition/mature-market.html>





questioned; and from follow up comments received from district staff the volume of training on offer inhibits involvement as a result of the problem of choosing what to attend.

However, despite concerns raised about credibility of presenters it was also notable those respondents who had completed some form of training viewed the program they undertook favourably.

Vanclay (2004), Carruthers and Vanclay (2012) and Hogan, Berry and Ng (2011) all point to social processes as driving decision making amongst producers. Those processes help establish what constitutes value to producers and why.

As Vanclay recognises “Non-adoption is not the cause of land degradation, rather practices actively promoted by extension in the past have significantly contributed to degradation” (2004, p215) and “Science and extension do not have automatic legitimacy and credibility” (2004, p220); such issues address a failure to work with producers rather than treat them as being open to control. Updegrave (2005) records “According to Kant, every rational being has intrinsic and not merely instrumental value. That is, every rational being exists as an end-in-itself and not merely as a means to an end.”

Treating people as being part of the solution not things to control is critical.

**It should be remembered 51% of respondents expressed an interest in future training; that figure represents a significant market for future training. The negative comments received and Pocock’s paper is a reminder to make clear why and how courses provide value to recipients.**

Roger’s diffusion theory (1962) represents push theories to marketing. Such a theory does not recognise behaviours which led to Vanclay and Hogan’s conclusions. A deliberate adoption of pull theories of marketing are therefore critical to meeting recommendations from the social science in terms of bringing about change.

## Drivers for involvement in training

There are a number of potential drivers to involvement in training:

One possible strategy is segmentation of the market; Wedel and Kamakura (2000) provide both a rational and process for such an approach to the market place. In this case previous educational achievements help predict likely involvement with training.

Table 4 shows a higher level of interest amongst those at the extremes of previous educational achievement. By interpretation those with limited training may recognise their need for it and be open to it while those who have done a lot of training may recognise the benefits of it and be open to further training.

This may provide an avenue for targeting clients using this segmentation. Messages promoting initiatives may be more effective if they promote the acquisition of required skills or continued development of skills.



There was some justification in the data obtained for this view as past education proved a greater determinant to engagement with management of personnel and utilisation of advisors; especially the soft side of business management as compared to the technical concerns of production and financial management.

Age and gender showed correlations to profitability, independence, productivity and improving the state of the farm (Table 9). These characteristics provide market signals as to who to promote and deliver training. However, it would be simplistic to target just those currently showing an interest in these areas; an understanding of why these are not of interest to others needs to be developed.

Given the skews identified in Figure 1 (Age distribution of respondents as a percentage of the sample size at time PMP finished compared to age as a percentage of total general farming population ) it is reasonable to deduce younger groups of producers are more responsive to initiatives such as PMP (or this survey) than the normal age distribution of producers. Capacity to target activities based on age segmentation may enhance DPI penetration of the market.

Given the low level of response from landowners outside the traditional descriptor of “Farmer” conclusions drawn against these criteria are indicative only. The “Farmer” group, however, remains the traditional market for training provided by DPI.

## Course design

Answers to the question “In terms of preparing for, responding to and recovering from events such as drought and natural disasters how important to you would be training in each of the following areas?” showed support for all the nominated activities as being Important or Very Important in dealing with adverse events (Table 15). Those activities were:

- \* Planning options that improve self reliance and resilience for the business in the event of adverse events;
- \* Enhancing physical assets (e.g. water supplies) or accumulating financial resources (e.g. Farm Management Deposits, improved equity);
- \* Responding in a timely manner to events (e.g. reducing stock or implementing fodder management strategies);
- \* Recovery planned before or during the event; and
- \* Managing time so as to be able manage the business.

All areas are therefore potential areas in which support could be provided. Overall, no area stands out as being a higher priority; although pre-planned recovery received a slightly lower ranking to the others.

Respondents were asked to rank areas of training according to its importance (Figure 12 Factors important to preparing for adversity (ranked by important and very important combined)) and Table 15 Ranked list of training seen as desirable in preparation for adversity). The top three choices deal with finding a future course of action and assessing its financial implications. The difference, though, across the top 7 is minimal being 8%; training in all 7 areas is therefore supported if such training were to be provided.

The capacity to identify options and assess financial implications is therefore of most interest to producers.



It is notable the University of Western Sydney considers Bawden's (2012) "Option Five (Sustainable Development/Sustainable Wellbeing) holds the best prospect of a strategic agenda for development of academic programs and research"<sup>10</sup> [to address the decline of Agricultural Education at their Hawkesbury campus].

## Educational theory

The pedagogy<sup>11</sup> behind training provided must be based on the target audience's understanding of their current situation. The style of training delivered must consider the high level of preparation for adversity reported by respondents (Figure 10 Graph of degree of preparedness for adverse events). The style of training needs to be designed as being principally refresher work rather than training for novices. What would suit a novice is very different to what would suit a refresher course. Pocock's point (2011) regarding perceived value of training is governed by a course's fit to level of development of participants.

As commented previously the market for training to producers can be usefully analysed as being a mature market. There are a number of providers including DPI, TAFE and other private providers. While there is strong support for further training it is useful to remember a segment of the target audience is showing fatigue from the number of courses on offer, as well as the impact of mandatory training that is viewed somewhat cynically either as driven by regulatory needs or being shallow as a 'tick the box' exercise.

Given the level of preparation respondents believe they have in place, training can provide self check tools to assess objectively what level of preparation has been achieved. Such a tool should be based on producers' experience before and after an event. Benchmarking against other producers provides concrete criteria of greater value to producers than purely theoretical ones.

## Provision of training

There is clear support for maintaining a range of providers of training. Encouragingly DPI was supported by twice the number of respondents as the next highest provider (Table 16 Who should provide training). DPI is clearly seen as continuing a role in training. Credibility and applicability of courses plays a critical role; pull strategies need to be developed to address this.

The majority of respondents support full day training to occur during the week (Table 16 Who should provide training). There is, however, still a significant proportion who favours half day training with timing of training during the day being evenly split.

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<sup>10</sup> Board of Trustees meeting on Wednesday 5 September 2012  
[http://www.uws.edu.au/about\\_uws/uws/board\\_of\\_trustees/board\\_meetings/board\\_of\\_trustees\\_meetings\\_2012/5\\_september\\_2012#ag](http://www.uws.edu.au/about_uws/uws/board_of_trustees/board_meetings/board_of_trustees_meetings_2012/5_september_2012#ag), accessed 1 November 2012

<sup>11</sup> Pedagogy is the function of a teaching and teaching covering the art and science of teaching/instructional methods.



## PMP compared to 'Other' training

Specific evaluations of the PMP program against 'Other' training on the basis of achieving outcomes and improvements in management practices favoured 'Other' training. The general evaluation based on assessing value, satisfaction and willingness to recommend a program to other producers (see Figure 8 Shape of the value/satisfaction/likelihood to recommend curves for PMP program and 'Other' programs) however showed little difference between the two.

Given the range of courses undertaken as part of 'Other' training, it can be concluded that well designed and delivered training that is relevant to participants is valued by participants.

It is notable that more was achieved in terms of the named outcomes in relation to the physical side than the financial/business side. This, however, was not unexpected given the higher proportion of males in the sample areas of training which involve concrete learning which naturally fits with the learning preferences of many males. Training packages therefore should seek to adopt such pedagogy that acknowledges these learning preferences; Bernice McCarthy's 4MAT learning (1987, 1996) provides a model to achieve this.



## RECOMMENDATIONS

The following recommendations arise from the comments of respondents.

- Producers' concentration on government policy and regulation is the major issue of concern to them and carries implications for change management in agriculture. This focus needs to be addressed in order to ensure programs can achieve their intended outcomes. Given that 78% of respondents held this position this represents a significant impediment to achieving change in agriculture. Social processes are critical to bringing about change amongst producers.
- There is a significant market for training amongst producers. Producer concerns in relation to value and credibility of courses has to be addressed in order for uptake to improve. What constitutes value to one group does not necessarily represent value to another, understanding that difference becomes one of the tools to bringing about change. The specific concerns of producers who did not participate reflects the relative weighting/value given to what is on offer compared to alternative activities; the reason behind attributed value needs to be understood in order to improve market penetration.
- More sophisticated segmentation of the market for training will provide an avenue for targeting training to the specific needs of individuals. Given producers' comments on training and the capacity to segment the market pull strategies for marketing would have higher impact on the level of uptake of training. This fits to Vanclay and Hogan's work on what influences decisions amongst producers.
- Respondents gave very clear feedback on what training is attractive to them:
  - 1 Planning options that improve self reliance and resilience;
  - 2 Enhancing physical assets or accumulating financial resources;
  - 3 Responding in a timely manner to events;
  - 4 Recovery planned before or during the event; and
  - 5 Managing time so as to be able manage the business.Whilst respondents saw these areas of being of value this response is not the same as asking whether those respondents would put time and money into such training. That question needs to be answered before investment in such training should go ahead.
- The market for training is mature. There are a number of providers. The target audience shows fatigue and cynicism about mandatory training. Pull strategies can address this situation.
- Given the high level of preparation for adversity reported by respondents, courses need to accommodate multiple entry points according to the specific development needs of individuals. Point of entry to training can be based on the provision of a self check tool developed from producer experience with adversity that helps a client see objectively how prepared they are and what they need to do next.
- Vanclay (2004) points out "Non-adoption is not the cause of land degradation, rather practices actively promoted by extension in the past have significantly contributed to degradation" (2004, p3); humility in extension is essential.



- Producers' opinion is consistent with course design based on tools that recognise the learning preferences of those involved: the deliberate targeting of learning styles of producers will improve engagement.
- DPI is heavily supported as a provider of training; the Department can adopt an aggressive stance in pursuing a market. What is critical from previous comments is credibility and applicability of courses provides the pull strategies needed to win market share. Whilst respondents supported full day training during the week a number look for other patterns, a single pattern does not need to be adopted however weighting needs to be given to the responses received.
- Well designed and delivered training that is relevant to participants is valued by participants; this survey supports that fact. DPI can therefore have confidence that provided those conditions are met there is a strong market for Department delivered training. Ultimately DPI is a 'business' that needs to listen to and develop strategies to meet a market.



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## APPENDICES

### Appendix A – Survey Instrument



Bathurst Primary Industries Centre  
PO Box 1386  
BATHURST NSW 2795

7 December 2011

Dear Producer,

I am writing to you in order to get your feedback on preparing for, responding to and recovering from drought and other adverse events.

We need feedback on what was achieved by the Property Management Planning program, what was achieved by other programs of a similar nature and what support might be provided in the future. An explanation of the survey is on the next page.

Your ongoing support shown through such things as giving us feedback on programs and advice on what might be of assistance in the future helps us service producers' needs more effectively.

Thanks for your attention; I hope you take the time to complete the survey and return it to me.

Yours faithfully,

A handwritten signature in black ink that reads 'Paul Forbes'. The signature is stylized and includes a large, looped initial 'P'.

Paul Forbes



## Farming for the Future/Property Management Planning – follow up survey

We want to know what the Farming for the Future/Property Management Planning (referred to as PMP below) helped producers achieve. We also want to better understand what will assist landholders prepare for, respond to and recover from adverse events in the future.

This survey is going to people who completed PMP and people who did not.


We will use the information collected for the future design of programs to provide training and support to landholders in dealing with adverse events. We want to identify:


- \* What worked in terms of changed outcomes or management practices that have endured;
- \* What pressures you see in the future that will challenge your business;
- \* The types of programs you would like to see offered;
- \* Landholders' preferences for important design features of these programs; and
- \* We are seeking to identify how and when to best communicate information about these programs to interested landholders.

We hope you will be willing to participate in this survey as your opinions are of great value for understanding how programs can be improved.

There are no right or wrong answers. The survey should take about 20 minutes to complete. By completing this survey you will have an opportunity to win a \$200 voucher with a business of your choice (please complete your details below if you want to go into the draw).

**You can be assured of complete confidentiality and anonymity.** The information within the survey will be analysed and **presented as summary results only and no individual will be able to be identified.**

 If you would prefer someone to go through the survey with you over the phone, please phone Paul Forbes on 02 6330 1202 who is the contact for this survey. Once you have completed the survey, please place it in the reply paid envelope provided, and mail it to us.

 If you would like us to post you or email you a copy of the survey results please fill in your details and return the slip with your questionnaire.

We acknowledge Professor Mark Morrison of the Institute for Land, Water and Society at Charles Sturt University for his input into the design of this survey.

- 
- Yes I would like to enter the prize draw (please enter your details below if you want to be in the draw) – to be in the prize draw return by **20 January 2012**.
  - Yes I would like to receive a copy of the survey results.
  - Yes I am happy to be contacted for follow up on the survey.

Name:

Address:

Email:

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## #1 What is your background and role as a farmer?

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1. In what year were you born? \_\_\_\_\_ Year
2. Please indicate your gender:
- Male                       Female
3. What is the highest level of formal education you have completed?  
*This question is optional, Please tick one box only.*
- |                                                   |                                                                         |
|---------------------------------------------------|-------------------------------------------------------------------------|
| <input type="checkbox"/> No formal schooling      | <input type="checkbox"/> Completed year 12 / form 6 / HSC / VCE         |
| <input type="checkbox"/> Primary                  | <input type="checkbox"/> Technical/trade                                |
| <input type="checkbox"/> Some secondary           | <input type="checkbox"/> Tertiary agriculture                           |
| <input type="checkbox"/> Completed year 10/Form 4 | <input type="checkbox"/> Other Tertiary (e.g. bachelor degree/ diploma) |
| <input type="checkbox"/> Completed year 11/Form 5 | <input type="checkbox"/> Postgraduate                                   |
4. Please indicate how you define yourself as a landowner/ manager.  
*Please tick one box only.*
- I'm a full-time farmer – this is how I make my living, I work on the farm most days.
- I'm a part-time farmer – I work off-farm some of the time and/or a fair proportion of my income comes from off-farm sources.
- I'm a semi-retired farmer, living and/or working on the farm some of the time.
- I'm a retired farmer – I live on the land but someone else runs the farm now.
- I live on the land for the lifestyle – I'm someone who lives on the land, but I don't consider myself a farmer.
- Other (*please specify*):
- 
5. Besides yourself, how many people work on your farm with you?
- Full-time** \_\_\_\_\_ (number)
- Part-time** \_\_\_\_\_ (number)
6. What is your postcode? \_\_\_\_\_

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## #2 Did you participate in PMP?

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7. Did you participate in the PMP Program? *Please tick one box only.*
- Yes
- No (*If no go to Q14*)

### #3 In your experience what did PMP achieve?

8. Did PMP contribute to you achieving the following **outcomes**?  
Please circle one number in each row.

I have:	Not at all true of PMP	Slightly true of PMP	Somewhat true of PMP	True of PMP	Very true of PMP
Greater personal resilience	1	2	3	4	5
Reduced dependency on support	1	2	3	4	5
Improved financial independence	1	2	3	4	5
Improved profitability	1	2	3	4	5
Reduced damage to resources	1	2	3	4	5
Improved natural resources	1	2	3	4	5
Improved farm productivity	1	2	3	4	5
Improved state of the farm	1	2	3	4	5

9. Did PMP contribute to you improving your **management practices**?  
Please circle one number in each row.

	Not at all true of PMP	Slightly true of PMP	Some-what true of PMP	True of PMP	Very true of PMP
Improved planning that adapts to conditions as they arise	1	2	3	4	5
Maintained accurate & up to date financial records	1	2	3	4	5
Understood financial figures and how to use them to improve planning	1	2	3	4	5
Recognised & used the skills of family/partnership members	1	2	3	4	5
Improved working relationships in the business	1	2	3	4	5
Improved networks to assist the producer in the future	1	2	3	4	5
Utilised advisors when required	1	2	3	4	5
Developed strategies to deal with adversity before the event	1	2	3	4	5



10. What percentage of your PMP plans were carried out? *Please circle one.*

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

11. Overall, how valuable to you was your participation in PMP? *Please circle one.*

Not at all 2 3 4 5 6 7 8 9 Extremely

12. How satisfied were you with PMP? *Please circle one.*

Not at all 2 3 4 5 6 7 8 9 Extremely

13. If a program such as PMP was run again how likely would it be you'd recommend it to another producer? *Please circle one.*

Not at all likely 2 3 4 5 6 7 8 9 Extremely likely

You now have the option of going to Q21 or continuing if you have done other training.

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#### #4 Did you participate in other programs?

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14. Did you participate in a program other than PMP? *Please tick one box only.*

No (*If no go to Q21*)

Yes (*please specify what the training was*):

**#5 In your experience what did that program achieve?**

15. Did the program contribute to you achieving the following **outcomes**?  
Please circle one number in each row.

I have:	Not at all true	Slightly true	Somewhat true	True	Very true
Greater personal resilience	1	2	3	4	5
Reduced dependency on support	1	2	3	4	5
Improved financial independence	1	2	3	4	5
Improved profitability	1	2	3	4	5
Reduced damage to resources	1	2	3	4	5
Improved natural resources	1	2	3	4	5
Improved farm productivity	1	2	3	4	5
Improved state of the farm	1	2	3	4	5

16. Did the program contribute to you improving your **management practices**?  
Please circle one number in each row.

	Not at all true	Slightly true	Some-what true	True	Very true
Improved planning that adapts to conditions as they arise	1	2	3	4	5
Maintained accurate & up to date financial records	1	2	3	4	5
Understood financial figures and how to use them to improve planning	1	2	3	4	5
Recognised & used the skills of family/partnership members	1	2	3	4	5
Improved working relationships in the business	1	2	3	4	5
Improved networks to assist the producer in the future	1	2	3	4	5
Utilised advisors when required	1	2	3	4	5
Developed strategies to deal with adversity before the event	1	2	3	4	5

17. What percentage of your plans were carried out? Please circle one.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

18. Overall, how valuable to you was your participation in that program? Please circle one.

Not at all 2 3 4 5 6 7 8 9 Extremely

19. How satisfied were you with this program? *Please circle one.*

Not at all    2    3    4    5    6    7    8    9    Extremely

20. If a program such as this was run again how likely would it be you'd recommend it to another producer? *Please circle one.*

Not at all likely    2    3    4    5    6    7    8    9    Extremely likely

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## #6 What challenges will you face in the future?

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21. In the future, what do you expect **will be** the main environmental challenges facing your business? *Please tick all that apply.*

- More frequent dry conditions
- Decreasing access to water
- Increased climate variability
- Increasing demands for actions favouring the environment
- Policies such as the Carbon Tax potentially impacting the business
- Decreased opportunities to trade
- Other (*please specify*):

22. In the future, what do you expect **will be** the specific production related challenges you will face in your business? *Please tick all that apply.*

- Reduced access to labour
- Decreasing use of high cost inputs
- Capital requirements increasing faster than income
- Reduced choices of varieties/breeds to use
- Reduced access to businesses supplying my inputs
- Other (*please specify*):



**#7 Do you feel well prepared to meet future change?**

23. Have you continued to develop business skills in planning, managing people and using information to make decisions? *Please tick one box only.*

- Yes
- No
- Not applicable
- Other (*please specify*):

24. How important do you consider the following management activities to be in helping you deal with adverse events (fire, flood, drought etc.)? *Please circle one number in each row.*

	Not at all important	Slightly important	Somewhat important	Important	Very important
Planning options that improve self reliance and resilience for the business in the event of adverse events	1	2	3	4	5
Enhancing physical assets (e.g. water supplies) or accumulating financial resources (e.g. Farm Management Deposits, improved equity)	1	2	3	4	5
Responding in a timely manner to events (e.g. reducing stock or implementing fodder management strategies)	1	2	3	4	5
Recovery planned before or during the event	1	2	3	4	5
Managing time so as to be able manage the business	1	2	3	4	5

25. Do you have plans for business continuity (that is plans to survive during an event and recover after adverse events) in place? *Please tick one box only.*

- Yes
- No

26. Would you like to undertake further training related to your farm business? *Please tick one box only.*

- Yes
- No
- Not sure

27. How prepared do you feel you are in relation to facing the following?  
Please circle one number in each row.

	Not at all prepared	Slightly prepared	Somewhat prepared	Prepared	Very prepared
Financial challenges	1	2	3	4	5
Market fluctuations	1	2	3	4	5
Passing on the farm	1	2	3	4	5
Natural disasters such as floods, fires etc.	1	2	3	4	5
More frequent dry periods	1	2	3	4	5

28. What would improve your preparedness for an adverse event?

29. Which business support networks do you participate in?

- No opportunity to make use of networks is available
- No use made as have found them to be of limited value
- People of relevance to the business aren't available
- A local social network is used (neighbours, sports club, church etc.)
- A professional network for advice is used e.g. industry group
- Other (please specify):

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**#8 What support services/training will help you deal with the future?**

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30. How interested would you be in participating in programs to develop self reliance/resilience for your business and community? Please tick one box only.

- Not interested    
  Slightly interested    
  Somewhat interested    
  Interested    
  Definitely participate

31. If you don't intend to pursue future training for yourself, family or partnership members or staff why not? *Please select all that apply.*

- Not needed
- Not found to be of value in the past
- Won't have the time or resources
- Can't find suitable course/training
- They aren't of value
- Been involved in too much training and am tired of it
- Other (*please specify*):

32. In terms of preparing for, responding to and recovering from events such as drought and natural disasters how important to you would be training in each of the following areas?  
*Please circle one number in each row.*

	Not at all important	Slightly important	Somewhat important	Important	Very important
Skills in identifying the need for additional income	1	2	3	4	5
Financial planning skills	1	2	3	4	5
Utilisation of Farm Management Deposits	1	2	3	4	5
Planning expenditures to prepare for adverse events (water, fodder storage etc.)	1	2	3	4	5
Managing people	1	2	3	4	5
Skills in problem solving and making timely decisions	1	2	3	4	5
Skills in managing particular enterprises ( <i>specify enterprises below</i> ):	1	2	3	4	5
Skills in assessing climatic trends and predictions	1	2	3	4	5
Decision tools to assist with fodder management	1	2	3	4	5
Identification and reduction of risks	1	2	3	4	5

	Not at all important	Slightly important	Somewhat important	Important	Very important
Identifying options before the event (e.g. sales of stock, agistment etc.)	1	2	3	4	5
Operational planning through PMP to assess options and plan implementation	1	2	3	4	5
Other. <i>Please specify below:</i>	1	2	3	4	5

33. Who do you think is best placed to deliver this training? *Please tick one box only.*

- TAFE
- Consultants
- Private providers
- NSW DPI
- Other (*please specify*):

34. In the future how should this training be delivered? *Please select all that apply.*

- 2 day workshop
- Single sessions
- Online
- Regular meetings
- Other (*please specify*):

35. What time suits you best to complete training? (*Please circle appropriate times*)

<input type="checkbox"/> Full day	<input type="checkbox"/> Weekends	<input type="checkbox"/> Mornings
<input type="checkbox"/> Half Day	<input type="checkbox"/> Weekdays	<input type="checkbox"/> Middle of day
		<input type="checkbox"/> Evenings

## END OF SURVEY

### Privacy Note:

**We are committed to keeping the information you provide in this survey strictly confidential and anonymous.**

Results will not include information that could be used to identify you. The information will be collected solely for finding what worked with PMP and what directions future training should take. Summary results may be used by Primary Industries in presentations and applications for funding. There will be no follow up unless you agreed to it on the first page.

YOU WILL NEED TO HAVE AGREED TO ENTER THE PRIZE DRAW AND ENTERED YOUR DETAILS ON THE FIRST PAGE IF YOU WISH TO GO INTO THE DRAW. IF YOU DID SO WHEN YOU COMPLETE AND RETURN YOUR SURVEY YOU WILL BE ELIGIBLE TO ENTER THE PRIZE DRAW. THERE IS ONE PRIZE OF \$200 THAT WILL BE AWARDED.



## Appendix B – ‘Other’ training undertaken

Various courses/workshops provided by NRCMA. Interested in soil health and stock management of cattle. COMMENT: Participated in PMP at a time when working/studying full time off farm and around 10 years ago. Courses now available appear to deal with more topics to manage farm by more sustainable methods. In recent years have moved towards additional fencing (smaller paddocks), off creek water and management of natural areas (fenced off and generally only grazed during winter).
Stockwise Stock Plan Prograze
RCS Grazing for Profit
Prograze Landscan Sheep breeding and selection
Prograze
Prograze
Prograze
Pro Graze Other local courses for Property Management
On farm quality assurance management program, Inverell. Cell grazing program, Inverell Rural production and native conservation vegetation and water. Farming for the Future - 1997 Warildra and surrounds.
OH&S etc.
Farming for the Future training of others.
Landscan Prograze Various small area farming courses
Landscan
Grazing for Profit Holistic Management KLR Marketing Low Stress Stock Handling
Grazing for Profit
Grant funding years ago to do an RCS course.
Farming Systems run by the CMA
Farming in the Future
Farming for the Future (at least ten years ago)
Farming for the Future
Farming for the Future
Diploma of Agriculture Plus doing Advanced Diploma in Front Line Management
Diploma Farm management Farming for the Future Soil management workshop
Computer courses U3A, Geology, computer studies First Aid and Farm Safety
Computer Courses U3A Geology/computer studies First Aid and Farm Safety
CMA course
Chemical course Stock handling Preg testing
Better Grow Better Graze
Applicant wrote some comments re PMP. "I had done farm and stationery book keeping when a teenager and had good books. PMP showed me how to utilise this information better in management of the land under my control." Occupation and Health Chemical Use Training MYOB computer course Cattlecare Weather Predicting and others
ABARE
"Compass" (Sugar Industry)

## Appendix C – Other comments as to what respondents expect will be the main environmental challenges facing their business

Age!!

Higher taxes

Management of increasing business size and scale.

Coal seam gas extraction effect on the Great Artesian Basin. In my lifetime on the land each year is different and throws up new challenges. I have worked through frequent dry and drought conditions and seen ever changing climate variations, but our rainfall average has not changed in 120 years. How the rainfalls can affect pastures response. In time we may need more carbon in the soil.

Soil health/fertility Weeds/pests and Biosecurity due to climate change

There is no help from the government for older farmers trying to make a living and stay on top. I personally know of 2 couples, both couples over 75, one husband is 78, the other 81 and no help from the government because of the amount of land owned regardless of whether it is rich or poor soil.

Too many surveys? Idiots legislating in State and Federal parliaments

Different opportunities will probably become available and some will decrease.

Rising input costs and falling commodity prices.

Rising cost making it impossible to complete necessary farm infrastructure. Farm no longer profitable because of the cost of fuel, power, fertiliser, water and labour. Increase price in beef not keeping up. Need to increase work off farm.

Loss of the single desk re: AWB markets too volatile, we need to be able to plan with confidence. Government policies federally undermining our future.

Mismanagement by the government with little thought as to where their food comes from. Both from governments and ignorant community expectations, e.g. live cattle trade to Indonesia.

Mismanagement by the government with little thought as to where their food comes from. Both from governments and ignorant community expectations, e.g. live cattle trade to Indonesia.

Competing against foreign products not subject to the same standards, taxes and costs as ours Pest and disease problems.

Government red tape compliance Too much paperwork and not enough time spent on income producing work.

The greatest challenge will come from the Green Fascism as environmentalism is a lie and all government departments just go along to get along which is corruption on top of all the quackery about the environment.

Decreasing access to water due to costs.

More requirements to take courses and repeat courses at great expense to learn what I already know.

Governments backing badly thought out programmes to please environmentalists, hindering our ability to farm.

The biggest impact on the environment will be from knee jerk government policy driven by ill informed green lobby groups.

Government policy and impact on increased paperwork and documents at time when farmers are price takers. How will all this extra cost be funded and what benefits really come to the farmer?

MDBC

Government red tape both federal and state. Inept agricultural policies Reduced government spending on agricultural research development and agricultural department staff. Lack of knowledge and understanding of agriculture at the very top of governance.

Government interference is the biggest environmental threat; it creates uncertainty and does not allow for long term planning.

Regrowth - the control of timbo (Woodyweed INS)

Encroachment by small land holders / tree changers.

Much the same as in the past. We get our drier years, and wet years when we are subjected to floods and bogged pastures.

Tighter rules and regulations regarding what you can and can't do on farm.

Urban encroachment and excessive government regulation.

Government water policy or the lack of action

More red tape to deal with

By historic rain variation, don't largely see! More unreasonable demands than increasing demands.

The price of farming land.

Stable commodity prices both domestic and international

Politically skewed environmental legislation that has lofty ideals with no peer reviewed back up that does not consider the triple bottom line.

Increased concentration on the input side, i.e. growing power of large corporations as suppliers of seed and chemicals. The same monopoly power over marketing by private companies. A monopoly is only beneficial when owned and controlled by its customers.

Flooding affecting pasture production.

Government interference.

Increasing government regulations and public perception - pressure on governments, e.g. cattle embargo on live cattle trade; native vegetation

Over regulation impairing proven management systems.

High input costs, low return prices

Ran out of water and had to sell most of my cattle.

Cost of fuel and fertiliser to high risk growing crops. Machinery costs are out of the ordinary person's reach.

Despite the weight of ongoing propaganda about "man made global warming/climate change" the likes of William Kininmonth, Prof Bob Carter, Prof Ian Plimer are sensibly reminding us that man's impact on our long term climate patterns is relatively insignificant. This does not mean there is no room for improved best practice.



## Appendix D Other comments to what respondents expect will be the specific production related challenges they will face

Increased costs of labour, inputs and less income.  
Depends on political decisions, world and Australian economy, supply and demand and climatic conditions!  
Depends on political decisions, world and Australian economy, supply and demand and climatic conditions!  
Resistance to herbicides and insecticides Tightening margins  
Lack of road infrastructure so I can meet contracts and receive services. Some year's road access for services is unavailable for eight months of a year. This is not satisfactory when governments are telling us to work smarter.  
Variations in weather patterns.  
To maintain profitability and a good environmental outcome  
Related to labour supply, i.e. skills supply Biosecurity issues and quality control  
Old age!  
There is no hope of selling our farm with the current financial crisis.  
Farms must be profitable to survive.  
Increasing costs of vaccinations and worming chemicals for my animals. I would like access to vaccinations for my dogs so that I can do them myself.  
Red tape and high input costs.  
Very little help to keep producing after drought and bush fires.  
Very little help to keep producing after the drought and bush fires.  
Labour - costs; finding casual competent workers  
Age 50+ now.  
To survive as government push farmers out of business like on the Murray Darling Basin.  
Green influence.  
Availability to access our water right on a regular basis without the government continually changing the rules that affect our ability to plan our future in farming.  
Increase in electricity charges for irrigation pumping.  
The biggest thing that has affected our production (piggery) over the last 20 years is foolish government policy on trade - allowing subsidised imports of pork into this country has promoted corporate greed and decimated the pig industry and feed grain industries.  
Weeds are an increasing problem on very steep, rough country.  
Decrease in commodity prices as opposed to cost increases.  
I have sheep and there is a shortage of shearers as it is very hard work and people don't want to do it.  
Reduced access to markets that supply my requirements needed to continue farming. E.G. grain and hay that is purchased off farm.  
Increasing age of operator and no next generation following me because of the low profit.  
Availability to water to keep production going. Restrictions and higher inputs will affect our production - because of present and future government policies.  
Biosecurity Government (State and Federal) should be increasing surveillance and be better prepared for any outbreaks of exotic pests or diseases.  
Old age, been in the game for 59 years.  
Decreased access to PN Forestry (State forests) Competition with imports Decreased demand of sawn timber due to economic climate  
Thos cost of everything.  
Not applicable (not farming)  
Cost of production increasing. Competing agricultural goods from overseas which are supported by governments which have less regulation on their product - uneven playing field.  
Costs of maintaining weed free pastures and eradicating serrated tussock.

## **Appendix E Other comments against “Have you continued to develop business skills in planning, managing people and using information to make decisions?”**

A farmer learns from experience. No two droughts are the same.

Age catches up with us and most people want to spend a small part of their life doing other things apart from farm work.

Computer skills

Depends on the level of change. Yes - if it is manageable. No - if it becomes unsustainable.

De-stocked at the end of the drought and with current positive environment/cattle prices, am re-assessing ALL skills to actively re-enter the business of cattle production again in 2012.

Have used information to try and improve on farm practices.

Need skills to help forecast change

Running out of options.

Semi retired, reduced scale of operation. Sold sheep, understocked with cattle so not really applicable.

Think that I would not be here today had this not been done in the past. (ticked yes)

Ticked yes and "my family are constantly reviewing ways to make production more efficient".

We have not gone on to develop more skills etc because of the uncertainty of our water entitlement.

Will retire in the next couple of years

Yes and no. I steel keep up with information on new techniques, but at my age I have adopted my plan and am now maintaining it.

## Appendix F Reasons for not wanting to be involved in future training

Approaching retirement

Considering sale of property because of my age.

Cost squeeze means it is very hard to justify time from an already busy schedule.

Currently doing advanced diploma in Frontline Management.

Good trainers are very few and far between. Most trainers are broken down farmers.

Giving up farming - breeding in 2 years.

Have found courses expensive and irrelevant and needing to repeat courses to learn the same thing is insulting.

Have retired and will no longer be on the farm.

I am 59 years old, I don't have any children, I have never married and I am near the end of my working life.

I believe that any thinking operator does training by what they hear, read and observe.

I'm 88 years old.

Information is disseminated in a manner that represents brain washing and based on fear.

N/A Have not been made aware of any due to the work related to off farm, i.e. frequently interstate etc.

Nearing retirement

Nearly retired

Nothing suitable for my age

Now semi-retired

Our age, we need to be retired.

Participant did not answer this question.

Planning necessary

Question not answered by participant

Retired

Selling out

Semi-retired. Leasing farm land to neighbour but manage weeds and fencing.

Semi-retired. Leasing farm land to neighbour, but manage weeds and fencing.

Semi-retired. Lower level of interest.

Though intend to pursue further training both of the above apply.

Time is very valuable so training needs to be time efficient and outcomes based.

Too many useless socialised programs causing market failure in developing useful ones for me. [Q30 added "Not been to one the presenter has had any skills worth imparting"]

Very much interested in further training

Where there is a relevant new idea, course or field day - every effort is made to participate

Will consider future training.

Working towards semi-retirement. Selling some land.

## Appendix G Training in enterprises to prepare for adversity

Beef cattle
Beef, pig and grain production
Cattle
Cattle and sheep.
Cropping and grazing
Dairy
Dryland sheep and wheat
Lamb Wheat Canola
Lamb production
Livestock
Livestock Skills
Parts 7, 8, 9 and 10 of question 32 applicant said "Don't do anything in this space you are not up to it. Rubbish question. Rubbish?"
Rice, wheat and barley growing.
Sheep and beef cattle.
Sheep and cattle.
Sheep, cattle, summer crop, winter crop On time management of cashflow - better budgeting
what makes money, maybe nut trees

## Appendix H Other comments against who should provide training

A combination of all of the above.
A mix of all mentioned
All of the above (dependent on the specific rural community).
All of the above have a role to play.
All of the above.
Applicant ticked Consultants; private providers and NSW DPI
Both Private providers and NSW DPI
Consultants and NSW DPI
Depending on the type of training. All have a purpose, may not cover all.
Don't see where a course is necessary. There are other less expensive and less time consuming ways of delivering this information.
Expand WA program naturally
Field days on properties or in a club and NSW DPI
Good practical farmers. Look over the fence listen and ask questions.
Not necessarily one training group. Different groups offer different things.
Not required
Not sure
NSW DPI and /or CMA's
NSW DPI and local Rural Lands Boards
NSW DPI and the CMA's
On line ticked as well. On line forums and distance education by educational provider.
Private providers and NSW DPI
Social networking
TAFE and NSW DPI
TAFE and the CMA
The most successful person in the local area.
Through Farming for Future program run by? NSW DPI
Through Farming for the Future program run by? NSW DPI
Ticked both Private providers and NSW DPI
Ticked Consultants and Private Providers
Ticked Consultants; Private providers; and NSW DPI
Ticked Consultants; private providers; and NSW DPI
Ticked NSW DPI and other - field days
Ticked private providers and NSW DPI
Ticked private providers three times Must develop robust market sensitive services.
Ticked TAFE and NSW DPI
Ticked TAFE and Private providers
Would prefer that all are available. Individual providers may be better available to deliver on different training, i.e. horses for courses.

## **Appendix I Vanclay's (2004) principles for Agricultural Extension**

- Principle 1. Farming is a socio-cultural practice
- Principle 2. Farmers are not all the same
- Principle 3. Adoption is a socio-cultural process
- Principle 4. Profit is not the main driving force of farmers
- Principle 5. It is hard to be green when you are in the red
- Principle 6. 'Doing the right thing' is a strong motivational factor
- Principle 7. Farmers don't distinguish environmental issues from other farm management issues
- Principle 8. There is a strong desire to hand the farm on to one's children
- Principle 9. Sustainability means staying on the farm
- Principle 10. Women are an integral part of the farm
- Principle 11. Stage in the lifecycle of a farming family and family composition are significant factors
- Principle 12. Non-adoption is not the cause of land degradation, rather practices actively promoted by extension in the past have significantly contributed to degradation
- Principle 13. Marginal farmers are not marginal because of their management ability but rather because of their structural location
- Principle 14. Farmers' attitudes are not the problem
- Principle 15. Farmers construct their own knowledge
- Principle 16. Effective extension requires more than the transfer of technology, it requires an understanding of the world views of farmers
- Principle 17. Farmers have legitimate reasons for non-adoption
- Principle 18. Top-down extension is inappropriate
- Principle 19. The 80–20 rule is a self-serving delusion
- Principle 20. Science and extension do not have automatic legitimacy and credibility
- Principle 21. Representation is not participation
- Principle 22. Promotion of awareness through the use of dramatic images is counterproductive
- Principle 23. Put degradation into perspective
- Principle 24. The best method of extension is multiple methods
- Principle 25. Group extension is not a panacea
- Principle 26. Extension is likely to have only a small impact
- Principle 27. Farmers need to feel valued



If we shadows have offended,  
Think but this, and all is mended,  
That you have but slumber'd here  
While these visions did appear.  
And this weak and idle theme,  
No more yielding but a dream,  
Gentles, do not reprehend:  
If you pardon we will mend.  
Else the Puck a liar call.  
Give me your hands,  
    If we be friends,  
And Robin shall restore amends.

A midsummer's night dream  
William Shakespeare

