



“ Building skills for controlling
erosion on roads, tracks
firebreaks and fence lines”
Workshop Evaluation Results

August – September 2013

(Project # PJ120312)

Feedback received from workshops

Background

A series of Soil Erosion Control Grader workshops, facilitated by Darryl Hill of “Soil Save”, were conducted throughout the rangelands of WA during August and September 2013. Workshops were held at Liveringa Station, Derby, Yarrie Station, Peedamulla Station, Winning Station, Austin Downs Station, and Ninghan Station. An abbreviated “mini workshop” was also held at Carey Downs Station.

The aim of the workshops was to provide participants with:

- a better understanding of the cause of water erosion problems on station tracks and fence lines;
- an overview of traditional versus alternative ways of dealing with water erosion problems;
- basic surveying principles;
- on-ground experience in basic surveying skills and the use of a dumpy level; and
- a demonstration of grader techniques for erosion control.

Soil erosion is a serious issue on many pastoral leases in WA and poorly constructed and/or maintained roads, tracks, firebreaks, and fences are often a major contributing factor. It has been estimated that up to 20 tonnes of soil per hectare may be lost in one intense rainfall event (Jolley 2009). As roads, tracks, firebreaks and fences are usually devoid of vegetation, and lie below the natural ground level, they often intensify channelling and thus exacerbate the problem.

Erosion Control Workshops run in the Kimberley and Pilbara by consultant Darryl Hill (“Soil Save”, Katherine NT) in 2011 & 2012 were popular and sparked demand for more workshops, from across WA’s rangelands. Originally it was intended to run 4 workshops in 2013, covering the Kimberley, Pilbara, Gascoyne, and Murchison sub regions. However popular demand required additional workshops to be scheduled, as well as a few “private” sessions on host properties, the day after a workshop was held.

An evaluation form was provided to all participants at the end of the workshops. The evaluation aimed to understand the effectiveness of the workshop in meeting the needs of those attending. A total of 55 evaluation responses were received (Table 1). This was a response rate of 81%, a very pleasing result and likely indication that those present were happy to provide feedback to the organisers.

Erosion Control Workshop site	Number of Participants	Evaluation Responses Received	Response Rate (%)
Liveringa	5	2	40
Derby	5	5	100
Yarrie	4	4	100
Peedamulla	8	7	88
Winning	14	9	64
Carey Downs ("mini" workshop)	2	0	0
Austin Downs	20	18	90
Ningham	10	10	100
TOTAL	68	55	81

Table 1 – Evaluation response rate

Results

Which Sessions Did You Find Most Useful?

Respondents were asked to identify which of the following workshop sessions they found were most useful:

- Causes of problems on station tracks and fence lines
- Traditional versus alternative ways of dealing with problems
- Basics of surveying
- Practical – Surveying and the use of dumpy level
- Demo/practical – grader techniques

Respondent were asked to score each session from 1 – 5, with 1 representing “no use”, to 5 representing “very useful”. All respondents from the workshops responded to all parts of the question (n=55, 100%), with the exception of one respondent from Derby who provided no comment on the session about causes of erosion problems.

Erosion Control Workshop Series 2013
 Q3-Most Useful Sessions
 (Scored from 1 = no use, to 5 = very useful)

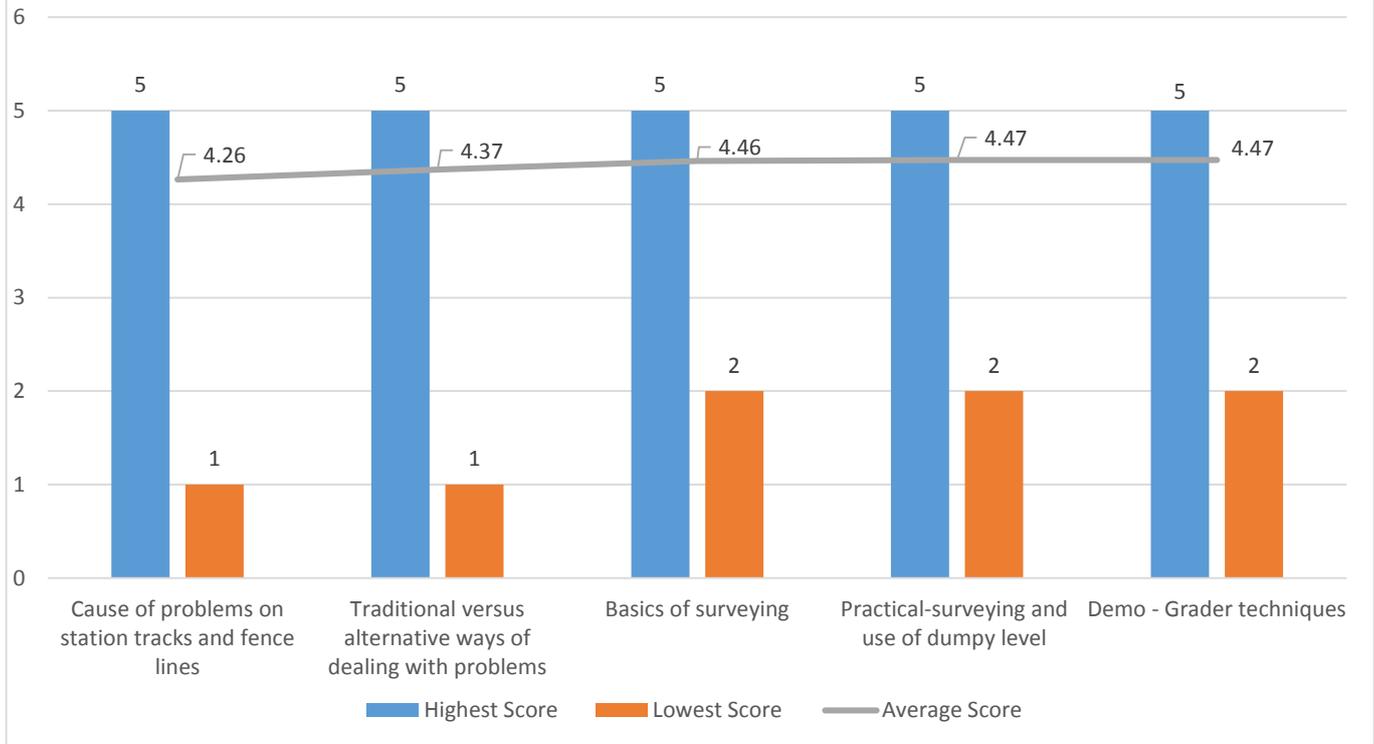


Figure 1 – Average scores to question 3 “Which sessions did you find most useful?”

All sessions were rated highly by respondents. Respondents found the practical sessions/demonstrations marginally more useful than the theory/“in class” sessions. Grader techniques and surveying were considered the most useful, followed closely by the session overviewing the basics of surveying. The respondents identified that the least useful sessions were the presentations about the causes of erosion problems and the traditional versus alternative ways of dealing with them (Figure 1), although the average score for these sessions was only marginally lower than the remainder. Across the 5 sessions and the majority of respondents the sessions were rated highly with ratings distributed as follows (Table 2).

Score selected by respondents where 1 represents “no use”, to 5 representing “very useful”	Distribution of score across all respondents and sessions (number of times score was selected)	% of total
1	2	0.78%
2	8	3.13%
3	23	8.98%
4	78	30.47%
5	145	56.64%
Total		100%

Table 2 – Distribution of responses across rating scores for usefulness of sessions

Relevance and Impact of the Training to their Work

Respondents were also asked to comment on their agreement with the following statements:

- The information provided today was relevant to the work I've been doing, or expect to do
- I learnt something that I can apply to my land management activities
- My land management knowledge and skills have improved as a result of the information provided
- I am likely to implement the techniques presented on my property

The available responses were 'Strongly Disagree', 'Disagree', 'Agree', and 'Strongly Agree'. Scores of 1 to 4, respectively, were assigned to these responses when analysing the data.

All respondents from the workshops answered the questions and a graphical representation of the results is shown below (Figure 2).

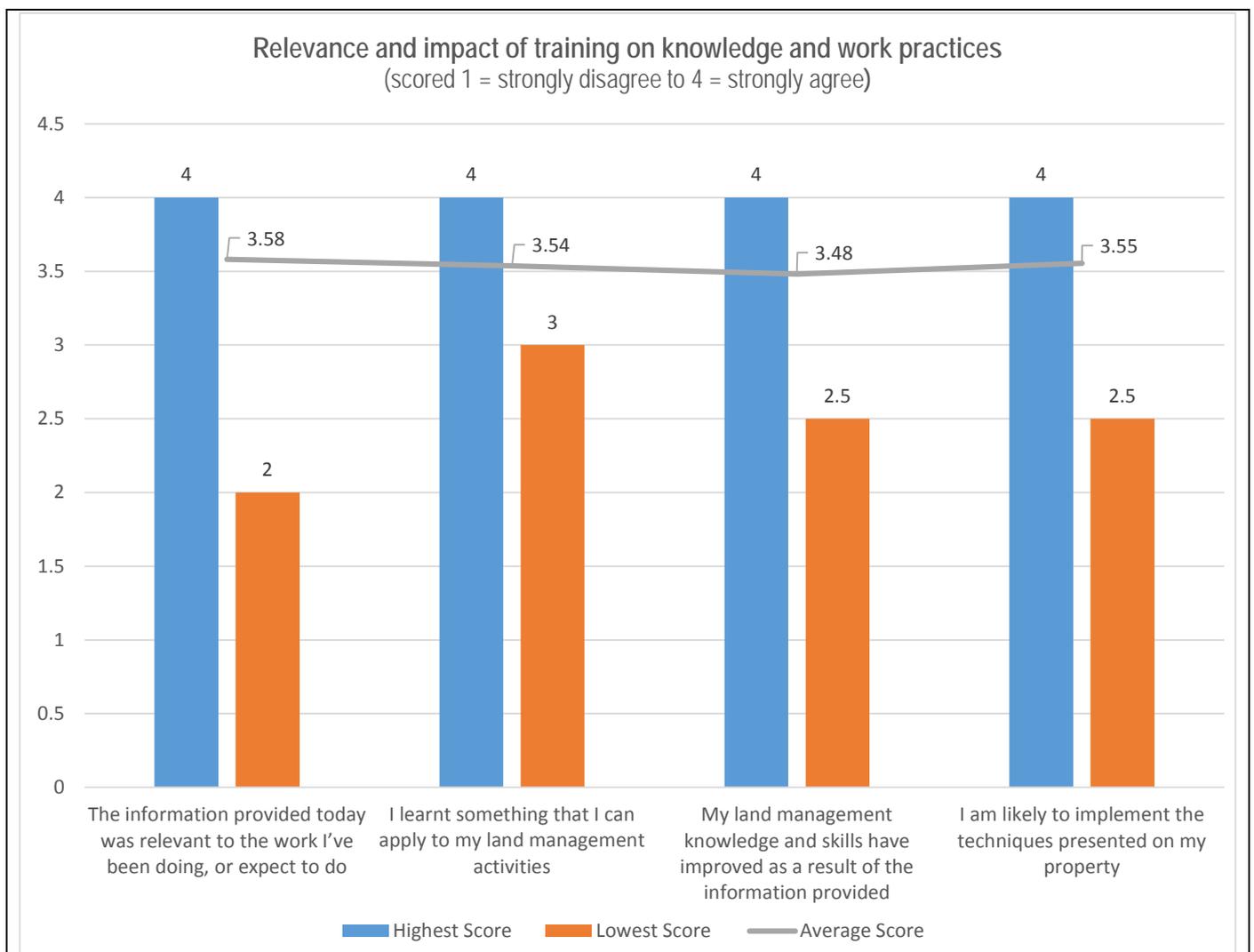


Figure 2 – Rating the relevance and impact of training on knowledge and work practices.

The responses indicate that the participants:

- Agreed that the information provided was relevant to the work they've been doing, or expect to do (average score of 3.58 from possible score of 4)
- Agreed that they learnt something that they could apply to their land management activities (average score of 3.54 from possible score of 4)
- Agreed that their knowledge and skills had improved (average score of 3.48 from possible score of 4)
- Agreed that they were likely to implement the techniques presented on their properties (average score of 3.55 from possible score of 4).

The results indicate that respondents had slightly less confidence that their knowledge had been improved but this difference is minimal. Across the 4 statements of relevance and impact the majority of respondents rated highly (Agree/Strongly agree) with ratings distributed as follows. Less than 0.5% of respondents disagreed with any of the 4 statements (Table 3).

Score selected by respondents where 1 represents 'Strongly Disagree', and 4 represents 'Strongly Agree'	Distribution of score across all respondents and statements (number of times score was selected)	% of total
1	0	0%
2	1	0.48%
3	96	45.93%
4	112	53.59%
Total		100%

Table 3 – Distribution of responses across relevance and impact rating scores

A comparison of the responses to these questions over the series of workshops delivered in 2011, 2012 and 2013 was only able to be achieved for one of the four questions (repeated in each year's evaluation form). Comparison of the responses to the question "The information provided today was relevant to the work I've been doing, or expect to do" over three years (Table 4), shows that the relevance of the workshops to work practice continues to be scored highly with the workshops in 2013 scored as relevant on average as in previous years. Caution is required with this data however, as the number of responses available in previous years is much lower than in 2013 and the scoring scale is different for 2013.

Year	Question	Score range	Highest Score	Lowest Score	Average Score
2011	The practices demonstrated today were relevant to the work I've been doing, or expect to do in my job	1-5	5	4	4.47
2012	The practices demonstrated today were relevant to work I've been doing or expect to do in my job	1-5	5	4	4.75
2013	The information provided today was relevant to the work I've been doing, or expect to do.	1-4	4	2	3.58

Table 4 – Comparison of relevance of workshop information to work practice 2011 – 2013

What factors are most likely to influence whether or not you implement the techniques on your property in the future?

Respondents were asked to provide qualitative responses to the question “What factors are most likely to influence whether or not you implement the techniques on your property in the future?”. Forty four (80%) respondents provided feedback to this question.

The number of responses shown in brackets below (including the percentage response rate), indicate how many times the issue was noted by respondents. It should be understood that this method of quantifying the number of responses is subject to error/double counting; however, it gives a reasonable indication of how frequently issues were mentioned in the evaluation responses.

The key barriers to implementation were noted as;

- Not enough money (48% – 21 responses)
- Not enough time (29% – 13 responses)
- Lack of access to necessary machinery (15% – 7 responses)
- Not enough confidence that they had enough knowledge/skills/experience to do the work (9% – 4 responses)
- Poor seasonal conditions to do the work (6.5% – 3 responses)
- Need for more practical training (2% – 1 response)

The key barriers of lack of money/funds, time, and knowledge/skills are a common thread across the erosion control workshops which have been conducted by Rangelands NRM over the past three years (2011, 2012, and 2013). However, point three “access to necessary machinery” may represent a different opportunity for Rangelands NRM to encourage collaboration between landholders for erosion control work in the region. It may be valuable for pastoral groups to investigate whether it is cost effective to hire appropriate machinery for erosion control works across a number of properties within one work season.

The same questions were asked of respondents in the evaluation of the 2012 workshops (but not in 2011). The 2012 responses followed a similar pattern to 2013 indicating the lack of time (3 responses), money (3

responses), additional practical training (2 responses), and lack of machinery (1 response) were key barriers to implementing the techniques they learned on their property.

Was there any other key learning that you will take away with you?

Respondents were asked to provide a qualitative response to *Was there any other key learning that you will take away with you?* Forty One (75 %) respondents provided feedback to this question.

The most frequently noted additional key learnings were:

- Survey techniques (34% – 14 responses)
- Erosion control construction techniques (6.5% – 3 responses)
- Water control techniques (10% – 4 responses)
- How to identify erosion problems (4% – 2 responses)
- Better knowledge of erosion control methods (4% – 2 responses)
- Information on cost of erosion control (2% – 1 response)

Learning to use the dumpy level to measure distance was a particularly memorable key learning for many participants of this workshop series.

Was there anything that could have been done better (including any topic not covered that you feel would have been useful)?

Respondents were asked to provide a qualitative response to *“Was there anything that could have been done better (including any topic not covered that you feel would have been useful)?”* Thirty four (62%) respondents provided feedback to this question.

The key areas of improvement identified were:

- Target similar training at Shires, Main Roads, Mining Companies, and Water Authority staff (4% – 2 responses)
- More notes/take home information (4% – 2 responses)
- Use of plant material in erosion control including relevant species lists (2% – 1 response)
- More information on construction of long contour banks (2% – 1 response)
- A new video needed (2% – 1 response)
- A longer workshop (2% – 1 response)

Point one identifies an opportunity to target NRM training towards local government, industry and state Government staff, or at the very least invite them to NRM training opportunities when they are being conducted within the region. It has been reported that this was also mentioned in verbal feedback to Rangelands NRM staff at the time of the workshop. Also, additional information materials related to the workshop topics, plus any other useful material requested by participants (such as plant species lists for erosion control mentioned above) could be forwarded to participants by email. This would add value to their training experience.

When comparing the responses from this workshop with those in 2011 and 2012, three respondents in 2012 suggested that a longer workshop (2-3 days) would be preferred to cover the topic in more depth.

Conclusion

A review of the results indicates that the workshops were successful in increasing the knowledge and skills of the respondents. The more practical sessions related to surveying, the use of a dumpy level for measuring distance, and the use of heavy machinery to construct erosion control structures were particularly well received by respondents.

Whilst respondents indicated that they understood the need for erosion control on their properties, they did identify a number of key barriers to implementation of the techniques they had learned – the key ones being not enough time, money, or access to machinery.

The comments generally indicate that the respondents were satisfied with the workshops' delivery and content. In future, it may be useful to have more detailed workshop notes to provide to participants for their own use, and to pass onto other people who could not make it to the events. These could also be uploaded to the Rangelands NRM website for future reference.

There were a couple of topics that may provide the basis for the development of future workshops, including the use of trees and plant material in erosion control and more technical instruction on the construction of contour banks.

This is the third series of erosion control workshops delivered by the Rangelands NRM staff over the past three years (2011, 2012, and 2013). It has been noted that different evaluation forms have been used for each series of workshops and that the questions asked each time have not been consistent. This makes comparative analysis of the results of the workshops and evaluation of the effectiveness of the training over time very difficult. Further work is required to improve data standardisation so that results arising from evaluation of similar events can be compared.

References

Jolley, K. (2009). Soil Conservation – A Managers Guide 2009, Savanna Solutions Pty Ltd