



"The Triple P Program"

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Abstract

The Triple P Program (PPP) is a continuation of the Grasslands Productivity Program (GPP) which ran from 1993 to 1996. The profitability of wool producers dropped following the abolition of the reserve price scheme in 1989. The GPP program was initiated primarily to help wool producers lift productivity and profitability and secondly in an endeavour to increase adoption of new technologies. It had been noted that few producers adopted new technologies following field days and seminars so the GPP was established to assist producers to implement the productive pasture technology on their own properties. The program was based on research conducted by the Victorian Department of Agriculture at Hamilton which showed that there are benefits from applying phosphorus to a perennial pasture system running spring lambing merino ewes in the >500 mm rainfall zone. The program provided wool producers with an opportunity to set up on-farm trials to evaluate a productive perennial pasture system with their current system of management in a group learning process. The results of the GPP showed after three years, that on average, producers received a return of \$1.67 for each extra dollar invested. The other key outcome was the participant's acquisition of the skills in livestock and pasture assessment. These skills are the basis of the Prograze course. Therefore although PPP stands for "Paired Paddock Program" it could also be called "Putting Prograze into Practise." Many participants stated one of the greatest benefits of the program was going to other properties and discussing issues in a group.

Background

The Triple P Program (PPP) which is abbreviated for "Paired Paddock Program" is a continuation of the Grasslands Productivity Program (GPP) which ran from 1993 to 1996. The GPP was initiated in 1993 to help woolgrowers investigate management strategies that might help increase their viability following the removal of the Reserve Price Scheme. The program was based on trials at the Pastoral and Veterinary Institute at Hamilton. The trials demonstrated that higher levels of animal production from spring lambing merino ewes were possible when they grazed at high stocking rates on pastures containing productive clover and perennial grass species, receiving high annual rates of applied phosphorus (Saul and Cayley 1992). These results were repeated when these pastures were compared with traditional low production pastures in replicated paddock comparisons at five sites across western Victoria.

The Triple P Program was launched in 1998 to offer more woolgrowers the opportunity to participate in the paired paddock program. Participants in the GPP stated that other woolgrowers should be offered the same course. The program has operated from Victoria, southern New South Wales, southeastern South Australia and Tasmania. This year the program has extended to cover more of NSW as well as some wool



producers in the pasture crop areas with low rainfall.

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In the initial year of PPP there were 58 groups with a total of 446 producers participating. The program set up farmer action-learning groups of six to seven producers who established paired-paddock comparisons to assess the impact of cost effective perennial pastures on their own farms.

Methodology

In 1997, fourteen facilitators were engaged to establish and manage Triple P groups. The basis of the program is to select two potentially responsive paddocks on each farm, to remove the nutritional limitations from one of them and to manage stocking rates to optimise feed utilisation.

Paddocks were either split for the project or similar paddocks selected. Where possible, the paddocks chosen contained perennial grass species, however this was not possible in a number of situations and annual-based or perennial weed based (eg. bent grass) pastures were used for these comparisons.

In situations where there were obvious differences between the paired paddocks, the better paddock was generally selected as the 'Productivity' paddock. This was done to allow the trials to express the potential productivity of the grazing system being investigated. However a number of farmers have selected some of their poorer pastures for the trial to see if they could significantly lift the productivity of these pastures.

Paddock treatments

Soil analyses were taken to determine the fertilizer requirements of the 'Productivity' paddock. Phosphorus was always applied. Other nutrients such as potassium, sulphur, molybdenum and copper have been applied as required.

The rates of fertilizer applied were designed to lift soil fertility levels rapidly. To achieve a level of consistency between sites, phosphorus has been applied at the rate of 1 kg phosphorus/ha for each 25 millimetres of average annual rainfall. For example, a site that has an average rainfall of 550 mm, superphosphate would be applied at the rate of 250 kg per hectare. There were a number of sites that were highly acid and these have been limed.

In some cases it was necessary to manipulate the existing pasture (through grazing, spraying etc.) to encourage clover content so that there were suitable species present to respond to the fertilizer. In these situations meaningful data regarding changes in stocking rate and profitability are not available.

At a number of sites, poor species composition or poor grazing management was identified as greater limitations to productivity than soil fertility and at these sites, treatments incorporating these facets were established. However, the basic tenet of the program of using a paired paddock comparison, to investigate the effect on productivity of removing limitations to pasture production, remained.



Stock types and stock management

A wide range of stock types is being used in the comparisons. The approximate break up of enterprises is:

Wool Sheep	71%
Meat Sheep	12%
Cattle	16%

In most cases, both paddocks have been set-stocked, for evaluative purposes only, with similar animals, initially at the same stocking rates. This stocking rate has been based on an estimate of the carrying capacity of the control paddock under the current management regime. Using the condition of the stock on the control paddock and the pasture on that paddock as benchmarks, stocking rates are adjusted as the pasture responds and the individual animal liveweight on the 'Productivity' paddocks increase.

The objective is to maintain the stock condition on the 'Productivity' paddock at a level similar to or slightly better than the condition of the stock on the control paddock.

For a number of reasons, participants are encouraged to set stock their trial paddocks. This has not always been possible and in a number of situations where farmers have identified grazing management systems as their major limitation, stock are being rotationally grazed.

Measurements

Farmers are required to monitor the performance of their stock and to record changes in stocking rate, animal condition, etc. Grazing days and dry sheep equivalent (DSE) ratings/ha are estimated where stock are rotationally grazed.

Animal performance is monitored by measuring liveweight or fat score in late autumn, in mid-winter and at the end of spring and weaning percentages annually. Lamb weaning weights are also a measure of the performance of the system. Some producers have also been able to measure wool production and wool quality. Pasture availability and pasture composition is assessed visually throughout the year but specifically in early autumn, early winter, late winter and at the end of spring.

Group operation

The farmers are asked to manage the paddocks as close as possible to a practical farming operation. In running the comparisons they are asked to consider the following questions:

- What level of productivity can be achieved when soil fertility is boosted and other limitations removed?
- What is the impact on profitability?
- What problems, if any, will arise from lifting productivity?
- What are the implications for whole farm management, if the technology was adopted over more of the farm?

Each group meets five times a year to assess the progress of the comparisons and make management changes as a result of changing pasture availability and stock condition. Pasture budgeting skills are taught during the program to provide a basis for making stocking rate adjustments.



The meetings have coincided with periods of the year that are critical either in setting stocking rates or in evaluating the impact of previous decisions. The actual dates vary between locations but are generally in late summer, early winter, late winter and the end of spring.

PPP Results to date

Gross margin analyses in the first year in most cases did not provide an accurate indication of the financial benefits of the program because pastures take a while to respond and in many cases stocking rate adjustments have not yet been possible. In other situations the first year has concentrated on preparing the paddock through grazing management etc and meaningful results are again not likely until the second year.

At the time of writing this report the analysis of the second year has not been finalised. A preliminary result from 4 groups of producers showed a return of \$1.51 for each extra dollar invested.

Stocking rate changes

In the first year of the program there was an average increase of 2.9 DSE/ha across the 160 sites. The average stocking rate on the control paddocks has been 12.7 DSE/ha and 15.6 DSE/ha on the 'Productivity' paddock – an increase of almost 23%.

At the end of the first year the results showed that, on average there has been a slight increase in gross margin on the 'Productivity' paddocks. Average gross margin for the control paddocks was \$195.40/ha and \$214.50/ha for the 'Productivity' paddocks.

The measure of profitability used was the dollar return on dollar invested. Therefore a return greater than \$1 represents a profit. The average dollar return on dollar invested was \$1.23 with 60% of sites achieving a return of \$1 or greater.

General observations

- Results confirmed potential stocking rates on well fertilised, productive perennial pastures, for an area are determined by rainfall. (Table 1)

Table 1. Potential stocking rates determined by rainfall

Annual rainfall (mm)	550	600	650	700
Potential stocking rate (dse's/ha)	15.6	18.2	20.8	23.4

These rates are applicable to south eastern Australia and need to be verified for other areas.

- Stocking rates are increased providing the stock and or pasture is above target levels.
- Autumn lambing merino ewes showed little or no financial gains to increased applications to fertilizer.
- Increased pasture grown must be utilised in order to maintain pasture quality.
- Fertiliser applications have not eradicated onion grass.
- Pastures containing high levels of silver grass show little response to fertilizer applications.
- Worms (internal parasites) were the same or less of a problem on well fertilised paddocks in most cases despite higher stocking rates.



- Selenium deficiency is potentially a problem in marginal areas when fertiliser is increased.
- Well fertilised pastures had better resilience in droughts.
- Well fertilised pastures are bared off earlier in the autumn due to higher digestibility.
- On-farm trialing and witnessing the results was the major impetus for adopting change.

Conclusion

This program is not a recipe for profitable productive pasture systems nor is it a grazing management program. It is rather, a program of training for producers to acquire the necessary skills to manage pastures to their optimum. It provides an opportunity for producers to evaluate their current management system against the productive pasture technology on their own property in a group situation. To witness a response on your own property results in greater confidence to adopt the system further. If the process shows no response then the extra outlay of funds is not a hardship and can be seen as benefit.

References

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