1997

Woolpro : the way to better pastures and sheep

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WOOLPRO farmers recognise that sustainable increases in productivity are essential to maintain and improve the income of woolgrowers. Julia Fry outlines some case studies which illustrate how farmers are using WOOLPRO.

WOOLPRO
Sustainable productivity and profit

To increase productivity in terms of the amount of wool grown per hectare, pastures need to be well managed and grazed to optimum levels at critical times. WOOLPRO farmers are developing skills in improving soil and pasture, matching animal requirements to feed grown, assessing ground cover and managing seasonal variations. These are essential skills for achieving sustainable increases in productivity.

WOOLPRO is an extension project funded by the Agriculture Western Australia Wool Program and the International Wool Secretariat. It is steered by an industry committee with representatives from Agriculture Western Australia, CSIRO, agribusiness and several farmer representatives. The committee chose the word WOOLPRO with the idea that ‘pro’ signifies productivity, profit and professionalism.

The clover leaf on the logo symbolises WOOLPRO’s primary concern with the efficient use of productive pastures. It is also concerned with long-term sustainability of wool production and therefore with environmental issues such as waterlogging, salinity and erosion.

WOOLPRO Chairman Allen Clarke wanted to be involved in the project in order to see more research findings implemented on-farm. “Woolgrowers have not achieved anywhere near the same productivity gains per hectare as some other industries,” he says.

Allen explains that WOOLPRO has two main aspects:

- productivity evaluations on farmers’ properties; and
- WOOLPRO focus farms.

Productivity evaluation case studies
WOOLPRO farmers set up and run productivity evaluations on their farms. Some of the evaluations are based on a two-paddock comparison. The farmer changes management in one paddock (the evaluation paddock) and compares it with an unchanged control paddock. Other evaluations may involve sowing a different pasture species, pasture manipulation or renovation of pastures.

The 1996 evaluations suggested some productive management practices to follow up, which are outlined in the following case studies.

Rod Sims, Narrogin
Rod Sims’ objective was to evaluate grazing to a target feed on offer with the aim of using more of the feed and to compare this practice with set stocking. By increasing the stock in his evaluation paddock when feed was plentiful in spring, Rod freed up paddocks for spray topping and kept his unshorn lambs out of the more grassy paddocks.

Even in the relatively poor 1996 season, Rod was able to
increase the grazing days per hectare in the evaluation paddock by 100 per cent compared with the control paddock. In 1995 in a similar comparison, he increased grazing days per hectare by 40 per cent, wool cut per hectare by 20 per cent and gross return by 30 per cent.

Ashley and Lucille Hobbs, Brookton
Ashley and Lucille Hobbs set stocked the control paddock at 10 sheep per hectare and grazed the evaluation paddock to a target feed on offer. Lucille estimated the feed on offer in the paddock every three weeks during the green phase and advised Ashley when more stock were needed on the paddock.

The wool cut per hectare in their two paddocks was similar as a result of the poor season. However, the wool in the evaluation paddock was almost a micron finer, 5 Newtons per ktex stronger and was worth 48 cents per kilogram more than the wool from the control paddock. There was an 18 per cent increase in return from the evaluation paddock.

Bill Moore, Narrogin
Bill Moore was interested in evaluating the effects on productivity of increased superphosphate rates (200 compared with 100 kilograms per hectare). Pasture production was not as good as expected because of the late break but Bill was able to stock his evaluation paddock at an average of 14.5 DSE per hectare compared with the control at 12.1 DSE per hectare.

The wethers in the evaluation paddock maintained better body condition than in the control paddock. The evaluation paddock produced 44 kilograms of wool per hectare (gross return: $233 per hectare) compared with 37 kilograms per hectare (gross return: $196 per hectare). Bill is continuing his evaluation this year and including redlegged earth mite control.

Dale Park, Badgingarra
Dale Park tested a higher superphosphate rate (400 kilograms per hectare) to improve his pastures in the evaluation paddock and combined this with grazing the pasture to a target feed on offer. The paddocks were sandy gravelly typical of the Bibby Springs area. He deferred early winter grazing on the evaluation paddock because of the poor start to the season and then divided it into three parts and grazed them in rotation.

In the control paddock Dale applied superphosphate at normal rates (100 kilograms per hectare) and set stocked. The evaluation paddock produced 63 per cent more wool per hectare than the control paddock and the wool from the sheep in the evaluation paddock was nearly 1 micron finer.

1997 evaluations
In 1997 there are 120 farmers running evaluations which cover a broad range of management practices.

For example, Adrian Phelps at Neridup in the Esperance region is evaluating grazing in paddocks in their first year after crop. He is
grazing the evaluation paddock to a target feed on offer. When pasture growth rates are sufficient, Adrian will lock up half the evaluation paddock and cut silage. He will put sheep in the section cut for silage to graze the regenerating pasture. Adrian intends to compare productivity from the two paddocks and follow what happens to pasture composition and regeneration in the paddock in the year following the silage harvesting.

Some farmers are evaluating ways to turn unproductive barley grass flats into productive pastures using annuals such as balansa and Persian clovers. Bob and Lyn Baker aim to increase wool production per hectare by increasing summer-autumn feed. They manage Redhills near Arthur River for Dick Lester. Bob and Lynn are comparing a paddock sown to balansa clover to one with a balansa:standing oats mixture, to see which paddock produces the best summer feed.

Other farmers are evaluating ways to establish perennials using recommended grazing management practices and monitoring the watertable and salinity problems. They hope to improve water use and increase productivity from waterlogged areas.

Andy Hardie is planting a 15 hectare waterlogged site on his farm near Williams to a range of perennial pastures. He has chosen those that have performed well in previous small trial plots. Andy is evaluating:

- phalaris – Holdfast;
- fescue – Triumph and Advance;
- strawberry clover – Palestine;
- puccinellia;
- tall wheat grass – Tyrell;
- plus a 'shot gun' mixture of cocksfoot, chicory, kikuyu and Rhodes grass.

He will establish the site this year and stock it in 1998. The site will be used to demonstrate the persistence of perennial pastures under a rotational grazing regime. Andy will monitor pasture establishment, growth rates and pasture production in the first year and pasture growth rates, pasture production and sheep grazing days in the second and third years.

Andy is also continuing his comparison with deferred grazing and nitrogen topdressing of annual pastures. Last year he had a doubling of early feed in only two weeks after nitrogen application. This year he is evaluating two rates of nitrogen application on paddocks that are various years out of crop. Andy intends to monitor pasture growth in the different areas.

**WOOLPRO focus farms**

A number of farmers throughout the woolbelt have offered their farms as WOOLPRO focus farms. Detailed paddock measurements enable farmers to see the feed pattern for the whole year and how it varies on different land management units. Knowing pasture quantity and growth rates enables farmers to make informed decisions about:

**WOOLPRO groups**

The WOOLPRO farmers in an area form a group and tour one another’s evaluations to discuss the management changes and the effects.

WOOLPRO farmers can also set up neighbourhood groups and become involved in an evaluation in their area. For example, the Esperance Region Wool Improvement Group tour the WOOLPRO sites in their region and discuss the results and implications for changes in management.
Ashely Stone weighing sheep on the Focus Farm at Williams.

- long-term carrying capacity, for example, time of lambing and stock buying and selling policies;
- feed budgeting, for example, managing feed surpluses or coping with a feed shortage; and
- grazing plans, for example, grazing paddocks to achieve targets for liveweight or wool quality.

Assessing feed on offer.

Feed on offer – 2000 kilograms of dry matter per hectare.
The effect of waterlogging and other factors that affect pasture growth are also being monitored.

WOOLPRO farmers can visit the focus farms and study ways to assess feed on offer, plant density and pasture composition. In the dry period, they can learn how to assess ground cover to help decisions about erosion control. Focus farms are an important resource for WOOLPRO farmers in developing skills to increase sustainable productivity through better information on pasture growth rates.

There are currently two whole-of-farm WOOLPRO focus farms, one at Kojonup in the lower Balgarup catchment and one at Williams in the upper Crossman catchment. On these farms Agriculture Western Australia Wool Program staff are measuring how much feed is grown throughout the year and how it varies from year to year.

Changes in farm management such as cutting silage or strip grazing are also being measured in terms of their affect on the overall pasture and animal production system.

WOOLPRO will be expanding next year so if you are interested, contact your nearest adviser (see map and contact list).

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