

The shift from wool to meat – implications for conservation of tableland native grasslands

John and Jan Powell

"Woodvale", Old Gap Road, Yass NSW 2582

Abstract. "Woodvale" is located high up in the southern tablelands of New South Wales on the eastern boundary of the Yass River catchment. When we purchased it in 1988, it was a 170 ha unimproved native grassland block suitable for grazing only by wethers. Much of it by today's standards was high conservation value native grassland. Over 15 years, the carrying capacity and profit-making ability of "Woodvale" has been dramatically enhanced by converting native grassland to native pasture, and by changing merino genetics from fine wools to extra superfines.

From 2003, market and climatic factors affecting wool growing on native grasslands and pastures on the southern tablelands have fundamentally changed. Sheep meat production has become a higher priority and rainfall has become much lower overall and more variable. For "Woodvale" to survive as a business, these changes have triggered a change in flock structure, a return to superfine and fine wool genetics, and a further shift away from conserving native grasslands and towards increasing productivity of native pastures. Direct drilling of phalaris to further increase productivity is also an option.

Native grasslands can be very resilient and the trend from native grassland to native pastures is probably not irreversible. An opportunity exists for the introduction of grassland conservation schemes that could enhance the viability of our business.

Property location and description

Our property "Woodvale" is 12 km east of Yass on the southern tablelands of New South Wales. It is high up (600m) on the eastern boundary of the Yass River catchment and comprises 170 ha of non-arable rises and hills. Land classes range from IV to VI. (NSW Land Classification System) We adjoin a nature reserve and kangaroos cause significant fence damage.

Late 1980s to early 2000s – extrafine merinos generally profitable

When we bought "Woodvale" it was essentially an unimproved wether block dominated by kangaroo grass, wiregrass, and poa tussock. It was fenced into two large paddocks and several smaller paddocks. Grazing pressure had been relatively low for many years.

By today's standards (and in hindsight), much of "Woodvale" was high conservation value native grassland in 1988 as there was a diversity of native grasses, they had retained their tussocky habit, and native flowers were common.

Over the next 15 years, we intensified our production system by implementing "best management practices". We subdivided "Woodvale" up into more than 20 paddocks, planted trees, fenced off natural regeneration, spread subterranean clover and superphosphate and put in more watering points. Tree cover increased from 5% to 32%. Weeping grass and wallaby grass replaced kangaroo grass and wiregrass on the deeper soils and annual legumes and grasses became more common on lighter soils.

This dramatic change from grassland to pasture more than trebled carrying capacity, transforming wether paddocks into lambing and growing out paddocks. These changes (especially the expansion of weeping grass), combined with improved genetics also enabled us to produce spinners wool of exceptional soundness (eg 15.4 microns at 60 N/Ktex, and 14.7 microns at 45 N/Ktex).

Investing in better genetics also reduced average micron from 19 to 16 with only a minimal fall in cut/head. Despite a drop in lambing percentage from about 85% to 70%, flock structure remained fairly constant at about 40% breeding ewes, 30%

their progeny, and 30% grown wethers.

As well as increasing wool quality, total production of greasy wool per ha of pasture rose more than 500% from 5 kg/ha in 1988 to almost 27 kg/ha in 2001. At our 15-year average clip price of 987 c/kg greasy, this increase in quality and production translated to an increase in annual wool income from \$7400 to \$34,110.

From 2000 to 2002, we had an even better run with wool and surplus sheep prices, with our clip averaging 1244 c/kg greasy and sheep prices averaging about \$25.

Notwithstanding the worsening drought in 2002, we were confident that we had dramatically improved our pastures' profit making potential while substantially increasing tree cover. The remaining native grasslands which still covered about 40% of the property suited the wethers and they were profitable. It was all coming together well!

2003 – Fundamental changes in operating environment

In our opinion, 2003 marked a turning point where the fundamentals of running merinos in the southern tablelands changed permanently (or at least for the remainder of our farming careers!):

- The average clip price for our wool dropped to around 800 c/kg greasy, and is likely to remain at about this level for the foreseeable future, given the dominance of China and India and the world textile situation;
- The average surplus sheep price has increased to about \$30 and is expected to remain at or about this level given the global outlook and increasing demand for sheepmeat including mutton;
- Over the last 10 years or so, our average annual rainfall has dropped from about 700mm to 500mm, with up to 25% of this falling in high evaporation months so it is not only lower, but it's less effective than it used to be;
- There appears to be consensus amongst climate forecasters that our weather over the last few years is indicative of a longer term pattern that will see more prolonged dry spells and more frequent droughts, interspersed with rain falling less often but harder (to quote Gordon

Refshauge, "The rangelands are moving east");

- There is such a cumulative deficiency in soil moisture at "Woodvale" now that even if the long term climate forecasters are wrong and rainfall does return to average or above average this year or next, it would be many years before soil moisture gets back to a "normal" sequence eg dry in '94, good in '95 and '96, dry in '97, good in '98, 99' '00 etc.

This is a substantially different operating environment to the one that prevailed for most of our first 15 years at "Woodvale". Instead of the Yass district living up to its reputation as a relatively safe rainfall area with uniform rainfall distribution, it has become more like the Monaro had been for many of those years – dry and cold in winter with hot dry summers, interspersed with some good rainfall events that could come at any time of the year.

A question of business survival

The key question facing our business is what sheep breed, flock structure, genetics and pastures can make us the most profit over the next 5 years in what has become a relatively harsh "rangelands" type environment?

On the subject of **sheep breed**, the kangaroos and the terrain make it impossible to have fences that are crossbred proof, and even though we have developed much of "Woodvale" from grasslands to pastures, it is not possible to grow prime lambs out to market specifications. So we have to stick with merinos.

Regarding **flock structure**, NSW DPI gross margins for January 2005 show that a self-replacing 19 micron merino ewe flock is 50% more profitable than a 19 micron wether flock (\$20.64/DSE for 19 micron ewes compared with \$13.77/DSE for 19 micron wethers). While the actual levels of profit might be different on "Woodvale", we are satisfied that having all ewes would be more profitable than all wethers, or having even a proportion of wethers.

With **genetics**, from the early 1990's we progressively moved from a 19 micron finewool flock to a 16 micron extra superfine flock. Although the extra superfines are smaller and less robust (especially the newborn lambs), this proved to be a good move for much of the 1990s. Despite some

volatility there was often strong demand from Italy, Europe and Korea for very fine and exceptionally sound spinners wool. The large premiums in the good years made up for the average prices in the not-so-good years.

However, more variable and lower overall rainfall looks like becoming the norm in our district. This change in soil moisture availability, combined with our cold winters, requires more robust sheep than the small extra superfine sheep we have at the moment. Furthermore, global textile markets have now fundamentally changed. While China and India do appreciate the qualities of our spinners wool, they will not pay what it costs to produce it.

In summary, even though our native grasslands can produce the best quality wool in the world, we can't see extra superfines on native grasslands returning to financial viability within the next 5 years. In contrast, bigger superfine to fine wool ewes on native pasture producing best topmakers wool and having more and bigger lambs are likely to be financially viable.

Major changes = less grassland, more pasture

In 2004 we responded to these market and climatic signals and started making major changes to our business. We are now running an all ewe flock, and selling our young wethers as two toothed shortly after their first shearing. In 2005 we have sourced bigger, 18-19 micron rams and have changed our joining procedures to maximise conception rates instead of wool quality.

Consistent with the advice from meat and wool research organisations, we intend to further subdivide and put more super on the wether paddocks to convert them into lambing and growing out paddocks. We are trying to keep the ewes in fat score three to get lambing percentages back up to 85-90% and maximise growth rates of young wethers for sale.

In combination, these changes will further extend the area of pasture on "Woodvale" dominated by weeping grass, wallaby grass, sub clover and annual grasses. Direct drilling phalaris into paddocks that have now had more than 10 years of super is also a possibility to further increase productivity.

While our management changes look like returning us to financial viability, they are diminishing the

species diversity and conservation values of the remaining area of "Woodvale" that until recently was wether paddocks dominated by kangaroo grass and wiregrass with some native flowers.

The unfortunate thing is that notwithstanding the rhetoric from some elements of the broader Australian community that they appreciate our native grasslands and want us to maintain their conservation values, they will not pay us what that costs.

A future scenario = a return to less pasture, more grassland?

The resilience of our native grasslands never ceases to amaze us. In the distant past (around the 1900's and mid-1940's), "Woodvale" must have been severely overgrazed as there are numerous old stabilised and grassed up gullies and up to 60 cm of silt up washed up against some of the netting fences. Yet by 1988 much of its grassland had recovered sufficiently to have high conservation values.

Some other observations that we have made in the Yass district include gravel tennis courts now covered in red grass, and a failed conventionally sown exotic pasture being recolonised within a few years by wallaby and spear grass. We understand that similar observations have been recorded in retired cropping paddocks by livestock producers in central western New South Wales.

The point we are making is that although our management of "Woodvale" over 17 years has changed a lot of it from native grassland to native pasture, it is probably not irreversible given sufficient time and a few changes in our operating environment.

We have the fencing infrastructure, knowledge and skills to "dial in" the types of grassland or pasture desired by the broader community and we would be prepared to modify our management of "Woodvale" to achieve their objectives if they are prepared to pay us what it costs us to provide that service.

We await with interest the development of a native grassland conservation scheme that would involve Government agencies on behalf of the broader community defining the type of native grassland they want, placing a value on that grassland, and inviting our business to negotiate a management

and remuneration package to deliver that grassland.

Well-designed grassland conservation schemes have the potential to enhance the viability of our business by providing an alternative income stream to meat and wool.