Pastures for prime lambs

Chris Blunt, "Bondonga", Orange

INTRODUCTION

Bondonga is a 900 ha grazing property 12 km east of Orange on the Central Tablelands. The climate is cool temperate with a fairly even distribution of 820 mm of rainfall throughout the year. Topography is gently undulating with 80% of the land arable and the remaining 20% made up of rocky ridges and parcels of remnant bushland.

Our soils are mainly of volcanic extraction ranging from grey through to red andecite volcanic ash, with small areas of light clay ironstone to slates supporting bushland areas.

BACKGROUND

"We live in a changing world", a cliché we've all heard before and the pace of that change cannot be better illustrated than in the Australian agricultural climate of the past 20 years. It is characterised by extreme fluctuations in climate, commodity prices and interest rates. There are also ever-increasing cash handouts to our farming compatriots and global competitors in the US and in the UK. At the same time, Australian farmers are increasingly perceived by our general populace as less important to Australia than they were in days gone by.

Yes, a changing world that has forced change on our farming practices. Some have been good changes and others have been bad. We have been forced as agriculturists to explore new farm and business methods and being stubborn individualists, we have all had our share of personal successes and failures.

My message in opening is to encourage you to meet the next challenge, and there will be others, head on. You've seen 20 pretty tough years and if you are all still farming, you should be proud. Compared with the rest of the world, we're a tough and resilient bunch and in spite of our climate and soils, we remain a highly efficient farming sector.

Yet my biggest fear in spite of the optimism already mentioned, is the overall sustainability of Australian agriculture in the long term. The over reliance on annual crops to remain profitable in Australian farming is slowly destroying our resource base, as a sea of salt is being steadily mobilised by our rising watertable.

Yes I can hear you saying "what does that have to do with pastures for producing prime lambs?" Absolutely nothing! I just wanted to get all that off my chest! But seriously, good perennial pasture management on the Central Tablelands can lead to a win-win situation both environmentally and financially.

OUR ENTERPRISE

"Bondonga" is a property on which we specialise in the production of prime lambs. We join 4000 to 4700 first cross ewes to produce about 4500 to 5000 second cross lambs depending on the season.

The ewes are generally joined in the third and fourth week of February with 1.5% of Lamb-Plan tested white Suffolk rams.

Prior to the last 8-10 years, 60-70% of lambs were marketed as suckers to the domestic trade at an average carcass weight of 17kgs. However over the last few years, with greater processing efficiency and the growing export trade, the market has dictated the move to the production of heavier lambs.

This has now meant we rarely achieve the marketing of more when 40-50% of our lambs as suckers and our average marketing weight has crept up to 20.5kg. This has necessitated the post-Christmas shearing of lambs. January 2002 saw us shear some 3300 lambs and this has put different demands on our summer/autumn pastures, not previously experienced. This is turn led us to find a pasture base to suit these demands.

PAST PASTURES

My grandfather, Bill Blunt, adopted the use of super and sub-clover 60 years ago using a direct dropper, a strong horse and a stronger shoulder to lump the potato sacks full of fertiliser. It was hugely successful. Our phosphorus deficient soils responded immediately, the clover grew up to the running boards of his chevy ute and fixed nitrogen for the annual and native grasses.

My father, Harry Blunt, decided to refine the pasture program in the 1950's with the adoption of yearly applications of 125 kg/ha of Super, spread aerially and the establishment of perennial rye grass and phalaris. The battle to control nitrophilious weeds was stepped up with the annual misting of pastures with 2,4-D.

This highly successful management regime continued until the disastrous drought of the early 80's.

Harry's son Chris (that's me) left school in 1980 and walked into pretty much the worst drought in living memory. Sadly our perennial pastures suffered very badly, completely losing stands of perennial rye and badly thinning phalaris stands. In an unfavourable partnership with the drought, came high interest rates and low commodity prices. Subsequently, cost cutting began.

Sharing the thoughts of other farmers in the area, fertiliser looked to be the obvious first cut in expenses. We believed that the money invested in "Bondonga's" phosphorous bank over the previous 30 years would carry us over the next few lean months ahead. We were wrong.

Those few months turned into years and production levels were falling. The loss of soil fertility is an insidious one that is often explained away by seasonal and animal health issues.

The loss of soil fertility had manifested itself in numerous ways:

- Lower lambing percentages (due to lower ewe joining weight)
- Lower weaning and sale weights of lambs
- Lower wool tensile strengths
- The appearance of low nutritional grasses, such as *Vulpia* and rushes
- The continued loss of perennials, in particular, ryegrass.

We started re-applying fertiliser to at least 50-60% of the property in 1988. We have maintained that strategy to date often applying up to 250 kg/ha on the more productive pastures during their establishment phase. It is interesting to note the biggest response I have seen was from the application of 80 kg/ha of SF45 because I thought our soils should have satisfactory sulphur levels.

On some of our lighter soils we found that we were getting very little response from even the heavier rates of fertiliser. The diagnosis - soil acidity. The remedy - lime. These soils were showing a pH down to 4.2 and Al levels up to around 20%.

We started off by applying and incorporating lime at 2.5 tonnes per hectare to the problem paddocks. The results were so encouraging we have extended the application and incorporation to our better soils and now only 25% of the property has not been limed.

We noted a huge increase in dry matter for the first 2-3 years after incorporating lime, then the dry matter production plateaued at acceptable levels.

The paddock mentioned previously, (pH 4.2), was limed 15 years ago and is still responding to P applications. A more targeted approach will be our goal over the next 20 years. More emphasis also needs to be placed, on not only pH and sulphur and phosphorus status, but also on trace elements and organic matter levels. Or to be more precise, following "Liebig's Law of the Minimum" which states and proves, "that plant growth will be limited by the nutrient that is the most deficient". With every kilogram of meat, wool, grain or hay produced, nutrients are being removed from soils and need to be replaced.

CURRENT PASTURE PRODUCTION

After the drought of the 1980's and with the need to finish our carry-over lambs in summer and autumn, we were on the hunt for a pasture that could keep producing through the summer and into our fickle and often dry autumns.

Along came the "Fescue For Meat" project in 1995. Twenty seven farms took part in the project in an attempt to determine the relative benefits of the new tall fescue cultivars against the traditional pastures used in the regions where the project was undertaken.

On "Bondonga", cultivars Advance and Dovey tall fescue were compared against each other and also against the traditional perennial ryegrass. Paddocks were sown in May 1996. The tall fescue was sown at a rate of 14 kg/ha, with 3 kg/ha of Demand white clover. The Kangaroo Valley rye grass was sown at 12 kg/ha, with 3 kg/ha of Demand white clover. Each paddock also had 120 kg/ha of DAP fertiliser applied at sowing.

Lambs were weighed and each paddock was evenly stocked. Palatability and live weight gain were monitored for each paddock over a period of ten months. The evidence suggested that tall fescue would marginally out produce the rye grass during winter and early spring and then go on to provide quality feed through summer and autumn, when there was little production from the rye grass.

The new cultivars of tall fescue have been bred with improved palatability. They have finer and softer leaves than older varieties, yet the hardier qualities of the plant have still been maintained. They will withstand long periods of drought, are tolerant of water logging, low pH, are legume friendly and of deep rooted habit. All of these features seem to fit the requirements of the pasture we had been looking for. Our lambs were being supplied with green forage, even in our driest autumns and with a small grain supplementation we were meeting marketing weights even under the most arduous seasons.

In singing the praises of tall fescue, 70% of "Bondonga" is still sown to phalaris, rye, sub and white clover pastures, many up to forty years of age. These pastures had thinned considerably during the drought years of the 1980's but with the return of regular top dressing and recent good seasons stands have thickened extremely well. In particular, it is encouraging to witness the way perennial rye grass has recovered.

We are not particularly fond of our Australian phalaris stands. Over the years phalaris has proved a very persistent plant and at times quite valuable but we have found it to be a maintenance feed for our sheep and lambs rather than a fattener. It has a tendency to cause scouring and become too dominant over our legumes. The plan is to eventually replace phalaris stands with tall fescue.

The legume component of our pastures has always been reliable. Subterranean clover would have to be the most underrated plant in the pasture kingdom, its ability to produce high protein feed and prolific hard seed and to provide a nitrogen source for our grasses is amazing. Even during the 1980's drought, mentioned above, when paddocks were completely bare, our ewes were fattening on the clover burr they dug up with their hooves.

In recent times we have been sowing Tahora white clover with our grasses. It has quite an unimpressive habit, being very prostrate, but it has the ability to be extremely persistent under the harshest stocking rates. On our farm we of course have a variety of native and other introduced species including *Microlena*, *Danthonia*, Yorkshire Fog, Barley Grass, Soft Brome, *Vulpia*, Trefoils etc. Some people may deem these as undesirable, but if grazing management and soil fertility is appropriate they will always be in balance with our more productive friends. They also enhance the botanical diversity of our grasslands and most of them have times during the year where they are productive grazing plants.

GRAZING MANAGEMENT

To gain the most nutritive benefit from pastures for prime lamb production we attempt to manage our pastures in a range between 2000-3500 kg/ha of green dry matter. In this range the grasses are more palatable, higher in protein and respond more quickly to rain and sun. We often find it difficult to attain this through grazing pressure alone so we found it beneficial to mechanically "top" our pastures. This is done in late spring or autumn with a hay mower or slasher. It is a procedure that has benefited the perennial grasses and controlled the seed set of annual grasses.

Our overall grazing management is based on visual pasture assessments with decisions mad considering the livestock to be grazed eg. ewes or lambs, pasture competition and the total feed resource at our disposal. No strict rotation or time philosophy is used in the movement of stock, although pastures are rested for various lengths of time to allow root development and adequate leaf recovery. The challenges in a modern grazing enterprise is to keep making the subtle changes in an effort to keep your business relevant and sustainable both financially and environmentally into the future.

INTO THE FUTURE

Our goal is to maintain our current stocking rate at 13 DSE/ha. I believe at that level a good balance can be made between production and nature.

We need to manage and improve our pastures in a more organised manner. I have just completed a course on Holistic Management and also Prograze. Both these have opened my eyes to some potential beneficial grazing and management philosophies. I believe the answer for "Bondonga's" pastures may lay somewhere between and above regimes balanced with my own experiences based on twenty years of visual and anecdotal evidence in pasture management.

Pastures are the visual indicator of a farm's potential production. Healthy pastures point to fertile and well managed soils and sensible grazing strategies. We will keep monitoring and appraising new pasture varieties and cultivars as they become available. Big gains may be possible in production with the possible advent of clover resistant to Red legged earth mite attack and of plants which utilise deposits of phosphorous more effectively.

But the soul of any farm is its soils and to manage soils in an effective and responsible manner is something we should all adopt a more learned approach to. Australia's soils have some enormous problems, salinity, acidity, fragile and infertile they need the appropriate agronomy to sustain them. I believe perennial grasses such as tall fescue can go a long way in addressing these problems, but Australian farmers need encouragement. It is not cheap to establish pastures. Our governments need to consider the financial support of programs supporting sowing of deep rooted perennial grasses and of addressing the increasing problem of soil acidity, just as it has done in the tree planting incentives sponsored through Landcare. Deep rooted perennial pastures have the ability to solve Australia's looming and present soil salinity problems while at the same time enhancing the profits of our farming and rural communities.

So as you can see, managing pastures for prime lambs is definitely not one dimensional. It encompasses the skills of a soil scientist, agronomist, accountant and vet whilst attempting to maintain the health and happiness of the people who manage the system. That's what is so great about farming. There is always another challenge to meet and overcome.