

Systems to enhance the ability to Farm to Specification, a farmer's perspective

M.C. PETERSEN
Farmer, Waipukurau

Te Puna Farm details

- Area:* 385 ha effective.
328 ha sheep and beef
57 ha deer.
- Contour:* Predominantly flat to easy rolling hill country.
- Climate details:*
Average rainfall 850 mm per annum.
Typical Hawke's Bay country with winter wet and very prone to summer dry.
- Ownership structure:*
Farmed in partnership with my wife Rachael and my parents David and Di.
- Stock numbers:*
- | | | |
|--------|------|-------------|
| Sheep | 1800 | MA Ewes |
| | 500 | Ewe Hoggets |
| | 20 | Rams |
| Cattle | 135 | R 1yr Bulls |
| | 180 | R 2yr Bulls |
| Deer | 400 | R 1yr Stags |
| | 120 | R 2yr Stags |
- Sheep policy:* 600 ewes lambing out of season to supply Marks and Spencer pre-Christmas chilled trade.
- 1200 ewes mated to one half East Friesian Romney cross rams to provide one quarter East Friesian three quarter Romney replacements.
 - Ewe hoggets mated to supply beta market.
- Cattle policy:* Bulls wintered in Cell systems, flexible policies to offset the effects of climate.
- Deer policy:* Stag trading supplying Cervena specification venison for year round market.

Introduction

What do we mean when we talk about Farming to Specification? As a farmer, I take that to mean supplying a product that has been farmed to required Quality Assurance Standards and presented to a processor on time, in full and to market specification.

Processing and marketing companies have started to demand tighter guidelines for product supplied and there is no doubt in my mind that the tightening trend will continue. We already have a number of companies

offering fixed price and grade contracts, with severe penalties for non-supply, and I am sure that these contracts will become commonplace within the Sheep, Beef and Deer industries. Our major customers in overseas markets are demanding guaranteed and consistent supply year round. The main threat that we face in our ability to supply product to specification is the climate and the influence it has on pasture production and animal performance. It is imperative that we have systems in place to take full advantage of opportunities when the climate is favourable, but also when the climate is challenging.

My paper today will focus on the systems we have developed that enhance our ability to farm to market specification for sheep beef and deer.

Feed planning

Intensive feed monitoring and planning has been one of the most important tools that we have used to enhance our ability to farm to specification. Our business is all about growing grass, harvesting it through animals and turning it into dollars. The whole process must be done as efficiently as possible, and in order to do this we must be able to put some figures to feed and feeding levels. I am constantly amazed, that the vast majority of pastoral farmers do not have the ability to put some figures to the single most important thing that determines their profitability, or lack of it. That is, the amount of grass they grow.

Farming to Specification requires setting targets for liveweight gain and therefore feeding levels, and the pasture covers required to achieve those. If we are to be successful in meeting our targets, then this is the bare minimum we must do. In our business we have taken this a step further and every planning or analysis decision is based on the amount of feed consumed relative to the income earned from it.

The first stage involved setting up a computer model to monitor pasture covers, feed intakes for each class of livestock and establish a utilised pasture growth rate for each period measured. We now have 4 years data comprising monthly pasture covers, net annual pasture production and monthly pasture growth rates, which all greatly enhance the accuracy of feed planning and analysis. From this information we know that our net pasture production ranges from 7000–10 000 kg DM/

ha/year. Average monthly utilised pasture growth rates range from a low of 1 kg DM/ha/day to a high of 62 kg DM/ha/day. We have determined the pasture growth curve and expected monthly pasture growth rates for our farm, which has given us the ability to really refine the driving force in our farming business, which is the growth and efficient utilisation of feed.

We are now much more responsive to deficit and surplus periods, by seeing them in advance and being able to take animal demand out of the system or increase feed supply. This can be in the form of nitrogen or feed supplements such as maize or silage. The result is that our farming system is much more efficient with feed covers operating in a much tighter range. For example, we can enter the winter with lower feed covers than previously thought necessary, and have confidence that we will achieve our winter targets. The impact of feed planning on feed quality has been immense, as it has lifted pasture covers during deficit growth periods, and utilised more effectively the feed surplus periods to drive up animal performance.

Perhaps more importantly, feed planning has enabled us to meet our contractual supply requirements, while maintaining or even increasing stocking rates at the same time. In order to guarantee the ability to supply, stocking rates are often reduced as a result, and the net gain is minimal but in our business this has not been the case.

We have developed our computer model so that we have the ability to cost feed grown and consumed, for each class of livestock for each month of the year. This has further enhanced our ability to determine which classes of livestock, and which stock policies provide the best opportunities for our business in any growing season. The result has provided some very powerful tools for planning and analysis.

Farm monitoring

In order to successfully farm to specification, we must have a very clear picture of the parameters that are going to influence our ability to meet our contractual requirements. Regular and intensive monitoring is vital, to give us the ability to establish our position relative to our targets, and adjust them if necessary.

Climatic factors such as rainfall and soil temperatures must be monitored regularly to aid in our predictions for pasture growth in particular. Regular stock weighing is vitally important to monitor liveweight gains so targets or feeding levels can be adjusted if required. An effective animal health plan is essential, to ensure low liveweight gains are not compromising our ability to supply to specification. In our case, this involves some monitoring and targeted applications of animal remedies to ensure withholding periods are adhered to. Farm input monitoring must also be carried out regularly to establish

if inputs are at the required levels to enable targets to be met. On our farm we place a very high priority on soil fertility, therefore soil testing is done annually with a high number of samples taken. Financial monitoring is of course essential, but we find in our business if we look after our feed plan the cashflow looks after itself.

Development

There is no doubt that in order to farm to specification without compromising stocking rates, a high standard of development is essential. We have found development to be a moving target in that the more developed our farm gets, the more development we want to do. Our farm is currently fenced into 80 paddocks with Olsen P levels in a range of 20 to 35 and a reticulated water system supplying the whole farm. Our targets for further development are for a minimum of 100 paddocks, Olsen P levels of 25 to 35 and obviously extending the water system to cover all additional paddocks. The gains from on-farm development have been huge and I am sure that these targets will continue to move.

The future

In the future, I believe that markets will require much tighter supply specifications from us and it will be essential that we have very smart systems in place to enable us to meet those new requirements. We have recently completed GPS mapping of our property and the possibilities look exciting. While we may not be grazing stock by satellite in my lifetime, we now have the ability to very accurately fence cells and blocks according to livestock and pasture requirements. I have no doubt that it will not be too long before we have advanced our computer model to allow individual paddock and mob analysis, and be able to objectively assess which paddocks and pasture species are the most profitable in our farming enterprise.

I believe that progress in animal genetics will be a very exciting field, with some rapid gains made in targeting specific areas of animal production. These will have significant impacts on the productivity and profitability of farming systems.

Summary

We have developed management systems in our farming business that have greatly improved our efficiency and ability to supply product to market specification. The systems we have will ensure that we can continue to do this under the much tighter supply guidelines that I believe will prevail in the future. The rewards will be attainable for those who can seize them.

