

# INTENSIFICATION OF TARANAKI HILL COUNTRY

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## INTRODUCTION

When your farm of 200 ha with poor contour is surrounded by properties 600 ha and more, the ideal solution would be to acquire more hectares and carry on store farming. The "more hectares" are not readily available so plan one is scrapped and you again consider what you can do with your 200 hectares. It has rundown farm buildings, a tiny woolshed, an ancient water supply and is divided into 25 reasonably grassed, set-stocked paddocks of varying sizes. Selling wool, store lambs, cast for age ewes and running beef weaners was not paying for much extra labour, let alone major capital improvements, such as more fencing, fertilizer, and a much bigger woolshed. More farm generated finance was needed to make progress, so out went the beef cows, the rough ewes, the set stocking and the pretty rams. In came the bulls, easy care higher fertility rams, electric fencing, subdivision, more fertilizer and the fatten everything policy. And so far it seems to be working.

## FARM STATISTICS

The farm is 20km east of Stratford, and the 202 hectares consists of 44 ha suitable for hay, 76 ha rolling to moderately steep and 80 ha of steep hard hill country. Soils are light, free draining volcanic sandy loam with parent material of mudstone and sandstone and a covering of volcanic ash on the flats. Rainfall is between 875-1500 mm (36-60") and averages 1250 mm (50").

Stock carried are 1900 s.u. of Romney sheep, breeding replacements and selling surplus as prime lambs and works ewes. There are 1300 s.u. of dairy bull beef, rearing most replacements and selling 18 months and 2½ year cattle giving a mean stocking rate of 15.8 s.u./ha. Production as follows:

Weaned lambing %	105-115
Wool	6.03 kg/ s.u. wintered
Lamb slaughter weights	12.5-14.5 kg
Mating weight of ewes	50-55 kg
Beef	475-500 kg/ha in conjunction with lamb fattening.

## INTENSIFICATION

I have no magic formula for the intensification of hill country. The methods for intensification, I believe, are well known and much publicised. They are obviously to grow more pasture as cheaply as possible and to feed as much of that pasture as possible to an animal capable of producing at a high and

profitable level.

My method has been to intensify on the best of the land first, and to use the profit generated to intensify the remaining land, at the same time to lift the productive potential of the animals grazing that land.

Having said that, I have found the practice not quite as easy as the theory.

## MANAGEMENT POLICIES

### 1. ROTATIONAL GRAZING and PASTURE SPECIES

Originally the farm was subdivided into 25 paddocks with a set-stocking policy on long established permanent ryegrass clover pasture, with high sheep numbers and low cattle numbers. In the last 6 years I have practiced rotational grazing on the 80 ha bull unit for 12 months of the year, and on the remainder at least 8 months.

The cattle-only pasture, originally dominated by grass-grub and creeping bent, soon developed into Taranaki dairy type pasture of ryegrass and clovers with grass-grub being tramped out in the autumn.

On sheep blocks, with rotational grazing, large differences are evident according to contour and size of paddock. Where grazing pressure can be executed adequately, pastures responded by becoming ryegrass and clover dominant although creeping bent is still a problem, becoming evident in the set-stocking period. Recently ewes and lambs have been rotated from docking to weaning and this tends to produce a better sward plus extra feed at weaning. Where adequate grazing pressure cannot be used, for various reasons such as difficult stock access, rotational grazing very quickly resulted in some areas of these blocks showing poor pasture use and, weed grasses, hard fern, and scrub soon established. I feel that with inadequate subdivision and stock pressure, set stocking in my hill country would control surplus growth including weeds better. I couldn't say that set stocking in this way would produce more grass though.

### 2. INCREASING SUMMER/AUTUMN SHEEP GROWTH RATES

This seems to be my most critical time of the year for sheep production as (a) dry late summers and autumns are quite usual, (b) my sheep grazing system produces ryegrass dominant pasture which is difficult to finish lambs and flush ewes on, and (c) ryegrass staggers and facial eczema are often major problems.

(a) Dry summers and autumns give trouble with lamb fattening, getting 18 month bulls up to **killable** weights and flushing ewes. A policy decision of more cattle flexibility was introduced. This was to market 2-2½ year bulls thus carrying less replacement cattle over the critical period. If there was a good summer than older cattle could be held longer. This change of policy fortunately coincided with rising premiums for mature bulls marketed out of the normal cattle killing season and while kg of beef/ha are obviously down, net \$/ha remained similar with the bonus of increased grass availability to finish lambs.

(b) Ryegrass dominance over clover through the summer/autumn period seems to be a trend produced by rotational grazing with sheep. Subsequently I am reluctant to use nitrogenous fertilizers in the spring because of further clover suppression. (Fertilizer application on the best of the sheep block is 375 kg of 20% K Superphosphate/ ha in the late spring). This low pasture clover, I feel, makes lambs difficult to finish and I note that even when weaned cattle (dairy beef) and lambs are liberally fed in the same mob the cattle appear to do much better on a weight gain basis. Even when lambs are moved onto the cattle blocks and fed well this trend is still apparent though not as serious. I have concluded that I need to produce a clover dominant pasture for lamb finishing and at present I mark lambs as soon as they are killable rather than take them through to heavier weight ranges.

(c) Ryegrass staggers is often a major problem and I have had it in all classes of stock. In rolling and hill country, losses can be high because of accidents and mating time can sometimes be a very humorous but not effective event.

Facial eczema is an occasional hazard and I favour the use of a microscope and moving stock to safe pasture (which can play havoc with rotations). However when staggers and eczema are combined, moving stock onto safe pasture is quite an event.

To overcome the autumn fattening clover problem, apart from a change in bull policy, I have considered:-

- Using higher rates of potash and muriate of potash.
- Using low rates of desiccant and sodseeding with clover where contour permits.

Establishing a pasture more palatable to sheep generally, possibly a timothy-clover mix, again limited by contour.

My overall feeling is that while my sheep performance is a little better than average, the pastures being produced seem to be far more suitable for cattle in the summer/autumn period.

### 3. INTEGRATION and ALTERNATE GRAZING of CATTLE and SHEEP

Most of my stock are run in separate areas and in separate lines but I try to interchange areas between sheep and cattle as much as possible. The major advantages for me are:

Breaking worm cycles in young stock and using cattle to establish better finishing and flushing pastures for sheep.

- Using cattle to tramp grassgrub in sheep blocks which seems to be my most effective treatment.
- Establishing larger mobs of stock thereby creating more stock pressure when required.
- Using sheep on cattle blocks for weed control and vice versa.

To integrate and interchange areas entirely when farming bulls is difficult because of their various behavioural problems and to adequately control them many more miles of electric fence would be needed. In my case consideration

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would have to be given to sacrifice the profitability of bulls for other cattle to achieve a high level of integration and/or alternate grazing.

#### 4. WINTER SHEEP MANAGEMENT

I note with some interest a previous paper on ewe and lamb performance at various prelambling feeding levels. Its message must be reassuring for many farmers and shows how forgiving our sheep can be. With fairly intensive wintering of bulls I have adopted a very basic feed budgeting system and attempt to measure grass ahead of stock so that slower grass growth than normal can be easily recognised. Bulls have a very decisive way of indicating your mistakes; they do the fine tuning! This system is a useful guide for me when wintering sheep and if a budget shows up deficits for July or August I endeavour to do any hay feeding in late May/ June (when ground conditions permit) so that ewes have build up on grass prior to and during lambing. In some years there is a definite weight loss when ewes have to adjust to eating hay and those that fall behind are preferentially treated.

I must concur that I have not noticed any great differences in ewe performance after a tight winter except that crutching is a little more difficult.

#### IMPROVEMENTS

1. Further electrification of fences is necessary to improve cattle control and allow more subdivision with temporary electric fencing for sheep especially in winter, e.g. 3 day blocks. I favour the upright relatively stock proof electric fence as rank growth under hot wires is a problem, and stock pressure on electric fences can be very high. Such fences are more expensive than say 3 wires, but even 1 % of a mob getting through a fence is unacceptable, especially at tupping time and when farming bulls.
2. In conjunction with subdivision, a racing system allowing easier stock movement will be developed. For example, this would allow better feeding levels of freshly lambed ewes by making "shedding off" easier particularly for ewes rearing twins.
3. The use of more phosphate fertilizer and oversowing particularly with improved clover species and consideration of capital dressing of fertilizer and oversowing after major subdivision will be required.
4. Consideration must be given to market 15-18 month bulls again, now that Government supplementary minimum prices are the major market force and the out of season premiums dwindle.
5. While maintaining the stocking rate to achieve adequate pasture usage and weed control I will try and increase animal performance by both feeding and breeding. This includes lifting fertility by changing to Coopworths, and increased feeding by adjusting the mean lambing date further into September to allow longer flushing in the autumn and more grass available for ewes at lambing.
6. Improve the careful selection of sheep for easy care and mothering ability as the twinning rate hopefully increases.

7. Experiment with implanting bulls to reduce behavioural problems. At present a major restriction is that daily shifts cannot be back fenced to tightly and this tends to restrict regrowth when compared to 24 hour block grazing.

8. My conserved feed is usually hay and this is used for maintenance feeding. I feel I could make better use of this surplus by turning some of it into high quality silage to use as an autumn supplement with grass for flushing ewes, and in spring with slower growth for supplementing ewes and lambs in particular.

In summary my intensification has been rotational grazing, subdivision, more phosphate and potassic fertilizer, the use of more profitable livestock and the odd headache or two.

Intensification obviously involves more stockwork, more planning, more problems and most of the time, more profit. Unfortunately too, it does substantially reduce the time available for the physical development and maintenance of a farm and thus you become more dependent on contractors and extra labour.

#### LOOKING AHEAD

As horticulture, urban sprawl and industrialisation encroach on New Zealand's better grasslands, I can see dairy farming forced back into what are now considered marginal areas for that land use. Similarly the hard hill country farmer might well consider trying to finish lambs rather than sell them store. Lower net financial returns must also force many small sheep farmers to consider alternatives to increase income.

In the long term I have a number of options, the obvious one being an amalgamation with another unit. Dairying must also be a future consideration particularly as there are 48 ha of rolling country in one area that could be used for dairying with major development. Also the long term beef market does not seem to be very optimistic and the price differential with butter fat has increased dramatically. In my case I would try to change before economics forced me to.

In conclusion, my farming has been influenced largely by the small size, the condition, and contour, of my property — the need to improve production from my grassland is both a necessity and a challenge.