

Northland Pastoral Extension: Popular Summary

Opportunities for Sheep and Beef Production

Part 1



Summary of Key Findings

The seasonality of animal growth in the north:

- Feed quality lower in the autumn
- Livestock growth poor in the autumn so set realistic liveweight targets

Fit farming to your pasture growth profile with these tools:

- Later calving
- Winter lambing some ewes or
- Autumn lambing some ewes

Opportunities to maximise winter growth policies:

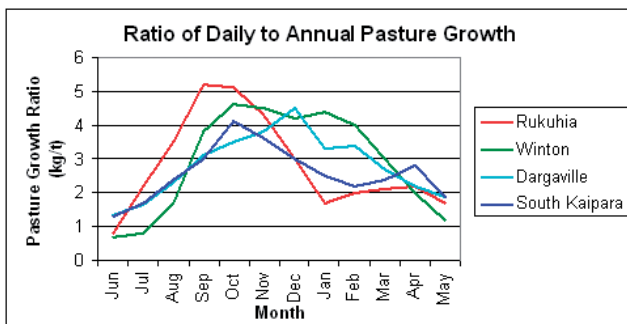
- Intensive Beef Systems

Seasonality of Animal Growth in Northland

How different is Northland?

This graph highlights the differences in pasture production:

- Spring growth in Northland is a lower proportion of annual production and is much slower
- Winter and early spring growth is similar on both Northland sites
- Pasture growth rates remained relatively high through the summer in Dargaville
- Winter pasture growth rates are almost double that of the southern regions



Previous research has shown the following trends in Northland pasture production:

- A rapid decline in pasture nutritive value from early October (especially in dry weather)
- Kikuyu pasture is generally of lower nutritive value than ryegrass/clover at most times of the year

Terry Reid, researcher for MAF in Whangarei in the 1980s demonstrated that cattle growth rates on autumn pasture are less than that on



spring pasture given the same herbage allowance. Because Northland experiences relatively high pasture growth rates over the autumn/winter period and lower spring growth relative to elsewhere in the country this work is particularly relevant to Northland farmers. It highlighted the difficulties we have in growing cattle, ewe hoggets and lambs in the autumn period. Farmers need to consider poor autumn growth when setting liveweight targets for all livestock. The months of April to June appear to be the most challenging, with many farmers struggling to even maintain liveweight.

What to do about it?

Different combinations of stock classes, lambing and calving times on Northland farms can be used to better fit the livestock demand to the available feed. This reduces the expenses of conserved and supplementary feedstuffs and increases the utilisation of the pasture during the period when pasture is actively growing. A long history of monitor farms in the Waiotira/Maungaturoto area of lower Northland has produced indicators for profitable management changes:

- Changes in stock policy from breeding to finishing and from sheep to cattle make matching feed supply and demand more difficult
- It is difficult to grow young stock through the late summer and autumn due to poor feed quality
- Poor feeding in autumn and early spring limit growth rates of all young stock
- Feed supply varies between years and can be modified by use of nitrogen fertiliser, forage cropping or supplementary feeding
- Lambing and calving dates need to be adjusted to give a better fit of animal feed requirements and pasture growth rates
- Sell any stock which are not going to be wintered by February



Fit farming to feed supply:

Later Calving

The slow seasonal growth pattern of kikuyu-dominant pastures in Northland, which results in poor spring production, can be managed by delaying calving until September or October. Delaying calving reduces the risk of underfeeding in early lactation and improves pregnancy rates. This may seem to be contradictory, because Northland has warmer winters than the rest of the country and the temptation to calve early is strong.

Among the recommendations from the lower Northland monitor farm groups:

To achieve 95% calving percentage from pregnant cows and heifers

- Only breed from heifers at 250 kg or heavier at mating
- Mate the heifers to calve 3 weeks earlier than the mixed age cows and leave the bull out for no more than 6 weeks
- Ensure cows are fed well in early lactation by matching calving date with pasture growth

Changes in Lambing

There is potential to spread feed demand by using a combination of some autumn lambing and later spring lambing which may help reduce the feed deficit.

- Increasing winter requirements
- Reducing spring requirements

A proportion of autumn lambing will reduce feed demand in the spring, allow more efficient use of meat processing facilities and allow farmers to capture early season premiums. However, autumn or winter lambing may not suit kikuyu-dominant farms because the winter pasture growth is low and reproduction rates will be considerably lower.

Researchers believe autumn lambing makes feed management easier:

- April lambing coincides with the usual May pasture surplus
- Weaning time is flexible depending on winter weather and feed supply
- Leads to ease of flushing in the late spring period
- Fits well with spring lambing feed demand

However, compared with spring lambing ewes, the autumn lambing ewes can be expected to lose more liveweight in early lactation, gain weight faster prior to mating, wean fewer lambs, but have better lamb survival. Autumn-born lambs are generally lighter at weaning than spring-born lambs, but their good spring growth rates can compensate, enabling them to meet heavy weights on the meat company price schedules at the beginning of the new season (October 1).

Intensive Beef Production

Agricultural consultant Colin Page collected the experiences of Northland farmers with intensive beef systems for a Sustainable Farming Fund project.

Key findings include:

- A pasture cover of 2000 kgDM/ha in May is needed to achieve a starting weight of 750kg per ha, which allows winter liveweight gains above 0.6 kg/head/day
- Ideally pasture covers should be at their lowest in September to ensure high quality feed for rapid spring liveweight gain
- Good soil fertility levels (Olsen P >30) are essential to maximise winter pasture growth rate of 20-30 kgDM/ha/day
- Application of nitrogen is vital to ensure initial stocking rates are 800 – 1000kg liveweight/ha.

100 kg N/ha is recommended split into two or three applications

- Combining short rotation ryegrass and nitrogen will enable winter pasture growth rates of 30 – 40 kgDM/ha/day giving the potential to achieve 1000 kg LWG per hectare
- Winter rotation length should be maintained at 40 – 50 days, generally longer winter rotations give the best results.
- Most farmers shift stock every second day, but at very high stocking rates daily shifts may be required, especially on wet soils
- Generally higher stocking rates lead to better per hectare performance, even when per head liveweight gains in winter are low (0.4 – 0.5 kg/head/day)
- Keeping bulls in mobs together from rearing allows them to be wintered in larger mob sizes
- Operating the systems over part of the year (May – Nov/Dec) and moving them onto other areas of the farm provides a longer term solution to parasite management
- Sandy soils can be run at higher stocking rates, larger mobs and have less pugging compared with clay soils.
- There has been no difference in total production per ha between the clay soils and sandy soils
- There has been little change in pasture composition with the more intensive systems
- Selling store animals represents an opportunity to carry lighter stock and avoid pugging damage on wet soils

The knowledge gained from intensive beef systems continues to increase and since Page's survey was written farmers have continued to increase stocking rate (LW/ha), performance and profit levels.

The biggest opportunity for increasing production and profit will be through increasing winter pasture production because this will largely determine winter stocking rate. This may be achieved through additional use of nitrogen and/or with improved pasture species. Improved cultivars of permanent pasture, at present, give little extra production compared to old pasture.



Compiled by Gareth Baynham, edited by Hugh Stringleman
A project co-ordinated by the Northland Pastoral Farming Development Group.
The complete research stocktake on Opportunities for Sheep and Beef Production
in Northland is on the Enterprise Northland website: www.enterprisenorthland.co.nz