

A description of Tussock Creek Farm

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History and description

John has been farming for a total of 37 years and is third generation on the family farm. Previously, 223 ha used to provide work for up to three labour units but now the farm is 65 ha smaller and John and Jill run the property by themselves. This is very much a partnership in the true sense of the word with equal responsibilities and a good working relationship.

Table 1 Area and stock numbers on Tussock Creek farm over the last 4 years.

	1997/98	1998/99	1999/00	2000/01
Area (ha)	158	158	158	158
MA ewes	1550	1550	1430	1470
Ewe hoggets	500	450	450	450
Rams	20	20	20	20
MA hinds	95	100	100	107
Weaner stags	3			38
Weaner hinds	27	45	45	44
MA stags	4	4	4	4
Total stock units	2286	2330	2110	2220
Stocking rate	14.29	14.56	13.19	13.88
S-D ratio				

Production

Lambing has been averaging 140–150% for more than the last 10 years. We have never exceeded 150% but to do so is definitely our current goal. Fawning percentage is running at an average of 90% or better.

Production Season	1997/98	1998/99	1999/00
Lambing date	10-09-97	11-09-98	11-09-99
Weaning date	30-11-97	14-12-98	11-01-00
Weaning weight (kg)	25	27.7	35.5
Avg. days birth to kill	180	165	163
Avg. kill date	21-03-98	07-03-99	04-03-99
Avg. growth rate from birth (g/d)	180	212	218
Pre-weaning growth rate (g/d)	286	289	304
Estimated post-weaning growth rate (g/d)	102	136	77
Avg. carcass weight (kg)	15.26	16.43	16.62
kg lamb meat/ssu	14.2	15.29	17.79
kg lamb meat/sha	201	214	233
Lamb growth index	1.39	1.62	1.77

Soil and management

Soil types are mostly Pukemutu. There is a small area of Dacre Gley.

pH	P	Ca	Mg	Na	S	K
6–6.2	20–25	10+	25	13	12	6

- We test soil every 2 years or so.
- The historical fertiliser history is based around 2.5 t/ha of lime every 4th year with 250 kg/ha of straight 0-9-0 super. Our current plan is to move towards 500 kg/ha of lime annually with 250+ kg/ha of serpentine super.
- We have started to trial some liquid fertilisers in combination with the above solids.
- Selenium prills are applied annually and cobalt as necessary via pasture spraying.
- We have moved into selective aerating and, in conjunction with our liquid, lime and solids policy, this has significantly improved soil health.

Pastures

History

- Traditionally, we used swedes and cereal cropping (1970s) but then moved into all-grass wintering until mid to late 1980s when we returned to growing swedes. The movement out of all cropping (forage and cereal) introduced another problem ... endophyte.
- The movement back to swedes was brought about by a combination of pastures starting to run out, soils seemed to be getting compaction problems, and endophyte toxins hitting hard.
- Currently, we put in up to 15 ha of swedes annually – this represents ~7.5% of total area.
- We have also increased the turnover into new grass by doing some grass-to-grass renovation.
- Our goal is to have the whole farm in nil-endophyte perennial ryegrass in 5 years time.

Seed mixes

- Endophyte came in via Ellet ryegrass – this was typically sown with Huia at about 25 kg/ha. This

type of mix was replaced by the newer cultivars when the regrassing started again in the late 1980s. Cultivars typically used were: Greenstone/Red Clover/Huia/Tahora/Timothy/Cocksfoot/Nil-endophyte ryegrass.

- The current mixture now incorporate the following cultivars:
 - Demand/Pawera/Colsono/G27/Impact/Marsden/Aries.
- Seeding rates were up to 28–30 kg/ha but are now down to 20 kg/ha total seed mix.
- Also, we like to add in forage herbs such as chicory and plantain for short-term lamb-finishing benefits.
- Regrassing is undertaken early, i.e., sowing is done by mid November.

Deer unit

History

- We got into deer in March 1987 with 8 ha. We now have 30 ha fenced and intend to fence another 10 ha next winter to give us a 40-ha unit.
- Our plan is to carry around 1.2 hinds per ha (3 per acre) (16–17su equiv/ha).
- Fourteen ha of pasture are old with some resident endophyte which will be dealt with as soon as possible.
- Our policy is to carry and finish own stock which is a movement away from selling all weaners.
- We want to keep with our breeding hinds and finishing all stags and non-replacement hinds.
- We are running all red base genetics, breeding own replacements but are considering a terminal policy and may buy in replacement red weaners.

Some questions for discussion

The following are some statements/questions we believe are current issues within this farm which may also be real issues, not only the wider Southland region, but

also across New Zealand. They are intended to act as stimuli for comment and debate.

1. **Sheep genetics**

Sheep genetics have traditionally been Romney but we believed the improvement rate started to stall – we had to work harder for same or less production. We decided to cross breed and have started using TefRom (Romney, Texel, East Freisian composite). Is this the way to go?

2. **Soil type**

Very wet in winter – it's hard to deal with it. Earlier comment from a scientist was, "We are getting the production that we were, not because of but in spite of the soil type". We are looking at aerating the soil. Is this "ambulance at the bottom of the cliff type" policy the way to go?

3. **Pasture mixes**

Deer need a good productive pasture for a combination of uses as traditionally, we have had to both winter and finish stock. What is the best pasture mix for Southland deer farms such as this? The herbs are very well-liked but what is the progress on breeding for persistence as they don't last or are grazed out.

4. **Pasture longevity**

What is the expected longevity of new pastures? We are seeing reversion back to old grasses even after 4–5 years – is this inevitable with our policy? What can we do to prevent it? What is a feasible prospect for our sheep and deer farm as we are not rotationally grazing as dairy farmers do?

5. **Trace element supply**

Copper deficiency in the deer is a serious issue and we are currently looking at spraying on copper, along with other trace elements. What is the considered opinion and likely uptake issues with sprayed-on trace elements?

