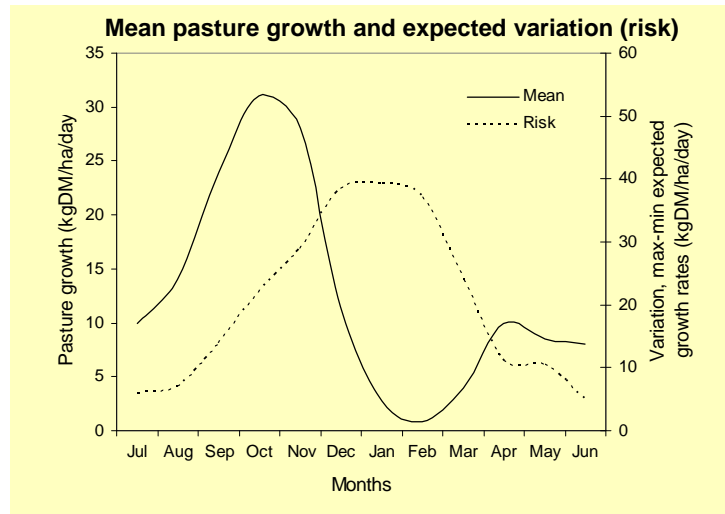


Farm systems adapt to dry, at Bonavaree



A change in farming systems at Bonavaree has radically improved profitability despite sheep industry returns trending downwards, nationally. Meanwhile, grazing pressure has been removed from erosion-prone slopes. Success has been achieved by:

- Recognising the need to adapt. Hoping climate would return to 'normal' would have failed.
- Recognising that the risk of variation in pasture growth is very high, November to March. Revenue generation should not rely on these months. The dotted line on the graph (right) tracks variation between highest and lowest pasture growth rates at Bonavaree, while the solid line shows average growth rate.
- Basing a pastoral system on what survives in the environment. Planting species which don't survive so need constant re-establishment, is costly.
- Developing grazing system which ensures the highest revenue earning enterprise utilises feed grown.
- Successful farm systems are recognised, then scaled up to have real impact on business profitability.



Ryegrass regime replaced

Drier conditions at Bonavaree demanded more efficient water use. This has meant a shift away from ryegrass based pastures and summer/autumn brassica crops, because they are unreliable and therefore expensive.

Key technologies employed have been:

- Growing lucerne, a plant that survives dry and produces high quality feed
- A grazing system that utilises lucerne for finishing multiple lambs
- Conservation tillage, which reduces establishment risk by taking spring moisture through to autumn
- Growing a large seed cereal grass (Omaka barley) that can be drilled deep and has good reserves to establish quickly to produce a reliable winter feed crop.

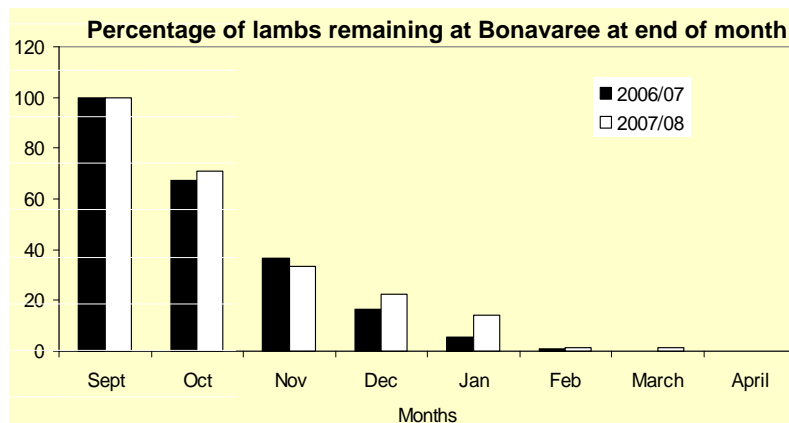
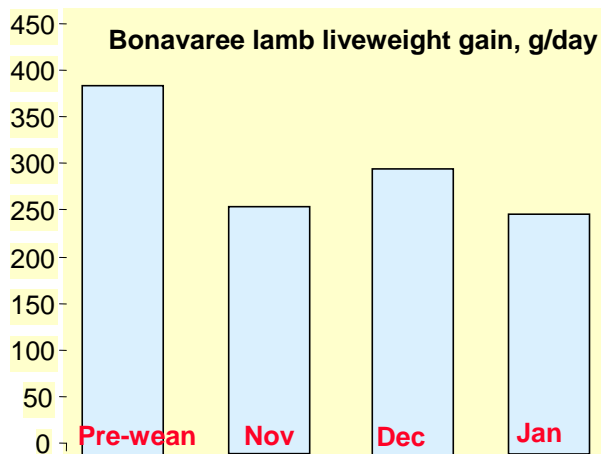
Lucerne underpins livestock performance

The lucerne area at Bonavaree is now approaching 25% of the total farm. The lucerne underpins a high performance lamb finishing enterprise with growth rates in the top 5% of the national flock, as measured by Farmax; a farm-planning system aimed at increasing profits.

- Multiple birth ewes are break-fed on lucerne through winter, from late May/early June until lambs go to the works.
- Winter and spring rotations are started on the same lucerne paddocks. Ewes with lambs at foot start the spring rotation, in late August. Soil temperature climbs and lucerne growth rates accelerate, just as lambs start to graze for their first time. Ideally lucerne is taller than 20 centimetres, pre-grazing.
- Ewes take five to seven days to graze down the lucerne and are ideally not returned to the same paddock for 30 - 35 days.
- To avoid bloat, salt blocks are continuously available, and ewes are shifted before they get hungry. In initial years losses were high, but the sheep have now become accustomed to lucerne.
- To enable root reserves to be replenished, stands are left to flower in autumn. A minimum 50% flowering is aimed for in every paddock every year, but most years 100% has been easily achieved.

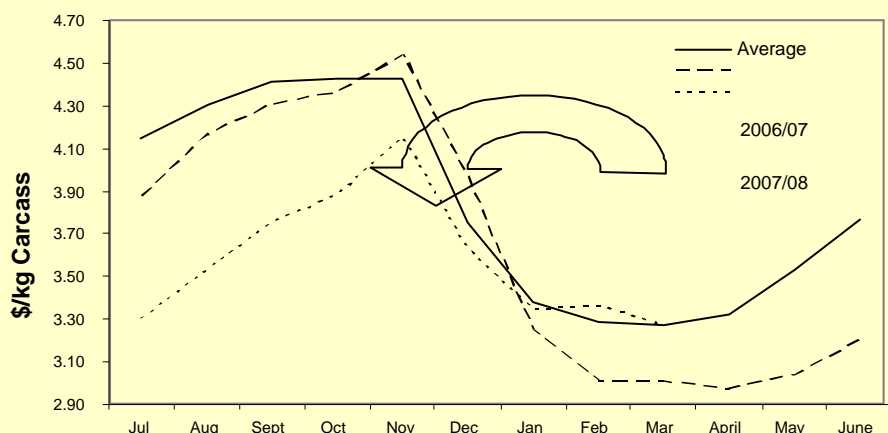
As the area of lucerne at Bonavaree has increased, business profitability has improved. Meanwhile, pressure is removed from hill slopes as stock favour the high quality feed on flat/rolling areas.





Lamb growth rates at Bonavaree are in the top 5% for New Zealand. High growth rates enable 80% of lambs to be finished before the end of December. This takes advantage of spring and early summer market premiums, and keeps finishing outside of the November-March period when pasture and thus

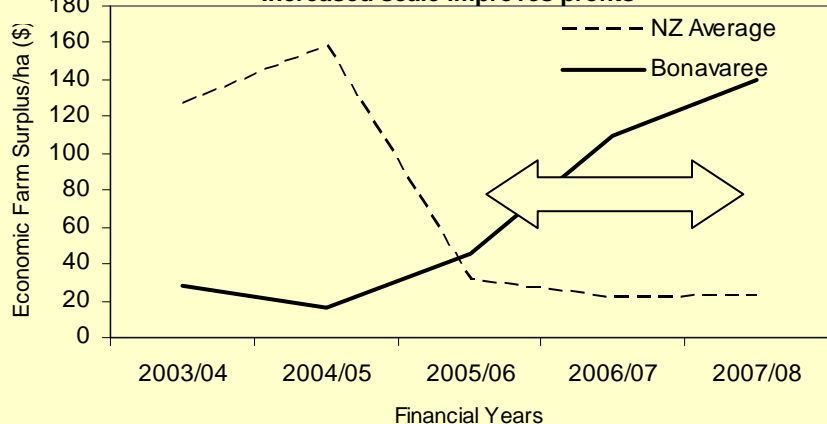
Market premium, 15kg YM lamb, South Island



Above; The arrow represents a premium of \$1.14/kg of carcass weight (\$20.50/head) for shifting lamb finishing from January to November. The average is calculated for the four years from 2003/04 to 2006/07.

Below; Business profit, measured by the economic farm surplus, has improved at Bonavaree as the lucerne area has increased. Meanwhile, profitability has fallen for the national average NZ sheep and beef farm (Meat & Wool Economic Service survey, 2007). The arrow shows the increasing scale of the lucerne/livestock policy.

Increased scale improves profits



Landscape result

Stock pressure on hill slopes is caused by a lack of alternative feed. High quality feed on flat/rolling areas offers stock a better choice and consequently, pressure is removed from hill slopes.



Graeme Ogle, Ogle Consulting, 585 Bruntwood Road, RD, Cambridge 07 857 0823 graeme.ogle@rezare.co.nz