

North Canterbury Sheep Profit Partnership

FINAL REPORT






Contents

beef+lamb new zealand

BY FARMERS. FOR FARMERS

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Executive summary

Initiated as a pilot extension programme for Beef + Lamb New Zealand (B+LNZ), the North Canterbury Sheep Profit Partnership (SPP) has been extremely successful. This report brings together the results and key findings of the SPP, which ran from 2011 to late 2015. The aim of the SPP was to lift production and profit from the participating farms by 5 per cent annually, or 15% over the three-year programme. The actual result for the group of 10 farms was a 21% increase in production (carcass weight produced), however profitability dropped by 1% due to declining commodity prices.

Had commodity prices remained at the initial levels the programme would have delivered a 52% increase in profit from sheep (at Earnings Before Interest and Tax level).

Factors contributing to increased production were:

- Lambing % - modest increase from 136.7% to 142%
- Lamb weaning weight – significant increase from 31.2kg to 34.3 kg
- Stocking rate – increase from 5.6 to 6.2 Sheep SU/ha
- Increased portion of hoggets mated – lifted to 77%

These increases were possible through a better feeding of ewes at the critical pre mate, pre lamb and pre wean periods, and by increasing the focus on young stock. The changes that allowed this included:

- Preparing Targets and identifying actions to achieve them
- Increased planning and monitoring
  - Feed budgets, Target covers, Weighing
- Growing more and higher quality feed, investing in a re-grassing and forage programme
  - Legume and/or herb based pastures eg lucerne, red and white clover, Subterranean clover, plantain
  - Sowing more persistent pastures eg lucerne, cocksfoot etc (less perennial ryegrass was targeted in the dryland environments)
  - Increased use of forage crops eg rape, kale, fodder beet, oats and short rotation ryegrass, for use at targeted times.
  - Supplementation with grain and PKE as required, particularly through the drought.
- Prioritising Stock
  - Significantly increased use of condition scoring, and scales
- Increased focus on timing of sales:
  - Increased focus on weaning draft
  - Increased attention to changes in store and prime markets when selling stock

The results show that improvements are possible, even on high-producing farms, when there are clear targets and a planned approach to implementing actions to achieve the targets.
All participating farmers thought there were further gains to be made in their systems.

Introduction and process

The SPP was part of the Northern South Island Farmer Council led extension programme for the region. Farmers were asked to express their interest in participating in the programme and several high-performing farmers were also invited to join the group. Wayne Allan was contracted to run and facilitate the group.

Twelve farmers attended the first meeting in August 2011. This meeting set out the expectations for the provision of monitoring information as well as gauging priorities for the group. Over the first few months each farm was visited and existing performance recorded to establish benchmark production for each property and the group as a whole.

Twelve properties were benchmarked but only 10 have had on-going involvement with the group. The ten ran diverse operations in environments which ranged from hill country to intensive breeding and finishing properties, running Halfbred, crossbred or composite ewes. It should be noted that all farmers involved with the group were already performing at above average for their land class and a number would be considered in the top 10 – 20%.

After collecting the benchmarking information, results and some analysis were presented at the on-farm meeting in November 2011. Some key messages relating to profitability were discussed and some specific areas of interest were identified by the group. These themes were revisited regularly over the period of the programme.

Importantly after the initial on-farm discussion day group members individually set targets and identified actions that would allow them to achieve their targets. Their targets were consistent with achieving or exceeding the targets of the SPP Programme.

The group operated with:

4 – 5 on farm meetings per year, each meeting consisted of:

- Key topic of focus, supported by group information, trial information or guest speaker.
- Discussion of seasonal management issues, and potential upcoming issues.

Discussion of monitoring results

- Annual Public Field Day – presenting key messages learned by the group.
- The day had a theme with a key topic and keynote speaker.
- 2–3 supporting topics - Group members discussed what was successful/unsuccessful on their properties.
- Networking opportunity.
- Hosted on a group member's farm that was relevant to the topic.

Individual visit to each farm by the facilitator to collect "year-end" information and update farm targets and actions.

Benchmarking outcomes

A group of 12 farms were benchmarked in the programme.

Key Points:

- A wide range of farms are represented in the group, running a range of sheep breeds and systems from intensive breeding and finishing to extensive hill country.
- Between farm comparisons can be interesting, and farmers learnt from each other, although there was probably more value in comparing a farm between years.
- Costs were generally well contained, so the focus for most farms was on increased production to achieve higher profit.
- Lambing percentage was confirmed as a key driver to profit
- Proportion drafted at weaning was identified as another key driver to profit.
- Increased stocking rate may be a driver to profit on some of the properties as they utilise additional feed produced as a result of development programmes.
- All farms set targets in these areas and developed action plans to achieve these targets.

It was generally agreed that this was regarded as a four-year programme, and target 15% increase in profitability and production. Importantly all farms believed their targets to be achievable over the period of the programme, if they were able to adequately put their planned actions into place.

Benchmarking summary

Table 1. Benchmarking and targets for production in the of sheep operation

		Benchmark Range	Target Range
Lambing % (to Ram)	- MA Ewes	100% - 165%	115% - 180%
	- Hoggets	50% - 110%	84% - 115%
Scanning	- MA Ewes	115% - 210%	155% - 210+%
	- Hoggets	60% - 140%	100% - 155%
Mating Weights	- MA Ewes	60 - 70 kg	65 - 75 kg
	- Hoggets	39 - 50 kg	45 - 50 kg
Lamb Weaning Wt.		28 - 35 kg	31 - 36 kg
Lamb Carcass Wt.		16.5 - 19 kg	17 – 20 kg
Wool Weight		3 - 6 kg/ewe	3 – 6 kg/ewe
Sheep Death Rates		2.5 - 5% all sheep 3 - 7% ewes	2.5 - 4% 3 – 6%

The key areas of potential gain were identified as:

- Lambing percentages (reliant on mating weights, scanning, lamb survival, nutrition and animal health)
- Lamb growth rates (reliant on ewe condition, nutrition, animal health)

Key drivers of carcass weight in a sheep system

The key output has been defined as carcass weight. Carcass weight is largely driven by numbers and weight of animals, or kilograms of wool sold (store sales and changes in livestock numbers have also been accounted for).

When benchmarking, the farmers' approach had been to look at which of the key drivers of sheep production offered opportunities for improvement on their individual farms.

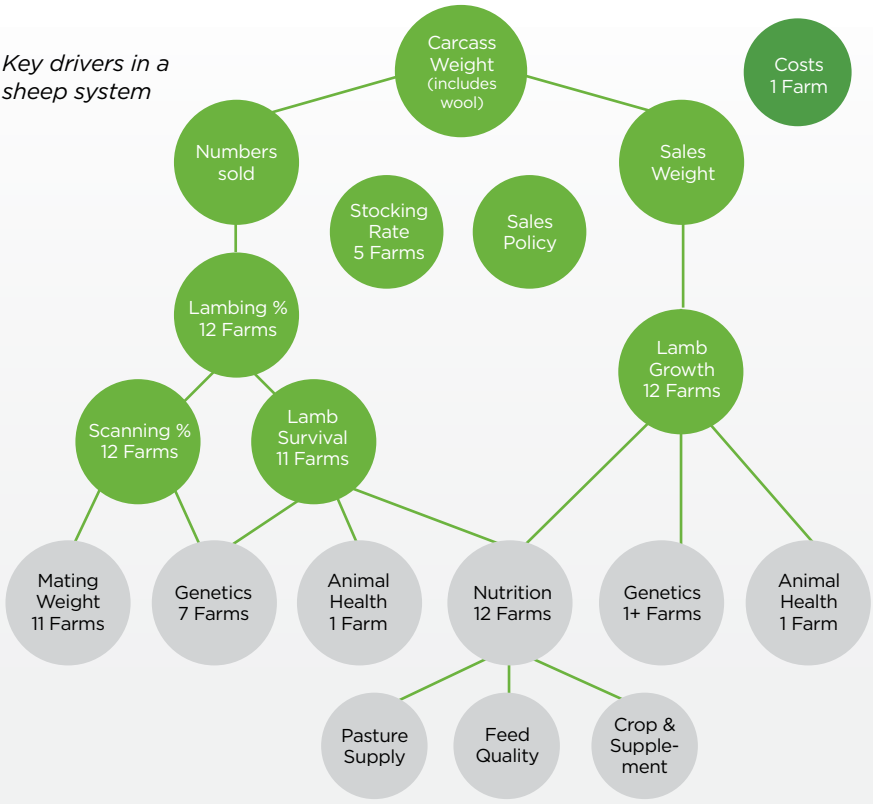
Each of the key drivers (in green) are influenced by other factors, such as liveweights, animal health, genetics, and levels of nutrition.

These are the things that are managed on farm. Nutrition was identified as the most critical of the inputs on most farms, and had the most potential for improvement.

In summary sheep production was influenced by:

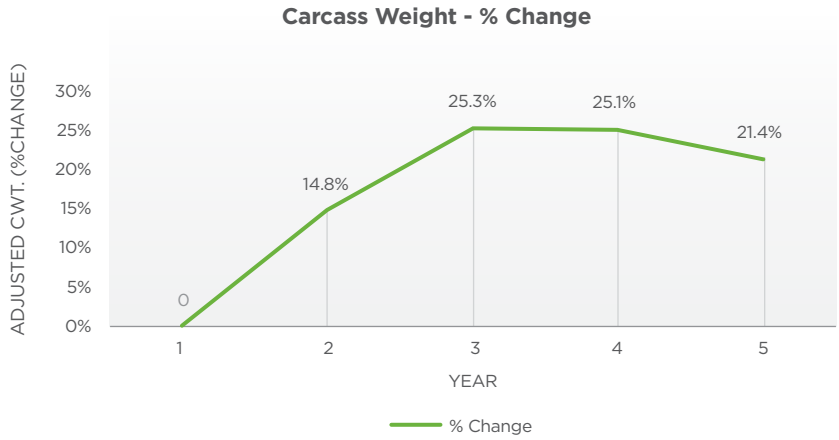
- **Drivers** - Scanning%, Lamb Survival and Lamb Growth Rate
- **Influencers** - Nutrition, Animal Health and Genetics
- **Timing** - Pre Mate, Pre Lamb and Pre Wean

Key drivers in a sheep system



Group results

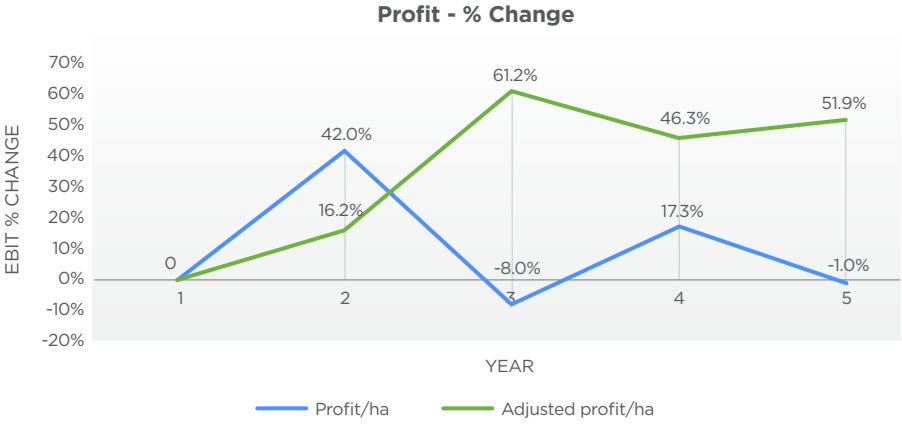
Group results are presented below. It is important to note that the individual results were quite variable as farms faced a number of challenging climatic seasons over the period of the project. The 2011/12 year was a very good year climatically for most of the farms, while spring growth was very slow in 2012/13, 2013/14 and 2014/15. 2014/15 also saw the most significant drought in Canterbury for at least 30 years which impacted production on all farms, particularly later in the season.



Carcass Weight

The average carcass weight production for the group started at 124.6 kg/ha and, despite the drought, improved to 151.3 kg/ha, an increase of 21.4% (target 15% increase). The pleasing aspect is that the carcass weight gains achieved in the favorable 2011/12 season were maintained and extended throughout the programme. Carcass weight production increased 26% in 2013/2014 before being impacted by drought in 2014/15. All farms in the group were impacted by the drought and production in 2015/16 was expected to further decline as a result.

The best performing farm increased carcass weight by 37% over the period, with consistent gains each year. Only one farm did not increase carcass weight per hectare over the programme, this was due to significant changes in farmed area (major sales and purchases of land), and significant increases are expected in the future.



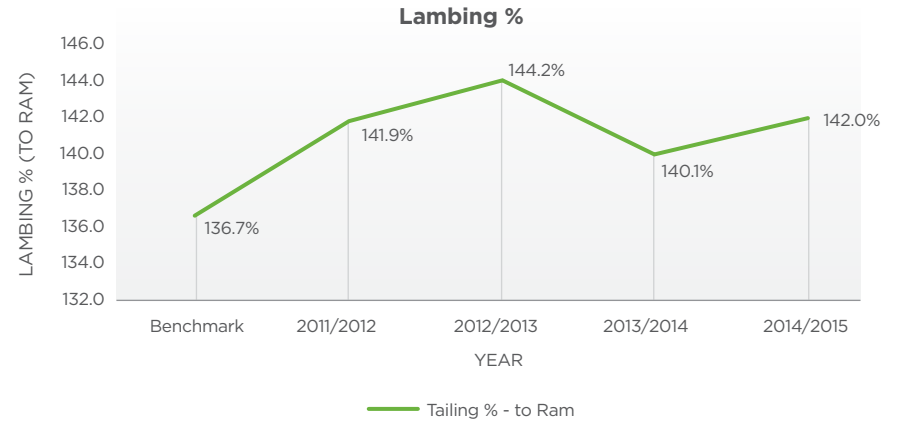
Profitability

Despite the increased productivity, commodity price decreases severely impacted the profitability of farms, which in real terms were 1% less profitable than in the benchmark year. The farms generated an average profit of $313/ha from sheep in the benchmark year, and $310/ha in the final year of the programme.

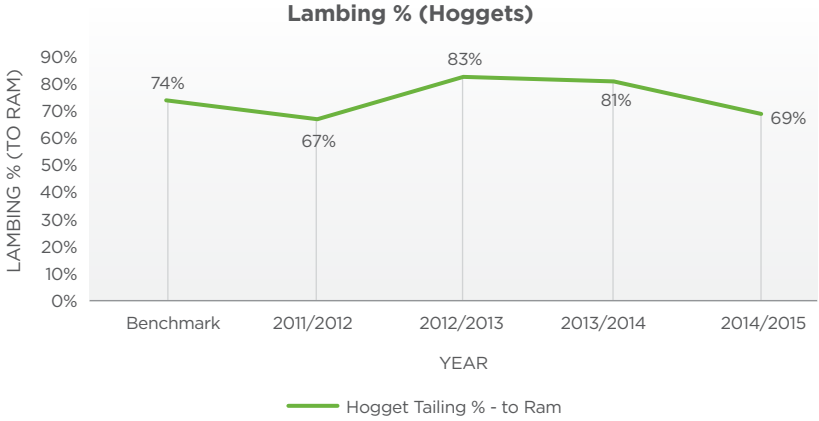
Commodity prices peaked in the first year of the programme (2011/2012), but by the end of the programme were only 82% of the benchmark levels.

Had commodity prices remained constant then the profitability for the group would have increased substantially by 52% ($475/ha).

The best performing farm achieved an increase in profit of 98% ($479/ha to $949/ha) and another achieved 81% (real terms), when adjusted for commodity price these returns were close to 200% (ie. profit almost tripled). The best individual profit achieved was $1490/ha in 2011/12 (from sheep).



Lambing percentage (Ewes)
The lambing percentage has been calculated as number lambs tailed to ewes mated. Due to the nature of these properties, the number of lambs tailed is effectively a weaning number. Over the programme the average lambing percent lifted by 6.3% to 142%. Interestingly, despite the severe drought, lambing percentage only dropped back to 137% in 2015/16 (outside the scope of the programme). The biggest individual improvement in lambing percentage was from 106.7% to 127%, followed by a property that lifted from 140% to 156%. Only one property saw a slight drop in lambing over the period, this property was impacted by a number of dry seasons.

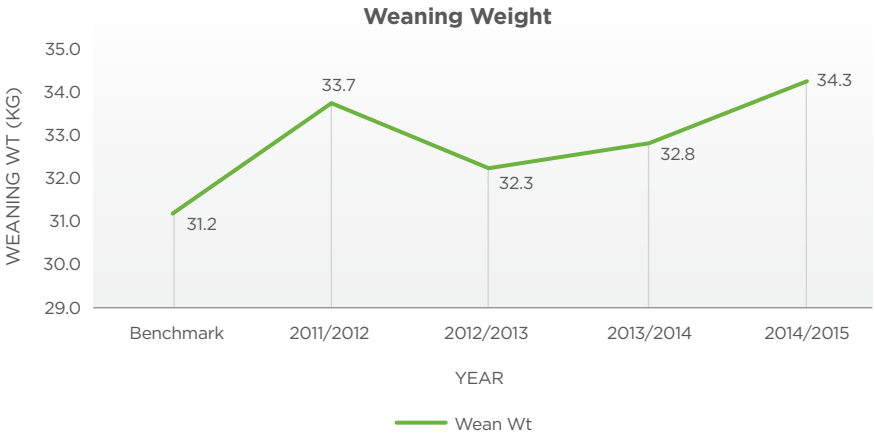


Hogget lambing
The hogget lambing results were variable. They started at 74%, peaked at 83% and then dropped back to 67% at the end of the programme. Pleasingly the 2015/16 season saw a lift back to 80%, despite the drought, highlighting the importance of prioritizing replacement stock.

Over the programme the numbers and proportion of hoggets mated increased. Interestingly, in the drought, farmers opted to mate better-grown hoggets and cull light two-tooths and mixed- age ewes lifting the portion of hoggets mated from 60% up to 77% in the 2015/2016 year (% mated of total hoggets wintered).

Most farms that mate hoggets are mating all their hoggets and one farm is over-mating and lambing additional hoggets and selling surplus as two-tooths.

The group calculated that a mated hogget, at 70% lambing, was likely to provide returns per kgDM that were significantly superior to their ewes. The returns were made up from $70/head increase in capital value (ewe lamb to two tooth), $49 from lamb and $16 of wool. The hoggets, generated around 23 cent/kgDM of income, compared with 18 – 19 cents/kgDM from ewes and around 15 cents/kgDM for dry hoggets. When modelled in Farmax mated hoggets (70% lambing) only consumed 60 –70 kgDM more than unmated hoggets over the same period. Some of the increased requirement is in autumn to achieve mating weights, some through winter but most is in very late winter and over lactation.



Weaning weights
Lifting weaning weights and the weaning draft was a key focus for the group. Average weaning weight lifted from 31.2 kg to 34.3 kg. This increase is significant when targeting larger weaning drafts in a summer dry environment, as it means farms either have the option of killing more lambs at weaning or increasing their drafting weight, as has been targeted by some members of the group to meet specific supply contracts.

The percentage weaning draft increased from an average of 31% to 41%, this would have been larger if some farms had not increased drafting cut-off weights. The weaning weight increases were largely driven by an increase in pre-weaning growth rates, which lifted from an average 271 g/d to 296 g/d. A slightly longer lactation also helped, with the average lactation length now being around 100 days. The extended lactation has only been possible as a result of the higher lambing covers and focus on providing quality feed in late lactation. Where feed was limited in late lactation, early weaning was encouraged.

A key focus of the programme was to have ewes at condition score 3+ going into lambing, and going onto pasture covers of around 1400 – 1500 kgDM/ha. High quality feed offered in late lactation helped sustain high lamb growth rates, even in a dryland environment. Legumes (lucerne, sub clover, red clover, white clover) and herbs (plantain) were used by members of the group to enhance feed quality, particularly for late lactation.

Interestingly, while average weaning-weight increased significantly, the average lamb sale weight remained around 16.2 kg carcass weight (including store lambs sold). More lambs were sold earlier (at weaning), and dry summers disrupted the rest of the lamb finishing season.

Stocking rate

While four of the properties sought to increase stocking rate on the back of capital development, most farms involved increased stocking rate. Overall stocking rate lifted from 5.7 to 6.2 traditional stock units/ha (8.8% increase). Some of this increase was as a response to utilize additional forage grown by newly-sown high legume pastures.

Stocking rates did drop back by 13% in the drought as a response to reduced feed supply.

Table 2 on page 15 shows the consolidated group results for production and profit over the duration of the programme. The percentage change from the benchmark year are in the columns to the right.

Key messages from the programme

Planning and Monitoring
- Importance of setting targets
- Looking forward – six months or more
- Take actions early, to protect future production
- Importance of monitoring (know where you are),
  - can make better decisions
  - can act to correct any problems early
  - better budget predictions
- Need to build some flexibility into high performing sytems

Hoggets
- Hoggets are number one priority until mated as two-tooths
- Mated hoggets are potentially the most profitable sheep on a property
- Unmated hoggets should not be ignored, it is still critical they achieve good mating weights as two-tooths
- Big hoggets make life easier
  - Targeted mating weight for hoggets (several in the group had a 50 kg target for their hoggets at mating).

Feeding
- Importance of bodyweight and condition score on production
  - Work on lifting (or culling) the tail end
- Feeding stock at key times
  - Ensure ewes (and hoggets) are holding- or preferably lifting- in weight at mating. Losing weight at this time can have a significant impact on scanning, and makes wintering more difficult
  - Better late winter feeding increases the weight of ewes and lambs at weaning
  - Important to achieve target lambing covers (1400 – 1500+ kgDM/ha)
  - Better feeding in late lactation lifted lamb weaning weight and increased weaning draft, as well as making ewes easier to summer.
- Invest in a forage and re-grassing programme if possible
- Lucerne and red clovers will sustain increased stocking rates over lactation, taking pressure off other parts of the farm.
- Large improvements in weaning weights and weaning drafts
  - Impact of a high weaning draft on income
  - Makes achieveing target hogget weights easier.

Power of a focused group
- Importance of regular meetings
  - Peer pressure from a group helped performance and accountability
  - Helped reinforce the basics, and importance of timing

Overall
- The SPP has been a good forum to discuss the plans of different farms, with a group of highly motivated farmers
- Group members thought there were further easy gains to be made on their farms.

Table 2: Group Consolidated KPI's

	Benchmark	2011/12	2012/13	2013/14	2014/15
Sheep Area	5542	5536	5678	5775	5752
Sheep SU	37044	35846	40745	42459	42369
Traditional Sheep SU	31713	30571	34543	35729	35495
Traditional Sheep Stocking Rate	5.7	5.5	6.1	6.2	6.2
Total Carcass Weight	711569	830165	881344	923851	843584
Profit/ha	$313	$444	$288	$367	$310
Ewes					
Mating Wt (Fleece Free)	63.5	63.04	65.67	65.18	66.52
Short Scan %	160.5	163.0	169.1	164.4	167.08
Tailing % - to Ram	136.7	141.9	144.2	140.1	142.03
Short Scan Lamb Loss %	14.8%	13.0%	14.7%	14.8%	15.0%
Days at weaning	98.7	102.9	101.7	102.8	100.1
Wean Wt	31.15	33.72	32.26	32.81	34.264
Pre Wean Growth (g/d)	270.8	287.9	272.5	274.9	296.2
Hoggets					
Hogget Mating Wt (fleece free)	45.5	45.0	45.6	44.3	45.4
Hogget Scanning (shortscan)	98%	93%	108%	103%	98%
Hogget Dry Rate	23%	25%	17%	22%	30%
Hogget Tailing% - to Ram	74%	67%	83%	81%	69%
Hogget Lamb Loss %	24.7%	27.8%	23.8%	21.6%	25.4%
Days at weaning	90.5	99.5	80.3	103.8	88.6
Wean Wt (kg)	29.6	30.7	25.1	31.2	28.2
Pre Wean Growth (g/d)	278.0	264.4	232.9	258.6	242.3
Lambs					
Lambs Sold	26178	28592	34094	35207	36057
Weaning Draft	8156	10062	11136	12461	14840
% sold at weaning	31%	35%	33%	35%	41%
Lamb Sale Weight (Carcass wt.)	16.4	16.8	15.9	16.2	16.2
Kg lamb weaned/kg ewe	71%	80%	74%	75%	78%

Key actions Implemented by group members:

- Condition scoring 3 – 4 times per year, and drafting lighter stock (below CS3) for improved feeding.
- Using kale, rape and grain as flushing/mating feeds
- Growing legumes and herbs for lactation feed (red clover, clover and plantain, lucerne)
- Winter feed crop (eg fodder beet, brassica) to build covers on the lambing platform
- Using grain feeders as a tool (post-scan, late-lactation, light ewes in a drought)
- Skim drafting to maximise income and number lambs sold by weaning
- More disciplined lamb finishing policy (and heifer grazing). It is too easy to compromise next years production
- Set targets and monitor against them
- Have some flexibility in the system
  - Stock class, timing of sales etc.
  - Buffer of supplement/crop or purchase of feed or grazing
- Place importance on the final decision (timing and method of marketing), it can have a large impact on profitability.

Discussion

Feeding
A key focus on all farms was to grow more and higher quality feed with the aim of providing better nutrition, particularly at pre-mating, pre-lambing and pre-tupping. Although all farms had this objective, all took actions which best suited their system, management and environment.

While some farms used grain to improve nutrition over tupping, others grew rape or kale crops for tupping and others investigated the use of fodder beet.

To improve ewe feeding (particularly twin and triplet-bearing ewes) in late winter and to lift lambing covers, some farms looked at utilising more winter feed crop, while others used more autumn nitrogen, fed grain to multiples or delayed lambing slightly. Often farms adopted more than one strategy to improve nutrition over this period.

To improve feed quality and quantity in late lactation, several farms significantly increased the area of lucerne, while others used red and white clover and plantain. Interestingly two of the farms with the highest weaning weights had pastures that were dominated by sub clover over spring. While these farmers looked to other options to complement the sub clover, particularly later in the season, the other farmer looked for opportunities to increase sub clover on suitable areas of their farms, including over-sown hill areas.

Lucerne proved particularly successful for grazing hoggets and their lambs in late lactation, with a number of farms weaning hogget lambs at over 34 kg average.

Poor persistence of perennial ryegrasses in the North Canterbury dryland environment was discussed during the programme. This meant that farms were growing considerably less dry matter than was their potential. Increasing the persistence of pastures (lucerne, fine leaf cocksfoots etc) or utilising high growth-rate crops or short-term pastures (eg red clover, short rotation ryegrasses) increased total dry matter production on properties, and often provided enhanced feed quality at critical times of the year. The challenge with some of the shorter term pasture options was to ensure their cost effectiveness.

Maintence feed vs production feed
One point that participants wanted to highlight:

- Maintenance feed typically generates income of 10 – 15 c/kgDM
- Finishing/production feed can generate income of up to 30 – 40 c/kgDM.

This is an added reason for legume and herb in a pastoral system.

Building flexibility into the farming system
High performing farmers are often pushing the farm quite hard. The drought highlighted the importance of building flexibility and buffers into the system to protect future production in a challenging climatic season.

Flexibility that the members of the group used included:

- Flexible stock classes, which could be sold as required
  - Finishing Cattle – bulls, steers or heifers
- Flexible thinking around sheep
  - One-year ewes (flying flock)
  - Surplus ewe lambs
  - Trading lambs
  - Early weaning
- Feed Buffers
  - Silage, balage, grain
  - Summer rape crop
  - Winter feed, sold if not required
- Off-farm grazing
  - Hoggets or ewes on grazing
  - Cattle on grazing

Unfinished Business
The group thought that there were several areas which had not been adequately addressed and that perhaps further research was required:

- Lack of progress improving lamb survival
- Variable performance from mated hoggets
- Variability of lambing performance of ewes over 150%
- Abortions, despite vaccination.

There was a strong feeling that the marketing of product internationally needed addressing. They wanted this report to be used to inform industry discussion. They could not understand how a 21% increase in production could not increase profit over the period of the programme, (market returns had fallen to 82%).

Drought management
The SPP programme was extended for 6 months to look at how the group members managed a second year of drought. This section of the report summarises the group's thoughts. It should be noted that only two of the group have access to small amounts of irrigation.

Farm systems to cope with drought
Building more resilient farm systems is becoming increasingly important with climate change and significant fluctuations in product prices.
The drought has highlighted the inflexibility of some classes of stock, particularly dairy heifers and there has been a significant swing away from them by the group. A key factor for building business which are more resilient to drought, is considering the impacts in advance. This allows farmers to think about their key actions in advance and effectively gives permission to act quickly when adverse conditions do arise.

Areas the group thought were important included:

- Planning for the worst (at least considering options)
- Build financial and feed buffers
- Have a more resilient farming operation
  - More drought tolerant species
  - Use of summer/autumn forage crops
  - Good soil fertility/health
  - Minimising summer feed demand (eg large weaning drafts).
- Build flexibility into the farm system, with stock classes and feed buffers
  - Bull vs dairy heifers
  - Flying flock
  - Finishing stock
  - Store of supplement of crop on hand
  - Ability to put stock on grazing or purchase feed etc
- Permission to act early, have go-to plans and write them down
  - Set trigger points (date, soil moisture, pasture covers, weather outlook, stock condition)

Seasonal management to prepare for drought

This drought was well forecast with El Nino conditions predicted well in advance of the drought. Farmers are often optimists, but this warning also allowed some preparation to be put in place prior to the drought. The group tried to act early by increasing feed supply and reducing feed demand:

- Maximise use of soil moisture while it is present
  - Use nitrogen and crops to carry feed into the drought
  - Increase use of feed crops (perhaps second crop vs regrassing)
  - Moisture fallow (even spring crops)
- Protect covers, protect stock condition, protect soil moisture
  - Sell cull stock while prices still high
  - Plan sales of trading stock
  - Source supplement before prices rise
- Try to contain the impacts of the drought to a single year
  - Protect capital stock for next year's income.

Managing an extended drought

The summer drought, extended into an autumn and winter drought, which forced a continuing series of actions to be taken.

- Put feed into higher producing stock (proportionally less feed going towards maintenance)
  - Eg mated hoggets and good capital ewes
  - Culling old ewes and poor condition ewes (of all ages)
  - Reduce replacement numbers (slightly) and feed the remaining hoggets well.
  - Culling all replacements is an option but needs careful consideration as to how they will be replaced. Many high producing ewes cannot simply be retained for 1 – 2 years longer to fill the gap.
- Use of sacrifice paddocks as feed pads for ewes. It is amazing what a ewe can get by on while the weather is still warm. Small amounts of grain, PKE or nuts were invaluable in the diet.
- Protect the genetic future and production of the flock, look after the young stock.

Some farmers opted to retain stock on-farm and buy in supplement, others grazed stock off-farm. Off- farm grazing proved the more expensive option but often resulted in better stock performance and better pasture covers for the following season. No economic analysis of the two options was undertaken. Both groups tried to protect their young, and higher performing stock.

Preparing for a second year of drought

Most farmers were surprised and relieved that they got some spring growth. Even relatively low rainfall over the winter and early spring provided some accumulation of soil moisture, which allowed valuable spring growth. The subsoil had little moisture so spring growth was likely to be limited. To make the most of the limited moisture the group:

- Tried to get cover and stock condition up before going into second dry season
- Make the most of the soil moisture while present by:
  - Aggressive use of N in late winter/ early spring to boost pasture growth
  - Feed crops sown early or spray and moisture fallowed until ready to sow.
  - Fodder beet was a very useful tool in increasing dry matter production, even in a dry spring, providing moisture follow was undertaken.
- Target a good weaning draft and draft to lighter weights if the prime vs store price indicates this is a good move (as this year). Destock as many lambs as possible at weaning to protect feed for ewes.
- If quality feed is limited and liveweight gains in late lactation are likely to decline, then consider early weaning (down to 18 kg lwt) onto the remaining good feed (may want to supplement with grain).

Recovery from drought

There is still uncertainty around drought recovery however farmers are planning to:

- Accumulate pasture cover as quickly as possible
  - Hold stock on feed pad or crop until there is noticeable/ sustainable recovery
  - Nitrogen early in the recovery may be considered (especially if sustained recovery is uncertain).
- Crops, lucerne, newer grasses will recover first, “grass grows grass” so keep off them for a period.
- Use surplus feed to restock feed reserves
  - Also let pastures recover, reseeding of sub clover etc.
- May undertake some pasture renewal through direct drilling.
- Lift stock condition and target increased production from existing stock
  - If understocked they may mate ewes slightly early to utilise surplus feed in spring and to have lambs/cull ewes marketable while prices are still at their peak.
  - Mate more hoggets to increase income the following year.
- Look for opportunities to increase income
  - Maybe the opportunity to restock early, before prices lift sharply
  - If looking at trading stock look for the out-of-favour and longer-term trading options, they are usually more realistically priced.

  - Purchase finishing ewe lambs, screen and mate the best.
  - Don't buy stock at any price just to eat grass, there needs to be a margin.
- Feed quality will initially be very good after a drought
- Carefully watch expenditure coming out of the drought
  - Reduce maintenance fertiliser for a year or two, low nutrient use over a drought.
  - Only use N where highly beneficial, to reduce costs
  - Contain repairs and maintenance etc.
- Let the farmer recover, droughts are a stressful time.

The group noted that there was a personal and financial cost to droughts. Need to watch out for themselves, their families and neighbours, over this stressful period. The group noted that it was essential that farmers have some support network (eg discussion group) providing support and encouraging proactive decision-making through a drought. Farmers need to feel they have some options and control over a largely uncontrollable situation.

Farmers also need to get off the farm and away from their issues for short periods of time.

Cost of drought

The cost of the drought comes not only in increased cost (feeding, freight etc), but also in significantly lower income (selling stock at lighter weights, into depressed markets), and in lower production the following year (lower stock numbers, lower lambing etc). It is difficult to fully quantify the financial impacts, however they will be significant.

Estimates from the group for year one of the drought:

Direct Costs in Year 1	Group Estimate $230,000 (increase of 10% of expenditure)
Reduced Income in Year 1	Group Estimates $135,000 (decrease of 3%)
Carryover Impact	13% drop in stock units, 7.2% lower lambing % from MA Ewes, increase from hoggets Similar weaning weight

The financial impacts of year one of the drought were minimised for this group due to high focus on weaning drafts (before the drought really hit) and proactive management. The financial impact in year two (and three) are expected to be far more significant. This fell outside the programme so figures have not been collected, but income for the group is expected to be down by a minimum of 20% and further expenditure incurred for grazing, supplements and freight (at higher levels than recorded in Year 1 above).

Appendix

1. Definitions

Carcass weight	Sales + Wool – Purchase +/- Change in stock numbers and weight. Store sales weight * 43% yield = carcass weight Wool sales – 1 kg = 1 kg carcass weight
Hectares	Refers to the proportion of the farm that is allocated to the sheep.
Lambing %	Lambs tailed/ ewes mated
Profit	Effectively an EBIT for sheep operation Sheep Income – Farm Working, including admin, rates insurance etc. Expenses were apportion between sheep and other farm enterprises.

2. Targets and action plan (example of final review)

Farm/Farmer: _____ **Updated:** _____

A benchmarking report was prepared for this farm in September 2011, leading to targets and action plans being prepared in 2012. This report reviews the targets and actions and documents plans for the future to continue the momentum.

Target profit and production
The original target was to increase production and profit by 15% by 30 June 2015, this was increased part way through the programme to a 30% increase in production. Both targets have been achieved with a 96% increase in profit and 38% increase in production achieved in the final year of the programme which was impacted by drought, which reduced both production and profit from the previous year.

	Benchmark	Target (adjusted)	Actual
Sheep Area	452 ha	490 ha	184 ha
Net Sheep Profit	$80,000 ($177/ha)	$100,000 ($203/ha)	$157,500 ($322/ha) Adjusted $252,000
Sheep Carcass Wt.	**58,325 kg (130 kg/ha)**	**84,000 (171 kg/ha)**	**80, 700kg (164 kg/ha) 2015 92,300 (188/ha) 2014**
Profit/kg Carcass Wt.	$1.19/kgCwt	$1.19/kgCwt	$1.95/kgCwt

Key output targets
The table below identifies the key performance areas that were targeted. The benchmark levels were identified and three year targets set.

	Benchmark	Target	Actual
Lambing % (Hoggets)	Nil	70%	66% - 92%
Lambing % (Ewes)	135%	145%	Improved to 137.5%
Lamb Carcass Weight	18.2 kg	18.5 kg	16.7 – 19 kg
Weaning Weight	33 kg	35 kg	34 – 36 kg

Comments:

- **Key drivers to the increase in production and profit have been:**
  - Increased weaning weight, higher weaning draft (earlier lambs sold at higher price/kg)
  - Increased lambing percentage.
  - Breeding own hoggets and mating them at good reproductive rates
- A significant increase in lucerne on the property has increased feed quality over the critical lactation period, significantly increasing lamb weaning weights, and providing a measure of nutrition over the dry summer period.

Key factors to achieving the target outputs above.
- Ewe condition at mating, low body condition range, lifting liveweight 190% scan.
- Holding condition over winter, optimal feeding pre lamb. CS 3.5
- 1800kg DM/ha covers for twin-bearing ewes at set stocking. Make sure covers and clover content lifts.
- Feed quality over spring, must wean heavy ewes. CS 3.5
- 300 g/d average lamb growth rate (35 kg at 20th Nov)

Actions – Focus to date
- Start breeding replacements, genetics, selection pressure.
- More lucerne being planted 10 - 40ha per year. Target around 200ha.
- Hill subdivision, better hill country management to increase clover production. Targeting improved quality and quantity.
- Better feed budgeting to have right covers at correct times. Good monitoring.
- Ongoing attention to ewe CS. With increase feeding at correct times.
- Use of urea on the hill country

Future focus
- Continue pasture renewal programme with a focus on high legume pastures, this will assist with improving feeding over spring with the resultant increase in lamb weaning weights (target now for a weaning draft of 80%)
- Continue subdivision and encouraging clover on the hill
- Monitoring and feed Budgeting
- Use of strategic urea

Facilitators comments:
Excellent progress has been made towards the targeted production. Overall the production has been met and the financial targets greatly exceeded with an increase in profit from the sheep operation of 96%.

These increases in production have largely been driven by the forage programme, particularly the lucerne. The lucerne is a powerful resource on this property.

The hill country complements the lucerne but as production increases more emphasis may be required on forages for late autumn, winter and early spring (brassica or short rotation ryegrasses may be of benefit).

Farmers comments:

Mark Zino, 1000ha flat land at Hawarden
- Maintaining ewe body condition and liveweight was critical in driving productivity.
- It's all about better feeding of quality feed for faster lamb growth.
- The more lambs we have and the faster they grow the more money we make.
- It has reinforced that what we were doing was the right thing.
- It was fun being involved with such motivated and forward-thinking farmers.
- Monitoring and measuring is important. Once you have the information you can learn from it.
- "You have to work to your strengths and minimise your weaknesses."

Tom Costello 540ha of flatland at Hawarden
- Feed your sheep properly. Where it is difficult is when the climate is against you.
- It is important to grow the right pastures for our climate, so we will continue to look for pasture options that give us quality and longevity.

Hugh Dampier-Crossley 2288ha hill country at Hurunui
- There are three critical periods for feeding; tupping, pre- lamb and pre-weaning.
- After weaning we body condition score the ewes, pull out the lighter ones and preferentially feed them to get them to a BCS of 3. Doing this has been beneficial to productivity.
- We have identified legumes (lucerne, red clover, subterranean clover and white clovers) and genetics as being the big drivers of production.

Richard Gorman, 780ha in Marlborough
- We are concentrating on body condition and ensuring pre-lambing pasture covers are there. We don't overstock so we can drive lactation and lamb growth rates.
- We now prioritise hoggets and get a huge amount of pleasure seeing them coming through the system.
- We are now targeting the bottom 10% of the flock. We either cull them or feed them to lift their body condition.
- We don't let them drag the productivity of the flock down.

Tim Hawke, 289ha flat land at North Loburn

- My main focus is to get as many lambs to survive to weaning and all my decisions are based around that. This means concentrating on ewe body condition Scores.
- I am now retaining and mating more replacements than I need and selling the surplus as capital stock. I am getting rid of dairy grazers because I can make more money from my sheep.

Hamish Craw, 442ha hill country on Banks Peninsula

- It's all about feeding. Most of us have sheep with a good genetic base, we just need to feed them well to allow them to reach their potential.
- The partnership has taught me that we have four to six months to hit those key targets.
- It has driven home to me the importance of monitoring and lifting the bottom 30% of the flock up.
- The partnership has given me the confidence to get stuck in and change our pasture species which will allow us to reach our targets.

Ben Cassidy, 2500ha of hill country at Hurunui

- I've started planning more, focusing a bit further out and setting longer-term goals. I'm now more focused on where we are heading.

Chris Hewett, 650ha of flat to easy rolling country near Cheviot

- We've got to get the lambs on the ground and feed them well. This makes for an efficient dryland unit. We have been focused on pasture development to help realise the genetic worth of the sheep.
- Through the partnership I have gleaned knowledge from the others which has given me the confidence to try new things.

Tim Le Pine, 258ha flat land near Waiau

- We are now monitoring, being pro-active and looking forward. You've got to have a plan and keep working towards what you want to achieve.

Phil Smith, 667ha of hill country near Culverden

- One of the main benefits of the partnership has been the comraderie and the peer pressure- it helps lift your game.
- It has reinforced the importance of feeding and doing the basics well.
- We are now watching ewe liveweight throughout the season. We are taking lighter ewes out and prioritising them.
- We are really working on that bottom end.
- Just keeping an eye on ewe liveweight has been a key focus for me.

CASSIDY

	Benchmark	2011/12	2012/13	2013/14	2014/15
Sheep Area	1875	1875	1719	1719	1719
Sheep SU	6346	6680	7080	7440	7540
Traditional Sheep SU	5340	5623	5955	6255	6345
Traditional Sheep Stocking Rate	2.8	3.0	3.5	3.6	3.7
Total Carcass Weight	122944	119318	127606	138127	111092
Profit/ha	$94	$189	$101	$165	$123
Ewes					
Mating Wt (Fleece Free)	60.3	63	62	60.5	59.7
Short Scan %	157.6	148.8	157.8	152.9	151.9
Tailing % - to Ram	135.7	122.4	132	132.4	129.7
Short Scan Lamb Loss %	13.9%	17.7%	16.3%	13.4%	12.6%
Days at weaning	114	114	110	109	109
Wean Wt	30.5	29.8	28.5	32.4	32
Pre Wean Growth (g/day)	228	222	218	256	252
Lambs					
Lambs Sold	4800	4204	4895	5262	4950
Weaning Draft	1000	1122	1660	1884	1707
% sold at weaning	21%	27%	34%	36%	34%
Lamb Sale Weight (Carcass wt.)	13	13.4	15.1	14.7	13.8
Kg lamb weaned/kg ewe	70%	65%	63%	87%	72%

COSTELLO

	Benchmark	2011/12	2012/13	2013/14	2014/15
Sheep Area	286	286	286	405	380
Sheep SU	3179	3263	3493	4852	4510
Traditional Sheep SU	2555	2635	2826	3988	3700
Traditional Sheep Stocking Rate	8.9	9.2	9.9	9.8	9.7
Total Carcass Weight	78049	96419	91366	116377	97581
Profit/ha	$878	$1,491	$974	$924	$828
Ewes					
Mating Wt (Fleece Free)	68	68	76	70.4	70.8
Short Scanning %	168.9	170.4	174.5	169	170.4
Tailing % - to Ram	150	151.6	158	150	153.7
Lamb Loss % - Short Scan	11.2%	11.0%	9.5%	11.2%	8.8%
Days at weaning	96	104	105	103	98
Wean Wt	35	38.6	36.8	34.6	34.6
Pre Wean Growth (g/d)	311	326	307	290	292
Hoggets					
Hogget Mating Wt (fleece free)	45	45	48	42	43
Hogget Scanning (shortscan)	84.0%	83.1%	89.0%	90.0%	40.0%
Hogget Dry Rate	16.0%	16.9%	11.0%	10.0%	60.0%
Hogget Tailing% - to Ram	84.0%	73.3%	88.2%	140.6%	36.7%
Hogget Lamb Loss %	0.0%	11.8%	0.9%		8.3%
Days at weaning	82	107	85	91	87
Wean Wt (kg)	30	31.5	29	29	29
Pre Wean Growth (g/d)	311	252	288	274	292
Lambs Sold	2679	2872	3342	4652	4515
Weaning Draft	2114	2135	2158	2391	2950
% sold at weaning	79%	74%	65%	51%	65%
Lamb Sale Wt (Carcass wt.)	18.0	18.8	17.5	15.62	16.87
Kg lamb weaned/kg ewe	79%	86%	79%	76%	77%

CRAW

	Benchmark	2011/12	2012/13	2013/14	2014/15
Sheep Area	277	277	277	277	277
Sheep SU	2454	2427	2466	2744	2517
Traditional Sheep SU	1955	1986	1962	2198	2024
Traditional Sheep Stocking Rate	7.1	7.2	7.1	7.9	7.3
Adjusted Carcass Wt	54506	63278	60448	65439	64543
Profit/ha	$614	$836	$449	$702	$658
Ewes					
Mating Wt (Fleece Free)	70	67.2	66.4	66.2	69.1
Short Scan %	164.9	168.8	171.6	172.7	174.3
Tailing % - to Ram	145	143.7	148.1	145.7	147.2
Short Scan Lamb Loss %	12.1%	14.9%	13.6%	15.6%	15.3%
Days at weaning	96	96	94	94	83
Wean Wt	30	34	32.3	33.3	32.84
Pre Wean Growth (g/d)	266	326	296	306	341
Hoggets					
Hogget Mating Wt (fleece free)	48	47.5	49.7	48.5	48.5
Hogget Scanning (shortscan)	116.0%	86.1%	125.9%	116.1%	132.0%
Hogget Dry Rate	14.0%	13.9%	11.0%	15.7%	14.2%
Hogget Tailing% - to Ram	90.0%	82.9%	101%	93%	99.5%
Hogget Lamb Loss %	22.4%	3.7%	19.5%	19.8%	20.0%
Days at weaning	95	95	94	100	101
Wean Wt (kg)	30	35.7	32.3	30.6	33.9
Pre Wean Growth (g/d)	268	328	296	261	291
Lambs					
Lambs Sold	1604	1800	1980	2373	2159
Weaning Draft	542	550	570	707	761
% sold at weaning	34%	31%	29%	30%	35%
Lamb Sale Weight (Carcass wt.)	17.8	18.88	15.35	16.68	16.19
Kg lamb weaned/kg ewe	64%	72%	72%	75%	71%

DAMPIER-CROSSLEY

	Benchmark	2011/12	2012/13	2013/14	2014/15
Sheep Area	1260	1260	1260	1260	1260
Sheep SU	7048	6049	6535	6749	6783
Traditional Sheep SU	7048	6049	6535	6749	6783
Traditional Sheep Stocking Rate	5.6	4.8	5.2	5.4	5.4
Total Carcass Weight	92200	114576	124335	126880	113252
Profit/ha	$167	$245	$122	$166	$39
Ewes					
Mating Wt (Fleece Free)	57	57	59.8	59.3	60.8
Short Scan %	137.3	141.7	151.7	142.7	154.3
Tailing % - to Ram	106.3	113.8	116.9	113	127
Short Scan Lamb Loss %	22.6%	19.7%	21.1%	20.0%	17.2%
Days at weaning	105	105	104	101	104
Wean Wt	28.5	30	28.1	28.7	30.2
Pre Wean Growth	229	243	227	240	247
Lambs					
Lambs Sold	3903	3826	5307	5204	6310
Weaning Draft	447	749	822	749	1263
% sold at weaning	11%	20%	17%	16%	20%
Lamb Sale Wt (Carcass Wt.)	12.7	14.2	12.68	13.32	14
Kg lamb weaned/kg ewe mated	47%	57%	57%	58%	63%

GORMAN

	Benchmark	2011/12	2012/13	2013/14	2014/15
Sheep Area	450	450	470	490	490
Sheep SU	3302	3292	3373	3468	3765
Traditional Sheep SU	2896	2882	2938	2831	3063
Traditional Sheep Stocking Rate	6.4	6.4	6.3	5.8	6.3
Adjusted Carcass Wt	58325	65889	72198	81174	
Profit/ha	$178	$398	$295	$338	$322
Ewes					
Mating Wt (Fleece Free)	63	65	65.6	66.8	67.8
Short Scan %	157.5	156.1	163	150	166
Tailing % - to Ram	135	131	130.7	128.3	137.5
Short Scan Lamb Loss %	14.3%	16.1%	19.8%	14.5%	17.2%
Days at weaning	100	120	113	110	103
Wean Wt	33	36	35.5	36	34
Pre Wean Growth (g/d)	285	263	274	284	282
Hoggets					
Hogget Mating Wt (fleece free)	0	0	0	51.3	46
Hogget Scanning (shortscan)				109.5%	94.9%
Hogget Dry Rate				23.1%	25.5%
Hogget Tailing% - to Ram				92.7%	66.3%
Hogget Lamb Loss %				15.3%	30.5%
Days at weaning				99	90
Wean Wt (kg)				34	32
Pre Wean Growth (g/d)				296	306
Lambs					
Lambs Sold (New Season)	3561	3628	3055	3440	3022
Weaning Draft	923	1417	1634	1660	1548
% sold at weaning	34.2%	56.0%	54.9%	51.1%	56.5%
Lamb Sale Weight (Carcass wt.)	18.2	19.02	18.71	18.52	16.7
Kg lamb weaned/kg ewe	72%	69%	72%	64%	66%

HAWKE

	Benchmark	2011/12	2012/13	2013/14	2014/15
Sheep Area	111	111	125	136	154
Sheep SU	1533	1336	1685	1692	2021
Traditional Sheep SU	1189	1013	1263	1306	1516
Traditional Sheep Stocking Rate	10.7	9.1	10.1	9.6	9.8
Total Carcass Weight	31737	41171	31666	44119	46487
Profit/ha	$905	$1,073	$418	$549	$708
Ewes					
Mating Wt (Fleece Free)	66.9	66.5	67.8	64.9	70
Short Scan %	176.7	177.9	186.7	180.4	179.4
Tailing % - to Ram	141.9	163.0	165.2	151.4	150.8
Short Scan Lamb Loss %	19.7%	8.4%	10.8%	14.7%	16.0%
Days at weaning	102	99	98	100	102
Wean Wt	30	34.8	35	31.7	38
Pre Wean Growth (g/d)	250	306	311	272	325
Hoggets					
Hogget Mating Wt (fleece free)	45	43.8	41.3	42	49.2
Hogget Scanning (shortscan)	130.0%	128.5%	129.3%	104.9%	128.0%
Hogget Dry Rate	20.8%	19.8%	13.0%	18.1%	19.9%
Hogget Tailing% - to Ram	110.0%	83.1%	90%	65%	82%
Hogget Lamb Loss %	15.4%	35.3%	30.4%	37.7%	36.2%
Days at weaning	102	102	94	92	95
Wean Wt (kg)	30	27.5	30	31	32
Pre Wean Growth (g/d)	250	225	271	284	286
Lambs					
Lambs Sold	1044	1065	1325	1033	1452
Weaning Draft	1	448	401	398	798
% sold at weaning	20%	42%	30%	39%	55%
Lamb Sale Weight (Carcass wt.)	18.8	17.33	14	17.94	16.7
Kg lamb weaned/kg ewe (excl hoggets)	65%	84%	86%	76%	85%

HEWETT

	Benchmark	2011/12	2012/13	2013/14	2014/15
Sheep Area	441	441	560	536	520
Sheep SU	4436	4597	5695	5471	5481
Traditional Sheep SU	3651	3785	4693	4412	4430
Traditional Sheep Stocking Rate	8.3	8.6	8.4	8.2	8.5
Total Carcass Weight	97391	105129	113069	109958	102729
Profit/ha	$608	$771	$295	$441	$339
Ewes					
Mating Wt (Fleece Free)	63.2	61.5	59.7	60.8	64
Short Scan %	162.5	164.8	158.6	163.2	165
Tailing % - to Ram	135	141.8	134.0	133.5	136.6
Short Scan Lamb Loss %	16.9%	14.0%	15.5%	18.2%	17.2%
Days at weaning	95	96	91	107	99
Wean Wt	32	32.6	31.5	34.1	33
Pre Wean Growth (g/d)	290	293	295	276	288
Hoggets					
Hogget Mating Wt (fleece free)	41	41.5	39	42	43
Hogget Scanning (shortscan)	90.0%	111.4%	84.9%	102.7%	64.6%
Hogget Dry Rate	25.0%	20.6%	29.5%	16.0%	47.0%
Hogget Tailing% - to Ram	70.0%	76.0%	66.0%	69.4%	47.0%
Hogget Lamb Loss %	22.2%	31.8%	22.3%	32.4%	27.2%
Days at weaning	88	96	94	108	108
Wean Wt (kg)	30	27	27	29	30
Pre Wean Growth (g/d)	289	233	239	227	236
Lambs					
Lambs Sold	3440	4478	4475	4686	4231
Weaning Draft	667	997	719	1218	1239
% sold at weaning	19%	22%	16%	26%	29%
Lamb Sale Weight (Carcass wt.)	15.66	16.37	14.4	15.36	16.04
Kg lamb weaned/kg ewe	70%	74%	71%	77%	71%

LE PINE

	Benchmark	2011/12	2012/13	2013/14	2014/15
Sheep Area	195	189	184	184	184
Sheep SU	2154	2045	2353	2289	1984
Traditional Sheep SU	1752	1639	1895	1838	1612
Traditional Sheep Stocking Rate	9.0	8.7	10.3	10.0	8.8
Total Carcass Weight	49129	63708	60911	54985	56675
Profit/ha	$479	$643	$681	$772	$949
Ewes					
Mating Wt (Fleece Free)	60	59.8	70.8	68.2	65.3
Short Scan %	160	172.4	177.3	178.1	171.8
Tailing % - to Ram	140	156.8	162	153.1	156.5
Short Scan Lamb Loss %	12.5%	9.0%	8.6%	14.0%	9.0%
Days at weaning	96	96	86	107	95
Wean Wt	32	31.5	29.1	30	35
Pre Wean Growth (g/d)	286	281	268	236	322
Hoggets					
Hogget Mating Wt (fleece free)	48	46	44	44.5	41
Hogget Scanning (shortscan)	104.9%	105.5%	120.3%	116.9%	116.5%
Hogget Dry Rate	25.6%	25.9%	11.4%	25.4%	28.3%
Hogget Tailing% - to Ram	60.0%	70.4%	92%	75.4%	84.5%
Hogget Lamb Loss %	42.8%	33.3%	23.5%	35.6%	27.5%
Days at weaning	92	92	71	116	113
Wean Wt (kg)	32	26	27	28	34
Pre Wean Growth (g/d)	299	234	317	203	261
Lambs					
Lambs Sold	1851	1778	1710	2063	2899
Weaning Draft	540	573	307	463	1079
% sold at weaning	29%	32%	18%	22%	56%
Lamb Sale Weight (Carcass wt.)	17.8	18.54	18.4	16.23	17.77
Kg lamb weaned/kg ewe	76%	83%	67%	66%	90%

SMITH

	Benchmark	2011/12	2012/13	2013/14	2014/15
Sheep Area	301	301	301	301	301
Sheep SU	2925	2573	2683	2679	2648
Traditional Sheep SU	2550	2243	2259	2272	2144
Traditional Sheep Stocking Rate	8.5	7.5	7.5	7.5	7.1
Total Carcass Weight	43055	51953	65709	57418	47085
Profit/ha	$397	$193	$262	$373	$271
Ewes					
Mating Wt (Fleece Free)	62	61	62.2	61.8	68.3
Short Scan %	154.1	154	170.9	158.6	163.6
Tailing % - to Ram	127	138.6	138.7	140.3	131.3
Short Scan Lamb Loss %	17.6%	10.0%	18.8%	11.2%	16.7%
Days at weaning	92	84	112	88	100
Wean Wt	28	32.5	28	29.3	34
Pre Wean Growth (g/d)	255	333	209	282	294
Hoggets					
Hogget Mating Wt (fleece free)	41	41	0	39.2	43
Hogget Scanning (shortscan)	66.0%	33.0%	87.7%	45.7%	75.7%
Hogget Dry Rate	34.0%	67.0%	31.0%	60.2%	40.0%
Hogget Tailing% - to Ram	44.0%	29.4%	71%	30.6%	55.0%
Hogget Lamb Loss %	33.3%	10.9%	19.4%	33.2%	27.3%
Days at weaning	87	102		109	
Wean Wt (kg)	26	38.4		32.2	
Pre Wean Growth (g/d)	247	332		254	
Lambs					
Lambs Sold		1733	2144	2048	1925
Weaning Draft	200	250	0	0	542
% sold at weaning	11%	14%	17%	12%	28%
Lamb Sale Weight (Carcass wt.)	15.4	12.9	14.5	14.2	15.29
Kg lamb weaned/kg ewe	60.0%	71.1%	63.0%	66.0%	71.0%

ZINO

	Benchmark	2011/12	2012/13	2013/14	2014/15
Sheep Area	346	346	496	467	467
Sheep SU	3667	3584	5382	5075	5120
Traditional Sheep SU	2777	2716	4217	3880	3878
Traditional Sheep Stocking Rate	8.0	7.8	8.5	8.3	8.3
Total Carcass Weight	81388	101811	136166	126722	118917
Profit/ha	$763	$928	$695	$698	$693
Ewes					
Mating Wt (Fleece Free)	64.6	61.4	66.4	72.9	69.4
Short Scan %	165.9	175.5	178.8	175.9	174.1
Tailing % - to Ram	151.4	156.1	156	153	150
Short Scan Lamb Loss %	8.7%	11.1%	12.8%	13.0%	13.8%
Days at weaning	91	115	104	109	108
Wean Wt	32.5	37.4	37.8	38	39
Pre Wean Growth (g/d)	308	286	320	307	319
Hoggets					
Hogget Mating Wt (fleece free)	47	46	48	45	49.5
Hogget Scanning (shortscan)	118.0%	117.5%	152.3%	142.1%	133.0%
Hogget Dry Rate	21.1%	17.1%	7.6%	10.4%	7.9%
Hogget Tailing% - to Ram	81.9%	80.4%	111.2%	82.9%	82.7%
Hogget Lamb Loss %	30.6%	31.6%	27.0%	41.7%	25.9%
Days at weaning	94	119	109	115	115
Wean Wt (kg)	32	31.7	32.5	36	35
Pre Wean Growth (g/d)	293	228	257	270	266
Lambs					
Lambs Sold	3296	3208	5861	4446	4594
Weaning Draft	1722	1821	2865	2991	2953
% sold at weaning	52%	57%	49%	67%	64%
Lamb Sale Weight (Carcass wt.)	16.3	18.4	18.57	19.26	18.21
Kg lamb weaned/kg ewe	76%	95%	82%	81%	84%


beef+lamb
new zealand