

CONTROLLED FEEDING INCREASES EWE STOCKING RATE BY 18%, WEANED HEAVIER EWES AND LAMBS AND THE LAMBS SOLD EARLIER FOR A HIGHER PRICE



An on-farm trial found that a **mob of twin bearing ewes supplemented by Advantage Feeders in late pregnancy and into lambing were able to rear more lambs/Ha.**

The ewes trained their lambs to creep feed and they had higher growth rates. The ewes that were supplement fed ate significantly less pasture and were stocked with 18% more ewes/Ha.

The ewes that were supplement fed weaned 9.5kg/head heavier than the control group.

TRIAL OUTLINE

	Advantage Feeders groups	Control groups
Quantity in each group	102	107
Ewes/Ha	9.5	8.0
Ewe age	Mixed	Mixed
Foetuses	Twins	Twins
Mean lambing date	4/10/2015	4/10/2015
Weaning date	7/1/2016	7/1/2016
Ewe supplement: 6 weeks pre-lambing to 6 weeks post lambing	300g/day of barley	No feed
Lamb supplementation: From 2 weeks of age	200g/day of pellets/barley	No feed



TRIAL BACKGROUND AND OBJECTIVE

There are a number of challenges facing profitable lamb production farms. These include:

- 1. Increasing the stock/Ha during the winter feed gap**
- 2. Reducing the amount of supplementation**
- 3. Increasing lamb survival**
- 4. Increasing lamb growth rates**
- 5. Eliminating the “check” lambs have at weaning**
- 6. Achieving a high conception rate in ewe lambs**

1. Farms have their biggest deficiency between pasture availability and livestock consumption when ewes are in late pregnancy and early lactation. If stocking rates are increased during this period (and based on lambs growing efficiently), the farm can often sustain this higher stocking rate for the remainder of the year. Stocking rates can be increased by supplementing stock with little and often amounts of starch based feeds as microbe populations increase and ensure high pasture utilisation. The stocking density of the Advantage Feeders group within this trial is 18% higher than the control group. Several other trials have shown a 50% higher stocking rate can be achieved.
2. Supplement can be reduced in a number of areas:
 - a) Feeding little and often provides an environment where microbes thrive. Trials have shown that the feed required to supplement mature stock can be reduced by more than 30%. As the control group had ceased being supplemented by the time the trial started, this doesn't affect the profitability of this trial period.
 - b) Most enterprises have a target weight for their weaners based on reaching a particular weight for a premium market or to coincide with the finish of the spring pasture flush. Creep feeding achieves higher growth rates which allow the pregnancy period to be delayed.

The majority of supplement costs on a farm is from feeding pregnant ewes before there is adequate pasture. If mating is delayed by 3 weeks, this saves approximately \$3/ewe.

- c) Weaning coincides with the ability of a lamb to be self-reliant on pasture. Creep feeding brings this forward approximately 4 weeks meaning that lambs can be weaned off their mothers early – usually during the spring pasture flush. This provides the ewe more time on high quality pasture to raise their condition before mating, reducing the amount of supplement feeding required in early and mid-pregnancy.
 3. Supplementing ewes with starch at lambing thins its colostrum increasing the chance of its lamb receiving enough to survive past the first few days of its life.
 4. Lamb growth rates are increased in three main ways:
 - a) Supplementing ewes post lambing increases milk supply.
 - b) Creep feeding lambs from 2-3 weeks of age starts the transition of their rumen so they can start consuming and converting pasture.
 - c) Lambs that have been creep fed have a developed rumen by eight weeks of age. Feeding a controlled ration after this period will provide an environment to maximise growth off pasture.
- The combination of these can often lead of the latter two benefits can produce a feed conversion of 3:1.
5. Weaned lambs that have been creep fed can transition through weaning better because they are less reliant on their mothers to feed.
 6. Ewe lamb conception is heavily reliant on the mating weight of ewe lambs. Higher growth rates of ewe lambs before weaning increases their conception rates, often by 20%.

FULL RESULTS

	Advantage Feeders group	Control mob
Ewe starting weight (kg): 20/8/15	73.5	73.5
Ewe weaning weight (kg): 7/1/15	84.4	74.7
Increase in ewe weight (kg)	10.9	1.2
Ewes/Ha	9.5	8.0
Starting pasture FOO (kgDM/Ha): 20/8/15	900	900
Interim pasture FOO (kgDM/Ha): 18/11/15	1610	1192
Finishing pasture FOO (kgDM/Ha): 7/1/16	900	900
Change in pasture FOO(kgDM/Ha): 7/1/16	0	0
Lambs weaned/Ha	14.5	12.6
Average weaning %	153%	158%
Average growth rate based on 50% rams (g/head/day)*	346	325
Lamb production/Ha based on 50% rams (kg)	536	426
Income/Ha (based on 50% rams, equal lambing %)	\$1,085.98	\$831.30
Barley consumption (kg)	4400	0
Barley consumption/Ha (kg)	441	0
Barley cost/Ha (\$400/tonne)	\$176.40	\$ -
Depreciation/Ha**	\$22.50	\$ -
Filling cost/Ha (\$20/tonne)	\$8.82	\$ -
TOTAL ADDITIONAL COSTS/HA	\$207.72	\$ -
TOTAL NET PROFIT/HA	\$878.26	\$831.30

*Assume a birth weight of 4.0kg

**This is calculated by multiplying the depreciation rate of 15% by the investment of \$2400 for one NGF1800.

Note: This doesn't take into account the benefit of the higher ewe weaning weight being an average of 9.7kg/head higher. It is hard to put an exact price on the value of the extra body weight however, the subsequent mating would scan considerably more foetuses.





Advantage Feeders



ABOUT THE TRIAL OPERATORS

Tim and Dinah Hawke run 1500 ewes on their farm outside of Rangiora in Canterbury. They also contract graze dairy heifers.

They lamb in September to avoid a growth check due to any cold snaps in the weather. All multiple bearing ewes are separated into twin and triplet mobs. Ewe lambs have a target of 45kg for mating. Most of the progeny from maiden ewes is kept and they market a number of 2yo ewes.

COMMENTS FROM THE TRIAL OPERATORS:

In a normal year I would be trying to lamb on 1400kgDM however, this year only had 900. The season was cold and dry and we are having our spring now in the new year.

Creep feeding was straight forward with ewes training the lambs. When the lambs are 4-6 weeks old, the ewes have one side of the feeder and the lambs have the other. The ewes are then excluded from 6 weeks of age by which time the lambs are very familiar with the feeder.

It has helped being able to sell lambs off earlier. With bigger lambs gone, the next group become leaders of the pack and finish faster. I also keep extra ewe lambs for sale as 2TT's. Having works lambs gone I can put more weight on these.

After weaning, I lift all ewes that are under CS 3 to at least this level. Ewes are supplement fed with barley to lift their weight. They are condition scored every four weeks with the ewes above CS 3 taken out, helping the lighter ones go forward. Heavier ewes within the trial mob has reduces a lot of these costs.

The Advantage Feeders system also gives me the flexibility and opportunity to lift a group of sheep to meet targets, any time of the season.

OPPORTUNITY FOR HIGHER PROFIT:

It is common within the industry for weaning rates to vary within mobs and from year to year, despite having similar conditions. The results in this trial are very similar. Over a large sample size of results, an increase weaning result of 10% could be average due to the increased colostrum and milk supply the ewe has at and after lambing. This would increase the profit/Ha by more than \$100/Ha.

The ewes consumed an average of 450g/day/head. The trial outline aimed for 300g/head/day. If this was achieved, this would reduce the feeding costs by \$50/Ha. With the high weight gain of the ewes in Advantage Feeders group, there is scope to reduce intake by 1/3 and still wean the ewes at a higher weight.

The lambs consumed an average of 130g/day/head. The trial outline aimed for 200g/head/day. If this was achieved, the weight gain of the lambs could have increased by an additional 20g/head/day and the income by \$50/Ha.

In addition, the consumption of the lambs in their first two months was quite low. This is likely due to using barley as the feed type. Best practice appears to start creep feeding lambs is a 50/50 ration of pellets and cereal grains until lambs are 8 weeks of age. This mix provides highly digestible starch sources while not being susceptible to clogging when weather is humid and lamb intake is low. Early intake could further increase weight gain by an additional 20g/head/day.

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