

LEGUMES AT MEADOWBANK

We're in clover

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BACKGROUND INFO

- 2800 ha, 2400 ha effective
- Topography
 - 140 ha Flat (excluding vineyard)
 - 250 ha Cultivable hill – developed
 - 40 ha Cultivable hill – yet to be developed
 - 800 ha Medium hill
 - 720 ha Steep hill
 - 850 ha Very steep un-topdressed
- 600 mm annual rainfall

STOCK WINTERED ON FARM 2012

Composites

3030 Ewes

960 Ewe hoggets

50 Rams

Merinos

1000 Ewes

850 m/s hoggets

1060 Wethers

13 Rams

STOCK WINTERED ON FARM 2012

Cattle

110 R1 heifers

132 R2 heifers

262 MA cows

111 R1 steers

32 R2 steers

13 Bulls

OBJECTIVES THAT DETERMINED WHAT TO SOW

Twin lambs 17 kg+ cwt at weaning.

48 kg+ hogget mating weight.

140% + lambing.

- Good pasture production without N from bag.
- Autumn, winter, spring production our strength.
- Enough summer production to grow young capital stock.
- Efficient use of water – deep rooting species.

CLOVER MIX

Finesse Q tall fescue	15 kg/ha
Prairie grass	8 kg/ha
‘Woogenellup’ Sub clover	6 kg/ha
‘Arrotas’ arrowleaf clover	2-3 kg/ha
‘Huia’ white clover	2 kg /ha
‘Tonic’ plantain	2 kg/ha

60 ha with winter active fescue
70 ha with Finesse Q fescue.

WHERE AND WHAT FOR

- Winter active fescue dry hill faces.
- Finesse Q good all-round production
 - better soils and shady.
- Twin ewes and lambs lambing
 - Weaning
- Trading cattle and young stock.
- Topping.







**Finesse Q fescue, Prairie grass, Sub and Arrowleaf clover and plantain mix
November 2011**



Commentary....

- **The Fescue/prairie/ Sub clover/arrowleaf clover/plantain mix photo was taken late November 2011 after being sown early February 2011.**
- **It was grazed once established through until mid September. Then it was shut up to give the sub clover a chance to flower.**
- **We then grazed off with steers in late November and then shut up again until around mid February for the arrowleaf clover to set seed.**

Grazing late November after letting sub clover flower and set burs.



Grazing after shutting up for sub clover seeding.





Arrowleaf clover flowering January 2011

- Flowering 'Arrotas' arrowleaf clover in January of its first summer.
- Sowing rate of 6 kg/ha – don't need this much 2-3 kg/ha is probably enough.
- Seed should be mature around mid February.





1st May 2013



Commentary....

- **Fescue/ Prairie/ sub clover/ arrowleaf clover and plantain mix.**
- **Photos shows arrowleaf and sub clover germinating after rain on 20th April. (Photo taken 1st May 2013).**
- **This block was sown in autumn 2010 and while there was a reasonable amount of arrowleaf in 2012 more of the hard seed is breaking down now with masses of seeds germinating.**



Close up of germinating clover seedlings on 1 May

- **Winter active fescue ('Flecha'), 'Woogenellup' sub clover, 'Arrotas' arrowleaf clover and plantain mix.**
- **Annual clovers germinating after autumn rains.**
- **Note plantain already green and leafy.**



Commentary....

- Same mix as shown on previous page.
- Note the stalk from the 'Flecha' fescue – it's very tough and hard to clean up if you let it get away too much in the spring.
- Sometimes in winter the cattle will rip the whole plant out by the stalk if the ground is too soft.
- Need good grazing control.





**'Finesse Q' tall fescue, Prairie grass, sub clover, 'Arrotas' arrowleaf clover, lucerne, white clover and plantain mix in late October 2012
sown autumn 2012.**





Commentary....

- Photo was taken 1st May 2013 just before first grazing (sown mid February 2013).
- Used 2 kg of 'Bolta' balansa clover instead of arrowleaf clover as parts of this paddock can get quite wet.
- Per ha mix is 'Finesse Q' tall fescue 15 kg, 'Monti' sub clover 6 kg (Yanninicum sub sp. which tolerates wet soils), 2 kg 'Bolta' balansa, 3 kg of both red and white clover, 4 kg lucerne and 2 kg of plantain.
- Some of the lucerne may get drowned out but will be ok on other parts of block.



Close up of mix in last photo.

THOUGHTS ON FESCUE/ ANNUAL CLOVER MIX

- Fescue is clover friendly.
- Like the mix of sub clover and arrowleaf
 - longer period of legume production.
- Patience with arrowleaf.
- Arrowleaf affected by red legged earth mite?
- Where too wet for arrowleaf swap to balansa.
- Lucerne in mix.
- Keep 'Flecha' fescue under good control.

LUCERNE

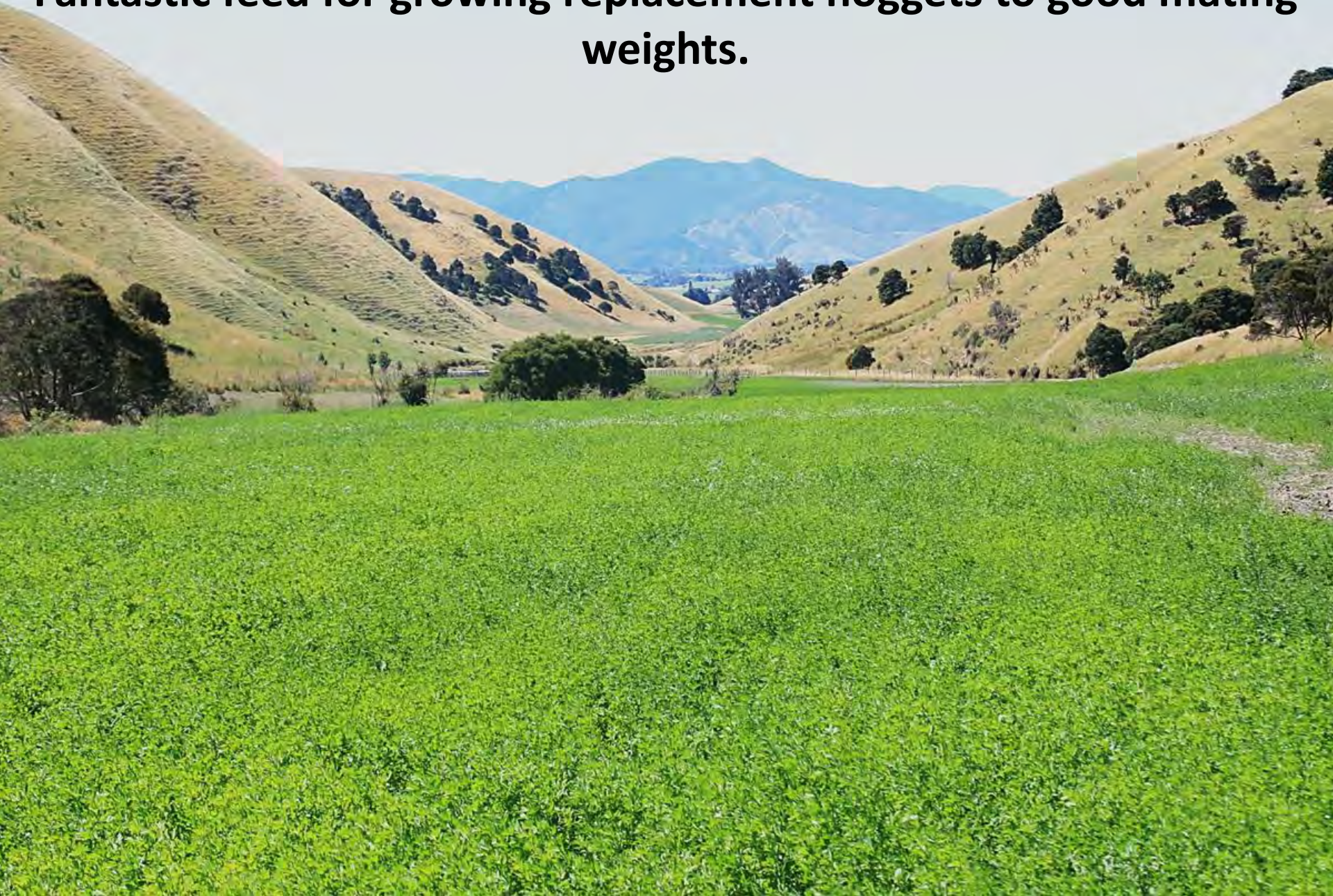
- 61 ha sown and 25 ha in renewal all on flat.

Used for:

- Ewes with twins/triplets, finishing cattle.
- Replacement hoggets 48 kg+ at mating.
- Topping feed for ewes or hoggets.
- Finishing lambs if we have a genuine surplus of feed.

Lucerne monoculture - January 2011.

Fantastic feed for growing replacement hoggets to good mating weights.



LUCERNE, PRAIRIE GRASS, PLANTAIN MIX

Lucerne (with peat inoculant)	9 kg/ha
Prairie grass	20 kg/ha
Tonic plantain	2 kg/ha

- High sowing rate for hill.
- 70 ha sown, 80 ha still to go.

**Autumn drilling Italian ryegrass 2013 as part of the hill development.
This is destined to go into a lucerne mix in spring 2014.**



- **‘Omaka’ barley six days after drilling on 6th February.**
- **All autumn drillings are summer fallowed by spraying out late October the year before.**
- **This block will be sprayed out in September and again in mid October before drilling into lucerne.**





First graze of Omaka barley in April after February sowing.



- **Lucerne/prairie grass/plantain mix in late January 2013.**
- **This was sown October 2012 and was first grazed late March 2013.**
- **This block of 16 ha is just about to be split into five paddocks and water troughs installed.**

The next generation

– George checking out lucerne/prairie/plantain mix after its first graze in late March 2013.

We also sowed some chicory and balansa clover in this mix.



Close up of previous photo – can see seedling prairie grass establishing in between drill rows.



Lucerne, prairie and plantain mix in October 2012.
Running twin ewes and lambs at 12 ewes /ha and 1 finishing heifer or
steer/ha.
The stand is 2 years old.



**Lucerne/prairie mix sown Oct 2011.
We added cocksfoot @ 2 kg/ha in this block as a steeper harder face.**



May 2013

- Lucerne monoculture in foreground winter spray just completed
- Hill block in background has lower half sown in lucerne/prairie/plantain, top half un-improved but has a lot of prairie grass from seed transferred up hill.
- Divided into 4 blocks of 3-4 ha with troughs at top and bottom so can split off un-improved from improved if required with hot wire.



WHAT LUCERNE/PRAIRIE GRASS/ PLANTAIN MIX IS USED FOR

- Twin ewes and lambs and finishing cattle in spring.
- Cattle and/or lighter ewes in post weaning.
- Topping feed for ewes.
- Replacement hoggets and calves / finishing cattle in winter.



**Replacement hoggets June 2013 on Lucerne/prairie/plantain.
Average weight to ram 48 kg after a typically dry summer.**

THOUGHTS ON LUCERNE/PRAIRIE/PLANTAIN MIX

- Quality even when gone to seed.
- All year growth.
- Responds quickly to rain.
- Sloping land – reduce erosion.
- Weeds.
- Stock health.
- Set stock – lambing?

WHAT'S HAPPENED TO PRODUCTION

- Similar stock numbers , better fed.
- Ewe efficiency **increased 40%** since 2005

	2005	2012	Change
Ewe Lambing%	121%	142%	↑ 21%
Hogget Lambing%	60%	81%	↑ 21%
Weaning weight	28 kg/hd	34 kg/hd	↑ 21%
Return	\$730/ha	\$2640/ha	↑ \$1910/ha (>260%)



Twin hogget lambs at weaning

Killed 16.1 kg at 10 weeks

Averaged 410 g/hd/day.

All hogget lambs averaged 370 g/hd/day.



BIG GAINS TO COME

- More area just gone in and still to go into permanent pasture.
- Increasing annual clover populations.
- Improved soil fertility, subdivision and water.
- Getting our heads around new systems.





WHERE TO FROM HERE

- Finish pasture renovation on cultivable hill.
- More fencing, water and fertiliser on hill.
 - 390 ha developed in 105 paddocks.
- Improve sub clover populations on native hill.
- Oversowing annual clovers into hill country.

TAKE HOME MESSAGES

- Planning and implementation.
- Timeliness.
- Let annuals seed.
- New pasture takes priority over stock.
- Fencing, water, fertiliser.
- Work out systems.
- Enjoy the rewards!



SUMMARY

- **Legume based pastures are making our business more profitable and resilient.**
- **Transformation amazing.**
- **Satisfaction.**
- **Give it a go and get in the clover!**