

Raising dairy beef in Southland

Waipuna farmer Alex Field has changed up his sheep farming systems to successfully grow out dairy beef calves for processing as yearlings.

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Dairy beef in Southland

Sheep farm systems-change to grow out dairy beef

When Alex and Ashleigh started managing Waipuna four years ago, the predominantly sheep farm had recently started taking on 100kg dairy beef calves from Canterbury farms. However, the early conversion was not showing great success, with low growth rates, high mortality, and overall low production.

Fast forward to this season and Alex's system changes have shifted the dial on both dairy beef and sheep production.

Getting started

Waipuna near Te Anau can be a challenging property, with high rainfall, cold winters and a long history of low investment resulting in largely failing infrastructure and fertility.

While lamb finishing was going OK on the property and early systems saw an uplift in sheep production, dairy beef calves were not flourishing.

Alex is a passionate sheep farmer and had to change his mindset to focus on the calves to drive a finishing operation in a challenging climate.

Waipuna Farm

- Northern Southland
- ~400 above sea level
- 560ha effective (85% cultivatable 15% hill)
- 6.5T grown a year
- 2.5m rainfall
- 250kg/CW/ha
- Lamb 2000 terminal ewes
- Receives 400 100kg calves in Nov/Dec
- 100% kill before second winter at 260kg CW

Changing the focus

“We started by looking at everything that went wrong with open minds,” says Alex. “Firstly, we stopped blaming the people or systems before us and looking for solutions to problems we can control.”

That led to a series of changes on farm.

Alex says they made a bit of ground the first year but not as much as expected.

“It was a game of cat and mouse. I kept trying to convince myself calves would be fine with lambs, but the lambs ate faster than the calves, resulting in fat lambs and lean calves.

“The real change was when I was talking to my fencer general on the fenceline in 2020 and he suggested we were not prioritising the dairy calves enough. We were still prioritising lamb finishing when the calves could be making more money, if done right.”

A passionate sheep farmer, Alex said that he “swallowed the hard pill” and took his advice, changing up the farm system to focus on the calves with the aim of wintering them once, and sending them to the works as yearlings.

The biggest operational change was pulling the finishing lambs off the recently sown young grass paddocks and putting calves on there instead.

While this initially had the negative effect of dropping lamb growth rates by 20%, calf growth rates went up by 100%.

Over three to four years, calf growth went from 400-500 grams/day to 900 grams/ day, peaking at 1.2kg a day. They are 280kg bull calves going into winter.



Setting up calves for success from day one

Alex says that growing the calves out early, secures yearling finishing and system success.

“It’s easier to grow a calf over summer and autumn than to play catchup over winter in our climate as we are two droughts in a row away from drying out.”

One of the biggest breakthroughs was transitioning the calves from the rearers to the farm system.

Even with five days of pellets when they arrived, they were making 200-300gm a day in the first month. Now from day three the calves are making 900gm a day because of the new system:

Unloaded from the truck to a three-day quarantine paddock, with 2500 quality untouched, clean cover.

The quarantine paddock only gets calves for the three days and is chewed down by ewes several times over the year to provide a stronger biosecurity safeguard.

- Additional 1kg pellets per calf per day for ten days.
- After three days holding, they get a Marks-Min to boost their nutrient levels, they enter the farm nutrient programme on the best feed, in front of the ewes and lambs.

“They never see the bottom of a sward until winter.”



“Putting them in the number one spot has made them the number one animal.”

The Waipuna yearling system

The Waipuna yearling platform is 120ha of the less sheltered parts of the farm that doesn't suit lambing. It is transitioning to a solid stand of Italian and self-sufficient in handling renewal of pastures.

“The Italian is an expensive tool but as the system looks after the grass year-round we can easily have pastures last more than four years. The key is allowing the plant to flower in the same manner as managing a lucerne stand.”

A total of 12 five-cell rotations are stocked at two bulls/ha in mobs under 25 bulls. This stops a lot of behavioural issues and is optimum mob size to hit peak LW gain.

Two bulls/ha allows the LW/ha to naturally follow the grass curve as the bulls grow and is a sweet spot that has taken three years to find.

Shift lengths start at three days, build up to week shifts, then become more regular during the autumn. This is largely driven by the system designed not to fail. Daily or two-daily shifts are problematic to manage when other things take priority on farm, so week shifts are more consistent.

The summer kill bulls (Dec-Feb) enter the rotations in mid-August (roughly a month before lambing) and stay in their rotations until slaughter at 520+kg/LW.

As rotations are emptied, either rotations with weaker grass growth are removed for pastoral renewal or Autumn kill (April-May) fill up the platform and remain on there until slaughter.

Autumn kill bulls are a buffer tool for the season. They can drive CW in good seasons or kill lighter in poor seasons.

Once the bulls are all finished, late season lambs are brought in to utilise feed and over winter the ewes graze the platform to the boards.

Ewes both reset any quality issues from the previous season, and significantly lower the parasite challenge for yearlings entering in the spring.

The combined systems

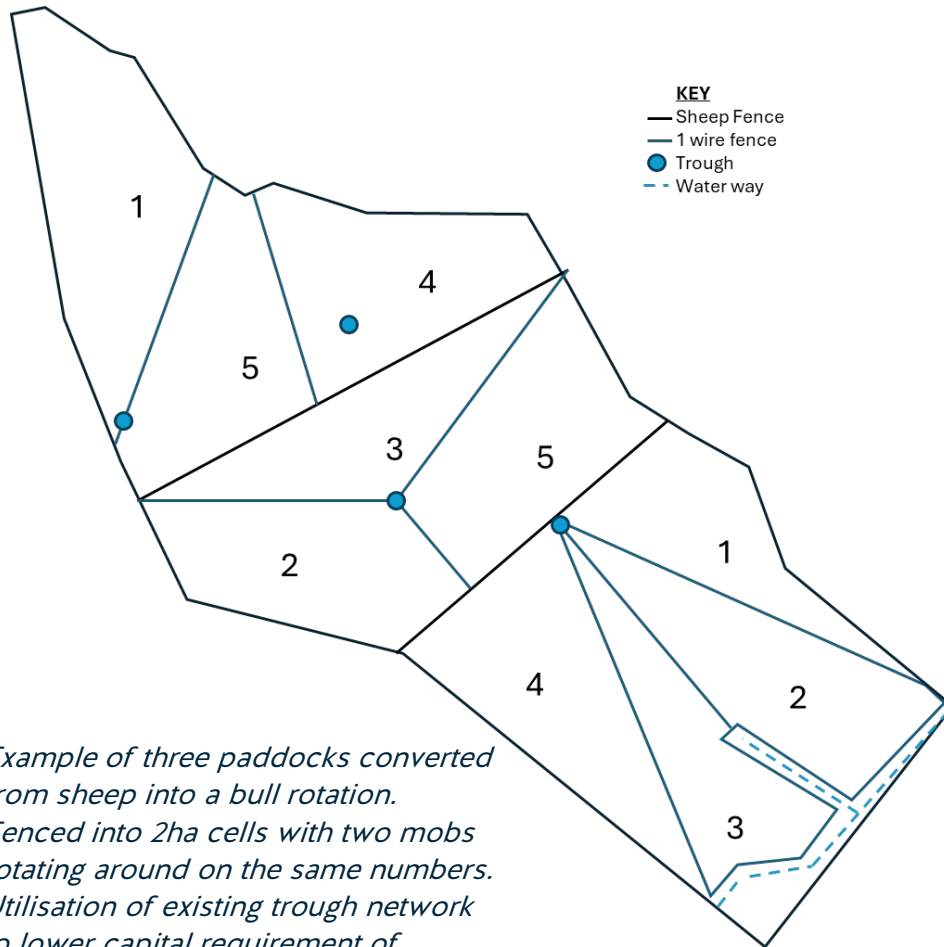
Much of the farm is used to support the 120ha.

Autumn kill yearlings are “backgrounded” with the ewes over the spring until there is space in the yearling platform.

The calves live on the rocket fuel of the system and ewes and finishing lambs must work around them.

Even playing second fiddle, lamb finishing numbers have climbed over the years to now finishing all lambs on farm.

Bull rotations



Example of three paddocks converted from sheep into a bull rotation. Fenced into 2ha cells with two mobs rotating around on the same numbers. Utilisation of existing trough network to lower capital requirement of transition.

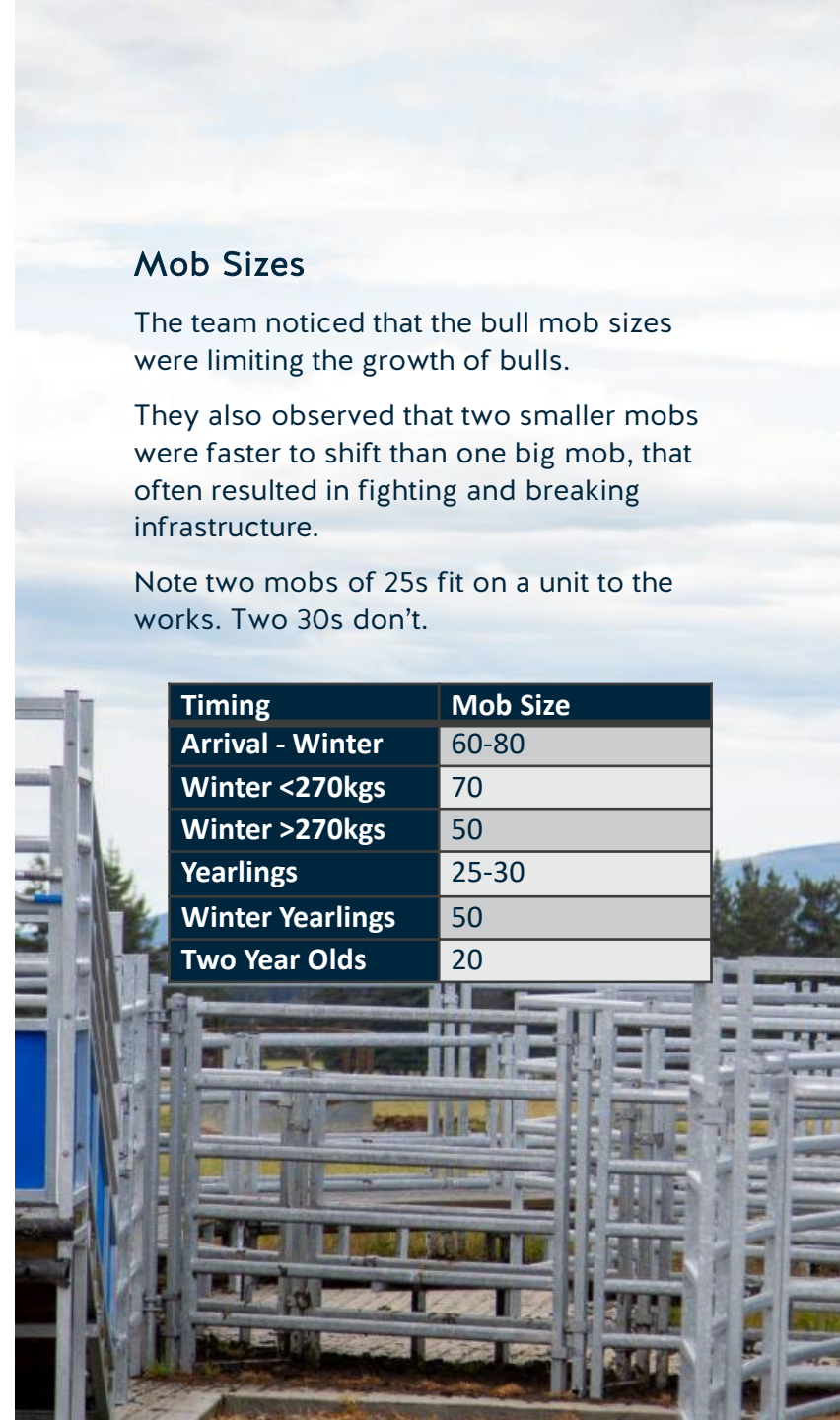
Mob Sizes

The team noticed that the bull mob sizes were limiting the growth of bulls.

They also observed that two smaller mobs were faster to shift than one big mob, that often resulted in fighting and breaking infrastructure.

Note two mobs of 25s fit on a unit to the works. Two 30s don't.

Timing	Mob Size
Arrival - Winter	60-80
Winter <270kgs	70
Winter >270kgs	50
Yearlings	25-30
Winter Yearlings	50
Two Year Olds	20



A herd of brown and white cows is grazing in a lush green field. In the foreground, a brown cow with a white blaze on its face and yellow ear tags (numbers 51 and 605) looks towards the camera. Other cows are visible in the background, some partially obscured by a metal fence. The background is filled with dense green trees and foliage.

Parasite management

Parasite management is 90% of the success, says Alex. “It’s not just about the drenching, it’s understanding the challenge you are putting them on. The calves are not going to grow a kilo a day on high worm count feed”.

A 50:50 ratio is the sweet spot for both species, and a target for the future; however, the higher returns of finishing bulls and trade cattle are hard to ignore from when lamb is under \$6/kg.

Monitoring and comparing growth rates are the most accurate way to assess the success of any parasite management system. Variances with growth rates between mobs of similar size and on rotations of similar feed levels, would often highlight parasite challenge. Alex’s team found a tool to fix this was to graze the rotation over the summer/autumn with lambs.

Getting the headcount right

Alex carried out the proof-of-concept last summer. He and the Business Manager negotiated within Pāmu to get the right number of calves in to allow him to build the system. In the early days of the dairy calf strategy, Waipuna and a neighbouring property answered a strategic need to absorb as many calves as possible. This saw both systems grow too fast and posed a lot of problems. Fortunately, a lot of the learnings were valuable to the late adapters in the Lower South Island which are embracing steadier systems shift.

The biggest challenge was to get the lightest calf finished before a second winter. Last season they were still carrying trade bulls, but the decision was made to sell bulls from the medium weight ranges instead of the smallest. This was to hit proof of concept with finishing the later-born calves.

With adjustments to stocking rates, Waipuna has also chased higher CW.

“In 2020-2021 our target CW was 245. Moving forward we still kill the same number of bulls at a target of 270 CW. There is still some fine tuning to systems to get there, especially over both kills of cattle. Normally if summer CW is up then autumn is down.”

“The 2023-2024 calf crop is our best yet. The smallest calf is 210 kg going into winter, compared to 2019-2020 when our heaviest calf was 213kg going into spring.”



Market opportunities

Previously Waipuna was growing store bulls as a trading option, which is lucrative when selling to Waikato and Hawke's bay because even with trucking they are cheaper up North than what can be bought locally.

However, there was a lot of work to take the trading bull through winter and the market dictated sale date so often the bulls were farmed through a tight spring and sold right as the grass started growing. Often the December price was \$1000/head at 330kg compared to March \$1000/head at 450kg.

Alex has worked with processors and stock agents to ensure the two kill mobs have space in the local works at the right time. The meat works are looking for cattle from January to February so it works for them to have 60% of the bull kill over that time.

As a result, they can leverage a timely Autumn kill. 2023-24 never had a kill delay over a week which was compared to a solid March kill with an average works delay of 60+ days.



Returns

These are still being modelled, making ground on finishing to capture the autumn kill value. Current returns are:

- Summer kill yearlings 30c of DM return plus
- Autumn kills 25c of DM
- 2y/o bulls up to 35c of DM return, but the period yearlings to 2y/o 15c return.

Year	Effective Area	Stock Units/ha	Sheep/Cattle Ratio	KG Product/ha	Calf May Weight (kg)	Calves
19-20	703	8.5	50/50	194.8	170	660
20-21	698	7.9	43/57	205.3	210	560
21-22	627	9.3	42/58	251.1	241	480
22-23	575	7.8	42/58	213.2	243	383
23-24	568	9.4	50/50	250.7	270	365
24-25	560	9.2	46/54	253.3		
25-26	560	10	44/56	282.1		

The system is not perfect, says Alex. “In reality it is still performing below modelling, however every goal set in the past has largely been hit so the goalpost is always moving.”

This table displays the journey in revenue terms.

	19-20	20-21	21-22	22-23	23-24	24-25 Forecast
Revenue	\$ 558,429.00	\$ 487,686.00	\$ 772,705.00	\$ 603,358.00	\$ 542,852.00	\$ 720,710.00
Expenditure	\$ 196,051.00	\$ 216,867.00	\$ 229,543.00	\$ 221,770.00	\$ 221,719.00	\$ 241,062.00
Gross Margin	\$ 362,378.00	\$ 270,867.00	\$ 543,162.00	\$ 381,588.00	\$ 321,133.00	\$ 479,648.00
Effective Area	703	698	627	575	568	560
Gross Margin/ha	\$ 515.47	\$ 388.06	\$ 866.29	\$ 663.63	\$ 565.38	\$ 856.51

“The 23-24 season figures are a good reminder that even with all the ducks in a row, things can go pear-shaped with a well below lambing percentage at 125% and a very cold summer impacting bull finishing. Our aim remains the same to drive revenue as efficiently as possible. There are plenty of lessons learned and more to share with others in the future.”

All Data from FARMAX forecast and monitoring

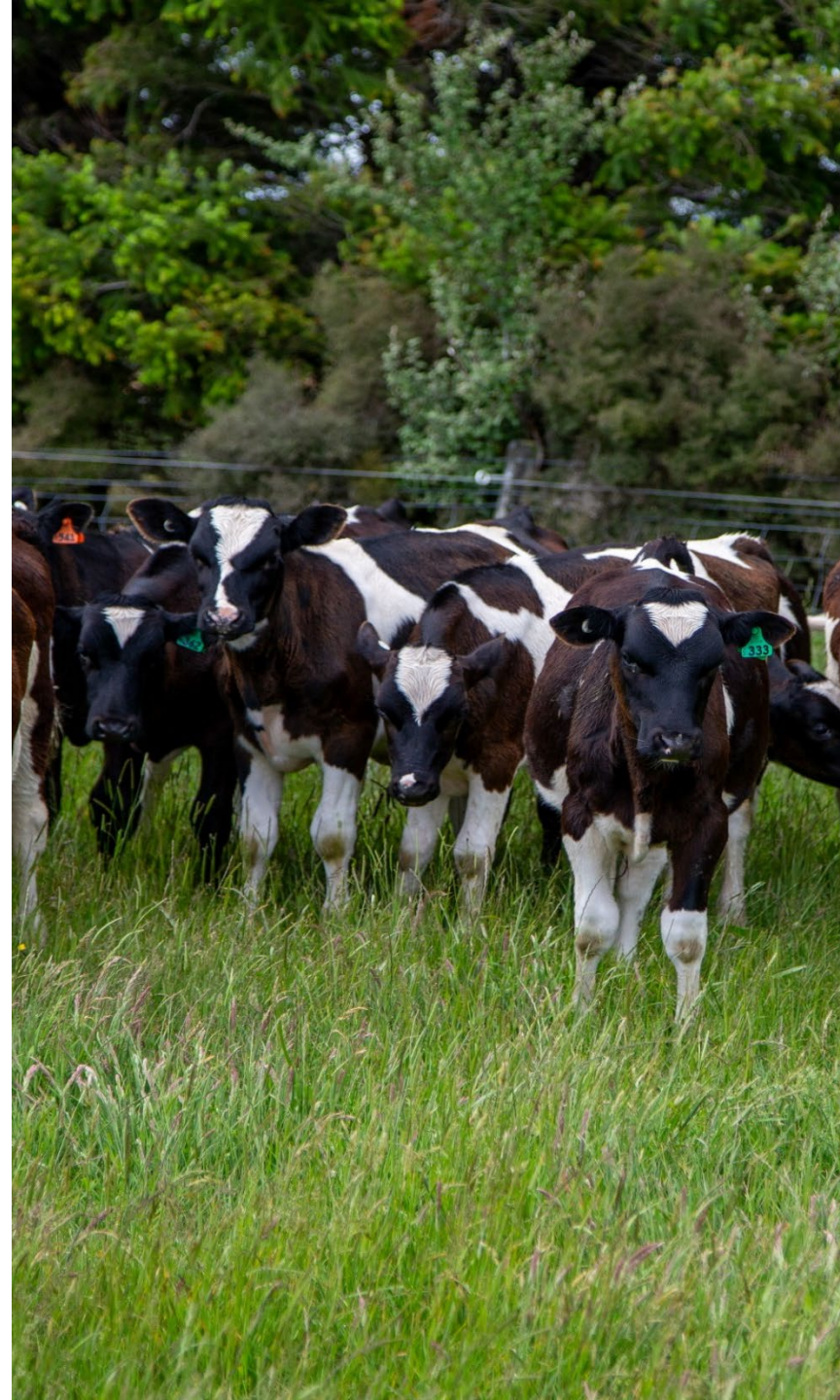
Next steps

1. This year coming Alex is expanding two of the existing bull platforms to push the numbers up. This should increase finishing numbers from 380 to 400.
2. Over this coming season they are sowing all Italians under the bull platforms. Currently the yearlings are finished on Italians which are getting more than four years longevity. They are summer-safe and can set good root reserves.
3. Next season all the bull platforms will be fenced up in the Waipuna beef model.
4. At the moment they hold cattle on baleage over lambing and are looking at green feed to drive cattle growth. Waipuna only grows 6-7 tonnes of dry matter a year. Expanding the operation with an environmentally and economically friendly supplement is the next step to hit targets and drive profitability.



Alex's top tips

1. Understand that system changes take time and you're not going to get everything right. Learning from failing is part of life. Focus on solutions not the problem.
2. Use FARMAX right. It's a great tool for this when you know how to use it. Shit in, shit out.
3. Right from the start use your own weights not rearers' weights, this sets a stable baseline for any analysis.
4. Work with peers and take learnings from everywhere. It sucks to swallow the hard pill and admit you're wrong, but not doing it will mean you stay wrong.
5. Every choice has an effect and consequence for the years coming. The first time I ramped up finishing numbers I mired winter covers, couldn't get space in works, and it nearly imploded the system the following year. Don't carry a problem from this year into the next – take the hit.
6. Put in place some hard stops and trigger points and be ready to pull the pin early.
7. Pick your line and run it. You have a finish line, focus there and know where it is. Don't focus on the stuff standing in your way.





Key Contributors

Pāmu Lower South Island managers from all corners have helped build the system. Lower South dairy beef farms are learning from each other and grow as a unit. Lower South Island Pāmu leadership allowed Waipuna to transform, to model just how good southern dairy beef can be.

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