



Tuapaka

History:

The original 420 hectare farm was acquired in 1938, with a further 56.5 ha added in 1971. In 1983, Tuapaka was divided into two blocks so that better commercial use could be made of the farm – a 111 ha unit of predominantly flat ground, and a hill unit of 365 ha. Initially following this subdivision it was decided to run bulls from weaners to 18 months on the smaller unit, with a sheep and bull beef system put into place on the larger unit. Recently, management strategies have changed to better utilise the property and improve the farms ability to service research and teaching activities.

Objectives:

- To provide a facility for quality research, teaching and extension in sheep and beef farming.
- To be managed as a profitable commercial sheep and beef farm.
- To provide a link between the University and Agribusiness.



Farm no: 12912

Manager: Steven Bayler

Stock Manager: Johnno Brophy

Total area: 476 ha – Flats 111 ha and Hill Unit 315 ha
359 ha effective – Flats 99 ha and Hill Unit 300 ha

Legal Description: Massey leased the land for approximately 10 years (1938-1948) and following Crown ownership acquired freehold title in 2018. Tuapaka is administered and managed by Massey Ag & Hort Enterprises.

Location: 800 Fitzherbert East Road, Palmerston North

Delivery Heading 15 km north-west from Palmerston North along Aokautere Road into Fitzherbert East Road. Tuapaka entrance is located 8.2 km along Fitzherbert East Road on the right.

Instructions:

Services: All major commercial services at Palmerston North (15km) Primary school at Aokautere (6.5 km and 4 minutes), Secondary Schools at Palmerston North.

Contour: Flats: mostly flat with some rolling country
Hill Unit: rolling to very steep hill country

Soils:

Flats: Tokomaru Silt Loam and Ohakea Silt Loam (derived from wind-blown dust from riverbeds). The subsoil is compacted which causes the soil to be slow draining. Natural fertility is medium to high.

Hill Unit: Steepland soil related to Makara Steepland Soils derived from greywacke and slope deposits. Natural fertility is generally low to very low.

Hilly and Steepland soils related to Halcombe hill and steepland soils – derived from loess, unconsolidated sediments and slope deposits. Natural fertility is very low.

Shannon and Tuapaka series – derived from loess overlaying marine sands and have a naturally low fertility.

Korokoro series – derived from loess and slope deposits overlaying greywacke, these soils are generally free draining and have a low natural fertility.

Climate:

Climate data for Aokautere

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Average high °C	21	22	20	17	15	13	12	13	14	16	17	19	16.58
Daily mean °C	17	17.5	15.5	12.5	11	9	7.5	8.5	10	12	13.5	15.5	12.46
Average low °C	13	13	11	8	7	5	3	4	6	8	10	12	7.50
Rainfall mm	59.8	42.4	78	67.6	81.1	106.6	62.7	96	75.4	84.2	81.6	74.9	910
Avg. rainy days	15	12	16	18	20	24	20	21	22	18	20	19	225
% humidity													

1100 mm (average annual rainfall). Summer is predominantly dry. Prevailing winds are westerlies and south easterlies.

Altitude: 100 – 360 m above sea level.

Noxious Weeds: Gorse and California thistles

Noxious Animals: Possums and rabbits

Registered Earmark:

Subdivision/Water: The property is subdivided into 85 paddocks which comprise of Flats: 31 paddocks ranging from 1.3 to 5.2 ha and Hill Unit: 54 paddocks ranging from 1.2 to 12.8 ha.

Fences on both the flats and hill unit are conventional posts and battens with electric outriggers, plus some 3 wire permanent electric. A grass laneway system allows access to all paddocks on the flats.

Water sourced from a bore with water being pumped to reservoirs on the hills and gravity-fed to most paddocks.

Farm Buildings:

Tuapaka Homestead	Stock Manager
Dwelling 2	Shepherd General
Dwelling 3	Empty

The Homestead was extensively upgraded in 2018. The Shepherd General's house is tired and is programmed for an upgrade. The third empty dwelling is beyond refurbishment.

Five-stand wool shed and covered yard complex with a 1,500 ewe capacity. Two sets of satellite yards. One main set of cattle yards (near the wool shed) with five main pens with concrete floor crush to race and weighing platform (electronic scales), head bail and spray dip. Another satellite set of yards near the south-western farm boundary.

Pastures

The flats are on a five year rotation of hybrid ryegrass/chicory/white clover species. For the hill unit, typical hill country pastures dominate consisting of browntop, crested dogstail with perennial ryegrass and white clover.

Forestry:

Stand	Species	Area (ha)	Year Planted
Tuapaka 01	Eucalypts	0.56	1980
Tuapaka 02	P. radiata	9.12	1993
Tuapaka 03	P. radiata	8.02	1998
Tuapaka 04	C.mac	0.80	1998
Tuapaka 05	P. radiata	5.26	2000
Tuapaka 06	Eu. fastigata	0.72	2000
Tuapaka 07	P. radiata	9.23	2002
Tuapaka 08	P. radiata	2.53	2005

Tuapaka 09	P. radiata	2.36	2005
Tuapaka 10	P. radiata	2.67	2007
Tuapaka 11	P. radiata	3.92	2015

Total Forestry Area: 45.19ha

As part of NZTA's construction of the new Ashhurst/Woodville expressway, 16.43ha of riparian and wetland areas were planted in the winter 2021 to offset resulting environmental damage. In conjunction with this programme Tuapaka management has identified a further 9.4ha which has been retired and earmarked for future biodiversity planting.

Cover:

As at 30th June 2021:

New Grass incl chicory + Clover	82.00ha
Good – Average Pasture	76.97ha
Old Pasture	200.00ha
Commercial Forestry	45.19ha
Riparian Diversity Planting	15.13ha
Wetland Diversity Planting	1.30ha
Research -Native Shrub Block	2.00ha
Manuka 2019 Planting	2.08ha
Waterfall Regeneration	10.09ha
Retired for Future Biodiversity Planting	9.40ha
Races Tracks waste	28.25ha
Total Tuapaka	472.41ha

Total Area 472ha
Total Effective Area 359ha



Livestock Policies:

Sheep

Approximately 1,700 breeding ewes, slightly less than 700 replacement ewe hoggets and 28 rams are carried on Tuapaka.

Replacements are bred on farm. All MAEwes are mated to a FE resistant maternal sire. Approximately 500 lambs > 36kgs were sold for slaughter at weaning in early December. The remaining lambs were drafted progressively through the season.

Around 380 4/5yr ewes are transferred to Keebles annually. Ewes are weighed and condition scored four times a year.

Ewe hoggets are mated early May to a Terminal sire with about 50% of the progeny sold to the works and the rest sold store.

Key strategies to improve the performance of the flock are as follows:

- Continued pasture improvement including expansion of the flat country improvement.
- A focus on all year-round nutrition of the ewe flock and hogget growth rates with an objective of lifting per head performances. Specifically:

- Heavier ewes at tugging – MAE at 67kg. 2ths at 63kg. This will result in higher scanning and lambing percentages
- Focus on growing hoggets from weaning. Treat these as a finishing animal.
- Lowering the ewe death rate to provide more cull ewes for sale and more selection pressure in the flock.

Production & Future Targets:

	Last Year	Current	Year 3
Sheep	2020/21	2021/22	202/25
Scanning %	170.2%	179.3%	180%
Dry %	3.2%	3.2%	2.5%
Ewe Death %	5.7%	6.0%	5.00%
Lambing %	142%	141%	150%
Weaning Weight	28.7kg	30kg	32kg

Cattle:

Tuapaka has recently bred up an Angus breeding herd. The herd comprises 116 breeding cows (91 Angus breeding cows, 25 in-calf Angus heifers) and replacements. Also grazed are six Angus bulls, 90 Angus calves.

Key Strategies to Improve cattle Performance are:

- Target winter growth rates of over 0.5kg/day for June and July with the use of crops
- Kill over 60% of animals before the second winter
- Weaning weight equivalent to 50% of dam winter weight.

Future Targets

	Last Year	Current	Year 3
Cattle	2020/21	2021/22	202/25
Scanning	94.8%	93.2%	96%
Cow Death	2.51%	1.3%	1.2%
Calving Percentage	86.5%	88%	92%
Dry Percentage	7.2%	5.1%	5%

Tuapaka 2021 Wintering Stock Numbers (@ 1July 2021):

SHEEP	Numbers	SU
MAEwes	937	937
2ths	760	760
Ewe Hoggets	710	497
Rams	35	28
Sheep Total	2451	2,222
CATTLE		

MA Cows	91	546
R2 Yr Heifers	25	150
R1 Yr Heifers	45	158
R1 Yr Steers	45	180
MA Bulls	6	33
Cattle Total	292	1,067

3,289 SU

Fertiliser Policy/ Strategy

- Soil tests are undertaken biennially on pre-determined transect lines.
- Fertiliser applications are then planned in conjunction with the Fertiliser rep using Overseer with objective of achieving economic optimum applications.
- The following table shows the average soil test readings on Tuapaka since the regular testing regime was established in 1988.

Historic soil test results

Flats:

Year	pH	Olsen P	SO4	K
2010	5.6	29	10	5.5
2012	6.1	22	9.5	5
2014	6.02	25.34	11.68	6
2018	5.9	22.4	8.6	9
2020	5.6	23.0	10	5.5

Hill Unit:

Year	pH	Olsen P	SO4	K
2010	5.6	30	12	15
2012	5.7	20	9	11
2014	6	25.86	15.4	11
2018	6.0	25.5	8.2	14.9
2020	5.7	27	10.5	12

The 2021 fertiliser programme which is typical is as follows:

Flats:

380kg/ha 10%K Super + N + Selenium (30-24-20-30).
2.5t/ha Lime.

New Grass:

200kg/ha Crop15 + Se (30-20-20-15)

Hill Block:

370 kg/ha Super + added selenium(0-18-0-22) applied autumn

Labour:

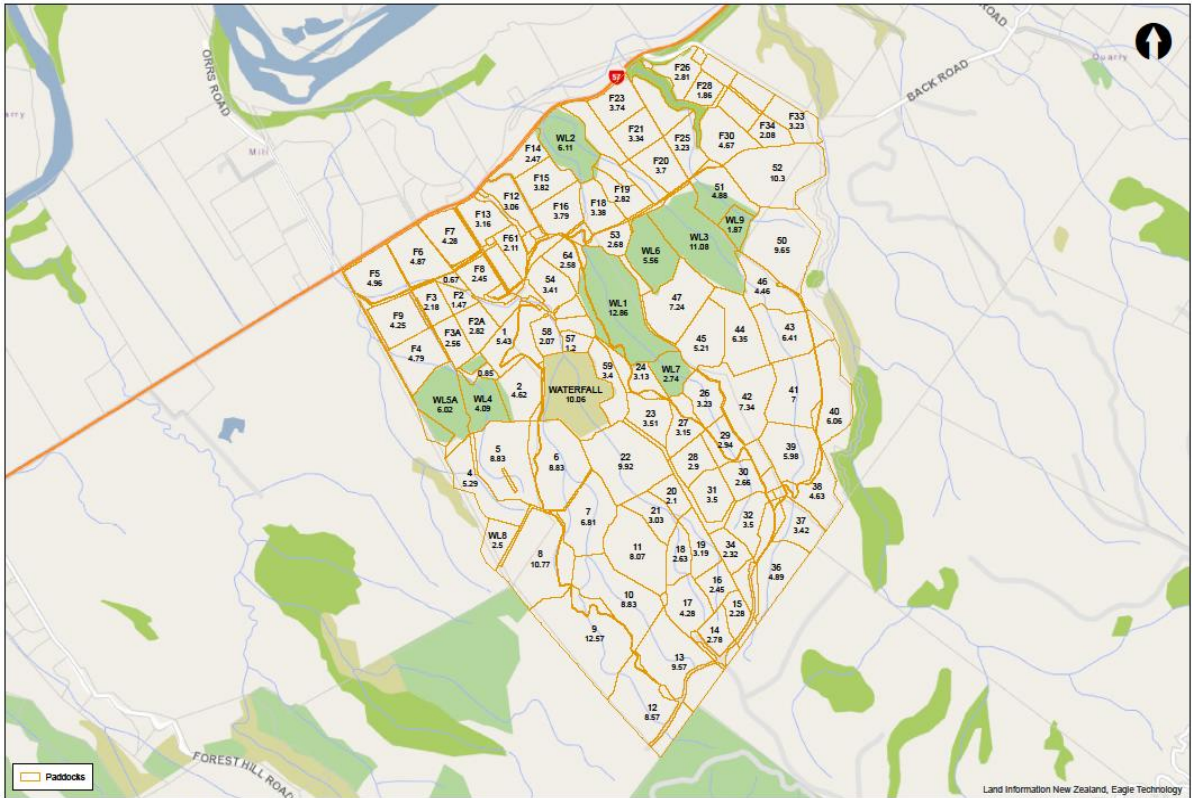
Two permanent staff and casual staff as required.

Research:

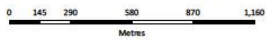
1. Monitoring stream nitrate concentrations leaving an 85ha catchment on farm via the Main weir using a high frequency nitrate sensor in order to develop strategies to enhance nitrate attenuation in these features.
2. Monitoring the behaviour and impact of sheep accessing natural waterways in spring, summer, autumn and impact on water quality.
3. Edible native plant species in North Island hill country.



Tuapaka



MASSEY - TUAPAKA BULL BEEF - UNIT 2912 - 7098004
Date printed: 16/01/2020
0800 73 73 73
www.hawkeye.farm



Land Information New Zealand, Eagle Technology
Hawkeye