

The Northland Dairy Development Trust
&
The Northland Agricultural Research Farm

‘Farm Systems for Profit’
Field Day – 4th December 2018

Project funders

Ministry for Primary Industries
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NDDT Science Manager:	Chris Boom, AgFirst Northland
NDDT Coordinator:	Kim Robinson, AgFirst Northland

PROGRAMME

10am - Welcome – Sean Bradbury

10:10 – Cow Fertility Studies – Dr Chris Burke

10:50 – NARF Imported Feed Trial – Chris Boom & Kate Reed

11:05 – Profitable Production – Dr Jane Kay

11:25 – NARF Managing Climatic Variation Trial – Chris Boom & Kate Reed

11:45 – Visit to Neville & Ainsley Porteous farm – Gareth Baynham

1:20 – Wrap-up and Feedback

1:30 - **BBQ lunch & drinks** – Farm Source Wellsford

Visit the Northland Dairy Development Trust website for further information and updates from these projects

www.nddt.nz

See us on Facebook – Northland Dairy Development Trust

Acknowledgements

Thanks to the funders and sponsors who have made this project possible. Special thanks to the NDDT trustees and NARF committee members who have given of their time and energy to make this project happen.

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Reducing Reliance on Imported Feed Trial - Brief Summary

Chris Boom (Science Manager, AgFirst Northland) & Kate Reed (NARF Farm Manager) – November 2018

This is a brief summary of this study. The full paper is available from www.nddt.nz.

This trial has been conducted by the Northland Dairy Development Trust (NDDT) in conjunction with the Northland Agricultural Research Farm (NARF). The project was funded by DairyNZ, Ministry of Primary Industries (Sustainable Farming Fund) and Hine Rangi Trust with support from commercial sponsors.

Summary

For three years a farm systems trial located at Dargaville has been testing how two farms using all 'home grown' feed (Grass Only farm and Cropping farm) compare to a farm importing Palm Kernel Expeller (PKE farm). Stocking rate averaged 2.6 cows/ha on the Grass Only farm and 2.8 cows/ha on the other two farms.

Weather conditions were relatively kind during the first two seasons, resulting in good pasture growth and pasture covers on all farms. The late winter and early spring of the third season was challenging due to prolonged wet conditions. Pasture production totalled 17.4, 18.8 and 17.4 t DM/ha for the 2015/16, 2016/17 and 2017/18 seasons respectively. None of these seasons had a prolonged summer/autumn dry.

Supplement use on the PKE farm was 469, 513 and 544 kg DM PKE/cow for the three seasons respectively. Crops were established on the Cropping farm totalling 23%, 21% and 25% of the farm area for the three seasons respectively. Crops sown were turnips (average yield 8.4 t DM/ha), fodder beet (during the first two seasons only - 15.6 t DM/ha) and maize silage (18.2 t DM/ha).

Averaged over the three years milk production was highest on the PKE farm at 1,092 kg MS/ha compared with 915 kg MS/ha on the Grass Only and 997 kg MS/ha on the PKE farm. Poor soil structure on ex-crop paddocks was a significant challenge for the Cropping farm. In-calf rates averaged 9% across all farms and all seasons. There was no consistent trend between farms as cow condition was carefully managed on all farms.

Costs were calculated for each farm, including differential labour requirements. Over the three seasons farm working expenses/kg MS averaged \$3.87, \$4.45 and \$3.96 for the Grass Only, Cropping and PKE farms respectively. In 2015/16 with a \$3.90/kg MS price, the Grass Only farm had the highest operating profit at \$442/ha followed by the PKE farm at \$277/ha and the Cropping farm at -\$52/ha. For the 2016/17 season at a \$6.12/kg MS price the PKE farm had the highest operating profit at \$2,525/ha followed by the Grass Only farm at \$2,477/ha and the Cropping farm at \$1,904 /ha. For the 2017/18 season with \$6.69/kg MS, the PKE farm again had the highest operating profit at \$2,679/ha compared with the Grass Only farm at \$2,078/ha and the Cropping farm at \$1,417/ha.

The first two years of this study showed that when costs associated with supplementary feeding are considered, a Grass Only farm system may have similar or better profitability to a system using PKE. However, the third season showed a significant advantage to the PKE farm due to a challenging late winter/spring impacting the other farms to a greater extent. The use of cropping on heavy clay soils to replace imported supplements has not proved to be an effective strategy.

Background

New Zealand dairy farms have come to rely heavily on importing feed onto the farm, largely PKE. There is concern in the farming community as to the impact on farms if this feed was not available due to lack of

supply, market pressures, milk composition requirements or food safety concerns. Increased levels of imported feed have also driven up farm working expenses, making farm systems vulnerable during seasons with lower milk price.

Removal of imported feed would have significant impact on the productivity of New Zealand dairy farms in the short to medium term. A three year farm systems trial was established at the Northland Agricultural Research Farm (NARF), located at Dargaville, to test and demonstrate how dairy systems might maintain production and/or profit without imported feed. The trial has been run for three years to ensure a range of climatic challenges.

Trial Structure

The trial compares three farms:

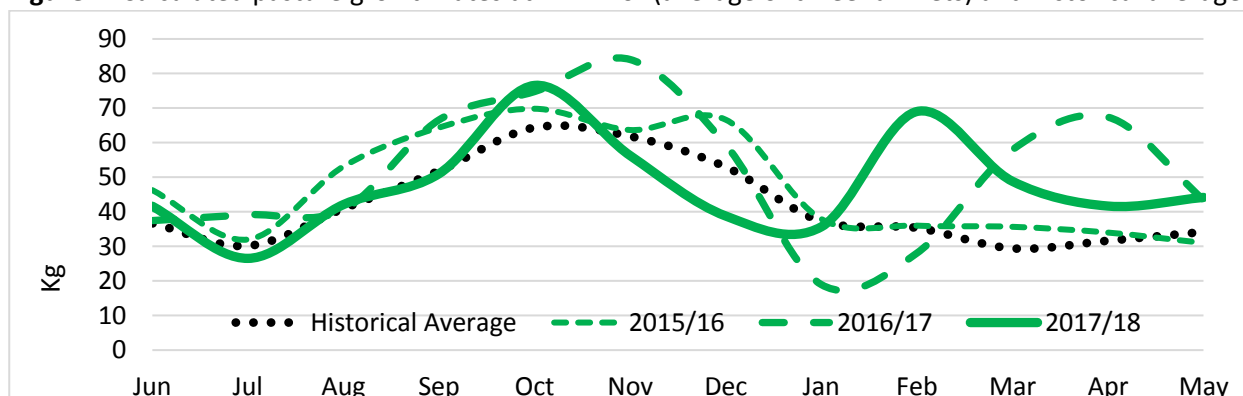
1. **Grass Only Farm** - No imported supplement, home grown grass silage may be used. Stocking rate of 2.6 cows/ha (73 cows calving on 28 ha)
2. **Cropping Farm** - No imported supplement, crops grown on farm (turnips, fodder beet and maize silage). Stocking rate of 2.8 cows/ha (80 cows calving on 28 ha)
3. **PKE Farm** - Importing of PKE as required to fill in feed gaps. Stocking rate of 2.8 cows/ha (80 cows calving on 28 ha)

Pasture Growth

Relatively good pasture growing conditions have prevailed through most of this three-year study. Calculated pasture growth (based on post and pre-grazing rising plate assessments) totaled 17.4 t DM/ha for the 2015/16 season, 18.8 t DM/ha for the 2016/17 season and 17.4 t DM/ha for the 2017/18 season. This compares with a historical annual production of 15.4 t DM/ha. Average monthly pasture growth rates are shown in Figure 1.

Nitrogen was applied totaling 143, 154 and 224 kg N/ha for the three seasons respectively. Nitrogen use was higher during the 2017/18 season due to additional applications during spring 2017, which was a challenging season. Nitrogen use has been similar between farms.

Figure 1. Calculated pasture growth rates at NARF for (average of three farmlets) and historical average.

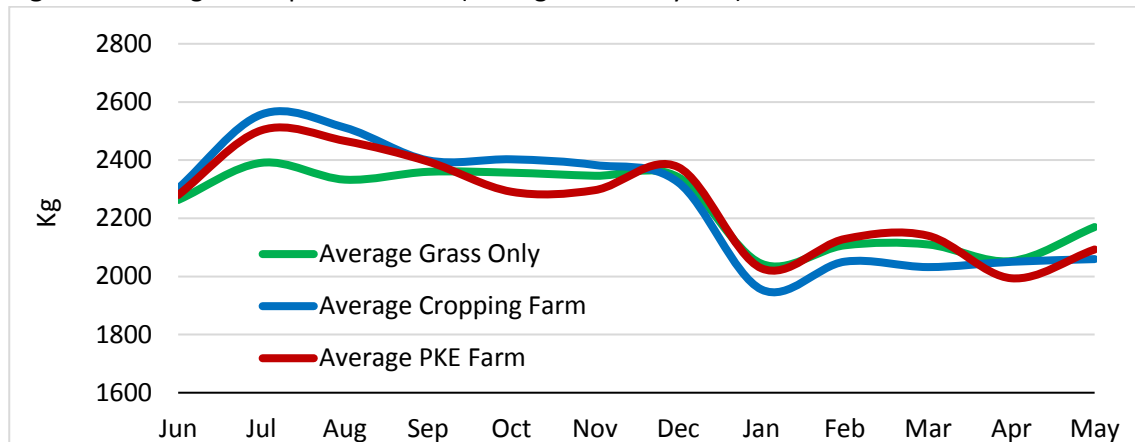


Pasture Covers

Average of farm pasture covers are shown in Figure 2. Overall, pasture supply was not extremely challenging at any time on the Grass Only farm. No pasture silage was conserved on the Cropping farm in the first two years while 17% of the farm was conserved in the third season. The PKE farm has had more flexible

supplement use to control pasture cover. Pasture silage was harvested on the PKE farm, being 21%, 50% and 41% of the farm during the three seasons respectively.

Figure 2. Average farm pasture cover (average of three years).



Supplement and Crop Use

Table 1 shows the crop areas, yields and costs. As a general rule, supplements were only fed when pasture grazing residuals were predicted to be below the target of 1500 – 1600 kg DM/ha, under optimal grazing rotation length.

Crops were established on 23%, 22% and 25% of land area on the Cropping farm for the three seasons respectively. Crops grown were turnips, fodder beet and maize silage. However, during 2017/18 fodder beet was not included due to a loss in confidence of growing a cost effective crop. Turnips were fed to the Cropping cows January – March and fodder beet from late February – June. Cropped paddocks were sown into either perennial or annual ryegrass after harvest.

Table 1. Crop production, cost and supplement fed (kg DM/cow). 2017/18 numbers are for the season to date (20th May). Crop costs include the cost of regrassing but not the farm tractor or labour costs.

	Supplement	% of Farm in Crop			Estimated crop t/ha			Growing & Harvesting Cost c/kg DM			Fed kg DM/cow		
		15/16	16/17	17/18	15/16	16/17	17/18	15/16	16/17	17/18	15/16	16/17	17/18
Grass Only Farm	Grass Silage	20%	47%	55%				12.1	13.5	8.7	99	321	513
Cropping Farm	Maize Silage	9%	7%	9%	22.0	14.5	18.0	13.1	30.1	20.3	630	536	375
	Turnips	7%	9%	16%	9.0	9.5	6.8	7.7	11.9	11.9	217	309	340
	Fodder Beet	7%	6%		15.5	16.0		26.2	26.4		404	199	73
	Grass Silage			17%						8.7			174
PKE Farm	Grass Silage	21%	50%	41%				12.1	13.5	8.7	123	278	326
	PKE							28.9	29.7	29.9	469	513	544

Milk Production

The Cropping farm had the highest milk production, and Grass Only the lowest during the 2015/16 season, as shown in Table 3. In the 2016/17 season the PKE farm had the highest production while the Grass Only farm had the lowest. During 2017/18, the Cropping farm, and to a lesser extent the Grass Only farm, were

significantly impacted during the wet winter/early spring while the PKE farm maintained similar production to the previous season.

Table 3. Milk solids production per ha and per cow.

	Kg MS/ha			Kg MS/cow		
	15/16	16/17	17/18	15/16	16/17	17/18
Grass Only Farm	884	965	897	349	380	344
Cropping Farm	1,050	1,055	886	387	379	340
PKE Farm	1,035	1,117	1125	381	401	394

Mating Results

Overall, the in-calf rates have been relatively good (table 4) with an average empty rate of 9% over the three seasons. Mating results have varied between farms within a season, however these differences are not considered significant as there is no consistent trend across the three seasons.

Table 4. Mating results.

	3 Week Submission			Non-return Rate			Empty Rate		
	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18
Grass Only Farm	96%	79%	89%	83%	72%	79%	6%	10%	8%
Cropping Farm	83%	85%	92%	63%	84%	74%	13%	7%	12%
PKE Farm	87%	79%	85%	78%	80%	71%	9%	1%	12%

Responses to PKE

Comparing the PKE farm to the Grass Only farm provides a calculation of response to PKE, shown in table 5. Differences in response to PKE over the three seasons are somewhat due to using PKE to improve farm production from pasture. The high response in the 2017/18 season was mainly due to being able to maintain twice a day milking for the cows on the PKE farm during the challenging spring, while cows on the Grass Only farm were milked once a day due to poor cow condition.

Table 5. PKE response calculation

	2015/16	2016/17	2017/18
Grass Only Farm Production (kg MS)	24,751	27,014	25,122
PKE farm production (kg MS)	28,984	31,274	31,501
PKE Fed tonne (wet)	39.6	44.5	51.1
Kg Milk Response/kg PKE Fed (wet)	0.107	0.096	0.125

Financial Results

The financial results for the three farms have been calculated and are shown in the table 7. The income is based on the full milk price of the season, being \$3.90/kg MS for 2015/16, \$6.12/kg MS for 2016/17 and \$6.69/kg MS for the 2017/18 season. Fonterra share dividend is not included. Actual income from livestock sales is included. Expenses are based on actual expenses with some adjustments for labour and administration to compensate for extraordinary expenses involved in running the research farm.

Farm working expenses were the highest on the Cropping farm for all three seasons, while they were the lowest on the Grass Only farm for the first two seasons and lowest on the PKE farm in the third season.

The Grass Only farm was the most profitable in 2015/16 season, while the PKE farm was the most profitable for the 2016/17 and 2017/18 seasons. These differences were due to changes in milk price. If a constant milk price of \$4.00/kg MS is used across all seasons, then the Grass Only farm would have been the most profitable in the first two seasons. Likewise, if a \$6.00/kg MS is used then the PKE farm would have been most profitable in all seasons. The Cropping farm was the least profitable all seasons, though the difference was especially great in the third season when farm production took a real hit due to the challenging spring.

In practice, additional capital is required to develop infrastructure, machinery and additional cows for more intensive systems. Assumptions were made, and adjusted operating profit is shown in the table below based on servicing the additional capital required for the Cropping and PKE farms. Taking the additional capital requirement into account favours the Grass Only farm which made it the most profitable during the first two seasons. Overall, taking into account the cost of capital, the Grass Only and PKE farms had similar profitability while the Cropping farm was less profitable.

Table 7. Summary of the three years income, expenses and operating profit for the three farms with alternative milk price and adjustment for additional capital required.

Financial Summary	Grass Only Farm			Cropping Farm			PKE Farm		
\$/ha	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18
\$/kg MS used in analysis	\$3.90	\$6.12	\$6.69	\$3.90	\$6.12	\$6.69	\$3.90	\$6.12	\$6.69
	\$/ha	\$/ha	\$/ha	\$/ha	\$/ha	\$/ha	\$/ha	\$/ha	\$/ha
Income from milk	\$3,447	\$5,904	\$6,002	\$4,094	\$6,459	\$5,925	\$4,037	\$6,836	\$7,526
Other Income	\$561	\$291	\$435	\$597	\$320	\$435	\$597	\$320	\$475
Total Income	\$4,009	\$6,196	\$6,437	\$4,691	\$6,778	\$6,360	\$4,635	\$7,155	\$8,001
FWE/kg MS	\$3.65	\$3.55	\$4.43	\$4.07	\$4.17	\$5.10	\$3.79	\$3.76	\$4.34
Total Operating Expenses	\$3,567	\$3,718	\$4,359	\$4,743	\$4,874	\$4,942	\$4,357	\$4,630	\$5,323
Operating Profit/ha	\$442	\$2,477	\$2,078	-\$52	\$1,904	\$1,417	\$277	\$2,525	\$2,679
Alternative Milk Price Analysis									
Op Profit/ha @ \$4.00	\$530	\$425	-\$355	\$53	-\$340	-\$985	\$381	\$150	-\$368
Op Profit/ha @ \$6.00	\$2,298	\$2,355	\$1,439	\$2,152	\$1,770	\$786	\$2,451	\$2,384	\$1,882
Op Profit/ha @ \$8.00	\$4,066	\$4,284	\$3,324	\$4,252	\$3,881	\$2,557	\$4,521	\$4,618	\$4,132
Adjustment for Cost of Additional Capital Required									
Additional Capital/ha	\$500			\$2,242			\$2,483		
Cost of Capital at 6.5%	\$33			\$146			\$161		
Adjusted Op Profit/ha	\$409	\$2,445	\$2,046	-\$198	\$1,758	\$1,272	\$116	\$2,363	2,517
3yr Average Profit/ha	\$1,633			\$944			\$1,665		

Dairying in a Variable Climate Trial – NARF

Chris Boom (Science Manager, AgFirst Northland) & Kate Reed (NARF Farm Manager) – November 2018

This trial has been conducted by the Northland Dairy Development Trust (NDDT) in conjunction with the Northland Agricultural Research Farm (NARF). The project was funded by DairyNZ, Ministry of Primary Industries (Sustainable Farming Fund) and Hine Rangi Trust with support from commercial sponsors.

Summary

A farm systems experiment commenced at the Northland Agricultural Research Farm (NARF) in June 2018. This study will run for three years. Three farms are being compared, being: a pasture only farm (Pasture Only, 2.7 cows/ha); a farm that supplements with PKE (PKE Only, 3.1 cows/ha) and a farm that supplements with PKE and other supplements (PKE Plus, 3.1 cows/ha).

Computer modelling was undertaken using Farmax software to understand the likely challenges, solutions, production and financial returns. Three different climatic conditions were tested, being an average season, a wet winter and a dry summer. Changes in milk price and feed costs were then tested.

Modelling showed that in a climatically average season, milk production on the Pasture Only farm was predicted to be 883 kg MS/ha, 1,093 kg MS/ha on the PKE Only farm and 1,209 kg MS/ha on the PKE Plus farm. At a \$6.00/kg MS milk price and an average season, the PKE Plus farm had the highest economic farm surplus (EFS) at \$2,049/ha, while the Pasture Only and PKE Only farms were similar at \$1,737 and \$1,742/ha respectively. The EFS of the PKE Only farm was most effected by both the wet winter and dry summer scenarios due to milk FEI constraining PKE feeding during challenging seasons. Of the three farms, the Pasture Only farm had the highest EFS under a \$4.00/kg MS milk price and the lowest under a \$8.00/kg MS milk price.

Modelling has indicated that of the three farms, the PKE Plus farm showed the least vulnerability to climate variability in terms of milk production and farm profit. Data collection from the actual trial is continuing.

Background

This project is conducting a farm systems experiment that measures the economic and environmental impacts of three different management strategies for producing milk within a variable climate and constraints of milk fat evaluation index (FEI). The farm systems study is being conducted at the Northland Agricultural Research Farm (NARF) and commenced in June 2018. The study will run for three years.

Data collected will allow examination of the effects of these systems on milk production, profitability, environmental sustainability, cow welfare, labour, and capital requirements. This project will assist farmers in developing more profitable, less vulnerable, and lower impact farming systems.

Farmlet structure

The three farm systems are:

1. **Pasture Only – 2.7 cows/ha**

This treatment will be managed as within the previous project. Nitrogen use will be common across all treatments so base pasture supply is common.

2. **PKE Only – 3.1 cows/ha**

This treatment will test and demonstrate options to managing feed supply shortages, such as OAD milking, early culling, drying off, etc. PKE use will be constrained so milk fat evaluation index (FEI) stays within the acceptable limits set by Fonterra. PKE will only be used when pasture grazing

residuals fall below predicted levels while maintaining ideal grazing rotation length (not to be used to create a pasture surplus for conservation).

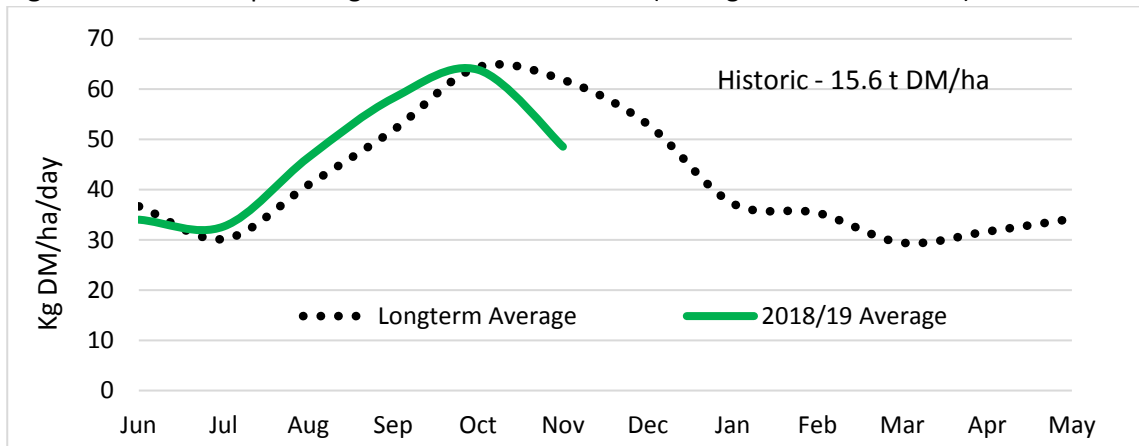
3. *PKE Plus – 3.1 cows/ha*

This treatment will test the viability of using PKE and other spot market feeds to fill feed supply shortages. PKE will be used to fill feed deficits until milk FEI limits are reached and then the next cheapest feed source (\$/ME) will be used. Spot market feed sources only to be used (no stored maize silage). As with treatment 2, supplement use will be determined by grazing residuals.

Pasture Growth

Pasture growth so far this season is shown in the graph below. Growth over winter and early spring was similar to historic averages, however the first part of November was dry.

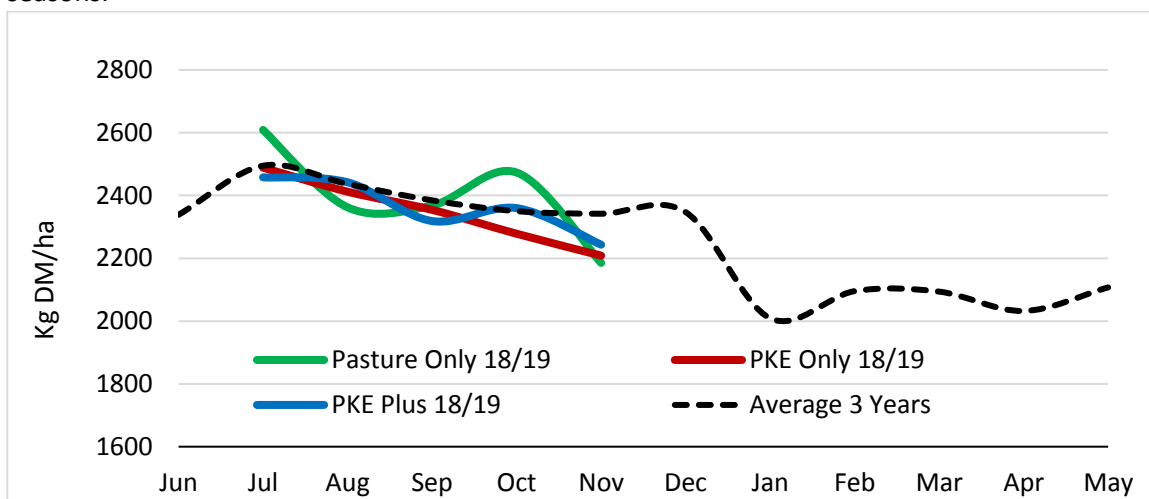
Figure 1. Calculated pasture growth rates at NARF for (average of three farmlets) and historical average.



Pasture Covers

Average of farm pasture covers are shown in Figure 2. Pasture cover was higher during October on the Pasture Only farm, likely due to the lower stocking rate. This allowed more area to be closed up for silage.

Figure 2. Average farm pasture cover for the 2018/19 season compared with the average of the previous 3 seasons.



Supplement Use

Table 1 shows the supplement fed to date and area cut for silage.

Table 1. Supplements fed this season to 20th November 2018 (kg DM/cow) and % of Farm Cut for Silage

	Supplement	Kg DM/cow	% of Farm Cut for Silage
Pasture Only Farm	Grass Silage	253	21%
PKE Only Farm	PKE	336	9%
PKE Plus Farm	PKE DDG	340 3	7%

Milk Production and Mating

Table 3 shows the milk production and mating results to date.

Table 3. Milk solids production per ha and per cow to 20th November 2018 and mating 3 week submission rate.

	Kg MS/ha	Kg MS/cow	3 Week Submission Rate
Pasture Only Farm	488	182	93%
PKE Only Farm	571	188	84%
PKE Plus Farm	579	189	91%

Farm Systems Modelling Results

Physical and Financial Results

The predicted milk production, pasture & crop eaten (home grown feed) and Economic Farm Surplus (EFS) for each farmlet and pasture scenario are summarized in the tables below. The average climatic season is highlighted in yellow.

Table 4: Predicted Milk Production (kg MS/ha) by Farmlet and Scenario:

	Predicted Milk Production (kg MS/ha)		
	Average	Wet Winter	Dry Summer
Pasture Only	883	817	750
PKE Only	1,093	1,042	894
PKE Plus	1,209	1,193	1,162

Table 5: Predicted Pasture & Crop offered (t DM/ha) by Farmlet and Scenario:

	Pasture & Supplement Offered (t DM/ha)		
	Average	Wet Winter	Dry Summer
Pasture Only	13.8	14.0	12.6
PKE Only	16.7	17.0	15.3
PKE Plus	17.6	18.1	17.4

Table 6: Predicted Economic Farm Surplus (\$/ha) by Farmlet and Scenario based on a \$6.00 milk price:

	Predicted EFS (\$/ha)		
	Average	Wet Winter	Dry Summer
Pasture Only	\$1,737	\$1,359	\$ 937
PKE Only	\$1,742	\$1,274	\$ 493
PKE Plus	\$2,049	\$1,713	\$1,230

Sensitivity Analysis

Table 7: Farm Working Expenses/kg Milk Solids (FW Ex \$/kg MS) and Economic Farm Surplus (\$/ha) sensitivity to milk price (Average Season)

Farmlet	FW Exp \$/kg MS	Milk Price		
		\$4.00/kg	\$6.00/kg	\$8.00/kg
Pasture Only	\$4.01	-\$ 29	\$1,737	\$3,502
PKE Only	\$4.43	-\$ 444	\$1,742	\$3,927
PKE Plus	\$4.28	-\$ 370	\$2,049	\$4,467

Table 8: Economic Farm Surplus (\$/ha) sensitivity to PKE price* (Average Year)

	PKE Price* (\$/t PKE)		
	\$200	\$300	\$400
Pasture Only	\$1,737		
PKE Only	\$2,064	\$1,742	\$1,420
PKE Plus	\$2,371	\$2,049	\$1,888

* Price for PKE landed on farm 'as fed'

Neville & Ainsley Porteous – Te Arai Farm

Background

- Neville and Ainsley bought the farm 11 years ago as part of an equity partnership, operating the farm with Lower-Order Sharemilkers
- Bought out the equity partners in June 2017 and operating the farm for the last 18 months
- The milking platform is 135 ha (total farm area is 157 ha – including bush and rough grazing)
- Growing 10.5 ha of maize on the milking platform (maize silage cost is 16c/kgDM, incl new grass)
- Dry cows grazed off the milking platform (winter and summer)
- Generally milking 400 cows at peak, split calving (moving to ~50% Autumn)
 - Calving Dates, 20th March (Autumn) & 23rd July (Spring)
- Staff employed: Three full time staff (plus Neville)

Production performance:

Season	2015/16	2016/17	2017/18*	Target 2018/19*	Long Term
KgMS	145,681	123,794	160,178	170,000	170,000
Peak Cows milked	400	400	400	400	410
Winter Milk (% peak cows)	33%	38%	50%	60%	41%
kgMS/cow	364	309	400	425	415
kgMS/ha	1079	917	1187	1259	1259

* 2017/18 and 2018/19 cow numbers and split calving percentage were unusual (farm purchase)

Farm System 3-4

Imported Feed (tDM)	2017/18	Target 2018/19	Northland Avg (D Base)
PKE (tDM)	279	198	
DDG (tDM)	36	0	
Balage (tDM)	29	15	
Dry Cow Grazing (tDM)	238	196	
Total Imported Feed	582	409	
Imported Feed/cow (tDM)	1.46	1.02	0.7
Imported Feed (% Total)	26%	18%	15%
Pasture & Crop Eaten	11.3	12.8	9.4

- The 2017/18 season was unusual; low pasture cover at takeover, extra carryover cows milked and autumn calvers were dried off in December (early dry spell last year).
- 2018/19 is more typical of the planned system – fed 120 tPKE of the expected 220T so far this season - forecasting pasture eaten of >12.5 tDM/ha, which would be exceptional for Northland
- Using 200 kgN/ha including effluent application.
- Winter milk contract is 330 kgMS/day – worth ~\$70,000 in premiums (which is equivalent to 200T PKE at \$350/t)

Pasture Management:

1. Hitting Target Residuals:

- Key focus is on leaving the right residual to ensure quality feed next rotation
- Preference is to make the cows graze to the target residual (will put them back into a paddock to reach the right residual) but prepared to top if necessary or be proactive making balage
 - E.g. This season harvested 20 ha in 3-4 cuts for a total of 110 bales – silage is cut while the grass is still relatively short to improve re-growth (green to the base)
- Using reels and standards all year to get the allocation right – often cut ¼ of paddock off to use following day then move cows on.
- Taking the maize silage area out increases the spring stocking rate to 3.3 cows/ha (feed demand of 55-60 kgDM/ha/day) and helps prevent surplus pasture
- Round length: 1st May 40 days, 1st June 50, 1st July 60 then use spring rotation planner from PSC.

2. Set Rotation:

- No plate-metering – the cows graze the farm in a rotation (the exception is new grass paddocks)
- Each herd grazes half the farm - sometimes the herds will switch over
- Having all the pre-grazing and post grazing paddocks in the same part of the farm helps to see how much grass is in front of the cows and keep an eye on residuals/regrowth – the hectares offered to the cows and supplement use can be fine-tuned each day
- Neville is on the spot to make the decisions – would this work for less experienced farmers?

Reproduction:

- This is an area Neville is currently working on – Empty rates have been in the mid 20% (10 weeks mating for autumn and 10+ weeks for spring). 15% for Autumn 2018 mating
- Empties may be carried over from the autumn mating into the spring, but not spring to autumn
- There are no pre-mating heats (no CIDR's) and no OAD milking for non-cyclers (no intervention)
- Neville's current focus is doing a great job with youngstock – monitoring has started
 - Calves remain on the milking platform until they are above MINDA weights targets
 - Autumn born calves averaged 140 kgLW in mid-August
 - Nothing is weaned below 100 kgLW (probably average 108 kgLW at weaning) and calves get a mixture of meal, maize silage and PKE

Reducing Reliance on PKE:

- Split calving is the key tool to manage feed deficits – moving dry cows off-farm reduces feed demand during winter and summer – grazing off makes up 40-50% of the “imported” feed
 - Drying off can reduce feed demand by ~20 kgDM/ha/day
- Supplementary feed is only used to fine tune pasture management
- Split calving is a good option when there's a high reliability of drought or challenging winters, but it can be less flexible than supplement – in wet summers there can be surplus pasture

Other Discussion Topics:

- **Health & Safety – How can you reduce risks?**
- **Effluent System “Hacks”**

Feedback Form

'Farm Systems for Profit' Field Day

4th December 2018

Are you a:

Farm Owner		Share Milker/Manager		Farm Staff	
Rural Professional		Tutor/Student		Other	

How did you hear about this event - tick one or more

Email		Text messaging		Website	
DairyNZ staff		Word of mouth		Other	

	No	Slightly	OK	Pretty good	Highly
Was the day beneficial?					

	No	Not really	OK	Pretty good	Yes
Was the day well run?					

	No	Probably not	Maybe	Yes	Definitely
Will you recommend other NDDT days?					

	No	Slightly	Somewhat	Yes	Definitely
Are you motivated to put in place messages from today's event?					

Things you will change as a result of coming today:

Any comments and recommendations you can make?

Research ideas that NDDT could undertake?

Thanks for coming - NDDT Trustees and NARF Committee