

# DairyNZ Lower North Partner Farm

*Final Field-day*  
4<sup>th</sup> May 2018

**Hokonui Farms: Innes Anderson & Tania Dropulich,  
Contract Milker: Stephen Shaw,  
Baldrock Rd, Kaiwaka**

**BIG Thanks to our Funders & Sponsors:**



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# Lower North Partner Farm – Topics & Agenda

## **TOPICS:** *Lower North Partner Farm – Our Dairying Future*

- *What We've Learned?*
- *What's Been Achieved?*
- *Where Are We Heading?*

10am **Morning Tea**

10:30am **Welcome & Outline of the Day**

- *Chris Neill, Regional Leader, DairyNZ*
- *Gareth Baynham, Project Facilitator, AgFirst Northland*

10:40am **Our Partner Farm Journey**

- *Partner Farmers: Innes Anderson & Tania Dropulich*
- *Our Journey – the last 3 years*
- *What's Been Achieved?*

11:20am **Farm Visit (Walking)**

- *Cows & Grass – Monitoring & Timing*
- *Targets & Trigger Points*

12:10pm **Our Dairying Future**

- *What's next for Innes & Tania?*
- *Key Lessons – Tips for a Brighter Future*
- *Key Points from the Management Team (Greg McCracken)*

12:30pm **Extension 350**

- *Chris Neill & Ken Hames*

12:45pm **Key Points, Wrap-Up & Evaluation**

- *Key Points and Evaluation*

1pm **Lunch – Thanks to The Vet Centre**

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## **Lower North Partner Farm Management Team:**

- Greg McCracken (Chair)
- Dion Aitken
- Warren Burke
- Peter Flood
- Ken Hames
- Brian Mason
- Neville Porteous
- Chris Neill

## Lower North Partner Farm: Background

Land Owners: John and Audrey Anderson

Company Owners: Innes Anderson & Tania Dropulich

Contract Milker: Stephen Shaw (2017-18 was Stephen's first season)

### **History:**

John and Audrey purchased the farm back in 1967, originally 144 ha now 225ha, plus a 250ha beef unit. This is under a Trust entity. An irrigation system was installed in 1995, involving a lake on the beef land.

Innes and Tania operate Hokonui Farms, which leases both the dairy and beef land from the Trust on a 5 year rolling lease, generating an income for John & Audrey and giving security to Innes and Tania's business. Stephen Shaw is contract milking (2017/18 was his first season), previous contract milkers Philip & Pia Rockell were contract milking for the previous 3 seasons.

### Farm Information:

The effective area is estimated at 211 ha. Most of the paddocks are within a 1.5 km walk from the cowshed (40 A/S Herringbone). Approximately 180 ha is irrigated.

The adjacent 220 ha sheep and beef farm is operated by Innes and Tania, carrying replacement heifers, growing 5-16ha of maize for silage and wintering dry cows. Calves are normally grazed on the milking platform until they are yearlings; in the past two seasons they were taken off the milking platform from the summer.

Soil fertility is at optimum across much of the farm, pastures are a mix of kikuyu and ryegrass.

### Partner Farm Goal: Increase Operating Surplus by \$180,000/year by 2017/18:

The management team set a **2017-18** goal of increasing production by 30,000 kgMS (from 170,000 to 200,000) with no increase in overall farm working expenditure. There is more detail in the Planning wheel, but key focus areas were:

**Focus Area: Pasture Management:** Lift Pasture eaten from 9.8 tDM/ha to 10.8 tDM/ha

- Pasture monitoring (10 days), Spring Rotation Plan, Mulching & Annual Ryegrass, More Nitrogen

**Focus Area: Milk Production:** Increase production by 30,000 kgMS to 200,000 kgMS by 2017/18

- Meet Body Condition Score Targets, Well Grown Young stock, Move all cows to TAD milking

**Focus Area: Manage Expenditure:** Drop farm working expenses by \$0.50/kgMS

- Hold dairy expenses at ~\$700,000, Benchmark Expenses, Set a Disciplined Budget and share it with the team, Compare Actuals against Budget Monthly and separate Dairy & Beef expenses

**Focus Area: People:** Maintain Good Relationships with Contract Milkiers and Family

- Formal meetings with Stephen (with written agenda & actions), ensure the farm business matches with the family vision

**Focus Area: Compliance & Environment:** No environmental/compliance issues

- Complete a Sustainable Milk Plan, Use the DairyNZ compliance checklist to identify issues

## Farm Physical Summary:

Production history and feed used is outlined in the table below (211 effective hectares):

	2017/18 Target	2017-18 Year 3	2016/17 Year 2	2015/16 Year 1	2014/15 Year 0	2013/14	2012/13
Milk Solids (kgMS)	200,000	~185,000	184,055 <sup>1</sup>	196,117 <sup>2</sup>	161,616	171,683	124,409
Cows (peak)	550	530	551	554	470	467	437
Cows/ha	2.6	2.5	2.6	2.6	2.2	2.2	2.1
kgMS/cow	363	349	334	357	343	367	285
kgMS/ha	948	876	872	938	765	813	590
Pasture and Feed (tDM) – Imported							
PKE	150	199	95	95	22	108	22
Maize Silage	100	145	180	180	100	80	80
Grass Silage/Hay						28	83
Dry Cow Grazing	109	132	82	160	109	109	101
Imported Feed (kgDM/cow)	652	860	702	700	491	696	654
Feed Eaten (tDM/ha)	12.9	12.3	12.5	12.8	10.8	11.0	8.9
<b>Pasture/Crop Eaten (tDM/ha)</b>	<b>11.4</b>	<b>10.2</b>	<b>10.9</b>	<b>11.0</b>	<b>9.8</b>	<b>9.8</b>	<b>7.9</b>
N Applied (kgN/ha)	120-180	~200 <sup>3</sup>	207	177	104	84	63

<sup>1</sup> Includes 6,117 kgMS of calf milk taken from the vat to rear beef calves (excludes milk for dairy calves)

<sup>2</sup> Includes 1,476 kgMS of calf milk taken from the vat to rear beef calves (excludes milk for dairy calves)

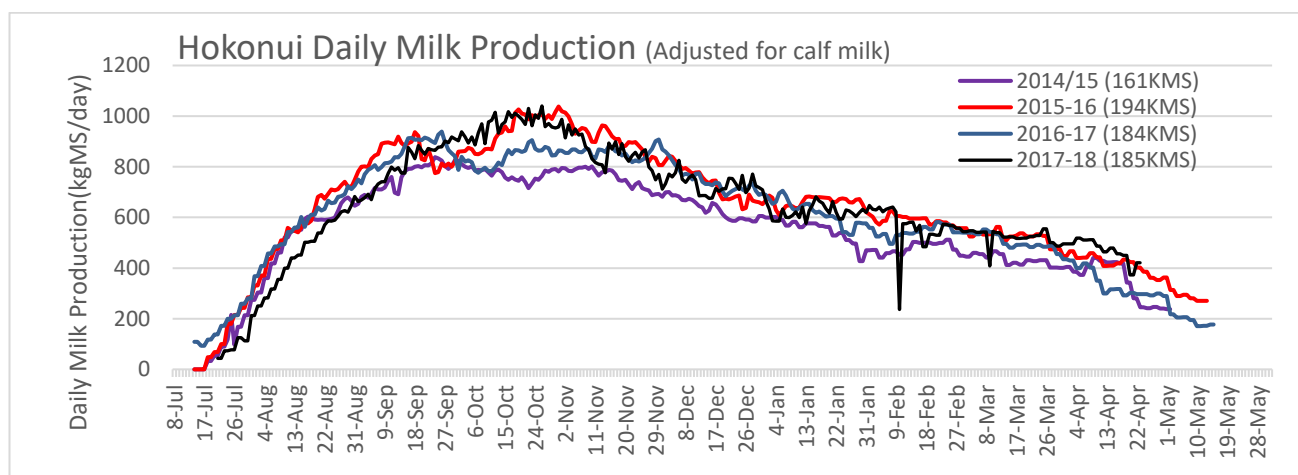
<sup>3</sup> 187 kgN/ha applied at 26<sup>th</sup> April

Milk production has been lower in the last two seasons (due to the difficult spring and dry spells in early Summer). In 2017/18 issues with mastitis forced early culling, peak milking numbers were 530 (vs 550 target), while it's disappointing not to have achieved the production target of 200,000, Innes and Tania are now confident that 185,000 kgMS is a "bankable" target. This is also a significant step up from the 6-year production average prior to the partner farm program (143,520 kgMS).

Pasture Eaten is a key measure of grass management, despite not quite reaching the target in 2017/18 there has been an increase in pasture eaten, despite difficult springs.

## Milk Production:

Milk production increased significantly in the first season (2015/16), in Year 2 (2016/17) production started well, but a wet spring impacted on production, followed by a dry spell in January. Milk production in the final season (2017/18) was slower (heifers calving at the same time as the main herd). Despite having 20 cows less than the previous year, milk production will be similar to the 2016/17 season.

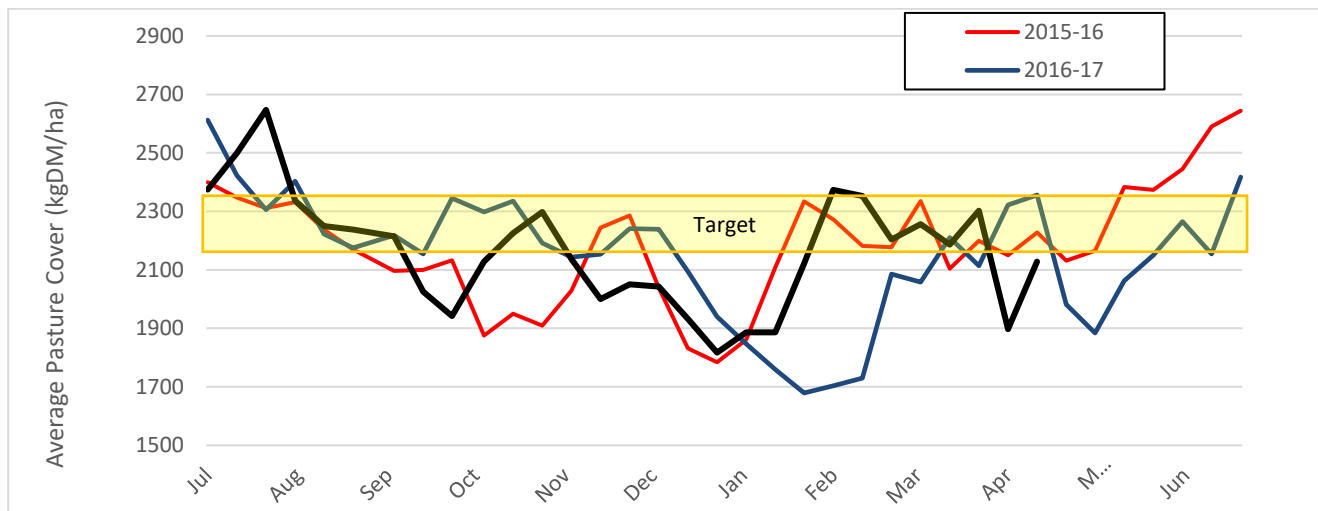


## Pasture:

During the first and second season the team identified several areas to tweak pasture management:

- Keeping average pasture cover close to the “Sweet Spot” (2150 – 2350 kgDM/ha) to maximise pasture growth – especially through late winter and spring
- Fine tuning pasture allocation – using breaks rather than whole paddocks
- Responding faster to feed deficits – setting targets and trigger points, monitoring against them and taking action early (with supplement or nitrogen)
- Being proactive with nitrogen – using nitrogen in anticipation of feed deficits rather than using it to respond to a feed deficit – nitrogen applied regularly behind the cows
- Starting irrigation prior to the dry weather (irrigators ready to go by 1<sup>st</sup> November) and moving to double shifting early rather than trying to catch-up when it’s dry

The graph below shows average pasture cover for the last 3 seasons. Pasture cover dipped in early summer in each year as an early dry spell impacted on pasture growth. All three seasons have had good autumn pasture growth. While pasture cover dipped below the “sweet spot” in September 2018, a swift response (nitrogen, supplement and pushing out the rotation) meant pasture cover quickly returned to the target zone.



### Pasture Management - What Worked Well:

- **Mulching & Oversewing Italian Ryegrass:** Provides a winter boost to pasture & increases quality
- **Targets and Trigger Points:** Defining targets to monitor against and trigger points to take action – once the trigger point is reached an agreed action is taken (e.g. supplement introduced or nitrogen started)
- **Proactive Nitrogen:** Nitrogen was applied regularly behind the cows through the winter and spring, providing a constant boost to pasture growth and avoiding the “boom and bust” cycle when nitrogen is applied aggressively to get out of feed deficit

## Cows:

Mating Key Performance Indicators (11 ½ week mating):

	2014/15	2015/16	2016/17	2017/18	Target	Your Farm
<b>6 Week In Calf Rate</b>	<b>64%</b>	<b>71%</b>	<b>64-66%</b>	<b>64%</b>	<b>78%</b>	
3 Week Submission Rate	76%	73%	73%	75%	90%	
Not in calf Rate	11-14%	12-14%	15%	16%	8%	
Herd Calved by Week 6 (%)	81%	79%	88%	79%	87%	
2 YO (Percentage of the herd)	18%	29%	20%	22%	18%	
2 YO - Calved by Week 6 (%)	89%	93%	97%	93%	92%	
2 YO: 3 Wk Submission Rate (%)	78%	72%	79%	82%	90%	

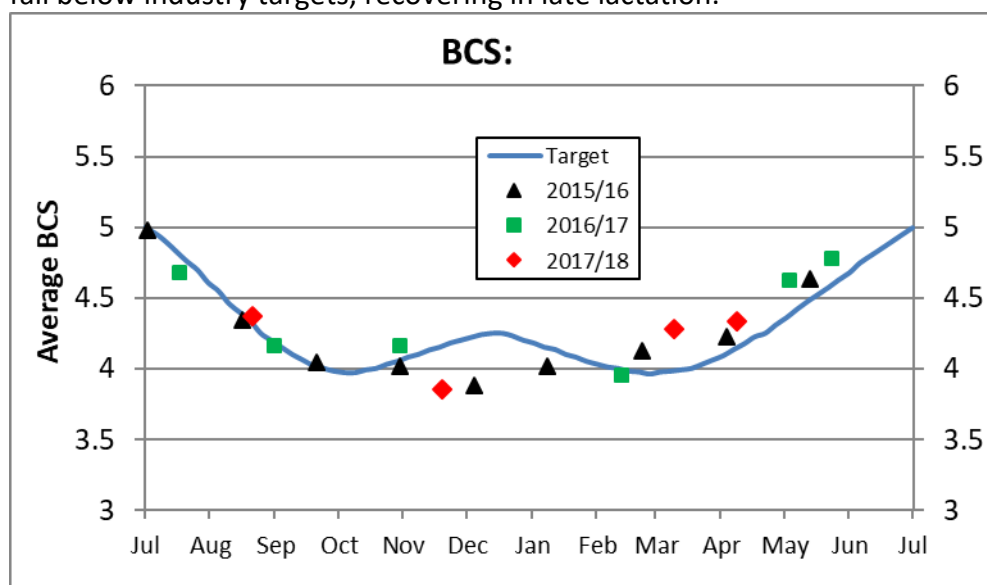
Mating has been similar across the 3 years of the project, which was disappointing. Analysis of the data shows a slower calving in 2017, which impacted on the 2018 mating. In hindsight, the cows were milked too long in May 2017 – this put cow condition and pasture cover under severe pressure. Additional off-farm grazing was required and additional supplement used to try and quarantine the impact of the season to the 2016-17 season.

No hormonal intervention was used – non-cyclers were identified from pre-mating heats and milked OAD for a fortnight before the start of mating, transferring back into the TAD mobs once they had been mated.

Growing good heifers has been a focus for Innes and Tania and they’ve done a great job. Heifers are weighed regularly and are typically above the target weights in MINDA Weights. The R2 Heifers calving in 2017/18 averaged 479 kgLW on the 17<sup>th</sup> May 2017 – 11 kgLW above target.

### Body Condition Score:

Cow condition is outlined in the graph below; the cows have tended to lose condition in mid lactation and fall below industry targets, recovering in late lactation.



### Drying Off Guide:

The drying off guide is based on DairyNZ recommendations to ensure cows have sufficient time to reach their BCS targets. This table is based on a 20<sup>th</sup> July Calving Date:

Body Condition Score		Autumn Pasture		Pasture + Supplement	
Mature Cow	First Calver	Days to Achieve BCS 5	Suggested Drying Off Date	Days to achieve BCS 5	Suggested Drying Off Date
3	3.5	160	<b>10-Feb</b>	120	<b>22-Mar</b>
3.5	4	130	<b>12-Mar</b>	100	<b>11-Apr</b>
4	4.5	100	<b>11-Apr</b>	80	<b>1-May</b>
4.5	5	70	<b>11-May</b>	60	<b>21-May</b>
5	5.5	30	<b>20-Jun</b>	30	<b>20-Jun</b>
5	5.5	Calving	<b>20-Jul</b>	Calving	<b>20-Jul</b>

\* Allows for 10 days of no LWG gain during drying off

## Financial:

The objective is **Profit from Pasture**, the goal on this farm was to increase milk production while holding costs – at a \$6 milk price this should equate to \$180,000 increased profit.

Innes and Tania have grown their confidence in budgeting and monitoring, they separate out the dairy and beef expenses to make it easier to benchmark and compare performance. They have been using Cash Manager Rural for a number of years, but are becoming experts at budgeting and forecasting cashflow. Costs from the beef farm for heifer and dry cow grazing, growing maize silage and bull hire are coded and charged to the dairy farm.

Costs have traditionally been well controlled on the farm, during the Partner Farm Program the focus has been shifting costs, rather than cutting costs – spending money where it provides the best return. This extra scrutiny on expenditure has helped Innes and Tania develop confidence that money is being well spent. This season nitrogen use has been above the budget – this is an added expense, but it's provided feed at around half the cost of the next best alternative and has been much cheaper than underfeeding the cows.

Dairy expenditure has only been separated for the last three seasons, however, comparing overall expenditure (including the beef farm), expenses have been similar to previous years when adjusting for grazing and contract milker payments. The 2017-18 had on-off/capital expenditure of ~\$84,000, which has been removed to give adjusted expenses in the summary below. Operating expenses are estimated to be ~\$4.40/kgMS, which compares well to the DairyBase 16/17 operating expenditure of \$5.15/kgMS for Northland Owner Operators.

### *Farm Working Expenses (Adjusted to allow comparison between years)*

	2013/14	2014/15	2015/16	2016/17	2017/18 <sup>1</sup>	Dbase (16/17)
Milk Solids (kg)	171,683	161,616	196,117	184,055	185,000	
Dairy Farm Expenses (\$)	?	?	\$756,934	\$739,449	\$793,000	
<b>Dairy Farm Expenses (\$/kgMS)</b>			<b>\$3.98</b>	<b>\$4.02</b>	<b>\$4.29</b>	<b>\$5.15</b>
Whole Farm Expenses (\$)	\$885,937	\$821,052	\$865,596	\$859,756	\$877,000	
<b>Whole Farm Expenses (\$/kgMS)</b>	<b>\$5.16</b>	<b>\$5.08</b>	<b>\$4.32</b>	<b>\$4.67</b>	<b>\$4.74</b>	

<sup>1</sup> Adjusted expense to exclude one-off capital costs and estimate for May expenditure

## Key Points from the Management Team:

- Getting together to share ideas and perspectives has been valuable – bringing a fresh perspective and ideas to help solve problems
- This Partner Farm project happened as the industry was going through tough times – record low milk prices (the toughest for a generation). Having support through this time has been valuable
- Having such a great first season helped to build confidence in the strategy, but also highlighted the importance of timely decision making – it's easier and cheaper to avoid a feed deficit than to climb out of one
- It's important to have a goal – they weren't all achieved, but with discipline and the targets and trigger points that are now in place, we're confident they will be achieved
- It's been rewarding to see Innes and Tania grow; they are now running a stronger business and are farming with confidence

## Hokonui Farms LNPF - Key Lessons

### Pasture Management

**10 Day pasture measurement:** Consistently measure to make timely decisions

**Targets & Trigger Points table:** Our Go-To Bible which gives clarity of where we should be sitting and actions if not, enabling timely decisions

**Paddock allocation:** using rods & reels to not over allocate feed, ensuring quality in the next round.

**Hitting Residuals:** even residuals not average

**Mulching:** gives quality feed and allows other grasses to come through in the winter and spring

**No Pugging:** protects pasture, be proactive standing off, setting up for balance date.

### Milk Production

**Growing R1's and R2's well:** Regular weighing and drenching programme

**Continually BCS:** refer to Targets & Triggers to ensure we are fully feeding, BCS 5 @ PSC

**Supplement:** have available when gaps need to be filled

**Irrigation:** Making sure it is ready and available when required

**Nitrogen:** No boom and bust, dribbling on behind the cows

**Animal Health:** Monitoring animal health to prevent issues compromising production

### Financials

**Maintain Financial Disciplines:** using Cash Manager for budgeting, know our one off costs, avoid budget creep, re quoting, actuals v budget

**Dairy Base:** benchmark to see where we are overspending and tracking in Northland

### People

**Share Learn and Grow:** Having support, sharing ideas, continually develop, the right people in the right roles.

**Regular Meetings:** Keep the regular weekly meetings to stay close to the business and provide support





**Focus Area** **Pasture Management**

- Goals & Measures:**  
 Lift Pasture Eaten from 9.8 tDM/ha to 10.8 tDM/ha
- Actions:**
1. Monitor pasture with 10 day farm walks
  2. Use Supplement to protect pasture ongoing
  3. Spring Rotation Plan to ration pasture
  4. Oversow Annuals & Mulch Kikuyu
  5. Plan to use 120-150 kgN/ha
  6. Do the basics well
  7. Make timely decisions

**Focus Area** **Milk Production**

- Goals & Measures:** Increase production to 200,000 kgMS by 2017/18
- Actions:**
1. Produce 73% of Liveweight (363/cow)
  2. Transition to milking all cows TAD
  3. Achieve BCS 5 at calving and 5.5 for first and second calvers
  4. Achieve MINDA weights targets for young Stock
  5. Reach Repro Targets & improve overall Breeding & Genetics

**Focus Area** **Equity Growth**

- Goals & Measures:**  
 Increase Equity by \$500,000 in 5 years
- Actions:**
1. Use the budget to drive equity growth timelines
  2. Separate Beef & Dairy Enterprises
  3. Generate cash surpluses for debt reduction & off farm interests
  4. Evaluate capital/development projects (cost/benefit & payback)

**Focus Area** **Expenditure**

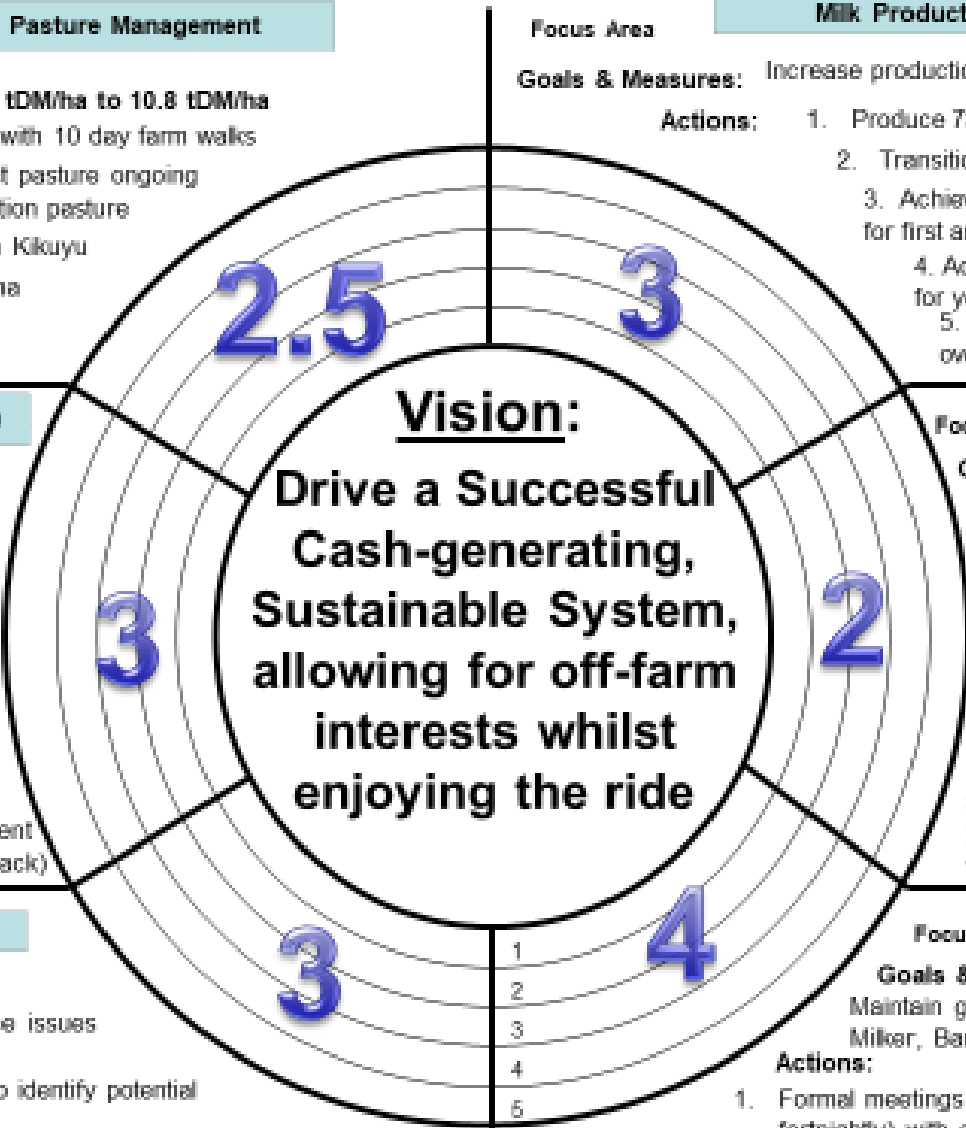
- Goals & Measures:**  
 Reduce Expenses from \$4/kgMS to \$3.50/kgMS
- Actions:**
1. Hold expenditure while increasing milk production
  2. Benchmark costs and look for opportunities to reduce expenditure below benchmark
  3. Analyse expenses actual vs budget each month and share with Philip & Pia

**Focus Area** **Environment**

- Goals & Measures:**  
 No environmental compliance issues
- Actions:**
1. Use DairyNZ resources to identify potential issues
  2. Sustainable Milk Plan completed by 31 May 2016
  3. Meet changing irrigation requirements
  4. Update health & safety plan for the farm

**Focus Area** **People**

- Goals & Measures:**  
 Maintain good relationship with family, Contract Milker, Bank, Accountant & Consultants
- Actions:**
1. Formal meetings with Contract Milker(at least fortnightly) with an agenda and agreed actions
  2. Ensure long term farm business needs are in-sync with the family vision
  3. Continue to communicate well with family around the lease, meeting the needs to everyone (Dairy Business, land owner & Family Vision)
  4. Constantly review succession plan currently in place



**Planning Wheel 2015**



## Hokonui Farms – Targets and Trigger Points:

	Average Pasture Cover (kgDM/ha)	Feed Allowance (kgDM/cow)	Feed Demand (kgDM/ha/day)	Post Grazing Residuals (kgDM/ha)	Rotation Length	Herd Average Body Condition Score	Nitrogen		
<b>1<sup>st</sup> June</b>	2,200	Dries 10-12	18	1,300	80-100 days	4.5	Follow the cows (30-35 kgN/ha)		
<b>20<sup>th</sup> July</b> <i>(Planned Start of Calving)</i>	2,500	Milkers 18		1,500	<b>Spring Rotation Plan</b>	5.0 MA Cows 5.5 1 <sup>st</sup> & 2 <sup>nd</sup> Calvers			
		Springers: 12		1,400					
		Dries: 10		1,300					
<b>20<sup>th</sup> Sept</b> <i>(Balance Date)</i>	2,200	Milkers 19	50	1,500-1,550	25 days	4.2	As Required to achieve APC Targets		
<b>Oct-Dec</b>	2,210					4.0-4.2			
<b>Jan</b>	2,181				Milkers 18	47		29-35 days	4.2
<b>Feb – Apr</b>	2,200				Milkers 17	42			4.1
<b>1<sup>st</sup> May</b>	2,100	Milkers 17	34	1,500	40-50 days	4.2			
		Dries 10-14		1,200-1,400			Whole Farm Application (30 kgN/ha)		

### Other:

- Supplement to be fed if required to meet cow feed allocation targets as a last resort – priority is to harvest as much pasture as possible
- Target is 150 kgN/ha/year, Maximum 200 kgN/ha/year. Nitrogen applied within 2 days of grazing – use quad spreader if too wet for the tractor
- Pugging Kills Spring Pasture Growth: Protect pasture from Springers and Dries
  - All breaks to be set up and supplement fed before the cows are let through – have 2 breaks set-up ahead of springer mobs
  - Graze from the back of paddock to protect grazed pasture (use all the paddock entrances - most paddocks have gates at the back)
  - Be Proactive with standing cows off - No-one ever regrets standing cows
- Irrigation: Start Early, Stop Early and Spread the workload
  - Irrigators to be ready by 1<sup>st</sup> November. Start early on the hills & move to double shifting early
  - Allocated areas for shifting irrigators to all staff – allocated areas shifted regularly, bikes to be appropriate for shifting