



South Island Dairying
Development Centre

Partners Networking
To Advance South
Island Dairying



**Lincoln
University**
Te Whare Wānaka o Aoraki
CHRISTCHURCH-NEW ZEALAND

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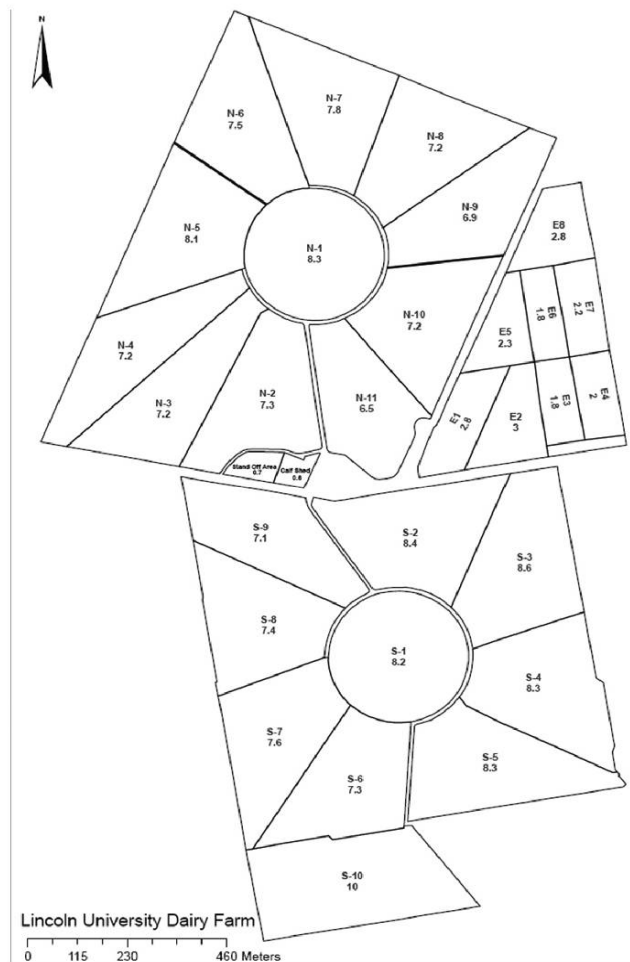
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Lincoln University Dairy Farm Focus Day

July 2014



Staff

Peter Hancox – Farm Manager

Matt Weatherhead – 2IC

Alistair Linfoot – Dairy Assistant

Hamish Shoa – Dairy Assistant

LUDF Hazards Notification

1. Children are the responsibility of their parent or guardian
2. Normal hazards associated with a dairy farm
3. Other vehicle traffic on farm roads and races
4. Crossing public roads
5. Underpass may be slippery

Please follow instructions given by event organisers or farm staff

Introduction

The 186 hectare irrigated property, of which 160 hectares is the milking platform, was a former University sheep farm until conversion in 2001. The spray irrigation system includes two centre pivots, small hand shifted lateral sprinklers, and k-lines. The different soil types on the farm represent most of the common soil types in Canterbury.

LUDF Strategic objective 2011-2015:

To maximise sustainable profit embracing the whole farm system through:

- *increasing productivity;*
- *without increasing the farm's total environmental footprint;*
- *while operating within definable and acceptable animal welfare targets; and*
- *remaining relevant to Canterbury (and South Island) dairy farmers by demonstrating practices achievable by leading and progressive farmers.*
- *LUDF is to accept a higher level of risk (than may be acceptable to many farmers) in the initial or transition phase of this project.*

Additional objectives

- To develop and demonstrate world-best practice pasture based dairy farming systems and to transfer them to dairy farms throughout the South Island.
- To consider the farms full environmental footprint, land requirement, resource use and efficiency in system decision making and reporting
- To use the best environmental monitoring and irrigation management systems in the development and implementation of practices, that achieve sustainable growth in profit from productivity and protection of the wider environment.
- To ensure optimal use of all nutrients on farm, including effluent, fertiliser, nutrients imported from supplements and atmospheric nitrogen; through storage where necessary, distribution according to plant needs and retention in the root zone.
- To continue the environmental monitoring programme and demonstrate technologies and farming practices that will ensure the average annual concentration of nitrate-N in drainage water from below the plant root zone remains below the critical value [16 mg N/L] specified in ECan's proposed regional rule in order for LUDF to remain a 'permitted activity' [Rule WQL20].
- To store and apply effluent such that there is no significant microbial contamination of the shallow aquifers.
- To manage pastures and grazing so per hectare energy production is optimised and milkers consume as much metabolisable energy [ME] as practicable.
- To optimize the use of the farm automation systems and demonstrate / document improved efficiencies and subsequent effect on the business.
- To achieve industry targets for mating performance within a 10 week mating period, including a 6 week in-calf rate of 79% and 10 week in calf rate greater than 89% i.e. empty rate of less than 11%.
- To continue to document and measure LUDF's influence on changes to defined management practices on other dairy farms.
- To ensure specific training is adequate and appropriate to enable staff members to contribute effectively in meeting the objectives of the farm.
- To operate an efficient and well organised business unit.
- To generate profit through tight cost control with appropriate re-investment and maintenance of the resources.
- To create and maintain an effective team environment at policy, management and operational levels.
- To actively seek labour productivity gains through adoption of technologies and practices that reduces labour requirements or makes the work environment more satisfying.
- To assist Lincoln University to attract top quality domestic and international students into the New Zealand dairy industry.

Ongoing research

- The effect of fertilisers & other farm inputs on groundwater. 10 groundwater monitoring wells sunk to monitor and manage the effect of fertiliser, grazing, irrigation and effluent inputs over a variety of contrasting soil types.
- Effects of eco-n on nitrate leaching and pasture production.
- Pasture growth rates, pests and weeds monitoring.
- The role of nutrition in lameness in Canterbury.
- Resource Inventory and Greenhouse Gas Footprint

Climate

Men Annual Maximum Temperature	32° C
Mean Annual Minimum Temperature	4° C
Average Days of Screen Frost	36 Days per annum
Mean Average Bright Sunshine	2040 Hours per annum
Average Annual Rainfall	666 mm

Farm area

Milking Platform	160 ha
Runoff [East Block]	15 ha
Unproductive land on platform	6.7 ha





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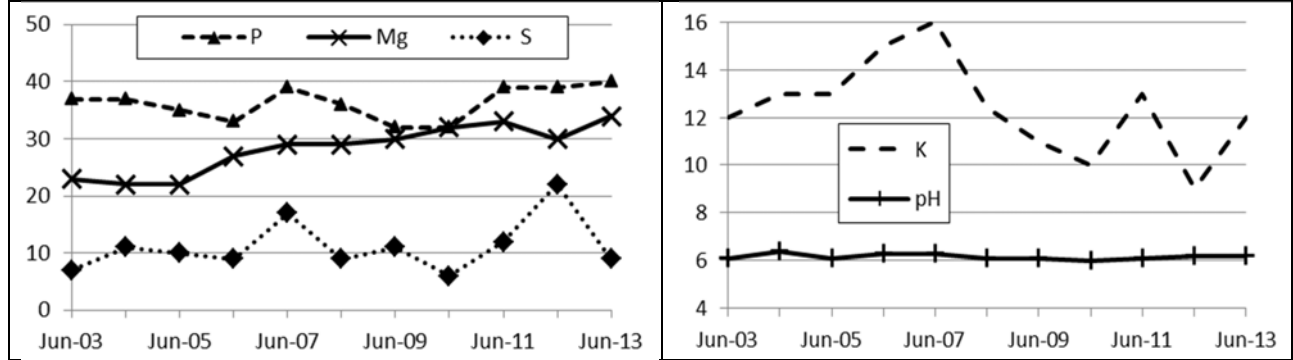
Soil types

Free-draining shallow stony soils (Eyre soils)	5	Imperfectly drained soils (Wakanui soils)	30
Deep sandy soils (Paparua & Templeton soils)	45	Heavy, poorly-drained soils (Temuka soils)	20

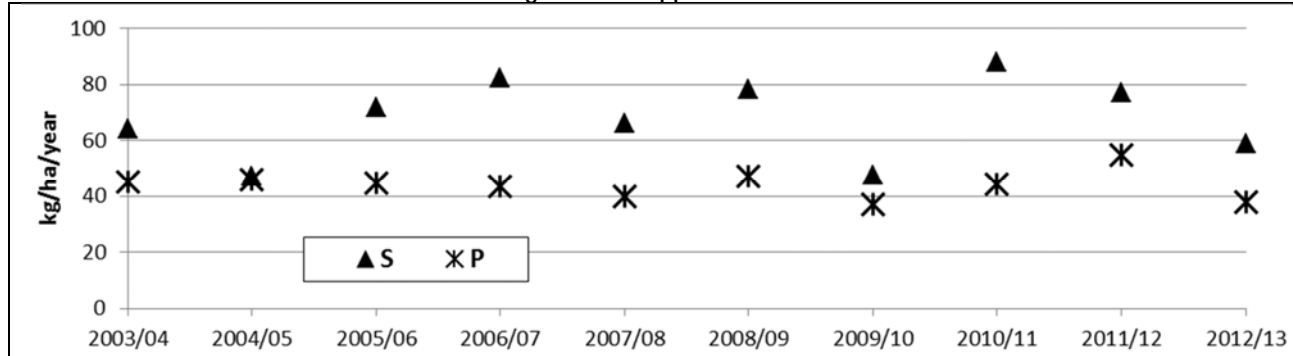
Soil test results and Fertiliser Applications

Target Soil Test Ranges: pH: 5.8 – 6.2, P: 30 – 40, K: 5 – 8, S: 10 – 12, Mg: 20+

Whole Farm Average Soil Test Results



Whole Farm Average P and S applications 2003/04 – 2012/13



Pasture

The milking platform was sown at conversion [March 2001] in a mix of 50/50 Bronsyn/Impact ryegrasses with Aran & Sustain white clovers, and 1kg/ha of Timothy

Paddock	Period Regrassed	Grass Cultivar	Paddock	Period Regrassed	Grass Cultivar
N1	Feb-01	Brons. Imp	S1	Dec-05	Bealey
N2	Feb-11	Trojan	S2	Dec-10	Troj. Bealey
N3	Nov-12 / Sept 13	Shogun + Chicory /Plantain	S3	Feb-10	Bealey
N4	Feb-01	Brons. Imp	S4	Dec-13	Bealey/Chicory/Plantain/Troj
N5	Dec-11 / Aug 13	Shogun	S5	Dec-08	Arrow - Alto
N6	Feb-01	Brons. Imp	S6	Dec-06	Arrow - Alto
N7	Jan -14	Bealey/Chicory/Plantain/Troj	S7	Sep-06	Arrow - Alto
N8	Jan -13	Bealey/Chicory/Plantain	S8	Oct-11	Troj. Bealey
N9	Oct-13	Bealey/Chicory/Plantain/Troj	S9	Dec-09	Bealey
N10	Jan-12	Tetraploids	S10	Feb-05	Bealey
N11	Nov-07	Bealey	All paddocks also sown with clover		

Irrigation and effluent system

Centre-pivots	127 ha
Long Laterals	24 ha
K-Lines	10 ha
Irrigation System Capacity	5.5 mm/day
Length of basic pivot	402
Well depth	90m

- A full rotation completed in 20.8 hours for 5.5 mm [at 100% of maximum speed].
 - Average Annual Rainfall = 666 mm. Average irrigation input applies an additional 450 mm.
 - Average Evapotranspiration for Lincoln is 870 mm/year.
- Effluent**
- Sump capable of holding 33,000 litres and a 300,000 litre enviro saucer.
 - 100 mm PVC pipe to base of North Block centre pivot, distribution through pot spray applicators.

Mating programme - Spring 2013

KiwiX DNA for 365 cows (F8-F16); Holstein Friesian Daughter Proven for 280 cows (F0-F7); KiwiX Premier Sires Daughter proven for yearling Heifers. AI mate for 3 weeks in heifers and 6 weeks in main herd then follow with Jersey bulls. Heifers start mating 10 days early. 10 weeks mating for milking herd. Expect to rear 150 heifers.

Herd details – February 2014

Breeding Worth (rel%) / Production Worth (rel%)

129 / 49% 158 / 73%

Recorded Ancestry

99%

Average weight / cow (Dec) – Herd monitored walk over weighing

474 kg [Dec 2012]

Calving start date

Heifers – 23 July, Herd 3 August 2014

Est Median calving date

21 August 2013

Mating start date

25 October 2013

Empty rate (nil induction policy) after 10 weeks mating - 12% (2013-14 mating). 6 week in-calf rate 78%.

	2002/03	Average 03/04 - 06/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Total kg/MS supplied	228,420	277,204	278,560	261,423	273,605	264,460	297,740	300,484	276,019
Average kg/MS/cow	381	425	409	384	415	395	471	477	440
Average kg/MS/ha	1414	1720	1744	1634	1710	1653	1861	1878	1725
Farm Working Expenses / kgMS	\$2.98	\$2.68	\$3.37	\$3.88	\$3.38	\$3.86	\$3.91	\$3.84	\$4.28
Dairy Operating Profit/ha	\$1,164	\$2,534	\$8,284	\$2,004	\$4,696	\$6,721	\$4,553	\$4665	\$7578
Payout [excl. levy] \$/kg [Milk price + div.]	\$4.10	\$4.33	\$7.87	\$5.25	\$6.37	\$7.80	\$6.30	\$6.12	\$8.50 F
Return on Assets	4.4%	6.18%	14.6%	4.8%	7%	7%	6%	6%	10%

Stock numbers	2002/03	Average 03/04 - 06/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
1 July cow numbers	631	675	704	704	685	694	665	650	650
Max. cows milked	604	654	680	683	660	669	632	630	628
Days in milk			263	254	266	271	272	273	259
Stocking rate Cow equiv. / ha	3.75	4.05	4.2	4.3	4.13	4.18	3.95	3.94	3.92
Stocking rate Kg liveweight / ha	1,838	1964	2,058	2,107	1,941	1914	1860	1878	1872
Cows wintered off No. Cows / Weeks	500 / 8	515 / 7.8	546 / 9	547 / 7	570 / 9	652 / 8.4	650 / 9.8	650/9.8	650/11.4
No. Yearlings grazed On / Off	0/118	0/157	0/171	0/200	0/160	0/166	0/141	0/138	0/140
No. Calves grazed On / Off	0/141	0/163	0/200	0/170	0/160	0/194	0/190	0/156	0/150
Est. Pasture Eaten (Dairybase) (tDM/ha)			17.9	17.2	16.2	16.9	17.3	16.8	14.9
Purch. Suppl - fed [kgDM/cow]	550	317	415	342	259	463	359	434	506.8
Made on dairy/platform [kgDM/cow]	0	194	95	64	144	160	154	93	0
Applied N / 160 eff. Ha			164	200	185	260	340	350	250

Staffing & Management

Roster System – 8 days on 2 off, 8 days on 3 off

Milking Times - Morning: cups on 5.00am
- Afternoon: cups on 2.30pm



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Contents

Lincoln University Dairy Farm - Farm Walk notes	6
Body Condition Score Data	11
LUDF Five Farm Profitability Comparison and Analysis for the 2013 – 2014 Season.....	13
Profitability Comparison with LUDF	16
Trend analysis for the 5 farms	20
Analysis of 2013- 14 Season (Income / Expenses expressed per effective ha)	22
2013 -2014 Analysis \$ /kg MS.....	23
2013 -2014 Analysis \$ /cow.....	24
LUDF DairyBase financials and physicals	25



Lincoln University Dairy Farm - Farm Walk notes

Tuesday 1st July 2014

Critical issues for the short term

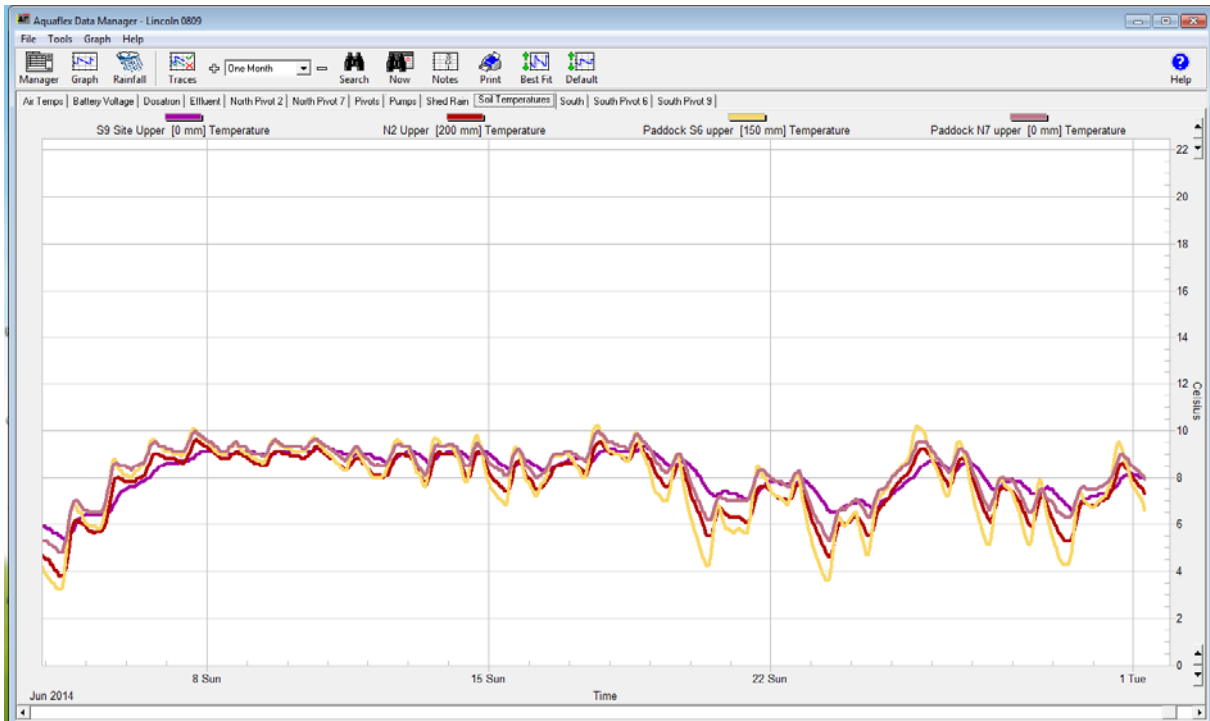
1. Achieving target grazing residuals and manage pasture cover to achieve desired target at calving.
2. Use dry cows to manage pasture cover and graze out paddocks which need tidying up.
3. Use back-fences on all herds whenever paddock grazing takes more than 36 hours.
4. Manage ground conditions minimise damage to soil and pastures.
5. Monitor Cows on winter grazing to achieve targets at calving
6. Get programmed winter maintenance done.

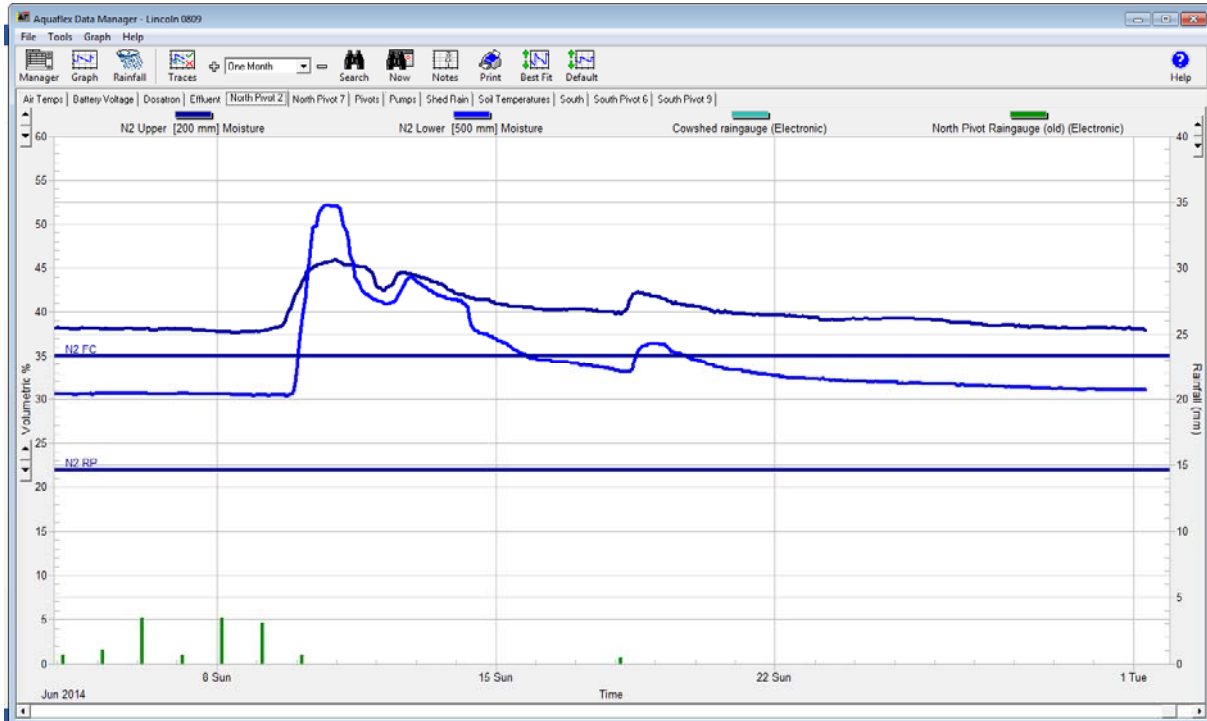
Herd Management

1. We currently have 63 cows on farm. These are our fattest cows and we have kept these on farm as we can on/off graze them if ground conditions become too wet.
2. All R2 heifers were teat sealed yesterday.

Growing Conditions

3. 9 am average soil temperature was 7 degrees 1.3 degrees cooler than 2 weeks ago.
4. The farm had 2.1mm rain over the last week.
5. Soil temperature and soil moisture graphs follow showing soil temperature over the last 4 weeks.



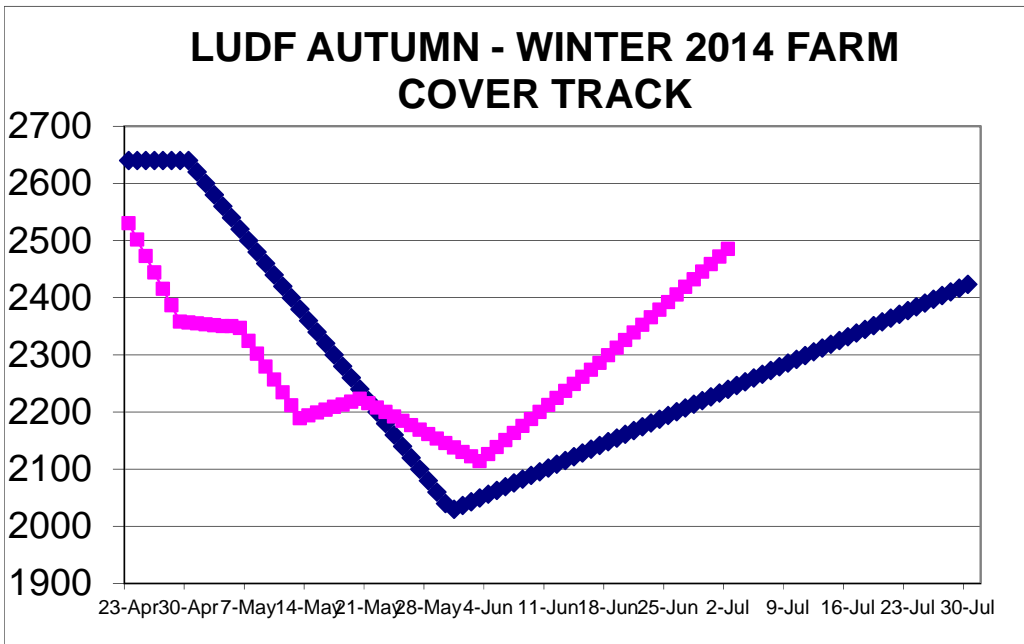


Pasture Production and Management

- 6. This weeks measured average pasture cover is 2472kgDM/ha up 186 kg DM/ha, from two weeks ago. Our estimated average daily pasture growth rate for the last two weeks has been 17 kg DM/ha.

Feeding Management

- 7. Below is our Autumn Winter Farm average pasture cover track, the budgeted track is how we would normally plan to run the farm.

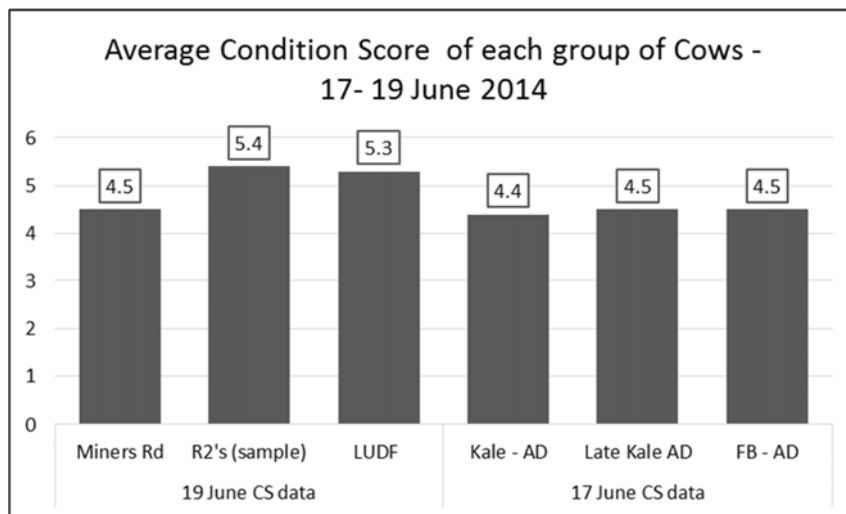


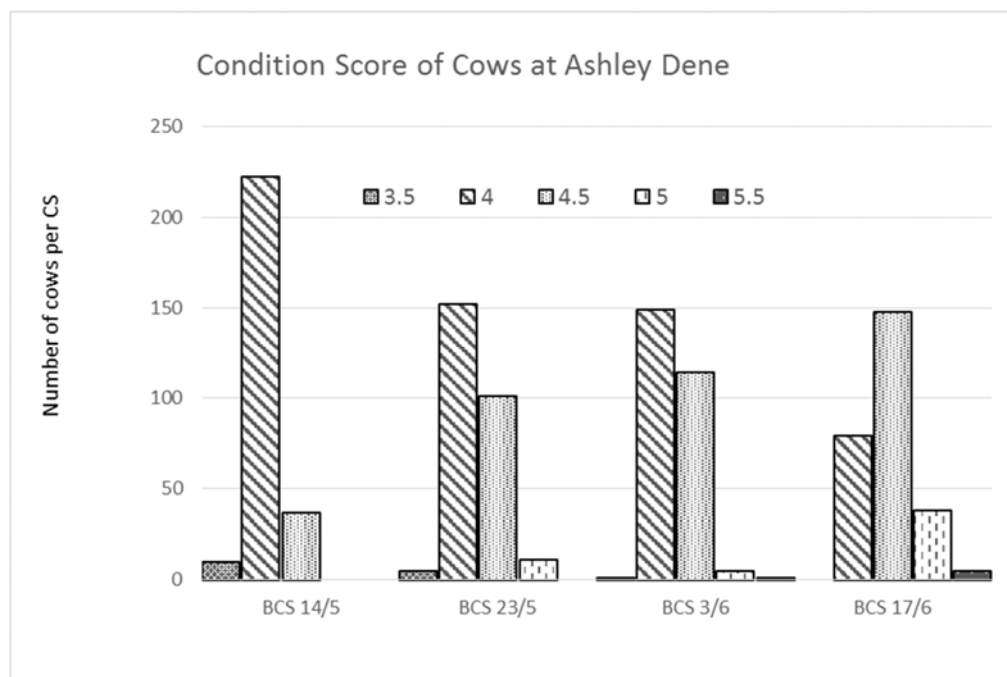
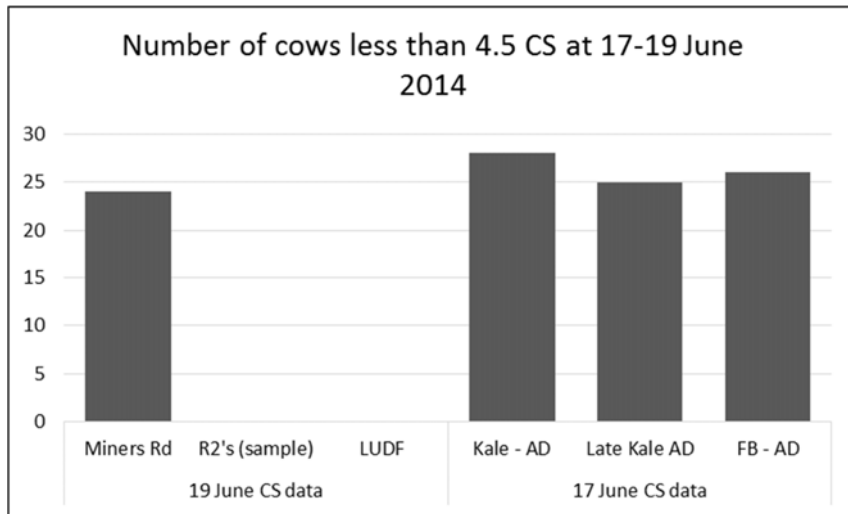
8. Below is the feed wedge for this week, this is done on the basis of having 63 cows on farm and APC target of 2227kg DM/ha. We currently have a 30 tonne surplus



Herd Management and Mating

9. The herd was body condition scored 10 days ago, the average was 4.7 and 17.6% were below BCS 4.5 We are confident that we will meet our required targets (every cow minimum 5 Cs at calving and first and second calvers 5.5 at calving). To achieve this we have put our lowest Cs early calving cows (127) on grass and silage 12Kg Dm of grass and 4Kg Dm of silage offered, our later calving and better condition score cows (270) have gone on crop 12 Kg Dm crop and 2Kg Dm oat balage this is part of the P21 research project. We will keep our fattest 63 cows on the milking platform over winter to help keep the shape of our feed wedge as we have the option of removing these if growth gets too low. Of the 580 cows condition scored, 103 were below 4.5 most of these will be at minimum 5 condition score by their calving date.





10. Data sheet

LUDF Weekly report	10-Jun-14	17-Jun-14	24-Jun-14	1-Jul-14
Farm grazing ha (available to milkers)	160	160	160	160
Dry Cows on farm / East blk /Jackies/other	68/0/0/517	63/0/0/517	63/0/0/517	63/0/0/517
Culls (Includes culls put down & empties)	0	0	0	0
Culls total to date	0	0	0	0
Deaths (Includes cows put down)	0	0	0	0
Deaths total to date	0	0	0	0
Calved Cows available (Peak Number 630...)	0	0	0	0
Treatment / Sick mob total	0	0	0	0
Mastitis clinical treatment	0	0	0	0
Mastitis clinical YTD (tgt below 64 yr end)	0	0	0	0

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Bulk milk SCC (tgt Avg below 150)	0	0	0	0
Lame new cases	0	0	0	0
Lame ytd	0	0	0	0
Lame days YTD (Tgt below 1000 yr end)	0	0	0	0
Other/Colostrum	0	0	0	0
Milking twice a day into vat	0	0	0	0
Milking once a day into vat	0	0	0	0
Small herd	0	0	0	0
Main Herd	0	0	0	0
MS/cow/day (Actual kg / Cows into vat only)	0.00	0.00	0.00	0.00
MS/cow to date (total kgs / Peak Cows 630	0	0	0	0
MS/ha/day (total kgs / ha used	0.0	0.0	0.0	0.0
Herd Average Cond'n Score	0.00	0.00	0.00	4.70
Monitor group LW kg WOW 347 early MA calvers	0	0	0	0
Soil Temp Avg Aquaflex	0.0	8.3	6.7	7.0
Growth Rate (kgDM/ha/day)	0	27	0	17
Plate meter height - ave half-cms	0.0	12.8	0.0	14.1
Ave Pasture Cover (x140 + 500)	0	2286	0	2472
Surplus/[deficit] on feed wedge- tonnes	0	17.1	0	30
Pre Grazing cover (ave for week)	0	0	3600	3650
Post Grazing cover (ave for week)	0	0	1500	1500
Highest pregrazing cover	0	0	3600	3650
Area grazed / day (ave for week)	0.00	0.00	0.57	0.57
Grazing Interval	0	0	281	281
Milkers Offered/grazed kg DM pasture	0.0	0.0	0.0	0.0
Estimated intake pasture MJME	0	0	0	0
Milkers offered kg DM Grass silage	0	0	0	0
Silage MJME/cow offered	0	0	0	0
Estimated intake Silage MJME	0	0	0	0
Estimated total intake MJME	0	0	0	0
Target total MJME Offered/eaten (incl. 6% waste)	0	0	0	0
Pasture ME (pre grazing sample)	0.0	0.0	11.8	0.0
Pasture % Protein	0.0	0.0	23.0	0.0
Pasture % DM - Concern below 16%	0.0	0.0	13.1	0.0
Pasture % NDF Concern < 33	0.0	0.0	43.6	0.0
Mowed pre or post grazing YTD				
Total area mowed YTD				
Supplements fed to date kg per cow (630 peak)	0.0	0.0	0.0	0.0
Supplements Made Kg DM / ha cumulative	0	0	0	0
Units N applied/ha and % of farm	0	0	0	0
Kgs N to Date (whole farm)	0	0	0	0
Rainfall (mm)	4	34.8	5.2	1.2
Aquaflex topsoil relative to fill point target 60 - 80%	100	100	100	100

Farm walks occur every Tuesday morning. Farmers or their managers and staff are always welcome to walk with us. Please call to notify us of your intention and bring your plate meter and gumboots. Phone SIDDC – 03 423 0022.

Peter Hancox, Farm Manager

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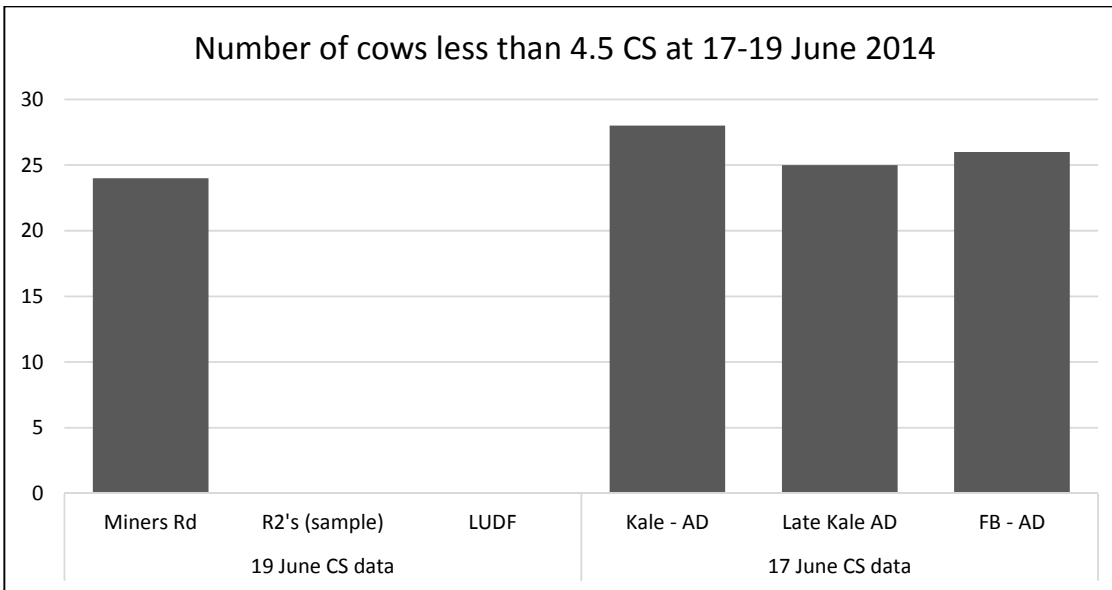
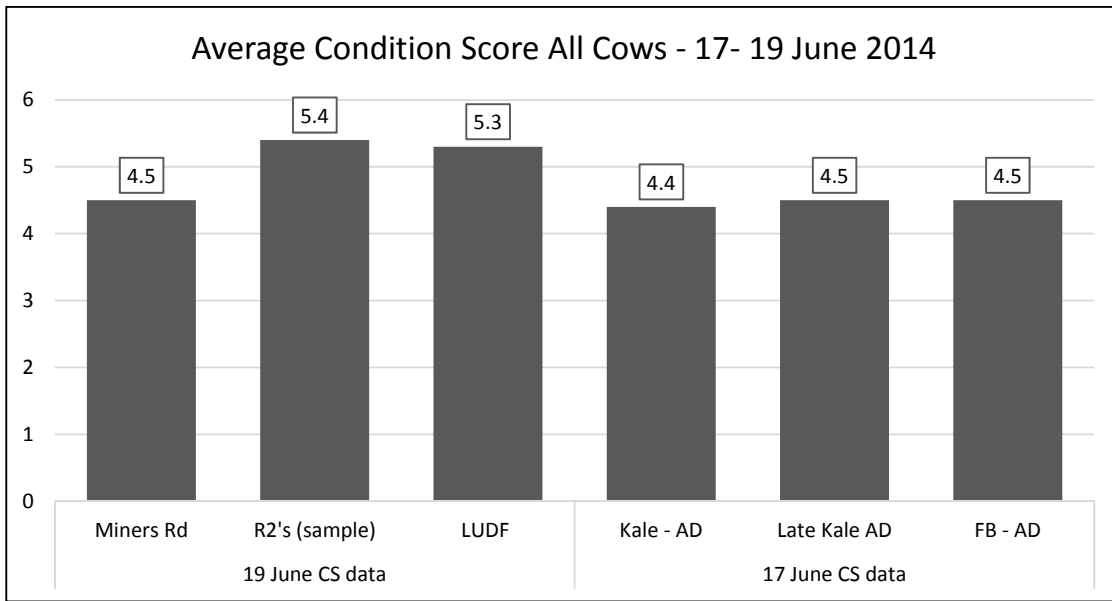
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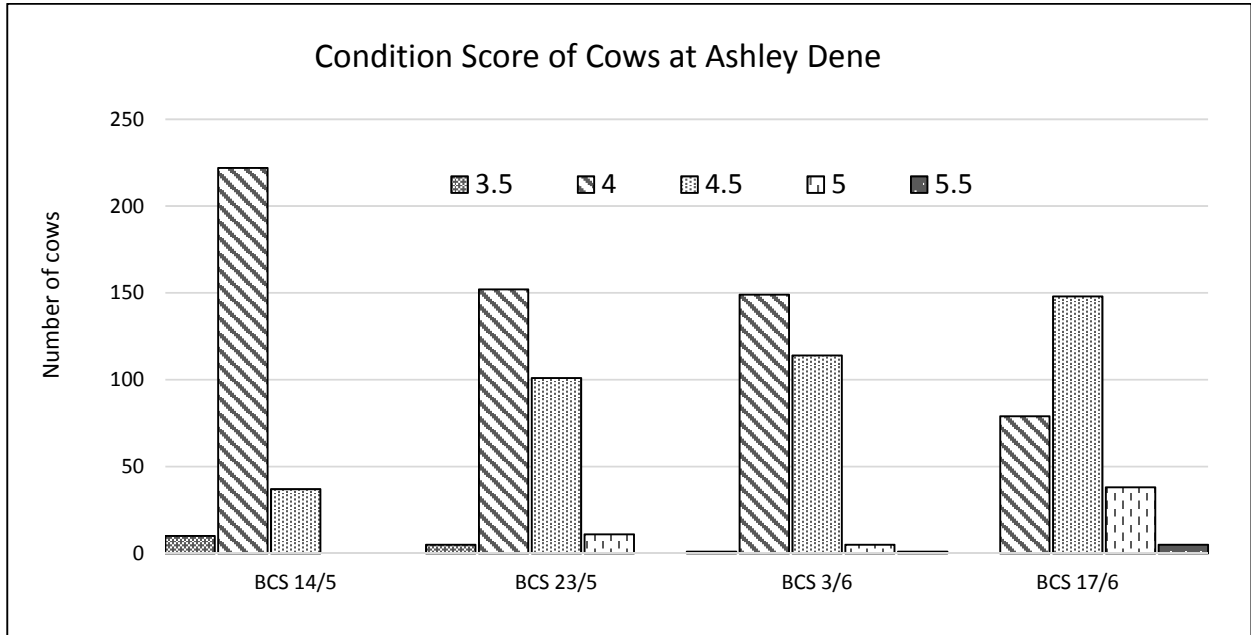
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Body Condition Score Data





LUDF Five Farm Profitability Comparison and Analysis for the 2013 – 2014 Season

This year we continue the annual farm profitability comparison, we are fortunate to have the same five participants for a 3rd year running. We thank all the participating farms and their support teams, for their efforts and generosity in sharing their time and information for the benefit of South Island dairying.

The analysis sets out to compare 5 highly profitable but different farms at an operating profit level. We have a good range of farms systems and pasture growth potential across this group of very well run farm businesses.

Whilst it is interesting to see who is most profitable, much of the real value is in understanding how profit is attained and then applying that knowledge to improve our own performance. Looking at where the money goes and thinking about how best to structure things in order to get a satisfying outcome is a good personal challenge at this time of year.

Summary of Farm Details and Performance

SEASON 2013-14	DAVIE-MARTIN	LUDF	DONKERS	ACTON	SLEE
Effective ha (MP)	141	160	306	173	698
Run Off	85				225
Cows	555	628	1036	720	2640
Kg MS	281,074	276,019	458,900	277,665	1,251,662
KG MS/Cow	506	440	443	386	474
kg MS/ha	1,993	1,725	1,500	1,605	1,793
SR	3.94	3.93	3.39	4.16	3.78
Imported feed t/ha	3.9	1.8	1.47	1.5	2.9
N use kg/ha	293	250	244	349	245
Operating Profit \$/ha	\$8975	\$7576	\$6844	\$8035	\$8592

Differences compared to last season

There are some quite big changes between farms, this year, reflecting in part the difference in weather conditions from one season to the next. For example, Alan and Sharon Davie-Martin had to purchase a lot of feed in the 2012-13 season due to irrigation restrictions; this year, without the same irrigation restriction, this farm has used a little more bought in feed, a little less N-fert and achieved much higher milk production. The increase in profit for all farms reflects the lift in payout from \$5.84/kgMS + \$0.32/kgMS dividend (as presented last year) to (forecast) \$8.40/kgMS + \$0.10/kgMS dividend for the 2013-14 season.



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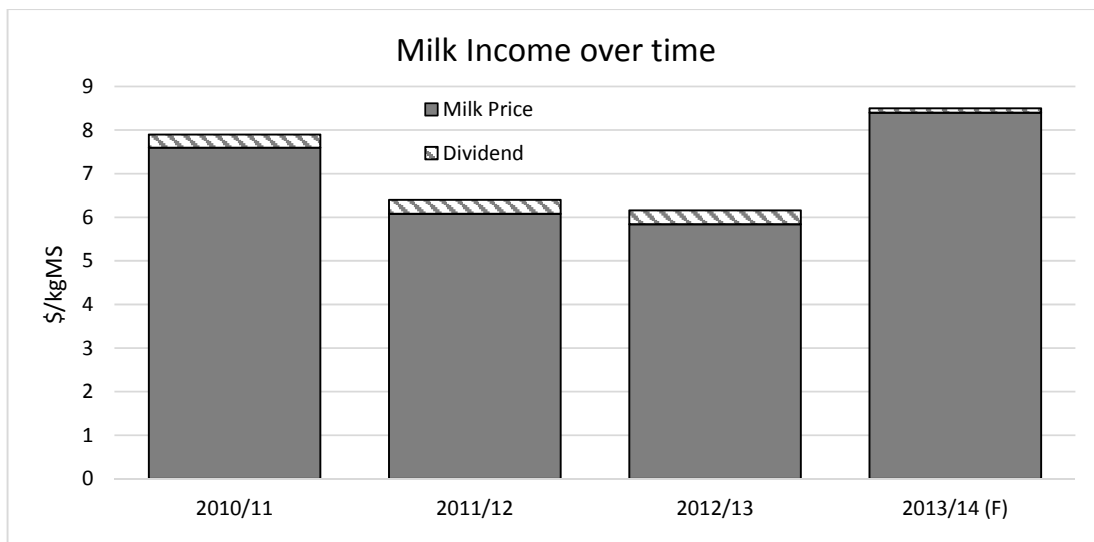


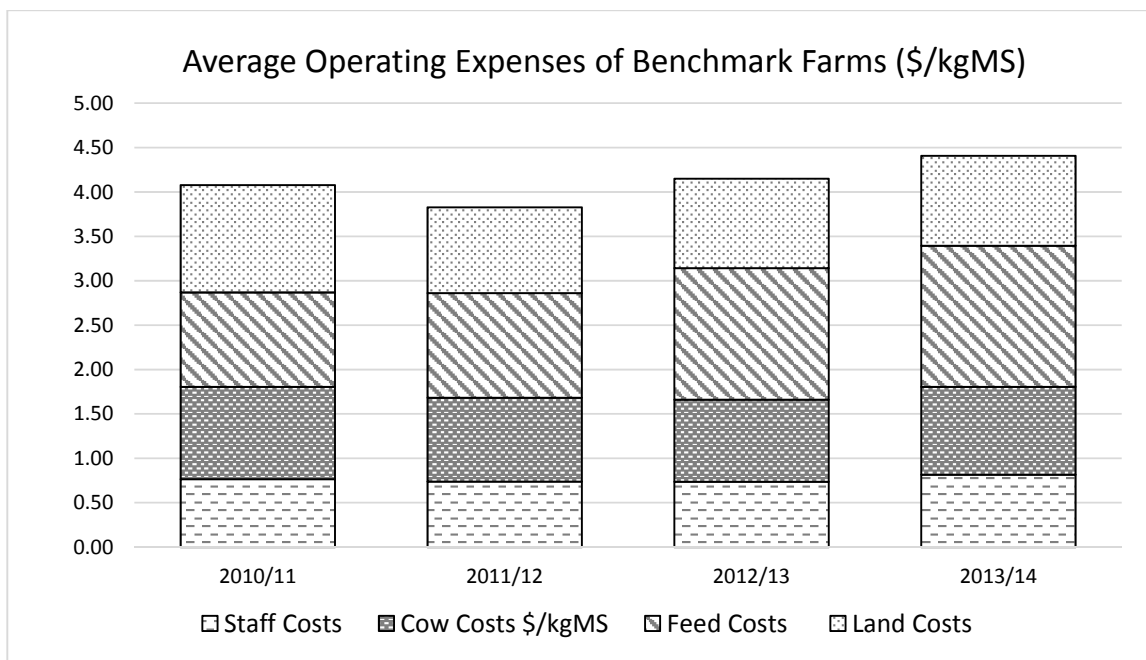
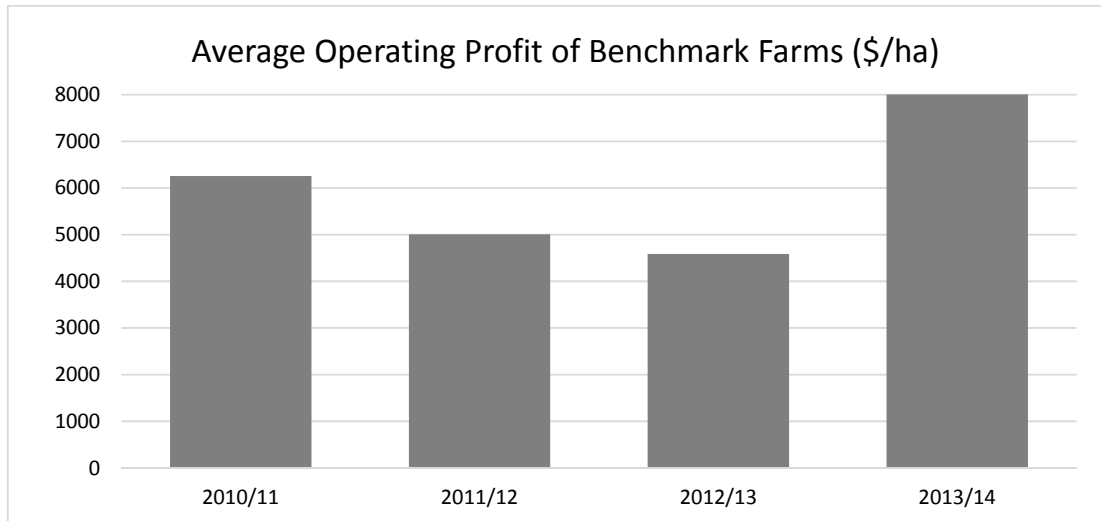


Changes season to season	DAVIE-MARTIN	LUDF	DONKERS	ACTON	SLEE
Effective area	0	0	0	0	+35
run off	-5	0	0	0	-35
Cows	+5	-2	0	0	+92
kgMS	+16571	-24465	+7218	-863	+40672
kg MS/cow	+26	-37	+7	-1	-1
Kg MS/ha	+118	-153	+24	-5	-33
SR	0.04	-0.01	0.00	0.00	-0.06
Imported feed T/ha	+0.20	+0.20	-1.83	-0.08	+0.60
N use Kg/ha	-75	-100	-24	+3	+20
Operating costs change \$/kg MS	+0.01	+0.48	+0.11	+0.17	+0.54
Operating Profit change \$/ha	+4172	+2911	+3088	+3613	+3321

Given the significance of payout on year to year profit, the following graph shows the volatility in milk revenue over the past 4 years. Note the 2013/14 milk income is as forecast in June 2014.

Below this, the average operating profitability of all 5 benchmark farms is plotted for the last four production seasons. It clearly shows the impact of varying payout on farm profitability.





Operating expenses are grouped throughout this analysis on the following basis:

- Staff Costs – all employment related costs, including housing adjustments.
- Cow Costs – all herd expenses (eg Animal Health, breeding, HT) and related herd costs that vary depending on the number of stock. This includes (where possible) grazing for dry cows and young stock.
- Feed Costs – all costs directly associated with growing or purchasing feed: Includes supplements purchased and harvesting costs for on farm supplements, fertiliser, irrigation, and regrassing, but where possible excludes winter grazing.
- Land – all other costs, ideally largely fixed and external costs – not influenced by the number of stock, production or staff employed. Depreciation is included to allow for calculation of operating profit. Also includes R&M, vehicle expenses, rates/insurance, administration, electricity, etc.

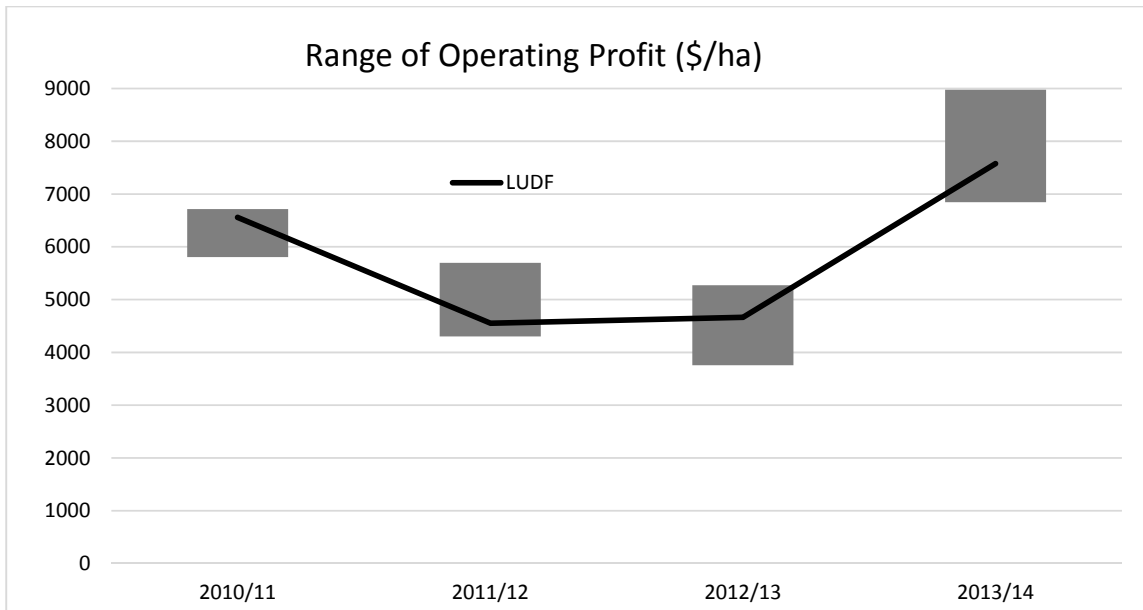
Profitability Comparison with LUDF

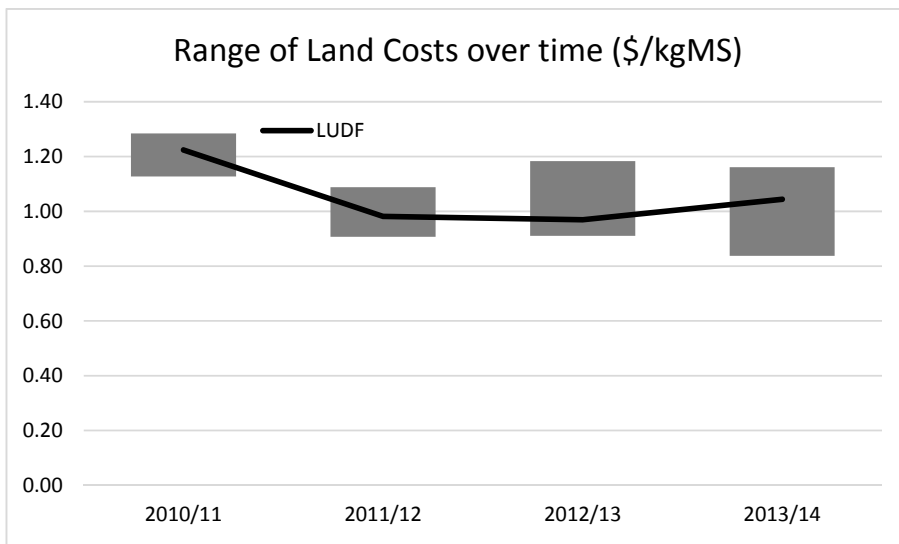
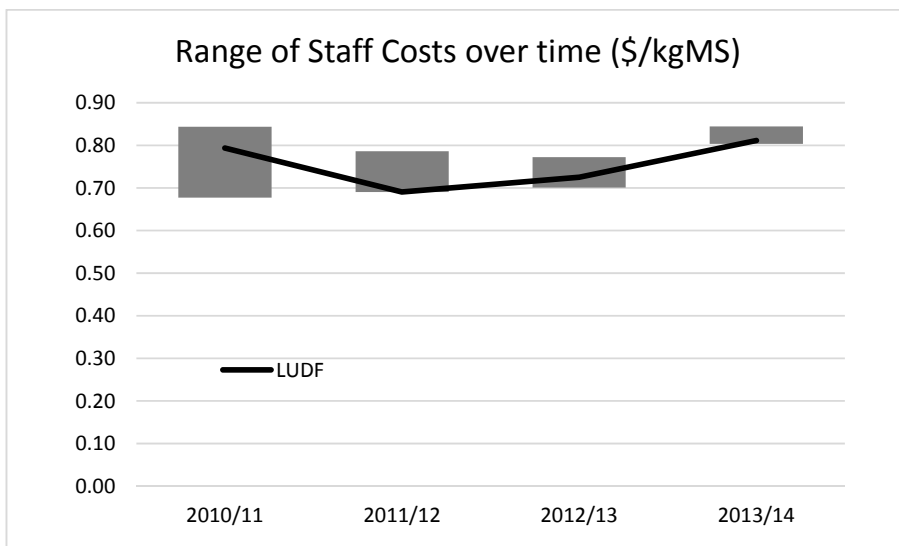
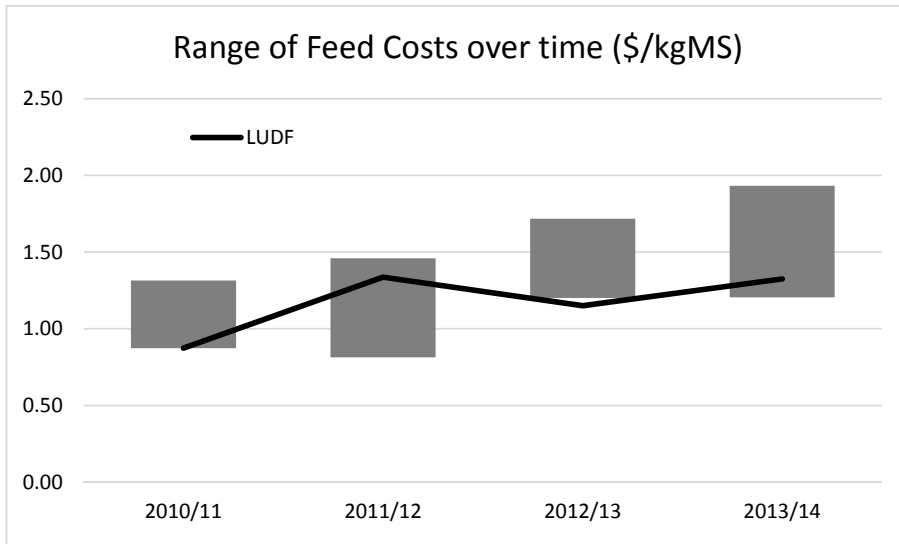
LUDF compares its operating profitability with a range of well known, highly respected farmers across similar parts of Canterbury to enable LUDF and other farmers to benchmark the profitability of this farm. The four farmers selected were previously identified through a number of sources as being amongst the most profitable farms in Canterbury. One of them was the 2013 NZ Dairy Business of the Year Runner-Up.

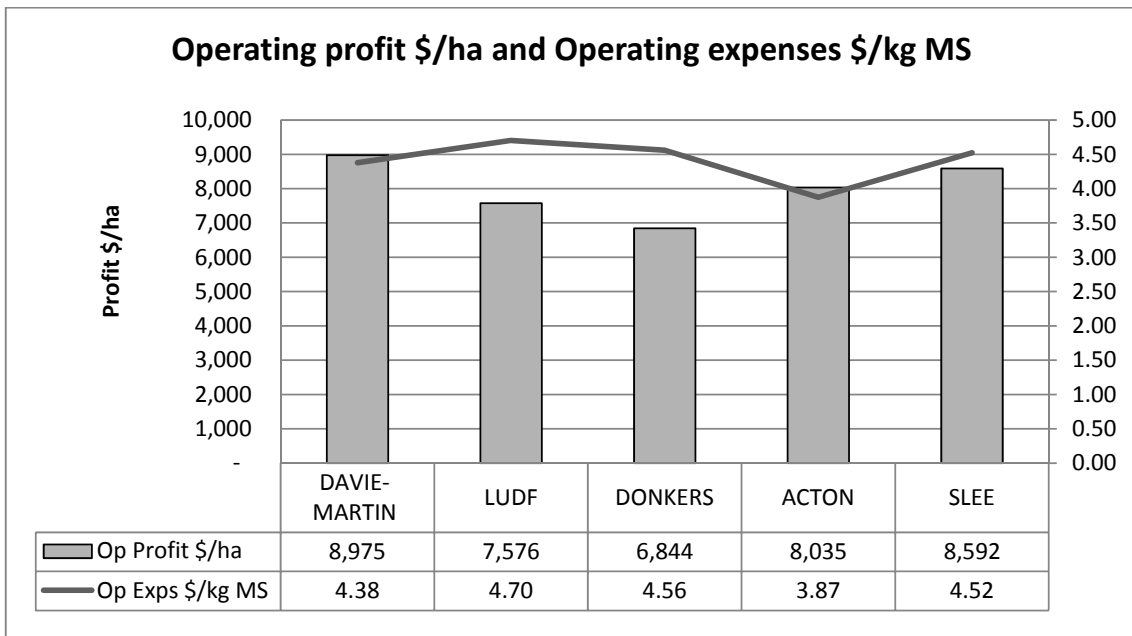
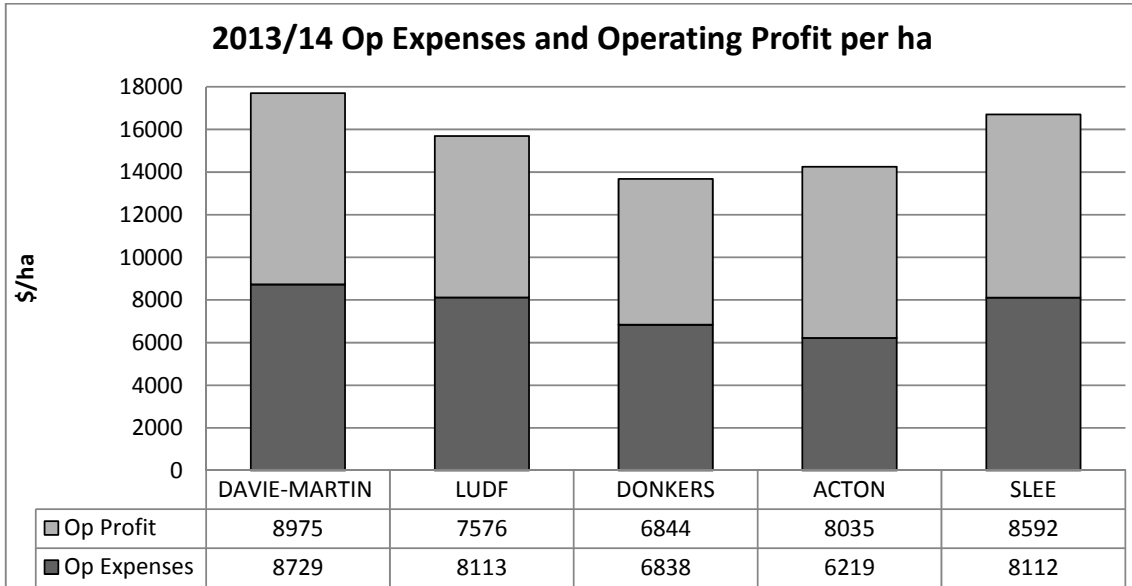
The following four graphs display the relative operating profitability or expenses of LUDF against these farms. LUDF is represented by the solid line while the 'boxes' display the range of profitability or expenses each year, amongst the benchmark farms. These show for example, that the range in profitability amongst this group of farms is wider this season than any of the past four years, and LUDF has moved from the middle of this group in 2012/13 to the lower end of the range of profitability this season.

LUDF's lower 'relative' profitability this year demonstrates the effect of its deliberate decisions in the 2014 autumn to dry cows of early and meet its self-imposed N-loss to water target. Previous analysis (see May 2014 LUDF focus day handout) forecast a reduction in milk production of 8% and reduction in autumn silage expenses that indicated a probable loss of profit of approximately \$100,000. Extrapolating LUDF's relative profit compared to the average of these benchmark farms gives a similar result – reinforcing the early drying off strategy at LUDF had a financial cost of \$85-100,000.

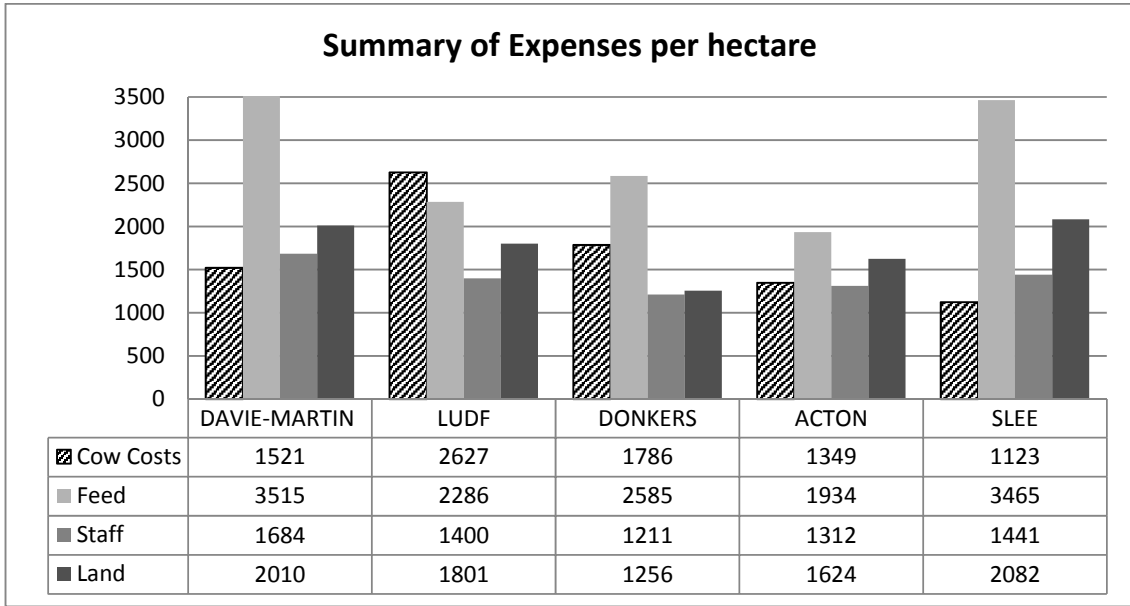
The relative profitability and relative expense graphs below show how LUDF is managing its expenses relative to other leading farms across Canterbury. LUDF has lost the position it gained in the middle of this group for profitability in the 2012-13 season. The graphs also show feed costs are increasing over time, and the spread of feed costs / kgMS is increasing as some of the benchmark farms have higher feed costs than other farms. Overall production has largely been static, especially in the past three seasons suggesting the following changes expressed per kgMS are primarily changes in the dollar values rather than changes due to varying milk production.



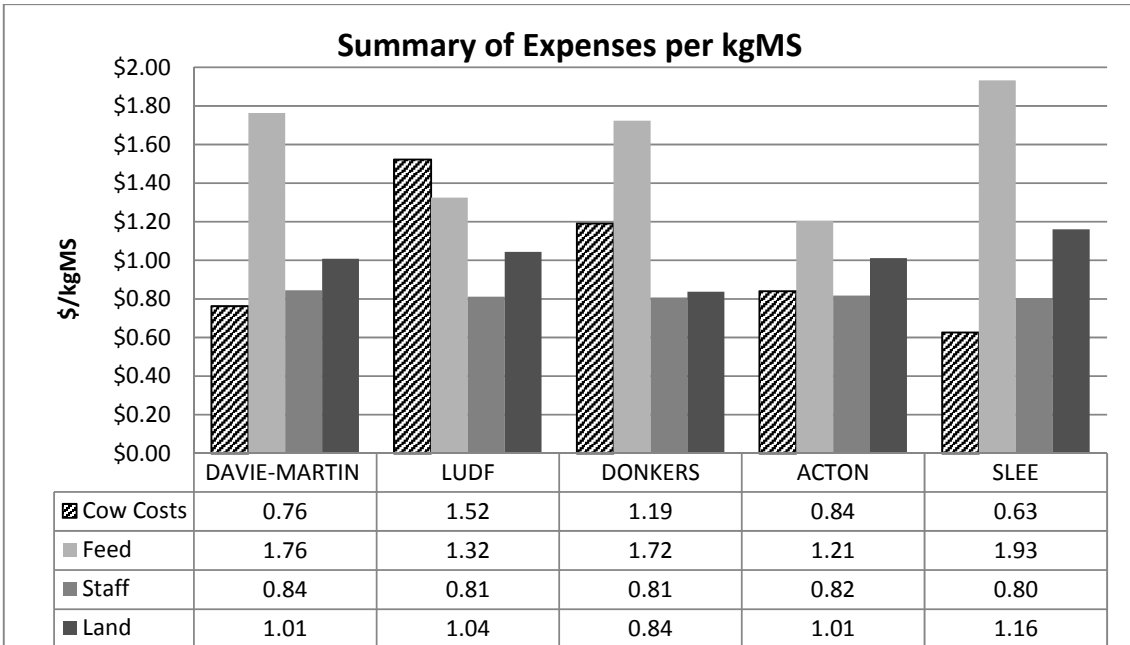




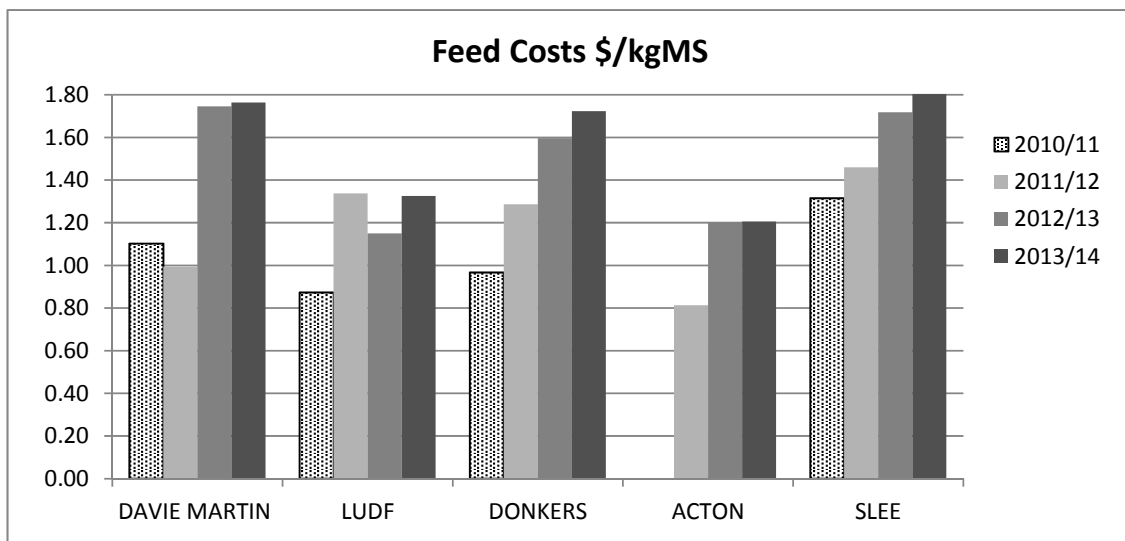
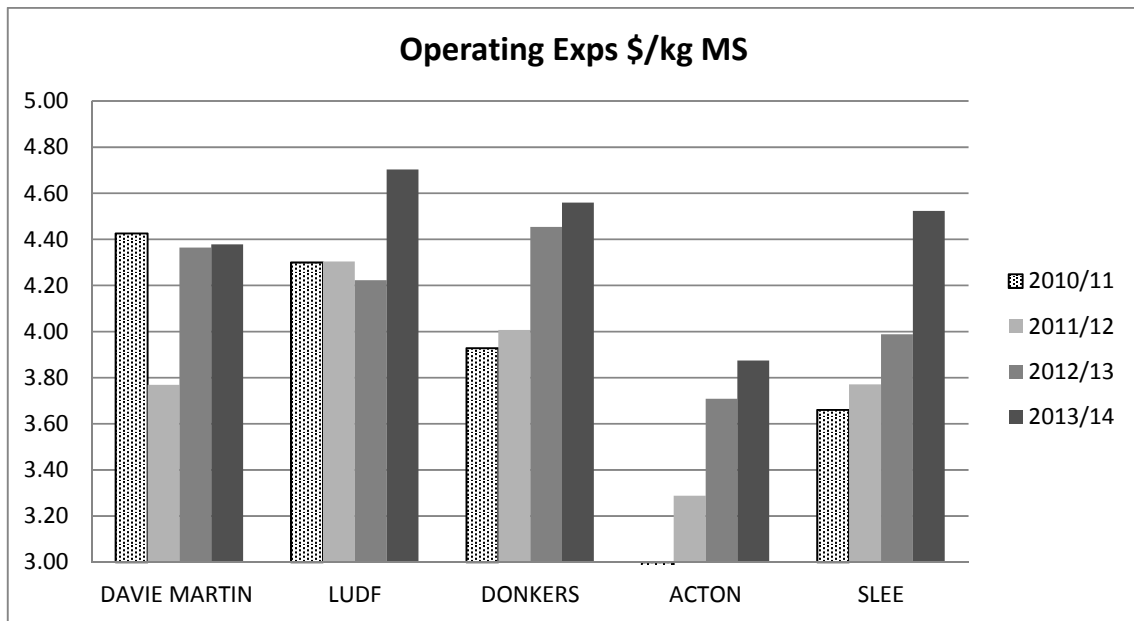
Summary of Expenses per hectare

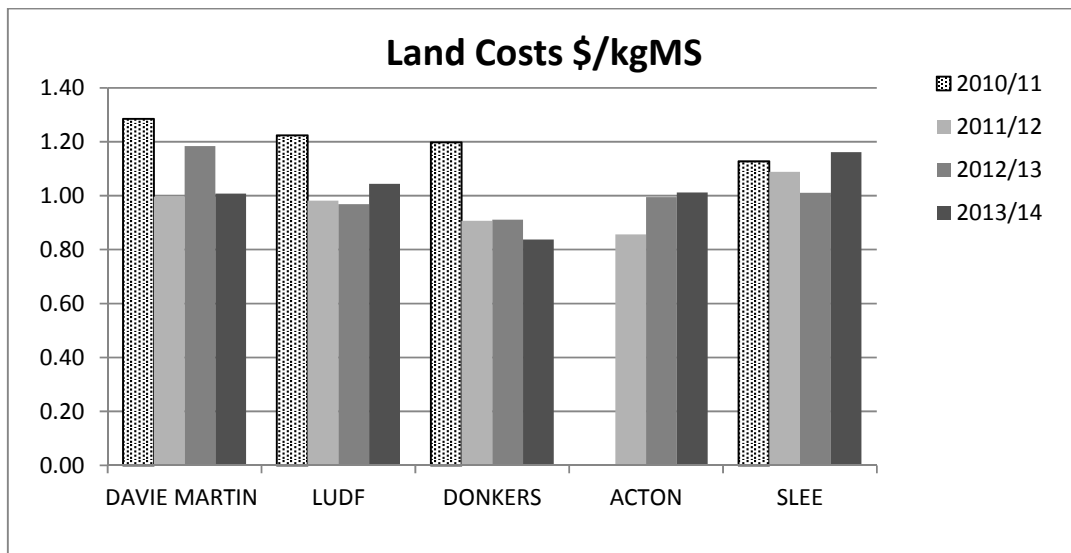
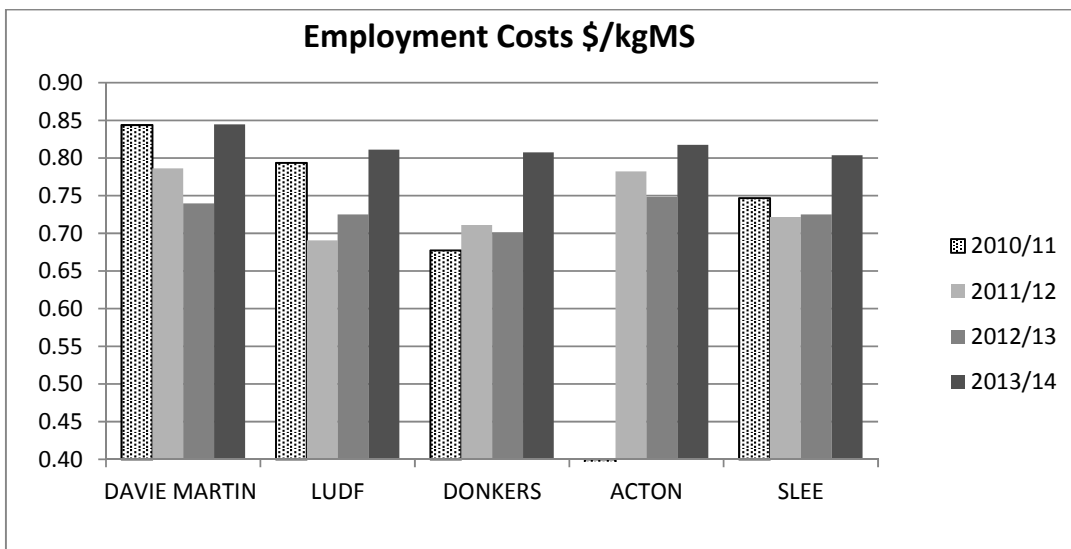
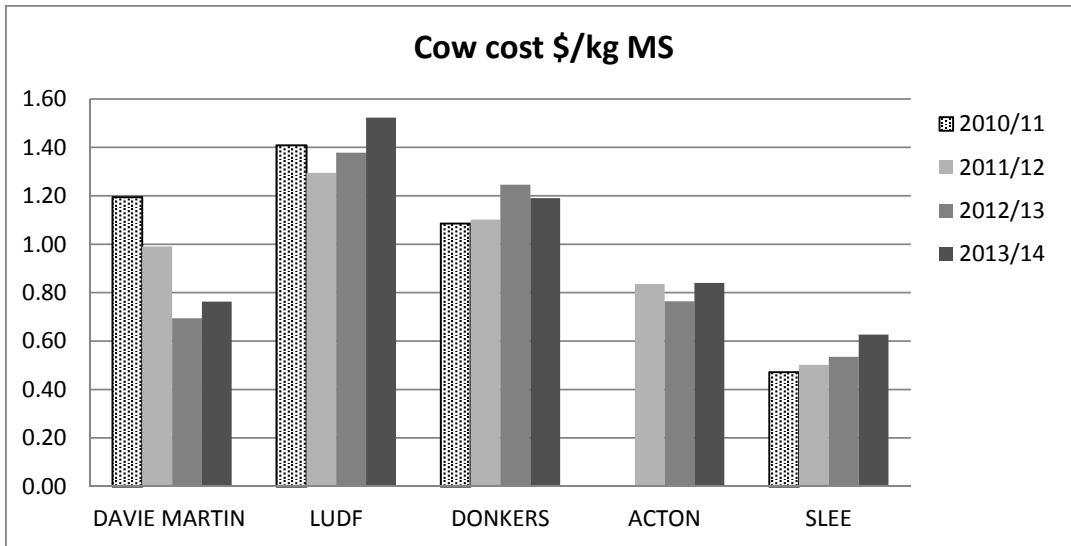


Summary of Expenses per kgMS



Trend analysis for the 5 farms





Analysis of 2013- 14 Season (Income / Expenses expressed per effective ha)

INCOME (2013-14)	DAVIE-MARTIN	LUDF	DONKERS	ACTON	SLEE
Milk income [\$8.40] -levy	16673	14429	12543	13424	14998
share income [\$0.10 est]	199	173	150	161	179
Stock Sales	1416	1235	877	800	987
Stock Purchased	155	145	10	131	104
Stock Adjustment	-467	-2	0	0	174
Net Stock Income	793	1088	867	669	1058
Other Income	39	0	122	0	469
Total income/ha	17704	15689	13682	14254	16704
Cow Costs					
Animal Health	452	339	224	197	321
Breeding/testing	97	325	220	187	169
Dry cows / Young stock grazing	972	1963	1342	964	633
Feed					
Net Feed (made +purchased, incl calf feed)	1458	1001	1174	878	1777
Run Off Adjustment /lease	836	0	0	0	484
Fertilizers (inc N)	930	753	745	717	788
Irrigation	222	312	510	335	331
Regrassing	68	220	156	4	86
Wages					
	1684	1400	1211	1312	1441
Land					
Electricity	134	179	65	105	78
Administration	297	139	177	263	85
Freight General	53	91	0	60	22
Rates and Insurance	147	131	179	223	147
R&M	413	328	316	379	348
Shed Expenses	43	42	71	103	119
Vehicle Expenses	352	161	85	150	150
Weed and pest/spraying	4	5	20	24	129
Depreciation	567	725	343	318	1004
Operating Expenses					
	8729	8113	6838	6219	8112
F.W.E	8054	7388	6455	5372	6787
Operating Profit	8975	7576	6844	8035	8592



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2013 -2014 Analysis \$ /kg MS

Analysis \$/kg MS	DAVIE-MARTIN	LUDF	DONKERS	ACTON	SLEE
Total income/kgMS	8.88	9.09	9.12	8.88	9.32
Cow Costs					
Animal Health	0.23	0.20	0.15	0.12	0.18
Breeding/testing	0.05	0.19	0.15	0.12	0.09
Dry cows / Young stock grazing	0.49	1.14	0.90	0.60	0.35
Feed					
Net Feed (made +purchased, incl calf feed)	0.73	0.58	0.78	0.55	0.99
Run Off Adjustment /lease	0.42	0.00	0.00	0.00	0.27
Fertilizers (inc N)	0.47	0.44	0.50	0.45	0.44
Irrigation	0.11	0.18	0.34	0.21	0.18
Regrassing	0.03	0.13	0.10	0.00	0.05
Wages	0.84	0.81	0.81	0.82	0.80
Land					
Electricity	0.07	0.10	0.04	0.07	0.04
Administration	0.15	0.08	0.12	0.16	0.05
Freight General	0.03	0.05	0.00	0.04	0.01
Rates and Insurance	0.07	0.08	0.12	0.14	0.08
R&M	0.21	0.19	0.21	0.24	0.19
Shed Expenses	0.02	0.02	0.05	0.06	0.07
Vehicle Expenses	0.18	0.09	0.06	0.09	0.08
Weed and pest/spraying	0.00	0.00	0.01	0.01	0.07
Depreciation	0.28	0.42	0.23	0.20	0.56
Operating Expenses	4.38	4.70	4.56	3.87	4.52
F.W.E	4.04	4.28	4.30	3.35	3.79
Operating Profit	4.50	4.39	4.56	5.01	4.79
Summary by Cost Category \$/kg MS	DAVIE-MARTIN	LUDF	DONKERS	ACTON	SLEE
Cow Costs	0.76	1.52	1.19	0.84	0.63
Feed	1.76	1.32	1.72	1.21	1.93
Staff	0.84	0.81	0.81	0.82	0.80
Land	1.01	1.04	0.84	1.01	1.16



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2013 -2014 Analysis \$ /cow

Analysis per cow	DAVIE-MARTIN	LUDF	DONKERS	ACTON	SLEE
Total income/cow	4498	3997	4041	3425	4416
Cow Costs					
Animal Health	115	86	66	47	85
Breeding/testing	25	83	65	45	45
Dry cows / Young stock grazing	247	500	396	232	167
Feed					
Net Feed (made +purchased, incl calf feed)	370	255	347	211	470
Run Off Adjustment /lease	212	0	0	0	128
Fertilizers (inc N)	236	192	220	172	208
Irrigation	56	80	151	81	88
Regrassing	17	56	46	1	23
Wages	428	357	358	315	381
Land					
Electricity	34	46	19	25	21
Administration	75	35	52	63	23
Freight General	13	23	0	14	6
Rates and Insurance	37	33	53	53	39
R&M	105	83	93	91	92
Shed Expenses	11	11	21	25	31
Vehicle Expenses	89	41	25	36	40
Weed and pest/spraying	1	1	6	6	34
Depreciation	144	185	101	76	266
Operating Expenses	2218	2067	2020	1494	2145
F.W.E	2046	1882	1907	1291	1795
Operating Profit /cow	2280	1930	2022	1931	2272

Summary by Cost Category	DAVIE-MARTIN	LUDF	DONKERS	ACTON	SLEE
Cow Costs	386	669	528	324	297
Feed	893	582	763	465	916
Staff	428	357	358	315	381
Land	511	459	371	390	551
Total	2218	2067	2020	1494	2145



Partners Networking To Advance South Island Dairying









This information was collected in the level-1 questionnaire. It is used to generate adjustments and KPI's in both Financial and Physical Detail reports. Please check that it is correct.

Dairy Co Supplied:	Fonterra	Balance Month:	May
Production System:	4 Feed imported to extend lactation 20-30%	Milking Interval:	Twice a day
Business Type:	Owner operator	Organic:	No
Calving Season:	Spring only	District	Selwyn
Winter Milk:	No	Season's rainfall (mm):	763
Region:	Marlborough-Canterbury	NIWA 10 Yr Av Rainfall (mm):	0
% Milking Area Irrigated:	More than 30%		
Farm Dairy Type:	R50		

Stock	
Predominant dairy breed:	Crossbred
Peak Cows Milked:	628
Stocking rate (Cows/ha):	3.9
Replacement Calves Reared:	150

Land Area (ha)	
Total Dairying area:	167.5
less Ungrazeable area:	7.5
Effective Dairying area:	160.0
Support block effective area:	0.0
Defined Young Stock area:	0
Non-dairy effective area:	0.0

Labour	
Full time paid labour equivalents:	3.7
Full time unpaid labour equivalents:	0.0
FTE unpaid management:	0.0
Total FTEs:	3.7
Milking Cups per FTE	13.5

Production	Total	Per ha	Per cow	Composition
Milk Litres:	2,983,264	18,645	4,750	
Fat kg:	155,496	972	248	5.2%
Protein kg:	120,524	753	192	4.0%
Financial year - Milksolids kg:	276,019	1,725	440	9.3%
Production year - Milksolids kg:	276,019	1,725	440	

Number in Benchmark Group:
Benchmark Group Selected by:
Benchmark Group Ranked by:

Data entered by: Financial: Extended Physical: DairyNZ Regional Leader (Canterbury / North Otago)

Disclaimer:

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Validation Messages: None

Number in Benchmark Group:
Benchmark Group Selected by:
Benchmark Group Ranked by:

Physical Description	Units	2013-14		2012-13	2011-12
		Farm	Benchmark	Farm	Farm
Milking area	ha	160.0		160.0	160.0
Support block effective area	ha	0.0		0.0	0.0
Percent of farm at different height to dairy		0%		0%	0%
Peak cows milked		628		630	632
Stocking rate	cows/ha	3.9		3.9	4.0
Cow breed		Crossbred		Crossbred	Crossbred
Cow liveweight	kg	477		477	470
Liveweight/ha	kg/ha	1,872		1,878	1,856
BW/reliability		118 / 49 LIC		113 / 51 LIC	104 / 46 null
PW/reliability		152 / 75 LIC		140 / 72 LIC	133 / 56 null
Season's rainfall	mm	763		671	533
NIWA 10 Year average rainfall	mm	0		740	730
Production system		4		4	3
Calving season		Spring only		Spring only	Spring only
Nitrogen applied for year	kg/ha	250		350	354
Milksolids (MS) Production to factory - (Seasonal year)					
Milksolids/ha	kg/ha	1,725		1,878	1,861
Milksolids/cow	kg/cow	440		477	471
MS/ha to 31st Dec	kg/ha	1,012		1,030	983
MS as % of liveweight		92%		100%	100%
10 day peak per cow	kg/day	2.17		2.20	2.16
Average Milksolids/cow/day	kg/day	1.7		1.7	1.7
Monthly production drop: Peak to 31Dec		3.1%		0.0%	5.9%
Days in Milk per cow		259		273	275
Feed Eaten					
feed KPIs based on 11.0 ME Pasture.					
Pasture & Crop eaten	MJME/ha	164,168		185,300	190,595
Pasture & Crop eaten	t DM/ha	14.9		16.8	17.3
Imported supplements eaten	t DM/ha	1.8		1.6	1.3
Grazing off dry cows eaten	t DM/ha	3.9		3.3	3.0
Total feed eaten	t DM/ha	20.6		21.8	21.6
Feed exported	t DM/ha	0.0		0.0	0.0
Imported supplements eaten	kg DM/cow	464		412	323
Imported supplements & grazing eaten	kg DM/cow	1458		1254	1082
Average utilisation imported supplement		85%		85%	85%
Average ME imported supplements	MJ/kgDM	11.5		11.0	11.0
Crops Grazed & Harvested					
Farm area in grazed winter crop	ha	0.0		0.0	0.0
Farm area in grazed summer crop	ha	0.0		0.0	0.0
Farm area in harvest crop	ha	0.0		0.0	0.0
Percent of farm harvested for hay & silage		0%		24%	29%
People					
Cows/Labour unit	cows/FTE	170		170	176
Milksolids/Labour unit	kg/FTE	74,600		81,212	82,700

No DairyBase benchmarks are available for this page, industry targets are provided where applicable.

		2013-14		2012-13	2011-12
Mastitis and Lameness		Units	Target	Farm	Farm
Cows treated for lameness			<3%	21%	30%
Average bulk SCC	1000s		<125 *	152	158
Clinical mastitis (1st 6 weeks season)			<8% *	3%	5%
Calving and Mating (Based on InCalf Fertility Focus Report)					
% of cows calving in Spring (vs Autumn)				100%	100%
Planned Start of Calving (PSC)	Spring			03-Aug	02-Aug
% Calved by week 3			60%	62%	65%
% by week 6			87%	86%	87%
% by week 9			98%	97%	98%
% Cows induced to calve				0%	0%
% Cows treated for non-cycling				0%	0%
Planned Start of Mating (PSM)				25-Oct	25-Oct
3-week submission rate			90%	88%	87%
6-week in-calf rate, Actual (A) or Estimated (E)			78%	78% E	73% A
Empty rate			9% * 2013-14	12%	13%
Length of AB	weeks			6	6
Length of total mating	weeks			10	10
Wastage and Replacements					
Cows milked 1 Dec as % of opening cows			>96%	97%	98%
Percent herd entering as heifers			18-22%	18%	22%
1st calvers on farm end of season %			>86%	84%	81%
Soils & Fertiliser					
Olsen P				39	38
Quick test K - Potassium (average)				11	10
Sulphate-S (average)				14	22
Quick test Mg - Magnesium (average)				32	30
Soil pH				6.2	6.1
Phosphate applied for year	kg/ha			43	53
Potassium applied for year	kg/ha			0	0
Sulphate applied for year	kg/ha			54	73
Magnesium applied for year	kg/ha			0	13
Lime applied for year	kg/ha			0	0
Irrigation					
Benchmark					
Area irrigated	ha			160.0	160.0
Percent of effective area irrigated %				100%	100%
Total water applied annually	mm			396	556
Pasture Eaten kgDM/ha/mm* (irrgn+rain Sept-Apr)	kgDM/ha/mm			0	17

Comments Industry targets: Empty rate target is based on the length of total mating and relates to the current season. SCC and Clinical mastitis targets are based on top 10%
367 ha were mowed pre-grazing

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