
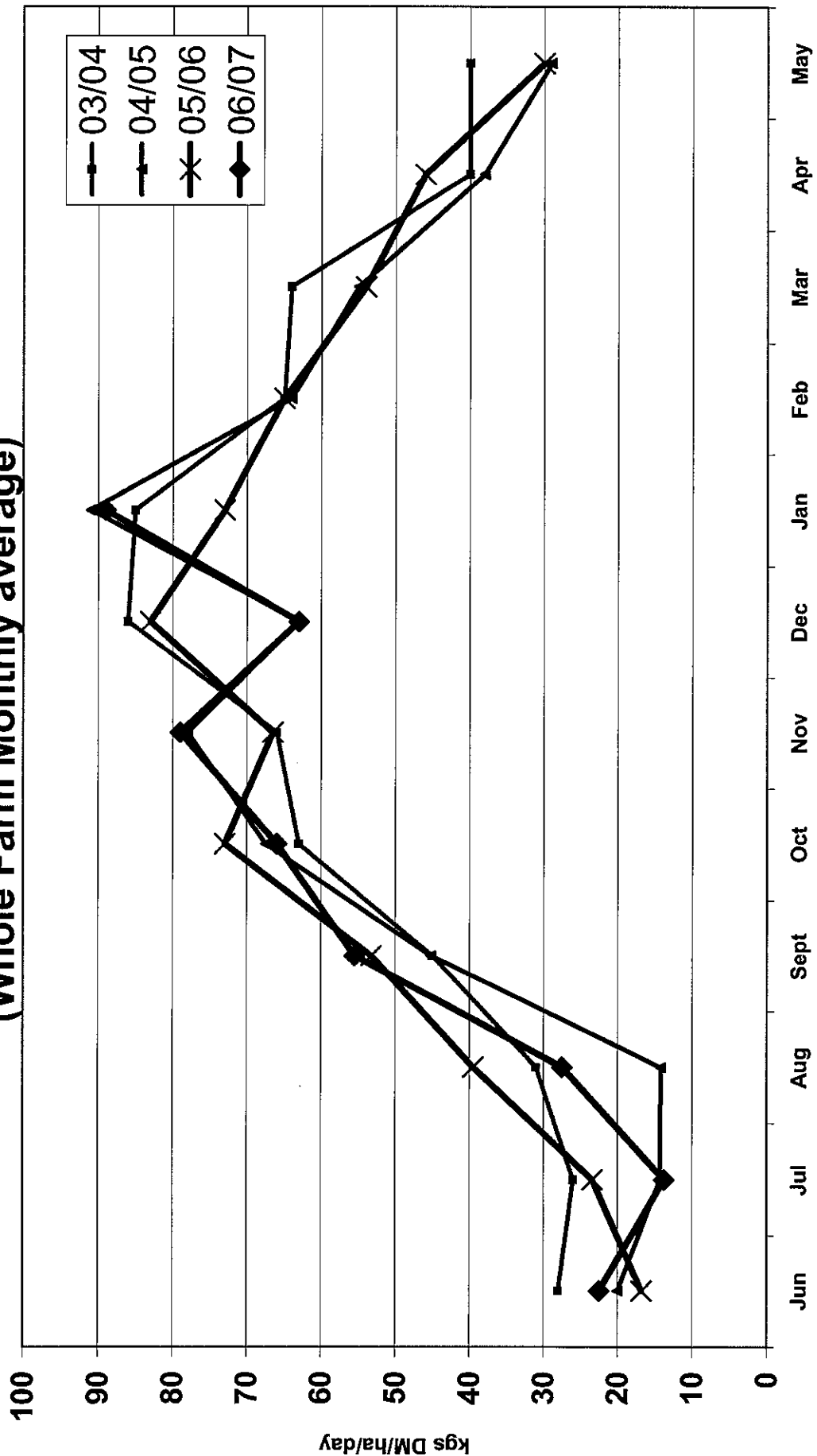


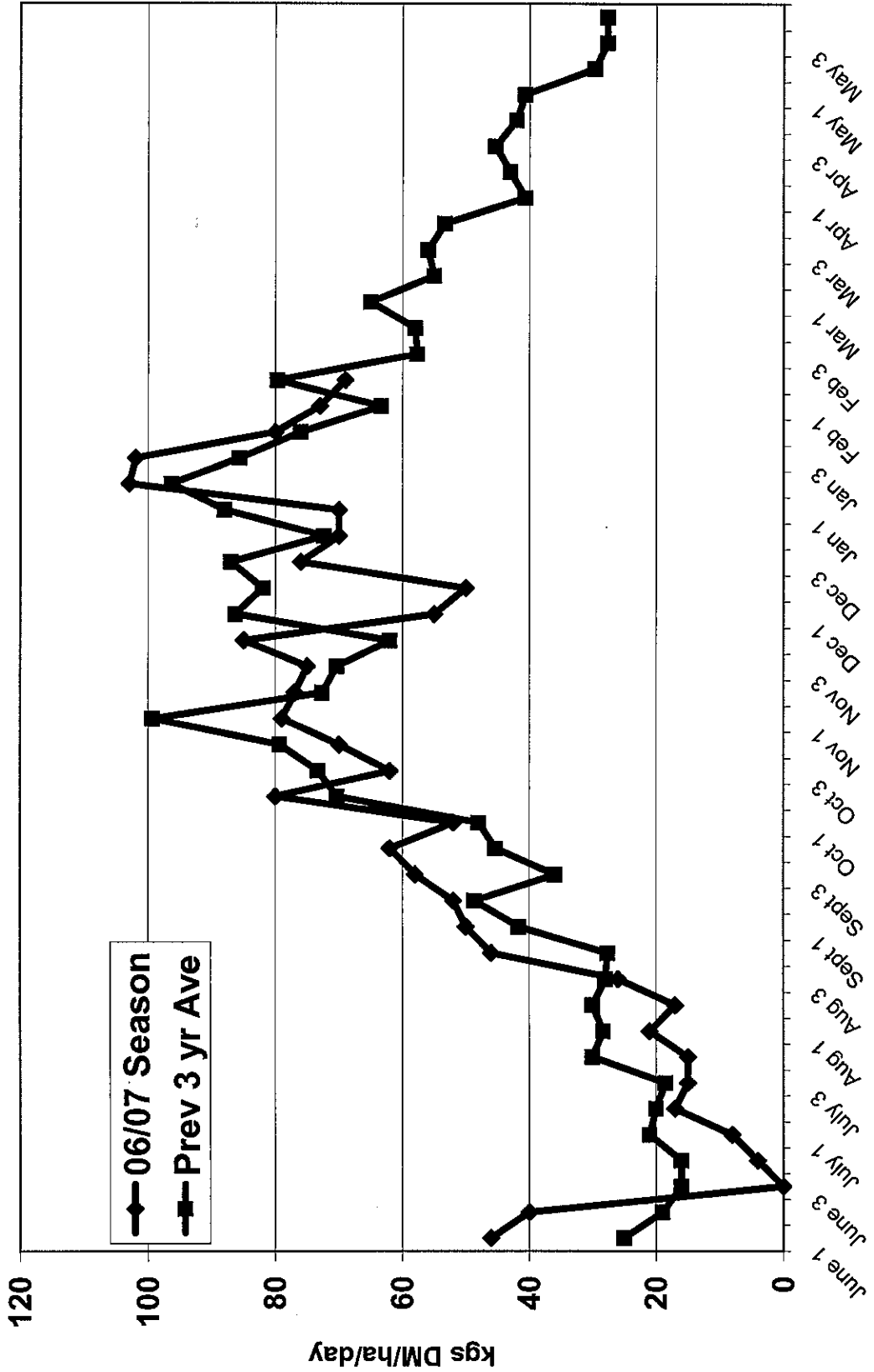
Programme
SIDDC Focus Day on LUDF Thursday 22nd February 2007
Making Profitable Decisions

10.15 am	Register Tanker Turnaround Tea and Coffee – Calf Shed Area	
10.30	Welcome – Purpose and Guest/Speaker Introductions	Richard Christie, SIDDC
10.35	Introduction – format for the day	Heather Lawson, Dexcel
10.40 am	LUDF Update and Farm Accounts to December - Calf shed area	Peter Hancox, Peter Gaul, LUDF
11.00 am	Supplements, Production and Profit	Peter Gaul Heather Lawson
	Split Groups	
11.30 am	Presentation 1 - South Block The Mysteries of Cow Lameness	Jim Gibbs Lincoln University
11.55 am	Dairy Insight – Doing the Industry Good	Doug Leeder, Dairy Insight
	Split Groups swap	
12.10 pm	Presentation 2 - Calf Shed Area On farm automation and information integration into farm management systems	Russell Knutson, LIC
12.35 pm	Mating Progress at LUDF	Peter Hancox
12.45 pm	Group 2 returns to Calf Shed Area	
12.50 pm	Open Session – General Questions	
1.00 pm	Summary and conclusion	Greg Roadley
1.05 pm	LUNCH - Calf Shed	
2.00 pm	Farm Walk Dairy Shed for Protrack and Walk on Weigher inspection	LIC/Peter Hancox Graham Kerr, Agriseeds
3.00 pm	Paddocks S6 and S7 – new pasture progress	

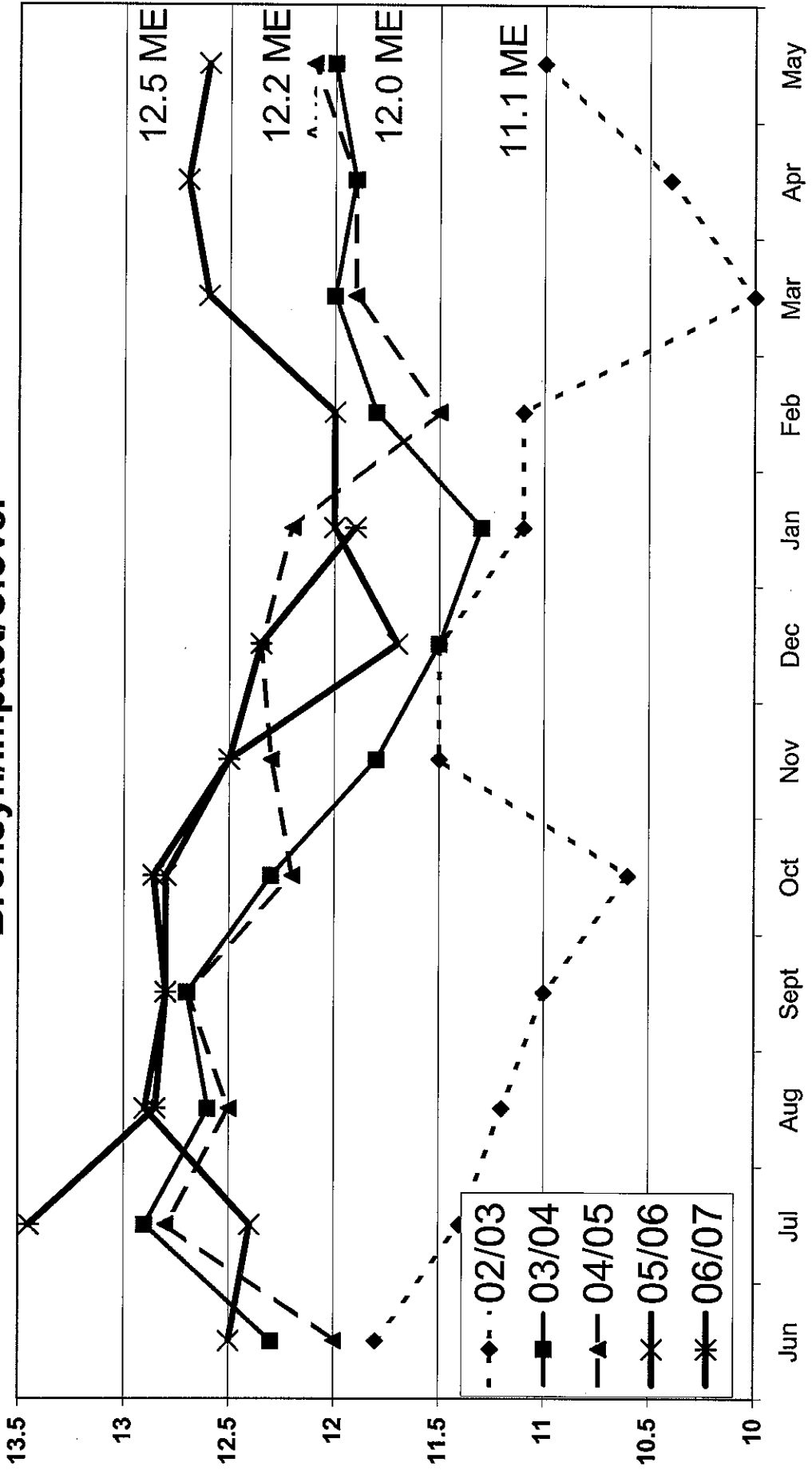
LUDF Pasture Growth (Whole Farm Monthly average)



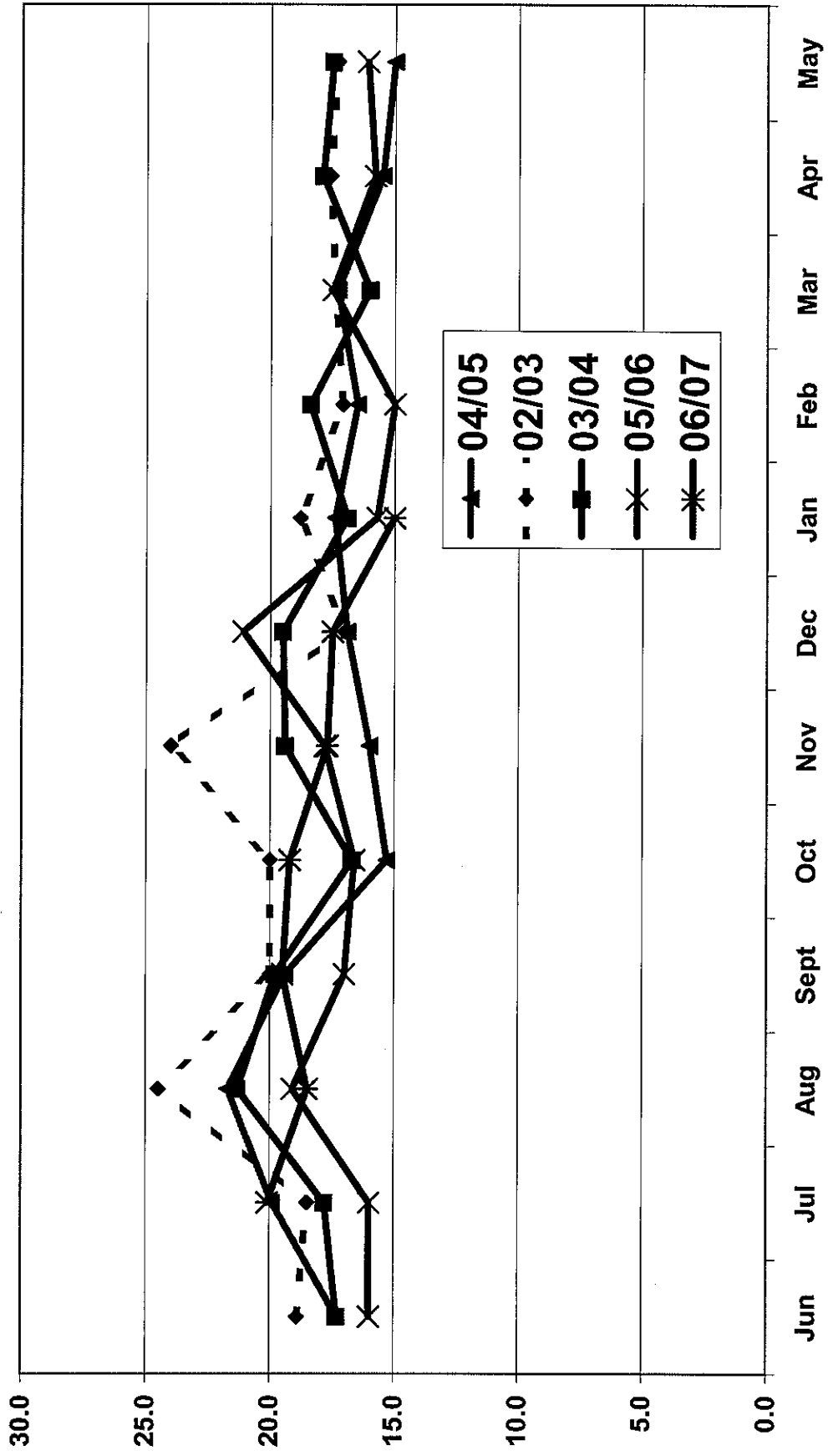
LUDF 10 Day Growth Rates



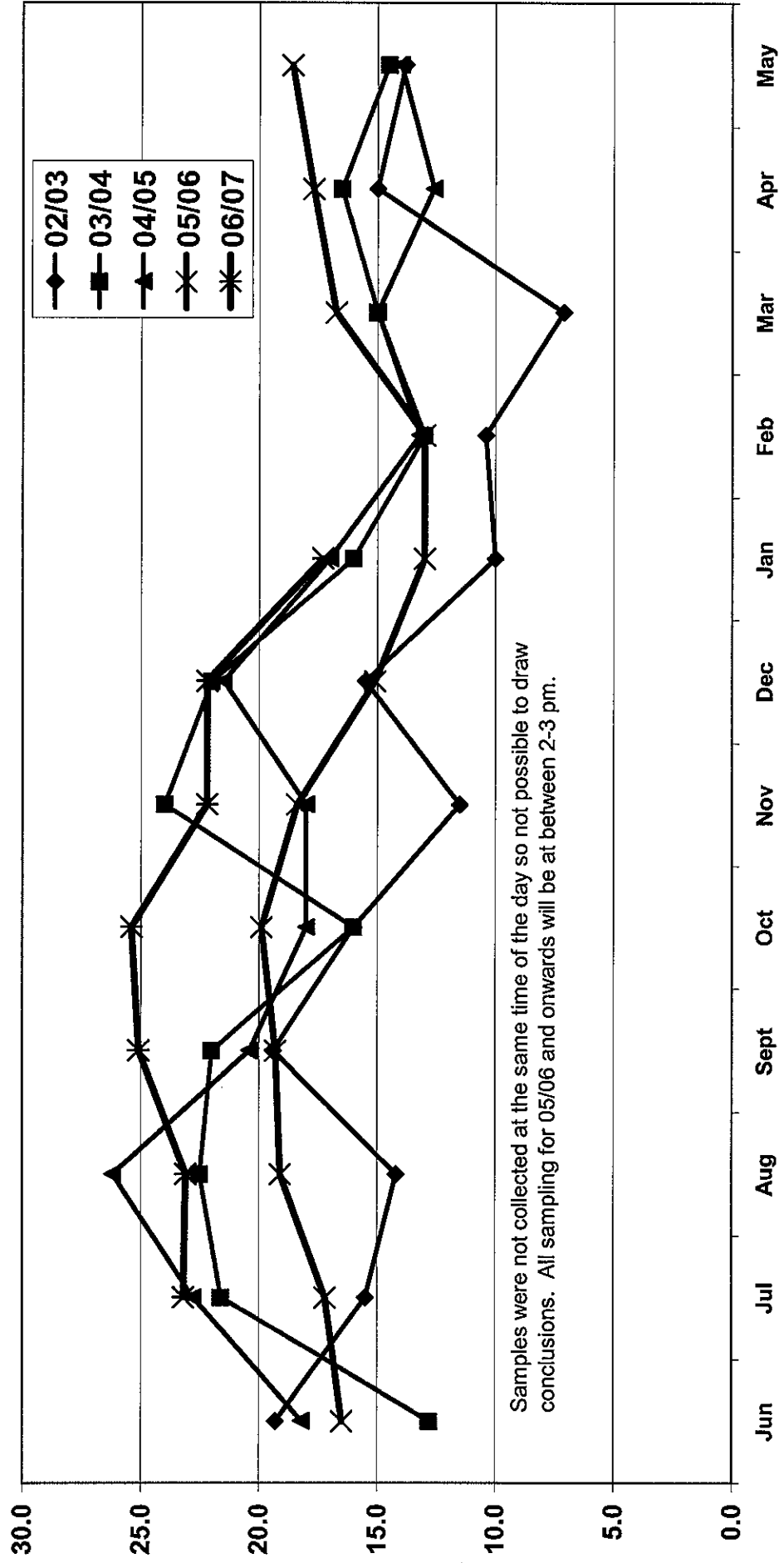
LUDF Pasture ME Bronsyn/Impact/Clover



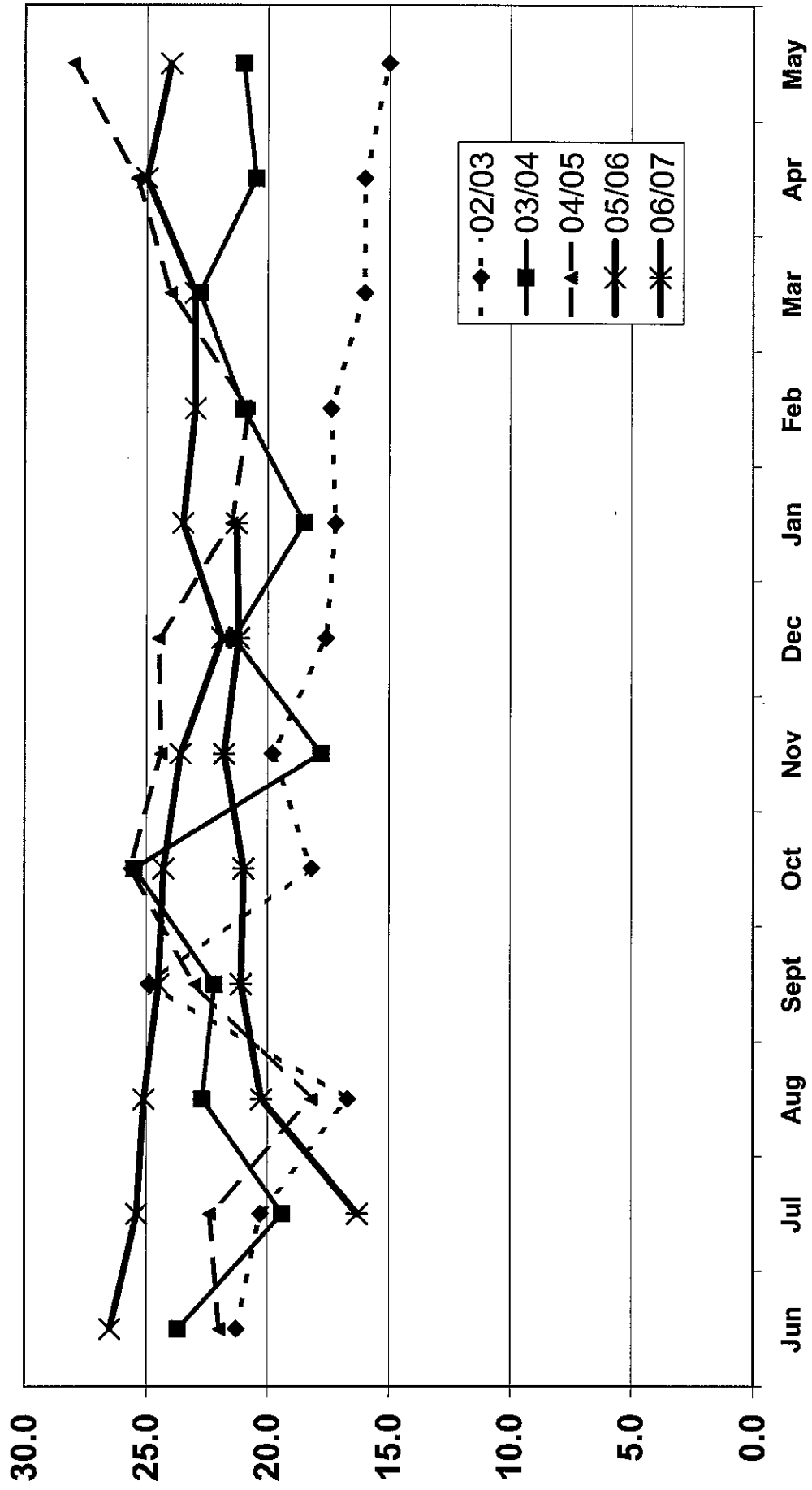
LUDF % Dry Matter



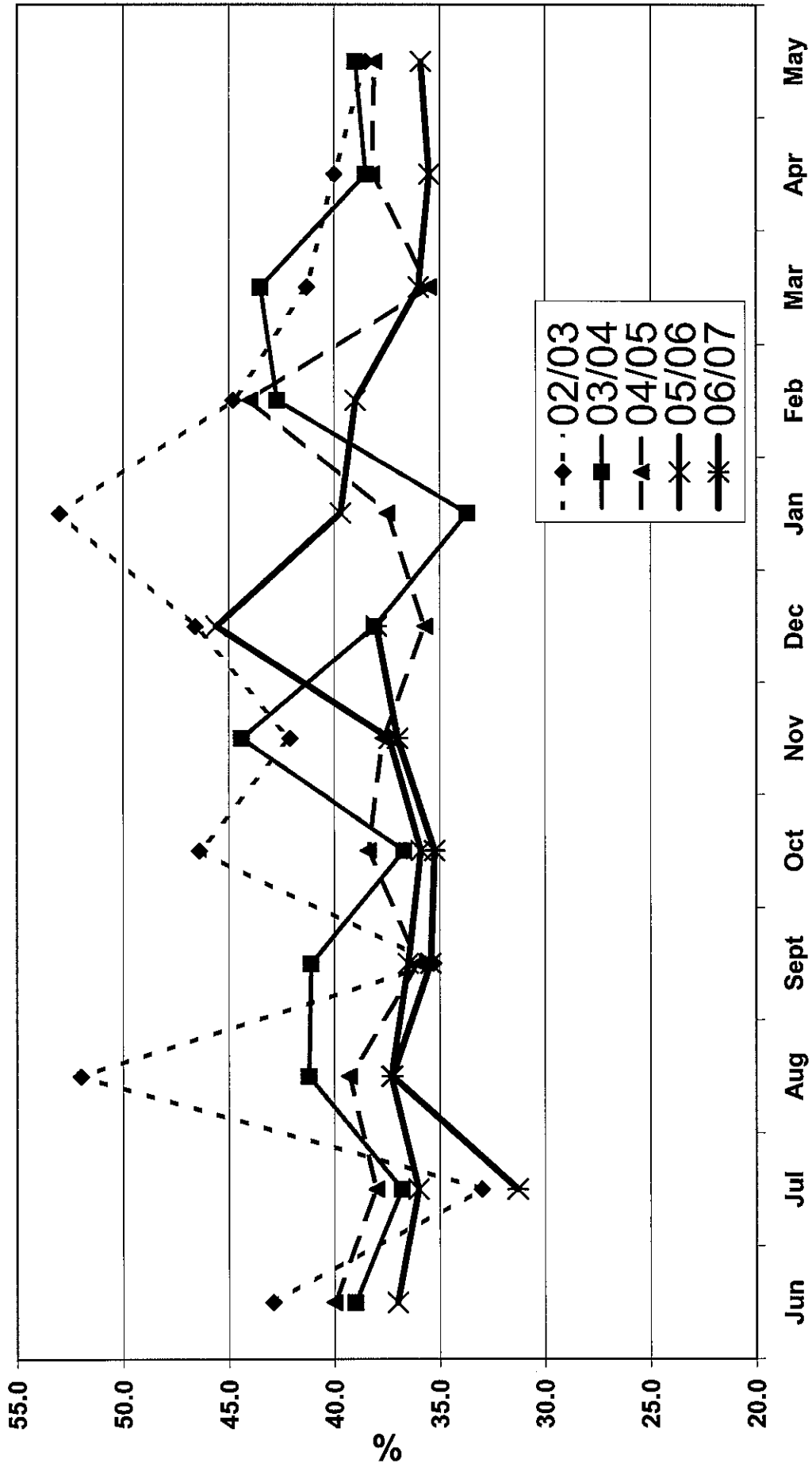
LUDF WSC % monthly average



LUDF % Protein



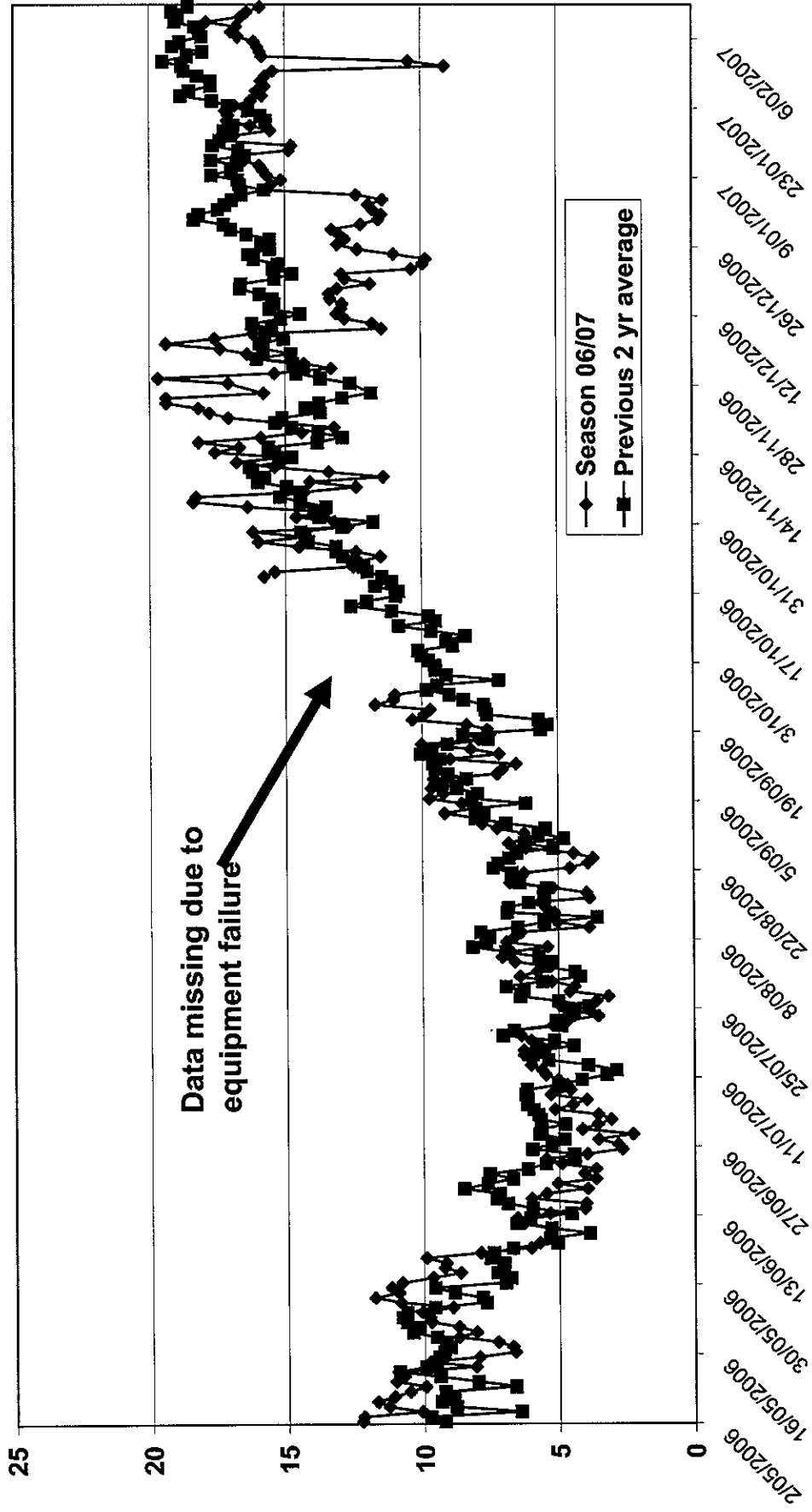
LUDF %NDF



**Lincoln University Dairy Farm
Pasture Analysis**

Sample	Date	Title	% Protein	% WSC	% NDF	% ADF	Digestibility (DMD)	MJ ME/kgDM	% DM	% OM
Reference T260752	sampled T260753	T260754	T260755	T260756	T260757	21.9	83.4	12.5	17.9	90.5
N11 - 18 clicks	3/07/2006	3-Jul	20.6	30.7	31.8	17.8	87.8	13.4	21.9	92.0
S1 - 15.8 clicks	25/07/2006	25-Jul	19.1	33.4	30.3	17.4	89.0	13.5	19.1	91.5
S10 - 24 clicks	25/07/2006	25-Jul	13.5	37.7	31.8	18.2	87.8	13.4	19.4	92.2
Winter Grazing Garretts 24 clicks	25/07/2006	25-Jul	17.7	14.9	46.6	25.5	77.0	11.4	22.0	89.1
S3	2/08/2006	2-Aug	21.6	20.1	37.2	20.4	85.0	12.7	15.9	90.1
S9	2/08/2006	2-Aug	20.3	19.1	39.3	21.6	84.0	12.5	15.6	89.7
N1	18/08/2006	18-Aug	19.4	24.5	38.1	20.8	85.6	12.9	19.4	90.7
S2 - 17.3 Clicks	18/08/2006	18-Aug	19.4	25.2	37.5	20.1	84.6	12.7	18.9	90.7
S8, 19.4 Clicks	31/08/2006	31-Aug	20.9	26.3	33.7	20.4	86.7	13.2	20.8	92.0
N10, 21.2 Clicks	31/08/2006	31-Aug	20.0	23.7	37.7	21.5	86.0	13.0	20.5	91.2
N5 - 25.5 Clicks	13/09/2006	13-Sep	22.0	21.6	37.8	19.6	83.6	12.5	19.0	90.3
N7 - 23 Clicks	15/09/2006	15-Sep	22.7	24.2	35.4	18.0	86.7	12.9	19.5	90.0
S10 - 16.5 Clicks	18/09/2006	18-Sep	18.7	30.5	33.9	17.3	86.0	12.8	19.8	90.0
N6	21/09/2006	21-Sep	21.7	25.9	34.0	17.5	86.8	13.1	20.7	90.9
N2	23/09/2006	23-Sep	22.2	22.8	37.1	18.7	84.4	12.7	19.0	91.0
S9 - 19.4 Clicks	27/09/2006	27-Sep	18.6	27.4	35.1	18.8	85.2	12.8	20.2	90.9
N3 - 19.8 Clicks	29/09/2006	29-Sep	21.6	23.5	34.7	18.5	84.6	12.7	18.6	90.7
S2 - 18.4 Clicks	2/10/2006	2-Oct	22.2	22.2	37.8	18.8	85.5	12.9	19.5	91.0
N10 - 21.1 Clicks	4/10/2006	4-Oct	22.6	24.1	34.9	18.4	86.2	13.0	18.5	91.0
N9	6/10/2006	6-Oct	19.2	26.1	35.9	18.0	86.0	12.9	18.8	90.9
S4 - 18 Clicks	9/10/2006	9-Oct	21.2	27.7	34.6	17.9	84.8	12.8	16.4	91.1
N4	11/10/2006	11-Oct	19.4	28.6	34.0	17.5	86.0	13.1	20.6	92.0
N11	16/10/2006	16-Oct	20.1	23.0	37.1	19.7	83.4	12.5	18.4	90.4
N2 - Ht 16.6, Cover 2824	18/10/2006	18-Oct	22.7	23.7	32.3	17.0	86.0	12.8	20.1	90.2
N3	20/10/2006	20-Oct	19.9	25.5	36.2	18.9	84.9	12.8	21.6	90.8
S2 - 16.8 Clicks	25/10/2006	25-Oct	19.4	27.6	34.1	18.0	85.0	12.9	21.2	91.5
S4 - 15.5 Clicks	27/10/2006	27-Oct	21.5	25.5	35.6	19.1	82.6	12.3	17.2	89.5
N6 - 15.3 Clicks	1/11/2006	1-Nov	23.0	19.5	36.7	19.6	83.0	12.9	18.2	90.4
S9 - 17.3 Clicks	2/11/2006	2-Nov	20.8	23.5	36.8	19.1	83.1	12.4	17.8	90.0
N7 - 16.8 clicks	6/11/2006	6-Nov	19.1	24.1	36.4	20.1	83.0	12.4	18.0	90.3
N2	7/11/2006	7-Nov	23.7	18.3	36.9	20.6	82.1	12.3	13.1	90.4
S5 - 20 clicks	8/11/2006	8-Nov	23.1	20.1	38.0	20.9	81.0	12.1	15.5	89.9
S3 - 17.1 clicks	8/11/2006	8-Nov	22.4	20.9	37.6	19.9	82.3	12.3	19.0	90.0
S3	9/11/2006	9-Nov	23.2	25.5	34.9	17.8	84.5	12.6	19.5	90.0
N10 - 17.2 clicks	10/11/2006	10-Nov	23.9	22.8	35.1	18.4	85.4	12.9	17.9	91.0
N3 - 17.8 clicks	13/11/2006	13-Nov	21.9	23.3	36.0	19.3	84.2	12.6	16.2	90.4
S2 - 17.4 clicks, 2936 cover	15/11/2006	15-Nov	21.0	23.4	37.4	19.7	83.3	12.6	19.5	91.6
S9 - 17 clicks	20/11/2006	20-Nov	22.9	21.4	36.7	19.6	83.1	12.4	15.8	90.2
N6 - 18.8 Clicks	22/11/2006	22-Nov	20.7	21.3	39.7	21.3	81.6	12.3	18.7	91.1
N8 - 17.2 clicks	24/11/2006	24-Nov	20.1	19.1	39.9	21.4	80.2	11.9	17.5	89.3
N9 - 16 clicks	27/11/2006	27-Nov	25.1	19.8	37.0	19.4	82.8	12.5	16.9	90.8
S3 - 18.8 clicks	29/11/2006	29-Nov	16.7	26.2	38.9	20.9	81.9	12.4	22.6	91.4
S5 - 19 clicks	29/11/2006	29-Nov	21.2	26.1	34.2	18.7	83.6	12.5	17.1	90.5
N3 - 19.9 clicks	1/12/2006	1-Dec	20.4	21.2	39.7	21.5	80.5	12.1	18.2	90.6
S6 - 17 clicks	4/12/2006	4-Dec	24.5	18.6	38.3	20.7	81.0	12.1	16.5	90.0
S2 - 16 clicks	6/12/2006	6-Dec	20.3	23.0	38.1	20.3	82.4	12.4	19.9	91.0
N4 - 15.6 clicks	8/12/2006	8-Dec	18.9	26.0	37.9	20.2	82.7	12.6	18.3	91.6
N5 - 14.6 clicks	11/12/2006	11-Dec	22.7	19.0	40.0	21.4	80.6	12.0	15.5	89.6
N11 - 15 clicks	13/12/2006	13-Dec	23.0	18.3	39.6	21.8	80.4	12.1	19.9	90.9
S10 - 15.6 clicks	13/12/2006	13-Dec	20.2	25.2	35.8	19.7	82.9	12.5	17.9	91.0
N7 - 14.3 clicks	15/12/2006	15-Dec	21.5	23.7	35.2	18.7	84.1	12.7	18.7	90.9
N3 - 14.3 clicks	18/12/2006	18-Dec	21.8	23.2	36.0	19.2	84.0	12.7	18.9	91.0
S5 - 17.6 clicks	20/12/2006	20-Dec	19.6	25.6	35.2	19.7	81.5	12.1	14.5	89.8
N3 - 17 clicks	20/12/2006	20-Dec	20.0	20.7	39.5	21.5	80.5	12.1	14.6	90.5
N3 - 19 clicks	8/01/2007	8-Jan	20.0	22.2	36.5	20.1	82.7	12.4	17.4	90.5
N6 - 22.2 clicks	17/01/2007	17-Jan	26.9	14.0	36.7	21.1	81.0	12.1	13.1	90.0
S8 - 24.7 clicks	17/01/2007	17-Jan	22.3	15.7	40.3	23.5	78.3	11.7	14.7	90.0
N-1 23 clicks	24/01/2007	24-Jan	19.1	18.3	41.1	23.7	79.4	11.8	14.7	89.3
N-8 24.5 clicks	24/01/2007	24-Jan	18.9	17.8	42.6	22.7	78.3	11.7	14.7	90.0
N-9 24.3 clicks	24/01/2007	24-Jan	20.6	15.7	40.4	21.9	79.4	11.7	15.4	88.9
N-1 17.9 clicks	2/02/2007	2-Feb	18.9	22.2	36.9	19.8	81.1	12.2	16.2	89.6
N-1 17.8 clicks	14/02/2007	14-Feb	22.3	17.1	36.6	20.2	82.0	12.1	14.7	89.1
S-7 18.3 clicks	14/02/2007	14-Feb	24.2	15.3	37.8	21.2	80.9	11.9	14.4	89.9

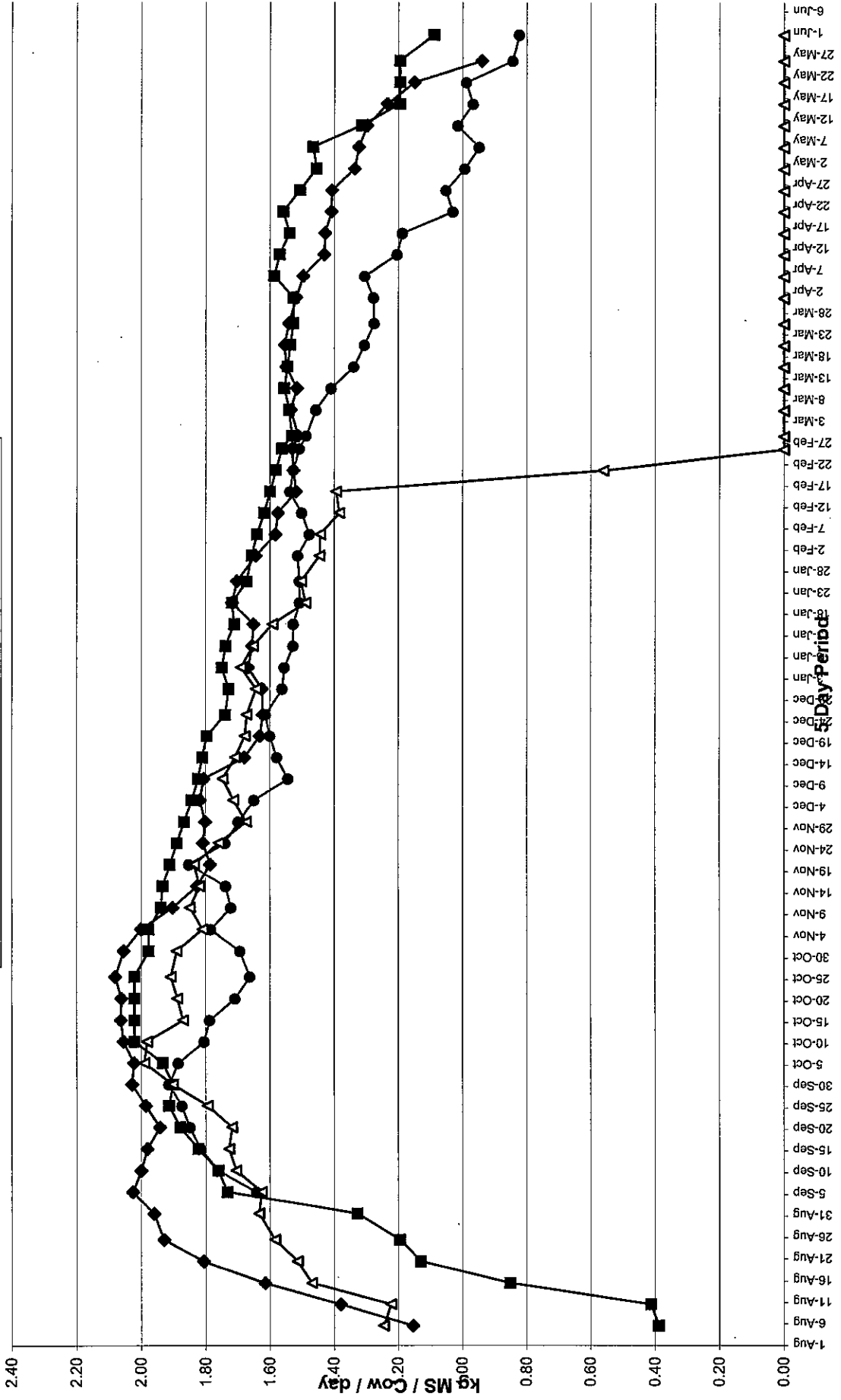
LUDF 10cm soil Temp at 9am



Lincoln University Dairy Farm

Lincoln University Dairy Farm Kg MS Production / Cow / Day 2005-2006 Season

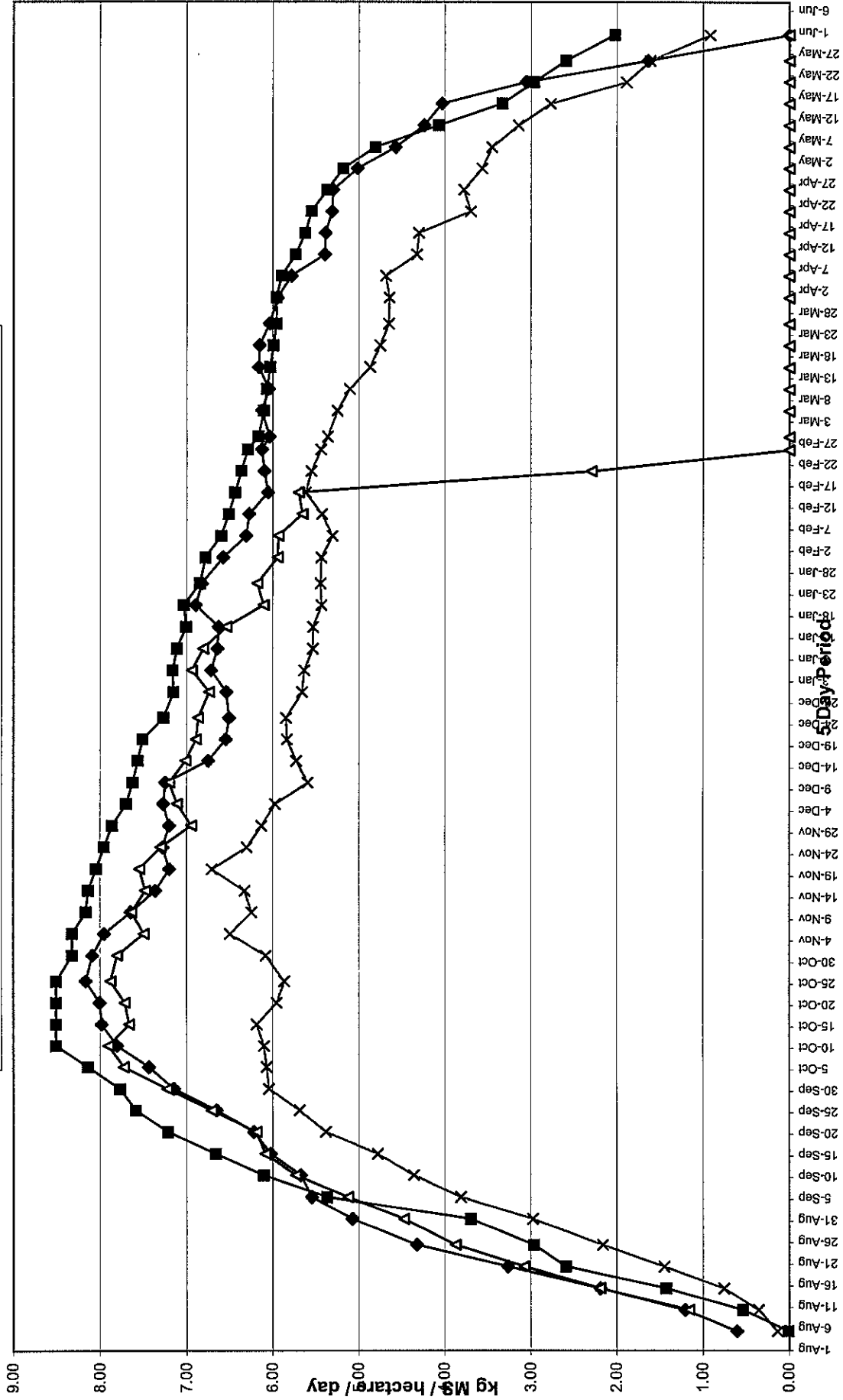
—■— Budget —◆— 2005/06 year —●— 2002/03 Year —▲— 2006/07 year



Lincoln University Dairy Farm

Lincoln University Dairy Farm Kg MS Production / Ha / Day 2006-2007 Season

Legend: ■ Budget (1850 MS/ha) period totals, ◆ 2005/06 Year, × 2002/03 Year, ▲ 2006/07 season



LUDF Milksolids Production 2005-06

	Actual	Budget		Last Year (04-05)	
	MS total	MS total	%	MS total	%
Year to Date - 15 Feb	198,701	212,212	-6.4%	202,757.0	-2.0%
Jan-07	32,060	34,964	-8.3%	33,589.0	-4.6%
Dec-06	34,861	37,348	-6.7%	34,055.0	2.4%
Nov-06	35,859	39,160	-8.4%	36,053.0	-0.5%
Oct-06	38,676	42,127	-8.2%	39,649.0	-2.5%
Sep-06	29,931	32,865	-8.9%	30,083.0	-0.5%
Aug-06	13,350	9,961	34.0%	14,274.0	-6.5%

Lincoln University Dairy Farm - Farm Walk notes

Tuesday 13th February 2007

Critical issues for the short term

1. Lift average farm cover to over 3000 to allow for a longer rotation length for the autumn.
2. Continue to apply Nitrogen fertilizer while response rates are high.
3. Make sure that the target residual of 7 "clicks" is reached to minimise pasture substitution.

Summary of Key Factors affecting Grazing Management & Animal Performance

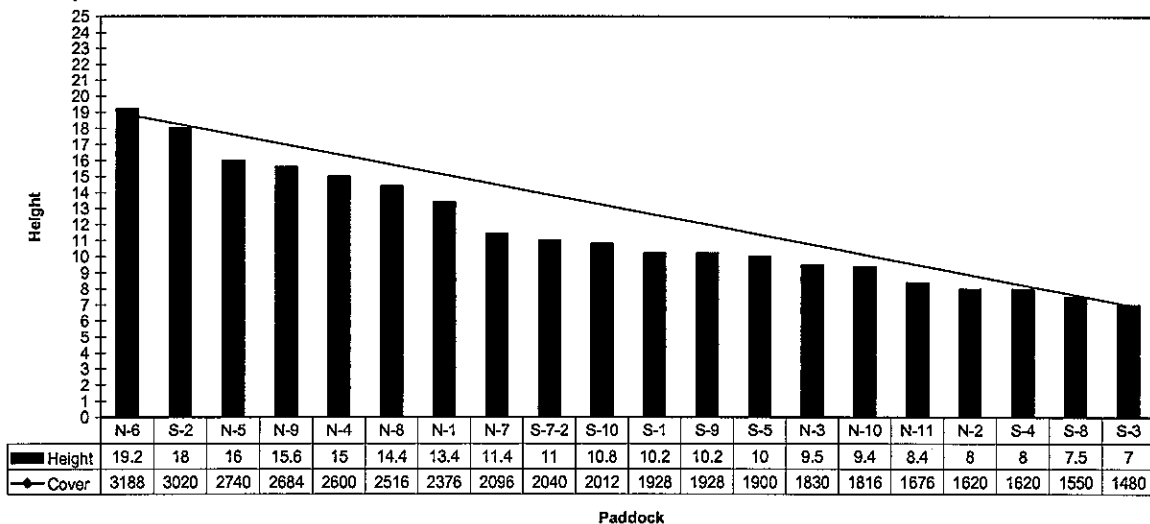
4. SOIL TEMPS have dropped to 16.5° C. Nights are cooler with significant morning dew.
5. PASTURE GROWTH over the last week has dropped slightly to 69 kg DM/ha (last week 73). Break even is 62 so this growth rate resulted in a lift in average farm cover
6. AVERAGE PASTURE COVER has lifted by 120 kgs DM/ha to 2156 as a result of holding the rotation length at 1/26 of the farm and feeding an average of 4.5 kgs of silage..
7. Pasture DRY MATTER % has lifted to 15%, which is much better than the 13% of previous weeks but still below the 19% more commonly seen at this time of the year. Water Soluble Carbohydrate levels are at 22% which is high for this time of the year and coupled with high digestibility is resulting in high M.E. test results i.e 12.4
8. MILK PRODUCTION is now 1.4kgs MS/cow/day and 5.7 kgs MS/ha and we do not have a satisfactory explanation for the continued drop. Pasture allocation appears to be 16 kgs as targeted and grazing residuals are at 7"clicks". Pasture ME and WSC are high and the grass silage also has an ME of over 12.
9. Last weeks PASTURE FEED WEDGE was

06-Feb-07
 $665/152 = 4.4$ cows/ha
 $(4.4 \times 16 \times 24) + 1480 = 3150$ kgDM/ha
 $(3150 - 500)/140 = 19$ RPM clicks
 Soil temp °C = 18

Farm Feed Wedge - Week Starting

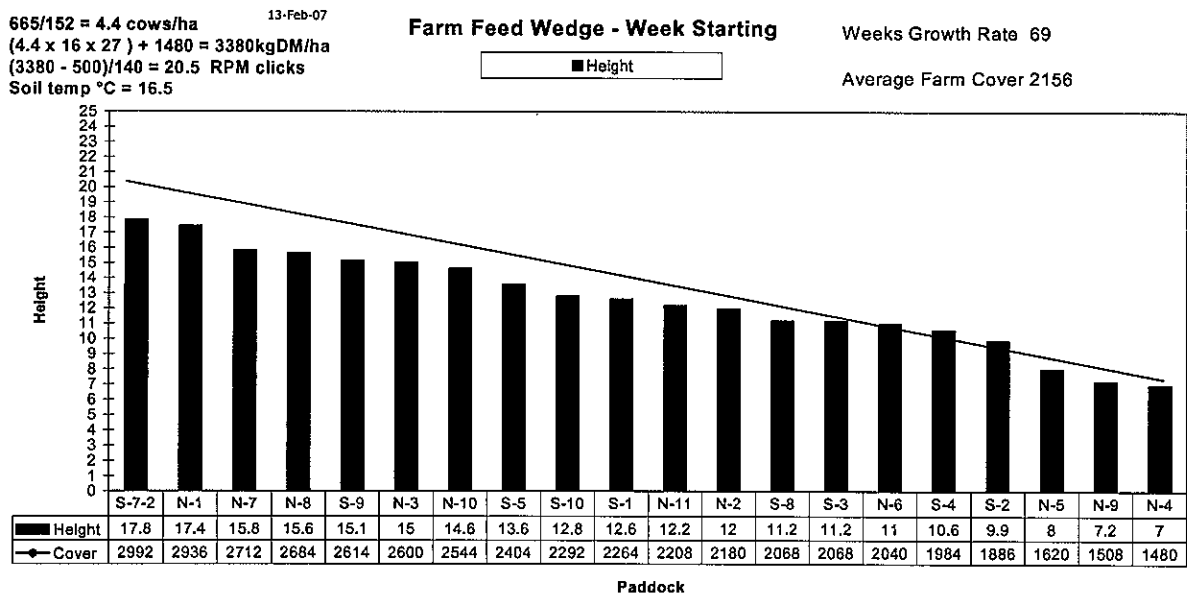
Weeks Growth Rate 73

Average Farm Cover 2038



14.

The weeks Pasture Feed Wedge is



10. The deficit in the middle in the previous weeks wedge has mostly filled and the deficit that now appear in this weeks wedge is as a result of lifting the target line to that required for a 27 day rotation. There is a deficit of about 240 kgs DM/ha, this is a silage bale/ha or 6 bales of silage (one wagon load) per day and works out to 2 kgs DM /cow/day.
11. We are now going to use our second best silage (average 11.5 ME) so that we can leave our best silage for the 50t of “insurance” silage we have on hand for the spring.
12. We will use the remainder of the nitrogen in two applications in late Feb and mid March to assist us to get the rotation length out through the early autumn, to minimise our reliance on supplements, as we did last season. We believe it is prudent to organise the autumn pasture grazing strategy NOW rather than at the time. We will only apply nitrogen to the non-effluent areas of the farm. This means that we will follow the cows for the next rotation with 30 kgs of N/ha and apply the remaining N in the subsequent rotation. The N response will last through well into May.
13. The latest pregnancy scan has confirmed that we have 80% of the herd in-calf after 9 weeks of mating. This is after a further 11 lost pregnancies since the last scan 3 weeks ago. (31 cows have had an early pregnancy loss). The 80% in-calf at 9 weeks compares with 75% at 9 weeks last year.

The next WEEKLY farm walk is on **TUESDAY 20th February 2007 10.00am.**

Management Group

Peter Hancox (Farm Manager), Peter Gaul (for SIDDC), and Adrian van Bysterveldt (Dexcel).

Weekly Dataset from Lincoln University Dairy Farm

Date (Totals at end of period)	21-Jan-07	28-Jan-07	31-Jan-07	7-Feb-07	14-Feb-07
Total Cows Wintered (July 1st Total)	702	702	702	702	702
Farm grazing ha (available to milkers)	151.7	151.7	151.7	151.7	151.7
Dry Cows on farm / East block / other	0	0	0	0	2
Culls (Includes culls put down & empties)	0	0	0	0	2
Culls total to date	11	11	11	11	13
Deaths (Includes cows put down)	1	0	0	0	0
Deaths total to date	21	21	21	20	20
Calved Cows available (Peak Number 680...)	665	665	665	665	661
Treatment / Sick mob total	3	1	1	3	2
<i>lame, mastitis, other, colostrums</i>	8/3/0/0	8/1/0/0	11/1/0/0	12/2/1/0	13/2/2/0
Milking twice a day into vat	654	655	653	650	646
Milking once a day into vat	8	9	11	12	13
Total Cows Milked into vat	662	664	664	662	659
Days in Milk actual cow days/Peak Cows	154	161	164	171	178
MS/cow/day (Actual kg / Cows into vat only)	1.50	1.48	1.4	1.43	1.39
MS/cow to date (total kgs / Peak Cows 680)	255	267	271	281	295
MS/ha/day (total kgs / Total ha used - eg 161.5ha)	6.53	6.1	6.3	6.2	6.1
MS/ha to date (total kg / Total ha used)	1075	1124	1142	1182.7	1222
Monitor Group Condition Score		4.38		4.35	
Monitor Group LW (kgs)		497		491	
Soil Temp Tues 10.00am 10cm	18.0	16.6	16.6	18.0	16.5
Growth Rate (kgDM/ha/day)	100	80	80	73	69
Plate meter height - ave half-cms	14.5	13.6	13.6	11.0	11.8
Ave Pasture Cover (x140 + 500)	2538	2400	2400	2038	2156
Pre Grazing cover (ave for week)	3520	3800	3600	3260	3090
Post Grazing cover (ave for week)	1480	1480	1480	1480	1450
Highest pre-grazing cover	3610	3900	3720	3720	3200
Area grazed / day (ave for week)	6.75	7.60	5.60	9.20	5.80
Grazing Interval	22	20	27	16	26
Pasture ME (pre grazing sample)	12.1		11.8	12.2	
Pasture % Protein	22.3		19.1	18.9	
Pasture % DM	13.1		14.7	16.2	
Pasture % NDF	40.3		41.1	36.9	
Supplements Type	0	0	0	0	0
Supplements fed kg DM/cow/day in paddock	0.0	0.0	0.0	0.0	4.5
Supplements fed to date kg per cow (680 peak)	142	142	142	142	174
Supplements Made Kg DM / ha cumulative	122.4	224.9	177	354	354
Units N applied/ha and % of farm	0	40units,.04%	0	20units,33%	0
Kgs/ha N to Date (excludes Italian & tetraploid)	139	141	141	149	149
Rainfall (mm)	0	5	0	0	15.6
ET Weekly Soil & Science readings (mm)	35est	25est	25est	30est	16est
Days irrigated each week	2	3	3	4	3
Irrigation mm applied per week	12	18	18	24	18
Stock Water Consumed litres / cow / day	33	20	31	41	38

Weekly Dataset from Lincoln University Dairy Farm

Date (Totals at end of period)	7-Jan-07	14-Jan-07	21-Jan-07	28-Jan-07	31-Jan-07
Total Cows Wintered (July 1st Total)	702	702	702	702	702
Farm grazing ha (available to milkers)	159	159	151.7	151.7	151.7
Dry Cows on farm / East block / other	0	0	0	0	0
Culls (Includes culls put down & empties)	0	0	0	0	0
Culls total to date	11	11	11	11	11
Deaths (Includes cows put down)	0	0	1	0	0
Deaths total to date	20	20	21	21	21
Calved Cows available (Peak Number 680...)	666	666	665	665	665
Treatment / Sick mob total	2	2	3	1	1
<i>lame, mastitis, other, colostrums</i>	10/2/0/0	9/2/0/0	8/3/0/0	8/1/0/0	11/1/0/0
Milking twice a day into vat	654	655	654	655	653
Milking once a day into vat	10	9	8	9	11
Total Cows Milked into vat	664	664	662	664	664
Days in Milk actual cow days/Peak Cows	140	147	154	161	164
MS/cow/day (Actual kg / Cows into vat only)	1.68	1.62	1.50	1.48	1.4
MS/cow to date (total kgs / Peak Cows 680)	239	247	255	267	271
MS/ha/day (total kgs / Total ha used - eg 161.5ha)	7.0	6.7	6.53	6.1	6.3
MS/ha to date (total kg / Total ha used)	991.6	1038	1075	1124	1142
Monitor Group Condition Score		4.3		4.38	
Monitor Group LW (kgs)		483		497	
Soil Temp Tues 10.00am 10cm	16.5	18.3	18.0	16.6	16.6
Growth Rate (kgDM/ha/day)	68	105	100	80	80
Plate meter height - ave half-cms	12.5	13.9	14.5	13.6	13.6
Ave Pasture Cover (x140 + 500)	2255	2454	2538	2400	2400
Pre Grazing cover (ave for week)	2950	3222	3520	3800	3600
Post Grazing cover (ave for week)	1450	1480	1480	1480	1480
Highest pre-grazing cover	3000	3580	3610	3900	3720
Area grazed / day (ave for week)	7.30	5.90	6.75	7.60	5.60
Grazing Interval	22	27	22	20	27
Pasture ME (pre grazing sample)			12.1		11.8
Pasture % Protein			22.3		19.1
Pasture % DM			13.1		14.7
Pasture % NDF			40.3		41.1
Supplements Type	0	8 hours on runoff	0	0	0
Supplements fed kg DM/cow/day in paddock	0.0	0.7	0.0	0.0	0.0
Supplements fed to date kg per cow (680 peak)	137	142	142	142	142
Supplements Made Kg DM / ha cumulative	0	0	122.4	224.9	177
Units N applied/ha and % of farm	0	0	0	40units,.04%	0
Kgs/ha N to Date (excludes Italian & tetraploid)	139	139	139	141	141
Rainfall (mm)	1.4	12est	0	5	0
ET Weekly Soil & Science readings (mm)	27.0	35est	35est	25est	25est
Days irrigated each week	0	4	2	3	3
Irrigation mm applied per week	0	24	12	18	18
Stock Water Consumed litres / cow / day	30	24	33	20	31

Weekly and Monthly Dataset from Lincoln University Dairy Farm

Date (Totals at end of period)	7-Dec-06	14-Dec-06	21-Dec-06	28-Dec-06	31-Dec-06
Total Cows Wintered (July 1st Total)	702	702	702	702	702
Farm grazing ha (available to milkers)	161.5	161.5	161.5	161.5	161.5
Dry Cows on farm / East blk / other	0	0	0	0	0
Culls (Includes culls put down & empties)	0	4	0	0	0
Culls total to date	7	11	11	11	11
Deaths (Includes cows put down)	2	0	0	0	0
Deaths total to date	20	20	20	20	20
Calved Cows available (Peak Number 670...)	670	666	666	666	666
Treatment / Sick mob total	1	3	2	2	5
<i>lame, mastitis, other, colostrum</i>	5/1/0/0	8/2/1/0	8/2/0/0	9/2/0/0	8/5/1/0/0
Milking twice a day into vat	664	655	655	654	653
Milking once a day into vat	1	8	8	9	8
Total Cows Milked into vat	665	663	663	663	661
Days in Milk actual cow days/Peak Cows	110	117	124	131	134
MS/cow/day (Actual kg / Cows into vat only)	1.73	1.72	1.68	1.67	1.6
MS/cow to date (total kgs / Peak Cows 680)	185	196	208	219	224
MS/ha/day (total kgs / Total ha used - eg 161.5ha)	7.1	7.1	6.91	6.9	6.7
MS/ha to date (total kg / Total ha used)	777.2	827	875	923	943
Monitor Group Cond'n Score	4.28	4.26	4.29		4.32
Monitor Group LW (kgs)	480	479	484		497
Soil Temp Tues 10.00am 10cm	14.5	16.2	16.0	16.0	16.0
Growth Rate (kgDM/ha/day)	55	50	76	61	70
Plate meter height - ave half-cms	10.9	10.5	11.8	11.2	11.2
Ave Pasture Cover (x140 + 500)	2025	1963	2162	2080	2110
Pre Grazing cover (ave for week)	3100	2800	2880	2700	2700
Post Grazing cover (ave for week)	1480	1450	1450	1450	1450
highest pregrazing cover	3200	2900	2900	2740	2740
Area grazed / day (ave for week)	7.20	8.00	7.60	8.40	7.60
Grazing Interval	22	20	21	19	21
Pasture ME (pre grazing sample)		12.3	12.3		
Pasture % Protein		22.4	21.9		
Pasture % DM		18.2	18.0		
Pasture % NDF		38.2	37.6		
Supplements Type	0	grass silage	grass silage	grass silage	grass silage
Supplements fed kg DM/cow/day in pdk	0.0	3.0	2.2	1.8	2.3
Supplements fed to date kg per cow (670 peak)	81	102	117	130	137
Supplements Made kg DM / ha cumulative	0	0	0	0	0
Units N applied/ha and % of farm	15units,13%	25units,27%	25units,23%	0	25units,42%
Kgs/ha N to Date (on the NON-effluent area 133ha)	113	120	126	126	139
Rainfall (mm)	6.4	40.6	56.4	19	29
ET Weekly Soil & Science readings (mm)	28.0	43.6	35.8	24.8	18.4
days irrigated each week	2	3	2	0	0
Irrigation mm applied per week	12	18	12	0	0
Stock Water Consumed litres / cow / day	55	42	51	30	37

Weekly Dataset from Lincoln University Dairy Farm

Date (Totals at end of period)	7-Nov-06	14-Nov-06	21-Nov-06	28-Nov-06	30-Nov-06
Total Cows Wintered (July 1st Total)	702	702	702	702	702
Farm grazing ha (available to milkers)	161.5	161.5	161.5	161.5	161.5
Dry Cows on farm / East block / other	0	0	0	0	0
Culls (Includes culls put down & empties)	0	0	2	2	2
Culls total to date	7	7	9	11	11
Deaths (Includes cows put down)	0	0	1	1	0
Deaths total to date	16	16	17	18	18
Calved Cows available (Peak Number 680...)	676	676	673	670	670
Treatment / Sick mob total	3	6	7	2	2
<i>lame, mastitis, other, colostrums</i>	9/3/4/0	11/4/4/0	6/5/1/0	7/2/0/0	7/2/0/1
Milking twice a day into vat	655	653	658	663	663
Milking once a day into vat	4	7	5	2	2
Total Cows Milked into vat	659	660	663	665	665
Days in Milk actual cow days/Peak Cows	80	86	93	101	103
MS/cow/day (Actual kg / Cows into vat only)	1.83	1.82	1.81	1.73	1.7
MS/cow to date (total kgs / Peak Cows 680)	133	145	158	169	173
MS/ha/day (total kgs / Total ha used - eg 161.5ha)	7.5	7.4	7.44	7.5	7.2
MS/ha to date (total kg / Total ha used)	559.5	611	663	713	727
Monitor Group Condition Score	4.36		4.26		
Monitor Group LW (kgs)	466.9		451		
Soil Temp Tues 10.00am 10cm	12.2	15.9	14.0	14.3	14.3
Growth Rate (kgDM/ha/day)	81	77	75	85	85
Plate meter height - ave half-cms	11.7	11.2	11.3	12.1	12.1
Ave Pasture Cover (x140 + 500)	2144	2074	2081	2187	2187
Pre Grazing cover (ave for week)	2800	3000	3000	2980	3160
Post Grazing cover (ave for week)	1450	1480	1480	1480	1480
Highest pre-grazing cover	2850	3300	3300	3160	3180
Area grazed / day (ave for week)	8.33	7.70	6.90	7.70	7.70
Grazing Interval	19	20	22	20	20
Pasture ME (pre grazing sample)		12.4	12.7	12.2	12.46
Pasture % Protein		22.0	22.2	21.2	21
Pasture % DM		17.2	17.8	17.3	18.8
Pasture % NDF		36.7	36.1	38.7	36.7
Supplements Type	Grass silage	0	0	0	0
Supplements fed kg DM/cow/day in paddock	1.0	0.0	0.0	0.0	0.0
Supplements fed to date kg per cow (680 peak)	81	81	81	81	81
Supplements Made Kg DM / ha cumulative	0	0	0	0	0
Units N applied/ha and % of farm	20units,25%	20units,13%	20units,49%	0	20units,12%
Kgs/ha N to Date (excludes Italian & tetreploid)	75.0	78.0	88.0	89.0	91.0
Rainfall (mm)	20 est	16 est	30 est	12.6	15est
ET Weekly Soil & Science readings (mm)	10 est	3 est	0 est	15.0	15est
Days irrigated each week	2	0	1	4	2
Irrigation mm applied per week	12	0	6	24	12
Stock Water Consumed litres / cow / day	45	37	31	46	48

Weekly and Monthly Dataset from Lincoln University Dairy Farm

Date (Totals at end of period)	7-Oct-06	14-Oct-06	21-Oct-06	28-Oct-06	31-Oct-06
Total Cows Wintered (July 1st Total)	702	702	702	702	702
Farm grazing ha (available to milkers)	161.5	161.5	161.5	161.5	161.5
Dry Cows on farm / East blk / other	0/15/0	9/0/0	3/0/0	2/0/0	0/0/0
Culls (Includes culls put down & empties)	0	1	0	0	0
Culls total to date	6	7	7	7	7
Deaths (Includes cows put down)	1	0	0	0	1
Deaths total to date	15	15	15	15	16
Calved Cows available (Peak Number 680...)	666	670	676	677	678
Treatment / Sick mob total	7	2	3	3	3
<i>lame, mastitis, other, colostrum</i>	1/6/1/13	2/2/1/8	5/3/2/5	9/3/2/1	8/3/2/0
Milking twice a day into vat	621	647	645	651	653
Milking once a day into vat	8	0	0	5	6
Total Cows Milked into vat	629	647	645	656	659
Days in Milk actual cow days/Peak Cows	50	56	63	71	73
MS/cow/day (Actual kg / Cows into vat only)	1.98	1.94	1.88	1.89	1.9
MS/cow to date (total kgs / Peak Cows 680)	77	90	102	115	120
MS/ha/day (total kgs / Total ha used - eg 161.5ha)	7.7	7.8	7.50	7.7	7.7
MS/ha to date (total kg / Total ha used)	323.4	378	430	484	507
Monitor Group Cond'n Score		4.38	4.39		
Monitor Group LW (kgs)		469.2	475.5		
Soil Temp Tues 10.00am 10cm	11.1	11.1	10.4	11.6	12.5
Growth Rate (kgDM/ha/day)	62	62	80	62	70
Plate meter height - ave half-cms	12.0	12.0	11.9	11.3	11.5
Ave Pasture Cover (x140 + 500)	2179	2179	2173	2080	2112
Pre Grazing cover (ave for week)	3450	2600	2700	2800	2800
Post Grazing cover (ave for week)	1480	1450	1450	1450	1450
highest pregrazing cover	3518	2670	2824	2850	2750
Area grazed / day (ave for week)	6.06	7.30	7.20	8.60	6.60
Grazing Interval	25	21	21	18	23
Pasture ME (pre grazing sample)		12.9	12.8	12.8	
Pasture % Protein		19.2	19.7	21.3	
Pasture % DM		18.4	19.5	20.8	
Pasture % NDF		35.9	35.5	34.2	
Supplements Type	0	Grass silage	Grass silage	Grass silage	0
Supplements fed kg DM/cow/day in pdk	0.0	4.4	4.4	1.8	0.0
Supplements fed to date kg per cow (680 peak)	0	34	61	74	74
Supplements Made kg DM / ha cumulative	0	0	0	0	0
Units N applied/ha and % of farm	0	20 units,50%	20 units,20%	20 units,32%	0
Kgs/ha N to Date (excludes Italian & tetraploid)	49.0	56.0	59.0	66.0	66.0
Rainfall (mm)	67	0	4.8	4.1	13.8
ET Weekly Soil & Science readings (mm)	13.2	20.47	9.1	13.4	5.8
days irrigated each week	0	0	2	1.5	0
Irrigation mm applied per week	0	0	12	9	0
Stock Water Consumed litres / cow / day	33	54	58	43	51

Paddock S7 Growth rates since re-grassing

Technique

S7 was sprayed on 15/09/06 then grazed and cultivated 20/09/06. The paddock was sown on 29/09/06. The presence of springs meant the western corner of the paddock were too wet to sow, and were sown in December when paddock S6 was sown.

Sowing mix

25kg/ha *Alto* perennial ryegrass, 1kg/ha timothy, 2kg/ha *Kotare* white clover & 2kg/ha *Sustain* white clover. Total rate = 30kg/ha.

A high sowing rate (25kg/ha ryegrass) was used with roller-drilling to give good ryegrass ground cover as this paddock has large levels of *poa* seed in the soil. (Thick ryegrass will limit *poa*.)

Alto was chosen as a late flowering ryegrass for better late spring quality. It is a relatively fine, dense, diploid variety to help give soil protection from pugging in this wet paddock.

Growth for week ending	05/06 Paddock S7	05/06 Farm average	06/07 Paddock S7	06/07 Farm average
28 Nov			First Nip off	
5 Dec	88	89	96	55
12 Dec	132	100	59	51
19 Dec	70	88	92	76
26 Dec	60	62	76	62
2 Jan	58	69	80	76
9 Jan	60	68	110	68
16 Jan	66	69	100	104
23 Jan	74	88	110	103
30 Jan	45	69	130	78
6 Feb	50	46	98	73
13 Feb	66	74	136	69
Total Growth for the period.	5383	5754	7609	5705
	-371 kgDM/ha		+1904 kgDM/ha	



Variance Report for LUDF

Compare Actual Actuals(2007) With Budget - Main (2007)
DateRange: Jun To Dec

GST Exclusive

	Actuals 2007		Budget 2007		Variance		Actuals 2007 as a % of Budget 2007	
	\$	Qty	\$	Qty	\$	Qty	\$	Qty
INCOME								
Cattle Sales (Sales)								
Bobby Calves	21,954	432	10,590	388	11,364	44	207 %	111 %
R2yr Heifers	1,653	2			1,653	2	0 %	0 %
Mixed Age Cows	3,956	11	5,894	6	(1,938)	3	67 %	138 %
	27,563		16,484		11,079		167 %	
Other Income								
House Rent	5,155		5,159		(4)		100 %	0 %
	5,155		5,159		(4)		100 %	
INCOME	32,718		21,643		11,075		151 %	
MILK								
Milk Sales								
Milk Solids	439,121	152321.1	471,741		(32,620)	152321.1	93 %	0 %
Milk [Final Payment]	145,108		118,368		26,740		123 %	0 %
	584,229		590,109		(5,880)		99 %	
MILK	584,229		590,109		(5,880)		99 %	
NET INCOME	616,946		611,752		5,194		101 %	
FARM EXPENSES								
Administration								
Tolls(claimable)	(2,870)		(2,800)		(70)		102 %	0 %
Stationery	(254)		(448)		194		57 %	0 %
Hospitality/Sundry	(94)		(300)		206		31 %	0 %
Other Admin Expense	(19)		(28)		9		66 %	0 %
Farm Consultant	(8,697)		(9,828)		1,131		88 %	0 %
Internet Charges	(195)		(1,400)		1,205		14 %	0 %
	(12,129)		(14,804)		2,675		82 %	
Animal Health								
Vet Fees	(4,949)		(3,469)		(1,480)		143 %	0 %
Drench	(807)		(2,040)		1,233		40 %	0 %
Trace Minerals	(7,665)		(4,458)		(3,207)		172 %	0 %
Vaccines	(1,249)		(1,250)		1		100 %	0 %
Other Drugs	(1,709)		(1,326)		(383)		129 %	0 %
Mastitis/Dry Cow	(5,618)		(6,338)		720		89 %	0 %
Bloat	(2,790)	600	(1,860)		(930)	600	150 %	0 %
Teatspray	(1,759)		(3,000)		1,241		59 %	0 %
Calving Expenses	(1,289)		(1,440)		151		90 %	0 %
	(27,835)		(25,181)		(2,654)		111 %	
Breeding Expenses								
Category			(2,096)		2,096		0 %	0 %
Admin /Identity Tags	(859)		(1,260)		401		68 %	0 %
Herd Test	(1,345)		(2,148)		803		63 %	0 %
Lease Sires	(5,300)	14	(5,300)			14	100 %	0 %
CIDR's	(3,580)	204	(3,100)		(480)	204	115 %	0 %
Artificial Insem.	(17,648)		(13,372)		(4,276)		132 %	0 %
Pregnancy testing	(124)				(124)		0 %	0 %
MINDA	(1,428)		(3,234)		1,806		44 %	0 %
	(30,285)		(30,510)		225		99 %	
Electricity								
Irrigation Power	(15,402)		(22,750)		7,348		68 %	0 %
Dairy Shed	(9,359)		(7,589)		(1,770)		123 %	0 %
	(24,761)		(30,339)		5,578		82 %	
Feed								



Variance Report for LUDF

Compare Actual Actuals(2007) With Budget - Main (2007)
Date Range: Jun To Dec

GST Exclusive

	Actuals 2007		Budget 2007		Variance		Actuals 2007 as a % of Budget 2007	
	\$	Qty	\$	Qty	\$	Qty	\$	Qty
Feed								
Winter Grazing	(75,773)		(73,508)		(2,265)		103 %	0 %
Silage Purchased	(33,360)	117	(27,744)		(5,616)	117	120 %	0 %
Calf feed	(5,179)	8	(3,872)		(1,307)	8	134 %	0 %
Hay/Silage	(50)				(50)		0 %	0 %
Grazing R2	(39,691)		(34,902)		(4,789)		114 %	0 %
Silage Making			(9,537)		9,537		0 %	0 %
	(154,053)		(149,563)		(4,490)		103 %	
Fertiliser								
Superphosphate	(8,085)	27272	(8,843)		758	27272	91 %	0 %
Nitrogen (Urea)	(21,776)	45082	(17,445)		(4,331)	45082	125 %	0 %
Eco-n	(3,703)		(6,476)		2,773		57 %	0 %
Fertiliser Spreader	(6,620)	662.6	(5,723)		(897)	662.6	116 %	0 %
	(40,184)		(38,487)		(1,697)		104 %	
Regrassing								
Cultivation	(1,676)		(2,730)		1,054		61 %	0 %
Drilling	(1,136)		(692)		(444)		164 %	0 %
Spraying	(530)		(1,221)		691		43 %	0 %
Seed Purchase	(4,175)		(2,615)		(1,560)		160 %	0 %
	(7,516)		(7,258)		(258)		104 %	
Repairs & Maint								
Farm Buildings	(161)		(1,750)		1,589		9 %	0 %
House Maintenance	(1,678)		(3,000)		1,322		56 %	0 %
Water Supply	(93)		(574)		481		16 %	0 %
Irrigation	(9,274)		(9,669)		395		96 %	0 %
Fences & Yards	(1,821)		(574)		(1,247)		317 %	0 %
Shelter Trees	(720)		(750)		30		96 %	0 %
Drainage	(9,624)		(9,050)		(574)		106 %	0 %
Tracks	(2,340)		(4,000)		1,660		58 %	0 %
Tools	(1,213)		(1,466)		253		83 %	0 %
Plant & Equipment	(856)		(3,795)		2,939		23 %	0 %
Dairy Shed Plant	(3,914)		(4,200)		286		93 %	0 %
Effluent	(2,706)		(1,400)		(1,306)		193 %	0 %
Minor Cap. purchases	(5,190)		(5,000)		(190)		104 %	0 %
	(39,591)		(45,228)		5,637		88 %	
Shed Expenses								
Detergents	(2,632)		(2,000)		(632)		132 %	0 %
Cleaners	(55)		(500)		445		11 %	0 %
Rubberware	(1,913)		(2,400)		487		80 %	0 %
Filters	(247)		(360)		113		69 %	0 %
Brooms and Brushes	(580)		(300)		(280)		193 %	0 %
	(5,428)		(5,560)		132		98 %	
Vehicle Expenses								
Petrol	(2,069)		(1,750)		(319)		118 %	0 %
Diesel	(3,192)		(4,000)		808		80 %	0 %
Oil & grease	(226)		(300)		74		75 %	0 %
Ute	(549)		(1,500)		951		37 %	0 %
Tractor	(1,330)		(3,265)		1,935		41 %	0 %
Motorbike	(1,712)		(1,600)		(112)		107 %	0 %
WOF & rego			(900)		900		0 %	0 %
	(9,079)		(13,315)		4,236		68 %	
Wages & Employment								
Casual	(1,029)	114	(4,950)		3,921	114	21 %	0 %



Variance Report for LUDF

Compare Actual Actuals(2007) With Budget - Main (2007)
DateRange: Jun To Dec

GST Exclusive

	Actuals 2007		Budget 2007		Variance		Actuals 2007 as a % of Budget 2007	
	\$	Qty	\$	Qty	\$	Qty	\$	Qty
Wages & Employment								
Accommodation Alice	(10,272)		(10,472)		200		98 %	0 %
ACC	(2,465)		(2,465)				100 %	0 %
Protective clothing	(1,787)		(1,211)		(576)		148 %	0 %
Recruitment	(500)		(1,518)		1,018		33 %	0 %
Staff Development	(845)		(900)		55		94 %	0 %
Assistant 2	(82,961)		(85,358)		2,397		97 %	0 %
Stores/Tea Supplies	(253)		(600)		347		42 %	0 %
	(100,113)		(107,474)		7,361		93 %	
Weed & Pest								
Herbicides	(199)		(1,938)		1,739		10 %	0 %
	(199)		(1,938)		1,739		10 %	
FREIGHT								
Freight Livestock	(443)	8			(443)	8	0 %	0 %
Freight General	(393)		(544)		151		72 %	0 %
	(835)		(544)		(291)		154 %	
FARM EXPENSES	(452,008)		(470,201)		18,193		96 %	
TRADING SURPLUS	164,938		141,551		23,387		117 %	
RUN-OFF EXPENSES								
Run-off Fertiliser								
Category	(5,892)	16696.4	(3,667)		(2,225)	16696.4	161 %	0 %
	(5,892)		(3,667)		(2,225)		161 %	
Run-off regrassing								
Category			(898)		898		0 %	0 %
			(898)		898		0 %	
Run-off R & M								
General	(658)				(658)		0 %	0 %
	(658)				(658)		0 %	
Run-off Hay & Silage								
Category	(1,100)				(1,100)		0 %	0 %
	(1,100)				(1,100)		0 %	
Run-off Admin								
Category	(5,850)		(6,825)		975		86 %	0 %
	(5,850)		(6,825)		975		86 %	
RUN-OFF EXPENSES	(13,500)		(11,390)		(2,110)		119 %	
RUN-OFF SURPLUS	(13,500)		(11,390)		(2,110)		119 %	
GST								
GST								
GST Payments			(12,899)		12,899		0 %	0 %
GST Component	(660)		19,033		(19,693)		3 %	0 %
	(660)		6,134		(6,794)		11 %	
GST	(660)		6,134		(6,794)		11 %	
INCOME (EXPENSE)	\$ 150,778		\$ 136,295		\$ 14,483		111 %	

Supplements for Production OR Profit, OR Both !

LUDF's key objective as a BUSINESS is high sustainable profit. The key foundation for achieving this objective is growing as much high-quality pasture as possible, and then harvesting it with milkers

- 2006/07 season - A challenging season – refer pasture growth rate graphs.
- EVERY season has periods where pasture feed supply and demand don't match.
- Fully-feeding milkers has been promoted strongly in the past, and remains critical at certain parts of the season.

Feeding SUPPLEMENTS to milkers has three apparent effects

- (i) increases OR decreases daily milk yields
- (ii) alters cow condition
- (iii) can affect how much pasture is eaten, and therefore the pasture cover OR shape of the pasture wedge is changed

For this discussion, we will consider the milking season as THREE sections:

1. Spring feeding and early lactation
2. Mid-lactation
3. Autumn feeding and late lactation

1. Spring feeding and early lactation

1. LUDF aims to NOT feed supplement in the spring/early lactation, provided cows are fully fed on pasture.
2. Silage, even top-quality silage, tends to dilute the overall diet to milkers through this period.
3. If feed QUANTITY is insufficient, LUDF will feed silage through this period.
4. LUDF policy is to carry a reserve of 50t DM of the best-quality grass silage for feeding during this period (ie 70-80 kgDM/cow)
5. The MAIN PURPOSE in feeding supplements through this period is to ensure milkers are fully fed, and pasture cover is enhanced

2. Mid-lactation

1. LUDF aims to NOT feed supplement through this period, preferring a pasture-only diet.
2. The pasture feed-supply should be sufficient, except in a difficult growing period (as experienced this year) OR if the regrassing programme interferes with pasture supply.
3. A feed shortage during mating should be avoided, and this season we chose to feed silage in December to mitigate this risk.

4. The MAIN PURPOSE in feeding supplements through this period is to manipulate pasture cover - both the Average Cover AND the Pre-Grazing cover).
5. TRIGGER POINTS – if projections for the next week suggest that pasture cover will be compromised, we introduce baleage to manipulate pre-grazing cover, rotation length, and average cover.

3. Autumn feeding and late lactation

1. LUDF believes feeding supplement through this period is usually cost-effective – depending on payout, feed costs, and response rates.
2. Nitrogen usage fits alongside autumn feeding of supplements – applications of N in late Feb and March are used to spike the cover while at the same time feeding supplements to reduce the area allocated to milkers
3. Pasture cover and rotation length are more important than per-cow production through this period.
4. LUDF policy is to carry a reserve of 130-150t DM of good quality grass silage for feeding during this period (ie 200+ kgDM/cow)
5. The MAIN PURPOSE in feeding supplements through this period is to gain LACTATION DAYS by lifting cover in early autumn, and using a longer grazing rotation through the autumn.

Should we purchase silage using Dry Matter or ME or Other ?

Silage value-for-money depends on some key variables

- a. Purchase price – very market sensitive - eg this season pre-December 13-15c per kg standing
- b. Silage quality varies across the season
- c. Silage testing – can give variable results – LUDF tests after 3 weeks, then again at feeding out
- d. Pit silage is cheaper, but baleage suits the LUDF system
 - Light cuts – typically < 3500 kgDM
 - Easy, flexible feeding out
 - The method of making silage
 - the product closely resembles the pasture, therefore can stop & start with little disruption to the rumen

2005/06 season - average cost of making baleage 13.2 c/kgDM

2006/07 season - average cost approaching 15c/kgDM

References

Dexcel FarmFact 5-13 "What is high quality pasture silage?" (Holmes & Brookes)
 Feed4Profit "Extending Lactation in 2007"
 "Seasonal solutions for improving milk production" Sept 2003
 Substitution rates – Dairy Exporter March 2002, p 96

Mating 2005/06 Season

05/06 Season 650 cows	Week 1	Week 2	Week 3	Week 6	Week 9	Week 12
Cows mated in Week	168	225	170			
Confirmed to Pregnancy Test	50%	49%	55%	70%	75.5%	83%
Cows confirmed pregnant	84	112	93	458	492	544

06/07 Season 665 cows	Week 1	Week 2	Week 3	Week 6	Week 9	Week 12 [21/2/07]
Cows mated in Week	336	164	135			
Confirmed to Pregnancy Test	45.2%	54.2%	55.5%	69.3%	80%	87%
Cows confirmed pregnant	152	89	75	461	539	572

- 20 cows confirmed pregnant in weeks 1,2,3 lost their pregnancy's before week six (last season 11 cows). All 20 cows were blood tested for Neosporin and tested negative. 11 cows who were confirmed pregnant at week six lost there pregnancy's before week nine (last season 10). *[Data for week 12 still being confirmed].*
- As part of the Neospora trial the cows have been scanned five times through December and January.
- Mating- eight weeks of AI then eight bulls were run with the herd for seven weeks, two teams of four bulls swapped every day. Bulls removed from herd 01/02/07.