THE FEED MARGIN

Agreed, standardised, Feed Margin analysis, understandable indicators:

- Any farmer, any time, check the feed margin.
- Check against last week, against other farms (in similar circumstances).
- Spot what is working, what needs adjusting.
- Improve the margin.

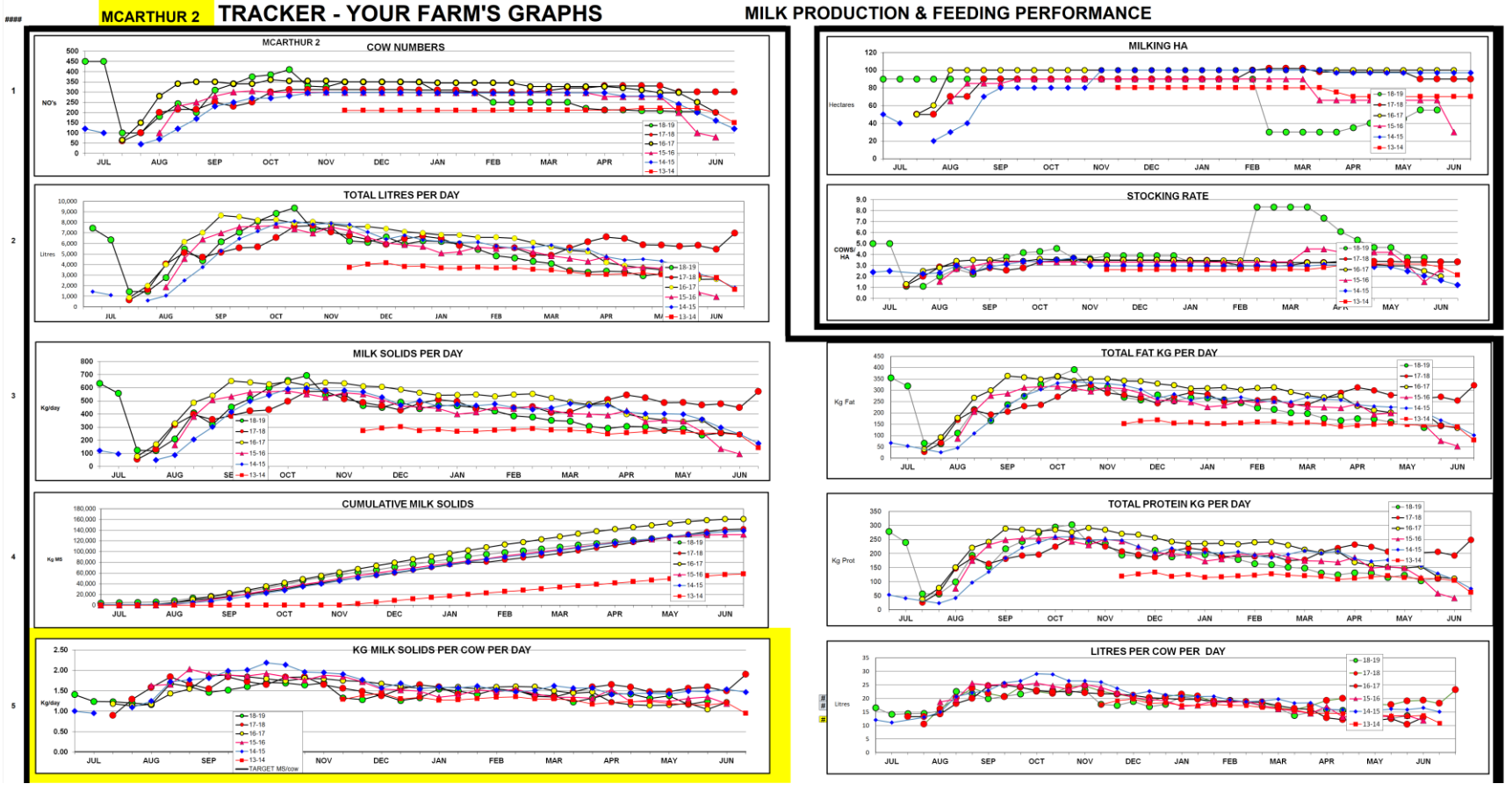
- **WHO:**
  - Consultants
  - Farmers
  - Extension operators
  - Accountants, bankers
  - Journalists
  - Sales people
  - Researchers?

THE FEED MARGIN

TRACKER RANKINGS GROUP: MID YOUR NUMBER: 41

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th			ROW CORRELATION WITH BOTH MARGINS	FEED MARGIN MODEL
Rank line:	40	You can rank any line you wish; put the line number in the blue box to left; the highest v													
FARM NUMBER	7	41	17	35	59	37	53	11	65	45	67				550
FARM NAME		MDF	DEVISSER	MCARTHUR 1	VERA	MCARTHUR 2	SMOLENAARS	CANNON	THOMSON	NEAL					300
Ten days to date	10-Nov	10-Nov	10-Nov	10-Nov	10-Nov	10-Nov	10-Nov	10-Nov	10-Nov	10-Nov	10-Nov	AVERAGE			71
Stocking rate	4.8	4.5	4.5	4.0	4.2	3.7	3.8	3.4	4.7	2.7	4.2	4.0	cows/ha	62%	4.2
Herd average Mnths-in-calf	2.0	1.0	1.0	0.0	3.0	2.0	2.0	6.0	2.0	4.0	2.0	2.3	Avg mnths in-calf	-43%	2
mm irrigation water /ha/day	3.5	3.0	3.0	3.0	3.0	2.0	3.0	2.0	3.0	0.0	3.0	2.6	mm water/ha/day	54%	1.0
Kg N element applied /ha/day	1.3	1.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	1.0	1.0	kg element/ha/day	87%	1.0
Kg P element applied /ha/day	0.05	0.10	0.10	0.05	0.05	0.10	0.10	0.10	0.10	0.00	0.10	0.08	kg element/ha/day	2%	0.1
Kg K element applied /ha/day	0.10	0.20	0.20	0.20	0.08	0.20	0.25	0.20	0.20	0.00	0.20	0.17	kg element/ha/day	1%	0.2
Renovation ($/ha/day)	$0.00	$0.25	$0.00	$0.05	$0.30	$0.05	$0.00	$0.00	$0.10	$0.65	$0.20	$0.15	$/ha/day	-33%	$0.25
Topping ($/ha/day)	$0.00	$0.00	$0.00	$0.00	$0.10	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.01	$/ha/day	1%	$0.30
Grazing allocation rate	30	30	30	30	30	30	30	30	35	42	30	32	th of graze area	-45%	
Average grazing rest time	30	27	30	30	30	30	30	30	33	26	30	30	days	-11%	
GRASS consumption/ milk ha/dy	**69**	**62**	**50**	**52**	**48**	**48**	**50**	**43**	**50**	**36**	**39**	**50**	**kg DM/ha/dy**	95%	**21.5**
DMI grass /cow/dy	14.6	13.7	11.2	13.1	11.6	13.1	12.1	12.5	10.6	12.9	9.1	12.2	kg DM/cow/dy	65%	5.1
Daily spend / milking ha	$4.30	$4.61	$3.88	$3.78	$3.96	$3.23	$3.95	$3.18	$3.98	$1.61	$4.08	$3.69	$/ha/day	59%	$3.03
Pasture price ($/t DM)	$62	$74	$77	$72	$82	$67	$79	$74	$80	$45	$106	$74	$/T DM	-20%	$141
Conc FED kg DM/cow/dy	4.1	4.3	6.3	3.6	6.0	2.7	4.1	3.6	6.8	3.6	4.5	4.5	kg DM/cow/dy	0%	5.2
Forage FED kg DM/cow/dy										0.3		0.3	kg DM/cow/dy		8.0
Total supplements FED kg DM/cow/dy	4.1	4.3	6.3	3.6	6.0	2.7	4.1	3.6	6.8	3.9	4.5	4.5	kg DM/cow/dy	-2%	11.5
All supplements price ($/t DM)	$544	$580	$522	$522	$525	$522	$552	$539	$499	$580	$500	$535	$/T DM	32%	$499
Total DM Intake /cow/dy	18.5	17.8	17.3	16.5	17.5	15.7	16.0	16.0	17.2	16.7	13.5	16.6	kg DM/cow/dy	72%	15.1
NDF fibre % of Intake	34.9%	34.0%	30.8%	35.2%	32.3%	35.6%	32.7%	35.2%	30.3%	34.3%	31.6%	33.4%	% NDF	24%	42.8%
Milkers Body Condition Change (kg lwt/dy)	-0.10	-0.10	-0.10	0.00	0.00	0.00	0.10	0.00	0.30	0.00	-0.10	0.00	kg LWT/cow/dy	-43%	0.1
Litres /cow/dy (incl calf)	**28.1**	**28.9**	**27.2**	**21.8**	**27.4**	**22.2**	**23.0**	**23.2**	**23.0**	**22.1**	**18.2**	**24.1**	l/cow/day	83%	18.5
FAT%	3.87%	3.60%	3.92%	4.56%	3.67%	4.16%	4.10%	3.66%	3.90%	4.33%	4.56%	4.03%	%	-47%	4.59%
PROTEIN %	3.29%	3.34%	3.26%	3.44%	3.24%	3.24%	3.43%	3.43%	3.45%	3.42%	3.60%	3.38%	%	-58%	3.34%
Milk Solids /cow/dy	**2.01**	**2.00**	**1.95**	**1.74**	**1.89**	**1.64**	**1.73**	**1.64**	**1.69**	**1.71**	**1.48**	**1.77**	**kg/cow/dy**	87%	**1.47**
FCE Avg kg MS/T fed DM	108	112	111	105	108	104	107	102	97	102	109	106	Kg MS/tonne DM	57%	88
FCE Avg Litres/Kg fed DM	1.51	1.61	1.55	1.31	1.56	1.40	1.42	1.44	1.32	1.31	1.33	1.4	Litres/kg DM	72%	1.1
Milk price (less levies) ($/kg MS)	$5.47	$5.54	$5.45	$5.39	$5.49	$5.39	$5.47	$5.56	$5.52	$5.42	$5.44	$5.47	$/kg MS	18%	$6.29
Milk price ($/litre)	$0.392	$0.385	$0.391	$0.431	$0.379	$0.399	$0.411	$0.394	$0.405	$0.420	$0.443	$0.405	$ per litre	-58%	$0.50
Milk income/cow	$11.01	$11.11	$10.63	$9.40	$10.39	$8.85	$9.44	$9.14	$9.31	$9.28	$8.05	$9.69	$/cow/dy	87%	$9.23
All feed cost/cow/day	$3.11	$3.49	$4.16	$2.83	$4.08	$2.29	$3.20	$2.87	$4.26	$2.84	$3.21	$3.30	$/cow/dy	12%	$6.45
Farm MOAF per DAY	$3,949	$2,490	$1,742	$3,154	$2,493	$2,165	$1,436	$1,504	$3,984	$4,076	$1,355	$2,577		20%	**$833**
Margin over all Feed/cow/day	**$7.90**	**$7.61**	**$6.48**	**$6.57**	**$6.31**	**$6.56**	**$6.25**	**$6.27**	**$5.04**	**$6.44**	**$4.84**	**$6.39**	**$/cow/dy**	84%	**$2.78**
MOAF /ha /day	$37.61	$34.58	$29.04	$26.29	$26.25	$24.05	$23.94	$21.49	$23.57	$17.57	$20.53	$25.90	$/ha/day	99%	**$11.73**
Feed cost per kg MS (this period)	$1.54	$1.74	$2.13	$1.62	$2.16	$1.40	$1.85	$1.75	$2.53	$1.66	$2.17	$1.87	$/kg MS	-32%	$800

THE FEED MARGIN

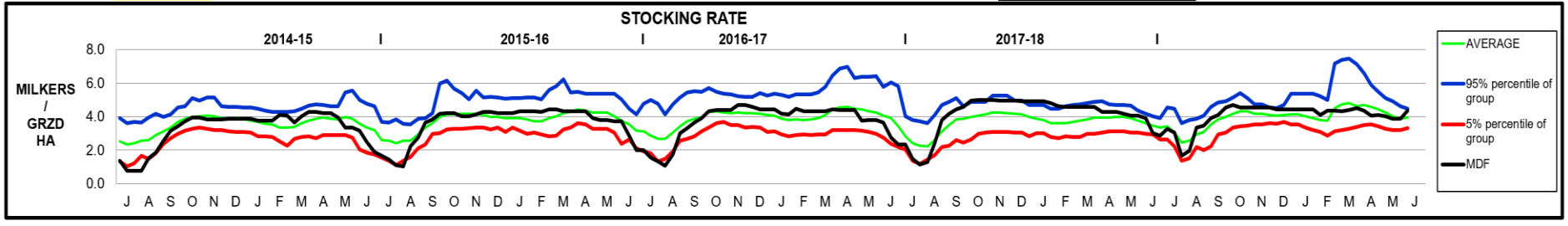


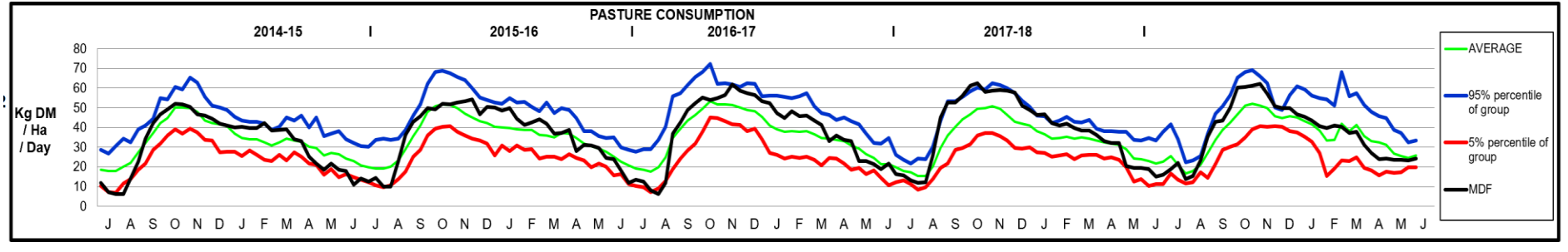
THE FEED MARGIN

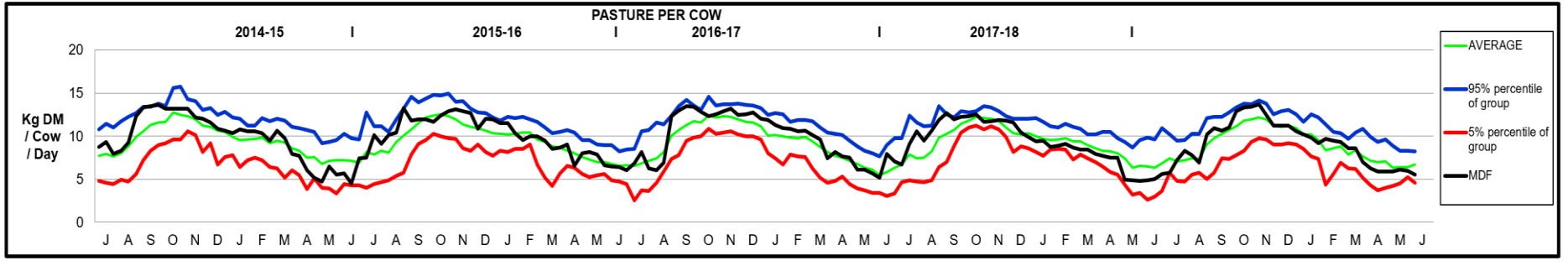
MDF

TEN DAY TRACKER - GROUP GRAPHS

GROUP: MID







TRACKER RANKINGS

GROUP:

		1st	2nd	11th			CORRELATION
4	FARM NAME		MDF				WITH BOTH
5	Ten days to date	10-Nov	10-Nov	10-Nov	AVERAGE		MARGINS
6	Stocking rate	4.8	4.5	4.2	4.0	cows/ha	62%
7	Herd average Mnths-in-calf	2.0	1.0	2.0	2.3	Avg mnths in-calf	-43%
8	mm irrigation water /ha/day	3.5	3.0	3.0	2.6	mm water/ha/day	54%
9	Kg N element applied /ha/day	1.3	1.4	1.0	1.0	kg element/ha/day	87%
10	Kg P element applied /ha/day	0.05	0.10	0.10	0.08	kg element/ha/day	2%
11	Kg K element applied /ha/day	0.10	0.20	0.20	0.17	kg element/ha/day	1%
12	Renovation ($/ha/day)	$0.00	$0.25	$0.20	$0.15	$/ha/day	-33%
13	Topping ($/ha/day)	$0.00	$0.00	$0.00	$0.01	$/ha/day	1%
14	Grazing allocation rate	30	30	30	32	th of graze area	-45%
15	Average grazing rest time	30	27	30	30	days	-11%
16	**GRASS consumption/ milk ha/dy**	**69**	**62**	**39**	**50**	**kg DM/ha/dy**	95%
17	DMI grass /cow/dy	14.6	13.7	9.1	12.2	kg DM/cow/dy	65%
18	Daily spend / milking ha	$4.30	$4.61	$4.08	$3.69	$/ha/day	59%
19	Pasture price ($/t DM)	$62	$74	$106	$74	$/T DM	-20%
20	Conc FED kg DM/cow/dy	4.1	4.3	4.5	4.5	kg DM/cow/dy	0%
21	Forage FED kg DM/cow/dy				0.3	kg DM/cow/dy	
22	Total supplements FED kg DM/cow/dy	4.1	4.3	4.5	4.5	kg DM/cow/dy	-2%
23	All supplements price ($/t DM)	$544	$580	$500	$535	$/T DM	32%
24	Total DM Intake /cow/dy	18.5	17.8	13.5	16.6	kg DM/cow/dy	72%
25	NDF fibre % of Intake	34.9%	34.0%	31.6%	33.4%	% NDF	24%
26	Milkers Body Condition Change (kg lwt/dy)	-0.10	-0.10	-0.10	0.00	kg LWT/cow/dy	-43%
27	**Litres /cow/dy (incl calf)**	**28.1**	**28.9**	**18.2**	**24.1**	l/cow/day	83%
28	FAT%	3.87%	3.60%	4.56%	4.03%	%	-47%
29	PROTEIN %	3.29%	3.34%	3.60%	3.38%	%	-58%
30	**Milk Solids /cow/dy**	**2.01**	**2.00**	**1.48**	**1.77**	**kg/cow/dy**	87%
31	FCE Avg kg MS/T fed DM	108	112	109	106	Kg MS/tonne DM	57%
32	FCE Avg Litres/Kg fed DM	1.51	1.61	1.33	1.4	Litres/kg DM	72%
33	Milk price (less levies) ($/kg MS)	$5.47	$5.54	$5.44	$5.47	$/kg MS	18%
34	Milk price ($/litre)	$0.392	$0.385	$0.443	$0.405	$ per litre	-58%
35	Milk income/cow	$11.01	$11.11	$8.05	$9.69	$/cow/dy	87%
36	All feed cost/cow/day	$3.11	$3.49	$3.21	$3.30	$/cow/dy	12%
37	Farm MOAF per DAY	$3,949	$2,490	$1,355	$2,577		20%
38	**Margin over all Feed/cow/day**	**$7.90**	**$7.61**	**$4.84**	**$6.39**	**$/cow/dy**	84%
39	MOAF /ha /day	$37.61	$34.58	$20.53	$25.90	$/ha/day	99%
47	Feed cost per kg MS (this period)	$1.54	$1.74	$2.17	$1.87	$/kg MS	-32%

THE FEED MARGIN

Total DM Intake /cow/dy	18.5	17.8	13.5	16.6	kg DM/cow/dy
NDF fibre % of Intake	34.9%	34.0%	31.6%	33.4%	% NDF
Milkers Body Condition Change (kg lwt/dy)	-0.10	-0.10	-0.10	0.00	kg LWT/cow/dy
Litres /cow/dy (incl calf)	**28.1**	**28.9**	**18.2**	**24.1**	l/cow/day
FAT%	3.87%	3.60%	4.56%	4.03%	%
PROTEIN %	3.29%	3.34%	3.60%	3.38%	%
Milk Solids /cow/dy	**2.01**	**2.00**	**1.48**	**1.77**	**kg/cow/dy**
FCE Avg kg MS/T fed DM	108	112	109	106	Kg MS/tonne DM
FCE Avg Litres/Kg fed DM	1.51	1.61	1.33	1.4	Litres/kg DM
Milk price (less levies) ($/kg MS)	$5.47	$5.54	$5.44	$5.47	$/kg MS
Milk price ($/litre)	$0.392	$0.385	$0.443	$0.405	$ per litre
Milk income/cow	$11.01	$11.11	$8.05	$9.69	$/cow/dy
All feed cost/cow/day	$3.11	$3.49	$3.21	$3.30	$/cow/dy
Farm MOAF per DAY	$3,949	$2,490	$1,355	$2,577	
Margin over all Feed/cow/day	**$7.90**	**$7.61**	**$4.84**	**$6.39**	**$/cow/dy**
MOAF /ha /day	$37.61	$34.58	$20.53	$25.90	$/ha/day

THE FEED MARGIN

GRASS consumption/ milk ha/dy	**69**	**62**	**39**	**50**	**kg DM/ha/dy**	95%
DMI grass /cow/dy	14.6	13.7	9.1	12.2	kg DM/cow/dy	65%
Daily spend / milking ha	$4.30	$4.61	$4.08	$3.69	$/ha/day	59%
Pasture price ($/t DM)	$62	$74	$106	$74	$/T DM	-20%
Conc FED kg DM/cow/dy	4.1	4.3	4.5	4.5	kg DM/cow/dy	0%
Forage FED kg DM/cow/dy				0.3	kg DM/cow/dy	
Total supplements FED kg DM/cow/dy	4.1	4.3	4.5	4.5	kg DM/cow/dy	-2%
All supplements price ($/t DM)	$544	$580	$500	$535	$/T DM	32%
Total DM Intake /cow/dy	18.5	17.8	13.5	16.6	kg DM/cow/dy	72%
NDF fibre % of Intake	34.9%	34.0%	31.6%	33.4%	% NDF	24%
Milkers Body Condition Change (kg lwt/dy)	-0.10	-0.10	-0.10	0.00	kg LWT/cow/dy	-43%
Litres /cow/dy (incl calf)	**28.1**	**28.9**	**18.2**	**24.1**	l/cow/day	83%
FAT%	3.87%	3.60%	4.56%	4.03%	%	-47%
PROTEIN %	3.29%	3.34%	3.60%	3.38%	%	-58%
Milk Solids /cow/dy	**2.01**	**2.00**	**1.48**	**1.77**	**kg/cow/dy**	87%

THE FEED MARGIN

	1st	2nd	11th			CORRELATION
FARM NAME		MDF				WITH BOTH
Ten days to date	10-Nov	10-Nov	10-Nov	AVERAGE		MARGINS
Stocking rate	4.8	4.5	4.2	4.0	cows/ha	62%
Herd average Mnths-in-calf	2.0	1.0	2.0	2.3	Avg mnths in-calf	-43%
mm irrigation water /ha/day	3.5	3.0	3.0	2.6	mm water/ha/day	54%
Kg N element applied /ha/day	1.3	1.4	1.0	1.0	kg element/ha/day	87%
Kg P element applied /ha/day	0.05	0.10	0.10	0.08	kg element/ha/day	2%
Kg K element applied /ha/day	0.10	0.20	0.20	0.17	kg element/ha/day	1%
Renovation ($/ha/day)	$0.00	$0.25	$0.20	$0.15	$/ha/day	-33%
Topping ($/ha/day)	$0.00	$0.00	$0.00	$0.01	$/ha/day	1%
Grazing allocation rate	30	30	30	32	th of graze area	-45%
Average grazing rest time	30	27	30	30	days	-11%
GRASS consumption/ milk ha/dy	**69**	**62**	**39**	**50**	**kg DM/ha/dy**	95%

THE FEED MARGIN

- **Margin over <u>ALL FEED</u>,** not only purch supps
- **All <u>MAJOR DRIVERS</u>** of the feed margin:
  - **Stocking rate**.
  - **Grass inputs** and prices.
    - Fertiliser, irrigation, grazing, renovation, topping, inputs
  - **Grass consumption** and grass price.
  - **Supplement** quantities and prices.
  - Feed **intake** and feed **efficiency**.
  - Feed **waste**.
  - **Ration** balance.
- Important and **<u>MEANINGFUL indicators</u>**
  - Some rarely mentioned (spend/ha to grow grass, grazed grass price).
- Farm report **<u>RANKABLE</u>** against other farms, any line.
- Multiple **<u>GRAPHS</u>** (60 plus).
- Which drivers **<u>CORRELATE</u>** best with margin.
- Reverse **<u>MODEL</u>** for testing new settings.
- Current margin (and drivers) set against yearly **<u>TARGETS</u>**.
- Huge part of consulting process.

WHY FOCUS ON A REGULAR FEED MARGIN?

- **Farmers are extremely interested**.
  - They talk about it, all the time.
  - Many articles in dairy media.
  - Twitter, Focus farms, Discussion groups.

- **Huge money** (growing grass & supps) lost or gained.
  - Extremely important **driver of overall farm profit**.
  - Pays for everything else.
  - Profit, Cash Surplus, Operating Surplus, **Feed Margin**.
  - 100's thousands dollars per farm.
  - Close to a $1 billion ?????.
  - Biggest **bang for** development/extension **buck**.

WHY FOCUS ON A REGULAR FEED MARGIN?

- **Constant decisions**, in changing circumstances, are needed.
  - Milk price, grain price, grass supply, lactation stage all change.
  - **End-of-year** analysis is **not good enough** for timely decisions**.**
  - **Short term** - rotation, residue, fertiliser, irrigation, supplements.
  - **Long term** - stocking rate and calving pattern.
  - I often (always) see something to tweak.

- **Industry needs** this analysis framework:
  - Needs **THE DATA.**
  - Enables **THE DISCUSSION**.
  - Provides **THE FRAMEWORK for feed-base extension:**
    - Provide purpose, a target.
    - Integrate programs.

WHY FOCUS ON A REGULAR FEED MARGIN?

- **Learn** how things work, **what gets results,** each line can be tweaked:
  - Analysis accurate?? The **logic, framework**, matters.

- **Clarify** vague rules and statements:
  - "Fully fed", "Losing a bit of weight", can mean anything.
  - "Cost of feed /kg MS" confusing, poor correlation.
  - "Grain-to-milk-price ratio" to decide conc???
  - "Milk per hectare" poor indicator.
  - Cow milk production (intake) vs Grass utilisation balance

What I have learnt 1: From F.M. observation (not research).

- Good feed margin, good profit
- Two important efficiencies:
  - **Grass per ha**
  - **Milk per cow**
- "Substitution", pasture by grain, mostly a fiction.
- Feed grain to balance ration, NOT when less grass available.
- Feed consistently, same every day.
- 1 litre milk response from 1 kg grain, mostly fiction.
- Average FCE: 80 to 120 (165) kg MS/t DM.
- At $6.50/kg MS, 1 tDM delivers $520-$780 ($1,072) milk value.
- Set-up cows to eat; Challenge cows to higher intake.
- Use cows to clean up paddocks - moves them to lower intake.

What I have learnt 2: From F.M. observation - not research:

- You can't "train" cows to eat all the grass.
- Hunger (i.e. lowered intake) gets rubbish grass eaten.
- Tactical topping is essential to maintain the margin.
- Many herds are under-fed.
- FPFP (Feeding Pastures for Profit) works.
- Plate metering grass is mostly a waste of time.
- Cost cutting, reducing feed inputs, usually worse off.
- Feed expensive? - maintain margin with high cow intake.
- Extended lactations (empty cows) are very profitable, if fed well.
- Drive COP down - OR chase high milk per cow? Balance! Analyse it!
- Optimum stocking rate/calving date very difficult to determine.

What I have learnt 3: From F.M.observation - not research:

- Grass growth needs only the BASICS:
  - Fert (partic N & K)
  - Soil moisture (10 to 40kPa)
  - Grazing (Rest time - 3 leaves; Residue - 5 cm)
- In MID, same grass consumption in winter as summer (irrigated).
- Irrigated summer grass often very expensive.
- Short-term ryegrass is a problem on irrigated country.
- Purchased conserved forage is a poor option.
  - Wasteful.
  - Too expensive.
  - Low quality.
  - Gut filling.