

## Tactics for Dry Times

**Yarram:** Tuesday 17<sup>th</sup> November at Lachlan and Vicki McLeod's  
**Lardner:** Wednesday 25<sup>th</sup> November at Rob and Jenni Marshall's  
**Inverloch:** Monday 30<sup>th</sup> November at Warren and Kerrie Redmond's  
**Nambrok:** Friday 11<sup>th</sup> December at Mike and Sarah O'Brien's

**These *Tactics for Dry Times* days have been supported by Dairy Australia through GippsDairy, as well as the voluntary contribution of local farmers.**

The farmer's role in these days goes above and beyond, and they have kindly opened their farms, their bank of knowledge and their situations for the benefit of all in the dairy industry. We sincerely thank them for the contributions in time, knowledge and for offering to be host farms or case study farms.

The unprecedented dry conditions experienced in South and West Gippsland commenced in mid-2014, with reduced rainfall and generally an absence of any run-off in many parts. This has put farm stock water at dire low levels, with some farmers particularly around coastal Gippsland having to move and pump water for the second year in a row. The dry conditions came to a head in September and October 2015, with many areas recording nothing more than 10mm of rain for a six-week period, limiting the ability to harvest pasture as silage, and grazing pasture availability dwindling by late October at a time of normally 'peak growth rates'. Dryland farms around Yarram, Tarraville and Hedley produced little if any silage at all, following on from a tough 2014 year.

It is times like these when the dairy farming community pulls together and draws on each other's experience, knowledge, good will and resilience. There is a wealth of knowledge and resources that exist in printed form, amongst the service sector of the industry, and most importantly in people's heads. Many have been through times like these before, even though recent tough seasons didn't have the combined water and feed deficit problems. But there are some positives. Milk price is not too bad in historic terms, grain and fodder are available, although fodder reserves are likely to run low and will get dearer, and cash reserves for many are intact at this point following two reasonable years.

The case studies of the farmers who have contributed to the day are in the notes. Please be aware that these are *their* plans and situations at the time of preparing for the day, and that these may not be perfect, may not be 'technically' or 'nutritionally' the best option, but it is what they plan to run with at this point. The plans may change as well, depending on how the season pans out.

We have deliberately chosen not to extend the plans beyond about April. This doesn't mean that the problem will be solved by then, or that there will be 100% pasture in the diet by then (although that would be great!), but rather that it is hard to write a plan out with any degree of accuracy some six months in advance when so much will, or may have changed. If things are still tough, the industry will be putting more information and days like these together to help on specific issues such as drying off, feeding over the dry period, recovering damaged pastures etc.

Once again, thanks to the host farmers, as well as the case study farmers, who have all gone over and above their duty to help other farmers and the industry in general. Again, your contributions are greatly appreciated.

Matt Harms, ONFARM Consulting



## A look at feed value & price comparisons in November 2015

Feed type	Price \$/t as fed	\$/t dry matter	Average energy value (MJ ME/kg DM)	Protein %	NDF %	c/MJ ME	“Feed value”
Wheat	\$335	\$372	13	11	12	2.86	√√√
Wheat 6kg plus 18c additive	\$365	\$405	13	11	12	3.11	√√√
Grain mix	\$390	\$433	12.5	14	14	3.46	√√√
Barley	\$325	\$361	12	10	15	3.0	√√√
High quality pellets	\$390	\$433	12.8	14	15	3.38	√√√
12/12 pellets	\$360	\$400	12	12	18	3.33	√√√
Lucerne hay or vetch hay	\$360	\$411	10	20	41	4.1	√
Cereal hay (eg wheaten)	\$240	\$267	10	9	52	2.67	√
Canola hay	\$230	\$256	9.8	16	41	2.61	√
Own-made good silage (\$70/tDM grass)	\$52/bale	\$208	10	16	50	2.08	√
Almond Hulls	\$180/t	\$200	10	5	35	2.0	√
Urea 10:1 response 90% eaten	\$580/t	\$140/t DM	12	20	45	1.17	√√√

- Energy drives production, so generally purchase on energy levels.
- Responses to protein are generally seen when protein is limiting, eg summer.
- These are ‘general’ market prices and are not necessarily what you should or will be paying, so don’t use it as a way of screwing down your feed supplier!

## FACTS, NOT OPINIONS!

	Full year 15/16 Traditional no step ups	Full year 15/16 max FMI	Milk price December Traditional	Milk price January Traditional	Milk price March Traditional
Milk price \$/kgMS	\$5.34	\$5.64	\$4.94	\$5.25	\$5.46
Milk price c/l	39.8	42	36.8	39.1	40.7
Grain mix/pellet price	\$390	\$390	\$390	\$390?	\$390?
kgMS to pay for 1kg	0.074kg	0.07kg	0.08kg	0.07kg	0.07kg
Litres to pay for 1kg	1	1.08	1.06	1	0.96
Milk price to grain price ratio	1:1	1.08	0.94	1	1.04

### Some further facts to note:

1. In late lactation, more energy is partitioned to body condition and less to milk production.
2. It takes more energy to put body condition on a cow when she is dry than when she is still milking. To gain 1kg in late lactation takes 44MJ but 55MJ as a dry cow.
3. The additional weight in one extra condition score is 44kg (Friesian) and 38kg for a smaller cross-bred.
4. Diets for milking cows require a minimum 33% NDF (fibre) and considerable chew factor (functional fibre). So on a diet of 18kgDM total if there is no or very little grass, one third of the diet needs to be high fibre feeds such as hay and silage with no more than two thirds of the diet as 'high energy' feed such as grain and turnips.

### Some rules of thumb:

- One standard silage bale is 500kg wet weight and most are 50% dry matter, so a standard silage bale is 250kgDM. One bale will provide 50 cows with 5kgDM (but remember wastage). A standard round bale of hay is 290kgDM.
- Wastage can easily be 10%, so 5kgDM = 4.5kg eaten
- To work out the weight of bales on a truck of hay, divide the tonnage delivered by the number of bales.
- Hay is typically 85-90% dry matter, so allow for this in calculations.

### And one 'opinion':

It costs around \$2.70/cow/day to feed a dry cow on 100% purchased dry cow fodder this year, for no return- so a loss of \$2.70/cow/day. Even a low return on milkers may be better than a large loss on a dry cow!

## Ratios and Indicators in this 15/16 Season

	2014/15 prices		Opening Traditional 2015/2016	Opening max FMI
	Traditional	maxFMI		
<b>Milk Price</b>				
\$/kg Milk Solids	\$5.72	\$6.02	\$5.34	\$5.64
cents/litre	42.6	44.9	39.8c	42.0c
<b>Supplement Prices</b>				
\$/tonne	\$330		\$330	\$330
Grain	\$300		\$350	\$350
Hay				
Kg solids to pay for 1tonne concentrate	57.7	54.8	62	58.8
Milk Price (cents/L) to Grain Price (cents/kg) Ratio	1.29	1.36	1.21	1.27

## THE CHANGING VALUE OF MILK WITHIN A YEAR

Consider the value of a standard litre (4.15% BF/3.3% Pr) with in a year (supplied to major processors) with 100,000 litres sent every month. 8c/kgMS productivity.

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Full year
Trad.	42.4	38.2	36.8	36.8	36.8	36.8	39.1	40.3	40.7	42.4	43.3	44.1	39.8
max FMI	46.9	40.4	36.8	36.8	36.8	36.8	39.1	42.5	45.2	46.9	47.7	48.6	42.0

Note: All of the above figures assume no share deductions. Deduct for shares depending on your situation, and 4.4 c/kg MS deducted as industry levies

## Case Study 1: Maintaining high milk production

### *Ian and Shelley Conn, Hedley*

Ian, Shelley and Matthew Conn are experienced feeders of dairy cows. Farming at Hedley exposes them to greater seasonal variation than most others, and they have farmed through many tough years, learning more each time. The Conns believe in one thing- feed cows the best you can, as you are one day closer to good rain and at least you will be in the position to take advantage of it.

**Cow numbers:** 500 (was 530)

**Milking area:** 240 ha

**Stocking rate:** 2.1 cows/ha

**Start of calving:** May

**Silage on hand as at 1<sup>st</sup> November:** 620 round bale silage, 200-250tDM pit silage carried over from two years ago, 400-450 pasture hay from last season.

**Fodder crop:** 21 ha was sown to perennial ryegrass in September and if these paddocks fail they will be sown to a millet crop if there is adequate moisture.

**Purchased fodder:** 194 bales vetch hay, 72 bales medic hay. Possibly another load will be purchased.

#### **Feeding strategy:**

The feed plan for Conns began on 1<sup>st</sup> November. It centres on feeding a balanced, high input diet of 8.5kg balanced grain mix, 2.1kgDM northern hay and 4kgDM silage, and only relying on there being a pick of grass. There has been enough fodder purchased to last with the silage until mid-March, when things will be reviewed with dry off etc. Cow numbers may also be reduced further, possibly back to 480. There may be some additional hay purchased just to ensure security of feed reserves. Ian balances the ration carefully, ensuring that energy, protein and fibre are adequate (18kgDMI, 210MJ, 16.5% protein and 33% NDF), aiming to hold a 1.9kgMS production level with a feed cost of \$4.20/cow/day. Milk protein and cow health are monitored closely to make sure the ration is balanced.

Young stock are not neglected either, with 11ha of fodder crop sown to millet and rape on 30/10 for young stock grazing, an allocation of silage (40 rolls approx..) and grain or pellets to be used if needed. The young stock feeding in earnest will commence around new year.

#### **Key points (Conny's comments):**

- The worst decision is to make no decision;
- Monitor milk protein % as it is a good indicator of diet quality;
- Don't let this season impact on next season any more than possible;
- Feed your cows the best that you can, as you are one day closer to good rain and at least you will be in the position to take advantage of it;
- Get fodder on the farm ASAP- good quality and price changes quickly and a hand shake deal doesn't always end well;
- Make sure you are comparing apples with apples- use DM as a basis for comparison;
- Make sure you weigh your feed regularly- it can vary a lot and a lot of milk can be lost.

## Case Study 2: Former Won Wron Focus Farm

### *Bill and Janey Bodman*

Bill and Janey Bodman were the first of the Gippsdairy Focus Farms, and their farming style 'ramped up' under the program, to a higher input and higher output system. There was always much discussion around the merits of feeding cows for production, and with many tough seasons now under their belt, this year is yet but another tight year... but with some differences (see below).

**Cow numbers:** 220

**Milking area:** 123ha

**Stocking rate:** 1.8 cows/ha

**Silage on hand as at 1<sup>st</sup> November:** 351 rolls silage and 60 rolls dry cow hay

**Fodder crop:** 4ha irrigated Hunter and 5ha dryland turnips

**Young stock numbers:** 54 R1s and 55 R2s.

**Likely purchased fodder requirements:** three loads Lucerne hay and five loads cereal hay

This season saw a very good autumn, a dry winter with good rains at the end of August and a disastrous spring. Silage yields are around 60% of normal, and with a much longer feeding period likely, well short of what is required.

Bill firmly believes that there are some fundamental differences this season to other tight years (06/07, 02/03, 96/97 as examples), being chopper prices are very strong, milk price isn't too bad in historic terms, grain prices aren't too bad in historic terms and not bad relative to milk price, and fodder is available (at the moment). This all stacks up to saying that cows that you don't want to keep should go early, allowing you to feed the remaining cows well, and there will be a margin at the end for doing it.

The likely summer diet will consist of 6-7kgDM grain with added protein, 3kgDM Lucerne, 3kg DM silage and/or cereal hay, 2-3kg DM crop and a pick of grass (2kgDM is typical 'pick'). This is anticipated to deliver a margin over supplementary feed cost of around \$5-\$6.00/cow/day, and there have been seasons where this typical 'Won Wron summer diet' has delivered only a small positive margin, if at all.

Young stock are always fed well, and the commencement of this will be as the season dictates.

#### **Key points:**

- Cull empty cows early;
- Keep cows well-fed on a high quality diet;
- It can rain at any time and you need to have the cows in the best-shape as possible to take advantage of it;
- Keep non-essential costs to a minimum;
- There are some fundamental differences to other tight years.

## Case Study 3: Host farm

### *Lachie and Vicki McLeod*

Lachlan and Vicki McLeod are the host farmers for the Tactics for Dry Times Field Day, and are used to managing variable seasons. They are experienced fodder-croppers, and this helps to set up the season, whether it be over the winter period or for grazing over the dry summer months.

With some rain around the start of November, things are looking a little better than they were in October. With one of the earliest starts to feeding silage, the McLeods, like many others, will be faced with a long feeding period.

**Cow numbers:** 360

**Milking area:** 170ha

**Stocking rate:** 2.12 cows/ha

**Silage on hand as at 1<sup>st</sup> November:** 150tDM maize from last season, 250tDM pasture silage in a stack and 120 round bales silage for the young stock.

**Fodder crop:** winter turnip crop just finished and 30ha milking area and 30ha on turnout for young stock and beef animals.

**Young stock numbers:** R1s and R2s.

**Purchased fodder requirements:** bought 37t vetch hay at \$350 and 80t wheaten hay at \$240/t.

**Water:** 70ML from the river whilst there is flow, used on the turnip crop.

With the winter crop of turnips finished, and the new crop not yet ready to graze, there will be around a month when vetch hay will be fed to cows to maintain production. Grain in the bail is at a maximum level of about 6.5kg wheat, and so when pasture is limiting in the paddock (some paddocks have enough feed and others don't), the diet will be topped up with silage and vetch. The aim will be to keep production up, and herd test data will be used to identify lower producers so that feed is available for the cows that will produce.

Cow numbers will be constantly reviewed. There are 15 carryovers that will most likely be dried off, and 50 autumn calvers will be looked at closely. There is plenty of turnout country on which to turn dry cows out onto.

Current production for the McLeod herd is tracking just below last season, and the cows did 590kgMS last year, and Lachie and Vicki will be happy with 560kgMS this year given the conditions. Protein test in the herd is under pressure, an indicator of energy content of the diet and overall diet quality.

#### **Key points:**

- Production will be maintained by increasing feed inputs;
- Good carryover fodder levels have helped but additional fodder has been purchased and delivered;
- Fodder crops are a major part of the diet of the herd and these are determined by the weather, and so feed inputs are being lifted until the crops come on line.
- Cow numbers being constantly reviewed.

## Case Study 4: Young Stock Feeding

### *Trent and Belinda Crawford, former Binginwarri Focus Farm*

Trent and Belinda farm at Binginwarri and despite good rainfall conditions for much of the year, the dry spring has reduced fodder yields there as well. With additional milking area, which was added to the farm this season, there was the hope of additional silage potential, but increased numbers and a tight spring has meant that yields are still lower than what was anticipated.

**Cow numbers:** 165 but reducing to 160.

**Start of calving:** 25<sup>th</sup> July

**Silage on hand as at 1<sup>st</sup> November:** 156 rolls (about half of what was planned) or 47tDM (0.3tDM/cow).

**Young stock numbers:** 30 Rising 2yo and 53 Rising 1yo (reducing to 45)

**Fodder crops:** 3ha rape and chicory irrigated with effluent, and a further 2.5ha dryland rape and millet planted 25/10/15.

**Purchased fodder requirements:** 25t vetch hay and 25t canola hay for milkers and 40t pea pollard for milkers as per previous years. May buy dry cow hay and additional hay as required.

Trent and Belinda are strict on ensuring that stock are looked after on the farm. If feed needs to be bought in, it will be to ensure that the cows are not lacking, but particularly the young stock. With moderate grain inputs to the milkers over the summer (max feed rate is 6.5kg), the herd is supplemented with vetch and silage as needed. Any significant crop intake will be a bonus depending on how the dryland crop performs.

Young stock are never compromised. The rising 2yo heifers are on a turnout block at Welshpool, and despite the need to get dry cow hay, the heifers will not go hungry to get it...it will be bought in if needed. It is hoped that these yearlings will be sustained on grass only, but grain will be fed if needed.

The rising 1yo heifers will be kept at home on riverflat paddocks, where hopefully they will get a pick of grass. They will also be supplemented with grain mix and possibly some pea pollard if required, or failing the availability of pea pollard, they will get grain and silage. Heifers are always fed to ensure that target weights are met for joining and calving down, so that production potential is reached in all the herd.

#### **Key points:**

- Young stock are never compromised as these are the Crawford's asset base;
- Heifers will be supplemented over summer with pea pollard or silage and grain;
- Milkers will be fed grain, vetch and silage and hopefully crop;
- Vetch and canola hay has been purchased and delivered.

## What About The Young Stock?



It is often said that the replacement heifers are your superannuation...well the returns from superannuation fluctuate, and when there isn't spare funds to put into super, it is an easy investment to ignore.

### Well simply...DON'T!

Provided with these notes are some really good facts, figures, tables and guides such as the DA Heifers on Target guide. There is a good online tool to calculate the feed requirements of heifers, given the target growth rates, and this can be found at [www.dairyaustralia.com.au/HeiferDietCalculator](http://www.dairyaustralia.com.au/HeiferDietCalculator)

To keep things simple, below is a table with typical Friesian heifer weights for typical Gippsland calving dates, being May-born and August-born (mid-way period for autumn and spring calvers) and the age and expected weights they should be in Jan/Feb, and their minimum feed requirements given typical summer paddock feed (i.e. little to no pasture!). Any green pick or summer crop is a bonus!

	<b>Friesian Rising one year olds</b>		<b>Rising two year olds</b>	
	<b>Autumn born</b>	<b>Spring born</b>	<b>Autumn born</b>	<b>Spring born</b>
<b>Age months</b>	9-10	6-7	21-22	18-19
<b>Target weight January</b>	210-235kg	150-175kg	500-520kg	380-400kg
<b>Minimum MJ ME and protein % required for maintenance and 0.8kg/head/day growth</b>	50MJ and 17%	44MJ and 17%	94MJ and 14%	80MJ and 14%
<b>Diet to provide requirements option 1 (pellets and silage) <u>per 50 head</u></b>	2.6kg as fed 18% protein pellets and 2.5kgDM silage = <b>140kg pellets per day and 1 roll silage every second day</b>	2kg as fed 18% pellets and 2kgDM silage = <b>100kg pellets and 1 roll silage every second day</b>	3.8kg as fed 15% protein pellets and 5kg DM silage = <b>200kg pellets and 1 roll silage per day</b>	3.1kg as fed 15% protein pellets and 4kgDM silage = <b>160kg pellets and 1 roll silage per day</b>
<b>Diet to provide requirements Option 2 (cereal grain and protein or cereal hay) <u>per 50 head</u></b>	1.6kg as fed wheat and canola (2/3 1/3 mix) and 3kgDM vetch. = <b>85kg grain and 1/3 bale vetch per day</b>	1.5kg as fed wheat and canola mix and 2.5kgDM vetch hay = <b>80kg grain and 1/4-1/3 bale vetch per day</b>	4.4kg wheat and canola and 4.5kgDM good cereal hay = <b>230kg grain and 1/2 bale cereal hay per day</b>	3.3kg as fed wheat and canola mix and 4kg good cereal hay = <b>170kg grain and 1/2 bale cereal hay per day</b>