

Seasonal Conditions

Tactics for Dry Times: Shed Days

A series of short sharp meetings focused on planning for "Recovery" after the unseasonal dry conditions. Shed days are a joint collaboration between GippsDairy, Murray Goulburn, DEDJTR, Rabobank, Maffra Veterinary Centre and Rural Health Professionals.

Date:	Tuesday, 23 February 2016	Date:	Thursday, 25 February 2016
Host:	Barry & Suzanne Cliff Anthony & Prue Cliff	Host:	Macalister Focus Farm Support Group
Location:	199 Airly Road, Stratford	Location:	Boggy Creek Road, Maffra
Time:	10.30am to 1.00pm	Time:	10.30am to 1.00pm

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 levels at dire levels, with some farmers around particularly 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 much pasture as silage, and grazing pasture availability dwindling by late October at the 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.

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

Copies of these notes available at www.gippsdairy.com.au or contact John Gallienne 0407 863 493

These *Tactics for Dry Times* days are supported by Dairy Australia through GippsDairy. The days have been jointly organised by GippsDairy and John Gallienne, as well as the voluntary contribution of local farmers.

MID Autumn Pasture Renovation 2016

Pre Sowing Checklist:

1. Paddocks not performing – grazing days per year?
 - Assess now – ride the farm and rank from 1 to 10
 - Pasture density? - How much bare ground?
 - Weed control – broadleaf and grasses
 - Winter/spring production potential – paspalum, couch?
 - Sort out irrigation related pasture issues – leaking outlets, drainage.
2. Paddock fertility and other limiting soil issues
 - Soil test to find out limitations,
 - N-P-K-S needs,
 - pH, lime and fertiliser strategy

Pasture Sowing Decisions:

3. Pasture Improvement decisions
 - Annual pasture improvement budget? Target - 10% of your farm per year?
 - Re-sowing or Oversowing?
 - Dependable Diploid or Tasty Tetraploid?
 - Annual, Italian, Long rotation, or Perennial ryegrass? Would you like clover with that?
 - Ryegrass heading dates - seasonal growth and pasture quality, mixes?
 - Sowing rate – Ryegrass 4 to 40 kg/ha?
 - Sowing time – early gives better pre winter growth , irrigation vs rainfall
 - Starter fertilisers eg DAP?
 - Fully prepared seed bed or direct drilling
4. Possible insect/pest pressure (RLEM, Argentine Stem Weevil, African Black Beetle, Root Aphid) – plan ahead
 - Need for Ryegrass endophytes - NIL, SE, AR1, AR37, NEA2, ENDO 5, GrubOUT U2.
 - Seed treatments - for pests and diseases
 - Chance of Slugs – trash on paddocks!

Post Sowing Checklist:

5. Pests and Weeds
 - Regularly check for (establishment) pests – you'll need your glasses!
 - Monitor for weeds from pasture emergence and control swiftly as needed.
6. Time the first grazing to encourage tillering – when ryegrass is well anchored!

Notes prepared by:

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A look at feed value and price comparisons in December 2015

Feed type	Price \$/t as fed	\$/t dry matter	Av energy value (MJ ME/kg DM)	Protein %	NDF %	c/MJ ME	"Feed value"
Wheat	\$330	\$367	13	11	12	2.82	√√√
Wheat 6kg plus 18c additive	\$360	\$400	13	11	12	3.07	√√√
Grain mix	\$390	\$433	12.5	14	14	3.46	√√√
Barley	\$300	\$333	12	10	15	2.78	√√√
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	4.10	√√
Cereal hay (eg wheaten)	\$270	\$300	10	9	52	3.00	√
Canola hay	\$270	\$300	9.8	16	41	3.06	√√
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 a few 'opinions':

Look hard at the margin you are making per cow (if you need help with this, don't be scared to ask, as there are plenty of people out there who will help).

As water is a limited resource, and therefore grass is a limited commodity, the value of the grass needs to be included in such calculations, as every kg that one low-producing cow eats is a kg that the other cows could be eating.

WHAT PRICE FOR GRASS?

1. Some use the variable cost of pasture. That is, the direct costs that go into producing it (nitrogen, fertiliser (P,K,S), water, resowing costs) and this will give a price anywhere between \$70/tDM and \$120/tDM, or 7c-12c/kgDM.
2. Others will use the total cost of pasture over the year, based on how much has been grown and consumed for the year and include all the costs such as N, fertiliser, resowing, irrigation and diesel/power for irrigation, some R&M associated with managing the pasture. This will give a price of around \$140/tDM.
3. And a further way to look at it is to say "what is the value of the pasture today, based on the alternative feed that needs to be bought when there is no grass"? This will value the pasture at the next best alternative, and will look something like a vetch-equivalent, or \$410/tDM or 41c/kgDM.

Whatever way you value pasture, it will give a break-even production level somewhere between 10litres or 0.75kgMS and 17 litres or 1.3kgMS. It would be a brave person to dry off cows at 17litres (there may not be many cows milking in a month or two!), BUT, what it means is that cows below around 0.75kgMS or 10 litres need to be looked at hard!

The calculations:

What is the breakeven production for a cow consuming 6kg concentrate, 2kgDM silage and 10kg DM pasture?

6kg @\$390/t = \$2.34 in concentrates

2kgDM @ \$170/tDM= \$0.34 in silage

Total = \$2.68/cow/day. At \$0.40/litre = 6.7 litres

Then...

Less 10kg pasture at 7c/kgDM = \$0.70 (A) or 1.75 litres

or less 10kg pasture at 14c/kgDM = \$1.40 (B) or 3.5 litres

or less 10kg pasture at 41c/kg DM = \$4.10 (C) or 10 litres

Actual breakeven production including the grass is 8.5 litres (A), 10.2 litres (B) or 16.7 litres (C).

But, remember when she is dried off, she needs to be fed something, and in a year like this, it doesn't come for nothing.

"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, equivalent to 6 litres of 'summer milk'. Even a low return on milkers may be better than a large loss on a dry cow!"

So, the value of this feed needs to be "added back on" to the calculations!

The actual breakeven production becomes 2.5 litres (A), 4.2 litres (B) and 10.7 litres (C).

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!

Managing young stock

It is important to remember that heifers that are less well grown, and in poorer body condition, at calving are likely to have when compared to better grown heifers: reduced production; lower reproductive performance as 1st calvers and; an increased rate of culling from the herd.

Nutrition of young stock

Speaking from personal experience, we do not always feed our young stock so that they grow well enough so that they calve for the 1st time as well grown heifers in good body condition

If heifers are to reach the target of around 85% of the weight of the mature cows in the herd at the time of the 1st calving, they need to be kept growing well throughout the period from weaning until calving. In general, they need to gain weight at a rate of approximately 0.7 kg per day. To do this they require adequate amounts of good quality pasture throughout this period - I am talking about providing pasture of quality that is equal to that provided to the milking herd. If this cannot be provided, they need supplementation with good quality concentrates.

For many of us it is difficult, when we see our young stock on a fairly regular basis, to assess how well they are growing. There really is merit in weighing your young stock on a regular basis (say every 3 months) so that you can actually measure how well they are growing, and take corrective actions if they are not achieving the required rates of gain.

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

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!

	Friesian Rising one year olds		Rising two year olds	
	Autumn born	Spring born	Autumn born	Spring born
Age months	9-10	6-7	21-22	18-19
Target weight January	210-235kg	150-175kg	500-520kg	380-400kg
Minimum MJ ME and protein % required for maintenance and 0.8kg/head/day growth	50MJ and 17%	44MJ and 17%	94MJ and 14%	80MJ and 14%
Diet to provide requirements option 1 (pellets and silage) per 50 head	2.6kg as fed 18% protein pellets and 2.5kgDM silage = 140kg pellets per day and 1 roll silage every second day	2kg as fed 18% pellets and 2kgDM silage = 100kg pellets and 1 roll silage every second day	3.8kg as fed 15% protein pellets and 5kg DM silage = 200kg pellets and 1 roll silage per day	3.1kg as fed 15% protein pellets and 4kgDM silage = 160kg pellets and 1 roll silage per day
Diet to provide requirements Option 2 (cereal grain and protein or cereal hay) per 50 head	1.6kg as fed wheat and canola (2/3 1/3 mix) and 3kgDM vetch = 85kg grain and 1/3 bale vetch per day	1.5kg as fed wheat and canola mix and 2.5kgDM vetch hay = 80kg grain and ¼-1/3 bale vetch per day	4.4kg wheat and canola and 4.5kgDM good cereal hay = 230kg grain and ½ bale cereal hay per day	3.3kg as fed wheat and canola mix and 4kg good cereal hay = 170kg grain and ½ bale cereal hay per day

Control of liver fluke and worms

Liver Fluke has been recognised as a major problem in the MID for many years and a study undertaken in the MID in 2014 detected fluke eggs in the manure of cattle in 18 out of 20 herds tested. Liver fluke burdens in young cattle can be monitored by undertaking egg counts on a sample of cattle in the mob at regular intervals (and then treating as necessary), or by treating with Trichlabendazole (eg Fasinex) approximately every 6 months until calving.

Gastrointestinal parasites represent a major risk to calves in the MID and can severely impact on rate of weight gain of young cattle. Resistance to worm drenches has been now demonstrated in parasites in beef and dairy cattle in many parts of the world, and Steph Bullen's work has shown it is a potential major problem in the MID.

Options for worm control in young stock vary from:

- A production focussed approach with routine drenching of young stock every 6 weeks until they reach 12 months of age. This will minimise the risk of reduced weight gain associated with worms, but these routine treatments are likely to increase the risk of development of resistance of parasites to drenches.
- A sustainable approach could involve regularly checking worm egg counts (possibly every 3 weeks) in manure samples from these calves from weaning through until May (and treating them if worm egg counts start to rise) and in May treating them with an effective product.

Whenever drenching, to minimise the risk of resistance developing it is important to have an accurate estimate of the weight of the calves and to check the drenching equipment to ensure that the correct dose is given.

Some thoughts about culling decisions

Unless we get a significant rain event, it is likely that many farms will run short of irrigation water later this season and pasture feed may become limiting.

One option to make best use of the available feed is to consider removing from the herd earlier than normal cows that will not be of use to us next year. I have seen many situations where some milking cows are removed from the herd, yet milk production in the vat changes only very slightly. This may well be the case if feed is limiting - more feed for the remaining cows will help maintain overall milk production.

But care does need to be taken in exercising this option - at least on my farms, we want to be sure that we have sufficient cows in good body condition to calve next spring. So we are loath to cull many cows until we have completed at least the 1st round of pregnancy testing, and we know how well (or otherwise) our cows are getting in calf this season.

But even before the 1st round of pregnancy testing, there are some cows that we know we will not want in the herd next year, regardless as to their pregnancy status:

- Cows that have had 3 or more cases of clinical mastitis this season - hopefully these will already have been culled.
- Cows that have had high cell counts for the last several years - these are unlikely to respond to treatment and are a potential source of infection for other cows in the herd.
- Any walking wounded cows - chronically lame cows, cows with blown udders or with other issues such as very bad temperament that mean that we do not want them in the herd next season.

In years where we are considering getting rid of cows early, early pregnancy testing is, in my opinion, a no-brainer. I recommend that the 1st round of pregnancy testing should be undertaken some 6 weeks after the end of the AB period. Unless there is something seriously wrong with any of the pregnant cows, they are immediately removed from our list of cows from which to select culls.

The cows not in calf at this time are likely to be late calving cows next season. We will carry out a 2nd round of pregnancy testing some 6 weeks after the bulls have been removed from the herd and, in our case, these empty cows are sold. However, before this 2nd round of pregnancy testing we still like to watch closely for signs of heat in these cows - if they continue to come into heat they are most likely (but not guaranteed) to be not in calf and that little bit closer to the culling list. Because we have undertaken early pregnancy testing,

we have accurate predicted calving dates and have the option if we have excess pregnant cows to sell the late calving cows to someone else who may be able to make better use of them.

The heifers should not be forgotten. In many herds, the heifers have a shorter mating period and any heifers not pregnant at an early pregnancy test can at least be considered for culling. The heifers that are late getting in calf are likely to have a shorter lactation length in their 1st season and may represent the less fertile animals in the group - do you want to introduce these into your herd?

Our overall aim is to remove the passengers from the herd early, but to be sure that we have a sufficient number of healthy and likeable cows and heifers to calve in good condition next spring so that we can hit the ground running next year. We do not want a potentially difficult season this year to impact negatively on our herd and production next season.

The Macalister Irrigation District – Spore Count Report For Week Ending: 19 February 2016

Eighteen samples were submitted from paddocks in the MID this week, and overall the spore counts have fallen as compared with last week.

Looking at all sample submitted, a summary of the spore counts for the MID follows:

Summary Spore Counts MID					
Week beginning	Number of counts	Number zero	% Zero	Average count	Highest count
22/12/15	10	7	70%	2,500	15,000
4/01/16	8	5	63%	3,125	15,000
11/01/16	2	0	0%	12,500	20,000
18/01/16	9	5	56%	7,778	40,000
25/01/16	14	3	21%	10,357	60,000
1/02/16	17	4	24%	22,105	210,000
08/02/16	14	4	29%	27,500	115,000
15/02/16	18	3	17%	14,167	105,000

This table includes all samples tested. If the non-Sentinel farms, and the one paddock, which has had a high spore count for many weeks are deleted, the results are as follows (WB stands for week beginning).

	WB 18/1	WB 27/1	WB 1/2	WB 8/2	WB 15/2
Number	8	13	17	13	12
Average	3,750	6,538	7,692	20,769	11,250
Number 0	5	3	4	4	1
Percent 0	63%	23%	24%	31%	8%
Counts over 15,000	1	1	2	7	2
% over 15,000	13%	8%	12%	54%	17%

Looking at this table, the average spore count has nearly halved over the previous week and the number of paddocks with spore counts over 15,000 spores per gram of pasture has dropped.

We still need to monitor the spore counts closely, so please continue to submit samples from your Sentinel paddocks

West Gippsland and Yarram

2 samples were submitted from West Gippsland Sentinel farms last week, and the spore counts were 15,000 and 10,000 spores per gram of pasture

No samples were submitted from the Yarram area

Overall

With no rain over the last several weeks, conditions are not highly suitable for the growth of facial eczema spores and the spore counts have dropped.

While it is not possible to accurately predict what will happen to spore counts based purely on weather conditions, my hunch is that spore counts are not likely to rise until we get another rain event. But a combination of moisture and warm conditions moving into the autumn could see a rise in spore counts, bearing in mind that there are a significant number of spores present on many paddocks.

The spore counts in South Gippsland and Yarram are low

Some people who are risk averse are already adding zinc to the ration of the cows, and I have no problem with that provided, they are sure they give the correct dose.

For those who have not added zinc, they need to watch out for the free messages that will come if spore counts start to rise.

Prepared by:

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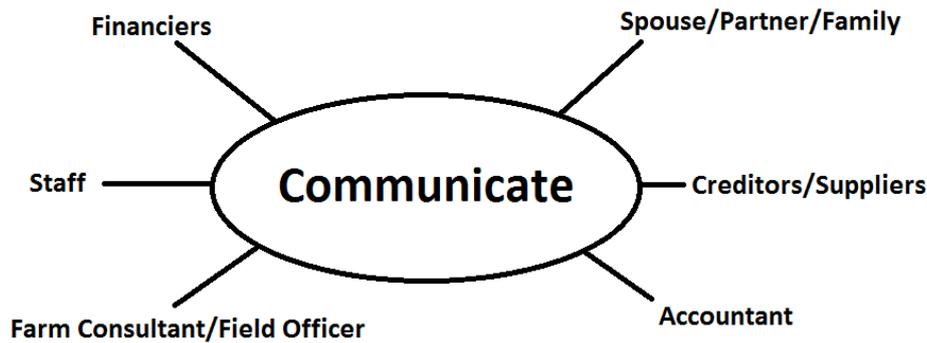
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Tactics for Dry Times: Shed Day



Take Stock: (not from your neighbour!)

- Information is power! Invest in a little bit of office time.
- Get your books up to date.
- Construct a Statement of Position/Assets & Liabilities making note of finance terms (the interest rates, payments and expiry dates).
- Update your cashflow forecast/budget. If you haven't got one, get onto it!
- Get tough! What 'fat' can be stripped out? Are there some 'nice to haves' that can go?
- Think long term. It's cliché but when the better milk price comes around you want a 'recovery not a prolonged hangover' due to poor cow condition and fertility (both cows and soils/pastures).

Finance Options:

- Debt restructure – your position will determine what lenders can support here.
 - o Is there too much 'short term' debt?
 - o Can you swing some debt onto interest only
 - o Do you have MG loans? Can they be restructured?
 - o Did you pay cash for any new or near new assets? Talk to your bank about the potential of a 'Sale & Leaseback'.
- MG Shares – are you over-subscribed? Can you sell some?

Suppliers/Creditors:

- Are any getting hostile? Need to deal with them.
- Prioritise (who can shut you down quickly? Staff, ATO, SRW, Bank)
- **Respect** your creditors, especially the local small ones. They are not your bank (also don't hold out on paying them only to turn up in a new ute!)
- Communicate – don't go to ground, answer your phone/messages. Nothing scares a creditor more than silence!

Health:

- Protect and maintain your physical and mental health.
- Talk with other farmers but try to avoid negativity (don't let everyone's problems become yours)
- Seek professional help if you need it. See a doctor.

Prepared by:

Tony Anderson & Ron Masin

Rabobank, Sale

MID Water Budget 2015/16



Use this farm water budget to: (a) review your farm water situation and, (b) consider possible options to make the most of your irrigation water.

(Abbreviations: ML = Megalitre, Ha = Hectare)

Name: _____

Date of Budget _____

Water Available this season

Farm Irrigated Milking Area					<input type="text"/>	Ha	
	Share		Allocation				
Farm HRWS	<input type="text"/>	ML X	<input type="text"/>	→	<input type="text"/>	ML for the season	
Farm LRWS	<input type="text"/>	ML X	<input type="text"/>	→	<input type="text"/>	ML for the season	
Purchased ML	<input type="text"/>	ML X	<input type="text"/>	→	<input type="text"/>	ML	
			Total		A	<input type="text"/>	ML
→							
Water usage to date				→	B	<input type="text"/>	ML
Channel water remaining				→	C	<input type="text"/>	ML
Water available from other sources				→	D	<input type="text"/>	ML
Total water remaining				→	E	<input type="text"/>	ML
							(calculate A - B)
							(calculate C + D)
Water Normally Ordered Per Irrigation				→	F	<input type="text"/>	ML
Area of irrigated pasture				→	G	<input type="text"/>	Ha
Calculated ML used per hectare per irrigation				→	H	<input type="text"/>	ML/Ha
							Ha = acres / 2.47
							(calculate F / G)

1. Using my remaining water, how many irrigations do I have left?

Area to be irrigated with remaining water	I	<input type="text"/>	Ha	(acres = 2.47 x Ha)
Number of irrigations remaining	J	<input type="text"/>	Irrigations	(E / (H X I))
Number of irrigations needed to reach April	K	<input type="text"/>	Irrigations	(see attached table)
			Irrigations short	

2. What area of pasture could I fully irrigate through to April ?

Number of irrigations needed to reach mid April	K	<input type="text"/>	Irrigations	(see attached table)
Total ML available	E	<input type="text"/>	ML	(see E above)
ML per irrigation available (remaining)	M	<input type="text"/>	ML	
Area that can be fully irrigated	N	<input type="text"/>	Ha	(calculate M / N)

Based on your figures, you have **(A)** ML of water available to complete the season.
 You can irrigate (I) _____ Ha with (J) _____ irrigations across the rest of the season.
 However, to fully irrigate for the rest of the season, you need **(K)** _____
 which means you can irrigate (N) _____ Ha fully.

For assistance on your irrigation budget contact Sarah Killury on 5147 0845