Macalister Demonstration Farm

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NEWSLETTER 36

Monday July 12th 2010

Extension projects at the MDF are funded by Dairy Australia, Sustainability Victoria and Department of Agriculture, Fisheries and Forestry, with support from GippsDairy.

MID Ten Day Tracker Project

Come and look at the performance of twenty farms in the MID Tracker Project and discover their secrets – what are the best performing farms doing, how are they getting those margins?

Tuesday, August 3rd, 10.30 am-12 pm
Macalister Demonstration Farm

Lunch provided. Contact Frank Tyndall 0409 940 782.

Calves – How to destroy and dispose of humanely

Come and join to Tristan Jubb, Vet and consultant, in an interactive seminar on the humane destruction of calves. Topics include different methods, including demonstration of bolt gun, safety precautions, legal obligations and how 'not' to destroy a calf.

10 – 2pm Monday July 26th 2010
Macalister Demonstration Farm

Places limited to 20 places so RSVP essential. Call Kylie Barry for registration – 0428 889 337

Yellow Rag Bit

Bree Walshe, Dairy Advisor DPI Maffra

Locusts

Potentially, we could be facing a locust plague this Spring. Egg laying has occurred across 70% of the state, with the hatching rates not known until spring, not to mention the vast egg laying that occurred in NSW. Locusts are very destructive to crops and pasture, therefore, we need to be aware of any potential impacts they may have on our dairying businesses, whether it be an immediate impact on the ground or an impact on our inputs.

What measures can you take on your own farm to help manage the risk of a potential locust plague?

Firstly, let's concentrate on a locust plague that impacts our inputs and what strategies can we put in place to manage the risk?

- Grain: if hatchings occur in our grain growing regions, a price hike is likely to be seen – as demand will be greater than supply. To manage this risk, you could lock in a third of your grain requirements.
- Fodder: if hatchings have occurred in our grain growing regions the availability of cereal hays from those regions will also be limited. Therefore, demand will be greater for other sources or types of hay / silage. If cash flow permits sourcing a quarter of your fodder needs may be worthwhile, as long as its good quality and will meet your needs.

Secondly, what if the impacted area is actually local – the MID, what are some potential strategies then?

- The good news is, very limited egg laying is reported in the immediate area, however, that does not rule out an invasion.
- Stay informed and keep an eye out for any locusts and report any potential sightings to the DPI Locust Hotline on 1300 135 559
- If an infestation occurs, there are chemical control measures available. There is no single, simple answer to which is the best chemical to use – it all depends on the specific circumstances. The DPI website (see below) and agronomists can help determine the appropriate chemicals for your farm.

For further information on locusts and locust hatchings you can visit the following websites
http://new.dpi.vic.gov.au/home (then click on the locust link)
www.daff.gov.au/animal-plant-health/locusts

We need to remember that the potential impact is not known, therefore it is about staying informed and managing the associated risk to our business and only in hindsight will we truly know how effective our decisions have been.

Please speak to your nutritionist, hay contractor or trusted advisor for assistance in making these decisions. To report any locust sightings please contact without delay the DPI locust hotline on 1300 135 559.

MID Ten Day Tracker Project

Is it worth spending more money on inputs to get higher grass production per hectare and higher milk per cow? Does it achieve a higher financial margin? As you chase higher production, more grass per hectare, or more milk per cow, the cost of getting that higher production eventually outweighs the cost of the inputs required to get that production, and no more margin is gained. Of course, the margin you can achieve also depends on the price of the inputs (fertiliser, supplements, irrigation water, etc) and the price of the output (milk), as they all go up and down over the years. It also depends on the level of any of these inputs as well as day-to-day feed management.

The Ten day Tracker analysis now has 12 months of data for sixteen farms in the Macalister Irrigation District. The graphs below show the relationship between production level and financial margin, using last season's prices and water supply situation. These are the figures provided by actual farms using up to date data collected for the **Ten day Tracker** project. The **Ten day Tracker** then calculates the grass consumption per hectare, the milk solids per cow, and the feed margins for each farm every ten days - that's 33 times for the year. The cumulative margins, **shown in the graphs,** add up all of these 33 margins for the year. The production per hectare and margins per hectare will seem high because they are calculated on only the hectares being grazed for milking and cows being milked at the time, with no dry-cow period included. The method is applied to all farms so the figures can be then be compared.

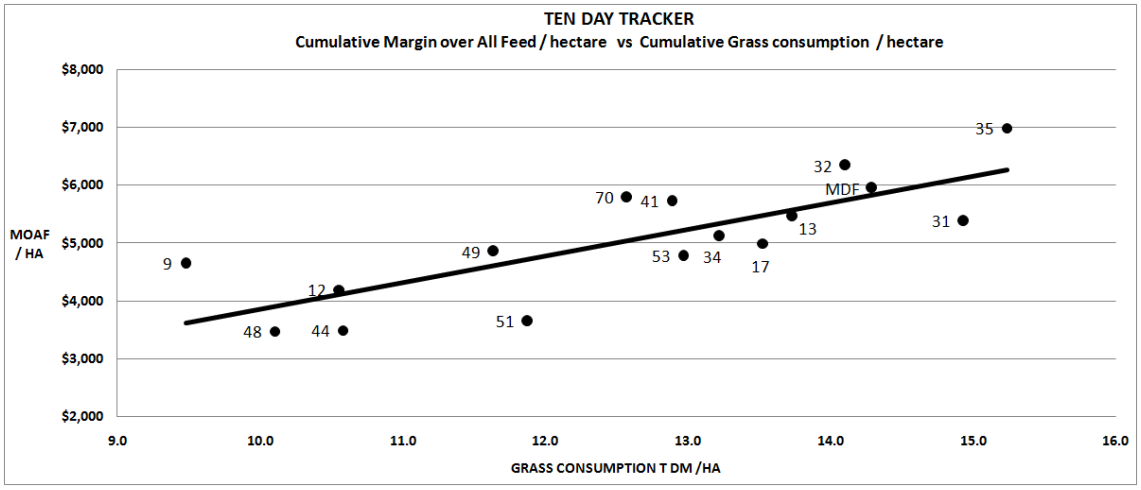
It's possible to consider feeding profitability, and the desire to increase the feeding financial margin, under only four headings:

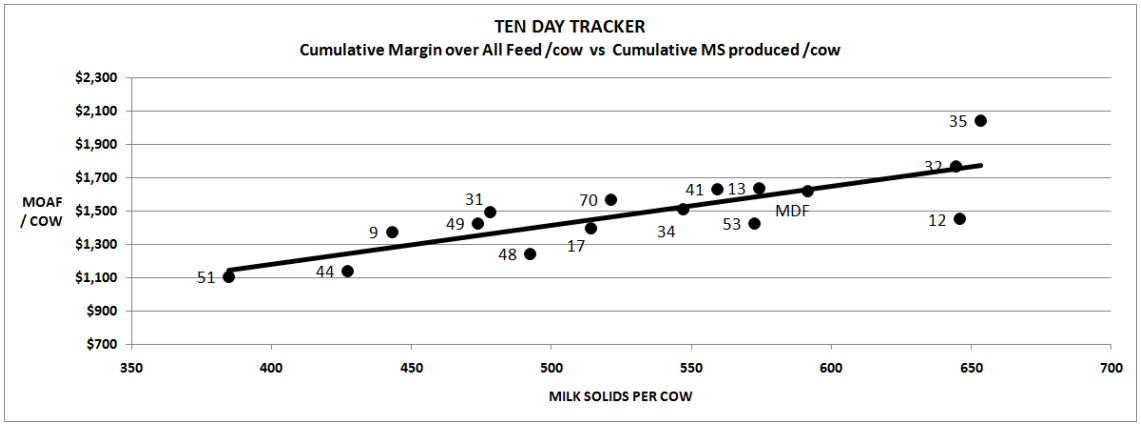
1. Feed price.
2. Milk price.
3. Efficiency of converting feed to milk.
4. The cost (capital and ongoing) of the herd that converts the feed to milk.

On our grass based farms, the two production issues that have the major effect on feeding profitability are:

1. Grass produced per hectare, because it's a major controller of the **feed price**.
2. Milk produced per cow, because it's a major controller of **feed conversion efficiency** and the dilution of the cost of the herd.

The lines in the two graphs clearly show a general trend, that more grass consumption per hectare AND more milk per cow, achieve a greater margin.





To get the range of margins in perspective, you can see that if farm 35 and farm 51 were both milking 300 cows, then farm 35 would have $615,000 left over after paying for all feed (including all costs to grow grass and buying supplements), while farm 51 would have $330,000 - that's a $270,000 difference!

Although the graphs show the trend that higher production delivers a higher margin, it doesn't work for all farmers. In the top graph, compare farm 53 and farm 49. Farm 53 has higher grass consumption than farm 49, but gets a lower margin. There are many possible reasons, but some could be:

- Farm 53 may not be set up as well, for example, it needs to apply a lot more Phosphorus.
- Farm 53 may be paying higher prices for fertiliser or irrigation water.
- Farm 53 may be getting a lower price for milk, because it's a smaller farm, or its milk solids are relatively low in protein.
- Maybe farm 53 is wasting more feed or fertiliser - with poor ration balance, or not applying fertiliser uniformly.

But in general, it seems that higher production will generate more margin, if the particular circumstances of the farm are considered, and if done properly.

The graphs show an interesting relationship between milk production per cow and grass consumed per hectare. A couple of examples help to illustrate this:

- In the top graph Farm 51 is getting 12 tonne of grass but has a margin/ hectare well **below** the trend line. The second graph shows that this is because farm 51 has low milk production per cow, and therefore low feed conversion efficiency.
- In the bottom graph, farm 31 is producing 480 kg MS per cow, with the margin/cow **above** the trend line. Even with milk production per cow in the bottom half of the group, margin/cow is being **strengthened** by high grass consumption per hectare in the other graph, keeping the feed price down.

Farm 35 shows what can happen when both high milk production per cow is achieved at the same time as high grass consumption per hectare.

Does this interest you? A **session for all dairy farmers and service providers** to discuss in more detail what the Tracker project is finding and how participating farmers are using it is coming up – see the advertisement on the front page.

SUB-SURFACE DRIP IRRIGATION - HOW DID THE SYSTEM PERFORM IN ITS SECOND SEASON?

The second season is the first full season of operation with the system becoming operational in December of the previous year. Performance monitoring has focused on pasture production following a breakdown of the water meter and an inability to measure water usage. It is still the intention to compare the performance of the different systems in ML/ha and ML/tonne DM in the next season.

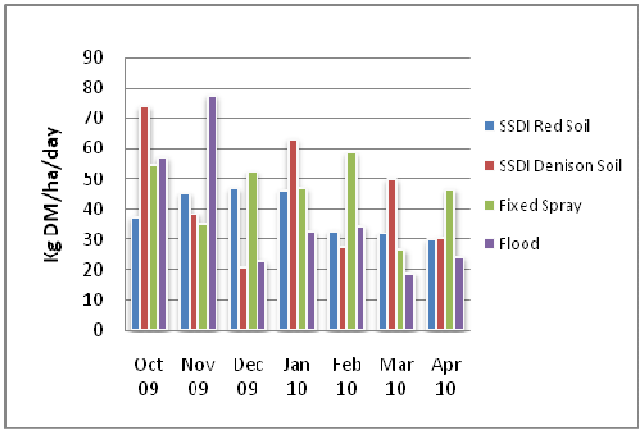
The 2009-10 season started with a very hot and dry Spring followed by a mild and damp Summer and Autumn. This made it a challenge to keep soil moisture levels at an optimum in Spring but delivered times of waterlogging in December and February, both of which had a negative impact on pasture growth for all systems.

The highest daily growth rate was achieved on the flood irrigated paddock in November at 77 kgDM/ha/day (Fig. 3), however, from December to the end of the season in April dry matter production did not exceed 35 kgDM/ha/day with the poorest performance in March at 19 kgDM/ha/day. The result was an average of 38 kgDM/ha/day for the season.

The most consistent growth rates were seen under fixed spray irrigation, ranging between 27 kgDM/ha/day and 54 kgDM/ha/day at an average of 46 kgDM/ha/day for the season.

Sub-surface drip irrigation on the red soil was also quite consistent, ranging between 30 kgDM/ha/day and 47 kgDM/ha/day but at a lower season average of 39 kgDM/ha/day. On the Denison soil results were very variable, ranging from 74 kgDM/ha/day down to 21 kgDM/ha/day but at a higher season average of 43 kgDM/ha/day.

Fig. 3: Daily Growth Rates October 2009 – April 2010

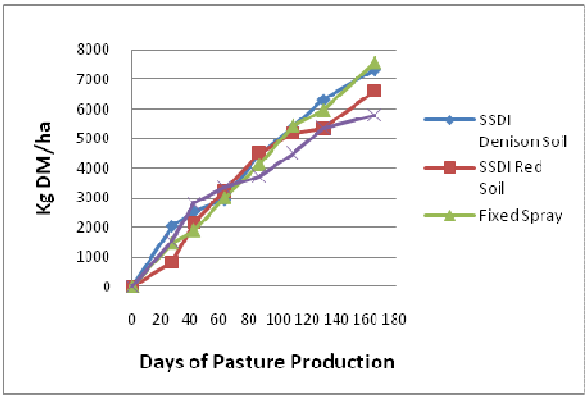


Despite the variability in growth rates through the season for each irrigation system, the difference in total dry matter production was not a great as might be expected (Fig. 4). Over the monitoring period of 166 days the highest dry matter production of 7.6 tones DM/ha was achieved under fixed spray, closely followed by the sub-surface drip irrigation on the Denison soil at 7.3 tonnes DM/ha. Total dry matter production for sub-surface drip irrigation on the red soil was 6.6 tonnes DM/ha and on the flood irrigated paddock it reached 5.8 tonnes DM/ha.

It is interesting to consider the potential production if each system performed at its highest measured growth rate for the whole season. Under flood irrigation at the highest daily growth rate of 77 kgDM/ha/day total potential production is 12.8 tonnesDM/ha; under sub-surface drip irrigation on the Denison soil at the highest daily growth rate of 74 kgDM/ha/day total potential production is 12.3 tonnesDM/ha; for fixed spray irrigation at a growth rate of 54 kgDM/ha/day total potential production is 9 tonnesDM/ha; and for sub-surface drip irrigation on the red soil at a growth rate of 47 kg DM/ha/day total potential production is 7.8 tonnes DM/ha. In the previous season all systems had a higher maximum growth rate in the 2010 season when compared to the 2009 season except for the sub-surface drip irrigation on the red soil. In 2009 it had a maximum growth rate of 66 kgDM/ha/day so the calculation above understates the potential of sub-surface drip irrigation on the red soil by about 2.8 tonnesDM/ha.

So how do we account for the differences between systems and soil types, particularly when the sub-surface drip irrigation system was the best performed last season? Look for the follow up article in the next newsletter.

Fig. 4: Total Pasture Production October 2009 – April 2010



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