

CASE STUDY INFORMATION - MICHAEL and MANDY MARGIN

1. Overview

Dryland farmers Michael and Mandy experience a fluctuating milk price and seasons. Like many younger farmers they have significant debt.

They have done an annual analysis of their figures for the past 10 years, not to assess if they can pay the bills (that's more of an annual budget job) but mainly to confirm and give them confidence that they are profitable dairy farmers assuming a reasonable season and milk price.

Michael and Mandy “push” margins with inputs so to them it is even more important to assess performance, to gauge if the extra spend is actually worth it.

In their district, the 2016/2017 year would be rated as seven out of 10 in a seasonal sense, but there was a high level of uncertainty around milk price at the start of the season. The 2016/2017 data must be viewed in context to these seasonal conditions.

Their financial records are kept directly from Cash Flow Manager, since they are not keen on book work and want to keep it very simple. You may want to discuss their system and chart of accounts as part of this exercise.

2. The Margins' Approach to Their Annual Performance Analysis

The Margins are now in an annual routine to make their annual analysis much simpler.

They understand the “matching principle” which means that whole focus is getting the income from milk and stock in the year and matching it with the costs associated with producing the milk and stock. When the income or costs were received or paid, is a cash issue which may be different to the matching principle.

The activities performed by The Margins that make the process much simpler include:

- At the start and end of the financial year everything is counted: stock, fodder, bank balances.
- They have a farm plan and therefore have a good idea of titled area versus actual grazing area. They also use this for grazing and fertilising.
- In spring, fodder made and where it was made is recorded. Then, during the feeding out period, a record is kept as to what is fed where.

- At the end of the year, all the suppliers of grain, fodder, and fertiliser are contacted (they tend to be the same each year) and asked to supply a summary page of all goods supplied to the farm in the financial year.
- Michael and Mandy try to pay all June supply accounts in June to avoid any confusion.
- Hours worked by employees are kept as a compliance requirement anyway. Mandy and Michael don't record the hours they work and always have that debate about how many hours they should put in the analysis.
- They do sometimes forward purchase goods in a high tax payable year. These goods are not actually consumed until the next season. Michael and Mandy keep a record of these and make the appropriate adjustments to their figures at the end of the financial year to ensure they are following the "matching principle".

All of the above mean that the preparation needed to be able to input data is minimised to a couple of hours, rather than a day.

3. Data Provided for The Margin Business

The information you have been provided includes

- The cash flow manager (excluding GST). Note: It needs some slight adjustments to follow the "matching principle".
- A Chart of Accounts based on the cash flow manager.
- A milk statement and income estimation
- Other information provided below.

4. Physical Information

To make it easier, the physical information is provided in the same order as it is asked for on the DairyBase input sheet. Fill this out as you read the information.

Land:

- They own 220 hectares on several titles in a 900 mm dry land dairying area.
- They lease another 40 hectares of relatively unimproved land.
- The measured area of milking area is 120 Hectares.
- The support grazing areas includes the unimproved 40 hectares leased and 60 Ha owned adjacent to the dairy farm but too distant to be used for milking. Therefore the total support grazing area is 100ha.
- The actual milking area would be classed as undulating and the milkers walk about 3 kilometres per day.
- According to the closest weather station measured rainfall in 2016/2017 was 925 mm.

Production:

- The 2016/2017 litres fat and protein production is presented on both the 30th June Milk Statement and the income estimation summary sheets.

Livestock:

- The herd and all young stock would be classed as Large Friesian type animals. The milking herd would weigh an average of about 600 kg.
- The herd calves once per year.
- Cows:
 - Peak milker numbers were 301 briefly but 290 cows were in the herd for 3 months or more, and therefore must be included.
 - The opening cow numbers were 286 and the closing cow numbers 280.
 - Value \$1,600
 - 116 dry cows went off the milking area for 35 days.
- Heifers 13 months and older:
 - The opening number was 90 rising 2 yo to calve and the closing number (last year's R1's) was 110. Therefore the average number grazed on the useable area was 110.
 - They stay on the support area until 3 weeks prior to calving when they move to the milking area.
 - Value: \$1,100
- Yearlings and calves less than 12 months old:
 - 110 was the opening number and 90 the closing number of new R1's.
 - There were a few sales so Mandy felt that 100 was a reasonable figure as an average for the year.
 - These are not run on the milking area at all. They have an early weaning program and spend virtually the whole year on the support area.
 - Value: \$500
- Bulls:
 - 5 as opening and closing numbers
 - They spend only 8 weeks on the milking area, the rest on the support area.
 - Value: \$2,250

Labour:

- From the wages records Mandy has totalled the paid hours worked to 2,424 hours by three different staff and a contractor which was estimated.
- A DairyBase "person" is 2,400 hours (48 weeks at 50 hours per week). This converts to 1.01 paid employees.
- Mandy estimates she does 30 hours per week and Michael estimates he does 60 hours per week.
- They use 52 weeks because even if they have a couple of weeks off they believe the cost of this has to be covered as if they were employees, so should be included in the "imputed labour". They did not have a couple of weeks off in 2016/17.
- Every year Michael and Mandy say they will record their hours for a busy month and a quieter month but they never do!

Feed and Fodder:

This is an area which creates the greatest discussion if no records have been kept during the year (especially for home grown fodder). This can affect the pasture consumption figure very significantly.

- **Purchased feed:** The **grain** dealer has provided a one pager with the tonnages delivered to the farm (in fresh weight, not dry matter):

- 618 tonne of wheat at an average price of \$240 per tonne
 - There was roughly 10 tonne in the silo at the start and 20 tonne at the end.
 - Some was fed to rising yearlings on the support area; Michael has estimated this was 38 tonne, so 570 tonne was fed on the milking area.
 - There was no canola at the start; 54 tonne was purchase at an average price of \$421/T with 46 tonnes fed on the milking area and 6 tonne on the support area, leaving a couple of tonnes at the end of the year.
- Michael and Mandy also normally purchase some **fodder**.
 - 79 tonne (fresh weight) of vetch hay was purchased for \$264/T
 - 73 tonne was fed on the milking area and 6 tonne fed on the support area with none on hand at the end of the year.
 - The year started with 35 tonne (fresh weight) of cereal hay on hand
 - 101 tonne was purchased for \$240/T.
 - 87 tonne was fed on the milking area and 11 tonne on the support area.
 - There was 38 tonne left on hand at the end of the year.
 - Finally 208 bales of pasture hay (5 by 4 bales say at 240 kg dry matter per bale or 50 tonne dry matter total) were purchased for \$190/T DM (\$9,519). This was equivalent to \$46/bale and 3 bales per tonne = \$138/tonne fresh weight.
 - About 60 bales were fed on the milking area and 60 bales on the support area leaving 88 bales at the end of the year.
- 9 tonne of **calf pellets** were purchased which is in the calf rearing costs, but Mandy argues that it was NOT fed on the milking or support area but in the calf shed and so should not be included; Michael is not sure, so the debate continues, but it won't make much difference to the pasture consumed figure so is not worth discussing for too long.
- **Home Grown Feed:**
 - Now that they record a few details during the year this is a much easier task although where they fed out still can be a bit grey!
 - The only home - made feed is in the form of silage bales. The contractor's invoice has got the number, as well as Michael's pocket diary.
 - They have actually weighed a few bales from this contractor and they averaged 650 kilograms
 - The feed test come in at about 40% dry matter. So they use 260 kg dry matter per bale.
 - The bales tend to be kept in the area where they are made so it's easy to keep track of where they are fed.
 - There was no silage on hand at the start of the year. They made 981 rolls, 700 on the milking area and the balance on the support area.

- 739 were fed on the milking area and there were 77 left at the end of the year on the “counting day”. This leaves 165 fed on the support area.
- These figures tallied with some discussion about how many bales per day were fed to the milkers and young stock during summer.
- (Note: With pit silage a guide is 0.6 tonne wet per cubic metre in the stack. This can then be compared to the area cut as a reality check.)

Fertiliser:

- Michael and Mandy have only been including this in their annual review in recent years, in particular nitrogen, just as a way of monitoring how much Nitrogen has been applied relative to how much pasture has been consumed.
- They contact their fertiliser distributor who actually keeps a record of the total kilograms applied- very simple.
 - **The milking area:** 33,720 kg N, 3720 kg P, and 9,120 Kg K
 - **Support area:** (40 ha only was fertilised) 8,400 kg N, 800 kg P and 2,400 kg K
 - This converts to one tonne per hectare 28% N, 3.1% P and 7.5% K on the milking area (120 tonnes)
 - 30 tonnes on 40 Ha of the support area of the same blend. Total 150 tonnes
- Note: This can be entered into DairyBase as the one fertiliser rather than inputting all the different blends applied- the nutrients will still be correct.

WE NEED TO CHECK FOR ANY FORWARD PURCHASING OF PRODUCT IN 15/16. THAT WAS DELIVERED AND USED IN 16/17 TO ENSURE THAT THE PHYSICAL FIGURES MATCH THE FINANCIALS.

Michael and Mandy had a tough season 2015/2016 and there were no additional funds to deliberately forward purchase into the 2016/2017 year. The 2016/2017 year was a low milk price and tight cash year and there was no forward purchasing in 2016/2017 for 2017/2018 consumed goods.

There were some minor adjustments that needed to be made between years and these will be noted in the financial section.

5. Financial information

The information used in this section will mainly come from the milk company printouts and the cash manager details but some adjustments will be required.

It would be handy to have their tax Profit and Loss Statement but this was not available. Often any livestock details on P & L statements are of limited value unless they are accurately completed.

All financial information is entered excluding GST.

- **Milk Income:**
 - You will need to examine the milk pay statement and the indicative cash flow income estimation and decide which the appropriate figure to use is, net of all levies and charges.
 - Note: Michael and Mandy did not have a 3 year supply arrangement in 15/16. The \$5,247 is an annual bonus for committing to a 3 year supply arrangement.

- **Livestock sales:**
 - This needs to be net of selling costs and levies.
 - Also you need to add \$4500 from calf sales; this was a cash figure and not banked.

- **Other farm income:**
 - This includes the fuel rebate via the BAS of \$2,608 (alternatively this can be dealt with by deducting it off fuel cost of \$11,788) and interest of \$61.

- **Non -Farm income:**
 - Michael and Mandy also used a \$65,000 Farm Management Deposit from a total of \$95,000 of FMD funds at the start of the year. This was to assist with cash flow during the year.
 - You can discuss the pros and cons and impact on the DairyBase data if this use of the FMD had been entered in farm income.
 - In addition \$22,200 was taken from a non-farm savings account and placed into the farm account to assist cash flow.
 - Total non- farm income is now \$87,200.

- **Variable Costs:**
 - There are some adjustments required to achieve the matching principle.
 - The veterinary expenses need to have \$350 from 15/16 deducted and \$420 added in from 16/17 which slipped into 17/18.
 - Calf rearing needs to have the pellets of \$3,600 added because they were actually paid in 15/16.
 - Dairy supplies need \$1,858 from 15/16 deducted and \$900 from 16/17 added.
 - The final adjustment was \$5,500 for urea which was included in the fertiliser supplied but was paid in 15/16.
 - Concentrates includes wheat, canola and Michael and Mandy add additives to this figure so that they can compare the cost of blending their own concentrate and minerals with pellets and grain mixes.
 - Pasture and cropping should also include weedicides.

- **Overhead Costs:**
 - Rates are listed as a sundry non GST payment of \$10,348.
 - Registration and insurance are combined. All farm insurance should be included here as well.
 - Repairs and maintenance should also include the vat of \$489.
 - Paid labour should include gross wages super, work cover and also a contractor (\$5,680) who essentially provides a service as a relief milker.

- **Finance costs:**

- The four entries of interest (2) loan payments and tractor loan total \$258,894. The cash flow manager does not reflect the interest and principal components.
- The interest was \$155,867 and the principal was \$103,027 including the chattel mortgage on the tractor and the farm loans.
- Michael and Mandy are very reluctant to revert to interest only in tight years.
- The lease on the 40 hectares is in two parts totalling \$15,998.

- **Capital costs:**
 - These included stock purchases of \$5,522 and new plant of \$3,904.

- **Personal costs:**
 - These included private expenses of \$32,052, and tax payments of \$23,239. Do not enter the tax payments into DairyBase.

- **Assets:**
 - The Shire values for rates purposes are below market value and Michael and Mandy seek an external opinion of the land value.

 - A figure of \$17,877 per hectare is regarded as a figure which would achieve a sale within a 6 month period.

 - This is a total of \$3,933,000 as both the closing value and opening values.

 - Owned plant had an opening value of \$236,000 and closing of \$212,400 plus \$3,904 (\$216,304) due to some small plant purchases.

 - The value of the 40 Hectares leased is \$600,000.

 - Total stock values opening and closing will be automatically calculated based on previous information provided into DairyBase.

- **Liabilities:**
 - The tractor chattel mortgage decreased from \$46,670 to \$27,557.
 - The total of the long term loans decreased from \$2,810,392 to \$2,726,478.
 - This information is available on the opening and closing loan statements.