TASSIE DAIRY
News
May 2020

Dairy HIGH

Dairy HIGH is jointly funded by Dairy Australia and the Tasmanian Institute of Agriculture (TIA).

> Dam earth works are defined under the *Water Management Act 1999* as any earth moving for the construction, erection, enlargement, modification, repair or removal of a dam.

Inside The Issue

Requirement for a Dam Permit

DPIPWE

Building a dam? Do you need a dam permit?

Dams store water for stock, irrigation, dairy effluent and even for garden landscaping purposes. So how do you know when a dam permit is required?

In most cases, earthworks for the purpose of building a dam will require a dam permit which issued by the Department of Primary Industries, Parks, Water and Environment (DPIPWE).

Dam earth works are defined under the *Water Management Act 1999* as any earth moving for the construction, erection, enlargement, modification, repair or removal of a dam. It also applies to any work on an existing dam which may significantly increase the dam's safety risk.

There are two classifications of dams: lower risk dams (Division 4) and higher risk dams (Division 3).

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There are a number of tools, such as the Dam Works Assessment Decision Framework, available on the DPIPWE website to help you classify your dam works. For information on building dams, check out https://dpipwe.tas.gov.au/water/dams.

If you undertake dam works without the appropriate permit this could be an offence under the Water Management Act 1999 and action may be taken against you and the person building the dam. This could include a fine.

As all proposed dams (includes both lower and higher risk) require a consultant or dam engineer to make the assessment of the dam safety category, it is recommended you talk to a dam consultant and get advice on what permit is required. A list of consultants can be found at https://dpipwe.tas.gov.au/water/water-management-forms

If you have any further questions, please don't hesitate to contact waterlicensing@dpipwe.tas.gov.au

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Understanding Breakeven Milk Price and Cost of Production

Symon Jones, TIA

In a recent online Dairy HIGH discussion group, the topic of preparing for next season was discussed. Among other things, the discussion group discussed how to prepare for a potentially lower milk price next season. In an online poll conducted during the discussion group, 55% of the discussion group participants indicated they were using a milk price between $5.51 and $6.00/kg MS in their planning for the 2020/21 season.

Also discussed was the value of calculating your breakeven milk price – as the name suggests, this is the milk price at which your dairy farm business is able to 'breakeven.' This can be a very useful number to know at all times but particularly when milk price signals are uncertain.

Calculating the breakeven milk involves determining your dairy business income and subtracting the cash costs including interest, lease costs, a provision for essential repairs and maintenance and an allowance for drawings. It doesn't have to include depreciation or capital costs that can be delayed in the short term. See Table 1 for example calculation.

Calculating your breakeven milk price

The breakeven milk price is the net milk price minus the calculated cash surplus/deficit in $/kg MS.

The surplus/deficit is calculated by deducting the total expenditure from total income, in $/kg MS.

- Total income includes net milk income, income for livestock sales and other farm income.
- Total expenditure includes farm working expenses (all variable costs), overheads, interest, lease payments and drawings.

The interesting thing about the breakeven milk price is that it is only influenced by the cost of production and the total milk solids produced on the farm and not the change in milk price.

A change in milk price will only increase or decrease the margin (surplus/deficit). This is because it is still costing you the same to produce that milk, regardless of what you get paid for it.

This why the breakeven milk price is a good forward planning tool in your dairy business as you can look at how changing the cost structure in the business and or the total production units impacts on the cash surplus or size of the deficit.

If you know your breakeven milk price, you can plan ahead for different milk price scenarios, and predict your cash surplus/deficit position. It is important to remember when doing this the cost of producing that milk remains the same. If you add in additional costs, for example feeding more grain, your variable costs will change, and therefore your breakeven milk price will change.

Cost of Production

The cost of production is a different calculation to the breakeven milk price but it can also be used for planning purposes.

There are three levels in the cost of production calculation:

1. **Farm working expenses (FWE)** – these are all the cash costs within your business and the number is useful for preparing cashflow budgets and adjusting to changes in input prices or milk price.
   a. FWE = variable costs + cash overhead costs
   b. Variable costs include herd, shed and feed costs
   c. Cash overhead costs include administration, repairs and maintenance and paid labour

2. **Total operating costs (TOC)** – includes the Farm Working Expenses (cash expenses) plus non-cash expenses
   a. TOC = variable costs + cash overhead costs + imputed labour + depreciation +/- feed and water inventory
   b. imputed labour is the value of the farm owners or family operators who are not paid a wage for their time
   c. depreciation is the calculated loss in value of plant and machinery used in the business.

3. **Cost of production (COP)** including inventory change – the calculation includes everything in the above examples with additional livestock inventory change which is an adjustment made for livestock on hand and livestock purchased. This is the most accurate measure where the business is undergoing significant change and is used to calculate profit and return of investment and for comparing business performance in our benchmarking program.

Finance, leasing, principal, capital repayments, personal drawings, tax payments are not included in cost of production calculations.

Table 1: Breakeven milk price calculation

Income	$/kgMS	Total
Net milk (includes dividends)	$6.59	$1,100,000
Net livestock	$0.46	$77,000
Other dairy income	$0.03	$5,000
Net cash income	**$7.08**	**$1,182,000**

Expenses	$/kgMS	Total
Farm working expenses	$4.31	$720,000
Interest and rent	$1.22	$204,000
Tax	$0.23	$38,000
Asset replacement allowance*	$0.42	$70,000
Drawings	$0.60	$100,000
Principal repayments*	$0.00	$0
Total expenses	**$6.78**	**$1,132,000**
Surplus/deficit	**$0.30**	**$50,000**
Breakeven milk price (net milk less surplus/deficit)		**$6.29**

**** These costs do not have to be included.***

Source: DairyNZ

The value of benchmarking

Knowing your business, including the cost of production, is a very useful step in preparing for a potentially lower milk price. Benchmarking not only helps you plan but also allows you to analyse your business performance from year to year and identify areas for improvement.

If you would like to benchmark your dairy business you can do this yourself online using Dairy Australia's DairyBase tool. If you would like help, one of TIA's dairy extension team is able to assist you in benchmarking your business – with either option, your data is kept private.

Information for this article was sourced from DairyNZ and Dairy Australia. You can find the DairyNZ breakeven milk price calculator here: https://www.dairynz.co.nz/business/business-analysis/analysis-tools/breakeven-milk-price/. More information on cost of production can be found in Dairy Australia's Dairy farm business analysis publication.

If you would like to be added to the TIA Dairy HIGH discussion group mailing list, please send your email address to symon.jones@utas.edu.au.

Seasonal outlook

Lesley Irvine, TIA

What is the weather during the first month of winter going to be like?

The forecast from the Bureau of Meteorology indicates it is more likely to be wetter than average for the northern regions of Tasmania (Figure 1).

Figure 1 The chance of exceeding median rainfall for June 2020. Source: Bureau of Meteorology (www.bom.gov.au). Accessed 22 May 2020.

For July, there is a slightly higher chance of exceeding the median rainfall in both the north-west and north-east. For the remainder of the dairy regions in Tasmania, there is an equal chance of July being either drier or wetter (Figure 2).

Figure 2 The chance of exceeding median rainfall for July 2020. Source: Bureau of Meteorology (www.bom.gov.au). Accessed 22 May 2020.

The maximum temperature for June is more likely to be warmer than the long-term median maximum temperature for most the state, except for the north-west where there is an equal chance of it being either warmer or colder (Figure 3). The eastern side of King Island has small likelihood of the maximum temperature being colder than the long-term median maximum temperature (Figure 3).

Figure 3 The chance of exceeding median maximum temperature for June 2020. Source: Bureau of Meteorology (www.bom.gov.au). Accessed 22 May 2020.

The maximum temperature outlook is very similar for the month of July – it is more likely to be warmer than the long–term median maximum temperature for most of Tasmania, except the north-west.

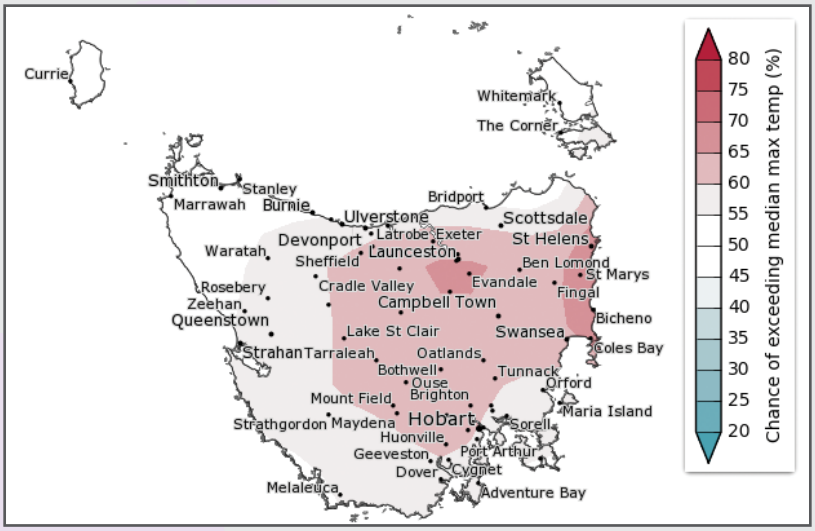

Figure 4 The chance of exceeding median maximum temperature for July 2020. Source: Bureau of Meteorology (www.bom.gov.au). Accessed 22 May 2020.

Similarly to the maximum temperature, the minimum temperature for June is more likely to be warmer in June for all of Tasmania except the north-west. In the north-west there is an equal likelihood of it being warmer or colder than median.

Figure 5 The chance of exceeding median minimum temperature for June. Source: Bureau of Meteorology (www.bom.gov.au). Accessed 22 May 2020.

The likelihood of exceeding the median minimum temperature is slightly lower in July (compared to June) for most dairy regions in Tasmania but it is still more likely to be warmer (than colder) in July.

Figure 6 The chance of exceeding median minimum temperature for July 2020. Source: Bureau of Meteorology (www.bom.gov.au). Accessed 22 May 2020.

Pasture growth

The pasture growth outlook for June and July is positive. Based on the climate forecasts, it is likely to be wetter than average, but not excessively wetter and both the minimum and maximum temperatures are likely to be above the long-term averages. This should lead to at least average or even above average pasture growth for the start of winter.

Soil temperature can be a good guide to potential pasture growth rates. Data from the Smarter Irrigation project weather stations shows soil temperature remain above 10°C at Waterhouse, Elliott and Lileah but is less than 10°C in the Meander district (Figure 7).

Soil temperatures this year are similar as to the same time last year at both Meander and Elliott although are trending slightly lower this season. Higher soil moisture levels can reduce the amount of warming in soils occurring during daylight hours. This means, even if the maximum temperature is higher this winter, soil temperature could still be lower if soil's are wetter. This could lead to lower pasture growth rates.

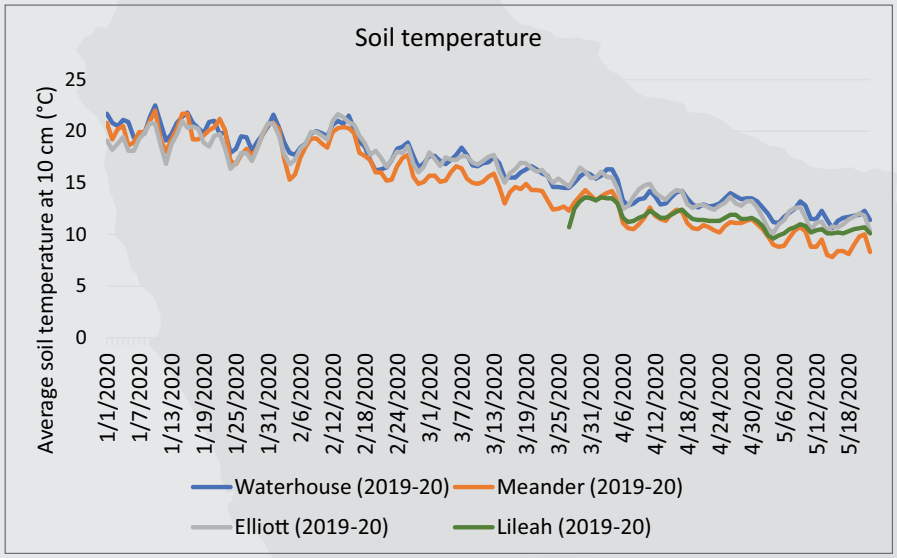

Figure 7 Soil temperature from 1 January 2020 to 22 May 2020 at four of the Smarter Irrigation project's optimised irrigation farms.

Pasture utilisation

Wetter soil conditions can reduce pasture utilisation as there is more trampling of pasture and more pugging damage. Having 'wet day' grazing strategies can minimise damage to soil and the associated reduction in pasture utilisation.

Strategies that minimise damage to soils and pasture include:

- 'On-off' grazing – cows are grazed on pasture for 2-4 hours and then moved to a standoff area
- Allocating two-thirds of feed for the day grazing and one-third for the night grazing
- Grazing paddocks from the back first
- Use of back fencing
- Where possible, using different gateways to enter and exit paddocks

Regardless of whether it is wetter or not this winter, it is highly likely there will be some very wet days. A grazing plan for wet days, that is well communicated to all the team and enacted when needed, will minimise pugging damage and help maintain good pasture growth rates and utilisation through the winter and into spring.

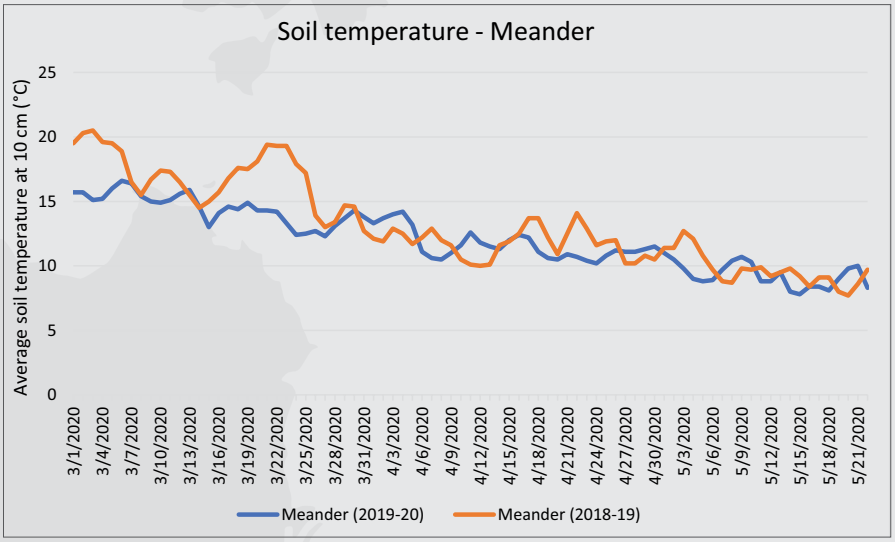

Figure 8 Soil temperature at Meander from 1st March to 22nd May for the 2018-19 season (orange line) and the current season (2019-20; blue line).

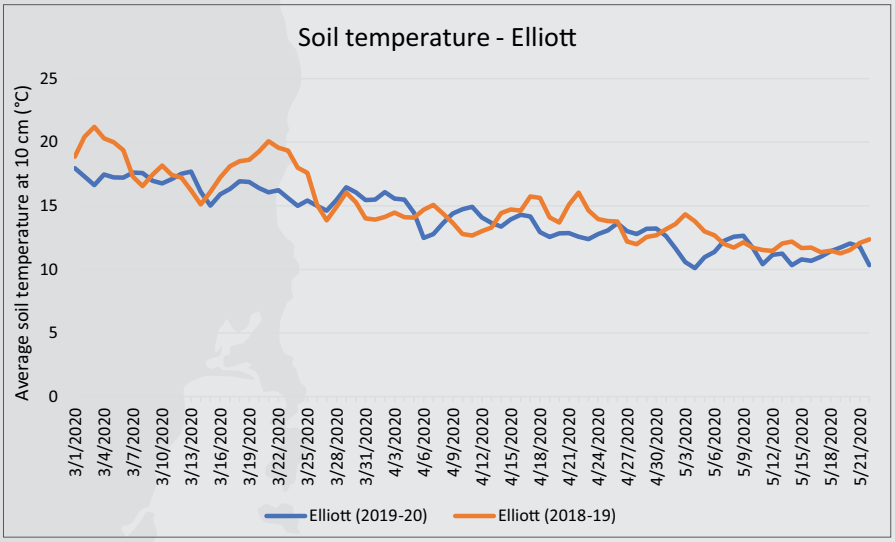

Figure 9 Soil temperature at Elliott from 1st March to 22nd May for the 2018-19 season (orange line) and the current season (2019-20; blue line).

More information:

- Current climate forecasts can be accessed from the Bureau of Meteorology website (www.bom.gov.au). These are updated regularly.
- TIA's Smarter Irrigation project weather stations can be accessed online from the WeatherMation website (weathermation.net.au). Click on the dropdown menu and scroll down to the UNITAS weather stations.
- More information about wet soil grazing management strategies are available from Dairy Australia (www.dairyaustralia.com.au) and Agriculture Victoria (www.agriculture.vic.gov.au).

DAIRY DIARY

MAY	
27 May	Water management need to know, online (DairyTas)
28 May	Tasmanian dairy farmers are the best! A look at the results from the Tasmanian Dairy Farm Monitor Project. 12 noon to 1:30 p.m. Meeting link: https://utas.zoom.us/j/98443277801. (TIA)
JUNE	
2 June	Pastoral Award and Employment discussion with Penny Williams and Andrew Cameron, 10:30 a.m. to 12:30 p.m., online – please RSVP to DairyTas for the meeting link. (DairyTas)
4 June	Dairy HIGH discussion group, online. (TIA)
9 June	Herd fertility tips with Khyle Stewart, 10:00 a.m. to 11:00 a.m. Please RSVP to DairyTas for meeting link. (DairyTas)
11 June	Dairy HIGH discussion group, online. (TIA)
17 June	Legendairy Women's Discussion Group meeting, 10:30 a.m. to 11:30 a.m., online. Please RSVP to DairyTas for the meeting link. (DairyTas)
23 June	What lives in our rivers? 1:00 p.m. to 2:00 p.m., online. Please RSVP to DairyTas for the meeting link. (DairyTas)
25 June	Dairy HIGH discussion group, online. (TIA)

Keep up-to-date by joining the TIA Dairy Discussions Facebook group. If you do not use Facebook, we are also communicating through our regional discussion group email lists. If you don't receive these emails from us and would like to be added to the list, please contact one of the TIA dairy extension team.

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WORKSHOPS STILL BEING DELIVERED

New virtual extension programs

To help prevent the spread of COVID-19, we have altered the way we deliver our extension programs. We are offering our signature Legendairy Ladies Discussion Groups, courses and our regional workshops virtually so you can continue to upskill and inform the people in your business. If you have previously been unable to attend our workshops jump on now as no matter where you are in the state, you can join in without leaving the farm.

Check out the DairyTas Calendar for our upcoming virtual workshops at bit.ly/2zmnLgX, and to stay up to date with Tasmanian Dairy news subscribe to the DairyTas eNews by emailing admin@dairytas.net.au.

Contact us

Dairy HIGH is provided free to all Tasmanian dairy farmers and is funded by Dairy Australia and the Tasmanian Institute of Agriculture (TIA).

For more information, please contact a TIA Dairy extension officer, phone 6430 4953 or email tas.dairynews@utas.edu.au.

Electronic copies of this newsletter are available at www.utas.edu.au/tia/dairy.

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TIA Dairy Discussions

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