

# Dairy Club Technical Notes

## February Checklist

### Water

During the hot weather grass will be drier and cows will need to drink more from the troughs. A thirsty cow can drink up to 15-20 litres per minute, so having enough capacity in the water troughs is important, especially if water pressure is low.

If water troughs are too small, consider putting two small ones in some paddocks and replacing some with bigger capacity ones. A good target is to ensure that around 10% of the herd can drink at any one time and allow 450mm per head. So a 250 cow herd would need 11.25m of trough edge.

Studies recording the daily drinking pattern of dairy cows have shown that the pattern is fairly constant, regardless of the season, but quantities differ.

### Heat Stress

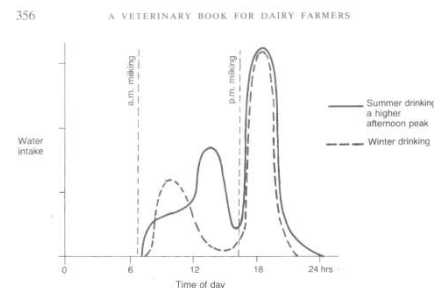
With the hotter and more humid summer days cattle can suffer quite badly from heat stress. The cow produces a lot of heat and unless she can cool herself down dry matter intakes and production can suffer.

As a guide the Temperature Humidity Index (THI) system can indicate when issues might arise. When the THI gets above

### FEEDING CLEAN

It's important to keep feed pads and in-shed feeding troughs clean as old feed harbours mould which in turn produces *Mycotoxins* which are harmful to both stock and staff. *Mycotoxins* can reduce; production, fertility, feed conversion and general health. Be on

- A rise in water intake occurs towards midday.
- There is a larger peak following the afternoon milking.
- This higher peak represents as much as 50% of the daily total and may be drunk over a 3 hour period.



#### Action

- Watch drinking behaviour of the herd. Is there sufficient space or do stress levels rise?
- How often are troughs drunk dry?
- Review whether troughs are big enough and flow rate adequate?

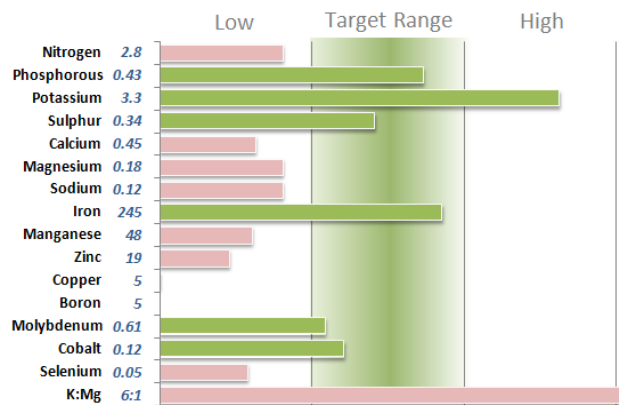


A calculator has been added to the member's area on the website to help you calculate this. Simple temperature & humidity gauges can be bought at the warehouse for less than \$10.

the lookout for runny noses, low intakes and even feed refusal. The same applies for silage faces and silage stack areas. Spoilage from the top and shoulders should not be allowed to contaminate the silage fed out.

## Foraging for answers

There are often many reasons why herds do not perform to their potential. One area which is often given less attention than it should, is the effect that the macro and some of the micro minerals of grass have on the cow. As grass is either the sole component of the diet, or is the major part, the effect that its make-up has on the cow is large. For example, high levels of Iron (Fe) in soils can lead to high levels of Iron in forages, which in turn lead to high dietary Iron intakes. This can cause reduced digestion, scours and a range of other symptoms which will reduce the performance of the herd and cause health issues. It is therefore important to build a picture of these elements through soil and foliar test and review their effect on the diet.



The results of the example grass test above indicate a number of areas for concern. Firstly, low nitrogen levels can result in poorer digestion of feed and low milk solids. Crude protein (CP) is a reflection of the amount of nitrogen in a feed, so to convert N to CP just multiply N x 6.25 therefore in this sample the crude protein is  $2.8 \times 6.25 = 17.5\%CP$ . Typically

diets need to be 18%CP, but many in NZ are well over 20%.

Low calcium and magnesium, which may affect muscle tone and effective rumen function.

Sodium is also low, which can affect palatability of the grass and cellular pressure within the cow.

Low Zinc can affect skin condition, especially on the teats which can leave the cow open to high cell counts and mastitis.

The ratio of potassium and magnesium is also important as excessive potassium ties up magnesium. Here the balance is severely out of kilter due to the high potassium and the low magnesium. A ratio of 4:1 is considered optimum.

Creating a farm map of areas where these high and low levels occur is useful in understanding the effect that the grazing rotation has on the herd. For example, there may be periods where the herd are grazing high K and low Mg pastures, due to the rain the cows are not drinking as much from the water troughs and therefore the Mg that is supplied through the Dosatron is of little use.

### Actions

- ✓ Split the farm up into areas for testing. Use your experience of past problem areas where cows either did not like grazing, or had issues following grazing there.
- ✓ Test the grass in these areas. Testing is not cheap, but neither is a downer cow or a drop in production.
- ✓ Take good advice on what the results mean and what best course of action to take.

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