

### **DairyNZ Tight N farm- Farm Walk Notes:**

**For 18<sup>th</sup> March 2008**

**Target:** Reduce nitrate leaching by 50% from current levels and produce 1200 kg milksolids per ha.

3.0 cows per hectare - 400 kg MS/cow.

7ha and 21 cows

#### **Production year to date:**

Production to March 14<sup>th</sup> is 1017 kg MS per ha which is 5.0% below target and 5.7% below last season. The Control herd has produced 1032 kg MS per ha season to date.

Nitrogen application: To date 99 kg N per ha applied (excluding effluent) compared with 126 N kg per ha on the control herd.

Rainfall for 2008 is 67 mm to date against a long term average of 190 mm.

#### **Current Situation:**

- 48 % of the herd remain in milk this week but all cows will be dried off on 20<sup>th</sup> March. 30% of the herd (all early calvers) were dried off on March 7<sup>th</sup>.
- Average pasture cover has dropped to 1780 kg DM per ha.
- Pasture growth for the last week was <10 kg DM per day.
- Rotation length is 28 days.
- Average body condition score is 3.9 (last year 4.1)
- Average liveweight is 482 kg, the same weight from a fortnight ago. (485 kg last year)
- Milksolids production per cow is 0.70 kg per day and 1.00 kg per ha per day.
- Current production is 57% below the same time last year.

#### **Critical Issues for the Tight N herd:**

- There was 237kg DM /cow of grass silage available for this herd. Only 93 kg DM /cow remains and this is vital for a winter reserve.
- Any feed purchased brings additional N into the farmlet which would compromise the N leaching objective.
- The decision to dry off the herd 15% short of its production target was made today based on low body condition score and the lack of supplementary feed.
- Currently it is possible to feed the herd 7-8 kg DM per cow per day on a 35 day rotation, without supplements. (Feed demand of 19 kg DM /ha /day for a stocking rate of 2.4 cows per ha). This is sufficient for dry cows but not milking cows
- One slight advantage of the drought is that it lessens the risk of N leaching in the immediate future.

- Nevertheless the Herd Home will be used to intercept some urine deposits over the next few months, as the urine patches on pasture will eventually be flushed of N when drainage finally occurs.
- A final pregnancy test for this herd was completed. (Feb 5<sup>th</sup>).
- 3 cows (14%) were confirmed MT. One of these had previously been counted as in calf at 6 weeks. This brings the 6 week in calf rate down to 66%.

### N leaching Results from Winter 2007

Ag Research measured N leaching during the winter of 2007. It was a low drainage year with just 202 mm drainage from June to October. Our records show this would be the 4<sup>th</sup> lowest drainage period for 30 years. The 30 year average is 400 mm. The low drainage meant N leaching levels were reduced by 43% on the control farmlet compared with 2006.

Our objective is to reduce the N leaching on the tight N farmlet to 50% of the level of the control farmlet.

In the winter of 2007 we were able to achieve a 26% reduction on the Tight N farm, more than the 12.5 % achieved in 2006. Of interest is that the Nitrate concentration measured in the ground water on the Tight N was similar to the No N farmlet which is encouraging given the higher stocking rate.

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[http://www.dairynz.co.nz/page/pageid/2145836823/Tight\\_Nitrogen\\_Farm](http://www.dairynz.co.nz/page/pageid/2145836823/Tight_Nitrogen_Farm)

