



**Drenching With Probiotic ProDairy Improves Milk Production**

*Waikato, 2001*

**Introduction**

A field trial was undertaken on a seasonal supply dairy farm near Putaruru in the North Island, to evaluate the production effects of probiotic ProDairy. The sharemilkers milk around 300 Jersey and Jersey/Friesian cross cows on 110 effective hectares of flat to rolling country on the Old Taupo Road. Pastures are typical ryegrass/clover mix. The season (2001/02) was an adjustment phase for the herd, being the first year they milked on this farm.

**Methods**

Trial cows were Jersey breed, divided into two groups (treated and untreated control) of 30 cows each - approximately paired for age and calving date. Cows were individually identified with group ear tags. The treatment cows were orally drenched once a day with ProDairy at afternoon milkings. No other additives were used before or during the trial period. Drenching commenced on August 29 and finished four weeks later on September 26. Daily dose rates were 10 ml/cow for the first day, then 7 ml/cow for the following 4 days, reducing to 5 ml/cow for the remainder of the trial period.

The two groups were herd tested on August 28, 2001 (prior to drenching), September 11 (after two weeks) and on September 26 (end of drenching). Both groups had the same feed regime: all cows were on autumn saved pasture until September 15 when they went on to spring pasture. They remained on this pasture through until the end of the trial. Baled pasture silage was also fed to both groups at 1.4 kg DM/cow (dropping to 1.0 kg DM/cow) from September 6 to September 14.

**Results**

Although data was limited to three herd tests, results indicated greater milk solids and milk volume in the cows drenched with probiotic ProDairy. Multiplying this effect by herd numbers represents an important potential gain for the farmer.

**Table 1: Average difference in production of probiotic treated group over untreated group.**

| Per Cow                | At day 14 (Sept. 11 herd test) |        | At day 29 (Sept. 26 herd test) |        |
|------------------------|--------------------------------|--------|--------------------------------|--------|
| Milk Volume (litres)   | + 0.533                        | + 3.9% | + 0.606                        | + 4.4% |
| Total Milk Solids (kg) | + 0.051                        | + 4.0% | + 0.087                        | + 6.8% |

The above results are shown graphically in Figures 1, 2 and 3 below.



Figure 1: Total average daily milk solids production at each herd test, for group treated with probiotic and for untreated group.

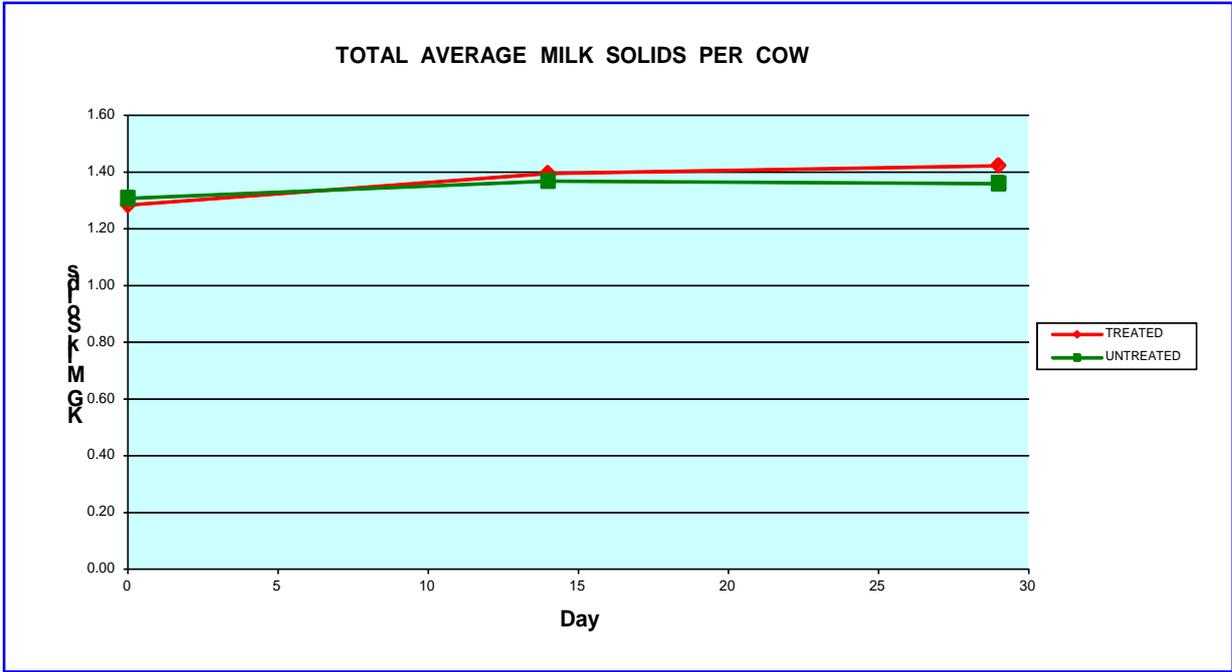
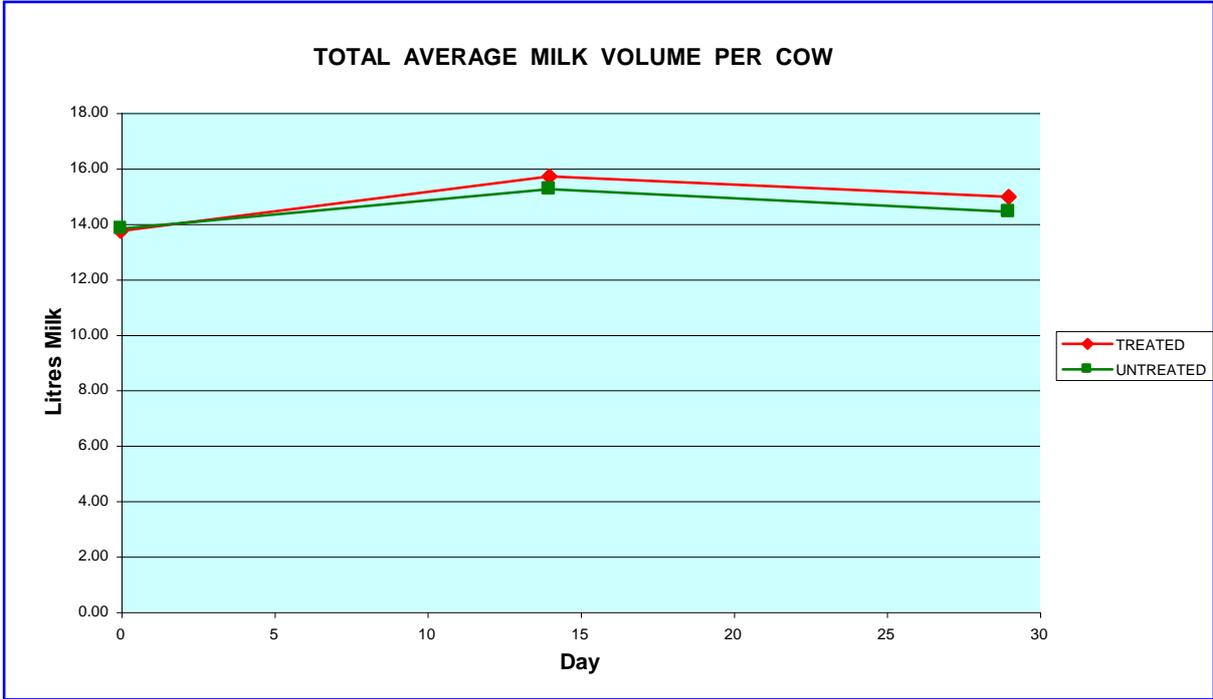
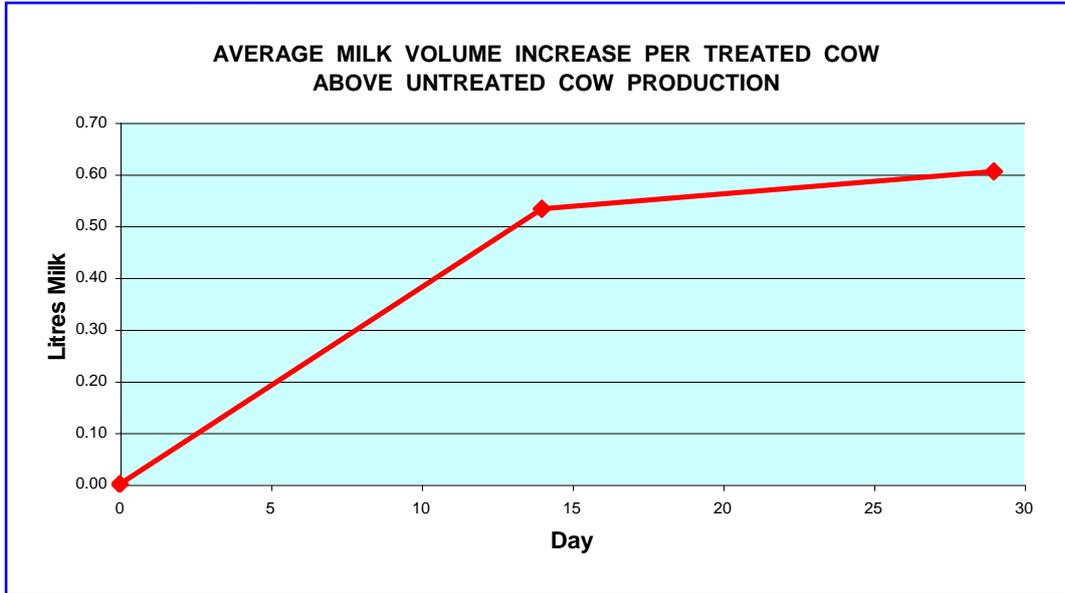


Figure 2: Total average daily milk volume production at each herd test, for treated and untreated groups.





**Figure 3: Average daily difference in milk volume production at each herd test, for probiotic treated group above untreated group.**



### Discussion & Conclusions

Over the four week period, estimated milk solids production of the treated group averaged 0.046 kg MS/cow/day more than the untreated group. In simple terms, at a \$4.90 payout this represents for an owner-operator \$0.16/day average gain per cow ( $\$4.90 \times 0.046$  kg MS less \$0.06 probiotic dose cost). Multiplied by 300 cows, this gives a potential gain of \$48.00 per day or \$1392.00 for the four weeks if the whole herd had been drenched. Note that at the final herd test, estimated production above the untreated group was 0.087 kg MS/cow/day (Table 1, Figure 1). This represents \$0.36/day average gain per treated cow, or multiplied by 300 cows equates to a potential gain of \$108.00 per day.

In summary, drenching cows with probiotic ProDairy in this trial held milk production higher in the treated group when compared with the untreated group.