

## **IFA LIMERICK SURVEY CONFIRMS OFFICIAL SCRUTINY NEEDED ON PROTEIN TESTING**

*In response to farmers' concerns in his County, IFA Limerick Dairy Committee Chairman Richard Kennedy organised a survey over the period of July and August 2005, comparing the protein and butterfat contents of the milk for 53 dairy farmers in Co. Limerick. In this article, Richard outlines the main findings of the survey, and based on its results calls for independent monitoring of protein testing.*

Our survey involved 53 volunteer Limerick dairy farmers. Of those, 26 are Dairygold suppliers, 21 Kerry suppliers, and 6 supply Tipperary Co-op. The survey did not involve split sampling: samples were taken by a trained person once a week on each farm for the period from July to August 05. The samples were tested for IFA by Teagasc Moorepark. The average results for the month were compared with the results on each participant's milk cheque to establish trends rather than make a direct comparison.

Reproduceability tolerances operated in commercial laboratories for butter are plus or minus 0.05%, while tolerances for protein under the reference Kjeldahl test are also plus or minus 0.05%. Outside of those limits, the discrepancies are significant.

We expected that, while the results would not be directly comparable, we would find variations up and down for both butterfat and protein.

What we found was that, while butterfat results did vary randomly above and below tolerance, protein results obtained in the creamery were more likely to be lower than those obtained from Moorepark.

### **Protein: too many creamery results to the disadvantage of the farmer**

Of the 52 test results for the 26 Dairygold suppliers in July and August, 39 or 75% were within the plus/minus 0.05% tolerance. None of the results outside the tolerances showed better results in the milk cheque, and 13 or 25% outside of the tolerance were better in Moorepark. The range of deviances for these results was from 0.06% to 0.11%. While the value of the average deviance as shown in table 1 was 0.32c/l (1.48c/gal), the value of the top 0.11% difference in Dairygold is 0.5c/l or 2.3c/gal.

All but seven of the 42 July and August tests of the 21 Kerry suppliers exceeded the +/-0.05% tolerance, and all of those (83% of results!) showed better results in the Moorepark test. The range of deviances was from 0.06% to 0.12%, with an average deviance of 0.08% worth 0.4c/l (1.81c/gal). The value of the top 0.12% deviance in Kerry is 0.59c/l (2.7c/gal).

Limerick County has a small number of Tipperary Co-op suppliers, and 6 of those participated in this exercise. Of their 12 average results for July and August, all were higher in Moorepark than in the creamery, and only 5 were within the +/-0.05% tolerance, with differences varying from 0.07% to 0.15%. Tipperary being the co-op paying most for protein, the value of the average deviance of 0.117% is 0.65c/l (2.98c/gal) while the top 0.15% difference comes to 0.84c/l (3.8c/gal).

### **Butterfat: do more variable results reflect independent scrutiny?**

On butterfat, the differences between the Moorepark and the Creamery tests tended to be more randomly spread above and below tolerance, which is as one would expect.

Of the 52 test results recorded for July and August for the 26 Dairygold participants, 26 (or 50%) did not exceed the  $\pm 0.05\%$  tolerance. A further 12 results were outside tolerance and better in Moorepark, while 14 more were outside tolerance but reflected a more favourable result from the Creamery. The range of discrepancies exceeding the tolerance was between  $-0.22\%$  (better at Creamery) and  $+0.18$  (better in Moorepark).

As per table 2 below, the value of the average deviance exceeding tolerance up or down in Dairygold is around  $0.33\text{c/l}$  ( $1.5\text{c/gal}$ ).

The 21 Kerry participants' 42 test results for both months also showed differences up and down. 24 results (57%) were within tolerance, and only 2 results were better in Moorepark. 38% of results were more favourable in the Creamery test. The range of deviances outside of tolerance varied from  $-0.25\%$  (better at Creamery) to  $+0.21\%$  (better in Moorepark) – with the average value of deviances up and down set out in table 2.

Finally, the 6 Tipperary participants' experience was different. Of their 12 tests for July and August, 5 were within tolerance, 7 (58%) exceeded tolerance and all 7 were significantly better in Moorepark. The range of differences beyond tolerance was from  $0.06\%$  to  $0.48\%$ .

### **Emphasis on protein requires independent monitoring of testing**

Over the years, protein has become far more valuable on the international market place than butterfat, and co-ops reflect this by paying up to twice more for protein. In addition, the butterfat adjustment of superlevy has led committed dairy farmers to invest resources and expertise on feeding and breeding for higher protein in their herds.

It is crucial that those farmers who work hard to add value to their milk would be properly rewarded, it is also essential that protein testing would be independently monitored. At the moment, it is not so, and I believe this goes at least some of the way to explain the dramatically different trends we found for butterfat and protein.

The one conclusion I draw from this exercise is that our industry needs to be much more serious about consolidating all milk testing in a central independent laboratory.

In the meantime, however, I call on the Department of Agriculture to extend the check testing they carry out on butterfat under the Dairy Produce Act 1924 to protein.

Table 1 – Protein test results comparison

<b>PROTEIN</b>	<b>Dairygold</b>	<b>Kerry</b>	<b>Tipperary</b>
Total no. results for July/Aug 05	52	42	12
% tests within tolerance of +/-0.05%	75.00%	16.67%	41.67%
% tests outside tolerance (better in Moorepark)	25.00%	83.33%	58.33%
% tests outside tolerance (better in Creamery)	0.00%	0.00%	0.00%
Average deviance from tolerance (better in M) in %	0.07	0.08	0.12
Average deviance from tolerance (better in C) in %	0.00	0.00	0.00
Value of average deviance (better in M) in c/gal	1.48	1.81	2.98
Value of average deviance (better in C) in c/gal	0.00	0.00	0.00

Table 2 – Butterfat test results comparison

<b>BUTTERFAT</b>	<b>Dairygold</b>	<b>Kerry</b>	<b>Tipperary</b>
Total no. results for July/Aug 05	52	42	12
% results within tolerance of +/-0.05%	50.00%	57.14%	41.67%
% results outside tolerance (better in Moorepark)	23.08%	4.76%	58.33%
% results outside tolerance (better in Creamery)	26.92%	38.10%	0.00%
Average deviance from tolerance (better in M) in %	0.11	0.14	0.22
Average deviance from tolerance (better in C) in %	0.11	0.11	0.00
Value of average deviance (better in M) in c/gal	1.49	1.53	2.53
Value of average deviance (better in C) in c/gal	1.51	1.26	0.00