



Managing dairy ewes to produce a better outcome for cheese production

Project Aim

The aim of this project is to progress the understanding of the factors that are within a farmers' control that can influence the bacteriological profile of ewes' milk and to evaluate milk quality and composition of a group of milking ewes for unpasteurised cheese production.

Testing Plan

Individual milk samples were taken and sent for Bacterial organism identification using MALDI-ToF analysis.

Milk quality and Somatic Cell Counts were analysed using a Delta CombiScope, model FTIR 400.

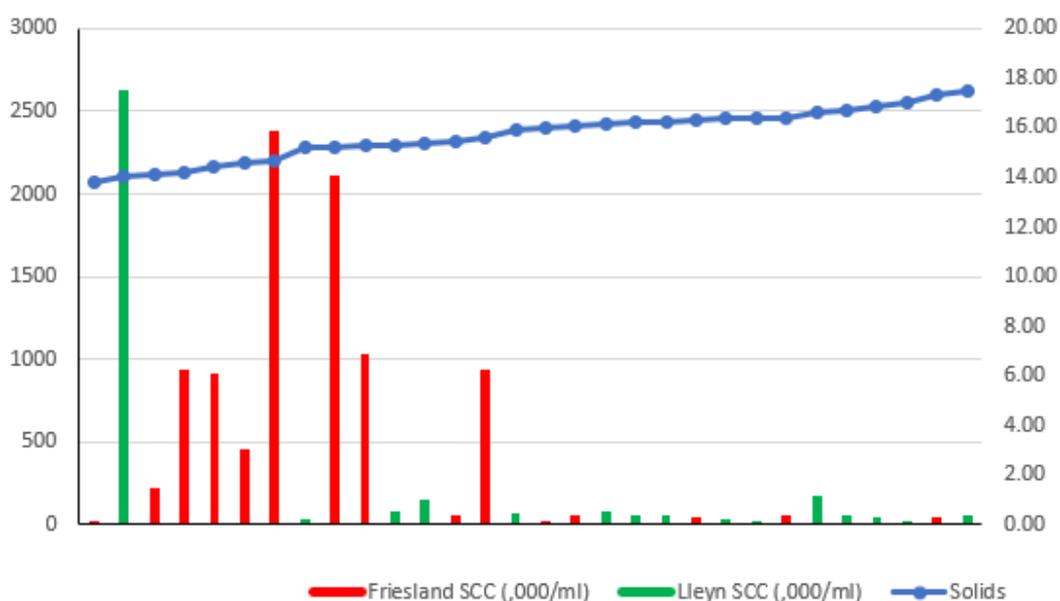
Bulk milk samples included an aerobic plate count, *S. aureus* count and *E. coli* count as well as testing for the presence/absence of *Salmonella* spp, *Listeria monocytogenes* and *E. coli* 0157.

Nasal swabs were taken and sent for Bacterial organism identification.

Milk Quality Findings

- Results show that the majority of ewes with a high SCC produce milk with lower total solids.
- This indicates that ewes with a possible chronic sub clinical infection and high SCC will have poorer milk quality which could have a negative effect on the yield of cheese produced.

June 2019 Individual Milk Samples



Above: Combination graph showing Total Milk Solids of each individual ewe against that ewe's Somatic Cell Count from the June 2019 sampling. The results broadly show that the lower the SCC, the higher the milk solids are.

- No positive correlation seems to exist between nasal and milk bacteriological samples as the overall bacterial population was markedly different.
- The results of giving ewes an increased selenium supplementation is inconclusive after year 1.
- Different bacteria groups were identified which will enable farmers to take the appropriate husbandry actions to improve milk bacteriology.