

## A targeted approach for selective dry cow management can reduce antibiotic usage and aid decision making

Three farmers in north east Wales who milk a total of 1,700 Holstein Friesian cows and operate all year-round calving systems are investigating whether there is a more targeted approach to their dry cow management. It is not unusual for farmers to use antibiotic tubes with teat sealants on every animal at drying off, with many farmers believing antibiotics are long-lasting but in fact, they only last in the udder for a short period. These three farmers are working towards their goal of reducing antibiotic usage without compromising herd health and welfare.



The VetScan DC-Q testing kit

In this project the farmers are using the latest technology by carrying out milk leukocyte differential (MLD) testing using the VetScan DC-Q machine. It is a new and scientifically proven portable diagnostic machine that scans milk samples microscopically. It allows for the sampling and testing of each milking quarter prior to drying off to determine whether individual quarters require antibiotic therapy to combat an intra-mammary infection, or whether they could be dried off using an internal teat sealant in isolation. The test results are available very quickly enabling prompt decision making. For these three farms the whole process from milk sample collection to the results takes about an hour, meaning that dairy managers have access to current udder health data allowing them to be confident in their decision making for every cow.

These are the results of the cows that have been dried off to date. Any cow with a somatic cell count (SSC) level of above 150,000 cells/ml in their lactation or a positive VetScan quarter test was treated with antibiotics and sealant.

Farm 1: Since the beginning of June 2020, 44 cows have been dried off, with 9 on sealant only, and 35 with antibiotic + sealant. Of these 35 cows, 16 would have only been treated with sealant if using the SCC milk records alone which could have led to the development of a flare up of an udder infection in the dry period or at calving.

Farm 2: Since December 2019, 160 cows have been dried off, 81 with sealant only and 79 with antibiotic + sealant. Of these 79 cows, 20 would have only been treated with sealant if using the SCC milk records alone.

Farm 3: Since November 2019, 125 cows have been dried off, 36 on sealant alone and 89 on antibiotics + sealant. 35 of these cows if relying on the SCC milk record alone would have been considered as sealant only. Because this farm only milk records every three months this data can be unreliable at the time of drying off.

All of the farmers are happy with the results of the project to date as they were keen to reduce their antibiotic usage and this has given them more confidence in only using sealant on cows with low SCC.

It is really important to stress that the decision for each cow should be a combination of the recent Vet scan DC-Q milk test and from analysing the SCC history of the individual cows' recent lactation, plus mastitis history. The final decision is the farmers.

The cows that have been dried off within the project so far have been treated at whole udder level (treating all 4 quarters the same), however the next stage of the project is to go down to individual quarter level on all three farms.

The other benefit of reducing the antibiotic use is the cost saving, so far in this period the total saved has been £932.00 this is based on an average cost per antibiotic tube of £1.85 (without vat) this will depend greatly on the antibiotic option for each farm.