

3-11 How to use Somatic Cell Count Information

Somatic cell counts help you control mastitis and milk quality in your herd. Somatic Cell Count Reports identify individual cows requiring special attention.

Individual Cow Somatic Cell Counts

The latest cell count indicates the cow's current mastitis status and should be monitored throughout the lactation. Large increases from normal levels indicate infection.

Cows with high cell counts should be checked for clinical signs at the next milking. Clinical cases should be treated with an appropriate antibiotic. Early detection and treatment will mean you are more likely to cure the infection.

The rate of cure depends on the age of the animal, the number of previous infections and the type of infection.

Treatment cure rates	
First time of treatment	75%
Second time	45%
Third time	12%

Percentage of mastitis infections cured (from 6,000 treated infections)			
Organism	Clinical	Sub-clinical	Drying off
<i>Staph. Aureus</i>	26	52	61
<i>Strep. Agalactiae</i>	85	100	99
<i>Strep. dysgalactiae</i>	90	98	96
<i>Strep. uberis</i>	77	82	87

Cows with high counts that are sub-clinical

It may be advisable to treat these animals in individual cases such as heifers with their first infection. Heifers suffer the largest loss of production if infected and have the highest rate of cure if treated.

Infected quarters of high somatic cell count heifers can be identified with the **Rapid Mastitis Test**. To use the test; squirt a small quantity of the first milk from each quarter into sections of a partitioned container. Add a diluted kitchen detergent (1 part detergent: 4 parts water) to each section then swirl the mix slowly for about half a minute. Milk from an infected quarter thickens to a jelly-like blob.

Older cows are harder to cure and if they are not clinical it may be better to delay treatment until drying off.

Drying off quarters

Cows that have been infected clinically three times during lactation have a 70% chance of being clinical a fourth time, therefore infected quarters of cows that do not respond to treatment should be dried off.

Excessive bulk counts

If your bulk count exceeds the company's penalty level, individual cow counts can be used to identify offending cows. Milk from these cows can be withheld from the vat until the cows are cured and their SCC lowered. In one survey 4% of the cows produced 50% of the somatic cells in the vat, indicating that to reduce the bulk count below the penalty level only the milk from a few cows may need to be withheld.

When to use Dry Cow Treatment

Dry cow treatment aims to cure infections from the previous season and also prevent new infections in the early dry period. Cows should be treated immediately following the last milking of the season. Cows to be treated should be selected on the basis of age, somatic cell count, previous clinical cases and whether they are to be kept in the herd.

The emphasis should be on treatment of young animals as they are more likely to be cured than animals that have been infected for a long time. Dry cow treatment is more successful than treatment during lactation because the antibiotic stays longer in the udder.

The current lactation average SCC

This can be used as a guide when deciding on cows for Dry Cow Treatment. It is also important to follow the SCC trends for each cow within the current lactation. This will ensure cows infected in late lactation are also identified.

The level at which a cow is assumed to be infected with mastitis varies between age groups and herds. Herds with high bulk counts have higher levels at which cows are assumed to be infected (cut off value) than herds with low bulk counts. Two year old cows generally have lower SCC levels than older cows and therefore have a lower cut off value.

Cows with lactation averages or autumn counts higher than the cut off value are probably infected and should receive Dry Cow Treatment.

Recommended cut off values for dry cow treatment are:

Bulk count (Jan - Mar average)	Cut off value for cows	Cut off value for heifers
Below 400,000	150,000	120,000
400,000 and above	Treat all quarters of all cows	

Note: These levels are a guideline only. Herd owners who use cut off values lower than those shown above will correctly identify most of the infected cows but will also include a larger number of uninfected cows in this treatment group.

Culling

Culling cows is ineffective as a mastitis control method unless it is part of a mastitis control programme such as the SAMM plan. (For further information read the Managing Mastitis Booklet available from Livestock Improvement).