

On farm somatic cell testing in dairy goats

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A somatic cell count test is used to indicate evidence of infection and provide a picture of overall udder health. On-farm somatic cell count tests can be useful screening tools to help dairy goat producers manage their herds and improve milk quality. Early mastitis detection may help your operation in many ways:

- Increase milk yield.
- Lower treatment costs.
- Increase premiums.
- Reduce culling rate.

The goals of screening are to:

- Improve overall herd health (by monitoring individual animals).
- Lower bulk tank cell count (by keeping high count milk out of the tank).

SCC test results

Somatic cell counts are widely used as an evaluation tool for milk quality and as an indicator of udder health. Intramammary

The PortaSCC goat milk test easily detects mastitis right on the farm.



infection is the major cause of elevated somatic cell counts (SCCs) in dairy ruminants. In order to assure quality milk supplies, milk producers are held to 'maximum level standards' by health officials.

Herd management decisions should not be based on the results of one test alone.

Testing goat milk

The industry standard for counting somatic cells in goat milk is the Green Stain. This is a microscopic method that differentiates between cells and cellular debris, both of which are shed in the milk. However, it is a complex process that can only be performed in a laboratory by trained professionals.

Other methods for testing goat SCC include various types of cell counters, ranging from large automated instruments used in reference laboratories to smaller portable counters that can be used on a farm.

A rapid non-instrumented on-farm screening tool is PortaCheck's PortaSCC goat milk test which has been specifically developed for goats and validated against the Green Stain. It can be used to detect sub-clinical mastitis at a very low infection level.

Interpreting results

Table 1 shows useful guidelines for interpreting somatic cell test results in your herd.

Table 1. Guidelines for interpreting somatic cell test results in your herd.

Cell count (cells/mL)	Interpretation of results	Suggested action plan
Less than 500,000	Normal	Monitor monthly
500,000 to 1,000,000	Possible weak udder infection	Monitor monthly
1,000,000 to 1,500,000	Indicates possible udder health problems	Monitor weekly
Over 1,500,000	Indicates infection of the udder	Retest within three days. If still high, culture and consult a veterinarian

Sometimes somatic cell counts increase due to non-infectious factors. Certain factors that may increase the somatic cell counts in goat milk are:

- Days in lactation.
- Parity.
- Variability before, during and after milking.
- Acidosis and high grain feeding.
- Caprine arthritic encephalitis (CAE).
- Breed effects.
- Tetracyclines.
- Some nutritional supplements.

One useful way to distinguish between udder health and other factors affecting SCC in goat milk is to compare SCC from each udder half in the same animal. If both tests are high, factors other than udder health may be involved.

Conclusion

While SCC testing is a key component of mastitis management in dairy goats, it is important to integrate it into a complete management protocol in order to have the most impact.

The best way to maximise your investment in testing is to address other issues such as milking procedure, milking hygiene, housing, bedding management, other environmental factors and diet.

All of these practices, if not properly addressed, may contribute to elevated cell counts and mastitis. ■