



# Screening options can help dairy producers detect leucosis in their herds

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The action plan for animal health put forward by Les Producteurs de lait du Québec (PLQ) urges dairy producers to tackle the problem of bovine leucosis in their herds.

The threefold plan for dealing with the disease proposes:

- a screening program adapted to each farm
- an assessment of herd management practices
- the implementation of biosecurity measures

Producers should choose a screening program that takes into account both the prevalence of the disease in their herd (i.e.: the percentage of cows testing positive) and their objectives for their particular operation. An approach that works on the neighbour's farm isn't necessarily the best choice for you. Before taking action, invest in a discussion with your veterinarian.

## A veterinarian has the expertise to help you:

- Understand the impact of the disease
- Choose a testing method suited to your objectives
- Validate your herd management practices
- Implement effective biosecurity measures
- Interpret lab test results appropriately

## Bulk tank testing

A research project conducted recently in Quebec and the Atlantic provinces has shown that the level of antibodies measured in the bulk tank can be used to estimate the prevalence (percentage of cows testing positive) of bovine leucosis in a herd.

Although the test cannot determine the exact number of positive cows, it does give producers an overview of the situation in their herds. Hence, the approach is both cost-effective – since only one analysis is required, as opposed to testing all the cows in the herd – and convenient, because the testing is done on a sample already taken to measure bacteria levels for the PLQ milk quality program.

The truck driver takes the sample at milk pickup, so there is no need for producers to take and send another sample.

Producers can request either periodic testing or a series of analyses (e.g., bulk tank testing twice a year until further notice).

## Cow testing

Another option is to test cows individually, using either a milk recording sample or a milk sample taken directly from the quarter.

Using milk recording samples for testing is an economical and practical choice for many producers. However, because the lab technique used for the leucosis analysis takes longer than the one used for the other milk recording parameters (fat and protein, for example), the results of the leucosis analysis will only be available a few days after you receive your milk recording report.

If you would rather not wait until the next milk test, a milk sample taken directly from the quarter will give you more immediate information about a cow's state of health. The procedure is identical to the one used for GESTALAB between milk tests (see Figure 1).

## Can milk carry-over from one milk recording sample to another (residual milk) affect the accuracy of the test result?

Carry-over occurs when a small quantity of milk from the previous cow in the milking order is retained in the milking equipment, and is consequently incorporated in the sample of the tested cow.

The impact of milk carry-over on the leucosis test has been evaluated. In a conventional milking system, the accuracy of the result remains unaffected as long as the recommended sampling procedure for milk recording is followed.

Carry-over is taken into account in the interpretation of the test result. If there is any doubt as to the validity of the result, the report will indicate that there is a risk of carry-over. If that is the case, you simply need to take another sample directly from the quarter and send it to the lab. Note that the producer is not invoiced when the report indicates a risk of carry-over.

Because the risk of obtaining a "possible carry-over" result is proportional to the percentage of positive cows in the herd, the number of cows with this

type of test result can be reduced by following the directives below:

- Use milk recording samples when the bulk tank test estimates a low prevalence of leucosis in the herd.
- Use samples taken manually directly from the quarter when the bulk tank test estimates a high prevalence in the herd.

Note that when the herd is milked with a robotic milking system, all samples must be taken directly from the quarter, since the occurrence of carry-over is significant with this type of milking system.

## I'm not enrolled on milk recording. Can I still get the testing done at the Valacta lab?

Certainly!

The different testing options are available to all of Quebec's dairy producers.

## Consult your veterinarian

Bulk tank testing or individual testing? A milk recording sample or samples taken manually directly from the quarter? Discuss the options with your veterinarian, who will be able to help you choose the approach best suited to your herd.

Figure 1

LEUKOSIS sampling kit for testing between milk tests



## Blood sample vs milk sample: comparable accuracy

The laboratory diagnosis is usually based on the detection of antibodies directed against the leucosis virus. The test is highly accurate for both blood and milk samples.

