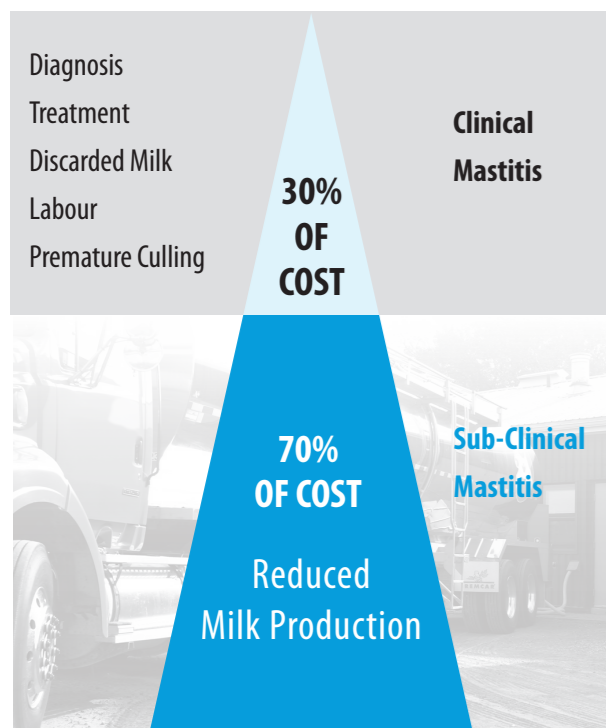
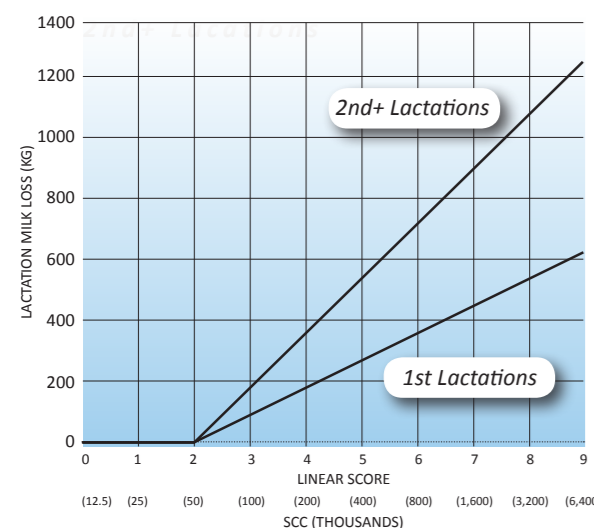


In addition to the obvious costs associated with clinical cases of mastitis, subclinical mastitis is also very costly through the loss of milk production.



Somatic cell counts (SCC), is one of the best indicators of sub-clinical Mastitis, and research has shown that approximately 85% of cows with an SCC level in excess of 200,000 cells/ml are infected with a mastitis causing pathogen. Furthermore, as SCC increases, so does the milk production losses as seen below.



Adapted from G. Shook - University of Wisconsin

EARLY DETECTION IS CRITICAL

Prevention through the use of best management practices is by far the best way to control mastitis, but effective treatment is also part of the strategy. In order to develop effective prevention and treatment programs, reliable and early detection of mastitis is important. Knowing which pathogen you're dealing with, in particular with contagious forms of mastitis, is critical.

THE MASTITIS 3 TEST

The Mastitis 3 test identifies the presence of the three mastitis pathogens commonly referred to as the 'contagious' pathogens, specifically *Staph. aureus*, *Strep. agalactiae* and *Mycoplasma bovis*. These contagious pathogens are often the cause of chronic infections leading to ongoing elevated SCC.

Here's some reasons why using the Mastitis 3 test makes good sense:

IT'S RELIABLE...

The test is based on polymerase chain reaction (PCR), which detects the presence of the bacteria's DNA in the milk sample. You no longer have to rely on the ability of the bacteria to grow under culture conditions.

IT'S CONVENIENT...

The regular DHI sample can be used! No more messing around with time consuming sample collection, storage and shipment.

IT'S FAST...

Once samples are in the lab, results are usually available within a day.

IT'S FLEXIBLE...

You have the ability to test the entire herd, selected cows (such as newly purchased or clinical cows), or cows that exceed a selected SCC level, where those samples will be redirected from the SCC analyzer to the Mastitis 3 test.

IT'S INTEGRATED...

Positive test results, reported as +, ++, or +++ for each of the three pathogens, are displayed on an easy-to-read report and are integrated with other important SCC and DHI information for improved decision making.

OPTIONS TO GET YOUR SCC RESULTS A.S.A.P.

About 30 years ago DHI started to offer Somatic Cell Count testing as an option. This was the beginning of a trend to find more ways to use the milk sample taken on test day to reduce cost, improve convenience, and add value to the service. More recently DHI has taken the next step in 'udder health' testing by introducing the Mastitis 3 (M3) service.

While the SCC service provides the raw cell counts and generates reports for individual cows and the herd as a whole, the Mastitis 3 test is looking for contagious pathogens which could be the underlying cause to the elevated SCC.

To help you make management decisions, these services need to get the results back to you as quickly as possible. As an alternative to the traditional postal service we have adopted many of the newer technologies to speed up the turn around time from testing back to farm.

Options for the return of SCC results include: Reports fax, Internet Reports, and the SCC Alert option with text messaging to your cell phone or e-mail. A brief description and cost of each delivery option follows, in order by speed of delivery. Of course, good old Canada Post continues to be an option.

SCC Alert – Text messaging: The SCC Alert process matches the DHI lab file with the test day file sent by the field staff and creates a list of the 7 highest raw SCC cows in the herd. This is then sent to your cell phone and displayed as a text message. Complete reports follow via mail or on the internet. A no-charge service, however, your cell phone provider may levy text messaging charges.

SCC Alert – E-mail: Follows the same process as the text messaging but sends the raw cell counts for all cows in the herd to your e-mail account. Complete reports follow via mail or on the internet. Both of these options are automated and provide very quick turnaround of results. No charge service.



1.800.549.4373 www.canwestdhi.com

MARCH 2011 NEWSLETTER

SCC SPECIAL EDITION

Welcome to this edition of our newsletter, which is dedicated 100% to the topic of SCC and Mastitis.

By now, most dairy producers will have heard of the National initiative to lower Somatic Cell Count (SCC) penalty level to 400,000 cells, (down from 500,000), by August 2012. The move to lower cell count here in Canada and around the world is positive, both from a milk quality perspective, but also from a producer profitability point of view.

SCC is a very good indicator of Mastitis infections, which to this day, continues to be the most costly disease of dairy cattle, robbing the industry of millions of dollars annually.

Yes, Mastitis infections will be around for as long as we have cows, but improvements are still achievable and the payback is significant. No one has found the 'magic bullet' because it just doesn't exist. SCC and Mastitis management comes down to just that — GOOD MANAGEMENT.

Thirty years after its introduction, DHI routine cow SCC service continues to be one of the best tools available to help manage Mastitis. It's not new and sexy, but it's a reliable, cost-effective tool that allows you to define the situation and the problem.

Defining where you're at is usually the first step in making improvements. We're pleased to be part of the solution.

CanWest DHI

Internet Reports: As the reports are printed for mailing they are posted to the DHI website and can be accessed from the internet by you or your advisor, via passcodes. We send you an automated e-mail letting you know that the reports are available for your viewing. The reports are identical to the reports you are used to receiving in the mail. No charge service.

Reports Fax: After the herd reports are printed and before they are mailed, the reports can be faxed to you. This option is slower because the herd information must have gone through the processing steps (calculating lactation totals, BCA, etc.), and herd reports printed, before they can be faxed to you. It does involve some labour so it is not as fast and carries a cost. On the plus side, you receive complete reports, including SCC percentage contribution to the tank, etc. Cost is \$7.50 per test.

Note: If all of your reports that are normally mailed are set up for *Internet Only* delivery, there is a \$2.00 per test credit applied to your account.

Delivery options for the Mastitis 3 results include mail, fax, and e-mail/internet.

Both the producer and their Veterinarian will receive a copy of the M3 report and the delivery method will be set up for each persons requirements. Whatever method is selected please make certain that the contact information is correct

Mail: The default method if no other option is available. No charge service.

Fax: Many veterinarians prefer this method because its fast and they are able to quickly get back to the farm for consultation if necessary. No charge service.

E-mail/Internet: After the reports are generated the producer or veterinarian will receive an automated e-mail saying the results are available on the CanWest DHI website. The reports can then be accessed from the internet in the same manner as the regular herd reports. No charge service.

Please contact the Customer Service Desk at 1-800-549-4373, or ask your Customer Service Rep on test-day about any of the above speedy delivery methods.



What are somatic cells?

White blood cells in milk, together with a small number of epithelial cells from milk secreting tissues, make up what are known as somatic cells. Somatic cells are produced by the cow's immune system to remove or destroy infection causing bacteria. When infection occurs in the udder, somatic cells are mobilized to go fight that infection.

What does an elevated SCC tell you?

The single most important reason for an increase in SCC is infection of one or more quarters with mastitis-causing bacteria. However, the level of SCC response and rise is not always consistent based on the type of bacteria or the severity of the infection. Based on research, it is well accepted that cows with a cell count greater than 200,000 should be considered as suspect for having a mastitis infection. As the SCC rise, so does the probability of an infection.

What is a normal SCC and can it be too low?

Given that somatic cells play an important role in immune response and fighting infections, a certain amount of cells is to be expected in the milk and is totally normal and even desirable. A count of zero, or extremely low is probably not ideal and may compromise the cows' ability to effectively respond to an infection. Counts in the 25-50,000 cells are perfectly normal, but lower counts should not be a cause for concern.

I'm curious, how is SCC actually measured in the lab?

When a milk sample is analyzed for SCC using an automated method such as at any CanWest DHI Lab, the measuring principle used is called flow cytometry.

This means a very thin string of milk (think thinner than a human hair) is passed under a counting unit. The diameter of the string of milk is such that only one cell can pass under the counting unit at one time. Before passing through the flow cell under the counting unit, the milk is mixed with a fluorescent dye, which dyes the DNA molecules in the somatic cells.

When passing under the counting unit, the sample is exposed to blue light, which excites the dyed cells, making them emit red light. These red light pulses are magnified and counted to give the number of somatic cells per millilitre.

This is a very fast, proven, accurate and reliable way to get your cow's SCC result. To ensure that the instrument is reading the SCC correctly, the lab continually purchases sets of "SCC standards", which is milk that has been analyzed for SCC by drying and staining a thin smear of milk, and having the cells counted by hand under a microscope by a trained analyst.



These samples are very expensive because of the work involved in getting an accurate SCC count, but they confirm the automated instrument performance thus are integral to lab operations. The lab runs these and in-house quality standards for SCC testing weekly, daily, and hourly, to ensure that the instruments continue to give accurate SCC counts when testing.

In addition to these quality control checks, if the lab has more than one instrument testing for SCC, the lab will measure each instrument's performance against the other instruments in the lab, to validate that they agree with each other. This is done on a weekly basis. If the instruments do not agree, the lab will investigate the root cause of the problem and have the instruments serviced to correct the problem if necessary.

SCC naturally goes up in summer months - there is not much that can be done, right?

Only part of this statement is correct! Yes, on average mastitis infections and SCC levels do increase during the hot, humid summer months. HOWEVER, a large number of herds maintain low SCC well below 200,000 cells year-round.

It really comes down to keeping cows cool, dry, clean and minimizing the exposure to environmental bacteria. It does become more difficult to do during hot summer months, but it is very doable.

Reducing SCC



As we are all aware, the national SCC is being reduced to 400,000 in 2012. As I have attended numerous winter meetings across Canada, it is great to see this issue on many dairy farm meeting agendas. Provincial marketing

Boards, as well as other producer groups, are seeking input from different industry partners to address the new requirements.

The common message from everyone is that we will need to **manage** SCC on our farms and a lot of great ideas have come forward.

A speaker recently stated that "Farmers who are not willing to participate in a standard milk recording system will not be able to monitor udder health and will

only temporarily reduce their bulk milk SCC". Others have said, "If you don't measure you can never improve".

Good record-keeping is going to become even more important in order to monitor individual and herd performance. It will require us to establish goals that are realistic and it is most important that we carry out our individual farm management plans to help reduce SCC.

CanWest DHI can be instrumental in helping you manage SCC by testing milk samples to identify different pathogens, and assisting in accurate record keeping. We are offering a reduced price for contagious Mastitis3 testing in 2011 to help farmers better manage SCC.

Remember, DHI offers more than you think!

Ed Friesen
Chairman, CanWest DHI

Ed Friesen is a dairy producer from Kleefeld, Manitoba

Use of DHI data reduces tank SCC and risk of penalty!

A recent study of Ontario herds by the University of Guelph has clearly demonstrated that DHI herds have lower tank SCC. Based on 2009 data, the study shows that non-DHI herds have a 40% higher risk of incurring SCC penalties at the new 400k cell level.

According to Dr. David Kelton of the Ontario Veterinary College, "Not surprising, herds and veterinarians that have routine individual cow SCC data available are in a much better position to monitor and take action on udder health issue. Routine cow SCC continues to be one of the best tools available to assist us with mastitis and udder health management."

Need Mastitis and SCC information?

By far your veterinarian will be your best resource for information. You should work closely with your vet to design best management practices, determine a monitoring and testing plan for your herd, SCC, Mastitis 3 and culture test results interpretation and implementation of an action plan for high SCC and test positive cows.

Want to read up? Visit National Mastitis Council (NMC) at www.nmconline.org or the Canadian Bovine Mastitis Research Network at www.mastitisnetwork.org.

It pays to test! Enrolling on DHI provides immediate payback

The proof is in the pudding! We evaluated 539 herds that enrolled on DHI in the last 10 years and monitored their progress over the first two years of starting DHI. The results were nothing short of outstanding. By the end of year two, the herds on average have improved by:

305 Milk kg.....	+5.0%
305 Fat kg.....	+5.4%
305 Prot kg.....	+3.5%
SCC.....	-10.0%

World renown Mastitis expert is a big fan of routine SCC testing

Dr. Ken Leslie is a big fan of DHI's SCC service. He's a member of the Department of Population Medicine at the Ontario Veterinary College at the University of Guelph and has a birds-eye view of the Canadian and international dairy industry. A large part of Dr. Leslie's career has been related to mastitis research and management.

"A major strength of DHI SCC data is the fact that it is measured routinely, without request, on every cow that is milking."

"Mastitis continues to be a very costly disease for the Canadian dairy industry. In my opinion, the use of DHI SCC data to monitor udder health status is an integral step in limiting the impact of this problem. A major strength of DHI SCC data is the fact that it is measured routinely, without request, on every cow that is milking. Furthermore, this information is returned to the herd in a format that is extremely useful for determining the frequency and distributions of cows with elevated SCC, as well as any changes in udder health status. As an ongoing monitoring tool, DHI SCC data is very difficult to beat, especially when used in conjunction with the Dairy Comp 305 Herd Advisor management program."

Sometimes bulk tank SCCs are high because of only a few bad apples in the herd. Knowing which cows are responsible makes it possible to either deal with them or cull them. But that's only a beginning. For example, the SCC data can also be analyzed to find out whether the cows that have just freshened have significantly higher scores. If so, that might be an area where corrections to the dry cow program, or early lactation program, can be made.

SCC ALERT!

Get your DHI SCC results in record time via email or text messaging and improve your ability to make decisions.

NAILING CONTAGIOUS MASTITIS JUST GOT A WHOLE LOT EASIER.

NOW AT A LOWER PRICE!

MASTITIS 3 SAME SAMPLE, NEW TEST
CONTAGIOUS MASTITIS ID