

# Central Milk Testing Lab Notes

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the cell count doubles and milk production decreases accordingly. For each increase of one linear score, the average loss is 1.5 pounds of milk per cow per day for cows with multiple lactations. For first calf heifers the milk production loss is estimated at 0.75 pounds per day per cow. This loss in milk production adds up over time, especially when many cows in the herd have high linear scores.

Much information about your herd's performance can be gained when reviewing the sheet titled PENNSYLVANIA DHIA SCC MANAGEMENT REPORT.

**RAW SCC and MEAN LS:** The effectiveness of your mastitis control program can be summed by evaluating the Raw SCC and the Mean LS. The Raw SCC is calculated by multiplying the SCC times the pounds of milk produced, then divided by the number of milking cows. The Raw SCC is converted into the Mean LS.

Raw SCC is not a true average of the herd's SCC, but weighted by milk production. Therefore, it can give an indication of milk quality. The Raw SCC will be different from your bulk tank count because not all milk may be going into the bulk tank. Some milk may be withheld because of treatment or other reasons.

**LOSSES DUE TO HIGH SCC LEVELS:** Producers need to be concerned about what mastitis is costing them in lost milk production. Losses due to high SCC levels spells out how milk was not produced by your cows this month and how much this affected your milk check.

**CURRENT INFECTION STATUS** offers another way of looking at your herd's mastitis situation. The cows are subdivided into first lactation and multiple lactation groups. It is important to understand each category.

New listing will be any cow with a LS of 4 or higher for the first time during this lactation. Cows with a current infection have LS of 4 or higher this month. This will include the new cows. Chronic cows have LS of 4 or higher for two months. They may not necessarily be consecutive months, nor do they need to be a current infection. Since a cow can be entered in one or more categories, the numbers will not need to add logically.

**DAYS IN MILK:** The information at the bottom of the page takes the above data and looks at it in a different light by showing the percentage of mastitis infections in each stage of lactation.

**USING AGE AND STAGE OF LACTATION TO HELP CONTROL**

**MASTITIS PROBLEMS**

Since heifers should not be exposed to the organisms causing mastitis before freshening their LS should be low. Hopefully only a few cows in this group will become infected during their first lactation.

Exposure to organisms causing mastitis increases throughout the lactation period. Infection rates often increase after 200 to 250 days in milk. Increase in LS at this time is due to a mastitis infection and not a decrease in milk production. When setting up a mastitis control program, set herd goals. A high percentage of your cows should have LS below 4. A very small percentage should have LS above 6 or 7. If you have a small herd, one cow with a high LS can throw the percentages off. Another way to set your mastitis control goals is by planning to cut your Raw SCC in half every year. For farms with a moderate to high Raw SCC, this goal should be easy to achieve. Remember efforts to lower an already Raw SCC will mean more milk going into your bulk tank.

While trying to understand your herd's mastitis problem, you need to look for patterns that have been set by your herd. This means looking at information on individual cows. This is found on the report named **COWS WITH HIGHEST LINEAR SCC THIS MONTH.**

Of all that is on this sheet, three columns will offer the most information concerning what led to this month's mastitis problem. They are the Percent-Bulk Tank, Times Severe, and Date First Infected.

When thinking of milk quality, you need to know what animals are putting the most somatic cells in the tank. This is true especially if you're close to losing or have lost your premium. On this sheet, cows are listed in descending order by their Testday SCC Linear Score. The Percent Bulk Tank gives the percentage of cells high SCC cows are contributing to the bulk tank. It may be desirable to withhold milk from high SCC cows until their count is lowered.

**DATE FIRST INFECTED:** To gain ideas to possible causes of your mastitis problems, look at the date of first infection column. Determine what months had the most numbers of new infections. During these times something caused a breakdown in your mastitis control program. Ask yourself several questions. Was there a new milker? Were some milking procedures changed? Was there a breakdown in the milking equipment? Was a newly purchased cow added to the herd that could have brought in contagious organisms? Or can it all be blamed on the weather? Now that you have an idea where the breakdown occurred, make changes to correct or prevent them from happening again.

By looking at how many times a cow was severe during her lactation will help in deciding her disposition. She will be listed as severe each time her LS is 4 and above. Of course deciding to cull her or to dry her off early will depend upon several factors. Her age or numbers of lactations, and if

she is confirmed pregnant are just a few considerations.

To be able to fight mastitis successfully, knowing what bacteria is causing problems is helpful. Have your veterinarian or a trained person take aseptic milk samples from a representative group of cows with SCC scores 5 or higher. These cows should not have been treated for at least 5 days prior to sampling. Samples should be cultured to learn what organisms are causing the mastitis. They should also be checked for antibiotic resistance to determine the best drug therapy.

In summary, what you can learn from the individual Cow

SCC can give you an idea on how to lower your herd's Raw SCC and Mean LS. By finding chronically infected cows, management procedures can be practiced to help meet your goals.

1. Milk high SCC cows last.
2. Dry high SCC cows off early.
3. Don't put milk from high SCC cows in the bulk tank, especially if close to losing premium.
4. Don't buy mastitis. Check SCC before purchasing. SCC should be less than 4.

**CHECK LIST THAT HELPS TO LOWER SCC**

1. Have all milking equipment checked by a qualified

service person twice a year.

2. Use good milking hygiene when prepping before milking. Use single service paper towels to wash teats.
3. Dip all teats after milking.
4. Dry treat all quarters when cows are dried off.
5. Keep udders clean between milkings.
6. Prevent injuries to udder and teats.
7. Cull chronic problem cows who don't respond to treatment.
8. Keep housing and loafing areas clean.
9. Identify predominant organisms causing mastitis in herd by culturing.

## Information On The Farm

**GEORGE CUDOC JR.**

**Consulting Dairyman STATE COLLEGE (Centre Co.)** — Dairy farmers and people that provide service to them are changing at a very rapid rate. One of the biggest changes is in the use of information on farms. It is a vast change that the dairy industry is beginning to embrace and is brought on by several key issues.

First in line is the concept that information is power. The very first step to implementation of new management ideas is to be able to evaluate what was done in the past. Performance records are a guiding light to the future by studying past and current milk production and factors that influence them. Knowing where we've been and why is the key to future goals and how to achieve them.

Second, we see the dairy industry relying less on tradition. Even though past generations did as they saw best for the time, modern dairies often need to break tradition and operate completely different than that of their immediate predecessor. Less fear of being different is apparent on many farms, and willingness to change and be different accelerates progress within any industry. Tradition is now used as a learning tool for progress and not accepted as the way to do things just because Dad and Granddad did it that way.

Thirdly, we have greater access than ever before to information. Computers have created this change by being able to retrieve large amounts of statistics and manipulate those statistics into trend setting ideas. As we advance further into this new world we compare the past with the present more easily. This alone will create faster changes in the future.

Lastly, DHIA plays a heavy role in creating change for the future. Those participants in a DHIA program provide the vast majority of information that generates change. Genetics, milk quality, reproductive management, disease control, and nutrient management all rely totally on the review of

statistical information compiled in the DHIA system.

PA DHIA has faced these issues in the past and intends to do so in the future. The newest attempt at making records work for the industry is providing consulting services. Dairy

farm personnel and the advisors that service them can use this tool to interpret DHIA information. A better understanding will lead to dairy farm improvement that will keep up with the fast changing world around us.

## Aggressive Marketing Proves Successful

**DEAN AMICK**

**Director Of Field**

**Operations And Marketing**

**STATE COLLEGE (Centre Co.)** — A very aggressive marketing plan has been put into action at PA DHIA which has resulted in a high substantial amount of new owner sampler herds. Since October 1997, there has been a very successful 37 percent increase in herds which includes a 5,000-cow increase in just one year. These statistics are a direct result in technician willingness to promote their product in a positive and knowledgeable manner. The low cost owner sampler program, which is USDA ap-

proved, allows today's modern dairymen the proper management tools to make proper decisions within their herd. Another way of utilizing this program is to cash in on young sire benefits available through your AI company. Currently, PA DHIA is the national leader with 83 percent of all records being used by USDA. This is direct reflection of the training and professionalism our technician force demonstrates. Our competition doesn't even come close to meeting these useable record requirements. Call 1-800-344-8378 to see how you can benefit from participating in a testing program through PA DHIA.

## 1997-98 PaDHIA Statistics

The 1997-98 PaDHIA test year was completed on September 30, 1998. Pennsylvania DHIA averages for breeds with 15 or more herds are listed below.

Herds averaged 72.7 cows per herd, an increase of 1.5 cows over the last year. Com-

Breed	Herds	Milk	Fat	Protein
Ayrshire	18	15206	589	502
Guernsey	20	14502	653	508
Holstein	2286	20377	742	646
Jersey	92	14357	674	532
B. Swiss	15	17988	710	625
Mixed	173	16555	632	541
All Breeds	2609	19814	730	633

**Cow Removals**

Data from the 1997-98 PaDHIA test year show that 32.3 percent of the cows in tested herds were removed. This is up from 31.1 percent for the previous year. Removals can be divided into two categories: voluntary and involuntary. The

ratio of involuntary culling (83.2) to voluntary removals (16.8) is widening with each passing year. This is an unfavorable trend. Comparisons with other regions of the country are scarce although Virginia recently reported a removal rate of 36 percent on 502 herds.