# Herd Summary Reports

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So much information is contained in the Herd Summary DHI-202 report that we sometimes get bogged down and possibly confused as to what this information tells us and what actions should be taken. The best way to overcome this obstacle is to approach the HS202 with a particular focus in mind. The one constant we have is that Somatic Cell Counts (SCC) are made on every pound of milk we sell and dairymen using DHI services have the opportunity to use individually measured SCC to control and improve udder health in their herds. With that focus in mind let's look at the SCC portions of the HS202 and how to use them. In an attempt to get you to look at SCC as it applies to good animal husbandry and not just from the regulatory side, I have provided Table 1.

**Table 1.** Estimated annual losses due to mastitis.

| Source of loss | Loss per cow | % of total |
|---|---|---|
| Reduced production | $121.00 | 66.0 |
| Discarded milk | $10.45 | 5.7 |
| Replacement Cost | $41.73 | 22.6 |
| Extra Labor | $1.14 | 0.1 |
| Treatment | $7.36 | 4.1 |
| Veterinary Services | $2.72 | 1.5 |
| *Total* | $184.40 | 100.0 |

**Assumptions:** One-third of cows infected in an average of 1.5 quarters; milk loss 856 lb/infected quarter; milk price $12.07/cwt. **Source:** Current concepts of Bovine Mastitis. The National Mastitis Council (NMC), 1996.

Losses from high SCC are many but by far the biggest opportunity comes from the increased production you will experience when you lower SCC. There may be some folks that believe they can profit from improved udder health by physically evaluating milk and treating clinically infected quarters alone, but it is estimated that for every clinical case of mastitis observed there are 15 to 40 sub-clinical cases. The best way to identify these sub-clinical cases is to look for cows with elevated SCC using regular DHI testing.

The first place we should go for SCC management information on the HS202 is the section on the backside bottom right that is part of the "Yearly Production and Mastitis Summary" labeled as "Somatic Cell Count Summary" and ask the following questions.

1. Are we at or below a goal of 200,000 SCC?
2. Are we seeing a declining trend?
3. Is the current test day lower than the yearly average?
4. What percent of the herd is SCC Score = 4 or lower? Goal should be 85%.

## Example of the Yearly Production and Mastitis Summary

| TEST PERIOD PERSIST-INDEX | TEST DAY AVERAGES (ALL COWS) | | | | ROLLING YEARLY HERD AVERAGE | | | SOMATIC CELL COUNT SUMMARY | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | % COWS SCC SCORE | | | | | AVG. SCC SCORE | WT. AVG. ACTUAL SCC |
| | | | | | | | | 0, 1, 2, 3 | 4 | 5 | 6 | 7, 8, 9 | | |
| | % IN MILK | MILK | % FAT | % PROT. | MILK | FAT | PROT. | BELOW 142,000 | 142,000 283,000 | 284,000 565,000 | 566,000 - 1.13 M | OVER 1.13 M | | |
| 103 | 89 | 68.3 | 3.4 | 3.4 | 26433 | 948 | 818 | 59 | 17 | 9 | 8 | 7 | 3.1 | 345 |
| 100 | 87 | 64.1 | 3.6 | 3.6 | 26014 | 934 | 806 | 58 | 15 | 10 | 8 | 9 | 3.2 | 375 |
| 101 | 92 | 65.7 | 3.9 | 3.9 | 25601 | 925 | 796 | 58 | 15 | 9 | 8 | 10 | 3.2 | 337 |
| 107 | 90 | 66.4 | 3.7 | 3.7 | 25180 | 915 | 786 | 67 | 12 | 8 | 7 | 6 | 3.2 | 249 |
| 101 | 90 | 66.2 | 3.8 | 3.8 | 25006 | 909 | 782 | 65 | 11 | 10 | 7 | 7 | 2.9 | 284 |
| 101 | 90 | 67.6 | 3.5 | 3.5 | 24915 | 904 | 781 | 68 | 11 | 10 | 5 | 6 | 2.7 | 235 |
| 107 | 88 | 70.7 | 3.6 | 3.6 | 24838 | 897 | 778 | 69 | 12 | 9 | 5 | 5 | 2.6 | 250 |
| 102 | 88 | 70.8 | 3.7 | 3.7 | 24869 | 896 | 778 | 65 | 12 | 10 | 5 | 8 | 2.9 | 318 |
| 111 | 87 | 75.6 | 3.4 | 3.4 | 25001 | 899 | 781 | 70 | 9 | 8 | 6 | 7 | 2.7 | 264 |
| 105 | 88 | 77.3 | 3.5 | 3.5 | 25180 | 904 | 785 | 70 | 9 | 8 | 7 | 6 | 2.6 | 288 |
| 109 | 91 | 84.0 | 3.5 | 3.5 | 25525 | 918 | 795 | 68 | 11 | 8 | 5 | 8 | 2.7 | 338 |
| 104 | 89 | 78.9 | 3.6 | 3.6 | 25921 | 934 | 807 | 61 | 13 | 9 | 6 | 11 | 3.0 | 463 |
| 103 | 88 | 76.5 | 3.3 | 3.3 | 26226 | 946 | 815 | 64 | 12 | 9 | 5 | 10 | 3.0 | 426 |
| 104 | 90 | 72.0 | 3.6 | 3.6 | | | | 65 | 12 | 9 | 6 | 8 | 2.9 | 319 |

Remember that the Average SCC Score, often displayed as Linear Score (LS), is referring to the average level of mastitis in each cow and is not a weighted average. The actual weighed SCC is similar to bulk tank SCC except that this is a measure of all cows producing milk in the herd and not just those entering the tank.

The animals found in the two columns as %cows with scores below or equal to 4 are those animals rated as non-infected during this test.

Next we should look at the "Stage of Lactation Profile" on the same page but at the top left. Here the data can be used for several decisions.

1. First lactation should be 3.0 SCC Score or below.
2. Mature cows should be 4.0 SCC Score or below.
3. Increased SCC Score as lactation progresses means animals are becoming infected as Days In Milk (DIM) increases.

We also find a section describing the number and percent animals that are considered infected for a number of lactation stages as well as the total. Certainly the emphasis here should be on what SCC Score we see as cows begin new lactations.

There are some common causes associated with rising SCC Score as lactations progresses. Most of these are likely associated with either the environment or procedures at milking time including proper preparation, properly functioning milking equipment, and milking sanitation.

High SCC Scores in the early (1-40 days) part of lactation is typically caused by unsanitary conditions while dry or at freshening, or may be due to ineffective dry cow therapy.

The final place to look at SCC data on the HS202 is on the back page but this time in the middle on the right side. This is the "Current Somatic Cell Count Summary. Each month you can look here to determine current SCC performance of your herd. First lactation animals are listed separately from older herd-mates and our expectations are a bit more aggressive.

1. 90% of the 1st lactation should be SCC Score = 4 or less.
2. 80% of the 2nd or greater lactation should be 80% SCC Score = 4 or less.
3. Severely affected cows are those with SCC Score = 6 or greater. Shoot for no more than 8% of the entire herd in this category.

**Example of the Stage of Lactation Profile**

| | | | STAGE OF LACTATION (DAYS) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 1 THRU 40 | 41 THRU 100 | 101 THRU 199 | 200 THRU 305 | *306* | TOTAL OR AVERAGE |
| NUMBER MILKING | | 1ST LACT | 6 | 9 | 31 | 40 | 31 | 117 |
| | | 2ND LACT | 14 | 33 | 41 | 29 | 39 | 156 |
| | | 3+ LACTS | 18 | 22 | 41 | 44 | 39 | 164 |
| | | ALL LACTS | 38 | 64 | 113 | 113 | 109 | 437 |
| AVERAGE DAILY MILK PROD-UCTION | | 1ST LACT | 67 | 79 | 86 | 76 | 67 | 76 |
| | | 2ND LACT | 81 | 100 | 103 | 86 | 71 | 89 |
| | | 3+ LACTS | 71 | 106 | 109 | 85 | 78 | 91 |
| | | ALL LACTS | 74 | 99 | 101 | 82 | 72 | 86 |
| % FAT & PROT. | 1ST LACT | FAT % | 4.0 | 3.2 | 3.3 | 3.7 | 3.9 | 3.6 |
| | | PROT % | 3.0 | 2.8 | 3.0 | 3.2 | 3.4 | 3.2 |
| | 2ND LACT | FAT % | 3.4 | 3.0 | 3.3 | 3.5 | 3.7 | 3.4 |
| | | PROT % | 2.9 | 2.8 | 3.0 | 3.3 | 3.4 | 3.1 |
| | 3+ LACTS | FAT % | 3.7 | 3.0 | 3.3 | 3.2 | 3.6 | 3.3 |
| | | PROT % | 3.0 | 2.7 | 2.9 | 3.2 | 3.3 | 3.1 |
| | ALL LACTS | FAT % | 3.6 | 3.1 | 3.3 | 3.5 | 3.7 | 3.4 |
| | | PROT % | 3.0 | 2.8 | 3.0 | 3.2 | 3.4 | 3.1 |
| SCC SCR | | 1ST LACT | 2.6 | 2.4 | 1.5 | 1.9 | 3.2 | 2.2 |
| | | 2ND LACT | 2.6 | 1.8 | 2.0 | 2.7 | 4.5 | 2.8 |
| | | 3+ LACTS | 4.5 | 3.4 | 3.4 | 3.2 | 4.4 | 3.7 |
| | | ALL LACTS | 3.5 | 2.4 | 2.4 | 2.6 | 4.1 | 3.0 |
| SCC SCORE > 3.9 | | NUMBER | 10 | 14 | 27 | 21 | 52 | 124 |
| | | PERCENT | 26 | 22 | 24 | 19 | 48 | 28 |

**Example of Current Somatic Cell Count Summary**

| HERD PRODUCTION LOST FROM SCC THIS TEST PERIOD | | MILK = 20,976 $ = 3,081 | | |
|---|---|---|---|---|
| % COWS SCC SCORE | | | | |
| 0, 1, 2, 3 | 4 | 5 | 6 | 7, 8, 9 |
| BELOW 142,000 | 142,000 283,000 | 284,000 565,000 | 566,000 1,130,000 | OVER 1,130,000 |
| 72 | 17 | 7 | 2 | 2 |
| 69 | 8 | 9 | 5 | 9 |
| 52 | 13 | 11 | 8 | 16 |
| 64 | 12 | 9 | 5 | 10 |

Just as we began this discussion, we see that an estimate of milk lost and it's value for the current testing period are reported. Monitoring this relationship between somatic cell count and milk lost can make a difference.