Tennessee Quality Milk Initiative

# Estimating Losses Using Somatic Cell Counts

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## Somatic Cells

- Primarily made up of white blood cells
- Used to gauge the level of infection in the udder

# Factors Affecting SCC

- Infection is primary cause of SCC increases
- Uninfected glands: SCC not significantly influenced by lactation number, stage of lactation, estrus, heat stress, exercise, stray voltage or presence of other infections
- Infected glands: SCC can be exaggerated by factors that cause a decrease in milk production (i.e., a dilution effect)

## **Infection Status**

- < 200,000 cells/ml = uninfected udder</p>
- > 200,000 cells/ml = infected udder
  - I. Infection is occurring
  - 2. Has recently occurred, or
  - 3. The mammary gland is still recovering from an infection, which may take days, weeks or longer
- The more severe the infection, the higher the SCC

## Losses Due to Mastitis

- Decreased milk production
- Discarded milk
- Increased treatment costs
- Premature culling
- Decreased genetic potential
- Decreased reproductive performance
- Death
- Loss of milk quality premiums
- Loss of milk market due to high SCC
- Contamination of bulk tank with antibiotics

Table I. Estimating Production	on Losses and Infection Le	vel Using Bulk Tank Milk So	CC)
Bulk tank milk SCC	% Production loss*	% Quarters infected	
200,000	0	6	
500.000	6	16	
1,000,000	18	32	
1,500,000	29	48	
*Production loss calculated as a p	percent of production expected at	200,000 cells/ml	
Source: Eberhart, 1982			

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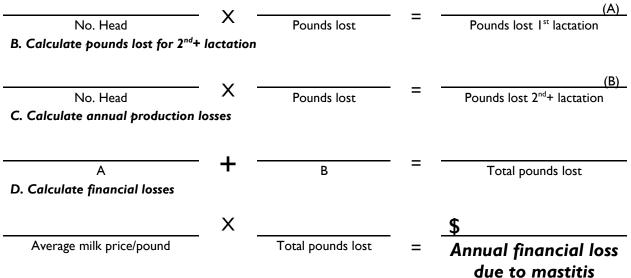
Factsheet

	Decrease in Yield (lbs/305d) <sup>3</sup>		
DHI-SCC Score	Average SCC	Lactation I	Lactation 2
0	12,500		
I	25,000		
2	50,000		
3	100,000	200	400
4	200,000	400	800
5	400,000	600	1,200
6	800,000	800	I,600
7	1,600,000	I,000	2,000

## **Economic Losses From Production**

To calculate economic losses, average the herd (or group) SCC over a one-year period and use Table 2 to estimate production losses per lactation number.

#### A. Calculate pounds lost for $I^{st}$ lactation cows:

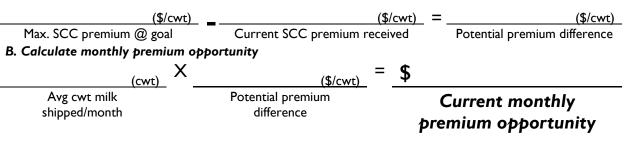


#### **Economic Losses From Premiums**

In some areas, premiums are awarded based on SCC. Premium opportunity information needs to come from the processor or milk cooperative that is buying your milk.

Your SCC Goal:

#### A. Calculate potential premium difference



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