

# MILK QUALITY

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## Consequences of High Somatic Cell Count at First Test

This article is taken from a Hoard's Dairyman Webcast given by Dr. Mark Kirkpatrick from Zoetis. High log 1 is defined as the first milk test (5-45 days in milk) with log linear score > 4 (greater than 200,000 actual somatic cell count). Dr. Kirkpatrick presented data from a study on 164,000 Holstein cows. A high log 1 is a numerical designation of a condition that potentially should be considered as impactful on a cow's lactation as clinical mastitis. Disease incidences are conditions that have an impact on production, reproduction, and longevity.

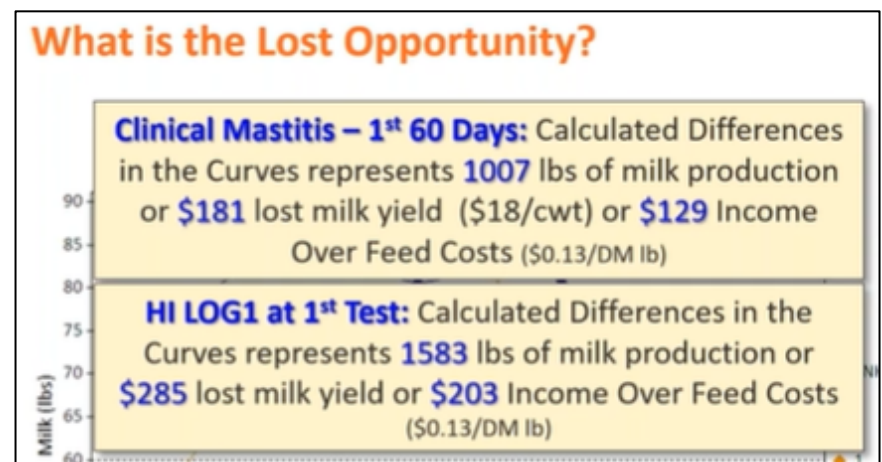
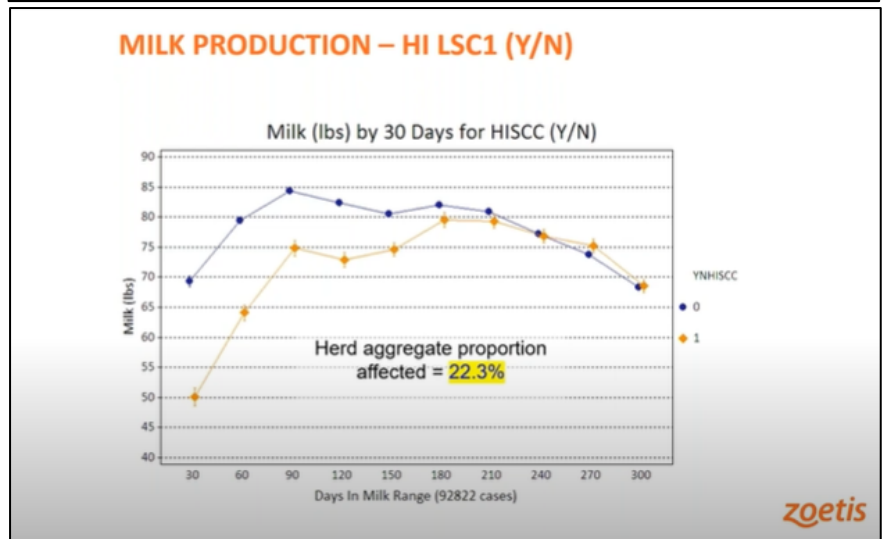
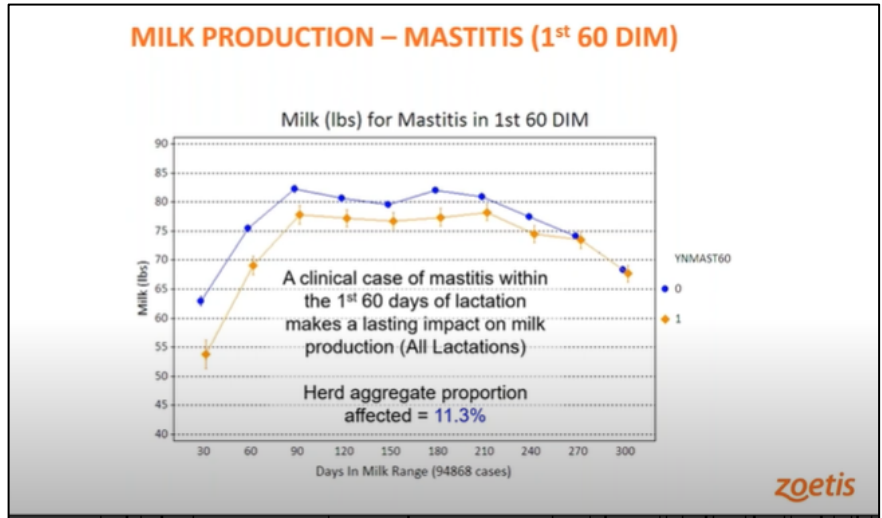
A cow that has a clinical case of mastitis in the first 60 days in milk does not equilibrate with production of a cow that doesn't have a case of mastitis until 270 days in milk. Eleven percent of the cows in this study had a clinical case of mastitis in the first 60 days of milk.

Cows with a high log 1 did not have their production equilibrate until 220 days in milk with a cow with a log 1 < 4. Twenty-two percent of the cows in this study had a high log 1.

There are critical control points in controlling the log 1. The first critical point is to control the environment in the pre-fresh and post fresh area. Often dry cows are forgotten but their environment can have a profound impact on their next lactation.

The second point is to resolve any lingering infections from the previous lactation. Blanket or target dry cow therapy is important for mature cows. Internal teat sealants are another control measure to reduce the number of high log 1 animals. The use of core antigen vaccinations is also helpful in reducing the effects of E. coli mastitis.

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The incidence of mastitis in the first 60 days also has a profound effect on culling and reproduction. Cows with a clinical case of mastitis in the first 60 days in milk have a 6% (8% vs 14%) greater chance of being culled by 60 days in milk and a 10% (11% vs 21%) greater chance of being culled by 120 days in milk. Cows that have a clinical case of mastitis by 60 days in milk also have an increase of 17 days being open, compared to cows with no mastitis.

Cows with a high log 1 also have an increase in culling, clinical mastitis, and days open. Cows with a high log 1 have a 4% greater chance of being culled by 60 days in milk and a 18% greater chance of getting a clinical case of mastitis versus cows with a low log 1. There is also an average of 17 days greater days open versus cows with a high log 1 versus a low log 1.

*Dr. Mark Sosalla of Waupun Veterinary Services offers milk quality services on the farm. For more information or to schedule a farm visit for services, please call the clinic.*

**Effect of Clinical mastitis in first 60 DIM**

	No mastitis	Clinical mastitis	Difference
Lost Milk, lbs (Y/N Mastitis)			1007
Removed by 60 DIM	7.78% <sup>a</sup>	13.73% <sup>b</sup>	5.95%
Removed by 120 DIM	10.97% <sup>a</sup>	20.95% <sup>b</sup>	9.98%
Median Days Open	129 <sup>a</sup>	146 <sup>b</sup>	17

Odds Ratio = 1.89:1

\* a, b denote difference p<0.05

zoetis

## Cleaning out the Back of Free Stalls

August and September are usually the highest month for bulk tank somatic cell counts in our area. This is because of the heat and humidity of the summer. We have had usually "good" milk quality herds spike with high bulk tank somatic cells this summer.

When we run bedding cultures, the counts have come back very high. The recommendation for cleaning out the backs of stalls has been once a year and 3-4 times a year for fresh cow pens. We are seeing more herds getting over 100 pounds a cow per day. This leads to more animals leaking milk in the stalls. We are also seeing more herds running over 150% overcrowded. We should be cleaning out stalls more often especially in overcrowded and high producing herds.

