

## Part 2: What drives profitability on commercial dairies?

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This month continues the discussion of factors related to profitability on dairy farms. The study by Zoetis and AgStar identified 6 factors related to profitability including net herd replacement cost (NHRC), pregnancy risk (PR), heifer survival rate, ECM shipped per cow per day, somatic cell count (SCC), and death loss. This column will discuss the last 3 factors.

It seems like a no-brainer that more milk per cow equals more profit. However, there are multiple factors that contribute to milk per cow including SCC, death loss, feed cost, days open, and production efficiency. Put simply, healthy cows make more milk, particularly marginal milk, which is the milk produced after fixed costs are paid. In this study, the difference between the top and bottom 1/3 of herds was \$1.44/cwt, or \$85,000/year.

SCC was one of the largest factors identified. The difference in SCC between herds was surprisingly small. The top third of profitability herds were found to have bulk tank SCCs of 196,000 cells/mL versus 239,000 cells/mL for the bottom third. However, production for the high milk quality herds in this study averaged 91 lb/cow/day ECM versus 72 lb/cow/day for the low herds. This was calculated to be \$1.14/cwt or \$115,000 more net income for average herd size in the study. Why the difference? For every 100,000 increase in bulk tank SCC, milk yield declined 5.2 lb. This is higher than suggested by previous studies, probably because milk production has increased per cow and mastitis affects aspects of health, reproduction, culling, and death loss. To summarize, managing cell counts = more milk per cow. SCC premiums are a very small part of the profit truly achieved by aggressively managing cell counts.

Finally, death loss (both calves and cows) was also a major factor related to profitability. This study showed the risk of death loss varied between farms. Death loss appears to be a good proxy for animal health and husbandry. The top third of herds with the lowest death losses were \$0.86/cwt more profitable than the lowest third of herds. This approximates to \$70,000 per year.