Impact of Trace Mineral Nutrition

SCC Scores and Udder Health

As producers strive to meet increasingly stringent somatic cell count (SCC) regulations, there is a renewed interest in the benefits of trace mineral supplementation. Producers reap several economic benefits from decreasing their herd's SCC scores, as improved mammary health and decreased SCC may lead to:

- Potentially higher milk premiums for lower SCC
- Higher milk yield
- Improved reproductive performance
- Decreased involuntary culling

IMPORTANT FUNCTIONS OF TRACE MINERALS

Disease Resistance	Somatic Cell Count	Skin and Mammory Health
Zn, Cu, Mn, Fe, Se	Zn, Cu, Mn, Se	Zn, Cu, Mn, Se

Key Research Finding:

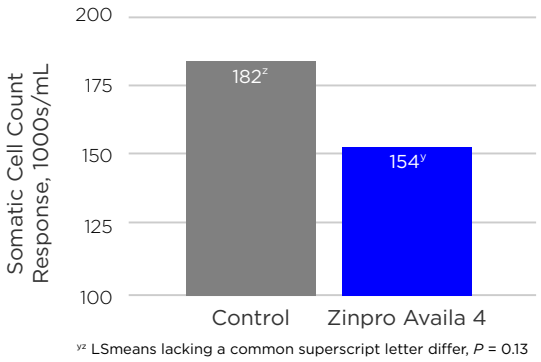
Feeding the trace minerals found in ZInpro® Performance Minerals® to dry and lactating cows helps improve immune function and milk production, while also delivering greater reproductive performance.

Decreasing SCC Scores

Stress, parturition and negative energy balance contribute to a significant depression in immune competence, leading to a greater chance for mastitis in early lactation.

Achieving optimal immune cell protection (and function) requires a bioavailable supply of trace minerals (Zn, Mn, Cu, Se, I, Co and Fe).

Impact of Zinpro® Availa® 4 on SCC



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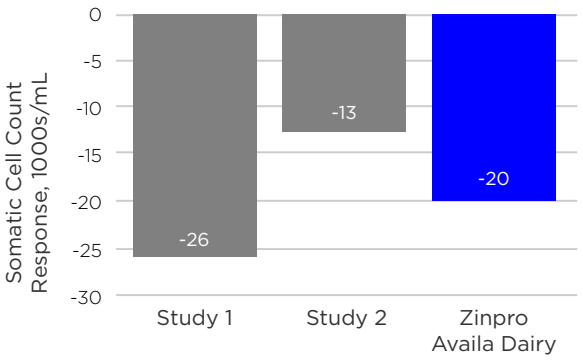
A summary of 5 studies found that feeding the highly bioavailable forms of Zn, Mn, Cu and Co found in Zinpro Availa 4 resulted in:

15% ⬇ SCC

Zinpro Availa 4 Feeding Recommendations	**7 g/cow/day**

Impact of Zinpro® Availa® Dairy on SCC



Two recent studies have shown on average a 20% reduction in somatic cell count when Zinpro Availa Dairy is fed to dairy cattle compared with inorganic trace minerals.

20% ⬇ SCC

Zinpro Availa Dairy Feeding Recommendations	**14 g/cow/day**

Contributing Factors

Factors associated with poor mammary health and mastitis infections include:

- Depressed dry matter intake in late gestation and early lactation
- Hypocalcemia and ketosis in early lactation – leads to poor immune cell function
- Poor cow hygiene
- Poor cow comfort, social and environmental stress and lameness

Opportunities

The NMC (formerly the National Mastitis Council) has developed a five-point control plan for improving mammary health and SCC.

1. Post-milk teat dipping
2. Dry cow therapy
3. Pre-milking hygiene
4. Proper function and operation of milking equipment
5. Appropriate treatment of clinical cases

ZINPRO®

For more information: contact your Zinpro representative or visit **zinpro.com/dairy**