



Mastitis

Summary

- Mastitis is the most common disease in the dairy industry and identified as the third reason cows are permanently removed from a herd (NAHMS, 2014).
- Mastitis results in considerable economic losses for dairy producers. Clinical cases during the first 30 days of lactation have been estimated to cost \$444 per case (Rollin et al. 2015).
- Feeding OmniGen® has been proven to help reduce the incidence of mastitis by supporting the immune response to mastitic bacteria, thereby improving milk quality.

Introduction

Mastitis occurs when pathogens invade the mammary gland. Due to this infection, the immune system starts an inflammatory response recruiting white blood cells to the mammary gland. In subclinical mastitis, there is an increase in somatic cells count (SCC) but no visible change in milk appearance. On the other hand, in the case of clinical mastitis there is a visible change in milk characteristics including change in color, watery or bloody appearance and clots.

OmniGen nutritional specialty product from Phibro Animal Health Corporation has the proven capability to minimize the adverse effects of mastitis in dairy cattle by improving immune response. A healthier immune system leads to reduced mammary gland infection, cases of clinical mastitis, and SCC. With more than 10 years of research and numerous publications, OmniGen has supported the dairy industry by improving immune response.

Lowering the Incidence of Clinical Cases of Mastitis

With improved immune response to the infection, animals fed OmniGen have a lower incidence of clinical mastitis.

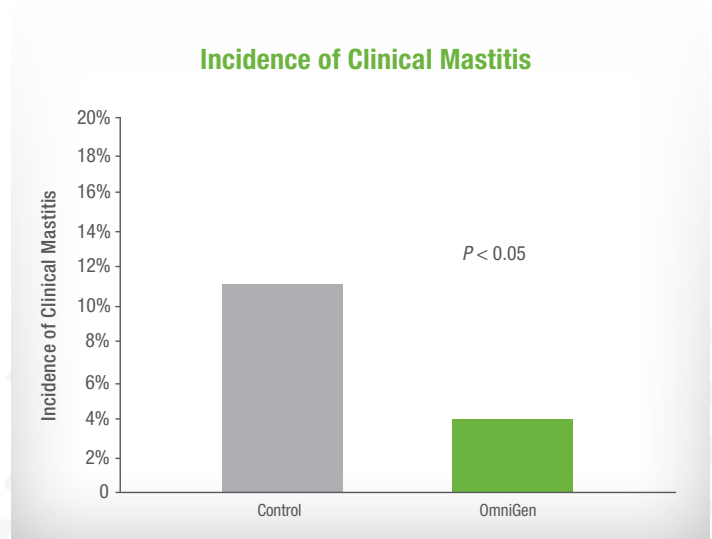


Figure 1: Mammi et al., 2018.

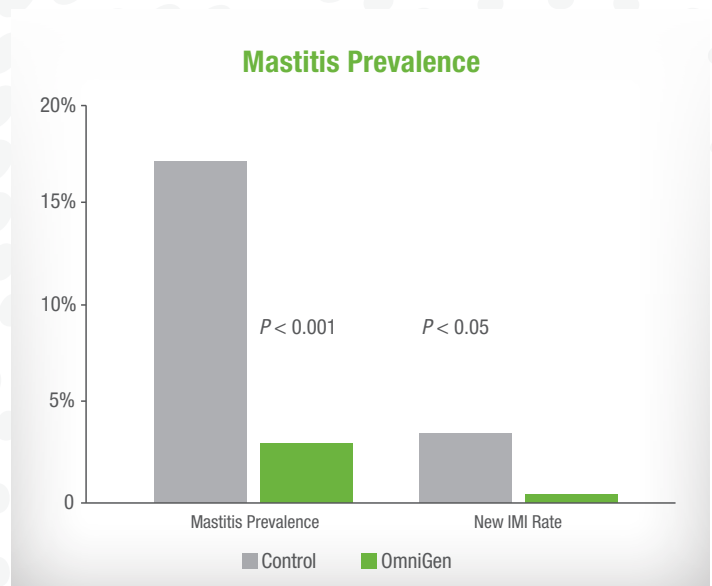


Figure 2: Nickerson et al, 2019.



Decreasing Somatic Cell Counts

Somatic Cell Counts have gained the attention of many producers due to premium payments on milk loads with SCC below certain thresholds. Also, elevated SCC is associated with subclinical mastitis and related to loss of milk production. OmniGen has been shown to improve immune function in dairy cows which can lead to reduced SCC and the incidence of subclinical and clinical mastitis, which ultimately helps dairy producers.

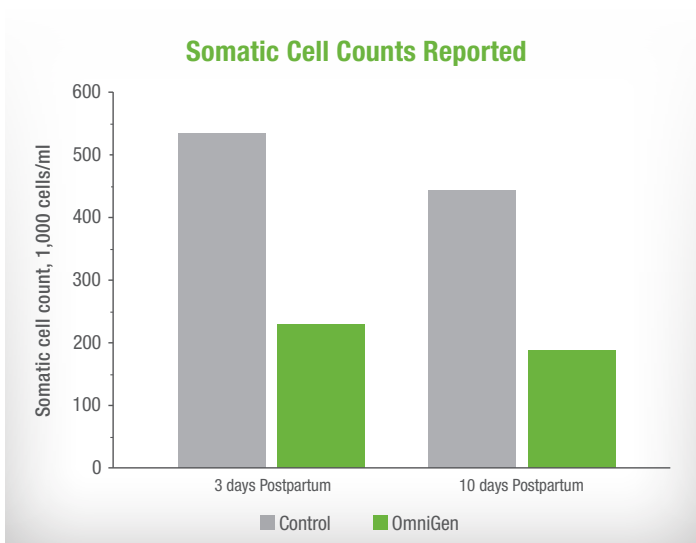


Figure 3: Nickerson et al, 2019.

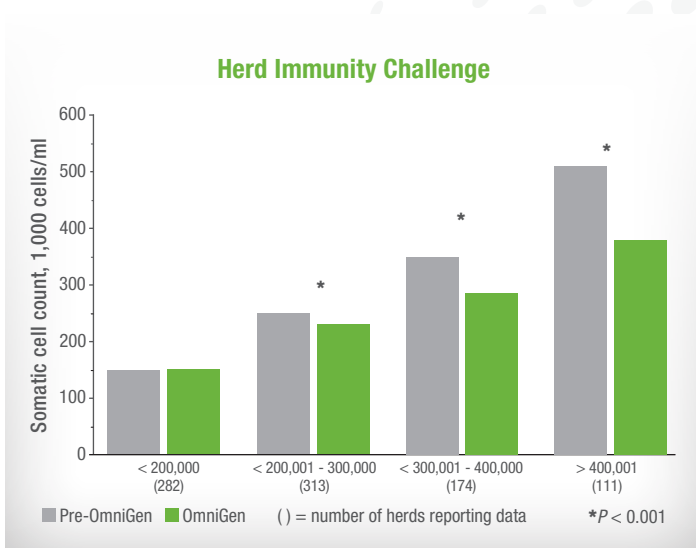


Figure 4: 1,004-Herd Immunity Challenge, 2019.

Improving immune response to mammary gland infection

OmniGen improves the immune response in dairy cows by increasing the responsiveness of the immune cells to a pathogen or immunological challenge.

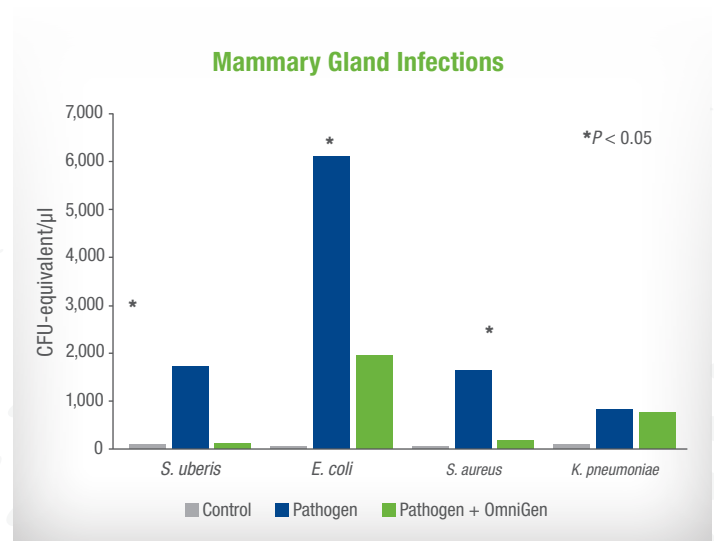


Figure 5: Rowson et al., 2011. Animal 5:220-229.

References

- Chapman, J. D. Nutritional Strategies for Managing Stress in Dairy Cattle for Improved Herd Health, Milk and Milk Quality: 1,004-Herd Immunity Challenge Summary with OmniGen. PAHC Reference #OG210719GLB Available upon request.
- Mammi et al. 2018. Immunomodulant feed supplement to support dairy cows health and milk quality evaluated in Parmigiano Reggiano cheese production. Animal Feed Sci and Tech. 242:21-30
- NAHMS, 2014. Dairy 2014: Section I.A: Population Estimates, Diseases, Removals, and Deaths. USDA, Animal and Plant Health Inspection Service, Veterinary Services, Center for Epidemiology at Animal Health, Fort Collins, CO.
- Nickerson et al. 2019. Effects of an immunomodulatory feed additive on intramammary infection prevalence and somatic cell counts in a dairy herd experiencing major health issues. Res. Vet. Sci. 124: 186-190
- Rollin et al. 2015. The cost of clinical mastitis in the first 30 days of lactation: An economic modeling tool. Preventive Veterinary Medicine 122 (2015) 257-264
- Rowson et al. 2011. Effects of an immunomodulatory feed additive on the development of mastitis in a mouse infection model using bovine-origin isolates. Animal, 5:220-229

This information has been prepared for industry technical professionals.