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Organic Dairies Face Fertility Challenges and Opportunities

Management practices may help offset reproductive challenges resulting from organic agriculture regulations and certification requirements, according to a review in *Applied Animal Science*

Philadelphia, PA, July 29, 2019 The demand for organically produced food has increased in the United States. The number of certified organic dairy cattle has increased by more than 20% during the last decade, making organic milk production one of the fastest growing segments of organic agriculture in the country. However, dairy herd fertility has been in a declining trend for the last 50 years, and U.S. organic dairy regulations add additional reproductive challenges. Management practices adopted by some organic dairy farms may help mitigate those challenges.

Most studies show an antagonistic relationship between milk production and fertility. However, both the use of crossbred cows and lower levels of milk production have been associated with higher fertility. Organic dairy farms are three times more likely than conventional dairy farms to have herds composed primary of crossbred cows. Many studies have also shown that organic dairy farms have lower milk yield per cow than conventional dairy farms.

The most evident limitation related to reproductive management faced by organic dairies is the impossibility of applying estrus or ovulation synchronization protocols. “There is consensus that the use of hormonal interventions has reduced the effect of declining fertility in dairy herds,” said lead author Pablo Pinedo, from Colorado State University. “However, the use of antibiotics and hormones (excluding oxytocin for postpartum disorders) is prohibited for organic dairy farms in the United States. Consequently, reproductive management must rely on the different strategies that are available for estrus detection.” New technologies, for example, have enhanced the accuracy of estrus detection, with improvements from 55 to 80% in heat detection rate reported when visual detection methods are replaced by automated systems.

Applied Animal Science Editor-in-Chief David K. Beede said, “Organic dairy production is growing in the United States. Due to certification requirements and regulations, organic dairies have unique reproductive management challenges. Although some factors may reduce fertility, there are other unique attributes of well-managed organic herds that may result in improved fertility.”

“The effects of suboptimal health and comfort on fertility have been clearly established in both conventional and organic operations,” Pinedo added. “Dairies have witnessed a shift in the approach to disease, with more emphasis on the implementation of managing strategies for disease prevention, rather than treatment. In addition, an increased focus has been placed on closely monitoring populations of cows at risk. This strategic change is clearly advantageous in organic systems, where therapeutic options are more limited and prevention of disease has a dominant role.”

The review appears in the August issue of *Applied Animal Science*.

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NOTES FOR EDITORS

“INVITED REVIEW: Unique reproductive challenges for certified organic dairy herds,” by P. J. Pinedo and J. Velez (DOI: https://doi.org/10.15232/aas.2019-01863), *Applied Animal Science*, Volume 35, Issue 4 (August 2019), published by FASS Inc. and Elsevier Inc.

Full text of the article is available to credentialed journalists upon request; contact Brittany Morstatter at +1-217-356-3182 ext. 143 or arpas@assochq.org to obtain copies. To schedule an interview with the authors, please contact Pablo Pinedo at +1-970-491-8300 or pablo.pinedo@colostate.edu.

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