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Invited presentation

Timed artificial insemination in dairy cattle

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Abstract

Intensive genetic selection for milk production without attention to reproductive performance has contributed to an inverse relationship between milk production and reproduction. Therefore, estrus detection and animal identification have become increasingly difficult in dairy herds because of rising herd size and milk production. Poor estrus detection and low fertility to insemination at a detected estrus are severe problems for dairy farms. The increasing size of herds necessitated the development of more systematic programs for the management of reproduction. Because of the impact of high milk production on reduced expression of estrus, timed artificial insemination (TAI) has become an important component of management of reproduction in high-producing herds. With the use of TAI, the average calving interval in USA has been reduced by 21 days over the last decade without any decrease in pregnancy rate per AI. Over the past 20 years, numerous fixed-time AI programs have been developed. However, a TAI protocol has not yet been developed that can be successfully implemented in all dairy farms. Many physiologic, nutritional, cow comfort, and health issues can affect the success of these programs. Matching the use of TAI programs with the farm conditions, goals and staff structure is probably most critical for success of these protocols on specific dairy farms. It is much more useful for Veterinarians to learn the conditions for the success of these synchronization programs, that is to learn the logic of TAI, instead of memorizing and practicing of developed synchronization programs. Therefore, the factors affecting pregnancy rates of TAI programs will be summarized in this presentation.

Keywords: dairy cattle, ovulation synchronization, timed insemination

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