

Comparing the Economic Reproductive Performance of Timed Artificial Insemination and Different Levels of Estrus Detection

- The objective of the study was to evaluate through daily dairy herd simulation what type of reproductive program that combined timed artificial insemination (TAI) with estrus detection (ED) will return the largest herd profit.
- Eighteen different programs were tested against a control:
 - Control was a TAI program having a conception rate (CR) of 42% in first service and 30% in later services
 - Combined TAI and ED programs varied between 30 to 80% in ED service rate, between 25 to 35% in ED CR.
- Depending on the conception rate relationship between the TAI and ED, combined programs could underperform or outperform the pure TAI program

RESOURCES

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- The net value of a combined reproductive program in relation to the pure TAI was:
 - Lower when the ED CR was 25%
 - Slightly higher when the ED CR was 30%
 - Much higher when the ED CR was 35%
- The combined reproductive program with ED CR of 35% in relation to the pure TAI had:
 - Higher pregnancy rate
 - Lower calving interval
 - Lower herd average days in milk

Excerpt from: Giordano, J. O., A. Kalantari, P. M. Fricke, M. C. Wiltbank, and V. E. Cabrera. 2012. A daily herd Markov-chain model to study the reproductive and economic impact of reproductive programs combining timed artificial insemination and estrous detection. *Journal of Dairy Science* 95:5442-5460.

