Reproductive performance of dairy cows following estrus synchronization treatment with PGF2α and progesterone

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Objectives
To quantify and compare reproductive performance of dairy cows following estrus synchronization treatment with PGF2α and progesterone (CIDR), with that of untreated control cows.

Methods
In total, 168 primiparous (PP) and 214 multiparous (MP) high-producing Holstein cows were studied over 6 months. Clusters of cows were formed at 2-week intervals. The cows in each cluster were categorized according to parity and days in milk, into one of two reproductive managements:

1. Synchronized Reproductive Management
Cows (n=202) received two PGF injections given 14 days apart. An intravaginal device containing progesterone (CIDR), which was inserted 9 days after the first PGF injection, was removed when the second PGF injection was administered. Cows that manifested estrus during the next 7 days were inseminated. Cows not observed in estrus were treated again. In both groups, AI was performed once daily a.m., following estrus.

2. Conventional Reproductive Management
Cows (n=180) were inseminated following the first estrus detected after the end of the VWP.

Introduction
Studies have shown that high progesterone levels during the luteal phase preceding first artificial insemination were associated with higher conception rates in dairy cows.

Conclusion
Estrus synchronization treatment with PGF2α and progesterone, improved the conception rate at 1st AI, and pregnancy rate at 120 d after calving in high-producing dairy cows.