Differences in Conception Rate across Breeding Protocols in Dairy Cattle

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INTRODUCTION

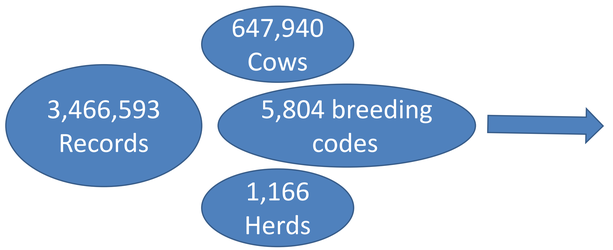
- Estrus detection has become more difficult due to its decreased expression in high-producing dairy cows
- Technologies such as activity monitors and timed AI protocols have been developed to alleviate the pressure of estrus detection
- Records from DHI's DairyComp herd management software were analyzed to gauge the effectiveness of such technologies

OBJECTIVE

To determine conception rates of various breeding protocols on commercial herds

MATERIALS & METHODS

- The DHI DairyComp data consisted of:

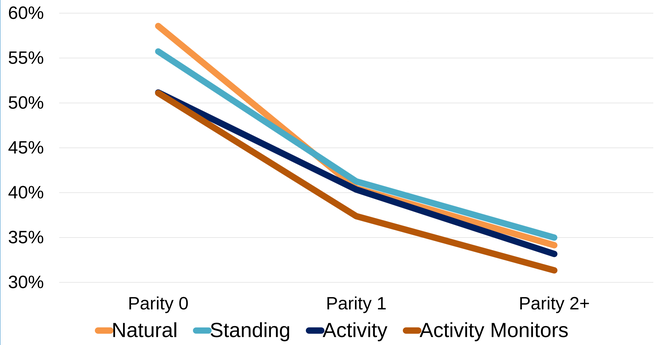


Breeding codes found across herds:
- 2,046 unique breeding codes
- 65 on 10+ herds
- 312 on 2–9 herds
- 1,668 on single herds

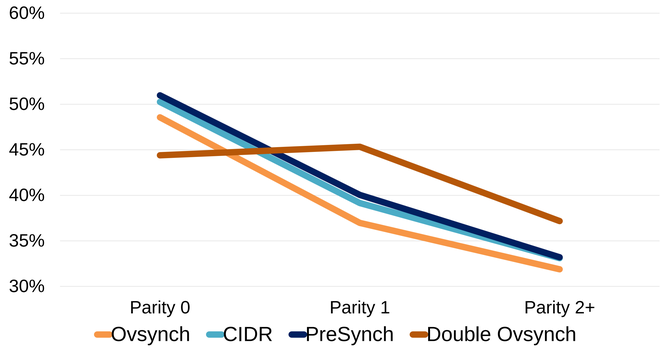
- Breeding codes describe the breeding protocol that took place
- Codes are unique per herd, leading to numerous ways of recording the same protocol
- Pattern recognition used to group breeding protocols
- The top 4 Heat Detection and Timed AI protocols were identified for comparison

RESULTS

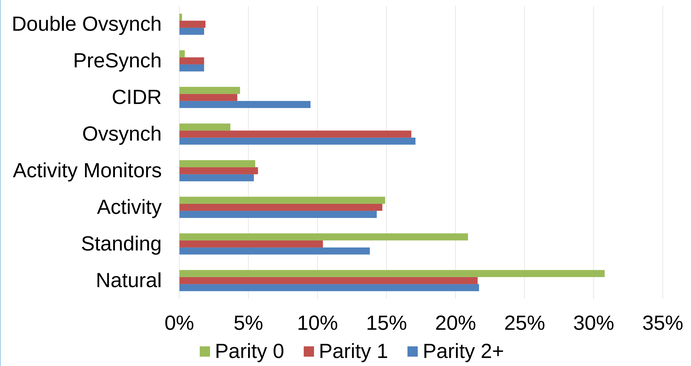
Heat Detection Conception Rates



Timed AI Conception Rates



% Total Records Per Parity



	Protocols	Breeding Codes	Total Records
Heat Detection	Natural	75	490,357
	Standing	40	153,668
	Activity	70	302,103
	Activity Monitors	58	114,080
Timed AI	Ovsynch	156	294,410
	CIDR	152	99,287
	PreSynch	33	31,353
	Double Ovsynch	37	31,579

TAKE HOME MESSAGES

- Standardized measures of recording breeding methods is required
- Initial results indicate similar conception rates to those found in the literature for all protocols analysed
- Further analysis is required to account for environmental effects