

# Research Summaries 3

## Survey of reproduction management on Canadian dairy farms

**J. Denis-Robichaud, DMV, MSc<sup>1</sup>; R.L.A. Cerri, DVM, PhD<sup>2</sup>; A. Jones-Bitton, DVM, PhD<sup>1</sup>; S.J. LeBlanc, DVM, DVSc<sup>1</sup>**

<sup>1</sup>*Department of Population Medicine, University of Guelph, Guelph, Canada, N1G 2W1*

<sup>2</sup>*Faculty of Land and Food Systems, University of British Columbia, Vancouver, Canada, V6T 1Z4*

### Introduction

Many dairy herds do not achieve their targets for reproductive performance. Despite many advances in technologies and management tools, producer attitudes towards, and frequency of implementation of these tools are not well documented. The objective of the present study was to survey current reproduction management practices in a representative sample of Canadian dairy farms.

### Materials and Methods

A survey was developed to assess general and reproduction management in dairy herds. To survey farms nationally, the questionnaire was translated from English to French and validated with pilot group and back-translation techniques. From March to May 2014, the survey was administered to Canadian dairy farmers by internet (FluidSurveys, Ottawa, Canada) and mail. For the former, a web link to the survey was sent to all available email addresses ( $n \cong 2,000$ ) of subscribers to one of two milk recording services; for the latter, 2,000 randomly selected milk recording subscribers received a paper copy of the questionnaire with their monthly report. Mean, median (med), and interquartile range (IQR) were calculated for continuous and ordinal variables, and frequencies were calculated for binary and categorical variables. Statistical analyses were conducted using SAS 9.3 (SAS Institute, Cary, USA).

### Results

Seven hundred seventy-two surveys were completed (463 and 309 by internet and mail, respectively), representing 6% of the total number of dairy farms in Canada. The average herd size was 84 (med = 60, IQR = 40-95) lactating cows, and herds were located in all Canadian provinces. Lactating cows were housed in tie stall (55%) and free stall barns (45%). The average milk quota owned by participating farms was 91.6 (med = 62, IQR = 41-105) kg of fat per day.

Heat detection by observation was used in 88% and 87% of herds at first and subsequent inseminations,

respectively. Cows were observed for estrus 3.4 times per day on average (med = 3, IQR = 2-4) for an average of 38 minutes per day (med = 20, IQR = 10-40). Twenty-seven percent of participants reported that no other task was accomplished during heat detection.

Use of hormones to synchronize ovulation was often used as part of the management strategy to inseminate cows with 55% and 69% of herds using synchronization for first and subsequent inseminations, respectively. The most common TAI protocol was OvSynch with 71% and 73% of the participants using TAI at first and subsequent insemination, respectively. The combination of OvSynch with presynchronization or a progesterone device was used by a smaller proportion of the participants. Prostaglandins were used to synchronize heat by 37% of the participants for first and subsequent inseminations.

Seventy-four percent of participants agreed that reproductive hormones were safe for consumers of dairy products. Concerning the routine use of synchronization programs, 63% agreed it was acceptable to them, while 41% agreed that consumers would find it acceptable.

Automated activity monitoring (AAM) systems were used in 28% of the participating herds (4% and 59% of the tie stall and free stall herds, respectively) and were consulted for increases in activity at least twice daily by 92% users. Interestingly, 21% of the participants never confirmed heat by visual observation before insemination, while 26% always did. Inseminations without detection of an increase in activity were uncommon: 63% and 21% of the herds using AAM reported < 10% and 10-20% of all their inseminations were done without an AAM alert, respectively.

Pregnancy diagnoses were performed before 39 days after insemination in 91% of herds and confirmation of pregnancy was completed by 69% of participants.

### Significance

Results from this survey highlight the variability in reproduction management among Canadian dairy herds. Knowledge of producers' attitudes toward different management practices should help optimize the development and implementation of reproduction management tools.