

Assessing the Associations Among Facility Design and Management Practices and Drug Use in Ontario Free-Stall Dairy Herds

Léger, D.; Kelton, D.; Lissemore, K.; Martin, S.W.

Department of Population Medicine, University of Guelph, Guelph, Ontario, Canada

Introduction

In recent years, issues centered on drug use in food producing animals have emerged as major food safety concerns in this agricultural sector. The dairy industry must adopt practical management strategies that minimize drug use in cattle. These strategies need to be identified and must focus on husbandry practices and facility design that minimize animal stress, and that contain specific biosecurity, sanitation and nutritional recommendations to minimize disease—and therefore drug use—in food animals.

The objectives of this study are:

1. Identify key aspects of facilities design and cow management that could have a sparing effect on herd-level drug use on Ontario dairy farms.
2. Investigate what influence veterinary attitude has on farmer attitude and herd-level drug use. (The term *drug* will be refined to a list of antimicrobial and hormonal drugs to narrow the scope of this study).

Materials and Methods

From the Dairy Farmers of Ontario (DFO) registry, dairy farmers designated as having free-stall facilities for housing the milking herd will receive a general

survey. This short questionnaire will focus on aspects of barn design and farmer attitude pertaining to drug use in their herds. A similar survey will be sent to all veterinary practices designated as Large Animal or Bovine in the College of Veterinarians of Ontario (CVO) registry. The results of these surveys will provide information about the prevalence of different barn design factors, and variability in attitudes regarding drug use in cattle among farmers and veterinarians. From a list of respondents to this survey, a purposive sample of 100 herds will be selected to ensure that all hypothesized risk factors are present among the study herds.

These herds will be enrolled in a longitudinal study and followed for one year, to remove seasonal variation. Exposure variables, to be measured and recorded on each farm, are key aspects of barn design and associated management practices. The outcome variable in this study is herd-level drug use. Each farmer and herd veterinarian will be surveyed regarding drug use in dairy cattle and their attitudes on drug related issues.

Results

From the timeline for this study, we anticipate results from Objectives 1 and 2 will be available for presentation at the conference in September 2001.