

Chute-side Entry of Lameness Information thru the Use of Touch-screen Technology

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Introduction

The on-farm capture of lameness information remains a major deficiency in animal health record keeping programs throughout North America. To address this issue, a language-neutral record-keeping system was developed utilizing touch screen computer technology, RFID and the claw zone and foot numbering techniques as described by the AABP Lameness Committee in 2004.

Materials and Methods

Touch screen computer technology is more or less commonplace in today's modern business world. Considering ease of use and some of the unique challenges involved in the capture of lameness data, authors proposed development of a similar system for recording lameness events. The system presented here is able to conveniently record cow identification by RFID, as well as information on claw, foot or limb lesions on a touch screen computer. Capture of the animal's identification number by RFID is intended to reduce errors that normally occur when trimmers manually record this information, or when these data are later transcribed into herd records. Use of the touch screen computer technology also provides for more convenient entry of lameness information. The operator will be able to identify the lesion's location, either in the claw, foot or limb, by chute-side entry using the claw zones and foot numbering techniques as described in the Bovine Lameness Committee's publication in *The Bovine Practitioner* of 2004. Another major advantage of this system is that it is language neutral. Trimmers, regardless of their spoken language or understanding of lameness conditions and/or terminology, can record lesions accurately. Trimmers record information by simply touching the claw zone on the computer screen, which corresponds to the lesion they observe in the foot or claw.

Claw zones correspond to claw lesions (for example, zone 4 = sole ulcer, zones 1, 2, or 3 = white line disease, etc.). For ease of use, feet and claws are presented to the trimmer on the computer screen in a manner consistent with their position in either a stand-up or tilt table type of restraint device. For example, for cows trimmed in a stand-up style chute, the diagram of feet and claws will be displayed on the screen as if viewed from above. For cows restrained on a tilt table, feet and claw diagrams will appear on the screen as the feet and claws would be viewed by the trimmer. Lesions are recorded and archived within a database that offers graphic display of data for convenient analysis and interpretation. Treatment information such as application of a foot block, wrapping of a claw lesion, or antibiotic treatment are also recorded so that follow-up monitoring, treatment and withholding may be managed as necessary.

Results

Manual recording of lesions using this system has been used on a large southeastern dairy for the past three years. Data from this project has been published previously and was the stimulus for development of the touch-screen system. A marketable version of this program is scheduled for release in July of 2008. It is designed to work as a stand-alone system, but will also have the ability to work interactively with other farm record keeping systems.

Significance

Touch screen record-keeping offers multiple advantages to the recording of lameness conditions in dairy cattle. It is the only language-neutral record keeping program to offer simple yet accurate recording of lameness events for the purposeful analysis and interpretation of foot problems in cattle.