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College of Veterinary Medicine

VETERINARY CONTINUING EDUCATION



ST. PAUL, MINNESOTA  
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## **Use of Radio Frequency Eartags in Dairy Cattle**

Krista Steffenhagen, Margaret Perala, Paul Rapnicki, and Steven Stewart

Interest in electronic identification of cattle has increased recently due to the activities of the National Animal Identification System (NAIS, 2006). The Cattle Industry Working Group of the NAIS has recommended the use of low frequency electronic identification devices (EID) in the form of ISO-compliant (ISO, 1996a; ISO, 1996b) external eartags within a future national animal identification system. These devices are currently available commercially using either half-duplex (HDX) and full-duplex (FDX-B) technologies. These devices are relatively inexpensive, passive and read-only.

Additionally, availability of these inexpensive low-frequency electronic identification external eartags offers many opportunities for use on commercial dairies. Some current management applications include guiding reproductive, treatment, and other management tasks using hand-wands; providing identification for sort systems using panel readers; and providing identification for parlor data systems using panel readers.

### ***Study #1: Comparison of RFID versus Metal Eartags for Identification in Adult Dairy Cows***

Krista Steffenhagen  
Minnesota CVM Class of 2008

A study was conducted to examine the time required to perform the following tasks:

1. Reading and assigning a management ID electronically to an RFID at the time of initial tagging with an RFID eartag.
2. Electronic reading of an existing RFID eartag.
3. Reading and recording of an existing metal eartag's information using a paper system.
4. Degree of potential error when recording metal eartag information.

Results of the study will be presented and discussed for approximately 1200 animals.

### ***Study #2: Using RFID Eartags with a Commercial Panel Reader in Adult Dairy Cows***

Margaret Perala  
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A study was conducted to examine the potential of a commercial panel reader system to detect half-duplex (HDX) and full-duplex (FDX-B) passive electronic eartags in a population of adult dairy cows on a commercial dairy operation. Results of the study will be presented and discussed for approximately 10,000 read attempts of 500 EID devices.