

Practical Applications for RFID in Today's Dairy Industry

King Smith

ABS Global District Sales Manager

ABS Global's Involvement

- After work with many large commercial dairies we saw the need for a more accurate and efficient way to locate and administer common dairy practices
 - Synchronization programs
 - Vaccination Protocols
 - Animals for Reproductive Exams
 - Others

Considerations



- Today dairy workers are only finding 85-90% of daily cows by using the manual method of reading visual ear tags. We need to take this to 100% using RFID
- Reduced cow lock up time equates to reduced stress, increased milk production.
- Faster animal look up and decision support reduces labor in barn and in follow up data entry
- Improves data entry accuracy by eliminating later office entry

Timeline

- December 2002
 - Began initial meetings with AgInfoLink to investigate the possibility of using RFID technologies to meet the needs of our customers
- February 2003
 - Began providing synchronization injections service to a 2500 cow facility
 - This increased our need for some type of system to help with service
- April 2003
 - Tagged one pen of 225 Cows and began scanning just to see if it was possible to scan cows in a freestall and headlock environment
- May 2003
 - Started working with AgInfoLinks BT3 Reader and PDA Handheld
 - We also tried tagging some cows in the excess skin around the tailhead but it did not work (tag retention problems)

Initial Findings

- We could cut our injection time in about half
- We tremendously reduced errors
- Found 99% of the Animals Needed
- Had a accurate list of cows that were not found
- Could tell exactly when the injections were given
- Began to envision other opportunities for RFID technologies
- Tagged the remaining cows in the herd



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Bovine Spongiform Encephalopathy (BSE) in a Dairy Cow --- Washington State, December 2003

- National ID gained momentum
- Dairies now had another reason to purchase RFID Tags
- Producers utilizing the NuPulse Milk Meters with Automatic ID
- Farmers participating in Holstein Association USA, Inc. National Farm Animal Identification and Records (FAIR) program

January 2004

- The decision was made to move forward with the developed of a RFID system with **AgInfoLink USA, Inc.** to market to the dairy industry
- **VALID™** Verified Animal Location Identification launched at AABP 2004

VALID™

- Consist of a Bluetooth PDA Handheld, AgInfoLink BT3 Reader, and Software
- Data is transferred from the herd management software to the VALID™ Handheld System with use of text files.
- VALID™ Handheld communicates with a BT3 Reader that scans the RFID tag
- Automatically pulls up animals current information
- Provides audio feedback alerts for actions that need to be performed and notify user that animal has been scanned
- Produces a file of all task performed
- Generates an out-put-file with all information recorded
- Creates a list of all cows not found
- Flexibility – it can be used for many tasks such as vet check, injections, etc.
- VALID™ technology is ISO compatible



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ABS RFID Market

- Working with several Dairies and Heifer Facilities located in 4 States (Texas, New Mexico, Kansas, and Wisconsin)
- These Facilities represent approximately 50,000 head
- We have not yet aggressively addressed the market

RFID Dairy Applications

- Drying Cows
- Moving Animals
- Treating Hospital
- BST Injections
- Vaccinations
- Heifer Management
- Dairy Animal Inventories
- Field Trial Data Collection
- Recording Milk Weights
- Sorting Animals
- Culling Animals
- Record Breedings
- Print Labels for Animal Samples
- Animal Observations
- More

Dairy Benefits

- Improves labor efficiency
- Improves injection compliance for synchronization programs, vaccination programs, etc.
- Reduces time on concrete which will assist in improving milk production and reproduction
- Assists lactating, dry, and pre-fresh cow management
- Assists hospital pen management
- Inventory of animals

Challenges

- Not all Dairies utilize headlocks
- Management Rails not as user friendly
- Animal lockup percentages
- Bring RFID to the rear of the Animal
- Many Dairies struggle with computer skills
- Customer Support
- PDA issues

Opportunities

- Large Commercial Dairies (1000 head and Up)
 - Labor Management
 - Managing Increased cattle numbers
 - Integrity of Data
 - Affordable Automatic Individual Animal ID
 - Used to collect milk weights
 - Much interest in sorting animals when exiting parlor

Thought to Ponder

- Revelations 13:16-17 reads
 - “He also forced everyone, small and great, rich, and poor, free and slave, to receive a mark on his right hand or on his forehead, so that no one could buy or sell unless he had the mark, which is the name of the beast or the number of his name.”

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Thank You