



Accurate Recording within Large Herds in the United States Current Practices and Future Expected Developments

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Abstract

Accurate recording involves many variables in large commercial dairies interfacing various computer programs for automatic milk recording, herd management and robotics. Often these large dairies require auditing the abilities of the various systems to maintain accurate recordings is left in the hands of the Dairy Herd Information Specialist. From accessing the herds dairy software to scanning RFID buttons in the cows a Dairy Herd Information Specialist needs to be on top of things. This is a taxing position to maintain a dairy's data collection rating while dealing with a variety of programs and interfaces. Maintaining accuracy while recording as well as common interface platforms will continue to be a challenge as technology advances.

Background and perspective

As herd size has increased over the years, Information Specialists skill sets have needed to advance. The skills needed to adequately service a herd of 50-60 cows are vastly different than a Specialist servicing 500 – 1000 – 2,500 cows or more.

Insert cows by herd size -

Along with the advancement of training, companies employing Information Specialists along with their data processing centers have also needed to make advances in technology, measuring and sampling equipment, interfacing

capabilities with the various manufacturers of dairy equipment and adapting to change. All of this change has led to a new constant learning culture in which what works today could possibly be obsolete tomorrow and the Dairy Herd Information Specialist needs to adapt to perform their duties and stay ahead of the learning curve of dairy equipment advancements.

Insert current interfaces with PCDART -

Along with change comes the daily change from farm to farm and facility to facility. Each with their own set of challenges to overcome. Different types of milking parlors different type stalls and readers, different software to interface with. All of this can be taxing on a DHI Specialist assuring they have the right equipment, trained staffing, and are set up in preparation for 100-150 cows per hour or more. Often these higher parlor turn speeds leave little room and time for errors.

Many of the larger dairies have Automated Milk Recording or (AMR). In AMR recording we are taking a 7 or 10 day average of the cow's milk weights for recording and are pulling the samples on test day for the component data. While these meters are calibrated to less than a 2% tolerance level the possibility does exist for error if the system isn't maintained correctly. Each individual cow is monitored with an ICAR approved meter by a valid cow ID. The animal's ID, milking stall and milk yield is captured by the computer which later is accessed by the DHI Specialist. Pulling Parlor deviation reports from the system with numerous systems is available through PCDART, Dairy Comp 305, Dairy Plan, and other dairy software programs. This added information allows a DHI Specialist to evaluate the efficiency and accuracy of the parlor management equipment program along with the fact they then can report errors to the herd owners for additional calibration and equipment repair.

Insert 817 report

Outline

Distribution of herd sizes in NorthStars service area by herd size

1. Distribution of herd sizes by parlor size? Double 10, double20, rotary etc.

2. Number of meters needed
3. Mileage & travel times between herds

Staffing

1. Number of DHI Specialists needed per herd
2. Dbl 10 100 cows/hr.; Dbl 20 160 cows/hr.; Rotary's 200-300 cows/hr
3. Robots
4. Proper Training
5. Proper Equipment

Data flow

1. Assuring data flows thru system-CDCB
2. Accuracy of ID; Id's-metal tags, visual, registration #, RFID, 840
3. Data Collection Ratings

Automatic Milk Recording herds

1. 7 or 10 day average
2. ICAR approved equipment
3. Data exchanges
4. Parlor Deviations- 817 parlor report
5. Electronic ID verification

RFID

1. Wanding cows
2. Pocket meter/Dairy data handler
3. More accurate cow side ID
4. Increased efficiency - accuracy

Supplemental Health Tests

1. Johne's
2. BVD
3. Leukosis
4. Milk Pregnancy- assuring days carried calf is long enough plus 35 days
(Various on-farm methods and management data points implemented)
5. Contagious Mastitis
6. Managing carry over
7. Proper recording- data exchange

Parlor efficiencies/Showing value

1. Transferring whole herds records when dairies grow
2. Pen audits on test day. Put cows in correct pens in computer
3. Missing ID Tag audits
4. Evaluating broken parlor parts milkers might not report
5. Correct pen counts help with accurate feed mixing/preparation

Challenges

1. Speed- larger pens increase milking times. Less time to test
2. 2X, 3X, 4X, 6X (fresh pens), milkings
3. Data exchanges- DC305, Lely, Delaval Delpro, Delaval Alpro, Dairy Plan, Afi Farm, Cow Search, Dairy Quest, Herdmetrix, PCDART
4. Non-English speaking farm workers
5. Lab time and equipment to process large herds
6. Meter inventories
7. Computer support
8. QCS recording
9. Herd owner recording correct data (multiple users inputting data)
10. Enough employees to handle a large scale farm workload

Future Information/Opportunities

1. Milking Speed
2. Robots – Teat Placement/Body Weight/Body Condition Scoring
3. Health Data
4. Disposition/Temperament
5. Calving Ease – Real Time
6. Pregnancy/Conception Rates – Real Time
7. In Parlor – Laboratory
8. On-farm Training & Support

Conclusion;

Insert – NorthStar DHI Growth slide

As the number of herds in the U.S. continues to decrease, the number of cows are holding steady and even growing in some areas. Producers, herd managers, consultants, veterinarians, nutritionists, industry experts all need accurate and

timely DHI information. Changes of herd size and cow-side information availability are in constant demand by those managing and operating multi-million dollar milk production centers. Training and working together with DHI field personnel and dairy equipment operators is in essence a win-win for all parties involved, especially the producer that in the long-run pays the bills yet reaps the rewards for accurate and timely information.

As much change as there has been in the past ten years there will be even more as the demographics change in cow care, management and real-time information as the world population demands safe, viable, affordable dairy products for public needs and consumption.

