

**RFID (EID)**

**PRACTICAL  
APPLICATIONS OF  
RFID**

**ON OUR DAIRY FARMS.**



# THE TAG



# OUR GOAL

- TO OBTAIN RELIABLE COW IDENTIFICATION
- TO USE THE INFORMATION RECORDED FROM THE PARLOR AND OUT OF PARLOR DEVICES
- TO TRANSMIT INSTRUCTIONS AND DETAILS TO THE EQUIPMENT AND OPERATORS
- TO COLLECT STORE AND RETRIVE INFORMATION



# Electronic Identification.



- Accurate.
- Ear tag based system.
- Complies with ISO.
- Passive – no battery.
- Eliminates manual entry of data.
- Interfaces with automation system.
- Ideal with sound messaging.



# BENEFITS SHOULD BE

- COST EFFECTIVE
- FOR BOTH INSTALLATION AND OPERATION
- RELIABILITY
- ACCURACY



# IN HOUSE TECHNOLOGY

- DAIRYMASTER HAS USED THE RFID HALF DUPLEX PLATFORM FOR THE LAST 14 YEARS.
- DEVELOPED IN HOUSE ANTENNAS, READER BOARDS, COMPUTER INTERFACE.
- DEVELOPED OUR OWN HERD MANAGEMENT PROGRAM.



# METHOD

- PORTAL ENTRY
- HALF DUPLEX EAR TAG
- EASY CONNECTION TO ALL DEVICES USING A 2 WIRE DAISY CHAIN CONNECTION
- SYSTEM MONITORING ABILITY
- COMPATABLE TO LINK TO COMMON HERD MANAGEMENT PROGRAMS

# RECEIVER -ANTENNA

- GATE OPEN
- PORTAL ENTRY
- BOTH SIDES



# SENDING THE SIGNAL

- HOW DO YOU DO THIS



- NEED AN ANTENNA
- NEED ELECTRONICS TO TRANSMIT
- NEED BOTH TO RECEIVE RETURN SIGNAL

# ID INTERFACE

- SMALL
- EASY CONNECTIONS
- RELIABLE
- PROTECTION



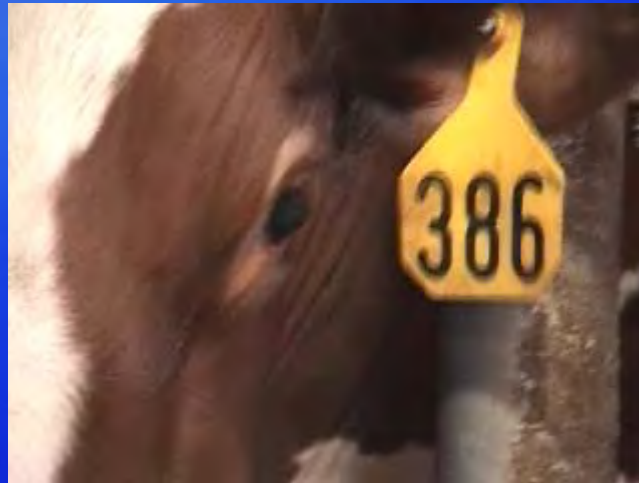
# Sound Messaging.

- Provide messages to the operator about veterinary information, warnings, depressions in yield.
- Counts cows on entry to the parlour.
- Important events are easily highlighted.
- Fully configurable.
- Message can be repeated on cluster attachment.
- Integrates with all parlour types.



No milk today  
– dry off !

# Cow ID on rotary platform



# RELIABLE ID RECORDS

- 386 ENTERING PLAFORM BUT SEEING US SLOWED DOWN HER ENTRANCE
- THE EMPTY BAIL SHOWED 0 INDICATING NO COW PRESENT
- 386 RECOGNIZED AND CONFIRMED ON DISPLAY IN THE BAIL SHE ENTERED



# Auto teat spray



# Auto teat spray

- AT EXIT OF PARLOR
- ADJUSTABLE TIME TO SPRAY
- ADJUSTABLE DURATION OF SPRAY
- SPRAY PATTERNS CAN BE VARIED WITH NOZZLE SELECTION
- ALSO USED ON ENTRANCE TO PLATFORM

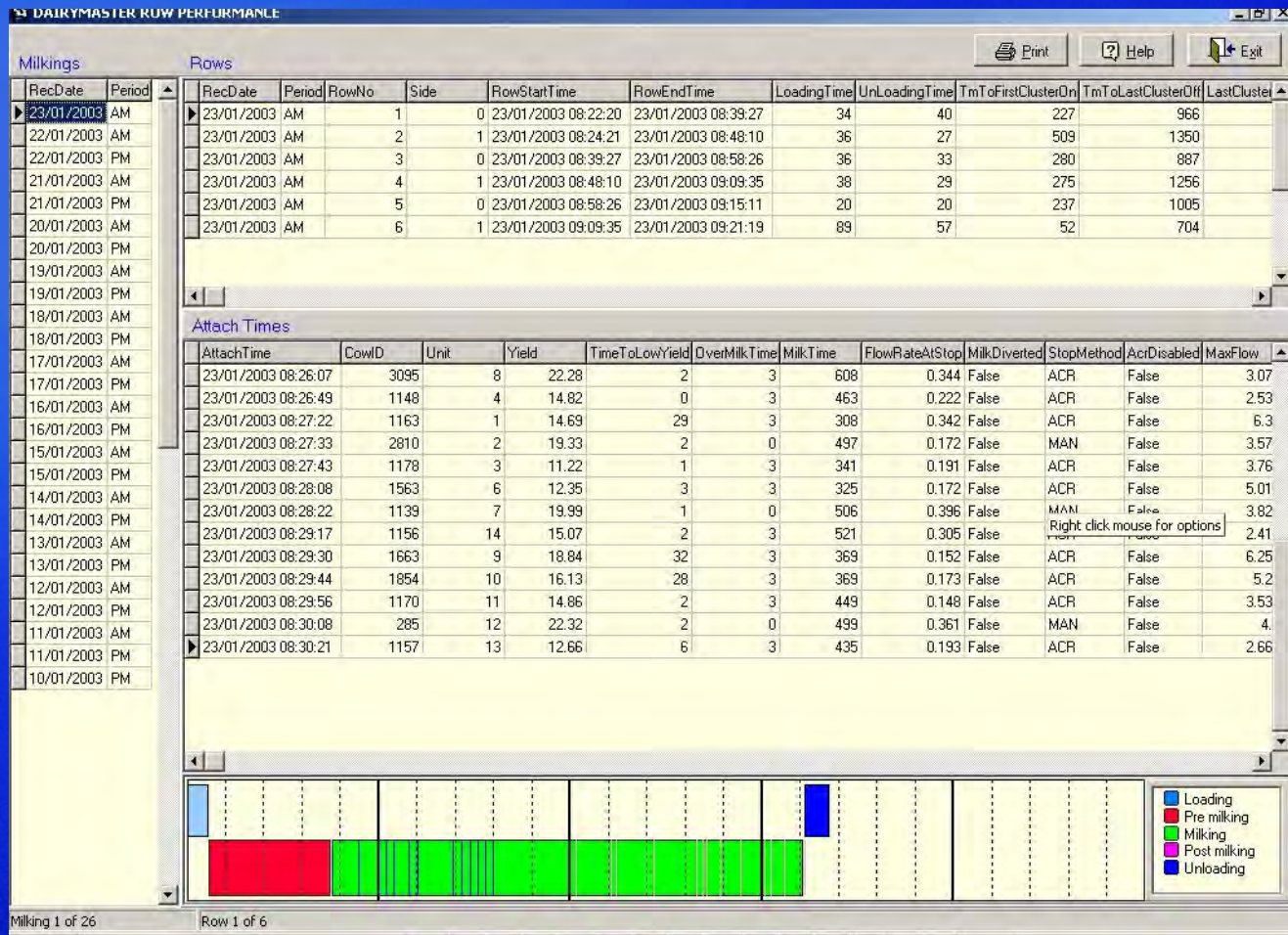


# MILKING RECORDS

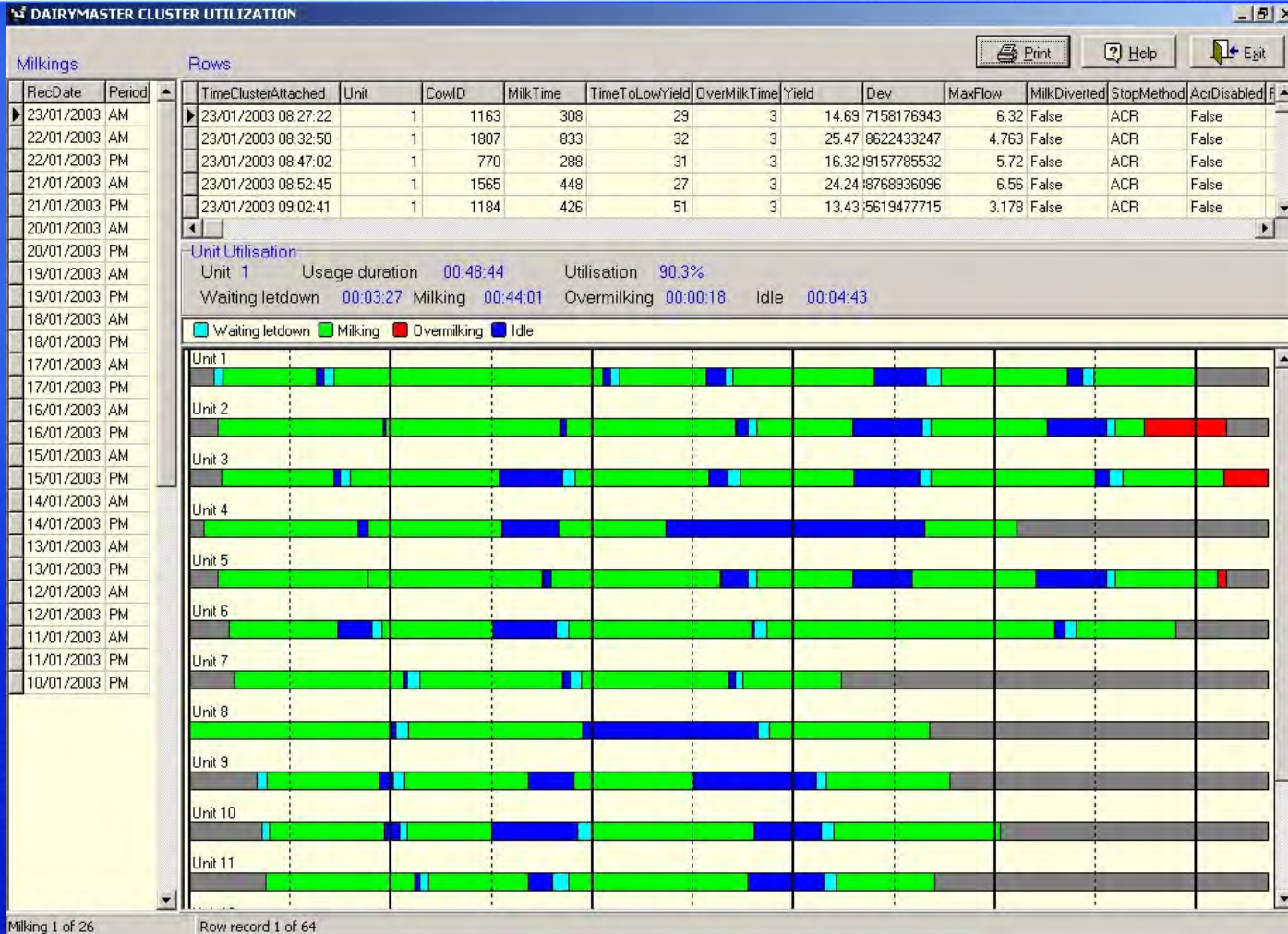
- LETS LOOK AT WHATS AVAILABLE
- HOW WILL THIS HELP THE BOTTOM LINE



# Row Performance.



# Unit performance.



# Sorting / Drafting.

- Choice of 2-way and 3-way Sorting / drafting systems.
- Saloon entry gates on the drafting unit provide accurate separation of animals.
- Auto weighing / teat spray / fly spray



# MORE LABOR SAVING

- COWS WITH NO TAGS
- UNIDENTIFIED TAGS
- VET CHECKS
- SORTING GROUPS



# FEEDING

- IN PARLOR OR STAND ALONE
- FEED INSTRUCTIONS BY MILK YIELD
- DIVERT MILK TO SECONDMILK LINE OR TANK
- CAN BE DONE BY BREED, SCC LEVELS OR BY MANUAL INSTRUCTION FROM COMPUTER



# HERD MANAGEMENT WITH AUTO I.D. USING LOW-COST EID EAR TAG WITH NO BATTERIES.

COWS ENTER PARLOUR

COWS FOR DRAFTING



READER BOARD PICKS UP COW IDENTITY  
FROM ITS EAR TAG RESPONDER -  
RELAYS INFORMATION TO COMPUTER



Same EID tag that is proposed to be used  
for the National Animal ID.



AUTOMATIC  
CONTROL  
OF FEED  
IN THE  
PARLOUR



DRAFTING IS  
CONTROLLED BY  
COMPUTER,  
PRE-PROGRAMMED  
AS REQUIRED  
OR FROM THE  
OPERATOR



AUTOMATIC  
MILK RECORDING  
BY UNIQUE  
DAIRYMASTER  
WEIGHALL METER  
APPROVED BY  
ICAR  
and  
DHIA

LINKS TO FULL  
MANAGEMENT  
PROGRAMS WITH  
REPORTS PRODUCED  
AS REQUIRED

MILK REPORT

DAIRYMASTER PARLOURS  
AND SLURRY  
MANAGEMENT SYSTEMS  
ARE MANUFACTURED  
IN IRELAND BY



DAIRYMASTER USA, INC.

DAIRYMASTER

- NEW INSTALLATIONS or
- WE CAN RETROFIT YOUR EXISTING SYSTEMS

dairymaster.com

# SOME FACTS TO CONSIDER

- EXISTING FARM IN MICHIGAN  
PLANNING TO EXPAND FROM 800 TO  
1600
- CURRENTLY MAXED OUT ON TIME IN  
EXISTING D14 WITH THE 800 COWS
- CHOSE TO BUILD 40 UNIT  
DAIRYMASTER ROTARY WITH FULL  
AUTO ID AND RECORDING SYSTEMS



# RESULTS OF CHANGE AFTER 9 MONTHS OF OPERATION

- STAFF REDUCED FROM 13 TO 6
- 800 COWS COULD BE MILKED BY ONE OPERATOR IN 3.5 HOURS
- LEAVES OPEN THE OPPORTUNITY TO MILK MORE COWS
- 6000LBS MILK PER MAN HR IN THE TANK
- MADE POSSIBLE BY USE OF RFID SYSTEM

THANK YOU.



# Getting Started

