



Experiences with Comprehensive Herd Management of a Mega-Dairy

Using RFID, Automatic Milk Recording and Multi-client Cow-side Data Entry
with Reproduction and Health Protocols

By

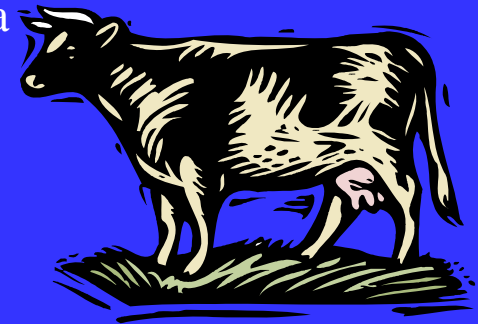
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Acknowledgments

- DRMS staff : Robin Andrews, Brad Ennis, Ken Butcher, Lauralyn Monticello, Tammie Guyer, Phil Dukas
- North Florida Holsteins Farm staff
- Boumatic
- Allflex USA
- Southeast DHIA

Herds use different Systems for Cow Management

- Individual cows
- Groups of cows in similar condition
- Lock-up stanchions
- Robotics
- *Sort cows on parlor exit*

Herd in this study

- 3,800 milking cows
- 2 Milking Parlors with Boumatic Hardware
 - Double-40 controlled by BM2060
 - Double-12 controlled by BM2060
- All cow data are stored in PCDART database
- PC Network allows for access to each cow's data
- Sort gates as cows exit parlor
 - 2 dual sort gates on D-40 parlor
 - 1 single sort gate on D-12 parlor

North Florida Holsteins



Farm Overview

- Located in north-central Florida, about 50 km from the Gulf of Mexico is *North Florida Holsteins* operated by Don Bennink and his staff of more than 70.
- They are committed to producing quality milk from comfortable cows.
- Priorities are breeding, performance, herd health and environmental stewardship.
- *Management depends heavily on digital information for everyday operation.*

North Florida Holsteins

April, 2010

Number of Cows	4,204
Number of Heifers	3,386
Milk per Cow – daily	35.3 kg
Milk per Cow – annual	10,414 kg
Fat per Cow – annual	365 kg
Protein per Cow – annual	301 kg

Genetic Improvement is High Priority



No-Fla Rudolph 16033 EX 93 EEEEE
1-11 360 28,033 3.6 1007 3.1 869
3-6 363 35,406 3.6 1282 3.0 1064

- Intensive embryo transfer program – 629 females carrying ET's as of May 1, 2010
- 90% of females are registered with Holstein USA

Free-stall Housing



Tunnel ventilation



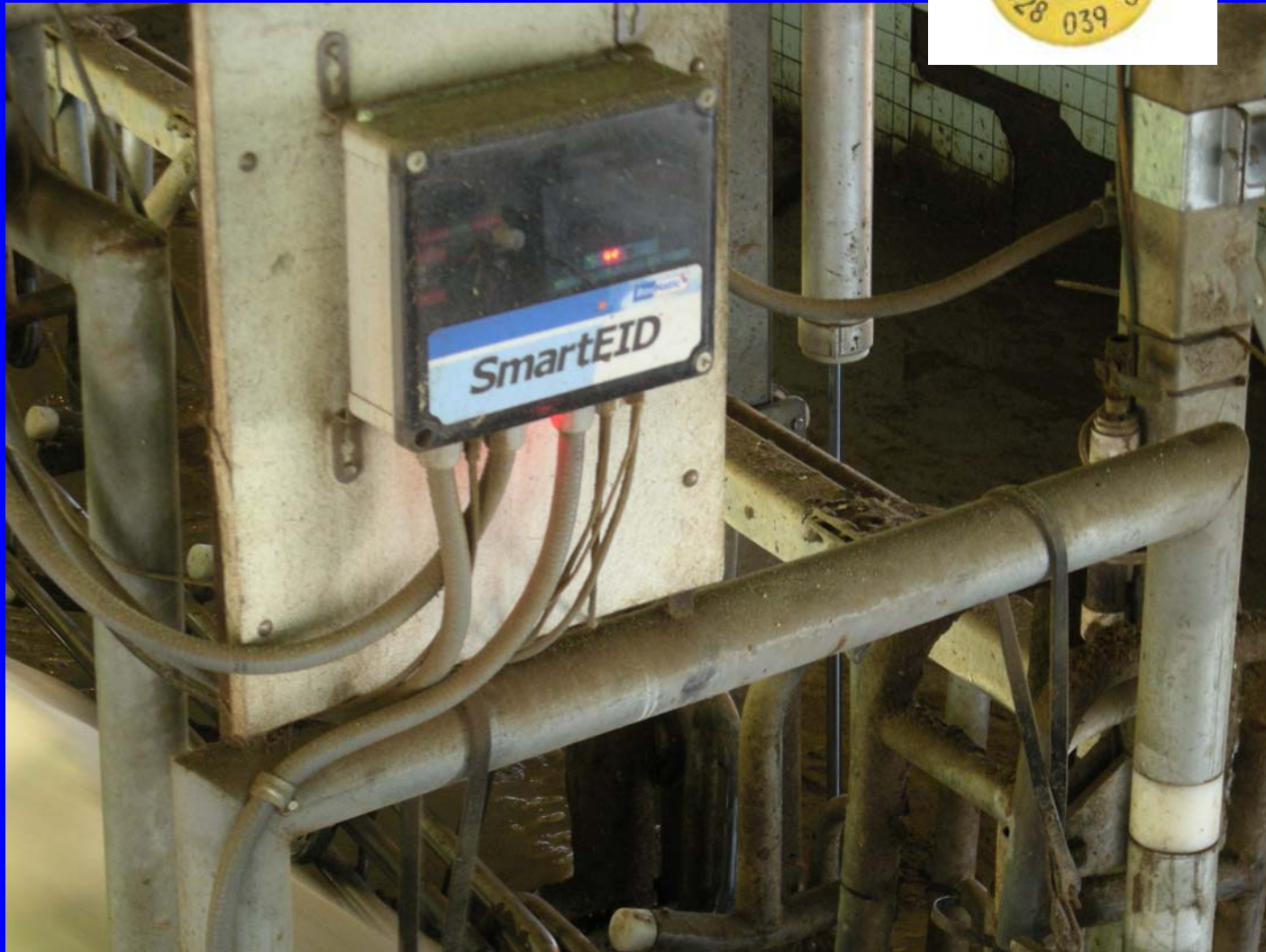
3,800 cows milked 3x per day



Double-40 Parallel Parlor



Individual Cow ID using RFID



- The observations reported here began with the transition from a previous system in June of 2009. The new system consists of 2 BM2060 controllers from Boumatic, each connected to an individual PC on the parlour office network. There are a total of 13 PC's, 2 for Boumatic, 3 at cow-side stations, 6 in the office, 1 as the server for PCDART and 1 for data backup.
- Cows are identified with Allflex HD button tags.
- Numbering is coordinated with Holstein USA for registration and pedigrees.

Cows Identified at Parlor Entry



Cow sorting after milking

- Upon exit from milking parlor, each cow passes a dual sort gate
- Automatic sorts based on parlor algorithm
- Programmed sorts based on PCDART protocol (schedule)
- Manual sorts, entered by farm personnel





Cow-side network terminal

- Network PC located at each sort gate
- PCDART contains entire herd database
- QuickCow offers a look at each cow's specific data
- Breedings, pregnancy checks, chores done, new protocol enrollment



Network PC at Hospital Area



- QuickCow for cow's current status, previous treatment and chores to do
- Any treatment administered is entered directly into PCDART
- New schedule (protocol) for future treatment

Office Network Clients

- calving records
- detail for embryo transfers
- scheduled group changes
- dry off and dry-cow protocol
- herd exit records
- breed registry detail





 **QuickCow - 58210075**

Index:

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Filter

☒ All ☐ Cows only ☐ Heifers only

Cy 9345

STEINE

Group # 9

Milk ✓ **Meat** ✓

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Setup

F1 for Help

Chores to Do

Chore	Date to Do	Protocol
BRD-1	05/19/2010	SYN
VJ5	05/31/2010 - 06/06/2010	35-VAC
VJ5	09/08/2010 - 09/14/2010	35-VAC
VJ5	12/17/2010 - 12/23/2010	35-VAC
VJ5	03/27/2011 - 04/02/2011	35-VAC
VJ5	07/05/2011 - 07/11/2011	35-VAC

Reproductive

Event	Date	Other Information
MISC	05/15/2010	N F9NF
MISC	02/08/2010	Y FTM
MISC	01/17/2010	Y PRV IVP
VACC	01/15/2010	Y VBG VC8 VSG VJ5
MISC	11/19/2009	Y FTM33
VACC	11/18/2009	Y VJ5 VSG

Chores Done

Event	Date	Other Information
Chore	05/18/2010	GnRH-2; Grp=9
Chore	05/16/2010	PF2; (Tech=63); Grp=9
Chore	05/08/2010	GnRH-1; (Tech=63); Grp=9
Chore	04/28/2010	CHECKCOW; Grp=9
Chore	04/26/2010	PF2; Grp=9
Chore	04/18/2010	UTCK; (Tech=40); Grp=9

Basic Cow Information

3 Lactation no.
840003005751128 RFID
2/7/2010 Last calving date
7H06349 Sire's name/code
Last bred MDY
Service sire name/code
STEIN Dam's barn name

Boumatic Daily Milk Weights

Date	Time	Lot	Wt	Dev	Cnd	Act
05/19/2010	04:05:02 am	09	35.3	+1.0	6.4	
05/18/2010	07:40:56 pm	09	35.5	+1.4	5.7	
05/18/2010	11:48:53 am	09	38.2	+2.2	5.9	
05/18/2010	04:13:22 am	09	34.6	+2.7	5.9	
05/17/2010	07:34:00 pm	09	34.8	+1.7	6.0	
05/17/2010	11:59:09 am	09	35.3	-1.7	6.2	

Sort Gate Retrievals

Gate Name	Done?	Date	Time	Reason
Sort West_1	No	05/19/2010	06:01:00 am	BRD-1
Sort East_1	Yes	05/18/2010	02:01:00 pm	GnRH-2
Sort East_1	No	05/19/2010	06:01:00 am	BRD-1
Sort East_1	Yes	05/18/2010	06:01:00 am	GnRH-2

Index:

Cw 8032

8032

Setup

Filter

☒ All ☐ Cows only ☐ Heifers only

Group # 4

Milk ☒ Meat ☒

F1 for Help

Chores to Do

Chore	Date to Do	Protocol
4-DAYCK	05/19/2010	FRESHCOW
6DAYPRD	05/21/2010	FRESHCOW
6DAYUTCK	05/21/2010	FRESHCOW
10DAYCHK	05/25/2010	FRESHCOW
10DAYUT	05/25/2010	FRESHCOW
VJ5	05/29/2010 - 06/04/2010	J5-VAC

Basic Cow Information

1	Lactation no.
840003004658452	RFID
5/16/2010	Last calving date
29H010818	Sire's name/code
	Last bred MDY
	Service sire name/code
15848	Dam's barn name

Reproductive

Event	Date	Other Information
VACC	04/28/2010	Y VBG VC8 VSG VJ5
VACC	03/11/2010	Y VSG VJ5 VLL IVP
VACC	09/22/2009	Y VC8 IVP

Boumatic Daily Milk Weights

Date	Time	Lot	Wt	Dev	Cnd	Act
05/19/2010	07:36:33 am	04	11.7	+7.8	5.7	
05/18/2010	10:58:42 pm	04	09.0	+0.9	5.7	
05/18/2010	03:37:25 pm	04	09.6	-5.2	6.1	
05/18/2010	07:41:21 am	04	09.3	+2.9	6.4	
05/18/2010	07:36:12 am	04	09.3	+2.9	6.4	
05/17/2010	11:34:03 pm	04	07.6	+0.0	4.0	

Chores Done

Event	Date	Other Information
Chore	05/16/2010	PRV-UBT; Grp=4

Sort Gate Retrievals

Gate Name	Done	Date	Time	Reason
Sort East_2	Yes	05/18/2010	03:44:39 pm	Deviation
Sort East_1	Yes	05/19/2010	06:01:00 am	4-DAYCK

Index:

Cw 8032

8032

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Index:

Cw 8032

8032

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Milk Meat

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Some Details

- Herd staff have defined 77 different protocols using 146 chores for routine management.
 - Protocols = schedules
 - Chores = actions, drugs or observations to be done
- Sept-Apr 2355 cows enrolled on SYP (primary sync protocol)
- 1807 cows were on LAMECHK (foot management protocol)
- 3087 cows on VACC (primary vaccination protocol)

More Details

- Data for all milking cows have been collected successfully for both double-40 and double-12 parlours.
- PCDART communicates routinely with both BM2060's.
- Early in the observation period, data were transferred at the close of each milking.
- Currently, parlour data are being pulled at 10-minute intervals
- Data entered at cow-side are transferred immediately.
- Sort gates are operating fully and provide cows for breeding, treatment, vaccination, reproductive evaluations.
- Sort gates run during first and second shifts (0700 – 2300 hr) every day.

Thank you

