

**Missouri Dairy Expo**  
FRIDAY - February 9, 2024  
Oasis Conference Center  
2546 N Glenstone Ave, Springfield, MO

9:30 Registration, Coffee with vendors

**10:00 Concurrent Session 1**

**Genomic progress through bull proof assessment - Coco.....2**

Jason Ewing, US Holstein

**Looking Into the Future with Farmers Assuring Responsible Management (FARM 5.0) - Fiji.....6**

Dr. Scott Pock, Professor at Univ. of Missouri, Veterinary Medicine

10:30 Break with sponsors

**10:45 Concurrent Session 2**

**Points to consider for Farm Succession - Fiji.....13**

Dr. Kevin Hoogendoorn, Zisk Dairy App & Animal Health and Management

**Sorghum Silage for Milk cows? Drought resilient Forage Systems Options - Coco.....19**

Dr. Juan Piñeiro, Ph.D., DVM, Texas A&M AgriLife Extension Service dairy specialist

11:45 Break with sponsors

**12:00 LUNCH, KEYNOTE and Comments**

Lieutenant Governor Mike Kehoe

Clayton Boyles, American Foods Group

**1:15 Concurrent Session 3**

**The 2024 Outlook for Dairy Markets and Policy - Coco/Maui.....21**

Dr. Scott Brown, Associate Extension Professor in Applied Social Sciences

**Lock milk and feed into a profit - Fiji.....23**

Dr. Kevin Hoogendoorn, Zisk Dairy App & Animal Health and Management

**2:00 Producer Panel – Value of a nutritionist and herd consultant - Coco/Maui**

2:45 Ice Cream Break with sponsors

**3:00 MO Dairy Business Meeting - Coco/Maui**

Meet and Greet your Missouri Dairy Team

Resolutions Review

**EVENING PROGRAMMING - Paradise Hall**



**6:30** Hors d'oeuvres: Provided by our generous sponsors & member dairy farm families

**7:00** Missouri Dairy Industry Awards Ceremony

**7:30** Cornhole Tournament and Silent Auction Fundraiser for Dairy youth

# GETTING THE MOST FOR YOUR INVESTMENT

# HOW TO READ AN OFFICIAL HOLSTEIN PEDIGREE

## OFFICIAL HOLSTEIN PEDIGREE

Holstein Association USA, Inc.  
www.holsteinusa.com

**100% Registered Holstein Ancestry (RHA-NA)**

**COOKIECUTTER DELTA HABIT-ET** 13K GTPI 85%R 2545 FEMALE  
840003126700264 100%RHA-NA PO +2550 G 01/28/2015

4-00 90 EE+VE

PTA	+1206M	+66F	+38P	86%R	4/2023
PTA	+501NM	+07%F	+00%P		
PTA	+0.4PL	3.08SCS	-2.4DPR	2.6%DCE	
PTA	+2.00T	+1.83UDC	+2.8FLC	84%R	4/2023
PTA	+180FE	-1.6FI	2.1%SCE		

AGE	X	DAYS	MILK	DCRM	%	FAT	%	PRT	DCRC
1-10	3	305	30170	81	3.9	1162	3.1	931	81
			344	32930	81	3.9	1272	3.1	1022
3-10	3	305	32070	100	4.3	1378	3.4	1079	90
			351	35490	100	4.3	1528	3.4	1196

COOKIECUTTER HOLSTEINS, LLC  
DENISE DICKINSON  
1 HOLSTEIN LN  
BRATTLEBORO, VT 05302-0808  
800/952-5200

**MOUNTFIELD SSI DCY MOGUL-ET** A1/A2 AE 50K GTPI 99%R +2291 G  
840003006972816 100%RHA-NA TR TP TC TY 06/22/2010  
7-00 93 EEVE GM 8/15

PTA	+460M	+42F	+14P	99%R	4/2023
PTA	+328NM	+09%F	+00%P	51%US	
PTA	+0.0PL	3.13SCS	-3.1DPR	1.6%DCE	
PTA	+1.29T	+2.09UDC	+1.07FLC	99%R	4/2023

**MISS OCD ROBST DELICIOUS-ET** 50K GTPI 97%R +2653 G  
840003006989479 100%RHA-NA 01/28/2011  
3-05 87 +EV+V GMD DOM

PTA	+1880M	+48F	+61P	97%R	4/2023
PTA	+814NM	-08%F	+01%P		
PTA	+4.0PL	2.95SCS	-1.6DPR	2.3%DCE	
PTA	+5.7T	+1.53UDC	-3.0FLC	97%R	4/2023



HOLSTEIN ASSOCIATION USA, INC.  
1 HOLSTEIN PLACE, PO BOX 808 • BRATTLEBORO, VT 05302-0808  
800.952.5200 • WWW.HOLSTEINUSA.COM

# A trusted source for accurate genetic information

Official Holstein Pedigrees combine ancestry, performance and genetic information all into one easy-to-use document. Whether you are making mating decisions or trying to decide which sale animal might have a place on your operation, Official Holstein Pedigrees give you the information and details you need on the animals you are working with.

Official Holstein Pedigrees also serve as a verified source of genetic, production and ancestry information when you are selling animals, allowing you to provide trusted documentation to potential buyers; the first step to satisfied, repeat customers!

## Read with ease, evaluate with confidence

Official Holstein Pedigrees contain a wealth of important information on a single page. While each animal is different, their information is all presented in the same format, making it easy to evaluate and compare animals.

Official Holstein Pedigrees provide multi-generation details and performance information on Registered Holsteins of all ages.

# How to Read an Official Holstein Pedigree

## OFFICIAL HOLSTEIN PEDIGREE

Holstein Association USA, Inc. [www.holsteinusa.com](http://www.holsteinusa.com)

**1** 100% Registered Holstein Ancestry (RHA-NA) 3368

**2** **COOKIECUTTER DTA HABITAN-ET** 19K GTPI 93%R

**5** 840003134739087 100%RHA-NA +2826 G

5-06 90 EVVVE DOM

PTA +1075M +79F +39P 95%R 4/2023

PTA +739NM +.13%F +.02%P 92%US

PTA +3.3PL 2.93SCS +.0DPR 2.5%DCE

PTA +2.73T +2.54UDC +.39FLC 95%R 4/2023

PTA +203PE +0.4PI 2.3%SCS

**6** AGE X DAYS MILK DCRM % FAT % PRT DCR

\*\*\* 2-04 3 305 30820 94 4.7 1438 3.1 961 88X

\*\*\* 5-05 3 131 9920 4.7 170 2.9 289

---

**7** MR MUGUL DELTA 1427-ET Al/A2 BE 75K GTPI 99%R

USA 72128216 100%RHA-NA TR TC TY TV TL +2622 G

GM 8/20 01/31/2013

PTA +883M +56F +32P 99%R 4/2023

PTA +748NM +.08%F +.02%P 92%US

PTA +4.3PL 3.03SCS +.1DPR 2.1%DCE

PTA +1.13T +1.77UDC +4.0FLC 99%R 4/2023

PTA +197PE +0.3PI 1.8%SCS

**COOKIECUTTER DAY HALEY-ET** 9K GTPI 92%R

840003011584606 100%RHA-NA +2413 G

3-09 88 VEVVE DOM 04/14/2013

PTA +1387M +49F +34P 93%R 4/2023

PTA +284NM -.01%F -.03%P 92%US

PTA -.8PL 2.95SCS -2.3DPR 2.5%DCE

PTA +2.16T +1.63UDC +.09FLC 92%R 4/2023

PTA +121FE -1.7FI 2.4%SCS

AGE X DAYS MILK DCRM % FAT % PRT DCR

\*\* 2-00 3 305 29920 90 3.8 1335 3.2 943 90

365 35140 90 3.9 1379 3.2 1126 90

\*\* 3-03 3 305 28160 91 4.3 1217 3.2 900 91

365 31900 91 4.4 1401 3.2 1031 91

**3** AOT GENETICS 02/06/2016

**4** **THOMAS KUGLER** FEMALE

**1 HOLSTEIN LN**

**BRATTLEBORO, VT 05302-0808**

**800/952-5200**

**MOUNTFIELD SSI DCY MUGUL-ET** Al/A2 AE 50K GTPI 99%R

840003006972816 100%RHA-NA TR TP TC TY +2291 G

7-00 93 EEVE GM 8/15 06/22/2010

PTA +460M +42F +14P 99%R 4/2023

PTA +328NM +.09%F +.00%P 51%US

PTA +.0PL 3.13SCS -3.1DPR 1.6%DCE

PTA +1.29T +2.09UDC +1.07FLC 99%R 4/2023

**MISS OCD ROBST DELICIOUS-ET** 50K GTPI 97%R

840003006989479 100%RHA-NA +2653 G

3-05 87 +EV+V GMD DOM 01/28/2011

PTA +1880M +48F +61P 97%R 4/2023

PTA +814NM -.08%F +.01%P 92%US

PTA +4.0PL 2.95SCS -1.6DPR 2.3%DCE

PTA +.57T +1.53UDC -.30FLC 97%R 4/2023

AGE X DAYS MILK DCRM % FAT % PRT DCR

\* 2-05 2 305 25780 89 3.5 908 3.1 793 89

365 33780 89 3.3 1121 3.1 1047 89

---

**MINNIGAN-HILLS DAY-ET** Al/A1 AA 50K GTPI 99%R

USA 69774730 100%RHA-NA TP TC TY TV TL +2313 G

GM 8/15 08/06/2010

PTA +1102M +18F +27P 99%R 4/2023

PTA +318NM -.08%F -.02%P 49%US

PTA +2.2PL 2.79SCS -.6DPR 2.3%DCE

PTA +1.03T +.91UDC -.03FLC 99%R 4/2023

**COOKIECUTTER MOM HALO-ET** 50K GTPI 97%R

840003007069733 100%RHA-NA +2290 G

2-09 88 VV+VE DOM 04/22/2010

PTA +294M +41F +21P 97%R 4/2023

PTA +207NM +.10%F +.04%P 92%US

PTA -.8PL 2.95SCS -.6DPR 2.3%DCE

PTA +1.34T +1.45UDC -.74FLC 96%R 4/2023

AGE X DAYS MILK DCRM % FAT % PRT DCR

\*\* 2-00 3 305 31070 90 5.2 1608 3.4 1066 90X

365 35280 90 5.2 1819 3.5 1237 90X

Protein reported is true protein. 006235209 3342285 7/20/2023

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## Information included on an Official Holstein Pedigree:

### 1. 100% Registered Holstein Ancestry (RHA-NA)

The first line, centered on a pedigree, shows the **percentage Registered Holstein Ancestry (RHA)** and whether the animal is of an entirely North American (RHA-NA) blood-line or has some International ancestors (RHA-I).

### 2. **COOKIECUTTER DTA HABITAN-ET** 840003134739087 100%RHA-NA 5-06 90 EVVVE DOM

The first information block on the left side of a pedigree provides you the animal's complete **identification and classification information**. You will see the animal's name, country of origin of the identification, registration number, %RHA information and any genetic condition codes that are on file with the Holstein Association.

## Genetic Codes

- BD Bulldog<sup>1</sup>
- BL Bovine Leukocyte Adhesion Deficiency (BLAD)<sup>1</sup>
- TL Tested free of BLAD
- BY Brachyspina<sup>1</sup>
- TY Tested free of Brachyspina
- CD Cholesterol Deficiency<sup>1</sup>
- TC Tested free of Cholesterol Deficiency
- CV Complex Vertebral Malformation (CVM)<sup>1</sup>
- TV Tested Free of CVM
- DP Deficiency of Uridine Monophosphate Synthase (DUMPS)<sup>1</sup>
- TD Tested free of DUMPS
- MF Mule-Foot<sup>1</sup>
- TM Tested free of Mule-Foot
- PO Observed Polled<sup>2</sup>
- PC Tested Heterozygous Polled<sup>2</sup>
- PP Tested Homozygous Polled<sup>2</sup>
- TP Tested free of the Polled Condition (horned)
- RC Recessive Red Carrier<sup>1</sup>
- B/R Black/Red Coat Color<sup>1</sup>
- TR Tested free of Recessive Red
- DR1 Tested Heterozygous Dominant Red<sup>2</sup>
- DR2 Tested Homozygous Dominant Red<sup>2</sup>

<sup>1</sup>Recessive gene carrier      <sup>2</sup>Dominant gene carrier

**Classification information** is found under the animal's registration number. It includes the age of the animal at classification, final score and major classification categories. The five categories are Front End/Capacity, Dairy Strength, Rump, Feet & Legs, and Udder. Cows with classification scores that were received prior to December 2004 are underlined, and represent the following categories: Frame, Dairy Character, Body Capacity, Feet & Legs, and Udder. If an animal has been classified Excellent in more than one age category, a multiple E designation may appear on this line after major category designations. Recognition as a Gold Medal Sire (GM), Gold Medal Dam (GMD) or Dam of Merit (DOM) will be found on this line as well.

3. A1/A2 BE 75K GTPI 99%R  
+2622 G

**TPI® (Total Performance Index)** values appear on the same line as the name. TPI is a selection index based on a balance of traits to assist Holstein breeders by sorting out animals that possess genes which will enhance the overall quality of the Holstein breed. There are different types of TPIs you will find on pedigrees:

The TPI value is preceded by a percentile ranking of P5 through P9 for the top 50% of animals born within a given year of birth, for animals less than three years old. For example, P9 animals are in the 90th percentile for the birth year, P8s are in the 80th percentile, etc.

For genomic-tested animals, you will find an indicator of which SNP density chip they were tested on (ex: 19k). After the TPI indicator is the TPI reliability value. If an animal has genetic test results for Beta Casein or Kappa Casein milk proteins, they will appear on this line, to the left of the genomic chip density indicator. Examples of these labels can be seen on the paternal ancestors on this pedigree.

- 3368  
FEMALE  
02/06/2016
- AOT GENETICS  
THOMAS KUGLER  
1 HOLSTEIN LN  
BRATTLEBORO, VT 05302-0808  
800/952-5200
4. The information block in the upper right corner reflects **ownership information and the birth date of the animal**. This block also designates whether the animal is male or female and the animal's barn ID or short name for AI bulls.
- |        |        |          |          |         |        |
|--------|--------|----------|----------|---------|--------|
| 5. PTA | +1075M | +79F     | +39P     | 95%R    | 4/2023 |
| PTA    | +739NM | + .13%F  | + .02%P  |         |        |
| PTA    | +3.3PL | 2.93SCS  | + .0DPR  | 2.5%DCE |        |
| PTA    | +2.73T | +2.54UDC | + .39FLC | 95%R    | 4/2023 |
| PTA    | +203FE | +0.4FI   | 2.3%SCE  |         |        |

**Predicted Transmitting Ability (PTA)** information follows the animal's identification and classification information. PTAs express the level of genetic superiority or inferiority an animal is expected to transmit to its offspring for a given production or type trait. These values are used to rank animals based on their genetic merit.

**Line one** indicates the Predicted Transmitting Ability for Milk (M), Fat (F), Protein (P), and Reliability (R) for production information. The date of the PTA for production calculation is also shown on this line. For animals that have a PTPI, the PTA values are estimated by averaging the parents' PTAs. This is denoted with #.

**Line two** indicates the PTA for Net Merit (NM) and the PTA% for Fat and Protein. For males this line will also include the percent of U.S. daughters in the evaluation.

**Line three** shows PTAs for Productive Life (PL), Somatic Cell Score (SCS), Daughter Pregnancy Rate (DPR), and Daughter Calving Ease (DCE).

**Line four** provides the animal's Predicted Transmitting Ability for Type (T), Udder Composite (UDC) and Feet and Legs Composite (FLC). The Reliability (R) for Type and the date of PTAT calculations are also shown on this line.

**Line five** shows PTAs for Feed Efficiency (FE), Fertility Index (FI), and Sire Calving Ease (SCE).

International genetic evaluations for type and production are labeled by printing MACE YIELD EVALUATION and/or MACE TYPE EVALUATION on the line above the PTA data. The TPI value will be followed by an M. If a conversion formula is used to convert a foreign type evaluation to a U.S. base then CONVERTED TYPE EVALUATION will be printed above the PTA data. These evaluations are based on either conversion formulas or Multiple Across Country Evaluations (MACE). Whenever the PTPI of an offspring of a bull with a MACE or converted proof is calculated a C or an M will appear after the PTPI value until U.S. information is available.

6.***	AGE	X	DAYS	MILK	DCRM %	FAT %	PRT	DCRC
2-04	3	305	30820	94	4.7	1438	3.1	961 88X
***	5-05	3	131	9920	4.7	470	2.9	289

For females, **production records** follow the genetic information. Each main line indicates the TriStar Option; age at calving; number of times milked per day; length of record in days; pounds of milk; DCRM (Data Collection Rating for milk); fat percent; pounds of fat; protein percent; pounds of protein; and DCRC (Data Collection Rating for components) during that lactation up to 305 days. An "X" at the end of the line indicates that the record is significantly above herd average. A second line of data is only included if the cow's lactation is longer than 305 days (up to 365 days) for that lactation. Once a cow produces more than 100,000 pounds of milk, her total production information appears on the pedigree and is labeled "LIFE."

State and national leader records for Milk, Fat and Protein production are labeled on the line below the outstanding record. This recognition is based on TriStar Premier records and awarded in eight age categories.

### Type of Testing Program Labels

TriStar Labels (for production records starting after 1/1/1997)	
Premier	***
Deluxe	**
Custom	*
Automated Milk Records	AMR

Type of Test (for records prior to 1/1/1997)	Dairy Herd Improvement Registry	Dairy Herd Improvement Association
Alternating AM/PM with a time monitor	APT	APM
Alternating AM/PM component sampling	APS	APC
Alternating AM/PM without a time monitor	APR	APD
Weights and component samples at monthly test milkings	DHR	DHI

- The space below the production records is used to list other recognitions, including National Show placings, All-National and All-American recognitions, Elite Performer and Star of the Breed honors.



## Holstein Association USA, Inc.

1 Holstein Place, PO Box 808 • Brattleboro, VT 05302-0808


800.952.5200 • [www.holsteinusa.com](http://www.holsteinusa.com)

Jason Ewing | 417-459-9507

# FARM VERSION 5.0

## MISSOURI DAIRY EXPO FEBRUARY 2024


**Scott E. Poock, DVM, DABVP (Dairy)**  
Associate Extension Professor  
University of Missouri  
[poockse@missouri.edu](mailto:poockse@missouri.edu)



1

## BACKGROUND ON VERSION 4.0 (WHAT DOES NOT CHANGE)

- Veterinary Client Patient Relationship (VCPR)
  - Maintain written agreements for working relationships
  - Standard Operating Procedures overview
- Veterinarian of Record (VOR)
  - Provide oversight of drug use on the farm
  - Establish treatment protocols
  - Treatment records review (written and/or Electronic)
  - Appropriate labeling of drugs
  - Regular farm visits



2

## FOREMOST DAIRY

Manager: \_\_\_\_\_ Name: \_\_\_\_\_ Date: \_\_\_\_\_  
Signature: \_\_\_\_\_

Veterinarian of Record (VOR): Name: \_\_\_\_\_ Date: \_\_\_\_\_  
Signature: \_\_\_\_\_

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*Guide for the Care and Use of Laboratory Animals is referred to as the Guide in this document*

*Guide for the Care and Use of Agricultural Animals in Agricultural Research and Teaching is referred to as the AG Guide in this document*

### Standard Operating Procedures Personnel Training Dairy Farm

**Policy:** Any person engaged in the care and use of animals at the Dairy Farm should be adequately trained to perform their duties in a humane manner and in compliance with all applicable laws, regulations and policies.

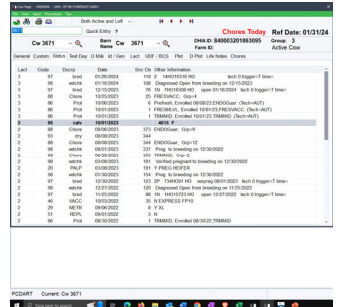

**Applicable:** All faculty, staff, and students employed by the University of Missouri utilizing the Dairy Farm to house their research and teaching animals.



3

## FOREMOST DAIRY


- Daily log of activity on the farm
- PC Dart
- Dairy Plan
- Dairy Comp 305

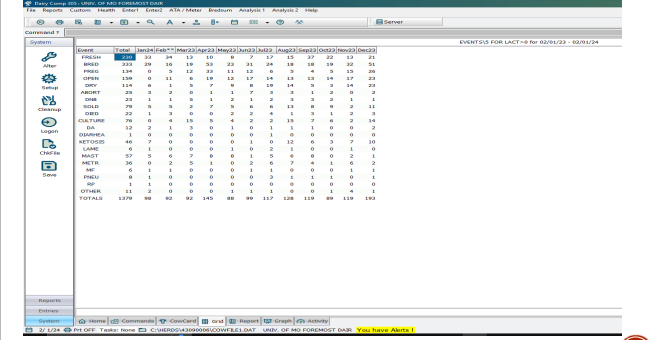
4

## BACKGROUND ON VERSION 4.0 (WHAT DOES NOT CHANGE)


- Veterinary Client Patient Relationship (VCPR)
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  - Standard Operating Procedures overview
- Veterinarian of Record (VOR)
  - Provide oversight of drug use on the farm
  - Establish treatment protocols
  - Treatment records review (written and/or Electronic)
  - Appropriate labeling of drugs
  - Regular farm visits



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Category	Item	Count	Value	Unit	Notes
Animals	ANIMALS	127	24		
Animals	AMHS	24	18		
Animals	PMHS	124	0		
Animals	OPHS	124	0		
Animals	DRY	124	0		
Animals	ABSENT	23	0		
Animals	DOB	23	1		
Animals	CULTURE	23	1		
Animals	DOB	23	1		
Animals	DIAPYRMA	1	0		
Animals	NETS	44	7		
Animals	LAME	6	1		
Animals	MARKET	127	0		
Animals	METS	124	0		
Animals	MS	6	1		
Animals	MS	6	1		
Animals	MS	1	0		
Animals	MS	1	0		
Animals	MS	1	0		
TOTALS		127	24		



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### NON-AMBULATORY ANIMALS

- How are these animals moved?
- What prompt medical care is provided?
- Must be separated, provided with feed and water, and protection from weather and predators.



https://www.ber.co.uk/strategies-to-kill-medical-from-to-diagnose-and-treat-downer-cows

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### HERD HEALTH PLAN FITNESS FOR TRANSPORT

- Definition of animals eligible for market
- Adherence to withholds
- Lactating cows should be milked before leaving
- < 103 F
- No cancer eye or blindness
- Lame or fractures (unable to stand during the travel)
- No prolapses
- Not calving or near to calving
- CNS symptoms
- Visible wounds

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### HERD HEALTH PLAN TREATMENT OF COMMON DISEASES

<ul style="list-style-type: none"> <li>Mastitis</li> <li>Metritis</li> <li>Milk Fever</li> <li>Ketosis</li> <li>Displaced Abomasum</li> <li>Pneumonia</li> <li>Diarrhea</li> </ul>	<p><b>Example Pneumonia</b></p> <p><b>Cows</b></p> <ul style="list-style-type: none"> <li>Excenel (ceftiofur)</li> </ul> <p>Cows are initially treated for respiratory disease with Excenel. It is administered at the dosage of 1-2 ml / 100 lbs IM or Sub-Q and is given at 24 hour intervals for 3-5 days of treatment dependent on response and consulting with veterinarian.</p> <p><b>Warnings</b></p> <p>No milk discard time is required when this product is used according to label directions.</p> <p>Treated cattle must not be slaughtered for 72 hours following last treatment because unsafe levels of drug remain at the injection sites.</p>
--	--

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### HERD HEALTH PLAN VACCINATION PROTOCOLS

- Age/stage
- Product used
- Dosage administered
- Route of administration
- Withdrawal times

**Pre-Breeding Heifers**  
≥ 30 days prior to moving the heifers to the Breeding Age Lot

- Vision 7 – 2 cc Sub-Q (21 day withhold)
- Express FP10 – 2cc IM (21 day withhold)
- Magnet – use balling gun to insert orally

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### HERD HEALTH PLAN MILKING PROCEDURE

- Protocol
- Foremost
  - Spray 1-2-3-4
  - Strip 1-2-3-4
  - Wipe 1-2-3-4
  - Attach 1-2-3-4
- Post Dip



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### HERD HEALTH PLAN

- Emergency Action Plan
- Biosecurity Protocol
- Pest, Fly, and Parasite Control
- Dystocia (difficult calving) Protocol

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## JULY 1, 2024 TO JUNE 30, 2027: VERSION 5.0

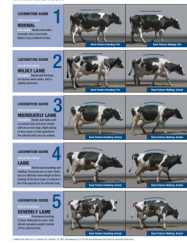
- 85 dairy farmers
- Veterinarians
- Cooperative and processor staff
- Animal scientists

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## HERD HEALTH PLAN LAMENESS

- Prevention and Treatment
- 95% score 2 or less
- continuous improvement
- **Maintain 95%**
- **85% score 1**

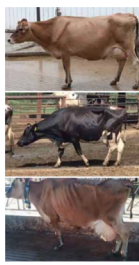
Locomotion Scoring of Dairy Cattle\*



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### Locomotion Scoring



**SCORE 1 NORMAL**  
85%  
Animal walks easily with no gait or only minor changes. Steps may be slightly uneven.

**SCORE 2 MODERATE**  
Asymmetric gait. Exhibits any of the following: shortening of the stride, slight limp, weight transfer while moving, but may bear weight evenly while standing.

**SCORE 3 SEVERE**  
Difficulty bearing weight on a limb and may exhibit obvious back arch or head bob. Animals in this category may be unable to move or be extremely reluctant to move even when encouraged by a handler.

**95% Score 1 or 2**

**Notes:**

- Hooves must be visible while scoring. If not, then may only be able to score 3s
- If in tiestalls, only score 3s and make a note of this
- Visit FAMM database library for locomotion scoring videos

Chapter 11: Appendix, Glossary and References

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## HERD HEALTH PLAN PREWEANED CALVES

- How do you move calves?
- How is **colostrum** provided?
- How is milk/milk replacer provided?
- Feed and water available starting at 3 days of age
- **Disbudding by Cautery or Paste and done by 8 weeks of age**
- **Pain mitigation**

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## COLOSTRUM FEEDING

- **A producer must provide data to support proper colostrum management**
- Quality
  - colostrometer (>50 g IgG/Liter, **Green**)
  - refractometer (> 22% on Brix)
- Quantity
  - 10% of Body Weight
  - 1 gallon of milk = 8.6#
  - 90 # Holstein heifer should receive a gallon
- Passive transfer data
  - Total Proteins from calves 1-7 days of age

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Figure 1



Figure 2





**RUGGED Precision PA201**

Brix (range 0-56)

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<https://www.misco.com/>

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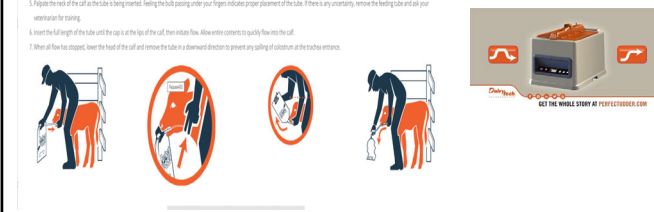
18



### COLOSTRUM FEEDING

- **A producer must provide data to support proper colostrum management**
- Quality
  - colostrometer (>80 g IgG/Liter, Green)
  - refractometer (> 22% on Brix)
- Quantity
  - 10% of Body Weight
  - 1 gallon of milk = 8.6#
  - 90 # Holstein heifer should receive a gallon
- Passive transfer data
  - Total Proteins from calves 1-7 days of age

<https://dairytechinc.com/matilda/>



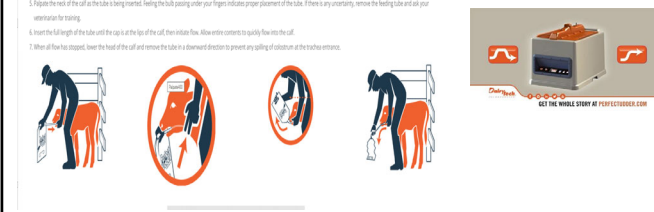
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19

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<https://dairytechinc.com/matilda/>



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### COLOSTRUM FEEDING

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  - 90 # Holstein heifer should receive a gallon
- Passive transfer data
  - Total Proteins from calves 1-7 days of age

TPI Category	Total Protein (g/dL)	Farm Level Goals (%)	Your Farm	Confidence Interval (95%)
Excellent	> 6.2	> 40%	57.0%	49.6% - 64.4%
Good	5.8 to 6.1	~ 30%	25.8%	19.3% - 32.3%
Fair	5.1 to 5.7	~ 20%	15.1%	9.7% - 20.4%
Poor	< 5.1	< 10%	2.2%	0.0% - 4.3%

Goal	Your Farm
% ≥ 5.2	% ≥ 5.5
90%	80%
96.8%	89.2%

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### A HOLSTEIN BULL, BEEF ON DAIRY BULL, AND HOLSTEIN HEIFER ARE BORN TODAY?

- The farmer has more than enough **"Green"** colostrum with plenty of reserves. However, the producer does have some **"Yellow"** colostrum.
- Which colostrum should the dairyman feed each calf?






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### DAIRY CALF AND HEIFER ASSOCIATION GOLD STANDARDS



Setting the benchmarks for your herd's future.

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### DCHA GOALS FOREMOST DAIRY RECORDS

- **Mortality (death loss)**
  - < 3%
- **Scours**
  - < 15%
- **Pneumonia**
  - < 10%

Calf and Heifer	
Yearly Death Loss (<60 days of age)	2.2
% scours (< 60 days of age)	3.3
% pneumonia (<60 days of age)	1.1

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## EXAMPLE OF DATA TO RECORD FOREMOST DAIRY

Calf ID Dam ID Date Navel Dip First Colostrum Donor and Quality Second Colostrum Donor and Quality Inforce 3

Calf ID	Dam ID	Date	Navel Dip	First Colostrum	Donor and Quality	Second Colostrum	Donor and Quality	Inforce 3

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### New Calf Information

Calf ID	Dam ID	Date	Navel Dip	First Colostrum	Donor and Quality	Second Colostrum	Donor and Quality	Inforce 3
3715B	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715C	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715D	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715E	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715F	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715G	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715H	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715I	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715J	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715K	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715L	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715M	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715N	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715O	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715P	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715Q	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715R	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715S	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715T	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715U	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715V	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715W	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715X	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715Y	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0
3715Z	3775	12-6	SM	HA	3670	25.0	CC	3780 25.0

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## DISBUDDING

- Version 4.0 --- no specific method required
- Version 5.0 --- method must be Paste or cautery

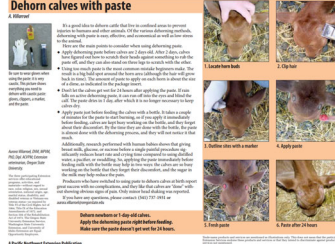



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## Dehorn calves with paste

Two Heads Are Better Than One: A Starter Guide to Pairing Dairy Calves



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[extension.oregonstate.edu/sites/default/files/documents/pnw626.pdf](https://extension.oregonstate.edu/sites/default/files/documents/pnw626.pdf)

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## PAIN MITIGATION AT DISBUDDING

If pain mitigation has not been implemented, the producer has nine months to start





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## CONTINUING EDUCATION

If this is not recorded, in version 5.0 a producer has only **nine** months to rectify

### Continuing Education (CE) Records

Stockmanship
Pre-Weaned Calf Care
Non-ambulatory Animals
Euthanasia
Determining Animals are Fit to Transport

### Who Needs to Document CE Records

Family Members
Non-Family Members
Students
Professors and Teachers
Veterinarians
Interns and Residents
Graduate students
Research assistants
Teaching Assistants

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### CONTINUING EDUCATION AND DOCUMENTATION MUST OCCUR EVERY YEAR FOR EVERYONE!



- First calf received 12/29/69
- DVM received 1987
- Board Certified
  - Beef Cattle 1997
  - Dairy Cattle 2004
- Professor University of Missouri since 2006
- PAACO Third Party Certified since 2019
- Beef Quality Assurance Certified
- Calf Care Quality Assurance Certified

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### HERD HEALTH PLAN (VERSION 4.0) EUTHANASIA

- Criteria for euthanasia
- Euthanasia techniques
- Carcass disposal
- **Identify a primary and secondary person for euthanasia**
  - If not present, a farm has **nine** months to correct
  - Confirmation of death needs to be recorded
  - If not present, a farm has **nine** months to correct

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### FARM Program Areas



ANIMAL CARE



ENVIRONMENTAL STEWARDSHIP



ANTIBIOTIC STEWARDSHIP



WORKFORCE DEVELOPMENT

FARM works with you, the producer community and industry partners, to provide comprehensive resources, ongoing training and other educational tools. These tools help create a culture of continuous animal care improvement.

The goal of FARM is to unite the dairy industry around best management practices and demonstrate the excellence that occurs on your farm every day through science and outcome-based standards that are facility, size and

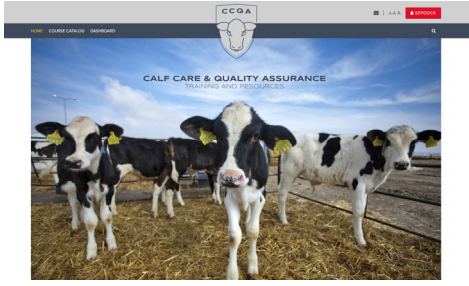
daily excellence in animal care through their farm's culture by way of active leadership, oversight and management. FARM does not ensure a culture, guarantee best management practices are followed, or replace supervision or management.

**Implementing FARM**  
Created by the National Milk Producers Federation (NMPPF), with support from Dairy Management.

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### CALF CARE QUALITY ASSURANCE







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### VERSION 6.0?

- Paired/group housing

Paired housing benefits calves & dairies | [update.com](http://update.com)

[calfcare.ca](http://calfcare.ca)

[wisfarmer.com](http://wisfarmer.com)

[agriland.co](http://agriland.co)

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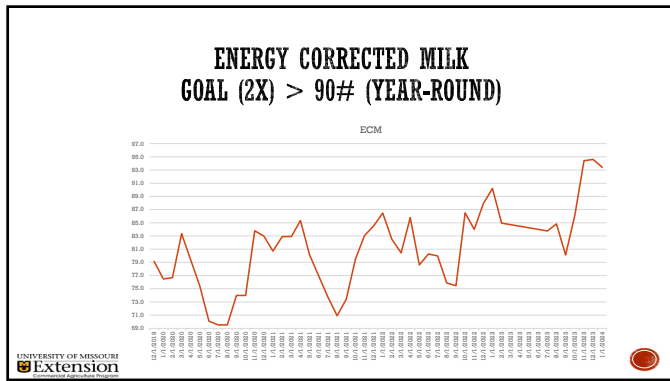
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### UPDATE ON FOREMOST DAIRY

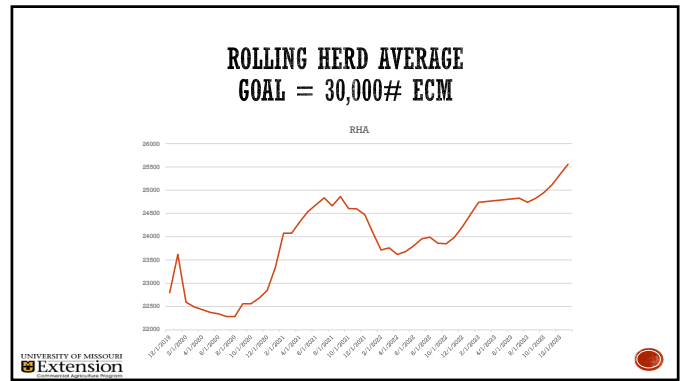
- Sale of Holstein Farm and loss of Kirby property for lease
- Move to a 300-cow confinement dairy
- Have all Holsteins
  - The Xbred cows will be bred up to Holstein
- New parlor with classroom(s)
- A new endowed dairy nutrition position
- Improvements to facilities
- Activity/rumination monitor system
- New heifer facilities (under construction)

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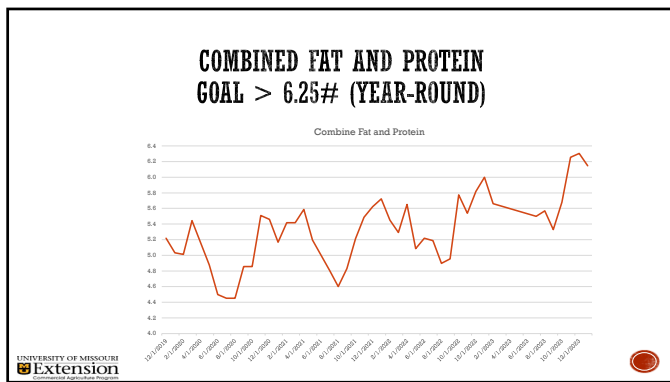
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37



38



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### FERTILITY

Month	%Conc	#Preg	#Open	Total
2023 February	31	5	11	16
2023 March	67	12	6	18
2023 April	63	33	19	52
2023 May	48	11	12	23
2023 June	41	12	17	29
2023 July	30	6	14	20
2023 August	28	5	13	18
2023 September	24	4	13	17
2023 October	26	5	14	19
2023 November	47	15	17	32
2023 December	56	22	17	39
<b>TOTALS</b>	<b>45.9</b>	<b>130</b>	<b>153</b>	<b>283</b>

Technician	%Conc	#Preg	#Open	Total
Students	45	10	12	22
Scott Poock	49	19	20	39
<b>TOTALS</b>	<b>47.5</b>	<b>29</b>	<b>32</b>	<b>61</b>

	%Conc	#Preg	#Open	Total	%Tot
Conventional	47	99	110	209	70
Sexed	48	15	16	31	10
Beef	40	22	33	55	20
<b>TOTALS</b>	<b>46.1</b>	<b>136</b>	<b>159</b>	<b>295</b>	<b>100</b>

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## Questions, Comments

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# Passing the Torch

(A practical start)



Nhy/tj/Kcc/|gggcnug/8YP



1


# The \$10 Challenge




ISK logo: DAIRY • NEWS • MARKETS • PEOPLE

2

# What lens are we seeing through?



OR



ISK logo: DAIRY • NEWS • MARKETS • PEOPLE

3



# Have you walked a mile in their shoes?

ISK logo: DAIRY • NEWS • MARKETS • PEOPLE

4

# Let's talk about dairy farming parents.....

ISK logo: DAIRY • NEWS • MARKETS • PEOPLE

5

# When they started dairying.....


Age: 20 - 30

ISK logo: DAIRY • NEWS • MARKETS • PEOPLE

6

When they saw early success.....


Age: 30 - 40



7

When they expanded the farm.....


Age: 40 - 50



8

When they hit/exceeded their goals.....


Age: 50 - 60



9


As they end dairy farming.....

Age: 60 - 70



10

Each of these eras require change.




11

**Understanding Change is Half the Battle**

“There appears to be a mental process that people go through when dealing with change. There are a series of steps that move from one emotional mindset to the next. Knowing that there is a way is better than ignoring the path or, worse yet, trying to make the climb in the dark and alone.”

-pp. 4-6, Gary Siplorski, DAIRY MONEY MATTERS




12

Change always needs to be processed.

Processing change is very similar to processing grief.

6 steps to the process




13

### 1. Denial

“I cannot believe that this is happening to me!”

- pp. 4-6, Gary Siplorski, DAIRY MONEY MATTERS




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### 2. Anger

...we realize that a change is happening and the change is not to our liking.

- pp. 4-6, Gary Siplorski, DAIRY MONEY MATTERS




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### 3. Realization

“...a person realizes that, no matter what they do, the industry/farm will move on, with or without them.”

- pp. 4-6, Gary Siplorski, DAIRY MONEY MATTERS




16

### 4. Depression

We know we have to make the change, but we don't want to do it. We are stuck in a state of feeling sorry for ourselves.

- pp. 4-6, Gary Siplorski, DAIRY MONEY MATTERS




17

### 5. Acceptance

This is a breath of fresh air. Our mind starts thinking more clearly. We still may not like the change, but know we have to do it.

- pp. 4-6, Gary Siplorski, DAIRY MONEY MATTERS



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## 6. Growth

At this stage of the change process, real personal and business growth happens.

Funny thing is.....now you are prepared for the next change to happen.

- pp. 4-6, Gary Siplorski, DAIRY MONEY MATTERS



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## Let's talk more about dairy farming parents.....



20

### They are experienced

- they actually have seen it all in one way or another

- they've had to learn from poor decisions

- they've learned that dairying is really, really hard



21

### They want to be heard

- they have so much great advice for you....if you'd just stop and listen

- their way isn't ALWAYS the old geezer way of doing things

- they want you to feel how much they love you and want you to succeed



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### They don't want you to fail

- they've seen neighbors go broke

- buying things is easy, paying for them less easy

- they want you to be successful, but are scared to let go and see you get hurt



23



## Let's talk about dairy farming's next gen.....



24




They maybe don't remember 9/11..... and a lot of other things you remember

25


They likely went to college



"I learned a lot in college, but they make fun of everything I bring up"

"Mom and Dad never really asked me about my classes or what I was learning"

"they never encouraged me to go to college because I was.... just going to be a dairy farmer"



26

They love dairy farming as much as you do



"I actually love working long days.... especially during harvest season"

"I think we have a really awesome group of cows.... they're milking like crazy"

"Have you seen how high our butterfat and protein are?"



27

They have good ideas




"We need to be checking the kernel processor at least twice per day.... we can't afford to buy corn silage that goes right through the cow"

"We're so busy, we don't get risk management decisions made on time... we should work with company X"



28


They want to feel heard



"Dad never asks for my opinion"


"I try to speak up, but Grandpa dismisses my ideas before he's even really heard them"

"Could you talk to my Dad for me.... he'll listen to you"



29


They want to be involved



"You know how Dad is, he wants to make all the marketing decisions himself"

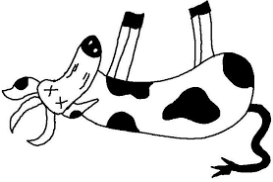
"Its faster for Mom to just do the books"

"I don't know anything about it, Dad went to that meeting"




30

## They want to make their own mistakes



“I want to buy a tractor and liquid manure wagon....I think it will make us money and I’d like to give it a try”

“I want to breed some of our cows to this bull, he is more feed efficient and I think smaller cows will fit on our rotary parlor better”




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## The Ten Dollar Challenge





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**Microresolution:**  
I resolve to make the bed each day.  
NOT  
I resolve to keep the house clean.

**Microresolution:**  
I resolve to talk for 1 hour each week over coffee/beer with \_\_\_\_\_.  
NOT  
I resolve to build a transition plan.



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<https://extension.missouri.edu/publications>

<https://farms.extension.wisc.edu/topics/farm-succession/>

<https://extension.umn.edu/business/transfer-and-estate-planning>

<https://www.extension.iastate.edu/agdm/wdbusiness.html>



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**Thoughts & Discussion**



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## Strategies to increase sorghum silage digestibility

Juan M. Piñeiro, DVM, MS, Ph.D.

Assistant Professor and Extension Dairy Specialist

Department of Animal Science, Texas A&M University

### Summary

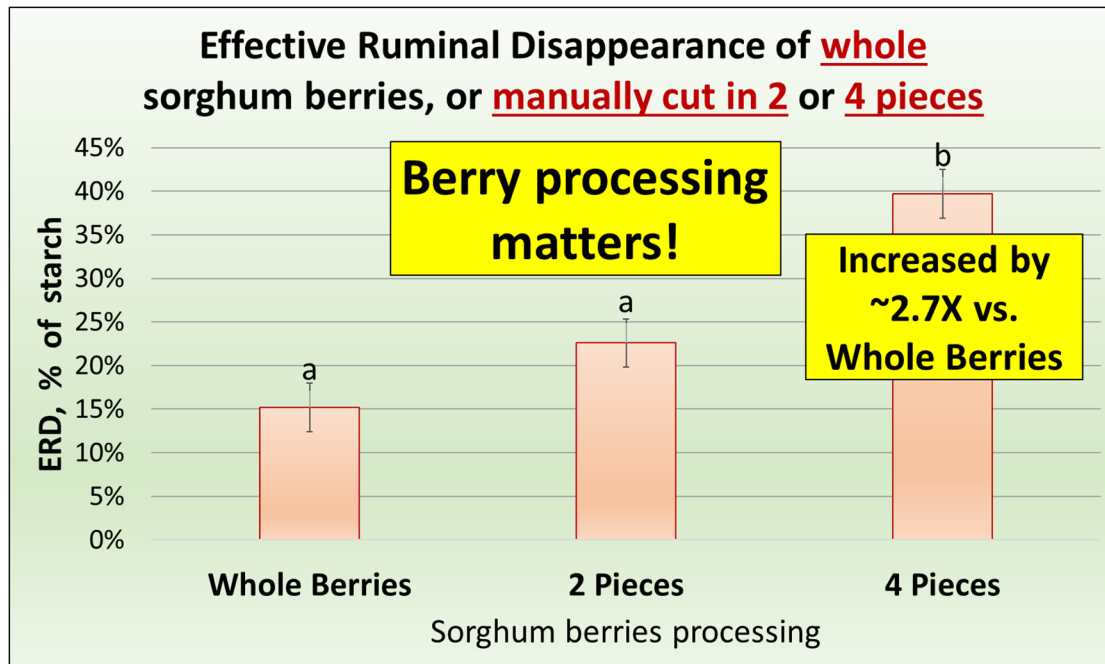
- While corn is the most common crop used for silage, sorghum is more drought tolerant and has lower input costs. However, conventional (i.e., non-BMR) sorghum silage has lower starch and fiber digestibility compared to corn silage<sup>1</sup>.
- To decide which sorghum hybrid to use, farmers need to set their priorities while considering land availability, water well capacity and access to cutting-edge harvesting technologies. In regions with severe water and forage scarcity with
- If the priority to **maximize only fiber yield and fiber digestibility**, Brown mid-rid forage (BMR) BMR sorghum hybrids should be considered. Brown mid-rid forage (BMR) sorghum hybrids have similar fiber digestibility to conventional corn silage<sup>2</sup>. On average, BMR sorghum hybrids have ~0.5 %-points lower lignin and ~5% higher NDF digestibility compared to conventional sorghum hybrids<sup>3</sup>. This ~5% higher NDF digestibility could increase dairy cows dry matter intake and milk yield by roughly 2 and 3 lbs/cow/d<sup>4</sup>.
- BMR male-sterile sorghum hybrids do not develop grain which decreases lodging risks, duplicate the content of sugars and increases the harvest window compared to non-sterile hybrids<sup>5</sup>.
- If the priority is to **maximize the fiber and starch yield and have excellent starch digestibility**, then cutting-edge technologies to process sorghum berries is needed to achieve >95% of berries processed. Strategies to increase starch digestibility include: 1) increasing sorghum berries processing<sup>6,7</sup> 2) harvesting at an earlier plant maturity stage (e.g., soft dough > hard dough stage<sup>8</sup>) and 3) increasing ensiling time<sup>8</sup>.
- Sorghum berries processed in 4 pieces increase rumen in-situ starch digestibility by more than double compared to whole sorghum berries (Fig. 1). Improvements in starch digestibility would be explained by disruption of the pericarp and starch-protein matrix as well as increased surface area for microbial digestion<sup>5</sup>.

**Table 1.** Nutritional value and trade-off between sugars and starch of male-sterile with non-sterile sorghum hybrids<sup>5</sup>.

**Table 1.** Nutrient composition comparison between male-sterile and non-sterile sorghum hybrids.

Item	Male-Sterile LSM ± SEM	Non-Sterile LSM ± SEM	P-value
DM, %	28.4 ± 0.98	40.8 ± 0.85	< 0.0001
WSC, %DM	18.0 ± 0.73	7.21 ± 0.63	< 0.0001
Starch, %DM	13.0 ± 1.1	28.6 ± 0.95	< 0.0001
aNDF, %DM	42.3 ± 0.59	35.0 ± 0.51	< 0.0001
NFC, %DM	39.6 ± 0.75	46.2 ± 0.68	0.003
Crude Protein, %DM	8.29 ± 0.21	10.2 ± 0.19	< 0.0001
Total Fatty Acids, %DM	1.14 ± 0.06	1.69 ± 0.05	< 0.0001

WSC: Water soluble carbohydrates.  
NFC: Non-fiber carbohydrates.



**Figure 1.** Adapted from McCary, 2019. Strategies to improve whole-plant sorghum silage nutritive value. MSc. Thesis, UF<sup>5</sup>.

## References

- <sup>1</sup> McCary, C.L., D. Vyas, A.P. Faciola, and L.F. Ferraretto. 2020. Graduate student literature review: Current perspectives on whole-plant sorghum silage production and utilization by lactating dairy cows. *J. Dairy Sci.* 103:5783–5790.
- <sup>2</sup> Sánchez-Duarte, J. I., K.F. Kalscheur, A.D. Garcia, and F.E. Contreras-Govea. 2019. Short communication: Meta-analysis of dairy cows fed conventional sorghum or corn silages compared with brown midrib sorghum silage. *J. Dairy Sci.* 102:419–425.
- <sup>3</sup> Pupo, M.R., Wallau, M.O. and Ferraretto, L.F., 2022. Effects of season, variety type, and trait on dry matter yield, nutrient composition, and predicted intake and milk yield of whole-plant sorghum forage. *J. Dairy Sci.* 105:5776-5785.
- <sup>4</sup> Oba, M. and Allen, M.S., 1999. Evaluation of the importance of the digestibility of neutral detergent fiber from forage: effects on dry matter intake and milk yield of dairy cows. *J. Dairy Sci.* 82:589-596.
- <sup>5</sup> Duhatschek, D., Bell, J.M., Druetto, D., Ferraretto, L.F., Raver, K., Goeser, J., Smith, J.K., Paudyal, S., and Piñeiro, J.M. 2023. Comparing the nutritional value and the trade-off between sugars and starch of male-sterile with non-sterile sorghum hybrids. *J. Ani. Sci.* 101:487-488.
- <sup>6</sup> McCary C.L., 2019. Strategies to improve whole-plant sorghum silage nutritive value. Master of Science Thesis, University of Florida.
- <sup>7</sup> McCary C.L., and L.F. Ferraretto. 2020. Re-evaluating berry processing score. *Hay and Forage Grower*.
- <sup>8</sup> Robison, C.A., 2019. Management impacts on sorghum silage ruminal digestibility. MSc thesis WTAMU.

# The 2024 Outlook for Dairy Markets and Policy

Dr. Scott Brown  
Agricultural Economist  
University of Missouri

## Take Home Points:

The DMC program may be important again in 2024

- December 2023 – DMC margin was \$8.44
- Lower feed costs will reduce the chances of DMC payments
- Milk prices may stay at 2023 levels in 2024
- Farm bill debate will take time to unfold

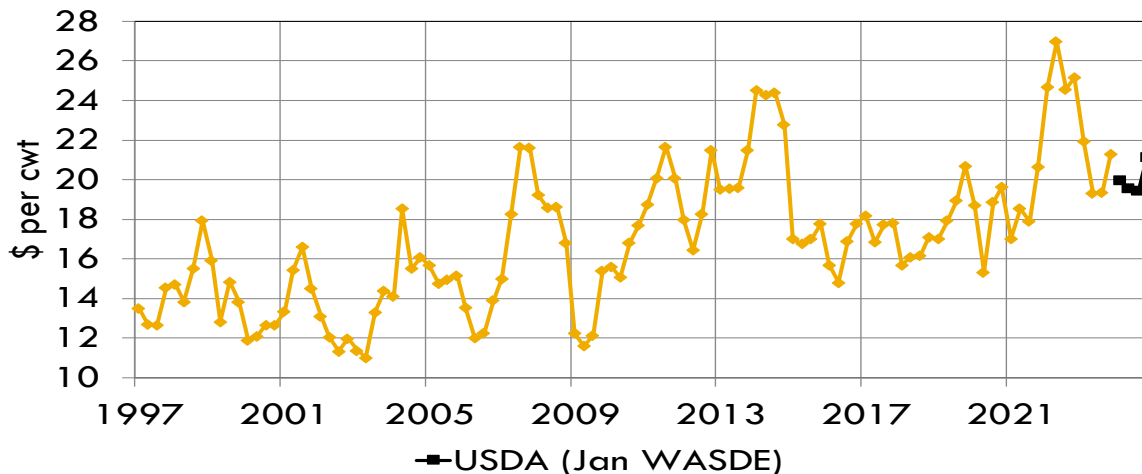
The national federal milk market order hearing has finished

- The outcome of the hearing remains unclear
- It could take 12 to 18 months to complete the process

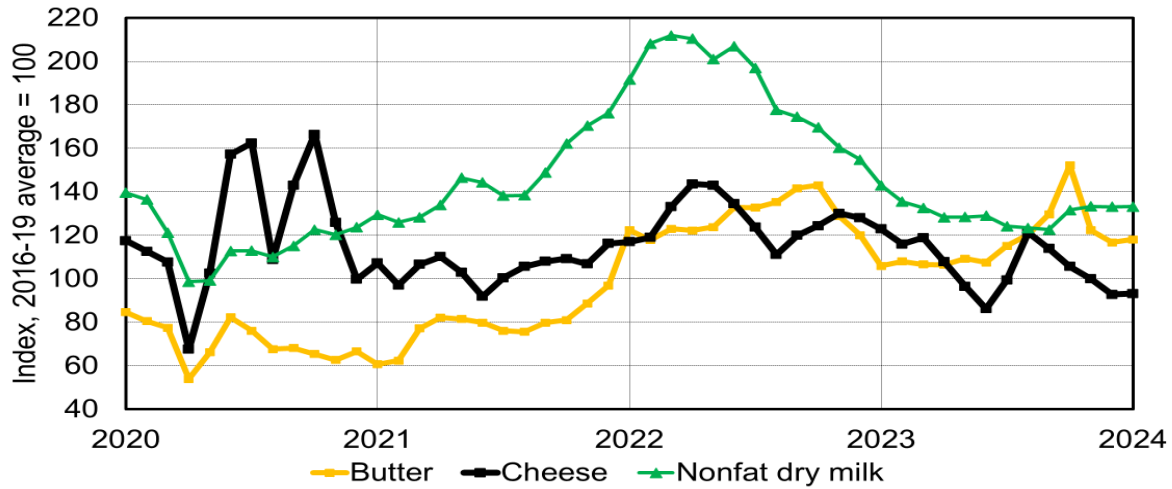
The outlook for the dairy industry remains challenged in 2024

- Dairy product prices will remain at lower levels this year
- International demand for U.S. dairy products expected to remain low
- Even with weak milk production growth, all milk prices remain low

## Quarterly U.S. All Milk Prices

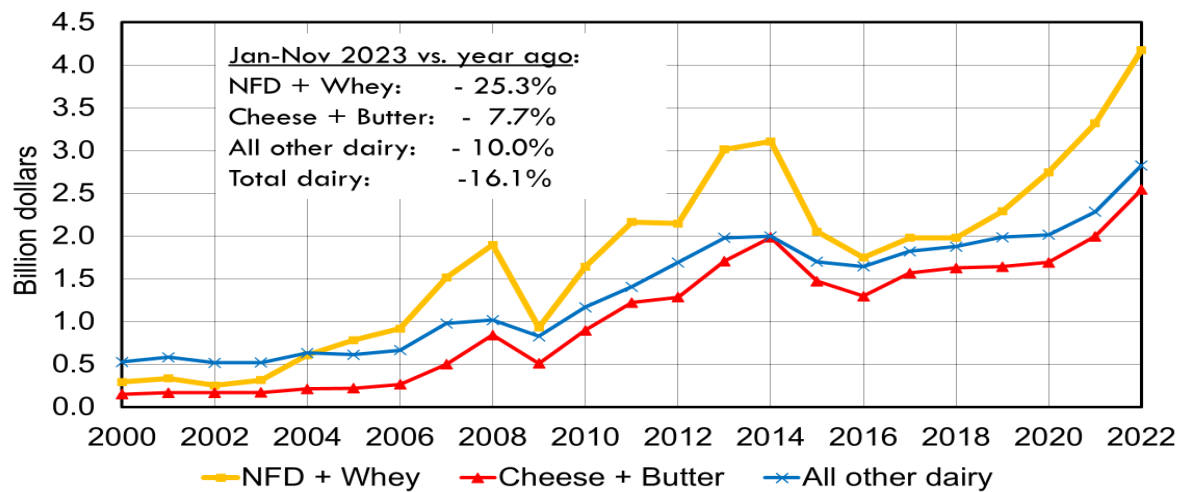


# Monthly Dairy Product Prices



 College of Agriculture,  
Food and Natural Resources


# U.S. Dairy Export Value



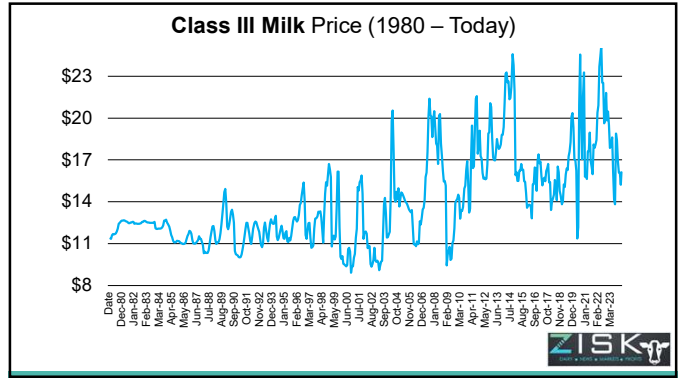
 College of Agriculture,  
Food and Natural Resources

# Basic Guide to Dairy Markets

— Kevin Hoogendoorn, DVM —



1



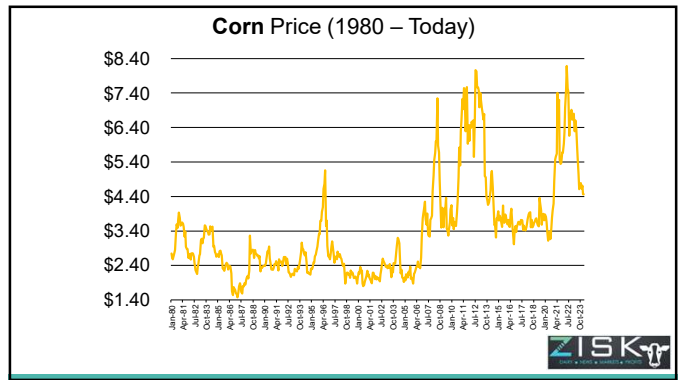
2

### Milk /cwt

1980's:	\$10.30 – 14.93	(\$4.63)
1990's:	\$10.02 – 16.70	(\$6.68)
2000's:	\$8.90 – 21.40	(\$11.50)
2010's:	\$12.78 – 24.58	(\$11.80)
2020's:	\$11.37 – 25.20	(\$13.83)




3



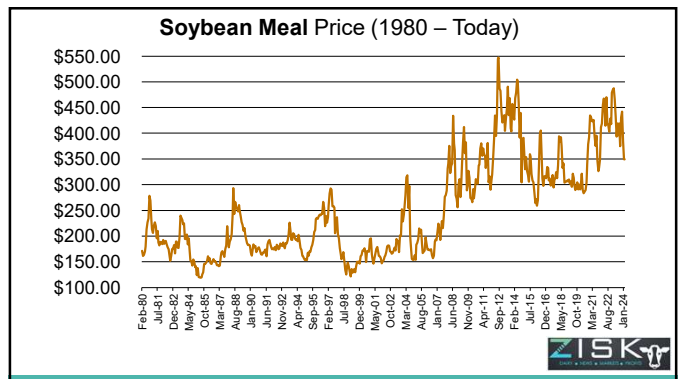
4

### Corn /bu

1980's:	\$1.47 – 3.94	(\$2.47)
1990's:	\$1.87 – 5.16	(\$3.29)
2000's:	\$2.20 – 7.24	(\$5.04)
2010's:	\$3.02 – 8.07	(\$5.05)
2020's:	\$3.12 – 8.18	(\$5.06)




5



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### Soy Meal /ton


1980's:	\$119 – 293	(\$174)
1990's:	\$122 – 293	(\$171)
2000's:	\$147 – 434	(\$287)
2010's:	\$259 – 547	(\$288)
2020's:	\$283 – 488	(\$205)



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### Old REALITY – 1980's


Milk:	\$4.60 price swings
Corn:	\$2.50 price swings
SoyMeal:	\$170 price swings



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### New REALITY – 2020's


Milk:	\$14 price swings	<u>1980's</u> \$4.60
Corn:	\$5 price swings	\$2.50
SoyMeal:	\$300 price swings	\$170



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*"In the past, taking care of cows and crops meant success. And, if you worked hard, you made a profit...Believe it or not, in the 1970's and 1980's the U.S. milk support prices offered an average \$13.50 mailbox price support in a world of \$6.00 cost of production."*


– Gary Sipiorsky, Dairy Money Matters



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What's the cause of the increased volatility in the current commodity markets?


1. CME trading
  - Fund involvement
  - Speculators
  - Hedging Inflation
2. Information flow



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### 1980's



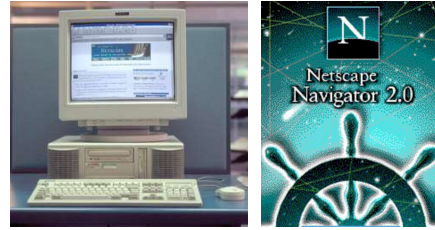
12



**1990's**



**2000's**



28.8 - 56Kbit/s dialup modems



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**2020's**



5G - 500 Mbit/s



**2030's**



6G - 1Tbit/s



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How do we find success in volatile markets?

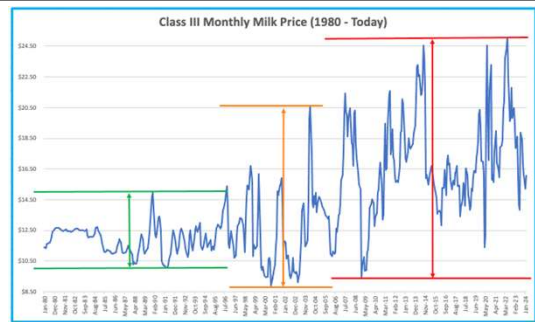
History predicts the future....think on base % not home runs!

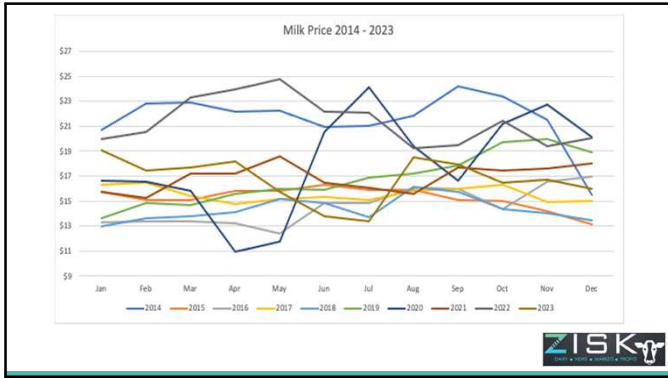
**MONEYBALL**



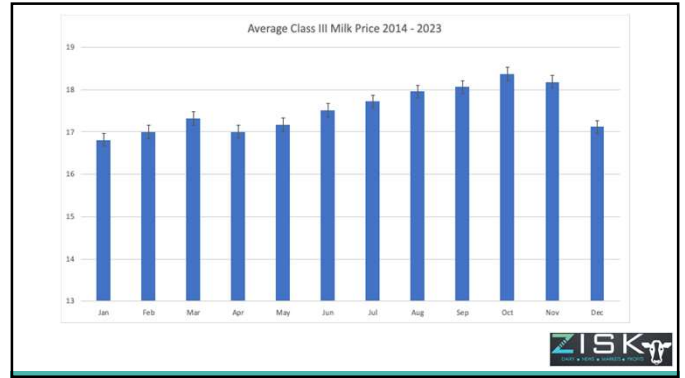
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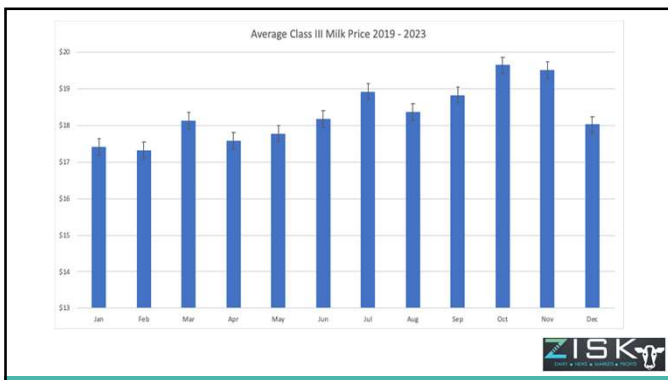




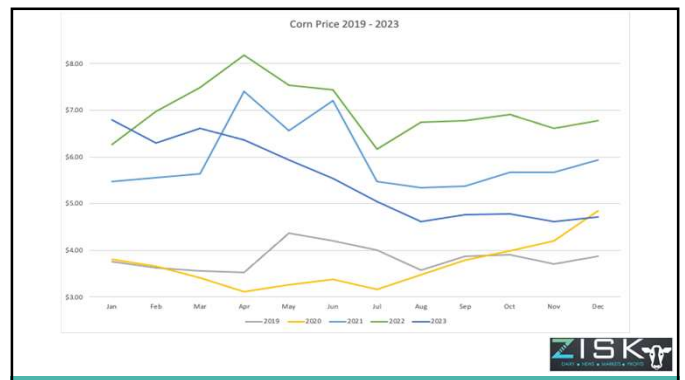
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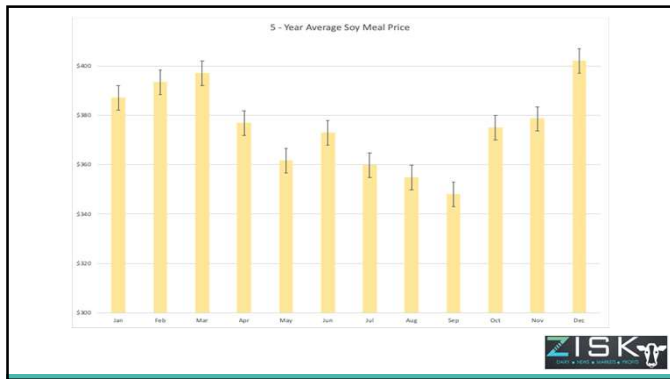
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What else can you do?

*Pay attention to the markets! **Be AWARE!***

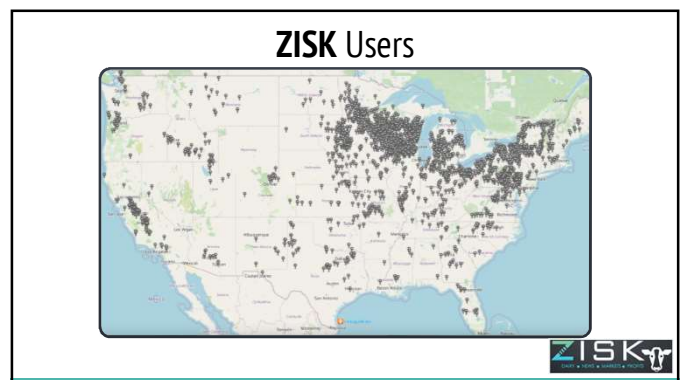
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**ZISK Dairy App**

Used by 4,241,900 US dairy cows (45%)

**FREE** app designed for dairy farmers

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- Profit projections
- CME markets
  - Class III & IV milk
  - Corn
  - Soybean meal
- News

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**Thank You..... Questions?**

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We're here to help  
identify opportunities  
to improve your  
farm's profit

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