# Table of Contents

# Program Agenda

| | |
|---|---|
| 9:00 am | Registration |
| 9:30 am | DR. DERRELL PEEL, Professor Oklahoma State University, **Industry Outlook.** |
| 10:30 am | DR. KEN ODDE, Kansas State University, **Beef on dairy economics: results of a video auction analysis.** |
| 11:30 am | **Q & A Session**, WARREN RUSCHE, South Dakota State University, moderating. |
| 12 noon | Lunch |
| 12:45 pm | DR. BOB WEABER, Kansas State University, **Genetic considerations for a more valuable calf** |
| 1:45 pm | DR. LAUREN KIMBLE, Select Sires, **How do dairy influenced cattle fit into value-based markets** |
| 2:45 pm | **Q & A Session**, WARREN RUSCHE, South Dakota State University, moderating. |
| 3:15 pm | Adjourn |

# I-29 Moo University Faculty Members

## Iowa State University

### Jennifer Bentley

Extension Dairy Field Specialist
Phone: 563-382-2949; Email: jbentley@iastate.edu

Jennifer Bentley is a Dairy Field Specialist for ISU Extension and Outreach in northeast Iowa. Her base office is in Decorah, Iowa and she currently works and develops educational programming with producers in 10 surrounding counties. Jennifer grew up on a dairy farm in North Central Iowa, where the 3rd and 4th generation family is operating the dairy farm today. She earned her Bachelor of Science Degree in Dairy Science and Master of Agriculture Degree both from Iowa State University. She works closely with dairy producers, providing them with information regarding facility design, calf management, and overall dairy herd management. She enjoys educating the public about modern dairy practices and plays an integral role in telling the Iowa Dairy Story, a program to educate consumers about the importance of the dairy industry in Iowa.

### Fred Hall

Northwest Iowa Extension Dairy Specialist
Phone: 712-737-4230; Email: fredhall@iastate.edu

Hall joined Iowa State University Extension in January 2017 as the dairy specialist for Northwest Iowa. He served as the Chickasaw County Extension Director for Iowa State University Extension from 2005 to July of 2009 where he served on the Iowa Extension Dairy Team. He coordinates the ISU webinar series and most recently publishes the Siouxland Latino Work/Life Celebration newsletter for Latino employees in the NW Iowa food industry. His industry focus in on milk marketing and labor issues. Hall is married to Sharon Lee and has two sons.

### Gail Carpenter

Iowa State University Extension Dairy Specialist
Phone: (515) 294-9085  Email: ajcarpen@iastate.edu

Gail Carpenter is the state dairy extension specialist for Iowa State University, beginning in July 2022. Gail joined the faculty at ISU as a teaching professor and coach of the Dairy Challenge team in 2021. A Michigan native, Gail received a Bachelor's degree from Michigan State University in Animal Science. In graduate school, she completed her Master's at the University of Minnesota in ruminant nutrition and her PhD at Kansas State University in transition cow nutritional physiology. Gail was a faculty member at the University of Guelph, Ridgetown Campus from 2016-2019, where she held an appointment in teaching, service, and research, focusing on applied dairy nutrition management and alternative forages in dairy rations. From 2019-2021, Gail worked as a dairy nutritionist for CSA Animal Nutrition in Dayton, OH. Her current position is split between statewide extension, research, and teaching, and she is heavily involved with the Dairy Challenge organization as a national board member and member of the Midwest Regional Planning Committee in addition to serving as ISU's team coach. *Expertise*: nutrition, management, feed management, records analysis, beef on dairy.

# South Dakota State University

## Maristela Rovai

Assistant Professor/Extension Dairy Specialist
Phone: 605-688-5488; Email: maristela.rovai@sdstate.edu

Dr. Rovai is a Veterinarian from Brazil with a MSc & PhD degree in Veterinary with emphasis in Animal Science (UAB-Spain). She had postdoc positions in USA (UW-Madison and E. (Kika) de la Garza American Institute for Goat Research-Langston University) and Europe (TUM in Germany and UAB-Spain) working in animal science with emphasis in mammary gland physiology and ruminant management. Dr. Rovai's research activity has involved studies on the area of milk ability in dairy ruminants (goat, sheep, camels and cows), with a strong focus on milking technology, milk quality improvement, mastitis impact on technological properties of milk and cheese. Dr. Rovai has published more than 45 scientific and extension papers and has mentored graduate students in pursuing either their Master or PhD degree in Animal Science.

Currently, she is an Assistant Professor / Extension Dairy Specialist at the Department of Dairy and Food Science at the South Dakota State University in Brookings, SD. Dr. Rovai's main responsibilities are to develop Extension programs for improvement of milk quality and assist dairy producers and industry personnel on workforce development and best production practices. She is also coordinating a program called "Semillas" – the Spanish word for seeds - designed to help Latino youth of dairy workers within the region to embrace their heritage and gain a sense of community while understanding the Dairy Industry. Dr. Rovai has the ability to assist dairy producers on developing farm protocols, educational trainings, which include hands on and assisting with farm employee meetings. Rovai's expertise is in lactation physiology and milk quality, employee educational training, and speaks fluent Spanish, English and Portuguese.

## Patricia Villamediana

Extension Dairy Field Specialist
Phone: 605-882-5140, Email: patricia.villamediana@sdstate.edu

Dr. Villamediana is a veterinarian with a MSc degree in Cellular Biology and a PhD degree in Veterinary Medicine with emphasis in Animal Reproduction (UAB-Spain). She was a Professor in Venezuela working on in vitro embryo production in goats, cattle, and buffaloes. Dr. Villamediana's research focuses on the physiological fundaments of in vitro embryo production. Dr. Villamediana has published more than 30 scientific papers and has mentored graduate students pursuing their Master or/and PhD degrees in Animal Production, Animal Reproduction, Veterinary Science and Basic Immunology. Currently, she is an Extension Dairy Field Specialist in the Department of Dairy and Food Science at South Dakota State University officed in Watertown, SD. Dr. Villamediana's main responsibilities are to enhance agricultural profitability and grow the South Dakota dairy industry, focus on improving the reproductive efficiency of dairy cattle by applying knowledge gained through scientific research to develop practical management strategies and disseminate that information throughout South Dakota.. Speaks fluent Spanish and English.

# University of Minnesota


## Jim Salfer

Extension Educator-Dairy
Phone: 320-203-6093; Email: salfe001@umn.edu


Jim Salfer is a Regional Extension Educator – with University of Minnesota Extension. Jim has served in his present position for 22 years. Before that he managed a feed department, was a dairy nutritionist, a district sales manager for an AI company and managed a dairy farm. Jim has been involved on farm research projects studying robotic milking systems and automatic calf feeders. The focus of his education program has been to help farmers and other industry professionals understand the major factors driving dairy farm profitability and develop management strategies to improve profitability.

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# I-29 Moo University Beef Short Course Speakers

**Derrell Peel** Professor and Extension Specialist for Livestock Marketing. Peel holds the Charles Breedlove Professorship of Agribusiness in the Department of Agricultural Economics. He has served as the Extension Livestock Marketing Specialist since 1989. My extension programs focus on livestock market situation and outlook and marketing/risk management education for producers.
derrell.peel@okstate.edu 405-744-9816 & 6082.

**Kenneth G. Odde, DVM, PhD** Professor Emeritus Kansas State University. Dr. Odde received a bachelor's degree in animal science from South Dakota State University, a master's degree in reproductive physiology, a doctor of veterinary medicine and a doctorate in physiology from Kansas State University. Dr. Odde served as Assistant Professor, Associate Professor and Professor at Colorado State University from 1983 to 1994. He taught and conducted research in beef cattle reproduction and health. In 1994, Dr. Odde returned to his home area in South Dakota and joined the technical services team at SmithKline Beecham Animal Health. He was a member of the technical services team at Pfizer Animal Health following their acquisition of SmithKline Beecham Animal Health. In 2000, Dr. Odde left Pfizer to become Vice President of Veterinary Operations at AgSpan and then had his own consulting business. Dr. Odde joined North Dakota State University as Professor and Head, Department of Animal & Range Sciences, in January of 2003. Starting in June 2005, he served as Professor and Director, Beef Systems-Center of Excellence, a public-private partnership designed to grow cattle feeding and processing in ND, and the research and education support to the beef industry. Dr. Odde served as Department Head for the Animal Sciences and Industry Department at Kansas State University from 2007 to 2018. Dr. Odde is a member of several associations, including American Society of Animal Science, American Veterinary Medical Association and American Association of Bovine Practitioners and is a frequent speaker at veterinary and cattle producer meetings.

kenodde@ksu.edu 605-848-4479

*Abstract.* Our objective was to determine 1) the value of Holstein feeder steer lots compared with steer lots of other breed descriptions, 2) the value of beef-dairy cross weaned steer calves compared with either Holstein weaned calves or weaned calves of other breed descriptions, and 3) the value of beef-dairy cross weaned steers and heifers compared with weaned steers

and heifers of other beef breed descriptions sold through video auctions. Materials and Methods: Data on 14,075 feeder steer lots sold in 211 auctions from 2010 through 2018, 763 weaned steer calf lots, and 1,125 weaned steer and heifer calf lots sold via 7 auctions in 2020 and 2021 were used. Separate multiple-regression models using backward selection were developed for feeder cattle, weaned steer, and weaned steer and heifer calf lots. The 5 breed group categories used were English-English crossed, English-Continental crossed, Brahman influenced, Holstein, and beef-dairy crossed (weaned calves). Results and Discussion: Breed description of feeder steer, weaned steer calf, and weaned steer and heifer calf lots affected sale price ($P < 0.0001$). Among feeder steer lots, Holsteins sold for the lowest ($P < 0.05$) sale price ($110.56/45.36 kg of BW) compared with all other breed groups. Among weaned steer calves, beef-dairy crossed lots sold for the second lowest ($P < 0.05$) price ($147.62/45.36 kg of BW), though greater than Holsteins. Among weaned steer and heifer calves, beef-dairy crosses sold for less than ($P < 0.05$; $136.39/45.36 kg of BW) all other breed groups. Implications and Applications: Beef-dairy crosses have a greater value prospect than Holstein steers in the beef supply chain.

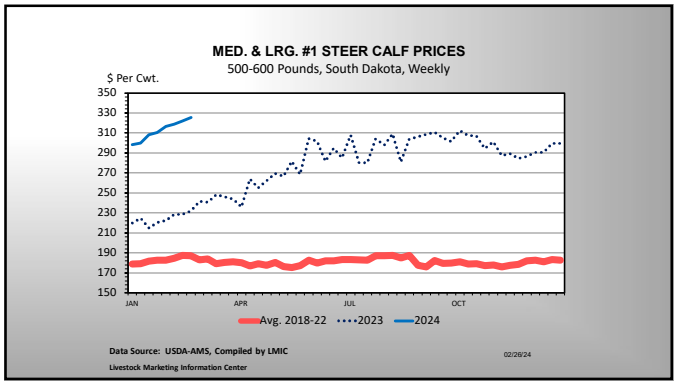
**Dr. Bob Weaber** B.S. Animal Science, Colorado State University, 1993. M.S. Beef Industry Leadership, Colorado State University, 1995. Ph.D. Animal Breeding, Cornell University, 2004. Bob Weaber's nationally recognized extension programming has resulted in more than 145 publications and more than $13 million from 42 awards of grants and gifts for research and extension programming. Weaber's extension program leadership has been recognized with MU Provost's Innovative Extension Programming by New Faculty, the MU CAFNR J.W. Burch State Extension Specialist Award, and the Beef Improvement Federation's Continuing Service Award. Weaber grew up on a cow-calf operation in southern Colorado and went on to earn a BS in animal science followed by a Master of Agriculture degree in the Beef Industry Leadership Program at Colorado State University. He completed his doctoral studies in the Animal Breeding and Genetics Group at Cornell University. While there, he served as the Interim Director of Performance Programs for the American Simmental Association for three and a half years. Previously, Weaber was Director of Education and Research at the American Gelbvieh Association. Bob, his wife, Tami, and their young children, Maddie, Cooper and Wyatt, reside near Wamego, KS. bweaber@ksu.edu 785-532-1460

**Dr. Lauren Kimble.** McGill University, BS Agricultural and Environmental Sciences. Virginia Tech, MS Animal Science, Bovine Reproductive Physiology. Having lived through the beef x dairy (BxD) explosion on the dairy and in her role with Select Sires, Inc (SSI), Lauren Kimble quickly became fascinated with the value of BxD to the dairy industry. Originally trained with a Masters in reproductive physiology from Virginia Tech, and having worked at two dairy genetics companies, Lauren transitioned in her career from delivering on-farm mating strategies to delving deeper into the application of BxD. In her current role as the ProfitSOURCE Supply Chain Manager at SSI, Lauren leads efforts to develop regional partnerships with beef supply chain partners, from calf buyers and growers to feeders and packers. Thanks to quality genetics and traceability-fueled insights, dairy producers can benefit from long-term relationships with beef production partners that are experiencing and sharing the value of ProfitSOURCE BxD programs.
LKimble@selectsires.com

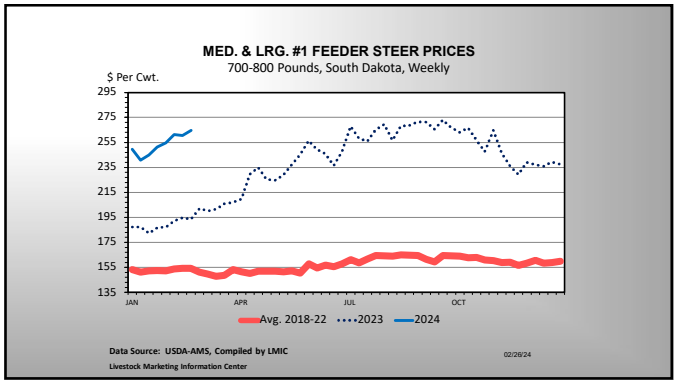
*Abstract* Intertwining research findings and industry data, this presentation investigates how the increased volume of beef x dairy (BxD) cattle in the market has molded trends and mindsets from the dairy producer to the packer, and everything in between. Industry research demonstrates some of the challenges and perceptions facing BxD, while Select Sires' continued commercial data collection indicates areas of success and ongoing supply chain development. BxD cattle are not only shown to have economic benefits across the entire supply chain when compared to straight dairy steers, but also vary in value within the BxD population when comparing high genetic merit groups to commodity BxD groups of unknown genetics. These insights can help dairy producers to participate more effectively in a dynamic and value-driven beef market.


CATTLE MARKET UPDATE
Derrell S. Peel
Breedlove Professor of Agribusiness and
Extension Livestock Marketing Specialist
Oklahoma State University
OKLAHOMA COOPERATIVE
EXTENSION SERVICE

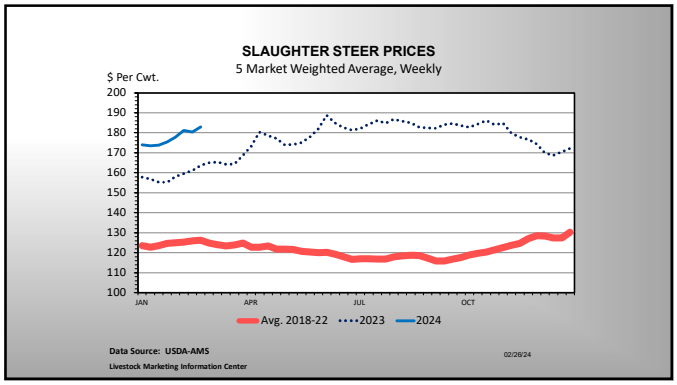
1


MED. & LRG. #1 STEER CALF PRICES
500-600 Pounds, South Dakota, Weekly
$ Per Cwt.
350
330
310
290
270
250
230
210
190
170
150
JAN
APR
JUL
OCT
Avg. 2018-22
2023
2024
Data Source: USDA-AMS, Compiled by LMIC
Livestock Marketing Information Center
02/26/24

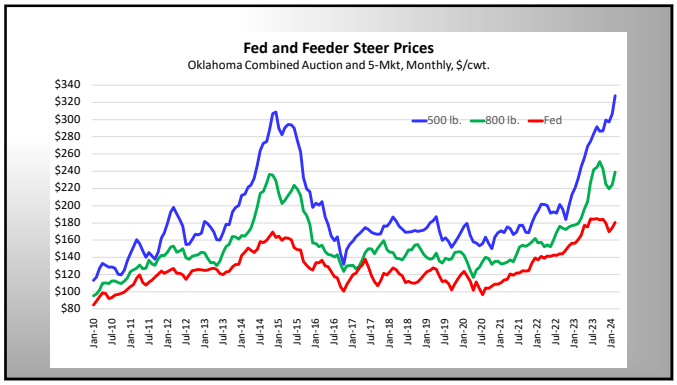
2


MED. & LRG. #1 FEEDER STEER PRICES
700-800 Pounds, South Dakota, Weekly
$ Per Cwt.
295
275
255
235
215
195
175
155
135
JAN
APR
JUL
OCT
Avg. 2018-22
2023
2024
Data Source: USDA-AMS, Compiled by LMIC
Livestock Marketing Information Center
02/26/24

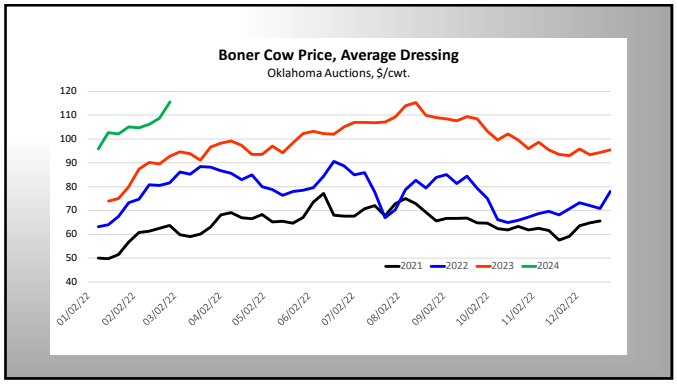
3


SLAUGHTER STEER PRICES
5 Market Weighted Average, Weekly
$ Per Cwt.
200
190
180
170
160
150
140
130
120
110
100
JAN
APR
JUL
OCT
Avg. 2018-22
2023
2024
Data Source: USDA-AMS
Livestock Marketing Information Center
02/26/24

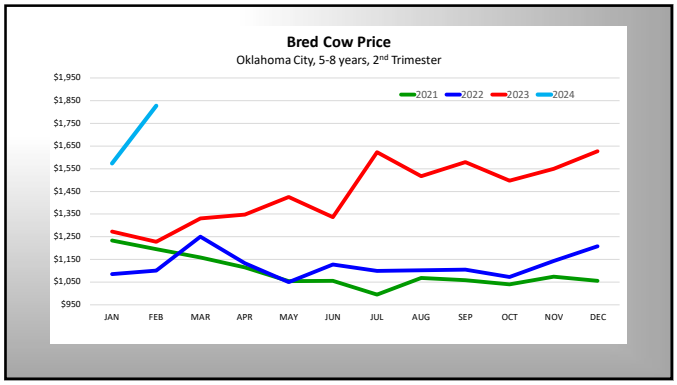
4


Fed and Feeder Steer Prices
Oklahoma Combined Auction and 5-Mkt, Monthly, $/cwt.
$340
$320
$300
$280
$260
$240
$220
$200
$180
$160
$140
$120
$100
$80
500 lb.
800 lb.
Fed
Jan-10
Jul-10
Jan-11
Jul-11
Jan-12
Jul-12
Jan-13
Jul-13
Jan-14
Jul-14
Jan-15
Jul-15
Jan-16
Jul-16
Jan-17
Jul-17
Jan-18
Jul-18
Jan-19
Jul-19
Jan-20
Jul-20
Jan-21
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24

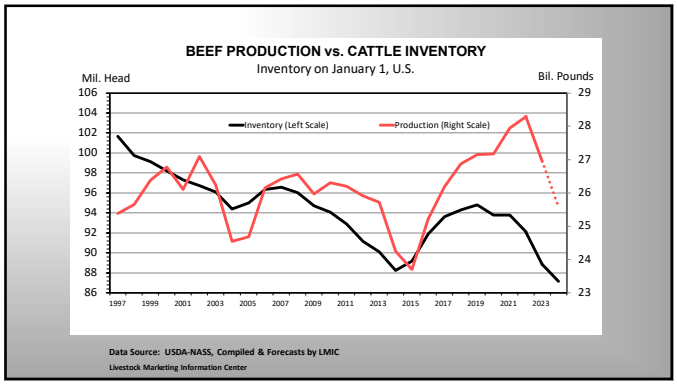
5


Boner Cow Price, Average Dressing
Oklahoma Auctions, $/cwt.
120
110
100
90
80
70
60
50
40
2021
2022
2023
2024
01/02/22
02/02/22
03/02/22
04/02/22
05/02/22
06/02/22
07/02/22
08/02/22
09/02/22
10/02/22
11/02/22
12/02/22

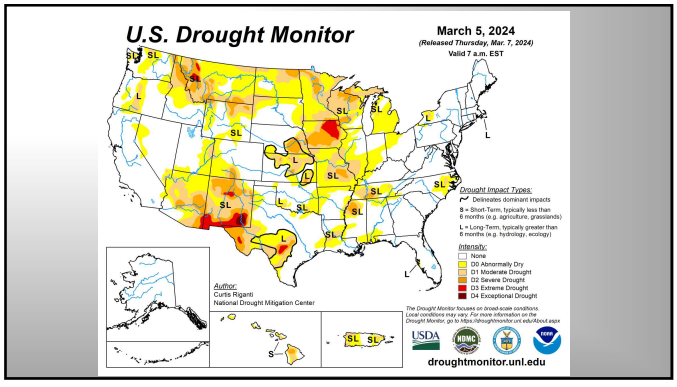
6


Bred Cow Price
Oklahoma City, 5-8 years, 2nd Trimester
2021
2022
2023
2024
$1,950
$1,850
$1,750
$1,650
$1,550
$1,450
$1,350
$1,250
$1,150
$1,050
$950
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC

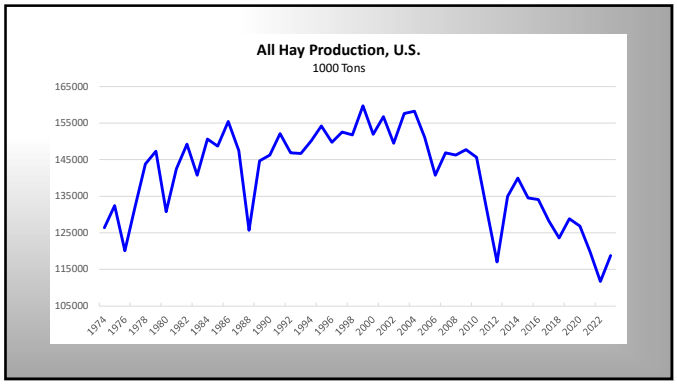
7


BEEF PRODUCTION vs. CATTLE INVENTORY
Inventory on January 1, U.S.
Mil. Head
Bil. Pounds
Inventory (Left Scale)
Production (Right Scale)
106
104
102
100
98
96
94
92
90
88
86
29
28
27
26
25
24
23
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021
2023
Data Source: USDA-NASS, Compiled & Forecasts by LMIC
Livestock Marketing Information Center

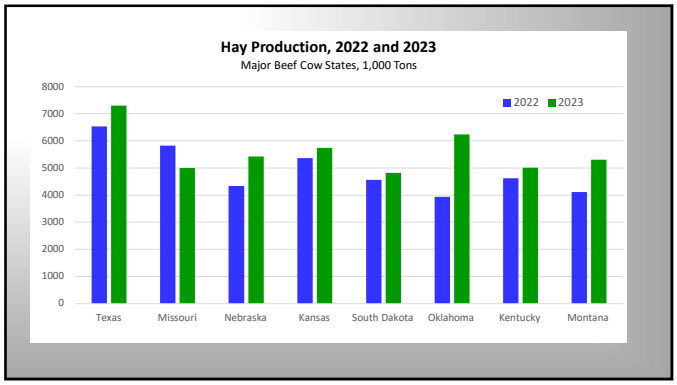
8


U.S. Drought Monitor
March 5, 2024
(Released Thursday, Mar. 7, 2024)
Valid 7 a.m. EST
Drought Impact Types:
Delineates dominant impacts
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)
Intensity:
None
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
Author:
Curtis Riganti
National Drought Mitigation Center
droughtmonitor.unl.edu

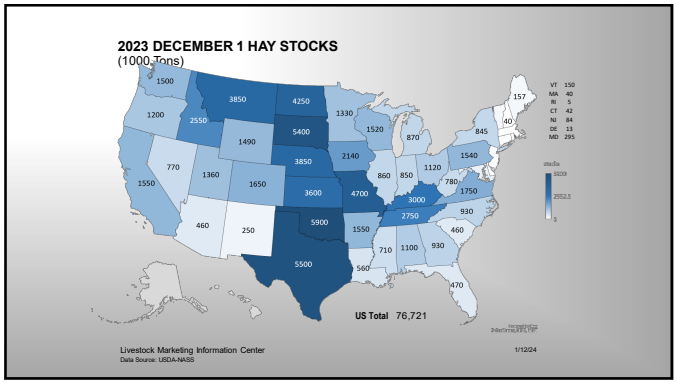
9


All Hay Production, U.S.
1000 Tons
165000
155000
145000
135000
125000
115000
105000
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
2022

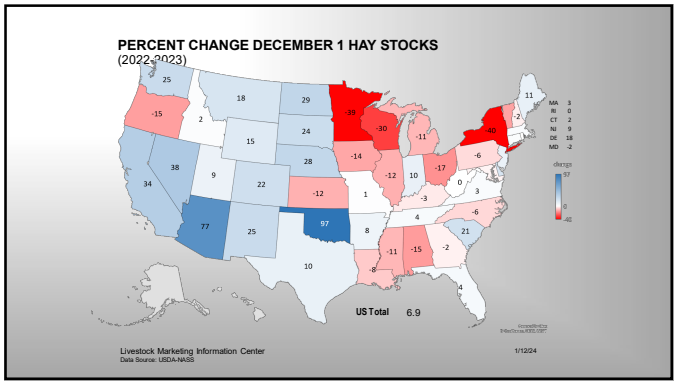
10


Hay Production, 2022 and 2023
Major Beef Cow States, 1,000 Tons
2022
2023
8000
7000
6000
5000
4000
3000
2000
1000
0
Texas
Missouri
Nebraska
Kansas
South Dakota
Oklahoma
Kentucky
Montana

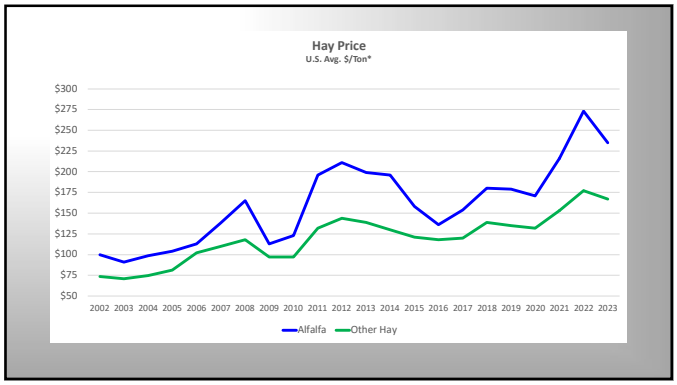
11


2023 DECEMBER 1 HAY STOCKS
(1000 Tons)
1500
3850
4250
1200
2550
1330
1520
5400
870
157
40
845
1490
2140
1540
770
1360
1650
3850
860
850
1120
780
1550
3600
4700
3000
1750
460
250
5900
1550
2750
930
710
1100
930
460
5500
560
470
US Total 76,721
VT 150
MA 40
RI 5
CT 42
NJ 84
DE 13
MD 295
Livestock Marketing Information Center
Data Source: USDA-NASS
1/12/24

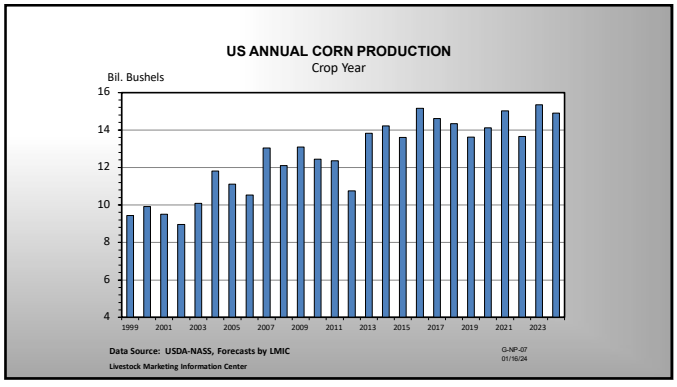
12


PERCENT CHANGE DECEMBER 1 HAY STOCKS
(2022-2023)
US Total 6.9
Livestock Marketing Information Center
Data Source: USDA-NASS
1/12/24

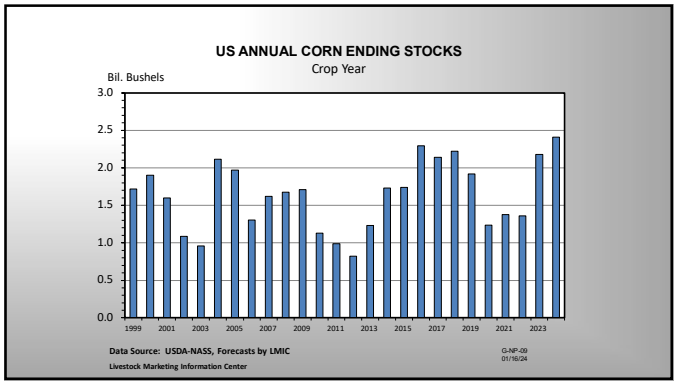
13


Hay Price
U.S. Avg. $/Ton*
$300
$275
$250
$225
$200
$175
$150
$125
$100
$75
$50
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023
Alfalfa
Other Hay

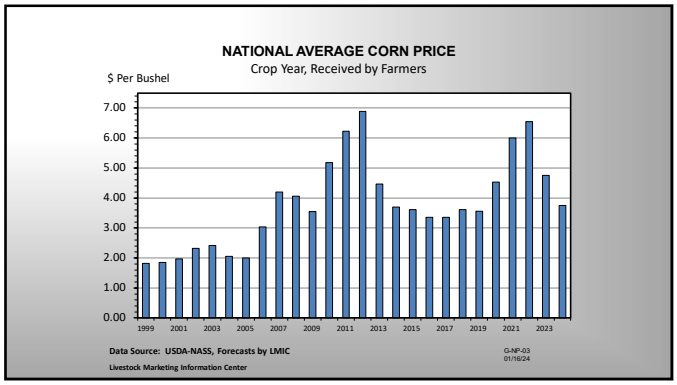
14


US ANNUAL CORN PRODUCTION
Crop Year
Bil. Bushels
16
14
12
10
8
6
4
1999 2001 2003 2005 2007 2009 2011 2013 2015 2017 2019 2021 2023
Data Source: USDA-NASS, Forecasts by LMIC
Livestock Marketing Information Center
G-NP-07
01/16/24

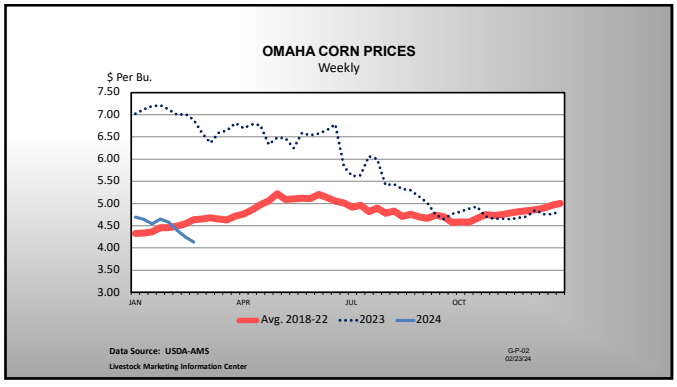
15


US ANNUAL CORN ENDING STOCKS
Crop Year
Bil. Bushels
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1999 2001 2003 2005 2007 2009 2011 2013 2015 2017 2019 2021 2023
Data Source: USDA-NASS, Forecasts by LMIC
Livestock Marketing Information Center
G-NP-09
01/16/24

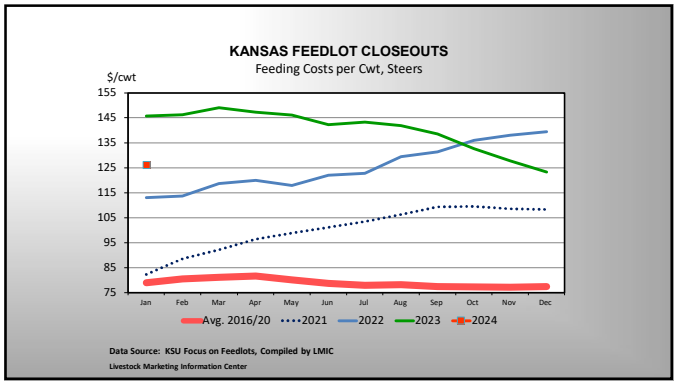
16


NATIONAL AVERAGE CORN PRICE
Crop Year, Received by Farmers
$ Per Bushel
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
1999 2001 2003 2005 2007 2009 2011 2013 2015 2017 2019 2021 2023
Data Source: USDA-NASS, Forecasts by LMIC
Livestock Marketing Information Center
G-NP-03
01/16/24

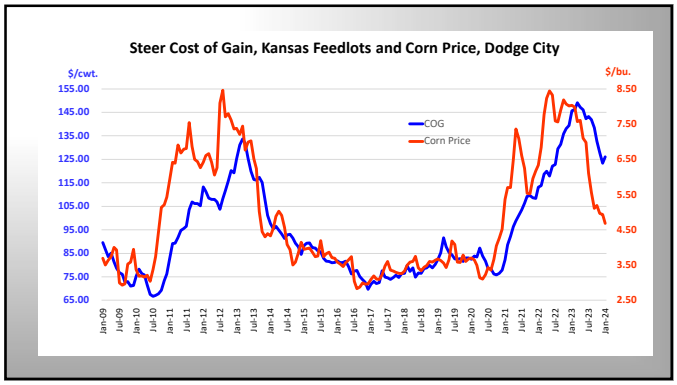
17


OMAHA CORN PRICES
Weekly
$ Per Bu.
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
JAN APR JUL OCT
Avg. 2018-22
2023
2024
Data Source: USDA-AMS
Livestock Marketing Information Center
G-P-02
02/23/24

18




19

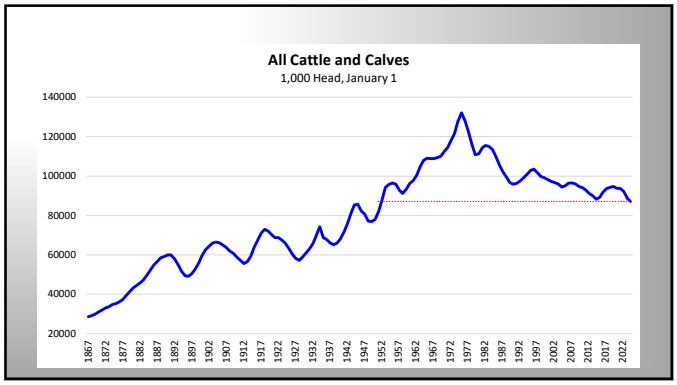



20

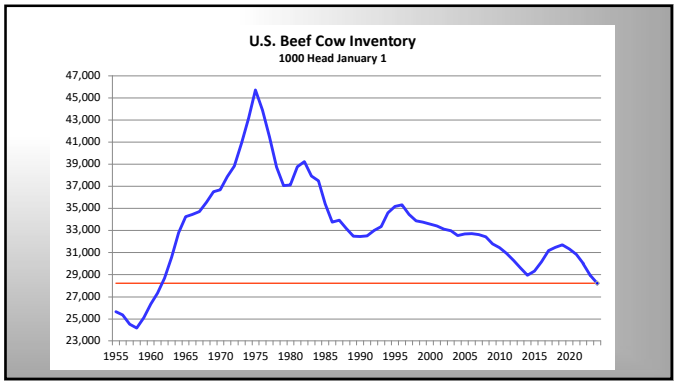
## U.S. Cattle Inventory
January 1

| | 2021 | 2022 | 2023 | 2024 | % Change |
|---|---|---|---|---|---|
| | 1000 Head | 1000 Head | 1000 Head | 1000 Head | |
| All Cattle and Calves | 93789.5 | 92076.6 | 88841.0 | 87157.4 | -1.9 |
| Beef Cows | 30843.6 | 29983.1 | 28939.3 | 28223.0 | -2.5 |
| Dairy Cows | 9442.4 | 9377.0 | 9397.5 | 9356.8 | -0.4 |
| Beef Replacements | 5803.1 | 5481.5 | 4929.6 | 4858.3 | -1.4 |
| Dairy Replacements | 4608.5 | 4440.6 | 4073.6 | 4059.2 | -0.4 |
| Feeder Supply | 26214.0 | 25865.2 | 25276.2 | 24216.1 | -4.2 |
| Cattle on Feed | 14667.4 | 14694.6 | 14195.8 | 14423.3 | +1.6 |
| | | | | | |
| | 2020 | 2021 | 2022 | 2023 | |
| Calf Crop | 35495.5 | 35165.9 | 34439.5 | 33593.0 | -2.5 |

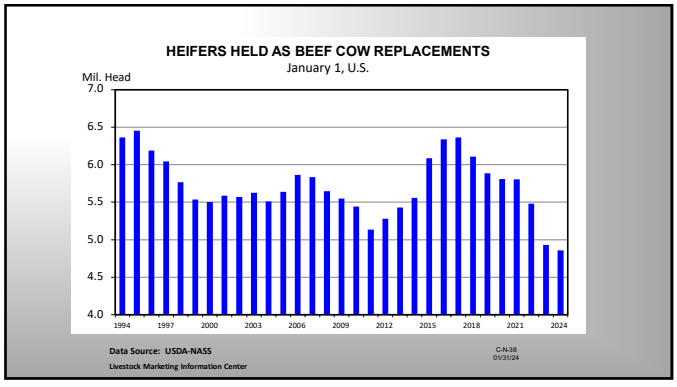
21


All Cattle and Calves
1,000 Head, January 1
140000
120000
100000
80000
60000
40000
20000
1867
1872
1877
1882
1887
1892
1897
1902
1907
1912
1917
1922
1927
1932
1937
1942
1947
1952
1957
1962
1967
1972
1977
1982
1987
1992
1997
2002
2007
2012
2017
2022

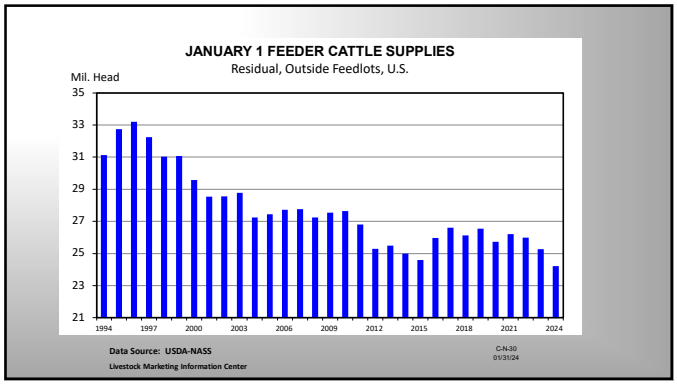
22


U.S. Beef Cow Inventory
1000 Head January 1
47,000
45,000
43,000
41,000
39,000
37,000
35,000
33,000
31,000
29,000
27,000
25,000
23,000
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020

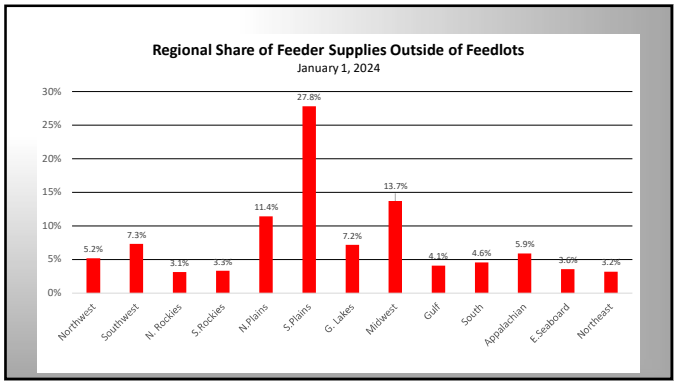
23


HEIFERS HELD AS BEEF COW REPLACEMENTS
January 1, U.S.
Mil. Head
7.0
6.5
6.0
5.5
5.0
4.5
4.0
1994
1997
2000
2003
2006
2009
2012
2015
2018
2021
2024
Data Source: USDA-NASS
Livestock Marketing Information Center
C-N-38
01/31/24

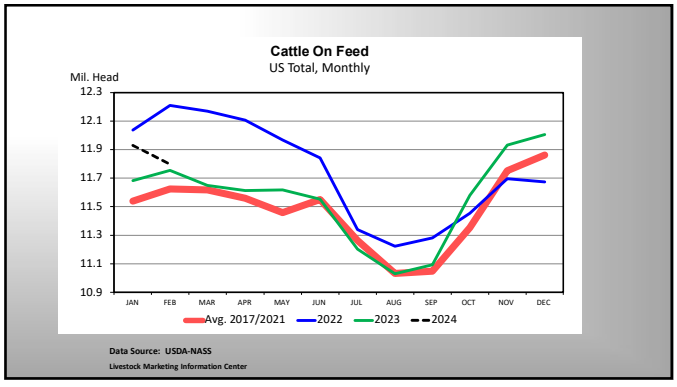
24


JANUARY 1 FEEDER CATTLE SUPPLIES
Residual, Outside Feedlots, U.S.
Mil. Head
35
33
31
29
27
25
23
21
1994
1997
2000
2003
2006
2009
2012
2015
2018
2021
2024
Data Source: USDA-NASS
Livestock Marketing Information Center
C-N-30
01/31/24

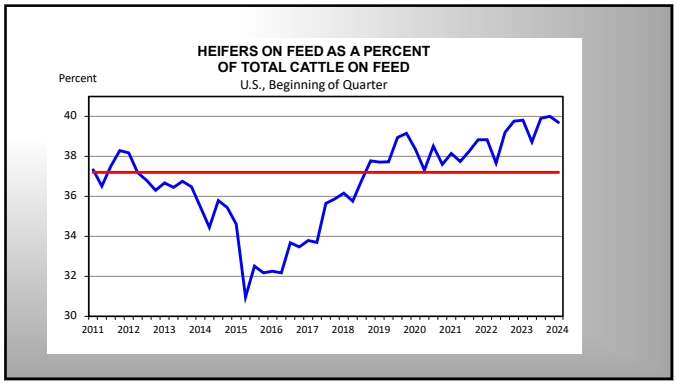
25


Regional Share of Feeder Supplies Outside of Feedlots
January 1, 2024
30%
25%
20%
15%
10%
5%
0%
5.2%
7.3%
3.1%
3.3%
11.4%
27.8%
7.2%
13.7%
4.1%
4.6%
5.9%
3.6%
3.2%
Northwest
Southwest
N. Rockies
S.Rockies
N.Plains
S.Plains
G. Lakes
Midwest
Gulf
South
Appalachian
E.Seaboard
Northeast

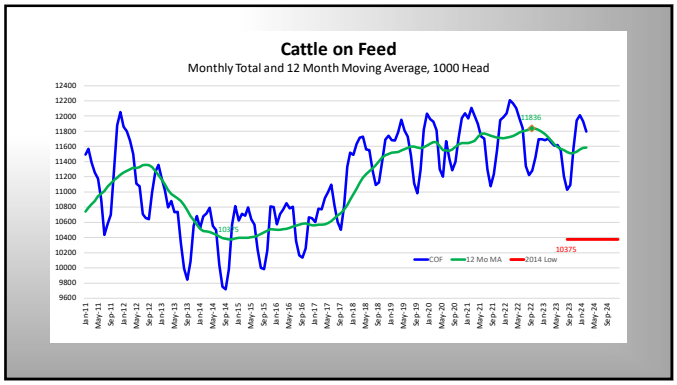
26


Cattle On Feed
US Total, Monthly
Mil. Head
12.3
12.1
11.9
11.7
11.5
11.3
11.1
10.9
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Avg. 2017/2021
2022
2023
2024
Data Source: USDA-NASS
Livestock Marketing Information Center

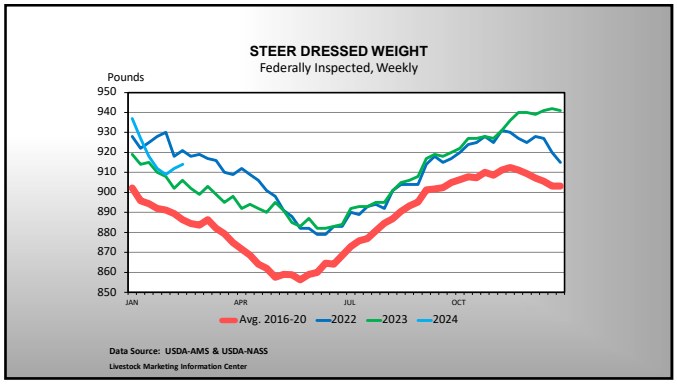
27


HEIFERS ON FEED AS A PERCENT
OF TOTAL CATTLE ON FEED
U.S., Beginning of Quarter
Percent
40
38
36
34
32
30
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024

28


Cattle on Feed
Monthly Total and 12 Month Moving Average, 1000 Head
COF
12 Mo MA
2014 Low
11836
10375

29


STEER DRESSED WEIGHT
Federally Inspected, Weekly
Pounds
950
940
930
920
910
900
890
880
870
860
850
JAN
APR
JUL
OCT
Avg. 2016-20
2022
2023
2024
Data Source: USDA-AMS & USDA-NASS
Livestock Marketing Information Center

30

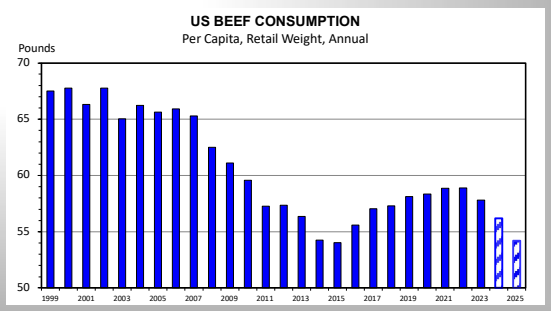
## 2024 Meat Production and Consumption

| | Production | | | | | Consum. Change | Consum. Per Capita | Consum. Change |
|---|---|---|---|---|---|---|---|---|
| | 2022 | 2023 | 2022-2023 | 2024 | 2023-2024 | 2022-2023 | 2024 | 2023-2024 |
| | Million lbs. | Million lbs. | % Change | Million lbs. | % Change | % Change | Retail Lbs. | % Change |
| Beef | 28291 | 26964 | -4.7 | 25542 | -5.3 | -1.7 | 56.2 | -2.9 |
| Pork | 26996 | 27300 | +1.1 | 27622 | +1.2 | -1.4 | 50.5 | +0.6 |
| Broilers | 45711 | 45886 | +0.3 | 47736 | +4.0 | +0.4 | 102.6 | +3.7 |
| Total | 107005 | 106388 | -0.6 | 107534 | +1.1 | -0.5 | 227.3 | +1.2 |

2024 forecast

LMIC, January 31, 2024

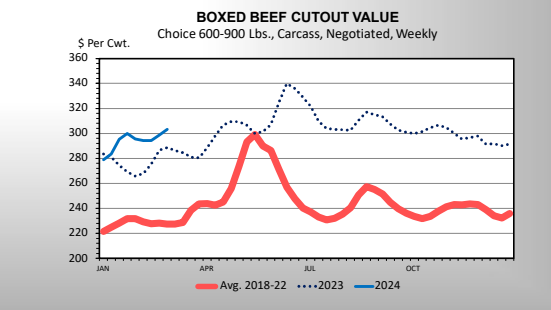
31




Data Source: USDA-NASS and USDA-ERS, Compiled & Analysis by LMIC

Livestock Marketing Information Center

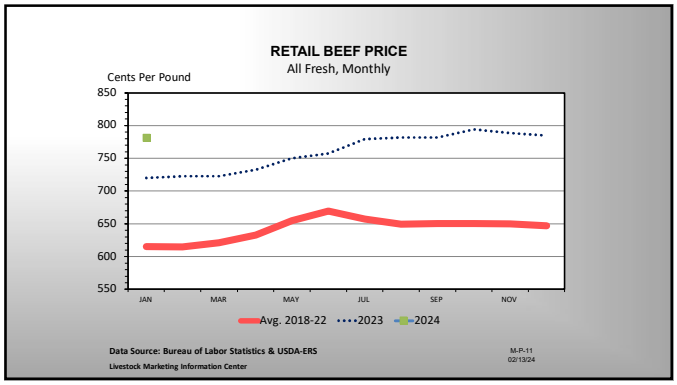
32



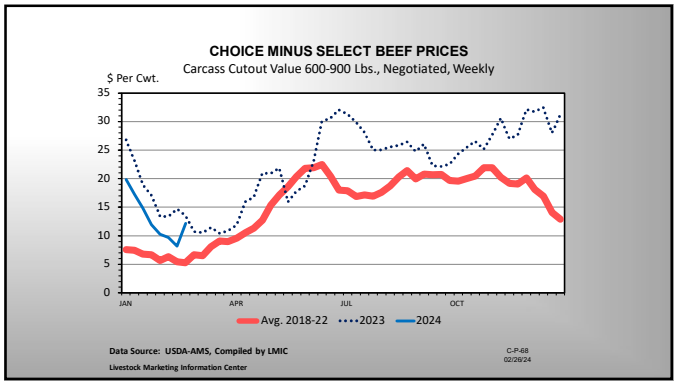

Data Source: USDA-AMS

Livestock Marketing Information Center

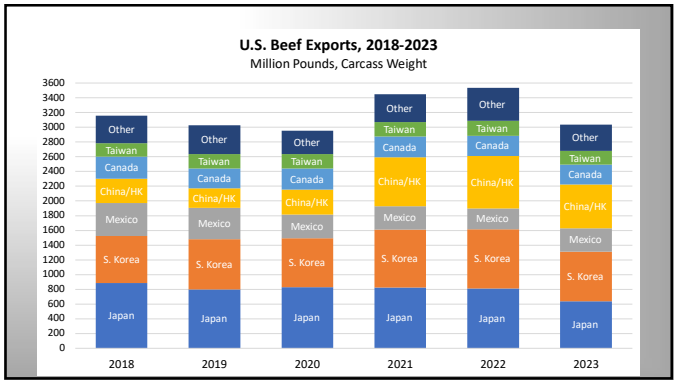
33


RETAIL BEEF PRICE
All Fresh, Monthly
Cents Per Pound
850
800
750
700
650
600
550
JAN
MAR
MAY
JUL
SEP
NOV
Avg. 2018-22
2023
2024
Data Source: Bureau of Labor Statistics & USDA-ERS
Livestock Marketing Information Center
M-P-11
02/13/24

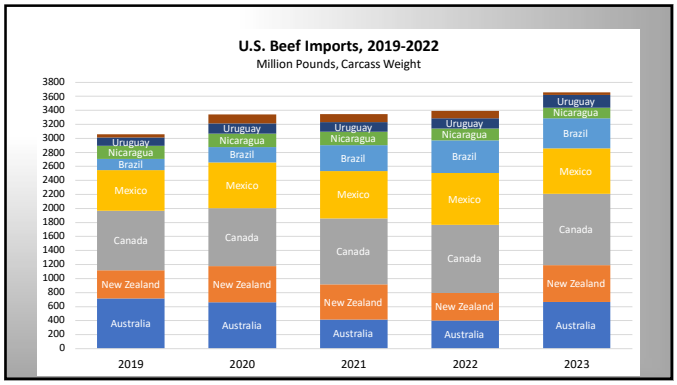
34


CHOICE MINUS SELECT BEEF PRICES
Carcass Cutout Value 600-900 Lbs., Negotiated, Weekly
$ Per Cwt.
35
30
25
20
15
10
5
0
JAN
APR
JUL
OCT
Avg. 2018-22
2023
2024
Data Source: USDA-AMS, Compiled by LMIC
Livestock Marketing Information Center
C-P-68
02/26/24

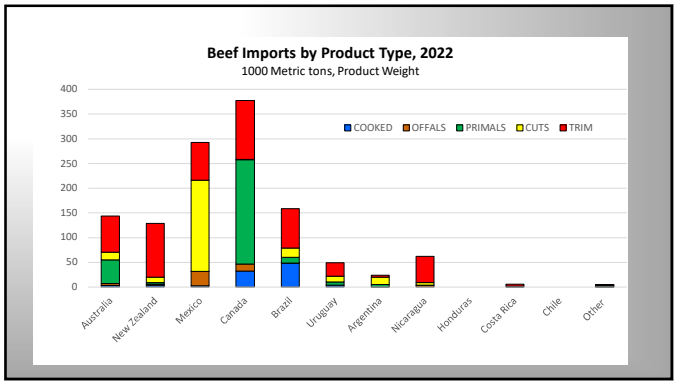
35


U.S. Beef Exports, 2018-2023
Million Pounds, Carcass Weight
3600
3400
3200
3000
2800
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
Other
Taiwan
Canada
China/HK
Mexico
S. Korea
Japan
2018
2019
2020
2021
2022
2023

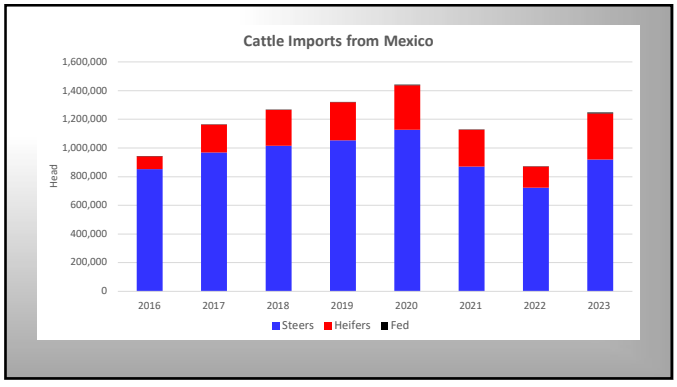
36


U.S. Beef Imports, 2019-2022
Million Pounds, Carcass Weight
3800
3600
3400
3200
3000
2800
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
Uruguay
Nicaragua
Brazil
Mexico
Canada
New Zealand
Australia
2019
2020
2021
2022
2023

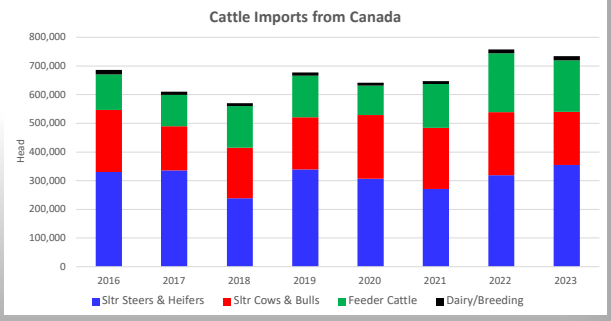
37


Beef Imports by Product Type, 2022
1000 Metric tons, Product Weight
400
350
300
250
200
150
100
50
0
COOKED
OFFALS
PRIMALS
CUTS
TRIM
Australia
New Zealand
Mexico
Canada
Brazil
Uruguay
Argentina
Nicaragua
Honduras
Costa Rica
Chile
Other

38


Cattle Imports from Mexico
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
Head
2016
2017
2018
2019
2020
2021
2022
2023
Steers
Heifers
Fed

39




40

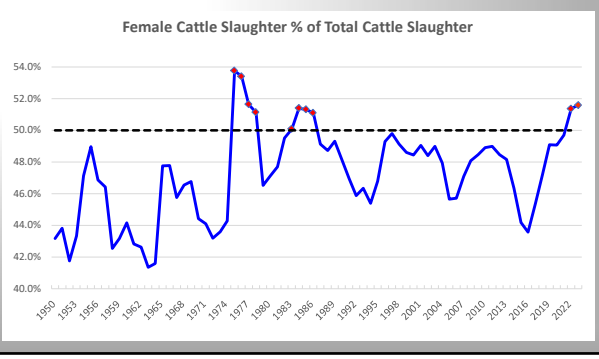
## Cattle Slaughter

Federally Inspected, 1000 Head

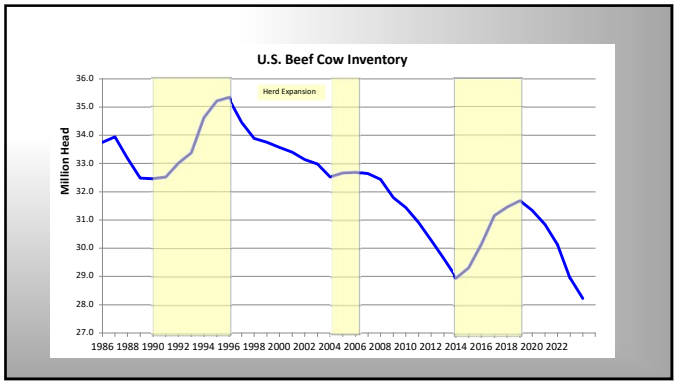
| | 2021 | 2022 | 2023 | % Change 2022-2023 | YTD % Change 2023-2024 |
|---|---|---|---|---|---|
| Steers | 16147 | 15811 | 15075 | -4.7 | -2.3 |
| Heifers | 9825 | 10292 | 10033 | -2.5 | -4.0 |
| S+H Total | 25972 | 26103 | 25109 | -3.8 | -3.0 |
| Dairy Cows | 3106 | 3047 | 3076 | +1.0 | -16.0 |
| Beef Cows | 3562 | 3952 | 3516 | -11.0 | -12.1 |
| Cows Total | 6668 | 6999 | 6592 | -5.8 | -14.0 |
| Bulls | 544 | 565 | 532 | -5.9 | -11.1 |
| | | | | | |
| Total | 33185 | 33667 | 32233 | -4.3 | -5.5 |

Latest data: February 17, 2024

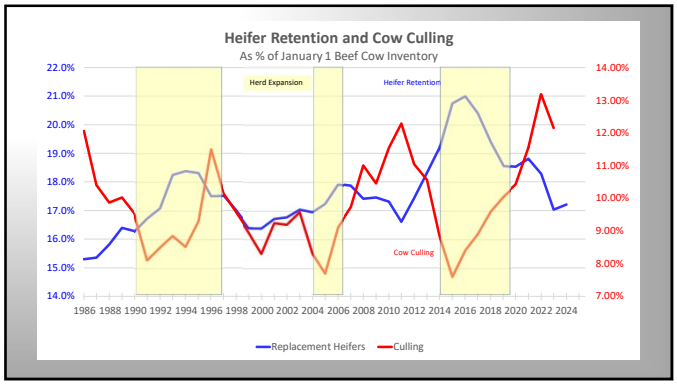
41



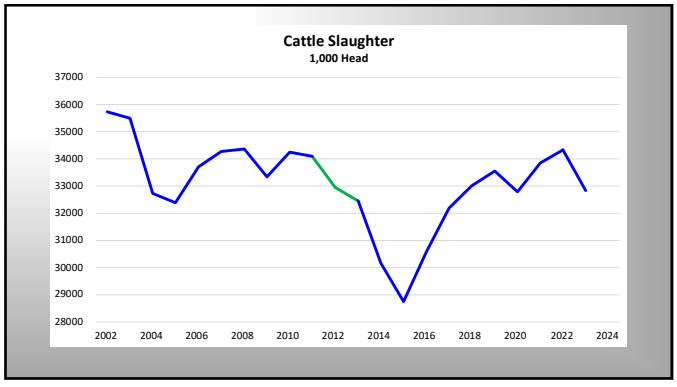

42


U.S. Beef Cow Inventory
Herd Expansion
Million Head
36.0
35.0
34.0
33.0
32.0
31.0
30.0
29.0
28.0
27.0
1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018 2020 2022

43


Heifer Retention and Cow Culling
As % of January 1 Beef Cow Inventory
Herd Expansion
Heifer Retention
Cow Culling
22.0%
21.0%
20.0%
19.0%
18.0%
17.0%
16.0%
15.0%
14.0%
14.00%
13.00%
12.00%
11.00%
10.00%
9.00%
8.00%
7.00%
1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018 2020 2022 2024
Replacement Heifers
Culling

44

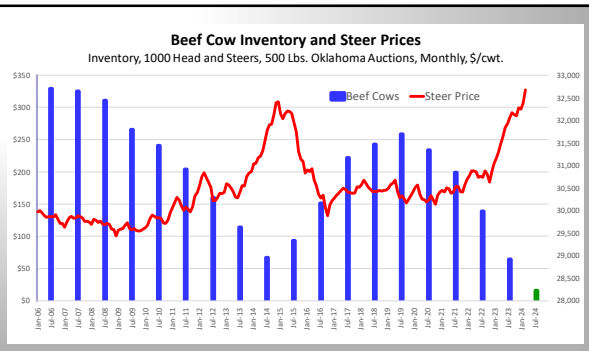

Cattle Slaughter
1,000 Head
37000
36000
35000
34000
33000
32000
31000
30000
29000
28000
2002 2004 2006 2008 2010 2012 2014 2016 2018 2020 2022 2024

45

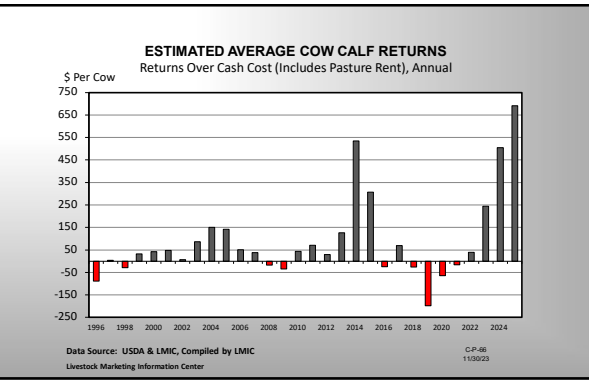
## This Herd Expansion/High Price Cycle Will Start Slower and Last longer

- Rebuild Female Numbers
- Continuing Drought
- Drought Recovery
- Financial Recovery
- Finance Costs/Interest Rates
- Producer Age
- Producer Expectations

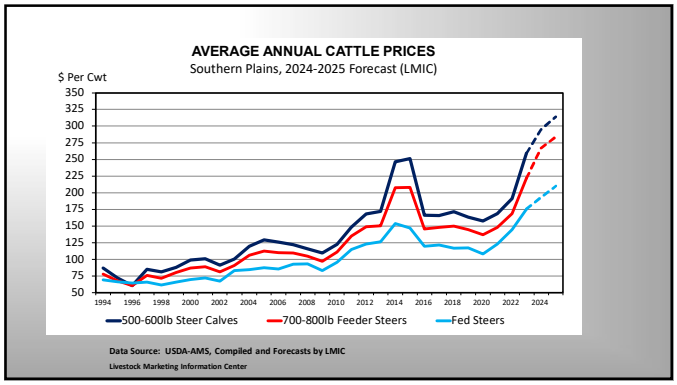
46




47




48


AVERAGE ANNUAL CATTLE PRICES
Southern Plains, 2024-2025 Forecast (LMIC)
$ Per Cwt
350
325
300
275
250
225
200
175
150
125
100
75
50
1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018 2020 2022 2024
500-600lb Steer Calves
700-800lb Feeder Steers
Fed Steers
Data Source: USDA-AMS, Compiled and Forecasts by LMIC
Livestock Marketing Information Center

49


Cow-Calf Corner
The Weekly Email Newsletter
From OSU Animal Science and Agricultural Economics
• Send Email to
derrell.peel@okstate.edu
or scan >>>>>>>>>>>
OKLAHOMA COOPERATIVE
EXTENSION SERVICE

50

# Beef on Dairy Economics: Results of a Video Auction Analysis

Kenneth G. Odde, DVM, PhD
Professor Emeritus
Department of Animal Science and Industry
Kansas State University

1

**National Association of Animal Breeders**

8413 Excelsior Drive, Suite 140 • Madison, WI 53717 • USA PHONE: 608.827.0277 • FAX: 608.827.1535 • Email: naab-css@naab-css.org

FOR IMMEDIATE RELEASE
Contact: Jay L. Weiker, National Association of Animal Breeders
Email: jweiker@naab-css.org Office Phone:(608) 827-0277

**2023 Semen Sales Report Reflects Global Trends**

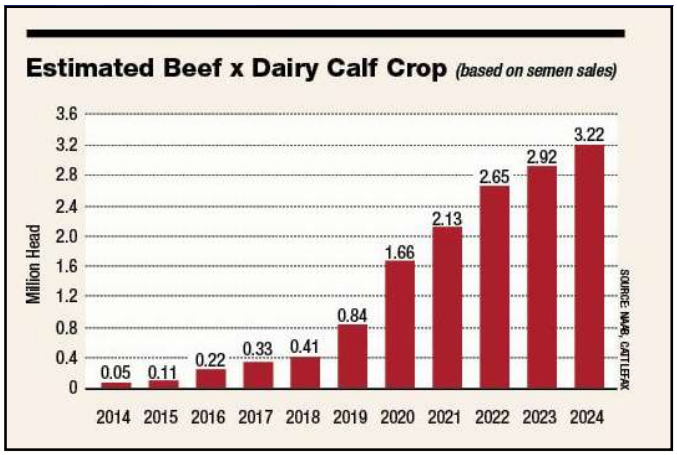
*National Association of Animal Breeders regular members unit sales shows domestic and global semen use continues to shift.*

2

***In 2023, the total beef units sold in the US totaled 9.4 million units with 7.9 million going into dairy herds and 1.5 million used in beef herds.***

NAAB, March 12, 2024

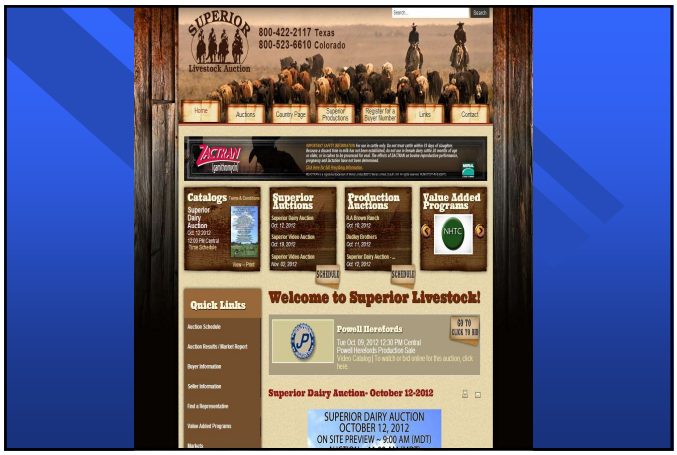
3



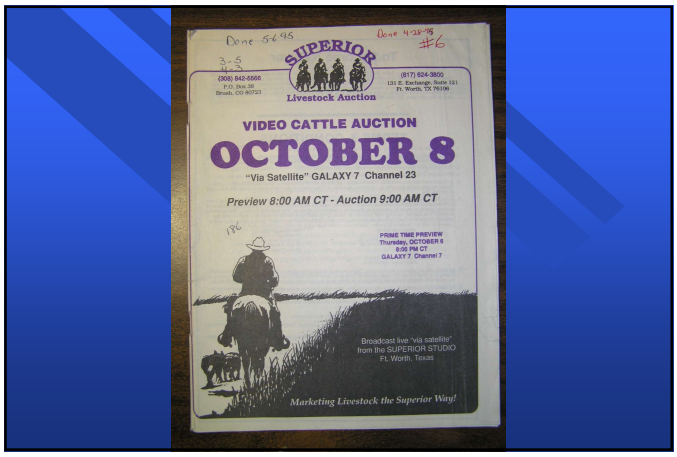

4

CattleFax predicts U.S. beef-on-dairy cattle numbers will reach between 4 million and 5 million head – roughly 15% of the cattle harvested annually – as early as 2026.

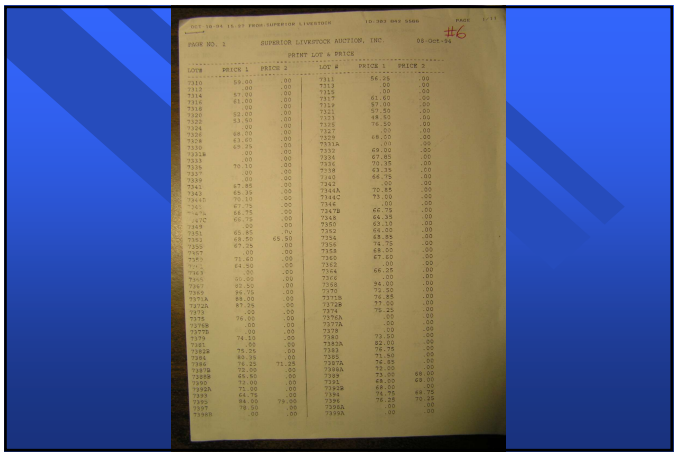
5



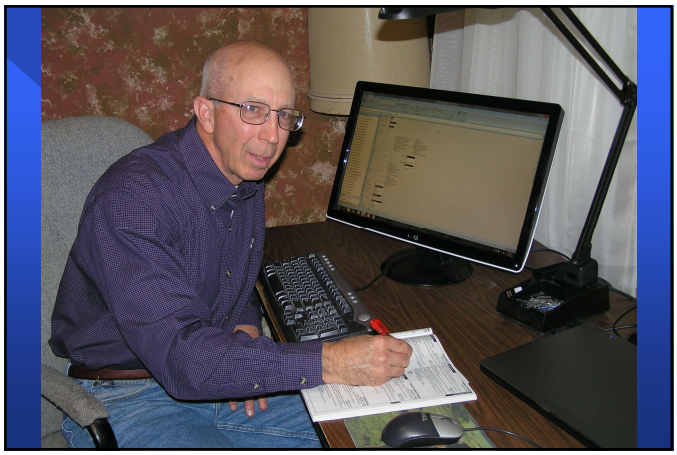

6


Done 5-6-95
3-5
Done 4-28-95
#6
SUPERIOR
Livestock Auction
(308) 842-5566
P.O. Box 30
Brush, CO 80723
(817) 624-3800
131 E. Exchange, Suite 121
Ft. Worth, TX 76106
VIDEO CATTLE AUCTION
OCTOBER 8
"Via Satellite" GALAXY 7 Channel 23
Preview 8:00 AM CT - Auction 9:00 AM CT
186
PRIME TIME PREVIEW
Thursday, OCTOBER 6
8:00 PM CT
GALAXY 7 Channel 7
Broadcast live "via satellite"
from the SUPERIOR STUDIO
Ft. Worth, Texas
Marketing Livestock the Superior Way!

7


#6
SUPERIOR LIVESTOCK AUCTION, INC.
08-Oct-94
PRINT LOT & PRICE

8



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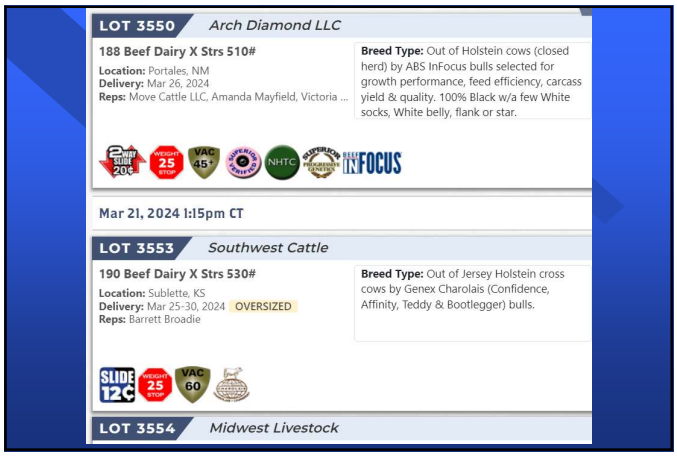
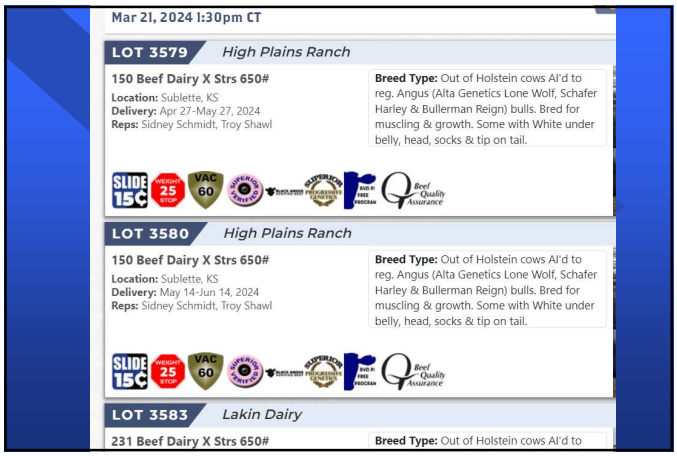

LOT 3550 Arch Diamond LLC
188 Beef Dairy X Strs 510#
Location: Portales, NM
Delivery: Mar 26, 2024
Reps: Move Cattle LLC, Amanda Mayfield, Victoria ...
Breed Type: Out of Holstein cows (closed herd) by ABS InFocus bulls selected for growth performance, feed efficiency, carcass yield & quality. 100% Black w/a few White socks, White belly, flank or star.
Mar 21, 2024 1:15pm CT
LOT 3553 Southwest Cattle
190 Beef Dairy X Strs 530#
Location: Sublette, KS
Delivery: Mar 25-30, 2024 OVERSIZED
Reps: Barrett Broadie
Breed Type: Out of Jersey Holstein cross cows by Genex Charolais (Confidence, Affinity, Teddy & Bootlegger) bulls.
LOT 3554 Midwest Livestock

10


Mar 21, 2024 1:30pm CT
LOT 3579 High Plains Ranch
150 Beef Dairy X Strs 650#
Location: Sublette, KS
Delivery: Apr 27-May 27, 2024
Reps: Sidney Schmidt, Troy Shawl
Breed Type: Out of Holstein cows AI'd to reg. Angus (Alta Genetics Lone Wolf, Schafer Harley & Bullerman Reign) bulls. Bred for muscling & growth. Some with White under belly, head, socks & tip on tail.
LOT 3580 High Plains Ranch
150 Beef Dairy X Strs 650#
Location: Sublette, KS
Delivery: May 14-Jun 14, 2024
Reps: Sidney Schmidt, Troy Shawl
Breed Type: Out of Holstein cows AI'd to reg. Angus (Alta Genetics Lone Wolf, Schafer Harley & Bullerman Reign) bulls. Bred for muscling & growth. Some with White under belly, head, socks & tip on tail.
LOT 3583 Lakin Dairy
231 Beef Dairy X Strs 650#
Breed Type: Out of Holstein cows AI'd to

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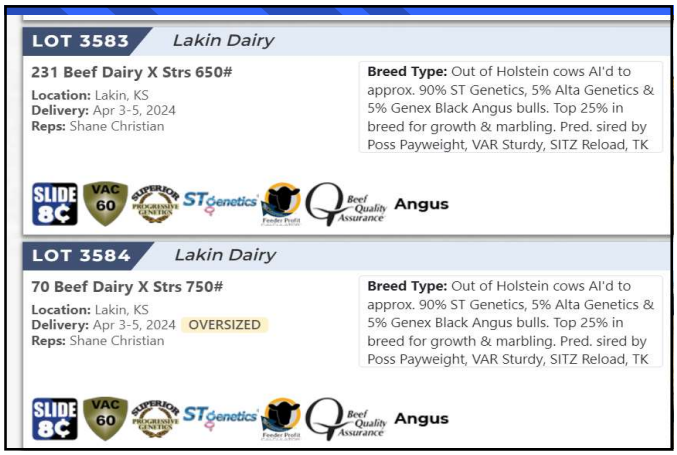
LOT 3583 Lakin Dairy
231 Beef Dairy X Strs 650#
Location: Lakin, KS
Delivery: Apr 3-5, 2024
Reps: Shane Christian
Breed Type: Out of Holstein cows AI'd to approx. 90% ST Genetics, 5% Alta Genetics & 5% Genex Black Angus bulls. Top 25% in breed for growth & marbling. Pred. sired by Poss Payweight, VAR Sturdy, SITZ Reload, TK
Angus
LOT 3584 Lakin Dairy
70 Beef Dairy X Strs 750#
Location: Lakin, KS
Delivery: Apr 3-5, 2024 OVERSIZED
Reps: Shane Christian
Breed Type: Out of Holstein cows AI'd to approx. 90% ST Genetics, 5% Alta Genetics & 5% Genex Black Angus bulls. Top 25% in breed for growth & marbling. Pred. sired by Poss Payweight, VAR Sturdy, SITZ Reload, TK
Angus

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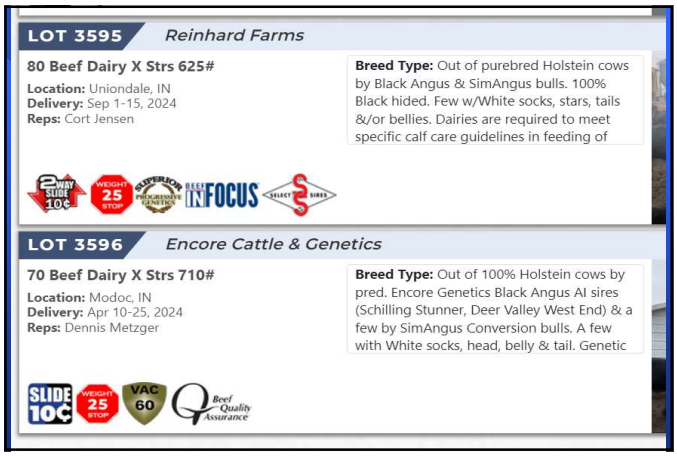


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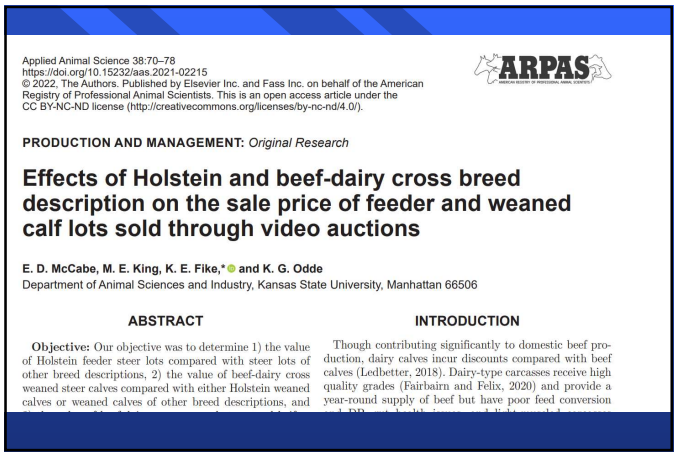

Applied Animal Science 38:70–78
https://doi.org/10.15232/aas.2021-02215


ARPAS

**PRODUCTION AND MANAGEMENT:** *Original Research*

## Effects of Holstein and beef-dairy cross breed description on the sale price of feeder and weaned calf lots sold through video auctions

**E. D. McCabe, M. E. King, K. E. Fike,* and K. G. Odde**
Department of Animal Sciences and Industry, Kansas State University, Manhattan 66506

### ABSTRACT

**Objective:** Our objective was to determine 1) the value of Holstein feeder steer lots compared with steer lots of other breed descriptions, 2) the value of beef-dairy cross weaned steer calves compared with either Holstein weaned calves or weaned calves of other breed descriptions, and

### INTRODUCTION

Though contributing significantly to domestic beef production, dairy calves incur discounts compared with beef calves (Ledbetter, 2018). Dairy-type carcasses receive high quality grades (Fairbairn and Felix, 2020) and provide a year-round supply of beef but have poor feed conversion

14

## Objectives

- Compare price of feeder cattle beef breeds and Holsteins using 211 sales from 2010-2018 (~1.7 MM head)
- Compare price of feeder cattle steers of beef breeds, beef on dairy and Holsteins using sales in 2020 and 2021 (~83,000 head)
- Compare price of feeder cattle steers and heifers beef breeds and beef on dairy using sales in 2020 and 2021 (~138,000 head)

15

**Table 1.** Nonadjusted means, medians, and ranges for factors describing single-sex lots of feeder steers sold through 211 Superior Livestock Auction video sales from 2010 through 2018

| Factor | Mean ± SD | Median | Range |
|---|---|---|---|
| Number of steers in the lot | 121.1 ± 110.3 | 70 | 17–1,680 |
| Base weight of the lot (kg) | 363.2 ± 50.6 | 374.2 | 99.8–580.6 |
| Number of days from auction to forecasted delivery | 30.8 ± 38.2 | 15 | 0–287 |
| Price per 45.36 kg ($) | 145.80 ± 33.77 | 141.00 | 68.00–333.00 |

16

**Table 4.** Sale price of Holstein feeder steer lots relative to other breed descriptions sold through 211 Superior Livestock Auction video sales from 2010 through 2018[1]

| Breed description | Number of lots | LSM of sale price ($/45.36 kg of BW) | Regression coefficient |
|---|---|---|---|
| 2010 to 2018 | | | |
| English-English cross | 3,829 | 152.39[a] | 41.83 |
| English-Continental cross | 4,310 | 150.61[b] | 40.05 |
| Brahman influenced | 4,945 | 148.75[c] | 38.19 |
| Holstein | 991 | 110.56[d] | 0.00 |
| 2010 to 2012 | | | |
| English-English cross | 1,252 | 128.10[a] | 34.47 |
| English-Continental cross | 1,562 | 126.81[b] | 33.18 |
| Brahman influenced | 2,185 | 125.56[c] | 31.93 |
| Holstein | 282 | 93.63[d] | 0.00 |
| 2013 to 2015 | | | |
| English-English cross | 1,171 | 182.43[a] | 44.82 |
| English-Continental cross | 1,485 | 180.46[b] | 42.85 |
| Brahman influenced | 1,630 | 178.83[c] | 41.22 |
| Holstein | 373 | 137.61[d] | 0.00 |
| 2016 to 2018 | | | |
| English-English cross | 1,465 | 145.62[a] | 47.84 |
| English-Continental cross | 1,359 | 144.47[b] | 46.69 |
| Brahman influenced | 1,283 | 141.97[c] | 44.19 |
| Holstein | 360 | 97.78[d] | 0.00 |

[a–d]Prices without a common superscript differ ($P < 0.05$) within years.

[1]Breed description affected sale price ($P < 0.0001$). Within each analysis (2010 to 2018, 2010 to 2012, 2013 to 2015, and 2016 to 2018), each multiple-regression model was adjusted for the random effect of auction date nested within auction year.

17

**Table 5.** Least squares means sale price of feeder steer lots and the mean and percentage discounts of Holstein feeder as compared with English-English cross, English-Continental cross, and Brahman influenced steer lots for each 3-yr increment

| Breed description | Number of lots | LSM of sale price ($/45.36 kg of BW) | Mean discount ($/45.36 kg of BW) | Percentage discount (%) |
|---|---|---|---|---|
| 2010 to 2012 | | | | |
| English-English cross, English-Continental cross, and Brahman influenced | 4,999 | 126.82 | | |
| Holstein | 282 | 93.63 | 33.19 | 26.2 |
| 2013 to 2015 | | | | |
| English-English cross, English-Continental cross, and Brahman influenced | 4,286 | 180.57 | | |
| Holstein | 373 | 137.61 | 42.96 | 24.3 |
| 2016 to 2018 | | | | |
| English-English cross, English-Continental cross, and Brahman influenced | 4,107 | 144.02 | | |
| Holstein | 360 | 97.78 | 46.24 | 32.1 |

18

**Table 2.** Nonadjusted means, medians, and ranges for factors describing single-sex weaned steer calf lots sold through 7 Superior Livestock Auction video sales in 2020 and 2021

| Factor | Mean ± SD | Median | Range |
|---|---|---|---|
| Number of steers in the lot | 124.7 ± 75.4 | 98 | 20–800 |
| Base weight of the lot (kg) | 278.9 ± 59.1 | 283.5 | 95.3–442.3 |
| Number of days from auction to forecasted delivery | 60.0 ± 49.9 | 57 | 0–205 |
| Price per 45.36 kg ($) | 151.86 ± 20.19 | 151.00 | 81.00–228.00 |

19

**Table 6.** Effect of breed description on the sale price of weaned steer calf lots sold through 7 Superior Livestock Auction video sales in 2020 and 2021

| Breed description | Number of lots | LSM of sale price ($/45.36 kg of BW) | Regression coefficient |
|---|---|---|---|
| English-English cross | 270 | 165.18[a] | 52.14 |
| English-Continental cross | 197 | 160.38[b] | 47.34 |
| Brahman influenced | 111 | 155.54[c] | 42.50 |
| Beef-dairy cross | 94 | 147.62[d] | 34.58 |
| Holstein | 91 | 113.04[e] | 0.00 |

[a–e]Means within a factor without a common superscript differ ($P < 0.05$).

20

**Table 3.** Nonadjusted means, medians, and ranges for factors describing weaned steer and heifer calf lots sold through 7 Superior Livestock Auction video sales in 2020 and 2021

| Factor | Mean ± SD | Median | Range |
|---|---|---|---|
| Number of steers in the lot | 123.4 ± 75.4 | 98 | 20–800 |
| Base weight of the lot (kg) | 280.5 ± 44.8 | 283.5 | 95.3–430.9 |
| Number of days from auction to forecasted delivery | 61.2 ± 51.1 | 57 | 0–205 |
| Price per 45.36 kg ($) | 150.65 ± 17.06 | 149.50 | 110.00–228.00 |

21

**Table 7.** Effect of breed description on the sale price of weaned steer and heifer calf lots sold through 7 Superior Livestock Auction video sales in 2020 and 2021

| Breed description | Number of lots | LSM of sale price ($/45.36 kg of BW) | Regression coefficient |
|---|---|---|---|
| English-English cross | 441 | 155.15[a] | 18.79 |
| English-Continental cross | 321 | 151.09[b] | 14.70 |
| Brahman influenced | 181 | 146.20[c] | 9.81 |
| Beef-dairy cross | 182 | 139.39[d] | 0.00 |

[a–d]Means within a factor without a common superscript differ ($P < 0.05$).

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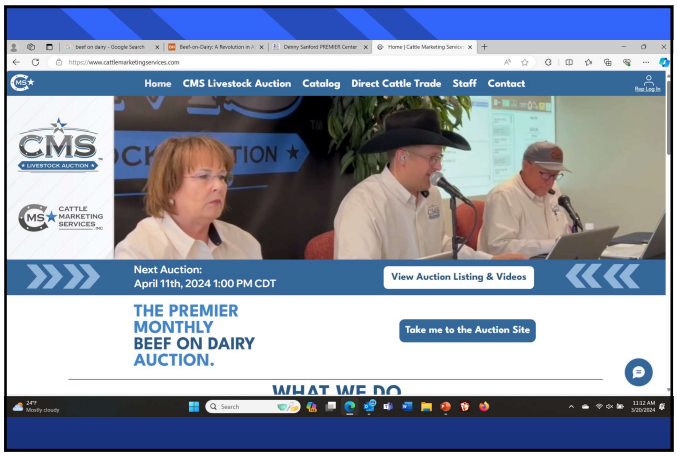


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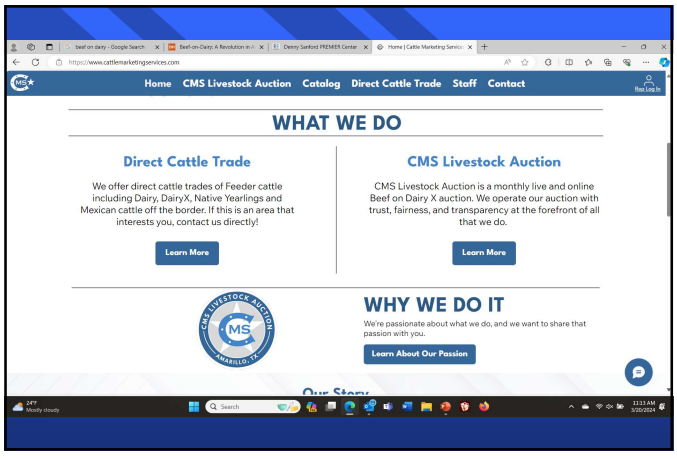


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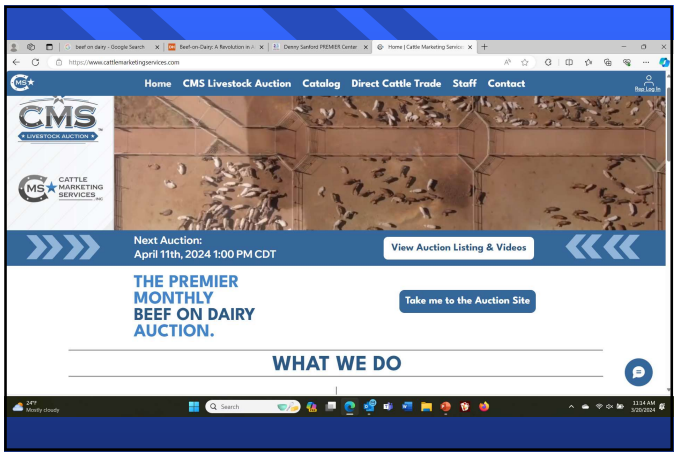
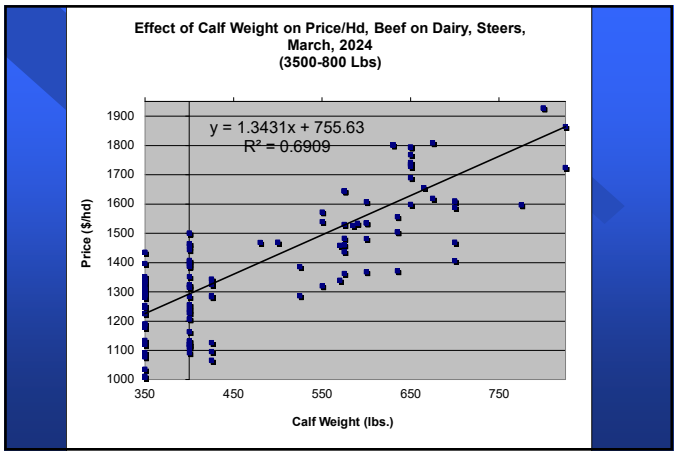



25

## Cattle Marketing Services Amarillo, Texas

- Online beef on dairy auction
- 2023-2024 data
- 52,279 head
- Average lot size=233 head
- Mostly Beef on Dairy, a few Holsteins

26

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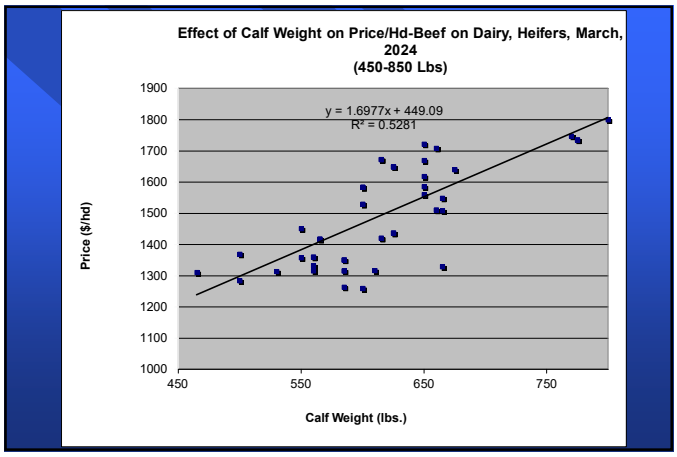


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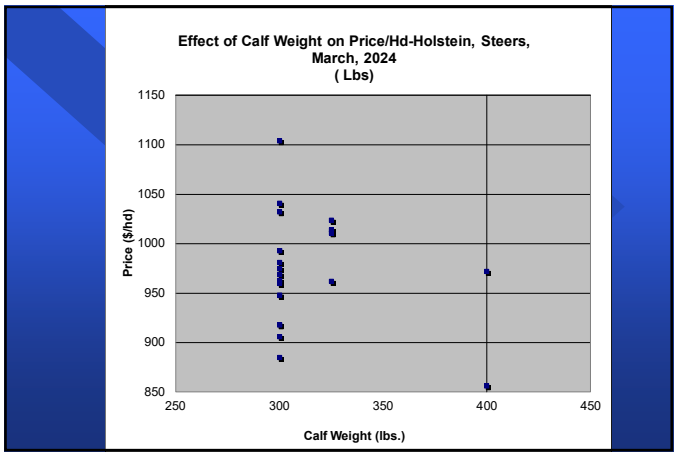


29

## CMS Results

| Breed Group | Price/Head ($) 350 lbs. | Price/Head ($) 650 lbs. |
|---|---|---|
| Beef on Dairy-Steers | $1,226 | $1,629 |
| Beef on Dairy-Heifers | $1,043 | $1,552 |
| Holstein Steers | $976* | |

*300 lbs

30

Gardiner Angus Bulls X 35% Holstein Cows, 35% F1 Composite HoJo Cows, 30% Jersey Cows

Combination of TD/InFocus/Genex Genetics X Composite Jersey Cross Cows

TD Angus Bulls X Holstein Cows
Combination of TD/InFocus/Genex Genetics X Composite Jersey Cross Cows

Combination of TD/ St/ GENEX/ ABS Genetics X Holstein Cows

31

TD Charolais Bull X 1/2 Holstein & 1/2 Composite Jersey Cows

TD Charolais Bull X 1/2 Holstein & 1/2 Composite Jersey Cows

Charolais Bulls (Combination of TD/InFocus/Genex Genetics) X Holstein and Composite Jersey Cross Cows

Charolais Bulls (Combination of TD/InFocus/Genex Genetics) X Holstein and Composite Jersey Cross Cows

Charolais Bulls (Combination of TD/InFocus/Genex Genetics) X Holstein and Composite Jersey Cross Cows

32

"Beef × dairy carcasses produced slightly less saleable red meat yield than conventional beef carcasses but much greater yield than straightbred dairy carcasses. A greater percent bone in crossbred beef × dairy carcasses was the primary reason for their slight disadvantage in red meat yield to conventional beef carcasses".

Translational Anim Sci. 2022 Apr; 6(2

Invited review: a carcass and meat perspective of crossbred beef × dairy cattle

Blake A Foraker, Jenna L Frink, and Dale R Woerner

33

"Future beef × dairy crossbred mating and management systems should emphasize increases in total carcass muscling."

Translational Anim Sci. 2022 Apr; 6(2

Invited review: a carcass and meat perspective of crossbred beef × dairy cattle

Blake A Foraker, Jenna L Frink, and Dale R Woerner

34

## Summary

- Beef on Dairy market continues to grow

35

## Summary

- Beef on Dairy market continues to grow
- Beef on Dairy calves are much closer in value to Beef on Beef than straight dairy

36

## Summary

- Beef on Dairy market continues to grow
- Beef on Dairy calves are much closer in value to Beef on Beef than straight dairy
- Beef semen sales into the dairy market have grown dramatically

37

## Summary

- Beef on Dairy market continues to grow
- Beef on Dairy calves are much closer in value to Beef on Beef than straight dairy
- Beef semen sales into the dairy market have grown dramatically
- Heterosis benefit from Beef on Dairy

38

## Summary

- Beef on Dairy market continues to grow
- Beef on Dairy calves are much closer in value to Beef on Beef than straight dairy
- Beef semen sales into the dairy market have grown dramatically
- Heterosis benefit from Beef on Dairy
- Emphasize muscling and feed efficiency in selecting beef bulls

39

# Genetic Considerations for a More Valuable Calf:

## *Breed Complementarity in the context of beef x dairy decisions*

**Bob Weaber, Ph.D.**
Professor and Head,
Eastern Kansas Research and Extension Centers
Kansas State University



1

## Acknowledgements: A Collaborative Project

**Participants:**
- Wulf Cattle
- Riverview LLP
- North American Limousin Foundation
- IGS Science Team
- K-State

**Thanks to:**
- Drs. Matt Spangler and Bruce Golden



2

## Beef on Dairy is a **Disrupter**

- Sexed dairy semen used on best cows to build high merit replacements
- Beef semen used on dairy cows that:
  - Have been hard to settle with dairy semen
  - Older cows
  - Genetics milking herd doesn't want to propagate
- Maximize value of calf products
  - Targeted replacements
  - Value added terminal calves



3

## Challenges for Dairy Cattle in the Beef Value chain

- Gain and efficiency in feeding period
- Days on feed (risk and cost)
- Carcass
  - Dressing percent
  - Lean yield
  - REA and ribeye shape
  - Carcass weight (Jersey)
  - Carcass Length (Holstein)
  - Liver Abscess
- Market Access…

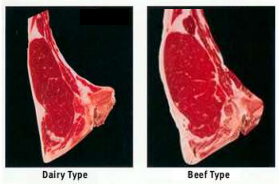


Photo courtesy Dr. Duane Wulf



4

## Consequence of Dairy Type

- Decreased value/price of dairy type bull/steer calves
- Increased feeding and health costs
- Demand for Holstein/Dairy Beef good but priced back of native
  - Consistent product
  - High quality product

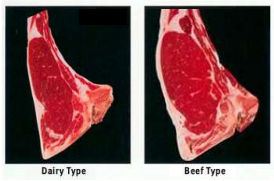


Photo courtesy Dr. Duane Wulf



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## Beef on Dairy Opportunities!!!

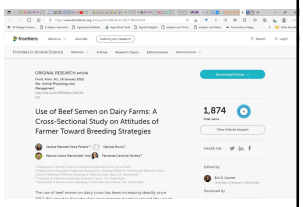
- Year around supply
- High quality, market targeted product
- Requirements:
  - Begin with end product in mind
  - Build with 'product' mentality (not a byproduct)
  - Impactful decisions: genetics, health, nutrition
- Premium product… premium process!




6

## Beef x Dairy Motivators

- Mean herd size: 1,693
- 81% of respondents used beef semen
- 78% reported extra profit as main motivation
- 69% controlled heifer inventory
- 37% genetic improvement
- 58% started using beef semen in last 3 years
- 34% breeding more than 30% of inventory to beef sires
- Angus, (89%), Limousin (12%), Wagyu (10%), Charolais (7%)




(Pereira et al., Front. An. Sci. )
https://doi.org/10.3389/fanim.2021.785253



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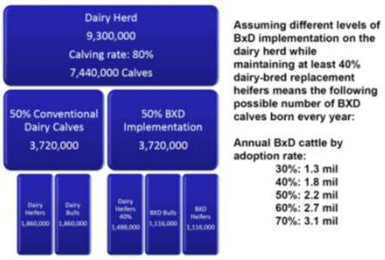
## Supply Chain Contributions




**Assuming different levels of BxD implementation on the dairy herd while maintaining at least 40% dairy-bred replacement heifers means the following possible number of BXD calves born every year:**

**Annual BxD cattle by adoption rate:**

- **30%: 1.3 mil**
- **40%: 1.8 mil**
- **50%: 2.2 mil**
- **60%: 2.7 mil**
- **70%: 3.1 mil**

CattleFax



8

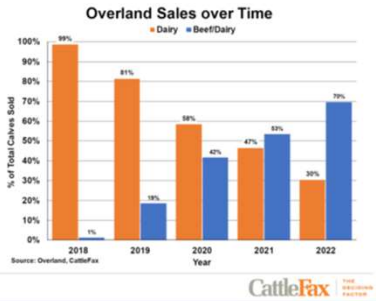
## Dairy x Beef Crosses Add Value


CattleFax



9

## Dairy x Beef Crosses Growing



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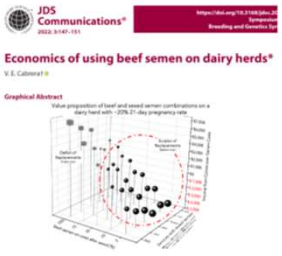
## Conclusions from Beef X Dairy Decision Support

https://doi.org/10.3168/jdsc.2021-0155

- Crossbred beef on dairy is valuable when reproductive performance is better than average.
- Crossbred beef on dairy is valuable when crossbred beef calves are more valuable than dairy calves.
- The value of beef semen is greater when used in combination with dairy sexed semen.
- The value of beef semen is greater when opportunity and willingness to buy and sell calves exists.
- The decision support tool is available online: https://DairyMGT.info: Tools: Premium Beef on Dairy Program.



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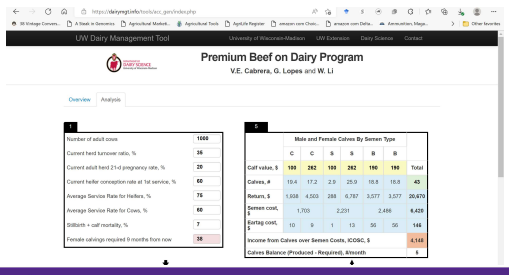
## Decision Support Tools for Beef x Dairy Systems

https://dairymgt.info/tools/acc_gen/index.php






12

## Beef X Dairy Calf Attributes

- Improved Average Daily Gain
- Improved Feed Efficiency
- Reduced Days on Feed (decreased risk)
- Dramatically Improved Carcass Value
  - Increased and improved ribeye shape/area; round shape
  - Improved cutability/retail yield
- Decreased dairy discount at packer ($4-10 cwt improvement)
- Better animal welfare message
- Improved Dairy Beef sustainability
- Beef carcass program eligibility
- Improved **Profit** potential
- Risks– margin in retained ownership
- Liver abscess issues



13

## What's a Dairy Cow Bring to Carcass Genetics Table??

1. **Abundant Marbling**
2. Uniformity
3. ??
4. ??



14

## Case for complementarity: Pure Terminal Sire System

- Use of breed strengths to fill deficiencies of other breeds
- Beef Sires for Use on Dairy Cows Should Have:
  - Good/Great Fertility
  - Adequate Calving Ease
  - ADG and Feed Efficiency
  - Carcass Weight
  - Ribeye Area Especially Ribeye Shape
  - Round/chuck muscularity
  - Health
- Ability to build calves that avoid dairy discount
- Add value to beef chain



15

## Breeds grouped into biological type by four criteria.[a,b]

| Breed Group | Growth rate and mature size | Percent retail product | Age at puberty | Milk production |
|---|---|---|---|---|
| Jersey | X | X | X | XXXXX |
| Angus | XXX | XX | XX | XXX |
| Hereford | XXX | XX | XXX | XX |
| Shorthorn | XXX | XX | XXX | XXX |
| Brangus | XXX | XX | XXXX | XX |
| Santa Gertrudis | XXX | XX | XXXX | XX |
| Gelbvieh | XXXX | XXXX | XX | XXXX |
| Holstein | XXXX | XXXX | XX | XXXXX |
| Simmental | XXXXX | XXXX | XXX | XXXX |
| Maine Anjou | XXXXX | XXXX | XXX | XXX |
| Salers | XXXXX | XXXX | XXX | XXX |
| Piedmontese | XXX | XXXXX | XX | XX |
| Limousin | XXX | XXXX | XXXX | X |
| Charolais | XXXXX | XXXX | XXXX | X |
| Chianina | XXXXX | XXXX | XXXX | X |

[a]Adapted from Cundiff et al. 1993
[b] Increasing number of X's indicate relatively higher levels of trait



16

## Relative Performance Levels for Seven Traits

Table 1. Breed performance levels for seven traits in beef cattle.[a,b]

| Breed Group | Growth Rate and Mature Size | Lean to Fat Ratio | Marbling (Intramuscular Fat) | Tenderness | Age at Puberty | Milk Production | Tropical Adaptation |
|---|---|---|---|---|---|---|---|
| Longhorn | X | XXX | XX | XX | XXX | XX | XX |
| Wagyu | X | XXX | XXXX | XXX | XX | XX | XX |
| Angus | XXXX | XX | XXXX | XXX | XX | XXX | X |
| Red Angus | XXXX | XX | XXXX | XXX | XX | XXX | X |
| Hereford | XXXX | XX | XXX | XXX | XXX | XX | X |
| Red Poll | XX | XX | XXX | XXX | XX | XXXX | X |
| Devon | XX | XX | XXX | XXX | XXX | XX | X |
| Shorthorn | XXXX | XX | XXXX | XXX | XX | XXX | X |
| Galloway | XX | XXX | XXX | XXX | XXX | XX | X |
| South Devon | XXX | XXX | XXXX | XXX | XX | XXX | X |
| Tarentaise | XXX | XXX | XX | XX | XX | XXX | X |
| Pinzgauer | XXXX | XXX | XXX | XXX | XX | XXX | X |
| Braunvieh | XXX | XXXX | XXX | XX | XX | XXXX | XX |
| Gelbvieh | XXXX | XXXX | X | XX | XX | XXXX | X |
| Simmental | XXXXX | XXXX | XX | XX | XXX | XXXX | X |
| Maine Anjou | XXXXX | XXXX | XX | XX | XXX | XXX | X |
| Salers | XXXX | XXXX | XX | XX | XXX | XXX | X |
| Piedmontese | XX | XXXXXX | X | XXX | XX | XX | XX |
| Belgian Blue | XXX | XXXXXX | X | XXX | XX | XX | X |
| Limousin | XXX | XXXXX | X | XX | XXXX | X | X |
| Charolais | XXXXX | XXXXX | XX | XX | XXXX | XX | X |
| Chianina | XXXXX | XXXXX | XX | XX | XXXX | X | XX |
| Tuli | XX | XXX | XXX | XX | XXX | XXX | XXX |
| Romosinuano | X | XXX | XX | XX | XXX | XXX | XXX |
| Brangus | XXXX | XXX | XXX | XX | XXX | XXX | XXX |
| Beefmaster | XXXX | XXX | XX | XX | XXX | XXX | XXX |
| Bonsmara | XXX | XXX | XX | XX | XXX | XXX | XXX |
| Brahman | XXXX | XXXX | XX | X | XXXXX | XXXX | XXXX |
| Nellore | XXXX | XXXX | XX | X | XXXXX | XXX | XXXX |
| Sahiwal | XX | XXXX | XX | X | XXXX | XXXX | XXXX |
| Boran | XXX | XXX | XX | X | XXXX | XXX | XXXX |

[a] Cundiff, 2003.
[b] Increasing numbers of X's indicate relatively higher value.



17

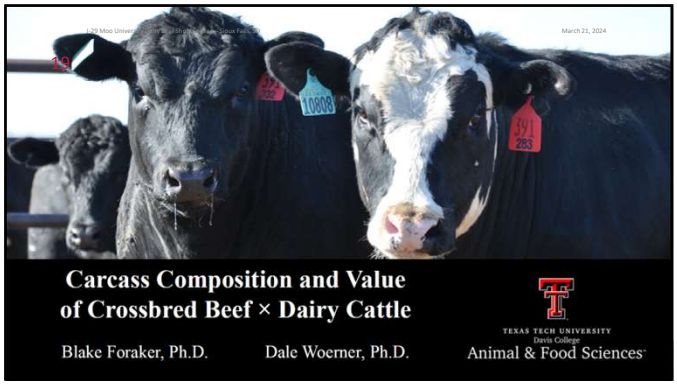
**TABLE 2: BREED OF SIRE MEANS FOR 2020 BORN ANIMALS UNDER CONDITIONS SIMILAR TO USMARC**

| Breed | Birth Wt. (lb) | Weaning Wt. (lb) | Yearling Wt. (lb) | Maternal Milk (lb) | Marbling Score* | Ribeye Area (in²) | Fat (in) | Carcass Wt.(lb) |
|---|---|---|---|---|---|---|---|---|
| Angus | 84.7 | 539.2 | 978.6 | 521.1 | 6.19 | 13.71 | 0.663 | 920.8 |
| Hereford | 87.2 | 517.2 | 914.7 | 508.9 | 5.31 | 13.50 | 0.590 | 868.7 |
| Red Angus | 83.9 | 518.6 | 937.5 | 521.6 | 5.87 | 13.47 | 0.631 | 885.5 |
| Shorthorn | 89.0 | 500.9 | 901.9 | 514.2 | 5.45 | 13.71 | 0.529 | 867.5 |
| South Devon | 88.2 | 506.0 | 893.5 | 518.1 | 5.29 | 13.90 | 0.493 | 850.6 |
| Beefmaster | 87.4 | 528.2 | 920.1 | 507.8 | | | | |
| Brahman | 94.4 | 557.4 | 928.7 | 513.5 | 4.86 | 13.49 | 0.509 | 859.3 |
| Brangus | 87.1 | 520.8 | 929.7 | 519.0 | | | | |
| Santa Gertrudis | 88.4 | 528.2 | 920.7 | 512.3 | 5.11 | 13.32 | 0.579 | 873.2 |
| Braunvieh | 88.2 | 511.7 | 902.7 | 528.8 | 5.49 | 14.47 | 0.487 | 853.4 |
| Charolais | 89.5 | 540.8 | 950.2 | 515.8 | 5.34 | 14.57 | 0.463 | 898.1 |
| Chiangus | 87.9 | 507.0 | 907.0 | 512.6 | 5.46 | 14.01 | 0.524 | 872.9 |
| Gelbvieh | 86.5 | 537.8 | 955.6 | 520.2 | 5.30 | 14.42 | 0.522 | 890.0 |
| Limousin | 85.5 | 530.1 | 926.2 | 512.3 | 5.39 | 14.52 | 0.531 | 892.8 |
| Maine-Anjou | 86.3 | 496.8 | 876.9 | 503.8 | 5.17 | 14.40 | 0.454 | 855.4 |
| Salers | 85.9 | 517.9 | 916.8 | 518.7 | 5.17 | 14.39 | 0.475 | 861.1 |
| Simmental | 87.1 | 542.0 | 959.1 | 516.1 | 5.50 | 14.45 | 0.501 | 897.5 |
| Tarentaise | 86.2 | 523.1 | 892.1 | 505.7 | | | | |

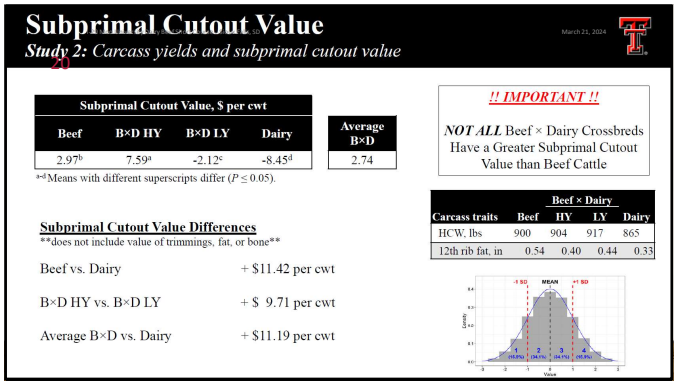
*Marbling score units: 4.00 = $Sl^{00}$; 5.00 = $Sm^{00}$



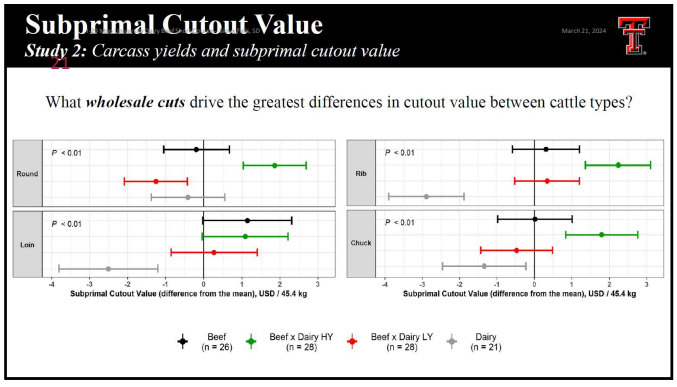
18


19
March 21, 2024
Carcass Composition and Value
of Crossbred Beef × Dairy Cattle
Blake Foraker, Ph.D.
Dale Woerner, Ph.D.
TEXAS TECH UNIVERSITY
Davis College
Animal & Food Sciences

19

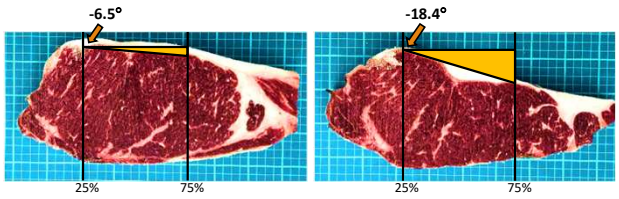

Subprimal Cutout Value
Study 2: Carcass yields and subprimal cutout value
March 21, 2024
20
Subprimal Cutout Value, $ per cwt
Beef
B×D HY
B×D LY
Dairy
2.97b
7.59a
-2.12c
-8.45d
Average B×D
2.74
a-dMeans with different superscripts differ (P ≤ 0.05).
!! IMPORTANT !!
NOT ALL Beef × Dairy Crossbreds Have a Greater Subprimal Cutout Value than Beef Cattle
Beef × Dairy
Carcass traits
Beef
HY
LY
Dairy
HCW, lbs
900
904
917
865
12th rib fat, in
0.54
0.40
0.44
0.33
Subprimal Cutout Value Differences
**does not include value of trimmings, fat, or bone**
Beef vs. Dairy
+ $11.42 per cwt
B×D HY vs. B×D LY
+ $ 9.71 per cwt
Average B×D vs. Dairy
+ $11.19 per cwt
MEAN
-1 SD
+1 SD

20


Subprimal Cutout Value
Study 2: Carcass yields and subprimal cutout value
March 21, 2024
21
What wholesale cuts drive the greatest differences in cutout value between cattle types?
Round
Rib
Loin
Chuck
P < 0.01
Subprimal Cutout Value (difference from the mean), USD / 45.4 kg
Beef (n = 26)
Beef x Dairy HY (n = 28)
Beef x Dairy LY (n = 28)
Dairy (n = 21)

21

## Strip Steak Angle 724364




Slide Courtesy Dr. Duane Wulf



22




23

## The FUTURE…

- What additional opportunities for data flow from dairy sector to improve performance in Beef x Dairy system
  - Gestation length (in Beta Development CSU)
  - Male fertility-semen quality/conception rate (KSU project underway)
  - Gain (calf ranch, early and late feeding period)
  - Health/treatment outcomes
  - Feed efficiency
- Key: Partners that recognize the value of data and willing to share it up and down the value chain




24

## The FUTURE Disrupted…

- Beef X Dairy Systems
  - Terminal Sire System
  - Leverage Breed Complementarity
  - What does each breed (type) bring to the table
- IVF ET systems
  - Terminal systems—what beef breeds/crosses?
- Needs:
  - Tailored Selection Index Decision Support System -- iGENDEC
  - Breeders to build bulls targeted at market vs. sort existing production stream



25

## The FUTURE…

- Development of Beef on Dairy indexes
- Carcass EPDs on Dairy Bulls…
  - Wait what?
  - Breed complementarity
    - What should the dairy cow bring to the carcass trait party
  - Leverage breed complementarity and terminal breeding system



26

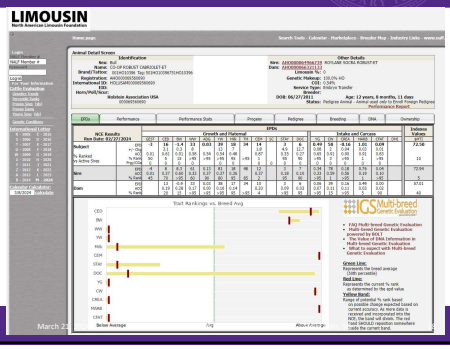
## The FUTURE…It's Here **TODAY!**

| Dairy Breed | | Grand-progeny Count | epd_ms | acc_ms | epd_yg | acc_yg | epd_cw | acc_cw | epd_rea | acc_rea | epd_bf | acc_bf |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JER | Average | 127 | 0.59 | 0.22 | 0.23 | 0.22 | 41.09 | 0.30 | 0.03 | 0.29 | 0.04 | 0.18 |
| | Min | 1 | 0.07 | 0.03 | -0.13 | 0.04 | 19.70 | 0.07 | -0.65 | 0.06 | -0.03 | 0.02 |
| | Max | 2940 | 1.32 | 0.74 | 0.54 | 0.56 | 79.20 | 0.73 | 0.55 | 0.71 | 0.11 | 0.66 |
| | | | | | | | | | | | | |
| HOL | Average | 53.96 | 0.62 | 0.23 | 0.19 | 0.24 | 41.33 | 0.33 | 0.13 | 0.32 | 0.04 | 0.18 |
| | Min | 1.00 | 0.22 | 0.05 | -0.07 | 0.05 | 11.90 | 0.06 | -0.50 | 0.06 | -0.01 | 0.04 |
| | Max | 390.00 | 1.02 | 0.54 | 0.44 | 0.44 | 73.60 | 0.63 | 0.91 | 0.59 | 0.09 | 0.44 |



27

## CO-OP ROBUST CABRIOLET-ET AHO000069560690

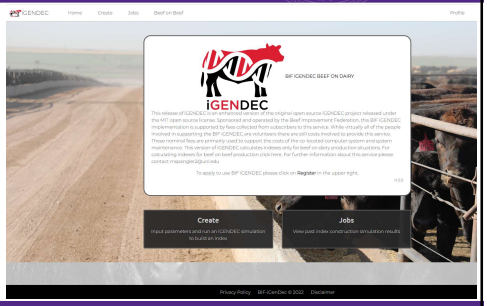





28

## iGENDEC – igendec.beefimprovement.org

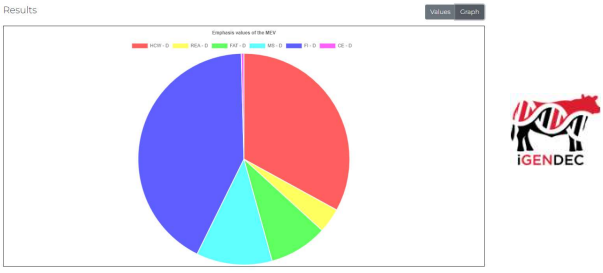
Customizable Beef x Dairy Selection Index Development Tool






29

## iGENDEC






30

# THANK YOU!

# QUESTIONS?

Bob Weaber, Ph.D.
Professor and Head,
Eastern Kansas Research and Extension Centers
Kansas State University
bweaber@k-state.edu
785-477-1287



31

*Bringing the Beef:*

# Beef x Dairy

*in Value-Based Markets*

*Lauren N. Kimble, Manager of ProfitSOURCE*
*Select Sires, Inc.*

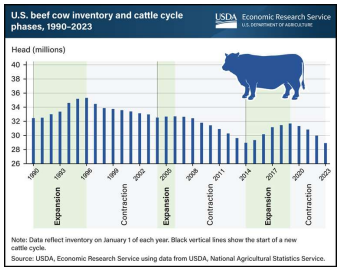
1

## THE STATE OF THE MARKET



2

## *Shackle Space to Fill*




2010s contraction – *BxD not prevalent yet, straight HO filled gaps*

2014 expansion – *tune changes!*

2020s contraction – *BxD preferred to fill pens and chain space*



3

## *From Holstein to Crosses*

For years, Holstein steers represented 14-16% of fed kill

Use of sexed semen

3 of 4 major packers quitting or slowing Holstein harvest

Higher prices paid to dairies for crosses
*~$300 spread HO vs commodity BxD, addt'l ~$35 and up for program BxD*

Prediction: BxD will replace 70% of Holstein steer population

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## *Right From the Packer's Mouth*

***National Beef Quality Audits:***

FED CATTLE: "Holstein hide color decreased from 20% in 2016 to **12.3%** in 2022"

***Cargill for 2023:***

Out of their dairy-influenced fed kill:

**95%** Beef x dairy vs **5%** HO Steer

Glen Dolezal, Cargill, CAB Feeding Quality Forum 2023

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## *Why Beef x Dairy?*

***Best of both worlds…***

- Increased **palatability** over native beef
  - "Buttery" and "fat-like", less metallic off-flavors
- Greater tenderness – 86.5% USDA Very Tender
- Improved **dressing percentage** and **ribeye area** (and shape) over straight dairy
- Longer shelf life (slower browning) at retail than straight dairy
- Likely all under **30 mo.!**

| | Dairy | Beef x Dairy | Beef |
|---|---|---|---|
| Dressing % | 60% | 62.8% | 65% |
| Ribeye Area | 13.3" | 14.1" | 14.8" |

Jenna Frink, TTU; BCRC

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### *…and Why Not?*

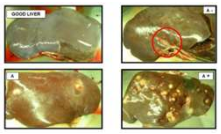
***The not-so-stellar…***

- Bulling | Respiratory | Udder development | and…

**$409 million** est. industry losses last year due to **Liver Abscess**

→ *reduced feed conversion, marbling and REA*

→ *condemnations/loss of outside skirt, rail stoppages, etc.*




Prevalence:

- 25-30% native beef
- 29% / 50-80% Holsteins (numbers vary)
- 53% - 68% beef x dairy

Wide variation across feedlots – supplier linked
High concentrate diet contributes to acidosis and liver abscess
~$1/hd for liver scoring

Ty Lawrence; Blake Forsker

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### *BxD are Necessary Regardless*

***Beef x Dairy has a huge role to fill***

- Keep the yards full – check those calf prices!
- Address and overcome the not-so-stellar

***Even with the need for cattle, quality still reigns***

- Consumers continue to…
  - Buy **quality** (“Prime!”) beef
  - Seek **transparency**
  - Demand **environmentally-sound** practices


Midan

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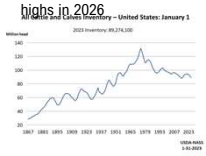
### *BxD are Necessary Regardless*

- Lowest cattle volume at harvest expected to be in 2026
- Weekly harvests in 2024 likely to be merely half of plant capacity
- Beef prices expected to hit record highs in 2026





TOP CALVES
9685 VT 90#@ 9.20.00 $828.00
9654 NY 86#@ 9.10.00 $782.60
277 NY 83#@ 9.10.00 $755.30
185 NY 94#@ 9.00.00 $846.00
1681 VT 94#@ 9.00.00 $846.00
182 NY 93#@ 9.00.00 $837.00
9991 MA 91#@ 9.00.00 $819.00
1663 VT 88#@ 9.00.00 $792.00
9377 NY 88#@ 9.00.00 $792.00
9363 NY 88#@ 9.00.00 $792.00

- Current BxD prices skyrocketing, even on day-olds
- Will it always be like this?

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9


CHANGING
PERCEPTIONS
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Reconciling Needs
Quality
Flexibility of marketing
Year-round supply
Maximize fertility
Calving ease
Traceability & insights
Value add !!!
Consistency & predictability
Market access & value
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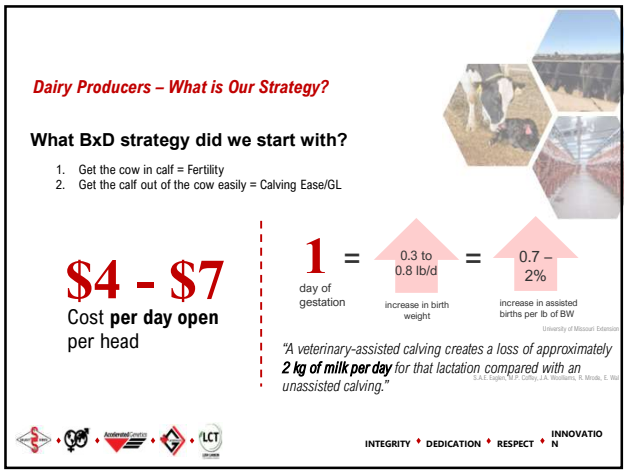
11


Dairy Producers – What is Our Strategy?
What BxD strategy did we start with?
1. Get the cow in calf = Fertility
2. Get the calf out of the cow easily = Calving Ease/GL
$4 - $7
Cost per day open per head
1 = 0.3 to 0.8 lb/d = 0.7 – 2%
day of gestation
increase in birth weight
increase in assisted births per lb of BW
"A veterinary-assisted calving creates a loss of approximately 2 kg of milk per day for that lactation compared with an unassisted calving."
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12

## *What Should Our Strategy Be?*

**Grid marketing made us HAVE to get smart.**

**The New BxD Mentality**

1. Get the cow in calf → ***with a calf carrying traits desired by beef market***
2. Get the calf out of the cow easily
3. **Prove the value of the calf with traceability**

Domestic beef for Maternal needs

7AN600 WOLVERINE

| | CED | BW | CW | Marb | RE |
|---|---|---|---|---|---|
| EPD | 16 | -2.1 | 30 | 0.67 | 0.78 |
| % Rank | 4 | 4 | 80 | 60 | 25 |

✗ ✗ ✗

ProfitSOURCE

2AN724 SET UP

| | CED | BW | CW | Marb | RE |
|---|---|---|---|---|---|
| EPD | 1<br>1 | 0 | 7<br>3 | 1.05 | 1.4<br>4 |
| % Rank | 1<br>5 | 2<br>5 | 5 | 10 | 1 |

✓ ✓ ✓

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13

## THE VALUE OF QUALITY

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14

## *General Expectations at Harvest*

HOLSTEIN

Fed HO Quality Grade

Prime Choice Select No Roll

BEEF

Fed Native Beef Quality Grade

Prime Choice Select No Roll

BxD

Fed BxD Quality Grade (Program)

Prime Choice Select No Roll

NBDA, Texas Tech, Internal Data

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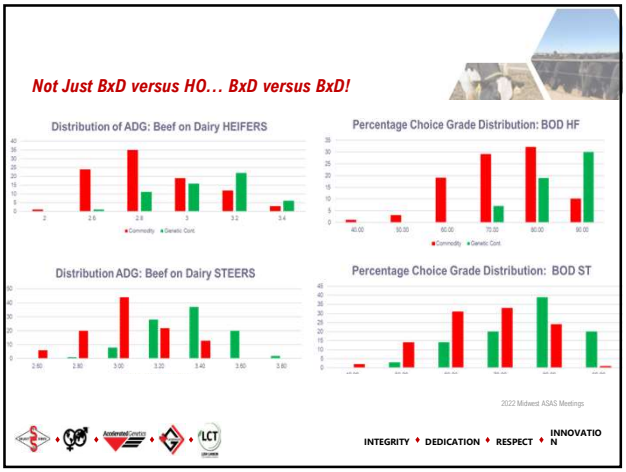
15

## *Not Just BxD versus HO… BxD versus BxD!*






16

## *Why The Disparate Performance?*

***Figure 4. Value of Marbling/Quality Grade***

| Pen 1 | | Pen 2 | |
|---|---|---|---|
| % Select | 2% | % Select | 14% |
| % Choice | 10% | % Choice | 44% |
| % CAB | 50% | % CAB | 36% |
| % Prime | 38% | % Prime | 6% |

*The following prices of $348 for Prime, $309 for CAB, $293 for Choice, and $279 for Select were used along with an average carcass weight of 910 lbs.*

| Pen 1 | | Pen 2 | |
|---|---|---|---|
| Pen Value - Select | $5,078 | Pen Value - Select | $35,545 |
| Pen Value - Choice | $26,663 | Pen Value - Choice | $117, 317 |
| Pen Value - CAB | $140,595 | Pen Value - CAB | $101,228 |
| Pen Value - Prime | $120,338 | Pen Value - Prime | $19,000 |
| Total Pen Value | $292,674 | Total Pen Value | $273,090 |
| | | **Difference/pen** | **$19,584** |
| | | **Difference/head** | **$195.84** |

American Angus Assoc.

***"Genetics have never been worth more than they are today"***

*American Angus Assoc.*



17

## *Grids Reward Quality*

**WHAT IS A GRID?**

A cattle pricing structure based on actual individual **carcass merit** when selling finished cattle to a packer. Grid marketing accounts for carcass weights and applies **premiums and discounts based on the quality** and yield grade attributes of each carcass.

This is the opposite of cattle sold on a live weight, or cash basis, to the packer, which are paid only based on the live weight of

GeneNet

| Grading Attributes | Premium/Discount |
|---|---|
| Primes | C/S Spread |
| Choice | Par |
| Certified Angus Beef | +$5 |
| Select | -USDA C/S Spread |
| No-Rolls (Sub Select) | C/S Spread -$25 |
| Yield Grade 1's + 2's | +$5 Over Plant Average |
| Yield Grade 3's | 0 |
| Yield Grade 4's & 5's | - $10 Over Plant Average |
| Light Weights (Less than 535 lbs) | -$25.00 |
| Carcasses Between 535 – 750lbs | -3.00 |
| Carcasses Between 750 – 950lbs | 0 |
| Carcasses Between 950-1100lbs | +3.00 |
| Carcasses > 1100lbs | -3.00 |
| 30 Month Cattle | -$100/hd |



18

## Show Me the Money

*AVERAGE PERFORMANCE, INTERNAL RECORDS*

| (Base Current Grid) | Base Price $286 | | | | Prime | Choice | Select | No Roll | CAB | YG 1 | YG 2 | YG 3 | YG 4 & 5 | Sum of Values ($/HD) | $/CWT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Carcass ID | Hot WGT | Quality Grade | Yield Grade | Program | $25.00 | $ - | $(10.00) | $(55.00) | $7.00 | $7.00 | $3.00 | $ - | $(10.00) | $10,279.55 | $300.13 |
| HOL | 802 | Choice | 3 | | | $ - | | | | | | $ - | | $2,293.72 | $286.00 |
| COMM BxD | 849 | Choice | 2 | CAB | | $ - | | | $59.43 | | $25.47 | | | $2,513.04 | $296.00 |
| PROG BxD | 887 | Choice | 2 | CAB | | $ - | | | $62.09 | | $26.61 | | | $2,625.52 | $296.00 |
| PROG BxD | 887 | Prime | 2 | CAB | $ 221.75 | | | | $62.09 | | $26.61 | | | $2,847.27 | $321.00 |

Commodity BxD over HO = $219.32
Avg Program BxD over HO = $331.80

Avg Program BxD over Commodity BxD = $112.48
Elite Program BxD over Commodity BxD = $334.23

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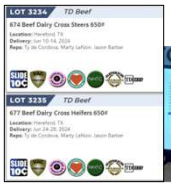
## Signaling Value

***Programs help:***

- Guide proper **genetic** selection
- Signal proper **calf care**
- In some cases, ensure **traceability** – proof of value
  - Market access through pickup programs
  - Ability to signal program specs on open market

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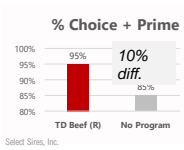
## Data Feedback → Program Success

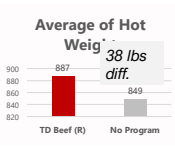
ProfitSOURCE

traceability derived carcass records clearly indicate the expected trend, with targeted program genetics performing stronger than unknown's. Communicate your on-farm strategy with your buyers.

Quality Grade

| | Prime | Choice | Select | Condemned | No Roll |
|---|---|---|---|---|---|
| TD Beef | 27% | 68% | 5% | 0% | 0% |
| Unknown | 14% | 71% | 15% | 0% | 1% |




Select Sires, Inc.

*ProfitSOURCE TD Beef calf harvested at ~17 mo, 36.6% IMF*

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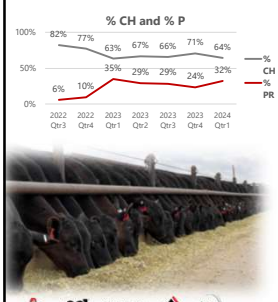
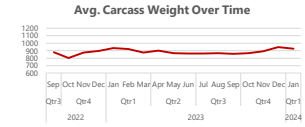
21

## *Data Feedback → Program Success*




*Consistency and progress associated with tailored programs also creates buy-in with your downstream.*

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22

## QUALITY IS MULTIFACETED

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23

## *Consumer Trends*

- 7 out of 10 US consumers have **mod. to high trust of packaging labels** from government, manufacturers and retailers (2/3 for third-party orgs)
- 66% of consumers seek eco brands
- 55% would **pay more** for sustainable items
- 'Sustainable' products grew **2.7x** faster than conventional
- In the news – beef sustainability mentions have increased **257%** since Q2 2022
- 63% would like to know where their food comes from

Midan Marketing

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24

## *Sustainability Matters*

- NCBA: climate neutrality by 2040
- Many retailers and foodservice reporting GHG reduction progress by 2030


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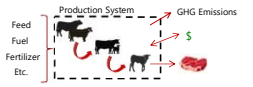
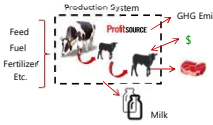
## *What Role does BxD Play?*

**Beef x Dairy have a key advantage when it comes to greenhouse gas emissions.**




The native beef cow dam only produces one product, a beef calf.




The dairy cow's main resource produced is milk. The beef calf is a co-product, and therefore her emissions are allocated across more products.

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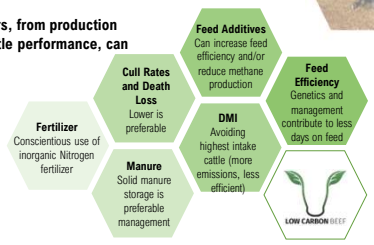
26

## *What Else Contributes to Lower GHG Emissions?*

**Various factors, from production system to cattle performance, can contribute:**

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## *Emissions Intensity Scenarios*

*In this example, assumptions included: mature cow weight, preg rate, cow cull rate, calf death loss, nitrogen fertilizer usage, manure management system*

| | Backgrounding (BxB) | Dairy-Beef Holstein (HO) | Dairy-Beef (AN x HO) |
|---|---|---|---|
| Harvest live weight (lbs) | 1,330 | 1,330 | 1,400 |
| Days in feedlot (days) | 135 | 337 | 300 |
| ADG, feedlot (lbs/d) | 3.4 | 2.9 | 3.5 |
| Feed:Gain, feedlot (lbs/lbs) | 7.2 | 7.2 | 6.2 |
| Dressing (%) | 63.50% | 60.00% | 62.80% |
| | | | |
| GHG Intensity (kg CO2e/kg CW) | 18.4 | 12.5 | 11.2 |
| Reduction in GHG Int (%) | - | 32.40% | 39.10% |

*In this scenario, beef x dairy had a 39.10% reduction in greenhouse gas intensity across a lifetime of production compared to the native beef animal, and may carry some efficiency advantages over straight Holstein.*

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## *Back to Programs…*

***How does the dairy producer benefit?***

- Select sire **genetics** that meet beef supply chain needs
  - Production traits
    - Weaning Weight
    - Yearling Weight
    - Average Daily Gain
  - Terminal traits
    - Carcass Weight
    - Marbling
    - Ribeye Area
- Take part in programs that help you to document and **communicate calf value**
- Lead in the **sustainability** conversation – investigate certification programs to be at the front of the narrative

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29


30