Value Captured from Improved Production Practices: What’s the sale data say?

Winter Ranch Management
February 11, 2020
Esther McCabe

What do you already have invested?

- Nutrition of dam
- Cost for bull or AI
- Vaccinations for cowherd
- Calving
How to capture calf value?

- Management
  - Breeds
  - Gender
  - Vaccinations
  - Castration
  - Implants

- Programs
  - Age and Source
  - Non Hormone Treated Cattle

Background

- Data since 1995
- Data provided electronically starting in 2010
- Video auctions – “lots” of beef calves
Lot Example

LOT #5194A
252 Steer Calves

ORIGIN: Home Raised

CURRENT LOCATION: Ranch, 26 miles S of Meade, KS which is 35 miles SW of Dodge City, KS

BREED TYPE: Out of Angus & a few Red Angus cows by 95% Gardiner Angus & 2 Red Angus bulls. Cows are 100% Gardiner influenced.

FRAME: Med – Med Lg
EST. WT. VAR.: Uneven
FLESH: Medium
HORNS: None


IMPLANTED: No

Region where lot originated

- West Coast: 1,259 lots, $160.21/cwt
- Rocky Mountain/North Central: 1,801 lots, $164.33/cwt
- South Central: 1,046 lots, 160.35/cwt
- Southeast: 265 lots, $155.16/cwt

2018 Summer Calf Sales
Non-adjusted Means, Medians, and Ranges

<table>
<thead>
<tr>
<th>Factor</th>
<th>Mean ± SD</th>
<th>Median</th>
<th>Range</th>
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<tbody>
<tr>
<td>Number of calves in lot</td>
<td>104.5 ± 70.4</td>
<td>88</td>
<td>7 to 840</td>
</tr>
<tr>
<td>Base weight of lots (lb)</td>
<td>569.9 ± 82.5</td>
<td>570</td>
<td>330 to 900</td>
</tr>
<tr>
<td>Number of days from auction to forecasted delivery</td>
<td>75.7 ± 38.4</td>
<td>80</td>
<td>0 to 218</td>
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<tr>
<td>Price per 100 pounds ($)</td>
<td>165.79 ± 15.85</td>
<td>164.00</td>
<td>113.00 to 256.00</td>
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</table>
## Gender of the Lot

<table>
<thead>
<tr>
<th>Gender of the Lot</th>
<th>Number of lots</th>
<th>Least squares mean of sale price ($/cwt)</th>
<th>Regression coefficient</th>
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</thead>
<tbody>
<tr>
<td>Steers</td>
<td>2,660</td>
<td>168.36\textsuperscript{a}</td>
<td>16.70</td>
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<tr>
<td>Heifers</td>
<td>1,711</td>
<td>151.66\textsuperscript{b}</td>
<td>0.00</td>
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</table>

## Sold in Mixed-Gender Lot

<table>
<thead>
<tr>
<th>Sold in Mixed-Gender Lot</th>
<th>Number of lots</th>
<th>Least squares mean of sale price ($/cwt)</th>
<th>Regression coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>971</td>
<td>157.74\textsuperscript{a}</td>
<td>-4.55</td>
</tr>
<tr>
<td>No</td>
<td>3,400</td>
<td>162.29\textsuperscript{b}</td>
<td>0.00</td>
</tr>
</tbody>
</table>
## Auction Date

<table>
<thead>
<tr>
<th>Auction Date</th>
<th>Number of lots</th>
<th>Least squares mean of sale price ($/cwt)</th>
<th>Regression coefficient</th>
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</thead>
<tbody>
<tr>
<td>June 13 – 14</td>
<td>320</td>
<td>159.87&lt;sup&gt;a&lt;/sup&gt;</td>
<td>2.73</td>
</tr>
<tr>
<td>June 27 – 28</td>
<td>288</td>
<td>158.23&lt;sup&gt;ab&lt;/sup&gt;</td>
<td>1.09</td>
</tr>
<tr>
<td>July 9 – 13</td>
<td>1,282</td>
<td>162.53&lt;sup&gt;c&lt;/sup&gt;</td>
<td>5.39</td>
</tr>
<tr>
<td>July 30 – August 3</td>
<td>1,023</td>
<td>162.78&lt;sup&gt;c&lt;/sup&gt;</td>
<td>5.64</td>
</tr>
<tr>
<td>August 20 – 24</td>
<td>1,162</td>
<td>159.53&lt;sup&gt;a&lt;/sup&gt;</td>
<td>2.39</td>
</tr>
<tr>
<td>September 6 – 7</td>
<td>296</td>
<td>157.14&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### Calf Health

**Summers 1995 – 2018**
Lot Example

LOT #2380
Agricultural Prod. Ent. Inc.

130 Weaned Str Calves

ORIGIN: Home Raised

CURRENT LOCATION: Pasture, 12 mile(s) NE of Mount Pleasant, TX which is 150 miles NE of Fort Worth, TX


FRAME: Med - Med Lg

EST. WT. VAR: Uneven

FEED: Native grass, ryegrass & 2-3# DOG per day if needed.

DELIVERY: May 1-25 Rep's option

WEATHER: Medium

COMMENTS: Bred; I continue weaned, ready for ensilage.

VACCINATIONS: VAC 45.

IMPLANTED: No

REPRESENTED BY: Norman Sansom (903) 277-7318

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Lot Example

LOT #2409
Antelope Valley Ranch

37 Steer Calves

38 Heifer Calves

ORIGIN: Home Raised

CURRENT LOCATION: Ranch, 6 mile(s) S of Valentine, TX which is 40 miles S of Van Horn, TX


FRAME: Medium

WEIGHT: Medium

FEED: On range, native grass, protein tubs & free choice mineral.

DELIVERY: Mar. 18 weather permitting

WEIGHT: Medium


VACCINATIONS: VAC 34+. 7-way w/Somnus & CattleMaster 4 @ branding. BoviShield Gold One Shot 2-4 weeks before delivery.

IMPLANTED: No

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Calf Health

- VAC 24
- VAC 34 and 34+
- VAC 45 and 45+
- Non-weaned and no viral vaccination

Percent of lots non-weaned and no viral vaccination

82,793 total lots
Percent of lots qualifying for VAC 24

- 82,793 total lots

Percent of Total Lots

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<thead>
<tr>
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<tr>
<td></td>
<td>100</td>
<td>80</td>
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<td>10</td>
<td>10</td>
<td>7</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>

Percent of lots qualifying for VAC 34*

- 82,793 total lots

*Includes VAC 34 and VAC 34+
Percent of lots qualifying for VAC 45*

82,793 total lots

Percent of Total Lots

Years: 1995 to 2018

Values: 3, 4, 4, 6, 7, 7, 10, 13, 18, 21, 21, 22, 23, 23, 26, 26, 27, 27, 29, 29, 30, 29, 29, 29

*Includes VAC 45 and VAC 45+

Methods

Multiple regression model, backwards selection
- P<0.05 maintained a factor in the final model
Premium associated with lots qualifying for VAC 34* in select years

- 1995: 11% at $1.35/cwt
- 2000: 20% at $1.76/cwt
- 2005: 46% at $2.45/cwt
- 2010: 51% at $1.93/cwt
- 2018: 50% at $3.07/cwt

*Includes VAC 34 and VAC 34+

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Premium associated with lots qualifying for VAC 45* in select years

- 1995: 3% at $2.47/cwt
- 2000: 7% at $3.66/cwt
- 2005: 21% at $6.64/cwt
- 2010: 27% at $4.93/cwt
- 2018: 29% at $6.19/cwt

82,793 total lots

*Includes VAC 45 and VAC 45+
Breed Descriptions

English, English Crossed
English-Continental Crossed
Brahman-Influenced

Lot Example

**BREED TYPE:** Out of Angus & Angus cross cows by Angus & Hebert Charolais bulls. Black, Black Brockle Face & Charolais cross.

**ECX:** English-Continental cross out of dams with no Brahman influence
Lot Example

**BREED TYPE:** Charolais cross carrying 1/4 or less Brahman influence.

**BR:** Brahman influence

Brahman Influenced Trend

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent of Total Lots</th>
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<tbody>
<tr>
<td>1995</td>
<td>22</td>
</tr>
<tr>
<td>1996</td>
<td>23</td>
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<td>1997</td>
<td>25</td>
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<td>16</td>
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<td>2009</td>
<td>14</td>
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<td>2016</td>
<td>10</td>
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<tr>
<td>2017</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td></td>
</tr>
</tbody>
</table>
English-Continental Crossed Trend

English, English Crossed Trend
### Breed Description of the Lot

<table>
<thead>
<tr>
<th>Breed Description</th>
<th>Number of lots</th>
<th>$/cwt</th>
<th>Regression coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>English, English crosses</td>
<td>2,318</td>
<td>162.84</td>
<td>7.61</td>
</tr>
<tr>
<td>English-Continental crosses</td>
<td>1,490</td>
<td>161.97</td>
<td>6.74</td>
</tr>
<tr>
<td>Brahman influenced</td>
<td>563</td>
<td>155.23</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### Trends and sale price of NHTC and implanted lots

Trends and sale price of NHTC and implanted lots

Summer sales 2010 – 2018
Non Hormone Treated Cattle Program (NHTC)

- USDA approved program
- 3rd party audited
- Created for export to European Union in 1999

Lot Example

LOT #2413B

Carlink Ranch & Dunn Ranch

74 Weaned Hfr Calves

ORIGIN: Home Raised Carlink Ranch

2 WAY SLIDE:

10 cents overlander up to 25A overlander base weight.

CURRENT LOCATION: Ranch, 45 mile(s) N of Benson, AZ which is 160 miles W of Deming, NM

BREED TYPE: Out of Angus, Hereford & English cross cows by reg. Dunn Angus bulls. 100% Black & BWF

FRAME: Medium

EST. WT. VAR.: Uneven

FLESH: Medium

HORNS: Dehorned or Muley

FEED: Weaned 45+ days on irrigated 4-way pasture supplemented with longstem alfalfa & oat hay with free choice mineral. Bunk broke.

DELIVERY Mar. 12-30 Rep's option

WEIGHTING COND: Gather from trap early & weigh on ground w/a 3%.

COMMENTS: Quality Angus sired hfrs. Big sort from 175 hfrs. All raised & located on Carlink Ranch. Maybe replacement prospects. 2 ranch brands.

VACCINATIONS: VAC 45+. Ultrabac 7 & BS Gold @ branding. BS Gold, One Shot Pasteurella, Ultrabac 7 (boostered) & wormed w/Dectomax @ weaning.

IMPLANTED: No

REPRESENTED BY: Butch Mayfield (575) 436-2544

Age/Source Verified: SUPERIOR VERIFIED w/ IMGlobal

Angus

NHTC
Lot Example

LOT #2316

**90 Weaned Hfr Calves**

**ORIGIN:** Home Raised

**2 WAY SLIDE:**

15 cents over/under up to 25# over/under base weight

**CURRENT LOCATION:** Ranch, 3 mile(s) N of Lyman, WY which is 320 miles W of Cheyenne, WY

**BREED TYPE:** Out of Angus Simmental Composite & Angus cross cows by Crowfoot SimAngus & Black Angus bulls. Pred. Black hided, 4 Red.

**FRAME:** Med. - Med Lg

**EST. WT. VAR.:** Very Uneven

**FEED:** Longstem alfalfa & grass hay.

**DELIVERY:** Feb. 25-Mar. 6 Rep's option

**WEIGHING COND:** Gather, load on seller's truck, haul to Modfield Scales, unload & weigh on ground w/ a 1%.

**COMMENTS:** Good end of hay fed hfrs. Light end sorted off.

**VACCINATIONS:** VAC 45. BovShield Gold 5 & One Shot Ultra 8 @ branding & in fall.

**REPRESENTED BY:** Shane Christian (307) 709-9000

**Age/Source Verified:** No

**Implanted:** No

Lot Example

LOT #2283

**440 Weaned Str Calves**

**ORIGIN:** Purchased Western ND

**2 WAY SLIDE:**

8 cents over/under up to 25# over/under base weight.

**CURRENT LOCATION:** Ranch, 30 mile(s) N of New Salem, ND which is 30 miles W of Bismarck, ND

**BREED TYPE:** Black Angus & a few Black Angus Hereford cross.

**FRAME:** Med Lg

**EST. WT. VAR.:** Fairly Even

**FEED:** Ration of corn silage, chopped hay & distillers to gain 2.5# per day.

**DELIVERY:** Feb. 25-Mar. 1 Rep's option

**WEIGHING COND:** Gather from pens by 9:00 a.m., sort & weigh on ground w/ a 3%: 54,685# id(s), 37 loads, gate cut. One contract if buyer takes all.

**COMMENTS:** Knife cut. Good Northern feeder strs w/gentle disposition.

**VACCINATIONS:** Infarve 3, Ultrabac 7 w/Somubac & One Shot BVD 10/18. Boostered w/Resvac 4 w/Somubac & Dysentery Inactivated 11/18.

**REPRESENTED BY:** Stockmen’s Livestock Exchange, Inc. (701) 225-8156

**James Erickson (701) 290-4811**

**John Fischer (701) 290-1606**

**Age/Source Verified:** No

**Implanted:** Synovex One Grass

**Angus**
Percentage of NHTC lots from 2010 - 2018

- 40,941 total lots
- 50% increase in lots

Premiums for NHTC lots

- P < 0.05

1Premiums for NHTC lots compared to non NHTC lots
Percentage of implanted lots from 2010 - 2018

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage of Lots</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>27</td>
</tr>
<tr>
<td>2011</td>
<td>28</td>
</tr>
<tr>
<td>2012</td>
<td>28</td>
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<td>2015</td>
<td>29</td>
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<td>2016</td>
<td>28</td>
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<tr>
<td>2017</td>
<td>27</td>
</tr>
<tr>
<td>2018</td>
<td>25</td>
</tr>
</tbody>
</table>

40,941 total lots

Price difference of implanted lots

<table>
<thead>
<tr>
<th>Year</th>
<th>Premium ($/cwt)</th>
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<tbody>
<tr>
<td>2010</td>
<td>-0.07</td>
</tr>
<tr>
<td>2011</td>
<td>0.25a</td>
</tr>
<tr>
<td>2012</td>
<td>0.11</td>
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<tr>
<td>2013</td>
<td>-0.08</td>
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<tr>
<td>2017</td>
<td>0.57a</td>
</tr>
<tr>
<td>2018</td>
<td>1.07a</td>
</tr>
</tbody>
</table>

P < 0.05

1Price differences for implanted lots compared to non implanted lots
Source and Age Verification

Summers 2010 – 2018

To qualify for the Source claim the cattle to enroll must have been born and raised on your operation. To qualify for the Age claim, calving records must be kept showing the first and last calf born for each season. First calf must be the actual first calf born, not an estimation based on bull turnout, or other ranch activity. A branding, processing, or weaning date may be used for the last calf born date. The ranch must keep head count support showing cow numbers that support the number of head to enroll. (ex. preg. check numbers, inventories, calving book data, vaccine receipts, etc.). Your IMI Representative may ask you to send in copies of calving records and/or head count support.
Trend for Source and Age Verified Lots

40,941 total lots

Percent of Lots

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>2011</td>
<td>56</td>
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<tr>
<td>2012</td>
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<td>28</td>
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<tr>
<td>2018</td>
<td>29</td>
</tr>
</tbody>
</table>

Kansas State University

Premiums for Source and Age Verified Lots

40,941 total lots

Premium ($/cwt)

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<th>Year</th>
<th>Premium</th>
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<td>1.81</td>
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<td>2015</td>
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<td>2016</td>
<td>1.97</td>
</tr>
<tr>
<td>2017</td>
<td>2.08</td>
</tr>
<tr>
<td>2018</td>
<td>0.76</td>
</tr>
</tbody>
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Least: $0.76/cwt
Greatest: $4.07/cwt

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Key Points

• Vaccination program
• Breed composition
• Implants
• How you market
• Additional programs
• Premiums are variable

• Market the calves

Market Calves to Capture Value

LOT #5215
75 Steer Calves
ORIGIN: Home Raised

CURRENT LOCATION: Pasture, 14 mile(s) NE of Cambridge, KS which is 60 mile(s) SE of Wichita, KS

BREED TYPE: Out of Angus, Angus cross, Hereford cross & English Exotic cross cows by Fink Angus & McCabe Horncd Hereford bulls. Approx. 75% Black & Black Baldy, 25% RWF & Blacknose Charolais.

FRAME: Med - Med Lg
EST. WT. VAR: Uneven
FEED: On cows, native grass & mineral.
DELIVERY: Oct. 1-14 Rep's option
WEIGHING COND: Gather ASAP, drive to pens, sort & weigh on ground w/ a 2%.
COMMENTS: Real nice set of calves, Big end from 162 str's filmed.
VACCINATIONS: VAC 34+. Pyramid 5+Presponse SQ & Vision 7 Spur @ branding & 2-4 weeks prior to weaning.
IMPLANTED: Synovex C 5/19
REPRESENTED BY: Barrett Broadie (620) 635-6128
Age/Source Verified: No
Value Captured from Improved Production Practices: What’s the sale data say?

Winter Ranch Management
February 11, 2020
Esther McCabe