

Factors Affecting Calf Value

Management decisions add and subtract dollars.

by *Deana Hardee, DVM*

Various attributes impact how much buyers are willing to pay for cattle, including everything from gender and weight to frame and condition. The same goes for how cattle are managed, presented for sale and their eligibility for specific value-added programs.

Superior Livestock Auction (SLA), Kansas State University and Merck Animal Health analyzed data from calves sold through SLA to estimate how specific cattle attributes and management affect calf prices. Researchers also examined how much value buyers assign to various calf health programs. The analysis included data from more than 28,000 calf lot transactions (more than 850,000 calves) from across the country selling through SLA in 2019 and 2020.

Price-neutral factors

Some factors neither decreased nor increased calf value, including the number of days between sale date and delivery date, brucellosis vaccination status, bovine viral diarrhea persistently infected (BVD-PI) status and implant status. In this dataset, cattle that were tested and noted as BVD-PI free did not receive a premium. Brucellosis (Bang's, OCV, etc.) vaccination did not add value to

heifers being sold, but this may be required in certain areas.

Considering that implant status of non-program cattle did not affect price, sellers of those cattle bypassed significant potential to increase weaning weight and associated revenue. For instance, based on trial summaries involving more than 2,300 suckling calves, those receiving Ralgro® (zeranol), achieved weaning weights estimated to be 23 lbs. heavier than non-implanted peers.¹ The added weight equates to approximately \$40 per head, basis a price of \$175 per hundredweight (cwt.).

Factors decreasing price

Some management decisions create discounts and lower calf prices (see Table 1). These include weight variation or lack of uniformity, heavier flesh and breed type. As an example, using English breeds as the base, significant discounts were observed for dairy, dairy cross and Brahman-influenced calves. Unsurprisingly, calf gender also affected value with heifers discounted to steers.

Factors increasing price

On the other hand, a variety of management decisions create premiums and increase calf prices (see Table 2). These include compliance with programs

designed to provide consumers with specific product attributes, such as antibiotic-free and hormone-free, as well as assurance of specific cattle handling and health product use like that verified through Beef Quality Assurance.

Premiums for health

Just as cattle health underpins optimum cattle well-being and beef production, it is also the foundation of specific programs buyers seek to reduce risk.

Health challenges related to bovine respiratory disease (BRD) in newly weaned calves continue to be a significant problem in the beef industry. Direct costs related to BRD include treatment costs, labor costs and death loss. In addition, indirect costs such as decreased growth performance, feed efficiency, carcass value and overall market value are concerning.²

Calves selling through SLA in 2019 and 2020 consistently earned premiums if they qualified for various Value-Added Calf (VAC) programs (see Table 3). Premiums were paid even when accounting for variation in calf sex, weight, flesh, frame, region of origin and other characteristics.

The collaborative research analyzed five specific VAC programs recognized by SLA. Keep in mind there are many similar

Sources:

¹Data on file, Merck Animal Health.

²Holland B, Burciaga-Robles L, VanOverbeke D, Shook J, Step D, Richards C, Krehbiel C (2010) Effect of bovine respiratory disease during preconditioning on subsequent feedlot performance, carcass characteristics, and beef attributes. *J Anim Sci* 88:2486–2499.

health programs recognized by other markets, which mirror the SLA programs below.

VAC 24 – For this basic program, calves must be vaccinated on cows at two to four months of age.

Vaccination requirements:

- 1 dose of a clostridial 7-way, 8-way or 9-way
- 1 dose of a viral respiratory 5-way (IBR, PI3, BRSV and BVD Type I & II)
- 1 dose of a bacterial respiratory Mannheimia haemolytica and/or Pasteurella multocida

VAC 34 – With this next level of health assurance, calves are vaccinated on cows at branding and then again two to four weeks prior to shipping.

Vaccination requirements:

- 2 doses of a clostridial 7-way, 8-way or 9-way
- 2 doses of a viral respiratory 5-way (IBR, PI3, BRSV and BVD Type I & II)
- 1 dose of a bacterial respiratory Mannheimia haemolytica and/or Pasteurella multocida

VAC 45 – Calves are vaccinated twice, either at branding or two to four weeks prior to weaning and at weaning. Weaned minimum of 45 days prior to delivery.

Vaccination requirements:

- 2 doses of a clostridial 7-way, 8-way or 9-way
- 2 doses of a viral respiratory 5-way (IBR, PI3, BRSV and BVD Type I & II)
- 1 dose of a bacterial respiratory Mannheimia haemolytica and/or Pasteurella multocida

VAC 60 – Calves are vaccinated twice either at branding or two to four weeks prior to weaning and at weaning. Weaned minimum of 60 days prior to delivery.

Vaccination requirements:

- 2 doses of a clostridial 7-way, 8-way or 9-way
- 2 doses of a viral respiratory 5-way (IBR, PI3, BRSV and BVD Type I & II)

Vaccination requirements:

- 2 doses of a clostridial 7-way, 8-way or 9-way
- 2 doses of a viral respiratory 5-way (IBR, PI3, BRSV and BVD Type I & II)
- 1 dose of a bacterial respiratory Mannheimia haemolytica and/or Pasteurella multocida

Internal and external

parasite control is also recommended.

See the SLA website or your local representative for more information.

Calculating net opportunity

There are many ways to carve out calf price premiums, avoid discounts or both. However, it's important to understand various programs often come with added cost. Take advantage of this online calculator, which incorporates expected premiums and anticipated production expenses. It helps producers make informed management and marketing decisions. It can be found at agmanager.info/livestock-meat/cross-subject-areas/ksu-merck-calf-vaccination-program-assessment-tool.

Whether retaining ownership or marketing weaned calves, consider your vaccine program and other management factors to maximize value back to you.

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Table 1: Discounts

Factors Decreasing Price	\$/cwt. Premium
Lack of Uniformity	(\$2.59)
Med-Heavy Flesh	(\$1.86)
Horns	(\$1.37)
Non-English Breeds	(\$2.85 – \$12.72)

Table 2: Premiums

Factors Increasing Calf Value	\$/cwt. Premium
GAP (Global Animal Partnership)	\$5.48
NHTC (Non-Hormone Treated Cattle)	\$3.30
Progressive Genetics (SLA recognized program)	\$1.27
BQA (Beef Quality Assurance)	\$0.50

Table 3: Value-Added Health Program Effect on Calf Price

Vaccine Program	\$/cwt.
VAC 24	Base
VAC 34	\$2.58
VAC 45	\$7.51
VAC 60	\$7.92
VAC Precon	\$8.60

- 1 dose of a bacterial respiratory Mannheimia haemolytica and/or Pasteurella multocida

Vac Precon – This program applies to calves gathered from various sources and weaned at least 60 days prior to delivery. These calves must be vaccinated when received and then boosted according to label directions with the last vaccination administered at least 14 days before arrival.