EXTENSION

BEEF CATTLE RESEARCH UPDATE
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Trends in "Natural" Value-Added Calf Programs at Superior Livestock Video Auction

The word "natural" has been used in beef marketing for many years. While the word "natural" is defined by the entities that use it in beef marketing, it most commonly means no growth-promoting implants and no antibiotics. Kansa State University research determined changes in enrollment of calf lots in natural programs at Superior Livestock Video Auction over the last 9 years.[1]

This study utilized data for lots of beef calves offered for sale during summer sales from 2010 through 2018. Consignors of calves to Superior Livestock Video Auction can choose from four different "natural" programs, or they may choose to not enroll calves in a natural program. Consignors may enroll calves in more than one natural program. The four "natural" programs are:

1) Certified Natural: no hormones, antibiotics, or animal by-products.
2) Certified Natural Plus: no growth-promoting hormones/steroids, antibiotics, ionophores, beta adrenoreceptors, or animal by-products. Seller will sign additional Natural Affidavit.
3) Verified Natural Beef: process verified natural by third-party auditors, free of antibiotics, growth promotants, or any type of animal by-product.
4) Non-hormone treated cattle (NHTC): U.S. Department of Agriculture approved; created in 1999 when the European Union and the U.S. agreed to control measures to facilitate the trade of non-hormone treated beef, including veal.

The total number of lots in the analysis was 36,856, representing 4,419,921 calves. The analysis showed that there was an increase in the percentage of lots enrolled in one or more natural programs over the 9-year period (35.3 to 42.0%, Figure 1).

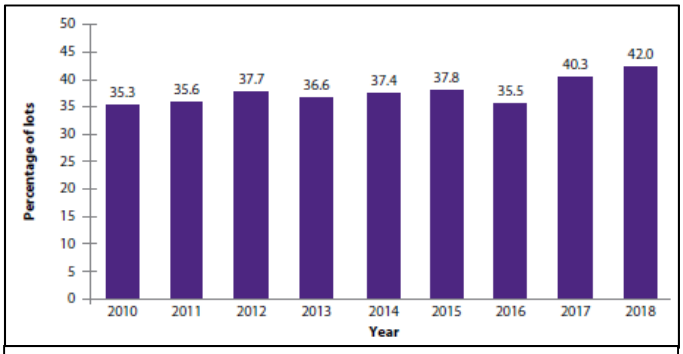

Figure 1. Percentage of lots of single-gender beef calves offered for sale in 67 summer video auctions from 2010 through 2018 that were in one or more natural programs. Source: Odde et al., 2019.

Another part of this study determined the sale prices of beef calf lots enrolled in the NHTC program and those that received implants.[2] The percentage of lots enrolled in the non-hormone treated cattle (NTHC) program grew from 5.2 to 23.8% from 2010 through 2018 (Table 1). The largest increase was 8% points from 2017 to 2018. These researchers speculated that this growth was likely fueled by the higher prices that buyers were willing to pay (Table 1). For seven of the nine years, significant premiums were associated with NHTC lots. The magnitude of this premium advantage ranged from $1.02/cwt in 2013 to $4.04/cwt in 2014. Presumably, consumers noted this added value price signal, thus the increase in enrolled lots.

They also reported that in the nine years of analysis, implant status did not result in price reduction in any year. Even though the percentage of NHTC lots grew, a corresponding decline in the value of implanted lots was not seen. In only three of the nine years were significant premiums associated with non-implanted lots. The percentage of lots ranged from 24.5 to 29.4% in the nine years. These results are similar to those previously reported in a 2015 study that quantified the effect of implant status on the sale price of beef calves marketed through a Superior Livestock Video Auctions from 2010 through 2013.[3] This study utilized 27,746 lots (2,749,406 total calves) selling in 92 video auctions. In this study, implant status had no effect on sale price in any of the 4 years of the study.

In the three of the four years (2010, 2011, and 2102), not implanting numerically reduced sale price by $0.09 to 0.17/cwt. In 2013, not implanting numerically increased sale price by $0.40/cwt. The percentage of lots that were implanted in each year averaged 29.5% (~33 and 25% of the steer and heifer lots were implanted, respectively.

Table 1. Percentage and value of the NHTC cattle program and growth promoting implanted lots of beef calve sold through 67 video auctions.

	NHTC Lots		Implanted Lots	
Year	% NHTC Lots	Price Difference of NHTC[1], $/cwt	% Implanted Lots	Price Difference of Implant Status[2], $/cwt
2010	5.2	2.38[a]	26.5	-0.07
2011	9.5	2.28[a]	28.0	0.25[b]
2012	12.3	1.03[a]	27.6	0.11
2013	11.4	1.02[a]	29.4	-0.08
2014	13.5	4.04[a]	28.0	0.16
2015	15.1	-0.24	28.5	-0.14
2016	12.4	0.23	27.9	-0.05
2017	15.8	2.40[a]	26.5	0.57[b]
2018	23.8	2.30[a]	24.5	1.07[b]

[1]Regression coefficients represent price advantages for NHTC calves compared with calves not in the NHTC program.
[2]Regression coefficients represent price differences for implanted lots compared to lots not implanted.
[a]Regression coefficients with a superscript are higher (P < 0.05) than for lots not in the NHTC group.
[b]Regression coefficients with a superscript are higher (P < 0.05) than for lots not implanted.
Source: McCabe et al., 2019

These researchers concluded that "while there are significant price advantages for 7 of the 9 years in the analysis, the price advantages may not be sufficient to offset not using a growth-promoting implant in the calves". Since numerous studies have consistently shown that non-implanted calves weigh less at weaning (about 15 to 25 pounds), these calves need to bring a substantial price premium to offset the decreased number of pounds sold.

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[1] Odde, K. G., M. E. King, E. D. McCabe, M. J. Smith, K. L. Hill, G. M. Rogers, and K. E. Fike. 2019. Trends in "Natural" Value-Added Calf Programs at Superior Livestock Video Auction. Kansas State Univ. Beef Cattlemen's Day Beef Cattle Research Kansas Agricultural Experiment Station Research Reports: Vol. 5: Iss. 1:5-7.

[2] McCabe, E. D., M. E. King, K. E. Fike, M. J. Smith, K. L. Hill, G. M. Rogers, and K. G. Odde. 2019. Effect of implant status and non-hormone treated cattle status on sale price of beef calves-Superior Livestock Video Auction. J. Anim. Sci. 97 (Suppl. S2):7 (Abstr.).

[3] Rogers, G. M., M. E. King, K. L. Hill, T. E. Wittum, and K. G. Odde. 2015. The effect of growth-promoting implant status on the sale price of beef calves sold through a livestock video auction service from 2010 through 2013. Prof. Anim. Sci. 31: 443-447.