K-STATE Research and Extension

CATTLEMEN'S DAY 2018

Trends in Source and Age Verification for Beef Calves Sold via Summer Video Auction from 2010 Through 2017

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Introduction

Source and age verification programs are essential for many United States beef export markets and some branded beef programs. While there were some source and age verification programs introduced as early as the mid-1990s, many current programs were introduced from 2004 through 2006. In 2003, the United States had a case of bovine spongiform encephalopathy. This event drastically decreased beef exports and ceased trade agreements with countries such as Japan and South Korea. These beef export markets to Japan and South Korea slowly began to reopen, with age restrictions of beef exported from cattle harvested at a maximum of 20 and 30 months, respectively (USDA, 2017).

Cattle meeting the export age restrictions are identified through source and age verification programs. Beef from enrolled calves can be exported to these restrictive markets. More recently, after nearly 14 years of market closure following the bovine spongiform encephalopathy case in 2003, the United States signed a trade agreement with China. One of the requirements for beef export to China includes source and age verification of cattle to ensure they are less than 30 months of age at harvest (Inouye, 2017). In the coming years, this may provide more incentive for producers to enroll calves in source and age verification programs. As the beef industry has evolved, more descriptors of calves selling through a video auction service have been communicated from buyer to seller and recorded, including source and age verified status. The objective of this study was to quantify the effect of source and age verification status on the sale price of lots of beef calves sold via summer video auctions from 2010 through 2017 while adjusting for all other factors that significantly influenced price.

Experimental Procedures

Information describing factors about lots sold through a livestock video auction service (Superior Livestock Auction, Fort Worth, TX) were obtained from the auction service in an electronic format. These data were collected for lots of beef calves offered for sale during summer sales from 2010 through 2017.

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The descriptive pieces of information that were available for each lot of calves were:

- Date of the video auction, number of calves
- Sex of the calves (steers, heifers, or both steers and heifers)
- Base weight
- Weaning status before shipment from farm or ranch of origin
- Geographical region of the United States where the lot originated
- Breed description
- Frame score
- Flesh score
- Vaccination history
- A subjective classification of base weight variation within the lot
- Whether the calves had horns
- Whether the calves had been implanted with a growth-promoting compound
- Whether the lot qualified for a U.S. Department of Agriculture approved source and age verification program
- Days between the auction date and planned date of delivery
- Whether the lot qualified for one or more of the video auction services' special programs: Value Added Calf, Certified Natural, Non-Hormone Treated Cattle, Superior Progressive Genetics, Bovine Viral Diarrhea-Persistently Infected Free, Verified Natural Beef or Never Ever 3, Certified Natural Plus, Global Animal Partnership, Superior RightSlide, Reputation Feeder Cattle, or Top Dollar Angus
- The sale price of the lot ($/cwt)

The specific and current requirements of each of the video auction service's special health and management programs are available at www.SuperiorLivestock.com.

Factors describing the lots of beef calves that were not numeric in the original file received from the video auction service were classified into well-defined groups, and each group within a factor was assigned a numeric code. A multiple-regression model was developed using a backward selection procedure to quantify the effects of factors on the sale price of beef calves.

Results and Discussion

Data analyzed were collected from 61 summer livestock video auctions from 2010 through 2017. There were 36,570 lots of beef calves used in the analyses. In all years of the analysis, source and age verification influenced the sale price of lots of beef calves. The largest premium associated with lots enrolled in a program was $4.07/cwt (Table 1). In 2014, the smallest premium for source and age verified lots was $1.02/cwt. The average premium from 2010 through 2017 for source and age verified lots was $2.25/cwt. This premium may not have been enough for the average producer selling calves via video auction to be profitable with the cost and time associated with enrolling in various source and age verification programs.

The percentage of lots of beef calves enrolled in a source and age verified program decreased from 46.5% to 27.5% (Figure 1). Premiums for source and age verified calves marketed in 2017 were greater than those received in 2016. Recently reopened beef export markets for the United States will likely increase the premium and percentage of lots enrolled in source and age programs in the coming years.

Implications

The decision to enroll beef calves in a source and age verification program is ultimately a decision made by the producer and until premiums increase, not all producers may find this value-added management practice profitable.

References

Inouye, A. 2017. Procedures for exporting U.S. beef to China. United States Department of Agriculture, Foreign Agricultural Service. Global Agricultural Information Network. Accessed 20 October 2017. https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Procedures%20for%20Exporting%20U.S.%20Beef%20to%20China_Beijing_China%20-%20Peoples%20Republic%20of_7-13-2017.pdf

U.S. Department of Agriculture, Economics Research Service. 2017. Trade. Accessed 20 October 2017. https://www.ers.usda.gov/topics/animal-products/cattle-beef/trade/

Table 1. Effect of qualification for a source and age verification on the sale price of lots of beef calves sold through summer video auctions from 2010 through 2017

Year	Qualified for a source and age verification program?[c]	Number of lots	Least squares mean of sale price ($/cwt)	Regression coefficient	P value
2010					<0.0001
	Yes	2,417	116.60[a]	1.81	
	No	2,888	114.79[b]	0.00	
2011					<0.0001
	Yes	2,579	140.30[a]	1.88	
	No	2,056	138.42[b]	0.00	
2012					<0.0001
	Yes	2,059	159.06[a]	1.67	
	No	1,764	157.37[b]	0.00	
2013					<0.0001
	Yes	1,746	161.10[a]	1.02	
	No	2,982	160.08[b]	0.00	
2014					<0.0001
	Yes	1,014	245.50[a]	3.52	
	No	3,230	241.98[b]	0.00	
2015					<0.0001
	Yes	1,014	238.50[a]	4.07	
	No	3,464	234.43[b]	0.00	
2016					<0.0001
	Yes	963	141.66[a]	1.97	
	No	3,612	139.69[b]	0.00	
2017					<0.0001
	Yes	1,314	156.29[a]	2.08	
	No	3,468	154.21[b]	0.00	

[a,b]Means within a year without a common superscript differ (P<0.05).

[c]The seller of calves consigned to sell through a Superior Livestock Auction video sale must complete and sign an affidavit verifying that the calves were enrolled in a U.S. Department of Agriculture approved Source and Age Verification program and had program-compliant ear tags. In each year, a model was developed to quantify the effects of all factors describing lots of beef calves that significantly affected sale price.

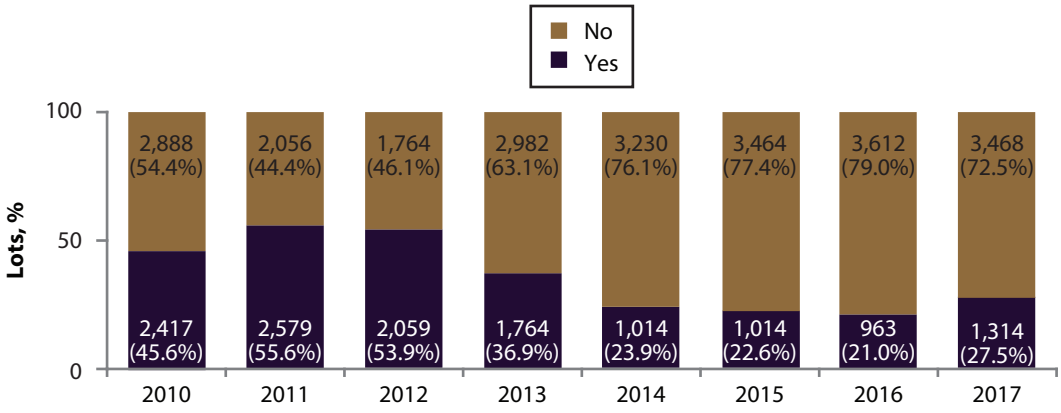

Figure 1. Percent of lots of beef calves qualifying for a source and age verification program sold via video auction from 2010 through 2017.