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E.D. McCabe, M.E. King, K.E. Fike, K.L. Hill,¹ G.M. Rogers,² and K.G. Odde

Introduction

The average cow herd in the United States has shifted to be primarily black hided. In previous years, black hided cattle tended to sell for higher prices and many producers took advantage of this opportunity for a premium on their calves. The black hide color came from an increase in use of Angus genetics, which also allows calves to qualify for various value added or branded beef programs (Wessler, 2011; Eastwood et al., 2017). Producers use specific sire breeds dependent upon their production goals, available resources, and environment. As the cow herd has become primarily black hided, some producers may re-evaluate the sire breeds utilized in their cow herd, potentially to capture hybrid vigor in calves by use of other breeds. The objective of this study was to characterize the potential change in the percentage of lots of beef calves sired by a single breed marketed via video auction from 2010 through July 14, 2017.

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 with a single sire breed offered for sale from 2010 through July 14, 2017. The sire breed of a lot was determined based on lot description information provided by the seller and sales representative. For a beef calf lot to be included in a sire breed category, all calves in a lot must have been sired by a single breed. A minimum of 50 lots of calves were required for a single sire breed to be included in the analysis. The single sire breed categories included in this analysis were Angus, Brangus, Charolais, Hereford, Red Angus, and SimAngus.

The Cochran-Armitage trend test was used to determine the presence of an increasing or decreasing trend in the percentage of lots sired by Angus, Brangus, Charolais, Hereford, Red Angus, and SimAngus bulls over time with a $P \leq 0.05$ considered significant. Lots of beef calves originating from the Northeast region (Connecticut, Delaware, Massachusetts, Maryland, Maine, New Hampshire, New Jersey, New York, Ohio,

¹Merck Animal Health, Kaysville, UT.

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Pennsylvania, Rhode Island, Vermont, and West Virginia) were excluded from the study because of very few lots in this region.

Results and Discussion

There were 29,535 lots of beef calves offered for sale via 178 video auctions through Superior Livestock Auction from 2010 through July 14, 2017 and included in this analysis. The percentage of lots of beef calves sired by Angus bulls decreased ($P < 0.0001$) from 2010 through July 14, 2017 (Table 1). Angus-sired lots, however, comprised the greatest percentage of single-breed sired lots marketed, ranging from 70 to 82% across all years (Table 2). Percentage of lots of beef calves sired by Brangus, Charolais, Red Angus, and SimAngus bulls increased ($P < 0.001$). However, there was no evidence of change ($P = 0.16$) in the percentage of lots of beef calves sired by Hereford bulls.

Implications

Many producers have likely taken advantage of premiums associated with black hided calves but producers marketing calves via video auction may be changing the genetics of their sires to use on a primarily black cow herd.

References

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Table 1. Percentage of lots of beef calves described with a single-sire breed offered for sale via 178 Superior Livestock video auctions from 2010 through 2017¹

Sire breed	Year								P-value
	2010	2011	2012	2013	2014	2015	2016	2017 ¹	
Angus	82.2	79.9	79.1	78.6	77.6	74.2	72.4	69.9	<0.0001
Red Angus	7.6	8.2	8.6	9.1	9.2	9.8	10.8	12.4	<0.0001
Charolais	7.0	6.9	7.2	7.0	7.4	8.5	8.6	8.6	<0.0001
Brangus	1.3	1.8	2.0	1.9	2.0	2.5	2.2	2.2	<0.001
Hereford	1.3	1.4	1.4	1.5	1.8	1.5	1.4	2.0	=0.16
SimAngus	0.7	1.7	1.7	2.0	2.2	3.4	4.6	4.9	<0.0001
Total lots	4,233	3,990	3,771	3,971	3,425	3,720	4,375	2,050	

¹Included data as of July 14, 2017.**Table 2. Number of lots of beef calves described with a single-sire breed offered for sale via 178 Superior Livestock video auctions from 2010 through 2017¹**

Sire breed	Year							
	2010	2011	2012	2013	2014	2015	2016	2017 ¹
Angus	3,480	3,187	2,983	3,121	2,656	2,762	3,167	1,433
Red Angus	320	327	323	362	315	364	474	254
Charolais	294	277	273	276	252	317	375	177
Brangus	55	73	75	75	67	94	97	45
Hereford	54	58	54	58	60	55	61	40
SimAngus	30	68	63	79	75	128	201	101
Total lots	4,233	3,990	3,771	3,971	3,425	3,720	4,375	2,050

¹Included data as of July 14, 2017.