

The Impact of Livestock Auction Location on the Selling Price of Replacement and Market Cows¹

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Story in Brief

Data were collected from 15 Arkansas livestock auctions to determine if livestock auction location affected the selling price of replacement and market cows. Data were collected on 22,745 cows that included cow type (replacement or market) and selling price. Longitudinal and latitudinal coordinates (livestock auction location) were determined for each livestock auction. Selling prices differed across livestock auctions ($P < 0.001$). The longitude and latitude livestock auction locations were not significantly related ($P > 0.10$) to the overall average selling price. There was a significant relationship ($P < 0.01$) between the selling price and degrees north for replacement cows. This implies that the livestock auctions located in the northern section of Arkansas sold replacement cows for a greater selling price than livestock auctions located in the southern section of Arkansas. For replacement cows, the difference between the livestock auction with the greatest selling price and the livestock auctions with the least selling price was \$10.02 per cwt. The selling price difference was not as great with market cows (\$4.27 per cwt.). There was a difference in the selling price of replacement and market cows between livestock auctions. Livestock auctions located in the northern section of Arkansas sold replacement cows for a greater selling price than livestock auctions located in the southern section of Arkansas.

Introduction

The majority of Arkansas cow-calf producers sell replacement and market cows through local livestock auctions. Many cow-calf producers believe that the livestock auction location affects the selling price of replacement and market cows and they are priced inconsistently from one livestock auction to another. Most market reports list the selling prices of replacement and market cows by cow status (replacement or slaughter cows), pregnancy status (open/short-bred or springing) and pairs (small or large calves). Buyers appraise individual characteristics as predictors of quality and animal performance and adjust their bids accordingly. Producers do not understand why some phenotypic characteristics are discounted and others are not.

Therefore, the objective was to determine if livestock auction location affected the selling price of replacement and market cows across weekly Arkansas livestock auctions.

Experimental Procedures

Five USDA-certified livestock market reporters collected data from 15 weekly livestock auctions in Arkansas from March 1, 2001 to May 31, 2001 and September 1, 2001 to November 30, 2001. The data collected included classifying the cows as either replacement or market cows. The livestock auctions were located in Ash Flat, Charlotte, Conway, Fort Smith, Glenwood, Green Forest, Harrison, Hope, Marshall, Morrilton, Ola, Ozark, Pocahontas, Ratcliff and Springdale. During the six reporting months in 2001, a total of 52,292 cows were sold through these livestock auctions, and data were randomly collected (every second to third cow) on 22,745 animals (43.5%). Longitudinal and latitudinal coordinates for each livestock auction were used to determine the relationship between location and selling price using a regression analysis. All selling prices reported are in dollars/cwt.

Results and Discussion

There was a significant difference in the selling price of cows across the weekly livestock auctions ($P < 0.001$; Table 1). For replacement cows, the difference between the livestock auction with the greatest selling price and the livestock auction with the least selling price was \$10.02. The selling price difference was not as great with market cows, \$4.27. A livestock auction by cow type interaction (replacement vs. market cows) existed ($P < 0.0001$). The interaction occurred because generally speaking the livestock auctions with higher selling prices for replacement cows had lower selling prices for market cows and vice versa (Table 1). The longitude and latitude livestock auction locations were not significantly related ($P > 0.10$) to the overall average cow selling price. There was a significant relationship ($P < 0.01$) between the selling price and degrees north for replacement cows. This implies that the livestock auctions located in the northern section of Arkansas sold replacement cows for a greater selling price than livestock auctions located in the southern section of Arkansas.

Implications

The majority of cow-calf producers in Arkansas sell replacement and market cows at local livestock auctions. Selling prices for replacement and market cows differ across Arkansas livestock auctions. The selling price of replacement cows was higher in the northern livestock auctions as compared to the southern livestock auctions.

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Table 1. Selling price of replacement and market cows based on livestock auction location.^a

Replacement cows			Market cows		
Livestock			Livestock		
	n	Selling price ^b		n	Selling price ^b
Auction			Auction		
1	510	\$53.07 ± 0.34 ^c	13	1,023	\$40.89 ± 0.25 ^c
2	1,403	\$52.73 ± 0.21 ^c	9	912	\$40.60 ± 0.28 ^{cd}
3	837	\$49.96 ± 0.27 ^d	4	465	\$40.43 ± 0.91 ^{cde}
4	850	\$49.34 ± 0.36 ^d	14	562	\$39.76 ± 0.33 ^{de}
5	645	\$48.09 ± 0.30 ^e	8	1,418	\$39.64 ± 0.23 ^e
6	336	\$48.08 ± 0.42 ^{ef}	7	1,094	\$39.53 ± 0.24 ^e
7	703	\$47.60 ± 0.29 ^{efg}	11	658	\$39.47 ± 0.34 ^e
8	731	\$47.06 ± 0.29 ^{efg}	12	538	\$39.17 ± 0.35 ^e
9	728	\$46.95 ± 0.29 ^{fgh}	2	2,273	\$38.94 ± 0.17 ^e
10	569	\$46.88 ± 0.32 ^{fgh}	3	1,443	\$38.92 ± 0.21 ^e
11	643	\$46.76 ± 0.31 ^{gh}	5	503	\$38.85 ± 0.34 ^e
12	266	\$46.52 ± 0.47 ^{gh}	6	534	\$38.63 ± 0.36 ^e
13	606	\$45.95 ± 0.32 ^h	15	285	\$38.30 ± 0.49 ^e
14	543	\$43.82 ± 0.33 ⁱ	10	913	\$38.35 ± 0.26 ^e
15	228	\$43.05 ± 0.51 ⁱ	1	526	\$36.62 ± 0.36 ^f

^a Livestock auction by cow type interaction (P < 0.0001).

^b Least-squares mean ± SE (dollars/cwt.).

^{c,d,e,f,g,h,i} Means within columns without a common superscript differ (P < 0.01).