



# Current Report

Cooperative Extension Service • Division of Agricultural Sciences and Natural Resources  
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## Understanding Cattle Price Differences by Location

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### Why Do Cattle Prices Vary by Location?

It is often observed that cattle prices vary by location. Such variation may complicate marketing decisions of a cattle producer who is assessing short run market trends before determining appropriate marketing actions.

Cattle prices at any specific location represent the net effect of supply and demand conditions influencing the local market. Previous research has identified a variety of physical and market factors which influence feeder cattle price (Schroeder et al.). Physical factors, including fill, condition, frame size, muscling, and overall health in addition to weight and sex, are major determinants of feeder cattle prices. Other marketing conditions influencing feeder cattle prices were lot size, lot uniformity, time of day of sale, day of week of sale, and auction location. Similar factors were found to affect cow auction prices (Mintert et al.).

In Oklahoma, different market characteristics may be exhibited in markets, depending on whether local production is predominantly cow/calf, summer stockers, or winter stockers. Moreover, the seasonal production patterns of each of these cattle enterprises will result in varying market characteristics at different times of the year. Given that the nature of cattle production varies with the geographical variation in the state, different supply and demand conditions may give rise to very different market conditions, even between markets separated by no more than 50 miles.

### Improving Cattle Marketing Decisions

The nature of local production often results in local markets "specializing" in certain types and qualities of cattle. Even small auctions, which may not have enough volume to always attract buyers for all types of cattle, may routinely have good demand for certain classes of cattle. Producers who recognize these differences will also recognize different marketing opportunities for different groups of cattle. Depending on the type and quality of cattle and the time of year, a producer can determine which of several potential markets may offer the best marketing opportunity. Obvi-

ously, apparent market advantages at a more distant market must be great enough to offset increased transportation cost and shrink associated with the longer haul. Cattle producers also need to account for differences in direct marketing costs, such as yardage and sales commission fees at alternative markets.

Tables 1-7 present the 1990 average price differences for feeder cattle between various auctions in Oklahoma and the weekly average prices for feeder cattle reported in the USDA's *Livestock, Meat and Wool Market News*. Each table includes monthly and annual averages of weekly price differences as well as standard deviations and maximum and minimum weekly price differences. Auctions included in the tables are Ada, Apache, Clinton, McAlester, Oklahoma National, Tulsa, and Woodward as reported in the *Oklahoma Market Report*. The Oklahoma City weekly average is used as a point of reference because it is widely reported and recognized nationally as a large regional feeder cattle market.

Examination of Tables 1-7 demonstrates price variation and price differences seasonally and by feeder class. Price variations between specific local auctions and the weekly Oklahoma City average may occur for a variety of reasons. Geographic location and the implied transportation differentials between sites are obviously important factors affecting price differences. Price differences between various auctions may also be noted due to the different days of the week on which auction sales are held. Price differences in Tables 1-7 are on the same Thursday through Wednesday format as the *Oklahoma Market Report*, thus Thursday and Friday sales are for the previous week. Auction prices for a particular day of the week may be higher or lower than the Oklahoma City weekly average depending on whether markets are trending up or down. It is apparent from the maximum and minimum weekly differences shown in the tables that substantial variation in price difference may exist any given week.

Other market characteristics may also influence price differences at local auctions. Average lot size and lot uniformity may account for some differences as well as average differences in the type and quality of cattle traded in different locations.

## Using Local Market Prices to Localize Basis

In order to evaluate other marketing alternatives, such as futures hedges and minimum pricing with futures options, cattle producers must be able to localize the futures price with an appropriate basis. For many producers, the local auction price may be a logical point of reference for local cattle prices. The price differences in Tables 1-7 can be used to improve local basis estimates.

OSU Extension Facts 499 and 500 present historical basis estimates for feeder heifers and steers using average weekly Oklahoma City prices as a base. The Oklahoma City weekly average used for basis estimates is the same price used as the base of comparison in Tables 1-7. Cattle producers in other parts of Oklahoma who may use a local auction as the final market for animals forward priced with futures can make appropriate adjustments in their basis estimates using the information in Tables 1-7.

## Summary

Cattle prices between specific locations vary due to differences in local supply and demand characteristics. Cattle producers may improve cattle marketing decisions by knowing and exploiting market characteristics between alternative markets. Increasingly specialized cattle production enterprises must recognize the value of different types and qualities of cattle and market those cattle to their highest value. Cattle producers who recognize and utilize the widest set of marketing alternatives have the best chance of improving the profitability of cattle production.

## References

- Schroeder, Ted, James Mintert, Frank Brazle, and Orlen Grunwald. "Factors Affecting Feeder Cattle Price Differentials." *Western Journal of Agricultural Economics*, 13(1): 71-81.
- Mintert, James, Joanne Blair, Ted Schroeder, and Frank Brazle. "Analysis of Factors Affecting Cow Auction Price Differentials." *Southern Journal of Agricultural Economics* 22(2): 23-30.

**Table 1. 1990 Oklahoma Feeder Cattle Price Differences by Location: Southern Oklahoma Livestock Auction, Ada, Wednesday Sales Minus USDA Oklahoma City Average<sup>1</sup>**

	STEERS				HEIFERS	
	4-500LB	5-600LB	6-700LB	7-800LB	5-600LB	6-700LB
	\$/CWT				\$/CWT	
JAN	-1.81	-1.75	-2.11	-0.08	-2.81	-2.75
FEB	-4.00	-0.95	0.37	-0.54	0.69	-0.09
MAR	0.86	-2.53	-1.46	-0.44	0.04	1.83
APR	-2.97	0.01	-1.13	-2.05	-0.41	-0.84
MAY	-3.44	-0.84	-3.92	-2.46	-0.48	-2.20
JUN	-1.19	-2.34	-2.02	-1.97	0.16	-2.86
JUL	-2.63	-2.88	-2.04	-2.41	-0.19	0.35
AUG	-2.32	-1.52	-2.70	-1.28	0.63	-1.09
SEP	-0.53	-0.64	-2.10	-8.19	0.14	-2.44
OCT	-1.34	-2.53	-3.41	-4.39	0.31	-1.54
NOV	-2.63	-2.13	-2.83	-5.19	-3.40	-3.29
DEC	-2.42	-1.34	-4.42	-7.11	-0.98	-3.71
ANNUAL AVG <sup>2</sup>	-2.04	-1.57	-2.32	-2.73	-0.38	-1.48
STD DEV <sup>2</sup>	2.05	1.93	1.89	2.55	1.85	2.06
MAX <sup>2</sup>	4.50	2.94	1.06	0.25	3.44	2.44
MIN <sup>2</sup>	-5.25	-6.25	-9.00	-9.06	-5.25	-6.63

<sup>1</sup> Auction prices reported in the *Oklahoma Market Report*, USDA weekly average price reported in *Livestock, Meat & Wool Market News*. Price differences between locations may not reflect quality differences of animals in reported weight ranges.

<sup>2</sup> Annual average, standard deviation, maximum and minimum of weekly price differences.

**Table 2. 1990 Oklahoma Feeder Cattle Price Differences by Location: Apache Livestock Auction, Previous Friday Sales Minus USDA Oklahoma City Average<sup>1</sup>**

	STEERS				HEIFERS	
	4-500LB	5-600LB	6-700LB	7-800LB	5-600LB	6-700LB
	\$/CWT				\$/CWT	
JAN	-5.88	-3.24	-2.34	-1.49	-2.70	-1.44
FEB	-5.13	-2.55	-1.25	-0.06	-1.60	-0.25
MAR	-3.70	-4.19	-3.66	-1.39	-2.27	-1.19
APR	-6.47	-2.14	-2.88	-1.11	-3.35	-1.84
MAY	-4.30	-4.95	-4.45	-2.39	-2.55	-2.55
JUN	-1.39	-4.14	-4.92	-2.92	-2.10	-3.27
JUL	-6.29	-5.79	-4.38	-3.86	-3.19	-2.90
AUG	-3.72	-6.12	-5.11	-2.92	-4.07	-2.91
SEP	-6.04	-4.06	-5.84	-3.75	-3.56	-4.02
OCT	-3.44	-4.43	-5.56	-8.14	-3.74	-4.81
NOV	-7.38	-8.28	-6.88	-6.63	-6.84	-5.63
DEC	-5.00	-1.67	-3.59	-4.52	-2.81	-4.29
ANNUAL AVG <sup>2</sup>	-4.67	-4.24	-4.17	-3.17	-3.10	-2.79
STD DEV <sup>2</sup>	3.08	2.52	2.04	2.58	1.88	1.98
MAX <sup>2</sup>	1.00	1.19	-0.19	1.38	0.50	1.12
MIN <sup>2</sup>	-12.50	-9.63	-7.50	-10.50	-7.88	-6.69

<sup>1</sup> Auction prices reported in the *Oklahoma Market Report*, USDA weekly average price reported in *Livestock, Meat & Wool Market News*. Price differences between locations may not reflect quality differences of animals in reported weight ranges.

<sup>2</sup> Annual average, standard deviation, maximum and minimum of weekly price differences.

**Table 3. 1990 Oklahoma Feeder Cattle Price Differences by Location: clinton Livestock Auction, Previous Thursday Sales Minus USDA Oklahoma City Average<sup>1</sup>**

	STEERS				HEIFERS	
	4-500LB	5-600LB	6-700LB	7-800LB	5-600LB	6-700LB
	\$/CWT				\$/CWT	
JAN	-7.54	-3.50	-2.64	-1.47	-4.06	-1.09
FEB	-8.06	-4.39	-0.84	-0.07	-2.38	-0.53
MAR	-5.64	-6.75	-3.94	-1.86	-3.71	-2.17
APR	-5.09	-4.49	-4.78	-2.60	-1.94	-2.16
MAY	-5.67	-6.20	-6.64	-3.80	-4.13	-3.28
JUN	-2.64	-8.61	-5.67	-3.83	-3.92	-3.07
JUL	-3.25	-6.19	-2.84	-2.19	-3.47	-4.09
AUG	-3.02	-6.97	-3.90	-0.69	-4.22	-3.49
SEP	-4.41	-4.14	-4.28	-2.94	-2.21	-2.83
OCT	-1.44	-4.53	-6.59	-7.09	-2.29	-5.31
NOV	-7.50	-9.41	-8.00	-5.38	-3.78	-6.63
DEC	-0.33	0.83	-2.54	-6.56	-4.10	-4.92
ANNUAL AVG <sup>2</sup>	-4.40	-5.23	-4.38	-3.11	-3.31	-3.13
STD DEV <sup>2</sup>	3.85	3.42	2.42	2.83	2.03	2.63
MAX <sup>2</sup>	3.25	3.50	-0.38	1.81	0.87	1.06
MIN <sup>2</sup>	-13.50	-10.44	-10.13	-11.38	-7.88	-14.19

<sup>1</sup> Auction prices reported in the *Oklahoma Market Report*, USDA weekly average price reported in *Livestock, Meat & Wool Market News*. Price differences between locations may not reflect quality differences of animals in reported weight ranges.

<sup>2</sup> Annual average, standard deviation, maximum and minimum of weekly price differences.

**Table 4. 1990 Oklahoma Feeder Cattle Price Differences by Location: McAlester Livestock Auction, Monday Sales Minus USDA Oklahoma City Average<sup>1</sup>**

	STEERS				HEIFERS	
	4-500LB	5-600LB	6-700LB	7-800LB	5-600LB	6-700LB
	\$/CWT				\$/CWT	
JAN	-3.13	-1.84	-4.52	-2.94	-3.75	-4.94
FEB	-4.63	0.52	-1.41		2.87	-1.63
MAR	-3.20	-0.03	-2.69		-0.77	0.22
APR	-6.34	-0.49	-3.00	-1.00	-1.75	-2.16
MAY	-7.54	-4.74	-6.01	-3.19	-3.08	-3.15
JUN	-5.86	-3.42	-5.60	-2.06	-1.75	-2.73
JUL	-6.13	-4.04	-5.63	-6.56	-3.36	-1.15
AUG	-8.97	-4.97	-7.50	-7.50	-3.30	-4.19
SEP	-5.71	-2.81	-8.46		-4.48	-5.09
OCT	-4.84	-1.83	-6.44	-5.52	-1.99	-3.95
NOV	-7.13	-4.79	-6.17	-8.75	-5.10	-4.63
DEC	-6.83	-1.92	-6.09	-7.13	-3.31	-5.50
ANNUAL AVG <sup>2</sup>	-5.89	-2.52	-5.26	-5.02	-2.38	-3.32
STD DEV <sup>2</sup>	2.43	2.41	2.74	2.37	2.40	2.07
MAX <sup>2</sup>	-0.06	3.44	0.06	-1.00	4.62	2.56
MIN <sup>2</sup>	-13.13	-6.50	-9.50	-8.75	-7.00	-7.25

<sup>1</sup> Auction prices reported in the *Oklahoma Market Report*, USDA weekly average price reported in *Livestock, Meat & Wool Market News*. Price differences between locations may not reflect quality differences of animals in reported weight ranges.

<sup>2</sup> Annual average, standard deviation, maximum and minimum of weekly price differences.

**Table 5. 1990 Oklahoma Feeder Cattle Price Differences by Location: Oklahoma National Livestock Auction, Monday Sales Minus USDA Oklahoma City Average<sup>1</sup>**

	STEERS				HEIFERS	
	4-500LB	5-600LB	6-700LB	7-800LB	5-600LB	6-700LB
	\$/CWT				\$/CWT	
JAN	0.37	-0.16	-0.14	-0.06	0.06	-0.38
FEB	-1.31	-0.30	0.06	0.17	-0.03	0.22
MAR	-0.55	-0.59	-1.00	0.17	-0.49	-0.11
APR	-0.84	-0.55	-0.10	0.17	-1.06	-0.25
MAY	-0.96	-0.39	-1.29	-0.43	0.26	-0.20
JUN	-0.99	-0.52	0.23	-0.27	0.06	0.01
JUL	-0.79	0.67	-0.46	-0.15	-0.31	0.15
AUG	-0.59	-1.22	-0.20	-0.06	-0.10	-0.34
SEP	-1.16	-0.42	-0.25	0.50	-0.52	0.23
OCT	-0.36	-1.60	-0.74	-0.74	-0.44	-0.71
NOV	-1.63	-2.17	-0.58	-0.15	-0.52	-0.17
DEC	-1.68	-0.17	0.08	-0.36	0.10	-1.83
ANNUAL AVG <sup>2</sup>	-0.83	-0.65	-0.39	-0.11	-0.24	-0.27
STD DEV <sup>2</sup>	1.91	1.36	0.81	0.59	1.00	0.89
MAX <sup>2</sup>	3.62	2.00	1.06	1.56	2.00	0.88
MIN <sup>2</sup>	-4.80	-5.25	-2.25	-1.38	-4.56	-5.00

<sup>1</sup> Auction prices reported in the *Oklahoma Market Report*, USDA weekly average price reported in *Livestock, Meat & Wool Market News*. Price differences between locations may not reflect quality differences of animals in reported weight ranges.

<sup>2</sup> Annual average, standard deviation, maximum and minimum of weekly price differences.

**Table 6. 1990 Oklahoma Feeder Cattle Price Differences by Location: Tulsa Livestock Auction, Monday Sales Minus USDA Oklahoma City Average<sup>1</sup>**

	STEERS				HEIFERS	
	4-500LB	5-600LB	6-700LB	7-800LB	5-600LB	6-700LB
	\$/CWT				\$/CWT	
JAN	-3.38	-2.91	-2.86	-3.03	-2.88	-2.00
FEB	-3.75	-2.36	-0.94	-0.63	-0.66	
MAR	-1.89	0.09	0.28		-0.77	0.16
APR	-4.59	-1.80	0.31	-0.25	-0.25	-0.83
MAY	-1.86	-0.61	-1.03		-1.16	-4.19
JUN	-0.69	-2.09	-2.02		0.04	-1.50
JUL	-4.71	-5.21	-3.42	-5.24	-3.48	-2.38
AUG	-4.77	-3.39	-2.21	-1.90	-2.57	-2.24
SEP	-1.97	-4.86	-2.05	-2.91	-2.55	-0.88
OCT	-3.04	-4.65	-4.58	-3.75	-1.71	-1.13
NOV	-6.21	-6.96	-4.21	-5.53	-4.98	
DEC	-4.15	-3.34	-2.75		-2.06	-4.38
ANNUAL AVG <sup>2</sup>	-3.39	-3.10	-2.20	-2.97	-1.87	-1.84
STD DEV <sup>2</sup>	2.29	2.61	2.13	1.74	1.94	1.53
MAX <sup>2</sup>	1.75	2.87	1.62	-0.25	2.44	0.94
MIN <sup>2</sup>	-8.63	-8.88	-8.25	-7.00	-6.19	-7.00

<sup>1</sup> Auction prices reported in the *Oklahoma Market Report*, USDA weekly average price reported in *Livestock, Meat & Wool Market News*. Price differences between locations may not reflect quality differences of animals in reported weight ranges.

<sup>2</sup> Annual average, standard deviation, maximum and minimum of weekly price differences.

**Table 7. 1990 Oklahoma Feeder Cattle Price Differences by Location: Woodward Livestock Auction, Previous Friday Sales Minus USDA Oklahoma City Average<sup>1</sup>**

	STEERS				HEIFERS	
	4-500LB	5-600LB	6-700LB	7-800LB	5-600LB	6-700LB
	\$/CWT				\$/CWT	
JAN	-6.25	-3.25	-3.86	-1.33	-0.84	0.54
FEB	-4.42	-5.21	-1.94	-1.02	-1.36	0.17
MAR	-2.02	-3.34	-3.41	-0.27	-2.14	-0.42
APR	-5.84	-4.56	-4.06	-2.11	-2.38	-2.47
MAY	-5.79	-4.34	-6.84	-3.75	-2.15	-2.45
JUN	-4.89	-4.58	-6.08	-3.89	-0.97	-1.95
JUL	-8.46	-8.38	-3.21	-2.56	-4.69	-2.65
AUG	-4.91	-5.30	-5.49	-0.86	-2.47	-2.41
SEP	-8.22	-2.27	-3.10	-2.03	-1.73	-0.61
OCT	-6.49	-4.08	-2.69	-3.84	0.29	-1.01
NOV	-9.25	-7.35	-5.00	-5.38	-2.59	-2.56
DEC	-2.17	-2.17	-2.92	-3.86	0.02	-2.21
ANNUAL AVG <sup>2</sup>	-5.62	-4.41	-4.14	-2.59	-1.70	-1.51
STD DEV <sup>2</sup>	3.06	2.36	2.04	1.84	1.77	1.49
MAX <sup>2</sup>	1.25	0.19	-0.25	2.06	2.44	1.87
MIN <sup>2</sup>	-13.13	-9.13	-10.00	-6.56	-6.88	-3.75

<sup>1</sup> Auction prices reported in the *Oklahoma Market Report*, USDA weekly average price reported in *Livestock, Meat & Wool Market News*. Price differences between locations may not reflect quality differences of animals in reported weight ranges.

<sup>2</sup> Annual average, standard deviation, maximum and minimum of weekly price differences.

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