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CATTLE AND HOG INDUSTRIES

Ted C. Schroeder, James Mintert,
and David Darling

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Department of Agricultural Economics,
Kansas State University

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**Contribution No. 90-492-D from the Kansas Agricultural Experiment Station,
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Impacts of Proposed Inventory Tax on Kansas

Cattle and Hog Industries

March 26, 1990

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Executive Summary

1. Imposition of an inventory tax would result in a reduction in output from the Kansas cattle feeding industry. A reduction in the size this industry would lead to a much larger decline in the value of the state's total output and income. For example, a 1% decline in the value of Kansas fed cattle output (based on 1989 prices and marketings) would result in a decline of up to \$98 million decline in total output in the Kansas economy in the short run.
2. Nearly three times as many cattle (4.2 million head) were marketed in Kansas in 1989 as were calved in the state (1.5 million head). This large importation of cattle for finishing in Kansas would decline under the proposed inventory tax, as the major competing cattle feeding states of Texas, Nebraska, and Colorado gain market share.
3. Total inventory tax liability for the cattle feeding sector would likely exceed \$17.8 million (nearly \$65,000 per feed lot with 1,000 or more head capacity) under the \$100,000 exemption, and \$16.9 million (nearly \$62,000 per feed lot) under the \$250,000 exemption.
4. Breeding sow herds of fewer than 500 head would likely not be subject to the inventory tax under the \$100,000 exemption. Sow herds of less than 1,000 head would generally not be subject to the inventory tax under the \$250,000 exemption.
5. Impacts of the proposed inventory tax on the cow-calf sector would be relatively small. Total liability for this sector would be approximately \$1.2 million. However, the average inventory tax per operation subject to the tax would be roughly \$370. Cow-calf operations having fewer than 150 cows would likely not be subject to the tax.

Introduction

Two state inventory tax bills were recently proposed in the Kansas legislature as a means of increasing Kansas tax revenues. This report investigates the possible impacts the proposed taxes would have on the beef and swine industries in Kansas. The discussion is organized as follows. First, a brief overview of the proposed tax bills is presented to highlight the assumptions used in the ensuing analysis. The next two sections examine the likely impacts of the proposed tax bills on the Kansas swine and cattle industries, respectively. Following that, the expected impacts of the tax on the Kansas economy are summarized.

Overview of Proposed Tax Bills

Two state tax bills proposed in the 1990 session of the Kansas House of Representatives are examined in this report. The bills are Kansas House Bill No. 2632 (HB2632), proposed by the Committee on Taxation, and Kansas House Bill No. 2670 (HB2670), proposed by Representatives Vancrum, Francisco, Graeber, Hoy, Lane, D. Miller, Patrick, Sawyer, Snowbarger, and Spaniol. Both bills impose a 2% inventory value tax on Kansas businesses, including livestock producers. For livestock producers, the inventory tax under both bills applies only to animals of age one year or older and includes cattle, swine, sheep, and horses. For tax purposes, the value of personal property held by livestock producers or feed lot operators is to be determined by the monthly average value of inventory on hand during the previous year.

The primary difference between the two bills is that HB2632 exempts the first \$100,000 of average monthly inventory of livestock from the 2% tax, whereas HB2670 allows for a \$250,000 exemption. Both bills imply that feed lot operators would be subject to the tax, regardless of who owns the cattle

in the feed yard. The bills are unclear regarding whether livestock being custom fed would be subject to double taxation of both the owner and the custom feeder. Thus, in the analysis conducted here, we assume that feedlot operators would pay the tax and that individual cattle owners would not be required to pay a separate inventory tax on cattle that are being custom fed in a feed lot. Given that commercial feed lots in Kansas often custom feed in excess of 70% of the cattle in their lots (Schroeder and Blair), changing this assumption could result in a substantial difference in tax liabilities.

Implications for the Kansas Swine Industry

The Kansas swine industry would be influenced by the proposed inventory tax. Under the provisions of the tax, only the swine breeding herd would be subject to the tax, because market hogs are usually not kept beyond 6 months of age. Table 1 provides estimates of the minimum sow-herd size that would be subject to the tax under the two proposals for various average sow weights and hog prices. As the table illustrates, only relatively large hog operations would be subject to the tax. For example, under the \$100,000 exemption proposal, even with sow values near \$50/cwt, generally any herd of fewer than 500 sows would not incur a sizeable inventory tax liability. Under the \$250,000 exemption, only breeding herds exceeding 1,000 head would likely be subject to the tax.

Table 2 provides an indication of the size structure of the Kansas hog industry. Several of the operations with 1,000 head and above capacity would likely be affected by the inventory tax. Probably less than 10% of the hog operations but possibly more than 50% of the breeding herd in Kansas would be subject to the tax. However, it is difficult, given the manner in which these data are reported, to specifically estimate the expected magnitude of the tax

liability to the Kansas swine sector.

Table 1. Minimum Estimated Sow Herd Size above Which Inventory Tax Would be Applicable under Various Sow Values.

Inventory Value Exemption	Average Sow Weight (lbs)	Average Sow Price (\$/cwt)						
		32	36	40	44	48	52	56
		----- (head) -----						
\$100,000	350	893	794	714	649	595	549	510
	375	833	741	667	606	556	513	476
	400	781	694	625	568	521	481	446
	425	735	654	588	535	490	452	420
	450	694	617	556	505	463	427	397
	500	625	556	500	455	417	385	357
\$250,000	350	2,232	1,984	1,786	1,623	1,488	1,374	1,276
	375	2,083	1,852	1,667	1,515	1,389	1,282	1,190
	400	1,953	1,736	1,563	1,420	1,302	1,202	1,116
	425	1,838	1,634	1,471	1,337	1,225	1,131	1,050
	450	1,736	1,543	1,389	1,263	1,157	1,068	992
	500	1,563	1,389	1,250	1,136	1,042	962	893

Table 2. Number of Hog Operations and Hog Inventory in Kansas by Operation Size, 1988-89.

Operations Having	Number of Operations		Hog Inventory (1,000 head)	
	1988	1989	1988	1989
1-99 head	3,471	3,937	135	122
100-499 head	2,503	2,298	558	499
500-999 head	338	354	233	218
1,000+ head	188	211	575	612
Total	6,500	6,800	1,500	1,450

Source: Kansas Ag. Statistics, Hogs and Pigs, various issues.

Implications for the Kansas Beef Industry

The Kansas beef industry is composed of three primary groups of producers: cow-calf producers, backgrounders, and feed lots. Under the proposed tax bills, backgrounders, who generally purchase cattle at roughly 6 months of age and grow them through 9 to 12 months of age, likely would not be directly affected by the tax (assuming they do not retain ownership of cattle through finishing). Backgrounders would generally not have substantial inventories of cattle each month that are at least 1 year old. Cow-calf producers and feed lots, on the other hand, would be subject to the tax on much of their inventory (depending on the exemption), because the bulk of their inventories consists of animals older than 1 year.

Impact on Cow-Calf Producers

Given the exemptions that are proposed, not all producers would necessarily be subject to the tax. Table 3 shows the minimum estimated beef cow herd size that would be subject to the inventory tax. Producers would be subject to the tax on inventories above those listed, because inventories below those levels would be exempt. Using 1989 average cull cow prices of approximately \$52/cwt (which likely understates the value of breeding herd animals), table 3 shows that cow-calf producers having a cow herd of greater than 166-head would be subject to the tax on those cows in excess of 166 head, under the \$100,000 exemption. The maximum herd size that could avoid the tax under the \$250,000 exemption, assuming a \$52/cwt cow price, would be 416 head.

Table 3. Minimum Estimated Beef Cow Herd Size above Which Inventory Tax Would Be Applicable under Various Cow Values.

Inventory Value Exemption	Average Cow Weight (lbs)	Average Cow Price (\$/cwt)						
		40	44	48	52	56	60	64
----- (head excluding replacement heifers) -----								
\$100,000	970	216	197	180	166	154	144	135
\$250,000	970	541	491	450	416	386	360	338

*Assumes no retention of calves beyond yearling age with the exception of replacement heifers. Assumes 16% of cow herd is replacement yearling heifers valued at 1.2 times the average cow value.

Table 4 illustrates the size distribution of Kansas cow-calf operations from 1986 through 1988. These size distribution data can be used to reach a tentative conclusion regarding the number of Kansas beef cow producers that would be affected by the inventory tax. Because cow-calf producers with inventories of fewer than 100 cows, who do not retain ownership of their calves through finishing, are not expected to be impacted by the tax, producers in the 1-49 head and 50-99 head categories would not feel any direct effect from the imposition of the tax. A substantial number of cow-calf producers in the 100 head and over category would be directly affected by the bill, allowing for a \$100,000 inventory exemption. The average cow herd inventory of the 3,201 cow-calf producers in the 100 head and larger category was 199 head in 1988, well above the 166 head maximum that would be exempt from the tax in 1989 (table 3). Given that average cull cow values in 1989 were around \$498/head and replacement heifer values were roughly \$590/head, a cow-calf operator with a 200-head cow herd and 32 (16% of herd) replacement yearling heifers on hand would incur an inventory tax of approximately \$370 $((\$498/\text{head} \times 200 \text{ head} + \$590/\text{head} \times 32 \text{ head}) - \$100,000) \times 2\%$ under the

\$100,000 exemption. Using the average Kansas cow-herd size of 200 head for the 3,201 producers in the 100 head and over size category, the total tax liability of the cow-calf sector would be roughly \$1.2 million (3,201 producers X \$370/producer) under the \$100,000 exemption. Total tax revenues generated from the cow-calf sector under the \$250,000 exemption would decline significantly from that level.

Table 4. Number of Beef Cow Operations and Inventory by Size Group in Kansas, 1986-89.

Year	Operation Size			Total
	1-49 head	50-99 head	100+ head	
<u>1986</u>				
Inventory (1,000 head)	464.1	337.6	653.3	1,455
Operations	24,684	5,202	4,114	34,000
<u>1987</u>				
Inventory (1,000 head)	460.2	413.5	587.3	1,461
Operations	23,298	6,204	3,498	33,000
<u>1988</u>				
Inventory (1,000 head)	448.6	376.8	640.6	1,466
Operations	24,189	5,610	3,201	33,000
<u>1989</u>				
Inventory (1,000 head)	NA*	NA	NA	NA
Operations				

*Not available.

Source: USDA, Cattle, various issues.

Implications for Cattle Feeders and Feed Lots

Feed lot operators and cattle finishers would likely bear the brunt of the proposed inventory tax. Table 5 shows the minimum size of feed lot that would be subject to the inventory tax, assuming that the inventory weight distribution of the cattle in the feed lot matches the average quarterly inventory of cattle on feed in Kansas during 1989 (table 6) valued at 1989 annual average prices (table 5). As can be seen in table 5, feed lots with average monthly inventories exceeding 139 head with 1989 prices would be subject to the tax under the \$100,000 exemption. Feed lots having more than 348 head in average monthly inventory would be subject to the tax under the \$250,000 exemption.

Table 5. Minimum Estimated Cattle on Feed Inventory above Which Inventory Tax Would Be Applicable under Average 1989 Kansas Inventories and Prices.

Year	Annual Average Prices, Dodge City						Yearling and Older	
	Weight Range						Minimum Cattle Inventory	
	7/800 lbs		10/1,100 lbs		11/1,300 lbs		\$100,000	\$250,000
	steers	heifers	steers	heifers	steers	heifers	Exemption	Exemption
	-----(\$/cwt)-----						----- (head) -----	
1987	73.69	68.65	66.81 ^a	65.55 ^a	66.83	65.55 ^a	157 ^b	392
1988	81.20	75.54	71.58	70.66 ^c	71.57	70.66 ^c	144	361
1989	82.86	78.75	74.49	74.14 ^c	74.44	74.14 ^c	139	348

^aPrice for 9/1,100 lbs.

^bAssumes average monthly inventory of yearling cattle or older (700 lbs and greater) distributed according to 1989 inventories of cattle on feed (table 4). This implies that of the yearling and older cattle on feed, 26.7% were 7/899 lb steers; 30.8% were 9/1,099 lb steers; 11.1% were steers weighing 1,100 lbs and over; 19.1% were 7/899 lb heifers; 11.1% were 9/1,099 lb heifers; and 1.1% were heifers weighing 1,100 lbs and over.

^cPrice for 10/1,200 lbs.

Table 6. Quarterly Cattle on Feed in Kansas by Weight Category, 1989.

Weight Range	Date								Quarterly	
	January 1		April 1		July 1		October 1		Average	
	Steers	Heifers	Steers	Heifers	Steers	Heifers	Steers	Heifers	Steers	Heifers
	----- (1,000 head) -----									
Under 500 lbs	10	10	5	4	7	10	9	9	7.8	8.3
500-699 lbs	105	134	114	120	71	87	85	102	93.8	110.8
700-899 lbs	280	198	427	317	306	268	369	205	345.5	247.0
900-1,099 lbs	357	144	446	143	451	159	340	130	398.5	144.0
1,100 lbs and over	212	10	86	8	131	20	142	19	142.8	14.3

Source: USDA, Cattle on Feed, January 1990.

Table 7 shows the size distribution of feed lots in Kansas from 1985 through 1989. Assuming an average complete feed lot inventory turnover of 2.75 times per year (cattle averaging approximately 130 days on feed), any feed lot or cattle feeder marketing in excess of 382 head per year (139 head inventory (table 5) X 2.75 turnover) would be subject to the tax with the \$100,000 exemption. Similarly, any producer marketing more than 957 head per year under the \$250,000 exemption would be subject to the tax. Table 7 clearly indicates that a large portion of the feed lots in Kansas would be subject to a significant inventory tax. At the very least, all feed lots in the 1,000 head and greater feed lot capacity would be subject to the tax under either exemption level. At 1989 prices, marketings, and average inventories, the total tax liability of the feed lot sector would likely exceed \$17.8 million,¹ an average of nearly \$65,000 per feedlot under the \$100,000

¹ Calculated as follows: Average inventory of yearling and older cattle in Kansas in 1989 was 1,292,100 head (table 6) of which 1,275,000 head (98.7%) is assumed to be in lots of 1,000 head or larger capacity based on 1989 marketings of these lots relative to smaller lots (table 7). The weighted average value (weighted by weight and sex breakdowns) of yearling and older cattle on feed inventory in 1989 was \$718/head (computed from tables 5 and 6). In 1989 a total of 274 Kansas feed lots had 1,000 head or larger capacity (table 7). Thus, average tax per lot would be \$64,821 = (((1,275,000 total head X \$718/head) / 274 lots) - \$100,000 exemption) X 2% tax. This would result in a total tax for the 274 lots of \$17,760,954 = (274 lots X \$64,821/lot). Calculation of the total tax liability under the \$250,000 exemption is identical except the \$100,000 exemption in the above equation is replaced with the \$250,000 exemption.

exemption. Estimated tax revenue under the \$250,000 exemption would likely total \$16.9 million. An addendum to this analysis contained in Appendix A considers modifications of these results under imposition of a property tax.

Table 7. Number of Feed Lots and Cattle Marketed in Kansas by Lot Size, 1985-89.

Year	Feed Lot Capacity (head)						
	<1,000	1,000-1,999	2,000-3,999	4,000-7,999	8,000-15,999	16,000-31,999	32,000>
<u>1985</u>							
Marketings (1,000 head)	103	66	182	383	983	1,065	1,083
Lots	2,000	44	37	33	48	28	10
<u>1986</u>							
Marketings (1,000 head)	70	81	194	365	1,010	1,050	1,425
Lots	1,636	82	58	34	48	27	15
<u>1987</u>							
Marketings (1,000 head)	70	71	190	267	1,014	1,065	1,353
Lots	1,627	92	57	34	49	26	15
<u>1988</u>							
Marketings (1,000 head)	60	58	173	260	1,046	1,179	1,379
Lots	1,615	88	62	40	54	27	14
<u>1989</u>							
Marketings (1,000 head)	55	53	159	238	1,068	1,293	1,379
Lots	1,626	98	51	34	49	29	13

Source: USDA, Cattle on Feed, various issues.

Impacts on Cattle Slaughtering

Cattle slaughterers could also be significantly affected by the inventory tax. In southwestern Kansas where the feed lot industry is concentrated, there are five large beef packing plants with combined daily slaughter capacity in excess of 20,000 head. If they are subject to the inventory tax, it is not clear whether their inventories would be valued on a live weight basis or as fabricated beef cuts. If the packers are subject to the inventory tax, the tax liability would be significant. As an example,

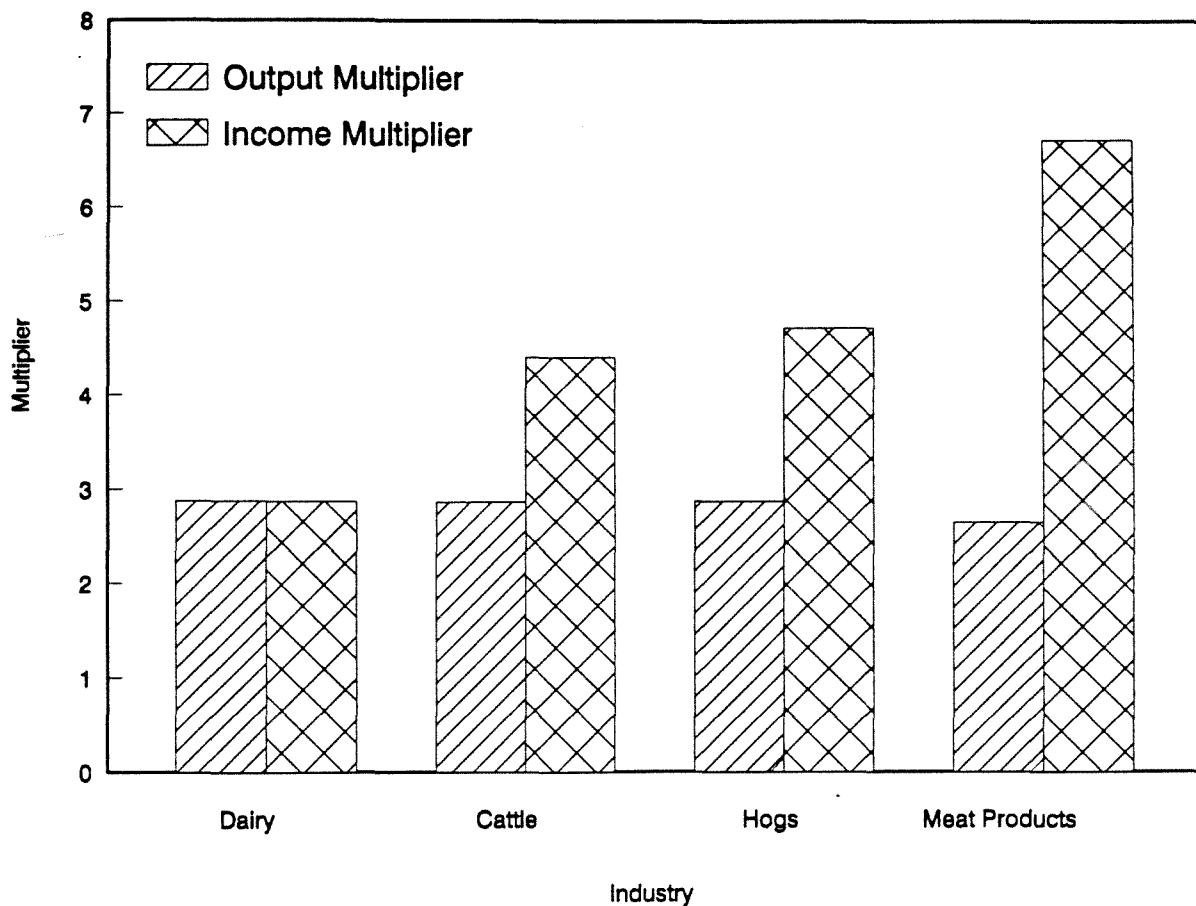
assume that the 1989 weighted-average 1,100 lb slaughter (65%) steer and (35%) heifer value of \$818/head was used to estimate inventory values and that an average of 4,000 head per day was slaughtered in a given plant. Also, assume that on average, it takes two days for each animal to be processed, stored, and packaged, prior to leaving the plant. Under these assumptions, the packer would have an average annual inventory tax of \$126,880 with the \$100,000 exemption.

The Kansas Economy and The Livestock Sector

The livestock industry is integrated into the Kansas economy. Any changes in production in the livestock sector have strong ripple effects on the entire Kansas economy. This "ripple effect" is referred to as a multiplier. Output multipliers measure firm to firm relationships. They were first constructed to examine the impact of demand driven expansions of one industry on the total economy of a region or state. For example, the expansion of the beef processing industry in southwest Kansas during the 1980's created additional demand for labor, paper boxes, transportation services, fuel, and other inputs used in the production of boxed beef.

The output multiplier measures the total impact on the state's economy resulting from one dollar of additional output from an industry. In the meat processing industry, the total impact of one dollar of expansion is \$2.65 (figure 1). This multiplier can be separated into two components; the primary effect and the secondary effect. The primary effect is the one dollar of additional output in the meat processing industry. The secondary effect of \$1.65 ($\$2.65 - \1), measures the impact on output from the businesses that support the meat processing industry.

Output multipliers for other sectors of the Kansas livestock industry are also reported in figure 1. The output multiplier for cattle production is \$2.87. For every dollar of cattle production in Kansas, an additional \$1.87



**Figure 1. Kansas Economy Livestock Industry
Output and Income Multipliers**

Source: Emerson, J., The Kansas Input-Output Model, A Study of Economic Linkages. Manhattan: 1989, Bulletin 655.

of output is produced by the firms supplying inputs to cattle producers. For hog production, the output multiplier is \$2.87, or \$1.87 of secondary effect for every dollar of primary effect.

Income multipliers measure household to household relationships. When an industry expands, it hires more people and pays more wages which, when spent by these households, generate more income for other households in the state. In the meat processing industry, the total income multiplier is \$6.75. This total is the sum of the primary effect on households (the new income earned) and the secondary effect on other households in the state.

If an industry contracts, these multipliers can be used to estimate the impact on the Kansas economy of small reductions in output. However, they do not reflect the impact of reductions as accurately (being an upper limit) as expansions, because labor and other resources will eventually be employed elsewhere in the state. In addition, these multipliers represent an upper limit estimate of the impacts of a change in economic activity.

Clearly any reduction in the size of the Kansas cattle and meat processing industries would have a negative effect on the Kansas economy. It is important to note that the impact on the total Kansas economy would be much larger than the impact on the cattle production and meat processing industries alone. For example, if the value of fed cattle output declined by only \$34 million (roughly 1% of the 1989 value of fed cattle marketings in Kansas), total output in the Kansas economy would be expected to decline by as much as \$98 million in the short run. A reduction in the size of the fed cattle industry would also induce a relatively large decline in Kansas' total household income.

Implications of an Inventory Tax on the Kansas Beef Industry

The tax liability on the Kansas cattle industry, assuming 1989 production levels, would be significant. However, perhaps the most

substantial effect of the tax would be its long-term impact on the size of the Kansas cattle industry. A large portion of the cattle finished in Kansas are not calved in the state. As shown in table 8, almost three times as many finished cattle are marketed in Kansas as are born the state. Thus, a large percentage of feeder cattle are imported into Kansas from other states for finishing. Would Kansas continue to be as large a net importer of feeder cattle for finishing to slaughter weight following imposition of the tax?

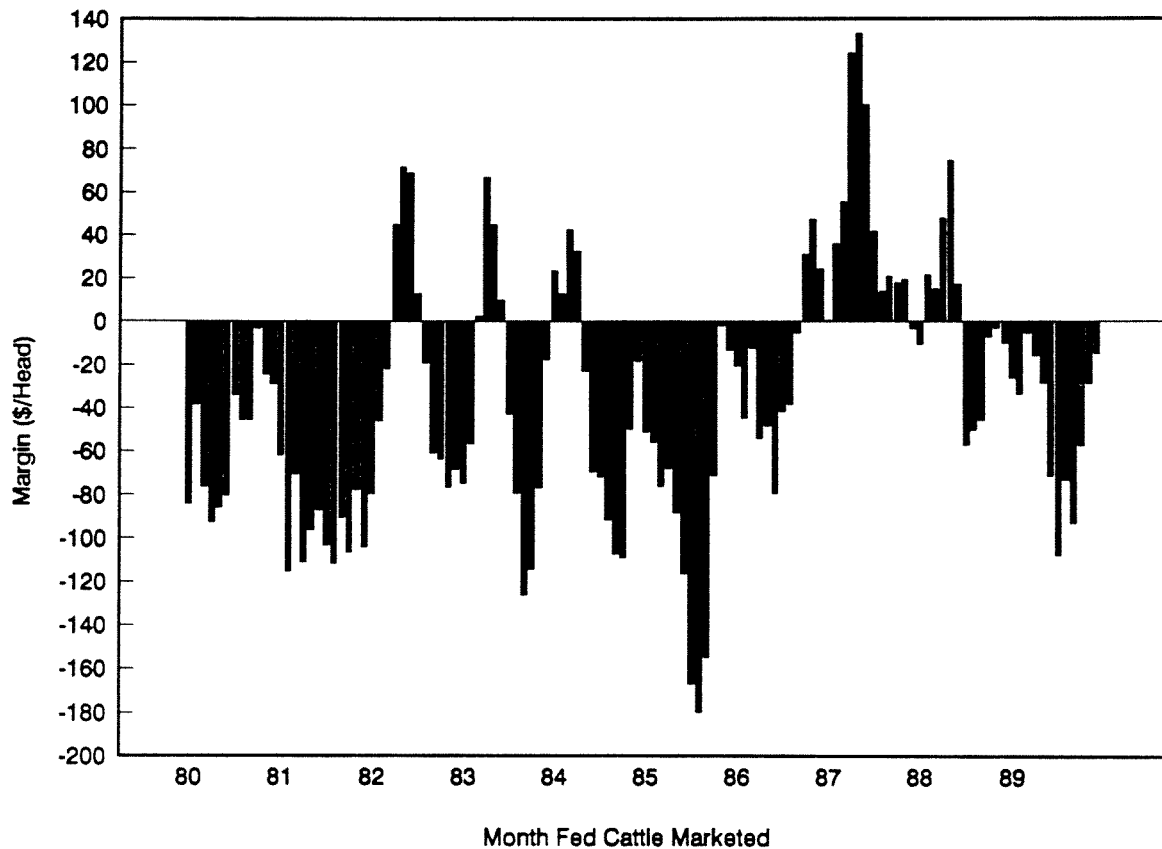
Table 8. Calf Crop, Fed Cattle Marketings, and Commercial Cattle Slaughter, in Kansas, 1986-89.

Year	Calf Crop (1,000 head)	Fed Cattle Marketings (1,000 head)	Commercial Cattle Slaughter (1,000 head)
1986	1,505	4,195	6,494
1987	1,470	4,030	6,265
1988	1,488*	4,155	6,307
1989	1,483*	4,245	6,219

*Based on cows that have calved.

Sources: USDA, Cattle; Kansas Ag. Statistics, Kansas Farm Facts.

Historically, the cattle feeding industry has operated on small, and quite often negative, margins. Figure 2 illustrates USDA estimates of net margins (gross revenue less costs) for Great Plains custom cattle feeding over the 1980 through 1989 period. Details of trends in specific cost and revenue components of the USDA custom cattle feeding budgets are presented in Appendix B. Over this 10-year period, the average net margin was -\$34.87/head. An increase in cattle feeding expenses in the magnitude of the 2% inventory tax would decrease earnings further. The large influx of cattle coming into the state would likely decline if the inventory tax is enacted. Custom feed lot operators in Kansas could find themselves unable to compete with cattle feeders in the competitive neighboring cattle feeding states of Texas, Nebraska, and Colorado. Of these three states, Kansas would be the only one with such an inventory tax on cattle, creating an absolute cost disadvantage



Average = -\$34.87/Head

Figure 2. Great Plains Custom Cattle Feeding Net Margins, for Cattle Marketed January 1980 through December 1989

Source: USDA

for Kansas feed lots.

For the last several years, the Kansas cattle industry has grown at a rapid pace. Figure 3 shows the increase in fed cattle marketings and slaughtering Kansas has enjoyed over the last 20 years. From 1970 to 1989, fed cattle marketings in Kansas have more than doubled and slaughtering has more than tripled. Cattle slaughtered in Kansas in 1989 exceeded 6.2 million head, making Kansas the largest cattle slaughtering state in the U.S. The phenomenal growth rate that the Kansas beef industry has enjoyed will not continue and may well decline in the presence of the proposed inventory tax, especially over a period of several years. Indeed, signs are appearing that the growth rate of the Kansas beef industry is already leveling off, even in light of the removal of the livestock personal property tax that was in place in Kansas through 1988. Nebraska's cattle feeding sector has increased in recent years and the announcement by IBP to open a 4,000 head-per-day cattle slaughtering plant in Nebraska is likely to provide further impetus for growth there. The cattle industry in Kansas is just now maturing, and the proposed inventory taxes could induce shifts in the cattle industry toward neighboring states.

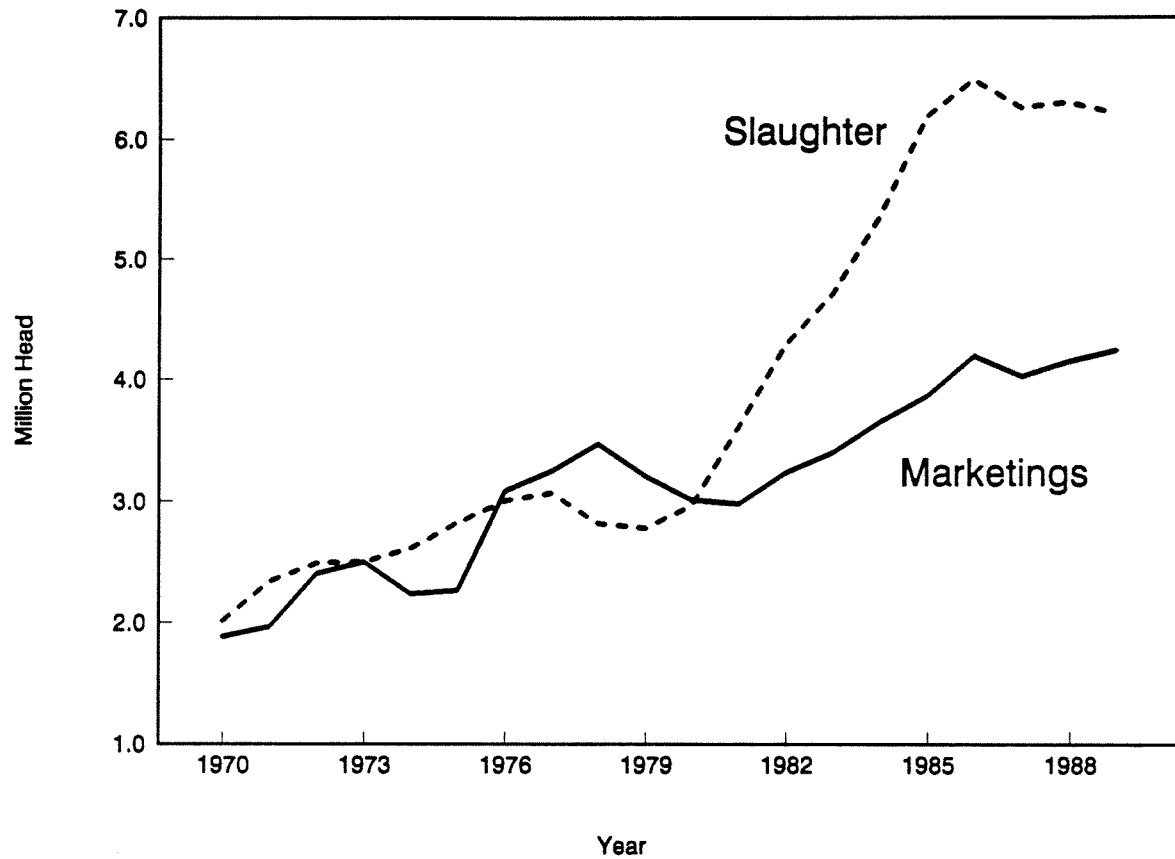


Figure 3. Annual Kansas Fed Cattle Marketings and Slaughter, 1970-89

References

Emerson, J. The Kansas Input-Output Model. A study of Economic Linkages. Bulletin 655. Agricultural Experiment Station, Kansas State University, 1989.

Kansas Agricultural Statistics. Kansas Farm Facts, various issues.

Kansas Agricultural Statistics. Hogs and Pigs, various issues.

Kansas Livestock Association. "KLA Livestock Taxation Fact Sheet."
Unpublished fact sheet sent to KLA members with accompanying cover letter,
March 14, 1990.

Schroeder, T. and J. Blair. A Survey of Custom Cattle-Feeding Practices in Kansas. Report of Progress 573. Agricultural Experiment Station, Kansas State University, May 1989.

United States Department of Agriculture. Cattle, Various issues.

United States Department of Agriculture. Cattle on Feed, Various issues.

United States Department of Agriculture. Hogs and Pigs, Various issues.

United States Department of Agriculture. Livestock and Poultry Situation and Outlook Report, Various issues.

United States Department of Agriculture. Livestock Slaughter, Various issues.

Appendix A

Potential Impacts of a Property Tax on the Kansas Cattle Industry

In addition to livestock inventory tax proposals, policy makers have also considered imposition of a livestock property tax. The impact of this tax likely would be similar to that of the proposed inventory excise tax, although the magnitude would be different. The inventory excise tax proposal is for a tax of 2% of the average monthly inventory value of livestock 1 year and older. The two proposals analyzed in this study included exemptions for inventories valued under \$100,000 and \$250,000, respectively. The property tax proposal would apply an effective tax rate of approximately 3% (assuming 100 mill tax levy and 30% assessment rate) to the average value of all livestock inventories. Note that this proposal differs from the excise tax proposal in several important respects. First, all livestock would apparently be subject to tax, not just livestock 1 year old and older. Second, the percentage tax rate for the property tax proposal is 50% higher than that for the excise tax proposal (3% vs. 2%). Value exemptions for inventories (\$100,000 or \$250,000) that are present under the inventory excise tax proposal would not be present under the property tax.

Overall, a property tax would have similar impacts on cattle producers as those found for the inventory tax. Important exceptions would be that, relative to the excise tax, the property tax would result in an increased tax liability to backgrounders (who have little or no tax liability under the inventory tax) and cow-calf producers. The Kansas Livestock Association estimates that a property tax of \$17.50 per cow would be assessed to cow-calf producers. In addition, the total tax liability facing Kansas feedlots would likely be at least 50% greater under the property tax than under the similar inventory tax. Finally, given that no value exemptions would be present under the property tax, it would affect all sizes of livestock producers, not just

the larger size operations, as is the case for the inventory excise tax.

The magnitude of the impact on the size of the Kansas cattle industry is extremely difficult to predict. It is clear that in an industry that consistently operates on razor thin margins, any tax approaching the size of those currently being discussed would lead to a significant shift away from Kansas by the most mobile sector of the cattle economy, namely the cattle feeding sector. Based on a 1987 KSU survey of Kansas cattle feeders, approximately 77% (possibly approaching 3 million head in 1989) of the cattle fed in custom yards were being custom fed (Schroeder and Blair). Custom fed cattle are the component of the cattle feeding sector most likely to exit the state, if the tax is imposed. Fed cattle marketings have increased roughly 50% over the last 10 years. An industry that shifted into Kansas very rapidly can also shift out of Kansas very rapidly.

In the very short run (less than 1 year), Kansas custom feedyards would likely absorb at least part of the property tax by not passing all of the tax onto customers in an attempt to retain their customer base. Longer term, however, this will not be possible, and customers would ultimately pay the tax. As a result, imposition of the tax might not have a sharp impact on the size of the Kansas feedlot industry in the short run, but, over time, it would drive cattle feeding into the neighboring states of Nebraska, Texas, and Colorado. It is conceivable that over a period of 3 to 5 years, the size of Kansas cattle feeding industry could shrink by 10% or more as a result of the tax.

Appendix B

Components of USDA Great Plains Custom Cattle Feeding Budgets

The USDA Great Plains custom cattle feeding budgets are rough measures of relative changes in profitability associated with finishing cattle. The budgets are primarily estimates of representative costs of cattle feeding in the Great Plains but not meant to necessarily coincide with any specific feed lot. The budgets are for steers assumed to be put on feed at 600 pounds and fed for 180 days, to gain 2.8 pounds per day, and have a feed conversion of 8.4 pounds of feed per pound of gain. The prices used are primarily from the Texas Panhandle region, which should be fairly representative of Western Kansas feedlots. More efficient, lower cost feedlots would have higher net margins than those implied by the USDA budgets. The budgets summarized here are reported in the USDA's Livestock and Poultry Situation and Outlook Report, which is published every two months.

Figures B1 through B4 show trends in specific cost and revenue components of the USDA budgets over 1980 through 1989. The net margin in any particular year can be evaluated by examining the individual components composing the margin. In 1989 for example, although fed cattle prices were relatively high (figure B1), and thus gross revenues were high, net margins were still negative because of high break-even prices. These high break-even prices during 1989 resulted from relatively high feeder costs (figure B2), high feed costs (figure B3), and increases in other costs (primarily interest costs associated with higher feed and feeder costs) relative to recent years (figure B4).

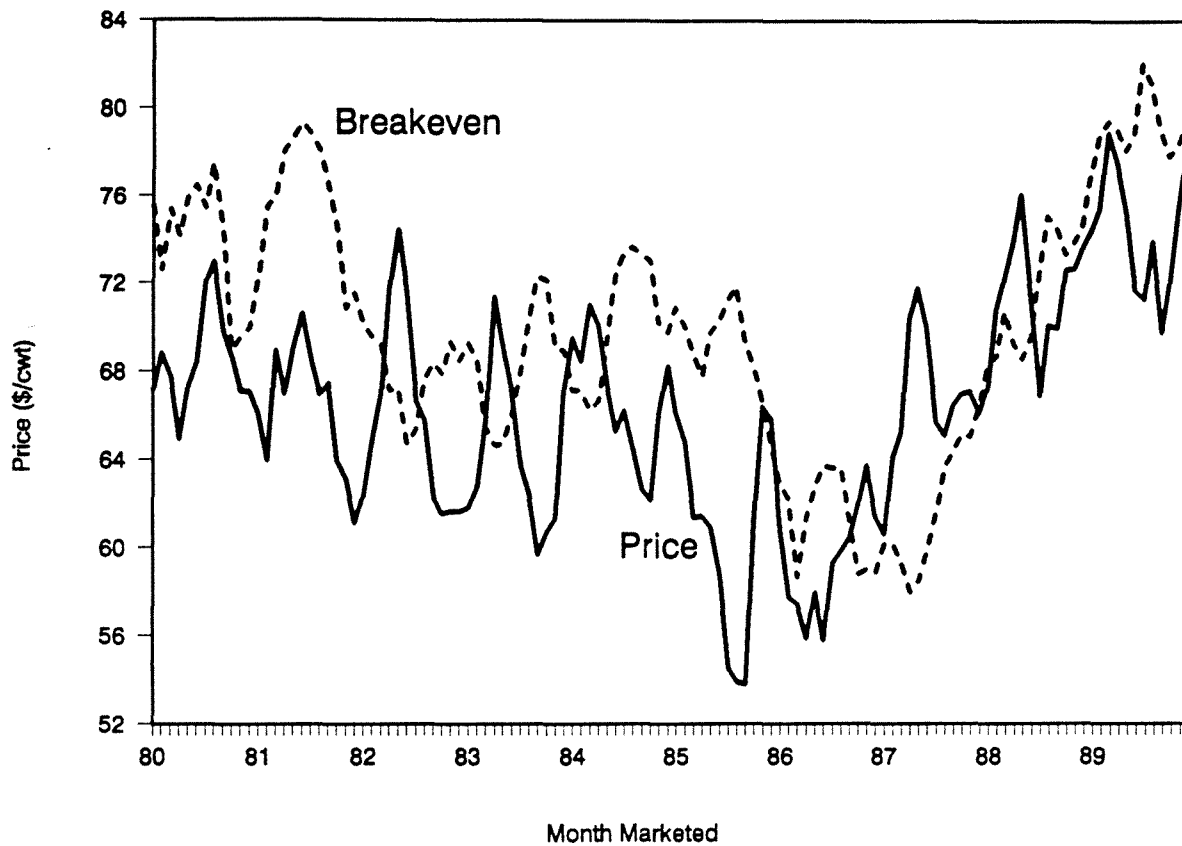


Figure B1. Monthly Average 900-1100 pound Slaughter Steer Price, Texas-New Mexico, and Custom Cattle Feeding Breakeven Price, 1980-89

Source: USDA

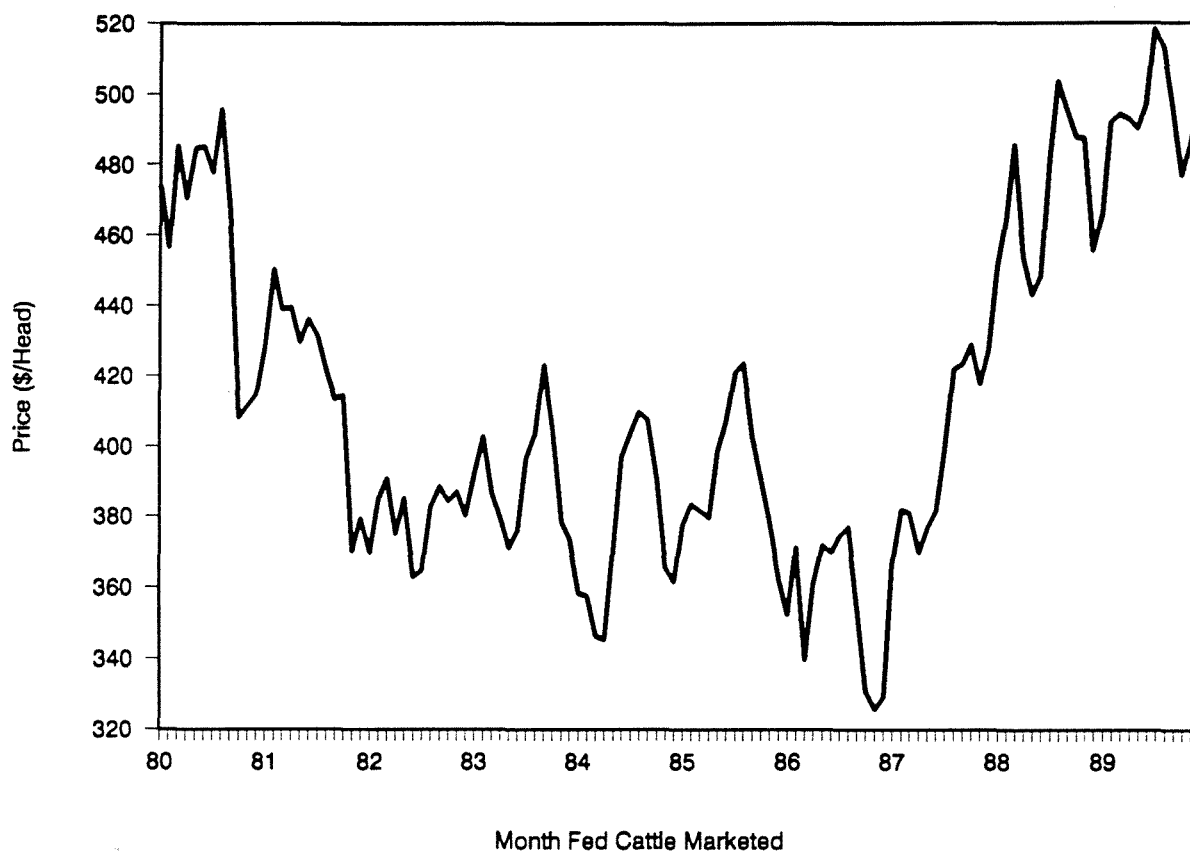


Figure B2. Cost of 600 pound Feeder Cattle,
Texas-New Mexico, 1980-89

Source: USDA

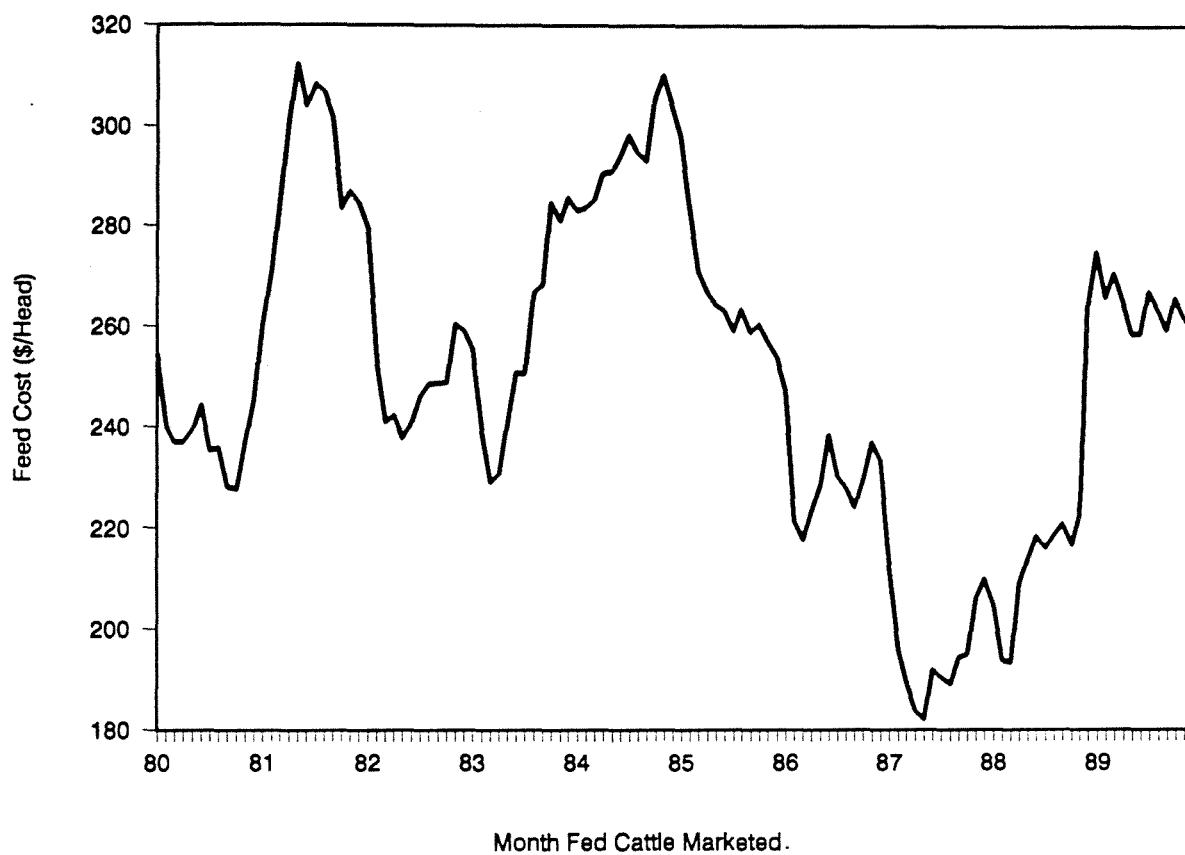


Figure B3. Feed Cost of Finishing Cattle, 1980-89

Source: USDA

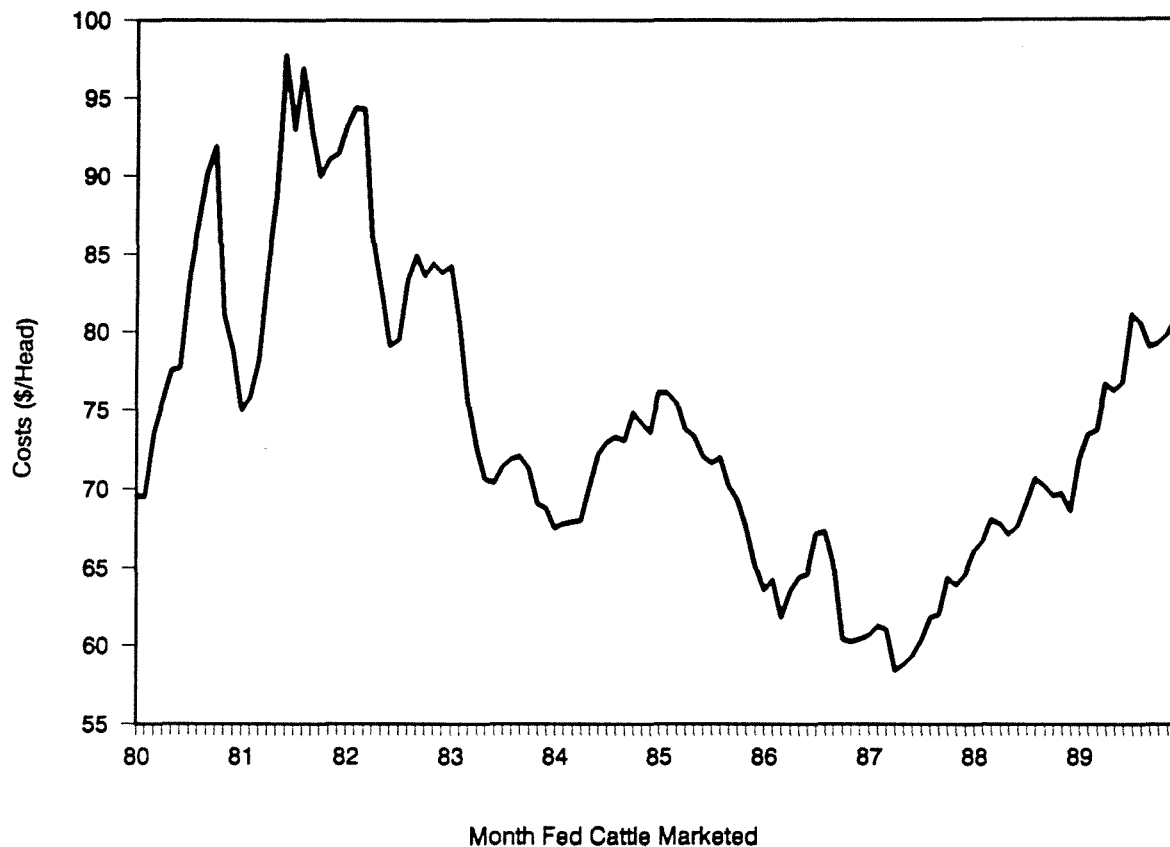


Figure B4. Transportation, Commission, Feed Handling and Management, Interest, Death Loss, and Vet Medicine Costs of Finishing Cattle, 1980-89

Source: USDA

