

Economic Importance of and Economic Impacts Associated with Livestock Production in Hitchcock County

March 2005

Prepared by:

Donis N. Petersan, Ph.D., CEcD
Economist
Economic Development Department
Nebraska Public Power District
1414 15th Street - Box 499
Columbus, Nebraska 68602-0499

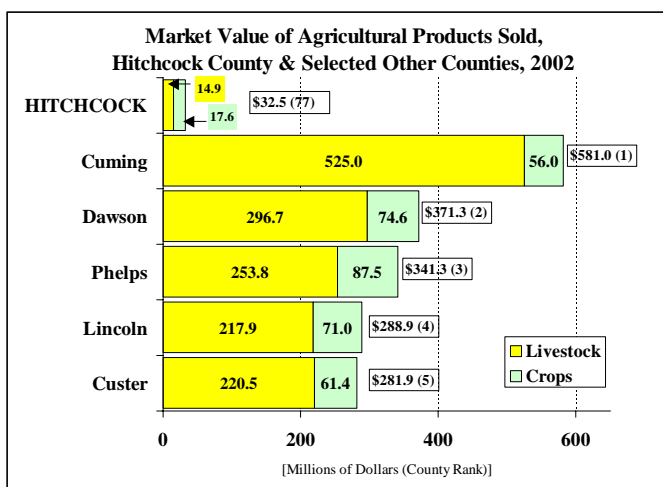
Telephone: (402) 563-5304 or (800) 282-6773
Email: dnpeter@nppd.com

Executive Summary

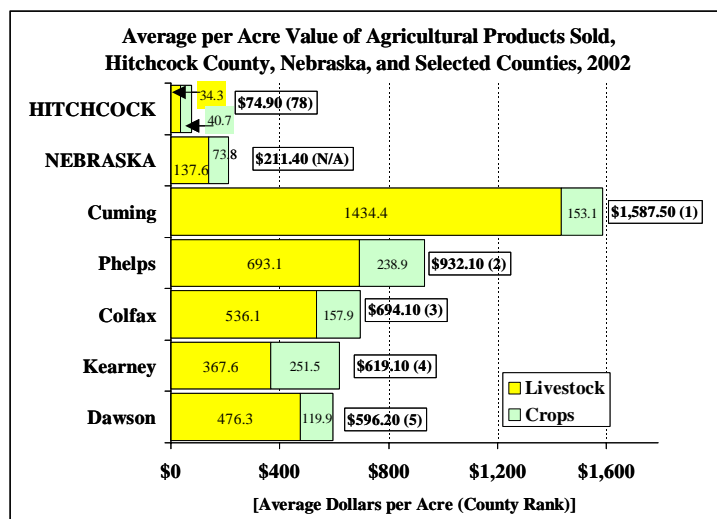
Information provided in this report focuses on the economic importance of the livestock sector in Hitchcock County. The first part of the report reviews agriculture data from the *2002 Census of Agriculture*. These data provide information on the importance of agriculture and the livestock sector in Hitchcock County. The second part of the report analyzes the direct, indirect and total economic impacts associated with livestock operations in Hitchcock County. This analysis utilizes an IMPLAN input-output (I-O) database and model developed specifically for Hitchcock County.

Livestock and Agricultural Production in Hitchcock County

The *2002 Census of Agriculture* for Nebraska provides data showing the importance of agriculture and the livestock sector in Hitchcock County. The data presented in the chart indicate the market value of agricultural products sold in Hitchcock County totaled \$32.5 million in 2002. Considering the per farm value of agricultural products sold, Hitchcock County's average of \$108,645 also ranked 77th among the counties and was only 55.3 percent of the Nebraska per farm average of \$196,609.



The average market value of agricultural products per acre is shown in the current chart and includes the data for Hitchcock County and for the leading five counties in terms of this measure, along with the Nebraska data.



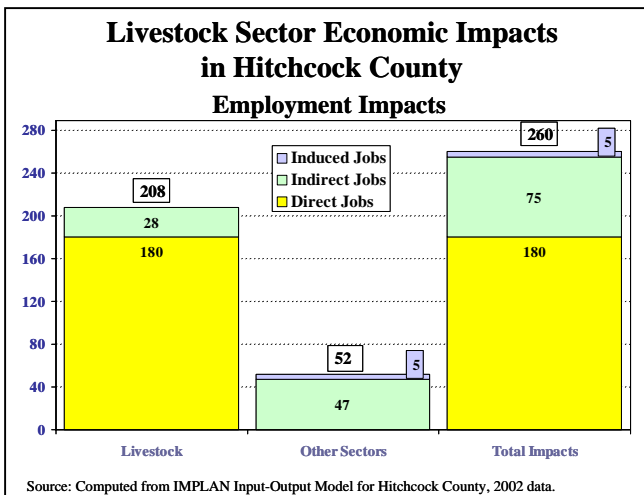
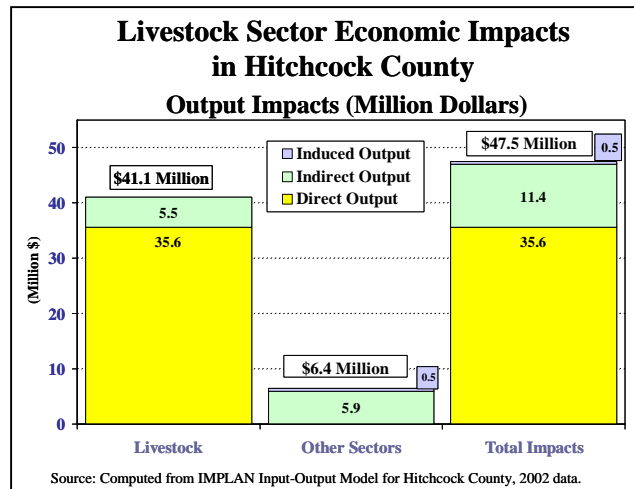
Hitchcock County, with a value of \$74.90, ranks 78th among the Nebraska counties in terms of the market value of agriculture products per acre, with \$34.30 of that amount accounted for by livestock and livestock products. Hitchcock County's per acre average for all agricultural products is only 35.4 percent (64.6 percent less than) the Nebraska per acre average of \$211.40.

Data provided in this report clearly show that while livestock and livestock products are not as important as a source of income for Hitchcock County farmers as is true for some other Nebraska counties, this sector has a very significant economic impact on the local economy. The per farm market value of livestock and livestock products averaged \$49,692 (45.7 percent of the total market value of all agricultural products sold) for Hitchcock County, ranking the county 77th among the Nebraska counties in terms of this measure. The average Hitchcock County per farm value (for livestock and livestock products) was only 38.8 percent of the average per farm value of \$127,959 for Nebraska as a whole.

Economic Impacts Associated with Livestock Production in Hitchcock County

The second part of the report provides an assessment of the positive employment and other economic effects associated with the production of livestock and livestock products in Hitchcock County. The analysis utilizes an IMPLAN input-output (I-O) model developed for Hitchcock County. The major positive employment and other economic effects associated with the production of livestock and livestock products in Hitchcock County are summarized in the continuing portion of the Executive Summary.

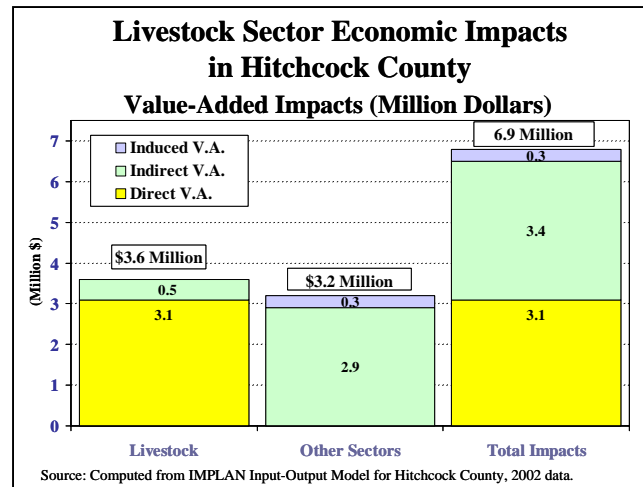
- Total Output Effects: The total value of output directly associated with sales to final demand by the livestock sector in Hitchcock County is estimated to be \$35.6 million. When the secondary output effects (indirect and induced output) are added, the total output effects associated with the production of livestock and livestock products in Hitchcock County are estimated to be \$47.5 million. Of this total, 87 percent (\$41.1 million) is accounted for by output (direct, indirect, and induced) produced by the livestock sector and the indirect and induced effects in other sectors represent an additional \$6.4 million of output.



- Employment Effects: There are an estimated 180 individuals employed in the Hitchcock County livestock products sector producing the output dedicated to sales to final demand (\$35.6 million). When the indirect and induced employment effects are included, employment in the livestock sector is estimated to be 208 workers (and proprietors). The other secondary employment effects

(indirect and induced effects in sectors other than livestock and livestock products) account for an additional 52 employees that support livestock production. When the total employment effects for all sectors are considered, the estimated Hitchcock County employment supporting the production of livestock is estimated to be 260 workers.

- Value-Added Effects: The value-added effects associated with livestock production in Hitchcock County provide a good measure of the economic value associated with this sector. Value-added consists of payments to the factors of production within the economy and includes payments to labor, proprietors' income, other property income, and indirect business taxes. As the information and analysis provided in this report indicate, the total value-added effects related to the production of livestock and livestock products in Hitchcock County are estimated to be \$6.9 million (for 2002). Of this amount, \$3.6 million represents value-added in the livestock products sector itself and \$3.2 million is value-added in other economic sectors supporting the production of livestock and livestock products in Hitchcock County.



Livestock-Related Impacts Not Analyzed

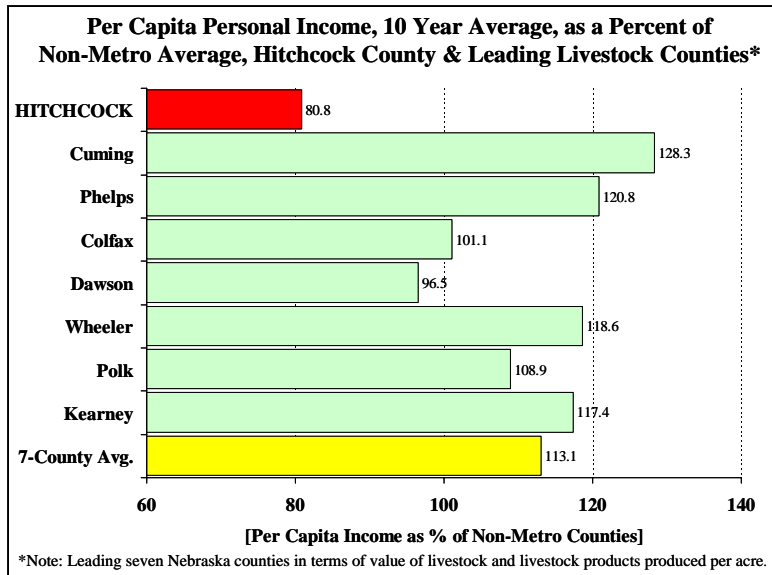
The analysis discussed in this report considers the backward-linkages associated with livestock production in Hitchcock County. That is, the analysis has considered impacts associated with economic sectors providing inputs to support livestock production. The analysis has not considered the “stemming from” effects, or the economic impacts associated with those industry sectors with forward linkages from the livestock production sector. The obvious sector in this regard would be food processing activities utilizing meat products as an input. Obviously, the food and meat processing industry creates a very substantial amount of additional employment and economic activity in Nebraska and in many Nebraska counties, suggesting the contributions of the livestock industry may be significantly greater than reported in this analysis if these forward-linkages were considered.

Livestock Production and Economic Well Being

A key question about the importance of the livestock industry concerns its contributions to the economic well being of residents of Hitchcock County, and other counties where the production of livestock and livestock products may be even more significant as a contributor to the overall level of economic activity. Data presented in this report provide some insights into the relationship between livestock production and economic well being, measured in terms of per capita personal income.

Per capita personal income in Cuming County, which is the leading county in Nebraska, in terms of the production of livestock and livestock products, was 21.7 percent more than the average per capita personal income for all non-metropolitan counties for the year 2002. For the ten-year period from 1993 to 2002, the average per capita personal income in Cuming County was 28.3 percent more than the average for the non-metropolitan areas of Nebraska. In the case of Hitchcock County, which ranked 78th among the Nebraska counties in terms of livestock and livestock products sold per acre, per capita income for the ten-year period from 1993 to 2002 was \$17,380. This per capita income level was 19.2 percent less than the average per capita income level for all non-metropolitan counties for the ten-year review period.

For the top seven livestock counties, in terms of the average value of livestock and livestock products sold per acre, the per capita personal income average in 2002 was 8 percent more than for all non-metropolitan counties. In the case of the ten-year average (1993-2002), the per capita personal income average in the leading livestock counties was 13.1 percent more than for all non-metropolitan counties.

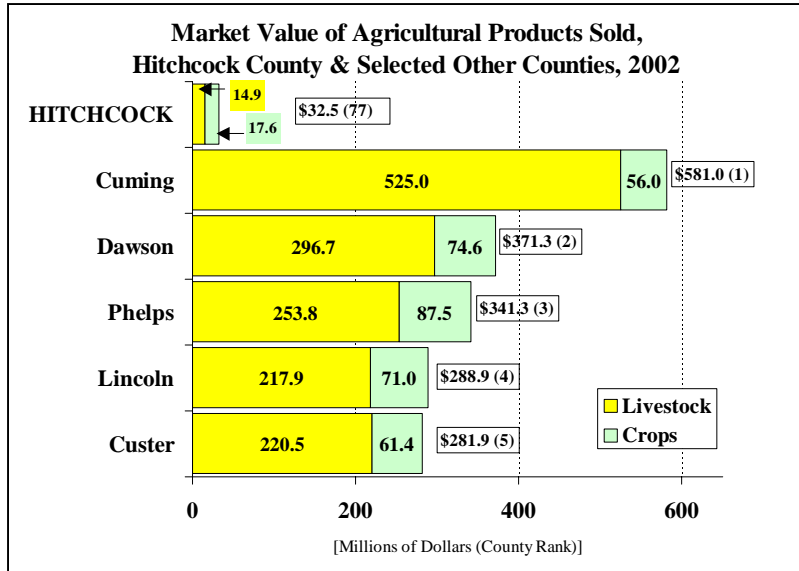


Economic Importance of and Economic Impacts Associated with Livestock Production in Hitchcock County

Information provided in this report focuses on the importance of the livestock sector to the economy of Hitchcock County. The first part of the report reviews agriculture data from the *2002 Census of Agriculture*. These data provide insights into the importance of agriculture and the livestock sector in Hitchcock County. The second part of the report analyzes the secondary economic impacts associated with livestock production in Hitchcock County. This analysis utilizes an IMPLAN input-output (I-O) database and model developed specifically for Hitchcock County.

Livestock and Agricultural Production in Hitchcock County

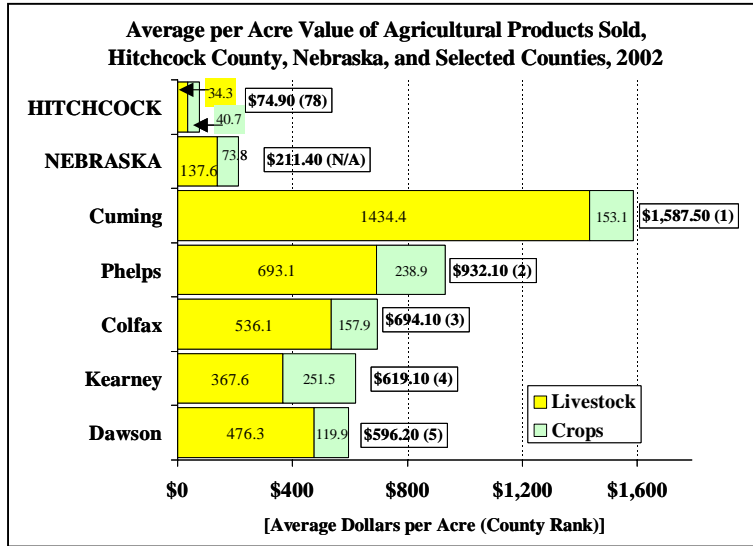
The *2002 Census of Agriculture* for Nebraska provides data showing the importance of agriculture and the livestock sector for Hitchcock County. The data presented in Table One include the data for Hitchcock County, along with data for Nebraska and selected Nebraska counties. The market value of agricultural products sold in Hitchcock County totaled \$32,485,000 in 2002. This level of sales of agricultural products ranked Hitchcock County 77th among the Nebraska counties. In terms of the per farm value of agricultural products sold, Hitchcock County's average of \$108,645 also ranked 77th among the Nebraska counties and was 55.3 percent of the Nebraska per farm average of \$196,609.



The data reporting the market value of agricultural products sold may be somewhat misleading for selected counties, as these data are affected by the geographic size of the county (number of farms and acres). For example, while Lincoln and Custer counties rank fourth and fifth in terms of the total market value of agricultural products, their high ranking results, in part, from the relatively large size of these counties. When the data are normalized for the size of the county, these counties do not maintain their high rankings. For example, using the average market value of agricultural products per acre, Lincoln County ranks 50th and Custer County ranks 51st among Nebraska's 93 counties.

The average market value of agricultural products per acre is shown in the current chart and includes the data for Hitchcock County and for the top five Nebraska counties in terms of this measure, along with the Nebraska data.

These data are also shown in Table One. In terms of the market value of agriculture products sold per acre, Hitchcock County with a value of \$74.90 ranks 78th among the Nebraska counties. Hitchcock County's per acre average is only 35.4 percent (64.6 percent less than) the Nebraska per acre average of \$211.40.



The data presented in Table One indicate that livestock and livestock products are not as important as a source of income for Hitchcock County farmers as is true for many other counties, or for Nebraska as a whole. The per farm market value of livestock and livestock products sold averaged \$49,692 for Hitchcock County, ranking the county 77th among Nebraska's 93 counties in terms of this measure. The market value of livestock products in Hitchcock County accounted for 45.7 percent of the total market value of all agricultural products sold. For Nebraska as a whole, the market value of livestock and livestock products accounted for 65.1 percent of the total market value of all agricultural products sold. It is also of interest to note the average Hitchcock County per farm value of livestock and livestock products sold was only 38.8 percent of the average per farm value of \$127,959 for Nebraska.

Table One also provides data reporting the number of farms, land in farms, farm employment, the estimated market value of land and buildings and of machinery and equipment, and net cash farm income of farm operations for Hitchcock County, selected other Nebraska counties, and Nebraska.

Table One
Agricultural Characteristics, Hitchcock County, Nebraska, and Selected Nebraska Counties, 2002

	HITCHCOCK COUNTY	Nebraska	Buffalo	Colfax	Cuming	Custer	Dawson	Fillmore	Gosper	Morrill	York
Number of Farms	299	49,355	989	589	904	1,149	718	499	242	443	617
% FT Farms ^(a)	81.3	73.0	70.6	75.0	76.0	76.1	74.2	85.6	83.9	70.0	77.8
Land in farms (Acres)	433,525	45,903,116	601,256	244,361	365,994	1,501,959	622,805	363,915	262,216	872,351	353,762
Average size (Acres)	1,450	930	608	415	405	1,307	867	729	1,084	1,969	573
Farm Employment^(b)	388	63,138	1,257	819	1,314	1,646	1,162	781	337	681	818
Average per farm	1.3	1.3	1.3	1.4	1.5	1.4	1.62	1.6	1.4	1.5	1.3
Estimated market value of land and buildings											
Average per farm (\$)	787,250	723,863	787,773	627,679	658,526	696,003	830,919	1,178,604	806,413	657,996	1,103,666
Average per acre (\$)	487	776	1,312	1,629	1,571	535	1,014	1,685	836	327	2,009
Estimated market value of all machinery and equipment											
Average per farm (\$)	115,452	111,776	128,090	121,938	111,129	104,469	137,066	191,054	151,941	104,187	180,841
Market value of agricultural products sold											
(\$1,000)	32,485	9,703,657	179,004	169,600	580,999	281,928	371,332	128,003	47,689	162,576	160,833
Average per farm (\$)	108,645	196,609	180,995	287,946	642,698	245,368	517,176	256,519	197,062	366,990	260,669
Average per acre (\$)	75	211	298	694	1,587	188	596	352	182	186	455
Market value of livestock, poultry, and their products											
Per farm (\$)	49,692	127,959	101,782	222,431	580,723	191,950	413,188	97,629	79,669	300,009	113,810
% Livestock	45.7	65.1	56.2	77.2	90.4	78.2	79.9	38.1	40.4	81.7	43.7
Net cash farm income of operation											
Average per farm (\$)	13,327	24,820	36,509	19,991	36,148	21,659	40,959	55,786	22,938	35,873	51,544

^(a) Full-time farms are defined as those where the principal operator has indicated their primary occupation is farming.

^(b) Farm employment estimates for 2002 from the U.S. Department of Commerce, Bureau of Economic Analysis (BEA), where farm employment includes farm proprietors and hired labor.

Source: USDA, National Agricultural Statistics Service, 2002 *Census of Agriculture*.

Economic Impacts Associated with Livestock Production in Hitchcock County

Information presented in the continuing portion of this report focuses on the economic impacts associated with livestock operations in Hitchcock County. This analysis utilizes an IMPLAN economic input-output (I-O) model developed specifically for Hitchcock County.

From the Hitchcock County I-O model, economic multipliers are derived that quantify the level or magnitude of economic activity necessary to support the production activity of local livestock enterprises. As such, the input-output analysis identifies and quantifies economic linkages associated with the inputs required in order for the livestock sector to produce the level of output it has achieved (backward linkages). The model does not evaluate forward linkages. That is, the model does not provide a measure of additional (downstream) processing made possible by the production of the livestock output, although this is certainly an important factor for Nebraska and for many Nebraska counties.

To provide a basic understanding of the structure and size of the agricultural sector within Hitchcock County, data in Table One provides basic information describing production activity and other parameters for the farm sector from the *2002 Census of Agriculture*.

The IMPLAN database and I-O model provide further insight into the value of production of livestock and livestock products in Hitchcock County. The data in Table Two present estimates of the value of production for the livestock sector reported by the IMPLAN database and I-O model for Hitchcock County in 2002. As the data in Table Two show, the total value of output for livestock and livestock products was reported to be \$41.149 million dollars for 2002 (compared to the \$14.858 million market value of livestock and livestock products sold reported by the *2002 Census of Agriculture*).

The data in Table Two also provide a further disaggregation of livestock and livestock products. As reported in Table Two, cattle ranching and farming (which includes cattle feeding) were reported to have a value of production of \$40.421 million for the year 2002. Animal production, except cattle and poultry, had an estimated output value of \$0.728 million (Note: No poultry production was reported for Hitchcock County).

A review of the data in Table Two clearly shows the most significant livestock sector is the beef-producing sector, accounting for 98.2 percent of the total production of livestock and livestock products in Hitchcock County in 2002. Moreover, the beef-producing sector employed 199 (95.7 percent) of the 208 total employment in the livestock-producing sector and accounted for essentially all of the \$1.295 million of value added in the livestock and livestock products sector.

Table Two
Agricultural Sector Parameters, Hitchcock County IMPLAN Database, 2002

Industry	Industry	Employee	Proprietor	Other	Total	
	Output (Million \$)	Employment	Compensation (Million \$)	Income (Million \$)	Property Income (Million \$)	Value Added (Million \$)
Oilseed farming	0.714	4	0.002	0.123	0.195	0.023
Grain farming	20.874	202	0.281	2.484	5.722	0.566
Vegetable and melon farming	0.329	1	0.020	0.031	0.165	0.005
All other crop farming	2.102	6	0.104	0.157	0.784	0.061
Livestock & Livestock Products	41.149	208	1.550	-0.542	1.322	1.295
Cattle ranching and farming	40.421	199	1.501	-0.539	1.267	1.278
Animal production, except cattle and poultry	0.728	9	0.049	-0.003	0.055	0.017

Source: Minnesota IMPLAN Group, Inc., IMPLAN Input-Output Model and database for Hitchcock County (2002 data).

Economic Impact Analysis

The economic linkages and impacts associated with livestock operations in Hitchcock County are analyzed in the balance of this report. The analysis utilizes an I-O model developed for Hitchcock County, in which the livestock producing sectors have been collapsed (aggregated) into one sector (livestock and livestock products). This involves aggregating the two livestock sectors shown in Table Two into one livestock sector. The analysis then focuses on the economic impacts associated with the production of livestock and livestock products in Hitchcock County. The I-O model analysis involves identifying the multiplier effects associated with this economic sector, where the multiplier effects evaluated include the output multiplier, the employment multiplier, and the value-added multiplier.

Each of the multipliers, in turn, consists of three components: the direct effect, the indirect effect, and the induced effect. The output multiplier defines (quantifies) the change in total output for the economy which is associated with the delivery of an additional unit (dollar) of output of livestock and livestock products to final demand.

The multipliers specified for the livestock sector recognize that changes in output (increases in sales to final demand) by this sector will require additional inputs from other businesses or economic sectors be provided. The industries or economic sectors supplying additional inputs to the livestock sector will find they also must purchase additional inputs in order to expand their output to supply the increased inputs demanded by the livestock enterprises. As the increased demand for goods and services associated with the initial increase in sales to final demand works itself through the sectors of the economy, these effects are collected and termed the indirect effects component of each of the economic multipliers.

The induced component of the economic multipliers follows from the increased personal income (payments to households) in Hitchcock County resulting from the increase in the demand for labor, both with respect to the direct and indirect economic effects. That is, as output is increased by the livestock products sector (direct effect) and in the economic sectors that supply the additional inputs to the livestock sector (indirect effects), these

sectors will add labor inputs and increase their payments to labor. The translation of the additional household incomes into additional expenditures for (consumer) goods and services is referred to as the induced effects. The three effects--direct, indirect, and induced--together represent the total economic impacts embodied in the multipliers utilized to measure the economic impacts associated with the subject livestock enterprises.

The estimated direct, indirect, and induced components of the economic multipliers associated with the production of livestock and livestock products in Hitchcock County are provided in Table Three. As indicated by these data, the three multipliers for which values are reported include the output, value-added, and employment multipliers. The output multiplier indicates that for each dollar of sales to final demand by the livestock sector in Hitchcock County, there will be an estimated increase in total economic output of \$1.33 for the Hitchcock County economy.

Multiplier Component	Total Output ^(a)	Total Value Added ^(b)	Total Employment ^(c)
Direct	1.0000	0.0881	5.0525
Indirect	0.3196	0.0960	2.1010
Induced	0.0128	0.0087	0.1499
Total	1.3323	0.1929	7.3033
Multiplier ^(d)	1.3323	2.1894	1.4455

(a) Increase in output for each dollar of sales to final demand.
 (b) Change in value added for each dollar of sales to final demand.
 (c) Total jobs created per million dollars of sales to final demand.
 (d) Multiplier values equal the total effects divided by the direct effect.
 Source: Minnesota IMPLAN Group, Inc., IMPLAN Input-Output Model for Hitchcock County, 2002 data.

The value-added multiplier estimates there will be total payments to the factors of production of \$0.1929 for each dollar of sales of livestock and livestock products to final demand. This total value-added effect includes the direct effect of \$0.0881 associated with the initial sales of one dollar of output to final demand, \$0.0960 of payment to the factors of production associated with the indirect increase in output (sales) for the intermediate (supplying) sectors, and the induced effect of \$0.0087 related to the increased household demand for goods and services resulting from the increased payment to labor (household income). The value-added multiplier of 2.19 indicates that for each dollar of value-added in the livestock and livestock products sector, we would expect to see an additional \$1.19 of value-added in other sectors of the Hitchcock County economy.

The employment multiplier indicates for each \$1,000,000 of sales to final demand by the livestock and livestock products sector, there will be a total of 7.3 jobs supported in the Hitchcock County economy, including the direct, indirect, and induced components of the employment multiplier.

Table Four provides a summary of the economic effects associated with the production of livestock and livestock products in Hitchcock County. As the information provided in this table is reviewed, it will be of interest to note the estimated sales to final demand by the livestock sector are presented in the table as the direct effects (output, employment, and value-added). For example, the direct output (value of production) associated with sales of livestock and livestock products to the final demand sector by Hitchcock County livestock producers is estimated to be \$35,638,000. From the Hitchcock County Input-Output model, we estimate that for the Hitchcock County livestock sector to sell this amount of output to final demand, it would need to produce a total of \$41,149,300 of total output, as approximately 13.4 percent (\$5,511,300) of the total output would represent intermediate sales (sales by one producer in the livestock sector to other producers in the same sector).

-Output Effects

A review of the data presented in Table Four indicates the total output effects (including the direct, indirect, and induced output) associated with the production of livestock and livestock products in Hitchcock County are estimated to be \$47,481,700. Of this total, 86.7 percent (\$41,149,300 million) is accounted for by output (direct, indirect, and induced) produced by the livestock sector and the indirect and induced effects in other Hitchcock County economic sectors represent an additional \$6,332,400 million of output.

-Employment Effects

There are an estimated 180 people employed in the livestock products sector working to produce the output dedicated to sales to final demand (\$35.6 million); when the indirect and induced effects are included, the estimated employment in the livestock sector increases to 208 people. The other secondary employment effects (indirect and induced effects in sectors other than livestock and livestock products), account for an additional 52 jobs and total employment in Hitchcock County supporting the production of livestock and livestock products is estimated to be 260 workers.

-Value-Added Effects

The value-added effects associated with the livestock production in Hitchcock County provide a measure of the economic value associated with this sector. Value-added consists of payments to the factors of production within the economy and includes payments to labor, proprietors' income, other property income, and indirect business taxes. As the data in Table Four show, the total value-added effects related to the production of livestock and livestock products in Hitchcock County are estimated to be \$6,873,300 (for 2002). Of this amount, \$3.6 million is value-added in the livestock products sector itself and an estimated \$3.2 million is value-added in other economic sectors that results because of the additional economic activity in these other economic

sectors required to support the production of livestock and livestock products in Hitchcock County.

	Livestock Products	Other Economic Sectors	Total Economic Impacts
Output Effects			
Direct Output (Value of Production)	\$35,638,000	\$0	\$35,638,000
Indirect Effects [0.3196 of Direct]	5,509,300	5,879,200	11,388,500
Induced Effects [0.0128 of Direct]	2,000	453,200	455,200
Total Output Effects	\$41,149,300	\$6,332,400	\$47,481,700
Employment Effects			
Direct Employment (FTE)	180	0	180
Indirect Effects [0.4159 of Direct]	28	47	75
Induced Effects [0.0294 of Direct]	0	5	5
Total Employment (FTE)	208	52	260
Value-Added Effects			
Direct Value-Added (Payments)	\$3,139,400	\$0	\$3,139,400
Indirect Effects [1.0903 of Direct]	485,300	2,937,500	3,422,800
Induced Effects [0.0991 of Direct]	200	310,900	311,100
Total Value-Added Effects	\$3,624,947	\$3,248,353	\$6,873,300

Source: Computed from the IMPLAN Input-Output Model for Hitchcock County (2002 data).

Table Five provides additional detail describing the economic effects associated with the production of livestock and livestock products in Hitchcock County. The data in the table identify the business or economic sectors that are the primary beneficiaries of the economic activity resulting from livestock production in Hitchcock County. Shown in the table is a list of the leading 25 economic and business sectors that are likely to be the most positively impacted by the production of livestock and livestock products. The impacts presented in the table include the predicted output, value-added, and employment impacts for each of the 25 sectors associated with the production and sales to final demand of the output produced by the livestock sector in Hitchcock County.

Table Five
Distribution of Livestock Production Economic Impacts, by Selected Economic Sector^(a),
Hitchcock County Nebraska, 2002

Industry	Total Output	% Total Output	Value Added	Employment	% Total Emp.
Livestock Aggregate	\$41,149,336	86.66	\$3,624,947	207.9	79.90
All other crop farming	1,980,098	4.17	1,041,168	6.0	2.31
Wholesale trade	826,903	1.74	598,675	10.5	4.04
Truck transportation	720,663	1.52	276,961	7.7	2.96
Grain farming	550,969	1.16	238,957	5.3	2.04
Oil and gas extraction	440,595	0.93	128,430	2.3	0.88
Real estate	283,119	0.60	199,758	4.6	1.77
Phosphatic fertilizer manufacturing	276,660	0.58	35,986	0.6	0.23
Monetary authorities and depository credit inst.	271,845	0.57	174,697	1.9	0.73
Commercial machinery repair and maintenance	247,411	0.52	49,966	3.7	1.42
Owner-occupied dwellings	210,138	0.44	168,363	0.0	0.00
Other State and local government enterprises	134,912	0.28	91,127	0.6	0.23
Maintenance and repair of nonresidential buildings	70,284	0.15	52,903	0.3	0.12
Agriculture and forestry support activities	62,112	0.13	38,182	3.0	1.15
Rail transportation	56,807	0.12	37,080	0.2	0.08
Food services and drinking places	44,355	0.09	13,192	1.4	0.54
Building material and garden supply stores	26,832	0.06	21,001	0.8	0.31
Postal service	22,091	0.05	17,717	0.3	0.12
Food and beverage stores	21,503	0.05	16,216	0.8	0.31
Nonstore retailers	20,454	0.04	13,413	1.4	0.54
Buttons, pins, and all other miscellaneous materials	10,284	0.02	3,764	0.1	0.04
Telecommunications	9,726	0.02	6,523	0.1	0.04
Gasoline stations	8,162	0.02	5,918	0.3	0.12
Vegetable and melon farming	7,742	0.02	5,215	0.0	0.00
Social assistance, except child day care services	6,892	0.01	3,018	0.2	0.08
Total Top 25 Sectors	\$47,459,893	99.95	\$6,863,177	260.0	99.92
Total Impacts, All Economic Sectors	\$47,481,716	100.00	\$6,873,355	260.3	100.00

^(a) The selected sectors include the top 25 business sectors impacted by the production of \$35,638,000 of livestock and livestock products for sales to final demand in Hitchcock County (2002).

Source: Computed from the IMPLAN Input-Output Model for Hitchcock County (2002 data).

- Livestock Production and Economic Well Being

Data presented in Table Six provide further insights into the importance of livestock production activities as a contributing factor to economic well being for selected livestock producing counties. Included in the table are data showing the average per-acre value of livestock and livestock products sold for Hitchcock County and for the leading livestock counties, according to this metric. Also included in the table are data showing per capita personal income for the counties, as a percent of per capita personal income for all non-metropolitan counties. The per capita personal income index data are included for two time periods. First the income index data are included for 2002. Also, recognizing the volatility of year-to-year changes in income, especially in rural counties, an average per capita personal income index measure is included for a ten-year period, 1993-2002.

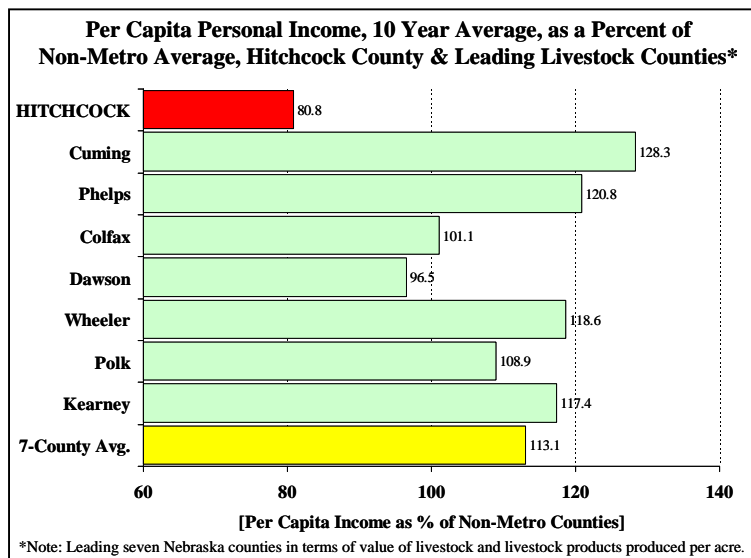
Table Six
Livestock Production and Per Capita Personal Income,
Hitchcock County and Leading Nebraska Livestock Counties

County/ Nebraska	Livestock & Livestock Products Per Acre		Per Capita Income (% of NonMetro Counties)	
	Value (\$)	County Rank	2002	10 Yr Avg. (1993-2002)
HITCHCOCK Co.	34.27	83	70.4	80.8
NEBRASKA	137.60	N/A	118.1	115.0
Cuming	1,434.40	1	121.7	128.3
Phelps	693.10	2	117.0	120.8
Colfax	536.10	3	101.8	101.1
Dawson	476.30	4	91.1	96.5
Wheeler	398.80	5	107.4	118.6
Polk	374.70	6	104.0	108.9
Kearney	367.60	7	112.9	117.4
Average for Top Seven Livestock Counties			134.9	141.1

Source: USDA, National Agricultural Statistics Service, *2002 Census of Agriculture*, and U.S. Bureau of Economic Analysis (BEA), *County Personal Income, 1993-2002*.

As the data shown in Table Six and the accompanying chart indicate, per capita personal income for 2002 in Cuming County, the leading county in Nebraska in terms of the production of livestock and livestock products, was 21.7 percent more than the average per capita personal income for all non-metropolitan counties. For the ten-year period, from 1993 to 2002, the average per capita personal income in Cuming County was 28.3 percent more than the average for the non-metropolitan areas of Nebraska. In the case of Hitchcock County which ranked 78th among Nebraska’s 93 counties in terms of livestock sold per acre, average per capita income for the ten-year period, from 1993 to 2002, was \$17,380. This per capita income level was 19.2 percent less than the average per capita income level for all non-metropolitan counties for the 1993-2002 period.

The data presented in the table and the accompanying chart also show, for the top seven livestock counties, per-capita personal income in 2002 was 8 percent more than for all non-metropolitan counties. In the case of the ten-year average, per capita personal income in the leading livestock counties was 13.1 percent more than for all non-metropolitan counties.



If further information about this analysis is desired or if the reader has questions about any aspect of this report, please contact:

**Donis N. Petersan, Ph.D., CEcD
Economist
Nebraska Public Power District
1414 15th Street - Box 499
Columbus, NE 68602-0499**

**Telephone: (402) 563-5304 or (800) 282-6773
Email: dnpeter@nppd.com**