

# **Economic Importance of and Economic Impacts Associated with Livestock Production in Richardson County**

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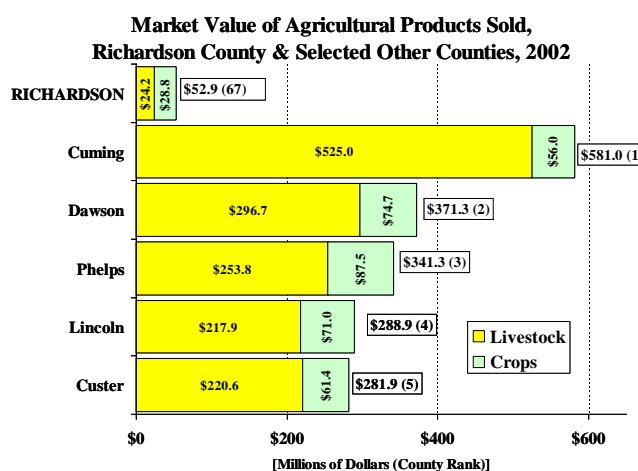
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# Executive Summary

Information provided in this report focuses on the economic importance of the livestock sector in Richardson County, Nebraska (Richardson 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 Richardson County. The second part of the report analyzes the direct, indirect, and total economic impacts associated with livestock operations in Richardson County. This analysis utilizes an IMPLAN input-output (I-O) database and model developed specifically for Richardson County.

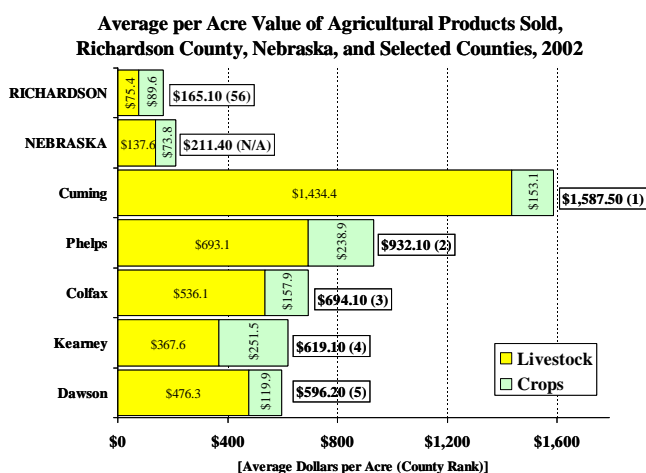
## Livestock and Agricultural Production in Richardson County, Nebraska

The *2002 Census of Agriculture* provides data showing the importance of agriculture and the livestock sector in Richardson County. The data presented in the chart indicate the market value of agricultural products sold in Richardson County totaled \$52.9 million in 2002. Considering the per farm value of agricultural products sold, Richardson County's average of \$72,335 ranked 86<sup>th</sup> among Nebraska's 93 counties and was 36.8 percent of the state per farm average of \$196,609.



Note: Parts may not sum to totals due to rounding.  
Source: USDA, National Agricultural Statistics Service, 2002 Census of Agriculture.

The average market value of agricultural products sold per acre is shown in the current chart and includes the data for Richardson County and for the leading five counties in



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

terms of this measure, along with the Nebraska data. Richardson County, with a value of \$165.10, ranks 56<sup>th</sup> among the Nebraska counties in terms of the market value of agriculture products per acre, with \$75.40 of that amount accounted for by livestock and livestock products. Richardson County's per acre average for all agricultural products is 78.1 percent of the state per acre average of \$211.40.

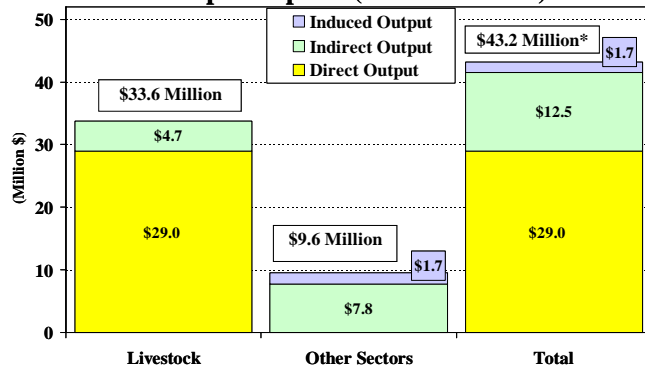
Data provided in this report indicate that livestock and livestock products are a significant source of income for Richardson County farmers. The per farm market value of livestock and livestock products sold averaged \$33,056 (45.7 percent of the total market value of all agricultural products sold) for Richardson County, ranking the county 82<sup>nd</sup> among the Nebraska counties in terms of this measure. The average Richardson County per farm value for livestock and livestock products sold was 25.8 percent of the average per farm value of \$127,959 for Nebraska as a whole.

**Economic Impacts Associated with Livestock Production in Richardson County, Nebraska**

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

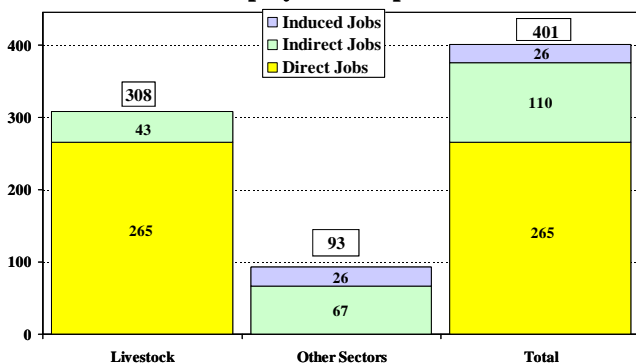
**- Total Output Effects:** The total value of output directly associated with sales to final demand by the livestock sector in Richardson County is estimated to be \$29 million. When the secondary output effects (indirect and induced output) are added, the total output effects associated with the production of livestock and livestock products in Richardson County are estimated to be \$43.2 million. Of this total, 77.8 percent (\$33.6 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 \$9.6 million of output.

**Livestock Sector Economic Impacts in Richardson County**  
**Output Impacts (Million Dollars)**



\*Note: Impact components may not sum to total due to rounding.  
 Source: Computed from IMPLAN Input-Output Model for Richardson County, 2003 data.

**Livestock Sector Economic Impacts in Richardson County**  
**Employment Impacts**



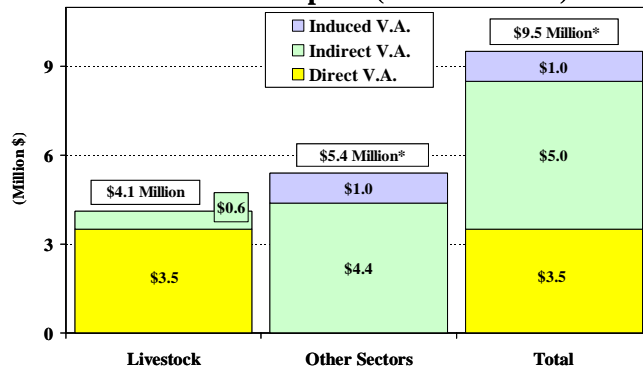
\*Note: Impact components may not sum to total due to rounding.  
 Source: Computed from IMPLAN Input-Output Model for Richardson County, 2003 data.

**- Employment Effects:** There are an estimated 265 individuals employed in the Richardson County livestock products sector producing the output dedicated to sales to final demand (\$29 million). When the indirect and induced employment effects are included, employment in the livestock sector is estimated to be 308 workers (and proprietors). The other secondary employment effects (indirect and induced

effects in sectors other than livestock and livestock products) account for an additional 93 employees that support livestock production. When the indirect and induced effects for all sectors are included, the estimated Richardson County employment supporting the production of livestock is estimated to be 401 workers.

– **Value-Added Effects:** The value-added effects associated with livestock production in Richardson 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 local 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 associated with the

**Livestock Sector Economic Impacts  
in Richardson County  
Value-Added Impacts (Million Dollars)**



\*Note: Impact components may not sum to total due to rounding.  
Source: Computed from IMPLAN Input-Output Model for Richardson County, 2003 data.

production of livestock and livestock products in Richardson County are estimated to be \$9.5 million. Of this amount, \$4.1 million represents value-added in the livestock products sector itself and \$5.4 million is value-added in other economic sectors supporting the production of livestock and livestock products in Richardson County.

**Livestock-Related Impacts Not Analyzed**

The analysis discussed in this report considers the backward-linkages associated with livestock production in Richardson 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.

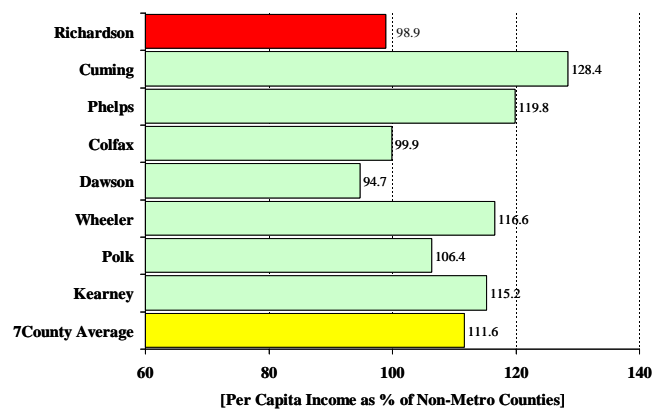
**Livestock Production and Economic Well Being**

A key question about the importance of the livestock industry concerns its contributions to the economic well being of residents of Richardson County and other Nebraska 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 32.9 percent more than the average per capita personal income for all non-metropolitan, Nebraska counties for the year 2004. For the ten-year period from 1995 to 2004, the average per capita personal income in Cuming County was 28.4 percent more than the average for the non-metropolitan areas of Nebraska. In the case of Richardson County, which ranked 62<sup>nd</sup> among the Nebraska counties in terms of livestock and livestock products sold per acre, per capita income for the ten-year period from 1995 to 2004 was \$23,041. This per capita income level was 1.1 percent less than the average per capita income level for all non-metropolitan Nebraska counties for the ten-year review period. Moreover, per capita personal income for Richardson County in 2004 was \$29,099 or 3.4 percent above the average per capita income level for all non-metropolitan Nebraska counties.

For the top seven Nebraska livestock counties, in terms of the average value of livestock and livestock products sold per acre, the per-capita personal income average in 2004 was 10.7 percent more than for all non-metropolitan counties. In the case of the ten-year average (1995-2004), the per capita personal income average in the leading livestock counties was 11.6 percent more than for all non-metropolitan counties.

**Per Capita Personal Income, 10 Year Average\*, as a Percent of Non-Metro Average, Richardson County & Leading Livestock Counties\*\***

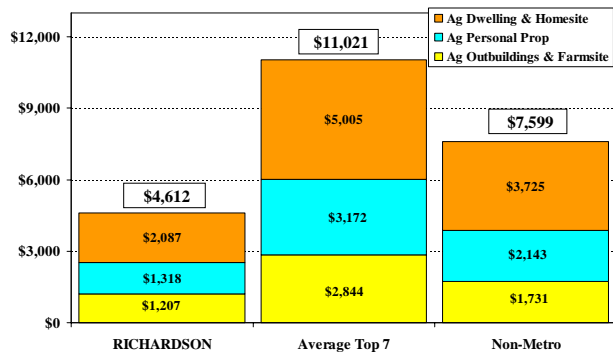


\* 10 Year Average (1995-2004).  
 \*\*Note: Leading seven Nebraska counties in terms of value of livestock and livestock products produced per acre.

### **Livestock Production and Property Taxes**

Livestock production activity contributes in a significant and positive manner to the tax base and to tax revenues needed to support local schools and other local public services. The per capita assessed valuation of agricultural property (other than agricultural land) was \$11,021 for the leading seven Nebraska livestock counties, 45.0 percent more than the \$7,599 of per capita assessed valuation for all non-metropolitan counties in the state. In the case of Richardson County, the per capita assessed valuation of agricultural property (except agricultural land) was \$4,612. This value was 39.3 percent less than the per capita assessed value of the same class of property for all non-metropolitan counties.

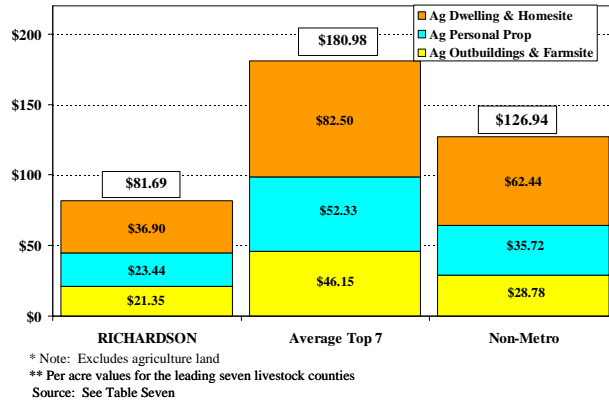
**Per Capita Assessed Valuation for the Agriculture Sector\*, Richardson County, Non-Metro Area and Leading Livestock Counties**



\* Note: Excludes agriculture land  
 \*\* Per farm values for the leading seven livestock counties  
 Source: See Table Seven

Local tax revenues are also significantly enhanced by the presence of livestock production activity. As this chart illustrates, per capita taxes levied on agricultural property (other than agricultural land) were \$180.98 for the seven leading Nebraska livestock counties. This level of per capita tax revenues was \$54.04, or 42.6 percent more than per capita tax revenues for the same class of agricultural property for all non-metropolitan Nebraska counties. In the case of Richardson County, the per capita taxes levied on this class of agricultural property were \$81.69 or 35.6 percent less than per capita taxes levied for all non-metropolitan counties.

**Per Capita Taxes Levied for the Agriculture Sector\*,  
Richardson County, Non-Metro Area and Leading Livestock Counties**

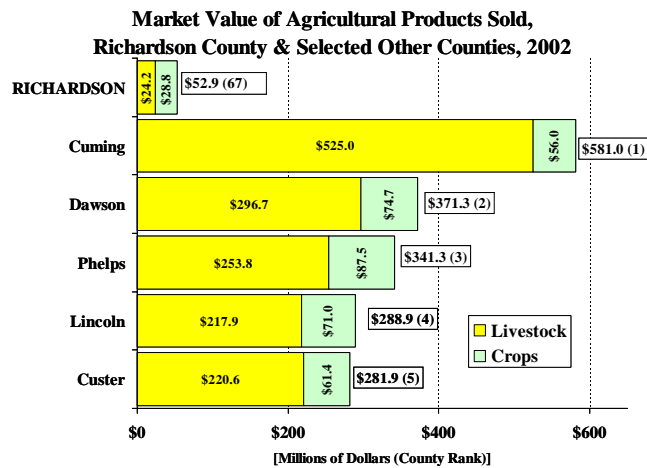


# Economic Importance of and Economic Impacts Associated with Livestock Production in Richardson County, Nebraska

Information provided in this report focuses on the importance of the livestock sector to the economy of Richardson County, Nebraska (Richardson 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 Richardson County. The second part of the report analyzes the secondary economic impacts associated with livestock production in Richardson County. This analysis utilizes an IMPLAN input-output (I-O) database and model developed specifically for Richardson County.

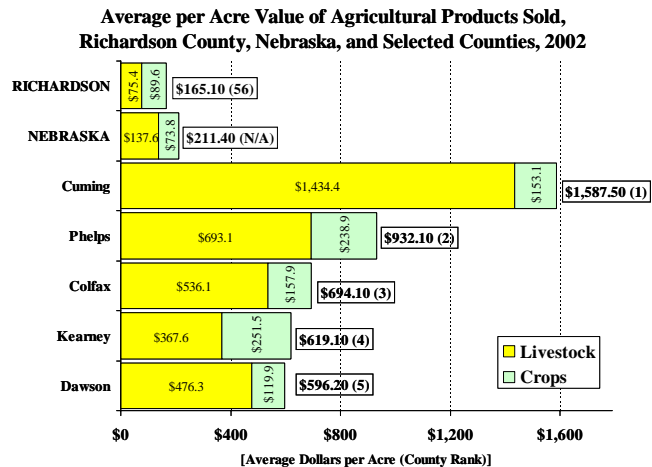
## Livestock and Agricultural Production in Richardson County, Nebraska

The 2002 Census of Agriculture provides data showing the importance of agriculture and the livestock sector for Richardson County. The data presented in Table One include the data for Richardson County, along with data for Nebraska and selected Nebraska counties. The market value of agricultural products sold in Richardson County was \$52.9 million in 2002. This level of sales of agricultural products ranked Richardson County 67<sup>th</sup> among the Nebraska counties in terms of this measure. In terms of the per farm value of agricultural products sold, Richardson County's average of \$72,335 ranked 86<sup>th</sup> among the counties and was 36.8 percent of the Nebraska per farm average of \$196,609.



The data reporting the market value of agricultural products sold may be somewhat misleading 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 4<sup>th</sup> and 5<sup>th</sup> 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 sold per acre, Lincoln County ranks 50<sup>th</sup> and Custer County ranks 51<sup>st</sup> among Nebraska's 93 counties.

The average market value of agricultural products sold per acre is shown in the current chart and includes the data for Richardson 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, Richardson County, with a value of \$165.1, ranks 56<sup>th</sup> among Nebraska's 93 counties. Richardson County's per acre average for all agricultural products is 78.1 percent of the Nebraska per acre average of \$211.40.



Note: Parts may not sum to totals due to rounding.  
Source: USDA, National Agricultural Statistics Service, 2002 Census of Agriculture.

Data presented in Table One indicate that livestock and livestock products are an important source of income for Richardson County farmers. The per farm market value of livestock and livestock products sold averaged \$33,056 for Richardson County, ranking the county 82<sup>nd</sup> among Nebraska's 93 counties in terms of this measure. The market value of livestock products sold in Richardson County accounted for 45.7 percent of the total market value of all agricultural products sold, compared to 65.1 percent for Nebraska. The average Richardson County per farm value (for livestock and livestock products sold) was 25.8 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; estimated market value of land and buildings; estimated market value of machinery and equipment; and net cash farm income of farm operations for Richardson County, selected other Nebraska counties, and Nebraska.

**Table One**  
**Agricultural Characteristics, Richardson County, Nebraska, and Selected Nebraska Counties, 2002**

	<b>RICHARDSON COUNTY</b>	<b>Nebraska</b>	<b>Buffalo</b>	<b>Colfax</b>	<b>Cuming</b>	<b>Custer</b>	<b>Dawson</b>	<b>Kearney</b>	<b>Lincoln</b>	<b>Phelps</b>	<b>Polk</b>	<b>Wheeler</b>
<b>Number of farms</b>	732	49,355	989	589	904	1,149	718	412	959	470	527	194
% FT Farms <sup>(a)</sup>	60.1	73.0	70.6	75.0	76.0	76.1	74.2	87.9	67.4	80.6	79.1	75.8
<b>Land in farms (Acres)</b>	320,783	45,903,116	601,256	244,361	365,994	1,501,959	622,805	331,283	1,529,011	366,154	264,455	338,136
Average size (Acres)	438	930	608	415	405	1,307	867	804	1,594	779	502	1,743
<b>Farm employment<sup>(b)</sup></b>	803	60,084	1,196	780	1,251	1,566	1,107	657	1,305	686	654	341
Average per farm	1.1	1.2	1.2	1.3	1.4	1.4	1.5	1.6	1.4	1.5	1.2	1.8
<b>Estimated market value of land and buildings</b>												
Average per farm (\$)	417,609	723,863	787,773	627,679	658,526	696,003	830,919	1,223,182	846,826	1,159,506	972,107	899,296
Average per acre (\$)	973	776	1,312	1,629	1,571	535	1,014	1,447	509	1,479	1,851	525
<b>Estimated market value of all machinery and equipment</b>												
Average per farm (\$)	78,948	111,776	128,090	121,938	111,129	104,469	137,066	229,426	112,748	205,673	142,746	134,128
<b>Market value of agricultural products sold</b>												
(\$1,000)	52,949	9,703,657	179,004	169,600	580,999	281,928	371,332	205,090	288,881	341,280	148,561	146,154
Average per farm (\$)	72,335	196,609	180,995	287,946	642,698	245,368	517,176	497,791	301,231	726,127	281,900	753,372
Average per acre (\$)	165	211	298	694	1,587	188	596	619	189	932	562	432
<b>Market value of livestock, poultry, and their products</b>												
Per farm (\$)	33,056	127,959	101,782	222,431	580,723	191,950	413,188	295,583	227,222	539,989	188,038	695,067
% Livestock	45.7	65.1	56.2	77.2	90.4	78.2	79.9	59.4	75.4	74.4	66.7	92.3
<b>Net cash farm income of operation</b>												
Average per farm (\$)	11,953	24,820	36,509	19,991	36,148	21,659	40,959	81,169	27,166	81,610	40,832	27,473

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

<sup>(b)</sup> Farm employment estimates for 2003 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 Richardson County, Nebraska**

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

From the Richardson 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 Richardson County, data in Table One provide basic information from the *2002 Census of Agriculture* describing production activity and other parameters for the farm sector.

The IMPLAN database and input-output model provide further insight into the value of production of livestock and livestock products in Richardson 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 Richardson County for 2003. As the data in Table Two show, the total value of output for livestock and livestock products was reported to be \$33.641 million dollars for 2003 (compared to the \$24.2 million market value of livestock and livestock products sold reported by the *2002 Census of Agriculture*<sup>1</sup>).

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 cow-calf operations and cattle feeding) was reported to have a value of production of \$29.228 million for the year 2003. The value of poultry and egg production was reported to be \$1.080 and the other animal production activities, except cattle and poultry, had an estimated output value of \$3.333 million.

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<sup>1</sup> Between 2002 and 2003 the average annual price received by Nebraska farmers for beef cows increased by 23.1 (USDA Nebraska Agricultural Statistics Service. "ALL BEEF CATTLE PRICE" Prices Received By Farmers, Accessed February 2006. Available at: [www.nass.usda.gov/ne/nebhist.htm](http://www.nass.usda.gov/ne/nebhist.htm)).

**Table Two**  
**Agricultural Sector Parameters, Richardson County IMPLAN Database, 2003**

<b>Industry</b>	<b>Industry Output</b>	<b>Employment</b>	<b>Employee Compensation</b>	<b>Proprietor Income</b>	<b>Other Property Income</b>	<b>Total Value Added</b>
	(Million \$)	(Number)	(Million \$)	(Million \$)	(Million \$)	(Million \$)
Oilseed farming	18.109	177	0.076	7.094	3.034	10.740
Grain farming	15.286	256	0.268	4.564	2.777	7.982
All other crop farming	4.720	23	0.305	1.223	1.383	3.025
<b>Livestock &amp; Livestock Products</b>	<b>33.641</b>	<b>308</b>	<b>1.518</b>	<b>0.254</b>	<b>1.374</b>	<b>4.055</b>
Cattle ranching and farming	29.228	232	1.173	0.191	0.882	3.080
Poultry and egg production	1.080	2	0.063	0.133	0.222	0.423
Animal production, except cattle and poultry	3.333	74	0.282	-0.070	0.270	0.552

Source: Minnesota IMPLAN Group, Inc., IMPLAN Input-Output Model and database for Richardson County (2003 data).

The data presented in Table Two show the most significant livestock sector is the beef-producing sector, accounting for 86.9 percent of the total production of livestock and livestock products in Richardson County in 2003. Moreover, the beef-producing sector accounted for 232 of the 308 total reported employees in the livestock-producing sector and accounted for 76.0 percent of the value added by the livestock and livestock products sector.

### **Economic Impact Analysis**

The economic linkages and impacts associated with livestock operations in Richardson County are analyzed in the balance of this report. The analysis utilizes an input-output model developed for Richardson County, for which the livestock producing sectors have been collapsed (aggregated) into one sector (livestock and livestock products). This involves aggregating the three 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 Richardson County. This analysis involves identifying the multiplier effects associated with this production 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 Richardson 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 Richardson County are provided in Table Three. The three economic 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 Richardson County, there will be an estimated increase in total economic output of \$1.4896 for the Richardson County economy.

**Table Three**  
**Input-Output Multipliers for the Livestock & Livestock Products Sector,**  
**Richardson County**

Multiplier Component	Total		
	Total Output <sup>(a)</sup>	Value Added <sup>(b)</sup>	Total Employment <sup>(c)</sup>
Direct	1.0000	0.1205	9.1371
Indirect	0.4301	0.1721	3.8162
Induced	0.0595	0.0362	0.8884
Total	1.4896	0.3288	13.8417
Multiplier <sup>(d)</sup>	1.4896	2.7286	1.5149

<sup>(a)</sup> Increase in output for each dollar of sales to final demand.

<sup>(b)</sup> Change in value added for each dollar of sales to final demand.

<sup>(c)</sup> Total jobs created per million dollars of sales to final demand.

<sup>(d)</sup> Multiplier values equal the total effects divided by the direct effect.

Source: Minnesota IMPLAN Group, Inc., IMPLAN Input-Output Model for Richardson County, 2003 data.

The value-added multiplier estimates there will be total payments to the factors of production of \$0.3288 for each dollar of sales of livestock and livestock products to final demand. This total value-added effect includes the direct effect of \$0.1205 associated with the initial sales of one dollar of output to final demand, \$0.1721 of payment to the factors of production associated with the increase in output (sales) for the intermediate (supplying) sectors, and the induced effect of \$0.0362 related to the increased household demand for goods and services resulting from the increased payment to labor (household

income). The value-added multiplier of 2.7286 indicates for each dollar of value-added in the livestock and livestock products sector, we would expect to see approximately \$1.73 of additional value-added in other sectors of the Richardson 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 13.8417 jobs supported, including the direct, indirect, and induced components of the employment multiplier. Moreover, the employment multiplier of 1.5149 indicates that for each 100 workers employed in the livestock and livestock products sector, we would expect to find 51 workers employed in other sectors which support livestock production in Richardson County.

Table Four provides a summary of the economic effects associated with the production of livestock and livestock products in Richardson 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 Richardson County livestock producers is estimated to be \$29 million. From the Richardson County I-O model, we estimate that for the Richardson County livestock sector to sell this amount of output to final demand, it would need to produce a total of \$33.6 million of total output, as approximately 13.9 percent (\$4.6 million) of the total output would represent intermediate sales (sales by one producer in the livestock sector to other producers in the same sector).

**Table Four**  
**Summary of Output, Employment and Value-Added Effects**  
**Associated with the Livestock Products Sector in Richardson County, Nebraska**  
**(Annual Estimates, 2003)**

	<b>Livestock Products</b>	<b>Other Economic Sectors</b>	<b>Total Economic Impacts</b>
<b>Output Effects</b>			
Direct Output (Value of Production)	\$28,970,000	\$0	\$28,970,000
Indirect Effects [0.4301 of Direct]	\$4,661,000	\$7,799,000	\$12,460,000
Induced Effects [0.0595 of Direct]	\$10,000	\$1,714,000	\$1,724,000
<b>Total Output Effects</b>	<b>\$33,641,000</b>	<b>\$9,513,000</b>	<b>\$43,154,000</b>
<b>Employment Effects</b>			
Direct Employment (FTE)	265	0	265
Indirect Effects [0.4151 of Direct]	43	67	110
Induced Effects [0.0981 of Direct]	0	26	26
<b>Total Employment (FTE)</b>	<b>308</b>	<b>93</b>	<b>401</b>
<b>Value-Added Effects</b>			
Direct Value-Added (Payments)	\$3,492,000	\$0	\$3,492,000
Indirect Effects [1.4275 of Direct]	\$562,000	\$4,423,000	\$4,985,000
Induced Effects [0.3001 of Direct]	\$1,000	\$1,047,000	\$1,048,000
<b>Total Value-Added Effects</b>	<b>\$4,055,000</b>	<b>\$5,470,000</b>	<b>\$9,525,000</b>

Source: Computed from the IMPLAN Input-Output Model for Richardson County (2003 data).

### **-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 Richardson County are estimated to be \$43.2 million. Of this total, 77.8 percent (\$33.6 million) is accounted for by output (direct, indirect, and induced) produced by the livestock sector and the indirect and induced effects in other Richardson County economic sectors represent an additional \$9.6 million of output.

### **-Employment Effects**

There are an estimated 265 people employed in the livestock products sector to produce the output dedicated to sales to final demand (\$29 million); when the indirect and induced effects are included, the estimated employment in the livestock sector increases to 308 people. The other secondary employment effects (indirect and induced effects in sectors other than livestock and livestock products), account for an additional 93 jobs and total employment in Richardson County supporting the production of livestock and livestock products is estimated to be 401 employees.

### **-Value-Added Effects**

The value-added effects associated with the livestock production in Richardson 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 Richardson County are estimated to be \$9.5 million. Of this amount, \$4.1 million is value-added in the livestock products sector itself and an estimated \$5.5 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 Richardson County.

Table Five provides additional detail describing the economic effects associated with the production of livestock and livestock products in Richardson 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 Richardson County. Shown in the table is a list of the economic and business sectors likely to be positively impacted by the production of livestock products. The impacts presented in the table include the predicted output, value-added, and employment impacts for each of the sectors associated with the production and sales to final demand of the output produced by the livestock sector in Richardson County.

**Table Five**  
**Distribution of Livestock Production Economic Impacts, by Selected Economic Sector<sup>(a)</sup>,**  
**Richardson County Nebraska, 2003**

<b>Industry</b>	<b>Total Output</b>	<b>% Total</b>		<b>Employment</b>	<b>% Total Emp.</b>
		<b>Output</b>	<b>Value Added</b>		
Livestock	33,641,000	77.95	4,055,000	307.4	76.75
All other crop farming	3,557,000	8.24	2,133,000	17.2	4.29
Wholesale trade	930,000	2.16	707,000	13.4	3.35
Truck transportation	569,000	1.32	253,000	6.2	1.55
Grain farming	414,000	0.96	216,000	6.9	1.72
Monetary authorities and depository credit institutions	397,000	0.92	280,000	2.9	0.72
Owner-occupied dwellings	378,000	0.88	302,000	0.0	0.00
Rail transportation	289,000	0.67	182,000	1.1	0.27
Veterinary services	247,000	0.57	114,000	4.2	1.05
Commercial machinery repair and maintenance	195,000	0.45	51,000	3.2	0.80
Hospitals	177,000	0.41	74,000	2.1	0.52
Real estate	163,000	0.38	112,000	0.9	0.22
Oilseed farming	148,000	0.34	88,000	1.4	0.35
Automotive repair and maintenance, except car washes	139,000	0.32	58,000	2.7	0.67
Maintenance and repair of nonresidential buildings	133,000	0.31	55,000	1.7	0.42
Food services and drinking places	119,000	0.28	42,000	3.4	0.85
Other State and local government enterprises	113,000	0.26	31,000	0.7	0.17
Accounting and bookkeeping services	111,000	0.26	53,000	1.9	0.47
Oil and gas extraction	107,000	0.25	26,000	0.4	0.10
Industrial truck, trailer, and stacker manufacturing	85,000	0.20	20,000	0.5	0.12
Food and beverage stores	83,000	0.19	56,000	1.8	0.45
Civic, social, professional and similar organizations	78,000	0.18	18,000	1.7	0.42
Radio and television broadcasting	77,000	0.18	29,000	0.5	0.12
Motor vehicle and parts dealers	76,000	0.18	60,000	1.1	0.27
Telecommunications	61,000	0.14	35,000	0.2	0.05
All other	868,000	2.01	475,000	17.0	4.24
<b>Total</b>	<b>43,155,000</b>	<b>100.00</b>	<b>9,525,000</b>	<b>400.5</b>	<b>100.00</b>

(a) The business or economic sectors impacted by the production of \$28,970,000 of livestock and livestock products for sales to final demand in Richardson County (2003).

Source: Computed from the IMPLAN Input-Output Model for Richardson County (2003 data).

### **Livestock Production and Economic Well Being**

Data presented in Table Six provide further insight into the importance of livestock production activities as a contributing factor to economic well being for selected livestock production counties. Included in the table are data showing the average per acre value of livestock and livestock products sold for Richardson 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 2004. Also, recognizing the volatility of year-to-year changes in total personal and per capita personal income, especially in rural counties, an average per capita personal income index measure is included for a ten-year period, 1995-2004.

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

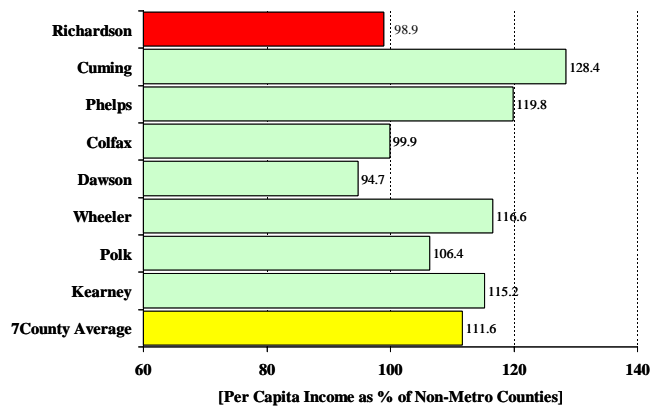
County/Nebraska	Livestock & Livestock Products Per Acre		Per Capita Income (% of Non-Metro Counties)	
	Value (\$)	County Rank	2004	10 Yr Avg. (1995-2004)
<b>Richardson</b>	<b>75.40</b>	<b>62</b>	<b>103.4</b>	<b>98.9</b>
NEBRASKA	137.60	N/A	114.9	115.8
Cuming	1,434.40	1	132.9	128.4
Phelps	693.10	2	118.3	119.8
Colfax	536.10	3	98.4	99.9
Dawson	476.30	4	87.9	94.7
Wheeler	398.80	5	123.2	116.6
Polk	374.70	6	104.5	106.4
Kearney	367.60	7	109.8	115.2
<b>Average for Top Seven Livestock Counties</b>			<b>110.7</b>	<b>111.6</b>

Source: USDA, National Agricultural Statistics Service, *2002 Census of Agriculture*, and U.S. Bureau of Economic Analysis (BEA), County Personal Income, 1995-2004.

As the data shown in Table Six and the accompanying chart indicate, per capita personal income for 2004 in Cuming County, the leading county in Nebraska in terms of the production of livestock and livestock products, was 32.9 percent more than the average per capita personal income for all non-metropolitan counties. For the ten-year period from 1995 to 2004, the average per capita personal income in Cuming County was 28.4 percent more than the average for the non-metropolitan areas of Nebraska. In the case of Richardson County, which ranked 62<sup>nd</sup> among the Nebraska counties in terms of livestock sold per acre, average per capita income for the ten-year period, from 1995 to 2004, was \$23,041. This per capita income level was 1.1 percent below the average per capita income level for all non-metropolitan counties for the 1995-2004 period. In 2004, per capita personal income for Richardson County was \$29,099, or 3.4 percent above the average per capita income level for all non-metropolitan counties.

The data presented in the table and the accompanying chart also show that, for the top seven livestock counties, per capita personal income in 2004 was 10.7 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 11.6 percent more than for all non-metropolitan counties.

**Per Capita Personal Income, 10 Year Average\*, as a Percent of Non-Metro Average, Richardson County & Leading Livestock Counties\*\***



\* 10 Year Average (1995-2004).

\*\*Note: Leading seven Nebraska counties in terms of value of livestock and livestock products produced per acre.

## **Livestock Production and Property Taxes**

As the data presented in Table Seven show, livestock production activity contributes in a significant and positive manner to the tax base and to tax revenues needed to support local schools and other local public services. Part A of the table indicates the per capita assessed valuation of agricultural property (other than agricultural land) was \$11,021 for the leading seven livestock counties, 45.0 percent more than the \$7,599 of per capita assessed valuation for all non-metropolitan counties in the state. In the case of Richardson County, the per capita assessed valuation of agricultural property (except agricultural land) was \$4,612. This value was 60.7 percent of the per capita assessed value of the same class of property for all non-metropolitan counties.

**Table Seven**  
**Agricultural Property Valuation and Taxes Levied Per Capita, Richardson County,**  
**Non-Metropolitan Nebraska, and Leading Nebraska Livestock Counties**

<b>Part A -- Per Capita Assessed Valuation</b>				
<b>County/ Nebraska</b>	<b>Ag. Outbuildings &amp; Farmsite</b>	<b>Ag. Personal Property</b>	<b>Ag. Dwelling &amp; Homesite</b>	<b>Total Ag. Property Except Ag. Land</b>
<b>RICHARDSON</b>	<b>\$1,207</b>	<b>\$1,318</b>	<b>\$2,087</b>	<b>\$4,612</b>
Non-Metro Area*	1,731	2,143	3,725	7,599
Cuming	4,756	4,131	5,438	14,326
Phelps	3,117	4,472	4,287	11,876
Colfax	2,780	2,067	5,543	10,390
Dawson	906	1,865	2,646	5,417
Wheeler	26,377	10,073	8,543	44,993
Polk	4,305	4,203	8,634	17,142
Kearney	2,857	4,774	9,800	17,431
<b>Average for Top 7 Livestock Counties</b>	<b>\$2,844</b>	<b>\$3,172</b>	<b>\$5,005</b>	<b>\$11,021</b>

<b>Part B -- Per Capita Taxes Levied</b>				
<b>County/ Nebraska</b>	<b>Ag. Outbuildings &amp; Farmsite</b>	<b>Ag. Personal Property</b>	<b>Ag. Dwelling &amp; Homesite</b>	<b>Total Ag. Property Except Ag. Land</b>
<b>RICHARDSON</b>	<b>\$21.35</b>	<b>\$23.44</b>	<b>\$36.90</b>	<b>\$81.69</b>
Non-Metro Area*	28.78	35.72	62.44	126.94
Cuming	77.96	67.58	88.90	234.44
Phelps	51.46	74.18	70.89	196.53
Colfax	47.26	35.08	93.77	176.11
Dawson	15.42	31.91	44.52	91.85
Wheeler	375.40	143.19	122.23	640.82
Polk	65.21	63.79	130.91	259.91
Kearney	48.08	80.64	166.67	295.39
<b>Average for Top 7 Livestock Counties</b>	<b>\$46.15</b>	<b>\$52.33</b>	<b>\$82.50</b>	<b>\$180.98</b>

\* Non-Metro Area includes Nebraska except Cass, Douglas, Lancaster, Sarpy, and Washington counties.

Source: Special tabulation provided by the Nebraska Department of Property Assessment & Taxation

Part B of Table Seven also illustrates that local tax revenues are significantly enhanced by the presence of livestock production activity. These data show the per capita taxes levied on agricultural property (other than agricultural land) were \$180.98 for the top seven livestock counties. This level of per farm tax revenues was \$54.04, or 42.6 percent more than per capita tax revenues for the same class of agricultural property for all non-metropolitan counties. In the case of Richardson County, per capita taxes levied on this class of agricultural property were \$81.69, or 45.1 percent of the average per capita tax levied for all non-metropolitan areas.

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

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