

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

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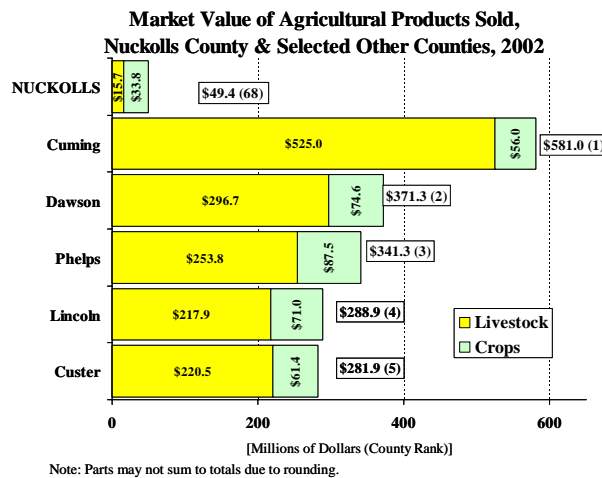
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# Executive Summary

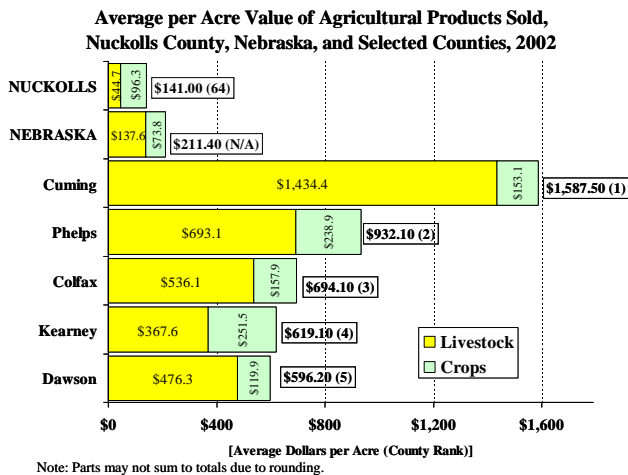
Information provided in this report focuses on the economic importance of the livestock sector in Nuckolls County, Nebraska (Nuckolls County). The first part of the report reviews agriculture data from the *2002 Census of Agriculture*. These data provide information on the importance of agriculture and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

## Livestock and Agricultural Production in Nuckolls County, Nebraska

The *2002 Census of Agriculture* provides data showing the importance of agriculture and the livestock sector in Nuckolls County. The data presented in the chart indicate the market value of agricultural products sold in Nuckolls County totaled \$49.4 million in 2002. Considering the per farm value of agricultural products sold, Nuckolls County's average of \$103,851 ranked 78th among Nebraska's 93 counties and was 52.8 percent of the state per farm average of \$196,609.



The average market value of agricultural products sold per acre is shown in the current chart and includes the data for Nuckolls County and for the leading five counties in terms of this measure, along with the Nebraska data. Nuckolls County, with a value of \$141.00, ranks 64th among the Nebraska counties in terms of the market value of agriculture products per acre, with \$44.70 of that amount accounted for by livestock and livestock products. Nuckolls County's per acre average for all agricultural products is 66.7 percent of the state per acre average of \$211.40.



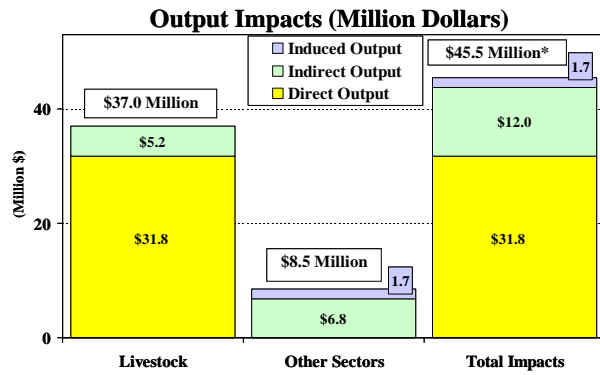
Data provided in this report indicate that livestock and livestock products, while making a much smaller contribution to average farm sales than the Nebraska average, are a significant source of income for Nuckolls County farmers. The per farm market value of livestock and livestock products sold averaged \$32,901 (31.7 percent of the total market value of all agricultural products sold) for Nuckolls County, ranking the county 83rd among the Nebraska counties in terms of this measure. The average Nuckolls County per farm value for livestock and livestock products sold was 25.7 percent of the average per farm value of \$127,959 for Nebraska as a whole.

**Economic Impacts Associated with Livestock Production in Nuckolls 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 Nuckolls County. The analysis utilizes an IMPLAN input-output (I-O) model developed for Nuckolls 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.

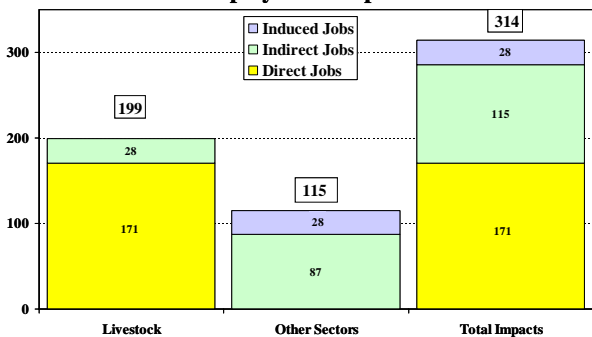
**- Total Output Effects:** The total value of output directly associated with sales to final demand by the livestock sector in Nuckolls County is estimated to be \$31.8 million. When the secondary output effects (indirect and induced output) are added, the total output effects associated with the production of livestock and livestock products in Nuckolls County are estimated to be \$45.5 million. Of this total, 81.3 percent (\$37.0 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 \$8.5 million of output.

**Livestock Sector Economic Impacts in Nuckolls County**



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

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



Source: Computed from IMPLAN Input-Output Model for Nuckolls County, 2003 data.

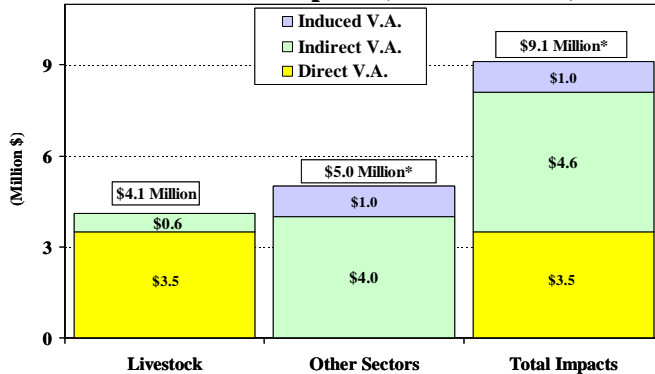
**- Employment Effects:** There are an estimated 171 individuals employed in the Nuckolls County livestock products sector producing the output dedicated to sales to final demand (\$31.8 million). When the indirect and induced employment effects are included, employment in the livestock sector is estimated to be 199 workers (and proprietors). The other secondary employment effects (indirect and induced effects in sectors other than livestock and livestock products)

account for an additional 115 employees that support livestock production. When the indirect and induced effects for all sectors are included, the estimated Nuckolls County employment supporting the production of livestock is estimated to be 314 workers.

**- Value-Added Effects:** The value-added effects associated with livestock production in Nuckolls 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 production of livestock and livestock products in Nuckolls County are estimated to be \$9.1 million. Of this amount, \$4.1 million represents value-added in the livestock products sector itself and \$5.0 million is value-added in other economic sectors supporting the production of livestock and livestock products in Nuckolls County.

**Livestock Sector Economic Impacts  
in Nuckolls 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 Nuckolls County, 2003 data.

**Livestock-Related Impacts Not Analyzed**

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

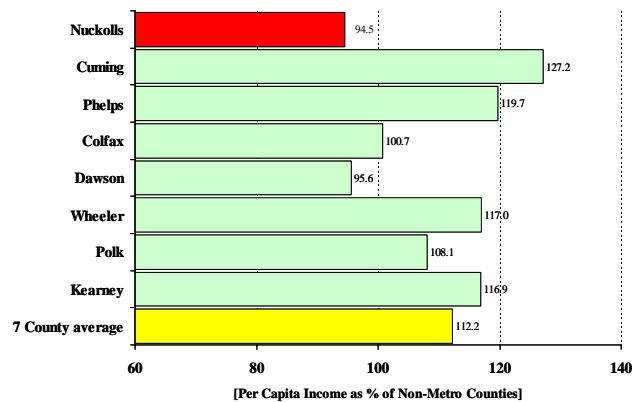
**Livestock Production and Economic Well Being**

A key question about the importance of the livestock industry concerns its contributions to the economic well being of residents of Nuckolls 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 26.9 percent more than the average per capita personal income for all non-metropolitan, Nebraska counties for the year 2003. For the ten-year period from 1994 to 2003, the average per capita personal income in Cuming County was 27.2 percent more than the average for the non-metropolitan areas of Nebraska. In the case of Nuckolls 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 1994 to 2003 was \$21,051. This per capita income level was 4.5 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 Nuckolls County in 2003 was \$24,974 or 5.0 percent less than 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 2003 was 12.7 percent more than for all non-metropolitan counties. In the case of the ten-year average (1994-2003), the per capita personal income average in the leading livestock counties was 12.2 percent more than for all non-metropolitan counties.

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

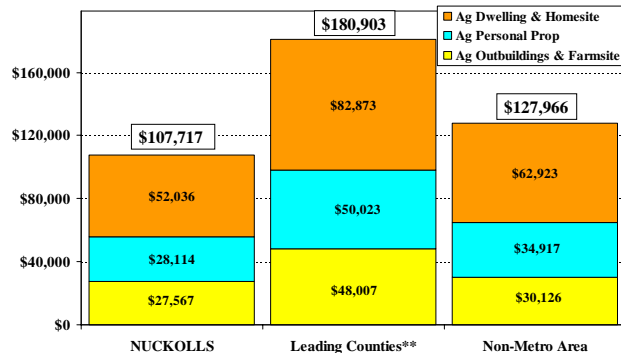


\* 10 Year Average (1994-2003).  
 \*\*Note: Leading seven Nebraska counties in terms of value of livestock and livestock products produced per acre.

### **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 farm assessed valuation of agricultural property (other than agricultural land) was \$180,903 for the leading seven Nebraska livestock counties, 41.4 percent more than the \$127,966 of per farm assessed valuation for all non-metropolitan counties in the state. In the case of Nuckolls County, the per farm assessed valuation of agricultural property (except agricultural land) was \$107,717. This value was 84.2 percent of the per farm assessed value of the same class of property for all non-metropolitan counties.

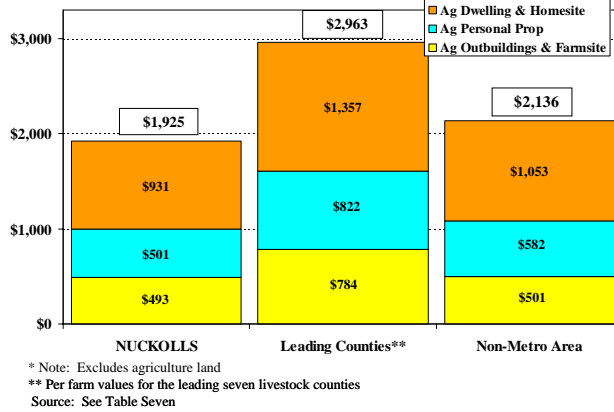
**Per Farm Assessed Valuation for the Agriculture Sector\*, Nuckolls County, Non-Metro Area and Leading Livestock Counties**



\* 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 farm taxes levied on agricultural property (other than agricultural land) were \$2,963 for the seven leading Nebraska livestock counties. This level of per farm tax revenues was \$827, or 38.7 percent more than per farm tax revenues for the same class of agricultural property for all non-metropolitan Nebraska counties. In the case of Nuckolls County, the per farm taxes levied on this class of agricultural property were \$1,925, or 90.1 percent of the average per capita tax levies for all non-metropolitan counties.

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

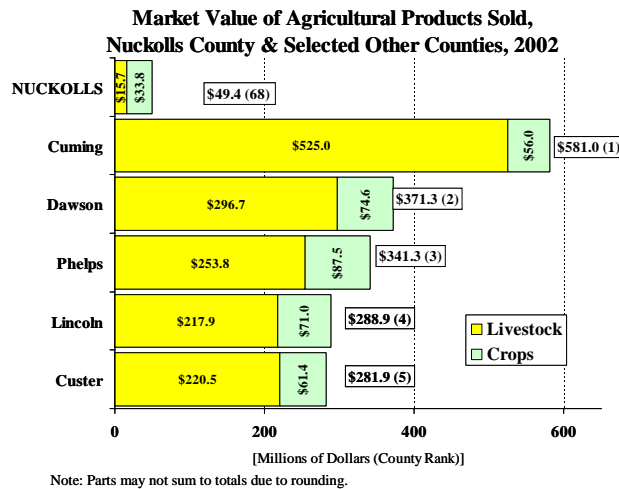


## Economic Importance of and Economic Impacts Associated with Livestock Production in Nuckolls County, Nebraska

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

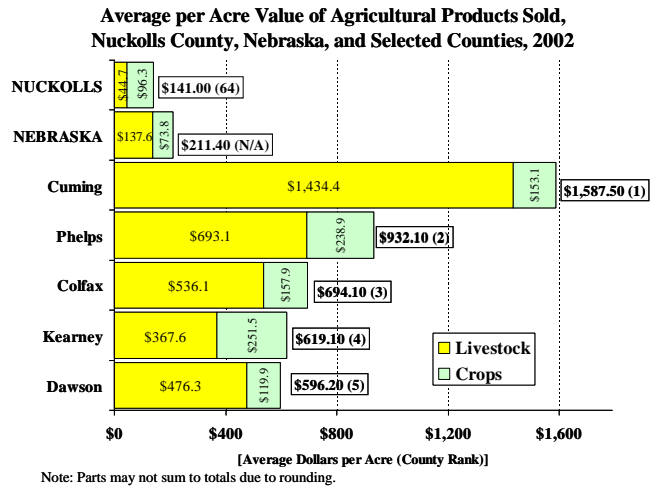
### Livestock and Agricultural Production in Nuckolls County, Nebraska

The *2002 Census of Agriculture* provides data showing the importance of agriculture and the livestock sector for Nuckolls County. The data presented in Table One include the data for Nuckolls County, along with data for Nebraska and selected Nebraska counties. The market value of agricultural products sold in Nuckolls County was \$49.4 million in 2002. This level of sales of agricultural products ranked Nuckolls County 68th among the Nebraska counties in terms of this measure. In terms of the per farm value of agricultural products sold, Nuckolls County's average of \$103,851 ranked 78th among the counties and was 52.8 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 4th and 5th 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 50th and Custer County ranks 51st 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 Nuckolls 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, Nuckolls County with a value of \$141.0 ranks 64th among Nebraska's 93 counties. Nuckolls County's per acre average for all agricultural products is 66.7 of the Nebraska per acre average of \$211.40.



Data presented in Table One indicate that livestock and livestock products are not as important as a source of income for Nuckolls County farmers as is true for Nebraska as a whole. The per farm market value of livestock and livestock products sold averaged \$103,851 for Nuckolls County, ranking the county 78th among Nebraska's 93 counties in terms of this measure. The market value of livestock products sold in Nuckolls County accounted for 31.7 percent of the total market value of all agricultural products sold, compared to 65.1 percent for Nebraska. The average Nuckolls County per farm value (for livestock and livestock products sold) was 25.7 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 Nuckolls County, selected other Nebraska counties, and Nebraska.

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

	NUCKOLLS COUNTY	Nebraska	Buffalo	Colfax	Cuming	Custer	Dawson	Fillmore	Kearney	Morrill	Wheeler	York
<b>Number of Farms</b>	476	49,355	989	589	904	1,149	718	499	412	443	194	617
% FT Farms <sup>(a)</sup>	73.9	73.0	70.6	75.0	76.0	76.1	74.2	85.6	87.9	70.0	75.8	77.8
<b>Land in farms (Acres)</b>	350,539	45,903,116	601,256	244,361	365,994	1,501,959	622,805	363,915	331,283	872,351	338,136	353,762
Average size (Acres)	736	930	608	415	405	1,307	867	729	804	1,969	1,743	573
<b>Farm Employment<sup>(b)</sup></b>	545	60,084	1,196	780	1,251	1,566	1,150	767	657	628	341	778
Average per farm	1.1	1.2	1.2	1.3	1.4	1.4	1.62	1.5	1.6	1.5	1.8	1.3
<b>Estimated market value of land and buildings</b>												
Average per farm (\$)	697,215	723,863	787,773	627,679	658,526	696,003	830,919	1,178,604	1,223,182	657,996	899,296	1,103,666
Average per acre (\$)	900	776	1,312	1,629	1,571	535	1,014	1,685	1,447	327	525	2,009
<b>Estimated market value of all machinery and equipment</b>												
Average per farm (\$)	96,559	111,776	128,090	121,938	111,129	104,469	137,066	191,054	229,426	104,187	134,128	180,841
<b>Market value of agricultural products sold</b>												
(\$1,000)	49,433	9,703,657	179,004	169,600	580,999	281,928	371,332	128,003	205,090	162,576	146,154	160,833
Average per farm (\$)	103,851	196,609	180,995	287,946	642,698	245,368	517,176	256,519	497,791	366,990	753,372	260,669
Average per acre (\$)	141	211	298	694	1,587	188	596	352	619	186	432	455
<b>Market value of livestock, poultry, and their products</b>												
Per farm (\$)	32,901	127,959	101,782	222,431	580,723	191,950	413,188	97,629	295,583	300,009	695,067	113,810
% Livestock	31.7	65.1	56.2	77.2	90.4	78.2	79.9	38.1	59.4	81.7	92.3	43.7
<b>Net cash farm income of operation</b>												
Average per farm (\$)	18,039	24,820	36,509	19,991	36,148	21,659	40,959	55,786	81,169	35,873	27,473	51,544

<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 Nuckolls County, Nebraska**

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

From the Nuckolls 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 Nuckolls 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 Nuckolls 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 Nuckolls County for 2003. As the data in Table Two show, the total value of output for livestock and livestock products was reported to be \$37.0 million dollars for 2003 (compared to the \$15.7 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 \$34.0 million for the year 2003. Other animal production activities, except cattle and poultry, had an estimated output value of \$3.0 million. No poultry and egg production as reported in Nuckolls County during 2003.

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<sup>1</sup> Between 2002 and 2003 the number of beef cows in Nuckolls County increased 21.4 percent (USDA National Agricultural Statistics Service. "Livestock". Quick Stats U.S. & All States County Data. Accessed February 2006. Available at: [http://www.nass.usda.gov:8080/QuickStats/PullData\\_US\\_CNTY](http://www.nass.usda.gov:8080/QuickStats/PullData_US_CNTY).) and 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: <http://www.nass.usda.gov/ne/nebhist.htm>).

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

<b>Industry</b>	<b>Industry Output</b>	<b>Employment</b>	<b>Employee Compensation</b>	<b>Proprietor Income</b>	<b>Property Income</b>	<b>Other Value Added</b>
	(Million \$)	(Number)	(Million \$)	(Million \$)	(Million \$)	(Million \$)
Oilseed farming	11.894	69	0.047	4.659	1.996	7.054
Grain farming	28.728	284	0.475	8.578	5.247	15.001
Vegetable and melon farming	0.667	2	0.049	0.253	0.208	0.518
All other crop farming	1.806	5	0.095	0.422	0.518	1.083
<b>Livestock &amp; Livestock Products</b>	<b>37.008</b>	<b>198</b>	<b>1.528</b>	<b>0.159</b>	<b>1.359</b>	<b>4.080</b>
Cattle ranching and farming	34.017	159	1.289	0.222	1.103	3.585
Animal production, except cattle and poultry	2.991	39	0.239	-0.063	0.256	0.495

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

The data presented in Table Two show the most significant livestock sector is the beef-producing sector, accounting for 91.9 percent of the total production of livestock and livestock products in Nuckolls County in 2002. Moreover, the beef-producing sector accounted for 159 of the 198 total reported employees in the livestock-producing sector and accounted for 87.9 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 Nuckolls County are analyzed in the balance of this report. The analysis utilizes an input-output model developed for Nuckolls County, for 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 Nuckolls 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 Nuckolls 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 Nuckolls 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 Nuckolls County, there will be an estimated increase in total economic output of \$1.43 for the Nuckolls County economy.

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

Multiplier Component	Total		
	Total Output <sup>(a)</sup>	Value Added <sup>(b)</sup>	Total Employment <sup>(c)</sup>
Direct	1.0000	0.1103	5.3666
Indirect	0.3779	0.1436	3.6135
Induced	0.0542	0.0330	0.8924
Total	1.4321	0.2869	9.8725
Multiplier <sup>(d)</sup>	1.4321	2.6011	1.8396

<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 Nuckolls County, 2003 data.

The value-added multiplier estimates there will be total payments to the factors of production of \$0.2868 for each dollar of sales of livestock and livestock products to final demand. This total value-added effect includes the direct effect of \$0.1103 associated with the initial sales of one dollar of output to final demand, \$0.1436 of payment to the factors of production associated with the increase in output (sales) for the intermediate (supplying) sectors, and the induced effect of \$0.0330 related to the increased household demand for goods and services resulting from the increased payment to labor (household income). The value-added multiplier of 2.6011 indicates for each dollar of value-added

in the livestock and livestock products sector, we would expect to see approximately \$1.60 of additional value-added in other sectors of the Nuckolls 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 9.87 jobs supported, including the direct, indirect, and induced components of the employment multiplier. Moreover, the employment multiplier of 1.8396 indicates that for each 100 workers employed in the livestock and livestock products sector, we would expect to find 84 workers employed in other sectors which support livestock production in Nuckolls County.

Table Four provides a summary of the economic effects associated with the production of livestock and livestock products in Nuckolls 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 Nuckolls County livestock producers is estimated to be \$31.8 million. From the Nuckolls County I-O model, we estimate that for the Nuckolls County livestock sector to sell this amount of output to final demand, it would need to produce a total of \$37.0 million of total output, as approximately 14.0 percent (\$5.2 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 Nuckolls County, Nebraska**  
**(Annual Estimates, 2003)**

	Livestock Products	Other Economic Sectors	Total Economic Impacts
<b>Output Effects</b>			
Direct Output (Value of Production)	\$31,814,000	\$0	\$31,814,000
Indirect Effects [0.3779 of Direct]	\$5,186,000	\$6,837,000	\$12,023,000
Induced Effects [0.0542 of Direct]	\$8,000	\$1,716,000	\$1,724,000
<b>Total Output Effects</b>	<b>\$37,008,000</b>	<b>\$8,553,000</b>	<b>\$45,561,000</b>
<b>Employment Effects</b>			
Direct Employment (FTE)	171	0	171
Indirect Effects [0.6737 of Direct]	28	87	115
Induced Effects [0.1664 of Direct]	0	28	28
<b>Total Employment (FTE)</b>	<b>199</b>	<b>116</b>	<b>314</b>
<b>Value-Added Effects</b>			
Direct Value-Added (Payments)	\$3,508,000	\$0	\$3,508,000
Indirect Effects [1.3025 of Direct]	\$572,000	\$3,997,000	\$4,569,000
Induced Effects [0.2990 of Direct]	\$1,000	\$1,048,000	\$1,049,000
<b>Total Value-Added Effects</b>	<b>\$4,081,000</b>	<b>\$5,045,000</b>	<b>\$9,126,000</b>

Source: Computed from the IMPLAN Input-Output Model for Nuckolls 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 Nuckolls County are estimated to be \$45.6 million. Of this total, 81.2 percent (\$37.0 million) is accounted for by output (direct, indirect, and induced) produced by the livestock sector and the indirect and induced effects in other Nuckolls County economic sectors represent an additional \$8.6 million of output.

### **-Employment Effects**

There are an estimated 171 people employed in the livestock products sector to produce the output dedicated to sales to final demand (\$31.8 million); when the indirect and induced effects are included, the estimated employment in the livestock sector increases to 199 people. The other secondary employment effects (indirect and induced effects in sectors other than livestock and livestock products), account for an additional 115 jobs and total employment in Nuckolls County supporting the production of livestock and livestock products is estimated to be 314 employees.

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

The value-added effects associated with the livestock production in Nuckolls 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 Nuckolls County are estimated to be \$9.1 million. Of this amount, \$4.1 million is value-added in the livestock products sector itself and an estimated \$5.0 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 Nuckolls County.

Table Five provides additional detail describing the economic effects associated with the production of livestock and livestock products in Nuckolls 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 Nuckolls 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 Nuckolls County.

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

Industry	Total Output	% Total Output	Value Added	Employment	% Total Emp.
Livestock	37,008,000	81.23	4,080,286	198.6	63.23
All other crop farming	1,680,325	3.69	1,007,661	4.8	1.53
Wholesale trade	1,349,484	2.96	1,026,402	15.2	4.84
Truck transportation	614,087	1.35	265,299	7.0	2.23
Grain farming	564,022	1.24	294,522	5.6	1.78
Agriculture and forestry support activities	503,582	1.11	387,828	27.7	8.82
Monetary authorities and depository credit in	423,188	0.93	297,838	2.3	0.73
Veterinary services	367,224	0.81	130,876	7.7	2.45
Owner-occupied dwellings	363,773	0.80	290,807	0.0	0.00
Rail transportation	283,131	0.62	178,492	1.1	0.35
Real estate	262,307	0.58	180,398	2.9	0.92
Commercial machinery repair and maintenance	213,295	0.47	64,159	3.2	1.02
Hospitals	191,333	0.42	69,868	2.5	0.80
Automotive repair and maintenance, except car	147,057	0.32	60,598	2.8	0.89
Accounting and bookkeeping services	131,904	0.29	65,572	2.1	0.67
Food services and drinking places	128,143	0.28	39,806	4.0	1.27
Waste management and remediation services	113,450	0.25	44,738	1.0	0.32
Other State and local government enterprises	101,948	0.22	26,152	0.6	0.19
Maintenance and repair of nonresidential buil	98,540	0.22	37,691	1.3	0.41
Motor vehicle and parts dealers	85,234	0.19	66,842	1.4	0.45
Oilseed farming	84,664	0.19	50,210	0.5	0.16
Food and beverage stores	83,811	0.18	55,167	2.8	0.89
Civic, social, professional and similar organ	82,337	0.18	19,478	1.8	0.57
Offices of physicians, dentists, and other he	79,912	0.18	61,838	1.4	0.45
Nursing and residential care facilities	55,953	0.12	34,439	1.9	0.60
All other sectors	543,944	1.19	288,393	13.5	4.30
Total	45,560,651	100.00	9,125,363	314.1	100.00

<sup>(a)</sup> The business or economic sectors impacted by the production of \$31,814,000 of livestock and livestock products for sales to final demand in Nuckolls County (2003).

Source: Computed from the IMPLAN Input-Output Model for Nuckolls 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 Nuckolls 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 2003. 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, 1994-2003.

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

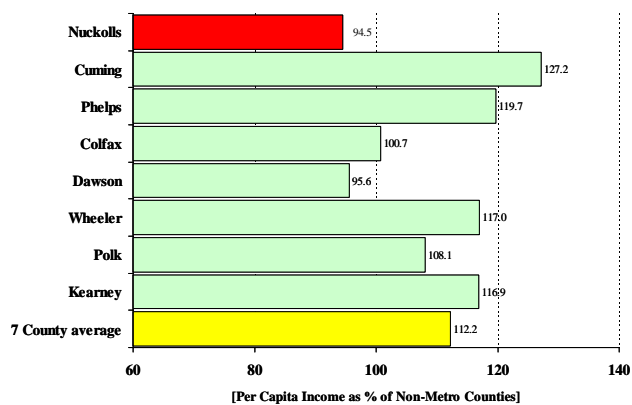
County/ Nebraska	Livestock & Livestock Products Per Acre		Per Capita Income (% of Non-Metro Counties)	
	Value (\$)	County Rank	2003	10 Yr Avg. (1994-2003)
<b>NUCKOLLS</b>	<b>44.70</b>	<b>78</b>	<b>95.0</b>	<b>94.5</b>
NEBRASKA	137.60	N/A	114.8	115.5
Cuming	1,434.40	1	126.9	127.2
Phelps	693.10	2	115.3	119.7
Colfax	536.10	3	100.8	100.7
Dawson	476.30	4	89.9	95.6
Wheeler	398.80	5	136.4	117.0
Polk	374.70	6	106.1	108.1
Kearney	367.60	7	113.5	116.9
<b>Average for Top Seven Livestock Counties</b>			<b>112.7</b>	<b>112.2</b>

Source: USDA, National Agricultural Statistics Service, *2002 Census of Agriculture*, and U.S. Bureau of Economic Analysis (BEA), County Personal Income, 1994-2003.

As the data shown in Table Six and the accompanying chart indicate, per capita personal income for 2003 in Cuming County, the leading county in Nebraska in terms of the production of livestock and livestock products, was 26.9 percent more than the average per capita personal income for all non-metropolitan counties. For the ten-year period from 1994 to 2003, the average per capita personal income in Cuming County was 27.2 percent more than the average for the non-metropolitan areas of Nebraska. In the case of Nuckolls County, which ranked 78th among the Nebraska counties in terms of livestock sold per acre, average per capita income for the ten-year period, from 1994 to 2003, was \$21,051. This per capita income level was 5.5 percent below the average per capita income level for all non-metropolitan counties for the 1994-2003 period. Moreover, per capita personal income for Nuckolls County in 2003 was \$24,974, or 5.0 percent below 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 2003 was 12.7 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 12.2 percent more than for all non-metropolitan counties.

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



\* 10 Year Average (1994-2003).

\*\*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 farm assessed valuation of agricultural property (other than agricultural land) was \$180,903 for the leading seven livestock counties, 41.4 percent more than the \$127,966 of per farm assessed valuation for all non-metropolitan counties in the state. In the case of Nuckolls County, the per farm assessed valuation of agricultural property (except agricultural land) was \$107,717. This value was 84.2 percent of the per farm assessed value of the same class of property for all non-metropolitan counties.

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

<b>Part A -- Per Farm 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>Nuckolls</b>	<b>\$27,567</b>	<b>\$28,114</b>	<b>\$52,036</b>	<b>\$107,717</b>
Non-Metro Area*	\$30,126	\$34,917	\$62,923	127,966
Cuming	\$49,299	\$38,292	\$55,716	143,307
Phelps	\$62,507	\$76,753	\$86,042	225,302
Colfax	\$49,185	\$32,148	\$82,799	164,132
Dawson	\$30,917	\$61,228	\$90,535	182,680
Wheeler	\$109,634	\$37,802	\$34,905	182,341
Polk	\$38,513	\$38,928	\$85,860	163,301
Kearney	\$39,854	\$71,246	\$144,362	255,462
<b>Average for Top 7 Livestock Counties</b>	<b>\$48,007</b>	<b>\$50,023</b>	<b>\$82,873</b>	<b>\$180,903</b>

<b>Part B -- Per Farm 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>Nuckolls</b>	<b>\$493.00</b>	<b>\$501.00</b>	<b>\$931.00</b>	<b>\$1,925.00</b>
Non-Metro Area*	501.00	582.00	1,053.00	2,136.00
Cuming	810.00	629.00	912.00	2,351.00
Phelps	1,011.00	1,246.00	1,395.00	3,652.00
Colfax	843.00	551.00	1,414.00	2,808.00
Dawson	514.00	1,028.00	1,492.00	3,034.00
Wheeler	1,726.00	593.00	546.00	2,865.00
Polk	581.00	586.00	1,295.00	2,462.00
Kearney	664.00	1,198.00	2,437.00	4,299.00
<b>Average for Top 7 Livestock Counties</b>	<b>\$784.00</b>	<b>\$822.00</b>	<b>\$1,357.00</b>	<b>\$2,963.00</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 also significantly enhanced by the presence of livestock production activity. These data show the per farm taxes levied on agricultural property (other than agricultural land) were \$2,963 for the seven leading livestock counties. This level of per farm tax revenues was \$827, or 38.7 percent more than per farm tax revenues for the same class of agricultural property for all non-metropolitan counties. In the case of Nuckolls County, per farm taxes levied on this class of agricultural property were \$1,925.00, or 90.1 percent of the average per farm tax levies 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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