

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

September 2007

Prepared by:

Kenneth M. Lemke, Ph.D.
Economist
Economic Development Department
Nebraska Public Power District
1414 15th Street - Box 499
Columbus, Nebraska 68602-0499

Telephone: (402) 563-5535 or (800) 282-6773

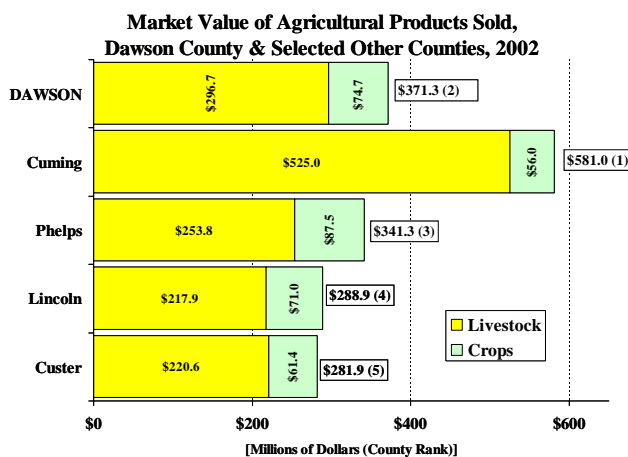
Email: kmlemke@nppd.com

Executive Summary

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

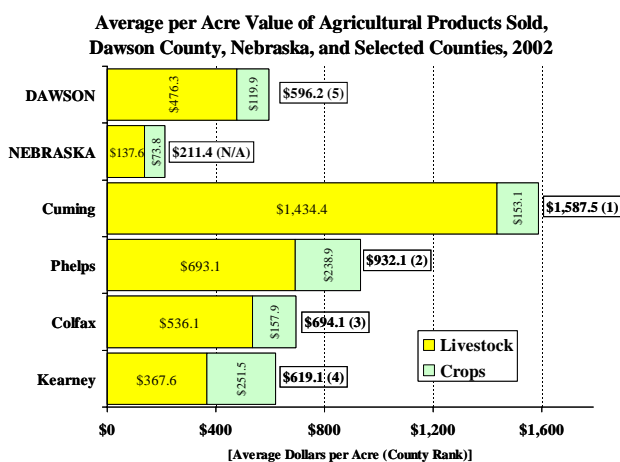
Livestock and Agricultural Production in Dawson County, Nebraska

The *2002 Census of Agriculture* provides data showing the importance of agriculture and the livestock sector in Dawson County. The data presented in the chart indicate the market value of agricultural products sold in Dawson County totaled \$371.3 million in 2002. Considering the per farm value of agricultural products sold, Dawson County's average of \$517,176 ranked 4th among Nebraska's 93 counties and was 2.6 times 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 Dawson County and for the leading four counties in terms



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

of this measure, along with the Nebraska data. Dawson County, with a value of \$596.20, ranks 5th among the Nebraska counties in terms of the market value of agriculture products per acre, with \$476.30 of that amount accounted for by livestock and livestock products. Dawson County's per acre average for all agricultural products is 2.8 times the state per acre average of \$211.40.

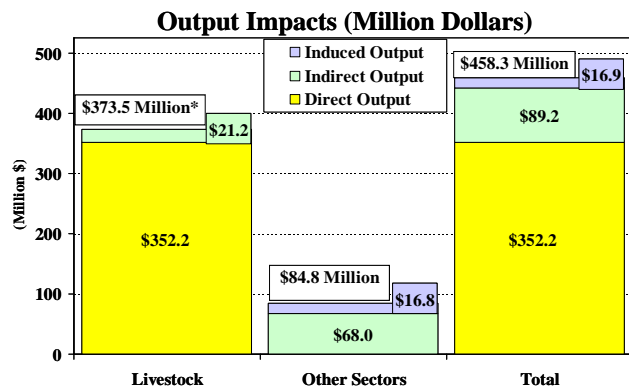
Data provided in this report indicate that livestock and livestock products are a significant source of income for Dawson County farmers. The per farm market value of livestock and livestock products sold averaged \$413,188 (79.9 percent of the total market value of all agricultural products sold) for Dawson County, ranking the county 4th among the Nebraska counties in terms of this measure. The average Dawson County per farm value for livestock and livestock products sold was 3.2 times the average per farm value of \$127,959 for Nebraska as a whole.

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

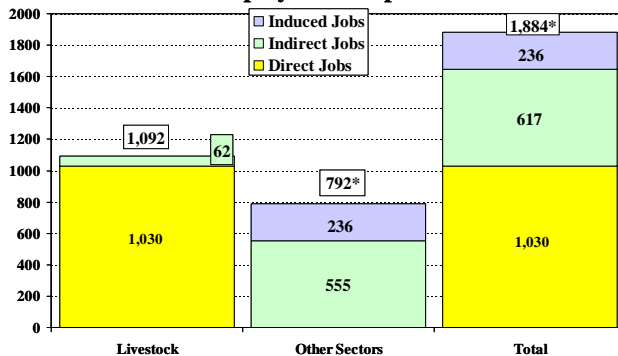
- Total Output Effects: The total value of output directly associated with sales to final demand by the livestock sector in Dawson County is estimated to be \$352.2 million. When the secondary output effects (indirect and induced output) are added, the total output effects associated with the production of livestock and livestock products in Dawson County are estimated to be \$458.3 million. Of this total, 81.5 percent (\$373.5 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 \$84.8 million of output.

Livestock Sector Economic Impacts in Dawson County



*Note: Impact components may not sum to total due to rounding.
Source: Computed using 2004 REIS data and IMPLAN Input-Output Model for Dawson County.

Livestock Sector Economic Impacts in Dawson County
Employment Impacts

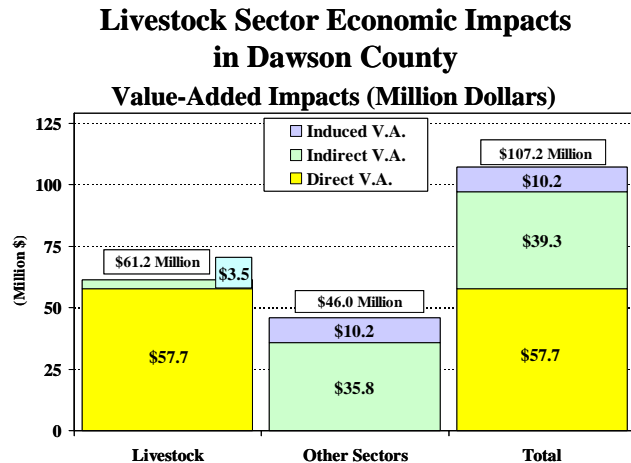


*Note: Impact components may not sum to total due to rounding.
Source: Computed using 2004 REIS data and IMPLAN Input-Output Model for Dawson County.

- Employment Effects: There are an estimated 1,030 individuals employed in the Dawson County livestock products sector producing the output dedicated to sales to final demand (\$352.2 million). When the indirect and induced employment effects are included, employment in the livestock sector is estimated to be 1,092 workers (and proprietors). The other secondary employment effects (indirect and induced effects in sectors other than livestock and

livestock products) account for an additional 792 employees that support livestock production. When the indirect and induced effects for all sectors are included, the estimated Dawson County employment supporting the production of livestock is estimated to be 1,884 workers.

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



Source: Computed using 2004 REIS data and IMPLAN Input-Output Model for Dawson County.

with the production of livestock and livestock products in Dawson County are estimated to be \$107.2 million. Of this amount, \$61.2 million represents value-added in the livestock products sector itself and \$46.0 million is value-added in other economic sectors supporting the production of livestock and livestock products in Dawson County.

Livestock-Related Impacts Not Analyzed

The analysis discussed in this report considers the backward-linkages associated with livestock production in Dawson 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, Dawson County, and in many other Nebraska counties, suggesting the contributions of the livestock industry may be significantly greater than reported in this analysis if these forward-linkages were considered.

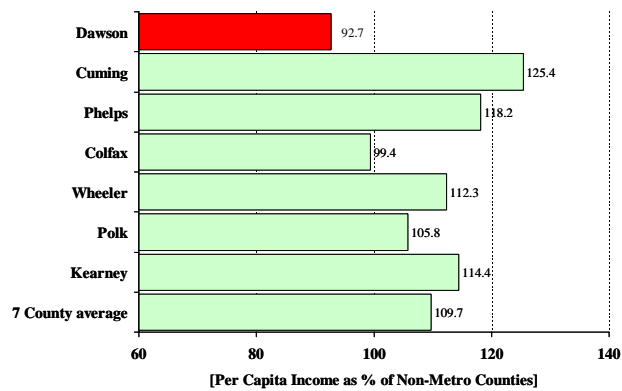
Livestock Production and Economic Well Being

A key question about the importance of the livestock industry concerns its contributions to the economic well being of residents of Dawson 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 10.7 percent more than the average per capita personal income for all non-metropolitan, Nebraska counties for the year 2005. For the ten-year period from 1996 to 2005, the average per capita personal income in Cuming County was 25.4 percent more than the average for the non-metropolitan areas of Nebraska. In the case of Dawson County, which ranked 4th among the Nebraska counties in terms of livestock and livestock products sold per acre, per capita income for the ten-year period from 1996 to 2005 was \$22,335. This per capita income level was 7.3 percent below the average per capita income level for all non-metropolitan Nebraska counties for the ten-year review period. Per capita personal income for Dawson County in 2005 was \$24,199 or 13.1 percent below 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 ten-year (1996-2005) average per capita personal income was 9.7 percent more than for all non-metropolitan counties. The per-capita personal income for the leading livestock counties in 2005 was 3.7 percent more than for all non-metropolitan counties.

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

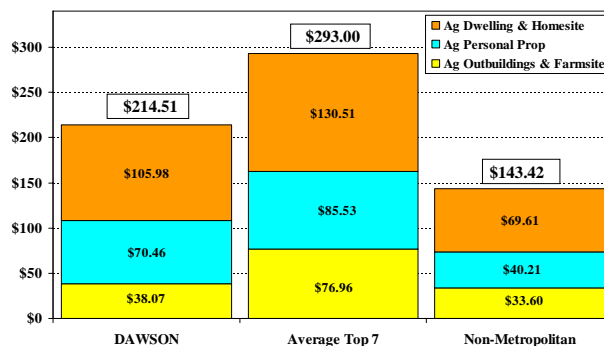


* 10 Year Average (1996-2005).
 **Note: Other top seven Nebraska counties in terms of value of livestock and livestock products produced per acre.

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 acre assessed valuation of agricultural property (other than agricultural land) was \$293.00 for the leading seven Nebraska livestock counties, more than twice the \$143.42 of per acre assessed valuation for all non-metropolitan counties in the state. In the case of Dawson County, the per acre assessed valuation of agricultural property (except agricultural land) was \$214.51. This value was 49.6 percent higher than the per acre assessed value of the same class of property for all non-metropolitan counties.

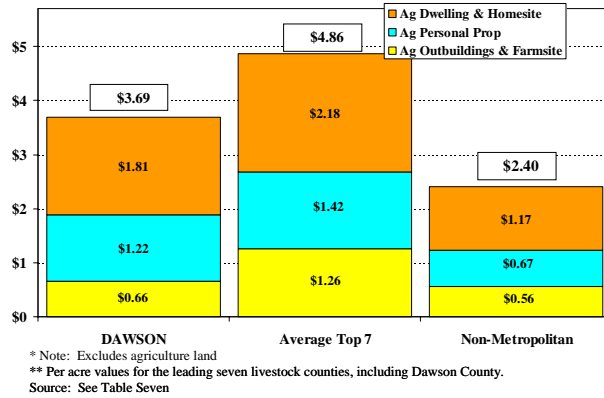
Per Acre Assessed Valuation for the Agriculture Sector*, Dawson County, Non-Metro Area and Leading Livestock Counties**



*Note: Excludes agriculture land
 ** Per acre values for the leading seven livestock counties, including Dawson County
 Source: See Table Seven

Local tax revenues are also significantly enhanced by the presence of livestock production activity. As this chart illustrates, per acre taxes levied on agricultural property (other than agricultural land) were \$4.86 for the seven leading Nebraska livestock counties. This level of per acre tax revenues was \$2.46, or slightly more than twice the per acre tax revenues for the same class of agricultural property for all non-metropolitan Nebraska counties. In the case of Dawson County, the per acre taxes levied on this class of agricultural property were \$3.69 or 53.8 percent higher than per acre taxes levied for all non-metropolitan counties.

Per Acre Taxes Levied for the Agriculture Sector*, Dawson County, Non-Metro Area, and Leading Livestock Counties**

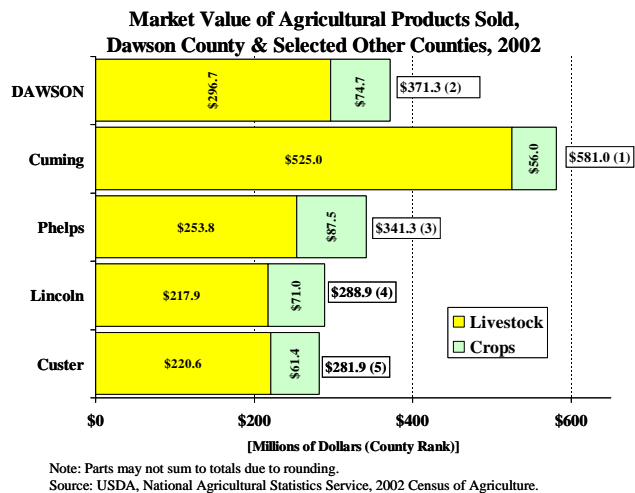


Economic Importance of and Economic Impacts Associated with Livestock Production in Dawson County, Nebraska

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

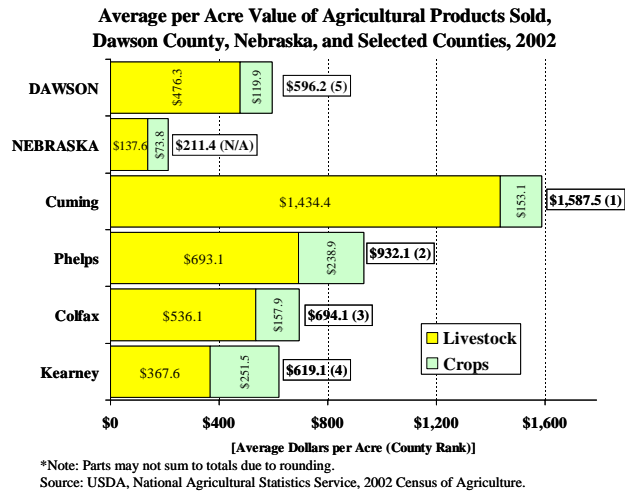
Livestock and Agricultural Production in Dawson County, Nebraska

The 2002 Census of Agriculture provides data showing the importance of agriculture and the livestock sector for Dawson County. The data presented in Table One include the data for Dawson County, along with data for Nebraska and selected Nebraska counties. The market value of agricultural products sold in Dawson County was \$371.3 million in 2002. This level of sales of agricultural products ranked Dawson County 2nd among the Nebraska counties in terms of this measure. In terms of the per farm value of agricultural products sold, Dawson County's average of \$517,176 ranked 4th among the counties and was 2.6 times 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 Dawson County and for the other 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, Dawson County, with a value of \$596.2, ranks 5th among Nebraska's 93 counties. Dawson County's per acre average for all agricultural products is 2.8 times the Nebraska per acre average of \$211.4.



Data presented in Table One indicate that livestock and livestock products are an important source of income for Dawson County farmers. The per farm market value of livestock and livestock products sold averaged \$413,188 for Dawson County, ranking the county 4th among Nebraska's 93 counties in terms of this measure. The market value of livestock products sold in Dawson County accounted for 79.9 percent of the total market value of all agricultural products sold, compared to 65.1 percent for Nebraska. The average Dawson County per farm value (for livestock and livestock products sold) was 3.2 times 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 Dawson County, selected other Nebraska counties, and Nebraska.

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

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

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

^(b)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 Dawson County, Nebraska

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

From the Dawson 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 Dawson 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 and data from the U.S. Bureau of Economic Analysis (BEA), Regional Economic Accounts database provide further insight into the value of production of livestock and livestock products in Dawson County. Table Two presents estimates of the value of production for the livestock sector derived from BEA estimates of agricultural output and the IMPLAN I-O model for Dawson County for 2004. As the data in Part A of Table Two show, the total value of output for livestock and livestock products was reported to be \$373.471 million dollars for 2004 (compared to the \$296.7 million market value of livestock and livestock products sold reported by the 2002 Census of Agriculture).

A further review of the data in Table Two indicates that livestock production in Dawson County is derived primarily from the beef-producing sector. As Part B of the Table indicates, beef production activities accounted for 97.6 percent of output by the livestock and livestock products sector.

Table Two
Agricultural Sector Parameters, Dawson County, 2004

Part A - Estimates based on Regional Economic Information Service (REIS) Data^(a), 2004						
Industry	Industry Output	Employment	Employee Compensation	Proprietor Income	Other Property Income	Total Value Added
	(Million \$)	(Number)	(Million \$)	(Million \$)	(Million \$)	(Million \$)
Crops	84.400	490	2.087	25.277	16.171	45.656
Livestock	373.471	1,257	17.537	2.103	9.9	40.107
Total Agriculture	457.871	1,747	19.624	27.380	26.071	85.763

^(a) Estimates of output (value of products sold) derived from 2004 Beureau of Economic Analysis, Regional Economic Information System (REIS) data. Employment data, employee compensation and other parameters estimated using the REIS data in combination with data from IMPLAN database for Dawson County.

Part B - IMPLAN Agricultural Sector Data, 2004

Industry	Industry Output	Employment	Employee Compensation	Proprietor Income	Other Property Income	Total Value Added
	(Million \$)	(Number)	(Million \$)	(Million \$)	(Million \$)	(Million \$)
Oilseed farming	10.524	41	0.050	4.123	1.758	6.241
Grain farming	85.052	570	1.681	25.394	15.260	44.413
All other crop farming	14.478	28	0.991	3.443	4.068	8.879
Livestock & Livestock Products	212.199	714	9.964	1.195	5.625	22.788
Cattle ranching and farming	205.173	651	9.294	1.342	5.132	21.625
Animal production, except cattle and poultry	7.026	63	0.670	-0.147	0.493	1.163

Sources: Minnesota IMPLAN Group, Inc., IMPLAN Input-Output Model and database for Dawson County (2004 data).
2004 Beureau of Economic Analysis, Regional Economic Information System data.

Economic Impact Analysis

The economic linkages and impacts associated with livestock operations in Dawson County are analyzed in the balance of this report. The analysis utilizes an input-output model developed for Dawson 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 Part B of Table Two into one livestock sector. The analysis then focuses on the economic impacts associated with the production of livestock and livestock products in Dawson 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 Dawson 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 Dawson 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 Dawson County, there will be an estimated increase in total economic output of \$1.3013 for the Dawson County economy.

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

Multiplier Component	Total		
	Total Output ^(a)	Value Added ^(b)	Total Employment ^(c)
Direct	1.0000	0.1639	2.9242
Indirect	0.2533	0.1116	1.7524
Induced	0.0480	0.0290	0.6708
Total	1.3013	0.3045	5.3474
Multiplier ^(d)	1.3013	1.8578	1.8287

^(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 Dawson County, 2004 data.

The value-added multiplier estimates there will be total payments to the factors of production of \$0.3045 for each dollar of sales of livestock and livestock products to final demand. This total value-added effect includes the direct effect of \$0.1639 associated with the initial sales of one dollar of output to final demand, \$0.1116 of payment to the factors of production associated with the increase in output (sales) for the intermediate (supplying) sectors, and the induced effect of \$0.0290 related to the increased household demand for goods and services resulting from the increased payment to labor (household income). The value-added multiplier of 1.8578 indicates for each dollar of value-added in the livestock and livestock products sector, we would expect to see approximately \$0.86 of additional value-added in other sectors of the Dawson 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 5.3474 jobs supported, including the direct, indirect, and induced components of the employment multiplier. Moreover, the employment multiplier of 1.8287 indicates that for each 100 workers employed in the livestock and livestock products sector, we would expect to find 83 workers employed in other sectors which support livestock production in Dawson County.

Table Four provides a summary of the economic effects associated with the production of livestock and livestock products in Dawson 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 Dawson County livestock producers is estimated to be \$352.2 million. From the Dawson County I-O model, we estimate that for the Dawson County livestock sector to sell this amount of output to final demand, it would need to produce a total of \$373.5 million of total output, as approximately 5.7 percent (\$21.3 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 Dawson County, Nebraska
(Annual Estimates, 2004)

	Livestock Products	Other Economic Sectors	Total Economic Impacts
Output Effects			
Direct Output (Value of Production)	\$352,156,000	\$0	\$352,156,000
Indirect Effects [0.2533 of Direct]	\$21,182,000	\$68,018,000	\$89,201,000
Induced Effects [0.048 of Direct]	\$133,000	\$16,761,000	\$16,894,000
Total Output Effects	\$373,471,000	\$84,779,000	\$458,251,000
Employment Effects			
Direct Employment (FTE)	1,030	0	1,030
Indirect Effects [0.599 of Direct]	62	555	617
Induced Effects [0.2291 of Direct]	0	236	236
Total Employment (FTE)	1,092	791	1,883
Value-Added Effects			
Direct Value-Added (Payments)	\$57,724,000	\$0	\$57,724,000
Indirect Effects [0.6807 of Direct]	\$3,472,000	\$35,822,000	\$39,294,000
Induced Effects [0.1771 of Direct]	\$22,000	\$10,199,000	\$10,221,000
Total Value-Added Effects	\$61,218,000	\$46,021,000	\$107,239,000

Source: Computed from the IMPLAN Input-Output Model for Dawson County (2004 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 Dawson County are estimated to be \$458.3 million. Of this total, 81.5 percent (\$373.5 million) is accounted for by output (direct, indirect, and induced) produced by the livestock sector and the indirect and induced effects in other Dawson County economic sectors represent an additional \$84.8 million of output.

-Employment Effects

There are an estimated 1,030 people employed in the livestock products sector to produce the output dedicated to sales to final demand (\$352.2 million); when the indirect and induced effects are included, the estimated employment in the livestock sector increases to 1,092 people. The other secondary employment effects (indirect and induced effects in sectors other than livestock and livestock products), account for an additional 791 jobs and total employment in Dawson County supporting the production of livestock and livestock products is estimated to be 1,883 employees.

-Value-Added Effects

The value-added effects associated with the livestock production in Dawson 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 Dawson County are estimated to be \$107.2 million. Of this amount, \$61.2 million is value-added in the livestock products sector itself and an estimated \$46.0 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 Dawson County.

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

Table Five
Distribution of Livestock Production Economic Impacts, by Selected Economic Sector^(a),
Dawson County Nebraska, 2004

Industry	Total Output	% Total Output	Value Added	Employment	% Total Emp.
Livestock	373,471,000	81.50	61,218,000	1,092.3	58.01
All other crop farming	21,491,000	4.69	12,502,000	32.8	1.74
Wholesale trade	7,782,000	1.70	5,319,000	80.4	4.27
Truck transportation	5,523,000	1.21	2,612,000	45.2	2.40
Veterinary services	5,427,000	1.18	2,189,000	93.9	4.99
Grain farming	4,201,000	0.92	2,338,000	22.5	1.19
Owner-occupied dwellings	4,042,000	0.88	3,316,000	0.0	0.00
Agriculture and forestry support activities	3,416,000	0.75	2,100,000	107.7	5.72
Monetary authorities and depository credit in	3,155,000	0.69	2,412,000	18.8	1.00
Farm machinery and equipment manufacturing	3,047,000	0.66	677,000	9.5	0.50
Rail transportation	2,266,000	0.49	1,400,000	8.0	0.42
Other State and local government enterprises	2,093,000	0.46	826,000	12.1	0.64
Food services and drinking places	1,753,000	0.38	652,000	47.8	2.54
Commercial machinery repair and maintenance	1,169,000	0.26	707,000	22.7	1.21
Automotive repair and maintenance- except car	1,165,000	0.25	614,000	15.9	0.84
Real estate	1,018,000	0.22	713,000	14.0	0.74
Other animal food manufacturing	964,000	0.21	64,000	1.4	0.07
Oil and gas extraction	901,000	0.20	177,000	3.5	0.19
Motor vehicle parts manufacturing	896,000	0.20	181,000	2.9	0.15
Offices of physicians- dentists- and other he	884,000	0.19	609,000	12.9	0.69
Motor vehicle and parts dealers	853,000	0.19	518,000	10.2	0.54
Insurance carriers	845,000	0.18	291,000	4.0	0.21
Telecommunications	828,000	0.18	444,000	2.0	0.11
Civic- social- professional and similar organ	701,000	0.15	183,000	29.0	1.54
Food and beverage stores	679,000	0.15	398,000	13.6	0.72
All other	9,680,000	2.11	4,779,000	179.9	9.55
Total	458,250,000	100.00	107,239,000	1,883.0	100.00

^(a) The business or economic sectors impacted by the production of \$352,236,000 of livestock and livestock products for sales to final demand in Dawson County (2004).

Source: Computed from the IMPLAN Input-Output Model for Dawson County (2004 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 Dawson 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 2005. 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, 1996-2005.

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

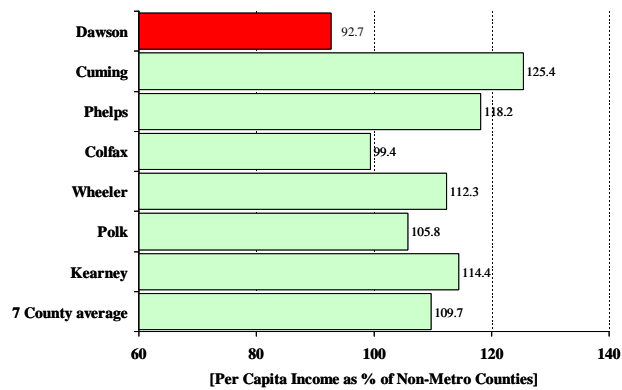
County/Nebraska	Livestock & Livestock Products Per Acre		Per Capita Income (% of Non-Metro Counties)	
	Value (\$)	County Rank	2005	10 Yr Avg. (1996-2005)
Dawson	476.30	4	86.9	92.7
NEBRASKA	137.60	N/A	118.3	116.5
Cuming	1,434.40	1	110.7	125.4
Phelps	693.10	2	114.3	118.2
Colfax	536.10	3	96.6	99.4
Wheeler	398.80	5	104.9	112.3
Polk	374.70	6	103.0	105.8
Kearney	367.60	7	109.7	114.4
Average for Top Seven Livestock Counties			103.7	109.7

Source: USDA, National Agricultural Statistics Service, *2002 Census of Agriculture*, and U.S. Bureau of Economic Analysis (BEA), County Personal Income, 1996-2005.

As the data shown in Table Six and the accompanying chart indicate, per capita personal income for 2005 in Cuming County, the leading county in Nebraska in terms of the production of livestock and livestock products, was 10.7 percent more than the average per capita personal income for all non-metropolitan counties. For the ten-year period from 1996 to 2005, the average per capita personal income in Cuming County was 25.4 percent more than the average for the non-metropolitan areas of Nebraska. In the case of Dawson County, which ranked 4th among the Nebraska counties in terms of livestock sold per acre, average per capita income for the ten-year period, from 1996 to 2005, was \$22,335. This per capita income level was 7.3 percent below the average per capita income level for all non-metropolitan counties for the 1996-2005 period. In 2005, per capita personal income for Dawson County was \$24,199, or 13.1 percent less than 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, the ten-year (1996-2005) average per capita personal income was 9.7 percent more than for all non-metropolitan counties. In 2005, per capita personal income in the leading livestock counties was 3.7 percent more than for all non-metropolitan counties.

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



* 10 Year Average (1996-2005).

**Note: Other top 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 acre assessed valuation of agricultural property (other than agricultural land) was \$293.00 for the leading seven Nebraska livestock counties, more than twice the \$143.42 of per acre assessed valuation for all non-metropolitan counties in the state. In the case of Dawson County, the per acre assessed valuation of agricultural property (except agricultural land) was \$214.51. This value was 49.6 percent higher than the per acre assessed value of the same class of property for all non-metropolitan counties.

Table Seven
Agricultural Property Valuation and Taxes Levied Per Acre, Dawson County,
Non-Metropolitan Nebraska, and Leading Nebraska Livestock Counties

Part A -- Per Acre Assessed Valuation					
County/ Nebraska	Ag. Outbuildings & Farmsite	Ag. Personal Property	Ag. Dwelling & Homesite	Ag. Land	Total Ag.
DAWSON	38.07	70.46	105.98	800.48	1,014.99
Non-Metro Area*	33.60	40.21	69.61	583.95	727.37
Cumming	130.25	115.10	152.26	1,461.17	1,858.78
Phelps	78.23	117.52	90.75	1,098.64	1,385.14
Colfax	121.53	92.28	236.50	1,559.45	2,009.76
Wheeler	64.88	24.60	20.85	455.12	565.45
Polk	90.62	91.77	177.03	1,475.10	1,834.52
Kearney	58.33	98.05	193.12	1,105.02	1,454.52
Average for Top 7 Livestock Counties	76.96	85.53	130.51	1,076.40	1,369.40

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

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

Table Seven
Agricultural Property Valuation and Taxes Levied Per Acre, Dawson County,
Non-Metropolitan Nebraska, and Leading Nebraska Livestock Counties

Part B -- Per Acre Taxes Levied					
County/Nebraska	Ag. Outbuildings & Farmsite	Ag. Personal Property	Ag. Dwelling & Homesite	Ag. Land	Total Ag.
DAWSON	\$0.66	\$1.22	\$1.81	\$13.63	\$17.32
Non-Metro Area*	0.56	0.67	1.17	2.39	4.79
Cuming	2.16	1.91	2.52	24.15	30.74
Phelps	1.29	1.95	1.51	18.23	22.98
Colfax	2.08	1.58	4.03	26.52	34.21
Wheeler	0.87	0.33	0.28	6.13	7.61
Polk	1.46	1.48	2.87	23.84	29.65
Kearney	0.98	1.62	3.25	18.42	24.27
Average for Top 7 Livestock Counties	\$1.26	\$1.42	\$2.18	\$17.75	\$22.61

* Non-Metro Area counties includes Nebraska except Cass, Douglas, Lancaster, Sarpy, and Washington.
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 acre taxes levied on agricultural property (other than agricultural land) were \$4.86 for the seven leading Nebraska livestock counties. This level of per acre tax revenues was \$2.46, or slightly more than twice the per acre tax revenues for the same class of agricultural property for all non-metropolitan Nebraska counties. In the case of Dawson County, the per acre taxes levied on this class of agricultural property were \$3.69 or 53.8 percent higher than per acre taxes levied 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:**

Kenneth M. Lemke, Ph.D.
Economist
Nebraska Public Power District
1414 15th Street - Box 499
Columbus, NE 68602-0499

Telephone: (402) 563-5535 or (800) 282-6773
Email: klemke@nppd.com