

**Impact of the Wheat Industry
on the U.S. Economy**

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Introduction

The economic impact of an industry on the overall U.S. economy is more than the income generated by those employed by the sector. In the case of wheat, the economic impact is more than the number of farmers who farm wheat and their combined incomes. This report estimates the impact of the U.S. wheat industry at the state-level and for the United States as a whole.

Methods

Input-output models are a technique used to quantify the interactions between industries (or sectors) within an economy and estimate the overall impact. The Impact Analyses and Planning (IMPLAN) software package and database of technical coefficients were utilized to estimate the impacts of the wheat industry by state and for the entire United States.

The results are driven by the gross value of production from each of 47 states included in the analysis. All states where production, price, and government payment data could be found for the 2003 to 2005 period were included in the analysis.

For the wheat industry, the model estimates three components of total change within the economy. Direct effects represent the initial change in the industry in this case the direct effects result from the gross value of wheat production including government payments. Indirect effects result from inter-industry transactions as supplying industries respond to increased demands from the wheat industry. Induced effects reflect changes in local spending that result from income changes in the directly and indirectly affected industry sectors. In addition, the employment impacts are also provided by state and total.

Results

Table 1 includes the direct, indirect, induced, and total impact of wheat production on each of 47 states, their total, and the United States for 2005. In addition, an estimate of the employment impact on the state economy is also included. To avoid criticism for picking a single year (while the most current, 2005, had the lowest gross value of production) Table 2 estimates the average impact for the years 2003-2005.

The total for the 47 states does not equal the impact for the U.S. as a whole because the individual state models are unable to capture some of the impacts that leak outside the state boundary while the U.S. model does not have that problem.

In 2005, the wheat industry generated 198,370 jobs nationwide. The total impact of the industry on the U.S. economy was \$20.6 billion. The average over the 2003-2005 period would be slightly larger for both measures.

References for More Explanation of Impact Analysis

Minnesota IMPLAN Group Inc, <http://www.implan.com/kb/question.php?qstId=164>

Mulkey, D. and A. W. Hodges. Using IMPLAN to Assess Local Economic Impacts.
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Florida. <http://hortbusiness.ifas.ufl.edu/usingimplan.pdf>

Table 1. Economic Impact of the Industry Wheat on the Economy of Each State and the U.S., 2005.

	Employment (No.)	Direct (Mil \$s)	Indirect (Mil \$s)	Induced (Mil \$s)	Total (Mil \$s)
Alabama	304.4	8.4	2.7	3.5	14.6
Alaska	0.0	769.0	0.2	0.0	0.0
Arizona	633.9	36.5	9.2	11.2	56.9
Arkansas	816.0	36.7	10.2	13.6	60.6
California	2,016.4	113.5	33.0	34.4	180.9
Colorado	3,047.0	204.1	51.4	46.0	301.6
Connecticut	0.0	0.0	0.0	0.0	0.0
Delaware	168.5	11.1	2.0	2.6	15.7
Florida	27.4	1.4	0.3	0.3	2.0
Georgia	742.3	25.7	7.2	10.2	43.2
Idaho	6,424.8	365.9	90.8	100.6	557.2
Illinois	1,791.0	132.4	37.5	44.6	214.6
Indiana	1,416.2	85.4	23.0	22.0	130.4
Iowa	38.8	2.9	0.8	1.0	4.7
Kansas	19,947.6	1,369.7	351.4	233.9	1,955.1
Kentucky	2,263.9	71.1	15.3	15.4	101.8
Louisiana	400.5	17.4	5.7	5.6	28.7
Maine	0.1	0.0	0.0	0.0	0.0
Maryland	585.3	29.8	4.7	5.6	40.1
Massachusetts	0.0	0.0	0.0	0.0	0.0
Michigan	3,029.5	131.6	20.6	17.2	169.5
Minnesota	4,088.4	286.1	66.2	64.1	416.4
Mississippi	382.1	13.7	4.3	5.2	23.1
Missouri	3,547.7	118.7	34.7	42.8	196.2
Montana	14,992.2	752.6	182.5	152.3	1,087.4
Nebraska	2,686.6	246.6	55.6	71.9	374.0
Nevada	47.3	3.0	0.4	0.4	3.8
New Jersey	102.2	4.1	0.7	0.4	5.2
New Mexico	774.0	33.1	11.1	16.2	60.4
New York	408.3	17.3	2.8	2.9	23.0
North Carolina	1,286.1	81.9	21.5	26.3	129.6
North Dakota	15,129.5	1,169.8	210.1	160.1	1,540.0
Ohio	4,678.9	203.5	35.2	24.3	263.1
Oklahoma	14,480.9	486.7	134.9	173.5	795.2
Oregon	5,231.5	198.0	44.8	38.1	280.8
Pennsylvania	764.4	28.3	6.5	7.5	42.4
South Carolina	829.7	25.8	4.8	6.8	37.4
South Dakota	6,730.8	513.2	93.1	144.2	750.5
Tennessee	1,815.3	33.1	6.5	3.2	42.8
Texas	11,273.6	356.5	145.3	157.0	658.8
Utah	642.2	28.4	6.9	7.5	42.8
Vermont	0.1	0.0	0.0	0.0	0.0
Virginia	1,120.8	31.9	4.8	3.8	40.5
Washington	11,709.3	516.7	130.4	113.7	760.9
West Virginia	42.8	1.0	0.3	0.1	1.3
Wisconsin	819.8	31.4	7.4	10.0	48.9
Wyoming	305.7	17.0	4.6	2.9	24.5
Sum of 47 states	147,543.9	8,610.9	1,881.4	1,803.1	11,526.3
United States	198,370.4	8,182.9	6,174.4	6,789.1	20,625.7

Table 2. Economic Impact of the Wheat Industry on the Economy of Each State and the U.S., Average for the 2003 - 2005 Period.

	Employment (No.)	Direct (Mil \$s)	Indirect (Mil \$s)	Induced (Mil \$s)	Total (Mil \$s)
Alabama	400.0	10.7	3.4	4.6	18.7
Alaska	0.0	769.0	0.2	0.0	0.0
Arizona	812.0	46.7	11.7	14.3	72.7
Arkansas	2,047.0	87.4	24.5	33.8	145.7
California	2,490.2	139.3	40.3	41.9	221.5
Colorado	3,308.2	221.6	55.6	49.7	326.9
Connecticut	0.0	0.0	0.0	0.0	0.0
Delaware	133.3	8.7	1.5	2.1	12.4
Florida	39.4	1.9	0.5	0.4	2.8
Georgia	944.5	32.2	9.0	12.9	54.1
Idaho	6,326.6	360.3	89.4	99.0	548.7
Illinois	2,271.3	168.0	47.3	56.4	271.8
Indiana	1,584.8	95.5	25.7	24.5	145.7
Iowa	52.4	3.9	1.1	1.4	6.4
Kansas	20,077.9	1,378.7	353.7	235.4	1,967.8
Kentucky	2,252.3	70.8	15.2	15.3	101.3
Louisiana	533.5	23.0	7.5	7.4	37.9
Maine	0.1	0.0	0.0	0.0	0.0
Maryland	503.2	25.7	4.1	4.8	34.6
Massachusetts	0.0	0.0	0.0	0.0	0.0
Michigan	3,221.0	139.8	21.9	18.2	179.9
Minnesota	4,923.2	344.5	79.2	76.5	500.2
Mississippi	628.2	21.6	6.9	8.4	36.9
Missouri	4,896.5	160.7	46.6	57.8	265.1
Montana	13,319.8	669.4	162.4	135.7	967.5
Nebraska	2,760.9	253.6	57.1	74.0	384.7
Nevada	48.3	3.0	0.4	0.4	3.8
New Jersey	97.3	3.9	0.7	0.3	5.0
New Mexico	595.6	25.6	8.6	12.4	46.6
New York	399.9	16.9	2.7	2.9	22.5
North Carolina	1,080.6	68.9	18.1	22.1	109.0
North Dakota	15,315.7	1,184.5	212.7	162.0	1,559.2
Ohio	4,798.0	208.6	36.1	24.9	269.6
Oklahoma	17,495.9	583.6	161.2	208.2	953.1
Oregon	5,624.6	212.5	48.0	40.7	301.2
Pennsylvania	696.0	25.8	6.0	6.9	38.7
South Carolina	837.3	26.0	4.8	6.8	37.7
South Dakota	6,188.9	471.5	85.7	132.5	689.7
Tennessee	2,528.2	44.8	8.6	3.9	57.3
Texas	11,552.5	364.9	148.8	160.8	674.4
Utah	592.7	26.2	6.4	7.0	39.6
Vermont	0.1	0.0	0.0	0.0	0.0
Virginia	1,029.3	29.4	4.4	3.5	37.4
Washington	12,455.3	548.9	138.4	120.7	808.0
West Virginia	40.6	0.9	0.3	0.0	1.3
Wisconsin	955.0	36.5	8.6	11.7	56.8
Wyoming	275.0	15.3	4.2	2.6	22.1
Sum of 47 states	156,133.0	8,930.9	1,969.3	1,905.1	12,036.1
United States	206,304.4	8,502.9	6,416.9	7,051.3	21,450.4