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Impact of South Dakota Agriculture 2002

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Recommended Citation

Beutler, Martin, "Impact of South Dakota Agriculture 2002" (2003). *SDSU Extension Special Series*. Paper 20.
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IMPACT of South Dakota Agriculture 2002

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The total impact of agriculture on our state's economy is determined by agricultural production, agricultural support, and their interactions with other industries and employee spending. This is often referred to as the multiplied value.

The values given here represent the total economic impact agriculture has on the economy of South Dakota.

Agricultural production = Gross receipts from livestock, crops, and government payments.

Agricultural support = Agricultural services, machinery, supplies, food processing, wholesale trade, and forestry products.

Since 1991, the SDSU Economics Department has tracked the impact of agriculture on the state's economy with a model developed specifically for South Dakota. This report summarizes the economic impact of agriculture in 2002.

Data sources and methods

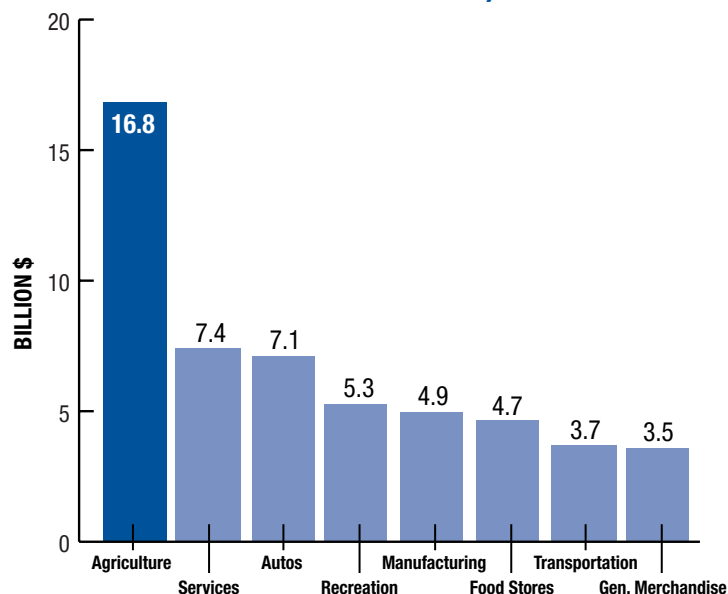
Primary data sources for this study are the South Dakota Department of Revenue and USDA's South Dakota Agricultural Statistics Service. Other sources include the U.S. Forest Service, Bureau of Land Management, South Dakota Office of School and Public Lands, and the Western Wood Products Association.

These data are combined to capture in a single group the impacts of industries that produce or utilize agricultural commodities in South Dakota. Similar aggregations of data are made for other industries in the state. Thus, Standard Industry Code groupings have been modified for this study. For example, South Dakota industries that manufacture agricultural items are aggregated with agriculture and not with the manufacturing grouping.

Economic impacts are estimated using "multipliers" for the state adapted from other economic models. These multipliers range from 1.20 to 2.39 for agricultural industries and 1.28 to 2.81 for nonagricultural industries.

A multiplier of 1.5, for example, implies that for every \$1 of a given commodity or service originating in South Dakota, another 50¢ is gained as that original \$1 of commodity or service moves through the economy.

*Economic Impact of Selected
South Dakota Industries, 2002*



Once a commodity or service has left the state, it no longer has an impact on the state's economy. Commodities processed within the state and those that are more labor intensive tend to have larger multipliers. (For more information on economic multipliers please see Extension Extra 5020, Using multipliers in economic studies).

2002 impacts of agriculture

Economic output from agriculture in 2002 decreased from the previous year. Much of this decrease can be attributed to drought. Total economic activity dropped \$1.4 billion from \$18.2 billion in 2001 to \$16.8 billion in 2002.

When adjusted for inflation, the 2002 decrease fell by \$1.1 billion; from \$17.8 billion in 2001 to \$16.9 billion in 2002. Due to deflation in ag production, the inflation adjusted total for agriculture did not fall below the unadjusted total.

Decreases in economic impacts were also realized in the auto industry, \$100 million; and transportation industry, \$500 million. Industries with increased economic impacts were services, \$800 million; recreation, \$300 million; manufacturing, \$900 million; food stores, \$100 million; and general merchandising, \$300 million.

Agricultural economic activity in 2002 included the direct dollars generated when producers sold grain and livestock at market. It included products that were manufactured to support agriculture such as agricultural machinery and supplies.

Also included was the value added as raw materials were bought and sold for processing into consumable products for either local or out-of-state use. And finally, economic activity included the impacts generated as farm families spend money in town for food, clothing, and other items.



Consequently, agriculture's impacts are felt in every home and nearly every industry in South Dakota, either through direct contact or expenditures of people employed in agriculture.

Ag commodity impacts

Much of the decrease in ag production and processing can be attributed to the impacts that drought played on agricultural production in 2002.

In 2002, the economic impact of livestock decreased to \$5.8 billion from \$6.3 billion in 2001. Livestock's impact was divided into 71% production, 10% wholesale trade, and 19% processing. Livestock production decreased over \$360 million from the previous year. Livestock processing decreased by \$428 million. Wholesale trade, which increased in 2001, added another \$300 million in 2002.

The total impact of the crops sectors decreased from \$6.1 billion in 2001 to \$5.9 billion in 2002. The production of crops accounted for 57% of the total economic impact, with wholesale trade 34% and processing 9%. Wholesale trade remained fairly constant from the previous year at \$2 billion. Crops processing increased \$186 million over that reported in 2001 due to increased ethanol production and prepared livestock feeds.

Another \$5.1 billion dollars in economic activity was generated by businesses in support of both livestock and crops activities, but this was down \$700 million from 2001. A large portion of this decline was in the smaller amount of government payments received by South Dakota producers in 2002.

Ag economic impacts and inflation

Agricultural support industries make up nearly half of the total economic impact of agriculture and have led the way in increasing agriculture's impact in South Dakota.

From 1991 to 2001 economic impact from ag support industries increased \$3.9 billion while ag production increased only \$0.8 billion. In 2002, ag support fell by \$100 million from 2001 levels to \$8.8 billion while ag production decreased by \$1.3 billion to \$8.0 billion. These numbers again show the effect that drought can have on South Dakota's economy and specifically on the ag sector.

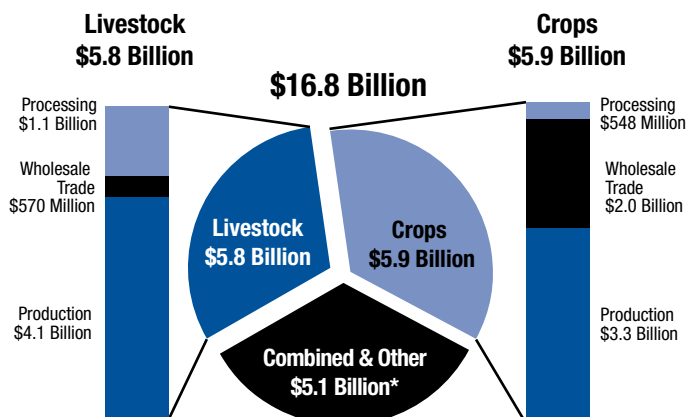
When adjusted for inflation (using 1991 dollar values), ag production has averaged an \$8.4 billion impact over the years with a high of \$9.6 billion in 2000 and a low of \$6.5 billion in 1996.

Ag support's inflation-adjusted impact has increased steadily from 1991 to 2002, averaging \$6.9 billion impact, with a high of \$8.8 billion in 2002 and a low of \$5 billion in 1991.

The inflation-adjusted impact of ag production fell from \$9.3 billion in 2001 to \$8.4 billion in 2002. Ag production experienced some deflation of prices from 2001 to 2002, as demonstrated by a nearly 7 point drop in the Producer Price Index of crude food and feedstuffs for that period.

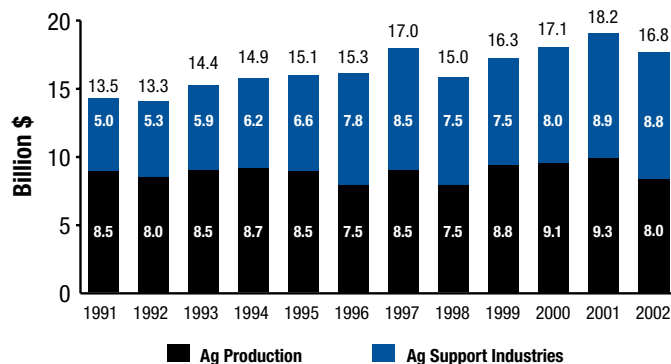
Ag support industries experienced continued real growth from \$8.5 billion in 2001 to \$8.8 billion in 2002.

Economic Impact of Agriculture in South Dakota, 2002

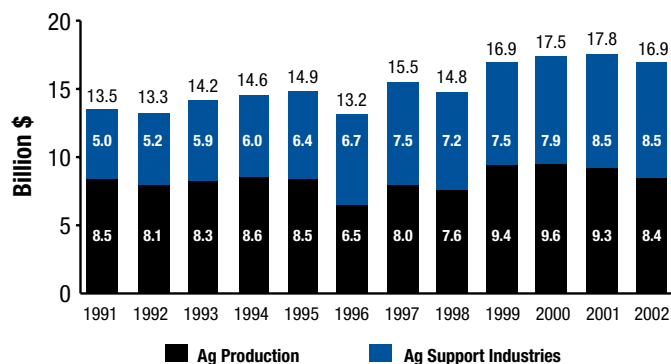


*Includes: Ag Services, Ag Chemicals, Farm Machinery, Warehousing, Government Payments, Wholesale Trade Farm Equipment & Supplies, and Other Food Processing.

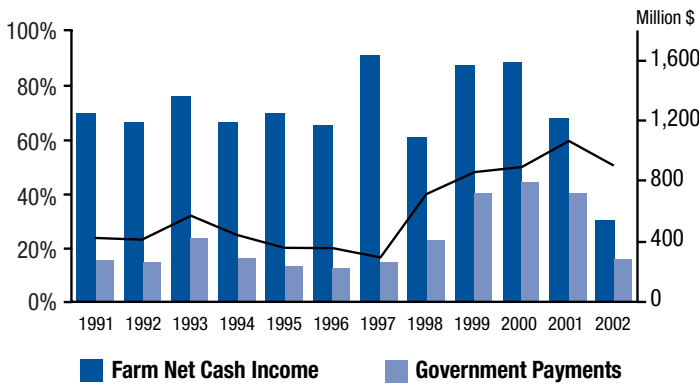
Total Impact of Agriculture in South Dakota Production and Ag Support, 1991-2002



Total Impact of Agriculture in South Dakota Adjusted for Inflation, 1991-2002



Government Payments as a Percent of Farm Net Cash Income, South Dakota 1991-2002



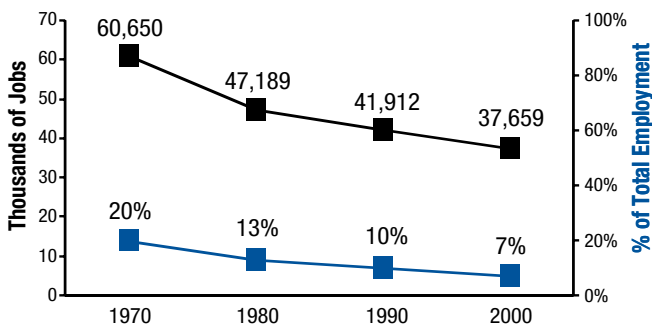
Government payments and South Dakota agriculture

The amount of government payments received by South Dakota producers declined substantially in 2002, as did farm net cash income. However, government payments still represented 50% of farm net cash income. This indicated a continuing dependence on government assistance in South Dakota agriculture. The drought significantly reduced the amount of government payments received by producers.

Payments to producers, specifically those in crop production, decreased to \$281 million. This is down from \$715 million in 2001, and it is \$509 million less than the high of \$790 million paid out in 2000. Government payments were about equal to those paid out in 1991; however, payments in 1991 represented only 23% of farm net cash income that year.

Current times are in sharp contrast to the early 1990s when government support accounted for little more than 20% of farm net cash income. South Dakota producers, especially those raising commodities (such as corn, wheat, soybeans, etc.), are very dependent upon government programs. As global markets are affected by recent political and economic events, farmer dependence on government payments is expected to remain high.

Farm Employment, South Dakota 1970-2000



Employment in agriculture

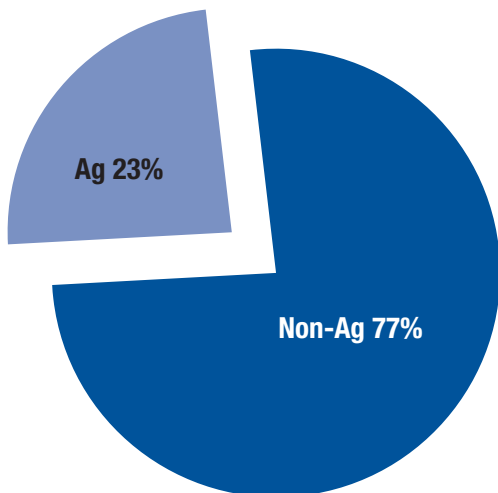
The number of persons employed in production agriculture in South Dakota has fallen 38% since 1970, from around 60,650 to 37,659 in agriculture-related jobs in 2000. Farm employment as a percentage of total employment in the state fell during the same time period from 20% to 7%.

Fewer persons employed in agriculture mean fewer dollars are spent in local communities for groceries, clothing, cars, trucks, movie tickets, and other items. Fewer dollars spent lead to smaller inventories and eventually closed businesses for local merchants. The ripple effect impacts all industries and people in South Dakota.

The continuing decline in employment in ag production underlines the importance of value-added agriculture.

Without our South Dakota agricultural base, many of our rural communities would cease to exist, taking with them nonagricultural businesses.

South Dakota's 2002 Gross State Output*



*South Dakota Department of Revenue Data on Gross Sales plus South Dakota Agricultural Production Statistics Data

Working together: ag and non-ag

South Dakota's economy is closely tied to agriculture. It is estimated that 23% of the state's gross economic output is directly related to production agriculture and related agricultural industries; down 1% from the estimate for 2001.

South Dakota livestock and crop industries

At \$4.1 billion, livestock production accounts for 71% of the total economic impact of the livestock production, processing, and wholesale trade industries in 2002. Cattle contribute \$3.2 billion, or 77%, of this impact, up from 75% in 2001. The production of pork is next with a \$476 million impact or 12%, down \$143 million from 2001. Dairy contributes \$248 million or 6%, down \$81 million from 2001. Poultry and sheep contribute 2% and 1% respectively, unchanged from 2001.

The economic impact of crop production in South Dakota totaled \$3.3 billion in 2002. This included corn at \$1.1 billion, 33%; soybeans at \$1.0 billion, 31%; forages at \$588 million, 18%; wheat at \$296 million, 9%; and sunflowers and forestry at \$115 million and \$108 million respectively, 3% each. Major declines were experienced in forages, \$131 million, and wheat, \$130 million. All other crop commodities remained at approximately the same level of impact as 2001.

Increasing economic activity in South Dakota through agriculture

South Dakota is an exporter of raw materials. Cattle, corn, soybeans, wheat, wood chips, etc., are packaged in bulk and sent to neighboring states and across the globe to be transformed, through various manufacturing processes, into finished goods. Some of these finished goods are then imported back into the state to satisfy local demand for those products.

It could be said that we “sell low and buy high,” as we sell cheap raw materials and buy them back at much higher prices.

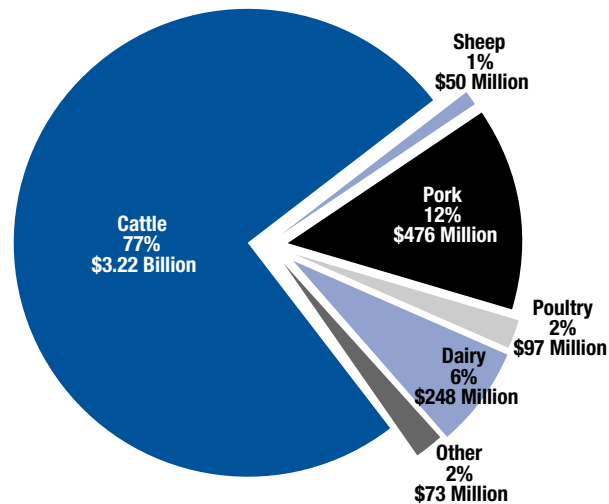
What we pay for finished goods reflects mostly the cost of—and profit in—processing, packaging, and transportation. The added value between the cost of the raw agricultural commodities and the finished goods is a loss to our state’s economy. Those dollars would have meant millions to the state as wages to our workers. The profits of turning those commodities into finished products could have been paid to South Dakotans.

To capture this added income, higher profits, and added jobs, new value-added enterprises need to be developed in South Dakota.

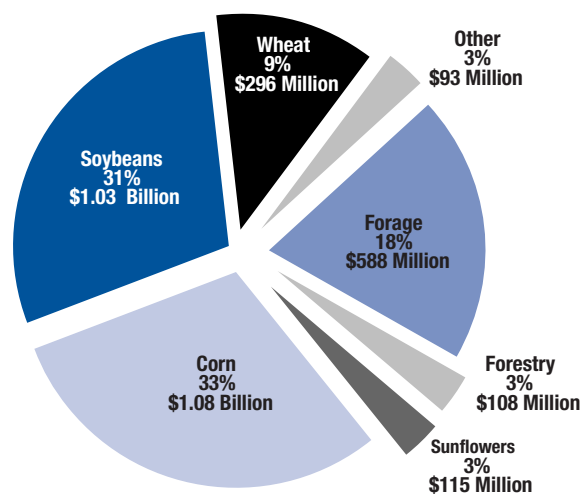
When a new value-added enterprise that uses South Dakota’s agricultural commodities begins production the following happens: Producers benefit from better markets with higher prices. Local economies benefit from higher employment and the expenditures that come from having more people (families) within the community. More money is spent in non-ag businesses. The state and every individual citizen in it benefit from increased sales and property taxes.

Communities can help. They can seek funding sources such as block grants that would provide funds to be used in establishing value-added industries in their areas. Community leaders can discover opportunities to use the physical resources in their areas, employ local people, and produce products from our agricultural commodities. Additional help in developing business and marketing plans is available through SDSU and other agencies.

Livestock Production in South Dakota Economic Impact, 2002



Crop Production in South Dakota Economic Impact, 2002



There is potential for economic growth in South Dakota in developing industries which use locally grown agricultural commodities in producing finished goods.

Conclusion

Agriculture is one of South Dakota’s greatest strengths. We produce ample food for ourselves and much of the world’s population. Crises throughout the world and drought at home will continue to affect South Dakota’s economy. Continued emphasis on stabilizing agricultural production and in seeking new ways to add value to our raw agricultural products will help protect the state’s economy from economic downturns and help its people move toward the future.

In South Dakota, Agriculture is still Number One.