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Production Costs

Burton Pflueger
South Dakota State University, burton.pflueger@sdstate.edu

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by

Burton Pflueger
Professor / Extension Specialist

South Dakota producers are contemplating the time when they can begin spring field work. While several factors, including weather during the planting season, will still influence the final acreage planted, producers need to finalize their spring planting intentions. Estimates of costs and returns will be major factors in the consideration of what crops to plant and whether producers will make adjustments to their crop rotations and crop enterprise mix.

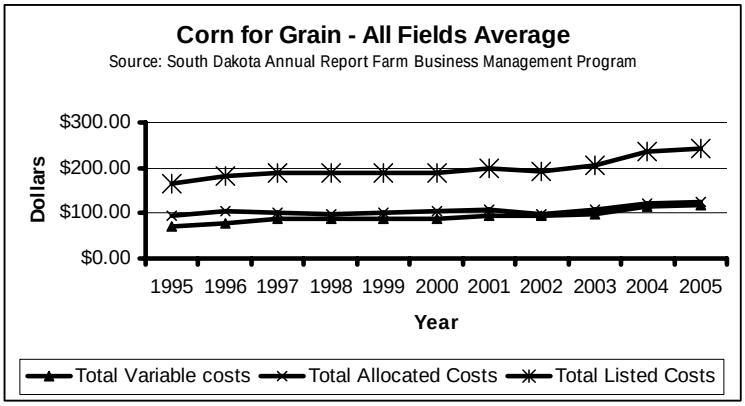
The Economic Research Service, U.S. Department of Agriculture released their forecast of annual production costs on Friday, December 29, 2006. ERS forecasts show producers can expect higher production costs for the next two years. (Source: http://www.ers.usda.gov/) Data comparisons across the forecasted ERS production costs show similar percentage increases across the three major South Dakota spring crops per categorical item for both 2007 and 2008 as shown in the first table. This information should be useful to South Dakota producers.

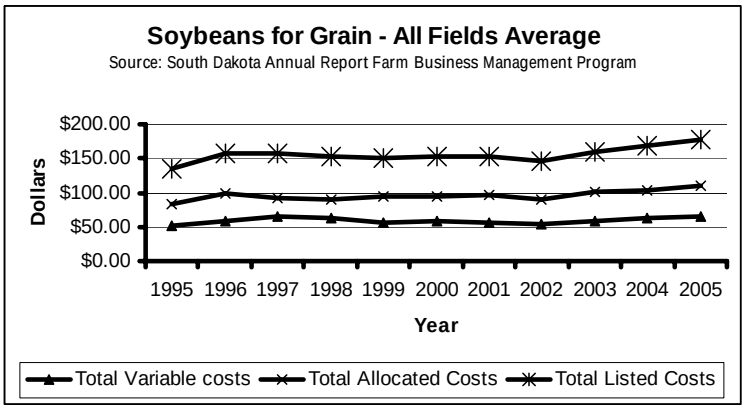
However, the ERS production costs projections are for the U.S. agricultural sector. The total production costs for each of the major spring South Dakota crops listed by ERS is higher than what many South Dakota producers may actually be spending for crop production costs.

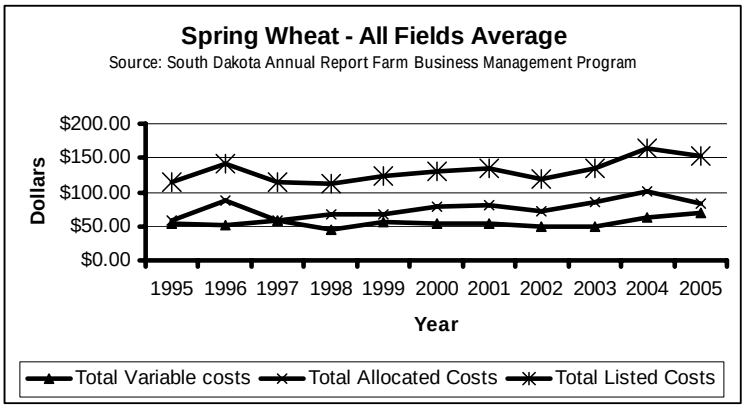
Accessible farm level data for South Dakota cost of production comparisons is contained in the annual report published by the Farm Business Management Program instructors. The Farm Business Management Program is coordinated by the Division of Workforce and Career Preparation with the South Dakota Department of Education and Cultural Affairs. The annual published report contains a summary of data voluntarily submitted by program participants and is a valuable resource for South Dakota's agricultural sector.

Item	2007F Average % increase from 2006	2008F Average % increase from 2006
Operating costs:		
Seed	5.94%	7.53%
Fertilizer	8.55%	11.10%
Chemicals	6.98%	9.29%
Custom operations	6.30%	7.74%
Fuel, lube, and electricity	-0.75%	0.14%
Repairs	3.38%	4.70%
Other variable expenses 1/	3.50%	7.17%
Interest on operating capital	17.44%	25.40%
Total, operating costs	5.55%	7.46%
Allocated overhead:		
Hired labor	3.55%	4.78%
Unpaid labor	3.32%	4.51%
Capital recovery	7.55%	10.66%
Land	7.02%	9.34%
Taxes and insurance	2.59%	3.81%
General farm overhead	3.01%	3.62%
Total, allocated costs	6.24%	8.51%
Total costs listed	5.97%	8.09%

Value from this information comes from observing trends over time. Summarizing the published data for several years shows the same trends in increasing production costs for South Dakota producers as for U.S. producers as a whole.







Data summaries show that, on average, South Dakota producers spend less on production costs than what is estimated by ERS. While it is interesting to note that total cost of production expenditures are lower in South Dakota, it may be of greater interest to producers using aggregate farm level data for benchmarking purposes to understand a breakdown of expenditures rather than an estimate of total production costs. Even within South Dakota, there will be differences between farms on the dollar amounts spent for production inputs.

Analysis of the data shows that the percentage expenditure of production inputs remains fairly static despite an increasing total cost of production.

For South Dakota corn producers represented by the Farm Business Management Program, the expenditure for variable costs of production is approximately one-half of the ERS estimate shown. At least some of this difference is due to accounting issues with some items. For example, energy costs are included in the ERS estimate as a variable cost while the Farm Business Management Program data lists the comparable item as an allocated cost. It should be noted that information in this report is taken directly from published information and no data correction was possible. For example, published reports from the Farm Business Management program show that South Dakota producers had a corn production expenditure of $11.19 per acre in 2005 categorized as other expenses while in prior years this expenditure never exceeded $1.16 per acre. Similarly for soybeans, South Dakota producers had an expenditure of $0.62 per acre for crop insurance in 2004, while in 2003 this expenditure was reported at $6.76 per acre and in 2005 the expenditure was reported to be $7.52 per acre. The emphasis for this newsletter is that readers should not focus on individual cost items in the budgets or reported costs of production, but examine the trends in total costs as each producer who reports data makes changes annually.

Comparisons from the Farm Business Management program show that South Dakota producers in their database have consistently spent about 48% of their total production costs for variable cost inputs. In addition, they have spent approximately 33% of their corn production variable costs for fertilizer and about 30% for seed. Seed expenditures have been commanding a higher percentage of variable costs over time, while expenditures for chemicals have been decreasing on a percentage of total variable cost basis. It is interesting to note that as a percentage of total variable costs, the expenditure for crop insurance has been increasing over the last ten years.

Corn for Grain (Source: South Dakota Annual Report Farm Business Management Program)			
Average of all Fields	10 year average	5year average	3 year average
Fertilizer as % of total variable cost	32.72%	33.01%	33.69%
Chemicals as % of total variable cost	25.60%	22.93%	21.82%
Seed as % of total variable cost	28.42%	29.84%	30.39%
Drying as % of total variable cost	1.10%	0.85%	0.85%
Crop Insurance as % of total variable cost	7.84%	8.94%	10.09%
Other Expense as % of total variable cost	1.66%	2.32%	3.53%
Special Hired Labor as % of total variable cost	0.12%	0.16%	0.13%
Custom Work as % of total variable cost	2.57%	2.26%	1.79%
Irrigation as % of total variable cost	0.28%	0.57%	0.94%
Total Variable costs	$94.17	$103.26	$109.70
Variable cost as % of Total Cost	46.69%	47.97%	48.01%

Soybeans (Source: South Dakota Annual Report Farm Business Management Program)			
Average of all Fields	10 year average	5year average	3 year average
Fertilizer as % of total variable cost	13.20%	13.93%	14.98%
Chemicals as % of total variable cost	33.41%	27.84%	25.14%
Seed as % of total variable cost	36.93%	41.49%	42.23%
Drying as % of total variable cost	2.63%	7.49%	14.18%
Crop Insurance as % of total variable cost	8.56%	8.31%	7.88%
Other Expense as % of total variable cost	1.23%	0.74%	0.63%
Special Hired Labor as % of total variable cost	0.71%	1.12%	1.59%
Custom Work as % of total variable cost	4.95%	4.47%	4.23%
Total Variable costs	$59.99	$59.81	$63.03
Variable cost as % of Total Cost	38.11%	37.24%	37.45%

Spring Wheat (Source: South Dakota Annual Report Farm Business Management Program)			
Average of all Fields	10 year average	5year average	3 year average
Fertilizer as % of total variable cost	47.19%	50.64%	49.97%
Chemicals as % of total variable cost	17.91%	14.96%	14.81%
Seed as % of total variable cost	15.73%	14.68%	15.38%
Drying as % of total variable cost	0.88%	0.19%	
Crop Insurance as % of total variable cost	8.61%	8.80%	8.91%
Other Expense as % of total variable cost	2.68%	2.88%	3.00%
Special Hired Labor as % of total variable cost	0.32%	0.50%	0.34%
Custom Work as % of total variable cost	7.21%	7.84%	7.88%
Total Variable costs	$54.87	$57.29	$60.88
Variable cost as % of Total Cost	41.30%	40.49%	40.42%

Similarly, for soybeans, data from the Farm Business Management program show that South Dakota producers'average variable costs of production are approximately 40% of the ERS forecast for U.S. major field crops. Like the situation for corn, South Dakota producers have been increasing the dollar expenditure for producing soybeans, but the percentage of total costs allocated to variable cost items has consistently been approximately 37% of total costs of production. For South Dakota producers, the percentage of variable costs being allocated to fertilizer has increased slightly over time

while the percentage of variable costs being allocated to chemicals has been decreasing. One hypothesis is that with innovations in seed technology, producers are able to plant Round-Up Ready® soybeans and alter their application of chemicals. Contrasted to the situation for corn production, South Dakota producers are shown to be spending a lower percentage of total variable costs for soybean crop insurance on a per acre basis.

For spring wheat, data from the Farm Business Management program show South Dakota producers' average variable costs of production are approximately 70% of the ERS forecast for U.S. major field crops. Like the situation for the other major spring crops, South Dakota producers have been increasing the dollar expenditure for producing spring wheat. However, the percentage of total costs allocated to variable cost items has consistently been approximately 40% of total costs of production. For South Dakota producers, the percentage of variable costs being allocated to fertilizer has remained consistent at approximately 50%, while the percentage of variable costs being allocated to chemicals and seed has been consistently 15% over the last five years.

Cost of production estimate information is available to assist South Dakota producers with their spring planting budgeting process and can be found on the SDSU Extension Economics web site at http://econ.sdstate.edu/Extension/otherlinks.htm. Templates of cost of production budgets for major spring crops are available with space provided for producers to complete the budget using their own figures based on their actual production history. These budgets and information provided in this article should be useful to producers as they finalize their spring planting intentions.

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Economics Department
South Dakota State University — Phone: 605-688-4141
Box 504 Scobey Hall — Fax: 605-688-6386
Brookings, SD 57007-0895 — E-Mail: Penny_Stover@ sdstate.edu

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SOUTH DAKOTA STATE UNIVERSITY
Department of Economics
Box 504
Brookings SD 57007-0895

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