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## **COST TO PRODUCE CORN AND SOYBEANS IN ILLINOIS—2006**

In 2006 the total of all economic costs per acre for growing corn in Illinois averaged \$502 in the northern section, \$500 in the central section for farmland with “high” soil ratings, \$472 in the central section for farmland with “low” soil ratings, and \$448 in the southern section. Soybean costs per acre were \$387, \$386, \$361 and \$341, respectively (see Table 1). Costs were lower in southern Illinois primarily because of lower land costs. The total of all economic costs per bushel in the different sections of the state ranged from \$2.74 to \$3.11 for corn and from \$6.94 to \$7.30 for soybeans. Variations in this cost were related to weather, yields, and land quality.

These figures were obtained from farm business records kept by farmers enrolled in the Illinois Farm Business Farm Management Association. The samples included only farms which had no livestock and had more than 500 acres of productive and nearly level soils in each area of the state. Farms located in the 22 counties north and northwest of the Illinois River are included in the sample for northern Illinois. Farms from 36 counties below a line from about Mattoon to Alton are in the sample for southern Illinois. The remaining 44 counties make up the sample for central Illinois. The sample farms averaged 1,198 tillable acres in northern Illinois, 1,189 acres in the central section with high soil ratings, 1,288 acres in the central section with lower soil ratings, and 1,515 acres in southern Illinois.

### **COST OF PRODUCTION FOR CORN COMPARED TO 2005**

Costs **per bushel** of corn in 2006 as compared to 2005 were lower for all geographic areas of the state except for the southern region. Costs per bushel were lower due to higher corn yields. Costs per bushel were 47 cents lower in northern Illinois, 31 cents lower in central Illinois with the lower rated soils, 17 cents lower in central Illinois with the higher rated soils and 9 cents higher in southern Illinois.

The average corn yield in 2006 was 38 bushels per acre higher than 2005 in northern Illinois, 20 to 25 bushels higher in central Illinois and 6 bushels per acre higher in southern Illinois. The 2006 average corn yield in the different geographical locations ranged from 3 bushels per acre lower to 11 bushels per acre higher than the four-year average from 2003 to 2006.

Costs **per acre** were higher in all the different geographic regions in Illinois compared to 2005. Across the state total costs per acre to produce corn increased 5 to 8 percent. A number of costs increased, including fertilizer, seed, fuel, insurance and land costs. The nonland interest cost per acre increased the most due to higher interest rates and higher grain inventory values.

## COST OF PRODUCTION FOR SOYBEANS COMPARED TO 2005

Production costs **per bushel** of soybeans in 2006 increased in all areas of the state except for the northern region as compared to 2005. Costs per bushel increased mainly due to higher per acre costs. Soybean yields were the same or slightly higher than the year before except for the southern region. Soybean yields ranged from 1 bushel per acre lower to 4 bushels per acre higher in 2006 as compared to 2005. Increases in costs per bushel ranged from 12 cents in central Illinois with the lower rated soils to 71 cents in southern Illinois. Costs per bushel were 5 cents less in northern Illinois.

Like corn, total costs **per acre** increased in all geographic regions of the state compared to 2005. Costs increased \$27 per acre in northern Illinois, \$19 per acre in central Illinois with the higher rated soils, \$20 per acre in central Illinois with the lower rated soils and \$28 per acre in southern Illinois. Fertilizer, fuel, and interest were some of the costs that increased. Average soybean yields in the different areas ranged from 1 to 6 bushels per acre higher than the four-year average from 2003 to 2006.

## STATE AVERAGES

Total costs to produce corn for all combined areas of the state were \$488 per acre. This figure increased 6.5 percent compared to the year before. Variable costs increased \$9 per acre, or 4 percent, other nonland costs increased \$16 per acre and land costs increased \$5 per acre. In 2006, cash costs accounted for 45 percent of the total cost of production for corn, other nonland costs were 29 percent, and land costs were 26 percent. The average corn yield for all combined areas of the state was 174 bushels per acre resulting in a total cost of production of \$2.80 per bushel. The average corn yield was the second highest on record. The 2004 corn yield was 184 bushels per acre and the 2003 corn yield was also 174 bushels per acre. Total costs per acre were the highest on record. Even with the relatively high corn yields, total costs per bushel were the second highest since 1998. The highest cost per bushel during that time period was \$3.05 in 2005.

Total cost per acre to produce soybeans increased, from \$351 per acre in 2005 to \$375 per acre in 2006. Generally speaking, the same expenses that increased for corn also increased for soybeans. Variable costs accounted for 33 percent of the total cost of production for soybeans, other nonland costs 33 percent and land costs 34 percent. The average soybean yield for all combined areas of the state was 53 bushels per acre resulting in a total cost of production of \$7.08 per bushel. The average soybean yield was the second highest on record. The previous high yield of 54 bushels per acre was recorded in 2004. The cost per bushel to raise soybeans the last five years averaged \$7.02 per bushel.

The author would like to acknowledge that data used in this study comes from the local Farm Business Farm Management (FBFM) Associations across the State of Illinois. Without their cooperation, information as comprehensive and accurate as this would not be available for educational purposes. FBFM, which consists of 5,800 plus farmers and 60 professional field staff, is a not-for-profit organization available to all farm operators in Illinois. FBFM field staff provide on-farm counsel with computerized recordkeeping, farm financial management, business entity planning and income tax management. For more information, please contact the State FBFM Office located at the University of Illinois Department of Agricultural and Consumer Economics at 217-333-5511 or visit the FBFM website at [www.fbfm.org](http://www.fbfm.org).

A more complete discussion of how some of the costs are calculated can be found under enterprise costs in the management section of *farmdoc*.

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Table 1. Cost Per Acre of Growing Corn and Soybeans on Illinois Grain Farms Without Livestock in 2006.

	Corn			
	North	Central <sup>1</sup>	Central <sup>2</sup>	South
Number of farms .....	392	590	308	192
Acres in crop .....	731	628	668	651
<b>Nonland Costs</b>				
Variable costs:				
Soil fertility.....	\$ 77	\$ 82	\$ 79	\$ 81
Pesticides.....	37	40	37	41
Seed.....	47	45	47	47
Drying.....	15	11	10	6
Repairs, fuel, and hire .....	<u>50</u>	<u>38</u>	<u>41</u>	<u>42</u>
Total, variable costs.....	\$ 226	\$ 216	\$ 214	\$ 217
Percent change from 2005.....	6	3	3	5
Other nonland costs:				
Labor.....	\$ 32	\$ 35	\$ 34	\$ 34
Buildings.....	11	7	8	10
Storage.....	4	8	6	3
Machinery depreciation .....	21	20	21	25
Nonland interest.....	43	43	41	39
Overhead .....	<u>32</u>	<u>28</u>	<u>28</u>	<u>27</u>
Total, other costs .....	\$ 143	\$ 141	\$ 138	\$ 138
Total, nonland costs.....	\$ 369	\$ 357	\$ 352	\$ 355
Percent change from 2005 .....	10	7	6	9
<b>Land costs</b>				
Taxes.....	\$ 24	\$ 26	\$ 20	\$ 15
Annually adjusted net rent .....	<u>109</u>	<u>117</u>	<u>100</u>	<u>78</u>
Total land cost.....	\$ 133	\$ 143	\$ 120	\$ 93
<b>Total, all costs</b> .....	\$ 502	\$ 500	\$ 472	\$ 448
Percent change from 2005.....	8	6	5	7
2006 yields, bushels per acre.....	183	180	172	144
Nonland cost per bushel .....	\$2.02	\$1.98	\$2.05	\$2.47
Total, all costs per bushel .....	\$2.74	\$2.78	\$2.74	\$3.11
2003-2006 average yield.....	172	179	168	147
Nonland cost per bushel.....	\$2.15	\$1.99	\$2.10	\$2.41
Total, all costs per bushel.....	\$2.92	\$2.79	\$2.81	\$3.05

Note: The last two lines of the table are costs based on 2003-2006 average yields.

<sup>1</sup> Soil productivity ratings of 86 to 100.

<sup>2</sup> Soil productivity ratings of 56 to 85

Table 1 - continued. Cost Per Acre of Growing Corn and Soybeans on Illinois Grain Farms Without Livestock in 2006.

	Soybeans			
	North	Central <sup>1</sup>	Central <sup>2</sup>	South
Number of farms .....	392	590	308	192
Acres in crop .....	437	537	572	706
<b>Nonland Costs</b>				
Variable costs:				
Soil fertility .....	\$ 23	\$ 26	\$ 25	\$ 25
Pesticides .....	23	25	24	30
Seed .....	35	32	33	31
Drying .....	4	2	3	3
Repairs, fuel, and hire .....	42	33	35	40
Total, variable costs .....	\$ 127	\$ 118	\$ 120	\$ 129
Percent change from 2005 .....	3	-2	0	7
Other nonland costs:				
Labor .....	\$ 30	\$ 33	\$ 32	\$ 33
Buildings .....	6	4	5	5
Storage .....	3	4	3	1
Machinery depreciation .....	18	18	18	21
Nonland interest .....	38	39	36	33
Overhead .....	32	27	27	26
Total, other costs .....	\$ 127	\$ 125	\$ 121	\$ 119
Total, nonland costs .....	\$ 254	\$ 243	\$ 241	\$ 248
Percent change from 2005 .....	10	6	7	11
<b>Land costs</b>				
Taxes .....	\$ 24	\$ 26	\$ 20	\$ 15
Annually adjusted net rent .....	109	117	100	78
Total land cost .....	\$ 133	\$ 143	\$ 120	\$ 93
<b>Total, all costs</b> .....	<b>\$ 387</b>	<b>\$ 386</b>	<b>\$ 361</b>	<b>\$ 341</b>
Percent change from 2005 .....	8	5	6	9
2006 yields, bushels per acre .....	53	55	52	48
Nonland cost per bushel .....	\$ 4.79	\$ 4.42	\$ 4.63	\$ 5.17
Total, all costs per bushel .....	\$ 7.30	\$ 7.02	\$ 6.94	\$ 7.10
2003-2006 average yield .....	47	52	48	47
Nonland cost per bushel .....	\$ 5.40	\$ 4.67	\$ 5.02	\$ 5.28
Total, all costs per bushel .....	\$ 8.23	\$ 7.42	\$ 7.52	\$ 7.26

Note: The last two lines of the table are costs based on 2003-2006 average yields.

<sup>1</sup> Soil productivity ratings of 86 to 100.

<sup>2</sup> Soil productivity ratings of 56 to 85