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COST TO PRODUCE CORN AND SOYBEANS IN ILLINOIS—2004

In 2004 the total of all economic costs per acre for growing corn in Illinois averaged \$444 in the northern section, \$434 in the central section for farmland with “high” soil ratings, \$411 in the central section for farmland with “low” soil ratings, and \$374 in the southern section. Soybean costs per acre were \$349, \$343, \$319 and \$289, respectively (see Table 1). Costs were lower in the 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 \$2.20 to \$2.40 for corn and from \$5.78 to \$6.71 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 260 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 935 tillable acres in northern Illinois, 1,075 acres in the central section with high soil ratings, 1,045 acres in the central section with lower soil ratings, and 1,331 acres in southern Illinois.

COST OF PRODUCTION FOR CORN COMPARED TO 2003

Costs **per bushel** of corn in 2004 were slightly higher for northern and central Illinois and lower for southern Illinois as compared to 2003. Costs were lower in southern Illinois due a significant increase in yields in 2004 compared to 2003. Costs per bushel were 6 cents higher in northern Illinois, 4 cents higher in central Illinois with the lower rated soils, 8 cents higher in central Illinois with the higher rated soils and 37 cents lower in southern Illinois.

The average corn yield in 2004 was 11 bushels per acre higher than 2003 in northern Illinois, 4 to 8 bushels higher in central Illinois and 36 bushels per acre higher in southern Illinois. The 2004 average corn yield in the different geographical locations ranged from 15 to 32 bushels per acre higher than the four-year average from 2001 to 2004.

Costs **per acre** were higher in all the different geographic regions in Illinois compared to 2003. Across the state total costs per acre to produce corn increased 6 to 9 percent. The main reason for the increase in costs per acre was due to higher fertilizer, seed, and fuel costs. Overhead and land costs also increased.



COST OF PRODUCTION FOR SOYBEANS COMPARED TO 2003

Production costs **per bushel** of soybeans decreased significantly in all areas of the state compared to 2003. Costs per bushel decreased due to substantially higher yields. Soybean yields ranged from 11 to 17 bushels per acre higher in 2004 as compared to 2003. Decreases in costs per bushel ranged from a \$1.22 decrease in southern Illinois to a \$2.60 decrease in northern Illinois.

Like corn, total costs **per acre** increased in all geographic regions of the state compared to 2003. Costs increased \$17 per acre in northern Illinois, \$13 per acre in central Illinois with the higher rated soils, \$17 per acre in central Illinois with the lower rated soils and \$16 per acre in southern Illinois. Seed, fuel, and the charge for land were some of the costs that increased. Average soybean yields in the different areas ranged from 6 to 8 bushels per acre higher than the four-year average from 2001 to 2004.

STATE AVERAGES

Total costs to produce corn for all combined areas of the state were \$426 per acre. This figure increased 8 percent compared to the year before. Variable costs increased \$19 per acre, or 11 percent, other nonland costs increased \$7 per acre and land costs increased \$4 per acre. In 2004, cash costs accounted for 45 percent of the total cost of production for corn, other nonland costs were 27 percent, and land costs were 28 percent. The average corn yield for all combined areas of the state was 184 bushels per acre resulting in a total cost of production of \$2.32 per bushel. The average corn yield was the highest on record. The previous high was 174 bushels per acre in 2003. Total costs per acre were the third highest on record. Due to the record high yields however, total costs per bushel were the second lowest since 1994 when they were \$2.11.

Total cost per acre to produce soybeans increased, from \$317 per acre in 2003 to \$333 per acre in 2004. 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 31 percent and land costs 36 percent. The average soybean yield for all combined areas of the state was a record 54 bushels per acre resulting in a total cost of production of \$6.17 per bushel. The previous high soybean yield was 50 bushels per acre in 1994. The cost per bushel of \$6.17 was the lowest since \$5.80 in 1994.

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 6,000 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.

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

Issued by: Dale Lattz, Department of Agricultural and Consumer Economics



Table 1. Cost Per Acre of Growing Corn and Soybeans on Illinois Grain Farms Without Livestock in 2004.

	Corn			
	North	Central ¹	Central ²	South
Number of farms	558	733	378	228
Acres in crop	558	556	555	608
Nonland Costs				
Variable costs:				
Soil fertility	\$ 64	\$ 68	\$ 66	\$ 66
Pesticides	40	38	38	31
Seed	39	38	38	41
Drying	16	9	8	4
Repairs, fuel, and hire	<u>41</u>	<u>34</u>	<u>36</u>	<u>37</u>
Total, variable costs	\$ 200	\$ 187	\$ 186	\$ 179
Percent change from 2003	13	10	7	9
Other nonland costs:				
Labor	\$ 34	\$ 36	\$ 37	\$ 35
Buildings	10	8	8	9
Storage	4	6	5	2
Machinery depreciation	19	19	19	20
Nonland interest	24	25	23	21
Overhead	<u>27</u>	<u>22</u>	<u>23</u>	<u>23</u>
Total, other costs	\$ 118	\$ 116	\$ 115	\$ 110
Total, nonland costs	\$ 318	\$ 303	\$ 301	\$ 289
Percent change from 2003	11	8	7	7
Land costs				
Taxes	\$ 25	\$ 26	\$ 22	\$ 15
Annually adjusted net rent	<u>101</u>	<u>105</u>	<u>88</u>	<u>70</u>
Total land cost	\$ 126	\$ 131	\$ 110	\$ 85
Total, all costs	\$ 444	\$ 434	\$ 411	\$ 374
Percent change from 2003	9	6	6	8
2004 yields, bushels per acre	185	190	181	170
Nonland cost per bushel	\$1.72	\$1.59	\$1.66	\$1.70
Total, all costs per bushel	\$2.40	\$2.28	\$2.27	\$2.20
2001-2004 average yield	168	174	166	138
Nonland cost per bushel	\$1.89	\$1.74	\$1.81	\$2.09
Total, all costs per bushel	\$2.64	\$2.49	\$2.48	\$2.71

Note: The last two lines of the table are costs based on 2001-2004 average yields.

¹ Soil productivity ratings of 86 to 100.

² 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 2004.

	Soybeans			
	North	Central ¹	Central ²	South
Number of farms	558	733	378	228
Acres in crop	352	469	481	574
Nonland Costs				
Variable costs:				
Soil fertility	\$ 20	\$ 22	\$ 22	\$ 19
Pesticides	29	28	28	27
Seed	28	27	27	27
Drying	5	2	2	2
Repairs, fuel, and hire	35	30	30	35
Total, variable costs	\$ 117	\$ 109	\$ 109	\$ 110
Percent change from 2003	9	6	5	4
Other nonland costs:				
Labor	\$ 32	\$ 34	\$ 34	\$ 33
Buildings	6	5	5	4
Storage	3	3	2	1
Machinery depreciation	16	17	17	17
Nonland interest	22	23	20	18
Overhead	27	21	22	21
Total, other costs	\$ 106	\$ 103	\$ 100	\$ 94
Total, nonland costs	\$ 223	\$ 212	\$ 209	\$ 204
Percent change from 2003	9	6	6	3
Land costs				
Taxes	\$ 25	\$ 26	\$ 22	\$ 15
Annually adjusted net rent	101	105	88	70
Total land cost	\$ 126	\$ 131	\$ 110	\$ 85
Total, all costs	\$ 349	\$ 343	\$ 319	\$ 289
Percent change from 2003	7	4	6	6
2004 yields, bushels per acre	52	56	53	50
Nonland cost per bushel	\$ 4.29	\$ 3.79	\$ 3.94	\$ 4.08
Total, all costs per bushel	\$ 6.71	\$ 6.13	\$ 6.02	\$ 5.78
2001-2004 average yield	46	50	47	42
Nonland cost per bushel	\$ 4.85	\$ 4.24	\$ 4.45	\$ 4.86
Total, all costs per bushel	\$ 7.59	\$ 6.86	\$ 6.79	\$ 6.88

Note: The last two lines of the table are costs based on 2001-2004 average yields.

¹ Soil productivity ratings of 86 to 100.

² Soil productivity ratings of 56 to 85