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Cost to Produce Corn and Soybeans in Illinois - 2014

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In 2014, the total of all economic costs per acre for growing corn in Illinois averaged $1,045 in the northern section, $1,002 in the central section for farmland with “high” soil ratings, $955 in the central section for farmland with “low” soil ratings, and $895 in the southern section. Soybean costs per acre were $745, $758, $685 and $664, 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 $4.34 to $5.10 for corn and from $11.23 to $12.21 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 with more than 500 acres of productive and nearly level soils in each area of the state; these are farms without livestock. 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 1,356 tillable acres in northern Illinois, 1,316 acres in the central section with high soil ratings, 1,356 acres in the central section with lower soil ratings, and 1,702 acres in southern Illinois.

Cost of Production for Corn Compared to 2013

Costs **per bushel** of corn in 2014 as compared to 2013 were lower for all geographic areas of the state, except northern Illinois. Costs per bushel were lower due to higher yields and lower costs. Costs per bushel were 4 cents higher in northern Illinois, 56 cents lower in central Illinois with the higher rated soils, 76 cents lower in central Illinois with the lower rated soils and 55 cents lower in southern Illinois.

The average corn yield in 2014 was one bushel per acre higher than 2013 in northern Illinois, 32 to 34 bushels higher in central Illinois and 25 bushels per acre higher in southern Illinois. The 2014 average corn yield in the different geographical locations ranged from 24 to 54 bushels per acre higher than the five-year average from 2010 to 2014.

Costs **per acre** were mostly higher in all the different geographic regions in Illinois compared to 2013. Across the state, total costs per acre to produce corn increased zero to four percent. Many costs increased, including seed, drying, repairs, machinery depreciation and adjusted net rent. Soil fertility decreased in all areas of the state.

Cost of Production for Soybeans Compared to 2012

Production costs **per bushel** of soybeans in 2014 decreased in all areas of the state as compared to 2013. Costs per bushel decreased mainly due to higher yields. Soybean yields were higher in every region of Illinois when compared to the year before. Soybean yields ranged from 3 to 8 bushels per acre higher in 2014 compared to 2013. Decreases in costs per bushel ranged from 11 cents in northern Illinois to $1.47 in central Illinois with lower rated soils.

Total costs **per acre** increased in all geographic regions of the state when compared to 2013. Costs increased $18 per acre in northern Illinois, $43 per acre in central Illinois with the higher rated soils, $12 per acre in central Illinois with the lower rated soils and $33 per acre in southern Illinois. Average soybean yields in the different areas ranged from 4 to 8 bushels per acre higher than the five-year average from 2010 to 2014.

State Averages

Total costs to produce corn for all combined areas of the state were $989 per acre. This figure increased two percent compared to the year before. Variable costs decreased $11 per acre or 2 percent, other nonland costs increased $8 per acre and land costs increased $27 per acre. In 2014, cash costs accounted for 47 percent of the total cost of production for corn, other nonland costs were 25 percent, and land costs were 28 percent. The average corn yield for all combined areas of the state was 217 bushels per acre resulting in a total cost of production of $4.56 per bushel. The average corn yield was the highest on record. Total costs per acre were the highest on record and total costs per bushel were the lowest in the last four years.

Total cost per acre to produce soybeans increased, from $697 per acre in 2013 to $727 per acre in 2014. Generally speaking, the same expenses that increased for corn also increased for soybeans. Variable costs accounted for 32 percent of the total cost of production for soybeans, other nonland costs 30 percent and land costs 38 percent. The average soybean yield for all combined areas of the state was 62 bushels per acre resulting in a total cost of production of $11.73 per bushel. The average soybean yield was the highest on record. The cost per bushel to raise soybeans the last five years averaged $11.54 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 5,700 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 (available here) can be found under Illinois Farm Management Handbook in the management section of *farmdoc*.

Table 1. Cost Per Acre for Growing Corn and Soybeans on Illinois Grain Farms Without Livestock in 2014

	Corn				Soybeans			
	Northern	Central [1] High	Central [2] Low	Southern	Northern	Central [1] High	Central [2] Low	Southern
Number of Farms	380	679	373	192	380	679	373	192
Acres in crop	860	703	709	789	452	595	599	734
NONLAND COSTS								
Variable Costs:								
Soil Fertility	$174	$171	$171	$170	$44	$58	$49	$54
Pesticides	65	67	66	67	39	41	42	47
Seed	123	120	122	116	71	77	64	67
Drying	34	28	26	19	1	1	2	1
Repairs, fuel and hire	87	67	69	76	74	58	61	71
Total variable costs	$483	$453	$454	$448	$229	$235	$218	$240
Percent change from 2013	-1%	-2%	-5%	-4%	3%	0%	-4%	-2%
Other nonland costs								
Labor	$50	$49	$50	$62	$44	$47	$48	$55
Buildings	28	17	18	25	14	14	13	15
Storage	7	12	11	6	3	7	3	4
Machinery depreciation	74	65	65	71	63	57	56	67
Nonland interest	55	52	49	49	46	47	42	49
Overhead	54	48	48	50	52	45	45	50
Total, other costs	$268	$243	$241	$263	$222	$217	$207	$240
Total, nonland costs	$751	$696	$695	$711	$451	$452	$425	$480
Percent change from 2013	1%	0%	-2%	-1%	3%	2%	-2%	1%
LAND COSTS								
Taxes	$43	$45	$33	$20	$43	$45	$33	$20
Annually adjusted net rent	$251	$261	227	164	251	261	227	164
Total land costs	$294	$306	$260	$184	$294	$306	$260	$184
TOTAL, all costs	$1,045	$1,002	$955	$895	$745	$758	$685	$664
Percent change from 2013	1%	4%	0%	3%	2%	6%	2%	5%
2014 yields, bushels per acre	205	231	215	194	61	64	61	55
Nonland costs per bushel	$3.66	$3.01	$3.23	$3.66	$7.39	$7.06	$6.97	$8.73
Total, all costs per bushel	$5.10	$4.34	$4.44	$4.61	$12.21	$11.84	$11.23	$12.07
2010-2014 average yield	182	182	168	140	58	57	53	47
Nonland costs per bushel	$4.13	$3.82	$4.14	$5.08	$7.78	$7.93	$8.02	$10.21
Total, all costs per bushel	$5.74	$5.51	$5.68	$6.39	$12.84	$13.30	$12.92	$14.13

Note: The last two lines of the table are costs based on 2010-2014 average yields

[1] Soil productivity ratings of 86 to 100

[2] Soil productivity ratings of 56 to 85