

**ESTIMATED COSTS OF CROP PRODUCTION  
IN ILLINOIS, 2001**



Department of Agricultural and Consumer Economics  
University of Illinois  
March 2001

## ESTIMATED COSTS OF CROP PRODUCTION IN ILLINOIS, 2001

The following budgets show estimated costs of production for:

<u>Budget</u>	<u>Page No.</u>
Corn following soybeans	4
Corn following corn	5
Soybeans	6
Wheat	7
Double Crop Soybeans	8
Alfalfa, establishment year costs	9
Alfalfa, costs in years following establishment	10

The crop budgets show costs for different production levels. For example, corn following soybean costs are shown for 120, 140, and 160 bu. production levels. These production levels represent different soil productivities. As such, land costs differ for each production level.

As prepared, the budgets reflect full costs of production, whether those costs are cash or opportunity costs. Opportunity costs reflect charges for the farmer's investment, labor, and management. These opportunity costs do not necessarily represent a cash expense to the farmer. Rather they reflect a charge for the farmer's contribution to the enterprise. Items that may be opportunity costs within the budgets are: 1) interest on operating inputs, 2) labor, and 3) interest on investment.

The budgets also include general farm expenses. These costs are not easily allocated to a crop enterprise. However, these costs must be recovered if the farming enterprise is profitable. Items that are general farm expenses include 1) building repair and depreciation and 2) overhead.

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Extensive use was made of data from Illinois Farm Business Farm Management (FBFM) records in preparing these budgets.

# FARM BUSINESS MANAGEMENT

**SUMMARY OF COSTS**  
**ILLINOIS, 2001**  
**ESTIMATED COSTS OF PRODUCTION**  
 Department of Agricultural and Consumer Economics  
 University of Illinois  
 FBM 0100

Budget	----- Per Acre -----			----- Per Bu. -----	
	Yield Level	Variable Costs	Total Costs	Variable Costs	Total Costs
Corn after soybeans	120 bu.	\$166	\$341	\$1.38	\$2.84
	140 bu.	179	384	1.28	2.74
	160 bu.	193	428	1.21	2.68
Corn after corn	110 bu.	\$168	\$343	\$1.53	\$3.12
	130 bu.	182	387	1.40	2.98
	150 bu.	195	430	1.30	2.87
Soybeans	35 bu.	\$98	\$266	\$2.80	\$7.60
	45 bu.	104	302	2.31	6.71
	55 bu.	110	338	1.99	6.14
Wheat	45 bu.	\$65	\$224	\$1.45	\$4.98
	60 bu.	75	264	1.25	4.40
	75 bu.	85	304	1.14	4.06
Double crop soybeans	20 bu.	\$35	\$146	\$1.75	\$7.30
Alfalfa	----- Per Ton -----				
	4 tons	\$110	\$383	\$28	\$96
	6 tons	120	423	20	71

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# FARM BUSINESS MANAGEMENT

## CORN AFTER SOYBEANS, ILLINOIS, 2001 ESTIMATED COST OF PRODUCTION

Department of Agricultural and Consumer Economics  
University of Illinois  
FBM 0100

	----- Bu. per acre -----			Your Estimate
	120	140	160	
<b>Variable costs</b>				
Nitrogen <sup>1</sup>	\$22	\$27	\$32	_____
Phosphorus <sup>2</sup>	11	13	15	_____
Potassium <sup>3</sup>	5	5	6	_____
Lime	6	6	6	_____
Herbicides	25	25	25	_____
Insecticides	4	4	4	_____
Seed <sup>4</sup>	31	33	35	_____
Drying and storage	22	25	29	_____
Machinery repairs, fuel, and hire	29	29	29	_____
Crop insurance	6	6	6	_____
Interest on operating inputs <sup>5</sup>	6	6	7	_____
<b>Total variable costs</b>	<b>\$166</b>	<b>\$179</b>	<b>\$193</b>	_____
<b>Fixed costs</b>				
Labor (2.5 hrs at \$10.00 per hr)	\$25	\$25	\$25	_____
Building repair and depreciation	8	8	8	_____
Machinery depreciation	19	19	19	_____
Interest on investment	23	23	23	_____
Overhead (farm insurance, utilities, etc.)	15	15	15	_____
Land (cash rent equivalent)	85	115	145	_____
<b>Total fixed costs</b>	<b>\$175</b>	<b>\$205</b>	<b>\$235</b>	_____
<b>Total costs</b>	<b>\$341</b>	<b>\$384</b>	<b>\$428</b>	_____
<b>Per bushels costs</b>				
Variable costs	\$1.38	\$1.28	\$1.21	_____
Fixed costs	1.46	1.46	1.47	_____
<b>Total costs</b>	<b>\$2.84</b>	<b>\$2.74</b>	<b>\$2.68</b>	_____

<sup>1</sup> Quantities based on Illinois Agronomy Handbook (120 bu = 111 lbs., 140 bu = 136 lbs., 160 bu = 160 lbs.). Price = 0.20 per lb.

<sup>2</sup> Quantities based on Illinois Agronomy Handbook (120 bu = 52 lbs., 140 bu = 60 lbs., 160 bu = 69 lbs.). Price = 0.22 per lb.

<sup>3</sup> Quantities based on Illinois Agronomy Handbook (120 bu = 34 lbs., 140 bu = 39 lbs., 160 bu = 45 lbs.). Price = 0.14 per lb.

<sup>4</sup> Based on a cost of \$1.10 per 1,000 kernels. Rates are 28,000 (120 bu), 30,000 (140 bu), and 32,000 (160 bu) seeds per acre.

<sup>5</sup> Based on an 8 percent interest rate on fertilizer through seed costs for 8 months.

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# FARM BUSINESS MANAGEMENT

## CORN AFTER CORN, ILLINOIS, 2001 ESTIMATED COST OF PRODUCTION

Department of Agricultural and Consumer Economics  
University of Illinois  
FBM 0100

	----- Bu. per acre -----			Your Estimate
	110	130	150	
<b>Variable costs</b>				
Nitrogen <sup>1</sup>	\$28	\$33	\$38	_____
Phosphorus <sup>2</sup>	10	12	14	_____
Potassium <sup>3</sup>	4	5	6	_____
Lime	6	6	6	_____
Herbicides	25	25	25	_____
Insecticides	14	14	14	_____
Seed <sup>4</sup>	31	33	35	_____
Drying and storage	14	17	20	_____
Machinery repairs, fuel, and hire	24	24	24	_____
Crop insurance	6	6	6	_____
Interest on operating inputs <sup>5</sup>	6	7	7	_____
<b>Total variable costs</b>	<b>\$168</b>	<b>\$182</b>	<b>\$195</b>	_____
<b>Fixed costs</b>				
Labor (2.5 hrs at \$10.00 per hr)	\$25	\$25	\$25	_____
Building repair and depreciation	8	8	8	_____
Machinery depreciation	19	19	19	_____
Interest on investment	23	23	23	_____
Overhead (farm insurance, utilities, etc.)	15	15	15	_____
Land (cash rent equivalent)	85	115	145	_____
<b>Total fixed costs</b>	<b>\$175</b>	<b>\$205</b>	<b>\$235</b>	_____
<b>Total costs</b>	<b>\$343</b>	<b>\$387</b>	<b>\$430</b>	_____
<b>Per bushels costs</b>				
Variable costs	\$1.53	\$1.40	\$1.30	_____
Fixed costs	1.59	1.58	1.57	_____
<b>Total costs</b>	<b>\$3.12</b>	<b>\$2.98</b>	<b>\$2.87</b>	_____

<sup>1</sup> Quantities based on Illinois Agronomy Handbook (110 bu = 139 lbs., 130 bu = 164 lbs., 150 bu = 189 lbs.). Price = 0.20 per lb.

<sup>2</sup> Quantities based on Illinois Agronomy Handbook (110 bu = 47 lbs., 130 bu = 56 lbs., 150 bu = 65 lbs.). Price = 0.22 per lb.

<sup>3</sup> Quantities based on Illinois Agronomy Handbook (110 bu = 31 lbs., 130 bu = 36 lbs., 150 bu = 42 lbs.). Price = 0.14 per lb.

<sup>4</sup> Based on a cost of \$1.10 per 1,000 kernels. Rates are 28,000 (110 bu), 30,000 (136 bu), and 32,000 (150 bu) seeds per acre.

<sup>5</sup> Based on an 8 percent interest rate on fertilizer through seed costs for 8 months.

# FARM BUSINESS MANAGEMENT

**SOYBEANS, ILLINOIS, 2001**  
**ESTIMATED COST OF PRODUCTION**  
 Department of Agricultural and Consumer Economics  
 University of Illinois  
 FBM 0100

	----- Bu. per acre -----			Your Estimate
	35	45	55	
<b>Variable costs</b>				
Phosphorus <sup>1</sup>	\$7	\$9	\$11	_____
Potassium <sup>2</sup>	7	9	11	_____
Lime	6	6	6	_____
Herbicides	34	34	34	_____
Seed <sup>3</sup>	18	18	18	_____
Drying and storage	5	7	8	_____
Machinery repairs, fuel, and hire	13	13	13	_____
Crop insurance	4	4	4	_____
Interest on operating inputs <sup>4</sup>	4	4	4	_____
<b>Total variable costs</b>	<u>\$98</u>	<u>\$104</u>	<u>\$110</u>	_____
<b>Fixed costs</b>				
Labor (2.0 hrs at \$10.00 per hr)	\$20	\$20	\$20	_____
Building repair and depreciation	8	8	8	_____
Machinery depreciation	17	17	17	_____
Interest on investment	23	23	23	_____
Overhead (farm insurance, utilities, etc.)	15	15	15	_____
Land (cash rent equivalent)	85	115	145	_____
<b>Total fixed costs</b>	<u>\$168</u>	<u>\$198</u>	<u>\$228</u>	_____
<b>Total costs</b>	<u>\$266</u>	<u>\$302</u>	<u>\$338</u>	_____
<b>Per bushels costs</b>				
Variable costs	\$2.80	\$2.31	\$1.99	_____
Fixed costs	4.80	4.40	4.15	_____
<b>Total costs</b>	<u>\$7.60</u>	<u>\$6.71</u>	<u>\$6.14</u>	_____

<sup>1</sup> Quantities based on Illinois Agronomy Handbook (40 bu = 34 lbs., 50 bu = 42 lbs., 60 bu = 51 lbs.). Price = 0.22 per lb.

<sup>2</sup> Quantities based on Illinois Agronomy Handbook (40 bu = 52 lbs., 50 bu = 65 lbs., 60 bu = 78 lbs.). Price = 0.14 per lb.

<sup>3</sup> Based on 60 pounds per acre at a cost of \$15.00 per 50 lbs.

<sup>4</sup> Based on an 8 percent interest rate on fertilizer through seed costs for 8 months.

# FARM BUSINESS MANAGEMENT

**WHEAT, ILLINOIS, 2001**  
**ESTIMATED COST OF PRODUCTION**  
 Department of Agricultural and Consumer Economics  
 University of Illinois  
 FBM 0100

	----- Bu. per acre -----			Your
	45	60	75	Estimate
<b>Variable costs</b>				
Nitrogen <sup>1</sup>	\$9	\$12	\$15	_____
Phosphorus <sup>2</sup>	10	13	17	_____
Potassium <sup>3</sup>	2	3	4	_____
Lime	6	6	6	_____
Seed <sup>4</sup>	15	15	15	_____
Drying and storage	6	8	10	_____
Machinery repairs, fuel, and hire	11	11	11	_____
Crop insurance	3	3	3	_____
Interest on operating inputs <sup>5</sup>	3	4	5	_____
<b>Total variable costs</b>	<b>\$65</b>	<b>\$75</b>	<b>\$85</b>	_____
<b>Fixed costs</b>				
Labor (2.0 hrs at \$10.00 per hr)	\$20	\$20	\$20	_____
Building repair and depreciation	8	8	8	_____
Machinery depreciation	15	15	15	_____
Interest on investment	16	16	16	_____
Overhead (farm insurance, utilities, etc.)	15	15	15	_____
Land (cash rent equivalent)	85	115	145	_____
<b>Total fixed costs</b>	<b>\$159</b>	<b>\$189</b>	<b>\$219</b>	_____
<b>Total costs</b>	<b>\$224</b>	<b>\$264</b>	<b>\$304</b>	_____
<b>Per bushels costs</b>				
Variable costs	\$1.45	\$1.25	\$1.14	_____
Fixed costs	3.53	3.15	2.92	_____
<b>Total costs</b>	<b>\$4.98</b>	<b>\$4.40</b>	<b>\$4.06</b>	_____

<sup>1</sup> Quantities based on Illinois Agronomy Handbook (45 bu = 40 lbs., 60 bu = 65 lbs., 75 bu = 80 lbs.). Price = 0.20 per lb.

<sup>2</sup> Quantities based on Illinois Agronomy Handbook (45 bu = 45 lbs., 60 bu = 60 lbs., 75 bu = 75 lbs.). Price = 0.22 per lb.

<sup>3</sup> Quantities based on Illinois Agronomy Handbook (45 bu = 12 lbs., 60 bu = 20 lbs., 75 bu = 28 lbs.). Price = 0.14 per lb.

<sup>4</sup> Based on 1.5 bushels planted per acre at a price of \$10.00 per bu.

<sup>5</sup> Based on an 8 percent interest rate on fertilizer through seed costs for 12 months.

	20 bu.	Your Estimate
<b>Variable costs</b>		
Nitrogen	\$0	_____
Phosphorus	0	_____
Potassium	0	_____
Lime	3	_____
Herbicide	15	_____
Seed	15	_____
Drying and storage	4	_____
Machinery repairs, fuel, and hire	12	_____
Interest on operating inputs	3	_____
Total variable costs	<u>\$51</u>	_____
<b>Fixed costs</b>		
Labor	\$10	_____
Building repair and depreciation	4	_____
Machinery depreciation	15	_____
Interest on investment	15	_____
Overhead (farm insurance, utilities, etc.)	7	_____
Land (cash rent equivalent)	60	_____
Total fixed costs	<u>\$111</u>	_____
Total costs	\$162	_____
<b>Per bushels costs</b>		
Variable costs	\$2.56	_____
Fixed costs	<u>5.55</u>	_____
Total costs	<u>\$8.11</u>	_____

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	Per Acre	Your Estimate
<b>Establishment costs</b>		
Variable costs		
Phosphorus <sup>2</sup>	\$8	_____
Potassium <sup>3</sup>	21	_____
Lime	12	_____
Herbicide	30	_____
Insecticide	18	_____
Seed <sup>4</sup>	48	_____
Machinery repairs, fuel, and hire	9	_____
Interest on operating inputs <sup>5</sup>	11	_____
Total variable costs	<u>\$157</u>	_____
Fixed costs		
Labor	\$8	_____
Building repair and depreciation	8	_____
Machinery depreciation	10	_____
Interest on investment	10	_____
Overhead (farm insurance, utilities, etc.)	15	_____
Land (cash rent equivalent)	110	_____
Total fixed costs	<u>\$161</u>	_____
Total establishment costs	\$318	_____
Total establishment costs prorated over five years	\$80	_____
<b>Harvesting costs (first year)</b>		
Establishment costs	\$80	_____
Supplies	5	_____
Machinery repairs, fuel, and hire	10	_____
Labor	20	_____
Machinery depreciation	5	_____
Interest on investment	6	_____
Total costs	<u>\$126</u>	_____
Total costs per ton (2.5 tons)	\$50	_____

<sup>1</sup> Based on spring seeding with no companion crop.

<sup>2</sup> Based on 36 pound per acre application at a price of \$0.22 per lb.

<sup>3</sup> Based on 150 pound per acre application at a price of \$0.14 per lb.

<sup>4</sup> Based on 12 pounds per acre at a price of \$4.00 per pound.

<sup>5</sup> Based on an 8 percent interest rate on fertilizer through seed costs for 12 months.

# FARM BUSINESS MANAGEMENT

**ALFALFA -- AFTER ESTABLISHMENT  
ILLINOIS, 2001  
ESTIMATED COST OF PRODUCTION**  
Department of Agricultural and Consumer Economics  
University of Illinois  
FBM 0100

	--- Tons per acre ---		Your Estimate
	4	6	
<b>Variable costs</b>			
Phosphorus <sup>1</sup>	\$13	\$18	_____
Potassium <sup>2</sup>	17	22	_____
Lime	6	6	_____
Herbicide	12	12	_____
Insecticide	20	20	_____
Machinery repairs, fuel, and hire	30	30	_____
Supplies	10	10	_____
Interest on operating inputs <sup>3</sup>	<u>2</u>	<u>2</u>	_____
<b>Total variable costs</b>	<b>\$110</b>	<b>\$120</b>	_____
<b>Fixed costs</b>			
Establishment costs	\$80	\$80	_____
Labor	30	30	_____
Building repair and depreciation	8	8	_____
Machinery depreciation	15	15	_____
Interest on investment	15	15	_____
Overhead (farm insurance, utilities, etc.)	15	15	_____
Land (cash rent equivalent)	<u>110</u>	<u>140</u>	_____
<b>Total fixed costs</b>	<b>\$273</b>	<b>\$303</b>	_____
<b>Total costs</b>	<b>\$383</b>	<b>\$423</b>	_____
<b>Per ton costs</b>			
Variable costs	\$28	\$20	_____
Fixed costs	<u>68</u>	<u>51</u>	_____
<b>Total costs</b>	<b>\$96</b>	<b>\$71</b>	_____

<sup>1</sup> Application amounts equal 60 lbs and 80 lbs at the 4 and 6 ton production levels, respectively. Price equals \$0.22 per lb.

<sup>2</sup> Application amounts equal 120 lbs and 160 lbs at the 4 and 6 ton production levels, respectively. Price equals \$0.14 per lb.

<sup>3</sup> Based on an 8 percent interest rate on fertilizer through seed costs for 3 months.

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