Estimated Costs of Crop Production in Iowa – 2003

The estimated costs of corn, corn silage, soybeans, alfalfa, and pasture maintenance in this report are based on data from several sources. They include the annual Iowa Farm Business Association record summaries, production and costs data from the Departments of Economics, Agricultural and Biosystems Engineering, and Agronomy at Iowa State University and a survey of selected agricultural cooperatives and other input suppliers around the state.

These costs estimates are representative of average costs for farms in Iowa. Very large or small farms may have lower or higher fixed costs per acre.

Due to differences in soil potentials, quantity of inputs used and other factors, production costs will vary from farm to farm. Price shifts of inputs can change production costs in both the short and long run. The attached data reflect average cost of purchased inputs and a return to land and labor resources, but do not provide a margin for profit or a return to management. They reflect production costs only, and do not include costs of storage.

Labor has been treated as a fixed cost, since most labor on Iowa farms is supplied by the operator, family or permanent hired labor. However, when deciding among alternative crops, labor should be considered a variable cost. The wage rate used here is $9.00 per hour. The hours assumed per crop are presented in the budgets. The hours per crop acre includes not only the field work but also time for maintenance, travel, and other activities related to crop production. The land charge is based on rent equivalent. Owned land may require a greater or lesser cash outlay.

In the short run, cash income must be sufficient to pay cash costs, including seed, fertilizer, chemicals, insurance, cash rent and hired labor, as well as machinery fuel and repairs and interest on operating capital. In the long run, income should be sufficient to pay all costs of production for resources to be used in their most profitable alternative.

Corn yields reflect rotation effects. Fertilizer rates have been adjusted to reflect current data on removal rates. Crop insurance costs reflect the mix of multiple peril, revenue and hail insurance, as well as noninsured acres.

Machinery costs reflect both new and used equipment. The machine operations assumed are based on the 2000 Crop Production Practices Survey conducted by the Iowa Agricultural Statistics Service. Further information on this survey can be obtained by contacting the authors.

Estimates represent typical costs and are only intended to be guidelines. Actual costs will vary considerably and can be entered in the column for "Your Estimates." Variable input prices can change significantly over time.

Budgets for alfalfa hay establishment with an oat companion crop and by direct seeding are included in this publication. Annual production costs for established alfalfa or alfalfa-grass hay as well as a budget for maintaining grass pastures are included as well. Additional pasture establishment budgets are published in Iowa State University Extension publication *AG-96, Estimated Costs of Pasture and Hay Production.*

Two no-till budgets, one for corn and one for soybeans, are included due to the increasing demand for this information. The major differences between the no-till and conventional budgets are the preharvest machinery, labor, herbicide, and seeding costs. Budgets for genetically modified (GM) soybeans are also included. One budget is based on conventional tillage practices and one on no-till, drilled soybeans. Cost differences similar to those stated above, are also shown in the two no-till budgets.

The Estimated Machinery Costs table can be used to budget other tillage and harvesting systems.

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Corn following Corn

	115 bu. per acre		135 bu. per acre		155 bu. per acre		
	Fixed	**Variable**	**Fixed**	**Variable**	**Fixed**	**Variable**	**Your Estimate**
Preharvest Machinery 1/	$20.05	$11.07	$20.05	$11.07	$20.05	$11.07	$
Seed, Chemical, etc.	**Units**		**Units**		**Units**		
Seed @ $1.06 per 1000 k.	22,000	$23.32	26,000	$27.56	30,000	$31.80	$
Nitrogen @$0.20 per lb.	140	28.00	160	32.00	190	38.00	
Phosphate @$0.25 per lb.	45	11.25	50	12.50	60	15.00	
Potash @$0.12 per lb.	35	4.20	40	4.80	45	5.40	
Lime (yearly cost)		6.00		6.00		6.00	
Herbicide		30.00		30.00		30.00	
Insecticide		14.00		14.00		14.00	
Crop Insurance		5.80		5.80		5.80	
Miscellaneous		6.00		7.00		8.00	
Interest on preharvest variable costs (8 months @ 6.5%)		6.05		6.53		7.15	
Total		$134.62		$146.19		$161.15	$
Harvest Machinery							
Combine	$10.96	$7.86	$10.96	$7.86	$10.96	$7.86	$
Haul	2.20	1.48	2.59	1.74	2.97	2.00	
Dry (LP Gas @ $0.85/gal.)	4.60	16.29	5.40	19.13	6.20	21.96	
Handle	1.20	0.50	1.55	0.65	1.85	0.80	
Total	$18.96	$26.13	$20.50	$29.37	$21.98	$32.61	$
Labor							
2.85 hours @ $9	$25.65		$25.65		$25.65		$
Land							
Cash rent equivalent	$115.00		$135.00		$155.00		$
Total fixed, variable							
Per acre	$179.66	$171.83	$201.19	$186.64	$222.68	$204.84	Yield:
Per bushel	$1.56	$1.49	$1.49	$1.38	$1.44	$1.32	bu./acre____
Total cost per acre	$351.49		$387.83		$427.52		$
Total cost per bushel	$3.06		$2.87		$2.76		$

1/Chisel plow, tandem disk, apply N, field cultivate, plant, cultivate, and spray. See the Estimated Machinery Costs table.

Corn following Soybeans

	130 bu. per acre		150 bu. per acre		170 bu. per acre		
	Fixed	**Variable**	**Fixed**	**Variable**	**Fixed**	**Variable**	**Your Estimate**
Preharvest Machinery 1/	$16.83	$9.39	$16.83	$9.39	$16.83	$9.39	$
Seed, Chemical, etc.	**Units**		**Units**		**Units**		
Seed @ $1.06 per 1000 k.	22,000	$23.32	26,000	$27.56	30,000	$31.80	$
Nitrogen @$0.20 per lb.	100	20.00	120	24.00	140	28.00	
Phosphate @$0.25 per lb.	50	12.50	55	13.75	65	16.25	
Potash @$0.12 per lb.	40	4.80	45	5.40	50	6.00	
Lime (yearly cost)		6.00		6.00		6.00	
Herbicide		30.00		30.00		30.00	
Crop Insurance		5.80		5.80		5.80	
Miscellaneous		6.00		7.00		8.00	
Interest on preharvest variable costs (8 months @ 6.5%)		5.11		5.59		6.12	
Total		$113.53		$125.10		$137.97	$
Harvest Machinery							
Combine	$10.96	$7.86	$10.96	$7.86	$10.96	$7.86	$
Haul	2.49	1.68	2.87	1.93	3.26	2.19	
Dry (LP Gas @ $0.85/gal.)	5.20	18.42	6.00	21.25	6.80	24.08	
Handle	1.25	0.55	1.70	0.75	1.95	0.85	
Total	$19.90	$28.50	$21.53	$31.79	$22.97	$34.98	$
Labor							
2.6 hours @ $9	$23.40		$23.40		$23.40		$
Land							
Cash rent equivalent	$115.00		$135.00		$155.00		$
Total fixed, variable							
Per acre	$175.13	$151.42	$196.76	$166.28	$218.20	$182.35	Yield:
Per bushel	$1.35	$1.16	$1.31	$1.11	$1.28	$1.07	bu./acre____
Total cost per acre	$326.55		$363.04		$400.54		$
Total cost per bushel	$2.51		$2.42		$2.36		$

1/Apply N, tandem disk, field cultivate, plant, cultivate, and spray. See the Estimated Machinery Costs table.

Corn Silage following Corn

	15 tons per acre		18 tons per acre		23 tons per acre		
	Fixed	**Variable**	**Fixed**	**Variable**	**Fixed**	**Variable**	**Your Estimate**
Preharvest Machinery 1/	$20.05	$11.07	$20.05	$11.07	$20.05	$11.07	$
Seed, Chemical, etc.	**Units**		**Units**		**Units**		
Seed @ $1.06 per 1000 k.	23,000	$24.38	27,000	$28.62	31,000	$32.86	$
Nitrogen @$0.20 per lb.	140	28.00	160	32.00	190	38.00	
Phosphate @$0.25 per lb.	55	13.75	65	16.25	80	20.00	
Potash @$0.12 per lb.	120	14.40	145	17.40	185	22.20	
Lime (yearly cost)		8.00		8.00		8.00	
Herbicide		30.00		30.00		30.00	
Insecticide		14.00		14.00		14.00	
Crop Insurance		5.80		5.80		5.80	
Miscellaneous		6.00		7.00		8.00	
Interest on preharvest variable costs (8 months @ 6.5%)		6.73		7.37		8.23	
Total		$151.06		$166.44		$187.09	$
Harvest Machinery							
Silage Harvester	$28.52	$13.34	$28.52	$13.34	$28.52	$13.34	$
Haul	14.67	8.23	17.66	9.91	22.08	12.39	
Blower	10.92	6.42	13.14	7.72	16.43	9.66	
Total	$54.11	$27.99	$59.32	$30.98	$67.03	$35.39	$
Labor							
5.0 hours @ $9	$45.00		$45.00		$45.00		$
Land							
Cash rent equivalent	$115.00		$135.00		$155.00		$
Total fixed, variable							
Per acre	$234.15	$190.13	$259.37	$208.49	$287.08	$233.56	Yield:
Per ton	$15.34	$12.46	$14.12	$11.35	$12.50	$10.17	tons/acre___
Total cost per acre	$424.28		$467.86		$520.63		$
Total cost per ton	$27.80		$25.47		$22.67		$

1/Chisel plow, tandem disk, apply N, field cultivate, plant, cultivate, and spray. See the Estimated Machinery Costs table.

Non-Genetically Modified Soybeans following Corn

	40 bu. per acre		45 bu. per acre		50 bu. per acre		
	Fixed	**Variable**	**Fixed**	**Variable**	**Fixed**	**Variable**	**Your Estimate**
Preharvest Machinery 1/	$15.99	$8.14	$15.99	$8.14	$15.99	$8.14	$
Seed, Chemical, etc.							
Seed @ $18.60 per 50 lb.	1.2	$22.32	1.2	$22.32	1.2	$22.32	$
Phosphate @$0.25 per lb.	30	7.50	35	8.75	40	10.00	
Potash @$0.12 per lb.	60	7.20	70	8.40	75	9.00	
Lime (yearly cost)		6.00		6.00		6.00	
Herbicide		25.00		25.00		25.00	
Crop Insurance		3.15		3.15		3.15	
Miscellaneous		6.00		7.00		8.00	
Interest on preharvest variable costs (8 months @ 6.5%)		3.70		3.85		3.97	
Total		$80.87		$84.47		$87.44	$
Harvest Machinery							
Combine	$10.91	$6.10	$10.91	$6.10	$10.91	$6.10	$
Haul	0.77	0.52	0.86	0.58	0.96	0.64	
Handle	0.45	0.20	0.55	0.25	0.65	0.30	
Total	$12.13	$6.81	$12.33	$6.93	$12.52	$7.04	$
Labor							
2.45 hours @ $9	$22.05		$22.05		$22.05		$
Land							
Cash rent equivalent	$115.00		$135.00		$155.00		$
Total fixed, variable							
Per acre	$165.17	$95.82	$185.36	$99.54	$205.56	$102.62	Yield:
Per bushel	$4.13	$2.40	$4.12	$2.21	$4.11	$2.05	bu./acre____
Total cost per acre	$260.99		$284.90		$308.18		$
Total cost per bushel	$6.52		$6.33		$6.16		$

1/Chisel plow, tandem disk, field cultivate, plant, cultivate, and spray. See the Estimated Machinery Costs table.

Genetically Modified Soybeans

	Soybeans Following Corn, Till			Drilled Soybeans Following Corn, No-Till		
	45 bu. per acre			45 bu. per acre		
	Fixed	Variable	Your Estimate	Fixed	Variable	Your Estimate
Preharvest Machinery 1/	$13.94	$6.98	$	$7.52	$3.78	$
Seed, Chemical, etc.						
Seed @ $26.04 per 50 lb.	1.2	$31.25	$	1.4	$36.46	$
Phosphate @$0.25 per lb.	35	8.75		35	8.75	
Potash @$0.12 per lb.	70	8.40		70	8.40	
Lime (yearly cost)		6.00			6.00	
Herbicide		18.68			21.68	
Crop Insurance		3.15			3.15	
Miscellaneous		7.00			7.00	
Interest on preharvest variable costs (8 months @ 6.5%)		3.91			4.13	
Total		$87.14	$		$95.56	$
Harvest Machinery						
Combine	$10.91	$6.10	$	$10.91	$6.10	$
Haul	0.86	0.58		0.86	0.58	
Handle	0.55	0.25		0.55	0.25	
Total	$12.33	$6.93	$	$12.33	$6.93	$
Labor						
2.25 hours @ $9	$20.25		$			
1.75 hours @ $9				$15.75		$
Land						
Cash rent equivalent	$135.00		$	$135.00		$
Total fixed, variable						
Per acre	$181.52	$101.04	Yield:	$170.59	$106.27	Yield:
Per bushel	$4.03	$2.25	bu./acre____	$3.79	$2.36	bu./acre____
Total cost per acre	$282.56		$	$276.86		$
Total cost per bushel	$6.28		$	$6.15		$

1/Chisel plow, tandem disk, field cultivate, plant, and spray for traditionally tilled soybeans.
Drill and spray for no-till, drilled soybeans. See the Estimated Machinery Costs table.

No-Till Corn and Soybeans

	Corn Following Soybeans			Drilled Soybeans Following Corn		
	155 bu. per acre			45 bu. per acre		
	Fixed	Variable	Your Estimate	Fixed	Variable	Your Estimate
Preharvest Machinery 1/	$12.35	$7.24	$	$7.52	$3.78	$
Seed, Chemical, etc.						
Seed @ $1.06 per 1000 k.	26,000	$27.56	$			
Seed @ $18.60 per 50 lb.				1.4	$26.04	$
Nitrogen @ $0.2 per lb.	120	24.00				
Phosphate @ $0.25 per lb.	55	13.75		35	8.75	
Potash @ $0.12 per lb.	45	5.40		70	8.40	
Lime (yearly cost)		6.00			6.00	
Herbicide		32.00			29.00	
Crop Insurance		5.80			3.15	
Miscellaneous		7.00			7.00	
Interest on preharvest variable costs (8 months @ 6.5%)		5.58			3.99	
Total		$127.09	$		$92.33	$
Harvest Machinery						
Combine	$10.96	$7.86	$	$10.91	$6.10	$
Haul	2.97	2.00		0.86	0.58	
Dry (LP Gas @ $0.85/gal.)	6.20	21.96				
Handle	1.70	0.75		0.55	0.25	
Total	$21.83	$32.56	$	$12.33	$6.93	$
Labor						
2.3 hours @ $9	$20.70		$			
1.75 hours @ $9				$15.75		$
Land						
Cash rent equivalent	$135.00		$	$135.00		$
Total fixed, variable						
Per acre	$189.88	$166.90	Yield:	$170.59	$103.04	Yield:
Per bushel	$1.23	$1.08	bu./acre____	$3.79	$2.29	bu./acre____
Total cost per acre	$356.78		$	$273.63		$
Total cost per bushel	$2.30		$	$6.08		$

1/ Apply N, plant, cultivate, and spray for corn. Drill and spray for soybeans. See the Estimated Machinery Costs table.

Oats and Hay production--Seeding year costs.

	Alfalfa-Grass Seeded with Oat Companion Crop *		Alfalfa Seeded with Herbicide **		Your Estimate	Your Estimate
	Fixed	**Variable**	**Fixed**	**Variable**	**Fixed**	**Variable**
Preharvest Machinery						
Spray herbicide			$1.16	$0.75	_____	_____
Tandem disk (2 times)	$6.15	$2.65	6.15	2.65	_____	_____
Spread fertilizer	1.60	0.78	1.60	0.78	_____	_____
Harrow	1.68	0.56	1.68	0.56	_____	_____
Seed (drill)	3.37	1.88	3.37	1.88	_____	_____
Total Preharvest Machinery	$12.79	$5.87	$13.95	$6.62	_____	_____
Seed * **						
Oats	2 bu.	$10.00			_____	_____
Alfalfa	8 lb.	24.00	15 lb.	45.00	_____	_____
Bromegrass	6 lb.	7.80			_____	_____
Orchardgrass	3 lb.	4.05			_____	_____
Total Seed Cost		$45.85		$45.00	_____	_____
Herbicide				11.50	_____	_____
Lime (total cost for hay lifetime)		25.00		25.00	_____	_____
Labor @ $9 1 hr.	$9.00		1 hr. $9.00		_____	_____
Total Establishment Costs	$21.79	$76.72	$22.95	$88.12	_____	_____
One-Third of Est. Costs (for establishment year)	$7.26	$25.57	$7.65	$29.37	_____	_____
Fertilizer						
Nitrogen	60 lb.	$12.00			_____	_____
Phosphorus	45 lb.	11.25	35 lb.	$8.75	_____	_____
Potash	130 lb.	15.60	125 lb.	15.00	_____	_____
Total Fertilizer		$38.85		$23.75	_____	_____
Labor @ $9 3 hr.	$27.00		3 hr. $27.00		_____	_____
Land Cash rent equivalent	$75.00		$75.00		_____	_____
Harvest Machinery						
Oats: combine	$8.69	$4.79			_____	_____
rake, bale, and haul straw	$14.37	$8.70			_____	_____
Alfalfa: mower-conditioner, rake, bale, and haul hay	$12.71	$8.80	$26.68	$19.12	_____	_____
Total Harvest Cost	$35.77	$22.29	$26.68	$19.12	_____	_____
	Fixed	**Variable**	**Fixed**	**Variable**		
Total Costs	$145.04	$86.71	$136.33	$72.24	_____	_____

** Assumes 80 bushels oat yield, one ton straw yield and one ton per acre alfalfa yield from one cutting.*

*** Assumes two and a half tons per acre from two alfalfa cuttings with a herbicide-assisted seeding.*

**** Omit oats from August seedings. Higher priced seed varieties or different seed mixtures could vary these costs by 1.2 to 2.0 times.*

Annual production costs for established alfalfa or alfalfa-grass hay

	Present Hay Production Level 4 tons per acre *		6 tons per acre		Your Estimate	
	Fixed	**Variable**	**Fixed**	**Variable**	**Fixed**	**Variable**
One-third of establishment costs Machinery, seed, lime, and herbicide **	$7.26	$25.57	$7.26	$25.57	_____	_____
Annual fertilizer *** 0-13-50 lbs/ton removed plus spreading	$1.60	$37.78	$3.19	$57.06	_____	_____
Harvesting Costs: Large Round Bales ****						
Mower-conditioner, rake, baling, and hauling	$45.75	$32.32	$66.08	$47.04	_____	_____
Labor Costs: 1.33 hr./cutting @ $9 per hour	$36.00		$48.00		_____	
Land Cash rent equivalent	$75.00		$85.00		_____	
Total Cost Using Large Round Bales	$165.61	$95.67	$209.54	$129.67	_____	_____
Cost per Ton	$41.40	$23.92	$34.92	$21.61	_____	_____
Total Cost per Acre	$261.28		$339.21		_____	
Total Cost per Ton	$65.32		$56.53		_____	
Harvesting Costs: Small Square Bales ******						
Mower-conditioner, rake, baling, and hauling	$59.90	$37.96	$76.71	$48.93	_____	_____
Labor Costs: 1.8 hr./cutting @ $9 per hour	$48.60		$64.80		_____	
Land Cash rent equivalent	$75.00		$85.00		_____	
Total Cost Using Small Square Bales	$192.36	$101.31	$236.97	$131.56	_____	_____
Cost per Ton	$48.09	$25.33	$39.49	$21.93	_____	_____
Total Cost per Acre	$293.67		$368.53		_____	
Total Cost per Ton	$73.42		$61.42		_____	

* *For harvest as silage use machine cost estimates from Table 7.*

** *Assumes alfalfa-grass seeded with oat companion crop. If alfalfa seeded with preplant herbicide then use other costs (see previous page).*

*** *For 6-ton yield goal, a split application of fertilizer is assumed.*

**** *Harvest cost estimates assume 3 cuttings for 4 tons and 4 cuttings for 6 tons.*

Maintaining grass pastures--Annual cost per acre.

	Improved Grass **		Improved Grass-Legume ***		Your Estimate	Your Estimate
	Fixed	Variable	Fixed	Variable	Fixed	Variable
Machinery Costs						
Spreading fertilizer	$1.60	$0.78	$1.60	$0.78	_____	_____
Spraying herbicide	1.16	0.75				
Clipping weeds	2.61	1.71	2.61	1.71	_____	_____
Total Machinery Cost	$5.36	$3.24	$4.21	$2.49	_____	_____
Fertilizer and Herbicide*						
Nitrogen @$0.2 per lb.	80 lb.	$16.00				_____
Phosphate @$0.25 per lb.	30 lb.	7.50	30 lb.	$7.50		_____
Potash @$0.12 per lb.			40 lb.	4.80		_____
Herbicide		4.25				_____
Total Fertilizer and Herbicide		$27.75		$12.30		_____
Labor						
Growing practices .5 hr. @ $9	$4.50		$4.50		_____	
Fence maintenance 1 hr. @ $9	9.00		9.00		_____	
Total Labor	$13.50		$13.50		_____	
Land Charge						
Cash rent equivalent	$45.00		$50.00		_____	
Total Annual Cost per Acre	$63.86	$30.99	$67.71	$14.79	_____	_____

** These are average rates and may vary with soil test and the level of management on a particular field. Different herbicide alternatives could vary this cost.*

*** Improved grass pastures assume a dominance of cool season grasses such as smooth bromegrass, orchardgrass, tall fescue, or reed canarygrass.*

**** Improved grass-legume pasture assumed one third of the forage is made up of red clover, birdsfoot trefoil, or alfalfa.*

Estimated Machinery Costs

The following cost estimates are for on-farm use, excluding labor. Depreciation is based on current replacement cost, interest is based on average market rates. Fixed costs will be greater for newer machinery. If annual machine use is greater than that assumed, fixed costs per acre will be lower, and vice versa. Hauling costs are based on a round trip of one mile. Remember these are estimates and they should not take the place of accurate record-keeping. Diesel fuel is estimated to cost **$1.05** per gallon, delivered to the farm in bulk.

Operation	Hours of Use Assumed per Year	Fixed Cost per Acre (depreciation, interest, insurance, housing)	Variable Cost per Acre (fuel, oil, repairs)
Subsoiling (V-ripper)	100	$5.40	$2.92
Moldboard plow	100	7.79	4.42
Chisel plow	100	3.22	1.68
Chop stalks	100	3.93	2.17
Tandem disk	100	3.07	1.33
Offset disk	100	3.95	1.77
Peg tooth harrow	50	1.68	0.56
Sprayer/disk	100	3.60	1.61
Field cultivator	100	1.91	0.94
Disk/Field cultivator	100	1.94	0.94
Bulk fertilizer spreader	50	1.60	0.78
NH3 applicator	100	4.06	2.93
Chisel plow, NH3 applic.	100	5.91	4.25
Grain drill	80	3.75	1.88
Broadcast seeder	80	1.94	0.89
Planter	80	4.58	2.28
No-till planter	80	5.09	2.40
No-till drill	80	6.36	3.03
Rotary hoe	50	1.29	0.48
Cultivator	100	2.05	1.17
Sprayer	60	1.16	0.75
Combine corn	170	10.96	7.86
Combine beans	100	10.91	6.10
Combine small grain	100	8.69	4.79
Haul grain (on farm)	280	0.02 /bu.	0.01 /bu.
Grain Cart	275	2.30	1.60
Corn picker	170	14.37	8.47
Silage harvester	200	28.52	13.34
Haul silage	140	0.96 /ton	0.54 /ton
Rotary mower	120	2.61	1.71
Mower-conditioner	120	3.16	1.68
Rake	120	1.93	1.20
Small square baler	120	5.69 /cutting	3.38 /cutting
Round baler	120	4.92	3.88
Stacker	120	6.77	5.22
Large square bailer	120	6.74	6.04
Windrower	200	2.41	0.85
Haul hay & straw	120	1.06 /ton	0.74 /ton
Forage chopper	200	11.83	7.72
Forage blower	100	$0.72	$0.42

Estimated Crop Production Costs in Iowa, 1997-2003

	1997*	1998**	1999**	2000**	2001**	2002**	2003***
Corn following Corn							
Machinery	$66.61	$64.08	$66.74	$68.22	$79.96	$74.62	$80.99
Seed, Chemicals, etc.	138.34	140.40	137.00	137.05	143.49	142.34	146.19
Labor	23.80	23.80	23.80	22.09	22.80	22.80	25.65
Land	120.00	125.00	125.00	120.00	120.00	125.00	135.00
Total Cost Per Acre	348.75	353.28	352.54	347.36	366.25	364.76	387.83
Assumed Yield	120 bu	120 bu	120 bu	120 bu	120 bu	120 bu	135 bu
Total Cost Per Bushel	$2.91	$2.94	$2.94	$2.89	$3.05	$3.04	$2.87
Corn following Soybeans							
Machinery	$65.63	$63.56	$66.26	$67.35	$78.98	$73.29	$79.55
Seed, Chemicals, etc.	123.08	123.73	120.96	120.85	126.21	125.15	125.10
Labor	21.00	21.00	21.00	20.15	20.80	20.80	23.40
Land	120.00	125.00	125.00	120.00	120.00	125.00	135.00
Total Cost Per Acre	329.71	333.28	333.22	328.34	345.99	344.23	363.04
Assumed Yield	135 bu	135 bu	135 bu	135 bu	135 bu	135 bu	150 bu
Total Cost Per Bushel	$2.44	$2.47	$2.47	$2.43	$2.56	$2.55	$2.42
Soybeans following Corn							
Machinery	$39.78	$36.90	$39.25	$42.36	$42.84	$41.39	$43.38
Seed, Chemicals, etc.	86.30	91.99	90.39	89.44	88.95	87.46	84.47
Labor	18.20	15.75	15.75	18.99	19.60	19.60	22.05
Land	120.00	125.00	125.00	120.00	120.00	125.00	135.00
Total Cost Per Acre	264.28	269.64	270.39	270.79	271.39	273.45	284.90
Assumed Yield	45 bu	45 bu	45 bu	45 bu	45 bu	45 bu	45 bu
Total Cost Per Bushel	$5.87	$5.99	$6.01	$6.02	$6.03	$6.08	$6.33
Alfalfa Hay, annual production, 6 ton per acre, large round bales							
One-Third of Est. Costs	$32.68	$33.04	$32.62	$33.33	$33.63	$31.90	$32.84
Annual Fertilizer	67.04	68.06	68.40	67.86	68.52	63.82	60.25
Harvest Machinery	88.56	80.96	89.50	93.58	93.20	90.56	113.12
Labor	37.33	37.33	37.33	41.33	42.67	42.67	48.00
Land	80.00	85.00	85.00	80.00	80.00	80.00	85.00
Total Cost Per Acre	305.61	304.39	312.85	316.10	318.02	308.95	339.21
Assumed Yield	6 ton	6 ton	6 ton	6 ton	6 ton	6 ton	6 ton
Total Cost Per Ton	$50.94	$50.73	$52.14	$52.68	$53.00	$51.49	$56.53

** 1997 fertilizer prices reflect the use of 55% anhydrous and 45% other nitrogen forms.*

*** 1998-2003 fertilizer prices reflect the use of 50% anhydrous and 50% other nitrogen forms.*

**** 2003 land rents, corn yields, and machinery costs were adjusted to reflect recent averages.*

[B] File: Economics 1-8

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