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Input Costs Trends for Arkansas Field Crops, 2006-2011

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Input Costs Trends for Arkansas Field Crops, 2006-2011

Increasing input prices during 2006-2011 have challenged farm profitability even during a period of favorable commodity prices. Relative prices among inputs are determinants of potential profitability for field crop production. Price increases for inputs with extensive application levels in a specified crop will decrease profits more for that crop than for crops with less extensive application levels. Input costs per unit of crop output is a useful measure for gauging profitability potential in relation to expected commodity prices for crops marketed. This report presents estimates of costs per acre for typical Arkansas methods of crop production, as well as trends in input prices for field crops.

Input Costs for 2011 Field Crop Production

Input prices applied to field rates of usage determine production costs. Crop enterprise budgets developed by the University of Arkansas include estimated costs per acre for field crops (University of Arkansas 2010.) Budget costs represent the most generalized production practices for three irrigation scenarios: 1) surface, 2) center pivot, and 3) non-irrigated. For this report, aggregated 2011 production functions are developed for field crops as weighted averages of crop enterprise budgets. Weighted average crop enterprise budgets are presented in Table 1. Input price changes since December 2010 are applied so that costs are representative of the spring 2011 planting period (USDA-NASS 2011a). Irrigation energy costs are weighted by irrigation type, as well as diesel or electric power source (USDA-NASS 2010; USDA-NASS 2009). Rice weights are percentages of seed type planted based on information from Extension specialists. Appendixes 1 through Appendix 6 are weighted budgets for each field crop during 2006-2011.

Value of cottonseed sold as a by-product is assumed greater than post-harvest costs. Thus, post-harvest costs are excluded from operating costs for cotton. Rice has the greatest operating costs of \$612.89/acre. With post-harvest costs excluded for cotton, corn has the second greatest operating costs of \$528.96. Soybeans have the lowest operating costs of \$258.20/acre.

Fixed costs are greatest for cotton with \$128.64/acre and lowest for wheat with \$39.30/acre. Adding fixed costs and operating costs leads to rice having the greatest total costs of production of \$712.09/acre. Costs in Table 1 include levee construction for rice, but do not include any other activities related to land forming. Cotton total production costs are \$16.58 greater than total costs for corn. Among crops planted in the spring season, soybeans have the lowest total costs of production at \$313.54/acre. Land costs are not included in Table 1.

Operating costs in Table 1 consists of production inputs, repairs and other fees, and post-harvest expenses. Table 2 summarizes total costs with the three categories for operating costs. Production inputs include seeds, fertilizers, chemicals, custom applications, diesel fuel, electricity, supplies, surveying levees, and labor. Rice has the greatest costs of production inputs with \$489.58/acre. Production inputs are lowest for soybeans with \$228.29/acre.

Expected yields for 2011 are calculated as averages of Arkansas yields for 2006-2010 (USDA-NASS 2011b). Dividing total costs by expected yields estimates total costs per yield unit in

Table 2. For example, corn prices received above \$3.98/bu. represent revenue greater than total production costs, excluding land costs.

Table 1. Weighted Average Crop Enterprise Budgets, per Acre, Arkansas Field Crops, 2011

Expense	Cotton	Corn	Soybean	Rice	Sorghum	Wheat
Seed, Includes All Fees	112.03	102.45	63.60	67.38	16.96	30.00
Nitrogen	50.01	118.47	0.00	85.81	58.01	68.06
Phosphate (P2O5)	19.07	40.80	20.40	27.20	40.80	13.60
Potash (K2O)	27.48	44.10	22.05	29.40	44.10	19.60
Other Nutrients	10.22	26.61	0.00	7.33	0.00	3.69
Herbicide	58.49	17.32	34.78	55.71	28.65	23.54
Insecticide	30.49	0.00	4.66	4.14	3.32	0.00
Other Chemicals	19.05	0.00	13.26	21.22	0.00	18.06
Custom Chemical & Fertilizer Applications	0.00	5.52	14.00	46.03	0.00	28.00
Diesel Fuel & Lube, Pre-Post Harvest	20.10	13.42	12.76	14.55	11.87	10.27
Repairs and Maintenance, Pre-Post Harvest	11.07	6.30	7.58	4.69	5.42	3.69
Diesel Fuel & Lube, Harvest	21.36	11.66	7.56	20.41	11.66	11.66
Repairs and Maintenance, Harvest	16.03	8.75	3.85	12.38	7.70	8.55
Irrigation Energy Cost	36.71	42.75	27.83	94.65	12.87	0.00
Irrigation System Repairs & Maintenance	5.32	5.02	2.99	3.69	1.62	0.00
Supplies (ex. polypipe, levee gates, other)	1.40	1.64	1.43	0.37	0.69	0.00
Other Inputs, Survey Levees	0.00	0.00	0.00	5.50	0.00	0.00
Labor, Field Activities	16.40	7.37	5.95	9.87	6.77	6.19
Scouting/Consultant Fee	9.00	0.00	0.00	0.00	0.00	0.00
Boll Weevil Eradication Fee	11.00	0.00	0.00	0.00	0.00	0.00
Interest, Annual Rate for 6 Months	14.04	13.36	7.17	15.07	7.40	7.23
Cotton: Hauling, Ginning; Grain: Drying	93.06	28.69	0.00	52.79	0.00	0.00
Cotton: Warehousing; Other: Hauling	21.71	33.22	7.96	33.18	18.48	13.42
Promotions, Boards, Classing	12.41	1.51	0.36	1.51	0.84	0.61
Operating Costs¹	489.26	528.96	258.20	612.89	277.16	266.17
Pre-Harvest and Harvest Machinery	85.00	39.15	32.57	51.21	34.97	31.44
Irrigation Equipment	22.39	23.43	14.63	35.19	7.29	0.00
Miscellaneous Overhead ²	21.25	9.79	8.14	12.80	8.74	7.86
Fixed Costs	128.64	72.36	55.34	99.20	51.01	39.30
Total Costs³	617.90	601.32	313.54	712.09	328.17	305.47

¹Value of cottonseed sold deducted from cotton post-harvest expenses.

²Estimated as 25% of pre-harvest and harvest machinery.

³Does not include land cost.

Table 2. Summary of Weighted Average Crop Enterprise Budgets, per Acre, 2011

Expense Category	Cotton	Corn	Soybean	Rice	Sorghum	Wheat
Production Inputs	422.80	432.11	228.29	489.58	235.71	232.67
Repairs & Other Fees	66.46	33.43	21.60	35.83	22.13	19.47
Post-Harvest Expenses ¹	0.00	63.42	8.32	87.47	19.32	14.03
Total Operating Expenses	489.26	528.96	258.20	612.89	277.16	266.17
Fixed Costs	128.64	72.36	55.34	99.20	51.01	39.30
Total Costs²	617.90	601.32	313.54	712.09	328.17	305.47
Unit Cost ³	0.60	3.98	8.67	4.72	3.91	5.01

¹Value of cottonseed sold deducted from cotton post-harvest expenses.

²Does not include land cost.

³Total costs per lb. for cotton, all other are total cost per bu.

Production inputs are presented by input type in Table 3. Seed is the greatest cost for cotton and soybeans. Seed cost for cotton production is \$112.03/acre which is 26% of production inputs. Soybeans have seed cost of \$63.60/acre, or 28% of production inputs. Fertilizers are the greatest production input costs for corn, rice, grain sorghum, and wheat. Fertilizers are 53% of production inputs for corn and 61% of production inputs for grain sorghum. The percentage of production inputs of chemicals is greatest for cotton with 26% of production inputs. Diesel and electricity are greatest for rice due to energy requirements for irrigation. The capital intensive nature of crop production is indicated by the relatively low labor cost for all crops in Table 3.

Table 3. Production Input Costs Details, Percent of Total Production Inputs, per Acre, 2011

Input	Cotton	Corn	Soybean	Rice	Sorghum	Wheat
Seed	112.03	102.45	63.60	67.38	16.96	30.00
Percent	26	24	28	14	7	13
Fertilizers	106.78	229.98	42.45	149.74	142.91	104.95
Percent	25	53	19	31	61	45
Chemicals	108.03	17.32	52.70	81.07	31.97	41.60
Percent	26	4	23	17	14	18
Diesel & Electricity	74.40	65.55	46.31	126.44	34.27	19.94
Percent	18	15	20	26	15	9
Labor, Field Activities	16.40	7.37	5.95	9.87	6.77	6.19
Percent	4	2	3	2	3	3
Other	5.17	9.44	17.28	55.07	2.83	29.99
Percent	1	2	8	11	1	13
Total Production Inputs¹	422.80	432.11	228.29	489.58	235.71	232.67
Percent¹	100	100	100	100	100	100

¹Totals may not sum due to rounding.

Trends in Prices for Primary Production Inputs

Prices for the primary production inputs in Table 3 have increasing trends during 2006-2011 (USDA-NASS 2011a). Price increases for nitrogen, potash and phosphate, as well as diesel follow similar trends in Figure 1. Fertilizers have their highest prices in 2008 before moderating. In 2011, nitrogen prices are 150% of the 2006 level, while potash and phosphate prices are over twice the 2006 level. Diesel prices in 2011 are at the highest level since 2006. Chemical prices in Figure 2 for insecticides, fungicides, and other chemicals have steadily trended upward. Fungicides and other chemical prices in 2011 are 137% of the 2006 level. Herbicide prices reached their highest level in 2009 before moderating to a level that is 6% greater than 2006 prices. Seed prices have increased for all crops in Figure 3. Corn seed prices have the greatest increase and are 201% of 2006 prices. Seed prices for cotton planting increased 192% during 2006-2011.

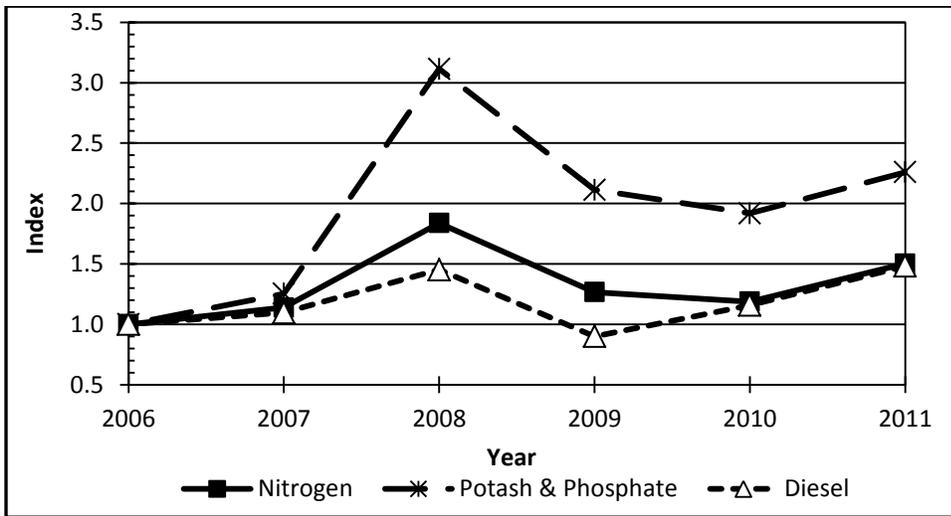


Figure 1. Price Indexes for Major Fertilizers and Diesel, U.S., 2006-2011, 2006=1.0

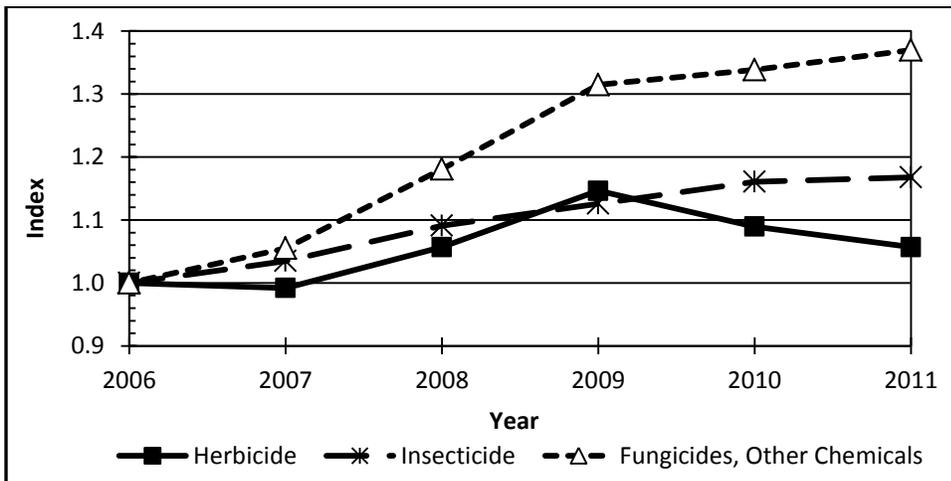


Figure 2. Price Indexes for Agricultural Chemicals, U.S., 2006-2011, 2006=1.0

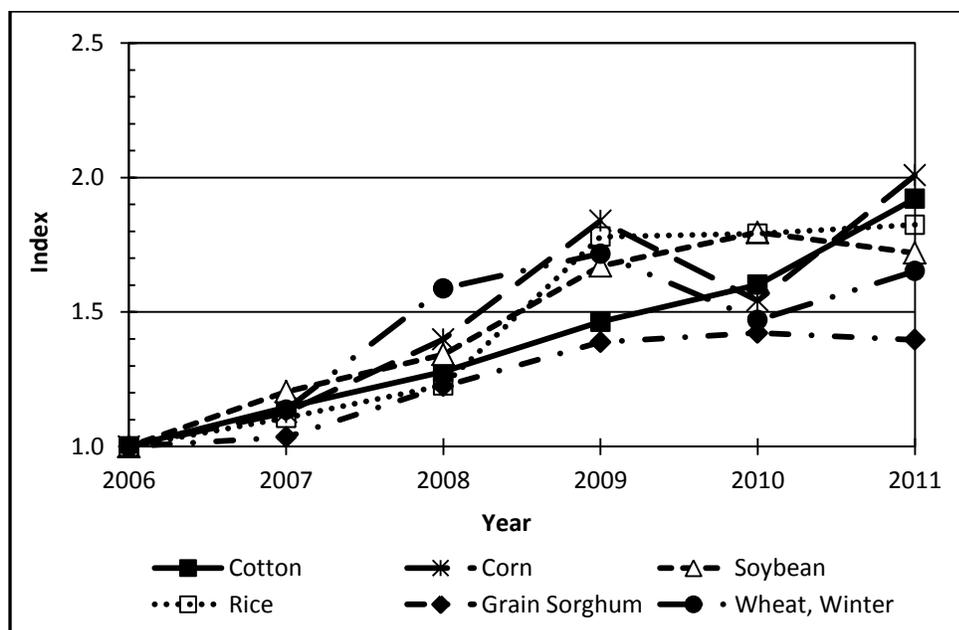


Figure 3. Price Indexes for Seeds, Major U.S. Field Crops, 2006-2011, 2006=1.0

Changes in Costs per Acre due to Increasing Input Prices

Price changes for all input items in crop enterprise budgets are available similarly to prices for primary production inputs presented in Figure 1 through Figure 3. Changes in annual costs per acre can be determined by applying price changes to input components which are 2011 costs in Table 1 based on crop enterprise budget application rates (USDA-NASS 2011a). Figure 4 presents costs per acre indexes during 2006-2011 for production inputs in Table 3. Corn, rice, grain sorghum, and wheat have the highest costs for production inputs in 2008. This is due to the relatively high proportion of production inputs consisting of fertilizers. Cotton and soybeans have the highest level of production input costs in 2011. All crops have 2011 production input costs at least 40% greater than 2006 levels. The greatest single year increase in production input costs for all crops occurred in 2008. Production input costs increases in 2011 over 2010 are cotton (12%), corn (16%), soybeans (7%), rice (13%), grain sorghum (18%), and wheat (15%). Figure 5 presents costs per acre indexes during 2006-2011 for total costs in Table 2. Total costs for corn, grain sorghum, and wheat are greatest in 2008, followed by declines in 2009 and 2010. Costs increased in 2011 from 2010, but are below 2008 levels. Total costs trends are similar for cotton, soybeans, and rice. Costs increases in 2011 put levels for these crops above 2008 costs. Total costs in 2011 have the greatest increases compared to 2006 for corn (47%) and wheat (45%). Total costs for grain sorghum are 43% greater than 2006 costs. Other total costs increases from 2006 to 2011 are soybeans (37%), cotton (35%), and rice (32%).

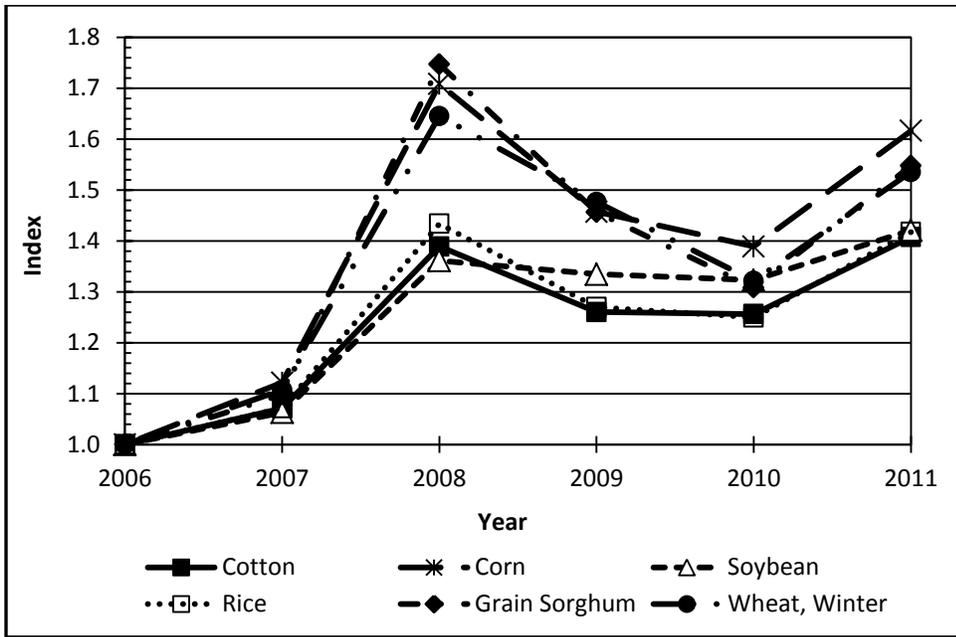


Figure 4. Indexes for Production Inputs, Costs per Acre, 2006-2011, 2006=1.0

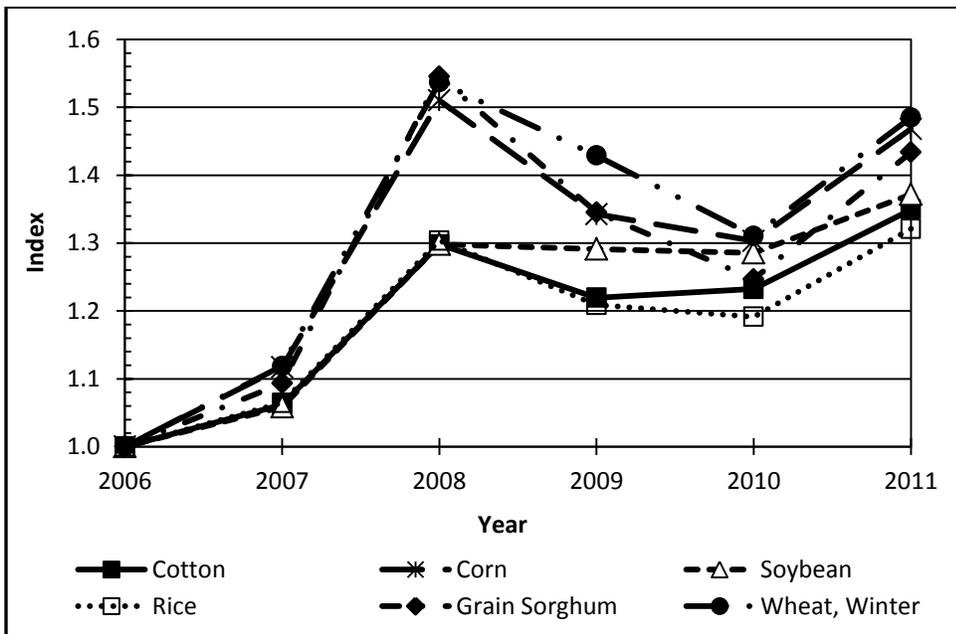


Figure 5. Indexes for Total Inputs, Costs per Acre, 2006-2011, 2006=1.0

Comparing Trends in Costs of Production and Prices Received

Increases in commodity prices received can mitigate negative consequences to net returns caused by increasing costs of production. Figure 6 shows changes in commodity prices for 2006-2010 ((USDA-NASS 2011b). Wheat prices for 2010 are estimated with prices from market reports in Arkansas (USDA-AMS 2011). Prices for soybeans, corn, and grain sorghum are more than 70% higher in 2010 compared to 2006. Wheat price in 2010 is 59% greater than 2006. The increase is mostly due to a one year increase from 2009 to 2010. Cotton prices have steadily trended upward similar to soybeans, corn, and grain sorghum, but at a much lower rate than these crops. Cotton price in 2010 is 25% higher than the 2006 price. Rice price in 2010 is 22% higher than in 2006. This is a result of large price increases in 2007 and 2008, followed by successive decreases in 2009 and 2010.

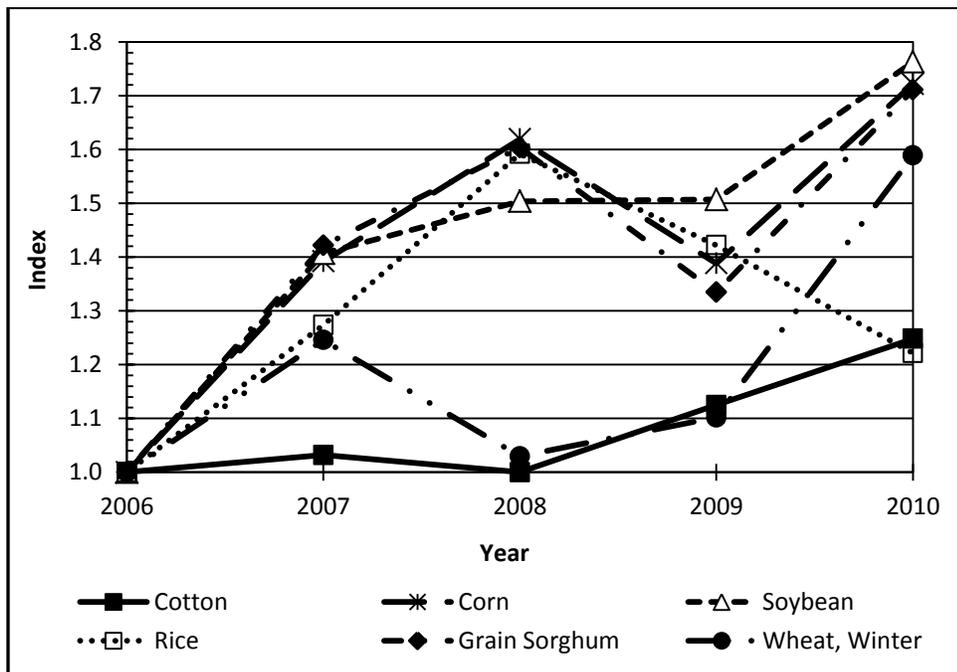


Figure 6. Indexes for Arkansas Price Received, Field Crops, 2006-2011, 2006=1.0

Impacts of costs increases on net returns to crop production can be evaluated by comparing changes in costs to changes in prices received. Figure 7 through Figure 12 compare indexes for costs and prices of field crops for 2006-2010. Distances of the price index above the costs index represent positive outcomes for producer net returns compared to 2006. Figure 7 shows increases in cotton costs outpace increases in prices until 2010 when the price index is slightly above costs. Figure 8 and Figure 9 indicate that price increases are above costs increases throughout 2006-2010 for corn and soybeans, respectively. In Figure 10, price increases for rice are substantially above costs increases until 2010 when the price index is only slightly above the costs index. Prices for grain sorghum are above costs trends in each year except for 2009. Wheat prices trend below costs until 2010 when price is significantly greater than the costs index.

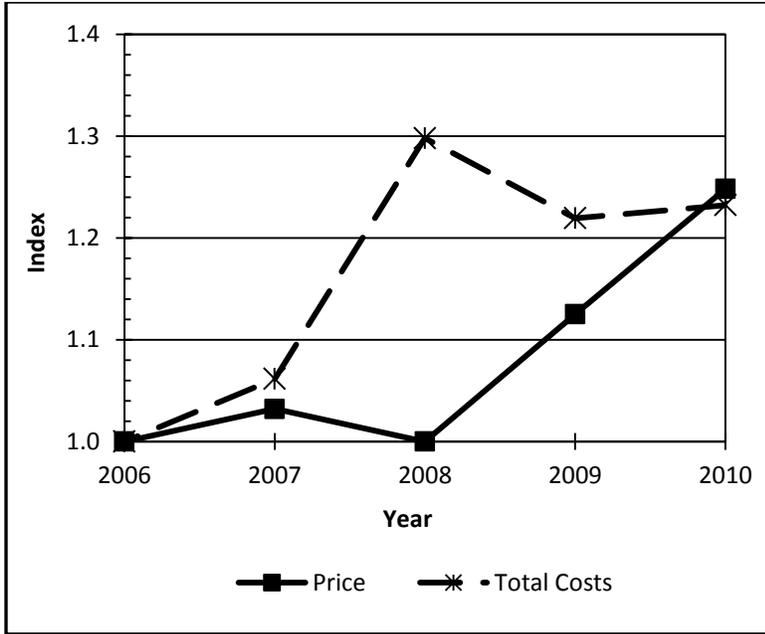


Figure 7. Indexes for Price Received and Total Production Costs, Arkansas Cotton, 2006-2010, 2006=1.0

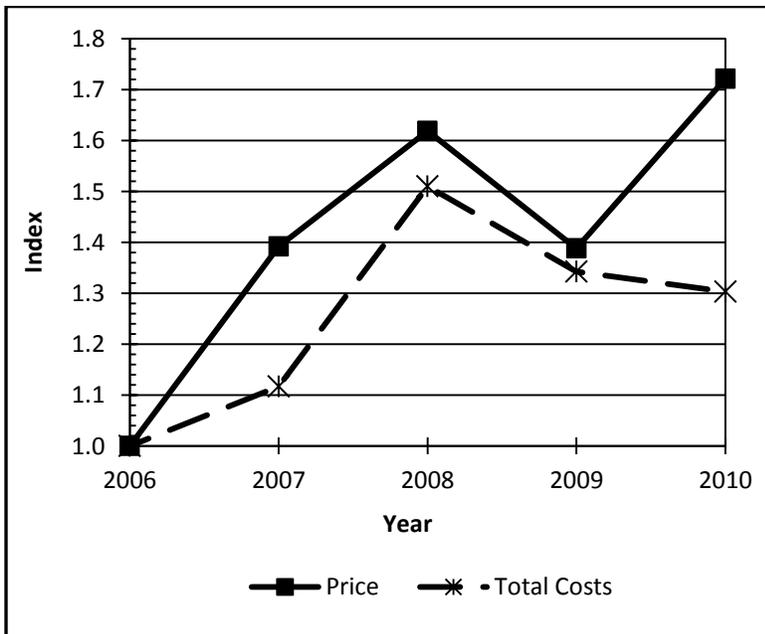


Figure 8. Indexes for Price Received and Total Production Costs, Arkansas Corn, 2006-2010, 2006=1.0

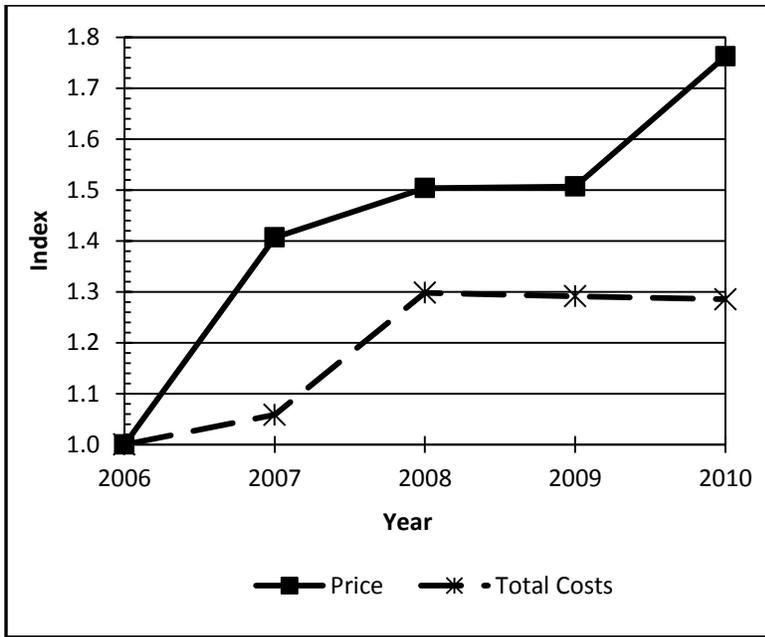


Figure 9. Indexes for Price Received and Total Production Costs, Arkansas Soybeans, 2006-2010, 2006=1.0

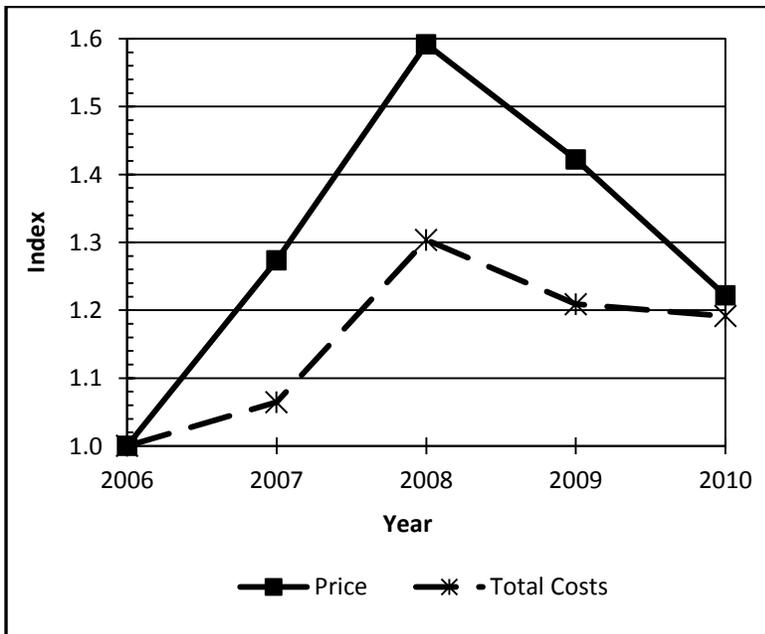


Figure 10. Indexes for Price Received and Total Production Costs, Arkansas Rice, 2006-2010, 2006=1.0

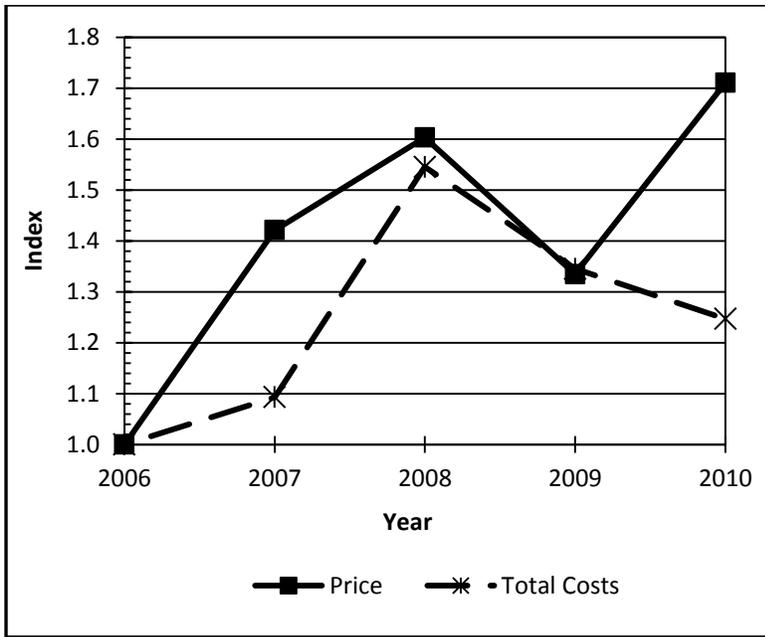


Figure 11. Indexes for Price Received and Total Production Costs, Arkansas Grain Sorghum, 2006-2010, 2006=1.0

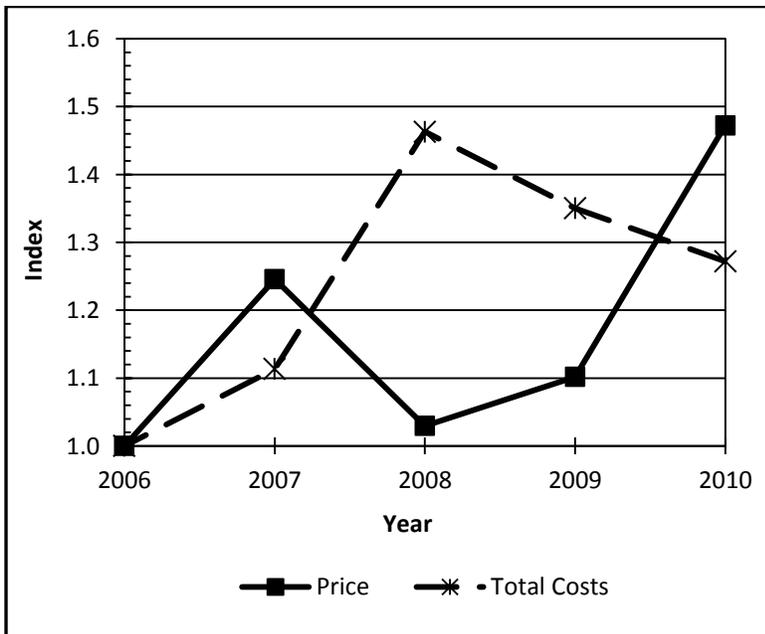


Figure 12. Indexes for Price Received and Total Production Costs, Arkansas Wheat, 2006-2010, 2006=1.0

Summary

Increasing input prices during 2006-2011 have challenged farm profitability even during a period of favorable commodity prices. Weighted average crop enterprise budgets with 2011 costs are developed for field crops produced in Arkansas. Rice has the greatest operating costs of \$612.89/acre, and soybeans have the lowest operating costs of \$258.20/acre. Fixed costs are greatest for cotton with \$128.64/acre and lowest for wheat with \$39.30/acre. Adding fixed costs and operating costs leads to rice having the greatest total costs of production of \$712.09/acre. Production inputs include seeds, fertilizers, chemicals, custom applications, diesel fuel, electricity, supplies, surveying levees, and labor. Rice has the greatest costs of production inputs with \$489.58/acre. Production inputs are lowest for soybeans with \$228.29/acre. Seed cost for cotton production is \$112.03/acre which is 26% of production inputs. Soybeans have seed cost of \$63.60/acre, or 28% of production inputs. Fertilizers are the greatest production input costs for corn, rice, grain sorghum, and wheat. Fertilizers are 53% of production inputs for corn and 61% of production inputs for grain sorghum. The percentage of production inputs for chemicals is greatest for cotton with 26% of production inputs. Diesel and electricity are greatest for rice due to energy requirements for irrigation. The capital intensive nature of crop production is indicated by the relatively low labor cost for all crops. Production input costs increases in 2011 over 2010 are cotton (12%), corn (16%), soybeans (7%), rice (13%), grain sorghum (18%), and wheat (15%). Impacts of costs increases on net returns to crop production can be evaluated by comparing changes in costs to changes in prices received. Indexes for total costs and prices of field crops are developed for 2006-2010. Cotton costs outpace increases in prices until 2010 when the price index is slightly above costs. Price increases are above costs increases throughout 2006-2010 for corn and soybeans. Price increases for rice are substantially above costs increases until 2010 when the price index is only slightly above the costs index.

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Appendix 1. Weighted Average Crop Enterprise Budgets, per Acre, Arkansas Cotton, 2006 - 2011

Expense	2011	2010	2009	2008	2007	2006
Seed, Includes All Fees	112.03	103.41	97.19	83.78	79.79	70.70
Nitrogen	50.01	39.52	42.14	61.17	37.88	33.29
Phosphate (P2O5)	19.07	13.78	13.72	27.59	12.29	8.80
Potash (K2O)	27.48	24.38	38.33	25.34	12.35	11.80
Other Nutrients	10.22	8.25	9.01	12.84	7.07	5.76
Herbicide	58.49	60.29	63.44	58.49	54.89	55.34
Insecticide	30.49	30.31	29.39	28.48	27.02	26.11
Other Chemicals	19.05	18.61	18.28	16.42	14.67	13.90
Custom Chemical & Fertilizer Applications	0.00	0.00	0.00	0.00	0.00	0.00
Diesel Fuel & Lube, Pre-Post Harvest	20.10	15.70	12.20	19.68	14.87	13.56
Repairs and Maintenance, Pre-Post Harvest	11.07	10.94	10.73	10.53	10.40	10.06
Diesel Fuel & Lube, Harvest	21.36	14.54	11.31	29.08	14.40	16.97
Repairs and Maintenance, Harvest	16.03	16.01	12.45	15.40	16.39	15.68
Irrigation Energy Cost	36.71	31.24	26.49	37.62	30.25	28.50
Irrigation System Repairs & Maintenance	5.32	5.26	5.16	5.06	5.00	4.84
Supplies (ex. polypipe, levee gates, other)	1.40	1.38	1.36	1.33	1.25	1.22
Other Inputs, Survey Levees	0.00	0.00	0.00	0.00	0.00	0.00
Labor, Field Activities	16.40	15.89	15.73	15.39	14.88	14.38
Scouting/Consultant Fee	9.00	9.00	9.00	9.00	9.00	9.00
Boll Weevil Eradication Fee	11.00	11.00	11.00	11.00	11.00	11.00
Interest, Annual Rate for 6 Months	14.04	11.00	12.00	13.71	9.92	9.04
Cotton: Hauling, Ginning; Grain: Drying	93.06	94.05	73.62	91.08	96.39	94.05
Cotton: Warehousing; Other: Hauling	21.71	21.95	17.18	21.25	22.49	21.95
Promotions, Boards, Classing	12.41	12.54	9.82	12.14	12.85	12.54
Operating Costs¹	489.26	440.50	438.92	481.90	383.31	359.94
Pre-Harvest and Harvest Machinery	85.00	81.80	78.95	74.33	67.93	64.73
Irrigation Equipment	22.39	21.55	20.80	19.58	17.89	17.05
Miscellaneous Overhead ²	21.25	20.45	19.74	18.58	16.98	16.18
Fixed Costs	128.64	123.79	119.49	112.49	102.80	97.96
Total Costs³	617.90	564.29	558.41	594.39	486.11	457.90

¹Value of cottonseed sold deducted from cotton post-harvest expenses.

²Estimated as 25% of pre-harvest and harvest machinery.

³Does not include land cost.

Appendix 2. Weighted Average Crop Enterprise Budgets, per Acre, Arkansas Corn, 2006 - 2011

Expense	2011	2010	2009	2008	2007	2006
Seed, Includes All Fees	102.45	101.63	96.69	75.71	63.36	56.37
Nitrogen	118.47	93.61	99.83	144.89	89.73	78.85
Phosphate (P2O5)	40.80	29.49	29.35	59.04	26.29	18.84
Potash (K2O)	44.10	39.13	61.51	40.66	19.82	18.94
Other Nutrients	26.61	21.49	23.45	33.43	18.42	15.01
Herbicide	17.32	17.85	18.79	17.32	16.25	16.39
Insecticide	0.00	0.00	0.00	0.00	0.00	0.00
Other Chemicals	0.00	0.00	0.00	0.00	0.00	0.00
Custom Chemical & Fertilizer Applications	5.52	5.39	5.32	4.89	4.89	4.65
Diesel Fuel & Lube, Pre-Post Harvest	13.42	10.48	8.14	13.14	9.92	9.05
Repairs and Maintenance, Pre-Post Harvest	6.30	6.23	6.11	6.00	5.92	5.73
Diesel Fuel & Lube, Harvest	11.66	7.16	7.03	15.29	7.80	8.14
Repairs and Maintenance, Harvest	8.75	8.58	8.41	8.81	9.66	8.18
Irrigation Energy Cost	42.75	36.38	30.85	43.80	35.22	33.19
Irrigation System Repairs & Maintenance	5.02	4.96	4.87	4.78	4.71	4.56
Supplies (ex. polypipe, levee gates, other)	1.64	1.62	1.60	1.55	1.46	1.43
Other Inputs, Survey Levees	0.00	0.00	0.00	0.00	0.00	0.00
Labor, Field Activities	7.37	7.15	7.07	6.92	6.69	6.47
Scouting/Consultant Fee	0.00	0.00	0.00	0.00	0.00	0.00
Boll Weevil Eradication Fee	0.00	0.00	0.00	0.00	0.00	0.00
Interest, Annual Rate for 6 Months	13.36	10.01	11.50	13.95	8.50	7.36
Cotton: Hauling, Ginning; Grain: Drying	28.69	28.50	28.12	29.45	32.11	27.74
Cotton: Warehousing; Other: Hauling	33.22	33.00	32.56	34.10	37.18	32.12
Promotions, Boards, Classing	1.51	1.50	1.48	1.55	1.69	1.46
Operating Costs	528.96	464.16	482.67	555.27	399.64	354.47
Pre-Harvest and Harvest Machinery	39.15	37.67	36.36	34.23	31.29	29.81
Irrigation Equipment	23.43	22.55	21.76	20.49	18.72	17.84
Miscellaneous Overhead ¹	9.79	9.42	9.09	8.56	7.82	7.45
Fixed Costs	72.36	69.64	67.22	63.28	57.83	55.10
Total Costs²	601.32	533.79	549.88	618.55	457.47	409.58

¹Estimated as 25% of pre-harvest and harvest machinery.

²Does not include land costs.

Appendix 3. Weighted Average Crop Enterprise Budgets, per Acre, Arkansas Soybean, 2006 - 2011

Expense	2011	2010	2009	2008	2007	2006
Seed, Includes All Fees	63.60	66.72	61.85	49.88	45.77	42.52
Nitrogen	0.00	0.00	0.00	0.00	0.00	0.00
Phosphate (P2O5)	20.40	14.74	14.68	29.52	13.15	9.42
Potash (K2O)	22.05	19.56	30.75	20.33	9.91	9.47
Other Nutrients	0.00	0.00	0.00	0.00	0.00	0.00
Herbicide	34.78	35.85	37.72	34.78	32.64	32.90
Insecticide	4.66	4.63	4.49	4.35	4.13	3.99
Other Chemicals	13.26	12.96	12.73	11.43	10.21	9.68
Custom Chemical & Fertilizer Applications	14.00	13.66	13.49	12.39	12.39	11.79
Diesel Fuel & Lube, Pre-Post Harvest	12.76	9.97	7.74	12.49	9.44	8.61
Repairs and Maintenance, Pre-Post Harvest	7.58	7.49	7.35	7.21	7.12	6.89
Diesel Fuel & Lube, Harvest	7.56	3.59	3.83	8.05	3.57	4.19
Repairs and Maintenance, Harvest	3.85	3.68	3.92	3.97	3.79	3.61
Irrigation Energy Cost	27.83	23.69	20.08	28.52	22.93	21.61
Irrigation System Repairs & Maintenance	2.99	2.95	2.90	2.84	2.81	2.72
Supplies (ex. polypipe, levee gates, other)	1.43	1.42	1.40	1.36	1.28	1.25
Other Inputs, Survey Levees	0.00	0.00	0.00	0.00	0.00	0.00
Labor, Field Activities	5.95	5.77	5.71	5.58	5.40	5.22
Scouting/Consultant Fee	0.00	0.00	0.00	0.00	0.00	0.00
Boll Weevil Eradication Fee	0.00	0.00	0.00	0.00	0.00	0.00
Interest, Annual Rate for 6 Months	7.17	5.80	6.43	6.82	4.90	4.48
Cotton: Hauling, Ginning; Grain: Drying	0.00	0.00	0.00	0.00	0.00	0.00
Cotton: Warehousing; Other: Hauling	7.96	7.70	8.25	8.36	7.92	7.70
Promotions, Boards, Classing	0.36	0.35	0.38	0.38	0.36	0.35
Operating Costs	258.20	240.53	243.70	248.29	197.71	186.40
Pre-Harvest and Harvest Machinery	32.57	31.34	30.25	28.48	26.03	24.80
Irrigation Equipment	14.63	14.08	13.59	12.79	11.69	11.14
Miscellaneous Overhead ¹	8.14	7.84	7.56	7.12	6.51	6.20
Fixed Costs	55.34	53.25	51.40	48.39	44.22	42.14
Total Costs²	313.54	293.79	295.10	296.68	241.93	228.54

¹Estimated as 25% of pre-harvest and harvest machinery.

²Does not include land costs.

Appendix 4. Weighted Average Crop Enterprise Budgets, per Acre, Arkansas Rice, 2006 - 2011

Expense	2011	2010	2009	2008	2007	2006
Seed, Includes All Fees	67.38	66.16	65.76	45.33	40.86	36.94
Nitrogen	85.81	67.80	72.31	104.94	64.99	57.11
Phosphate (P2O5)	27.20	19.66	19.57	39.36	17.53	12.56
Potash (K2O)	29.40	26.08	41.00	27.11	13.21	12.63
Other Nutrients	7.33	5.92	6.46	9.21	5.08	4.14
Herbicide	55.71	57.42	60.42	55.71	52.28	52.71
Insecticide	4.14	4.12	4.00	3.87	3.67	3.55
Other Chemicals	21.22	20.73	20.36	18.29	16.34	15.49
Custom Chemical & Fertilizer Applications	46.03	44.91	44.35	40.73	40.73	38.77
Diesel Fuel & Lube, Pre-Post Harvest	14.55	11.37	8.83	14.25	10.76	9.82
Repairs and Maintenance, Pre-Post Harvest	4.69	4.63	4.55	4.46	4.40	4.26
Diesel Fuel & Lube, Harvest	20.41	11.58	12.08	24.58	12.49	14.39
Repairs and Maintenance, Harvest	12.38	11.68	12.18	11.92	13.02	12.18
Irrigation Energy Cost	94.65	80.55	68.30	96.99	77.98	73.49
Irrigation System Repairs & Maintenance	3.69	3.64	3.57	3.51	3.46	3.35
Supplies (ex. polypipe, levee gates, other)	0.37	0.37	0.36	0.35	0.33	0.32
Other Inputs, Survey Levees	5.50	5.43	5.36	5.22	4.90	4.80
Labor, Field Activities	9.87	9.57	9.47	9.26	8.96	8.66
Scouting/Consultant Fee	0.00	0.00	0.00	0.00	0.00	0.00
Boll Weevil Eradication Fee	0.00	0.00	0.00	0.00	0.00	0.00
Interest, Annual Rate for 6 Months	15.07	11.56	12.90	15.09	10.39	9.41
Cotton: Hauling, Ginning; Grain: Drying	52.79	50.40	52.89	51.80	56.23	53.67
Cotton: Warehousing; Other: Hauling	33.18	31.68	33.24	32.56	35.35	33.73
Promotions, Boards, Classing	1.51	1.44	1.51	1.48	1.61	1.53
Operating Costs	612.89	546.71	559.47	616.02	494.58	463.49
Pre-Harvest and Harvest Machinery	51.21	49.28	47.57	44.78	40.93	39.00
Irrigation Equipment	35.19	33.86	32.69	30.77	28.12	26.80
Miscellaneous Overhead ¹	12.80	12.32	11.89	11.20	10.23	9.75
Fixed Costs	99.20	95.47	92.15	86.75	79.28	75.54
Total Costs²	712.09	642.18	651.62	702.77	573.86	539.04

¹Estimated as 25% of pre-harvest and harvest machinery.

²Does not include land costs.

Appendix 5. Weighted Average Crop Enterprise Budgets, per Acre, Arkansas Sorghum, 2006 - 2011

Expense	2011	2010	2009	2008	2007	2006
Seed, Includes All Fees	16.96	17.27	16.85	14.86	12.56	12.14
Nitrogen	58.01	45.84	48.88	70.94	43.93	38.61
Phosphate (P2O5)	40.80	29.49	29.35	59.04	26.29	18.84
Potash (K2O)	44.10	39.13	61.51	40.66	19.82	18.94
Other Nutrients	0.00	0.00	0.00	0.00	0.00	0.00
Herbicide	28.65	29.53	31.07	28.65	26.89	27.11
Insecticide	3.32	3.30	3.20	3.10	2.94	2.84
Other Chemicals	0.00	0.00	0.00	0.00	0.00	0.00
Custom Chemical & Fertilizer Applications	0.00	0.00	0.00	0.00	0.00	0.00
Diesel Fuel & Lube, Pre-Post Harvest	11.87	9.28	7.20	11.62	8.78	8.01
Repairs and Maintenance, Pre-Post Harvest	5.42	5.35	5.25	5.15	5.09	4.92
Diesel Fuel & Lube, Harvest	11.66	7.20	7.34	16.99	8.68	9.27
Repairs and Maintenance, Harvest	7.70	6.97	7.11	7.92	8.69	7.54
Irrigation Energy Cost	12.87	10.96	9.29	13.19	10.61	10.00
Irrigation System Repairs & Maintenance	1.62	1.60	1.57	1.54	1.52	1.47
Supplies (ex. polypipe, levee gates, other)	0.69	0.69	0.68	0.66	0.62	0.61
Other Inputs, Survey Levees	0.00	0.00	0.00	0.00	0.00	0.00
Labor, Field Activities	6.77	6.56	6.49	6.35	6.14	5.94
Scouting/Consultant Fee	0.00	0.00	0.00	0.00	0.00	0.00
Boll Weevil Eradication Fee	0.00	0.00	0.00	0.00	0.00	0.00
Interest, Annual Rate for 6 Months	7.40	5.46	6.63	8.22	4.85	4.28
Cotton: Hauling, Ginning; Grain: Drying	0.00	0.00	0.00	0.00	0.00	0.00
Cotton: Warehousing; Other: Hauling	18.48	16.94	17.38	19.36	21.12	18.70
Promotions, Boards, Classing	0.84	0.77	0.79	0.88	0.96	0.85
Operating Costs	277.16	236.31	260.59	309.14	209.48	190.06
Pre-Harvest and Harvest Machinery	34.97	33.66	32.49	30.58	27.95	26.63
Irrigation Equipment	7.29	7.02	6.77	6.38	5.83	5.55
Miscellaneous Overhead ¹	8.74	8.41	8.12	7.65	6.99	6.66
Fixed Costs	51.01	49.09	47.38	44.61	40.77	38.84
Total Costs²	328.17	285.40	307.97	353.75	250.25	228.90

¹Estimated as 25% of pre-harvest and harvest machinery.

²Does not include land costs.

Appendix 6. Weighted Average Crop Enterprise Budgets, per Acre, Arkansas Wheat, 2006 - 2011

Expense	2011	2010	2009	2008	2007	2006
Seed, Includes All Fees	30.00	26.69	31.17	28.83	20.65	18.16
Nitrogen	68.06	53.78	57.35	83.23	51.54	45.30
Phosphate (P2O5)	13.60	9.83	9.78	19.68	8.76	6.28
Potash (K2O)	19.60	17.39	27.34	18.07	8.81	8.42
Other Nutrients	3.69	2.98	3.25	4.64	2.56	2.08
Herbicide	23.54	24.26	25.53	23.54	22.09	22.27
Insecticide	0.00	0.00	0.00	0.00	0.00	0.00
Other Chemicals	18.06	17.64	17.33	15.57	13.91	13.18
Custom Chemical & Fertilizer Applications	28.00	27.32	26.98	24.78	24.78	23.59
Diesel Fuel & Lube, Pre-Post Harvest	10.27	8.02	6.23	10.05	7.59	6.93
Repairs and Maintenance, Pre-Post Harvest	3.69	3.65	3.58	3.51	3.47	3.36
Diesel Fuel & Lube, Harvest	11.66	7.71	7.67	12.98	7.87	6.84
Repairs and Maintenance, Harvest	8.55	7.47	7.43	6.05	7.88	5.56
Irrigation Energy Cost	0.00	0.00	0.00	0.00	0.00	0.00
Irrigation System Repairs & Maintenance	0.00	0.00	0.00	0.00	0.00	0.00
Supplies (ex. polypipe, levee gates, other)	0.00	0.00	0.00	0.00	0.00	0.00
Other Inputs, Survey Levees	0.00	0.00	0.00	0.00	0.00	0.00
Labor, Field Activities	6.19	6.00	5.94	5.81	5.62	5.43
Scouting/Consultant Fee	0.00	0.00	0.00	0.00	0.00	0.00
Boll Weevil Eradication Fee	0.00	0.00	0.00	0.00	0.00	0.00
Interest, Annual Rate for 6 Months	7.23	5.45	6.45	7.52	4.93	4.31
Cotton: Hauling, Ginning; Grain: Drying	0.00	0.00	0.00	0.00	0.00	0.00
Cotton: Warehousing; Other: Hauling	13.42	11.88	11.88	9.68	12.54	9.02
Promotions, Boards, Classing	0.61	0.54	0.54	0.44	0.57	0.41
Operating Costs	266.17	230.62	248.45	274.38	203.57	181.12
Pre-Harvest and Harvest Machinery	31.44	30.25	29.20	27.49	25.12	23.94
Irrigation Equipment	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous Overhead ¹	7.86	7.56	7.30	6.87	6.28	5.99
Fixed Costs	39.30	37.82	36.50	34.37	31.41	29.93
Total Costs²	305.47	268.43	284.95	308.74	234.98	211.04

¹Estimated as 25% of pre-harvest and harvest machinery.

²Does not include land costs.