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Input Costs Trends for Arkansas Field Crops, 2006-2012

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Input Costs Trends for Arkansas Field Crops, 2006-2012

Increasing input prices during 2006-2012 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 2012 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 2011). 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 2012 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 2011 are applied so that costs are representative of the spring 2012 planting period (USDA-NASS 2012a). 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 2006-2012.

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 \$678.71/acre. With post-harvest costs excluded for cotton, corn has the second greatest operating costs of \$573.83. Wheat has the lowest operating costs of \$281.95/acre.

Fixed costs are greatest for cotton with \$125.69/acre and lowest for wheat with \$40.93/acre. Adding fixed costs and operating costs leads to rice having the greatest total costs of production of \$776.20/acre. Costs in Table 1 include levee construction for rice, but do not include any other activities related to land forming. Corn total production costs are \$12.31 greater than total costs for cotton. Among crops planted in the spring season, soybeans have the lowest total costs of production at \$337.98/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 \$550.92/acre. Production inputs are lowest for wheat with \$246.70/acre.

Expected yields for 2012 are calculated as averages of Arkansas yields for 2006-2011 (USDA-NASS 2012b). Dividing total costs by expected yields estimates total costs per yield unit in

Table 2. For example, corn prices received above \$4.27/bu. represent revenue greater than total production costs, excluding land costs.

Table 1. Weighted Average Crop Enterprise Budgets, per Acre, Arkansas Field Crops, 2012

Expense	Cotton	Corn	Soybean	Rice	Sorghum	Wheat
Seed, Includes All Fees	106.26	108.75	70.20	79.44	16.13	30.00
Nitrogen	60.99	142.03	0.00	98.60	66.65	78.20
Phosphate (P2O5)	19.91	42.60	21.30	28.40	42.60	14.20
Potash (K2O)	29.72	47.70	23.85	31.80	47.70	21.20
Other Nutrients	9.43	21.82	0.00	7.01	0.00	3.96
Herbicide	56.69	18.66	36.71	62.01	26.98	25.92
Insecticide	22.57	0.00	4.91	4.37	3.49	0.00
Other Chemicals	21.44	0.00	19.56	31.30	0.00	14.77
Custom Chemical & Fertilizer Applications	0.00	5.52	14.00	46.03	0.00	28.00
Diesel Fuel & Lube, Pre-Post Harvest	22.67	15.57	14.83	16.01	13.85	11.80
Repairs and Maintenance, Pre-Post Harvest	13.88	8.28	8.90	6.96	8.00	5.82
Diesel Fuel & Lube, Harvest	22.33	11.52	6.04	19.32	11.21	11.58
Repairs and Maintenance, Harvest	17.94	9.99	4.56	14.67	8.61	9.87
Irrigation Energy Cost	42.79	49.83	32.44	110.33	14.01	0.00
Irrigation System Repairs & Maintenance	5.40	5.10	3.03	3.74	1.64	0.00
Supplies (ex. polypipe, levee gates, other)	1.60	1.88	1.65	0.37	0.80	0.00
Other Inputs, Survey Levees	0.00	0.00	0.00	5.50	0.00	0.00
Labor, Field Activities	17.43	8.06	6.57	10.45	7.81	7.07
Scouting/Consultant Fee	9.00	0.00	0.00	0.00	0.00	0.00
Boll Weevil Eradication Fee	14.00	0.00	0.00	0.00	0.00	0.00
Interest, Annual Rate for 6 Months	13.00	13.09	7.07	15.17	7.09	6.90
Cotton: Hauling, Ginning; Grain: Drying	89.85	28.69	0.00	52.65	0.00	0.00
Cotton: Warehousing; Other: Hauling	20.97	33.22	8.10	33.10	17.89	12.10
Promotions, Boards, Classing	10.88	1.51	0.37	1.50	0.81	0.55
Operating Costs¹	507.03	573.83	284.08	678.71	295.29	281.95
Pre-Harvest and Harvest Machinery	83.44	39.06	31.94	51.09	36.75	32.74
Irrigation Equipment	21.39	22.38	13.98	33.62	6.97	0.00
Miscellaneous Overhead ²	20.86	9.76	7.98	12.77	9.19	8.19
Fixed Costs	125.69	71.21	53.90	97.49	52.91	40.93
Total Costs³	632.72	645.03	337.98	776.20	348.20	322.88

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, 2012

Expense Category	Cotton	Corn	Soybean	Rice	Sorghum	Wheat
Production Inputs	433.82	473.95	252.05	550.92	251.23	246.70
Repairs & Other Fees	73.21	36.45	23.55	40.54	25.35	22.60
Post-Harvest Expenses ¹	0.00	63.42	8.47	87.25	18.71	12.65
Total Operating Expenses	507.03	573.83	284.08	678.71	295.29	281.95
Fixed Costs	125.69	71.21	53.90	97.49	52.91	40.93
Total Costs²	632.72	645.03	337.98	776.20	348.20	322.88
Unit Cost ³	0.63	4.27	9.18	5.16	4.28	5.29

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 soybeans. Seed cost for soybean production is \$70.20/acre which is 28% of production inputs. Fertilizers are the greatest production input costs for cotton, corn, rice, grain sorghum, and wheat. Fertilizers are 54% of production inputs for corn and 62% of production inputs for grain sorghum. The percentage of production inputs of chemicals is greatest for soybeans with 24% 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, 2012

Input	Cotton	Corn	Soybean	Rice	Sorghum	Wheat
Seed	106.26	108.75	70.20	79.44	16.13	30.00
Percent	24	23	28	14	6	12
Fertilizers	120.05	254.15	45.15	165.81	156.95	117.56
Percent	28	54	18	30	62	48
Chemicals	100.69	18.66	61.18	97.67	30.47	40.69
Percent	23	4	24	18	12	16
Diesel & Electricity	87.78	76.92	53.31	145.65	39.07	23.38
Percent	20	16	21	26	16	9
Labor, Field Activities	17.43	8.06	6.57	10.45	7.81	7.07
Percent	4	2	3	2	3	3
Other	1.60	7.41	15.65	51.90	0.80	28.00
Percent	0	2	6	9	0	11
Total Production Inputs¹	433.82	473.95	252.05	550.92	251.23	246.70
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 2006-2012 (USDA-NASS 2012a). 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 2012, nitrogen prices are 165% of the 2006 level, while potash and phosphate prices are over twice the 2006 level. Diesel prices in 2012 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 2012 are 143% of the 2006 level. Herbicide prices reached their highest level in 2009 before moderating in 2012 to a level that is 11% greater than 2006 prices. Seed prices have increased for all crops in Figure 3. Corn seed prices have the greatest increase and are 214% of 2006 prices. Seed prices for cotton planting increased 197% during 2006-2012.

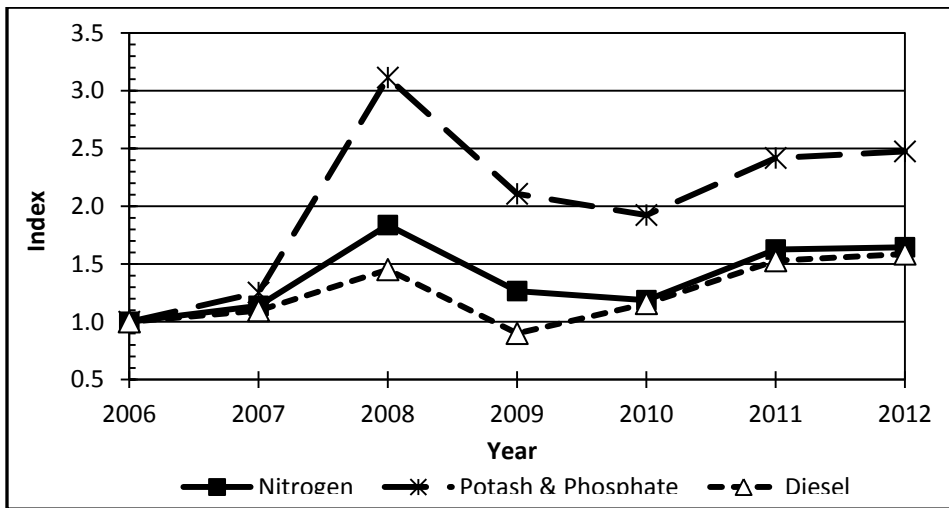


Figure 1. Price Indexes for Major Fertilizers and Diesel, U.S., 2006-2012, 2006=1.0

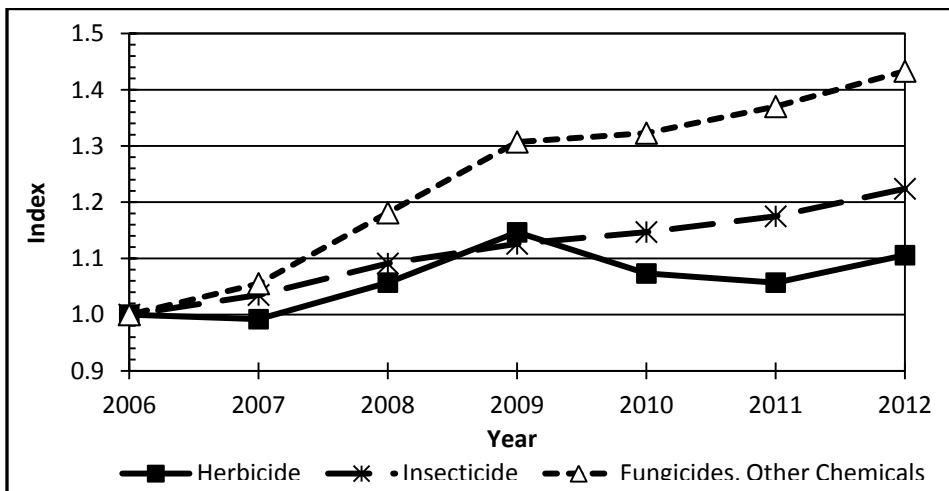


Figure 2. Price Indexes for Agricultural Chemicals, U.S., 2006-2012, 2006=1.0

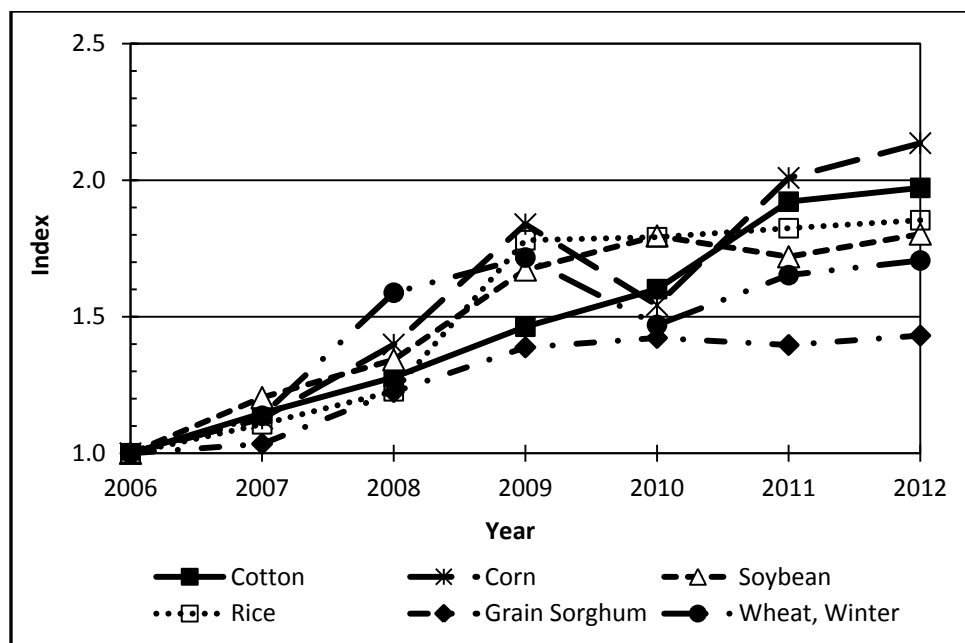


Figure 3. Price Indexes for Seeds, Major U.S. Field Crops, 2006-2012, 2006=1.0

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 2012 costs in Table 1 based on crop enterprise budget application rates (USDA-NASS 2012a). Figure 4 presents costs per acre indexes during 2006-2012 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. All crops have 2012 production input costs at least 47% greater than 2006 levels. The greatest single year increase in production input costs for all crops occurred in 2008. Production input costs increases in 2012 over 2011 are cotton (5%), corn (5%), soybeans (5%), rice (7%), grain sorghum (5%), and wheat (4%). Figure 5 presents costs per acre indexes during 2006-2012 for total costs in Table 2. Total costs for corn and grain sorghum are greatest in 2008, followed by declines in 2009 and 2010. Costs increased in 2012 from 2011, but are below 2008 levels. Total costs trends are similar for cotton, soybeans, rice, and wheat. Costs increases in 2012 put levels for these crops above 2008 costs. Total costs in 2012 have the greatest increases compared to 2006 for corn (54%) and grain sorghum (50%). Total costs for wheat are 47% greater than 2006 costs. Other total costs increases from 2006 to 2012 are soybeans (45%), cotton (40%), and rice (38%).

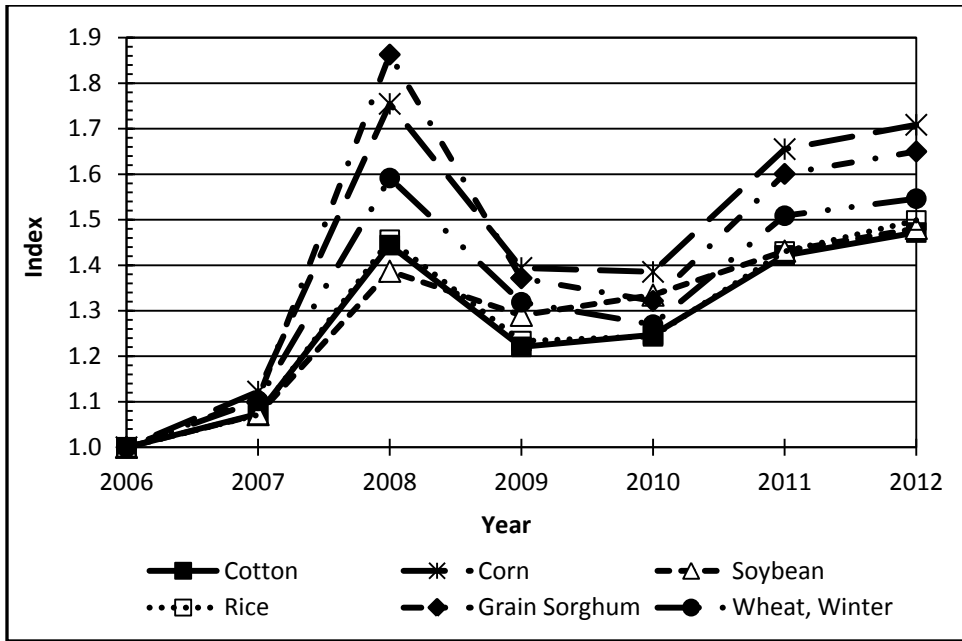


Figure 4. Indexes for Production Inputs, Costs per Acre, 2006-2012, 2006=1.0

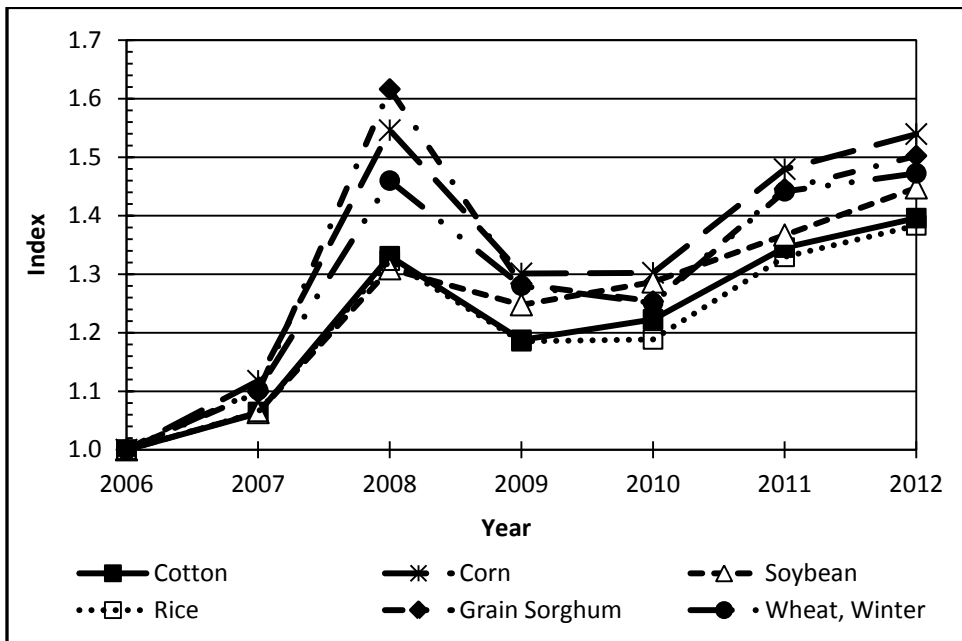


Figure 5. Indexes for Total Inputs, Costs per Acre, 2006-2012, 2006=1.0

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 2006-2011 (USDA-NASS 2012b). Prices for soybeans, corn, grain sorghum and wheat are more than 87% higher in 2011 compared to 2006. 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 2011 is 66% higher than the 2006 price. Rice price in 2011 is 43% higher than in 2006.

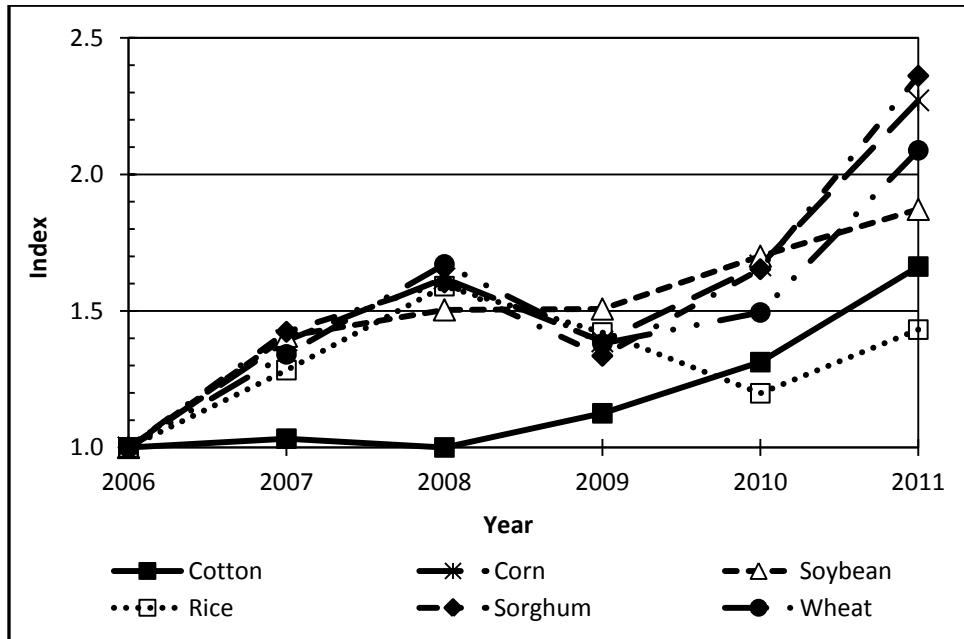


Figure 6. Indexes for Arkansas Price Received, Field Crops, 2006-2011, 2006=1.0

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 2006-2011. 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. The cotton price index continues to increase above cotton costs in 2011. Figure 8 and Figure 9 indicate that price increases are above costs increases throughout 2006-2011 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. In 2011, the rice price increase is significantly greater than the costs increase. 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. This trend continues for wheat in 2011.

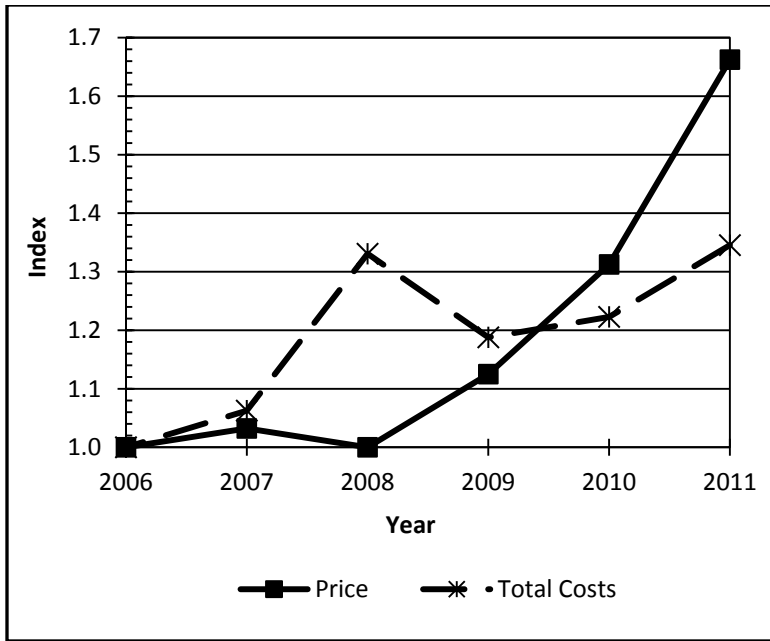


Figure 7. Indexes for Price Received and Total Production Costs, Arkansas Cotton, 2006-2011, 2006=1.0

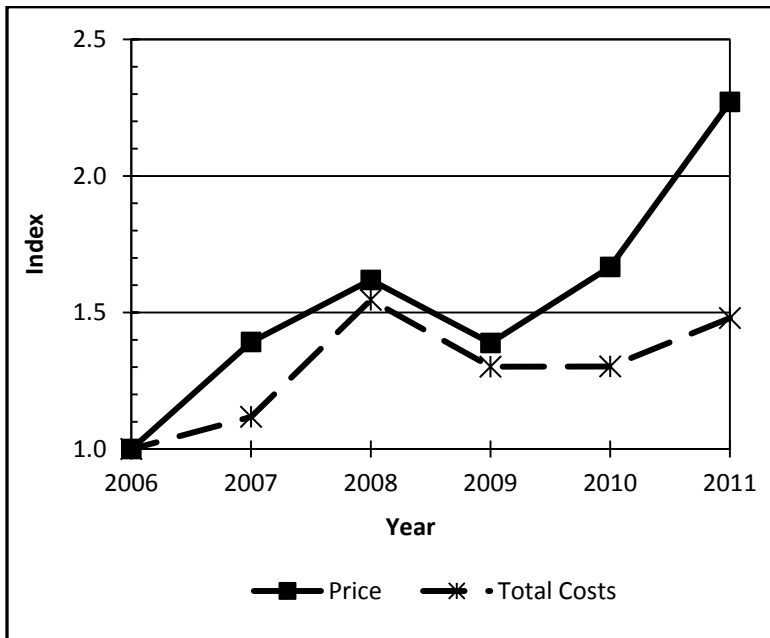


Figure 8. Indexes for Price Received and Total Production Costs, Arkansas Corn, 2006-2011, 2006=1.0

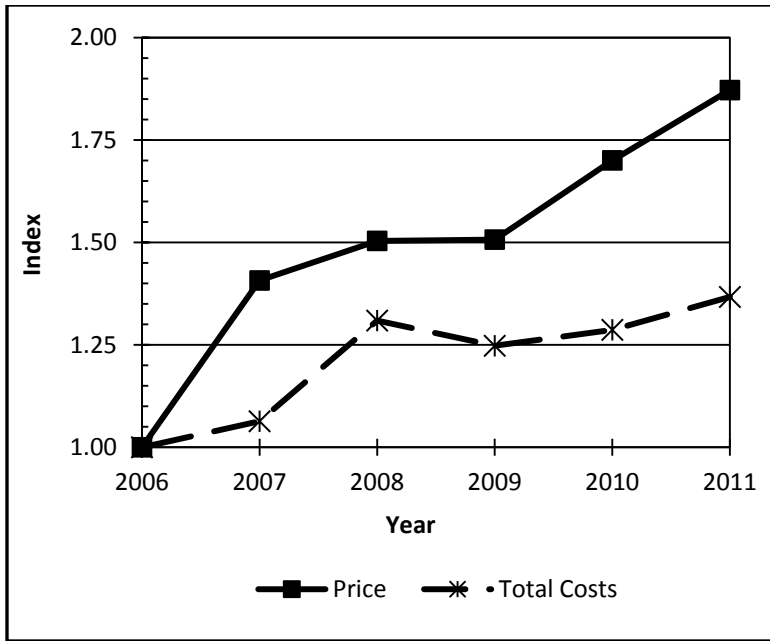


Figure 9. Indexes for Price Received and Total Production Costs, Arkansas Soybeans, 2006-2011, 2006=1.0

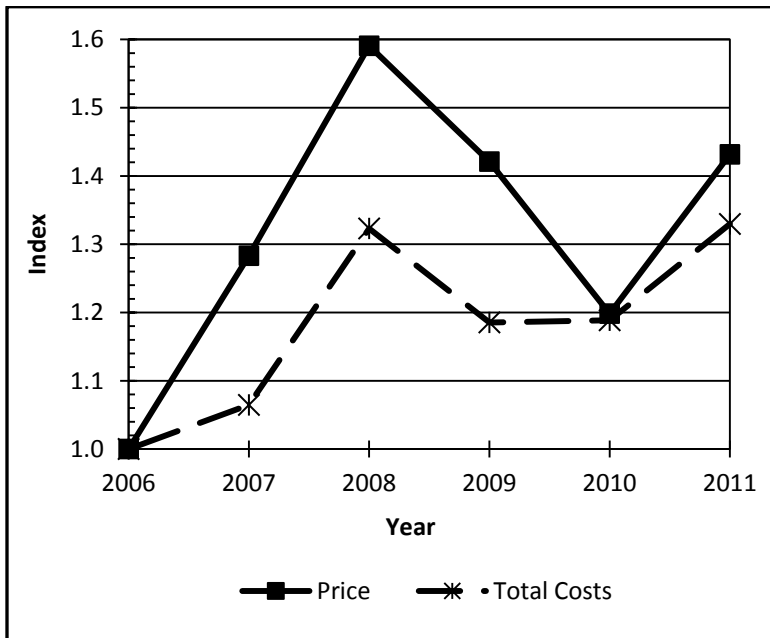


Figure 10. Indexes for Price Received and Total Production Costs, Arkansas Rice, 2006-2011, 2006=1.0

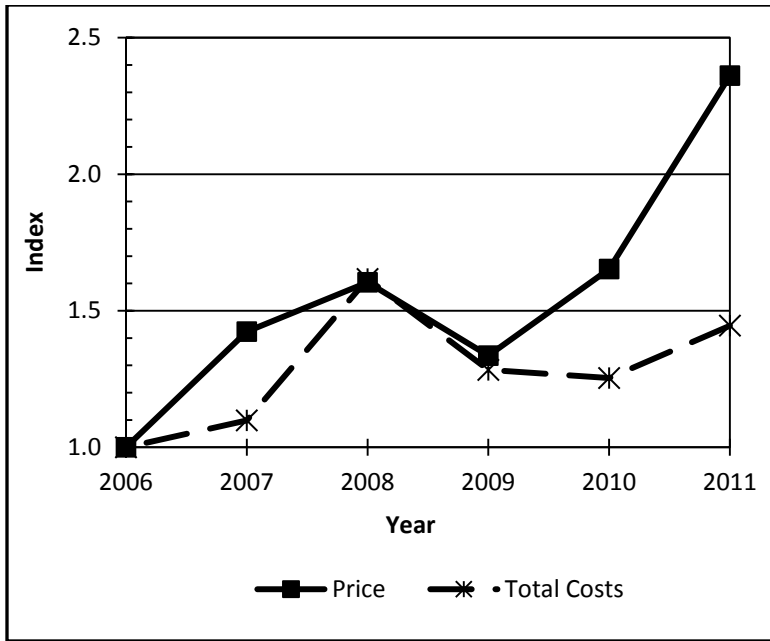


Figure 11. Indexes for Price Received and Total Production Costs, Arkansas Grain Sorghum, 2006-2011, 2006=1.0

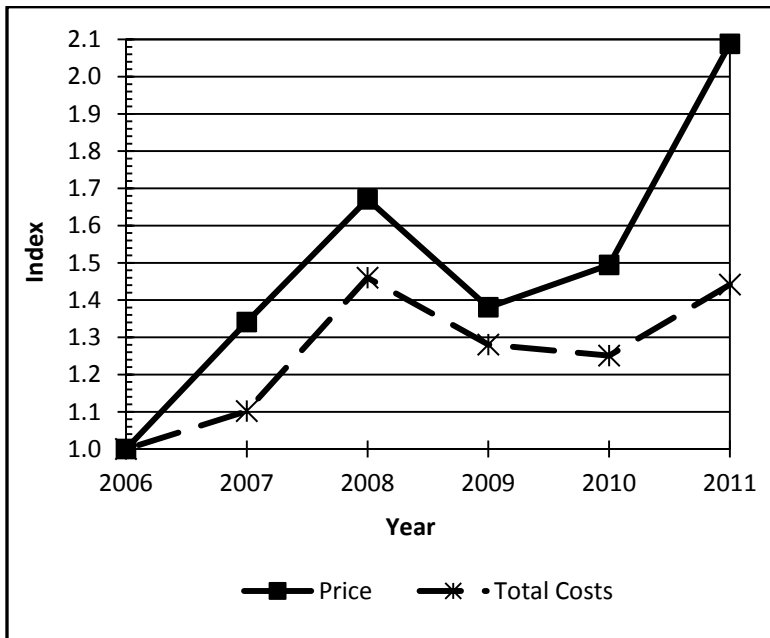


Figure 12. Indexes for Price Received and Total Production Costs, Arkansas Wheat, 2006-2011, 2006=1.0

Summary

Increasing input prices during 2006-2012 have challenged farm profitability even during a period of favorable commodity prices. Weighted average crop enterprise budgets with 2012 costs are developed for field crops produced in Arkansas. Rice has the greatest operating costs of \$678.71/acre, and wheat has the lowest operating costs of \$281.95/acre. Fixed costs are greatest for cotton with \$125.69/acre and lowest for wheat with \$40.93/acre. Adding fixed costs and operating costs leads to rice having the greatest total costs of production of \$776.20/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 \$550.92/acre. Production inputs are lowest for wheat with \$246.70/acre. Seed cost for cotton production is \$106.26/acre which is 24% of production inputs. Soybeans have seed cost of \$70.20/acre, or 28% of production inputs. Fertilizers are the greatest production input costs for corn, rice, grain sorghum, and wheat. Fertilizers are 54% of production inputs for corn and 62% of production inputs for grain sorghum. The percentage of production inputs for chemicals is greatest for soybeans with 24% 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 2012 over 2011 are cotton (5%), corn (5%), soybeans (5%), rice (7%), grain sorghum (5%), and wheat (4%). 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 2006-2011. Cotton costs outpace increases in prices until 2010 when the price index is slightly above costs. The cotton price index increases above the trend line in comparison to costs in 2011. Price increases are above costs increases throughout 2006-2011 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. In 2011, the rice price increase is significantly greater than the costs increase.

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Appendix 1. Weighted Average Crop Enterprise Budgets, per Acre, Arkansas Cotton, 2006 - 2012

Expense	2012	2011	2010	2009	2008	2007	2006
Seed, Includes All Fees	106.26	103.27	95.33	89.59	77.23	73.55	65.17
Nitrogen	60.99	60.26	44.01	46.93	68.11	42.18	37.07
Phosphate (P ₂ O ₅)	19.91	19.45	15.48	16.96	25.05	10.08	8.04
Potash (K ₂ O)	29.72	29.04	23.11	25.31	37.40	15.05	12.01
Other Nutrients	9.43	9.18	7.05	7.70	10.97	6.04	4.92
Herbicide	56.69	54.19	55.02	58.77	54.19	50.85	51.27
Insecticide	22.57	21.66	21.15	20.76	20.12	19.08	18.44
Other Chemicals	21.44	20.50	19.79	19.55	17.67	15.79	14.96
Custom Chemical & Fertilizer Applications	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diesel Fuel & Lube, Pre-Post Harvest	22.67	21.84	16.55	12.85	20.74	15.66	14.28
Repairs and Maintenance, Pre-Post Harvest	13.88	13.55	13.31	13.06	12.81	12.65	12.24
Diesel Fuel & Lube, Harvest	22.33	18.97	16.62	13.33	34.28	16.98	20.00
Repairs and Maintenance, Harvest	17.94	16.46	18.43	14.42	17.84	19.00	18.17
Irrigation Energy Cost	42.79	41.73	34.84	29.54	41.95	33.73	31.78
Irrigation System Repairs & Maintenance	5.40	5.28	5.18	5.08	4.99	4.92	4.76
Supplies (ex. polypipe, levee gates, other)	1.60	1.58	1.51	1.49	1.45	1.36	1.33
Other Inputs, Survey Levees	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Labor, Field Activities	17.43	17.34	17.07	16.98	16.53	15.99	15.44
Scouting/Consultant Fee	9.00	9.00	9.00	9.00	9.00	9.00	9.00
Boll Weevil Eradication Fee	14.00	14.00	14.00	14.00	14.00	14.00	14.00
Interest, Annual Rate for 6 Months	13.00	10.89	10.24	10.56	12.91	8.90	8.10
Cotton: Hauling, Ginning; Grain: Drying	89.85	84.42	94.05	73.62	91.08	96.39	94.05
Cotton: Warehousing; Other: Hauling	20.97	19.70	21.95	17.18	21.25	22.49	21.95
Promotions, Boards, Classing	10.88	10.22	11.39	8.92	11.03	11.67	11.39
Operating Costs¹	507.03	488.17	437.67	425.89	497.22	384.82	361.00
Pre-Harvest and Harvest Machinery	83.44	80.79	77.42	74.73	70.35	64.29	61.26
Irrigation Equipment	21.39	20.71	19.85	19.16	18.04	16.48	15.71
Miscellaneous Overhead ²	20.86	20.20	19.36	18.68	17.59	16.07	15.32
Fixed Costs	125.69	121.70	116.63	112.57	105.98	96.85	92.29
Total Costs³	632.72	609.87	554.30	538.46	603.20	481.67	453.29

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 - 2012

Expense	2012	2011	2010	2009	2008	2007	2006
Seed, Includes All Fees	108.75	102.97	102.14	97.18	76.09	63.68	56.65
Nitrogen	142.03	140.33	102.48	109.28	158.61	98.23	86.32
Phosphate (P ₂ O ₅)	42.60	41.62	33.12	36.28	53.60	21.57	17.21
Potash (K ₂ O)	47.70	46.60	37.09	40.62	60.02	24.15	19.28
Other Nutrients	21.82	21.24	16.32	17.81	25.38	13.99	11.40
Herbicide	18.66	17.84	18.11	19.35	17.84	16.74	16.88
Insecticide	0.00	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	0.00
Custom Chemical & Fertilizer Applications	5.52	5.42	5.32	5.16	4.83	4.83	4.60
Diesel Fuel & Lube, Pre-Post Harvest	15.57	15.01	11.37	8.83	14.25	10.76	9.81
Repairs and Maintenance, Pre-Post Harvest	8.28	8.09	7.94	7.79	7.64	7.55	7.30
Diesel Fuel & Lube, Harvest	11.52	9.66	8.14	8.23	17.92	9.14	9.54
Repairs and Maintenance, Harvest	9.99	9.05	9.75	9.61	10.06	11.04	9.35
Irrigation Energy Cost	49.83	48.59	40.57	34.40	48.85	39.27	37.01
Irrigation System Repairs & Maintenance	5.10	4.98	4.89	4.80	4.71	4.64	4.49
Supplies (ex. polypipe, levee gates, other)	1.88	1.85	1.77	1.75	1.70	1.60	1.56
Other Inputs, Survey Levees	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Labor, Field Activities	8.06	8.02	7.89	7.85	7.64	7.39	7.14
Scouting/Consultant Fee	0.00	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	0.00
Interest, Annual Rate for 6 Months	13.09	10.98	9.75	10.40	13.57	7.92	6.85
Cotton: Hauling, Ginning; Grain: Drying	28.69	26.60	28.50	28.12	29.45	32.11	27.74
Cotton: Warehousing; Other: Hauling	33.22	30.80	33.00	32.56	34.10	37.18	32.12
Promotions, Boards, Classing	1.51	1.40	1.50	1.48	1.55	1.69	1.46
Operating Costs	573.83	551.02	479.63	481.49	587.80	413.49	366.71
Pre-Harvest and Harvest Machinery	39.06	37.82	36.24	34.98	32.93	30.10	28.68
Irrigation Equipment	22.38	21.67	20.77	20.05	18.87	17.25	16.44
Miscellaneous Overhead ¹	9.76	9.45	9.06	8.75	8.23	7.52	7.17
Fixed Costs	71.21	68.95	66.07	63.77	60.04	54.87	52.28
Total Costs²	645.03	619.97	545.71	545.27	647.84	468.36	419.00

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

²Does not include land cost.

Appendix 3. Weighted Average Crop Enterprise Budgets, per Acre, Arkansas Soybean, 2006 - 2012

Expense	2012	2011	2010	2009	2008	2007	2006
Seed, Includes All Fees	70.20	67.30	70.60	65.45	52.78	48.43	45.00
Nitrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phosphate (P ₂ O ₅)	21.30	20.81	16.56	18.14	26.80	10.79	8.61
Potash (K ₂ O)	23.85	23.30	18.54	20.31	30.01	12.08	9.64
Other Nutrients	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Herbicide	36.71	35.09	35.63	38.06	35.09	32.93	33.20
Insecticide	4.91	4.72	4.61	4.52	4.38	4.16	4.02
Other Chemicals	19.56	18.70	18.06	17.84	16.12	14.40	13.65
Custom Chemical & Fertilizer Applications	14.00	13.75	13.50	13.08	12.24	12.24	11.65
Diesel Fuel & Lube, Pre-Post Harvest	14.83	14.29	10.82	8.41	13.56	10.25	9.34
Repairs and Maintenance, Pre-Post Harvest	8.90	8.69	8.53	8.37	8.21	8.11	7.85
Diesel Fuel & Lube, Harvest	6.04	5.82	4.41	3.42	5.52	4.17	3.81
Repairs and Maintenance, Harvest	4.56	4.45	4.37	4.29	4.21	4.16	4.02
Irrigation Energy Cost	32.44	31.64	26.41	22.40	31.80	25.57	24.10
Irrigation System Repairs & Maintenance	3.03	2.96	2.91	2.86	2.80	2.77	2.68
Supplies (ex. polypipe, levee gates, other)	1.65	1.62	1.55	1.53	1.49	1.40	1.37
Other Inputs, Survey Levees	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Labor, Field Activities	6.57	6.53	6.43	6.40	6.23	6.02	5.82
Scouting/Consultant Fee	0.00	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	0.00
Interest, Annual Rate for 6 Months	7.07	6.58	6.43	6.68	7.26	7.01	6.57
Cotton: Hauling, Ginning; Grain: Drying	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cotton: Warehousing; Other: Hauling	8.10	8.10	8.10	8.10	8.10	8.10	8.10
Promotions, Boards, Classing	0.37	0.37	0.37	0.37	0.37	0.37	0.37
Operating Costs	284.08	274.71	257.82	250.21	266.99	212.94	199.77
Pre-Harvest and Harvest Machinery	31.94	30.92	29.63	28.60	26.93	24.61	23.45
Irrigation Equipment	13.98	13.53	12.97	12.52	11.78	10.77	10.26
Miscellaneous Overhead ¹	7.98	0.00	0.00	0.00	0.00	0.00	0.00
Fixed Costs	53.90	44.46	42.60	41.12	38.71	35.38	33.71
Total Costs²	337.98	319.16	300.43	291.34	305.70	248.32	233.49

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

²Does not include land cost.

Appendix 4. Weighted Average Crop Enterprise Budgets, per Acre, Arkansas Rice, 2006 - 2012

Expense	2012	2011	2010	2009	2008	2007	2006
Seed, Includes All Fees	79.44	67.38	66.16	65.76	45.33	40.86	36.94
Nitrogen	98.60	97.42	71.15	75.87	110.11	68.19	59.93
Phosphate (P ₂ O ₅)	28.40	27.75	22.08	24.19	35.74	14.38	11.48
Potash (K ₂ O)	31.80	31.07	24.72	27.08	40.01	16.10	12.85
Other Nutrients	7.01	6.82	5.24	5.72	8.15	4.49	3.66
Herbicide	62.01	59.27	60.19	64.29	59.27	55.63	56.08
Insecticide	4.37	4.19	4.09	4.02	3.89	3.69	3.57
Other Chemicals	31.30	29.92	28.89	28.54	25.79	23.04	21.84
Custom Chemical & Fertilizer Applications	46.03	45.20	44.37	42.99	40.24	40.24	38.31
Diesel Fuel & Lube, Pre-Post Harvest	16.01	15.42	11.68	9.07	14.64	11.06	10.09
Repairs and Maintenance, Pre-Post Harvest	6.96	6.80	6.68	6.56	6.43	6.35	6.14
Diesel Fuel & Lube, Harvest	19.32	17.68	13.15	14.15	28.79	14.63	16.86
Repairs and Maintenance, Harvest	14.67	14.49	13.78	14.46	14.16	15.46	14.46
Irrigation Energy Cost	110.33	107.58	89.82	76.16	108.16	86.96	81.95
Irrigation System Repairs & Maintenance	3.74	3.65	3.59	3.52	3.45	3.41	3.30
Supplies (ex. polypipe, levee gates, other)	0.37	0.36	0.35	0.34	0.33	0.31	0.31
Other Inputs, Survey Levees	5.50	5.40	5.17	5.10	4.97	4.67	4.57
Labor, Field Activities	10.45	10.40	10.24	10.18	9.91	9.59	9.26
Scouting/Consultant Fee	0.00	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	0.00
Interest, Annual Rate for 6 Months	15.17	12.56	11.53	12.15	14.91	9.92	8.99
Cotton: Hauling, Ginning; Grain: Drying	52.65	53.27	50.40	52.89	51.80	56.23	53.67
Cotton: Warehousing; Other: Hauling	33.10	33.48	31.68	33.24	32.56	35.35	33.73
Promotions, Boards, Classing	1.50	1.52	1.44	1.51	1.48	1.61	1.53
Operating Costs	678.71	651.65	576.40	577.80	660.13	522.17	489.50
Pre-Harvest and Harvest Machinery	51.09	49.47	47.41	45.76	43.08	39.37	37.52
Irrigation Equipment	33.62	32.55	31.20	30.11	28.35	25.91	24.69
Miscellaneous Overhead ¹	12.77	12.37	11.85	11.44	10.77	9.84	9.38
Fixed Costs	97.49	94.39	90.46	87.31	82.20	75.12	71.58
Total Costs²	776.20	746.05	666.86	665.12	742.33	597.29	561.08

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

²Does not include land cost.

Appendix 5. Weighted Average Crop Enterprise Budgets, per Acre, Arkansas Sorghum, 2006 - 2012

Expense	2012	2011	2010	2009	2008	2007	2006
Seed, Includes All Fees	16.13	15.74	16.03	15.64	13.79	11.66	11.27
Nitrogen	66.65	65.86	48.09	51.29	74.44	46.10	40.51
Phosphate (P ₂ O ₅)	42.60	41.62	33.12	36.28	53.60	21.57	17.21
Potash (K ₂ O)	47.70	46.60	37.09	40.62	60.02	24.15	19.28
Other Nutrients	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Herbicide	26.98	25.78	26.18	27.97	25.78	24.20	24.40
Insecticide	3.49	3.35	3.27	3.21	3.12	2.96	2.86
Other Chemicals	0.00	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	0.00
Diesel Fuel & Lube, Pre-Post Harvest	13.85	13.35	10.11	7.85	12.67	9.57	8.73
Repairs and Maintenance, Pre-Post Harvest	8.00	7.82	7.68	7.53	7.39	7.30	7.06
Diesel Fuel & Lube, Harvest	11.21	9.22	7.54	7.93	18.36	9.38	10.02
Repairs and Maintenance, Harvest	8.61	7.65	8.00	8.21	9.14	10.03	8.71
Irrigation Energy Cost	14.01	13.66	11.41	9.67	13.74	11.04	10.41
Irrigation System Repairs & Maintenance	1.64	1.60	1.57	1.55	1.52	1.50	1.45
Supplies (ex. polypipe, levee gates, other)	0.80	0.78	0.75	0.74	0.72	0.68	0.66
Other Inputs, Survey Levees	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Labor, Field Activities	7.81	7.77	7.65	7.61	7.41	7.17	6.92
Scouting/Consultant Fee	0.00	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	0.00
Interest, Annual Rate for 6 Months	7.09	5.95	5.23	5.75	8.04	4.43	3.89
Cotton: Hauling, Ginning; Grain: Drying	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cotton: Warehousing; Other: Hauling	17.89	16.28	16.94	17.38	19.36	21.12	18.70
Promotions, Boards, Classing	0.81	0.74	0.77	0.79	0.88	0.96	0.85
Operating Costs	295.29	283.79	241.45	250.04	329.99	213.81	192.92
Pre-Harvest and Harvest Machinery	36.75	35.58	34.10	32.92	30.99	28.32	26.98
Irrigation Equipment	6.97	6.75	6.47	6.24	5.88	5.37	5.12
Miscellaneous Overhead ¹	9.19	8.90	8.53	8.23	7.75	7.08	6.75
Fixed Costs	52.91	51.23	49.09	47.39	44.61	40.77	38.85
Total Costs²	348.20	335.01	290.54	297.42	374.60	254.58	231.77

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

²Does not include land cost.

Appendix 6. Weighted Average Crop Enterprise Budgets, per Acre, Arkansas Wheat, 2006 - 2012

Expense	2012	2011	2010	2009	2008	2007	2006
Seed, Includes All Fees	30.00	29.06	25.85	30.19	27.92	20.00	17.58
Nitrogen	78.20	77.26	56.43	60.17	87.33	54.08	47.53
Phosphate (P ₂ O ₅)	14.20	13.87	11.04	12.09	17.87	7.19	5.74
Potash (K ₂ O)	21.20	20.71	16.48	18.06	26.68	10.74	8.57
Other Nutrients	3.96	3.85	2.96	3.23	4.61	2.54	2.07
Herbicide	25.92	24.78	25.16	26.87	24.78	23.25	23.44
Insecticide	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Chemicals	14.77	14.12	13.63	13.47	12.17	10.87	10.31
Custom Chemical & Fertilizer Applications	28.00	27.50	26.99	26.16	24.48	24.48	23.31
Diesel Fuel & Lube, Pre-Post Harvest	11.80	11.37	8.62	6.69	10.80	8.16	7.44
Repairs and Maintenance, Pre-Post Harvest	5.82	5.69	5.58	5.48	5.38	5.31	5.14
Diesel Fuel & Lube, Harvest	11.58	11.16	8.45	6.56	10.59	8.00	7.30
Repairs and Maintenance, Harvest	9.87	9.64	9.46	9.29	9.11	9.00	8.70
Irrigation Energy Cost	0.00	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	0.00
Supplies (ex. polypipe, levee gates, other)	0.00	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	0.00
Labor, Field Activities	7.07	7.03	6.92	6.89	6.70	6.48	6.26
Scouting/Consultant Fee	0.00	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	0.00
Interest, Annual Rate for 6 Months	6.90	6.43	6.29	6.52	7.10	6.85	6.42
Cotton: Hauling, Ginning; Grain: Drying	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cotton: Warehousing; Other: Hauling	12.10	13.42	11.88	11.88	9.68	12.54	9.02
Promotions, Boards, Classing	0.55	0.61	0.54	0.54	0.44	0.57	0.41
Operating Costs	281.95	276.50	236.29	244.09	285.63	210.06	189.23
Pre-Harvest and Harvest Machinery	32.74	31.70	30.38	29.33	27.61	25.23	24.04
Irrigation Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous Overhead ¹	8.19	7.93	7.60	7.33	6.90	6.31	6.01
Fixed Costs	40.93	39.63	37.98	36.66	34.51	31.54	30.05
Total Costs²	322.88	316.13	274.27	280.75	320.14	241.60	219.28

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

²Does not include land cost.