

**2009 Arkansas**



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and County Governments Cooperating**

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## CORN & GRAIN SORGHUM RESEARCH VERIFICATION PROGRAM, 2009

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Special acknowledgment to the members of the Arkansas Corn and Grain Sorghum Promotion Board:

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## INTRODUCTION

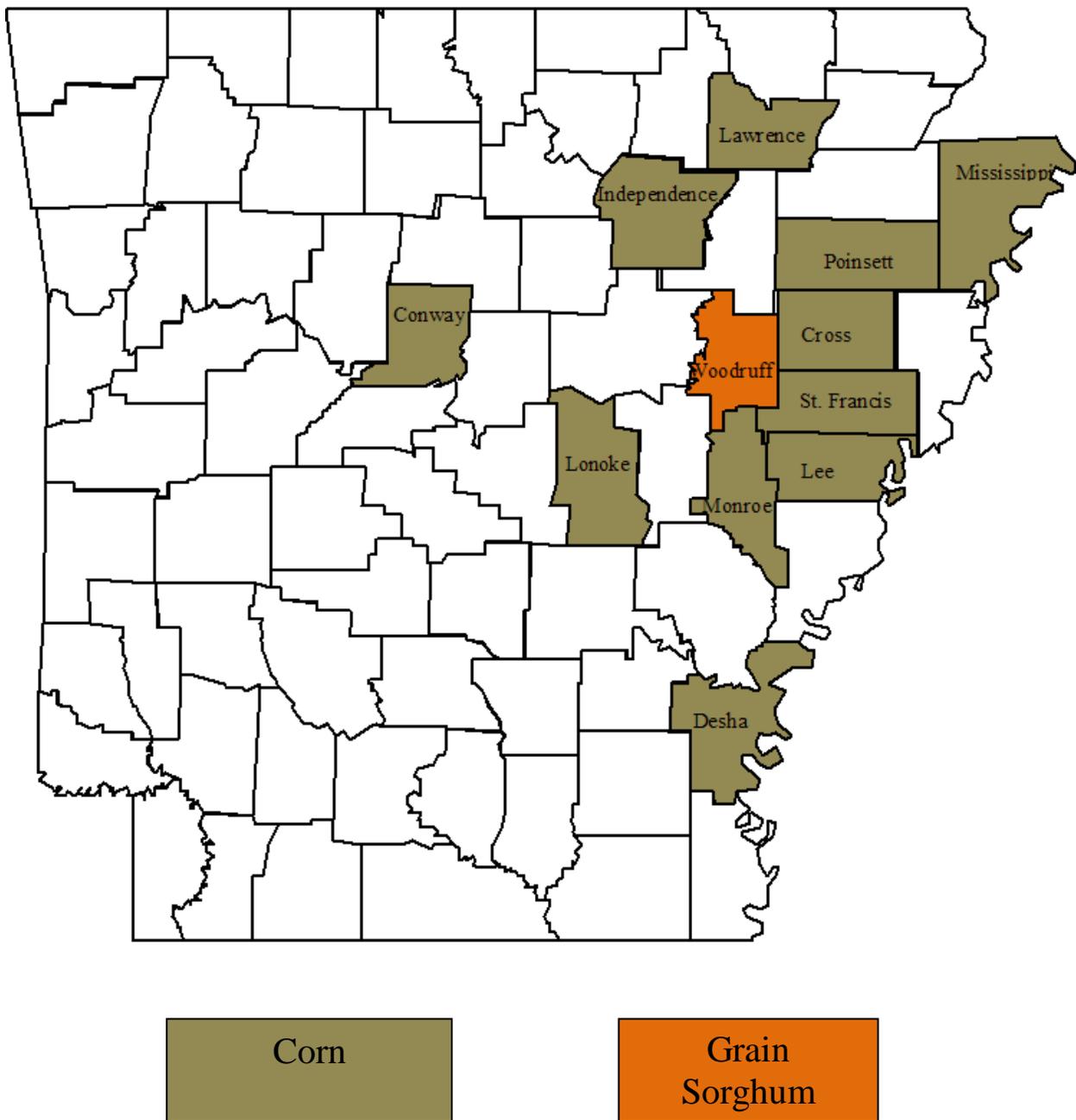
The 2009 growing season was the tenth year for the Corn and Grain Sorghum Research Verification Program (CGSRVP). The CGSRVP is an interdisciplinary effort between growers, county Extension agents, Extension specialists, and researchers. The CGSRVP is an on-farm demonstration of all the research-based recommendations required to grow corn and grain sorghum profitably in Arkansas. The specific objectives of the program are:

1. To verify research-based recommendations for profitable corn and grain sorghum production in all corn and grain sorghum producing areas of Arkansas.
2. To develop a database for economic analysis of all aspects of corn and grain sorghum production.
3. To demonstrate that consistently high yields of corn and grain sorghum can be produced economically with the use of available technology and inputs.
4. To identify specific problems and opportunities in Arkansas corn and grain sorghum production for further investigation.
5. To promote timely implementation of cultural and management practices among corn and grain sorghum growers.
6. To provide training and assistance to county agents with limited expertise in corn and grain sorghum production.

Each CGSRVP field and cooperator was selected prior to planting. Cooperators agreed to pay production expenses, provide crop expense data for economic analysis and implement the recommended production practices in a timely manner from seedbed preparation to harvest. Twelve growers were enrolled in the CGSRVP in the spring of 2009, eleven corn and one grain sorghum field. The fields were located on commercial farms ranging in size from 13 to 133 acres for corn fields, and 20.5 acres for the grain sorghum field. The average field size was 53 acres for the corn fields.

The 2009 CGSRVP corn fields were conducted in Conway, Cross, Desha, Independence, Lawrence, Lee, Lonoke, Mississippi, Monroe, Poinsett, and St. Francis Counties; and one grain sorghum field in Woodruff County. Six different corn hybrids (DeKalb DKC 64-79VT3, Mycogen 2T826, Pioneer 31D59, Pioneer 33M57, Pioneer 33N58, and Terral TV26TR41) and one grain sorghum variety (Pioneer 84G62) were planted. Management decisions were based on field history, soil test results, hybrids, and data collected from each individual field during the growing season.

Figure 1. Location of 2009 Corn and Grain Sorghum Research Verification Fields



## ECONOMIC ANALYSIS

This section provides information on the development of estimated production costs for the 2009 CGSRVP. Records of field operations on each field provided the basis for estimating these costs. The field records were compiled by the CGSRVP coordinator, county Extension agents, and cooperators in the 2009 CGSRVP.

Using CGSRVP production data from the 12 fields (11 corn and 1 grain sorghum), operating costs, and net returns above total specified costs assuming a 25 percent (25%) land rent were estimated for each field. Break-even prices needed to cover total specified costs are also presented.

### Direct Expenses

Direct expenses are those expenditures that would generally require annual cash outlays and would be included on an annual operating loan application. Actual quantities of all operating inputs as reported by the cooperators were used in this analysis. The prices used for these inputs were largely provided by the producer cooperators. When necessary, input prices were utilized from the "2009 Corn and Grain Sorghum Cost of Production Estimates" published by the Cooperative Extension Service.

Fuel and repair costs for machinery were calculated using a budget generator based on parameters and standards published in the American Society of Agricultural Engineers 1993 Handbook. Therefore, the producers' actual machinery costs will vary from the machinery cost estimates that are presented in this report. However, the producers' actual field operations were used as a basis for calculations and his equipment size and type were matched as closely as possible to the existing data set used in the annual set of state crop budgets.

Direct expenses, shown in Table 3, for the CGSRVP corn fields ranged from \$365.65 per acre for Independence County to \$548.34 per acre for Lonoke County and averaged \$482.27 per acre. The grain sorghum field in Woodruff County was estimated to have \$290.46 per acre in direct expenses. Corn direct expenses per bushel ranged from \$2.16 in Independence County to \$5.02 in Cross County and averaged \$2.94 per bushel. Grain Sorghum direct expenses for Woodruff County were \$3.93 per bushel. Due primarily to price decreases in fertilizer and fuel, 2009 direct expenses were on average 8% less for corn and 10% lower for grain sorghum than in 2008. Corn fertilizer expense decreased approximately 12% in 2009 and fuel expense decreased 53% compared to 2008. Seed and herbicide expense increased in 2009 over expenses in 2008 by 21% and 37%, respectively.

### Fixed or Ownership Costs

Fixed expenses represent the cost of owning farm equipment. These costs can vary greatly from one farm to another depending on the farm's size, management, and annual use of machinery. The fixed expenses presented in Table 3 include depreciation and interest. These costs are based on estimated initial cost and expected useful life of machinery similar to that used by the producer. Ownership costs were allocated on a per acre basis using estimated performance rates and hours of annual use. Calculations were made by using a budget generator based on parameters and standards published in the American Society of Agricultural Engineers 1993 Handbook.

Economic costs may differ from short-run tax based cash accounting figures for a particular year. The economic approach spreads these costs over the entire useful life of the machinery. In the long-run, the farm business must cover these costs to remain viable.

Fixed costs ranged from \$50.06 per acre in St. Francis County to \$111.35 per acre in Conway County for the corn fields and averaged \$64.44 per acre while the grain sorghum field was \$68.55 per acre.

Using custom operators rather than owning equipment replaces fixed expenses with direct expenses (custom work). Cooperators with high fixed expenses but low custom work expenses typically use high-clearance sprayers for chemical applications and spreaders (buggies) for fertilizer applications instead of hiring aerial or ground custom applicators.

### **Total Costs (Direct and Fixed Costs)**

Since fixed or ownership costs can be substituted for direct cost and vice-versa, total specified expense is calculated to give the true picture of expenses. Total direct and fixed costs presented in Table 3 are the summation of direct expenses and fixed or ownership costs. Not included in these costs are charges for land, risk, overhead, and management. The overhead and management costs would be better addressed at the whole-farm level and are not included in this analysis. Total direct costs plus ownership costs ranged from \$512.72 to \$631.05 per acre for corn and \$359.01 per acre for the grain sorghum field. Overall, total costs for corn averaged \$546.71 per acre.

Break-even prices needed to cover total direct costs plus fixed costs ranged from \$2.55 to \$5.61 per bushel with an average of \$3.34 per bushel while the grain sorghum break-even price was \$4.85 per bushel.

### **Land Costs**

Land costs incurred by producers participating in the CGSRVP would likely vary from land ownership, cash rent, or some form of crop share arrangement. Therefore, a comparison of these divergent cost structures would contribute little to this analysis. For this reason, a 25 percent (25%) crop share rental arrangement was assumed, with the landlord paying only their share for drying and the checkoff fee (Table 3). This is not meant to imply that this arrangement is normal or that it should be used in place of existing arrangements. It is simply a constant measure to be used across all CGSRVP fields. There are many other tenancy arrangements that are in use.

Table 3 presents the cost of production per bushel after 25 percent (25%) of the yield is given to the landlord. For corn, these break-even prices ranged from \$3.18 per bushel in Poinsett County to \$7.41 per bushel in Cross County. For grain sorghum, break-even price including rent was \$6.47 per bushel for Woodruff County.

### **Net Returns Per Acre**

Table 3 presents estimated returns per acre above "Total Costs" plus a 25 percent (25%) crop share rent assuming a corn price of \$3.25 per bushel and a grain sorghum price of \$3.15 per bushel. The corn and grain sorghum producer price used in this analysis is the September 2009 monthly average price obtained from the USDA National Agricultural Statistical Service (NASS). Net returns above "Total Costs and Land Rent" ranged from -\$302.56 to

\$10.33 per acre for corn and -\$184 per acre for the grain sorghum field. Additional costs related to risk, overhead, and management have not been included. These costs must be accounted for in any further interpretation of this data.

### **Estimated Direct Costs**

Tables 4 and 5 lists estimated direct costs per acre by field for corn and grain sorghum production. The largest specified operating cost for corn was the fertilizer and seed cost, averaging \$184.14 and \$97.99, respectively. Fertilizer cost was the highest direct costs per acre for grain sorghum at \$124.00 per acre. Seed, fertilizer, and diesel cost account for approximately 67% of input costs for corn and 57% for grain sorghum in the 2009 CGSRVP. Also included in the report are detailed estimated costs for each county in Appendix A and B.

## CORN FIELD REVIEWS

### Conway County

The Conway County corn research verification field was located in the south east part of the county just southeast of Morrilton. The producer for the field was Mr. Randy Pettingill and there was no agent due to the retirement of Mr. Tommy Thompson. The field was 39.5 acres and the previous crop was soybeans. The soil type was Dardanelle silt loam with some Roxana silt loam in the north part of the field. The field was deep ripped in the fall. A preplant fertilizer of 88-67-67-24-10 was applied on April 25 and cultivated in. The field was planted on April 25 with Terral TV 26TR41 at 34,000 seeds per acre with 30 inch row spacing. The field was planted flat since it was pivot irrigated. The final plant stand was 31,800 plants per acre. On May 20, 1.5 quarts of Atrazine, 1 oz of Resolve Q, plus 1 quart of Glyphosate was applied. 275 pounds of Urea (127 units) plus 50 pounds of Ammonium Sulfate (11 units N, 12 units S) was applied on May 21. The pivot was started on June 4, and the field was irrigated 6 times. An additional application of 100 pounds of Urea (46 units) was applied on June 18, due to the excessive rain that the field had received. Total fertilizer for this field was 272-67-67-36-10. After the pre tassel application of Urea was applied a storm came through the area with winds between 60 and 70 miles an hour. The combination of the fast growing stalks and the hard winds green snapped approximately 25% of the field. Southern rust was found in the field on July 17 in the R4 stage. The field was continually scouted but it was determined a fungicide was not needed. The field was harvested on September 25 and yielded 183.66 bushels per acre adjusted to 15.5% moisture.

### Cross County

The Cross County corn research verification field was located in the central part of the county just northwest of Wynne. The producer for the field was Mr. Melvin Taylor and the county agent was Mr. Rick Wimberley. The field was 67 acres and the previous crop was soybeans. The soil type was a combination of Crowley and Calloway silt loam. On April 6, a preplant fertilizer of 100-70-70-0-10 was applied and cultivated in. After the field was bedded, it was planted with Pioneer 33M57 at a rate of 35,500 seeds per acre with 30 inch row spacing. A starter fertilizer of 10-20-5 was applied with the planter. Total preplant fertilizer was 110-90-75-0-10. A stand count was taken after the field emerged and a final plant stand of 31,800 plants per acre was determined. Excessive rains delayed herbicide applications and on May 14 the producer applied 3 oz of Callisto plus 1 quart of Glyphosate. Callisto was used instead of Atrazine due to the height of the plants. 275 pounds of Urea (127 units) was aerially applied on May 15. A pre tassel application of 100 pounds of Urea (46 units) was applied on June 10. Total fertilizer for this field was 283-90-75-0-10. Furrow irrigation was started on June 24 and the field was irrigated 4 times. Due to water deficit stress and hot temperatures, this field had poor pollination. The field was harvested on September 9 and yielded 97.01 bushels per acre adjusted to 15.5% moisture.

## **Desha County**

The Desha County corn research verification field was located in the northwest part of the county near Dumas. The producer for the field was Mr. Lee Walt and the county agent was Mr. AJ Hood. The field was 37.6 acres and the previous crop was soybeans. The soil type was Hebert silt loam with some Rilla silt loam in the northeast part of the field. A preplant fertilizer of 80-80-70-10-2 was applied and the field was bedded. On March 23 the field was planted with DeKalb 64-79 VT3 at a seeding rate of 34,000 plants per acre with 38 inch row spacing. The final plant population was 32,650 plants per acre. On April 25, 1 quart of Atrazine plus 1 quart of Glyphosate was applied for weeds. 260 pounds of Urea (120 units) was applied on April 26. An additional 1 quart of Atrazine and 1 quart of Glyphosate was applied on May 16 for another flush of weeds. A pre tassel application of 100 lbs of Urea (46 units) was applied on June 2. Total fertilizer for this field was 246-80-70-10-2. Furrow irrigation was started on June 10 and the field was irrigated 4 times through the season. The field was harvested on September 2 and yielded 214.24 bushels per acre adjusted to 15.5% moisture.

## **Independence County**

The Independence County corn research verification field was located in the southeast part of the county near Oil Trough. The producer for the field was Mr. Steve Wyatt and the county agent was Mr. Nathan Reinhart. The field was 81.5 acres and the previous crop was soybeans. The soil type was an Egam silt loam. On April 8, 375 pounds of 23-18-16 was applied per acre by the producer. The field was cultivated then bedded. The field was planted on May 9 with Mycogen 2T826 at a seeding rate of 32,000 seeds per acre with 30 inch row spacing. The final plant population was 30,600 plants per acre. Due to excess rain 100 pounds of Urea (46 units) was applied on May 12. On May 19 the producer applied 2 quarts of Atrazine plus 1 quart of Glyphosate. The producer applied 150 pounds of Urea (69 units) plus 50 pounds of Ammonium Sulfate (11 units N, 12 units S) on May 22. A pre tassel application of 100 pounds per acre of Urea (46 units) was applied on June 9. The total fertilizer for this field was 258-68-60-12. Rains throughout the growing season were timely and sometimes excessive and a few storms with high winds caused a small amount of green snap. A flood irrigation was applied on July 1 and another one was started on July 9, but only half the field was irrigated due to a rain. Southern rust was found in the field, but the corn was far enough along so no fungicide was applied. The field was harvested on September 9 and yielded 168.93 bushels per acre adjusted to 15.5% moisture.

## **Lawrence County**

The Lawrence County corn research verification field was located in the Walnut Ridge area of the county. The producer was Mr. Hunter Burris and the county agent was Mr. Herb Ginn. The field was 40 acres and the previous crop was corn. The soil type was Dundee silt loam. The field received 1 ton of chicken litter in the fall. The analysis for the litter was 0-63-48. Additional commercial fertilizer of 285 pounds per acre of 30-0-21 was added on March 20 and disked in to bring nitrogen and potassium levels up to preplant requirements. Total preplant fertilizer was 86-63-108. The field was bedded, then planted on April 7. The field was planted with Pioneer 33N58 at a seeding rate of 38,000 seed per acre with 30 inch row spacing. The final plant population was 36,900 plants per acre. An application of 250 pounds of Urea (115 units) plus 50 pounds of Ammonium Sulfate (11 units N, 12 units S) was applied on May 15. On May 19 the producer applied 2 quarts of Atrazine, 1.2 ounces of Resolve Q, plus 22 ounces of Roundup. A pre tassel application of 100 pounds per acre of Urea (46 units) was applied on June 13. The total fertilizer for this field was 258-63-108-12. Irrigation was started on June 23. The field was furrow irrigated 4 times. The field was harvested on September 29 and yielded 224 bushels per acre adjusted to 15.5% moisture.

## **Lee County**

The Lee County corn research verification field was located in the northwest area of the county near Holub. The producer was Mr. Terry Swiney and the county agents were Mr. Mark Brawner and Mr. Lazaro English. The field was 53 acres and the previous crop was soybeans. The soil type was Calloway silt loam. The field was disked on April 25. A preplant fertilizer of 0-40-70 was applied on April 25. The field was bedded then planted in Pioneer 33M57 at a seeding rate of 36,000 seeds per acre with a 38 inch row spacing. The final plant population was 36,600 plants per acre. An application of 250 pounds of Urea (115 units) plus 50 pounds of Ammonium Sulfate (11 units N, 12 units S) was applied on May 23. On the same day, 1.5 quarts of Atrazine plus 22 ounces of Roundup was applied to the field. A pre tassel application of 100 pounds per acre of Urea (46 units) was applied on June 18. Total fertilizer for the field was 172-40-70-12. Irrigation was started on June 28. The field was furrow irrigated and received 4 irrigations. Southern rust was found in the field at the R3 stage, and 14 ounces of Quilt per acre was applied. The field was harvested on October 22 and yielded 185.57 bushels per acre adjusted to 15.5% moisture.

## **Lonoke County**

The Lonoke County corn research verification field was located in the southeastern part of the county near Coy. The producer was Mr. Brad Whitehead and the county agent was Mr. Jeff Welch. The field was 133 acres and the previous crop was corn. The soil type was Caspinana and Herbert silt loam. The field was hipped on April 7. A preplant fertilizer of chicken litter and 87-23-0-12-10 was applied on April 10. The field was planted in DeKalb 64-79 VT3 at the rate of 33,500 seeds per acre with a 38 inch row spacing. The final plant population was 32,100 plants per acre. 1 quart of Glyphosate plus 8 ounces of Clarity was applied on May 12. Urea at 270 pounds per acre (124 units) was applied on May 19 by the producer. 2 quarts of Atrazine plus 1 quart of Glyphosate was applied on May 26. Furrow irrigation was started on June 8, and the field was irrigated 5 times. A pre tassel application of 100 pounds per acre of Urea (46 units) was applied on June 15. Total fertilizer for the field was 257-23-0-12-10. The field was harvested on September 1 and yielded 185.0 bushels per acre adjusted to 15.5% moisture.

## **Mississippi County**

The Mississippi County corn research verification field was located in the western part of the county just south of Manila. The producer was Mr. Heath Donner and the county agent was Ms. Jenny Stacks. The field was 24 acres and the previous crop was soybeans. The soil type was Amagon Sandy Loam. A preplant fertilizer of 85-0-60-24 was applied on April 27 and cultivated in. The field was bedded and planted with Pioneer 31D59 at the rate of 34,400 seeds per acre with a 38 inch row spacing. The producer applied 2 quarts of Atrazine, 1.25 ounces of Resolve Q, plus 1 quart of Glyphosate on May 21. Excessive rains didn't allow for fertilization until the V8 stage, so instead of sidedress and pre tassel nitrogen, only a sidedress application of fertilizer was applied. On June 9 325 pounds of Urea (150 units) plus 50 pounds of Ammonium Sulfate (11 units N, 12 units S) was applied to the field. The total fertilizer for the field was 246-0-60-36. The first furrow irrigation was June 19 and the field was irrigated a total of 5 times. The field was harvested on September 30 and yielded 131.76 bushels per acre adjusted to 15.5% moisture.

## **Monroe County**

The Monroe County corn research verification field was located in the northern part of the county, just north of Brinkley. The producer was Mr. Bo Mason and the county agent was Mr. Van Banks. The field was 15.3 acres and the previous crop was soybeans. The soil type was Henry silt loam. The field was disked on April 1, cultivated and then floated. A preplant fertilize of 90-62-77-15-1 was applied May 8, then the field was bedded and then planted in Pioneer 33M57 at a rate of 34,000 seeds per acre with a 30 inch row spacing. Urea was applied at 275 pounds per acre (127 units) on May 19. On May 22, 2 quarts of Atrazine plus 1 quart of Glyphosate was applied. On June 10, a pre tassel application of 100 pounds per acre of Urea (46 units) was applied. Total fertilize for this field was 263-62-77-15-1. Furrow irrigation was started on June 28. The field was irrigated 3 times. Due to water deficit stress and hot temperatures, this field had poor pollination. Southern rust was found on July 16 at the R4 stage and 12 ounces of Quilt was applied on July 17. The field was harvested on September 3 and yielded 123.18 bushels per acre adjusted to 15.5% moisture.

## **Poinsett County**

The Poinsett County corn research verification field was located in the eastern part of the county, just west of Trumann. The producer was Mr. David Gairhan and the county agent was Mr. Rick Thompson. The field was 13 acres and the previous crop was soybeans. The soil type was Dundee silt loam. The field was cultivated on April 25 and a preplant fertilize of 159-46-114-30-13 was applied on April 26. The field was bedded and planted on April 26 with Pioneer 31D59 at the rate of 35,000 seed per acre with a 38 inch twin row. On June 3 the producer applied 1 quart of Glyphosate. The field was fertilized on June 3 with 200 pounds of Urea per acre (92 units). A pre tassel application of 100 pounds per acre of Urea (46 units) was applied on June 14. Total fertilizer for this field was 297-46-114-30-13. The first furrow irrigation was on June 21. The field was furrow irrigated 5 times. Southern rust was found in the field on July 14 at the R3 stage. The field was sprayed with 14 ounces of Quilt on July 17. The field was harvested on September 3 and yielded 203.0 bushels per acre adjusted to 15.5% moisture.

## **St Francis County**

The St. Francis County corn research verification field was located in the northwestern part of the county near Wheatley. The producer was Mr. Nathan Brown and the county agent was Mr. Mitch Crow. The field was 27.8 acres and the previous crop was soybeans. The soil type is Hillemann silt loam with some Henry silt loam. A preplant fertilizer of 85-69-60 was applied on April 7 and disked in. The field was bedded and planted in DeKalb 64-79 VT3 at the rate of 32,000 seeds per acre with a 30 inch row. The final plant population for the field was 32,000 plants per acre. Excessive rains drowned out part of the field which led to a lower yield. On April 30, 2 quarts of Atrazine plus 1 quart of Glyphosate was applied. An application of 250 pounds of Urea (115 units) plus 50 pounds of Ammonium Sulfate (11 units N, 12 units S) was applied on May 21 followed by 0.5 quarts of Atrazine plus 1 quart of Glyphosate. A pretassel application of 100 pounds of Urea (46 units) was applied on June 3. The total fertilizer for this field was 257-69-60-12. Furrow irrigation was started on June 18 and the field was irrigated 6 times. Southern rust was found in this field, but the corn was far enough along that a fungicide application was not needed. The field was harvested on September 4 and yielded 175.97 bushels per acre adjusted to 15.5% moisture.

## GRAIN SORGHUM FIELD REVIEWS

### Woodruff County

The Woodruff County grain sorghum research verification field was located in the central part of the county near Wiville. The producer was Mr. Jeremy Knight and the county agent was Mr. Eugene Terhune. The field was 20.5 acres and the previous crop was soybeans. The soil type was Grenada silt loam with some Calloway silt loam. A preplant fertilizer of 200 pounds of 0-0-60 was applied and the field was tilled. The field was planted with Pioneer 84G62 at a rate of 8 pounds per acre on April 25 with a 15 inch row spacing. On April 26, 10 gallons of 32% UAN (35 units), 1.3 pints of Dual, 1 quart of Atrazine, plus 1 quart of Glyphosate was applied. The final plant population was 68,500 plants per acre. 200 pounds of Urea (92 units) was applied on May 20. The total fertilizer for this field was 127-0-120. Another application of 1 quart of Atrazine was applied on May 20 following the fertilizer application. The field was furrow irrigated 1.5 times with the first irrigation coming on June 29. The field was scouted for worms and midge and an application of 1.6 ounces of Karate was applied on July 25. As the rains continued, the field developed anthracnose. Harvest was delayed due to heavy rains in the fall. The field was finally harvested on September 4, and by then there was excessive anthracnose and seed sprouting. Many seeds had shattered from the heads. The final yield was 74 bushels per acre adjusted to 14.0% moisture.

**Table 1. County, Hybrid, Field Size, Total Fertilizer and Soil Information CGSRVP Fields 2009.**

County	Planting Date	Row Sp. (in)	Hybrid	Field Size (Ac)	Fertilizer N-P-K-S-Zn lbs/acre	Soil Classification
<b>Corn</b>						
Conway	4/25/09	30	Terral TV 26TR41	39.5	272-67-67-36-10	Dardanelle/Roxana Silt Loam
Cross	4/6/09	30	Pioneer 33M57	67	283-90-75-0-10	Crowley/Calloway silt Loam
Desha	3/23/09	38	DeKalb 64-79VT3	37.6	246-80-70-0-10	Herbert/Rilla Silt Loam
Independence	4/9/09	30	Mycogen 2T826	81.5	258-68-60-12-0	Egam Silt Loam
Lawrence	4/7/09	30	Pioneer 33N58	40	258-63-108-12-0	Dundee Silt Loam
Lee	4/25/09	38	Pioneer 33M57	53	172-40-70-12-0	Calloway Silt Loam
Lonoke	4/10/09	38	DeKalb 64-79VT3	133	257-23-0-12-10	Caspinana/Herbert Silt Loam
Mississippi	4/27/09	38	Pioneer 31D59	24	246-0-60-36-0	Amagon Sandy Loam
Monroe	4/8/09	30	Pioneer 33M57	15.3	263-62-77-15-1	Henry Silt Loam
Poinsett	4/26/09	38 twin	Pioneer 31D59	13	297-46-114-30-13	Dundee Silt Loam
St. Francis	4/9/09	30	DeKalb 64-79VT3	27.8	257-69-60-12-0	Hileman/Henry Silt Loam
<b>Grain Sorghum</b>						
Woodruff	4/25/09	15	Pioneer 84G62	20.5	127-0-120-0-0	Grenada Silt Loam

**Table 2. Pesticide Usage, Irrigation, Previous Crop and Yield, CGSRVP 2009.**

County	Herbicide, Insecticide & Fungicide	Irrigation	Irrigation Type	Previous Crop	Yield (bu/a)
<b>Corn</b>					
Conway	1.5 qt Atrazine + 1 oz Resolve Q + 1 qt Glyphosate – May 20	6 times	Pivot	Soybeans	183.66
Cross	3 oz Callisto + 1 qt Glyphosate – May 14	4 times	Furrow	Soybeans	97.01
Desha	1 qt Atrazine + 1 qt Glyphosate – April 25 & May 16	4 times	Furrow	Soybeans	214.24
Independence	2 qt Atrazine + 1 qt Glyphosate – May 19	1.5 times	Flood	Soybeans	168.93
Lawrence	2 qt Atrazine + 1.2 oz Resolve Q + 22 oz Roundup – May 19	4 times	Furrow	Corn	224.00
Lee	1.5 qt Atrazine + 22 oz Roundup – May 23, 14 oz Quilt – July 20	4 times	Furrow	Soybeans	185.57
Lonoke	1 qt Glyphosate + 8 oz Clarity – April 12, 2 qt Atrazine + 1 qt Glyphosate – May 26	5 times	Furrow	Corn	185.00
Mississippi	2 qt Atrazine + 1.25 oz Resolve Q + 1 qt Glyphosate – May 21	5 times	Furrow	Soybeans	131.76
Monroe	2 qt Atrazine + 1 qt Glyphosate – May 22, 12 oz Quilt – July 17	3 times	Furrow	Soybeans	123.18
Poinsett	1 qt Glyphosate – June 3, 14 oz Quilt – July 17	5 times	Furrow	Soybeans	203.00
St. Francis	2 qt Atrazine + 1 qt Glyphosate – April 30, 0.5 qt Atrazine + 1 qt Glyphosate – May 21	6 times	Furrow	Soybeans	175.97
<b>Average Yield</b>					<b>172.03</b>
<b>Grain Sorghum</b>					
Woodruff	1.3 pt Dual + 1 qt Atrazine + 1 qt Glyphosate – April 25, 1 qt Atrazine May 20	1.5 times	Furrow	Soybeans	74.00

**Table 3. Selected Economic Information for the 2009 CGSRVP.**

County	Total Direct Expenses <sup>1</sup> (\$/A)	Break-even Price with Direct Costs <sup>2</sup> (\$/Bu)	Total Fixed Costs <sup>3</sup> (\$/A)	Total Direct and Fixed Costs <sup>4</sup> (\$/A)	Break-even Price with Total Costs <sup>5</sup> (\$/Bu)	Break-even Price with Land Rent Costs <sup>6</sup> (\$/A)	Returns Above Total Costs and Land Rent <sup>7</sup> (\$/A)
<b>Corn</b>							
Conway	\$519.70	\$2.83	\$111.35	\$631.05	\$3.44	\$4.51	-\$174.19
Cross	\$487.38	\$5.02	\$56.49	\$543.87	\$5.61	\$7.41	-\$302.56
Desha	\$489.02	\$2.28	\$65.31	\$554.33	\$2.59	\$3.38	-\$21.41
Independence	\$365.65	\$2.16	\$65.61	\$431.26	\$2.55	\$3.34	-\$11.05
Lawrence	\$543.14	\$2.42	\$52.42	\$595.56	\$2.66	\$3.48	-\$38.36
Lee	\$464.15	\$2.50	\$62.40	\$526.55	\$2.84	\$3.72	-\$64.94
Lonoke	\$548.34	\$2.96	\$63.79	\$612.13	\$3.31	\$4.35	-\$151.94
Mississippi	\$401.77	\$3.05	\$52.95	\$454.72	\$3.45	\$4.53	-\$126.97
Monroe	\$470.59	\$3.54	\$68.14	\$538.73	\$4.06	\$5.35	-\$208.97
Poinsett	\$441.93	\$2.18	\$52.70	\$494.63	\$2.44	\$3.18	\$10.33
St. Francis	\$462.66	\$2.63	\$50.06	\$512.72	\$2.91	\$3.82	-\$75.00
<b>Average</b>	<b>\$482.27</b>	<b>\$2.94</b>	<b>\$64.44</b>	<b>\$546.71</b>	<b>\$3.34</b>	<b>\$4.38</b>	<b>-\$117.65</b>
<b>Grain Sorghum</b>							
Woodruff	\$290.46	\$3.93	\$68.55	\$359.01	\$4.85	\$6.47	-\$184.00

<sup>1</sup> Direct out-of-pocket, operating expenses, such as seed, fertilizer, irrigation, etc.

<sup>2</sup> Price per bushel required by farmer to equal total direct costs. Does not include land, overhead, risk, and management costs.

<sup>3</sup> Total fixed or ownership costs which include charges for depreciation and opportunity cost of capital.

<sup>4</sup> Total direct costs plus fixed costs which include charges for depreciation and interest on all machinery and irrigation equipment.

<sup>5</sup> Price per bushel required by farmers to equal total direct and fixed costs. Does not include land, overhead, risk, and management costs.

<sup>6</sup> Break-even price per bushel including a 25 percent crop share rent. Does not include overhead, risk, and management costs.

<sup>7</sup> A 25 percent crop share is assumed as a land charge for a renter situation. Landlord only pays share of drying and checkoff fee.

**Table 4. Estimated Costs per Acre for Corn Fields, CGSRVP 2009.**

Acres	Conway	Cross	Desha	Independence	Lawrence	Lee	Lonoke	Mississippi	Monroe	Poinsett	St. Francis	weighted average <sup>c</sup>
	40	67	38	79	40	53	133	24	15	13	28	
<b>Direct Expenses</b>	<b>(\$/acre)</b>											
Drying/Checkoff	\$36.74	\$19.40	\$42.85	\$33.79	\$44.80	\$37.12	\$37.00	\$26.35	\$24.63	\$40.60	\$35.19	\$34.44
Fertilizer	\$179.50	\$218.00	\$199.40	\$152.50	\$217.38	\$151.50	\$202.00	\$143.75	\$188.50	\$136.98	\$161.25	\$184.14
Fungicides	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$10.78	\$0.00	\$0.00	\$9.24	\$10.78	\$0.00	\$1.61
Herbicides	\$19.75	\$21.20	\$19.50	\$13.00	\$32.02	\$17.86	\$72.52	\$22.48	\$13.50	\$5.50	\$25.78	\$32.84
Irrigation Supplies	\$0.00	\$5.10	\$5.10	\$0.00	\$6.60	\$5.74	\$3.62	\$8.52	\$10.66	\$11.58	\$7.92	\$4.39
Crop Seed	\$95.20	\$106.50	\$95.20	\$73.60	\$114.00	\$108.00	\$100.50	\$96.32	\$102.00	\$105.00	\$96.00	\$97.99
Custom Hire	\$43.23	\$50.53	\$48.85	\$39.79	\$64.30	\$61.61	\$50.25	\$36.35	\$55.36	\$63.60	\$63.76	\$50.87
Operator Labor	\$6.01	\$3.72	\$6.50	\$6.55	\$3.52	\$5.79	\$5.48	\$3.55	\$5.33	\$3.23	\$2.19	\$5.09
Irrigation Labor	\$1.26	\$2.70	\$2.70	\$0.35	\$2.70	\$2.70	\$3.35	\$3.35	\$2.05	\$3.35	\$3.99	\$2.50
Hand Labor	\$1.77	\$0.92	\$2.39	\$1.31	\$0.63	\$1.54	\$1.11	\$0.84	\$0.98	\$0.32	\$0.44	\$1.19
Diesel Fuel <sup>1</sup>	\$84.81	\$32.90	\$37.39	\$23.33	\$32.23	\$36.16	\$42.88	\$38.29	\$31.61	\$37.96	\$41.82	\$39.26
Repairs & Maint.	\$35.79	\$10.62	\$13.02	\$10.38	\$9.16	\$11.77	\$12.44	\$9.82	\$11.93	\$10.10	\$10.08	\$13.06
Interest on Op. Cap.	\$15.64	\$15.79	\$16.12	\$11.05	\$15.80	\$13.58	\$17.19	\$12.15	\$14.80	\$12.93	\$14.24	\$14.88
<b>Total Direct Expenses</b>	<b>\$519.70</b>	<b>\$487.38</b>	<b>\$489.02</b>	<b>\$365.65</b>	<b>\$543.14</b>	<b>\$464.15</b>	<b>\$548.34</b>	<b>\$401.77</b>	<b>\$470.59</b>	<b>\$441.93</b>	<b>\$462.66</b>	<b>\$482.27</b>

<sup>1</sup> Price of diesel was assumed to be \$2.00 per gallon.

<sup>2</sup> Weighted average calculations based on 528.7 total acres.

**Table 5. Estimated Costs per Acre for the Grain Sorghum Field, CGSRVP 2009.**

Acres	Woodruff
	21
<b>Direct Expenses</b>	<b>(\$/acre)</b>
Checkoff	\$0.74
Fertilizer	\$124.00
Insecticides	\$4.16
Herbicides	\$30.90
Irrigation Supplies	\$9.22
Crop Seed	\$11.20
Custom Hire	\$49.30
Operator Labor	\$7.77
Irrigation Labor	\$1.40
Hand Labor	\$1.41
Diesel Fuel <sup>1</sup>	\$30.53
Repairs & Maint.	\$10.40
Interest on Op. Cap.	\$9.43
<b>Total Direct Expenses</b>	<b>\$290.46</b>

<sup>1</sup> Price of diesel was assumed to be \$2.00 per gallon.

## **Appendix A**

### **Corn: Economic Analysis by County**

Estimated operating expenses and crop input costs

Table 1.A Estimated costs per acre  
 Corn, Center Pivot Irrigated, Silt Loam  
 Conway County, University of Arkansas, 2009

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZERS					
19-19-19	lb	0.23	350.0000	80.50	_____
Zinc	lb	1.00	30.0000	30.00	_____
Amm. Sulfate	lb	0.11	150.0000	16.50	_____
Urea	lb	0.14	375.0000	52.50	_____
HERBICIDES					
Atrazine	qt	3.50	1.5000	5.25	_____
Resolve Q	oz	7.50	1.0000	7.50	_____
Glyphosate	qt	7.00	1.0000	7.00	_____
CROP SEED					
Terral TV26TR41	thous	2.80	34.0000	95.20	_____
CUSTOM HIRE					
Aerial App.	ac	6.50	1.0000	6.50	_____
Haul Corn	bu	0.20	183.6600	36.73	_____
GIN/DRY					
Corn Checkoff	bu	0.01	183.6600	1.84	_____
Dry Corn	bu	0.19	183.6600	34.90	_____
OPERATOR LABOR					
Tractors	hour	9.92	0.4768	4.74	_____
Harvesters	hour	9.92	0.1277	1.27	_____
IRRIGATION LABOR					
Center pivot Irr.	hour	8.60	0.1462	1.26	_____
HAND LABOR					
Implements	hour	8.60	0.2068	1.77	_____
DIESEL FUEL					
Tractors	gal	2.00	4.6077	9.20	_____
Harvesters	gal	2.00	1.8070	3.61	_____
Center pivot Irr.	gal	2.00	36.0000	72.00	_____
REPAIR & MAINTENANCE					
Implements	acre	4.50	1.0000	4.50	_____
Tractors	acre	1.81	1.0000	1.81	_____
Harvesters	acre	2.59	1.0000	2.59	_____
Center pivot Irr.	ac-in	1.49	18.0000	26.89	_____
INTEREST ON OP. CAP.	acre	15.64	1.0000	15.64	_____
				-----	
TOTAL DIRECT EXPENSES				519.70	_____
FIXED EXPENSES					
Implements	acre	10.89	1.0000	10.89	_____
Tractors	acre	13.22	1.0000	13.22	_____
Harvesters	acre	11.77	1.0000	11.77	_____
Center pivot Irr.	each	9060.48	0.0083	75.47	_____
				-----	
TOTAL FIXED EXPENSES				111.35	_____
				-----	
TOTAL SPECIFIED EXPENSES				631.05	_____

Table 1.B Estimated resource use and costs for field operations, per acre  
 Corn, Center Pivot Irrigated, Silt Loam  
 Conway County, University of Arkansas, 2009

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST	
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST		
						-----dollars-----				dollars		-----dollars-----				
Subsoiler low-till	8 shank	MFWD 225	0.076	1.00	Nov	2.12	2.57	0.43	1.31	0.07	0.76					7.19
Spin Spreader	5 ton	2WD 130	0.042	1.00	Apr	0.66	0.71	0.27	0.64	0.08	0.78					3.06
19-19-19	lb											350.0000	0.23	80.50		80.50
Zinc	lb											30.0000	1.00	30.00		30.00
Amm. Sulfate	lb											100.0000	0.11	11.00		11.00
Field Cultivate Fld	32'	MFWD 225	0.046	1.00	Apr	1.29	1.56	0.32	1.61	0.04	0.46					5.24
Disk Bed (Hipper)	8R-30	MFWD 190	0.093	1.00	Apr	2.18	2.54	0.31	0.95	0.09	0.93					6.91
Plant & Pre-Rigid	8R-30	MFWD 170	0.101	1.00	Apr	2.15	2.71	1.23	2.79	0.20	1.88					10.76
Terral TV26TR41	thous											34.0000	2.80	95.20		95.20
Spray (Broadcast)	40'	MFWD 170	0.042	1.00	May	0.89	1.13	0.12	0.17	0.06	0.60					2.91
Atrazine	qt											1.5000	3.50	5.25		5.25
Resolve Q	oz											1.0000	7.50	7.50		7.50
Glyphosate	qt											1.0000	7.00	7.00		7.00
Spin Spreader	5 ton	MFWD 190	0.042	1.00	May	0.98	1.14	0.27	0.64	0.08	0.78					3.81
Urea	lb											275.0000	0.14	38.50		38.50
Amm. Sulfate	lb											50.0000	0.11	5.50		5.50
Aerial App.	ac			1.00	Jun							1.0000	6.50	6.50		6.50
Urea	lb											100.0000	0.14	14.00		14.00
Corn Grain Cart	8R30 500 bu	MFWD 190	0.031	1.00	Sep	0.74	0.86	0.15	0.31	0.03	0.32					2.38
Header - Corn	8R-30	275hp	0.127	1.00	Sep	6.20	11.77	1.40	2.47	0.12	1.27					23.11
Haul Corn	bu											183.6600	0.20	36.73		36.73
Corn Checkoff	bu											183.6600	0.01	1.84		1.84
Dry Corn	bu											183.6600	0.19	34.90		34.90
Center pivot Irr.	each			1.00	Jun				75.47			0.0083				75.47
1/2-mi Pivot Irr.	ac-in				Jun			65.93		0.09	0.84	12.0000				66.77
1/2-mi Pivot Irr.	ac-in				Jul			32.96		0.04	0.42	6.0000				33.38
TOTALS						17.21	24.99	103.39	86.36	0.95	9.04			374.42		615.41
INTEREST ON OPERATING CAPITAL																15.64
UNALLOCATED LABOR																0.00
TOTAL SPECIFIED COST																631.05

Table 2.A Estimated costs per acre  
 Corn, Furrow Irrigated, Silt Loam  
 Cross County, University of Arkansas, 2009

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZERS					
100-70-70-0-10	lb	1.33	100.0000	133.00	_____
White Lightning	gal	5.75	5.0000	28.75	_____
Urea	lb	0.15	375.0000	56.25	_____
HERBICIDES					
Callisto	oz	4.75	3.0000	14.25	_____
Glyphosate	qt	6.95	1.0000	6.95	_____
IRRIGATION SUPPLIES					
Roll-Out Pipe	ft	0.20	25.5000	5.10	_____
CROP SEED					
Pioneer 33M57	thous	3.00	35.5000	106.50	_____
CUSTOM HIRE					
Custom App.	acre	5.25	2.0000	10.50	_____
Aerial App.	ac	15.13	1.0000	15.13	_____
Aerial App.	ac	5.50	1.0000	5.50	_____
Haul Corn	bu	0.20	97.0100	19.40	_____
GIN/DRY					
Corn Checkoff	bu	0.01	97.0100	0.97	_____
Dry Corn	bu	0.19	97.0100	18.43	_____
OPERATOR LABOR					
Tractors	hour	9.92	0.2469	2.45	_____
Harvesters	hour	9.92	0.1277	1.27	_____
IRRIGATION LABOR					
Implements	hour	8.60	0.0125	0.10	_____
Furrow Irr.	hour	8.60	0.3017	2.60	_____
HAND LABOR					
Implements	hour	8.60	0.1069	0.92	_____
DIESEL FUEL					
Tractors	gal	2.00	2.6498	5.29	_____
Harvesters	gal	2.00	1.8070	3.61	_____
Furrow Irr.	gal	2.00	12.0000	24.00	_____
REPAIR & MAINTENANCE					
Implements	acre	4.48	1.0000	4.48	_____
Tractors	acre	1.04	1.0000	1.04	_____
Harvesters	acre	2.59	1.0000	2.59	_____
Furrow Irr.	ac-in	0.18	12.0000	2.25	_____
INTEREST ON OP. CAP.	acre	15.79	1.0000	15.79	_____
TOTAL DIRECT EXPENSES				487.38	_____
FIXED EXPENSES					
Implements	acre	9.83	1.0000	9.83	_____
Tractors	acre	7.52	1.0000	7.52	_____
Harvesters	acre	11.77	1.0000	11.77	_____
Furrow Irr.	each	3058.64	0.0083	25.49	_____
TOTAL FIXED EXPENSES				56.49	_____
TOTAL SPECIFIED EXPENSES				543.87	_____

Table 2.B Estimated resource use and costs for field operations, per acre  
 Corn, Furrow Irrigated, Silt Loam  
 Cross County, University of Arkansas, 2009

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Custom App.	acre			1.00	Apr							1.0000	5.25	5.25	5.25
100-70-70-0-10	lb											100.0000	1.33	133.00	133.00
Field Cultivate Fld	32'	MFWD 300	0.046	1.00	Apr	0.26	1.88	0.32	1.61						4.07
Bedder/Roller-Rigid	30'	MFWD 225	0.062	1.00	Apr	1.74	2.10	0.27	0.84	0.06	0.62				5.57
Plant & Pre-Folding	12R-30	MFWD 190	0.067	1.00	Apr	1.57	1.83	1.42	3.23	0.13	1.25				9.30
Pioneer 33M57	thous											35.5000	3.00	106.50	106.50
Fert Appl (Liquid)	12R-30	MFWD 225	0.078	1.00	Apr	2.18	2.63	0.90	1.19	0.11	1.12				8.02
White Lightning	gal											5.0000	5.75	28.75	28.75
Custom App	acre			1.00	May							1.0000	5.25	5.25	5.25
Callisto	oz											3.0000	4.75	14.25	14.25
Glyphosate	qt											1.0000	6.95	6.95	6.95
Aerial App.	ac			1.00	May							1.0000	15.13	15.13	15.13
Urea	lb											275.0000	0.15	41.25	41.25
Aerial App.	ac			1.00	Jun							1.0000	5.50	5.50	5.50
Urea	lb											100.0000	0.15	15.00	15.00
Pipe Spool 160ac	1/4m roll	2WD 130	0.003	1.00	Jun	0.05	0.05	0.01	0.09	0.00	0.08				0.28
Roll-Out Pipe	ft											25.5000	0.20	5.10	5.10
Pipe Spool 160ac	1/4m roll	2WD 130	0.003	1.00	Sep	0.05	0.05	0.01	0.09	0.00	0.08				0.28
Header - Corn	8R-30	275hp	0.127	1.00	Sep	6.20	11.77	1.40	2.47	0.12	1.27				23.11
Corn Grain Cart 8R30	500 bu	MFWD 190	0.031	1.00	Sep	0.74	0.86	0.15	0.31	0.03	0.32				2.38
Haul Corn	bu											97.0100	0.20	19.40	19.40
Corn Checkoff	bu											97.0100	0.01	0.97	0.97
Dry Corn	bu											97.0100	0.19	18.43	18.43
Furrow Irr.	each			1.00	Jun				25.49			0.0083			25.49
Apply Water	ac-in				Jun			6.56		0.07	0.65	3.0000			7.21
Apply Water	ac-in				Jul			19.69		0.22	1.95	9.0000			21.64
TOTALS						12.79	21.17	30.73	35.32	0.79	7.34			420.73	528.08
INTEREST ON OPERATING CAPITAL															15.79
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															543.87

Table 3.A Estimated costs per acre  
 Corn, Furrow Irrigated, Silt Loam  
 Desha County, University of Arkansas, 2009

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZERS					
80-80-70-10-2	lb	1.31	100.0000	131.00	_____
Urea	lb	0.19	360.0000	68.40	_____
HERBICIDES					
Atrazine	qt	3.25	2.0000	6.50	_____
Glyphosate	qt	6.50	2.0000	13.00	_____
IRRIGATION SUPPLIES					
Roll-Out Pipe	ft	0.20	25.5000	5.10	_____
CROP SEED					
DeKalb 64-79VT3	thous	2.80	34.0000	95.20	_____
CUSTOM HIRE					
Aerial App.	ac	6.00	1.0000	6.00	_____
Haul Corn	bu	0.20	214.2400	42.85	_____
GIN/DRY					
Corn Checkoff	bu	0.01	214.2400	2.14	_____
Dry Corn	bu	0.19	214.2400	40.71	_____
OPERATOR LABOR					
Tractors	hour	9.92	0.4833	4.81	_____
Harvesters	hour	9.92	0.1702	1.69	_____
IRRIGATION LABOR					
Implements	hour	8.60	0.0125	0.10	_____
Furrow Irr.	hour	8.60	0.3017	2.60	_____
HAND LABOR					
Implements	hour	8.60	0.2794	2.39	_____
DIESEL FUEL					
Tractors	gal	2.00	4.2871	8.57	_____
Harvesters	gal	2.00	2.4094	4.82	_____
Furrow Irr.	gal	2.00	12.0000	24.00	_____
REPAIR & MAINTENANCE					
Implements	acre	5.60	1.0000	5.60	_____
Tractors	acre	1.72	1.0000	1.72	_____
Harvesters	acre	3.45	1.0000	3.45	_____
Furrow Irr.	ac-in	0.18	12.0000	2.25	_____
INTEREST ON OP. CAP.	acre	16.12	1.0000	16.12	_____
TOTAL DIRECT EXPENSES				489.02	_____
FIXED EXPENSES					
Implements	acre	11.87	1.0000	11.87	_____
Tractors	acre	12.27	1.0000	12.27	_____
Harvesters	acre	15.69	1.0000	15.69	_____
Furrow Irr.	each	3058.64	0.0083	25.48	_____
TOTAL FIXED EXPENSES				65.31	_____
TOTAL SPECIFIED EXPENSES				554.33	_____

Table 3.B Estimated resource use and costs for field operations, per acre  
 Corn, Furrow Irrigated, Silt Loam  
 Desha County, University of Arkansas, 2009

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Disk & Incorporate	32'	MFWD 225	0.065	2.00	Mar	3.63	4.39	1.73	3.58	0.19	1.86				15.19
Spin Spreader	5 ton	MFWD 130	0.042	1.00	Mar	0.68	0.82	0.27	0.64	0.08	0.78				3.19
80-80-70-10-2	lb											100.0000	1.31	131.00	131.00
Bedder/Roller-Rigid	26'	MFWD 130	0.072	1.00	Mar	1.17	1.41	0.29	0.91	0.07	0.72				4.50
Plant & Pre-Rigid	8R-30	MFWD 190	0.101	1.00	Mar	2.37	2.75	1.23	2.79	0.20	1.88				11.02
DeKalb 64-79VT3	thous											34.0000	2.80	95.20	95.20
Spray (Broadcast)	60'	MFWD 130	0.028	1.00	Apr	0.46	0.55	0.10	0.14	0.04	0.40				1.65
Atrazine	qt											1.0000	3.25	3.25	3.25
Glyphosate	qt											1.0000	6.50	6.50	6.50
Spin Spreader	5 ton	MFWD 130	0.042	1.00	Apr	0.68	0.82	0.27	0.64	0.08	0.78				3.19
Urea	lb											260.0000	0.19	49.40	49.40
Spray (Broadcast)	60'	MFWD 130	0.028	1.00	May	0.46	0.55	0.10	0.14	0.04	0.40				1.65
Atrazine	qt											1.0000	3.25	3.25	3.25
Glyphosate	qt											1.0000	6.50	6.50	6.50
Aerial App.	ac			1.00	Jun							1.0000	6.00	6.00	6.00
Urea	lb											100.0000	0.19	19.00	19.00
Pipe Spool 160ac	1/4m roll	MFWD 130	0.003	1.00	Jun	0.05	0.06	0.01	0.09	0.00	0.08				0.29
Roll-Out Pipe	ft											25.5000	0.20	5.10	5.10
Pipe Spool 160ac	1/4m roll	MFWD 130	0.003	1.00	Sep	0.05	0.06	0.01	0.09	0.00	0.08				0.29
Header - Corn	6R30"	275hp	0.170	1.00	Sep	8.27	15.69	1.44	2.54	0.17	1.69				29.63
Corn Grain Cart 8R30	500 bu	MFWD 190	0.031	1.00	Sep	0.74	0.86	0.15	0.31	0.03	0.32				2.38
Haul Corn	bu											214.2400	0.20	42.85	42.85
Corn Checkoff	bu											214.2400	0.01	2.14	2.14
Dry Corn	bu											214.2400	0.19	40.71	40.71
Furrow Irr.	each			1.00	Jun				25.48			0.0083			25.48
Apply Water	ac-in				Jun			19.69		0.22	1.95	9.0000			21.64
Apply Water	ac-in				Jul			6.56		0.07	0.65	3.0000			7.21
TOTALS						18.56	27.96	31.85	37.35	1.24	11.59			410.90	538.21
INTEREST ON OPERATING CAPITAL															16.12
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															554.33

Table 4.A Estimated costs per acre  
 Corn, Flood Irrigated, Silt Loam  
 Independence County, University of Arkansas, 2009

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZERS					
23-18-16	lb	0.22	375.0000	82.50	_____
Urea	lb	0.18	350.0000	63.00	_____
Amm. Sulf.	lb	0.14	50.0000	7.00	_____
HERBICIDES					
Atrazine	qt	3.25	2.0000	6.50	_____
Glyphosate	qt	6.50	1.0000	6.50	_____
CROP SEED					
Mycogen 2T826	thous	2.30	32.0000	73.60	_____
CUSTOM HIRE					
Aerial App.	ac	6.00	1.0000	6.00	_____
Haul Corn	bu	0.20	168.9300	33.79	_____
GIN/DRY					
Corn Checkoff	bu	0.01	168.9300	1.69	_____
Dry Corn	bu	0.19	168.9300	32.10	_____
OPERATOR LABOR					
Tractors	hour	9.92	0.4739	4.71	_____
Harvesters	hour	9.92	0.1277	1.27	_____
Self-Propelled	hour	9.92	0.0570	0.57	_____
IRRIGATION LABOR					
Flood Irr. - Crn-Sor	hour	8.60	0.0407	0.35	_____
HAND LABOR					
Implements	hour	8.60	0.1263	1.08	_____
Self-Propelled	hour	8.60	0.0285	0.23	_____
DIESEL FUEL					
Tractors	gal	2.00	4.5309	9.07	_____
Harvesters	gal	2.00	1.8070	3.61	_____
Self-Propelled	gal	2.00	0.8209	1.65	_____
Flood Irr. - Crn-Sor	gal	2.00	4.5000	9.00	_____
REPAIR & MAINTENANCE					
Implements	acre	3.88	1.0000	3.88	_____
Tractors	acre	1.74	1.0000	1.74	_____
Harvesters	acre	2.59	1.0000	2.59	_____
Self-Propelled	acre	0.72	1.0000	0.72	_____
Flood Irr. - Crn-Sor	ac-in	0.32	4.5000	1.45	_____
INTEREST ON OP. CAP.	acre	11.05	1.0000	11.05	_____
TOTAL DIRECT EXPENSES				365.65	_____
FIXED EXPENSES					
Implements	acre	10.12	1.0000	10.12	_____
Tractors	acre	12.79	1.0000	12.79	_____
Harvesters	acre	11.77	1.0000	11.77	_____
Self-Propelled	acre	5.45	1.0000	5.45	_____
Flood Irr. - Crn-Sor	each	3058.64	0.0083	25.48	_____
TOTAL FIXED EXPENSES				65.61	_____
TOTAL SPECIFIED EXPENSES				431.26	_____

Table 4.B Estimated resource use and costs for field operations, per acre  
 Corn, Flood Irrigated, Silt Loam  
 Independence County, University of Arkansas, 2009

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Dry Applicator SP 23-18-16	70'300cuft lb		0.015	1.00	Apr	0.67	1.52			0.02	0.21				2.40
Field Cult & Inc Fld	32'	MFWD 190	0.049	1.00	Apr	1.15	1.34	0.41	2.05	0.07	0.70	375.0000	0.22	82.50	82.50
Land Plane	50'x16'	MFWD 190	0.151	1.00	Apr	3.53	4.10	0.23	0.70	0.15	1.50				10.06
Bedder/Roller-Fold.	21'	MFWD 190	0.089	1.00	Apr	2.08	2.42	0.34	1.06	0.08	0.89				6.79
Plant & Pre-Rigid Mycogen 2T826	8R-30 thous	MFWD 170	0.101	1.00	Apr	2.15	2.71	1.23	2.79	0.20	1.88	32.0000	2.30	73.60	73.60
Dry Applicator SP Urea	70'300cuft lb		0.015	1.00	May	0.67	1.52			0.02	0.21	100.0000	0.18	18.00	18.00
Sprayer( 600-825Gal)	90'		0.011	1.00	May	0.36	0.89			0.01	0.17				1.42
Atrazine	qt											2.0000	3.25	6.50	6.50
Glyphosate	qt											1.0000	6.50	6.50	6.50
Dry Applicator SP Urea	70'300cuft lb		0.015	1.00	May	0.67	1.52			0.02	0.21	150.0000	0.18	27.00	27.00
Amm. Sulf.	lb											50.0000	0.14	7.00	7.00
Aerial App.	ac			1.00	Jun							1.0000	6.00	6.00	6.00
Urea	lb											100.0000	0.18	18.00	18.00
Levee Disk	8 blade	MFWD 190	0.012	2.00	Jun	0.58	0.68	0.06	0.37	0.02	0.25				1.94
Levee Disk	8 blade	MFWD 190	0.012	2.00	Sep	0.58	0.68	0.06	0.37	0.02	0.25				1.94
Header - Corn	8R-30	275hp	0.127	1.00	Sep	6.20	11.77	1.40	2.47	0.12	1.27				23.11
Corn Grain Cart	8R30 500 bu	MFWD 190	0.031	1.00	Sep	0.74	0.86	0.15	0.31	0.03	0.32				2.38
Haul Corn	bu											168.9300	0.20	33.79	33.79
Corn Checkoff	bu											168.9300	0.01	1.69	1.69
Dry Corn	bu											168.9300	0.19	32.10	32.10
Flood Irr. - Crn-Sor	each			1.00	Jul				25.48			0.0083			25.48
Apply Water	ac-in							10.45		0.04	0.35	4.5000			10.80
TOTALS						19.38	30.01	14.33	35.60	0.85	8.21			312.68	420.21
INTEREST ON OPERATING CAPITAL															11.05
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															431.26

Table 5.A Estimated costs per acre  
 Corn, Furrow Irrigated, Silt Loam  
 Lawrence County, University of Arkansas, 2009

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZERS					
Chicken Litter	ac	37.00	1.0000	37.00	_____
30-0-21	lb	0.27	285.0000	78.38	_____
Urea, Solid (46% N)	lb.	0.21	250.0000	52.50	_____
Amm. Sulfate	lb	0.21	50.0000	10.50	_____
Urea	lb	0.39	100.0000	39.00	_____
HERBICIDES					
Atrazine	qt	4.75	2.0000	9.50	_____
Glyphosate	oz	0.59	22.0000	12.98	_____
ResolveQ	oz	7.95	1.2000	9.54	_____
IRRIGATION SUPPLIES					
Roll-Out Pipe	ft	0.20	33.0000	6.60	_____
CROP SEED					
Pionner 33N58	thous	3.00	38.0000	114.00	_____
CUSTOM HIRE					
Aerial App.	ac	6.50	3.0000	19.50	_____
Haul Corn	bu	0.20	224.0000	44.80	_____
GIN/DRY					
Corn Checkoff	bu	0.01	224.0000	2.24	_____
Dry Corn	bu	0.19	224.0000	42.56	_____
OPERATOR LABOR					
Tractors	hour	9.92	0.2150	2.13	_____
Harvesters	hour	9.92	0.1277	1.27	_____
Self-Propelled	hour	9.92	0.0117	0.12	_____
IRRIGATION LABOR					
Implements	hour	8.60	0.0125	0.10	_____
Furrow Irr.	hour	8.60	0.3017	2.60	_____
HAND LABOR					
Implements	hour	8.60	0.0676	0.58	_____
Self-Propelled	hour	8.60	0.0058	0.05	_____
DIESEL FUEL					
Tractors	gal	2.00	2.1962	4.38	_____
Harvesters	gal	2.00	1.8070	3.61	_____
Self-Propelled	gal	2.00	0.1209	0.24	_____
Furrow Irr.	gal	2.00	12.0000	24.00	_____
REPAIR & MAINTENANCE					
Implements	acre	3.35	1.0000	3.35	_____
Tractors	acre	0.85	1.0000	0.85	_____
Harvesters	acre	2.59	1.0000	2.59	_____
Self-Propelled	acre	0.12	1.0000	0.12	_____
Furrow Irr.	ac-in	0.18	12.0000	2.25	_____
INTEREST ON OP. CAP.	acre	15.80	1.0000	15.80	_____
TOTAL DIRECT EXPENSES				543.14	_____
FIXED EXPENSES					
Implements	acre	8.13	1.0000	8.13	_____
Tractors	acre	6.15	1.0000	6.15	_____
Harvesters	acre	11.77	1.0000	11.77	_____
Self-Propelled	acre	0.89	1.0000	0.89	_____
Furrow Irr.	each	3058.64	0.0083	25.48	_____
TOTAL FIXED EXPENSES				52.42	_____
TOTAL SPECIFIED EXPENSES				595.56	_____

Table 5.B Estimated resource use and costs for field operations, per acre  
 Corn, Furrow Irrigated, Silt Loam  
 Lawrence County, University of Arkansas, 2009

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Chicken Litter	ac			1.00	Nov							1.0000	37.00	37.00	37.00
Custom App.	ac			1.00	Mar							1.0000	6.50	6.50	6.50
30-0-2	lb											285.0000	0.27	78.38	78.38
Field Cultivate Fld	32'	MFWD 190	0.046	1.00	Apr	1.08	1.26	0.32	1.61	0.04	0.46				4.73
Disk Bed (Hipper)	12R-30	MFWD 225	0.062	1.00	Apr	1.74	2.10	0.30	0.94	0.06	0.62				5.70
Plant & Pre-Rigid	12R-30	MFWD 190	0.067	1.00	Apr	1.57	1.83	1.16	2.62	0.13	1.25				8.43
Pionner 33N58	thous											38.0000	3.00	114.00	114.00
Custom App.	ac			1.00	May							1.0000	6.50	6.50	6.50
Urea, Solid (46% N)	lb.											250.0000	0.21	52.50	52.50
Amm. Sulfate	lb											50.0000	0.21	10.50	10.50
Sprayer( 600-825Gal)	90'		0.011	1.00	May	0.36	0.89			0.01	0.17				1.42
Atrazine	qt											2.0000	4.75	9.50	9.50
Glyphosate	oz											22.0000	0.59	12.98	12.98
ResolveQ	oz											1.2000	7.95	9.54	9.54
Aerial App.	ac			1.00	Jun							1.0000	6.50	6.50	6.50
Urea	lb											100.0000	0.39	39.00	39.00
Pipe Spool 160ac	1/4m roll	2WD 130	0.003	1.00	Jun	0.05	0.05	0.01	0.09	0.00	0.08				0.28
Roll-Out Pipe	ft											33.0000	0.20	6.60	6.60
Pipe Spool 160ac	1/4m roll	2WD 130	0.003	1.00	Sep	0.05	0.05	0.01	0.09	0.00	0.08				0.28
Header - Corn	8R-30	275hp	0.127	1.00	Sep	6.20	11.77	1.40	2.47	0.12	1.27				23.11
Corn Grain Cart	8R30 500 bu	MFWD 190	0.031	1.00	Sep	0.74	0.86	0.15	0.31	0.03	0.32				2.38
Haul Corn	bu											224.0000	0.20	44.80	44.80
Corn Checkoff	bu											224.0000	0.01	2.24	2.24
Dry Corn	bu											224.0000	0.19	42.56	42.56
Furrow Irr.	each			1.00	Jun				25.48			0.0083			25.48
Apply Water	ac-in				Jun			6.56		0.07	0.65	3.0000			7.21
Apply Water	ac-in				Jul			19.69		0.22	1.95	9.0000			21.64
TOTALS						11.79	18.81	29.60	33.61	0.74	6.85			479.10	579.76
INTEREST ON OPERATING CAPITAL															15.80
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															595.56

Table 6.A Estimated costs per acre  
 Corn, Furrow Irrigated, Silt Loam  
 Lee County, University of Arkansas, 2009

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZERS					
0-40-70	lb	0.80	100.0000	80.00	_____
Urea	lb	0.18	350.0000	63.00	_____
Amm. Sulfate	lb	0.17	50.0000	8.50	_____
FUNGICIDES					
Quilt	oz	0.77	14.0000	10.78	_____
HERBICIDES					
Atrazine	qt	3.25	1.5000	4.88	_____
Roundup	oz	0.59	22.0000	12.98	_____
IRRIGATION SUPPLIES					
Roll-Out Pipe	ft	0.20	28.7000	5.74	_____
CROP SEED					
Pioneer 33M57	thous	3.00	36.0000	108.00	_____
CUSTOM HIRE					
Custom App.	ac	4.50	1.0000	4.50	_____
Custom App.	ac	4.00	2.0000	8.00	_____
Aerial App.	ac	6.00	2.0000	12.00	_____
Haul Corn	bu	0.20	185.5700	37.11	_____
GIN/DRY					
Corn Checkoff	bu	0.01	185.5700	1.86	_____
Dry Corn	bu	0.19	185.5700	35.26	_____
OPERATOR LABOR					
Tractors	hour	9.92	0.4123	4.10	_____
Harvesters	hour	9.92	0.1702	1.69	_____
IRRIGATION LABOR					
Implements	hour	8.60	0.0125	0.10	_____
Furrow Irr.	hour	8.60	0.3017	2.60	_____
HAND LABOR					
Implements	hour	8.60	0.1790	1.54	_____
DIESEL FUEL					
Tractors	gal	2.00	3.6707	7.34	_____
Harvesters	gal	2.00	2.4094	4.82	_____
Furrow Irr.	gal	2.00	12.0000	24.00	_____
REPAIR & MAINTENANCE					
Implements	acre	4.62	1.0000	4.62	_____
Tractors	acre	1.45	1.0000	1.45	_____
Harvesters	acre	3.45	1.0000	3.45	_____
Furrow Irr.	ac-in	0.18	12.0000	2.25	_____
INTEREST ON OP. CAP.	acre	13.58	1.0000	13.58	_____
TOTAL DIRECT EXPENSES				464.15	_____
FIXED EXPENSES					
Implements	acre	10.77	1.0000	10.77	_____
Tractors	acre	10.45	1.0000	10.45	_____
Harvesters	acre	15.69	1.0000	15.69	_____
Furrow Irr.	each	3058.64	0.0083	25.49	_____
TOTAL FIXED EXPENSES				62.40	_____
TOTAL SPECIFIED EXPENSES				526.55	_____

Table 6.B Estimated resource use and costs for field operations, per acre  
 Corn, Furrow Irrigated, Silt Loam  
 Lee County, University of Arkansas, 2009

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST	
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST		
						-----dollars-----				dollars		-----dollars-----				
Disk & Incorporate	24'	MFWD 190	0.087	1.00	Apr	2.03	2.36	0.92	1.90	0.13	1.25					8.46
Field Cultivate Fld	24'	MFWD 170	0.062	1.00	Apr	1.32	1.66	0.30	1.49	0.06	0.62					5.39
Custom App.	ac			1.00	Apr							1.0000	4.50	4.50		4.50
0-40-70	lb											100.0000	0.80	80.00		80.00
Bedder/Roller-Fold.	21'	MFWD 190	0.089	1.00	Apr	2.08	2.42	0.34	1.06	0.08	0.89					6.79
Plant & Pre-Rigid	6R-30	MFWD 150	0.135	1.00	Apr	2.52	3.05	1.45	3.29	0.27	2.50					12.81
Pioneer 33M57	thous											36.0000	3.00	108.00		108.00
Custom App.	ac			1.00	May							1.0000	4.00	4.00		4.00
Urea	lb											250.0000	0.18	45.00		45.00
Amm. Sulfate	lb											50.0000	0.17	8.50		8.50
Custom App.	ac			1.00	May							1.0000	4.00	4.00		4.00
Atrazine	qt											1.5000	3.25	4.88		4.88
Roundup	oz											22.0000	0.59	12.98		12.98
Aerial App.	ac			1.00	Jun							1.0000	6.00	6.00		6.00
Urea	lb											100.0000	0.18	18.00		18.00
Pipe Spool 160ac	1/4m roll	2WD 130	0.003	1.00	Jun	0.05	0.05	0.01	0.09	0.00	0.08					0.28
Roll-Out Pipe	ft											28.7000	0.20	5.74		5.74
Aerial App.	ac			1.00	Jul							1.0000	6.00	6.00		6.00
Quilt	oz											14.0000	0.77	10.78		10.78
Pipe Spool 160ac	1/4m roll	2WD 130	0.003	1.00	Oct	0.05	0.05	0.01	0.09	0.00	0.08					0.28
Header - Corn	6R30"	275hp	0.170	1.00	Oct	8.27	15.69	1.44	2.54	0.17	1.69					29.63
Corn Grain Cart 8R30	500 bu	MFWD 190	0.031	1.00	Oct	0.74	0.86	0.15	0.31	0.03	0.32					2.38
Haul Corn	bu											185.5700	0.20	37.11		37.11
Corn Checkoff	bu											185.5700	0.01	1.86		1.86
Dry Corn	bu											185.5700	0.19	35.26		35.26
Furrow Irr.	each			1.00	Jun				25.49			0.0083				25.49
Apply Water	ac-in				Jun			6.56		0.07	0.65	3.0000				7.21
Apply Water	ac-in				Jul			19.69		0.22	1.95	9.0000				21.64
TOTALS						17.06	26.14	30.87	36.26	1.07	10.03			392.61		512.97
INTEREST ON OPERATING CAPITAL																13.58
UNALLOCATED LABOR																0.00
TOTAL SPECIFIED COST																526.55

Table 7.A Estimated costs per acre  
 Corn, Furrow Irrigated, Silt Loam  
 Lonoke County, University of Arkansas, 2009

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZERS					
Chicken Litter	tons	40.00	1.0000	40.00	_____
Amm. Sulfate	lb	0.20	50.0000	10.00	_____
Urea	lb	0.20	510.0000	102.00	_____
DAP 18-46-0	lb	0.40	50.0000	20.00	_____
Zinc Sulfate	lb	1.00	30.0000	30.00	_____
HERBICIDES					
Glyphosate	qt	6.50	2.0000	13.00	_____
Clarity	oz	6.44	8.0000	51.52	_____
Atrazine	qts	4.00	2.0000	8.00	_____
IRRIGATION SUPPLIES					
Roll-Out Pipe	ft	0.20	18.1000	3.62	_____
CROP SEED					
DeKalb 64-79VT3	thou	3.00	33.5000	100.50	_____
CUSTOM HIRE					
Custom App.	acre	5.75	1.0000	5.75	_____
Aerial App.	acre	7.50	1.0000	7.50	_____
Haul Corn	bu	0.20	185.0000	37.00	_____
GIN/DRY					
Corn Checkoff	bu	0.01	185.0000	1.85	_____
Dry Corn	bu	0.19	185.0000	35.15	_____
OPERATOR LABOR					
Tractors	hour	9.92	0.3699	3.67	_____
Harvesters	hour	9.92	0.1702	1.69	_____
Self-Propelled	hour	9.92	0.0117	0.12	_____
IRRIGATION LABOR					
Implements	hour	8.60	0.0125	0.10	_____
Furrow Irr.	hour	8.60	0.3771	3.25	_____
HAND LABOR					
Implements	hour	8.60	0.1238	1.06	_____
Self-Propelled	hour	8.60	0.0058	0.05	_____
DIESEL FUEL					
Tractors	gal	2.00	3.9184	7.82	_____
Harvesters	gal	2.00	2.4094	4.82	_____
Self-Propelled	gal	2.00	0.1209	0.24	_____
Furrow Irr.	gal	2.00	15.0000	30.00	_____
REPAIR & MAINTENANCE					
Implements	acre	4.52	1.0000	4.52	_____
Tractors	acre	1.54	1.0000	1.54	_____
Harvesters	acre	3.45	1.0000	3.45	_____
Self-Propelled	acre	0.12	1.0000	0.12	_____
Furrow Irr.	ac-in	0.18	15.0000	2.81	_____
INTEREST ON OP. CAP.	acre	17.19	1.0000	17.19	_____
TOTAL DIRECT EXPENSES				548.34	_____
FIXED EXPENSES					
Implements	acre	10.54	1.0000	10.54	_____
Tractors	acre	11.19	1.0000	11.19	_____
Harvesters	acre	15.69	1.0000	15.69	_____
Self-Propelled	acre	0.89	1.0000	0.89	_____
Furrow Irr.	each	3058.64	0.0083	25.48	_____
TOTAL FIXED EXPENSES				63.79	_____
TOTAL SPECIFIED EXPENSES				612.13	_____

Table 7.B Estimated resource use and costs for field operations, per acre  
 Corn, Furrow Irrigated, Silt Loam  
 Lonoke County, University of Arkansas, 2009

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST	
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST		
						-----dollars-----				dollars		-----dollars-----				
Disk Bed (Hipper)	12R-30	MFWD 225	0.062	1.00	Apr	1.74	2.10	0.30	0.94	0.06	0.62					5.70
Cultivate	12R-30	MFWD 225	0.068	1.00	Apr	1.90	2.31	0.52	1.62	0.06	0.68					7.03
Disk Bed (Hipper)	12R-30	MFWD 225	0.062	1.00	Apr	1.74	2.10	0.30	0.94	0.06	0.62					5.70
Chicken Litter	tons			1.00	Apr							1.0000	40.00	40.00		40.00
Amm. Sulfate	lb			1.00	Apr							50.0000	0.20	10.00		10.00
Urea	lb											140.0000	0.20	28.00		28.00
DAP 18-46-0	lb											50.0000	0.40	20.00		20.00
Zinc Sulfate	lb											30.0000	1.00	30.00		30.00
Custom App.	acre											1.0000	5.75	5.75		5.75
Plant & Pre-Folding	12R-30	MFWD 190	0.067	1.00	Apr	1.57	1.83	1.42	3.23	0.13	1.25					9.30
DeKalb 64-79VT3	thou											33.5000	3.00	100.50		100.50
Sprayer( 600-825Gal)	90'		0.011	1.00	Apr	0.36	0.89			0.01	0.17					1.42
Glyphosate	qt											1.0000	6.50	6.50		6.50
Clarity	oz											8.0000	6.44	51.52		51.52
Spin Spreader	5 ton	MFWD 190	0.042	1.00	May	0.98	1.14	0.27	0.64	0.08	0.78					3.81
Urea	lb											270.0000	0.20	54.00		54.00
Spray (Band)	60' Fold	MFWD 170	0.028	1.00	May	0.59	0.75	0.10	0.14	0.04	0.40					1.98
Glyphosate	qt											1.0000	6.50	6.50		6.50
Atrazine	qts											2.0000	4.00	8.00		8.00
Pipe Spool 160ac	1/4m roll	2WD 130	0.003	1.00	Jun	0.05	0.05	0.01	0.09	0.00	0.08					0.28
Roll-Out Pipe	ft											18.1000	0.20	3.62		3.62
Aerial App.	acre			1.00	Jun							1.0000	7.50	7.50		7.50
Urea	lb											100.0000	0.20	20.00		20.00
Pipe Spool 160ac	1/4m roll	2WD 130	0.003	1.00	Sep	0.05	0.05	0.01	0.09	0.00	0.08					0.28
Header - Corn	6R30"	275hp	0.170	1.00	Sep	8.27	15.69	1.44	2.54	0.17	1.69					29.63
Corn Grain Cart 8R30	500 bu	MFWD 190	0.031	1.00	Sep	0.74	0.86	0.15	0.31	0.03	0.32					2.38
Haul Corn	bu											185.0000	0.20	37.00		37.00
Corn Checkoff	bu											185.0000	0.01	1.85		1.85
Dry Corn	bu											185.0000	0.19	35.15		35.15
Furrow Irr.	each			1.00	Jun				25.48			0.0083				25.48
Apply Water	ac-in				Jun			13.12		0.15	1.30	6.0000				14.42
Apply Water	ac-in				Jul			19.69		0.22	1.95	9.0000				21.64
TOTALS						17.99	27.77	37.33	36.02	1.07	9.94			465.89		594.94
INTEREST ON OPERATING CAPITAL																17.19
UNALLOCATED LABOR																0.00
TOTAL SPECIFIED COST																612.13

Table 8.A Estimated costs per acre  
 Corn, Furrow Irrigated, Sandy Loam  
 Mississippi County, University of Arkansas, 2009

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZERS					
85-0-60-24	lb	0.74	100.0000	74.40	_____
Urea	lb	0.19	325.0000	61.75	_____
Amm. Sulfate	lb	0.19	40.0000	7.60	_____
HERBICIDES					
Atrazine	qt	3.30	2.0000	6.60	_____
Glyphosate	qt	6.50	1.0000	6.50	_____
Resolve Q	oz	7.50	1.2500	9.38	_____
IRRIGATION SUPPLIES					
Roll-Out Pipe	ft	0.20	42.6000	8.52	_____
CROP SEED					
Pioneer 31D59	thous	2.80	34.4000	96.32	_____
CUSTOM HIRE					
Custom App.	ac	5.00	2.0000	10.00	_____
Haul Corn	bu	0.20	131.7600	26.35	_____
GIN/DRY					
Corn Checkoff	bu	0.01	131.7600	1.32	_____
Dry Corn	bu	0.19	131.7600	25.03	_____
OPERATOR LABOR					
Tractors	hour	9.92	0.2179	2.16	_____
Harvesters	hour	9.92	0.1277	1.27	_____
Self-Propelled	hour	9.92	0.0117	0.12	_____
IRRIGATION LABOR					
Implements	hour	8.60	0.0125	0.10	_____
Furrow Irr.	hour	8.60	0.3771	3.25	_____
HAND LABOR					
Implements	hour	8.60	0.0924	0.79	_____
Self-Propelled	hour	8.60	0.0058	0.05	_____
DIESEL FUEL					
Tractors	gal	2.00	2.2247	4.44	_____
Harvesters	gal	2.00	1.8070	3.61	_____
Self-Propelled	gal	2.00	0.1209	0.24	_____
Furrow Irr.	gal	2.00	15.0000	30.00	_____
REPAIR & MAINTENANCE					
Implements	acre	3.44	1.0000	3.44	_____
Tractors	acre	0.86	1.0000	0.86	_____
Harvesters	acre	2.59	1.0000	2.59	_____
Self-Propelled	acre	0.12	1.0000	0.12	_____
Furrow Irr.	ac-in	0.18	15.0000	2.81	_____
INTEREST ON OP. CAP.	acre	12.15	1.0000	12.15	_____
TOTAL DIRECT EXPENSES				401.77	_____
FIXED EXPENSES					
Implements	acre	8.57	1.0000	8.57	_____
Tractors	acre	6.23	1.0000	6.23	_____
Harvesters	acre	11.77	1.0000	11.77	_____
Self-Propelled	acre	0.89	1.0000	0.89	_____
Furrow Irr.	each	3058.64	0.0083	25.49	_____
TOTAL FIXED EXPENSES				52.95	_____
TOTAL SPECIFIED EXPENSES				454.72	_____

Table 8.B Estimated resource use and costs for field operations, per acre  
 Corn, Furrow Irrigation, Sandy Loam  
 Mississippi County, University of Arkansas, 2009

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Custom App.	ac			1.00	Apr							1.0000	5.00	5.00	5.00
85-0-60-24	lb											100.0000	0.74	74.40	74.40
Field Cult & Inc Fld	32'	MFWD 190	0.049	1.00	Apr	1.15	1.34	0.41	2.05	0.07	0.70				5.65
Disk Bed (Hipper)	12R-30	MFWD 225	0.062	1.00	Apr	1.74	2.10	0.30	0.94	0.06	0.62				5.70
Plant & Pre-Rigid	12R-30	MFWD 190	0.067	1.00	Apr	1.57	1.83	1.16	2.62	0.13	1.25				8.43
Pioneer 31D59	thous											34.4000	2.80	96.32	96.32
Sprayer( 600-825Gal)	90'		0.011	1.00	May	0.36	0.89			0.01	0.17				1.42
Atrazine	qt											2.0000	3.30	6.60	6.60
Glyphosate	qt											1.0000	6.50	6.50	6.50
Resolve Q	oz											1.2500	7.50	9.38	9.38
Custom App.	ac			1.00	Jun							1.0000	5.00	5.00	5.00
Urea	lb											325.0000	0.19	61.75	61.75
Amm. Sulfate	lb											40.0000	0.19	7.60	7.60
Pipe Spool 160ac	1/4m roll	2WD 130	0.003	1.00	Jun	0.05	0.05	0.01	0.09	0.00	0.08				0.28
Roll-Out Pipe	ft											42.6000	0.20	8.52	8.52
Pipe Spool 160ac	1/4m roll	2WD 130	0.003	1.00	Sep	0.05	0.05	0.01	0.09	0.00	0.08				0.28
Header - Corn	8R-30	275hp	0.127	1.00	Sep	6.20	11.77	1.40	2.47	0.12	1.27				23.11
Corn Grain Cart 8R30	500 bu	MFWD 190	0.031	1.00	Sep	0.74	0.86	0.15	0.31	0.03	0.32				2.38
Haul Corn	bu											131.7600	0.20	26.35	26.35
Corn Checkoff	bu											131.7600	0.01	1.32	1.32
Dry Corn	bu											131.7600	0.19	25.03	25.03
Furrow Irr.	each			1.00	Jun				25.49				0.0083		25.49
Apply Water	ac-in				Jun			19.69		0.22	1.95		9.0000		21.64
Apply Water	ac-in				Jul			13.12		0.15	1.30		6.0000		14.42
TOTALS						11.86	18.89	36.25	34.06	0.84	7.74			333.77	442.57
INTEREST ON OPERATING CAPITAL															12.15
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															454.72

Table 9.A Estimated costs per acre  
 Corn, Furrow Irrigated, Silt Loam  
 Monroe County, University of Arkansas, 2009

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZERS					
20.5-14.1-17.6-3.5-.3	lb	0.27	440.0000	121.00	_____
Urea	lb	0.18	375.0000	67.50	_____
FUNGICIDES					
Quilt	oz	0.77	12.0000	9.24	_____
HERBICIDES					
Atrazine	qt	3.25	2.0000	6.50	_____
Glyphosate	qt	7.00	1.0000	7.00	_____
IRRIGATION SUPPLIES					
Roll-Out Pipe	ft	0.20	53.3000	10.66	_____
CROP SEED					
Pioneer 33M57	thous	3.00	34.0000	102.00	_____
CUSTOM HIRE					
Cstm Ap Grd Fert	acre	5.50	1.0000	5.50	_____
Custom App.	ac	5.52	1.0000	5.52	_____
Custom App.	ac	6.00	1.0000	6.00	_____
Aerial App.	ac	6.85	2.0000	13.70	_____
Haul Corn	bu	0.20	123.1800	24.64	_____
GIN/DRY					
Corn Checkoff	bu	0.01	123.1800	1.23	_____
Dry Corn	bu	0.19	123.1800	23.40	_____
OPERATOR LABOR					
Tractors	hour	9.92	0.4086	4.06	_____
Harvesters	hour	9.92	0.1277	1.27	_____
IRRIGATION LABOR					
Implements	hour	8.60	0.0125	0.10	_____
Furrow Irr.	hour	8.60	0.2262	1.95	_____
HAND LABOR					
Implements	hour	8.60	0.1139	0.98	_____
DIESEL FUEL					
Tractors	gal	2.00	5.0045	10.00	_____
Harvesters	gal	2.00	1.8070	3.61	_____
Furrow Irr.	gal	2.00	9.0000	18.00	_____
REPAIR & MAINTENANCE					
Implements	acre	5.26	1.0000	5.26	_____
Tractors	acre	1.88	1.0000	1.88	_____
Harvesters	acre	2.59	1.0000	2.59	_____
Furrow Irr.	ac-in	0.18	9.0000	1.68	_____
INTEREST ON OP. CAP.	acre	14.80	1.0000	14.80	_____
TOTAL DIRECT EXPENSES				470.59	_____
FIXED EXPENSES					
Implements	acre	13.43	1.0000	13.43	_____
Tractors	acre	13.69	1.0000	13.69	_____
Harvesters	acre	11.77	1.0000	11.77	_____
Furrow Irr.	each	3058.64	0.0083	25.49	_____
TOTAL FIXED EXPENSES				68.14	_____
TOTAL SPECIFIED EXPENSES				538.73	_____

Table 9.B Estimated resource use and costs for field operations, per acre  
 Corn, Furrow Irrigated, Silt Loam  
 Monroe County, University of Arkansas, 2009

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Disk & Incorporate	32'	4WD 400	0.065	1.00	Apr	3.12	3.05	0.86	1.79	0.09	0.93				9.75
Field Cultivate Fld	32'	MFWD 300	0.046	1.00	Apr	0.26	1.88	0.32	1.61						4.07
Land Plane	50'x16'	MFWD 225	0.151	1.00	Apr	4.20	5.09	0.23	0.70	0.15	1.50				11.72
Field Cultivate Fld	32'	MFWD 300	0.046	1.00	Apr	0.26	1.88	0.32	1.61						4.07
Cstm Ap Grd Fert	acre			1.00	Apr							1.0000	5.50	5.50	5.50
20.5-14.1-17.6-3.5-.3 lb												440.0000	0.27	121.00	121.00
Bedder/Roller-Fold.	26'	MFWD 225	0.072	1.00	Apr	2.00	2.42	0.35	1.10	0.07	0.72				6.59
Plant & Pre-Folding	10R-30	MFWD 170	0.081	1.00	Apr	1.72	2.17	1.61	3.66	0.16	1.51				10.67
Pioneer 33M57	thous											34.0000	3.00	102.00	102.00
Custom App.	ac			1.00	May							1.0000	5.52	5.52	5.52
Urea	lb											275.0000	0.18	49.50	49.50
Custom App.	ac			1.00	May							1.0000	6.00	6.00	6.00
Atrazine	qt											2.0000	3.25	6.50	6.50
Glyphosate	qt											1.0000	7.00	7.00	7.00
Aerial App.	ac			1.00	Jun							1.0000	6.85	6.85	6.85
Urea	lb											100.0000	0.18	18.00	18.00
Pipe Spool 160ac	1/4m roll	2WD 130	0.003	1.00	Jun	0.05	0.05	0.01	0.09	0.00	0.08				0.28
Roll-Out Pipe	ft											53.3000	0.20	10.66	10.66
Aerial App.	ac			1.00	Jul							1.0000	6.85	6.85	6.85
Quilt	oz											12.0000	0.77	9.24	9.24
Pipe Spool 160ac	1/4m roll	2WD 130	0.003	1.00	Sep	0.05	0.05	0.01	0.09	0.00	0.08				0.28
Header - Corn	8R-30	275hp	0.127	1.00	Sep	6.20	11.77	1.40	2.47	0.12	1.27				23.11
Corn Grain Cart 8R30	500 bu	MFWD 190	0.031	1.00	Sep	0.74	0.86	0.15	0.31	0.03	0.32				2.38
Haul Corn	bu											123.1800	0.20	24.64	24.64
Corn Checkoff	bu											123.1800	0.01	1.23	1.23
Dry Corn	bu											123.1800	0.19	23.40	23.40
Furrow Irr.	each			1.00	Jun				25.49						25.49
Apply Water	ac-in				Jun			6.56		0.07	0.65				7.21
Apply Water	ac-in				Jul			13.12		0.15	1.30				14.42
TOTALS						18.60	29.22	24.94	38.92	0.88	8.36			403.89	523.93
INTEREST ON OPERATING CAPITAL															14.80
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															538.73

Table 10.A Estimated costs per acre  
 Corn, Furrow Irrigated, Silt Loam  
 Poinsett County, University of Arkansas, 2009

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZERS					
60.4-17.3-43-11.2-5	lbs	0.32	264.0000	84.48	_____
Urea	lbs	0.17	300.0000	52.50	_____
FUNGICIDES					
Quilt	oz	0.77	14.0000	10.78	_____
HERBICIDES					
Glyphosate	qt	5.50	1.0000	5.50	_____
IRRIGATION SUPPLIES					
Roll-Out Pipe	ft	0.20	57.9000	11.58	_____
CROP SEED					
Pioneer 31D59	thous	3.00	35.0000	105.00	_____
CUSTOM HIRE					
Custom App.	acre	4.50	2.0000	9.00	_____
Aerial App.	acre	7.00	2.0000	14.00	_____
Haul Corn	bu	0.20	203.0000	40.60	_____
GIN/DRY					
Corn Checkoff	bu	0.01	203.0000	2.03	_____
Dry Corn	bu	0.19	203.0000	38.57	_____
OPERATOR LABOR					
Tractors	hour	9.92	0.1852	1.84	_____
Harvesters	hour	9.92	0.1277	1.27	_____
Self-Propelled	hour	9.92	0.0117	0.12	_____
IRRIGATION LABOR					
Implements	hour	8.60	0.0125	0.10	_____
Furrow Irr.	hour	8.60	0.3771	3.25	_____
HAND LABOR					
Implements	hour	8.60	0.0314	0.27	_____
Self-Propelled	hour	8.60	0.0058	0.05	_____
DIESEL FUEL					
Tractors	gal	2.00	2.0572	4.11	_____
Harvesters	gal	2.00	1.8070	3.61	_____
Self-Propelled	gal	2.00	0.1209	0.24	_____
Furrow Irr.	gal	2.00	15.0000	30.00	_____
REPAIR & MAINTENANCE					
Implements	acre	3.78	1.0000	3.78	_____
Tractors	acre	0.80	1.0000	0.80	_____
Harvesters	acre	2.59	1.0000	2.59	_____
Self-Propelled	acre	0.12	1.0000	0.12	_____
Furrow Irr.	ac-in	0.18	15.0000	2.81	_____
INTEREST ON OP. CAP.	acre	12.93	1.0000	12.93	_____
TOTAL DIRECT EXPENSES				441.93	_____
FIXED EXPENSES					
Implements	acre	8.66	1.0000	8.66	_____
Tractors	acre	5.89	1.0000	5.89	_____
Harvesters	acre	11.77	1.0000	11.77	_____
Self-Propelled	acre	0.89	1.0000	0.89	_____
Furrow Irr.	each	3058.64	0.0083	25.49	_____
TOTAL FIXED EXPENSES				52.70	_____
TOTAL SPECIFIED EXPENSES				494.63	_____

Table 10.B Estimated resource use and costs for field operations, per acre  
 Corn, Furrow Irrigated, Silt Loam  
 Poinsett County, University of Arkansas, 2009

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST	
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST		
						-----dollars-----				dollars		-----dollars-----				
Cultivate	12R-30	MFWD 225	0.068	1.00	Apr	1.90	2.31	0.52	1.62	0.06	0.68					7.03
Custom App.	acre			1.00	Apr							1.0000	4.50	4.50		4.50
60.4-17.3-43-11.2-5	lbs											264.0000	0.32	84.48		84.48
Bedder/Roller-Rigid	40'	MFWD 225	0.046	1.00	Apr	1.30	1.57	0.26	0.82	0.04	0.47					4.42
Plant - Folding	24R-30	MFWD 225	0.031	1.00	Apr	0.87	1.05	1.43	3.26	0.06	0.58					7.19
Pioneer 31D59	thous											35.0000	3.00	105.00		105.00
Sprayer( 600-825Gal)	90'		0.011	1.00	Jun	0.36	0.89			0.01	0.17					1.42
Glyphosate	qt											1.0000	5.50	5.50		5.50
Custom App.	acre			1.00	Jun							1.0000	4.50	4.50		4.50
Urea	lbs											200.0000	0.17	35.00		35.00
Aerial App.	acre			1.00	Jun							1.0000	7.00	7.00		7.00
Urea	lbs											100.0000	0.17	17.50		17.50
Pipe Spool 160ac	1/4m roll	2WD 130	0.003	1.00	Jun	0.05	0.05	0.01	0.09	0.00	0.08					0.28
Roll-Out Pipe	ft											57.9000	0.20	11.58		11.58
Aerial App.	acre			1.00	Jul							1.0000	7.00	7.00		7.00
Quilt	oz											14.0000	0.77	10.78		10.78
Pipe Spool 160ac	1/4m roll	2WD 130	0.003	1.00	Sep	0.05	0.05	0.01	0.09	0.00	0.08					0.28
Header - Corn	8R-30	275hp	0.127	1.00	Sep	6.20	11.77	1.40	2.47	0.12	1.27					23.11
Corn Grain Cart 8R30	500 bu	MFWD 190	0.031	1.00	Sep	0.74	0.86	0.15	0.31	0.03	0.32					2.38
Haul Corn	bu											203.0000	0.20	40.60		40.60
Corn Checkoff	bu											203.0000	0.01	2.03		2.03
Dry Corn	bu											203.0000	0.19	38.57		38.57
Furrow Irr.	each			1.00	Jun				25.49			0.0083				25.49
Apply Water	ac-in				Jun			19.69		0.22	1.95	9.0000				21.64
Apply Water	ac-in				Jul			13.12		0.15	1.30	6.0000				14.42
TOTALS						11.47	18.55	36.59	34.15	0.75	6.90			374.04		481.70
INTEREST ON OPERATING CAPITAL																12.93
UNALLOCATED LABOR																0.00
TOTAL SPECIFIED COST																494.63

Table 11.A Estimated costs per acre  
 Corn, Furrow Irrigated, Silt Loam  
 St. Francis County, University of Arkansas, 2009

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZERS					
85-69-60	lb	0.93	100.0000	93.00	_____
Urea	lb	0.17	350.0000	59.50	_____
Amm. Sulfate	lb	0.17	50.0000	8.75	_____
HERBICIDES					
Atrazine	qt	4.75	2.5000	11.88	_____
Glyphosate	qt	6.95	2.0000	13.90	_____
IRRIGATION SUPPLIES					
Roll-Out Pipe	ft	0.20	39.6000	7.92	_____
CROP SEED					
DeKalb 64-79VT3	thou	3.00	32.0000	96.00	_____
CUSTOM HIRE					
Custom App.	ac	5.50	2.0000	11.00	_____
Custom App.	ac	5.41	2.0000	10.82	_____
Aerial App.	ac	6.75	1.0000	6.75	_____
Haul Corn	bu	0.20	175.9700	35.19	_____
GIN/DRY					
Corn Checkoff	bu	0.01	175.9700	1.76	_____
Dry Corn	bu	0.19	175.9700	33.43	_____
OPERATOR LABOR					
Tractors	hour	9.92	0.1358	1.35	_____
Harvesters	hour	9.92	0.0851	0.84	_____
IRRIGATION LABOR					
Implements	hour	8.60	0.0125	0.10	_____
Furrow Irr.	hour	8.60	0.4525	3.89	_____
HAND LABOR					
Implements	hour	8.60	0.0507	0.44	_____
DIESEL FUEL					
Tractors	gal	2.00	1.4849	2.97	_____
Harvesters	gal	2.00	1.4243	2.85	_____
Furrow Irr.	gal	2.00	18.0001	36.00	_____
REPAIR & MAINTENANCE					
Implements	acre	3.85	1.0000	3.85	_____
Tractors	acre	0.58	1.0000	0.58	_____
Harvesters	acre	2.02	1.0000	2.02	_____
Furrow Irr.	ac-in	0.18	18.0000	3.37	_____
INTEREST ON OP. CAP.	acre	14.24	1.0000	14.24	_____
TOTAL DIRECT EXPENSES				462.66	_____
FIXED EXPENSES					
Implements	acre	9.28	1.0000	9.28	_____
Tractors	acre	4.23	1.0000	4.23	_____
Harvesters	acre	9.19	1.0000	9.19	_____
Furrow Irr.	each	3058.64	0.0083	25.48	_____
TOTAL FIXED EXPENSES				50.06	_____
TOTAL SPECIFIED EXPENSES				512.72	_____

Table 11.B Estimated resource use and costs for field operations, per acre  
 Corn, Furrow Irrigated, Silt Loam  
 St. Francis County, University of Arkansas, 2009

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Custom App.	ac			1.00	Apr							1.0000	5.50	5.50	5.50
85-69-60	lb											100.0000	0.93	93.00	93.00
Field Cultivate Fld	32'	MFWD 300	0.046	1.00	Apr	0.26	1.88	0.32	1.61						4.07
Bedder/Roller-Fold.	40'	MFWD 225	0.046	1.00	Apr	1.30	1.57	0.33	1.03	0.04	0.47				4.70
Plant & Pre-Rigid	16R30	MFWD 225	0.050	1.00	Apr	1.41	1.70	1.61	3.64	0.10	0.94				9.30
DeKalb 64-79VT3	thou											32.0000	3.00	96.00	96.00
Atrazine	qt			1.00	Apr							2.0000	4.75	9.50	9.50
Glyphosate	qt											1.0000	6.95	6.95	6.95
Custom App.	ac											1.0000	5.41	5.41	5.41
Custom App.	ac			1.00	May							1.0000	5.50	5.50	5.50
Urea	lb											250.0000	0.17	42.50	42.50
Amm. Sulfate	lb											50.0000	0.17	8.75	8.75
Custom App.	ac			1.00	May							1.0000	5.41	5.41	5.41
Atrazine	qt											0.5000	4.75	2.38	2.38
Glyphosate	qt											1.0000	6.95	6.95	6.95
Aerial App.	ac			1.00	May							1.0000	6.75	6.75	6.75
Urea	lb											100.0000	0.17	17.00	17.00
Pipe Spool 160ac	1/4m roll	2WD 130	0.003	1.00	Jun	0.05	0.05	0.01	0.09	0.00	0.08				0.28
Roll-Out Pipe	ft											39.6000	0.20	7.92	7.92
Pipe Spool 160ac	1/4m roll	2WD 130	0.003	1.00	Sep	0.05	0.05	0.01	0.09	0.00	0.08				0.28
Header - Corn	12R-30	325hp	0.085	1.00	Sep	4.87	9.19	1.42	2.51	0.08	0.84				18.83
Corn Grain Cart 8R30	500 bu	MFWD 190	0.031	1.00	Sep	0.74	0.86	0.15	0.31	0.03	0.32				2.38
Haul Corn	bu											175.9700	0.20	35.19	35.19
Corn Checkoff	bu											175.9700	0.01	1.76	1.76
Dry Corn	bu											175.9700	0.19	33.43	33.43
Furrow Irr.	each			1.00	Jun				25.48			0.0083			25.48
Apply Water	ac-in				Jun			13.12		0.15	1.30	6.0000			14.42
Apply Water	ac-in				Jul			26.25		0.30	2.59	12.0000			28.84
TOTALS						8.68	15.30	43.22	34.76	0.73	6.62			389.90	498.48
INTEREST ON OPERATING CAPITAL															14.24
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															512.72

## **Appendix B**

### **Grain Sorghum: Economic Analysis by County**

Estimated operating expenses and crop input costs

Table 12.A Estimated costs per acre  
 Grain Sorghum, Furrow Irrigated, Silt Loam  
 Woodruff County, University of Arkansas, 2009

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZERS					
Potash 0-0-60	lbs	0.33	200.0000	66.00	_____
UAN 32%	gal	2.00	10.0000	20.00	_____
Urea	lb	0.19	200.0000	38.00	_____
HERBICIDES					
Duel	pts	13.00	1.3000	16.90	_____
Atrazine	qts	3.50	2.0000	7.00	_____
Glyphosate	qt	7.00	1.0000	7.00	_____
INSECTICIDES					
Karate	oz	2.60	1.6000	4.16	_____
IRRIGATION SUPPLIES					
Roll-Out Pipe	ft	0.20	46.1000	9.22	_____
CROP SEED					
Pioneer 84G62	lbs	1.40	8.0000	11.20	_____
CUSTOM HIRE					
Custom App.	acre	5.00	3.0000	15.00	_____
Aerial App.	acre	13.00	1.0000	13.00	_____
Aerial App.	acre	6.50	1.0000	6.50	_____
Haul Sorghum	bu	0.20	74.0000	14.80	_____
GIN/DRY					
Sorghum Checkoff	bu	0.01	74.0000	0.74	_____
OPERATOR LABOR					
Tractors	hour	9.92	0.6659	6.62	_____
Harvesters	hour	9.92	0.1161	1.15	_____
IRRIGATION LABOR					
Implements	hour	8.60	0.0125	0.10	_____
Furrow Irr.	hour	8.60	0.1508	1.30	_____
HAND LABOR					
Implements	hour	8.60	0.1647	1.41	_____
DIESEL FUEL					
Tractors	gal	2.00	7.6250	15.24	_____
Harvesters	gal	2.00	1.6428	3.29	_____
Furrow Irr.	gal	2.00	6.0000	12.00	_____
REPAIR & MAINTENANCE					
Implements	acre	3.92	1.0000	3.92	_____
Tractors	acre	3.01	1.0000	3.01	_____
Harvesters	acre	2.35	1.0000	2.35	_____
Furrow Irr.	ac-in	0.18	6.0000	1.12	_____
INTEREST ON OP. CAP.	acre	9.43	1.0000	9.43	_____
TOTAL DIRECT EXPENSES				290.46	_____
FIXED EXPENSES					
Implements	acre	10.34	1.0000	10.34	_____
Tractors	acre	22.02	1.0000	22.02	_____
Harvesters	acre	10.70	1.0000	10.70	_____
Furrow Irr.	each	3058.64	0.0083	25.49	_____
TOTAL FIXED EXPENSES				68.55	_____
TOTAL SPECIFIED EXPENSES				359.01	_____

Table 12.B Estimated resource use and costs for field operations, per acre  
 Grain Sorghum, Furrow Irrigated, Silt Loam  
 Woodruff County, University of Arkansas, 2009

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Disk & Incorporate	28'	MFWD 225	0.074	1.00	Apr	2.07	2.51	0.87	1.81	0.11	1.06				8.32
Field Cult & Inc Fld	24'	MFWD 225	0.066	1.00	Apr	1.83	2.22	0.41	2.03	0.09	0.94				7.43
Land Plane	50'x16'	MFWD 225	0.151	2.00	Apr	8.42	10.17	0.45	1.41	0.30	3.01				23.46
Custom App.	acre			1.00	Apr							1.0000	5.00	5.00	5.00
Potash 0-0-60	lbs											200.0000	0.33	66.00	66.00
Bedder/Roller-Fold.	21'	MFWD 225	0.089	1.00	Apr	2.48	2.99	0.34	1.06	0.08	0.89				7.76
Grain Drill	20'	4WD 225	0.094	1.00	Apr	2.61	3.17	1.12	2.55	0.18	1.75				11.20
Pioneer 84G62	lbs											8.0000	1.40	11.20	11.20
Custom App.	acre			1.00	Apr							1.0000	5.00	5.00	5.00
UAN 32%	gal											10.0000	2.00	20.00	20.00
Duel	pts											1.3000	13.00	16.90	16.90
Atrazine	qts											1.0000	3.50	3.50	3.50
Glyphosate	qt											1.0000	7.00	7.00	7.00
Aerial App.	acre			1.00	May							1.0000	13.00	13.00	13.00
Urea	lb											200.0000	0.19	38.00	38.00
Custom App.	acre			1.00	May							1.0000	5.00	5.00	5.00
Atrazine	qts											1.0000	3.50	3.50	3.50
Pipe Spool 160ac	1/4m roll	2WD 130	0.003	1.00	Jun	0.05	0.05	0.01	0.09	0.00	0.08				0.28
Roll-Out Pipe	ft											46.1000	0.20	9.22	9.22
Aerial App.	acre			1.00	Jul							1.0000	6.50	6.50	6.50
Karate	oz											1.6000	2.60	4.16	4.16
Pipe Spool 160ac	1/4m roll	2WD 130	0.003	1.00	Sep	0.05	0.05	0.01	0.09	0.00	0.08				0.28
Header Wheat/Sorghum	22' Rigid	275hp	0.116	1.00	Sep	5.64	10.70	0.56	0.99	0.11	1.15				19.04
Corn Grain Cart 8R30	500 bu	MFWD 190	0.031	1.00	Sep	0.74	0.86	0.15	0.31	0.03	0.32				2.38
Haul Sorghum	bu											74.0000	0.20	14.80	14.80
Sorghum Checkoff	bu											74.0000	0.01	0.74	0.74
Furrow Irr.	each			1.00	Jun				25.49			0.0083			25.49
Apply Water	ac-in				Jun			6.56		0.07	0.65	3.0000			7.21
Apply Water	ac-in				Jul			6.56		0.07	0.65	3.0000			7.21
TOTALS						23.89	32.72	17.04	35.83	1.11	10.58			229.52	349.58
INTEREST ON OPERATING CAPITAL															9.43
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															359.01