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**Corn and Grain Sorghum Research  
Verification Program**

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## **CORN & GRAIN SORGHUM RESEARCH VERIFICATION PROGRAM, 2012**

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## INTRODUCTION

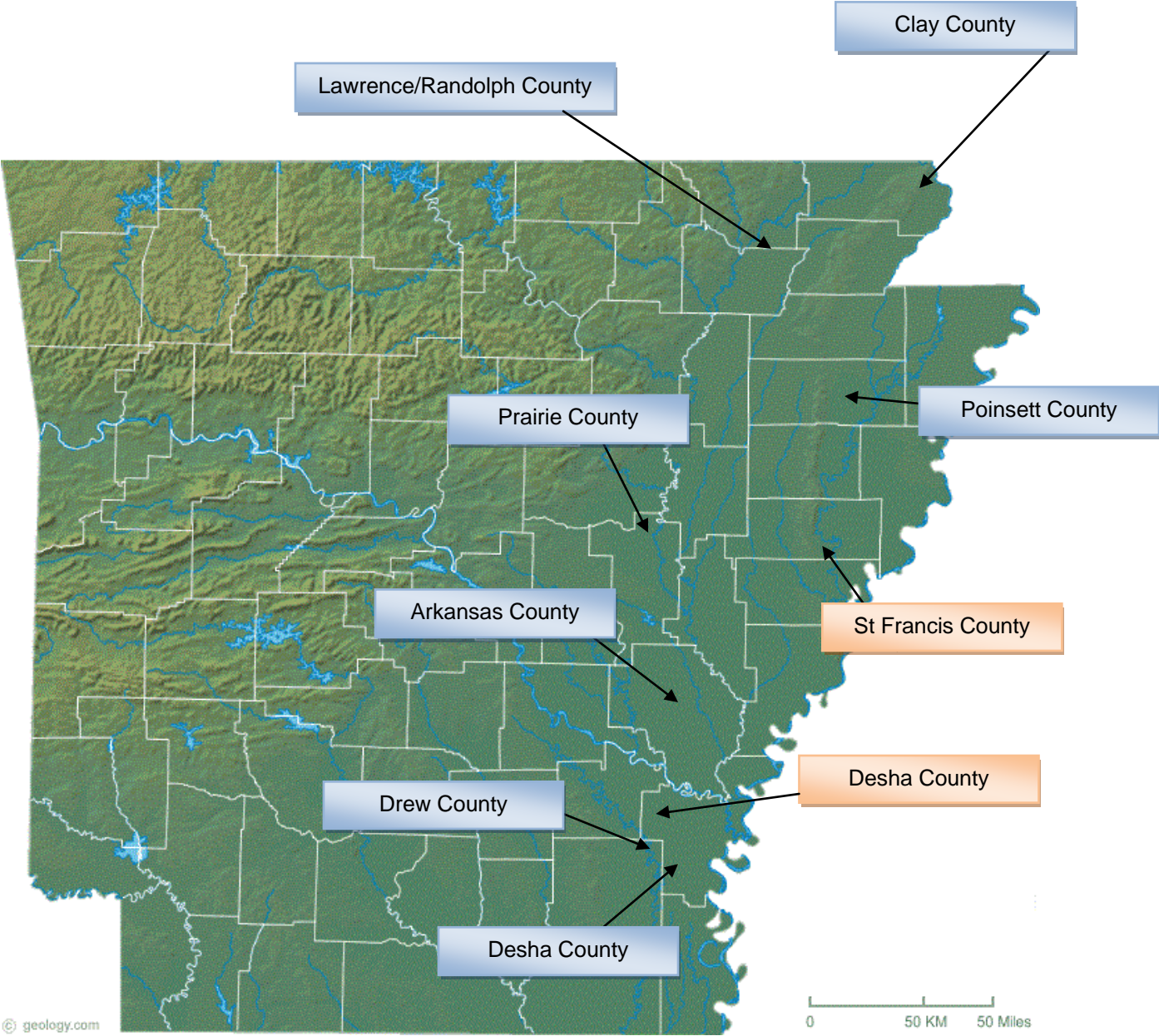
The 2012 growing season was the thirteenth year for the Corn and Grain Sorghum Research Verification Program (CGSRVP). The CGSRVP is an interdisciplinary effort between growers, county Extension agents, Extension specialists, and researchers. The CGSRVP is an on-farm demonstration of all the research-based 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. Nine growers were enrolled in the CGSRVP in the spring of 2012, seven corn and two grain sorghum fields. The fields were located on commercial farms and ranged in size from 32.9 to 65.6 acres for corn fields, and 23.6 to 99.7 acres for the grain sorghum fields. The average field size was 48.1 acres for the corn fields and 61.7 acres for the grain sorghum fields.

The 2012 CGSRVP corn fields were in Arkansas, Clay, Desha, Drew, Lawrence/Randolph, Poinsett and Prairie Counties; and grain sorghum fields were in Desha and St. Francis Counties. Five corn hybrids (Armor 1262DPRO, DeKalb DKC 64-69, DeKalb DKC 66-96, Pioneer P2088HR and Terral REV 28HR20) and two grain sorghum hybrids (Pioneer 84G62 and Pioneer 84G77) 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 2012 Corn and Grain Sorghum Research Verification Fields



Corn Field

Grain Sorghum Field

## CORN FIELD REVIEWS

### Arkansas County

The Arkansas County corn research verification field was located in the central part of the county near Almyra. The field was 53.4 acres and the previous crop was soybeans. The soil type was Stuttgart Silt Loam. The field was disked, cultivated and land planed in February. A mixed fertilizer of 75-80-120-13-10 was custom applied on March 28 and cultivated in. The field was bedded and planted on March 29 with Terral REV 28HR20 at 36,000 seeds per acre on a 36 inch twin row spacing. The field emerged on April 5 and the final plant stand was 31,400 plants per acre. The field was sprayed for weeds with 3.6 pints of Halex GT plus 1.5 quarts of Atrazine on April 18. 290 pounds of Urea (133 units of N) was aerially applied on April 19. Furrow irrigation started on May 1 and the field was irrigated 9 times throughout the season. A pretassel application of 100 pounds of Urea (46 units of N) was aerially applied on May 23 followed by an irrigation. Total fertilizer for the field was 254-80-120-13-10. The field was harvested on September 5 at 14.4% moisture and yielded 230.6 bushels per acre adjusted to 15.5% moisture.

### Clay County

The Clay County corn research verification field was located in the northeastern part of the county near Piggott. The field was 43.5 acres and the previous crop was soybeans. The soil type was Fountain Silt Loam. The producer sprayed the field with 8 ounces of Banvel plus 22 ounces of Roundup on February 29 for winter weed control. A mixed fertilizer of 67-0-60-24 was applied by the producer on March 25 and the field was hipped. The field was re-hipped on April 1. On April 2, the producer knocked off the tops of the beds with a do all, then planted Pioneer P2088HR at 34,000 seeds per acre on a 38 inch row spacing. The producer sprayed 1 quart of Atrazine plus 1 pint of Dual behind the planter for preemergence weed control. The field emerged on April 11 and the final plant stand was 32,500 plants per acre. The producer knifed in 50 gallons of 32% (175 units of N) on April 20. Total fertilizer for the field was 242-0-60-24-0. 2.6 ounces of Callisto, 22 ounces of Roundup plus 1 ounce of Halomax was applied by the producer on May 9 for weed control. Furrow irrigation started on May 11 and the field was irrigated 11 times throughout the season. The field was harvested on September 12 at 15.4% moisture and yielded 253.8 bushels per acre adjusted to 15.5% moisture.

### Desha County

The Desha County corn research verification field was located in the southern part of the county near McGehee. The field was 60.0 acres and the previous crop was cotton. The soil type was Herbert Silt Loam. In the fall the producer applied 250 lbs of 0-12-32. 1.25 pints of Salvo plus 1.5 pints of glyphosate was applied on January 20 for winter weed control. The field was hipped on February 27. On March 27 the field was rolled and planted with DeKalb DKC 66-96 at 34,000 seeds per acre on a 38 inch row spacing. The field emerged on April 1 and the final plant stand was 32,100 plants per acre. On April 4, the producer knifed in 50 gallons of 28-0-0-5 (150 units of N). The field received 1 gallon of liquid zinc by air on April 12 followed by 20 gallons of 32% (70 units of N) on April 14. The producer prepared the field for irrigation by sweeping the middles then applying 1 pint of Dual, 1 quart of Atrazine plus 18 ounces of Roundup on April 25. Furrow irrigation started on May 4 and the field was irrigated 7 times throughout the season. 100 pounds of Urea (46 units of N) was applied on May 22. Total fertilizer for this field was 266-32-80-25-1. The field was harvested on August 4 at 18.0% moisture and yielded 246.3 bushels per acre adjusted to 15.5% moisture.

## **Drew County**

The Drew County corn research verification field was located in the northeastern part of the county near Winchester. The field was 40.9 acres and the previous crop was corn. The soil type was McGehee Silt Loam. The field was disked on March 24 followed by a fertilizer application of 274 pounds of 5-15-33-3-.3 (15-41-90-8-1) and then field cultivated. The field was hipped and the tops knocked off with a do all on March 30. The field was planted on March 30 with DeKalb DKC 64-69 at 34,000 seeds per acre on a 38 inch twin row spacing. The field emerged on April 5 and the final plant stand was 34,000 plants per acre. On April 19, the field was sprayed with 0.75 quarts of Atrazine plus 25 ounces of Touchdown. 400 pounds of Urea (184 units of N) was applied on April 27. The field was sprayed again for weeds on May 9 with 3 ounces of Callisto and 25 ounces of Touchdown. Furrow irrigation started on May 14 and the field was irrigated 8 times throughout the season. A pretassel application of 100 pounds of Urea (46 units of N) was applied on May 29. Total fertilizer for this field was 245-41-90-8-1. The field was harvested on August 17 at 15.5% moisture and averaged 234.3 bushels per acre adjusted to 15.5%.

## **Lawrence/Randolph County**

The Lawrence/Randolph County corn research verification field was located on the line of Lawrence and Randolph Counties. Both County Agents assisted with this field. The field was located just east of Highway 67. The field was 65.6 acres and the previous crop was peanuts. The soil type was Tuckerman/Bosket Fine Sandy Loam. The field was grid sampled and a variable rate of fertilizer was applied. The average amount of preplant fertilizer was 0-90-120-0-0 and was applied on March 29. The field was disked and land planed behind the fertilizer. On April 4, 128 pounds of Urea (59 units of N) plus 100 pounds of Ammonium Sulfate (21 units of N) was applied and the field was bedded. The field was planted on April 4 with Pioneer P2088HR at 33,000 seeds per acre on a 30 inch row spacing. The field emerged on April 14 and the final plant stand was 32,800 plants per acre. 300 pounds of 41-0-0-4 (123 units of N) was applied on May 3. On May 11, the field was sprayed with 3.6 pints of Halex GT plus 1.5 quarts of Atrazine. Furrow irrigation started on May 17 and the field was irrigated 11 times throughout the season. A pretassel application of 100 pounds of Urea (46 units of N) was applied on May 30. Total fertilizer for this field was 249-94-120-12-0. The field was harvested on August 30 at 16.0% moisture and yielded 242.5 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 northeast of Harrisburg. The field was 40.2 acres and the previous crop was corn. The soil type was Falaya Silt Loam. The field was field cultivated and land planed on January 29. A mixed fertilizer application of 80-70-90-24-10 was applied on March 29 and the field was bedded. The field was planted on March 30 with Armor 1262DPRO at 35,000 seeds per acre on 30 inch row spacing. The field emerged on April 4 and the final plant stand was 35,000 plants per acre. 3.6 pints of Halex GT plus 1.5 quarts of Atrazine was applied on April 19 followed by 275 pounds of Urea (125 units of N) on April 20. Furrow irrigation started on May 15 and the field was irrigated 9 times throughout the season. A pretassel application of 100 pounds of Urea (46 units of N) was applied on May 22. Total fertilizer for this field was 251-70-90-24-10. The field was harvested on August 18 at 16.7% moisture and yielded 244.1 bushels per acre adjusted to 15.5% moisture.



## **Prairie County**

The Prairie County corn research verification field was located in the northern part of the county north of Des Arc. The field was 32.9 acres and the previous crop was soybeans. The soil type was Stuttgart Silt Loam. The field was disked, field cultivated and land planed on February 25. On March 27 400 lbs of 20.5-23-15-0-0 (82-92-60-0-0) was applied and cultivated in. The field was bedded and planted on March 28 in DeKalb DKC 64-69 at 33,000 seeds per acre on a 30 inch row spacing. 1 quart of Atrazine plus 1.5 pints of Starwarp was applied behind the planter for preemergence weed control. The field emerged on April 3 and the final plant stand was 30,500 plants per acre. 250 pounds of Urea (115 units of N) was applied on April 13. On April 26, 1.5 quarts of Atrazine plus 1 quart of glyphosate was applied. Furrow irrigation started on May 4 and the field was irrigated 9 times throughout the season. 100 pounds of Urea (46 units of N) was applied on May 20. Total fertilizer for the field was 243-92-60-0-0. The field was harvested on August 8 at 16.7% moisture and yielded 215.8 bushels per acre adjusted to 15.5%.

## GRAIN SORGHUM FIELD REVIEWS

### Desha County

The Desha County grain sorghum research verification field was located in the northern part of the county just northeast of Dumas. The field was 99.7 acres and the previous crop was soybeans. The soil type was Herbert Silt Loam. The field was field cultivated on February 27. On March 5, a mixed fertilizer of 0-60-100 was applied and the field was hipped. The beds were knocked down with a do all on March 29 and the field was planted with Pioneer 84G62 at 110,000 seeds per acre on a 38 inch twin row spacing. 1.25 pints of Charger plus 1.5 pints of Gramoxone was applied behind the planter for preemergence weed control followed by 100 pounds of Urea (46 units of N). The field emerged on April 4 and the final plant stand was 88,900 plants per acre. At the V4 stage, the field was damaged by a drift rate of Gramoxone. The plants turned brown and the field was scouted closely for a week. The plants recovered from the damage and a fertilizer application of 150 pounds of Urea (69 units of N) plus 100 pounds of Ammonium Sulfate (21 units of N) was applied on May 2. Total fertilizer for the field was 136-60-100-21-0. 1.3 quarts of Atrazine plus oil was applied on May 5. Irrigation started on May 5 and the field was irrigated 5 times throughout the season. The field was harvested on August 4 at 14.0% moisture and yielded 148.7 bushels per acre adjusted to 14.0%.

### St Francis County

The St Francis County non irrigated grain sorghum research verification field was located in the western part of the county south of Widener. The field was 23.6 acres and the previous crop was soybeans. The soil type was Dundee Silt Loam. The field was cultivated on March 1 and again on March 30. The field was planted on April 2 with Pioneer 84G77 at 75,000 seeds per acre on a 19 inch row spacing. 1.5 pints of Parallel plus 32 ounces of Touchdown was applied behind the planter for preemergence weed control. The field emerged on April 8 and the final plant stand was 70,400 plants per acre. 240 pounds of Urea (110 units of N) was applied on April 19. Total fertilizer for the field was 110-0-0-0-0. On April 24 the field received 1.3 quarts of Atrazine plus oil. The field was harvested on July 30 at 14.0% moisture and yielded 92.0 bushels per acre adjusted to 14.0% moisture.

**Table 1. Agronomic information for the 2012 Corn Research Verification Fields.**

County	Hybrid	Field Size (ac)	Row Spacing (in)	Previous Crop	Planting Population (seeds/ac)	Plant Stand (plants/ac)	Planting Date	Emergence Date	Harvest Date	Yield (bu/ac)
Arkansas	Terral REV 28HR20 <sup>3</sup>	53.4	36" Twin	Soybeans	36,000	31,400	March 29	April 5	September 5	230.6
Clay	Pioneer P2088HR <sup>3</sup>	43.5	38"	Soybeans	34,000	32,500	April 2	April 11	September 12	253.8
Desha	DeKalb DKC 66-96 <sup>1</sup>	60.0	38"	Cotton	34,000	32,100	March 27	April 1	August 4	246.3
Drew	DeKalb DKC 64-69 <sup>1</sup>	40.9	38" Twin	Corn	34,000	34,000	March 30	April 5	August 17	234.3
Lawrence/ Randolph	Pioneer P2088HR <sup>3</sup>	65.6	30"	Peanuts	33,000	32,800	April 4	April 14	August 30	242.5
Poinsett	Armor 1262DPRO <sup>2</sup>	40.2	30"	Corn	35,000	35,000	March 30	April 4	August 18	244.1
Prairie	DeKalb DKC 64-69 <sup>1</sup>	32.9	30"	Soybeans	33,000	30,500	March 28	April 3	August 8	215.8
<b>Average</b>	---	<b>48.1</b>	---	---	<b>34,000</b>	<b>32,614</b>	<b>March 30</b>	<b>April 6</b>	<b>August 22</b>	<b>238.2</b>

Traits – <sup>1</sup>Genuity VT Triple Pro  
<sup>2</sup>Genuity VT Double Pro  
<sup>3</sup>Herculex, Roundup Ready Corn 2, Liberty Link

**Table 2. Agronomic information for the 2012 Grain Sorghum Research Verification Fields.**

County	Hybrid	Field Size (ac)	Row Spacing (in)	Previous Crop	Planting Population (lbs/ac)	Plant Stand (plants/ac)	Planting Date	Emergence Date	Harvest Date	Yield (bu/ac)
<b>-----Irrigated-----</b>										
Desha	Pioneer 84G62	99.7	38" Twin	Soybeans	6	88,900	March 29	April 4	August 4	148.7
<b>-----Non Irrigated-----</b>										
St Francis	Pioneer 84G77	23.6	19"	Soybeans	4.5	70,400	April 2	April 8	July 30	92.0

**Table 3. Soil test results, applied fertilizer, total fertilizer and soil classification for the 2012 Corn Research Verification Fields.**

County	Soil Test (lb/ac)					Applied Fertilizer N-P-K-S-Zn <sup>1</sup> (lb/ac)			Total Applied Fertilizer N-P-K-S-Zn	Soil Classification
	pH	P	K	S	Zn	Preplant	Sidedress	Pre Tassel		
Arkansas	6.5	95	242	38	4.6	75-80-120-13-10	133-0-0-0-0	46-0-0-0-0	254-80-120-13-10	Stuttgart Silt Loam
Clay	7.1	175	263	10	12.5	67-0-60-24-0	175-0-0-0-0	---	242-0-60-24-0	Fountain Silt Loam
Desha	7.2	127	279	14	4.6	0-32-80-0-0	220-0-0-25-1	46-0-0-0-0	266-32-80-25-1	Herbert Silt Loam
Drew	6.9	58	234	16	3.6	15-41-90-8-1	184-0-0-0-0	46-0-0-0-0	245-41-90-8-1	McGehee Silt Loam
Lawrence/ Randolph	6.9	61	166	16	22.0	80-94-120-24-0	123-0-0-12-0	46-0-0-0-0	249-94-120-36-0	Tuckerman/Bosket Fine Sandy Loam
Poinsett	6.7	69	180	25	3.9	80-70-90-24-10	125-0-0-0-0	46-0-0-0-0	251-70-90-24-10	Falaya Silt Loam
Prairie	6.4	21	230	30	15.2	82-92-60-0-0	115-0-0-0-0	46-0-0-0-0	243-92-60-0-0	Stuttgart Silt Loam

**Table 4. Soil test results, applied fertilizer, total fertilizer and soil classification for the 2012 Grain Sorghum Research Verification Fields.**

County	Soil Test (lb/ac)					Applied Fertilizer N-P-K-S-Zn <sup>1</sup> (lb/ac)		Total Applied Fertilizer N-P-K-S-Zn	Soil Classification
	pH	P	K	S	Zn	Preplant	Sidedress		
Desha	6.8	44	138	18	3.0	46-60-100-0-0	90-0-0-21-0	136-60-100-21-0	Herbert Silt Loam
St Francis	5.8	108	368	10	13.8	0-0-0-0-0	110-0-0-0-0	110-0-0-0-0	Dundee Silt Loam

<sup>1</sup> N=nitrogen, P= phosphorus, K=potassium, S=sulfur and Zn=zinc.

**Table 5. Pesticide information for the 2012 Corn Research Verification fields.**

County	Herbicide	Insecticide	Fungicide
Arkansas	3.6 pts Halex GT + 1.5 qt Atrazine – April 18	None	None
Clay	8 oz Banvel + 22 oz Roundup – February 29 1 qt Atrazine + 1 pt Dual – April 2 2.6 oz Callisto + 22 oz Roundup – May 9	None	None
Desha	1.25 pts Salvo + 1.5 pts Glyphosate – January 20 1 pt Dual + 1 qt Atrazine + 18 oz Roundup – April 25	None	None
Drew	0.75 qt Atrazine + 25 oz Touchdown – April 19 3 oz Callisto + 25 oz Touchdown – May 9	None	None
Lawrence/ Randolph	3.6 pts Halex GT + 1.5 qts Atrazine – May 11	None	None
Poinsett	3.6 pts Halex GT + 1.5 qts Atrazine – April 19	None	None
Prairie	1.5 pts Starwarp + 1 qt Atrazine – Mar 30 1.5 qts Atrazine + 1 qt Glyphosate – April 26	None	None

**Table 6. . Pesticide information for the 2012 Grain Sorghum Research Verification field.**

County	Herbicide	Insecticide	Fungicide
Desha	1.25 pts Charger + 1.5 pts Gramoxone – March 29 1.3 qts Atrazine – May 5	None	None
St Francis	1.5 pts Parallel + 32 oz Touchdown – April 2 1.3 qts Atrazine – April 24	None	None

**Table 7. Irrigation information and rainfall for the 2012 Corn Research Verification Fields.**

County	Irrigation Type	Number of Irrigations	Season Rainfall (in)*
Arkansas	Furrow	9	13.91
Clay	Furrow	11	9.35
Desha	Furrow	7	12.95
Drew	Furrow	8	7.62
Lawrence/ Randolph	Furrow	11	7.80
Poinsett	Furrow	9	7.20
Prairie	Furrow	9	8.65

**Table 8. Irrigation information and rainfall for the 2012 Grain Sorghum Research Verification Fields.**

County	Irrigation Type	Number of Irrigations	Season Rainfall (in)*
Desha	Furrow	5	8.40
St Francis	Non Irrigated	---	8.05

\*Rainfall amount measured in verification field by weather stations and represents rainfall from planting until harvest.

## Economic Analysis – Dr. Archie Flanders

This section provides information on production costs for the 2012 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. Production data from the 9 fields (7 corn and 2 grain sorghum) were applied to determine costs and returns above operating costs, as well as total specified costs. Operating costs and total costs per bushel indicate the commodity price needed to meet each costs type.

Operating 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 are used in this analysis. Input prices are determined by data from the 2012 Crop Enterprise Budgets published by the Cooperative Extension Service and information provided by the producer cooperators. Fuel and repair costs for machinery are calculated using a budget calculator based on parameters and standards established by the American Society of Agricultural and Biological Engineers. Machinery repair costs should be regarded as estimated values for full service repairs, and actual cash outlays could differ as producers provide unpaid labor for equipment maintenance.

Ownership costs of machinery are determined by a capital recovery method which determines the amount of money that should be set aside each year to replace the value of equipment used in production. Machinery costs are estimated by applying engineering formulas to representative prices of new equipment. This measure differs from typical depreciation methods, as well as actual annual cash expenses for machinery.

Operating costs, total costs, costs per bushel, and returns are presented in Table 9. Costs in this report do not include land costs, management, or other expenses and fees not associated with production. Budget summaries for corn are presented in Table 10. A summary for the grain sorghum fields is in Table 11. Price received for corn of \$7.10/bu. is the weekly average of Arkansas markets reported by the U.S.D.A. during the harvest period. The corresponding average price for grain sorghum is \$6.25/bu. Average corn yield is 238.2 bu./acre and the average grain sorghum yield is 120.4 bu./acre.

Average operating costs for corn in Table 9 are \$687.62 per acre. Table 10 indicates that fertilizers and nutrients are the largest expense category at \$268.89/acre, or 39% of total operating costs. Seed costs average \$117.79, and irrigation energy costs average \$74.73 per acre.

With average yield of 238.2 bu./acre, average operating costs are \$2.89/bu. Operating costs range from a low of \$653.98 in Drew County to a high of \$741.31 in Arkansas County. Returns to operating costs average \$1,003.60 per acre. Returns to operating costs have a low of \$873.25 in Prairie County and a high of \$1,145.86 in Clay County. Average fixed costs are \$72.99 which leads to average total costs of \$760.61 per acre. Returns to total costs average \$930.61 per acre with a low of \$797.88 in Prairie County and a high of \$1,065.31 in Clay County. Total specified costs average \$3.20/bu.

**Table 9. Operating Costs, Total Costs<sup>1</sup>, Costs per Bushel, and Returns for 2012 CGSRVP**

County	Operating Costs	Operating Costs per Bushel	Returns to Operating Costs	Total Fixed Costs	Total Costs <sup>1</sup>	Returns to Total Costs	Total Costs per Bushel
<b>Corn</b>							
Arkansas	741.31	3.21	895.95	76.23	817.55	819.71	3.55
Clay	656.12	2.59	1,145.86	80.56	736.67	1,065.31	2.90
Desha	666.40	2.71	1,082.33	68.64	735.04	1,013.69	2.98
Drew	653.98	2.79	1,009.55	65.54	719.53	944.00	3.07
Lawrence	737.70	3.04	984.05	79.41	817.10	904.65	3.37
Poinsett	698.93	2.86	1,034.18	65.16	764.09	969.02	3.13
Prairie	658.93	3.05	873.25	75.38	734.30	797.88	3.40
<b>Average</b>	<b>687.62</b>	<b>2.89</b>	<b>1,003.60</b>	<b>72.99</b>	<b>760.61</b>	<b>930.61</b>	<b>3.20</b>
<b>Grain Sorghum</b>							
Desha	375.88	2.53	553.50	49.54	425.41	503.96	2.86
St. Francis	190.90	2.07	384.10	34.42	225.32	349.68	2.45
<b>Average</b>	<b>283.39</b>	<b>2.30</b>	<b>468.80</b>	<b>41.98</b>	<b>325.37</b>	<b>426.82</b>	<b>2.65</b>

<sup>1</sup>Does not include land costs, management, or other expenses and fees not associated with production.

The two grain sorghum fields have average operating costs of \$283.39 per acre which is \$2.30/bu. The field in St. Francis County was not irrigated and received much less fertilizer than the irrigated field in Desha County. With far fewer inputs, the St. Francis County field had a yield of 92.0 bu./acre, 56.7 bu./acre less than the Desha County field. Across both fields, fertilizers and nutrients are 47% of operating costs with an average expense of \$132.71 per acre in Table 11. Returns to operating costs are \$468.80 per acre. Fixed costs are \$41.98, and this leads to total costs of \$325.37, or \$2.65/bu. Returns to total specified costs average \$426.82 per acre.



**Table 10. Corn RVP, Summary of Revenue and Expenses per Acre**

Receipts	County							Average
	Arkansas	Clay	Desha	Drew	Lawrence	Poinsett	Prairie	
Yield (bu.)	230.6	253.8	246.3	234.3	242.5	244.1	215.8	238.2
Price (\$/bu.)	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10
<b>Total Crop Revenue</b>	<b>1,637.26</b>	<b>1,801.98</b>	<b>1,748.73</b>	<b>1,663.53</b>	<b>1,721.75</b>	<b>1,733.11</b>	<b>1,532.18</b>	<b>1,691.22</b>
<b>Operating Expenses</b>								
Seed	124.20	117.30	117.30	117.30	113.85	120.75	113.85	117.79
Fertilizers & Nutrients	306.23	208.08	267.08	249.84	307.27	286.20	257.50	268.89
Herbicides	24.12	55.25	25.93	23.87	24.12	24.12	23.08	28.64
Insecticides	0.00	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	0.00
Custom Applications	39.30	0.00	21.00	32.00	25.00	25.00	25.00	23.90
Diesel Fuel	26.68	28.39	28.26	24.33	26.15	23.89	27.47	26.45
Repairs & Maintenance	22.90	23.38	21.41	19.46	23.07	17.58	21.88	21.39
Irrigation Energy Costs	73.56	89.91	57.21	65.39	89.91	73.56	73.56	74.73
Labor, Field Activities	8.74	10.76	7.99	6.79	7.96	7.74	9.06	8.43
Other Inputs & Fees, Pre-harvest	18.72	16.45	16.77	16.60	18.52	17.57	16.90	17.36
Post-harvest Expenses	96.85	106.60	103.45	98.41	101.85	102.52	90.64	100.04
Custom Harvest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Operating Expenses</b>	<b>741.31</b>	<b>656.12</b>	<b>666.40</b>	<b>653.98</b>	<b>737.70</b>	<b>698.93</b>	<b>658.93</b>	<b>687.62</b>
<b>Returns to Operating Expenses</b>	<b>895.95</b>	<b>1,145.86</b>	<b>1,082.33</b>	<b>1,009.55</b>	<b>984.05</b>	<b>1,034.18</b>	<b>873.25</b>	<b>1,003.60</b>
Land Rent	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Capital Recovery & Fixed Costs	76.23	80.56	68.64	65.54	79.41	65.16	75.38	72.99
<b>Total Specified Expenses<sup>1</sup></b>	<b>817.55</b>	<b>736.67</b>	<b>735.04</b>	<b>719.53</b>	<b>817.10</b>	<b>764.09</b>	<b>734.30</b>	<b>760.61</b>
<b>Returns to Specified Expenses</b>	<b>819.71</b>	<b>1,065.31</b>	<b>1,013.69</b>	<b>944.00</b>	<b>904.65</b>	<b>969.02</b>	<b>797.88</b>	<b>930.61</b>
Operating Expenses/bu.	3.21	2.59	2.71	2.79	3.04	2.86	3.05	2.89
Total Expenses/bu.	3.55	2.90	2.98	3.07	3.37	3.13	3.40	3.20

<sup>1</sup>Does not include land costs, management, or other expenses and fees not associated with production.

**Table 11. Grain Sorghum RVP, Summary of Revenue and Expenses per Acre**

Receipts	County		
	Desha	St. Francis	Average
Yield (bu.)	148.7	92.0	120.4
Price (\$/bu.)	6.25	6.25	6.25
<b>Total Crop Revenue</b>	<b>929.38</b>	<b>575.00</b>	<b>752.19</b>
<b>Operating Expenses</b>			
Seed	18.60	13.95	16.28
Fertilizers & Nutrients	190.35	75.07	132.71
Herbicides	19.13	27.84	23.48
Insecticides	0.00	0.00	0.00
Other Chemicals	0.00	0.00	0.00
Custom Applications	18.00	12.00	15.00
Diesel Fuel	21.92	18.19	20.06
Repairs & Maintenance	14.37	12.80	13.58
Irrigation Energy Costs	40.87	0.00	20.43
Labor, Field Activities	6.96	5.82	6.39
Other Inputs & Fees, Pre-harvest	11.48	4.06	7.77
Post-harvest Expenses	34.20	21.16	27.68
Custom Harvest	0.00	0.00	0.00
<b>Total Operating Expenses</b>	<b>375.88</b>	<b>190.90</b>	<b>283.39</b>
<b>Returns to Operating Expenses</b>	<b>553.50</b>	<b>384.10</b>	<b>468.80</b>
Land Rent	0.00	0.00	0.00
Capital Recovery & Fixed Costs	49.54	34.42	41.98
<b>Total Specified Expenses<sup>1</sup></b>	<b>425.41</b>	<b>225.32</b>	<b>325.37</b>
<b>Returns to Specified Expenses</b>	<b>503.96</b>	<b>349.68</b>	<b>426.82</b>
Operating Expenses/bu.	2.53	2.07	2.30
Total Expenses/bu.	2.86	2.45	2.65

<sup>1</sup>Does not include land costs, management, or other expenses and fees not associated with production.