

**GRAIN SORGHUM, IRRIGATED, STRIP-TILLAGE  
SOUTH GEORGIA, 2009**

**ESTIMATED COSTS AND RETURNS**

Expected Yield 100 Bushels YIELD: YOUR FARM \_\_\_\_\_

| Variable Costs:                          | Unit    | Number of |    | \$/Unit | Cost/Acre        | \$/Bushels     | Your Farm |
|--|---------|-----------|----|---------|------------------|----------------|-----------|
|  |         | Units     |    |         |                  |                |           |
| Seed with Treatment                      | Thous.  | 100.00    | \$ | 0.145   | \$ 14.54         | \$ 0.15        | _____     |
| Cover Crop Seed                          | Bushel  | 1.50      | \$ | 11.000  | \$ 16.50         | \$ 0.17        | _____     |
| Lime                                     | Tons    | 0.25      | \$ | 43.00   | \$ 10.75         | \$ 0.11        | _____     |
| Fertilizer                               |         |           |    |         |                  |                |           |
| Nitrogen                                 | Lbs     | 100.00    | \$ | 0.82    | \$ 82.00         | \$ 0.82        | _____     |
| Phosphate (P2O5)                         | Lbs     | 60.00     | \$ | 0.74    | \$ 44.40         | \$ 0.44        | _____     |
| Potash (K2O)                             | Lbs     | 60.00     | \$ | 0.80    | \$ 48.00         | \$ 0.48        | _____     |
| Weed Control                             |         |           |    |         |                  |                |           |
| Pre-emerge <sup>1</sup> - Dual Magnum    | Acre    | 1.00      | \$ | 11.13   | \$ 11.13         | \$ 0.11        | _____     |
| Post-emerge - Atrazine                   | Acre    | 1.00      | \$ | 6.00    | \$ 6.00          | \$ 0.06        | _____     |
| Insect Control                           | Acre    | 1.00      | \$ | -       | \$ -             | \$ -           | _____     |
| <i>Machinery: Preharvest<sup>2</sup></i> |         |           |    |         |                  |                |           |
| Fuel                                     | Gallon  | 3.05      | \$ | 2.85    | \$ 8.69          | \$ 0.09        | _____     |
| Repairs & Maintenance                    | Acre    | 1.00      | \$ | 6.04    | \$ 6.04          | \$ 0.06        | _____     |
| <i>Machinery: Harvest</i>                |         |           |    |         |                  |                |           |
| Fuel                                     | Gallon  | 2.65      | \$ | 2.85    | \$ 7.55          | \$ 0.08        | _____     |
| Repairs & Maintenance                    | Acre    | 1.00      | \$ | 3.66    | \$ 3.66          | \$ 0.04        | _____     |
| Irrigation <sup>3</sup>                  | Inch    | 2.50      | \$ | 9.55    | \$ 23.88         | \$ 0.24        | _____     |
| Labor                                    | Hrs     | 0.77      | \$ | 11.00   | \$ 8.49          | \$ 0.08        | _____     |
| Crop Insurance                           | Acre    | 1.00      | \$ | 15.00   | \$ 15.00         | \$ 0.15        | _____     |
| Land Rental                              | Acre    | 1.00      | \$ | -       | \$ -             | \$ -           | _____     |
| Interest on Operating capital            | Percent | \$ 153.31 |    | 7.50%   | \$ 11.50         | \$ 0.11        | _____     |
| Drying - 8 points                        | Bushel  | 109.74    | \$ | 0.28    | \$ 30.73         | \$ 0.31        | _____     |
| <b>Total Variable Costs</b>              |         |           |    |         | <b>\$ 348.85</b> | <b>\$ 3.49</b> |           |

| <b>Fixed Costs:</b>   |         |           |    |        |                  |                |       |
|---|---------|-----------|----|--------|------------------|----------------|-------|
| <i>Machinery: Depreciation, Taxes, Insurance, and Housing</i> |         |           |    |        |                  |                |       |
| Preharvest  | Acre    | 1.00      | \$ | 16.65  | \$ 16.65         | \$ 0.17        | _____ |
| Harvest   | Acre    | 1.00      | \$ | 23.75  | \$ 23.75         | \$ 0.24        | _____ |
| General Overhead  | % of VC | \$ 348.85 |    | 5.00%  | \$ 17.44         | \$ 0.17        | _____ |
| Management  | % of VC | \$ 348.85 |    | 5.00%  | \$ 17.44         | \$ 0.17        | _____ |
| Irrigation  | Acre    | 1.00      | \$ | 100.00 | \$ 100.00        | \$ 1.00        | _____ |
| Owned Land Costs; Taxes, Cash Payment, Etc.                   | Acre    | 1.00      | \$ | -      | \$ -             | \$ -           | _____ |
| Other _____   | Acre    | 1.00      | \$ | -      | \$ -             | \$ -           | _____ |
| <b>Total Fixed Costs</b>                                      |         |           |    |        | <b>\$ 175.28</b> | <b>\$ 1.75</b> |       |

**TOTAL COSTS AND PROFIT GOAL**

|  |                  |                |
|--|------------------|----------------|
| <b>Total Costs Excluding Land</b>        | <b>\$ 524.13</b> | <b>\$ 5.24</b> |
| **** YOUR PROFIT GOAL ****               | \$ _____/Bu.     |                |
| <b>\$\$-PRICE NEEDED FOR PROFIT-\$\$</b> | \$ _____/Bu.     |                |

(1) Substituting mechanical cultivation for pre-emerge herbicide application would lower variable cost by \$10 per acre and in fixed costs by \$1.75 per acre.

(2) Planting may also be done with a grain drill in place of row crop planter. Substitution of a planter and rip and bed operation with field cultivation and 20' grain drill would lower variable cost by \$2.65 per acre and lower fixed cost by \$1.60 per

(3) Average of diesel and electric irrigation application costs. Electric is estimated to be \$6/application and diesel is estimated to be \$13.10/application at \$2.85/gallon diesel.

**Sensitivity Analysis of GRAIN SORGHUM, IRRIGATED, STRIP-TILLAGE**

| NET RETURNS ABOVE VARIABLE COSTS PER ACRE |             |            |            |            |           |  |
|---|-------------|------------|------------|------------|-----------|--|
| Varying Prices and Yield (Bushels)        |             |            |            |            |           |  |
| Bu/Acre                                   | -25%        | -10%       | Average    | +10%       | +25%      |  |
|   | 75          | 90         | 100        | 110        | 125       |  |
| \$3.00                                    | \$ (123.85) | \$ (78.85) | \$ (48.85) | \$ (18.85) | \$ 26.15  |  |
| \$3.25                                    | \$ (105.10) | \$ (56.35) | \$ (23.85) | \$ 8.65    | \$ 57.40  |  |
| \$3.50                                    | \$ (86.35)  | \$ (33.85) | \$ 1.15    | \$ 36.15   | \$ 88.65  |  |
| \$3.75                                    | \$ (67.60)  | \$ (11.35) | \$ 26.15   | \$ 63.65   | \$ 119.90 |  |
| \$4.00                                    | \$ (48.85)  | \$ 11.15   | \$ 51.15   | \$ 91.15   | \$ 151.15 |  |

**ESTIMATED LABOR AND MACHINERY COSTS PER ACRE**

| PREHARVEST OPERATIONS   |            |                   |                 |                    |                           |                     |
|---|------------|-------------------|-----------------|--------------------|---------------------------|---------------------|
| Operation   | Acres/Hour | Number Times Over | Labor Use (Hr.) | Fuel Use (Gal./Ac) | Machinery Repairs (\$/Ac) | Fixed Costs (\$/Ac) |
| Spin Spreader5 ton with Tractor (120-139 hp)-2WD 130            | 23.758     | 1.00              | 0.04            | 0.28               | 0.50                      | 1.42                |
| Disk Harrow32' with Tractor (180-199 hp)-MFWD 190               | 16.291     | 1.00              | 0.06            | 0.60               | 1.30                      | 3.78                |
| Spray (Broadcast)60' with Tractor (120-139 hp)-2WD 130          | 35.455     | 1.00              | 0.03            | 0.19               | 0.25                      | 0.61                |
| ST Plant-Rigid6R-36 with Tractor (180-199 hp)-MFWD 190          | 6.873      | 1.00              | 0.15            | 1.42               | 2.80                      | 8.38                |
| Fert Appl (Liquid)6R-36 with Tractor (120-139 hp)-2WD 130       | 18.327     | 1.00              | 0.05            | 0.37               | 0.93                      | 1.84                |
| Spray (Broadcast)60' with Tractor (120-139 hp)-2WD 130          | 35.455     | 1.00              | 0.03            | 0.19               | 0.25                      | 0.61                |
| <b>Total Preharvest Fuel, Repairs, Fixed Costs, &amp; Labor</b> |            |                   | <b>0.36</b>     | <b>3.05</b>        | <b>\$ 6.04</b>            | <b>\$ 16.65</b>     |

| HARVEST OPERATIONS   |            |                   |                 |                    |                           |                     |
|--|------------|-------------------|-----------------|--------------------|---------------------------|---------------------|
| Operation  | Acres/Hour | Number Times Over | Labor Use (Hr.) | Fuel Use (Gal./Ac) | Machinery Repairs (\$/Ac) | Fixed Costs (\$/Ac) |
| Header - Corn6R 36" with Combine (200 249 hp)-240hp          | 6.109      | 1.000             | 0.164           | 2.022              | \$ 3.06                   | \$ 21.20            |
| Corn Grain Cart 8R36500 bu with Tractor (120-139 hp)-2WD 130 | 10.642     | 1.000             | 0.094           | 0.629              | \$ 0.60                   | \$ 2.55             |
| <b>Total Harvest Fuel, Repairs, Fixed Costs, and Labor</b>   |            |                   | <b>0.26</b>     | <b>2.65</b>        | <b>\$ 3.66</b>            | <b>\$ 23.75</b>     |

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