

**Grain Sorghum, Non Irrigated
South Georgia, 2011**

Estimated Costs and Returns

Expected Yield: **65 Bushel** Yield on your farm: _____

| Variable Costs | Unit | Amount | \$/Unit | Cost/Acre | \$/Bushel | Your Farm |
|--|-------------|---------------|----------------|------------------|------------------|------------------|
| Seed | thousand | 50 | \$ 0.145 | \$ 7.25 | \$ 0.11 | _____ |
| Lime | ton | 0.25 | \$ 32.00 | \$ 8.00 | \$ 0.12 | _____ |
| Fertilizer | | | | | | |
| <i>Nitrogen</i> | pound | 80 | \$ 0.60 | \$ 48.00 | \$ 0.74 | _____ |
| <i>Phosphate</i> | pound | 60 | \$ 0.45 | \$ 27.00 | \$ 0.42 | _____ |
| <i>Potash</i> | pound | 60 | \$ 0.50 | \$ 30.00 | \$ 0.46 | _____ |
| Weed Control ^a | acre | 1 | \$ 15.10 | \$ 15.10 | \$ 0.23 | _____ |
| Insect Control | acre | 1 | \$ - | \$ - | \$ - | _____ |
| Disease Control | acre | 1 | \$ - | \$ - | \$ - | _____ |
| Preharvest Machinery ^b | | | | | | |
| <i>Fuel</i> | gallon | 4.8 | \$ 2.85 | \$ 13.56 | \$ 0.21 | _____ |
| <i>Repairs and Maintenance</i> | acre | 1 | \$ 9.27 | \$ 9.27 | \$ 0.14 | _____ |
| Harvest Machinery | | | | | | |
| <i>Fuel</i> | gallon | 2.4 | \$ 2.85 | \$ 6.79 | \$ 0.10 | _____ |
| <i>Repairs and Maintenance</i> | acre | 1 | \$ 4.99 | \$ 4.99 | \$ 0.08 | _____ |
| Labor | hour | 1.0 | \$ 11.25 | \$ 11.23 | \$ 0.17 | _____ |
| Crop Insurance ^c | acre | 1 | \$ 12.50 | \$ 12.50 | \$ 0.19 | _____ |
| Land Rent | acre | 1 | \$ - | \$ - | \$ - | _____ |
| Interest on Operating Capital | percent | \$ 96.85 | 6.5% | \$ 6.30 | \$ 0.10 | _____ |
| Drying - 8 points | | 72 | \$ 0.28 | \$ 20.03 | \$ 0.31 | _____ |
| Total Variable Costs: | | | | \$ 220.03 | \$ 3.39 | |
| Fixed Costs | | | | | | |
| Machinery Depreciation, Taxes, Insurance and Housing | | | | | | |
| <i>Preharvest Machinery</i> ^b | acre | 1 | \$ 24.96 | \$ 24.96 | \$ 0.38 | _____ |
| <i>Harvest Machinery</i> | acre | 1 | \$ 24.20 | \$ 24.20 | \$ 0.37 | _____ |
| General Overhead | % of VC | \$ 220.03 | 5% | \$ 11.00 | \$ 0.17 | _____ |
| Management | % of VC | \$ 220.03 | 5% | \$ 11.00 | \$ 0.17 | _____ |
| Owned Land Cost, Taxes, Cash Payment, etc. | acre | 1 | \$ - | \$ - | \$ - | _____ |
| Other _____ | acre | 1 | \$ - | \$ - | \$ - | _____ |
| Total Fixed Costs | | | | \$ 71.16 | \$ 1.09 | |
| Total Costs Excluding Land | | | | \$ 291.19 | \$ 4.48 | |
| Your Profit Goal | | | | \$ _____ | /Bushel | |
| Price Needed for Profit | | | | \$ _____ | /Bushel | |

^a Substituting mechanical cultivation for pre-emerge herbicide application would lower variable cost by \$9/ac and increase fixed costs by \$1/ac.

^b Planting may also be done with a grain drill. Substitution of a planter and rip & bed operation with field cultivation and 20' grain drill would lower variable cost by \$2.50/ac and fixed cost by 0.25/ac.

^c Assumes Yield Protection at 70% coverage. Revenue Protection at 70% coverage adds \$4-9/ac.

Sensitivity Analysis of Grain Sorghum, Non Irrigated

| Net Returns Above Variable Costs Per Acre | | | | | |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|
| Varying Prices and Yields (Bushel) | | | | | |
| Price \ Bushel/Acre | -25% | -10% | Expected | +10% | +25% |
| | 49 | 59 | 65 | 72 | 81 |
| \$2.50 | -\$98.16 | -\$73.78 | -\$57.53 | -\$41.28 | -\$16.91 |
| \$3.00 | -\$73.78 | -\$44.53 | -\$25.03 | -\$5.53 | \$23.72 |
| \$3.50 | -\$49.41 | -\$15.28 | \$7.47 | \$30.22 | \$64.34 |
| \$4.00 | -\$25.03 | \$13.97 | \$39.97 | \$65.97 | \$104.97 |
| \$4.50 | -\$0.66 | \$43.22 | \$72.47 | \$101.72 | \$145.59 |

Estimated Labor and Machinery Costs per Acre

Preharvest Operations

| Operation | Acres/ Hour | Number of Times Over | Labor Use ^d (hrs/ac) | Fuel Use (gal/ac) | Repairs (\$/ac) | Fixed Costs (\$/ac) |
|--|----------------|----------------------------|---------------------------------------|----------------------|--------------------|---------------------------|
| Heavy Disk 27' with Tractor (180-199 hp) MFWD 190 | 13.2 | 2 | 0.19 | 1.48 | \$ 2.89 | \$ 8.40 |
| Disk & Incorporate 32' with Tractor (180-199 hp) MFWD 190 | 15.3 | 1 | 0.08 | 0.64 | \$ 1.57 | \$ 4.10 |
| Disk Bed (Hipper) 6R-36 with Tractor (180- 199 hp) MFWD 190 | 9.6 | 1 | 0.13 | 1.02 | \$ 1.24 | \$ 3.83 |
| Plant - Rigid 6R-36 with Tractor (120-139 hp) 2WD 130 | 9.5 | 1 | 0.13 | 0.70 | \$ 1.56 | \$ 4.36 |
| Fert Appl (Liquid) 6R-36 with Tractor (120- 139 hp) 2WD 130 | 9.2 | 1 | 0.14 | 0.73 | \$ 1.71 | \$ 3.56 |
| Spray (Broadcast) 60' with Tractor (120-139 hp) 2WD 130 | 35.5 | 1 | 0.04 | 0.19 | \$ 0.30 | \$ 0.71 |
| Total Preharvest Values | | | 0.70 | 4.76 | \$ 9.27 | \$ 24.96 |

Harvest Operations

| Operation | Acres/ Hour | Number of Times Over | Labor Use ^d (hrs/ac) | Fuel Use (gal/ac) | Repairs (\$/ac) | Fixed Costs (\$/ac) |
|--|----------------|----------------------------|---------------------------------------|----------------------|--------------------|---------------------------|
| Header Wheat/Sorghum 18' Rigid with Combine (200-249 hp) 240 hp | 7.0 | 1 | 0.18 | 1.75 | \$ 3.88 | \$ 21.20 |
| Grain Cart Wht/Sor 500 bu with Tractor (120- 139 hp) 2WD 130 | 10.6 | 1 | 0.12 | 0.63 | \$ 1.12 | \$ 3.01 |
| Total Harvest Values | | | 0.29 | 2.38 | \$ 4.99 | \$ 24.20 |

^d Includes unallocated labor factor of 0.25. Unallocated labor factor is percentage allowance for additional labor required to move equipment and hook/unhook implements, etc.

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