

**GRAIN SORGHUM, IRRIGATED STRIP-TILLAGE  
SOUTH GEORGIA, 2008**

**ESTIMATED COSTS AND RETURNS**

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

Variable Costs:	Unit	Number of		\$/Unit	Cost/Acre	\$/Bushels	Your Farm
		Units					
Seed	Thous.	100.00	\$	0.092	\$ 9.20	\$ 0.09	_____
Seed Treatment	Thous.	100.00	\$	0.021	\$ 2.10	\$ 0.02	_____
Cover Crop Seed	Bushel	1.50	\$	11.000	\$ 16.50	\$ 0.17	_____
Lime	Tons	0.25	\$	40.00	\$ 10.00	\$ 0.10	_____
Fertilizer							
Nitrogen	Lbs	100.00	\$	0.53	\$ 53.00	\$ 0.53	_____
Phospate (P2O5)	Lbs	60.00	\$	0.40	\$ 24.00	\$ 0.24	_____
Potash (K2O)	Lbs	60.00	\$	0.30	\$ 18.00	\$ 0.18	_____
Weed Control							
Pre-emerge <sup>1</sup> - Dual Magnum	Acre	1.00	\$	11.50	\$ 11.50	\$ 0.11	_____
Post -emerge - Atrazine	Acre	1.00	\$	3.09	\$ 3.09	\$ 0.03	_____
Insect Control	Acre	1.00	\$	-	\$ -	\$ -	_____
<i>Machinery: Preharvest<sup>2</sup></i>							
Fuel	Gallon	3.41	\$	3.00	\$ 10.24	\$ 0.10	_____
Repairs & Maintenance	Acre	1.00	\$	6.04	\$ 6.04	\$ 0.06	_____
<i>Machinery: Harvest</i>							
Fuel	Gallon	2.65	\$	3.00	\$ 7.95	\$ 0.08	_____
Repairs & Maintenance	Acre	1.00	\$	3.66	\$ 3.66	\$ 0.04	_____
Irrigation <sup>3</sup>	Inch	2.50	\$	13.50	\$ 33.75	\$ 0.34	_____
Labor	Hrs	0.84	\$	10.50	\$ 8.82	\$ 0.09	_____
Crop Insurance	Acre	1.00	\$	12.00	\$ 12.00	\$ 0.12	_____
Land Rental	Acre	1.00	\$	-	\$ -	\$ -	_____
Interest on Operating capital	Percent	\$ 114.92		8.50%	\$ 9.77	\$ 0.10	_____
Drying - 8 points	Bushel	109.74	\$	0.28	\$ 30.73	\$ 0.31	_____
<b>Total Variable Costs</b>					<b>\$ 270.35</b>	<b>\$ 2.70</b>	

<b>Fixed Costs:</b>							
<i>Machinery: Depreciation, Taxes, Insurance, and Housing</i>							
Preharvest	Acre	1.00	\$	16.32	\$ 16.32	\$ 0.16	_____
Harvest	Acre	1.00	\$	23.56	\$ 23.56	\$ 0.24	_____
General Overhead	% of VC	\$ 270.35		5.00%	\$ 13.52	\$ 0.14	_____
Management	% of VC	\$ 270.35		5.00%	\$ 13.52	\$ 0.14	_____
Irrigation	Acre	1.00	\$	90.00	\$ 90.00	\$ 0.90	_____
Owned Land Costs; Taxes, Cash Payment, Etc.	Acre	1.00	\$	-	\$ -	\$ -	_____
Other _____	Acre	1.00	\$	-	\$ -	\$ -	_____
<b>Total Fixed Costs</b>					<b>\$ 156.92</b>	<b>\$ 1.57</b>	

**TOTAL COSTS AND PROFIT GOAL**

<b>Total Costs Excluding Land</b>	<b>\$ 427.27</b>	<b>\$ 4.27</b>
**** YOUR PROFIT GOAL ****	\$ _____/Bu.	
\$\$-PRICE NEEDED FOR PROFIT-\$\$	\$ _____/Bu.	

**FOOTNOTES**

- (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 acre.
- (3) Irrigation application assumes use of diesel power unit. Electric power unit is estimated to be 50% of the cost of \$3.00 per gal 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	\$ (45.35)	\$ (0.35)	\$ 29.65	\$ 59.65	\$ 104.65
\$3.25	\$ (26.60)	\$ 22.15	\$ 54.65	\$ 87.15	\$ 135.90
\$3.50	\$ (7.85)	\$ 44.65	\$ 79.65	\$ 114.65	\$ 167.15
\$3.75	\$ 10.90	\$ 67.15	\$ 104.65	\$ 142.15	\$ 198.40
\$4.00	\$ 29.65	\$ 89.65	\$ 129.65	\$ 169.65	\$ 229.65

**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	1.41
Disk Harrow32' with Tractor (180-199 hp)-MFWD 190	16.291	1.00	0.06	0.60	1.12	3.26
Spray (Broadcast)60' with Tractor (120-139 hp)-2WD 130	35.455	1.00	0.03	0.19	0.26	0.63
ST Plant-Rigid6R-36 with Tractor (180-199 hp)-MFWD 190	6.873	1.00	0.15	1.42	2.43	7.28
Fert Appl (Liquid)6R-36 with Tractor (120-139 hp)-2WD 130	9.164	1.00	0.11	0.73	1.47	3.11
Spray (Broadcast)60' with Tractor (120-139 hp)-2WD 130	35.455	1.00	0.03	0.19	0.26	0.63
<b>Total Preharvest Fuel, Repairs, Fixed Costs, &amp; Labor</b>			<b>0.41</b>	<b>3.41</b>	<b>\$ 6.04</b>	<b>\$ 16.32</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	\$ 21.11
Corn Grain Cart 8R36500 bu with Tractor (120-139 hp)-2WD 130	10.642	1.000	0.094	0.629	\$ 0.60	\$ 2.46
<b>Total Harvest Fuel, Repairs, Fixed Costs, and Labor</b>			<b>0.26</b>	<b>2.65</b>	<b>\$ 3.66</b>	<b>\$ 23.56</b>

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