

**Irrigated Soybeans, Strip Tillage  
South Georgia, 2012**

**Estimated Costs and Returns**

Expected Yield: **60 bushel** Yield Your Farm: \_\_\_\_\_

<b>Variable Costs</b>	<b>Unit</b>	<b>Amount</b>	<b>\$/Unit</b>	<b>Cost/Acre</b>	<b>\$/bushel</b>	<b>Your Farm</b>
Cover Crop Seed	bushel	1.5	\$ 20.00	\$ 30.00	\$ 0.50	_____
Seed	bag	1	\$ 50.00	\$ 50.00	\$ 0.83	_____
Inoculant	acre	1	\$ 3.50	\$ 3.50	\$ 0.06	_____
Lime	ton	0.33	\$ 35.00	\$ 11.55	\$ 0.19	_____
Fertilizer						
<i>Phosphate</i>	pounds	40	\$ 0.50	\$ 20.00	\$ 0.33	_____
<i>Potash</i>	pounds	80	\$ 0.58	\$ 46.40	\$ 0.77	_____
<i>Boron</i>	pounds	0.5	\$ 5.25	\$ 2.63	\$ 0.04	_____
Weed Control *	acre	1	\$ 45.01	\$ 45.01	\$ 0.75	_____
Insect Control	acre	1	\$ 4.70	\$ 4.70	\$ 0.08	_____
Disease Control **	acre	1	\$ 27.60	\$ 27.60	\$ 0.46	_____
Preharvest Machinery ***						
<i>Fuel</i>	gallon	3.1	\$ 3.55	\$ 10.86	\$ 0.18	_____
<i>Repairs and Maintenance</i>	acre	1	\$ 6.23	\$ 6.23	\$ 0.10	_____
Harvest Machinery						
<i>Fuel</i>	gallon	2.4	\$ 3.55	\$ 8.45	\$ 0.14	_____
<i>Repairs and Maintenance</i>	acre	1	\$ 5.79	\$ 5.79	\$ 0.10	_____
Labor	hours	0.7	\$ 11.25	\$ 8.41	\$ 0.14	_____
Irrigation****	applications	4	\$ 11.60	\$ 46.40	\$ 0.77	_____
Crop Insurance	acre	1	\$ 28.00	\$ 28.00	\$ 0.47	_____
Land Rent	acre	1	\$ -	\$ -	\$ -	_____
Interest on Operating Capital	percent	\$ 162.76	6.5%	\$ 10.58	\$ 0.18	_____
<b>Total Variable Costs:</b>				<b>\$ 366.10</b>	<b>\$ 6.10</b>	
<b>Fixed Costs</b>						
Machinery Depreciation, Taxes, Insurance and Housing						
<i>Preharvest Machinery ***</i>	acre	1	\$ 17.59	\$ 17.59	\$ 0.29	_____
<i>Harvest Machinery</i>	acre	1	\$ 27.89	\$ 27.89	\$ 0.46	_____
<i>Irrigation</i>	acre	1	\$ 110.00	\$ 110.00	\$ 1.83	_____
General Overhead	% of VC	\$ 366.10	5%	\$ 18.31	\$ 0.31	_____
Management	% of VC	\$ 366.10	5%	\$ 18.31	\$ 0.31	_____
Owned Land Cost, Taxes, Cash Payment, etc.	acre	1	\$ -	\$ -	\$ -	_____
Other _____	acre	1	\$ -	\$ -	\$ -	_____
<b>Total Fixed Costs</b>				<b>\$ 192.09</b>	<b>\$ 3.20</b>	
<b>Total Costs Excluding Land</b>				<b>\$ 558.19</b>	<b>\$ 9.30</b>	
<b>Your Profit Goal</b>				\$ _____	/bushel	
<b>Price Needed for Profit</b>				\$ _____	/bushel	

\* In the case of Liberty Link Soybeans, add \$4/ac for additional herbicide cost.

\*\* In the case of Asian Soybean Rust or other disease, add \$15-\$30 for additional fungicide sprays.

\*\*\* Rip, strip and plant in one pass. Performing rip, strip and plant as separate operations increases preharvest fuel use by 0.6 gal (\$2.13/ac), labor costs by \$0.77/ac, and repairs by \$0.80/ac. Fixed costs would increase by \$2.30/ac.

\*\*\*\* Average of diesel and electric irrigation application costs. Electric is estimated at \$7/appl and diesel is estimated at \$16.20/appl when diesel costs \$3.55/gal.

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Budget developed by Amanda Smith and Nathan Smith. The authors would like to acknowledge contributions by Jared Whitaker, Eric Prostko, Bob Kemerait, Glen Harris and the Georgia County Extension Agents.

### Sensitivity Analysis of Irrigated Soybeans, Strip Tillage

Net Returns Above Variable Costs Per Acre					
Varying Prices and Yields (bushel)					
Price \ bushel/Acre	-25%	-10%	Expected	+10%	+25%
	45	54	60	66	75
\$9.00	\$38.90	\$119.90	\$173.90	\$227.90	\$308.90
\$10.00	\$83.90	\$173.90	\$233.90	\$293.90	\$383.90
\$11.00	\$128.90	\$227.90	\$293.90	\$359.90	\$458.90
\$12.00	\$173.90	\$281.90	\$353.90	\$425.90	\$533.90
\$13.00	\$218.90	\$335.90	\$413.90	\$491.90	\$608.90

### Estimated Labor and Machinery Costs per Acre Preharvest Operations

Operation	Acres/Hour	Number of Times Over	Labor Use***** (hrs/ac)	Fuel Use (gal/ac)	Repairs (\$/ac)	Fixed Costs (\$/ac)
Spin Spreader 5 ton with Tractor (120-139 hp) 2WD 130	23.8	1	0.05	0.28	\$ 0.56	\$ 1.59
Disk Harrow 32' with Tractor (180-199 hp) MFWD 190	16.3	1	0.08	0.60	\$ 1.41	\$ 4.08
Spray (Broadcast) 60' with Tractor (120-139 hp) 2WD 130	35.5	1	0.04	0.19	\$ 0.34	\$ 0.82
ST Plant Rigid 6R-36 with Tractor (180-199 hp) MFWD 190	6.9	1	0.18	1.42	\$ 2.89	\$ 8.64
Spray (Broadcast) 60' with Tractor (120-139 hp) 2WD 130	35.5	3	0.11	0.57	\$ 1.03	\$ 2.45
<b>Total Preharvest Values</b>			<b>0.45</b>	<b>3.06</b>	<b>\$ 6.23</b>	<b>\$ 17.59</b>

### Harvest Operations

Operation	Acres/Hour	Number of Times Over	Labor Use***** (hrs/ac)	Fuel Use (gal/ac)	Repairs (\$/ac)	Fixed Costs (\$/ac)
Header -Soybean 18' Flex with Combine (200-249 hp) 240 hp	7.0	1	0.18	1.75	\$ 4.57	\$ 24.59
Grain Cart Corn 500 bu with Tractor (120-139 hp) 2WD 130	10.6	1	0.12	0.63	\$ 1.22	\$ 3.29
<b>Total Harvest Values</b>			<b>0.29</b>	<b>2.38</b>	<b>\$ 5.79</b>	<b>\$ 27.89</b>

\*\*\*\*\* 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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