

**CORN, GRAIN
SORGHUM & WHEAT
2020
PLANNING BUDGETS**

**Mississippi State University
Department of Agricultural Economics
Budget Report 2019-03**

October 2019

Foreword

This report is designed to provide necessary planning data to farmers, research and extension staffs, lending agencies, and others in agriculture. Readers are cautioned that returns presented are labeled "**Returns Above Specified Expenses.**" Estimated costs for land, management, and general farm overhead are not included in this report. The exception is unallocated labor, which is included. "**Returns Above Direct Expenses**" should be used in making 2020 planning decisions. This would be a one-year short-run decision. Decisions beyond one year, or long-run decisions, should be based on "**Returns Above Specified Expenses.**"

Acknowledgments

A list of individuals who contributed to the development of the agricultural enterprise budgets follows this acknowledgment. The administrative committee structure and enterprise committees have shown a spirit of cooperation seldom found when so many work together. A team effort has led to many improvements in the budgets over the years.

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The mention in this report of any commercial product does not imply its endorsement by MSU-ES, MAFES, or USDA over other products not named nor does the omission imply they are not satisfactory.

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2020 Planning Budgets

Budgets for Agricultural Enterprises

This publication provides economic and technical information in the form of enterprise budgets for a major crop produced by Mississippi farmers. A multidisciplinary approach involving researchers and extension personnel was used to determine production practices and input quantities, and to estimate costs and returns for each enterprise (14). The purpose of this section is to present the methods and procedures used to calculate costs and returns for each budget included in this publication.

Enterprise budgets represent a type of information that can be used by a wide variety of individuals in making decisions in the food and fiber industry. They are used:

- by farmers for planning,
- by extension personnel in providing educational programs to farmers,
- by lenders as a basis for credit,
- to provide basic data for research, and
- to inform non-farmers of the costs incurred by farmers in the production of food and fiber crops.

A budget should be prepared with a specific objective in mind. The budgets in this report were prepared to provide general information for several different uses. They provide information concerning general levels of costs and returns which will need to be adjusted for specific situations. Most users should think of these budgets as a first approximation and then make appropriate adjustments using the "Your Farm" column provided on each budget to add, delete, or change costs or incomes to reflect their specific situations.

Methods and Procedures

Production Practices

The production practices listed in each budget are the result of a combined effort by researchers and extension personnel to represent those practices that producers could use in a specific production system. Producers might use different practices in their own operations. If different types and quantities of operating inputs are to be used, then the budgeted expenses should be changed to more accurately reflect actual input usage.

Committees made up of appropriate disciplines from the Mississippi Agricultural and Forestry Experiment Station, the Mississippi State University Extension Service, and the U.S. Department of Agriculture review and update the practices in the budgets every year. The updates are based on the collective judgment of the committee members. Quantities of materials and individual production practices budgeted are based on generally accepted recommendations by committee members.

Machinery

Machinery manufacturers form the basis for machinery prices used in these publications. Prices by size of equipment are determined from the most common sales in each category as reported by machinery dealers. Prices used in the budgets reflect prices paid by farmers in 2019. (Appendix Tables 1, 2, and 3).

A performance rate reflects the time required to perform a given task or operation and is expressed as that part of an hour per acre. Previous studies and expert knowledge of the equipment committee members are used to estimate performance rates for new and larger equipment (1, 4, 5, 6, 7, 9, and 13).

The hours of annual use have been modified based on information collected from the cited studies (3, 4, 6, and 7).

Repairs and maintenance as a percentage of new cost are estimated for the life of the equipment and include oil and lubricants (1, 4, and 6).

Estimates of Direct Costs

Direct costs include estimated costs of repairs and maintenance (R&M) for all machinery and include fuel costs for powered machinery (Appendix Tables 1, 2, and 3). Direct costs are estimated on an hourly basis and are then converted to a per-acre basis using the performance rate for the particular operation. R&M costs for towed equipment and powered equipment are estimated as follows:

$$RPH = \frac{RLC \times RP}{THL}$$

$$RPA = RPH \times PR$$

where:

RPH = R&M cost per hour of use
 RLC = Replacement cost of machine
 RP = R&M percentage (percent of RLC)
 THL = Total hours of machine life
 RPA = R&M cost per acre
 PR = Performance rate

Direct costs include an estimate of fuel cost based on average fuel consumption per hour of use for the power unit. Other components of direct costs include quantities of materials used in production multiplied by the price per unit of these inputs, custom rates, hourly wage rates, and interest charges on operating capital (Appendix Tables 4, 5, and 6).

The labor wage rate per hour includes social security, accident and unemployment insurance, and some perquisites (11). Labor costs are estimated for four labor categories: operator labor, hand labor, irrigation labor, and unallocated labor. Operator labor and hand labor represent estimates of labor required to

perform the in-field tasks. Operator labor is that labor required to operate all power-driven equipment. Irrigation labor is used to perform tasks associated with an irrigation system. Unallocated labor is an estimate of labor that is not used directly in producing the enterprise. Its cost is estimated as a percentage of operator labor (11). The percentages used for the various crop enterprises are listed in Appendix Table 6.

Interest on operating capital is determined by using a short-term interest rate obtained from agricultural lenders and making a charge against capital outflows as the production process takes place. Interest is accumulated until the crop is harvested.

Estimates of Fixed Costs

Annual fixed cost estimates for machinery are based on a budgeting technique which computes the annual capital recovery charge (2, p. 143). When a combination of machines or equipment is required to perform a single operation, the total cost per acre for all equipment used in the operation is estimated. The fixed cost of machinery ownership is calculated by first computing the capital recovery factor and then using it to estimate the annual capital recovery charge.

$$CRF = \frac{IIR}{1 - (1 + IIR)^{-TYL}}$$

where:

CRF = Capital recovery factor
 IIR = Intermediate-term interest rate
 TYL = Total years of life

$$CRCPY = [(RLC - SV) \times CRF] + (SV \times IIR)$$

where:

CRCPY = Capital recovery charge per year
 RLC = Replacement cost
 SV = Salvage value (at end of useful life)

This value is then converted to its per-hour and per-acre equivalent values:

$$\text{CRCPH} = \frac{\text{CRCPY}}{\text{HAU}}$$

$$\text{CRCPA} = \text{CRCPH} \times \text{PR}$$

where:

CRCPH = Capital recovery charge per hour

HAU = Hours of annual use

CRCPA = Capital recovery charge per acre

PR = Performance rate

Estimates of Returns

It is difficult to estimate crop yields that may be expected for a particular production system in a given year. Crop yields used in the budgets are representative of historical yields modified to match the production system used to produce the yield. All yields including conventional, no-tillage, irrigation, and double-cropping are tempered with unpublished research and judgments of the commodity committees. Producers should use yield estimates that are reflective of their own operation.

To estimate returns, a price for the commodity must be used. Individual producers must determine their own expected price for the commodity. Commodity prices used in this report represent the higher of a calculated forward contract price or the loan rate that was applicable for the 2019 crop year. Government payments for commodities are not included in the budgets except to the extent that they are included in loan rates.

The futures price for an appropriate contract month is determined by averaging the closing prices for the first five trading days in October. The basis is determined by subtracting the average daily cash price for the month of October from the average daily closing price of the specified harvest month futures contract. These average futures prices and the basis adjustments are presented in Appendix Table 7.

A special table is presented to illustrate the effects of alternative levels of yields and prices on net returns. The budgeted yield and the budgeted price are used as base values (100 percent). Yields are then varied from 50 to 150 percent of the base yield while prices are varied from 75 to 125 percent of the base price. Net returns are computed for each combination of yield and price.

Irrigation Costs

Estimated costs of various irrigation systems are presented in Appendix Tables 8 and 9. A dryland crop budget may be converted to an irrigated crop budget by adding the appropriate direct and fixed costs to the costs of the dryland crop. Also, adjustments in crop yields and other costs may be required with the addition of supplemental irrigation.

Net Returns

Net returns are generally considered to be the amount left after subtracting all costs from all incomes for a particular enterprise. In these budgets, "RETURNS ABOVE DIRECT EXPENSES" and "RETURNS ABOVE TOTAL SPECIFIED EXPENSES" are used as a proxy for the economic concepts of net returns above variable costs and net returns above variable plus fixed costs, respectively. Some items are intentionally left out of these calculations, i.e., costs for land or land rent, taxes, insurance premiums, general farm overhead, and expected incomes from government payments or insurance payments. These costs and incomes vary widely among farms and farm situations so as to make routine calculation for representative situations impractical. These items should, however, be considered by each producer and factored into the final budget each producer develops for his own situation.

Enterprise Budgets

Table 1.A Estimated costs per acre
 Corn, stale seedbed, BtRR, 12-row 38", 220 bu yield goal
 Furrow Irrigated, 13 ac-in., Delta Area, Mississippi, 2020

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air (5 gal)	appl	7.00	1.0000	7.00	_____
App by Air (3 gal)	appl	5.50	0.2000	1.10	_____
FERTILIZERS					
Phosphorus(46% P2O5)	cwt	18.11	1.9570	35.44	_____
Potash (60% K2O)	cwt	27.50	1.5000	41.25	_____
Fert 10-34-0	gal	2.90	4.0000	11.60	_____
Zinc Plus	pt	2.99	2.0000	5.98	_____
UAN + Sulfur (28%)	gal	1.39	32.1712	44.72	_____
UAN (32%)	gal	1.51	39.5570	59.73	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
Clarity	pt	11.60	0.5000	5.80	_____
Select Max	pt	10.87	1.0000	10.87	_____
Atrazine 4L	pt	2.09	4.0000	8.36	_____
Halex GT	pt	6.24	3.6000	22.46	_____
INSECTICIDES					
Bifenthrin	oz	0.82	1.2800	1.05	_____
IRRIGATION SUPPLIES					
Roll-Out Pipe	ft	0.24	33.0000	7.92	_____
SEED/PLANTS					
Corn Seed BtRR	thous	3.50	34.0000	119.00	_____
CUSTOM FERTILIZE					
Custom Apply Fert	acre	7.50	1.0000	7.50	_____
HAULING					
Haul Corn	bu	0.23	220.0000	50.60	_____
CUSTOM LIME					
Lime (Spread)	ton	43.00	0.6660	28.64	_____
CROP CONSULTANT					
Corn Consultant	acre	6.00	1.0000	6.00	_____
SOIL TEST					
Soil Test	acre	10.00	0.3330	3.33	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.4242	6.47	_____
Harvesters	hour	15.22	0.1009	1.54	_____
IRRIGATE LABOR					
Special Labor	hour	9.06	0.3250	2.96	_____
Implements	hour	9.06	0.0625	0.57	_____
HAND LABOR					
Implements	hour	9.06	0.1354	1.22	_____
UNALLOCATED LABOR					
	hour	15.24	0.4020	6.13	_____
DIESEL FUEL					
Tractors	gal	2.30	4.7302	10.87	_____
Harvesters	gal	2.30	1.6890	3.88	_____
Roll-Out Pipe Irr.	gal	2.30	10.5901	24.36	_____
REPAIR & MAINTENANCE					
Implements	acre	8.23	1.0000	8.23	_____
Tractors	acre	2.88	1.0000	2.88	_____
Harvesters	acre	4.03	1.0000	4.03	_____
Roll-Out Pipe Irr.	acre	6.88	1.0000	6.88	_____
INTEREST ON OP. CAP.	acre	16.38	1.0000	16.38	_____
TOTAL DIRECT EXPENSES				579.23	_____
FIXED EXPENSES					
Implements	acre	14.17	1.0000	14.17	_____
Tractors	acre	19.55	1.0000	19.55	_____
Harvesters	acre	17.09	1.0000	17.09	_____
Roll-Out Pipe Irr.	acre	60.69	1.0000	60.69	_____
TOTAL FIXED EXPENSES				111.50	_____
TOTAL SPECIFIED EXPENSES				690.73	_____

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 1.B Summary of estimated costs and returns per acre
 Corn, stale seedbed, BtRR, 12-row 38", 220 bu yield goal
 Furrow Irrigated, 13 ac-in., Delta Area, Mississippi, 2020

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.86	220.0000	849.20	_____

TOTAL INCOME				849.20	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	8.10	1.0000	8.10	_____
FERTILIZERS	acre	198.72	1.0000	198.72	_____
HERBICIDES	acre	51.97	1.0000	51.97	_____
INSECTICIDES	acre	1.05	1.0000	1.05	_____
IRRIGATION SUPPLIES	acre	7.92	1.0000	7.92	_____
SEED/PLANTS	acre	119.00	1.0000	119.00	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	50.60	1.0000	50.60	_____
CUSTOM LIME	acre	28.64	1.0000	28.64	_____
CROP CONSULTANT	acre	6.00	1.0000	6.00	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1354	1.22	_____
IRRIGATE LABOR	hour	9.06	0.3875	3.53	_____
OPERATOR LABOR	hour	15.22	0.5252	8.01	_____
UNALLOCATED LABOR	hour	15.24	0.4020	6.13	_____
DIESEL FUEL	gal	2.30	17.0094	39.11	_____
REPAIR & MAINTENANCE	acre	22.02	1.0000	22.02	_____
INTEREST ON OP. CAP.	acre	16.38	1.0000	16.38	_____

TOTAL DIRECT EXPENSES				579.23	_____
RETURNS ABOVE DIRECT EXPENSES				269.97	_____
TOTAL FIXED EXPENSES				111.50	_____

TOTAL SPECIFIED EXPENSES				690.73	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				158.47	_____

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.
Soil test cost is prorated for a test every 3rd year.
Lime cost prorated for application every 3rd year.

Table 1.C Estimated resource use for field operations, per acre
 Corn, stale seedbed, BtRR, 12-row 38", 220 bu yield goal
 Furrow Irrigated, 13 ac-in., Delta Area, Mississippi, 2020

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	INPUT AMOUNT	IMPLEMENT	POWER UNIT	ALLOC LABOR	UNALL LABOR
-----hours-----										
Soil Test	acre			0.33	Oct	0.3330				
Lime (Spread)	ton			0.33	Oct	0.6660				
Spin Spreader	5 ton	MFWD 225	0.042	1.00	Oct		0.04	0.04	0.08	0.03
Phosphorus (46% P2O5)	cwt					1.9570				
Potash (60% K2O)	cwt					1.5000				
Bed/Disk w/roller	12R-30/40	MFWD 225	0.062	1.00	Oct		0.06	0.06	0.06	0.05
App by Air (5 gal)	appl			1.00	Feb	1.0000				
Glyphosate 3lbs a.e	oz					32.0000				
Clarity	pt					0.5000				
Select Max	pt					1.0000				
Plant & Pre-Folding	12R-38	MFWD 225	0.053	1.00	Mar		0.05	0.05	0.10	0.04
Corn Seed BtRR	thous					34.0000				
Fert 10-34-0	gal					4.0000				
Zinc Plus	pt					2.0000				
Custom Apply Fert	acre			1.00	Apr	1.0000				
UAN + Sulfur (28%)	gal					32.1712				
Spray (Broadcast)	60'	MFWD 225	0.028	1.00	Apr		0.02	0.02	0.04	0.02
Atrazine 4L	pt					4.0000				
Halex GT	pt					3.6000				
App by Air (3 gal)	appl			0.20	May	0.2000				
Bifenthrin	oz					1.2800				
Corn Consultant	acre			1.00	May	1.0000				
Fert Appl (Liquid)	12R-38	MFWD 225	0.051	1.00	May		0.05	0.05	0.07	0.04
UAN (32%)	gal					39.5570				
Header - Corn	8R-38	325 hp	0.100	1.00	Sep		0.10	0.10	0.10	0.09
Grain Cart Corn	700 bu	MFWD 225	0.025	1.00	Sep		0.02	0.02	0.02	0.02
Haul Corn	bu					220.0000				
Stalk Shredder Flex	20'	MFWD 225	0.082	1.00	Sep		0.08	0.08	0.08	0.07
Roll-Out Pipe Irr.	acre				Jul	1.0000	0.07	0.07	0.46	
TOTALS							0.52	0.52	1.04	0.40

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 1.D Estimated costs for field operations, per acre
 Corn, stale seedbed, BtRR, 12-row 38", 220 bu yield goal
 Furrow Irrigated, 13 ac-in., Delta Area, Mississippi, 2020

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----							FIXED COST	TOTAL COST	
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL			
-----dollars-----											
Soil Test	acre	3.33						0.17	3.50		3.50
Lime (Spread)	ton	28.64						1.50	30.14		30.14
Spin Spreader	5 ton		1.12	0.61	1.60			0.17	3.50	2.70	6.20
Phosphorus (46% P2O5)	cwt	35.44						1.86	37.30		37.30
Potash (60% K2O)	cwt	41.25						2.17	43.42		43.42
Bed/Disk w/roller	12R-30/40		1.66	1.30	1.81			0.25	5.02	5.50	10.52
App by Air (5 gal)	appl	7.00						0.25	7.25		7.25
Glyphosate 3lbs a.e	oz	4.48						0.16	4.64		4.64
Clarity	pt	5.80						0.20	6.00		6.00
Select Max	pt	10.87						0.38	11.25		11.25
Plant & Pre-Folding	12R-38		1.42	2.16	2.02			0.17	5.77	6.30	12.07
Corn Seed BtRR	thous	119.00						3.64	122.64		122.64
Fert 10-34-0	gal	11.60						0.36	11.96		11.96
Zinc Plus	pt	5.98						0.18	6.16		6.16
Custom Apply Fert	acre	7.50						0.20	7.70		7.70
UAN + Sulfur (28%)	gal	44.72						1.17	45.89		45.89
Spray (Broadcast)	60'		0.75	0.41	0.95			0.06	2.17	1.63	3.80
Atrazine 4L	pt	8.36						0.22	8.58		8.58
Halex GT	pt	22.46						0.59	23.05		23.05
App by Air (3 gal)	appl	1.10						0.02	1.12		1.12
Bifenthrin	oz	1.05						0.02	1.07		1.07
Corn Consultant	acre	6.00						0.13	6.13		6.13
Fert Appl (Liquid)	12R-38		1.38	1.11	1.73			0.09	4.31	3.41	7.72
UAN (32%)	gal	59.73						1.31	61.04		61.04
Header - Corn	8R-38		3.88	5.72	2.92			0.05	12.57	19.85	32.42
Grain Cart Corn	700 bu		0.67	0.44	0.74			0.01	1.86	1.71	3.57
Haul Corn	bu	50.60						0.22	50.82		50.82
Stalk Shredder Flex	20'		2.20	2.77	2.39			0.03	7.39	5.41	12.80
Roll-Out Pipe Irr.	acre	7.92	26.03	7.50	4.73			0.80	46.98	64.99	111.97
TOTALS		482.83	39.11	22.02	18.89	0.00	16.38	579.23	111.50	690.73	

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 1.E Estimated monthly income and expense flows per acre
 Corn, stale seedbed, BtRR, 12-row 38", 220 bu yield goal
 Furrow Irrigated, 13 ac-in., Delta Area, Mississippi, 2020

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
-----dollars-----												
TOTAL INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	849.20
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	7.00	0.00	0.00	1.10	0.00	0.00	0.00	0.00
FERTILIZERS	76.69	0.00	0.00	0.00	0.00	17.58	44.72	59.73	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	21.15	0.00	30.82	0.00	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.05	0.00	0.00	0.00	0.00
IRRIGATION SUPPLIES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.92	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	119.00	0.00	0.00	0.00	0.00	0.00	0.00
CUSTOM FERTILIZE	0.00	0.00	0.00	0.00	0.00	0.00	7.50	0.00	0.00	0.00	0.00	0.00
HAULING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.60
CUSTOM LIME	28.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CROP CONSULTANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00	0.00
SOIL TEST	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LABOR	3.99	0.00	0.00	0.00	0.00	2.02	0.95	1.96	3.06	0.23	0.63	6.05
LEASE *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUEL	3.63	0.00	0.00	0.00	0.00	1.42	0.75	1.38	18.71	6.09	0.38	6.75
REPAIR & MAINTENANCE	2.21	0.00	0.00	0.00	0.00	2.16	0.41	1.11	6.07	0.98	0.15	8.93
INTEREST ON OP. CAP.	6.21	0.00	0.00	0.00	0.99	4.35	2.24	1.58	0.60	0.09	0.01	0.31
TOTAL DIRECT EXPENSES	124.70	0.00	0.00	0.00	29.14	146.53	87.39	73.91	36.36	7.39	1.17	72.64
NET INCOME	-124.70	0.00	0.00	0.00	-29.14	-146.53	-87.39	-73.91	-36.36	-7.39	-1.17	776.56
NET INCOME TO DATE	-124.70	-124.70	-124.70	-124.70	-153.84	-300.37	-387.76	-461.67	-498.03	-505.42	-506.59	269.97

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

* Lease costs are based on hourly usage costs.

Table 1.F Estimated returns for various price/yield combinations, per acre
 Corn, stale seedbed, BtRR, 12-row 38", 220 bu yield goal
 Furrow Irrigated, 13 ac-in., Delta Area, Mississippi, 2020

PRODUCT	PERCENT													
	75	80	85	90	95	100	105	110	115	120	125			
	PRODUCT PRICE													
Corn	2.89	3.08	3.28	3.47	3.66	3.86	4.05	4.24	4.43	4.63	4.82			
PERCENT	YIELD	UNIT	dollars											
50	110.00	bu	-235 -346	-214 -325	-192 -304	-171 -283	-150 -261	-129 -240	-107 -219	-86 -198	-65 -177	-44 -155	-23 -134	
60	132.00	bu	-176 -288	-151 -262	-125 -237	-100 -211	-74 -186	-49 -160	-23 -135	1 -109	27 -84	52 -58	77 -33	
70	154.00	bu	-118 -229	-88 -199	-58 -170	-28 -140	0 -110	30 -81	60 -51	89 -21	119 8	149 37	179 67	
80	176.00	bu	-59 -171	-25 -137	8 -103	42 -69	76 -35	110 -1	144 32	178 66	212 100	246 134	280 168	
90	198.00	bu	-0 -112	37 -74	75 -36	113 2	151 40	190 78	228 116	266 155	304 193	342 231	381 269	
100	220.00	bu	57 -53	100 -11	142 31	185 73	227 116	269 158	312 200	354 243	397 285	439 328	482 370	
110	242.00	bu	116 4	162 51	209 98	256 144	303 191	349 238	396 285	443 331	489 378	536 425	583 471	
120	264.00	bu	174 63	225 114	276 165	327 216	378 267	429 318	480 369	531 420	582 471	633 521	684 572	
130	286.00	bu	233 121	288 177	343 232	399 287	454 342	509 397	564 453	619 508	675 563	730 618	785 673	
140	308.00	bu	292 180	351 240	410 299	470 358	529 418	589 477	648 537	708 596	767 656	827 715	886 775	
150	330.00	bu	350 239	414 302	478 366	541 430	605 493	669 557	732 621	796 685	860 748	923 812	987 876	

The top number in each cell is Returns Above Direct Expenses.
 The bottom number in each cell is Returns Above Total Specified Expenses.
 Only the product listed has been varied to calculate net returns.
 Note: Cost of production estimates are based on 2019 input prices.

Table 2.A Estimated costs per acre
 Corn, stale seedbed, BtRR, non-irrigated, 12row 38"
 170 bu yield goal, Delta Area, Mississippi, 2020

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air (5 gal)	appl	7.00	1.0000	7.00	_____
App by Air (3 gal)	appl	5.50	0.2000	1.10	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	18.11	1.6300	29.52	_____
Potash (60% K2O)	cwt	27.50	1.2500	34.38	_____
Fert 10-34-0	gal	2.90	4.0000	11.60	_____
Zinc Plus	pt	2.99	2.0000	5.98	_____
UAN + Sulfur (28%)	gal	1.39	19.3063	26.84	_____
UAN (32%)	gal	1.51	36.7200	55.45	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
Clarity	pt	11.60	0.5000	5.80	_____
Select Max	pt	10.87	1.0000	10.87	_____
Atrazine 4L	pt	2.09	4.0000	8.36	_____
Halex GT	pt	6.24	3.6000	22.46	_____
INSECTICIDES					
Bifenthrin	oz	0.82	1.2800	1.05	_____
SEED/PLANTS					
Corn Seed BtRR	thous	3.50	28.0000	98.00	_____
CUSTOM FERTILIZE					
Custom Apply Fert	acre	7.50	1.0000	7.50	_____
HAULING					
Haul Corn	bu	0.23	170.0000	39.10	_____
CUSTOM LIME					
Lime (Spread)	ton	43.00	0.6660	28.64	_____
CROP CONSULTANT					
Corn Consultant	acre	6.00	1.0000	6.00	_____
SOIL TEST					
Soil Test	acre	10.00	0.3330	3.33	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.3457	5.27	_____
Harvesters	hour	15.22	0.1009	1.54	_____
HAND LABOR					
Implements	hour	9.06	0.1354	1.22	_____
UNALLOCATED LABOR	hour	15.24	0.4020	6.13	_____
DIESEL FUEL					
Tractors	gal	2.30	4.0040	9.20	_____
Harvesters	gal	2.30	1.3770	3.17	_____
REPAIR & MAINTENANCE					
Implements	acre	8.03	1.0000	8.03	_____
Tractors	acre	2.46	1.0000	2.46	_____
Harvesters	acre	3.70	1.0000	3.70	_____
INTEREST ON OP. CAP.	acre	13.64	1.0000	13.64	_____
TOTAL DIRECT EXPENSES				461.82	_____
FIXED EXPENSES					
Implements	acre	12.73	1.0000	12.73	_____
Tractors	acre	16.69	1.0000	16.69	_____
Harvesters	acre	15.71	1.0000	15.71	_____
TOTAL FIXED EXPENSES				45.13	_____
TOTAL SPECIFIED EXPENSES				506.95	_____

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 2.B Summary of estimated costs and returns per acre
 Corn, stale seedbed, BtRR, non-irrigated, 12row 38"
 170 bu yield goal, Delta Area, Mississippi, 2020

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.86	170.0000	656.20	_____

TOTAL INCOME				656.20	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	8.10	1.0000	8.10	_____
FERTILIZERS	acre	163.77	1.0000	163.77	_____
HERBICIDES	acre	51.97	1.0000	51.97	_____
INSECTICIDES	acre	1.05	1.0000	1.05	_____
SEED/PLANTS	acre	98.00	1.0000	98.00	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	39.10	1.0000	39.10	_____
CUSTOM LIME	acre	28.64	1.0000	28.64	_____
CROP CONSULTANT	acre	6.00	1.0000	6.00	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1354	1.22	_____
OPERATOR LABOR	hour	15.22	0.4466	6.81	_____
UNALLOCATED LABOR	hour	15.24	0.4020	6.13	_____
DIESEL FUEL	gal	2.30	5.3810	12.37	_____
REPAIR & MAINTENANCE	acre	14.19	1.0000	14.19	_____
INTEREST ON OP. CAP.	acre	13.64	1.0000	13.64	_____

TOTAL DIRECT EXPENSES				461.82	_____
RETURNS ABOVE DIRECT EXPENSES				194.38	_____
TOTAL FIXED EXPENSES				45.13	_____

TOTAL SPECIFIED EXPENSES				506.95	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				149.25	_____

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 1.C Estimated resource use for field operations, per acre
 Corn, stale seedbed, BtRR, 12-row 38", 220 bu yield goal
 Furrow Irrigated, 13 ac-in., Delta Area, Mississippi, 2020

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	INPUT AMOUNT	IMPLEMENT	POWER UNIT	ALLOC LABOR	UNALL LABOR
							-----hours-----			
Soil Test	acre			0.33	Oct	0.3330				
Lime (Spread)	ton			0.33	Oct	0.6660				
Spin Spreader	5 ton	MFWD 225	0.042	1.00	Oct		0.04	0.04	0.08	0.03
Phosphorus (46% P2O5)	cwt					1.9570				
Potash (60% K2O)	cwt					1.5000				
Bed/Disk w/roller	12R-30/40	MFWD 225	0.062	1.00	Oct		0.06	0.06	0.06	0.05
App by Air (5 gal)	appl			1.00	Feb	1.0000				
Glyphosate 3lbs a.e	oz					32.0000				
Clarity	pt					0.5000				
Select Max	pt					1.0000				
Plant & Pre-Folding	12R-38	MFWD 225	0.053	1.00	Mar		0.05	0.05	0.10	0.04
Corn Seed BtRR	thous					34.0000				
Fert 10-34-0	gal					4.0000				
Zinc Plus	pt					2.0000				
Custom Apply Fert	acre			1.00	Apr	1.0000				
UAN + Sulfur (28%)	gal					32.1712				
Spray (Broadcast)	60'	MFWD 225	0.028	1.00	Apr		0.02	0.02	0.04	0.02
Atrazine 4L	pt					4.0000				
Halex GT	pt					3.6000				
App by Air (3 gal)	appl			0.20	May	0.2000				
Bifenthrin	oz					1.2800				
Corn Consultant	acre			1.00	May	1.0000				
Fert Appl (Liquid)	12R-38	MFWD 225	0.051	1.00	May		0.05	0.05	0.07	0.04
UAN (32%)	gal					39.5570				
Header - Corn	8R-38	325 hp	0.100	1.00	Sep		0.10	0.10	0.10	0.09
Grain Cart Corn	700 bu	MFWD 225	0.025	1.00	Sep		0.02	0.02	0.02	0.02
Haul Corn	bu					220.0000				
Stalk Shredder Flex	20'	MFWD 225	0.082	1.00	Sep		0.08	0.08	0.08	0.07
Roll-Out Pipe Irr.	acre				Jul	1.0000	0.07	0.07	0.46	
TOTALS							0.52	0.52	1.04	0.40

Note: Cost of production estimates are based on 2019 input prices
 Note: Cost of production estimates are based on 2018 input prices.

Fertilization decisions should be based on soil tests.
Soil test cost is prorated for a test every 3rd year.
Lime cost prorated for application every 3rd year.

Table 2.D Estimated costs for field operations, per acre
 Corn, stale seedbed, BtRR, non-irrigated, 12row 38"
 170 bu yield goal, Delta Area, Mississippi, 2020

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----							FIXED COST	TOTAL COST	
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL			
-----dollars-----											
Soil Test	acre	3.33						0.17	3.50		3.50
Lime (Spread)	ton	28.64						1.50	30.14		30.14
Spin Spreader	5 ton		1.12	0.61	1.60			0.17	3.50	2.70	6.20
Phosphorus(46% P2O5)	cwt	29.52						1.55	31.07		31.07
Potash (60% K2O)	cwt	34.38						1.80	36.18		36.18
Bed/Disk w/roller	12R-30/40		1.66	1.30	1.81			0.25	5.02	5.50	10.52
App by Air (5 gal)	appl	7.00						0.25	7.25		7.25
Glyphosate 3lbs a.e	oz	4.48						0.16	4.64		4.64
Clarity	pt	5.80						0.20	6.00		6.00
Select Max	pt	10.87						0.38	11.25		11.25
Plant & Pre-Folding	12R-38		1.42	2.16	2.02			0.17	5.77	6.30	12.07
Corn Seed BtRR	thous	98.00						3.00	101.00		101.00
Fert 10-34-0	gal	11.60						0.36	11.96		11.96
Zinc Plus	pt	5.98						0.18	6.16		6.16
Custom Apply Fert	acre	7.50						0.20	7.70		7.70
UAN + Sulfur (28%)	gal	26.84						0.70	27.54		27.54
Spray (Broadcast)	60'		0.75	0.41	0.95			0.06	2.17	1.63	3.80
Atrazine 4L	pt	8.36						0.22	8.58		8.58
Halex GT	pt	22.46						0.59	23.05		23.05
App by Air (3 gal)	appl	1.10						0.02	1.12		1.12
Bifenthrin	oz	1.05						0.02	1.07		1.07
Corn Consultant	acre	6.00						0.13	6.13		6.13
Fert Appl (Liquid)	12R-38		1.38	1.11	1.73			0.09	4.31	3.41	7.72
UAN (32%)	gal	55.45						1.21	56.66		56.66
Header - Corn	8R-38		3.17	5.39	2.92			0.05	11.53	18.47	30.00
Grain Cart Corn	700 bu		0.67	0.44	0.74			0.01	1.86	1.71	3.57
Haul Corn	bu	39.10						0.17	39.27		39.27
Stalk Shredder Flex	20'		2.20	2.77	2.39			0.03	7.39	5.41	12.80
TOTALS		407.46	12.37	14.19	14.16	0.00	13.64	461.82	45.13	506.95	

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 2.E Estimated monthly income and expense flows per acre
 Corn, stale seedbed, BtRR, non-irrigated, 12row 38"
 170 bu yield goal, Delta Area, Mississippi, 2020

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
-----dollars-----												
TOTAL INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	656.20
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	7.00	0.00	0.00	1.10	0.00	0.00	0.00	0.00
FERTILIZERS	63.90	0.00	0.00	0.00	0.00	17.58	26.84	55.45	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	21.15	0.00	30.82	0.00	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.05	0.00	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	98.00	0.00	0.00	0.00	0.00	0.00	0.00
CUSTOM FERTILIZE	0.00	0.00	0.00	0.00	0.00	0.00	7.50	0.00	0.00	0.00	0.00	0.00
HAULING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.10
CUSTOM LIME	28.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CROP CONSULTANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00	0.00
SOIL TEST	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LABOR	3.41	0.00	0.00	0.00	0.00	2.02	0.95	1.73	0.00	0.00	0.00	6.05
LEASE *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUEL	2.78	0.00	0.00	0.00	0.00	1.42	0.75	1.38	0.00	0.00	0.00	6.04
REPAIR & MAINTENANCE	1.91	0.00	0.00	0.00	0.00	2.16	0.41	1.11	0.00	0.00	0.00	8.60
INTEREST ON OP. CAP.	5.44	0.00	0.00	0.00	0.99	3.71	1.77	1.47	0.00	0.00	0.00	0.26
TOTAL DIRECT EXPENSES	109.41	0.00	0.00	0.00	29.14	124.89	69.04	69.29	0.00	0.00	0.00	60.05
NET INCOME	-109.41	0.00	0.00	0.00	-29.14	-124.89	-69.04	-69.29	0.00	0.00	0.00	596.15
NET INCOME TO DATE	-109.41	-109.41	-109.41	-109.41	-138.55	-263.44	-332.48	-401.77	-401.77	-401.77	-401.77	194.38

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

* Lease costs are based on hourly usage costs.

Table 2.F Estimated returns for various price/yield combinations, per acre
 Corn, stale seedbed, BtRR, non-irrigated, 12row 38"
 170 bu yield goal, Delta Area, Mississippi, 2020

PRODUCT			PERCENT										
			75	80	85	90	95	100	105	110	115	120	125
			PRODUCT PRICE										
Corn			2.89	3.08	3.28	3.47	3.66	3.86	4.05	4.24	4.43	4.63	4.82
PERCENT	YIELD	UNIT	dollars										
50	85.00	bu	-196 -241	-179 -224	-163 -208	-146 -192	-130 -175	-114 -159	-97 -142	-81 -126	-64 -110	-48 -93	-32 -77
60	102.00	bu	-150 -195	-131 -176	-111 -156	-91 -136	-72 -117	-52 -97	-32 -77	-13 -58	6 -38	26 -18	46 0
70	119.00	bu	-105 -150	-82 -127	-59 -104	-36 -81	-13 -58	9 -35	32 -12	55 10	78 33	101 56	124 79
80	136.00	bu	-60 -105	-33 -79	-7 -52	18 -26	44 -0	70 25	97 52	123 78	149 104	175 130	202 157
90	153.00	bu	-14 -60	14 -30	44 -1	73 28	103 58	132 87	162 117	191 146	221 176	250 205	280 235
100	170.00	bu	30 -14	63 18	95 50	128 83	161 116	194 149	227 182	260 214	292 247	325 280	358 313
110	187.00	bu	75 30	111 66	147 102	183 138	219 174	256 210	292 247	328 283	364 319	400 355	436 391
120	204.00	bu	120 75	160 115	199 154	239 193	278 233	317 272	357 312	396 351	435 390	475 430	514 469
130	221.00	bu	166 121	208 163	251 206	294 249	336 291	379 334	422 376	464 419	507 462	550 504	592 547
140	238.00	bu	211 166	257 212	303 258	349 304	395 350	441 396	487 441	533 487	578 533	624 579	670 625
150	255.00	bu	256 211	305 260	355 310	404 359	453 408	502 457	552 506	601 556	650 605	699 654	748 703

The top number in each cell is Returns Above Direct Expenses.
 The bottom number in each cell is Returns Above Total Specified Expenses.
 Only the product listed has been varied to calculate net returns.
 Note: Cost of production estimates are based on 2019 input prices.

Table 3.A Estimated costs per acre
 Corn, conventional tillage, RR2 seed, 12-row 38",
 220 bu yld goal, furrow irrigated, 13 ac-in., Delta Area, Mississippi, 2020

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air (5 gal)	appl	7.00	1.0000	7.00	_____
App by Air (3 gal)	appl	5.50	1.2000	6.60	_____
FERTILIZERS					
Phosphorus(46% P2O5)	cwt	18.11	1.9570	35.44	_____
Potash (60% K2O)	cwt	27.50	1.5000	41.25	_____
UAN + Sulfur (28%)	gal	1.39	32.1712	44.72	_____
UAN (32%)	gal	1.51	39.5570	59.73	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
Clarity	pt	11.60	0.5000	5.80	_____
Select Max	pt	10.87	1.0000	10.87	_____
Atrazine 4L	pt	2.09	4.0000	8.36	_____
Halex GT	pt	6.24	3.6000	22.46	_____
INSECTICIDES					
Bifenthrin	oz	0.82	1.2800	1.05	_____
Intrepid 2F	oz	2.15	4.0000	8.60	_____
IRRIGATION SUPPLIES					
Roll-Out Pipe	ft	0.24	33.0000	7.92	_____
SEED/PLANTS					
Corn Seed RR2	thous	3.50	34.0000	119.00	_____
CUSTOM FERTILIZE					
Custom Apply Fert	acre	7.50	1.0000	7.50	_____
HAULING					
Haul Corn	bu	0.23	220.0000	50.60	_____
CUSTOM LIME					
Lime (Spread)	ton	43.00	0.6660	28.64	_____
CROP CONSULTANT					
Corn Consultant	acre	6.00	1.0000	6.00	_____
SOIL TEST					
Soil Test	acre	10.00	0.3330	3.33	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.7026	10.72	_____
Harvesters	hour	15.22	0.1009	1.54	_____
Self-Propelled	hour	15.22	0.0176	0.27	_____
IRRIGATE LABOR					
Special Labor	hour	9.06	0.3250	2.96	_____
Implements	hour	9.06	0.0625	0.57	_____
HAND LABOR					
Implements	hour	9.06	0.1175	1.06	_____
Self-Propelled	hour	9.06	0.0088	0.08	_____
UNALLOCATED LABOR	hour	15.22	0.6684	10.18	_____
DIESEL FUEL					
Tractors	gal	2.30	7.9543	18.29	_____
Harvesters	gal	2.30	1.3770	3.17	_____
Self-Propelled	gal	2.30	0.1586	0.36	_____
Roll-Out Pipe Irr.	gal	2.30	10.5901	24.36	_____
REPAIR & MAINTENANCE					
Implements	acre	9.95	1.0000	9.95	_____
Tractors	acre	4.85	1.0000	4.85	_____
Harvesters	acre	3.70	1.0000	3.70	_____
Self-Propelled	acre	0.20	1.0000	0.20	_____
Roll-Out Pipe Irr.	acre	6.88	1.0000	6.88	_____
INTEREST ON OP. CAP.	acre	16.95	1.0000	16.95	_____
TOTAL DIRECT EXPENSES				595.44	_____
FIXED EXPENSES					
Implements	acre	19.07	1.0000	19.07	_____
Tractors	acre	32.99	1.0000	32.99	_____
Harvesters	acre	15.71	1.0000	15.71	_____
Self-Propelled	acre	1.44	1.0000	1.44	_____
Roll-Out Pipe Irr.	acre	60.69	1.0000	60.69	_____
TOTAL FIXED EXPENSES				129.90	_____
TOTAL SPECIFIED EXPENSES				725.34	_____

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 3.B Summary of estimated costs and returns per acre
 Corn, conventional tillage, RR2 seed, 12-row 38",
 220 bu yld goal, furrow irrigated, 13 ac-in., Delta Area, Mississippi, 2020

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.86	220.0000	849.20	_____

TOTAL INCOME				849.20	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	13.60	1.0000	13.60	_____
FERTILIZERS	acre	181.14	1.0000	181.14	_____
HERBICIDES	acre	51.97	1.0000	51.97	_____
INSECTICIDES	acre	9.65	1.0000	9.65	_____
IRRIGATION SUPPLIES	acre	7.92	1.0000	7.92	_____
SEED/PLANTS	acre	119.00	1.0000	119.00	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	50.60	1.0000	50.60	_____
CUSTOM LIME	acre	28.64	1.0000	28.64	_____
CROP CONSULTANT	acre	6.00	1.0000	6.00	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1263	1.14	_____
IRRIGATE LABOR	hour	9.06	0.3875	3.53	_____
OPERATOR LABOR	hour	15.22	0.8212	12.53	_____
UNALLOCATED LABOR	hour	15.22	0.6684	10.18	_____
DIESEL FUEL	gal	2.30	20.0802	46.18	_____
REPAIR & MAINTENANCE	acre	25.58	1.0000	25.58	_____
INTEREST ON OP. CAP.	acre	16.95	1.0000	16.95	_____

TOTAL DIRECT EXPENSES				595.44	_____
RETURNS ABOVE DIRECT EXPENSES				253.76	_____
TOTAL FIXED EXPENSES				129.90	_____

TOTAL SPECIFIED EXPENSES				725.34	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				123.86	_____

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.
Soil test cost is prorated for a test every 3rd year.
Lime cost prorated for application every 3rd year.

Table 3.C Estimated resource use for field operations, per acre
 Corn, conventional tillage, RR2 seed, 12-row 38",
 220 bu yld goal, furrow irrigated, 13 ac-in.,Delta Area, Mississippi, 2020

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	INPUT AMOUNT	POWER IMPLEMENT	POWER UNIT	ALLOC LABOR	UNALL LABOR
-----hours-----										
Subsoiler	3 shank	MFWD 225	0.204	0.50	Oct		0.10	0.10	0.10	0.09
Disk Harrow	24'	MFWD 225	0.081	1.00	Oct		0.08	0.08	0.08	0.07
Soil Test	acre			0.33	Oct	0.3330				
Lime (Spread)	ton			0.33	Oct	0.6660				
Spin Spreader	5 ton	MFWD 225	0.042	1.00	Oct		0.04	0.04	0.08	0.03
Phosphorus(46% P2O5)	cwt					1.9570				
Potash (60% K2O)	cwt					1.5000				
Bed/Disk w/roller	12R-30/40	MFWD 225	0.062	1.00	Oct		0.06	0.06	0.06	0.05
App by Air (5 gal)	appl			1.00	Feb	1.0000				
Glyphosate 3lbs a.e	oz					32.0000				
Clarity	pt					0.5000				
Select Max	pt					1.0000				
Row Cond./Roll-Fold.	26'	MFWD 225	0.072	1.00	Mar		0.07	0.07	0.07	0.06
Plant - Folding	12R-38	MFWD 225	0.049	1.00	Mar		0.04	0.04	0.09	0.04
Corn Seed RR2	thous					34.0000				
Custom Apply Fert	acre			1.00	Apr	1.0000				
UAN + Sulfur (28%)	gal					32.1712				
Sprayer 600-750gal	60' 175hp		0.017	1.00	Apr			0.01	0.02	0.01
Atrazine 4L	pt					4.0000				
Halex GT	pt					3.6000				
Corn Consultant	acre			1.00	May	1.0000				
App by Air (3 gal)	appl			0.20	May	0.2000				
Bifenthrin	oz					1.2800				
Fert Appl (Liquid)	12R-38	MFWD 225	0.051	1.00	May		0.05	0.05	0.07	0.04
UAN (32%)	gal					39.5570				
Cultivate	12R-38	MFWD 225	0.054	1.00	May		0.05	0.05	0.05	0.04
App by Air (3 gal)	appl			1.00	Jun	1.0000				
Intrepid 2F	oz					4.0000				
Header - Corn	8R-38	265 hp	0.100	1.00	Sep		0.10	0.10	0.10	0.09
Grain Cart Corn	700 bu	MFWD 225	0.025	1.00	Sep		0.02	0.02	0.02	0.02
Haul Corn	bu					220.0000				
Stalk Shredder Flex	20'	MFWD 225	0.082	1.00	Sep		0.08	0.08	0.08	0.07
Roll-Out Pipe Irr.	acre				Jul	1.0000	0.07	0.07	0.46	
TOTALS							0.82	0.80	1.33	0.66

Note: Cost of production estimates are based on 2019 input prices.

- Fertilization decisions should be based on soil tests.**
- Soil test cost is prorated for a test every 3rd year.**
- Lime cost prorated for application every 3rd year.**

Table 3.D Estimated costs for field operations, per acre
 Corn, conventional tillage, RR2 seed, 12-row 38",
 220 bu yld goal, furrow irrigated, 13 ac-in.,Delta Area, Mississippi, 2020

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----							FIXED COST	TOTAL COST
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL		
-----dollars-----										
Subsoiler	3 shank		2.72	0.92	2.95		0.35	6.94	5.49	12.43
Disk Harrow	24'		2.18	1.59	2.37		0.32	6.46	6.27	12.73
Soil Test	acre	3.33					0.17	3.50		3.50
Lime (Spread)	ton	28.64					1.50	30.14		30.14
Spin Spreader	5 ton		1.12	0.61	1.60		0.17	3.50	2.70	6.20
Phosphorus (46% P2O5)	cwt	35.44					1.86	37.30		37.30
Potash (60% K2O)	cwt	41.25					2.17	43.42		43.42
Bed/Disk w/roller	12R-30/40		1.66	1.30	1.81		0.25	5.02	5.50	10.52
App by Air (5 gal)	appl	7.00					0.25	7.25		7.25
Glyphosate 3lbs a.e	oz	4.48					0.16	4.64		4.64
Clarity	pt	5.80					0.20	6.00		6.00
Select Max	pt	10.87					0.38	11.25		11.25
Row Cond./Roll-Fold.	26'		1.92	0.87	2.09		0.15	5.03	4.51	9.54
Plant - Folding	12R-38		1.32	1.84	1.89		0.15	5.20	5.52	10.72
Corn Seed RR2	thous	119.00					3.64	122.64		122.64
Custom Apply Fert	acre	7.50					0.20	7.70		7.70
UAN + Sulfur (28%)	gal	44.72					1.17	45.89		45.89
Sprayer 600-750gal	60' 175hp		0.36	0.20	0.59		0.03	1.18	1.44	2.62
Atrazine 4L	pt	8.36					0.22	8.58		8.58
Halex GT	pt	22.46					0.59	23.05		23.05
Corn Consultant	acre	6.00					0.13	6.13		6.13
App by Air (3 gal)	appl	1.10					0.02	1.12		1.12
Bifenthrin	oz	1.05					0.02	1.07		1.07
Fert Appl (Liquid)	12R-38		1.38	1.11	1.73		0.09	4.31	3.41	7.72
UAN (32%)	gal	59.73					1.31	61.04		61.04
Cultivate	12R-38		1.45	1.04	1.57		0.09	4.15	4.48	8.63
App by Air (3 gal)	appl	5.50					0.10	5.60		5.60
Intrepid 2F	oz	8.60					0.15	8.75		8.75
Header - Corn	8R-38		3.17	5.39	2.92		0.05	11.53	18.47	30.00
Grain Cart Corn	700 bu		0.67	0.44	0.74		0.01	1.86	1.71	3.57
Haul Corn	bu	50.60					0.22	50.82		50.82
Stalk Shredder Flex	20'		2.20	2.77	2.39		0.03	7.39	5.41	12.80
Roll-Out Pipe Irr.	acre	7.92	26.03	7.50	4.73		0.80	46.98	64.99	111.97
TOTALS		479.35	46.18	25.58	27.38	0.00	16.95	595.44	129.90	725.34

Note: Cost of production estimates are based on 2019 input prices.
Fertilization decisions should be based on soil tests.
Soil test cost is prorated for a test every 3rd year.
Lime cost prorated for application every 3rd year.

Table 3.E Estimated monthly income and expense flows per acre
 Corn, conventional tillage, RR2 seed, 12-row 38",
 220 bu yld goal, furrow irrigated, 13 ac-in.,Delta Area, Mississippi, 2020

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
-----dollars-----												
TOTAL INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	849.20
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	7.00	0.00	0.00	1.10	5.50	0.00	0.00	0.00
FERTILIZERS	76.69	0.00	0.00	0.00	0.00	0.00	44.72	59.73	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	21.15	0.00	30.82	0.00	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.05	8.60	0.00	0.00	0.00
IRRIGATION SUPPLIES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.92	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	119.00	0.00	0.00	0.00	0.00	0.00	0.00
CUSTOM FERTILIZE	0.00	0.00	0.00	0.00	0.00	0.00	7.50	0.00	0.00	0.00	0.00	0.00
HAULING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.60
CUSTOM LIME	28.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CROP CONSULTANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00	0.00
SOIL TEST	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LABOR	9.31	0.00	0.00	0.00	0.00	3.98	0.59	3.53	3.06	0.23	0.63	6.05
LEASE *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUEL	8.53	0.00	0.00	0.00	0.00	3.24	0.36	2.83	18.71	6.09	0.38	6.04
REPAIR & MAINTENANCE	4.72	0.00	0.00	0.00	0.00	2.71	0.20	2.15	6.07	0.98	0.15	8.60
INTEREST ON OP. CAP.	6.88	0.00	0.00	0.00	0.99	3.94	2.21	1.67	0.85	0.09	0.01	0.31
TOTAL DIRECT EXPENSES	138.10	0.00	0.00	0.00	29.14	132.87	86.40	78.06	50.71	7.39	1.17	71.60
NET INCOME	-138.10	0.00	0.00	0.00	-29.14	-132.87	-86.40	-78.06	-50.71	-7.39	-1.17	777.60
NET INCOME TO DATE	-138.10	-138.10	-138.10	-138.10	-167.24	-300.11	-386.51	-464.57	-515.28	-522.67	-523.84	253.76

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

* Lease costs are based on hourly usage costs.

Table 3.F Estimated returns for various price/yield combinations, per acre
 Corn, conventional tillage, RR2 seed, 12-row 38",
 220 bu yld goal, furrow irrigated, 13 ac-in.,Delta Area, Mississippi, 2020

PRODUCT	PERCENT												
	75	80	85	90	95	100	105	110	115	120	125		
PRODUCT PRICE													
Corn	2.89	3.08	3.28	3.47	3.66	3.86	4.05	4.24	4.43	4.63	4.82		
PERCENT	YIELD	UNIT	dollars										
50	110.00	bu	-251 -381	-230 -360	-209 -339	-187 -317	-166 -296	-145 -275	-124 -254	-102 -232	-81 -211	-60 -190	-39 -169
60	132.00	bu	-192 -322	-167 -297	-142 -271	-116 -246	-91 -220	-65 -195	-40 -170	-14 -144	10 -119	36 -93	61 -68
70	154.00	bu	-134 -264	-104 -234	-74 -204	-45 -175	-15 -145	14 -115	43 -85	73 -56	103 -26	133 3	162 32
80	176.00	bu	-75 -205	-41 -171	-7 -137	26 -103	60 -69	94 -35	128 -1	162 32	195 66	229 100	263 134
90	198.00	bu	-17 -147	21 -108	59 -70	97 -32	135 5	173 44	212 82	250 120	288 158	326 196	364 235
100	220.00	bu	41 -88	83 -45	126 -3	168 38	211 81	253 123	296 166	338 208	381 251	423 293	466 336
110	242.00	bu	100 -29	146 16	193 63	240 110	286 156	333 203	380 250	427 297	473 343	520 390	567 437
120	264.00	bu	158 28	209 79	260 130	311 181	362 232	413 283	464 334	515 385	566 436	617 487	668 538
130	286.00	bu	217 87	272 142	327 197	382 252	438 308	493 363	548 418	603 473	658 528	714 584	769 639
140	308.00	bu	275 145	335 205	394 264	454 324	513 383	573 443	632 502	692 562	751 621	810 680	870 740
150	330.00	bu	334 204	398 268	461 331	525 395	589 459	652 523	716 586	780 650	844 714	907 777	971 841

The top number in each cell is Returns Above Direct Expenses.
 The bottom number in each cell is Returns Above Total Specified Expenses.
 Only the product listed has been varied to calculate net returns.
 Note: Cost of production estimates are based on 2019 input prices.

Table 4.A Estimated costs per acre
 Corn, conventional tillage, RR2 seed, 12-row 38"
 170 bu yield goal, non-irrigated, Delta Area, Mississippi, 2020

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air (5 gal)	appl	7.00	1.0000	7.00	_____
App by Air (3 gal)	appl	5.50	1.2000	6.60	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	18.11	1.6300	29.52	_____
Potash (60% K2O)	cwt	27.50	1.2500	34.38	_____
UAN + Sulfur (28%)	gal	1.39	19.3063	26.84	_____
UAN (32%)	gal	1.51	36.7200	55.45	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
Clarity	pt	11.60	0.5000	5.80	_____
Select Max	pt	10.87	1.0000	10.87	_____
Atrazine 4L	pt	2.09	4.0000	8.36	_____
Halex GT	pt	6.24	3.6000	22.46	_____
INSECTICIDES					
Bifenthrin	oz	0.82	1.2804	1.05	_____
Intrepid 2F	oz	2.15	4.0000	8.60	_____
SEED/PLANTS					
Corn Seed RR2	thous	3.50	28.0000	98.00	_____
CUSTOM FERTILIZE					
Custom Apply Fert	acre	7.50	1.0000	7.50	_____
HAULING					
Haul Corn	bu	0.23	170.0000	39.10	_____
CUSTOM LIME					
Lime (Spread)	ton	43.00	0.6660	28.64	_____
CROP CONSULTANT					
Corn Consultant	acre	6.00	1.0000	6.00	_____
SOIL TEST					
Soil Test	acre	10.00	0.3330	3.33	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.5690	8.68	_____
Harvesters	hour	15.22	0.1009	1.54	_____
Self-Propelled	hour	15.22	0.0176	0.27	_____
HAND LABOR					
Implements	hour	9.06	0.1175	1.06	_____
Self-Propelled	hour	9.06	0.0088	0.08	_____
UNALLOCATED LABOR					
	hour	15.23	0.6188	9.43	_____
DIESEL FUEL					
Tractors	gal	2.30	6.5903	15.15	_____
Harvesters	gal	2.30	1.3770	3.17	_____
Self-Propelled	gal	2.30	0.1586	0.36	_____
REPAIR & MAINTENANCE					
Implements	acre	8.52	1.0000	8.52	_____
Tractors	acre	4.04	1.0000	4.04	_____
Harvesters	acre	3.70	1.0000	3.70	_____
Self-Propelled	acre	0.20	1.0000	0.20	_____
INTEREST ON OP. CAP.	acre	14.10	1.0000	14.10	_____
TOTAL DIRECT EXPENSES				474.28	_____
FIXED EXPENSES					
Implements	acre	14.53	1.0000	14.53	_____
Tractors	acre	27.47	1.0000	27.47	_____
Harvesters	acre	15.71	1.0000	15.71	_____
Self-Propelled	acre	1.44	1.0000	1.44	_____
TOTAL FIXED EXPENSES				59.15	_____
TOTAL SPECIFIED EXPENSES				533.43	_____

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 4.B Summary of estimated costs and returns per acre
 Corn, conventional tillage, RR2 seed, 12-row 38"
 170 bu yield goal, non-irrigated, Delta Area, Mississippi, 2020

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.86	170.0000	656.20	_____

TOTAL INCOME				656.20	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	13.60	1.0000	13.60	_____
FERTILIZERS	acre	146.19	1.0000	146.19	_____
HERBICIDES	acre	51.97	1.0000	51.97	_____
INSECTICIDES	acre	9.65	1.0000	9.65	_____
SEED/PLANTS	acre	98.00	1.0000	98.00	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	39.10	1.0000	39.10	_____
CUSTOM LIME	acre	28.64	1.0000	28.64	_____
CROP CONSULTANT	acre	6.00	1.0000	6.00	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1263	1.14	_____
OPERATOR LABOR	hour	15.22	0.6876	10.49	_____
UNALLOCATED LABOR	hour	15.23	0.6188	9.43	_____
DIESEL FUEL	gal	2.30	8.1261	18.68	_____
REPAIR & MAINTENANCE	acre	16.46	1.0000	16.46	_____
INTEREST ON OP. CAP.	acre	14.10	1.0000	14.10	_____

TOTAL DIRECT EXPENSES				474.28	_____
RETURNS ABOVE DIRECT EXPENSES				181.92	_____
TOTAL FIXED EXPENSES				59.15	_____

TOTAL SPECIFIED EXPENSES				533.43	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				122.77	_____

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 4.C Estimated resource use for field operations, per acre
 Corn, conventional tillage, RR2 seed, 12-row 38"
 170 bu yield goal, non-irrigated, Delta Area, Mississippi, 2020

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	INPUT AMOUNT	IMPLEMENT	POWER UNIT	ALLOC LABOR	UNALL LABOR
							-----hours-----			
Subsoiler	3 shank	MFWD 225	0.204	0.50	Oct		0.10	0.10	0.10	0.09
Disk Harrow	24'	MFWD 225	0.081	1.00	Oct		0.08	0.08	0.08	0.07
Soil Test	acre			0.33	Oct	0.3330				
Lime (Spread)	ton			0.33	Oct	0.6660				
Spin Spreader	5 ton	MFWD 225	0.042	1.00	Oct		0.04	0.04	0.08	0.03
Phosphorus (46% P2O5)	cwt					1.6300				
Potash (60% K2O)	cwt					1.2500				
Bed/Disk (Hipper)Rd	8R-38	MFWD 225	0.074	1.00	Oct		0.07	0.07	0.07	0.06
App by Air (5 gal)	appl			1.00	Feb	1.0000				
Glyphosate 3lbs a.e	oz					32.0000				
Clarity	pt					0.5000				
Select Max	pt					1.0000				
Row Cond Rigid	26'	MFWD 225	0.059	1.00	Mar		0.05	0.05	0.05	0.05
Plant - Folding	12R-38	MFWD 225	0.049	1.00	Mar		0.04	0.04	0.09	0.04
Corn Seed RR2	thous					28.0000				
Custom Apply Fert	acre			1.00	Apr	1.0000				
UAN + Sulfur (28%)	gal					19.3063				
Sprayer 600-750gal	60' 175hp		0.017	1.00	Apr			0.01	0.02	0.01
Atrazine 4L	pt					4.0000				
Halex GT	pt					3.6000				
Corn Consultant	acre			1.00	May	1.0000				
App by Air (3 gal)	appl			0.20	May	0.2000				
Bifenthrin	oz					1.2804				
Fert Appl (Liquid)	12R-38	MFWD 225	0.051	1.00	May		0.05	0.05	0.07	0.04
UAN (32%)	gal					36.7200				
App by Air (3 gal)	appl			1.00	Jun	1.0000				
Intrepid 2F	oz					4.0000				
Header - Corn	8R-38	265 hp	0.100	1.00	Sep		0.10	0.10	0.10	0.09
Grain Cart Corn	700 bu	MFWD 225	0.025	1.00	Sep		0.02	0.02	0.02	0.02
Haul Corn	bu					170.0000				
Stalk Shredder Flex	20'	MFWD 225	0.082	1.00	Sep		0.08	0.08	0.08	0.07
TOTALS							0.68	0.67	0.81	0.61

Note: Cost of production estimates are based on 2019 input prices.

- Fertilization decisions should be based on soil tests.**
- Soil test cost is prorated for a test every 3rd year.**
- Lime cost prorated for application every 3rd year.**

Table 4.D Estimated costs for field operations, per acre
 Corn, conventional tillage, RR2 seed, 12-row 38"
 170 bu yield goal, non-irrigated, Delta Area, Mississippi, 2020

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----							FIXED COST	TOTAL COST	
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL			
-----dollars-----											
Subsoiler	3 shank		2.72	0.92	2.95			0.35	6.94	5.49	12.43
Disk Harrow	24'		2.18	1.59	2.37			0.32	6.46	6.27	12.73
Soil Test	acre	3.33						0.17	3.50		3.50
Lime (Spread)	ton	28.64						1.50	30.14		30.14
Spin Spreader	5 ton		1.12	0.61	1.60			0.17	3.50	2.70	6.20
Phosphorus(46% P2O5)	cwt	29.52						1.55	31.07		31.07
Potash (60% K2O)	cwt	34.38						1.80	36.18		36.18
Bed/Disk (Hipper)Rd	8R-38		1.97	0.92	2.15			0.26	5.30	4.70	10.00
App by Air (5 gal)	appl	7.00						0.25	7.25		7.25
Glyphosate 3lbs a.e	oz	4.48						0.16	4.64		4.64
Clarity	pt	5.80						0.20	6.00		6.00
Select Max	pt	10.87						0.38	11.25		11.25
Row Cond Rigid	26'		1.59	0.67	1.73			0.12	4.11	4.03	8.14
Plant - Folding	12R-38		1.32	1.84	1.89			0.15	5.20	5.52	10.72
Corn Seed RR2	thous	98.00						3.00	101.00		101.00
Custom Apply Fert	acre	7.50						0.20	7.70		7.70
UAN + Sulfur (28%)	gal	26.84						0.70	27.54		27.54
Sprayer 600-750gal	60' 175hp		0.36	0.20	0.59			0.03	1.18	1.44	2.62
Atrazine 4L	pt	8.36						0.22	8.58		8.58
Halex GT	pt	22.46						0.59	23.05		23.05
Corn Consultant	acre	6.00						0.13	6.13		6.13
App by Air (3 gal)	appl	1.10						0.02	1.12		1.12
Bifenthrin	oz	1.05						0.02	1.07		1.07
Fert Appl (Liquid)	12R-38		1.38	1.11	1.73			0.09	4.31	3.41	7.72
UAN (32%)	gal	55.45						1.21	56.66		56.66
App by Air (3 gal)	appl	5.50						0.10	5.60		5.60
Intrepid 2F	oz	8.60						0.15	8.75		8.75
Header - Corn	8R-38		3.17	5.39	2.92			0.05	11.53	18.47	30.00
Grain Cart Corn	700 bu		0.67	0.44	0.74			0.01	1.86	1.71	3.57
Haul Corn	bu	39.10						0.17	39.27		39.27
Stalk Shredder Flex	20'		2.20	2.77	2.39			0.03	7.39	5.41	12.80
TOTALS		403.98	18.68	16.46	21.06	0.00	14.10	474.28	59.15	533.43	

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 4.E Estimated monthly income and expense flows per acre
 Corn, conventional tillage, RR2 seed, 12-row 38"
 170 bu yield goal, non-irrigated, Delta Area, Mississippi, 2020

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
-----dollars-----												
TOTAL INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	656.20
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	7.00	0.00	0.00	1.10	5.50	0.00	0.00	0.00
FERTILIZERS	63.90	0.00	0.00	0.00	0.00	0.00	26.84	55.45	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	21.15	0.00	30.82	0.00	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.05	8.60	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	98.00	0.00	0.00	0.00	0.00	0.00	0.00
CUSTOM FERTILIZE	0.00	0.00	0.00	0.00	0.00	0.00	7.50	0.00	0.00	0.00	0.00	0.00
HAULING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.10
CUSTOM LIME	28.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CROP CONSULTANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00	0.00
SOIL TEST	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LABOR	9.07	0.00	0.00	0.00	0.00	3.62	0.59	1.73	0.00	0.00	0.00	6.05
LEASE *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUEL	7.99	0.00	0.00	0.00	0.00	2.91	0.36	1.38	0.00	0.00	0.00	6.04
REPAIR & MAINTENANCE	4.04	0.00	0.00	0.00	0.00	2.51	0.20	1.11	0.00	0.00	0.00	8.60
INTEREST ON OP. CAP.	6.12	0.00	0.00	0.00	0.99	3.27	1.74	1.47	0.25	0.00	0.00	0.26
TOTAL DIRECT EXPENSES	123.09	0.00	0.00	0.00	29.14	110.31	68.05	69.29	14.35	0.00	0.00	60.05
NET INCOME	-123.09	0.00	0.00	0.00	-29.14	-110.31	-68.05	-69.29	-14.35	0.00	0.00	596.15
NET INCOME TO DATE	-123.09	-123.09	-123.09	-123.09	-152.23	-262.54	-330.59	-399.88	-414.23	-414.23	-414.23	181.92

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

* Lease costs are based on hourly usage costs.

Table 4.F Estimated returns for various price/yield combinations, per acre
 Corn, conventional tillage, RR2 seed, 12-row 38"
 170 bu yield goal, non-irrigated, Delta Area, Mississippi, 2020

			-----PERCENT-----										
PRODUCT			75	80	85	90	95	100	105	110	115	120	125
			-----PRODUCT PRICE-----										
Corn			2.89	3.08	3.28	3.47	3.66	3.86	4.05	4.24	4.43	4.63	4.82
			-----dollars-----										
PERCENT	YIELD	UNIT											
50	85.00	bu	-208 -267	-192 -251	-175 -234	-159 -218	-142 -202	-126 -185	-110 -169	-93 -152	-77 -136	-60 -120	-44 -103
60	102.00	bu	-163 -222	-143 -202	-123 -183	-104 -163	-84 -143	-64 -124	-45 -104	-25 -84	-5 -64	13 -45	33 -25
70	119.00	bu	-117 -177	-95 -154	-72 -131	-49 -108	-26 -85	-3 -62	19 -39	42 -16	65 6	88 29	111 52
80	136.00	bu	-72 -131	-46 -105	-20 -79	6 -53	32 -26	58 -0	84 25	111 51	137 78	163 104	189 130
90	153.00	bu	-27 -86	2 -57	31 -27	61 2	90 31	120 61	149 90	179 120	208 149	238 179	267 208
100	170.00	bu	17 -41	50 -8	83 24	116 57	149 89	181 122	214 155	247 188	280 221	313 254	345 286
110	187.00	bu	63 4	99 40	135 76	171 112	207 148	243 184	279 220	315 256	351 292	387 328	424 364
120	204.00	bu	108 49	147 88	187 128	226 167	265 206	305 246	344 285	384 324	423 364	462 403	502 443
130	221.00	bu	153 94	196 137	239 179	281 222	324 265	366 307	409 350	452 393	494 435	537 478	580 521
140	238.00	bu	199 139	244 185	290 231	336 277	382 323	428 369	474 415	520 461	566 507	612 553	658 599
150	255.00	bu	244 185	293 234	342 283	391 332	441 382	490 431	539 480	588 529	638 578	687 628	736 677

The top number in each cell is Returns Above Direct Expenses.
 The bottom number in each cell is Returns Above Total Specified Expenses.
 Only the product listed has been varied to calculate net returns.
 Note: Cost of production estimates are based on 2019 input prices.

Table 5.A Estimated costs per acre
 Corn, stale seedbed, RR2 seed, 12-row 30",
 170 bu yield goal, Non-Delta, Mississippi, 2020

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air (5 gal)	appl	7.00	1.0000	7.00	_____
App by Air (3 gal)	appl	5.50	1.2000	6.60	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	18.11	1.6300	29.52	_____
Potash (60% K2O)	cwt	27.50	1.2500	34.38	_____
UAN + Sulfur (28%)	gal	1.39	56.0263	77.88	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
Clarity	pt	11.60	0.5000	5.80	_____
Select Max	pt	10.87	1.0000	10.87	_____
Atrazine 4L	pt	2.09	4.0000	8.36	_____
Halex GT	pt	6.24	3.6000	22.46	_____
INSECTICIDES					
Bifenthrin	oz	0.82	1.2804	1.05	_____
Intrepid 2F	oz	2.15	4.0000	8.60	_____
SEED/PLANTS					
Corn Seed RR2	thous	3.50	28.0000	98.00	_____
CUSTOM FERTILIZE					
Custom Apply Fert	acre	7.50	1.0000	7.50	_____
HAULING					
Haul Corn	bu	0.23	170.0000	39.10	_____
CUSTOM LIME					
Lime (Spread)	ton	43.00	0.6660	28.64	_____
CROP CONSULTANT					
Corn Consultant	acre	6.00	1.0000	6.00	_____
SOIL TEST					
Soil Test	acre	10.00	0.3330	3.33	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.4823	7.36	_____
Harvesters	hour	15.22	0.1277	1.94	_____
Self-Propelled	hour	15.22	0.0176	0.27	_____
HAND LABOR					
Implements	hour	9.06	0.1442	1.31	_____
Self-Propelled	hour	9.06	0.0088	0.08	_____
UNALLOCATED LABOR					
	hour	15.22	0.5649	8.60	_____
DIESEL FUEL					
Tractors	gal	2.30	4.2208	9.72	_____
Harvesters	gal	2.30	1.7419	4.01	_____
Self-Propelled	gal	2.30	0.1586	0.36	_____
REPAIR & MAINTENANCE					
Implements	acre	9.15	1.0000	9.15	_____
Tractors	acre	2.32	1.0000	2.32	_____
Harvesters	acre	4.68	1.0000	4.68	_____
Self-Propelled	acre	0.20	1.0000	0.20	_____
INTEREST ON OP. CAP.	acre	13.65	1.0000	13.65	_____
TOTAL DIRECT EXPENSES				463.22	_____
FIXED EXPENSES					
Implements	acre	14.83	1.0000	14.83	_____
Tractors	acre	15.90	1.0000	15.90	_____
Harvesters	acre	19.87	1.0000	19.87	_____
Self-Propelled	acre	1.44	1.0000	1.44	_____
TOTAL FIXED EXPENSES				52.04	_____
TOTAL SPECIFIED EXPENSES				515.26	_____

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 5.B Summary of estimated costs and returns per acre
 Corn, stale seedbed, RR2 seed, 12-row 30",
 170 bu yield goal, Non-Delta, Mississippi, 2020

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.86	170.0000	656.20	_____

TOTAL INCOME				656.20	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	13.60	1.0000	13.60	_____
FERTILIZERS	acre	141.78	1.0000	141.78	_____
HERBICIDES	acre	51.97	1.0000	51.97	_____
INSECTICIDES	acre	9.65	1.0000	9.65	_____
SEED/PLANTS	acre	98.00	1.0000	98.00	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	39.10	1.0000	39.10	_____
CUSTOM LIME	acre	28.64	1.0000	28.64	_____
CROP CONSULTANT	acre	6.00	1.0000	6.00	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1530	1.39	_____
OPERATOR LABOR	hour	15.22	0.6277	9.57	_____
UNALLOCATED LABOR	hour	15.22	0.5649	8.60	_____
DIESEL FUEL	gal	2.30	6.1215	14.09	_____
REPAIR & MAINTENANCE	acre	16.35	1.0000	16.35	_____
INTEREST ON OP. CAP.	acre	13.65	1.0000	13.65	_____

TOTAL DIRECT EXPENSES				463.22	_____
RETURNS ABOVE DIRECT EXPENSES				192.98	_____
TOTAL FIXED EXPENSES				52.04	_____

TOTAL SPECIFIED EXPENSES				515.26	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				140.94	_____

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 5.C Estimated resource use for field operations, per acre
 Corn, stale seedbed, RR2 seed, 12-row 30",
 170 bu yield goal, Non-Delta, Mississippi, 2020

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	INPUT AMOUNT	IMPLEMENT	POWER UNIT	ALLOC LABOR	UNALL LABOR
						-----hours-----				
Soil Test	acre			0.33	Oct	0.3330				
Lime (Spread)	ton			0.33	Oct	0.6660				
Spin Spreader	5 ton	MFWD 170	0.042	1.00	Oct		0.04	0.04	0.08	0.03
Phosphorus (46% P2O5)	cwt					1.6300				
Potash (60% K2O)	cwt					1.2500				
Disk Heavy	20'	MFWD 170	0.097	1.00	Oct		0.09	0.09	0.09	0.08
Bed/Disk w/roller	8R-30	MFWD 170	0.093	1.00	Oct		0.09	0.09	0.09	0.08
App by Air (5 gal)	appl			1.00	Feb	1.0000				
Glyphosate 3lbs a.e	oz					32.0000				
Clarity	pt					0.5000				
Select Max	pt					1.0000				
Plant - Rigid	12R-30	MFWD 170	0.062	1.00	Mar		0.06	0.06	0.12	0.05
Corn Seed RR2	thous					28.0000				
Custom Apply Fert	acre			1.00	Apr	1.0000				
UAN + Sulfur (28%)	gal					19.3063				
Sprayer 600-750gal	60' 175hp		0.017	1.00	Apr			0.01	0.02	0.01
Atrazine 4L	pt					4.0000				
Halex GT	pt					3.6000				
Fert Appl (Liquid)	12R-30	MFWD 170	0.078	1.00	May		0.07	0.07	0.11	0.07
UAN + Sulfur (28%)	gal					36.7200				
Corn Consultant	acre			1.00	May	1.0000				
App by Air (3 gal)	appl			0.20	May	0.2000				
Bifenthrin	oz					1.2804				
App by Air (3 gal)	appl			1.00	Jun	1.0000				
Intrepid 2F	oz					4.0000				
Header - Corn	8R-30	265 hp	0.127	1.00	Sep		0.12	0.12	0.12	0.11
Grain Cart Corn	500 bu	MFWD 170	0.025	1.00	Sep		0.02	0.02	0.02	0.02
Haul Corn	bu					170.0000				
Stalk Shredder Flex	20'	MFWD 170	0.082	1.00	Sep		0.08	0.08	0.08	0.07
TOTALS							0.62	0.61	0.78	0.56

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 5.D Estimated costs for field operations, per acre
 Corn, stale seedbed, RR2 seed, 12-row 30",
 170 bu yield goal, Non-Delta, Mississippi, 2020

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----							FIXED COST	TOTAL COST	
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL			
-----dollars-----											
Soil Test	acre	3.33						0.17	3.50		3.50
Lime (Spread)	ton	28.64						1.50	30.14		30.14
Spin Spreader	5 ton		0.85	0.51	1.60			0.16	3.12	2.06	5.18
Phosphorus(46% P2O5)	cwt	29.52						1.55	31.07		31.07
Potash (60% K2O)	cwt	34.38						1.80	36.18		36.18
Disk Heavy	20'		1.96	1.69	2.81			0.34	6.80	6.01	12.81
Bed/Disk w/roller	8R-30		1.89	1.11	2.71			0.30	6.01	5.00	11.01
App by Air (5 gal)	appl	7.00						0.25	7.25		7.25
Glyphosate 3lbs a.e	oz	4.48						0.16	4.64		4.64
Clarity	pt	5.80						0.20	6.00		6.00
Select Max	pt	10.87						0.38	11.25		11.25
Plant - Rigid	12R-30		1.27	1.71	2.39			0.16	5.53	5.03	10.56
Corn Seed RR2	thous	98.00						3.00	101.00		101.00
Custom Apply Fert	acre	7.50						0.20	7.70		7.70
UAN + Sulfur (28%)	gal	26.84						0.70	27.54		27.54
Sprayer 600-750gal	60' 175hp		0.36	0.20	0.59			0.03	1.18	1.44	2.62
Atrazine 4L	pt	8.36						0.22	8.58		8.58
Halex GT	pt	22.46						0.59	23.05		23.05
Fert Appl (Liquid)	12R-30		1.58	1.59	2.64			0.13	5.94	4.07	10.01
UAN + Sulfur (28%)	gal	51.04						1.12	52.16		52.16
Corn Consultant	acre	6.00						0.13	6.13		6.13
App by Air (3 gal)	appl	1.10						0.02	1.12		1.12
Bifenthrin	oz	1.05						0.02	1.07		1.07
App by Air (3 gal)	appl	5.50						0.10	5.60		5.60
Intrepid 2F	oz	8.60						0.15	8.75		8.75
Header - Corn	8R-30		4.01	6.66	3.69			0.06	14.42	23.11	37.53
Grain Cart Corn	500 bu		0.51	0.30	0.74			0.01	1.56	1.17	2.73
Haul Corn	bu	39.10						0.17	39.27		39.27
Stalk Shredder Flex	20'		1.66	2.58	2.39			0.03	6.66	4.15	10.81
TOTALS		399.57	14.09	16.35	19.56	0.00	13.65	463.22	52.04	515.26	

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 5.E Estimated monthly income and expense flows per acre
 Corn, stale seedbed, RR2 seed, 12-row 30",
 170 bu yield goal, Non-Delta, Mississippi, 2020

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
-----dollars-----												
TOTAL INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	656.20
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	7.00	0.00	0.00	1.10	5.50	0.00	0.00	0.00
FERTILIZERS	63.90	0.00	0.00	0.00	0.00	0.00	26.84	51.04	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	21.15	0.00	30.82	0.00	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.05	8.60	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	98.00	0.00	0.00	0.00	0.00	0.00	0.00
CUSTOM FERTILIZE	0.00	0.00	0.00	0.00	0.00	0.00	7.50	0.00	0.00	0.00	0.00	0.00
HAULING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.10
CUSTOM LIME	28.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CROP CONSULTANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00	0.00
SOIL TEST	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LABOR	7.12	0.00	0.00	0.00	0.00	2.39	0.59	2.64	0.00	0.00	0.00	6.82
LEASE *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUEL	4.70	0.00	0.00	0.00	0.00	1.27	0.36	1.58	0.00	0.00	0.00	6.18
REPAIR & MAINTENANCE	3.31	0.00	0.00	0.00	0.00	1.71	0.20	1.59	0.00	0.00	0.00	9.54
INTEREST ON OP. CAP.	5.82	0.00	0.00	0.00	0.99	3.16	1.74	1.42	0.25	0.00	0.00	0.27
TOTAL DIRECT EXPENSES	116.82	0.00	0.00	0.00	29.14	106.53	68.05	66.42	14.35	0.00	0.00	61.91
NET INCOME	-116.82	0.00	0.00	0.00	-29.14	-106.53	-68.05	-66.42	-14.35	0.00	0.00	594.29
NET INCOME TO DATE	-116.82	-116.82	-116.82	-116.82	-145.96	-252.49	-320.54	-386.96	-401.31	-401.31	-401.31	192.98

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

* Lease costs are based on hourly usage costs.

Table 5.F Estimated returns for various price/yield combinations, per acre
 Corn, stale seedbed, RR2 seed, 12-row 30",
 170 bu yield goal, Non-Delta, Mississippi, 2020

PRODUCT	PERCENT												
	75	80	85	90	95	100	105	110	115	120	125		
PRODUCT PRICE													
Corn	2.89	3.08	3.28	3.47	3.66	3.86	4.05	4.24	4.43	4.63	4.82		
PERCENT	YIELD	UNIT	dollars										
50	85.00	bu	-197 -249	-181 -233	-164 -216	-148 -200	-131 -183	-115 -167	-99 -151	-82 -134	-66 -118	-49 -101	-33 -85
60	102.00	bu	-152 -204	-132 -184	-112 -164	-93 -145	-73 -125	-53 -105	-34 -86	-14 -66	5 -46	24 -27	44 -7
70	119.00	bu	-106 -158	-83 -136	-61 -113	-38 -90	-15 -67	7 -44	30 -21	53 1	76 24	99 47	122 70
80	136.00	bu	-61 -113	-35 -87	-9 -61	17 -34	43 -8	69 17	95 43	122 70	148 96	174 122	200 148
90	153.00	bu	-16 -68	13 -38	42 -9	72 20	101 49	131 79	160 108	190 138	219 167	249 197	278 226
100	170.00	bu	28 -23	61 9	94 42	127 75	160 108	192 140	225 173	258 206	291 239	324 272	357 304
110	187.00	bu	74 22	110 58	146 94	182 130	218 166	254 202	290 238	326 274	362 310	399 346	435 383
120	204.00	bu	119 67	158 106	198 146	237 185	276 224	316 264	355 303	395 343	434 382	473 421	513 461
130	221.00	bu	164 112	207 155	250 198	292 240	335 283	378 326	420 368	463 411	506 453	548 496	591 539
140	238.00	bu	210 158	256 203	301 249	347 295	393 341	439 387	485 433	531 479	577 525	623 571	669 617
150	255.00	bu	255 203	304 252	353 301	403 350	452 400	501 449	550 498	599 547	649 597	698 646	747 695

The top number in each cell is Returns Above Direct Expenses.
 The bottom number in each cell is Returns Above Total Specified Expenses.
 Only the product listed has been varied to calculate net returns.
 Note: Cost of production estimates are based on 2019 input prices.

Table 6.A Estimated costs per acre
 Corn, no-tillage, BtRR, 12-row 30", 170 bu yield goal
 Non-Delta Areas, Mississippi, 2020

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air (5 gal)	appl	7.00	1.0000	7.00	_____
App by Air (3 gal)	appl	5.50	1.0000	5.50	_____
FERTILIZERS					
DAP	cwt	22.64	1.6300	36.90	_____
Potash (60% K2O)	cwt	27.50	1.2500	34.38	_____
Fert 10-34-0	gal	2.90	5.0000	14.50	_____
UAN (32%)	gal	1.51	43.8348	66.19	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
Clarity	pt	11.60	0.5000	5.80	_____
Select Max	pt	10.87	1.0000	10.87	_____
Atrazine 4L	pt	2.09	4.0000	8.36	_____
Halex GT	pt	6.24	3.6000	22.46	_____
INSECTICIDES					
Bifenthrin	oz	0.82	6.4020	5.25	_____
SEED/PLANTS					
Corn Seed BtRR	thous	3.50	28.0000	98.00	_____
HAULING					
Haul Corn	bu	0.23	170.0000	39.10	_____
CUSTOM LIME					
Lime (Spread)	ton	43.00	0.6660	28.64	_____
CROP CONSULTANT					
Corn Consultant	acre	6.00	1.0000	6.00	_____
SOIL TEST					
Soil Test	acre	10.00	0.3330	3.33	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.4165	6.34	_____
Harvesters	hour	15.22	0.1277	1.94	_____
HAND LABOR					
Implements	hour	9.06	0.2283	2.06	_____
UNALLOCATED LABOR	hour	15.25	0.4898	7.47	_____
DIESEL FUEL					
Tractors	gal	2.30	3.6449	8.39	_____
Harvesters	gal	2.30	1.7419	4.01	_____
REPAIR & MAINTENANCE					
Implements	acre	8.22	1.0000	8.22	_____
Tractors	acre	2.01	1.0000	2.01	_____
Harvesters	acre	4.68	1.0000	4.68	_____
INTEREST ON OP. CAP.	acre	12.10	1.0000	12.10	_____
TOTAL DIRECT EXPENSES				453.98	_____
FIXED EXPENSES					
Implements	acre	11.94	1.0000	11.94	_____
Tractors	acre	13.74	1.0000	13.74	_____
Harvesters	acre	19.87	1.0000	19.87	_____
TOTAL FIXED EXPENSES				45.55	_____
TOTAL SPECIFIED EXPENSES				499.53	_____

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 6.B Summary of estimated costs and returns per acre
 Corn, no-tillage, BtRR, 12-row 30", 170 bu yield goal
 Non-Delta Areas, Mississippi, 2020

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.86	170.0000	656.20	_____

TOTAL INCOME				656.20	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	12.50	1.0000	12.50	_____
FERTILIZERS	acre	151.97	1.0000	151.97	_____
HERBICIDES	acre	51.97	1.0000	51.97	_____
INSECTICIDES	acre	5.25	1.0000	5.25	_____
SEED/PLANTS	acre	98.00	1.0000	98.00	_____
HAULING	acre	39.10	1.0000	39.10	_____
CUSTOM LIME	acre	28.64	1.0000	28.64	_____
CROP CONSULTANT	acre	6.00	1.0000	6.00	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.2283	2.06	_____
OPERATOR LABOR	hour	15.22	0.5442	8.28	_____
UNALLOCATED LABOR	hour	15.25	0.4898	7.47	_____
DIESEL FUEL	gal	2.30	5.3869	12.40	_____
REPAIR & MAINTENANCE	acre	14.91	1.0000	14.91	_____
INTEREST ON OP. CAP.	acre	12.10	1.0000	12.10	_____

TOTAL DIRECT EXPENSES				453.98	_____
RETURNS ABOVE DIRECT EXPENSES				202.22	_____
TOTAL FIXED EXPENSES				45.55	_____

TOTAL SPECIFIED EXPENSES				499.53	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				156.67	_____

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 6.C Estimated resource use for field operations, per acre
 Corn, no-tillage, BtRR, 12-row 30", 170 bu yield goal
 Non-Delta Areas, Mississippi, 2020

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	INPUT AMOUNT	IMPLEMENT	POWER UNIT	ALLOC LABOR	UNALL LABOR
						-----hours-----				
Soil Test	acre			0.33	Oct	0.3330				
Lime (Spread)	ton			0.33	Oct	0.6660				
App by Air (5 gal)	appl			1.00	Feb	1.0000				
Glyphosate 3lbs a.e	oz					32.0000				
Clarity	pt					0.5000				
Select Max	pt					1.0000				
Spin Spreader	5 ton	MFWD 170	0.042	1.00	Mar		0.04	0.04	0.08	0.03
DAP	cwt					1.6300				
Potash (60% K2O)	cwt					1.2500				
NT Plant&Pre-Rigid	8R-30	MFWD 170	0.105	1.00	Mar		0.10	0.10	0.21	0.09
Corn Seed BtRR	thous					28.0000				
Fert 10-34-0	gal					5.0000				
Spray (Broadcast)	27'	MFWD 170	0.062	1.00	Apr		0.06	0.06	0.09	0.05
Atrazine 4L	pt					4.0000				
Halex GT	pt					3.6000				
Fert Appl (Liquid)	8R-30	MFWD 170	0.098	1.00	Apr		0.09	0.09	0.14	0.08
UAN (32%)	gal					43.8348				
Corn Consultant	acre			1.00	May	1.0000				
App by Air (3 gal)	appl			1.00	May	1.0000				
Bifenthrin	oz					6.4020				
Header - Corn	8R-30	265 hp	0.127	1.00	Sep		0.12	0.12	0.12	0.11
Grain Cart Corn	500 bu	MFWD 170	0.025	1.00	Sep		0.02	0.02	0.02	0.02
Haul Corn	bu					170.0000				
Stalk Shredder Flex	20'	MFWD 170	0.082	1.00	Sep		0.08	0.08	0.08	0.07
TOTALS							0.54	0.54	0.77	0.48

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 6.D Estimated costs for field operations, per acre
 Corn, no-tillage, BtRR, 12-row 30", 170 bu yield goal
 Non-Delta Areas, Mississippi, 2020

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----							FIXED COST	TOTAL COST	
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL			
-----dollars-----											
Soil Test	acre	3.33						0.17	3.50		3.50
Lime (Spread)	ton	28.64						1.50	30.14		30.14
App by Air (5 gal)	appl	7.00						0.25	7.25		7.25
Glyphosate 3lbs a.e	oz	4.48						0.16	4.64		4.64
Clarity	pt	5.80						0.20	6.00		6.00
Select Max	pt	10.87						0.38	11.25		11.25
Spin Spreader	5 ton		0.85	0.51	1.60			0.09	3.05	2.06	5.11
DAP	cwt	36.90						1.13	38.03		38.03
Potash (60% K2O)	cwt	34.38						1.05	35.43		35.43
NT Plant&Pre-Rigid	8R-30		2.13	2.66	4.02			0.27	9.08	7.99	17.07
Corn Seed BtRR	thous	98.00						3.00	101.00		101.00
Fert 10-34-0	gal	14.50						0.44	14.94		14.94
Spray (Broadcast)	27'		1.26	0.52	2.09			0.10	3.97	2.35	6.32
Atrazine 4L	pt	8.36						0.22	8.58		8.58
Halex GT	pt	22.46						0.59	23.05		23.05
Fert Appl (Liquid)	8R-30		1.98	1.68	3.28			0.18	7.12	4.72	11.84
UAN (32%)	gal	66.19						1.74	67.93		67.93
Corn Consultant	acre	6.00						0.13	6.13		6.13
App by Air (3 gal)	appl	5.50						0.12	5.62		5.62
Bifenthrin	oz	5.25						0.11	5.36		5.36
Header - Corn	8R-30		4.01	6.66	3.69			0.06	14.42	23.11	37.53
Grain Cart Corn	500 bu		0.51	0.30	0.74			0.01	1.56	1.17	2.73
Haul Corn	bu	39.10						0.17	39.27		39.27
Stalk Shredder Flex	20'		1.66	2.58	2.39			0.03	6.66	4.15	10.81
TOTALS		396.76	12.40	14.91	17.81	0.00	12.10	453.98	45.55	499.53	

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 6.E Estimated monthly income and expense flows per acre
 Corn, no-tillage, BtRR, 12-row 30", 170 bu yield goal
 Non-Delta Areas, Mississippi, 2020

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
-----dollars-----												
TOTAL INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	656.20
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	7.00	0.00	0.00	5.50	0.00	0.00	0.00	0.00
FERTILIZERS	0.00	0.00	0.00	0.00	0.00	85.78	66.19	0.00	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	21.15	0.00	30.82	0.00	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.25	0.00	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	98.00	0.00	0.00	0.00	0.00	0.00	0.00
HAULING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.10
CUSTOM LIME	28.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CROP CONSULTANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00	0.00
SOIL TEST	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LABOR	0.00	0.00	0.00	0.00	0.00	5.62	5.37	0.00	0.00	0.00	0.00	6.82
LEASE *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUEL	0.00	0.00	0.00	0.00	0.00	2.98	3.24	0.00	0.00	0.00	0.00	6.18
REPAIR & MAINTENANCE	0.00	0.00	0.00	0.00	0.00	3.17	2.20	0.00	0.00	0.00	0.00	9.54
INTEREST ON OP. CAP.	1.67	0.00	0.00	0.00	0.99	5.98	2.83	0.36	0.00	0.00	0.00	0.27
TOTAL DIRECT EXPENSES	33.64	0.00	0.00	0.00	29.14	201.53	110.65	17.11	0.00	0.00	0.00	61.91
NET INCOME	-33.64	0.00	0.00	0.00	-29.14	-201.53	-110.65	-17.11	0.00	0.00	0.00	594.29
NET INCOME TO DATE	-33.64	-33.64	-33.64	-33.64	-62.78	-264.31	-374.96	-392.07	-392.07	-392.07	-392.07	202.22

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

* Lease costs are based on hourly usage costs.

Table 6.F Estimated returns for various price/yield combinations, per acre
 Corn, no-tillage, BtRR, 12-row 30", 170 bu yield goal
 Non-Delta Areas, Mississippi, 2020

PRODUCT	PERCENT												
	75	80	85	90	95	100	105	110	115	120	125		
PRODUCT PRICE													
Corn	2.89	3.08	3.28	3.47	3.66	3.86	4.05	4.24	4.43	4.63	4.82		
PERCENT	YIELD	UNIT	dollars										
50	85.00	bu	-188 -233	-171 -217	-155 -201	-139 -184	-122 -168	-106 -151	-89 -135	-73 -118	-57 -102	-40 -86	-24 -69
60	102.00	bu	-142 -188	-123 -168	-103 -149	-83 -129	-64 -109	-44 -90	-24 -70	-5 -50	14 -31	34 -11	53 8
70	119.00	bu	-97 -143	-74 -120	-51 -97	-28 -74	-5 -51	17 -28	40 -5	63 17	86 40	109 63	131 86
80	136.00	bu	-52 -97	-26 -71	0 -45	26 -19	52 7	78 33	105 59	131 85	157 112	183 138	210 164
90	153.00	bu	-7 -52	22 -23	51 6	81 35	110 65	140 94	170 124	199 154	229 183	258 213	288 242
100	170.00	bu	38 -7	70 25	103 58	136 91	169 123	202 156	235 189	267 222	300 255	333 287	366 320
110	187.00	bu	83 37	119 73	155 110	191 146	227 182	263 218	300 254	336 290	372 326	408 362	444 398
120	204.00	bu	128 83	168 122	207 161	246 201	286 240	325 280	364 319	404 358	443 398	483 437	522 476
130	221.00	bu	174 128	216 171	259 213	301 256	344 299	387 341	429 384	472 427	515 469	557 512	600 555
140	238.00	bu	219 173	265 219	311 265	357 311	403 357	448 403	494 449	540 495	586 541	632 587	678 633
150	255.00	bu	264 219	313 268	363 317	412 366	461 415	510 465	559 514	609 563	658 612	707 661	756 711

The top number in each cell is Returns Above Direct Expenses.
 The bottom number in each cell is Returns Above Total Specified Expenses.
 Only the product listed has been varied to calculate net returns.
 Note: Cost of production estimates are based on 2019 input prices.

Table 7.A Estimated costs per acre
 Grain sorghum, 12-row 30", 100 bu yield goal
 All Areas, Mississippi, 2020

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air (5 gal)	appl	7.00	1.0000	7.00	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	18.11	1.3000	23.54	_____
Potash (60% K2O)	cwt	27.50	1.0000	27.50	_____
UAN + Sulfur (28%)	gal	1.39	38.2883	53.22	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
2,4-D Amine 4	pt	2.73	2.0000	5.46	_____
Select Max	pt	10.87	1.0000	10.87	_____
Lexar	pt	7.67	6.0000	46.02	_____
INSECTICIDES					
Sivanto Prime	oz	2.54	8.0000	20.32	_____
Karate Z	oz	2.48	1.5000	3.72	_____
Prevathon	oz	1.12	14.0000	15.68	_____
SEED/PLANTS					
Sorghum Concept+ Po	lb	3.94	4.5000	17.73	_____
ADJUVANTS					
Surfactant	pt	5.31	0.3000	1.59	_____
HAULING					
Haul Sorghum	bu	0.25	100.0000	25.00	_____
CUSTOM LIME					
Lime (Spread)	ton	43.00	0.6660	28.64	_____
CROP CONSULTANT					
Sorghum Consultant	acre	6.00	1.0000	6.00	_____
SOIL TEST					
Soil Test	acre	10.00	0.3330	3.33	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.3120	4.76	_____
Harvesters	hour	15.22	0.1021	1.56	_____
Self-Propelled	hour	15.22	0.0661	1.00	_____
HAND LABOR					
Implements	hour	9.06	0.1442	1.31	_____
Self-Propelled	hour	9.06	0.0330	0.30	_____
UNALLOCATED LABOR					
	hour	15.22	0.4322	6.58	_____
DIESEL FUEL					
Tractors	gal	2.30	2.7303	6.29	_____
Harvesters	gal	2.30	1.3935	3.21	_____
Self-Propelled	gal	2.30	0.8505	1.95	_____
REPAIR & MAINTENANCE					
Implements	acre	5.23	1.0000	5.23	_____
Tractors	acre	1.51	1.0000	1.51	_____
Harvesters	acre	3.75	1.0000	3.75	_____
Self-Propelled	acre	1.00	1.0000	1.00	_____
INTEREST ON OP. CAP.	acre	8.53	1.0000	8.53	_____
TOTAL DIRECT EXPENSES				347.08	_____
FIXED EXPENSES					
Implements	acre	11.11	1.0000	11.11	_____
Tractors	acre	10.29	1.0000	10.29	_____
Harvesters	acre	15.90	1.0000	15.90	_____
Self-Propelled	acre	7.20	1.0000	7.20	_____
TOTAL FIXED EXPENSES				44.50	_____
TOTAL SPECIFIED EXPENSES				391.58	_____

Note: Cost of production estimates are based on 2019 input prices..
Fertilization decisions should be based on soil tests.
Soil test cost is prorated for a test every 3rd year.
Lime cost prorated for application every 3rd year.

Table 7.B Summary of estimated costs and returns per acre
 Grain sorghum, 12-row 30", 100 bu yield goal
 All Areas, Mississippi, 2020

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Grain Sorghum	bu	3.67	100.0000	367.00	_____

TOTAL INCOME				367.00	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	7.00	1.0000	7.00	_____
FERTILIZERS	acre	104.26	1.0000	104.26	_____
HERBICIDES	acre	66.83	1.0000	66.83	_____
INSECTICIDES	acre	39.72	1.0000	39.72	_____
SEED/PLANTS	acre	17.73	1.0000	17.73	_____
ADJUVANTS	acre	1.59	1.0000	1.59	_____
HAULING	acre	25.00	1.0000	25.00	_____
CUSTOM LIME	acre	28.64	1.0000	28.64	_____
CROP CONSULTANT	acre	6.00	1.0000	6.00	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1772	1.61	_____
OPERATOR LABOR	hour	15.22	0.4803	7.32	_____
UNALLOCATED LABOR	hour	15.22	0.4322	6.58	_____
DIESEL FUEL	gal	2.30	4.9745	11.45	_____
REPAIR & MAINTENANCE	acre	11.49	1.0000	11.49	_____
INTEREST ON OP. CAP.	acre	8.53	1.0000	8.53	_____

TOTAL DIRECT EXPENSES				347.08	_____
RETURNS ABOVE DIRECT EXPENSES				19.92	_____
TOTAL FIXED EXPENSES				44.50	_____

TOTAL SPECIFIED EXPENSES				391.58	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				-24.58	_____

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 7.C Estimated resource use for field operations, per acre
 Grain sorghum, 12-row 30", 100 bu yield goal
 All Areas, Mississippi, 2020

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	INPUT AMOUNT	IMPLEMENT	POWER UNIT	ALLOC LABOR	UNALL LABOR
							-----hours-----			
Soil Test	acre			0.33	Oct	0.3330				
Lime (Spread)	ton			0.33	Oct	0.6660				
Disk Harrow	24'	MFWD 170	0.081	1.00	Nov		0.08	0.08	0.08	0.07
App by Air (5 gal)	appl			1.00	Feb	1.0000				
Glyphosate 3lbs a.e	oz					32.0000				
2,4-D Amine 4	pt					2.0000				
Select Max	pt					1.0000				
Surfactant	pt					0.3000				
Spin Spreader	5 ton	MFWD 170	0.042	1.00	Apr		0.04	0.04	0.08	0.03
Phosphorus(46% P2O5)	cwt					1.3000				
Potash (60% K2O)	cwt					1.0000				
Field Cultivate Fld	32'	MFWD 170	0.046	1.00	Apr		0.04	0.04	0.04	0.04
Plant - Folding	12R-30	MFWD 170	0.062	1.00	Apr		0.06	0.06	0.12	0.05
Sorghum Concept+ Po	lb					4.5000				
Sprayer 800gal	80' 250hp		0.013	1.00	Apr			0.01	0.01	0.01
Lexar	pt					6.0000				
Sorghum Consultant	acre			1.00	May	1.0000				
Fert Appl (Liquid)	12R-30	MFWD 170	0.078	1.00	May		0.07	0.07	0.11	0.07
UAN + Sulfur (28%)	gal					38.2883				
Sprayer 800gal	80' 250hp		0.013	1.00	Jun			0.01	0.01	0.01
Sivanto Prime	oz					4.0000				
Sprayer 800gal	80' 250hp		0.013	1.00	Jul			0.01	0.01	0.01
Karate Z	oz					1.5000				
Sprayer 800gal	80' 250hp		0.013	1.00	Jul			0.01	0.01	0.01
Prevathon	oz					14.0000				
Sprayer 800gal	80' 250hp		0.013	1.00	Jul			0.01	0.01	0.01
Sivanto Prime	oz					4.0000				
Header Wheat/Sorghum	25' Rigid	265 hp	0.102	1.00	Sep		0.10	0.10	0.10	0.09
Haul Sorghum	bu					100.0000				
TOTALS							0.48	0.41	0.65	0.43

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 7.D Estimated costs for field operations, per acre
 Grain sorghum, 12-row 30", 100 bu yield goal
 All Areas, Mississippi, 2020

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----							FIXED COST	TOTAL COST	
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL			
-----dollars-----											
Soil Test	acre	3.33						0.17	3.50		3.50
Lime (Spread)	ton	28.64						1.50	30.14		30.14
Disk Harrow	24'		1.65	1.41	2.37			0.26	5.69	5.02	10.71
App by Air (5 gal)	appl	7.00						0.25	7.25		7.25
Glyphosate 3lbs a.e	oz	4.48						0.16	4.64		4.64
2,4-D Amine 4	pt	5.46						0.19	5.65		5.65
Select Max	pt	10.87						0.38	11.25		11.25
Surfactant	pt	1.59						0.06	1.65		1.65
Spin Spreader	5 ton		0.85	0.51	1.60			0.08	3.04	2.06	5.10
Phosphorus(46% P2O5)	cwt	23.54						0.62	24.16		24.16
Potash (60% K2O)	cwt	27.50						0.72	28.22		28.22
Field Cultivate Fld	32'		0.94	0.73	1.35			0.08	3.10	3.84	6.94
Plant - Folding	12R-30		1.27	1.96	2.39			0.15	5.77	5.53	11.30
Sorghum Concept+ Po	lb	17.73						0.47	18.20		18.20
Sprayer 800gal	80' 250hp		0.39	0.20	0.44			0.03	1.06	1.44	2.50
Lexar	pt	46.02						1.21	47.23		47.23
Sorghum Consultant	acre	6.00						0.13	6.13		6.13
Fert Appl (Liquid)	12R-30		1.58	1.59	2.64			0.13	5.94	4.07	10.01
UAN + Sulfur (28%)	gal	53.22						1.16	54.38		54.38
Sprayer 800gal	80' 250hp		0.39	0.20	0.44			0.02	1.05	1.44	2.49
Sivanto Prime	oz	10.16						0.18	10.34		10.34
Sprayer 800gal	80' 250hp		0.39	0.20	0.44			0.01	1.04	1.44	2.48
Karate Z	oz	3.72						0.05	3.77		3.77
Sprayer 800gal	80' 250hp		0.39	0.20	0.44			0.01	1.04	1.44	2.48
Prevathon	oz	15.68						0.21	15.89		15.89
Sprayer 800gal	80' 250hp		0.39	0.20	0.44			0.01	1.04	1.44	2.48
Sivanto Prime	oz	10.16						0.13	10.29		10.29
Header Wheat/Sorghum	25' Rigid		3.21	4.29	2.96			0.05	10.51	16.78	27.29
Haul Sorghum	bu	25.00						0.11	25.11		25.11
TOTALS		300.10	11.45	11.49	15.51	0.00	8.53	347.08	44.50	391.58	

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 7.E Estimated monthly income and expense flows per acre
 Grain sorghum, 12-row 30", 100 bu yield goal
 All Areas, Mississippi, 2020

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
-----dollars-----												
TOTAL INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	367.00
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	7.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	51.04	53.22	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	20.81	0.00	46.02	0.00	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.16	29.56	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	0.00	17.73	0.00	0.00	0.00	0.00	0.00
ADJUVANTS	0.00	0.00	0.00	0.00	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HAULING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00
CUSTOM LIME	28.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CROP CONSULTANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00	0.00
SOIL TEST	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LABOR	0.00	2.37	0.00	0.00	0.00	0.00	5.78	2.64	0.44	1.32	0.00	2.96
LEASE *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUEL	0.00	1.65	0.00	0.00	0.00	0.00	3.45	1.58	0.39	1.17	0.00	3.21
REPAIR & MAINTENANCE	0.00	1.41	0.00	0.00	0.00	0.00	3.40	1.59	0.20	0.60	0.00	4.29
INTEREST ON OP. CAP.	1.67	0.26	0.00	0.00	1.04	0.00	3.36	1.42	0.20	0.42	0.00	0.16
TOTAL DIRECT EXPENSES	33.64	5.69	0.00	0.00	30.44	0.00	130.78	66.45	11.39	33.07	0.00	35.62
NET INCOME	-33.64	-5.69	0.00	0.00	-30.44	0.00	-130.78	-66.45	-11.39	-33.07	0.00	331.38
NET INCOME TO DATE	-33.64	-39.33	-39.33	-39.33	-69.77	-69.77	-200.55	-267.00	-278.39	-311.46	-311.46	19.92

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

* Lease costs are based on hourly usage costs.

Table 7.F Estimated returns for various price/yield combinations, per acre
 Grain sorghum, 12-row 30", 100 bu yield goal
 All Areas, Mississippi, 2020

PRODUCT	PERCENT													
	75	80	85	90	95	100	105	110	115	120	125			
Grain Sorghum	2.75	2.93	3.11	3.30	3.48	3.67	3.85	4.03	4.22	4.40	4.58			
PERCENT	YIELD	UNIT	dollars											
50	50.00	bu	-196 -241	-187 -232	-178 -223	-169 -213	-160 -204	-151 -195	-141 -186	-132 -177	-123 -168	-114 -158	-105 -149	
60	60.00	bu	-171 -216	-160 -205	-149 -194	-138 -183	-127 -172	-116 -161	-105 -150	-94 -139	-83 -128	-72 -117	-61 -106	
70	70.00	bu	-146 -191	-134 -178	-121 -165	-108 -152	-95 -139	-82 -127	-69 -114	-56 -101	-44 -88	-31 -75	-18 -62	
80	80.00	bu	-121 -166	-107 -151	-92 -136	-77 -122	-63 -107	-48 -92	-33 -78	-19 -63	-4 -48	10 -34	24 -19	
90	90.00	bu	-96 -141	-80 -124	-63 -108	-47 -91	-30 -75	-14 -58	2 -42	18 -25	35 -9	51 7	68 23	
100	100.00	bu	-71 -116	-53 -97	-35 -79	-16 -61	1 -42	19 -24	38 -6	56 12	74 30	93 48	111 67	
110	110.00	bu	-46 -91	-26 -71	-6 -50	13 -30	33 -10	54 9	74 29	94 49	114 70	134 90	155 110	
120	120.00	bu	-21 -66	0 -44	22 -22	44 -0	66 21	88 43	110 65	132 87	154 109	176 131	198 153	
130	130.00	bu	3 -41	27 -17	50 6	74 30	98 54	122 77	146 101	170 125	194 149	217 173	241 197	
140	140.00	bu	28 -16	53 9	79 35	105 60	130 86	156 112	182 137	208 163	233 189	259 214	285 240	
150	150.00	bu	53 8	80 36	108 63	135 91	163 118	190 146	218 173	245 201	273 228	300 256	328 283	

The top number in each cell is Returns Above Direct Expenses.
 The bottom number in each cell is Returns Above Total Specified Expenses.
 Only the product listed has been varied to calculate net returns.
 Note: Cost of production estimates are based on 2019 input prices.

Table 8.A Estimated costs per acre
 Wheat followed by soybeans, 70 bu yield goal
 All Areas, Mississippi, 2020

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air (5 gal)	appl	7.00	2.0000	14.00	_____
App by Air (3 gal)	appl	5.50	1.0000	5.50	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	18.11	1.0000	18.11	_____
Potash (60% K2O)	cwt	27.50	0.7500	20.63	_____
Fert 41-0-0-4	cwt	18.60	3.0480	56.69	_____
FUNGICIDES					
CruiserMaxx	oz	4.18	4.5000	18.81	_____
Prosaro	oz	2.45	8.0000	19.60	_____
HERBICIDES					
Axiom	oz	1.84	10.0000	18.40	_____
Harmony Extra SG	oz	13.81	0.7500	10.36	_____
Axial XL	oz	1.21	16.4000	19.84	_____
INSECTICIDES					
Karate Z	oz	2.48	1.5000	3.72	_____
SEED/PLANTS					
Wheat Seed Private	lb	0.24	90.0000	21.60	_____
CUSTOM FERTILIZE					
App Fert by Air	cwt	7.50	3.0480	22.86	_____
HAULING					
Haul Wheat	bu	0.26	70.0000	18.20	_____
CUSTOM LIME					
Lime (Spread)	ton	43.00	0.6660	28.64	_____
CROP CONSULTANT					
Wheat Consultant	acre	5.50	1.0000	5.50	_____
SOIL TEST					
Soil Test	acre	10.00	0.3330	3.33	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.2648	4.04	_____
Harvesters	hour	15.22	0.1021	1.56	_____
HAND LABOR					
Implements	hour	9.06	0.1363	1.23	_____
UNALLOCATED LABOR	hour	15.22	0.2936	4.47	_____
DIESEL FUEL					
Tractors	gal	2.30	2.3178	5.34	_____
Harvesters	gal	2.30	1.3935	3.21	_____
REPAIR & MAINTENANCE					
Implements	acre	3.75	1.0000	3.75	_____
Tractors	acre	1.29	1.0000	1.29	_____
Harvesters	acre	3.75	1.0000	3.75	_____
INTEREST ON OP. CAP.	acre	9.47	1.0000	9.47	_____
TOTAL DIRECT EXPENSES				343.91	_____
FIXED EXPENSES					
Implements	acre	9.08	1.0000	9.08	_____
Tractors	acre	8.74	1.0000	8.74	_____
Harvesters	acre	15.90	1.0000	15.90	_____
TOTAL FIXED EXPENSES				33.72	_____
TOTAL SPECIFIED EXPENSES				377.63	_____

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 8.B Summary of estimated costs and returns per acre
 Wheat followed by soybeans, 70 bu yield goal
 All Areas, Mississippi, 2020

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Wheat	bu	4.24	70.0000	296.80	_____

TOTAL INCOME				296.80	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	19.50	1.0000	19.50	_____
FERTILIZERS	acre	95.44	1.0000	95.44	_____
FUNGICIDES	acre	38.41	1.0000	38.41	_____
HERBICIDES	acre	48.60	1.0000	48.60	_____
INSECTICIDES	acre	3.72	1.0000	3.72	_____
SEED/PLANTS	acre	21.60	1.0000	21.60	_____
CUSTOM FERTILIZE	acre	22.86	1.0000	22.86	_____
HAULING	acre	18.20	1.0000	18.20	_____
CUSTOM LIME	acre	28.64	1.0000	28.64	_____
CROP CONSULTANT	acre	5.50	1.0000	5.50	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1363	1.23	_____
OPERATOR LABOR	hour	15.22	0.3670	5.60	_____
UNALLOCATED LABOR	hour	15.22	0.2936	4.47	_____
DIESEL FUEL	gal	2.30	3.7114	8.55	_____
REPAIR & MAINTENANCE	acre	8.79	1.0000	8.79	_____
INTEREST ON OP. CAP.	acre	9.47	1.0000	9.47	_____

TOTAL DIRECT EXPENSES				343.91	_____
RETURNS ABOVE DIRECT EXPENSES				-47.11	_____
TOTAL FIXED EXPENSES				33.72	_____

TOTAL SPECIFIED EXPENSES				377.63	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				-80.83	_____

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 8.C Estimated resource use for field operations, per acre
 Wheat followed by soybeans, 70 bu yield goal
 All Areas, Mississippi, 2020

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	INPUT AMOUNT	IMPLEMENT	POWER UNIT	ALLOC LABOR	UNALL LABOR
							-----hours-----			
Soil Test	acre			0.33	Sep	0.3330				
Lime (Spread)	ton			0.33	Sep	0.6660				
Disk Harrow	24'	MFWD 170	0.081	1.00	Sep		0.08	0.08	0.08	0.06
Spin Spreader	5 ton	MFWD 170	0.042	1.00	Sep		0.04	0.04	0.08	0.03
Phosphorus (46% P2O5)	cwt					1.0000				
Potash (60% K2O)	cwt					0.7500				
Field Cultivate Fld	32'	MFWD 170	0.046	1.00	Sep		0.04	0.04	0.04	0.03
Grain Drill	20'	MFWD 170	0.094	1.00	Oct		0.09	0.09	0.18	0.07
Wheat Seed Private	lb					90.0000				
CruiserMaxx	oz					4.5000				
Wheat Consultant	acre			1.00	Oct	1.0000				
App by Air (5 gal)	appl			1.00	Nov	1.0000				
Axiom	oz					10.0000				
App by Air (3 gal)	appl			1.00	Feb	1.0000				
Karate Z	oz					1.5000				
Harmony Extra SG	oz					0.7500				
Axial XL	oz					16.4000				
App Fert by Air	cwt			1.00	Feb	1.5240				
Fert 41-0-0-4	cwt					1.5240				
App Fert by Air	cwt			1.00	Mar	1.5240				
Fert 41-0-0-4	cwt					1.5240				
App by Air (5 gal)	appl			1.00	Apr	1.0000				
Prosaro	oz					8.0000				
Header Wheat/Sorghum	25' Rigid	265 hp	0.102	1.00	Jun		0.10	0.10	0.10	0.08
Haul Wheat	bu					70.0000				
TOTALS							0.36	0.36	0.50	0.29

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 8.D Estimated costs for field operations, per acre
 Wheat followed by soybeans, 70 bu yield goal
 All Areas, Mississippi, 2020

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----							FIXED COST	TOTAL COST
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL		
-----dollars-----										
Soil Test	acre	3.33						0.15	3.48	3.48
Lime (Spread)	ton	28.64						1.25	29.89	29.89
Disk Harrow	24'		1.65	1.41	2.25			0.23	5.54	5.02
Spin Spreader	5 ton		0.85	0.51	1.53			0.13	3.02	2.06
Phosphorus(46% P2O5)	cwt	18.11						0.79	18.90	18.90
Potash (60% K2O)	cwt	20.63						0.90	21.53	21.53
Field Cultivate Fld	32'		0.94	0.73	1.28			0.13	3.08	3.84
Grain Drill	20'		1.90	1.85	3.44			0.28	7.47	6.02
Wheat Seed Private	lb	21.60						0.85	22.45	22.45
CruiserMaxx	oz	18.81						0.74	19.55	19.55
Wheat Consultant	acre	5.50						0.22	5.72	5.72
App by Air (5 gal)	appl	7.00						0.25	7.25	7.25
Axiom	oz	18.40						0.64	19.04	19.04
App by Air (3 gal)	appl	5.50						0.12	5.62	5.62
Karate Z	oz	3.72						0.08	3.80	3.80
Harmony Extra SG	oz	10.36						0.23	10.59	10.59
Axial XL	oz	19.84						0.43	20.27	20.27
App Fert by Air	cwt	11.43						0.25	11.68	11.68
Fert 41-0-0-4	cwt	28.35						0.62	28.97	28.97
App Fert by Air	cwt	11.43						0.20	11.63	11.63
Fert 41-0-0-4	cwt	28.35						0.50	28.85	28.85
App by Air (5 gal)	appl	7.00						0.09	7.09	7.09
Prosaro	oz	19.60						0.26	19.86	19.86
Header Wheat/Sorghum	25' Rigid		3.21	4.29	2.80			0.05	10.35	16.78
Haul Wheat	bu	18.20						0.08	18.28	18.28
TOTALS		305.80	8.55	8.79	11.30	0.00	9.47	343.91	33.72	377.63

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

Table 8.E Estimated monthly income and expense flows per acre
 Wheat followed by soybeans, 70 bu yield goal
 All Areas, Mississippi, 2020

ITEM	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
-----dollars-----												
TOTAL INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	296.80
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	7.00	0.00	0.00	5.50	0.00	7.00	0.00	0.00
FERTILIZERS	0.00	0.00	38.74	0.00	0.00	0.00	0.00	28.35	28.35	0.00	0.00	0.00
FUNGICIDES	0.00	0.00	0.00	18.81	0.00	0.00	0.00	0.00	0.00	19.60	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	18.40	0.00	0.00	30.20	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.72	0.00	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	21.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CUSTOM FERTILIZE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.43	11.43	0.00	0.00	0.00
HAULING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.20
CUSTOM LIME	0.00	0.00	28.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CROP CONSULTANT	0.00	0.00	0.00	5.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SOIL TEST	0.00	0.00	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LABOR	0.00	0.00	5.06	3.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.80
LEASE *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUEL	0.00	0.00	3.44	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
REPAIR & MAINTENANCE	0.00	0.00	2.65	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.29
INTEREST ON OP. CAP.	0.00	0.00	3.58	2.09	0.89	0.00	0.00	1.73	0.70	0.35	0.00	0.13
TOTAL DIRECT EXPENSES	0.00	0.00	85.44	55.19	26.29	0.00	0.00	80.93	40.48	26.95	0.00	28.63
NET INCOME	0.00	0.00	-85.44	-55.19	-26.29	0.00	0.00	-80.93	-40.48	-26.95	0.00	268.17
NET INCOME TO DATE	0.00	0.00	-85.44	-140.63	-166.92	-166.92	-166.92	-247.85	-288.33	-315.28	-315.28	-47.11

Note: Cost of production estimates are based on 2019 input prices.

Fertilization decisions should be based on soil tests.

Soil test cost is prorated for a test every 3rd year.

Lime cost prorated for application every 3rd year.

* Lease costs are based on hourly usage costs.

Table 8.F Estimated returns for various price/yield combinations, per acre
Wheat followed by soybeans, 70 bu yield goal
All Areas, Mississippi, 2020

			PERCENT										
PRODUCT			75	80	85	90	95	100	105	110	115	120	125
-----			-----PRODUCT PRICE-----										
Wheat			3.18	3.39	3.60	3.81	4.02	4.24	4.45	4.66	4.87	5.08	5.30
PERCENT	YIELD	UNIT	-----dollars-----										
50	35.00	bu	-223	-216	-208	-201	-193	-186	-178	-171	-164	-156	-149
			-257	-249	-242	-234	-227	-220	-212	-205	-197	-190	-182
60	42.00	bu	-203	-194	-185	-176	-167	-158	-149	-140	-131	-122	-113
			-236	-227	-218	-210	-201	-192	-183	-174	-165	-156	-147
70	49.00	bu	-182	-172	-161	-151	-141	-130	-120	-109	-99	-89	-78
			-216	-205	-195	-185	-174	-164	-153	-143	-133	-122	-112
80	56.00	bu	-162	-150	-138	-126	-114	-102	-90	-79	-67	-55	-43
			-195	-184	-172	-160	-148	-136	-124	-112	-100	-89	-77
90	63.00	bu	-141	-128	-115	-101	-88	-74	-61	-48	-34	-21	-8
			-175	-162	-148	-135	-122	-108	-95	-81	-68	-55	-41
100	70.00	bu	-121	-106	-91	-76	-61	-47	-32	-17	-2	12	27
			-155	-140	-125	-110	-95	-80	-65	-51	-36	-21	-6
110	77.00	bu	-100	-84	-68	-51	-35	-19	-2	13	29	46	62
			-134	-118	-101	-85	-69	-52	-36	-20	-4	12	28
120	84.00	bu	-80	-62	-44	-27	-9	8	26	44	62	79	97
			-114	-96	-78	-60	-42	-25	-7	10	28	46	63
130	91.00	bu	-60	-40	-21	-2	17	36	55	75	94	113	132
			-93	-74	-55	-35	-16	2	22	41	60	79	99
140	98.00	bu	-39	-18	1	22	43	64	85	105	126	147	168
			-73	-52	-31	-10	9	30	51	72	92	113	134
150	105.00	bu	-19	3	25	47	69	92	114	136	158	181	203
			-52	-30	-8	13	36	58	80	102	125	147	169

The top number in each cell is Returns Above Direct Expenses.
The bottom number in each cell is Returns Above Total Specified Expenses.
Only the product listed has been varied to calculate net returns.
Note: Cost of production estimates are based on 2019 input prices.

APPENDIX

Appendix Table 1. Tractors/Harvesters: estimated purchase price, annual use, useful life, fuel use, and direct and fixed cost per hour, Mississippi, 2020

Item Name	Size	Purchase Price	Annual Use	Useful Life	Fuel Use	Labor	Fuel	R&M	Total Direct	Fixed	Total Cost
		dollars	hours	years	gal/hr	-----\$/hour-----					
Combine (250-299 hp)	265 hp	352,000	300	8	13.64	15.22	31.37	36.66	83.25	155.57	238.83
Combine (300-349 hp)	325 hp	383,000	300	8	16.73	15.22	38.47	39.89	93.59	169.27	262.87
Combine (350-399 hp)	355 hp	395,000	300	8	18.27	15.22	42.02	41.14	98.38	174.58	272.96
Combine (400-449 hp)	425 hp	425,000	300	8	21.87	15.22	50.31	44.27	109.80	187.84	297.64
Combine (450-499hp)	475 hp	455,000	300	8	24.44	15.22	56.23	47.39	118.84	201.09	319.94
Tractor(20-39hp)CB	MFWD 30	30,000	600	8	1.54	15.22	3.55	0.93	19.70	6.12	25.83
Tractor(20-39hp)RB	MFWD 30	20,800	600	8	1.54	15.22	3.55	0.65	19.42	4.24	23.67
Tractor(40-59hp)CB	2WD 50	30,400	600	8	2.57	15.22	5.91	0.95	22.08	6.21	28.29
Tractor(40-59hp)CB	MFWD 50	40,300	600	8	2.57	15.22	5.91	1.25	22.39	8.23	30.63
Tractor(40-59hp)RB	2WD 50	21,600	600	8	2.57	15.22	5.91	0.67	21.81	4.41	26.22
Tractor(40-59hp)RB	MFWD 50	27,500	600	8	2.57	15.22	5.91	0.85	21.99	5.61	27.61
Tractor(60-89hp)CB	2WD 75	50,200	600	8	3.86	15.22	8.87	1.56	25.66	10.25	35.92
Tractor(60-89hp)CB	MFWD 75	56,800	600	8	3.86	15.22	8.87	1.77	25.87	11.60	37.47
Tractor(60-89hp)RB	2WD 75	35,800	600	8	3.86	15.22	8.87	1.11	25.21	7.31	32.53
Tractor(60-89hp)RB	MFWD 75	42,000	600	8	3.86	15.22	8.87	1.31	25.41	8.58	33.99
Tractor(90-119hp)CB	2WD 105	69,300	600	8	5.40	15.22	12.43	2.16	29.81	14.15	43.97
Tractor(90-119hp)CB	MFWD 105	88,100	600	8	5.40	15.22	12.43	2.75	30.40	17.99	48.40
Tractor(90-119hp)RB	2WD 105	62,300	600	8	5.40	15.22	12.43	1.94	29.59	12.72	42.32
Tractor(90-119hp)RB	MFWD 105	69,700	600	8	5.40	15.22	12.43	2.17	29.82	14.23	44.06
Tractor(120-139hp)CB	2WD 130	110,000	600	8	6.69	15.22	15.39	3.43	34.04	22.47	56.52
Tractor(120-139hp)CB	MFWD 130	125,000	600	8	6.69	15.22	15.39	3.90	34.51	25.53	60.05
Tractor(140-159hp)	2WD 150	108,000	600	8	7.72	15.22	17.75	3.37	36.35	22.06	58.41
Tractor(140-159hp)CB	MFWD 150	140,000	600	8	7.72	15.22	17.75	4.37	37.35	28.60	65.95
Tractor(160-179hp)CB	MFWD 170	155,000	600	8	8.75	15.22	20.12	4.84	40.18	32.95	73.14
Tractor(180-199hp)CB	MFWD 190	189,000	600	8	9.77	15.22	22.49	5.90	43.61	40.18	83.80
Tractor(200-249hp)CB	MFWD 225	227,000	600	8	11.58	15.22	26.63	7.09	48.95	48.27	97.22
Tractor(250-349hp)CB	4WD 300	298,000	600	8	15.44	15.22	35.51	9.31	60.04	63.36	123.41
Tractor(250-349hp)CB	MFWD 300	301,000	600	8	15.44	15.22	35.51	9.40	60.14	64.00	124.14
Tractor(250-349hp)CB	Track 300	327,000	600	8	15.44	15.22	35.51	10.21	60.95	69.53	130.48
Tractor(350-449hp)	Track 400	426,000	600	8	20.58	15.22	47.35	13.31	75.88	90.58	166.47
Tractor(350-449hp)CB	4WD 400	342,000	600	8	20.58	15.22	47.35	10.68	73.26	72.72	145.98
Tractor(450-550hp)CB	4WD 500	412,000	600	8	25.73	15.22	59.19	12.87	87.28	87.60	174.89
Tractor(450-550hp)CB	Track 500	466,000	600	8	25.73	15.22	59.19	14.56	88.97	99.09	188.06
Utility Vehicle	800 CC	12,200	200	8	0.70	15.22	1.54	1.90	18.66	8.08	26.75
Utility Vehicle	900 CC	15,800	200	8	1.00	15.22	2.20	2.46	19.88	10.47	30.36

Notes:

Labor: Includes allocated labor from power unit.

Total Direct: Does not include interest on operating capital.

Appendix Table 2. Self-propelled machines: estimated purchase price, annual use, useful life, fuel use, performance rate, and direct and fixed cost per acre, Mississippi, 2020

Item Name	Size	Purchase Price	Annual Use	Useful Life	Fuel Use	Perf Rate	Labor	Fuel	R&M	Total Direct	Fixed	Total Cost
		dollars	hours	years	gal/hr	hr/ac	-----\$/acre-----					
Cotton Picker	4R-38 (250)	268,000	200	8	12.86	0.257	6.25	7.62	10.79	24.68	45.80	70.48
Cotton Picker	4R-38 (350)	351,000	200	8	18.01	0.257	6.25	10.68	14.13	31.07	59.98	91.06
Cotton Picker	4R2x1 (350)	357,000	200	8	18.01	0.172	4.18	7.13	9.61	20.93	40.78	61.71
Cotton Picker	6R-30 (355)	465,000	200	8	18.27	0.218	5.29	9.17	15.85	30.32	67.28	97.61
Cotton Picker	6R-38 (355)	465,000	200	8	18.27	0.172	4.18	7.24	12.51	23.94	53.11	77.06
Cotton Picker/Modu	4R-38 (365)	536,000	200	8	20.58	0.257	6.25	12.20	21.58	40.05	91.60	131.65
Cotton Picker/Module	6R-30 (500)	776,000	200	8	25.73	0.218	5.29	12.91	26.46	44.68	112.28	156.96
Cotton Picker/Module	6R-38 (500)	808,000	200	8	25.73	0.172	4.18	10.19	21.75	36.13	92.30	128.43
Dry Applicator SP	70'300cuft	344,000	350	8	16.98	0.015	0.29	0.59	0.27	1.16	1.96	3.13
Sprayer 600-750gal	60' 175hp	216,000	350	8	9.00	0.017	0.34	0.36	0.20	0.91	1.44	2.35
Sprayer 600-825gal	80' 175hp	215,000	350	8	11.81	0.013	0.26	0.35	0.15	0.77	1.07	1.84
Sprayer 600-825gal	90' 250hp	316,000	350	8	12.73	0.011	0.23	0.34	0.19	0.77	1.40	2.18
Sprayer 800gal	100' 250hp	317,000	350	8	14.15	0.010	0.20	0.34	0.17	0.73	1.27	2.00
Sprayer 800gal	80' 250hp	287,000	350	8	12.86	0.013	0.26	0.39	0.20	0.85	1.43	2.29
Sprayer 1000-1400gal	90' 275hp	316,000	350	8	14.15	0.010	0.20	0.34	0.17	0.73	1.26	1.99
Sprayer 1000gal	100' 300hp	357,000	350	8	15.44	0.010	0.20	0.37	0.20	0.78	1.43	2.21
Sprayer 1200+gal	120' 300hp	376,000	350	8	15.44	0.008	0.17	0.31	0.17	0.66	1.25	1.91

Notes:

Labor: includes allocated labor plus any additional labor from self-propelled machine.

Direct: Does not include interest on operating capital.

Appendix Table 3. Towed equipment: estimated purchase price, annual use, useful life, performance rate, and direct and fixed cost per acre, Mississippi, 2020 (continued)

Item Name	Size	Power Unit	Purchase Price	Annual Use	Useful Life	Perf Rate	Labor	Fuel	---R&M---		Total Direct	--Fixed--		Total Cost
									Imp.	P.U.		Imp.	P.U.	
			dollars	hours	years	hr/ac	-----\$/acre-----							
Row Cond./Roll-Fold.	40'	MFWD 225	26,700	160	10	0.046	0.71	1.24	0.31	0.33	2.60	0.89	2.26	5.77
Spin Spreader	5 ton	MFWD 190	12,900	100	8	0.042	1.02	0.94	0.30	0.24	2.52	0.66	1.69	4.87
Spray (ATV Ropewick)	75"	800 CC	720	200	8	0.260	5.14	0.40	0.08	0.49	6.12	0.11	2.10	8.34
Spray (ATV)	20'	800 CC	1,690	200	8	0.084	1.67	0.13	0.06	0.16	2.02	0.08	0.68	2.80
Spray (Band)	27' Fold	MFWD 170	7,400	200	8	0.062	1.23	1.26	0.21	0.30	3.02	0.28	2.06	5.37
Spray (Band)	40' Fold	MFWD 170	8,600	200	8	0.042	0.83	0.85	0.17	0.20	2.06	0.22	1.39	3.68
Spray (Band)	50' Fold	MFWD 170	13,700	200	8	0.033	0.66	0.68	0.21	0.16	1.73	0.28	1.11	3.13
Spray (Band)	60' Fold	MFWD 170	15,600	200	8	0.028	0.55	0.56	0.20	0.13	1.46	0.26	0.92	2.66
Spray (Bcast/HB)	13' Rigid	MFWD 150	6,900	200	8	0.130	2.57	2.31	0.42	0.56	5.87	0.55	3.72	10.14
Spray (Bcast/HB)	20' Rigid	MFWD 150	8,100	200	8	0.084	1.67	1.50	0.32	0.37	3.86	0.42	2.42	6.70
Spray (Bcast/HB)	27' Fold	MFWD 170	15,400	200	8	0.062	1.23	1.26	0.45	0.30	3.25	0.59	2.06	5.91
Spray (Bcast/HB)	27' Rigid	MFWD 170	9,800	200	8	0.062	1.23	1.26	0.28	0.30	3.09	0.37	2.06	5.53
Spray (Bcast/HB)	30' Fold	MFWD 170	18,930	200	8	0.056	1.11	1.13	0.50	0.27	3.02	0.65	1.85	5.53
Spray (Bcast/HB)	40' Fold	MFWD 170	22,000	200	8	0.042	0.83	0.85	0.43	0.20	2.32	0.57	1.39	4.29
Spray (Broadcast)	27'	MFWD 170	7,400	200	8	0.062	1.23	1.26	0.21	0.30	3.02	0.28	2.06	5.37
Spray (Broadcast)	40'	MFWD 170	8,600	200	8	0.042	0.83	0.85	0.17	0.20	2.06	0.22	1.39	3.68
Spray (Broadcast)	50'	MFWD 170	13,700	200	8	0.033	0.66	0.68	0.21	0.16	1.73	0.28	1.11	3.13
Spray (Broadcast)	60'	MFWD 170	15,600	200	8	0.028	0.55	0.56	0.20	0.13	1.46	0.26	0.92	2.66
Spray (Direct/Hood)	8R-30	MFWD 170	20,400	200	8	0.084	1.67	1.70	0.80	0.40	4.59	1.05	2.78	8.44
Spray (Direct/Hood)	8R-38	MFWD 170	21,900	200	8	0.066	1.32	1.34	0.68	0.32	3.67	0.89	2.20	6.78
Spray (Direct/Hood)	12R-30	MFWD 170	25,300	200	8	0.056	1.11	1.13	0.66	0.27	3.19	0.87	1.85	5.92
Spray (Direct/Hood)	12R-38	MFWD 170	27,100	200	8	0.044	0.87	0.89	0.56	0.21	2.55	0.73	1.46	4.76
Spray (Direct/Layby)	8R-30	MFWD 170	11,300	200	8	0.084	1.67	1.70	0.44	0.40	4.23	0.58	2.78	7.60
Spray (Direct/Layby)	8R-38	MFWD 170	11,300	200	8	0.066	1.32	1.34	0.35	0.32	3.34	0.46	2.20	6.01
Spray (Direct/Layby)	8R-38 2x1	MFWD 170	14,900	200	8	0.044	0.87	0.89	0.31	0.21	2.30	0.40	1.46	4.17
Spray (Direct/Layby)	12R-30	MFWD 170	14,900	200	8	0.056	1.11	1.13	0.39	0.27	2.91	0.51	1.85	5.29
Spray (Direct/Layby)	12R-38	MFWD 170	14,900	200	8	0.044	0.87	0.89	0.31	0.21	2.30	0.40	1.46	4.17
Spray (Direct/Layby)	16R-20	MFWD 225	22,300	200	8	0.062	1.23	1.66	0.65	0.44	4.00	0.85	3.02	7.88
Spray (Levee Leaper)	50'	MFWD 225	13,200	200	8	0.033	0.66	0.90	0.20	0.24	2.01	0.27	1.63	3.92
Spray (Pull Type)	60'	MFWD 225	40,700	200	8	0.028	0.55	0.75	0.53	0.20	2.04	0.70	1.36	4.11
Spray (Pull Type)	80'	MFWD 225	52,500	200	8	0.021	0.41	0.56	0.52	0.15	1.65	0.68	1.02	3.35
Spray (Pull Type)	90'	2WD 50	53,200	200	8	0.018	0.37	0.11	0.46	0.01	0.96	0.61	0.08	1.66
Spray (Pull Type)	120'	MFWD 225	80,900	200	8	0.014	0.27	0.37	0.53	0.10	1.28	0.69	0.68	2.66
Spray (Ropewick)	20'	MFWD 190	4,100	200	8	0.084	1.67	1.90	0.16	0.49	4.23	0.21	3.40	7.85
Spray (Spot)	27'	MFWD 170	7,400	200	8	0.062	1.23	1.26	0.21	0.30	3.02	0.28	2.06	5.37
Spray (Spot)	40'	MFWD 170	8,600	200	8	0.042	0.83	0.85	0.17	0.20	2.06	0.22	1.39	3.68
Spray (Spot)	50'	MFWD 170	13,700	200	8	0.033	0.66	0.68	0.21	0.16	1.73	0.28	1.11	3.13
Spray (Spot)	60'	MFWD 225	15,600	200	8	0.028	0.55	0.75	0.20	0.20	1.71	0.26	1.36	3.34
Stalk Shredder	14'	MFWD 150	14,500	200	10	0.117	1.79	2.09	1.49	0.51	5.89	0.98	3.37	10.25
Stalk Shredder Flex	20'	MFWD 150	30,200	200	10	0.082	1.25	1.46	2.18	0.36	5.26	1.43	2.35	9.05
Stalk Shredder-Flail	12'	MFWD 150	20,500	200	10	0.137	2.09	2.44	2.46	0.60	7.60	1.62	3.93	13.15
Stalk Shredder-Flail	15'	MFWD 150	23,800	200	10	0.110	1.67	1.95	2.29	0.48	6.39	1.50	3.14	11.05
Stalk Shredder-Flail	18'	MFWD 150	28,900	200	10	0.091	1.39	1.62	2.31	0.40	5.74	1.52	2.62	9.88
Stalk Shredder-Flail	20'	MFWD 150	30,100	200	10	0.082	1.25	1.46	2.17	0.36	5.25	1.42	2.35	9.04
Stalk Shredder-Flail	25'	MFWD 150	45,300	200	10	0.066	1.00	1.17	2.61	0.28	5.08	1.71	1.88	8.68
Subsoiler	3 shank	MFWD 190	5,920	100	15	0.204	3.10	4.59	0.40	1.20	9.31	1.11	8.21	18.64
Subsoiler	4 shank	MFWD 225	9,830	100	15	0.153	2.33	4.09	0.50	1.08	8.02	1.38	7.41	16.82
Subsoiler	5 shank	MFWD 225	13,900	100	15	0.122	1.86	3.25	0.56	0.86	6.55	1.56	5.90	14.02
Subsoiler low-till	6 shank	MFWD 225	15,300	100	15	0.102	1.55	2.72	0.52	0.72	5.52	1.43	4.93	11.89
Subsoiler low-till	8 shank	MFWD 225	22,000	100	15	0.076	1.16	2.03	0.56	0.54	4.30	1.54	3.69	9.55

Notes:

Labor: Includes labor from Power unit plus additional labor from the implement.

Total Direct: Does not include interest on operating capital.

Appendix Table 4. Operating inputs: estimated prices, Mississippi, 2020

ITEM NAME	UNIT	PRICE	ITEM NAME	UNIT	PRICE
		dollars			dollars
ADJUVANTS			Artisan	oz	0.23
Agri-Dex	pt	2.43	Avaris	oz	1.65
AMS SuperMax	pt	3.81	Avicta Complete Bean	oz	3.65
Class Act NG	pt	2.44	Bravo Weather Stick	pt	6.35
Crop Oil Conc. (Pet.)	pt	3.00	Captan 50 WP	lb	4.28
Crop Oil Conc. (Veg.)	pt	3.22	Convoy	oz	0.78
Dyne-A-Pak	pt	5.45	Cotton Seed Trt.	acre	20.00
Fire-Zone	pt	3.07	CruiserMaxx	oz	4.18
Herbimax	pt	3.48	Echo	oz	0.41
Induce	pt	3.41	Elatus	oz	2.94
MSO	pt	3.55	Headline EC	oz	2.63
Penetrator Plus	pt	2.70	Miravis Top	oz	1.27
Surfactant	pt	5.31	Prior Xemium	oz	4.53
CLEANING			Propimax EC	pt	11.69
Cleaning Peanuts	ton	18.00	Prosaro	oz	2.45
CROP CONSULTANT			Provost Optimum	lb	1.64
Corn Consultant	acre	6.00	Quadris	oz	1.63
Cotton Consultant	acre	8.00	Quadris Top	oz	2.33
Peanut Consultant	acre	9.25	Quadris Top SBX	oz	2.36
Rice Consultant	acre	8.00	Quilt	pt	17.06
Sorghum Consultant	acre	6.00	Quilt XCEL	pt	23.43
Soybeans Consultant	acre	6.50	Stratego	pt	23.43
Wheat Consultant	acre	5.50	Stratego YLD	oz	3.51
CUSTOM FERTILIZE			Tebuconazole	oz	0.49
App Fert by Air	cwt	7.50	Tilt 3.6 EC	oz	0.72
App Fert by Air (Mi)	appl	7.50	Tilt/ Bravo SE	oz	1.00
Custom Apply Fert	acre	7.50	Trivapro	oz	1.53
CUSTOM LIME			GINNING		
Lime (Spread)	ton	43.00	Gin & Haul	lb	0.11
CUSTOM PLANT			GROWTH REGULATORS		
Custom Plant	acre	7.50	Mepex	oz	0.07
Custom Plant Air	cwt	7.50	Mepichlor 4.2%	oz	0.08
CUSTOM SPRAY			Mepiquat Chloride	oz	0.10
App by Air (3 gal)	appl	5.50	Mepstar 6	oz	0.39
App by Air (5 gal)	appl	7.00	Palisade	oz	1.28
App by Air (10 gal)	appl	9.00	Pentia	oz	0.85
Custom Spray Ground	acre	7.00	Pix Ultra	oz	0.21
DRYING			Stance	oz	1.23
Dry Corn	bu	0.19	Veto	oz	0.06
Dry Grain Sorghum	cwt	0.25	HARVEST AIDS		
Dry Peanuts	ton	24.00	Adios	oz	0.93
Dry Rice	bu	0.40	Aim 2EC	oz	5.68
ERADICATION FEE			Boll Buster	oz	0.18
Eradication	acre	1.00	Def/Folex	pt	8.61
FERTILIZERS			Defol 5	gal	6.54
Agrotain Ultra	pt	8.36	Display	oz	10.13
Amm Sulfate (21% N)	cwt	17.46	Ethephon 6E	pt	2.90
Boron Plus	pt	4.52	Finish 6	pt	9.37
DAP	cwt	22.64	Folex 6EC	pt	8.61
Fert 10-34-0	cwt	24.78	Freefall SC	oz	1.18
Fert 10-34-0	gal	2.90	Ginstar EC	pt	21.44
Fert 11-37-0	cwt	29.40	Gramoxone SL	oz	0.17
Fert 41-0-0-4	cwt	18.60	Sharpen	oz	5.66
Lime	ton	32.97	Sodium Chlorate 5L	gal	6.54
NBPT	pt	7.97	SuperBoll	oz	0.19
Phosphorus (46% P2O5)	cwt	18.11	Thidiazuron 4lb	oz	1.18
Potash (60% K2O)	cwt	27.50	Tribufos 6lb	pt	8.61
Sulfur Plus	pt	2.62	Vacate	oz	1.60
UAN (32% N)	cwt	13.62	HAULING		
UAN (32%)	gal	1.51	Haul Corn	bu	0.23
UAN + Sulfur (28%)	cwt	12.55	Haul Peanuts	ton	14.50
UAN + Sulfur (28%)	gal	1.39	Haul Rice	bu	0.35
Urea, Solid (46% N)	cwt	20.22	Haul Sorghum	bu	0.25
Zinc Plus	pt	2.99	Haul Soybeans	bu	0.27
FUNGICIDES			Haul Wheat	bu	0.26
Abound	oz	0.98	HERBICIDES		
Alfa Guard	lb	1.82	2,4-D Ester	pt	3.28
Approach Prima	pt	31.96	2,4-D Amine 4	pt	2.73
Apron Maxx RTA	oz	1.66	AAtrex 4L	pt	2.24

(continued)

Appendix Table 4. Operating inputs: estimated prices, Mississippi, 2020 (continued)

ITEM NAME	UNIT	PRICE	ITEM NAME	UNIT	PRICE
		dollars			dollars
Accent Q	oz	17.67	Halomax	oz	19.90
Acuron	oz	2.22	Harmony Extra SG	oz	13.81
Aim	oz	5.68	Helmet	oz	4.15
Anthem Flex	oz	2.67	Hero	pt	25.77
Anthem Maxx	oz	4.90	Huskie	oz	0.84
Armezon Pro	oz	1.16	Impact	oz	1.24
Atrazine 4L	pt	2.09	Intimidator	oz	0.59
Atrazine 90DF	lb	7.52	Leadoff	oz	5.15
Authority First	oz	4.50	League	oz	4.51
Authority Elite	pt	14.03	Lexar	pt	7.67
Authority Maxx	lb	49.72	Liberty 280	oz	0.49
Authority MTZ	lb	32.08	Loyant	oz	2.21
Avatar	pt	7.87	Makaze	oz	0.14
Avenger	pt	9.89	Metolachlor	pt	4.87
Axial XL	oz	1.21	Metribuzin 4L	pt	9.30
Axiom	oz	1.84	Metribuzin 75	lb	18.75
Banvel	pt	15.04	MSMA	pt	3.97
Barrage	pt	5.43	Newpath	oz	3.73
Basagran	pt	5.43	Oberon	oz	3.75
Boundary	pt	8.84	Obey	oz	0.91
Brake	oz	1.72	Osprey	oz	3.24
Broadaxe	pt	16.41	Outlook	pt	16.38
Broadhead	lb	58.21	Panther Pro	oz	3.35
Bucaneer Plus	pt	2.37	Parallel	pt	4.64
Bucril	pt	4.28	Paraquat	oz	0.19
Butyrac 200 (2,4-DB)	pt	3.49	Parazone 3SL	oz	0.19
Cadre	oz	3.10	Permit	oz	21.22
Canopy	oz	2.13	Permit Plus	oz	20.60
Caparol	pt	4.59	PowerFlex	oz	6.71
Capreno	oz	4.75	Prefix	pt	5.69
Cinch	pt	16.06	Provisia	oz	0.83
Cinch ATZ	pt	5.20	Prowl 3.3 EC	pt	5.30
Clarity	pt	11.60	Python WDG	oz	15.10
Classic	oz	14.02	Quelex	oz	7.00
Clearpath	lb	57.57	RealmQ	oz	4.66
Clethomine 2E	oz	0.50	RebelEx	oz	2.68
Clincher SF	oz	2.32	Reflex	pt	5.87
Cobra	oz	1.71	Regiment	oz	42.66
Command 3ME	pt	16.09	Resicore	oz	0.55
Corvus	oz	6.65	Resource	oz	1.72
Cotoran	pt	5.85	RiceBeaux	pt	5.79
Cotton Pro	pt	3.75	Riceshot	pt	3.92
Declare	oz	1.64	Ricestar HT	pt	24.04
Dicamba	pt	5.66	Ringside	pt	4.17
Direx	pt	3.01	Roundup Power Max	oz	0.20
Diuron	pt	3.53	Roundup PowerMax	pt	3.20
Dual II Magnum	pt	12.63	Roundup PowerMax ii	oz	0.20
Dual Magnum	pt	10.26	Roundup Pro	pt	0.20
Duet	pt	5.39	Scepter 70 DG	oz	4.50
Endigo	oz	1.80	Select Max	pt	10.87
Engenia	oz	0.83	Sencor/Tricor.Metrib	oz	5.45
Envive	oz	0.53	Sequence	pt	5.16
Envoke	oz	106.65	Sharpen	oz	5.66
Facet L	pt	13.61	Sinister	pt	14.61
Fierce	oz	7.44	Sonic	oz	4.63
Fierce XLT	oz	6.66	Stalwart	pt	3.95
Finesse	oz	14.38	Stam 80 EDF	lb	9.32
Firestorm	pt	5.97	Stam M4	qt	7.91
First Rate	oz	40.12	Staple LX	oz	1.95
Flexstar	pt	9.11	Storm	pt	11.58
Flexstar GT	pt	4.44	Strada	oz	6.65
Fusilade DX	oz	1.06	Strada Pro	oz	6.86
Gambit	oz	16.96	Strada XT2	pt	3.20
Glyphosate 3lbs a.e	pt	2.16	Superwham	qt	9.27
Glyphosate 3lbs a.e	oz	0.14	Suprend	lb	10.14
Goal 2XL	pt	7.77	SureStart II	oz	0.67
Gramoxone SL 2.0	oz	0.17	Surveil	oz	0.72
Grandstand R	pt	18.26	Synchrony XP	oz	11.72
Grasp	oz	12.03	Tempest	oz	1.84
Grasp Xtra	oz	1.68	Touchdown Total	qt	5.23
Halex GT	pt	6.24			(continued)

Appendix Table 4. Operating inputs: estimated prices, Mississippi, 2020 (continued)

ITEM NAME	UNIT	PRICE	ITEM NAME	UNIT	PRICE
		dollars			dollars
Treflan	pt	3.37	Lambda	oz	1.71
Trifluralin	pt	3.36	Lannate LV	pt	9.85
Triflurex	pt	3.66	Macho	oz	0.53
Ultra Blazer	pt	10.69	Malathion 5E	pt	8.16
Valor EZ	oz	4.43	Malathion 8E	pt	5.50
Valor SX	oz	4.28	Mustang Max	oz	1.33
Valor XLT	oz	4.90	Nuprid 4F	oz	0.89
Vamos	pt	6.49	Orthene 90	lb	15.98
Verdict	oz	1.72	Permethrin	oz	0.63
Veritas	pt	7.49	Portal XLO	oz	0.88
Villain	pt	5.24	Pounce 25WP	lb	18.08
Volunteer	pt	10.63	Prevathon	oz	1.12
Warrant	pt	4.02	Radiant	oz	6.28
XtendiMax	oz	0.49	Sevin 4F	pt	6.22
Zidua DF	oz	8.23	Sevin XLR Plus	qt	15.09
Zidua SC	oz	5.75	Sivanto Prime	oz	2.54
INOCULANT			Straffer Max	oz	9.61
Inoculant -Soybean	acre	1.55	Tempest	oz	1.82
Optimize LIFT	oz	0.51	Transform WG	oz	7.38
INSECTICIDES			Up-Cyde	oz	0.43
Abamectin .15EC	oz	1.67	Warrior ZT	oz	2.57
Acephate 90%	lb	7.17	Zeal	oz	17.50
Acephate 90SP	lb	7.59	IRRIGATION SUPPLIES		
Admire Pro	oz	1.33	Roll-Out Pipe	ft	0.24
Agri-Mek	oz	2.96	SEED/PLANTS		
Asana .66 XL	oz	0.48	Corn Seed BtRR	thous	3.50
Avenger	oz	0.70	Corn Seed RR2	thous	3.50
Baythroid XL	oz	1.06	Corn Seed VT2P	thous	3.62
Belt	oz	7.50	Corn Seed Op Leptra	thous	4.39
Besiege	oz	1.93	Cotton Seed B3XF	thous	2.32
Bidrin 8EC	oz	1.28	Cotton Seed W3FE	thous	2.37
Bifenthrin	oz	0.82	Cot.Seed B3XF/W3FE	thous	2.34
Bifenture 2EC	oz	0.81	Peanut Seed	lb	0.84
Brigade EC	pt	14.70	Rice Clearfield	lb	0.95
Capture LFR	oz	2.36	Rice Clrfld Hyb Trt	lb	6.10
Centric 40WG	oz	4.89	Rice Conv Hyb Trt	lb	6.15
Cypermethrin	oz	0.55	Rice Seed CF (Levees)	lb	0.95
Declare	oz	1.87	Rice Seed CFH (Levee)	lb	2.67
Diamond .83EC	oz	1.31	Rice Seed Conv.	lb	0.28
Dimethoate 4E	pt	5.37	Rice Seed Cv (Levees)	lb	0.28
Dimilin 2L	oz	1.91	Rice Seed CvH (Levee)	lb	1.93
Force 3G	lb	7.23	Rice Seed Provisia	lb	1.08
Gaucho 600	oz	2.36	Rice Seed Trt/Insect	lbseed	0.29
Imidacloprid 4F	oz	0.62	Sorghum Concept+ Po	lb	3.96
Imidan 70 WSB	oz	0.71	Soybean Seed LL	lb	1.27
IncidentalPestTrt \$8	acre	8.00	Soybean Seed RR2	lb	1.39
IncidentalPestTrt \$15	acre	15.00	Soybean Seed RR2X	lb	1.32
IncidentalPestTrt \$22	acre	22.00	Wheat Seed Private	lb	0.24
IncidentalPestTrt \$30	acre	30.00	SOIL TEST		
Intrepid 2F	oz	2.15	Soil Test	acre	10.00
Intruder 70WSP	oz	9.05	SURVEY & MARK LEVEES		
Karate Z	oz	2.48	Survey & Mark Levees	acre	4.50

Appendix Table 5. Estimated fuel prices
and interest rates, Mississippi, 2020

ITEM NAME	UNIT	PRICE
dollars		
FUEL TYPES		
Diesel Fuel	gal	2.30
Gasoline	gal	2.20
INTEREST RATES		
Short-term	%	5.25
Intermediate-term	%	6.25

Appendix Table 6. Labor types, wage rates and unallocated labor
Multipliers for crop enterprises, Mississippi, 2020

Item name	Unit	Wage Rate
OPERATOR LABOR	hour	15.22
IRRIGATE LABOR	hour	9.06
HAND LABOR	hour	9.06
HAND. & STOR. LABOR	hour	9.06
RICE MGT. LABOR	hour	9.06
CROP ENTERPRISE	UNALLOCATED LABOR MULTIPLIERS (%)	
Corn		90
Cotton		80
Grain Sorghum		90
Peanuts		80
Rice		90
Soybeans		90
Wheat		80

Appendix Table 7. Futures contract prices, basis levels, forward contract prices, and loan rates used in row crop budgets, Mississippi, 2020

Crop	uni	Futures Contract Month	Futures Contract Price ^a	Basis ^b	Forward Contract Price ^c	Loan Rate ^d	Budget Price ^e
Corn	bu	Dec '20	4.06	-0.20	3.86	2.35	3.86
Cotton Lint	lb	Dec '20	0.6447	-0.0158	0.6289	0.52	0.6289
Cottonseed	lb						0.10 ^f
Grain Sorghum	bu				3.67	2.27	3.67
Peanuts	ton				400.00	370.00	400.00
Soybeans	bu	Nov '20	9.62	-0.02	9.60	6.41	9.60
Rice	bu	Nov '20	5.32	-0.37	4.95	3.20	4.95
Wheat	bu	Jul '20	4.39	-0.15	4.24	3.35	4.24

^a Average of the daily closing futures contract prices during the first 5 trading days in October 2019 for the stated contract months.

^b Basis is the cash price minus the futures contract price for the stated contract month. The reported basis is a daily average from 2009 to 2019 for corn, soybeans and wheat at Greenville, MS. Rice basis is a weekly average price for river point delivery. June harvest delivery for wheat. September harvest delivery for corn, rice and soybeans. October harvest delivery for cotton.

^c The forward contract price for corn, cotton, rice, soybeans and wheat is the futures contract price plus the basis. The forward contract price for grain sorghum is 95% of the forward contract price for corn. The forward contract price for peanuts is an estimate from a poll of Extension Peanut Marketing Specialists.

^d Average Mississippi County CCC Loan Rate for 2019 crop year for corn, grain sorghum, soybeans and wheat. Mississippi CCC 2018 Farm-stored Loan Rate for long grain rough rice. National 2019 Upland Cotton Marketing Assistance Loan Base Rate for cotton lint.

^e Price used in MSU Extension Service Planning Budgets.

^f Cottonseed price is the average marketing year price over the years 2008-2018.

Appendix Table 8. Estimated costs for field operations, per acre
 Irrigation with a 1/4-mile center pivot system
 135-acre system, 7.5 ac-in., Delta Area, Mississippi, 2020

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----							FIXED COST	TOTAL COST
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL		
-----dollars-----										
Set Up Engine										
IRRIGATE LABOR	hour				0.27			0.01	0.28	0.28
Maintenance										
IRRIGATE LABOR	hour				1.07			0.03	1.10	1.10
Apply Water										
IRRIGATE LABOR	hour				0.15				0.15	0.15
Apply Water										
IRRIGATE LABOR	hour				0.20				0.20	0.20
Apply Water										
IRRIGATE LABOR	hour				0.15				0.15	0.15
Pivot, 1/4 CP	each			13.48				0.29	13.77	59.97
Well & Pump, 1/4 CP	each			3.50				0.08	3.58	11.69
Engine, 1/4 CP, 65	each									11.07
June Irr. 3app@.75"	ac-in		7.73	1.40				0.20	9.33	9.33
July Irr. 4app@.75"	ac-in		10.31	1.87				0.21	12.39	12.39
Aug Irr. 3app@.75"	ac-in		7.73	1.40				0.12	9.25	9.25
TOTALS		0.00	25.77	21.65	1.84	0.00	0.94	50.20	82.73	132.93

Note: Cost of production estimates are based on 2019 input prices.

Appendix Table 9. Estimated costs for field operations, per acre
 Corn irrigated with roll-out pipe
 160-acre system, 13 ac-in., Delta Area, Mississippi, 2020

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----					FIXED COST	TOTAL COST		
		OP INPUT	FUEL	R&M	LABOR	LEASE INTER				
-----dollars-----										
Land Plane	50'x16'		0.85	0.30	0.58		0.09	1.82	1.76	3.58
Set Up Engine										
IRRIGATE LABOR	hour				0.23		0.01	0.24		0.24
Ditcher (1m/160a)			0.19	0.07	0.14		0.01	0.41	0.34	0.75
Roll-Out Pipe	ft	7.92					0.14	8.06		8.06
Lay Roll-out Pipe										
Pipe Spool 160ac	1/4m roll		0.25	0.10	0.42		0.01	0.78	0.88	1.66
IRRIGATE LABOR	hour				1.81		0.03	1.84		1.84
Apply Water										
IRRIGATE LABOR	hour				0.23			0.23		0.23
Apply Water										
IRRIGATE LABOR	hour				0.23			0.23		0.23
Apply Water										
IRRIGATE LABOR	hour				0.23			0.23		0.23
Apply Water										
IRRIGATE LABOR	hour				0.23			0.23		0.23
Pick Up Pipe										
Pipe Spool 160ac	1/4m roll		0.38	0.15	0.63		0.01	1.17	1.32	2.49
Land Forming (\$450)	each								36.04	36.04
Well & Pump, Furrow	each			2.96			0.05	3.01	9.86	12.87
Main Line Pipe	each								5.45	5.45
Engine, RPF, Corn	each								9.34	9.34
1st June Irrigation	ac-in		6.09	0.98			0.12	7.19		7.19
2nd June Irrigation	ac-in		6.09	0.98			0.12	7.19		7.19
3rd June Irrigation	ac-in		6.09	0.98			0.12	7.19		7.19
July Irrigation	ac-in		6.09	0.98			0.09	7.16		7.16
TOTALS		7.92	26.03	7.50	4.73	0.00	0.80	46.98	64.99	111.97

Note: Cost of production estimates are based on 2019 input prices.

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