

Corn, Grain Sorghum, and Wheat 2019 Planning Budgets



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 2019 planning decisions. This would be a 1-year short-run decision. Decisions beyond 1 year, or long-run decisions, should be based on “**Returns Above Specified Expenses.**”

Acknowledgments

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2019 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 to provide educational programs to farmers,
- by lenders as a basis for credit,
- to provide basic data for research, and
- to inform nonfarmers 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. You 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 your specific situation.

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. The Mississippi Agricultural Statistics Service conducts a survey of producers of major field crops in Mississippi. Data collected from producers are a part of the information used in selecting the practices included in each budget.

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 survey data from producers and/or 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 2018. (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 that 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:

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

$$CRCPA = CRCPH \times PR$$

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 2018 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 (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. You should, however, consider these items and factor them into the final budget for your own situation.

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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, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air (5 gal)	appl	6.50	1.0000	6.50	_____
App by Air (3 gal)	appl	5.00	0.2000	1.00	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	23.75	1.9570	46.48	_____
Potash (60% K2O)	cwt	20.00	1.5000	30.00	_____
Fert 10-34-0	gal	2.59	4.0000	10.36	_____
Zinc Plus	pt	4.99	2.0000	9.98	_____
UAN + Sulfur (28%)	gal	1.38	32.1712	44.40	_____
UAN (32%)	gal	1.24	39.5570	49.05	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
Clarity	pt	11.51	0.5000	5.76	_____
Select Max	pt	12.71	1.0000	12.71	_____
Atrazine 4L	pt	1.98	4.0000	7.92	_____
Halex GT	pt	7.80	3.6000	28.08	_____
INSECTICIDES					
Bifenthrin	oz	0.76	1.2800	0.97	_____
IRRIGATION SUPPLIES					
Roll-Out Pipe	ft	0.25	33.0000	8.25	_____
SEED/PLANTS					
Corn Seed BtRR	thous	3.63	34.0000	123.42	_____
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	38.00	0.6660	25.31	_____
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	14.23	0.4242	6.04	_____
Harvesters	hour	14.23	0.1009	1.44	_____
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	14.20	0.4020	5.71	_____
DIESEL FUEL					
Tractors	gal	2.60	4.7302	12.29	_____
Harvesters	gal	2.60	1.6890	4.39	_____
Roll-Out Pipe Irr.	gal	2.60	10.5901	27.52	_____
REPAIR & MAINTENANCE					
Implements	acre	7.91	1.0000	7.91	_____
Tractors	acre	2.46	1.0000	2.46	_____
Harvesters	acre	3.81	1.0000	3.81	_____
Roll-Out Pipe Irr.	acre	6.88	1.0000	6.88	_____
INTEREST ON OP. CAP.	acre	18.80	1.0000	18.80	_____
TOTAL DIRECT EXPENSES				584.10	_____
FIXED EXPENSES					
Implements	acre	13.49	1.0000	13.49	_____
Tractors	acre	16.98	1.0000	16.98	_____
Harvesters	acre	16.38	1.0000	16.38	_____
Roll-Out Pipe Irr.	acre	61.50	1.0000	61.50	_____
TOTAL FIXED EXPENSES				108.35	_____
TOTAL SPECIFIED EXPENSES				692.45	_____

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 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, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.80	220.0000	836.00	_____

TOTAL INCOME				836.00	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	7.50	1.0000	7.50	_____
FERTILIZERS	acre	190.27	1.0000	190.27	_____
HERBICIDES	acre	58.95	1.0000	58.95	_____
INSECTICIDES	acre	0.97	1.0000	0.97	_____
IRRIGATION SUPPLIES	acre	8.25	1.0000	8.25	_____
SEED/PLANTS	acre	123.42	1.0000	123.42	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	50.60	1.0000	50.60	_____
CUSTOM LIME	acre	25.31	1.0000	25.31	_____
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	14.23	0.5252	7.48	_____
UNALLOCATED LABOR	hour	14.20	0.4020	5.71	_____
DIESEL FUEL	gal	2.60	17.0094	44.20	_____
REPAIR & MAINTENANCE	acre	21.06	1.0000	21.06	_____
INTEREST ON OP. CAP.	acre	18.80	1.0000	18.80	_____

TOTAL DIRECT EXPENSES				584.10	_____
RETURNS ABOVE DIRECT EXPENSES				251.90	_____
TOTAL FIXED EXPENSES				108.35	_____

TOTAL SPECIFIED EXPENSES				692.45	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				143.55	_____

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 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, 2019

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	INPUT AMOUNT	POWER 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 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 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, 2019

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						0.20	3.53		3.53
Lime (Spread)	ton	25.31						1.52	26.83		26.83
Spin Spreader	5 ton		1.27	0.54	1.52			0.20	3.53	2.39	5.92
Phosphorus (46% P2O5)	cwt	46.48						2.79	49.27		49.27
Potash (60% K2O)	cwt	30.00						1.80	31.80		31.80
Bed/Disk w/roller	12R-30/40		1.88	1.10	1.69			0.28	4.95	4.73	9.68
App by Air (5 gal)	appl	6.50						0.26	6.76		6.76
Glyphosate 3lbs a.e	oz	4.48						0.18	4.66		4.66
Clarity	pt	5.76						0.23	5.99		5.99
Select Max	pt	12.71						0.51	13.22		13.22
Plant & Pre-Folding	12R-38		1.61	2.14	1.92			0.20	5.87	6.08	11.95
Corn Seed BtRR	thous	123.42						4.32	127.74		127.74
Fert 10-34-0	gal	10.36						0.36	10.72		10.72
Zinc Plus	pt	9.98						0.35	10.33		10.33
Custom Apply Fert	acre	7.50						0.22	7.72		7.72
UAN + Sulfur (28%)	gal	44.40						1.33	45.73		45.73
Spray (Broadcast)	60'		0.85	0.38	0.89			0.06	2.18	1.43	3.61
Atrazine 4L	pt	7.92						0.24	8.16		8.16
Halex GT	pt	28.08						0.84	28.92		28.92
App by Air (3 gal)	appl	1.00						0.03	1.03		1.03
Bifenthrin	oz	0.97						0.02	0.99		0.99
Corn Consultant	acre	6.00						0.15	6.15		6.15
Fert Appl (Liquid)	12R-38		1.56	1.00	1.63			0.10	4.29	2.98	7.27
UAN (32%)	gal	49.05						1.23	50.28		50.28
Header - Corn	8R-38		4.39	5.40	2.73			0.06	12.58	19.02	31.60
Grain Cart Corn	700 bu		0.76	0.41	0.68			0.01	1.86	1.54	3.40
Haul Corn	bu	50.60						0.25	50.85		50.85
Stalk Shredder Flex	20'		2.48	2.61	2.23			0.04	7.36	4.81	12.17
Roll-Out Pipe Irr.	acre	8.25	29.40	7.48	4.65			1.02	50.80	65.37	116.17
TOTALS		482.10	44.20	21.06	17.94	0.00	18.80	584.10	108.35	692.45	

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 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, 2019

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
TOTAL INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	836.00
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	6.50	0.00	0.00	1.00	0.00	0.00	0.00	0.00
FERTILIZERS	76.48	0.00	0.00	0.00	0.00	20.34	44.40	49.05	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	22.95	0.00	36.00	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	0.97	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	8.25	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	123.42	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	25.31	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	3.75	0.00	0.00	0.00	0.00	1.92	0.89	1.86	3.04	0.23	0.61	5.64
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	4.11	0.00	0.00	0.00	0.00	1.61	0.85	1.56	21.13	6.88	0.43	7.63
REPAIR & MAINTENANCE	1.96	0.00	0.00	0.00	0.00	2.14	0.38	1.00	6.05	0.98	0.13	8.42
INTEREST ON OP. CAP.	6.90	0.00	0.00	0.00	1.18	5.23	2.69	1.54	0.77	0.12	0.01	0.36
TOTAL DIRECT EXPENSES	121.84	0.00	0.00	0.00	30.63	154.66	92.71	62.98	39.24	8.21	1.18	72.65
NET INCOME	-121.84	0.00	0.00	0.00	-30.63	-154.66	-92.71	-62.98	-39.24	-8.21	-1.18	763.35
NET INCOME TO DATE	-121.84	-121.84	-121.84	-121.84	-152.47	-307.13	-399.84	-462.82	-502.06	-510.27	-511.45	251.90

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.

* 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, 2019

PRODUCT	--PERCENT--													
	75	80	85	90	95	100	105	110	115	120	125			
Corn	2.85	3.04	3.23	3.42	3.61	3.80	3.99	4.18	4.37	4.56	4.75			
PERCENT	-----PRODUCT PRICE-----													
YIELD	-----dollars-----													
UNIT														
50	110.00	bu	-245	-224	-203	-182	-161	-140	-119	-98	-77	-57	-36	-144
			-353	-332	-311	-290	-269	-249	-228	-207	-186	-165		
60	132.00	bu	-187	-162	-137	-112	-87	-62	-37	-12	13	38	63	-45
			-295	-270	-245	-220	-195	-170	-145	-120	-95	-70		
70	154.00	bu	-129	-100	-71	-42	-12	16	45	74	104	133	162	54
			-238	-209	-179	-150	-121	-91	-62	-33	-4	25		
80	176.00	bu	-72	-38	-5	27	61	94	128	161	195	228	262	153
			-180	-147	-113	-80	-46	-13	19	53	86	120		
90	198.00	bu	-14	22	60	98	135	173	211	248	286	323	361	253
			-123	-85	-47	-10	27	65	102	140	177	215		
100	220.00	bu	42	84	126	168	210	251	293	335	377	419	460	352
			-65	-23	18	59	101	143	185	227	268	310		
110	242.00	bu	100	146	192	238	284	330	376	422	468	514	560	451
			-7	38	84	130	176	222	268	314	360	405		
120	264.00	bu	158	208	258	308	358	408	459	509	559	609	659	551
			49	99	150	200	250	300	350	400	451	501		
130	286.00	bu	215	270	324	378	433	487	541	596	650	704	759	650
			107	161	216	270	324	379	433	487	542	596		
140	308.00	bu	273	331	390	448	507	565	624	683	741	800	858	750
			165	223	282	340	399	457	516	574	633	691		
150	330.00	bu	330	393	456	519	581	644	707	769	832	895	957	849
			222	285	348	410	473	536	598	661	724	786		

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 2018 input prices.

Table 2.A Estimated costs per acre
 Corn, stale seedbed, BtRR, non-irrigated, 12row 38"
 170 bu yield goal, Delta Area, Mississippi, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air (5 gal)	appl	6.50	1.0000	6.50	_____
App by Air (3 gal)	appl	5.00	0.2000	1.00	_____
FERTILIZERS					
Phosphorus(46% P2O5)	cwt	23.75	1.6300	38.71	_____
Potash (60% K2O)	cwt	20.00	1.2500	25.00	_____
Fert 10-34-0	gal	2.59	4.0000	10.36	_____
Zinc Plus	pt	4.99	2.0000	9.98	_____
UAN + Sulfur (28%)	gal	1.38	19.3063	26.64	_____
UAN (32%)	gal	1.24	29.6700	36.79	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
Clarity	pt	11.51	0.5000	5.76	_____
Select Max	pt	12.71	1.0000	12.71	_____
Atrazine 4L	pt	1.98	4.0000	7.92	_____
Halex GT	pt	7.80	3.6000	28.08	_____
INSECTICIDES					
Bifenthrin	oz	0.76	1.2800	0.97	_____
SEED/PLANTS					
Corn Seed BtRR	thous	3.63	28.0000	101.64	_____
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	38.00	0.6660	25.31	_____
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	14.23	0.3457	4.92	_____
Harvesters	hour	14.23	0.1009	1.44	_____
HAND LABOR					
Implements	hour	9.06	0.1354	1.22	_____
UNALLOCATED LABOR	hour	14.20	0.4020	5.71	_____
DIESEL FUEL					
Tractors	gal	2.60	4.0040	10.41	_____
Harvesters	gal	2.60	1.3770	3.58	_____
REPAIR & MAINTENANCE					
Implements	acre	7.71	1.0000	7.71	_____
Tractors	acre	2.06	1.0000	2.06	_____
Harvesters	acre	3.57	1.0000	3.57	_____
INTEREST ON OP. CAP.	acre	15.36	1.0000	15.36	_____
TOTAL DIRECT EXPENSES				453.76	_____
FIXED EXPENSES					
Implements	acre	12.35	1.0000	12.35	_____
Tractors	acre	14.25	1.0000	14.25	_____
Harvesters	acre	15.34	1.0000	15.34	_____
TOTAL FIXED EXPENSES				41.94	_____
TOTAL SPECIFIED EXPENSES				495.70	_____

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.B Summary of estimated costs and returns per acre
 Corn, stale seedbed, BtRR, non-irrigated, 12row 38"
 170 bu yield goal, Delta Area, Mississippi, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.80	170.0000	646.00	_____

TOTAL INCOME				646.00	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	7.50	1.0000	7.50	_____
FERTILIZERS	acre	147.48	1.0000	147.48	_____
HERBICIDES	acre	58.95	1.0000	58.95	_____
INSECTICIDES	acre	0.97	1.0000	0.97	_____
SEED/PLANTS	acre	101.64	1.0000	101.64	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	39.10	1.0000	39.10	_____
CUSTOM LIME	acre	25.31	1.0000	25.31	_____
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	14.23	0.4466	6.36	_____
UNALLOCATED LABOR	hour	14.20	0.4020	5.71	_____
DIESEL FUEL	gal	2.60	5.3810	13.99	_____
REPAIR & MAINTENANCE	acre	13.34	1.0000	13.34	_____
INTEREST ON OP. CAP.	acre	15.36	1.0000	15.36	_____

TOTAL DIRECT EXPENSES				453.76	_____
RETURNS ABOVE DIRECT EXPENSES				192.24	_____

TOTAL FIXED EXPENSES				41.94	_____

TOTAL SPECIFIED EXPENSES				495.70	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				150.30	_____

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.C Estimated resource use for field operations, per acre
 Corn, stale seedbed, BtRR, non-irrigated, 12row 38"
 170 bu yield goal, Delta Area, Mississippi, 2019

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					1.6300				
Potash (60% K2O)	cwt					1.2500				
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					28.0000				
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					19.3063				
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					29.6700				
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							0.44	0.44	0.58	0.40

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, 2019

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						0.20	3.53		3.53
Lime (Spread)	ton	25.31						1.52	26.83		26.83
Spin Spreader	5 ton		1.27	0.54	1.52			0.20	3.53	2.39	5.92
Phosphorus (46% P2O5)	cwt	38.71						2.32	41.03		41.03
Potash (60% K2O)	cwt	25.00						1.50	26.50		26.50
Bed/Disk w/roller	12R-30/40		1.88	1.10	1.69			0.28	4.95	4.73	9.68
App by Air (5 gal)	appl	6.50						0.26	6.76		6.76
Glyphosate 3lbs a.e	oz	4.48						0.18	4.66		4.66
Clarity	pt	5.76						0.23	5.99		5.99
Select Max	pt	12.71						0.51	13.22		13.22
Plant & Pre-Folding	12R-38		1.61	2.14	1.92			0.20	5.87	6.08	11.95
Corn Seed BtRR	thous	101.64						3.56	105.20		105.20
Fert 10-34-0	gal	10.36						0.36	10.72		10.72
Zinc Plus	pt	9.98						0.35	10.33		10.33
Custom Apply Fert	acre	7.50						0.22	7.72		7.72
UAN + Sulfur (28%)	gal	26.64						0.80	27.44		27.44
Spray (Broadcast)	60'		0.85	0.38	0.89			0.06	2.18	1.43	3.61
Atrazine 4L	pt	7.92						0.24	8.16		8.16
Halex GT	pt	28.08						0.84	28.92		28.92
App by Air (3 gal)	appl	1.00						0.03	1.03		1.03
Bifenthrin	oz	0.97						0.02	0.99		0.99
Corn Consultant	acre	6.00						0.15	6.15		6.15
Fert Appl (Liquid)	12R-38		1.56	1.00	1.63			0.10	4.29	2.98	7.27
UAN (32%)	gal	36.79						0.92	37.71		37.71
Header - Corn	8R-38		3.58	5.16	2.73			0.06	11.53	17.98	29.51
Grain Cart Corn	700 bu		0.76	0.41	0.68			0.01	1.86	1.54	3.40
Haul Corn	bu	39.10						0.20	39.30		39.30
Stalk Shredder Flex	20'		2.48	2.61	2.23			0.04	7.36	4.81	12.17
TOTALS		397.78	13.99	13.34	13.29	0.00	15.36	453.76	41.94	495.70	

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.E Estimated monthly income and expense flows per acre
 Corn, stale seedbed, BtRR, non-irrigated, 12row 38"
 170 bu yield goal, Delta Area, Mississippi, 2019

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
TOTAL INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	646.00
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	6.50	0.00	0.00	1.00	0.00	0.00	0.00	0.00
FERTILIZERS	63.71	0.00	0.00	0.00	0.00	20.34	26.64	36.79	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	22.95	0.00	36.00	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	0.97	0.00	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	101.64	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	25.31	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	3.21	0.00	0.00	0.00	0.00	1.92	0.89	1.63	0.00	0.00	0.00	5.64
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	3.15	0.00	0.00	0.00	0.00	1.61	0.85	1.56	0.00	0.00	0.00	6.82
REPAIR & MAINTENANCE	1.64	0.00	0.00	0.00	0.00	2.14	0.38	1.00	0.00	0.00	0.00	8.18
INTEREST ON OP. CAP.	6.02	0.00	0.00	0.00	1.18	4.47	2.16	1.22	0.00	0.00	0.00	0.31
TOTAL DIRECT EXPENSES	106.37	0.00	0.00	0.00	30.63	132.12	74.42	50.17	0.00	0.00	0.00	60.05
NET INCOME	-106.37	0.00	0.00	0.00	-30.63	-132.12	-74.42	-50.17	0.00	0.00	0.00	585.95
NET INCOME TO DATE	-106.37	-106.37	-106.37	-106.37	-137.00	-269.12	-343.54	-393.71	-393.71	-393.71	-393.71	192.24

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.

* 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, 2019

PRODUCT	--PERCENT--										--PRODUCT PRICE--													
	75	80	85	90	95	100	105	110	115	120	125	2.85	3.04	3.23	3.42	3.61	3.80	3.99	4.18	4.37	4.56	4.75		
Corn																								
PERCENT	YIELD UNIT -----dollars-----																							
50	85.00	bu	-191	-175	-159	-143	-127	-111	-94	-78	-62	-46	-30	-233	-217	-201	-185	-169	-153	-136	-120	-104	-88	-72
60	102.00	bu	-147	-127	-108	-89	-69	-50	-31	-11	7	27	46	-189	-169	-150	-131	-111	-92	-73	-53	-34	-14	4
70	119.00	bu	-102	-80	-57	-34	-12	10	32	55	78	100	123	-144	-122	-99	-76	-54	-31	-9	13	36	58	81
80	136.00	bu	-58	-32	-6	19	45	70	96	122	148	174	200	-100	-74	-48	-22	3	28	54	80	106	132	158
90	153.00	bu	-13	15	44	73	102	131	160	189	218	247	276	-55	-26	2	31	60	89	118	147	176	205	234
100	170.00	bu	30	63	95	127	159	192	224	256	289	321	353	-11	21	53	85	118	150	182	214	247	279	311
110	187.00	bu	75	110	146	181	217	252	288	323	359	395	430	33	68	104	139	175	210	246	282	317	353	388
120	204.00	bu	119	158	197	236	274	313	352	391	429	468	507	77	116	155	194	232	271	310	349	387	426	465
130	221.00	bu	164	206	248	290	332	374	416	458	500	542	584	122	164	206	248	290	332	374	416	458	500	542
140	238.00	bu	208	254	299	344	389	434	480	525	570	615	661	166	212	257	302	347	392	438	483	528	573	619
150	255.00	bu	253	301	350	398	447	495	544	592	640	689	737	211	259	308	356	405	453	502	550	599	647	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 2018 input prices.

Table 3.A Estimated costs per acre
 Corn, conventional tillage, RR2 seed, 12-row 38",
 220 bu yield goal, furrow irrigated, 13 ac-in., Delta Area, Mississippi, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air (5 gal)	appl	6.50	1.0000	6.50	_____
App by Air (3 gal)	appl	5.00	1.2000	6.00	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	23.75	1.9570	46.48	_____
Potash (60% K2O)	cwt	20.00	1.5000	30.00	_____
UAN + Sulfur (28%)	gal	1.38	32.1712	44.40	_____
UAN (32%)	gal	1.24	39.5570	49.05	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
Clarity	pt	11.51	0.5000	5.76	_____
Select Max	pt	12.71	1.0000	12.71	_____
Atrazine 4L	pt	1.98	4.0000	7.92	_____
Halex GT	pt	7.80	3.6000	28.08	_____
INSECTICIDES					
Bifenthrin	oz	0.76	1.2804	0.97	_____
Intrepid 2F	oz	2.03	4.0000	8.12	_____
IRRIGATION SUPPLIES					
Roll-Out Pipe	ft	0.25	33.0000	8.25	_____
SEED/PLANTS					
Corn Seed RR2	thous	3.36	34.0000	114.24	_____
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	38.00	0.6660	25.31	_____
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	14.23	0.6930	9.86	_____
Harvesters	hour	14.23	0.1009	1.44	_____
Self-Propelled	hour	14.23	0.0176	0.25	_____
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	14.24	0.6597	9.40	_____
DIESEL FUEL					
Tractors	gal	2.60	7.8429	20.37	_____
Harvesters	gal	2.60	1.3770	3.58	_____
Self-Propelled	gal	2.60	0.1586	0.41	_____
Roll-Out Pipe Irr.	gal	2.60	10.5901	27.52	_____
REPAIR & MAINTENANCE					
Implements	acre	9.71	1.0000	9.71	_____
Tractors	acre	4.06	1.0000	4.06	_____
Harvesters	acre	3.57	1.0000	3.57	_____
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	19.02	1.0000	19.02	_____
TOTAL DIRECT EXPENSES				586.64	_____
FIXED EXPENSES					
Implements	acre	18.71	1.0000	18.71	_____
Tractors	acre	28.07	1.0000	28.07	_____
Harvesters	acre	15.34	1.0000	15.34	_____
Self-Propelled	acre	1.41	1.0000	1.41	_____
Roll-Out Pipe Irr.	acre	61.50	1.0000	61.50	_____
TOTAL FIXED EXPENSES				125.03	_____
TOTAL SPECIFIED EXPENSES				711.67	_____

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 3.B Summary of estimated costs and returns per acre
 Corn, conventional tillage, RR2 seed, 12-row 38",
 220 bu yield goal, furrow irrigated, 13 ac-in., Delta Area, Mississippi, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.80	220.0000	836.00	_____

TOTAL INCOME				836.00	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	12.50	1.0000	12.50	_____
FERTILIZERS	acre	169.93	1.0000	169.93	_____
HERBICIDES	acre	58.95	1.0000	58.95	_____
INSECTICIDES	acre	9.09	1.0000	9.09	_____
IRRIGATION SUPPLIES	acre	8.25	1.0000	8.25	_____
SEED/PLANTS	acre	114.24	1.0000	114.24	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	50.60	1.0000	50.60	_____
CUSTOM LIME	acre	25.31	1.0000	25.31	_____
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	14.23	0.8116	11.55	_____
UNALLOCATED LABOR	hour	14.24	0.6597	9.40	_____
DIESEL FUEL	gal	2.60	19.9688	51.88	_____
REPAIR & MAINTENANCE	acre	24.42	1.0000	24.42	_____
INTEREST ON OP. CAP.	acre	19.02	1.0000	19.02	_____

TOTAL DIRECT EXPENSES				586.64	_____
RETURNS ABOVE DIRECT EXPENSES				249.36	_____
TOTAL FIXED EXPENSES				125.03	_____

TOTAL SPECIFIED EXPENSES				711.67	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				124.33	_____

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 3.C Estimated resource use for field operations, per acre
 Corn, conventional tillage, RR2 seed, 12-row 38",
 220 bu yield goal, furrow irrigated, 13 ac-in., Delta Area, Mississippi, 2019

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					1.9570				
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-Fol	30'	MFWD 225	0.062	1.00	Mar		0.06	0.06	0.06	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					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				
				0.20	May					
App by Air (3 gal)	appl					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					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							0.81	0.79	1.32	0.65

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 3.D Estimated costs for field operations, per acre
 Corn, conventional tillage, RR2 seed, 12-row 38",
 220 bu yield goal, furrow irrigated, 13 ac-in., Delta Area, Mississippi, 2019

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----							FIXED COST	TOTAL COST	
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL			
-----dollars-----											
Subsoiler	3 shank		3.08	0.81	2.76			0.40	7.05	4.77	11.82
Disk Harrow	24'		2.46	1.46	2.21			0.37	6.50	5.64	12.14
Soil Test	acre	3.33						0.20	3.53		3.53
Lime (Spread)	ton	25.31						1.52	26.83		26.83
Spin Spreader	5 ton		1.27	0.54	1.52			0.20	3.53	2.39	5.92
Phosphorus (46% P2O5)	cwt	46.48						2.79	49.27		49.27
Potash (60% K2O)	cwt	30.00						1.80	31.80		31.80
Bed/Disk w/roller	12R-30/40		1.88	1.10	1.69			0.28	4.95	4.73	9.68
App by Air (5 gal)	appl	6.50						0.26	6.76		6.76
Glyphosate 3lbs a.e	oz	4.48						0.18	4.66		4.66
Clarity	pt	5.76						0.23	5.99		5.99
Select Max	pt	12.71						0.51	13.22		13.22
Row Cond./Roll-Fol	30'		1.88	0.93	1.69			0.16	4.66	4.21	8.87
Plant - Folding	12R-38		1.49	1.83	1.80			0.18	5.30	5.31	10.61
Corn Seed RR2	thous	114.24						4.00	118.24		118.24
Custom Apply Fert	acre	7.50						0.22	7.72		7.72
UAN + Sulfur (28%)	gal	44.40						1.33	45.73		45.73
Sprayer 600-750gal	60' 175hp		0.41	0.20	0.56			0.04	1.21	1.41	2.62
Atrazine 4L	pt	7.92						0.24	8.16		8.16
Halex GT	pt	28.08						0.84	28.92		28.92
Corn Consultant	acre	6.00						0.15	6.15		6.15
App by Air (3 gal)	appl	1.00						0.03	1.03		1.03
Bifenthrin	oz	0.97						0.02	0.99		0.99
Fert Appl (Liquid)	12R-38		1.56	1.00	1.63			0.10	4.29	2.98	7.27
UAN (32%)	gal	49.05						1.23	50.28		50.28
Cultivate	12R-38		1.63	0.89	1.47			0.10	4.09	3.89	7.98
App by Air (3 gal)	appl	5.00						0.10	5.10		5.10
Intrepid 2F	oz	8.12						0.16	8.28		8.28
Header - Corn	8R-38		3.58	5.16	2.73			0.06	11.53	17.98	29.51
Grain Cart Corn	700 bu		0.76	0.41	0.68			0.01	1.86	1.54	3.40
Haul Corn	bu	50.60						0.25	50.85		50.85
Stalk Shredder Flex	20'		2.48	2.61	2.23			0.04	7.36	4.81	12.17
Roll-Out Pipe Irr.	acre	8.25	29.40	7.48	4.65			1.02	50.80	65.37	116.17
TOTALS		465.70	51.88	24.42	25.62	0.00	19.02	586.64	125.03	711.67	

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 3.E Estimated monthly income and expense flows per acre
 Corn, conventional tillage, RR2 seed, 12-row 38",
 220 bu yield goal, furrow irrigated, 13 ac-in., Delta Area, Mississippi, 2019

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
TOTAL INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	836.00
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	6.50	0.00	0.00	1.00	5.00	0.00	0.00	0.00
FERTILIZERS	76.48	0.00	0.00	0.00	0.00	0.00	44.40	49.05	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	22.95	0.00	36.00	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	0.97	8.12	0.00	0.00	0.00
IRRIGATION SUPPLIES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.25	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	114.24	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	25.31	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	8.72	0.00	0.00	0.00	0.00	3.49	0.56	3.33	3.04	0.23	0.61	5.64
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	9.65	0.00	0.00	0.00	0.00	3.37	0.41	3.19	21.13	6.88	0.43	6.82
REPAIR & MAINTENANCE	4.23	0.00	0.00	0.00	0.00	2.76	0.20	1.89	6.05	0.98	0.13	8.18
INTEREST ON OP. CAP.	7.67	0.00	0.00	0.00	1.18	4.34	2.67	1.64	1.03	0.12	0.01	0.36
TOTAL DIRECT EXPENSES	135.39	0.00	0.00	0.00	30.63	128.20	91.74	67.07	52.62	8.21	1.18	71.60
NET INCOME	-135.39	0.00	0.00	0.00	-30.63	-128.20	-91.74	-67.07	-52.62	-8.21	-1.18	764.40
NET INCOME TO DATE	-135.39	-135.39	-135.39	-135.39	-166.02	-294.22	-385.96	-453.03	-505.65	-513.86	-515.04	249.36

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.

* 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 yield goal, furrow irrigated, 13 ac-in., Delta Area, Mississippi, 2019

PRODUCT	75	80	85	90	95	100	105	110	115	120	125		
Corn	2.85	3.04	3.23	3.42	3.61	3.80	3.99	4.18	4.37	4.56	4.75		
PERCENT	YIELD UNIT												
	---dollars---												
50	110.00	bu	-247	-226	-205	-185	-164	-143	-122	-101	-80	-59	-38
			-372	-351	-330	-310	-289	-268	-247	-226	-205	-184	-163
60	132.00	bu	-190	-165	-139	-114	-89	-64	-39	-14	10	35	60
			-315	-290	-264	-239	-214	-189	-164	-139	-114	-89	-64
70	154.00	bu	-132	-103	-73	-44	-15	13	43	72	101	130	160
			-257	-228	-198	-169	-140	-111	-81	-52	-23	5	35
80	176.00	bu	-74	-41	-7	25	58	92	125	159	192	226	259
			-199	-166	-133	-99	-66	-32	0	34	67	101	134
90	198.00	bu	-17	20	57	95	133	170	208	246	283	321	358
			-142	-104	-67	-29	8	45	83	121	158	196	233
100	220.00	bu	40	82	123	165	207	249	291	332	374	416	458
			-84	-42	-1	40	82	124	166	207	249	291	333
110	242.00	bu	97	143	189	235	281	327	373	419	465	511	557
			-27	18	64	110	156	202	248	294	340	386	432
120	264.00	bu	155	205	255	306	356	406	456	506	556	607	657
			30	80	130	181	231	281	331	381	431	482	532
130	286.00	bu	213	267	321	376	430	484	539	593	647	702	756
			88	142	196	251	305	359	414	468	522	577	631
140	308.00	bu	270	329	387	446	504	563	621	680	738	797	856
			145	204	262	321	379	438	496	555	613	672	730
150	330.00	bu	328	391	453	516	579	641	704	767	830	892	955
			203	266	328	391	454	516	579	642	705	767	830

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 2018 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, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air (5 gal)	appl	6.50	1.0000	6.50	_____
App by Air (3 gal)	appl	5.00	1.2000	6.00	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	23.75	1.6300	38.71	_____
Potash (60% K2O)	cwt	20.00	1.2500	25.00	_____
UAN + Sulfur (28%)	gal	1.38	19.3063	26.64	_____
UAN (32%)	gal	1.24	29.6700	36.79	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
Clarity	pt	11.51	0.5000	5.76	_____
Select Max	pt	12.71	1.0000	12.71	_____
Atrazine 4L	pt	1.98	4.0000	7.92	_____
Halex GT	pt	7.80	3.6000	28.08	_____
INSECTICIDES					
Bifenthrin	oz	0.76	1.2804	0.97	_____
Intrepid 2F	oz	2.03	4.0000	8.12	_____
SEED/PLANTS					
Corn Seed RR2	thous	3.36	28.0000	94.08	_____
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	38.00	0.6660	25.31	_____
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	14.23	0.5690	8.09	_____
Harvesters	hour	14.23	0.1009	1.44	_____
Self-Propelled	hour	14.23	0.0176	0.25	_____
HAND LABOR					
Implements	hour	9.06	0.1175	1.06	_____
Self-Propelled	hour	9.06	0.0088	0.08	_____
UNALLOCATED LABOR					
	hour	14.23	0.6188	8.81	_____
DIESEL FUEL					
Tractors	gal	2.60	6.5903	17.13	_____
Harvesters	gal	2.60	1.3770	3.58	_____
Self-Propelled	gal	2.60	0.1586	0.41	_____
REPAIR & MAINTENANCE					
Implements	acre	8.23	1.0000	8.23	_____
Tractors	acre	3.40	1.0000	3.40	_____
Harvesters	acre	3.57	1.0000	3.57	_____
Self-Propelled	acre	0.20	1.0000	0.20	_____
INTEREST ON OP. CAP.	acre	15.53	1.0000	15.53	_____
TOTAL DIRECT EXPENSES				454.78	_____
FIXED EXPENSES					
Implements	acre	14.27	1.0000	14.27	_____
Tractors	acre	23.46	1.0000	23.46	_____
Harvesters	acre	15.34	1.0000	15.34	_____
Self-Propelled	acre	1.41	1.0000	1.41	_____
TOTAL FIXED EXPENSES				54.48	_____
TOTAL SPECIFIED EXPENSES				509.26	_____

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 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, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.80	170.0000	646.00	_____

TOTAL INCOME				646.00	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	12.50	1.0000	12.50	_____
FERTILIZERS	acre	127.14	1.0000	127.14	_____
HERBICIDES	acre	58.95	1.0000	58.95	_____
INSECTICIDES	acre	9.09	1.0000	9.09	_____
SEED/PLANTS	acre	94.08	1.0000	94.08	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	39.10	1.0000	39.10	_____
CUSTOM LIME	acre	25.31	1.0000	25.31	_____
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	14.23	0.6876	9.78	_____
UNALLOCATED LABOR	hour	14.23	0.6188	8.81	_____
DIESEL FUEL	gal	2.60	8.1261	21.12	_____
REPAIR & MAINTENANCE	acre	15.40	1.0000	15.40	_____
INTEREST ON OP. CAP.	acre	15.53	1.0000	15.53	_____

TOTAL DIRECT EXPENSES				454.78	_____
RETURNS ABOVE DIRECT EXPENSES				191.22	_____

TOTAL FIXED EXPENSES				54.48	_____

TOTAL SPECIFIED EXPENSES				509.26	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				136.74	_____

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 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, 2019

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					29.6700				
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 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 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, 2019

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----							FIXED COST	TOTAL COST	
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL			
-----dollars-----											
Subsoiler	3 shank		3.08	0.81	2.76			0.40	7.05	4.77	11.82
Disk Harrow	24'		2.46	1.46	2.21			0.37	6.50	5.64	12.14
Soil Test	acre	3.33						0.20	3.53		3.53
Lime (Spread)	ton	25.31						1.52	26.83		26.83
Spin Spreader	5 ton		1.27	0.54	1.52			0.20	3.53	2.39	5.92
Phosphorus(46% P2O5)	cwt	38.71						2.32	41.03		41.03
Potash (60% K2O)	cwt	25.00						1.50	26.50		26.50
Bed/Disk (Hipper)Rd	8R-38		2.23	0.78	2.00			0.30	5.31	4.06	9.37
App by Air (5 gal)	appl	6.50						0.26	6.76		6.76
Glyphosate 3lbs a.e	oz	4.48						0.18	4.66		4.66
Clarity	pt	5.76						0.23	5.99		5.99
Select Max	pt	12.71						0.51	13.22		13.22
Row Cond Rigid	26'		1.80	0.60	1.61			0.14	4.15	3.59	7.74
Plant - Folding	12R-38		1.49	1.83	1.80			0.18	5.30	5.31	10.61
Corn Seed RR2	thous	94.08						3.29	97.37		97.37
Custom Apply Fert	acre	7.50						0.22	7.72		7.72
UAN + Sulfur (28%)	gal	26.64						0.80	27.44		27.44
Sprayer 600-750gal	60' 175hp		0.41	0.20	0.56			0.04	1.21	1.41	2.62
Atrazine 4L	pt	7.92						0.24	8.16		8.16
Halex GT	pt	28.08						0.84	28.92		28.92
Corn Consultant	acre	6.00						0.15	6.15		6.15
App by Air (3 gal)	appl	1.00						0.03	1.03		1.03
Bifenthrin	oz	0.97						0.02	0.99		0.99
Fert Appl (Liquid)	12R-38		1.56	1.00	1.63			0.10	4.29	2.98	7.27
UAN (32%)	gal	36.79						0.92	37.71		37.71
App by Air (3 gal)	appl	5.00						0.10	5.10		5.10
Intrepid 2F	oz	8.12						0.16	8.28		8.28
Header - Corn	8R-38		3.58	5.16	2.73			0.06	11.53	17.98	29.51
Grain Cart Corn	700 bu		0.76	0.41	0.68			0.01	1.86	1.54	3.40
Haul Corn	bu	39.10						0.20	39.30		39.30
Stalk Shredder Flex	20'		2.48	2.61	2.23			0.04	7.36	4.81	12.17
TOTALS		383.00	21.12	15.40	19.73	0.00	15.53	454.78	54.48	509.26	

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 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, 2019

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
TOTAL INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	646.00
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	6.50	0.00	0.00	1.00	5.00	0.00	0.00	0.00
FERTILIZERS	63.71	0.00	0.00	0.00	0.00	0.00	26.64	36.79	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	22.95	0.00	36.00	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	0.97	8.12	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	94.08	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	25.31	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	8.49	0.00	0.00	0.00	0.00	3.41	0.56	1.63	0.00	0.00	0.00	5.64
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	9.04	0.00	0.00	0.00	0.00	3.29	0.41	1.56	0.00	0.00	0.00	6.82
REPAIR & MAINTENANCE	3.59	0.00	0.00	0.00	0.00	2.43	0.20	1.00	0.00	0.00	0.00	8.18
INTEREST ON OP. CAP.	6.81	0.00	0.00	0.00	1.18	3.61	2.14	1.22	0.26	0.00	0.00	0.31
TOTAL DIRECT EXPENSES	120.28	0.00	0.00	0.00	30.63	106.82	73.45	50.17	13.38	0.00	0.00	60.05
NET INCOME	-120.28	0.00	0.00	0.00	-30.63	-106.82	-73.45	-50.17	-13.38	0.00	0.00	585.95
NET INCOME TO DATE	-120.28	-120.28	-120.28	-120.28	-150.91	-257.73	-331.18	-381.35	-394.73	-394.73	-394.73	191.22

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.
 * 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, 2019

PRODUCT	---PERCENT---										PRODUCT PRICE		
	75	80	85	90	95	100	105	110	115	120		125	
Corn	2.85	3.04	3.23	3.42	3.61	3.80	3.99	4.18	4.37	4.56	4.75		
PERCENT	---dollars---												
YIELD UNIT													
50	85.00	bu	-192	-176	-160	-144	-128	-112	-95	-79	-63	-47	-31
60	102.00	bu	-247	-231	-215	-198	-182	-166	-150	-134	-118	-102	-85
70	119.00	bu	-148	-128	-109	-90	-70	-51	-32	-12	6	26	45
80	136.00	bu	-202	-183	-164	-144	-125	-105	-86	-67	-47	-28	-9
90	153.00	bu	-103	-81	-58	-36	-13	9	31	54	77	99	122
100	170.00	bu	-158	-135	-113	-90	-67	-45	-22	0	22	45	67
110	187.00	bu	-59	-33	-7	18	44	69	95	121	147	173	199
120	204.00	bu	-113	-87	-62	-36	-10	15	41	67	92	118	144
130	221.00	bu	-14	14	43	72	101	130	159	188	217	246	275
140	238.00	bu	-69	-40	-11	17	47	76	105	134	163	192	221
150	255.00	bu	29	62	94	126	158	191	223	255	288	320	352
			-24	7	39	72	104	136	169	201	233	265	298
			74	109	145	180	216	251	287	322	358	394	429
			19	55	90	126	161	197	232	268	304	339	375
			118	157	196	235	273	312	351	390	428	467	506
			64	103	141	180	219	258	296	335	374	413	451
			163	205	247	289	331	373	415	457	499	541	583
			108	150	192	234	276	318	360	402	444	486	528
			207	253	298	343	388	433	479	524	569	614	660
			153	198	243	288	334	379	424	469	515	560	605
			252	300	349	397	446	494	543	591	639	688	736
			197	246	294	343	391	440	488	536	585	633	682

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 2018 input prices.

Table 5.A Estimated costs per acre
 Corn, stale seedbed, RR2 seed, 12-row 30",
 170 bu yield goal, Non-Delta, Mississippi, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air (5 gal)	appl	6.50	1.0000	6.50	_____
App by Air (3 gal)	appl	5.00	1.2000	6.00	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	23.75	1.6300	38.71	_____
Potash (60% K2O)	cwt	20.00	1.2500	25.00	_____
UAN + Sulfur (28%)	gal	1.38	48.5856	67.05	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
Clarity	pt	11.51	0.5000	5.76	_____
Select Max	pt	12.71	1.0000	12.71	_____
Atrazine 4L	pt	1.98	4.0000	7.92	_____
Halex GT	pt	7.80	3.6000	28.08	_____
INSECTICIDES					
Bifenthrin	oz	0.76	1.2804	0.97	_____
Intrepid 2F	oz	2.03	4.0000	8.12	_____
SEED/PLANTS					
Corn Seed RR2	thous	3.36	28.0000	94.08	_____
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	38.00	0.6660	25.31	_____
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	14.23	0.4823	6.85	_____
Harvesters	hour	14.23	0.1277	1.82	_____
Self-Propelled	hour	14.23	0.0176	0.25	_____
HAND LABOR					
Implements	hour	9.06	0.1442	1.31	_____
Self-Propelled	hour	9.06	0.0088	0.08	_____
UNALLOCATED LABOR					
	hour	14.26	0.5649	8.06	_____
DIESEL FUEL					
Tractors	gal	2.60	4.2208	10.98	_____
Harvesters	gal	2.60	1.7419	4.53	_____
Self-Propelled	gal	2.60	0.1586	0.41	_____
REPAIR & MAINTENANCE					
Implements	acre	8.85	1.0000	8.85	_____
Tractors	acre	2.22	1.0000	2.22	_____
Harvesters	acre	4.51	1.0000	4.51	_____
Self-Propelled	acre	0.20	1.0000	0.20	_____
INTEREST ON OP. CAP.	acre	15.14	1.0000	15.14	_____
TOTAL DIRECT EXPENSES				451.83	_____
FIXED EXPENSES					
Implements	acre	14.47	1.0000	14.47	_____
Tractors	acre	15.41	1.0000	15.41	_____
Harvesters	acre	19.41	1.0000	19.41	_____
Self-Propelled	acre	1.41	1.0000	1.41	_____
TOTAL FIXED EXPENSES				50.70	_____
TOTAL SPECIFIED EXPENSES				502.53	_____

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 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, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.80	170.0000	646.00	_____

TOTAL INCOME				646.00	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	12.50	1.0000	12.50	_____
FERTILIZERS	acre	130.76	1.0000	130.76	_____
HERBICIDES	acre	58.95	1.0000	58.95	_____
INSECTICIDES	acre	9.09	1.0000	9.09	_____
SEED/PLANTS	acre	94.08	1.0000	94.08	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	39.10	1.0000	39.10	_____
CUSTOM LIME	acre	25.31	1.0000	25.31	_____
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	14.23	0.6277	8.92	_____
UNALLOCATED LABOR	hour	14.26	0.5649	8.06	_____
DIESEL FUEL	gal	2.60	6.1215	15.92	_____
REPAIR & MAINTENANCE	acre	15.78	1.0000	15.78	_____
INTEREST ON OP. CAP.	acre	15.14	1.0000	15.14	_____

TOTAL DIRECT EXPENSES				451.83	_____
RETURNS ABOVE DIRECT EXPENSES				194.17	_____
TOTAL FIXED EXPENSES				50.70	_____

TOTAL SPECIFIED EXPENSES				502.53	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				143.47	_____

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 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, 2019

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% P205)	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					14.8018					
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					33.7838					
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 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 5.D Estimated costs for field operations, per acre
 Corn, stale seedbed, RR2 seed, 12-row 30",
 170 bu yield goal, Non-Delta, Mississippi, 2019

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						0.20	3.53		3.53
Lime (Spread)	ton	25.31						1.52	26.83		26.83
Spin Spreader	5 ton		0.96	0.48	1.52			0.18	3.14	1.99	5.13
Phosphorus (46% P2O5)	cwt	38.71						2.32	41.03		41.03
Potash (60% K2O)	cwt	25.00						1.50	26.50		26.50
Disk Heavy	20'		2.21	1.51	2.63			0.38	6.73	5.59	12.32
Bed/Disk w/roller	8R-30		2.13	1.05	2.53			0.34	6.05	4.81	10.86
App by Air (5 gal)	appl	6.50						0.26	6.76		6.76
Glyphosate 3lbs a.e	oz	4.48						0.18	4.66		4.66
Clarity	pt	5.76						0.23	5.99		5.99
Select Max	pt	12.71						0.51	13.22		13.22
Plant - Rigid	12R-30		1.43	1.70	2.27			0.19	5.59	5.01	10.60
Corn Seed RR2	thous	94.08						3.29	97.37		97.37
Custom Apply Fert	acre	7.50						0.22	7.72		7.72
UAN + Sulfur (28%)	gal	20.43						0.61	21.04		21.04
Sprayer 600-750gal	60' 175hp		0.41	0.20	0.56			0.04	1.21	1.41	2.62
Atrazine 4L	pt	7.92						0.24	8.16		8.16
Halex GT	pt	28.08						0.84	28.92		28.92
Fert Appl (Liquid)	12R-30		1.79	1.54	2.49			0.15	5.97	3.98	9.95
UAN + Sulfur (28%)	gal	46.62						1.17	47.79		47.79
Corn Consultant	acre	6.00						0.15	6.15		6.15
App by Air (3 gal)	appl	1.00						0.03	1.03		1.03
Bifenthrin	oz	0.97						0.02	0.99		0.99
App by Air (3 gal)	appl	5.00						0.10	5.10		5.10
Intrepid 2F	oz	8.12						0.16	8.28		8.28
Header - Corn	8R-30		4.53	6.50	3.46			0.07	14.56	22.71	37.27
Grain Cart Corn	500 bu		0.58	0.30	0.68			0.01	1.57	1.15	2.72
Haul Corn	bu	39.10						0.20	39.30		39.30
Stalk Shredder Flex	20'		1.88	2.50	2.23			0.03	6.64	4.05	10.69
TOTALS		386.62	15.92	15.78	18.37	0.00	15.14	451.83	50.70	502.53	

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 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, 2019

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
TOTAL INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	646.00
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	6.50	0.00	0.00	1.00	5.00	0.00	0.00	0.00
FERTILIZERS	63.71	0.00	0.00	0.00	0.00	0.00	20.43	46.62	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	22.95	0.00	36.00	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	0.97	8.12	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	94.08	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	25.31	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	6.68	0.00	0.00	0.00	0.00	2.27	0.56	2.49	0.00	0.00	0.00	6.37
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	5.30	0.00	0.00	0.00	0.00	1.43	0.41	1.79	0.00	0.00	0.00	6.99
REPAIR & MAINTENANCE	3.04	0.00	0.00	0.00	0.00	1.70	0.20	1.54	0.00	0.00	0.00	9.30
INTEREST ON OP. CAP.	6.44	0.00	0.00	0.00	1.18	3.48	1.95	1.52	0.26	0.00	0.00	0.31
TOTAL DIRECT EXPENSES	113.81	0.00	0.00	0.00	30.63	102.96	67.05	61.93	13.38	0.00	0.00	62.07
NET INCOME	-113.81	0.00	0.00	0.00	-30.63	-102.96	-67.05	-61.93	-13.38	0.00	0.00	583.93
NET INCOME TO DATE	-113.81	-113.81	-113.81	-113.81	-144.44	-247.40	-314.45	-376.38	-389.76	-389.76	-389.76	194.17

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.

* 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, 2019

PRODUCT	PERCENT										PRODUCT PRICE									
	75	80	85	90	95	100	105	110	115	120	2.85	3.04	3.23	3.42	3.61	3.80	3.99	4.18	4.37	4.56
Corn	-189	-173	-157	-141	-125	-109	-93	-76	-60	-44	-240	-224	-208	-192	-176	-159	-143	-127	-111	-95
50 85.00 bu	-145	-126	-106	-87	-67	-48	-29	-9	9	29	-196	-176	-157	-137	-118	-99	-79	-60	-41	-21
60 102.00 bu	-100	-78	-55	-33	-10	12	34	57	79	102	-151	-128	-106	-83	-61	-38	-15	6	29	51
70 119.00 bu	-56	-30	-4	21	46	72	98	124	150	176	-107	-81	-55	-29	-3	22	47	73	99	125
80 136.00 bu	-11	17	46	75	104	133	162	191	220	249	-62	-33	-4	24	53	82	111	140	170	199
90 153.00 bu	32	64	97	129	161	194	226	258	291	323	-18	14	46	78	111	143	175	208	240	272
100 170.00 bu	77	112	148	183	219	254	290	325	361	396	26	62	97	133	168	204	239	275	310	346
110 187.00 bu	121	160	199	237	276	315	354	393	431	470	71	109	148	187	226	264	303	342	381	419
120 204.00 bu	166	208	250	292	334	376	418	460	502	544	115	157	199	241	283	325	367	409	451	493
130 221.00 bu	210	255	301	346	391	436	482	527	572	617	160	205	250	295	340	386	431	476	521	567
140 238.00 bu	255	303	352	400	449	497	545	594	642	691	204	253	301	349	398	446	495	543	592	640
150 255.00 bu	204	253	301	349	398	446	495	543	592	640										

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 2018 input prices.

Table 6.A Estimated costs per acre
 Corn, no-tillage, BtRR, 12-row 30", 170 bu yield goal
 Non-Delta Areas, Mississippi, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air (5 gal)	appl	6.50	1.0000	6.50	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	23.75	1.6300	38.71	_____
Potash (60% K2O)	cwt	20.00	1.2500	25.00	_____
Fert 10-34-0	gal	2.59	5.0000	12.95	_____
UAN (32%)	gal	1.24	45.2080	56.06	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
Clarity	pt	11.51	0.5000	5.76	_____
Select Max	pt	12.71	1.0000	12.71	_____
Atrazine 4L	pt	1.98	4.0000	7.92	_____
Halex GT	pt	7.80	3.6000	28.08	_____
SEED/PLANTS					
Corn Seed BtRR	thous	3.63	28.0000	101.64	_____
HAULING					
Haul Corn	bu	0.23	170.0000	39.10	_____
CUSTOM LIME					
Lime (Spread)	ton	38.00	0.6660	25.31	_____
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	14.23	0.4165	5.93	_____
Harvesters	hour	14.23	0.1277	1.82	_____
HAND LABOR					
Implements	hour	9.06	0.2283	2.06	_____
UNALLOCATED LABOR	hour	14.22	0.4898	6.97	_____
DIESEL FUEL					
Tractors	gal	2.60	3.6449	9.49	_____
Harvesters	gal	2.60	1.7419	4.53	_____
REPAIR & MAINTENANCE					
Implements	acre	8.01	1.0000	8.01	_____
Tractors	acre	1.92	1.0000	1.92	_____
Harvesters	acre	4.51	1.0000	4.51	_____
INTEREST ON OP. CAP.	acre	13.10	1.0000	13.10	_____
TOTAL DIRECT EXPENSES				431.89	_____
FIXED EXPENSES					
Implements	acre	11.84	1.0000	11.84	_____
Tractors	acre	13.31	1.0000	13.31	_____
Harvesters	acre	19.41	1.0000	19.41	_____
TOTAL FIXED EXPENSES				44.56	_____
TOTAL SPECIFIED EXPENSES				476.45	_____

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 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, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.80	170.0000	646.00	_____

TOTAL INCOME				646.00	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	6.50	1.0000	6.50	_____
FERTILIZERS	acre	132.72	1.0000	132.72	_____
HERBICIDES	acre	58.95	1.0000	58.95	_____
SEED/PLANTS	acre	101.64	1.0000	101.64	_____
HAULING	acre	39.10	1.0000	39.10	_____
CUSTOM LIME	acre	25.31	1.0000	25.31	_____
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	14.23	0.5442	7.75	_____
UNALLOCATED LABOR	hour	14.22	0.4898	6.97	_____
DIESEL FUEL	gal	2.60	5.3869	14.02	_____
REPAIR & MAINTENANCE	acre	14.44	1.0000	14.44	_____
INTEREST ON OP. CAP.	acre	13.10	1.0000	13.10	_____

TOTAL DIRECT EXPENSES				431.89	_____
RETURNS ABOVE DIRECT EXPENSES				214.11	_____
TOTAL FIXED EXPENSES				44.56	_____

TOTAL SPECIFIED EXPENSES				476.45	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				169.55	_____

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 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, 2019

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
Phosphorus(46% P2O5)	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					45.2080				
Corn Consultant	acre			1.00	May	1.0000				
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							0.54	0.54	0.77	0.48

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 6.D Estimated costs for field operations, per acre
 Corn, no-tillage, BtRR, 12-row 30", 170 bu yield goal
 Non-Delta Areas, Mississippi, 2019

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						0.20	3.53	3.53
Lime (Spread)	ton	25.31						1.52	26.83	26.83
App by Air (5 gal)	appl	6.50						0.26	6.76	6.76
Glyphosate 3lbs a.e	oz	4.48						0.18	4.66	4.66
Clarity	pt	5.76						0.23	5.99	5.99
Select Max	pt	12.71						0.51	13.22	13.22
Spin Spreader	5 ton		0.96	0.48	1.52			0.10	3.06	1.99 5.05
Phosphorus (46% P2O5)	cwt	38.71						1.35	40.06	40.06
Potash (60% K2O)	cwt	25.00						0.88	25.88	25.88
NT Plant&Pre-Rigid	8R-30		2.41	2.60	3.82			0.31	9.14	7.86 17.00
Corn Seed BtRR	thous	101.64						3.56	105.20	105.20
Fert 10-34-0	gal	12.95						0.45	13.40	13.40
Spray (Broadcast)	27'		1.43	0.50	1.97			0.12	4.02	2.28 6.30
Atrazine 4L	pt	7.92						0.24	8.16	8.16
Halex GT	pt	28.08						0.84	28.92	28.92
Fert Appl (Liquid)	8R-30		2.23	1.56	3.10			0.21	7.10	4.52 11.62
UAN (32%)	gal	56.06						1.68	57.74	57.74
Corn Consultant	acre	6.00						0.15	6.15	6.15
Header - Corn	8R-30		4.53	6.50	3.46			0.07	14.56	22.71 37.27
Grain Cart Corn	500 bu		0.58	0.30	0.68			0.01	1.57	1.15 2.72
Haul Corn	bu	39.10						0.20	39.30	39.30
Stalk Shredder Flex	20'		1.88	2.50	2.23			0.03	6.64	4.05 10.69
TOTALS		373.55	14.02	14.44	16.78	0.00	13.10	431.89	44.56	476.45

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 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, 2019

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
TOTAL INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	646.00
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	6.50	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	76.66	56.06	0.00	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	22.95	0.00	36.00	0.00	0.00	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	101.64	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	25.31	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	5.34	5.07	0.00	0.00	0.00	0.00	6.37
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	3.37	3.66	0.00	0.00	0.00	0.00	6.99
REPAIR & MAINTENANCE	0.00	0.00	0.00	0.00	0.00	3.08	2.06	0.00	0.00	0.00	0.00	9.30
INTEREST ON OP. CAP.	1.72	0.00	0.00	0.00	1.18	6.65	3.09	0.15	0.00	0.00	0.00	0.31
TOTAL DIRECT EXPENSES	30.36	0.00	0.00	0.00	30.63	196.74	105.94	6.15	0.00	0.00	0.00	62.07
NET INCOME	-30.36	0.00	0.00	0.00	-30.63	-196.74	-105.94	-6.15	0.00	0.00	0.00	583.93
NET INCOME TO DATE	-30.36	-30.36	-30.36	-30.36	-60.99	-257.73	-363.67	-369.82	-369.82	-369.82	-369.82	214.11

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.

* 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, 2019

PRODUCT	PERCENT												
	75	80	85	90	95	100	105	110	115	120	125		
Corn	2.85	3.04	3.23	3.42	3.61	3.80	3.99	4.18	4.37	4.56	4.75		
PERCENT	YIELD UNIT												
	dollars												
50	85.00	bu	-169	-153	-137	-121	-105	-89	-73	-56	-40	-24	-8
			-214	-198	-182	-166	-149	-133	-117	-101	-85	-69	-53
60	102.00	bu	-125	-106	-86	-67	-47	-28	-9	10	29	48	68
			-170	-150	-131	-111	-92	-73	-53	-34	-14	4	23
70	119.00	bu	-80	-58	-35	-13	9	32	54	77	99	122	145
			-125	-102	-80	-57	-35	-12	10	32	55	77	100
80	136.00	bu	-36	-10	15	41	66	92	118	144	170	196	221
			-80	-55	-29	-3	22	48	74	99	125	151	177
90	153.00	bu	8	37	66	95	124	153	182	211	240	269	298
			-36	-7	21	50	79	108	137	167	196	225	254
100	170.00	bu	52	84	117	149	181	214	246	278	311	343	375
			8	40	72	104	137	169	201	234	266	298	331
110	187.00	bu	97	132	168	203	239	274	310	345	381	416	452
			52	88	123	159	194	230	265	301	336	372	407
120	204.00	bu	141	180	219	257	296	335	374	412	451	490	529
			97	135	174	213	252	290	329	368	407	445	484
130	221.00	bu	186	228	270	312	354	396	438	480	522	564	606
			141	183	225	267	309	351	393	435	477	519	561
140	238.00	bu	230	275	321	366	411	456	502	547	592	637	682
			186	231	276	321	367	412	457	502	547	593	638
150	255.00	bu	275	323	372	420	469	517	565	614	662	711	759
			230	279	327	376	424	472	521	569	618	666	715

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 2018 input prices.

Table 7.A Estimated costs per acre
 Grain sorghum, 12-row 30", 100 bu yield goal
 All Areas, Mississippi, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air (5 gal)	appl	6.50	1.0000	6.50	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	23.75	1.3000	30.88	_____
Potash (60% K2O)	cwt	20.00	1.0000	20.00	_____
UAN + Sulfur (28%)	gal	1.38	38.2883	52.84	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
2,4-D Amine 4	pt	2.40	2.0000	4.80	_____
Select Max	pt	12.71	1.0000	12.71	_____
Lexar	pt	8.01	6.0000	48.06	_____
INSECTICIDES					
Sivanto Prime	oz	2.52	8.0000	20.16	_____
Karate Z	oz	2.74	1.5000	4.11	_____
Prevathon	oz	1.32	14.0000	18.48	_____
SEED/PLANTS					
Sorghum Concept+ Po	lb	3.96	4.5000	17.82	_____
ADJUVANTS					
Surfactant	pt	3.59	0.3000	1.08	_____
HAULING					
Haul Sorghum	bu	0.25	100.0000	25.00	_____
CUSTOM LIME					
Lime (Spread)	ton	38.00	0.6660	25.31	_____
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	14.23	0.3120	4.43	_____
Harvesters	hour	14.23	0.1021	1.45	_____
Self-Propelled	hour	14.23	0.0661	0.95	_____
HAND LABOR					
Implements	hour	9.06	0.1442	1.31	_____
Self-Propelled	hour	9.06	0.0330	0.30	_____
UNALLOCATED LABOR	hour	14.27	0.4322	6.17	_____
DIESEL FUEL					
Tractors	gal	2.60	2.7303	7.10	_____
Harvesters	gal	2.60	1.3935	3.62	_____
Self-Propelled	gal	2.60	0.8505	2.20	_____
REPAIR & MAINTENANCE					
Implements	acre	5.10	1.0000	5.10	_____
Tractors	acre	1.44	1.0000	1.44	_____
Harvesters	acre	3.61	1.0000	3.61	_____
Self-Propelled	acre	0.90	1.0000	0.90	_____
INTEREST ON OP. CAP.	acre	9.65	1.0000	9.65	_____
TOTAL DIRECT EXPENSES				349.79	_____
FIXED EXPENSES					
Implements	acre	11.06	1.0000	11.06	_____
Tractors	acre	9.96	1.0000	9.96	_____
Harvesters	acre	15.52	1.0000	15.52	_____
Self-Propelled	acre	6.50	1.0000	6.50	_____
TOTAL FIXED EXPENSES				43.04	_____
TOTAL SPECIFIED EXPENSES				392.83	_____

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 7.B Summary of estimated costs and returns per acre
 Grain sorghum, 12-row 30", 100 bu yield goal
 All Areas, Mississippi, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Grain Sorghum	bu	3.61	100.0000	361.00	_____

TOTAL INCOME				361.00	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	6.50	1.0000	6.50	_____
FERTILIZERS	acre	103.72	1.0000	103.72	_____
HERBICIDES	acre	70.05	1.0000	70.05	_____
INSECTICIDES	acre	42.75	1.0000	42.75	_____
SEED/PLANTS	acre	17.82	1.0000	17.82	_____
ADJUVANTS	acre	1.08	1.0000	1.08	_____
HAULING	acre	25.00	1.0000	25.00	_____
CUSTOM LIME	acre	25.31	1.0000	25.31	_____
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	14.23	0.4803	6.83	_____
UNALLOCATED LABOR	hour	14.27	0.4322	6.17	_____
DIESEL FUEL	gal	2.60	4.9745	12.92	_____
REPAIR & MAINTENANCE	acre	11.05	1.0000	11.05	_____
INTEREST ON OP. CAP.	acre	9.65	1.0000	9.65	_____

TOTAL DIRECT EXPENSES				349.79	_____
RETURNS ABOVE DIRECT EXPENSES				11.21	_____
TOTAL FIXED EXPENSES				43.04	_____

TOTAL SPECIFIED EXPENSES				392.83	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				-31.83	_____

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 7.C Estimated resource use for field operations, per acre
 Grain sorghum, 12-row 30", 100 bu yield goal
 All Areas, Mississippi, 2019

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 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 7.D Estimated costs for field operations, per acre
 Grain sorghum, 12-row 30", 100 bu yield goal
 All Areas, Mississippi, 2019

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						0.20	3.53	3.53
Lime (Spread)	ton	25.31						1.52	26.83	26.83
Disk Harrow	24'		1.86	1.35	2.21			0.30	5.72	4.88 10.60
App by Air (5 gal)	appl	6.50						0.26	6.76	6.76
Glyphosate 3lbs a.e	oz	4.48						0.18	4.66	4.66
2,4-D Amine 4	pt	4.80						0.19	4.99	4.99
Select Max	pt	12.71						0.51	13.22	13.22
Surfactant	pt	1.08						0.04	1.12	1.12
Spin Spreader	5 ton		0.96	0.48	1.52			0.09	3.05	1.99 5.04
Phosphorus(46% P2O5)	cwt	30.88						0.93	31.81	31.81
Potash (60% K2O)	cwt	20.00						0.60	20.60	20.60
Field Cultivate Fld	32'		1.06	0.73	1.26			0.09	3.14	3.85 6.99
Plant - Folding	12R-30		1.43	1.90	2.27			0.17	5.77	5.43 11.20
Sorghum Concept+ Po	lb	17.82						0.53	18.35	18.35
Sprayer 800gal	80' 250hp		0.44	0.18	0.42			0.03	1.07	1.30 2.37
Lexar	pt	48.06						1.44	49.50	49.50
Sorghum Consultant	acre	6.00						0.15	6.15	6.15
Fert Appl (Liquid)	12R-30		1.79	1.54	2.49			0.15	5.97	3.98 9.95
UAN + Sulfur (28%)	gal	52.84						1.32	54.16	54.16
Sprayer 800gal	80' 250hp		0.44	0.18	0.42			0.02	1.06	1.30 2.36
Sivanto Prime	oz	10.08						0.20	10.28	10.28
Sprayer 800gal	80' 250hp		0.44	0.18	0.42			0.02	1.06	1.30 2.36
Karate Z	oz	4.11						0.06	4.17	4.17
Sprayer 800gal	80' 250hp		0.44	0.18	0.42			0.02	1.06	1.30 2.36
Prevathon	oz	18.48						0.28	18.76	18.76
Sprayer 800gal	80' 250hp		0.44	0.18	0.42			0.02	1.06	1.30 2.36
Sivanto Prime	oz	10.08						0.15	10.23	10.23
Header Wheat/Sorghum	25' Rigid		3.62	4.15	2.76			0.05	10.58	16.41 26.99
Haul Sorghum	bu	25.00						0.13	25.13	25.13
TOTALS		301.56	12.92	11.05	14.61	0.00	9.65	349.79	43.04	392.83

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 7.E Estimated monthly income and expense flows per acre
 Grain sorghum, 12-row 30", 100 bu yield goal
 All Areas, Mississippi, 2019

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
TOTAL INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	361.00
-----dollars-----												
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	6.50	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	50.88	52.84	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	21.99	0.00	48.06	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	10.08	32.67	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	0.00	17.82	0.00	0.00	0.00	0.00	0.00
ADJUVANTS	0.00	0.00	0.00	0.00	1.08	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	25.31	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	2.21	0.00	0.00	0.00	0.00	5.47	2.49	0.42	1.26	0.00	2.76
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	1.86	0.00	0.00	0.00	0.00	3.89	1.79	0.44	1.32	0.00	3.62
REPAIR & MAINTENANCE	0.00	1.35	0.00	0.00	0.00	0.00	3.29	1.54	0.18	0.54	0.00	4.15
INTEREST ON OP. CAP.	1.72	0.30	0.00	0.00	1.18	0.00	3.88	1.62	0.22	0.55	0.00	0.18
TOTAL DIRECT EXPENSES	30.36	5.72	0.00	0.00	30.75	0.00	133.29	66.28	11.34	36.34	0.00	35.71
NET INCOME	-30.36	-5.72	0.00	0.00	-30.75	0.00	-133.29	-66.28	-11.34	-36.34	0.00	325.29
NET INCOME TO DATE	-30.36	-36.08	-36.08	-36.08	-66.83	-66.83	-200.12	-266.40	-277.74	-314.08	-314.08	11.21

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.

* 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, 2019

PRODUCT	75	80	85	90	95	100	105	110	115	120	125			
Grain Sorghum	2.70	2.88	3.06	3.24	3.42	3.61	3.79	3.97	4.15	4.33	4.51			
PERCENT	YIELD UNIT													
	---dollars---													
50	50.00	bu	-201	-192	-183	-174	-165	-156	-147	-138	-129	-120	-111	-154
			-244	-235	-226	-217	-208	-199	-190	-181	-172	-163	-154	
60	60.00	bu	-177	-166	-155	-144	-133	-123	-112	-101	-90	-79	-68	-112
			-220	-209	-198	-187	-177	-166	-155	-144	-133	-122	-112	
70	70.00	bu	-152	-140	-127	-114	-102	-89	-76	-64	-51	-39	-26	-69
			-195	-183	-170	-157	-145	-132	-119	-107	-94	-82	-69	
80	80.00	bu	-128	-113	-99	-84	-70	-55	-41	-27	-12	1	16	-26
			-171	-156	-142	-127	-113	-99	-84	-70	-55	-41	-26	
90	90.00	bu	-103	-87	-71	-54	-38	-22	-6	10	26	42	58	15
			-146	-130	-114	-97	-81	-65	-49	-32	-16	-0	15	
100	100.00	bu	-79	-60	-42	-24	-6	11	29	47	65	83	101	58
			-122	-104	-85	-67	-49	-31	-13	4	22	40	58	
110	110.00	bu	-54	-34	-14	5	24	44	64	84	104	124	144	101
			-97	-77	-57	-37	-18	1	21	41	61	81	101	
120	120.00	bu	-29	-8	13	35	56	78	100	121	143	165	186	143
			-72	-51	-29	-7	13	35	57	78	100	121	143	
130	130.00	bu	-5	18	41	65	88	111	135	158	182	205	229	186
			-48	-24	-1	22	45	68	92	115	139	162	186	
140	140.00	bu	19	44	69	95	120	145	170	196	221	246	271	228
			-23	1	26	51	77	102	127	153	178	203	228	
150	150.00	bu	43	70	97	124	152	179	206	233	260	287	314	271
			0	27	54	81	109	136	163	190	217	244	271	

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 2018 input prices.

Table 8.A Estimated costs per acre
Wheat followed by soybeans, 70 bu yield goal
All Areas, Mississippi, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air (5 gal)	appl	6.50	2.0000	13.00	_____
App by Air (3 gal)	appl	5.00	1.0000	5.00	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	23.75	1.0000	23.75	_____
Potash (60% K2O)	cwt	20.00	0.7500	15.00	_____
Fert 41-0-0-4	cwt	14.25	3.0480	43.43	_____
FUNGICIDES					
CruiserMaxx	oz	4.28	4.5000	19.26	_____
Prosaro	oz	2.56	8.0000	20.48	_____
HERBICIDES					
Axiom	oz	1.92	10.0000	19.20	_____
Harmony Extra SG	oz	13.79	0.7500	10.34	_____
Axial XL	oz	1.18	16.4000	19.35	_____
INSECTICIDES					
Karate Z	oz	2.74	1.5000	4.11	_____
SEED/PLANTS					
Wheat Seed Private	lb	0.22	90.0000	19.80	_____
CUSTOM FERTILIZE					
App Fert by Air	cwt	7.00	3.0480	21.34	_____
HAULING					
Haul Wheat	bu	0.26	70.0000	18.20	_____
CUSTOM LIME					
Lime (Spread)	ton	38.00	0.6660	25.31	_____
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	14.23	0.2648	3.76	_____
Harvesters	hour	14.23	0.1021	1.45	_____
HAND LABOR					
Implements	hour	9.06	0.1363	1.23	_____
UNALLOCATED LABOR	hour	14.20	0.2936	4.17	_____
DIESEL FUEL					
Tractors	gal	2.60	2.3178	6.03	_____
Harvesters	gal	2.60	1.3935	3.62	_____
REPAIR & MAINTENANCE					
Implements	acre	3.68	1.0000	3.68	_____
Tractors	acre	1.23	1.0000	1.23	_____
Harvesters	acre	3.61	1.0000	3.61	_____
INTEREST ON OP. CAP.	acre	10.27	1.0000	10.27	_____
TOTAL DIRECT EXPENSES				325.46	_____
FIXED EXPENSES					
Implements	acre	9.09	1.0000	9.09	_____
Tractors	acre	8.45	1.0000	8.45	_____
Harvesters	acre	15.52	1.0000	15.52	_____
TOTAL FIXED EXPENSES				33.06	_____
TOTAL SPECIFIED EXPENSES				358.52	_____

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 8.B Summary of estimated costs and returns per acre
Wheat followed by soybeans, 70 bu yield goal
All Areas, Mississippi, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Wheat	bu	5.37	70.0000	375.90	_____

TOTAL INCOME				375.90	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	18.00	1.0000	18.00	_____
FERTILIZERS	acre	82.19	1.0000	82.19	_____
FUNGICIDES	acre	39.74	1.0000	39.74	_____
HERBICIDES	acre	48.89	1.0000	48.89	_____
INSECTICIDES	acre	4.11	1.0000	4.11	_____
SEED/PLANTS	acre	19.80	1.0000	19.80	_____
CUSTOM FERTILIZE	acre	21.34	1.0000	21.34	_____
HAULING	acre	18.20	1.0000	18.20	_____
CUSTOM LIME	acre	25.31	1.0000	25.31	_____
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	14.23	0.3670	5.21	_____
UNALLOCATED LABOR	hour	14.20	0.2936	4.17	_____
DIESEL FUEL	gal	2.60	3.7114	9.65	_____
REPAIR & MAINTENANCE	acre	8.52	1.0000	8.52	_____
INTEREST ON OP. CAP.	acre	10.27	1.0000	10.27	_____

TOTAL DIRECT EXPENSES				325.46	_____
RETURNS ABOVE DIRECT EXPENSES				50.44	_____
TOTAL FIXED EXPENSES				33.06	_____

TOTAL SPECIFIED EXPENSES				358.52	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				17.38	_____

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 8.C Estimated resource use for field operations, per acre
Wheat followed by soybeans, 70 bu yield goal
All Areas, Mississippi, 2019

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	INPUT AMOUNT	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	0.06	
Spin Spreader	5 ton	MFWD 170	0.042	1.00	Sep		0.04	0.04	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	0.03	
Grain Drill	20'	MFWD 170	0.094	1.00	Oct		0.09	0.09	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	0.08	
Haul Wheat	bu					70.0000				
TOTALS							0.36	0.36	0.50	0.29

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 8.D Estimated costs for field operations, per acre
Wheat followed by soybeans, 70 bu yield goal
All Areas, Mississippi, 2019

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	25.31						1.27	26.58	26.58
Disk Harrow	24'		1.86	1.35	2.09			0.27	5.57	4.88
Spin Spreader	5 ton		0.96	0.48	1.46			0.14	3.04	1.99
Phosphorus (46% P2O5)	cwt	23.75						1.19	24.94	24.94
Potash (60% K2O)	cwt	15.00						0.75	15.75	15.75
Field Cultivate Fld	32'		1.06	0.73	1.19			0.15	3.13	3.85
Grain Drill	20'		2.15	1.81	3.26			0.32	7.54	5.93
Wheat Seed Private	lb	19.80						0.89	20.69	20.69
CruiserMaxx	oz	19.26						0.87	20.13	20.13
Wheat Consultant	acre	5.50						0.25	5.75	5.75
App by Air (5 gal)	appl	6.50						0.26	6.76	6.76
Axiom	oz	19.20						0.77	19.97	19.97
App by Air (3 gal)	appl	5.00						0.13	5.13	5.13
Karate Z	oz	4.11						0.10	4.21	4.21
Harmony Extra SG	oz	10.34						0.26	10.60	10.60
Axial XL	oz	19.35						0.48	19.83	19.83
App Fert by Air	cwt	10.67						0.27	10.94	10.94
Fert 41-0-0-4	cwt	21.72						0.54	22.26	22.26
App Fert by Air	cwt	10.67						0.21	10.88	10.88
Fert 41-0-0-4	cwt	21.72						0.43	22.15	22.15
App by Air (5 gal)	appl	6.50						0.10	6.60	6.60
Prosaro	oz	20.48						0.31	20.79	20.79
Header Wheat/Sorghum	25' Rigid		3.62	4.15	2.61			0.05	10.43	16.41
Haul Wheat	bu	18.20						0.09	18.29	18.29
TOTALS		286.41	9.65	8.52	10.61	0.00	10.27	325.46	33.06	358.52

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 8.E Estimated monthly income and expense flows per acre
 Wheat followed by soybeans, 70 bu yield goal
 All Areas, Mississippi, 2019

ITEM	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
TOTAL INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	375.90
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	6.50	0.00	0.00	5.00	0.00	6.50	0.00	0.00
FERTILIZERS	0.00	0.00	38.75	0.00	0.00	0.00	0.00	21.72	21.72	0.00	0.00	0.00
FUNGICIDES	0.00	0.00	0.00	19.26	0.00	0.00	0.00	0.00	0.00	20.48	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	19.20	0.00	0.00	29.69	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.11	0.00	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	19.80	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	10.67	10.67	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	25.31	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	4.74	3.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.61
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	3.88	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.62
REPAIR & MAINTENANCE	0.00	0.00	2.56	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.15
INTEREST ON OP. CAP.	0.00	0.00	3.94	2.33	1.03	0.00	0.00	1.78	0.64	0.41	0.00	0.14
TOTAL DIRECT EXPENSES	0.00	0.00	82.51	54.11	26.73	0.00	0.00	72.97	33.03	27.39	0.00	28.72
NET INCOME	0.00	0.00	-82.51	-54.11	-26.73	0.00	0.00	-72.97	-33.03	-27.39	0.00	347.18
NET INCOME TO DATE	0.00	0.00	-82.51	-136.62	-163.35	-163.35	-163.35	-236.32	-269.35	-296.74	-296.74	50.44

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.

* 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, 2019

PRODUCT	PERCENT										PRODUCT PRICE	PERCENT												
	75	80	85	90	95	100	105	110	115	120														
Wheat	4.02	4.29	4.56	4.83	5.10	5.37	5.63	5.90	6.17	6.44	6.71													
PERCENT	YIELD UNIT												dollars											
50	35.00	bu	-175	-165	-156	-147	-137	-128	-118	-109	-100	-90	-81	-208	-199	-189	-180	-170	-161	-152	-142	-133	-123	-114
60	42.00	bu	-148	-137	-126	-115	-103	-92	-81	-70	-58	-47	-36	-182	-170	-159	-148	-136	-125	-114	-103	-91	-80	-69
70	49.00	bu	-122	-109	-96	-83	-70	-56	-43	-30	-17	-4	8	-155	-142	-129	-116	-103	-89	-76	-63	-50	-37	-24
80	56.00	bu	-96	-81	-66	-51	-36	-21	-6	8	24	39	54	-129	-114	-99	-84	-69	-54	-39	-24	-9	6	21
90	63.00	bu	-69	-52	-36	-19	-2	14	31	48	65	82	99	-102	-86	-69	-52	-35	-18	-1	15	32	49	66
100	70.00	bu	-43	-24	-5	12	31	50	69	88	106	125	144	-76	-57	-39	-20	-1	17	36	54	73	92	111
110	77.00	bu	-17	3	24	44	65	86	106	127	148	168	189	-50	-29	-8	11	32	53	73	94	115	135	156
120	84.00	bu	9	31	54	76	99	121	144	167	189	212	234	-23	-1	21	43	66	88	111	134	156	179	201
130	91.00	bu	35	59	84	108	133	157	182	206	231	255	279	2	26	51	75	100	124	149	173	197	222	246
140	98.00	bu	61	88	114	140	167	193	219	246	272	298	325	28	55	81	107	134	160	186	213	239	265	291
150	105.00	bu	88	116	144	172	201	229	257	285	313	342	370	55	83	111	139	167	196	224	252	280	308	337

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 2018 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, 2019

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	339,000	300	8	13.64	13.51	35.46	35.31	84.28	151.94	236.23
Combine (300-349 hp)	325 hp	362,000	300	8	16.73	13.51	43.49	37.70	94.71	162.25	256.97
Combine (350-399 hp)	355 hp	391,000	300	8	18.27	13.51	47.50	40.72	101.74	175.25	276.99
Combine (400-449 hp)	425 hp	412,000	300	8	21.87	13.51	56.87	42.91	113.30	184.66	297.97
Combine (450-499hp)	475 hp	434,000	300	8	24.44	13.51	63.56	45.20	122.28	194.52	316.81
Tractor (20-39hp)CB	MFWD 30	25,500	600	8	1.54	13.51	4.01	0.79	18.32	5.29	23.61
Tractor (20-39hp)RB	MFWD 30	20,400	600	8	1.54	13.51	4.01	0.63	18.16	4.23	22.39
Tractor (40-59hp)CB	2WD 50	29,400	600	8	2.57	13.51	6.69	0.91	21.12	6.10	27.22
Tractor (40-59hp)CB	MFWD 50	39,500	600	8	2.57	13.51	6.69	1.23	21.43	8.19	29.63
Tractor (40-59hp)RB	2WD 50	22,900	600	8	2.57	13.51	6.69	0.71	20.91	4.75	25.67
Tractor (40-59hp)RB	MFWD 50	27,800	600	8	2.57	13.51	6.69	0.86	21.07	5.77	26.84
Tractor (60-89hp)CB	2WD 75	52,800	600	8	3.86	13.51	10.03	1.65	25.19	10.95	36.15
Tractor (60-89hp)CB	MFWD 75	62,500	600	8	3.86	13.51	10.03	1.95	25.50	12.97	38.47
Tractor (60-89hp)RB	2WD 75	38,600	600	8	3.86	13.51	10.03	1.20	24.75	8.01	32.76
Tractor (60-89hp)RB	MFWD 75	40,100	600	8	3.86	13.51	10.03	1.25	24.80	8.32	33.12
Tractor (90-119hp)CB	2WD 105	69,200	600	8	5.40	13.51	14.05	2.16	29.72	14.36	44.08
Tractor (90-119hp)CB	MFWD 105	83,000	600	8	5.40	13.51	14.05	2.59	30.15	17.22	47.38
Tractor (90-119hp)RB	2WD 105	61,200	600	8	5.40	13.51	14.05	1.91	29.47	12.70	42.17
Tractor (90-119hp)RB	MFWD 105	67,500	600	8	5.40	13.51	14.05	2.10	29.67	14.01	43.68
Tractor (120-139hp)CB	2WD 130	103,000	600	8	6.69	13.51	17.39	3.21	34.12	21.37	55.50
Tractor (120-139hp)CB	MFWD 130	114,000	600	8	6.69	13.51	17.39	3.56	34.47	23.66	58.13
Tractor (140-159hp)	2WD 150	109,000	600	8	7.72	13.51	20.07	3.40	36.99	22.62	59.61
Tractor (140-159hp)CB	MFWD 150	130,000	600	8	7.72	13.51	20.07	4.06	37.64	26.98	64.63
Tractor (160-179hp)CB	MFWD 170	148,000	600	8	8.75	13.51	22.75	4.62	40.88	31.94	72.83
Tractor (180-199hp)CB	MFWD 190	175,000	600	8	9.77	13.51	25.42	5.46	44.40	37.77	82.17
Tractor (200-249hp)CB	MFWD 225	191,000	600	8	11.58	13.51	30.11	5.96	49.59	41.22	90.81
Tractor (250-349hp)CB	4WD 300	286,000	600	8	15.44	13.51	40.14	8.93	62.59	61.73	124.32
Tractor (250-349hp)CB	MFWD 300	278,000	600	8	15.44	13.51	40.14	8.68	62.34	60.00	122.34
Tractor (250-349hp)CB	Track 300	317,000	600	8	15.44	13.51	40.14	9.90	63.56	68.42	131.98
Tractor (350-449hp)	Track 400	420,000	600	8	20.58	13.51	53.53	13.12	80.16	90.65	170.81
Tractor (350-449hp)CB	4WD 400	328,000	600	8	20.58	13.51	53.53	10.25	77.29	70.79	148.08
Tractor (450-550hp)CB	4WD 500	394,000	600	8	25.73	13.51	66.91	12.31	92.73	85.04	177.77
Tractor (450-550hp)CB	Track 500	444,000	600	8	25.73	13.51	66.91	13.87	94.29	95.83	190.13
Utility Vehicle	800 CC	12,200	200	8	0.70	13.51	1.75	1.90	17.16	8.20	25.36
Utility Vehicle	900 CC	15,800	200	8	1.00	13.51	2.50	2.46	18.47	10.62	29.10

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, 2019

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	5.81	8.62	10.79	25.23	46.44	71.68
Cotton Picker	4R-38 (350)	351,000	200	8	18.01	0.257	5.81	12.07	14.13	32.02	60.83	92.86
Cotton Picker	4R2x1 (350)	357,000	200	8	18.01	0.172	3.88	8.07	9.61	21.57	41.35	62.92
Cotton Picker	6R-30 (355)	465,000	200	8	18.27	0.218	4.92	10.36	15.85	31.15	68.23	99.38
Cotton Picker	6R-38 (355)	465,000	200	8	18.27	0.172	3.88	8.18	12.51	24.59	53.86	78.46
Cotton Picker/Module	4R-38 (365)	536,000	200	8	20.58	0.257	5.81	13.79	21.58	41.20	92.89	134.10
Cotton Picker/Module	6R-30 (500)	776,000	200	8	25.73	0.218	4.92	14.60	26.46	45.99	113.86	159.85
Cotton Picker/Module	6R-38 (500)	777,000	200	8	25.73	0.172	3.88	11.52	20.91	36.33	90.01	126.35
Dry Applicator SP	70'300cuft	347,000	350	8	16.98	0.015	0.27	0.66	0.28	1.22	2.01	3.23
Sprayer 600-750gal	60' 175hp	208,000	350	8	9.00	0.017	0.31	0.41	0.19	0.92	1.40	2.33
Sprayer 600-825gal	80' 175hp	210,000	350	8	11.81	0.013	0.23	0.40	0.14	0.79	1.06	1.85
Sprayer 600-825gal	90' 250hp	288,000	350	8	12.73	0.011	0.21	0.38	0.18	0.78	1.30	2.08
Sprayer 800gal	100' 250hp	303,000	350	8	14.15	0.010	0.19	0.38	0.17	0.75	1.23	1.98
Sprayer 800gal	80' 250hp	255,000	350	8	12.86	0.013	0.23	0.44	0.18	0.86	1.29	2.15
Sprayer 1000-1400gal	90' 275hp	289,000	350	8	14.15	0.010	0.19	0.38	0.16	0.74	1.17	1.91
Sprayer 1000gal	100' 300hp	328,000	350	8	15.44	0.010	0.19	0.42	0.18	0.80	1.33	2.13
Sprayer 1200+gal	120' 300hp	332,000	350	8	15.44	0.008	0.15	0.35	0.15	0.66	1.12	1.79

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, 2019 (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-----							
Rotary Cutter	7'	MFWD 130	5,245	185	10	0.168	2.27	2.92	0.71	0.59	6.51	0.55	3.98	11.06
Rotary Cutter	12'	2WD 150	11,500	185	10	0.098	1.32	1.97	0.91	0.33	4.54	0.71	2.22	7.48
Rotary Cutter-Flex	15'	MFWD 150	21,100	185	10	0.078	1.06	1.57	1.34	0.31	4.30	1.04	2.12	7.46
Rotary Cutter-Flex	20'	MFWD 150	29,300	185	10	0.058	0.79	1.18	1.39	0.23	3.61	1.09	1.59	6.29
Row Cond & Inc-Fold.	26'	MFWD 190	26,600	100	10	0.063	1.14	1.61	0.42	0.34	3.52	1.97	2.39	7.89
Row Cond & Inc-Fold.	38'	MFWD 225	33,800	100	10	0.043	0.78	1.30	0.36	0.25	2.71	1.71	1.79	6.22
Row Cond & Inc-Rigid	13'	2WD 130	16,800	100	10	0.126	2.28	2.20	0.53	0.40	5.43	2.49	2.71	10.64
Row Cond & Inc-Rigid	21'	2WD 170	20,700	100	10	0.078	1.41	1.78	0.40	0.29	3.90	1.90	2.01	7.82
Row Cond & Inc-Rigid	26'	MFWD 190	23,400	100	10	0.026	0.48	0.67	0.15	0.14	1.45	0.72	1.00	3.19
Row Cond Folding	26'	MFWD 225	19,300	100	10	0.059	0.80	1.79	0.28	0.35	3.25	1.34	2.46	7.05
Row Cond Folding	38'	MFWD 225	25,800	100	10	0.040	0.55	1.23	0.26	0.24	2.29	1.23	1.68	5.20
Row Cond Rigid	13'	2WD 130	9,540	100	10	0.119	1.61	2.07	0.28	0.38	4.36	1.33	2.55	8.24
Row Cond Rigid	21'	2WD 170	13,400	100	10	0.073	0.99	1.68	0.24	0.27	3.20	1.15	1.89	6.26
Row Cond Rigid	26'	MFWD 190	16,200	100	10	0.059	0.80	1.51	0.24	0.32	2.89	1.13	2.25	6.28
Row Cond./Roll-Fol	30'	MFWD 190	35,600	160	10	0.062	0.84	1.58	0.55	0.34	3.33	1.62	2.36	7.31
Row Cond./Roll-Fold.	26'	MFWD 190	26,800	160	10	0.072	0.97	1.83	0.48	0.39	3.68	1.41	2.72	7.82
Row Cond./Roll-Fold.	40'	MFWD 225	23,700	160	10	0.046	0.63	1.41	0.27	0.27	2.60	0.81	1.93	5.34
Row Cond./Roll-Rig	21'	MFWD 190	23,000	160	10	0.089	1.20	2.27	0.51	0.48	4.47	1.50	3.37	9.35
Row Cond./Roll-Rig	26'	MFWD 190	25,800	160	10	0.072	0.97	1.83	0.46	0.39	3.66	1.35	2.72	7.75
Spray Spreader	5 ton	MFWD 190	12,400	100	8	0.042	0.94	1.07	0.29	0.23	2.54	0.65	1.58	4.78
Spray (ATV Ropewick)	75"	800 CC	720	200	8	0.260	4.69	0.45	0.08	0.49	5.73	0.11	2.13	7.98
Spray (ATV)	20"	800 CC	1,700	200	8	0.084	1.52	0.14	0.06	0.16	1.90	0.08	0.69	2.68
Spray (Band)	27' Fold	MFWD 170	7,270	200	8	0.062	1.13	1.42	0.21	0.28	3.06	0.28	2.00	5.34
Spray (Band)	40' Fold	MFWD 170	8,630	200	8	0.042	0.76	0.96	0.17	0.19	2.09	0.22	1.35	3.67
Spray (Band)	50' Fold	MFWD 170	13,700	200	8	0.033	0.61	0.77	0.21	0.15	1.75	0.28	1.08	3.12
Spray (Band)	60' Fold	MFWD 170	15,600	200	8	0.028	0.50	0.64	0.20	0.13	1.48	0.27	0.90	2.66
Spray (Bcast/HB)	13' Rigid	MFWD 150	6,760	200	8	0.130	2.34	2.61	0.41	0.52	5.90	0.54	3.51	9.96
Spray (Bcast/HB)	20' Rigid	MFWD 150	7,920	200	8	0.084	1.52	1.69	0.31	0.34	3.88	0.41	2.28	6.58
Spray (Bcast/HB)	27' Fold	MFWD 170	15,100	200	8	0.062	1.13	1.42	0.44	0.28	3.29	0.58	2.00	5.88
Spray (Bcast/HB)	27' Rigid	MFWD 170	9,570	200	8	0.062	1.13	1.42	0.28	0.28	3.12	0.37	2.00	5.50
Spray (Bcast/HB)	30' Fold	MFWD 170	18,600	200	8	0.056	1.01	1.28	0.49	0.26	3.05	0.65	1.80	5.50
Spray (Bcast/HB)	40' Fold	MFWD 170	21,800	200	8	0.042	0.76	0.96	0.43	0.19	2.35	0.57	1.35	4.27
Spray (Broadcast)	27'	MFWD 170	7,270	200	8	0.062	1.13	1.42	0.21	0.28	3.06	0.28	2.00	5.34
Spray (Broadcast)	40'	MFWD 170	8,630	200	8	0.042	0.76	0.96	0.17	0.19	2.09	0.22	1.35	3.67
Spray (Broadcast)	50'	MFWD 170	13,700	200	8	0.033	0.61	0.77	0.21	0.15	1.75	0.28	1.08	3.12
Spray (Broadcast)	60'	MFWD 170	15,600	200	8	0.028	0.50	0.64	0.20	0.13	1.48	0.27	0.90	2.66
Spray (Direct/Hood)	8R-30	MFWD 170	20,000	200	8	0.084	1.52	1.92	0.79	0.39	4.63	1.05	2.70	8.39
Spray (Direct/Hood)	8R-38	MFWD 170	21,500	200	8	0.066	1.20	1.52	0.67	0.30	3.71	0.89	2.13	6.74
Spray (Direct/Hood)	12R-30	MFWD 170	24,800	200	8	0.056	1.01	1.28	0.65	0.26	3.21	0.87	1.80	5.89
Spray (Direct/Hood)	12R-38	MFWD 170	26,600	200	8	0.044	0.80	1.01	0.55	0.20	2.57	0.73	1.42	4.73
Spray (Direct/Layby)	8R-30	MFWD 170	11,300	200	8	0.084	1.52	1.92	0.44	0.39	4.29	0.59	2.70	7.58
Spray (Direct/Layby)	8R-38	MFWD 170	11,300	200	8	0.066	1.20	1.52	0.35	0.30	3.39	0.47	2.13	5.99
Spray (Direct/Layby)	8R-38 2x1	MFWD 170	14,900	200	8	0.044	0.80	1.01	0.31	0.20	2.33	0.41	1.42	4.16
Spray (Direct/Layby)	12R-30	MFWD 170	14,900	200	8	0.056	1.01	1.28	0.39	0.26	2.95	0.52	1.80	5.28
Spray (Direct/Layby)	12R-38	MFWD 170	14,900	200	8	0.044	0.80	1.01	0.31	0.20	2.33	0.41	1.42	4.16
Spray (Direct/Layby)	16R-20	MFWD 225	17,100	200	8	0.062	1.13	1.88	0.50	0.37	3.89	0.66	2.58	7.14
Spray (Levee Leaper)	50'	MFWD 225	13,200	200	8	0.033	0.61	1.01	0.20	0.20	2.04	0.27	1.39	3.71
Spray (Pull Type)	60'	MFWD 225	40,700	200	8	0.028	0.50	0.84	0.53	0.16	2.06	0.71	1.16	3.94
Spray (Pull Type)	80'	MFWD 225	52,500	200	8	0.021	0.38	0.63	0.52	0.12	1.66	0.69	0.87	3.22
Spray (Pull Type)	90'	2WD 50	53,200	200	8	0.018	0.33	0.12	0.46	0.01	0.94	0.62	0.08	1.65
Spray (Pull Type)	120'	MFWD 225	80,900	200	8	0.014	0.25	0.42	0.53	0.08	1.29	0.71	0.58	2.58
Spray (Ropewick)	20'	MFWD 190	4,100	200	8	0.084	1.52	2.15	0.16	0.46	4.30	0.21	3.19	7.71
Spray (Spot)	27'	MFWD 170	7,270	200	8	0.062	1.13	1.42	0.21	0.28	3.06	0.28	2.00	5.34
Spray (Spot)	40'	MFWD 170	8,630	200	8	0.042	0.76	0.96	0.17	0.19	2.09	0.22	1.35	3.67
Spray (Spot)	50'	MFWD 170	13,700	200	8	0.033	0.61	0.77	0.21	0.15	1.75	0.28	1.08	3.12
Spray (Spot)	60'	MFWD 225	15,600	200	8	0.028	0.50	0.84	0.20	0.16	1.73	0.27	1.16	3.17
Stalk Shredder	14'	MFWD 150	21,100	200	10	0.117	1.59	2.36	2.17	0.47	6.61	1.45	3.18	11.24
Stalk Shredder Flex	20'	MFWD 150	29,300	200	10	0.082	1.11	1.65	2.11	0.33	5.22	1.41	2.22	8.85
Stalk Shredder-Flail	12'	MFWD 150	17,400	200	10	0.137	1.85	2.76	2.09	0.55	7.26	1.39	3.71	12.37
Stalk Shredder-Flail	15'	MFWD 150	21,900	200	10	0.110	1.48	2.20	2.10	0.44	6.24	1.40	2.96	10.62
Stalk Shredder-Flail	18'	MFWD 150	29,200	200	10	0.091	1.23	1.84	2.34	0.37	5.79	1.56	2.47	9.83
Stalk Shredder-Flail	20'	MFWD 150	29,000	200	10	0.082	1.11	1.65	2.09	0.33	5.19	1.39	2.22	8.82
Stalk Shredder-Flail	25'	MFWD 150	41,000	200	10	0.066	0.89	1.32	2.36	0.26	4.85	1.58	1.78	8.21
Subsoiler	3 shank	MFWD 190	5,810	100	15	0.204	2.76	5.19	0.39	1.11	9.46	1.11	7.71	18.30
Subsoiler	4 shank	MFWD 225	9,200	100	15	0.153	2.07	4.62	0.47	0.91	8.08	1.32	6.33	15.75
Subsoiler	5 shank	MFWD 225	12,600	100	15	0.122	1.65	3.68	0.51	0.73	6.58	1.44	5.04	13.07
Subsoiler low-till	6 shank	MFWD 225	14,600	100	15	0.102	1.38	3.07	0.49	0.60	5.56	1.40	4.21	11.17
Subsoiler low-till	8 shank	MFWD 225	20,000	100	15	0.076	1.03	2.30	0.51	0.45	4.30	1.43	3.15	8.89

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, 2019

ITEM NAME	UNIT	PRICE	ITEM NAME	UNIT	PRICE
		dollars			dollars
ADJUVANTS			Captan 50 WP	lb	4.28
Agri-Dex	pt	2.39	Cotton Seed Trt.	acre	20.00
Crop Oil Conc. (Pet.)	pt	2.37	CruiserMaxx	oz	4.28
Crop Oil Conc. (Veg.)	pt	2.58	Headline EC	oz	3.11
Dyne-A-Pak	pt	4.80	Propimax EC	pt	12.88
Induce	pt	3.59	Prosaro	oz	2.56
MSO	pt	2.09	Quadris	oz	2.25
Penetrator Plus	pt	2.34	Quadris Top	oz	2.61
Surfactant	pt	3.59	Quadris Top SBX	oz	2.75
CLEANING			Quilt	pt	18.55
Cleaning Peanuts	ton	18.00	Quilt XCEL	pt	25.43
CROP CONSULTANT			Stratego	pt	24.58
Corn Consultant	acre	6.00	Stratego YLD	oz	4.28
Cotton Consultant	acre	8.00	Tilt 3.6 EC	oz	0.75
Peanut Consultant	acre	9.25	Tilt/ Bravo SE	oz	0.41
Rice Consultant	acre	8.00	GINNING		
Sorghum Consultant	acre	6.00	Gin & Haul	lb	0.11
Soybeans Consultant	acre	6.50	GROWTH REGULATORS		
Wheat Consultant	acre	5.50	Mepex	oz	0.08
CUSTOM FERTILIZE			Mepichlor 4.2%	oz	0.08
App Fert by Air	cwt	7.00	Mepiquat	oz	0.08
App Fert by Air (Mi)	appl	7.00	Mepstar	oz	0.08
Custom Apply Fert	acre	7.50	Palisade	oz	1.25
CUSTOM LIME			Stance	oz	1.25
Lime (Spread)	ton	38.00	HARVEST AIDS		
CUSTOM PLANT			Adios	oz	1.99
Custom Plant	acre	7.50	Aim 2EC	oz	5.65
Custom Plant Air	cwt	7.00	Def/Folex	pt	10.90
CUSTOM			Defol 5	gal	5.40
App by Air (3 gal)	appl	5.00	Display	pt	40.61
App by Air (5 gal)	appl	6.50	Ethephon 6E	pt	3.53
App by Air (10 gal)	appl	9.00	Finish 6	pt	9.60
Custom Spray Ground	acre	7.00	Folex 6EC	pt	10.90
DRYING			Freefall SC	oz	0.97
Dry Corn	bu	0.19	Ginstar EC	pt	26.41
Dry Grain Sorghum	cwt	0.25	Gramoxone SL	oz	0.15
Dry Peanuts	ton	24.00	Sharpen	oz	6.45
Dry Rice	bu	0.40	Sodium Chlorate 5L	gal	5.40
ERADICATION FEE			SuperBoll	oz	0.22
Eradication	acre	1.00	Thidiazuron 4lb	oz	0.97
FERTILIZERS			Tribufos 6lb	pt	10.90
Agrotain Ultra	pt	9.12	HAULING		
Amm Sulfate (21% N)	cwt	14.50	Haul Corn	bu	0.23
Boron Plus	pt	3.50	Haul Peanuts	ton	14.50
DAP	cwt	23.76	Haul Rice	bu	0.35
Fert 10-34-0	cwt	22.25	Haul Sorghum	bu	0.25
Fert 10-34-0	gal	2.59	Haul Soybeans	bu	0.27
Fert 11-37-0	cwt	26.50	Haul Wheat	bu	0.26
Fert 33-0-0-12S	cwt	18.00	HERBICIDES		
Fert 41-0-0-4	cwt	14.25	2,4-D Ester	pt	4.17
Lime	ton	28.00	2,4-D Amine 4	pt	2.40
NBPT	pt	9.12	AAtrex 4L	pt	2.12
Phosphorus (46% P2O5)	cwt	23.75	Accent Q	oz	23.85
Potash (60% K2O)	cwt	20.00	Aim	oz	5.65
Sulfur Plus	pt	3.15	Anthem	oz	3.08
UAN (32% N)	cwt	11.25	Anthem Maxx	oz	6.16
UAN (32%)	gal	1.24	Armezon Pro	oz	1.26
UAN + Sulfur (28%)	cwt	12.40	Atrazine 4L	pt	1.98
UAN + Sulfur (28%)	gal	1.38	Atrazine 90DF	lb	3.38
Urea, Solid (46% N)	cwt	14.50	Authority Elite	pt	15.67
Zinc Plus	pt	4.99	Authority Maxx	lb	64.05
FUNGICIDES			Authority MTZ	lb	26.30
Aframe	oz	1.91	Axial XL	oz	1.18
Alfa Guard	lb	1.55	Axiom	oz	1.92
Allegiance Flowable	pt	49.00	Barrage	pt	6.63
Approach Prima	pt	42.10	Boundary	pt	11.21
Apron Maxx RTA	oz	0.95	Broadaxe	pt	16.57
Avicta Complete Bean	oz	0.49	Bucaneer Plus	pt	1.48
Bravo Weather Stick	pt	6.88			

(continued)

Appendix Table 4. Operating inputs: estimated prices, Mississippi, 2019(continued)

ITEM NAME	UNIT	PRICE	ITEM NAME	UNIT	PRICE
		dollars			dollars
Butyrac 200 (2,4-DB)	pt	4.34	Stalwart	pt	4.80
Bxxolero	pt	7.73	Stam 80 EDF	lb	9.64
Cadre	oz	3.54	Stam M4	qt	7.84
Caparol	pt	4.52	Staple LX	oz	7.63
Capreno	oz	7.13	Sterling Blue	pt	7.82
Cinch ATZ	pt	5.89	Storm	pt	11.41
Clarity	pt	11.51	Superwham	qt	9.20
Classic	oz	17.18	Suprend	lb	13.74
Clearpath	lb	61.27	Synchrony XP	oz	12.71
Clethomine 2E	oz	0.56	Tempest	oz	1.84
Clincher SF	oz	2.34	Touchdown Total	qt	6.97
Command 3ME	pt	19.93	Trifluralin	pt	3.56
Corvus	oz	7.29	Triflurex	pt	3.86
Cotoran	pt	6.42	Ultra Blazer	pt	10.26
Declare	oz	1.64	Valor SX	oz	4.57
Dicamba	pt	8.48	Warrant	pt	4.84
Direx	pt	2.93	XtendiMax	oz	9.10
Diuron	pt	2.90	Zidua	oz	9.05
Dual II Magnum	pt	14.83	INOCULANT		
Dual Magnum	pt	13.81	Inoculant-Soybean	acre	1.55
Duet	pt	5.35	Optimize LIFT	oz	0.55
Endigo	oz	1.80	INSECTICIDES		
Engenia	oz	1.02	Abamectin .15EC	oz	0.95
Facet L	pt	15.25	Acephate 90%	lb	8.70
Fierce	oz	7.54	Acephate 90SP	lb	7.92
First Rate	oz	43.40	Admire Pro	oz	1.80
Flexstar	pt	8.41	Baythroid XL	oz	2.65
Fusilade DX	oz	1.00	Belt	oz	7.90
Glyphosate 3lbs a.e	pt	2.16	Bidrin 8EC	oz	1.26
Glyphosate 3lbs a.e	oz	0.14	Bifenthrin	oz	0.76
Gramoxone SL 2.0	oz	0.15	Bifenture 2EC	oz	0.76
Grandstand R	pt	15.86	Brigade EC	pt	12.37
Halex GT	pt	7.80	Capture LFR	oz	2.28
Halomax	oz	21.44	Centric 40WG	oz	5.37
Harmony Extra SG	oz	13.79	Diamond .83EC	oz	1.40
Hero	pt	25.77	Dimethoate 4E	pt	5.35
Leadoff	oz	5.82	Dimilin 2L	oz	2.13
Lexar	pt	8.01	Force 3G	lb	6.03
Liberty 280	oz	0.59	Gaicho 600	oz	2.36
Loyant	oz	0.00	Imidacloprid 4F	oz	1.00
Metribuzin 4L	pt	9.98	Imidan 70 WSB	oz	0.67
Metribuzin 75	lb	16.40	IncidentalPestTrt \$8	acre	8.00
Newpath	oz	3.83	IncidentalPestTrt\$15	acre	15.00
Osprey	oz	3.62	IncidentalPestTrt\$22	acre	22.00
Outlook	pt	16.60	IncidentalPestTrt\$30	acre	30.00
Paraquat	oz	0.24	Intrepid 2F	oz	2.03
Parazone 3SL	oz	0.24	Intruder 70WSP	oz	9.05
Permit	oz	22.46	Karate Z	oz	2.74
Permit Plus	oz	21.02	Lambda	oz	1.09
Prefix	pt	6.53	Lannate LV	pt	10.99
Provisia	oz	0.78	Macho	oz	0.64
Prowl 3.3 EC	pt	6.09	Malathion 5E	pt	5.50
RealmQ	oz	4.97	Malathion 8E	pt	5.50
RebelEx	oz	2.51	Mustang Max	oz	1.34
Reflex	pt	6.53	Nuprid 4F	oz	1.06
Regiment	oz	44.90	Orthene 90	lb	9.49
Resicore	oz	0.58	Permethrin	oz	0.49
Resource	oz	1.83	Pounce 25WP	lb	14.15
RiceBeaux	pt	5.85	Prevathon	oz	1.32
Riceshot	pt	3.87	Radiant	oz	6.82
Ricestar HT	pt	24.35	Sevin 4F	pt	6.22
Roundup Power Max	oz	0.18	Sevin XLR Plus	qt	13.23
Roundup PowerMax	pt	2.80	Sivanto Prime	oz	2.52
Roundup WeatherMax	oz	0.26	Transform WG	oz	8.18
Roundup WeatherMax	pt	4.17	Warrior II	oz	2.67
Select Max	pt	12.71	IRRIGATION SUPPLIES		
Sequence	pt	5.94	Roll-Out Pipe	ft	0.25
Sharpen	oz	6.45	SEED/PLANTS		
Sinister	pt	15.63			(continued)

Appendix Table 4. Operating inputs: estimated prices, Mississippi, 2019 (continued)

ITEM NAME	UNIT	PRICE	ITEM NAME	UNIT	PRICE
		dollars			dollars
Corn Seed Conv.	thous	2.26	Rice Seed Trt/Insect	lbseed	0.23
Corn Seed BtRR	thous	3.63	Sorghum Concept	lb	2.10
Corn Seed RR2	thous	3.36	Sorghum Concept+ Po	lb	3.96
Cotton Seed B3XF	thous	2.40	Soybean Seed LL	lb	1.42
Cotton Seed GLB2	thous	2.54	Soybean Seed RR2	lb	1.34
Cotton Seed GLTP	thous	2.11	Soybean Seed RR2X	lb	1.55
Cotton Seed W3FE	thous	2.34	SOIL TEST		
CSeed B3XF/W3RE/GLTP	thous	2.28	Soil Test	acre	10.00
Peanut Seed	lb	0.84	SURVEY & MARK LEVEES		
Rice Clearfield	lb	1.06	Survey & Mark Levees	acre	4.50
Rice Clrflld Hyb Trt	lb	5.70			
Rice Conv Hyb Trt	lb	5.70			
Rice Seed CF(Levees)	lb	1.06			
Rice Seed CFH(Levee)	lb	1.78			
Rice Seed Conv.	lb	0.28			
Rice Seed Cv(Levees)	lb	0.28			
Rice Seed CvH(Levee)	lb	1.66			
Rice Seed Provisia	lb	1.15			

Appendix Table 5. Estimated fuel prices
and interest rates, Mississippi, 2019

ITEM NAME	UNIT	PRICE
		dollars
FUEL TYPES		
Diesel Fuel	gal	2.60
Gasoline	gal	2.50
INTEREST RATES		
Short-term	%	6.00
Intermediate-term	%	6.50

Appendix Table 6. Labor types, wage rates and unallocated labor
Multipliers for crop enterprises, Mississippi, 2019

Item name	Unit	Wage Rate
OPERATOR LABOR	hour	14.23
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, 2019

Crop	unit	Futures Contract Month	Futures Contract Price ^a	Basis ^b	Forward Contract Price ^c	Loan Rate ^d	Budget Price ^e
Corn	bu	Dec '19	4.00	-0.20	3.80	2.10	3.80
Cotton Lint	lb	Dec '19	0.7572	-0.0158	0.7414	0.52	0.7414
Cottonseed	lb						0.10 ^f
Grain Sorghum	bu				3.61	2.02	3.61
Peanuts	ton				385.00	355.00	385.00
Soybeans	bu	Nov '19	9.29	+0.01	9.30	5.21	9.30
Rice	bu	Nov '19	4.98	-0.38	4.60	2.96	4.60
Wheat	bu	Jul '19	5.52	-0.15	5.37	2.76	5.37

^a Average of the daily closing futures contract prices during the first 5 trading days in October 2018 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 2018 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 2018 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 2008-2017.

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, 2019

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				0.34	13.82	61.18
Well & Pump, 1/4 CP	each			3.50				0.09	3.59	11.96
Engine, 1/4 CP, 65	each									11.29
June Irr. 3app@.75"	ac-in		8.74	1.40				0.25	10.39	10.39
July Irr. 4app@.75"	ac-in		11.65	1.87				0.27	13.79	13.79
Aug Irr. 3app@.75"	ac-in		8.74	1.40				0.15	10.29	10.29
TOTALS			0.00	29.13	21.65	1.84	0.00	1.14	53.76	84.43

Note: Cost of production estimates are based on 2018 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, 2019

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----						FIXED COST	TOTAL COST	
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER			
-----dollars-----										
Land Plane	50'x16'		0.96	0.32	0.51		0.11	1.90	1.75	3.65
Set Up Engine										
IRRIGATE LABOR	hour				0.23		0.01	0.24		0.24
Ditcher (1m/160a)			0.21	0.06	0.13		0.01	0.41	0.33	0.74
Roll-Out Pipe	ft	8.25					0.16	8.41		8.41
Lay Roll-out Pipe										
Pipe Spool 160ac	1/4m roll		0.28	0.09	0.40		0.02	0.79	0.72	1.51
IRRIGATE LABOR	hour				1.81		0.04	1.85		1.85
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		0.43	0.13	0.59		0.01	1.16	1.07	2.23
Land Forming (\$450)	each								36.89	36.89
Well & Pump, Furrow	each			2.96			0.06	3.02	10.09	13.11
Main Line Pipe	each								4.99	4.99
Engine, RPF, Corn	each								9.53	9.53
1st June Irrigation	ac-in		6.88	0.98			0.16	8.02		8.02
2nd June Irrigation	ac-in		6.88	0.98			0.16	8.02		8.02
3rd June Irrigation	ac-in		6.88	0.98			0.16	8.02		8.02
July Irrigation	ac-in		6.88	0.98			0.12	7.98		7.98
TOTALS		8.25	29.40	7.48	4.59	0.00	1.02	50.74	65.37	116.11

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

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