CORN, GRAIN SORGHUM &WHEAT 2020 PLANNING BUDGETS

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

October 2019

Foreword

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

Acknowledgments

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

Special appreciation is expressed to producers who provided information on crop practices used. Appreciation also is expressed to farm supply dealers, equipment dealers, custom operators, and chemical companies who provided prices for crop production inputs. The Mississippi Agricultural Statistics Service is commended for its excellence in collecting price and production practice data.

Acknowledgment is made to the Mississippi State University Extension Service, the Mississippi Agricultural and Forestry Experiment Station, and the United States Agricultural Research Service staffs for the excellent cooperation that made this report possible.

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Budgets for Agricultural Enterprises

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

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

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

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

Methods and Procedures

Production Practices

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

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

Machinery

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

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

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

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

Estimates of Direct Costs

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

$$RPH = \frac{RLC \; x \; RP}{THL}$$

$$RPA = RPH \; x \; PR$$

where:

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

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

The labor wage rate per hour includes social security, accident and unemployment insurance, and some perquisites (11). Labor costs are estimated for four labor categories: operator labor, hand labor, irrigation labor, and unallocated labor. Operator labor and hand labor represent estimates of labor required to perform the in-field tasks. Operator labor is that labor required to operate all power-driven equipment. Irrigation labor is used to perform tasks associated with an irrigation system. Unallocated labor is an estimate of labor that is not used directly in producing the enterprise. Its cost is estimated as a percentage of operator labor (11). The percentages used for the various crop enterprises are listed in Appendix Table 6.

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

Estimates of Fixed Costs

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

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

where:

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

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

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 2019 crop year. Government payments for commodities are not included in the budgets except to the extent that they are included in loan rates.

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

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

Irrigation Costs

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

Net Returns

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

Enterprise Budgets

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

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

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

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

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.86	220.0000	849.20	_____
TOTAL INCOME				849.20	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	8.10	1.0000	8.10	_____
FERTILIZERS	acre	198.72	1.0000	198.72	_____
HERBICIDES	acre	51.97	1.0000	51.97	_____
INSECTICIDES	acre	1.05	1.0000	1.05	_____
IRRIGATION SUPPLIES	acre	7.92	1.0000	7.92	_____
SEED/PLANTS	acre	119.00	1.0000	119.00	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	50.60	1.0000	50.60	_____
CUSTOM LIME	acre	28.64	1.0000	28.64	_____
CROP CONSULTANT	acre	6.00	1.0000	6.00	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1354	1.22	_____
IRRIGATE LABOR	hour	9.06	0.3875	3.53	_____
OPERATOR LABOR	hour	15.22	0.5252	8.01	_____
UNALLOCATED LABOR	hour	15.24	0.4020	6.13	_____
DIESEL FUEL	gal	2.30	17.0094	39.11	_____
REPAIR & MAINTENANCE	acre	22.02	1.0000	22.02	_____
INTEREST ON OP. CAP.	acre	16.38	1.0000	16.38	_____
TOTAL DIRECT EXPENSES				579.23	_____
RETURNS ABOVE DIRECT EXPENSES				269.97	_____
TOTAL FIXED EXPENSES				111.50	_____
TOTAL SPECIFIED EXPENSES				690.73	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				158.47	_____

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

TOTAL DIRECT EXPENSES				461.82	_____
FIXED EXPENSES					
Implements	acre	12.73	1.0000	12.73	_____
Tractors	acre	16.69	1.0000	16.69	_____
Harvesters	acre	15.71	1.0000	15.71	_____

TOTAL FIXED EXPENSES				45.13	_____

TOTAL SPECIFIED EXPENSES				506.95	_____

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

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

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.86	170.0000	656.20	
TOTAL INCOME				656.20	
DIRECT EXPENSES					
CUSTOM SPRAY	acre	8.10	1.0000	8.10	
FERTILIZERS	acre	163.77	1.0000	163.77	
HERBICIDES	acre	51.97	1.0000	51.97	
INSECTICIDES	acre	1.05	1.0000	1.05	
SEED/PLANTS	acre	98.00	1.0000	98.00	
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	
HAULING	acre	39.10	1.0000	39.10	
CUSTOM LIME	acre	28.64	1.0000	28.64	
CROP CONSULTANT	acre	6.00	1.0000	6.00	
SOIL TEST	acre	3.33	1.0000	3.33	
HAND LABOR	hour	9.06	0.1354	1.22	
OPERATOR LABOR	hour	15.22	0.4466	6.81	
UNALLOCATED LABOR	hour	15.24	0.4020	6.13	
DIESEL FUEL	gal	2.30	5.3810	12.37	
REPAIR & MAINTENANCE	acre	14.19	1.0000	14.19	
INTEREST ON OP. CAP.	acre	13.64	1.0000	13.64	
TOTAL DIRECT EXPENSES				461.82	
RETURNS ABOVE DIRECT EXPENSES				194.38	
TOTAL FIXED EXPENSES				45.13	
TOTAL SPECIFIED EXPENSES				506.95	
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				149.25	

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

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

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	INPUT AMOUNT	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 2019 input pricesNote: Cost of production estimates are based on 2018 input prices.

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

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

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

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

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

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

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

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

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

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

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

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

TOTAL DIRECT EXPENSES				595.44	
FIXED EXPENSES					
Implements	acre	19.07	1.0000	19.07	
Tractors	acre	32.99	1.0000	32.99	
Harvesters	acre	15.71	1.0000	15.71	
Self-Propelled	acre	1.44	1.0000	1.44	
Roll-Out Pipe Irr.	acre	60.69	1.0000	60.69	

TOTAL FIXED EXPENSES				129.90	

TOTAL SPECIFIED EXPENSES				725.34	

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

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

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.86	220.0000	849.20	_____
TOTAL INCOME				849.20	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	13.60	1.0000	13.60	_____
FERTILIZERS	acre	181.14	1.0000	181.14	_____
HERBICIDES	acre	51.97	1.0000	51.97	_____
INSECTICIDES	acre	9.65	1.0000	9.65	_____
IRRIGATION SUPPLIES	acre	7.92	1.0000	7.92	_____
SEED/PLANTS	acre	119.00	1.0000	119.00	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	50.60	1.0000	50.60	_____
CUSTOM LIME	acre	28.64	1.0000	28.64	_____
CROP CONSULTANT	acre	6.00	1.0000	6.00	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1263	1.14	_____
IRRIGATE LABOR	hour	9.06	0.3875	3.53	_____
OPERATOR LABOR	hour	15.22	0.8212	12.53	_____
UNALLOCATED LABOR	hour	15.22	0.6684	10.18	_____
DIESEL FUEL	gal	2.30	20.0802	46.18	_____
REPAIR & MAINTENANCE	acre	25.58	1.0000	25.58	_____
INTEREST ON OP. CAP.	acre	16.95	1.0000	16.95	_____
TOTAL DIRECT EXPENSES				595.44	_____
RETURNS ABOVE DIRECT EXPENSES				253.76	_____
TOTAL FIXED EXPENSES				129.90	_____
TOTAL SPECIFIED EXPENSES				725.34	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				123.86	_____

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

TOTAL DIRECT EXPENSES				474.28	_____
FIXED EXPENSES					
Implements	acre	14.53	1.0000	14.53	_____
Tractors	acre	27.47	1.0000	27.47	_____
Harvesters	acre	15.71	1.0000	15.71	_____
Self-Propelled	acre	1.44	1.0000	1.44	_____

TOTAL FIXED EXPENSES				59.15	_____

TOTAL SPECIFIED EXPENSES				533.43	_____

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

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

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.86	170.0000	656.20	_____
TOTAL INCOME				656.20	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	13.60	1.0000	13.60	_____
FERTILIZERS	acre	146.19	1.0000	146.19	_____
HERBICIDES	acre	51.97	1.0000	51.97	_____
INSECTICIDES	acre	9.65	1.0000	9.65	_____
SEED/PLANTS	acre	98.00	1.0000	98.00	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	39.10	1.0000	39.10	_____
CUSTOM LIME	acre	28.64	1.0000	28.64	_____
CROP CONSULTANT	acre	6.00	1.0000	6.00	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1263	1.14	_____
OPERATOR LABOR	hour	15.22	0.6876	10.49	_____
UNALLOCATED LABOR	hour	15.23	0.6188	9.43	_____
DIESEL FUEL	gal	2.30	8.1261	18.68	_____
REPAIR & MAINTENANCE	acre	16.46	1.0000	16.46	_____
INTEREST ON OP. CAP.	acre	14.10	1.0000	14.10	_____
TOTAL DIRECT EXPENSES				474.28	_____
RETURNS ABOVE DIRECT EXPENSES				181.92	_____
TOTAL FIXED EXPENSES				59.15	_____
TOTAL SPECIFIED EXPENSES				533.43	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				122.77	_____

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

TOTAL DIRECT EXPENSES				463.22	
FIXED EXPENSES					
Implements	acre	14.83	1.0000	14.83	
Tractors	acre	15.90	1.0000	15.90	
Harvesters	acre	19.87	1.0000	19.87	
Self-Propelled	acre	1.44	1.0000	1.44	

TOTAL FIXED EXPENSES				52.04	

TOTAL SPECIFIED EXPENSES				515.26	

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

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

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.86	170.0000	656.20	_____
TOTAL INCOME				656.20	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	13.60	1.0000	13.60	_____
FERTILIZERS	acre	141.78	1.0000	141.78	_____
HERBICIDES	acre	51.97	1.0000	51.97	_____
INSECTICIDES	acre	9.65	1.0000	9.65	_____
SEED/PLANTS	acre	98.00	1.0000	98.00	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	39.10	1.0000	39.10	_____
CUSTOM LIME	acre	28.64	1.0000	28.64	_____
CROP CONSULTANT	acre	6.00	1.0000	6.00	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1530	1.39	_____
OPERATOR LABOR	hour	15.22	0.6277	9.57	_____
UNALLOCATED LABOR	hour	15.22	0.5649	8.60	_____
DIESEL FUEL	gal	2.30	6.1215	14.09	_____
REPAIR & MAINTENANCE	acre	16.35	1.0000	16.35	_____
INTEREST ON OP. CAP.	acre	13.65	1.0000	13.65	_____
TOTAL DIRECT EXPENSES				463.22	_____
RETURNS ABOVE DIRECT EXPENSES				192.98	_____
TOTAL FIXED EXPENSES				52.04	_____
TOTAL SPECIFIED EXPENSES				515.26	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				140.94	_____

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

TOTAL DIRECT EXPENSES				453.98	_____
FIXED EXPENSES					
Implements	acre	11.94	1.0000	11.94	_____
Tractors	acre	13.74	1.0000	13.74	_____
Harvesters	acre	19.87	1.0000	19.87	_____

TOTAL FIXED EXPENSES				45.55	_____

TOTAL SPECIFIED EXPENSES				499.53	_____

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

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

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.86	170.0000	656.20	_____
TOTAL INCOME				656.20	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	12.50	1.0000	12.50	_____
FERTILIZERS	acre	151.97	1.0000	151.97	_____
HERBICIDES	acre	51.97	1.0000	51.97	_____
INSECTICIDES	acre	5.25	1.0000	5.25	_____
SEED/PLANTS	acre	98.00	1.0000	98.00	_____
HAULING	acre	39.10	1.0000	39.10	_____
CUSTOM LIME	acre	28.64	1.0000	28.64	_____
CROP CONSULTANT	acre	6.00	1.0000	6.00	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.2283	2.06	_____
OPERATOR LABOR	hour	15.22	0.5442	8.28	_____
UNALLOCATED LABOR	hour	15.25	0.4898	7.47	_____
DIESEL FUEL	gal	2.30	5.3869	12.40	_____
REPAIR & MAINTENANCE	acre	14.91	1.0000	14.91	_____
INTEREST ON OP. CAP.	acre	12.10	1.0000	12.10	_____
TOTAL DIRECT EXPENSES				453.98	_____
RETURNS ABOVE DIRECT EXPENSES				202.22	_____
TOTAL FIXED EXPENSES				45.55	_____
TOTAL SPECIFIED EXPENSES				499.53	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				156.67	_____

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

TOTAL DIRECT EXPENSES				347.08	
FIXED EXPENSES					
Implements	acre	11.11	1.0000	11.11	
Tractors	acre	10.29	1.0000	10.29	
Harvesters	acre	15.90	1.0000	15.90	
Self-Propelled	acre	7.20	1.0000	7.20	

TOTAL FIXED EXPENSES				44.50	

TOTAL SPECIFIED EXPENSES				391.58	

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

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

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Grain Sorghum	bu	3.67	100.0000	367.00	
TOTAL INCOME				367.00	
DIRECT EXPENSES					
CUSTOM SPRAY	acre	7.00	1.0000	7.00	
FERTILIZERS	acre	104.26	1.0000	104.26	
HERBICIDES	acre	66.83	1.0000	66.83	
INSECTICIDES	acre	39.72	1.0000	39.72	
SEED/PLANTS	acre	17.73	1.0000	17.73	
ADJUVANTS	acre	1.59	1.0000	1.59	
HAULING	acre	25.00	1.0000	25.00	
CUSTOM LIME	acre	28.64	1.0000	28.64	
CROP CONSULTANT	acre	6.00	1.0000	6.00	
SOIL TEST	acre	3.33	1.0000	3.33	
HAND LABOR	hour	9.06	0.1772	1.61	
OPERATOR LABOR	hour	15.22	0.4803	7.32	
UNALLOCATED LABOR	hour	15.22	0.4322	6.58	
DIESEL FUEL	gal	2.30	4.9745	11.45	
REPAIR & MAINTENANCE	acre	11.49	1.0000	11.49	
INTEREST ON OP. CAP.	acre	8.53	1.0000	8.53	
TOTAL DIRECT EXPENSES				347.08	
RETURNS ABOVE DIRECT EXPENSES				19.92	
TOTAL FIXED EXPENSES				44.50	
TOTAL SPECIFIED EXPENSES				391.58	
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				-24.58	

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

TOTAL DIRECT EXPENSES				343.91	_____
FIXED EXPENSES					
Implements	acre	9.08	1.0000	9.08	_____
Tractors	acre	8.74	1.0000	8.74	_____
Harvesters	acre	15.90	1.0000	15.90	_____

TOTAL FIXED EXPENSES				33.72	_____

TOTAL SPECIFIED EXPENSES				377.63	_____

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

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

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Wheat	bu	4.24	70.0000	296.80	_____
TOTAL INCOME				296.80	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	19.50	1.0000	19.50	_____
FERTILIZERS	acre	95.44	1.0000	95.44	_____
FUNGICIDES	acre	38.41	1.0000	38.41	_____
HERBICIDES	acre	48.60	1.0000	48.60	_____
INSECTICIDES	acre	3.72	1.0000	3.72	_____
SEED/PLANTS	acre	21.60	1.0000	21.60	_____
CUSTOM FERTILIZE	acre	22.86	1.0000	22.86	_____
HAULING	acre	18.20	1.0000	18.20	_____
CUSTOM LIME	acre	28.64	1.0000	28.64	_____
CROP CONSULTANT	acre	5.50	1.0000	5.50	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1363	1.23	_____
OPERATOR LABOR	hour	15.22	0.3670	5.60	_____
UNALLOCATED LABOR	hour	15.22	0.2936	4.47	_____
DIESEL FUEL	gal	2.30	3.7114	8.55	_____
REPAIR & MAINTENANCE	acre	8.79	1.0000	8.79	_____
INTEREST ON OP. CAP.	acre	9.47	1.0000	9.47	_____
TOTAL DIRECT EXPENSES				343.91	_____
RETURNS ABOVE DIRECT EXPENSES				-47.11	_____
TOTAL FIXED EXPENSES				33.72	_____
TOTAL SPECIFIED EXPENSES				377.63	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				-80.83	_____

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

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

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

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

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

OPERATION/ OPERATING INPUT	SIZE/ UNIT	DIRECT COST							FIXED COST	TOTAL COST
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL		
		dollars								
Soil Test	acre	3.33					0.15	3.48		3.48
Lime (Spread)	ton	28.64					1.25	29.89		29.89
Disk Harrow	24'		1.65	1.41	2.25		0.23	5.54	5.02	10.56
Spin Spreader	5 ton		0.85	0.51	1.53		0.13	3.02	2.06	5.08
Phosphorus(46% P2O5)	cwt	18.11					0.79	18.90		18.90
Potash (60% K2O)	cwt	20.63					0.90	21.53		21.53
Field Cultivate Fld	32'		0.94	0.73	1.28		0.13	3.08	3.84	6.92
Grain Drill	20'		1.90	1.85	3.44		0.28	7.47	6.02	13.49
Wheat Seed Private	lb	21.60					0.85	22.45		22.45
CruiserMaxx	oz	18.81					0.74	19.55		19.55
Wheat Consultant	acre	5.50					0.22	5.72		5.72
App by Air (5 gal)	appl	7.00					0.25	7.25		7.25
Axiom	oz	18.40					0.64	19.04		19.04
App by Air (3 gal)	appl	5.50					0.12	5.62		5.62
Karate Z	oz	3.72					0.08	3.80		3.80
Harmony Extra SG	oz	10.36					0.23	10.59		10.59
Axial XL	oz	19.84					0.43	20.27		20.27
App Fert by Air	cwt	11.43					0.25	11.68		11.68
Fert 41-0-0-4	cwt	28.35					0.62	28.97		28.97
App Fert by Air	cwt	11.43					0.20	11.63		11.63
Fert 41-0-0-4	cwt	28.35					0.50	28.85		28.85
App by Air (5 gal)	appl	7.00					0.09	7.09		7.09
Prosaro	oz	19.60					0.26	19.86		19.86
Header Wheat/Sorghum	25' Rigid		3.21	4.29	2.80		0.05	10.35	16.78	27.13
Haul Wheat	bu	18.20					0.08	18.28		18.28
TOTALS		305.80	8.55	8.79	11.30	0.00	9.47	343.91	33.72	377.63

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

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

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

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

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

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

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

APPENDIX

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

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

Notes:
Labor: Includes allocated labor from power unit.
Total Direct: Does not include interest on operating capital.

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

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

Notes:
Labor: includes allocated labor plus any additional labor from self-propelled machine.
Direct: Does not include interest on operating capital.

Appendix Table 3. Implements: estimated purchase price, annual use, useful life, performance rate, and direct and fixed cost per acre, Mississippi, 2020

Item Name	Size	Power Unit	Purchase Price	Annual Use	Useful Life	Perf Rate	Labor	Fuel	R&M Imp.	R&M P.U.	Total Direct	Fixed Imp.	Fixed P.U.	Total Cost
			dollars	hours	years	hr/ac	$/acre							
Bed-Rip/Disk Fold.	8R-38	MFWD 190	48,700	300	20	0.073	1.11	1.64	0.17	0.43	3.36	0.96	2.93	7.26
Bed-Rip/Disk Fold.	12R-30	MFWD 225	67,900	300	20	0.061	0.93	1.64	0.20	0.43	3.22	1.13	2.97	7.32
Bed-Rip/Disk Fold.	12R-38	MFWD 225	67,900	300	20	0.046	0.70	1.23	0.15	0.32	2.41	0.84	2.23	5.49
Bed-Rip/Disk Rigid	4R-30	MFWD 190	21,400	300	20	0.184	2.81	4.15	0.19	1.09	8.26	1.06	7.42	16.76
Bed-Rip/Disk Rigid	4R-38	MFWD 190	21,400	300	20	0.146	2.23	3.30	0.15	0.86	6.55	0.84	5.89	13.30
Bed-Rip/Disk Rigid	6R-30	MFWD 190	29,800	300	20	0.123	1.87	2.77	0.18	0.72	5.55	0.99	4.95	11.50
Bed-Rip/Disk Rigid	6R-38	MFWD 190	39,800	300	20	0.097	1.48	2.18	0.19	0.57	4.43	1.04	3.91	9.39
Bed-Rip/Disk Rigid	8R-30	MFWD 190	39,800	300	20	0.139	2.11	3.12	0.27	0.82	6.33	1.49	5.58	13.42
Bed-Rip/Disk Rigid	8R-38	MFWD 190	29,800	300	20	0.073	1.11	1.64	0.10	0.43	3.29	0.58	2.93	6.82
Bed-Subsoil Fold	8R-38	MFWD 225	48,700	150	12	0.080	1.22	2.15	1.42	0.57	5.37	2.71	3.89	11.98
Bed-Subsoil Fold	8R-38 2x1	MFWD 225	67,900	150	12	0.053	0.81	1.43	1.31	0.38	3.95	2.51	2.59	9.06
Bed-Subsoil Fold	12R-38	MFWD 225	67,900	150	12	0.053	0.81	1.43	1.31	0.38	3.95	2.51	2.59	9.06
Bed-Subsoil Rigid	4R-30	MFWD 225	21,400	150	12	0.204	3.10	5.44	1.57	1.44	11.58	3.01	9.86	24.45
Bed-Subsoil Rigid	4R-38	MFWD 225	21,400	150	12	0.160	2.44	4.28	1.24	1.14	9.11	2.37	7.76	19.25
Bed-Subsoil Rigid	6R-30	MFWD 225	29,800	150	12	0.136	2.07	3.62	1.46	0.96	8.13	2.79	6.57	17.50
Bed-Subsoil Rigid	6R-38	MFWD 225	29,800	150	12	0.107	1.63	2.86	1.15	0.76	6.42	2.20	5.19	13.82
Bed-Subsoil Rigid	8R-30	MFWD 225	39,800	150	12	0.102	1.55	2.72	1.46	0.72	6.46	2.80	4.93	14.20
Bed-Subsoil Rigid	8R-38	MFWD 225	39,800	150	12	0.080	1.22	2.15	1.16	0.57	5.11	2.21	3.89	11.22
Bed/Disk (Hipper)	4R-38	MFWD 150	9,200	160	10	0.147	2.24	2.62	0.33	0.64	5.85	0.97	4.22	11.05
Bed/Disk (Hipper)	6R-38	MFWD 170	15,200	160	10	0.098	1.50	1.98	0.37	0.47	4.34	1.07	3.25	8.67
Bed/Disk (Hipper)	8R-30	MFWD 190	19,500	160	10	0.093	1.42	2.10	0.45	0.55	4.54	1.31	3.76	9.62
Bed/Disk (Hipper)	8R-38 2x1	MFWD 190	37,400	160	10	0.049	0.75	1.10	0.46	0.29	2.61	1.32	1.98	5.92
Bed/Disk (Hipper)	12R-30	MFWD 225	34,500	160	10	0.062	0.95	1.66	0.53	0.44	3.59	1.54	3.01	8.16
Bed/Disk (Hipper)	12R-38	MFWD 225	37,400	160	10	0.049	0.75	1.31	0.46	0.35	2.87	1.32	2.38	6.58
Bed/Disk (Hipper)Fl	8R-38	MFWD 190	27,200	160	10	0.074	1.12	1.66	0.50	0.43	3.73	1.44	2.97	8.16
Bed/Disk (Hipper)Rd	8R-38	MFWD 190	21,000	160	10	0.074	1.12	1.66	0.38	0.43	3.62	1.11	2.97	7.71
Bed/Lister-Roll-Fo	8R-38	MFWD 190	24,300	160	10	0.095	1.45	2.15	0.58	0.56	4.76	1.67	3.85	10.29
Bed/Lister-Roll-Fo	12R-30	MFWD 225	36,175	160	10	0.080	1.23	2.15	0.73	0.57	4.69	2.10	3.90	10.69
Bed/Lister-Roll-Fo	12R-38	MFWD 225	35,700	160	10	0.063	0.97	1.70	0.56	0.45	3.69	1.63	3.08	8.41
Bed/Lister-Roll-Fo	16R-30	MFWD 225	40,400	160	10	0.060	0.92	1.61	0.61	0.43	3.58	1.76	2.92	8.27
Bed/Lister-Roll-Ri	8R-38	MFWD 190	24,300	160	10	0.095	1.45	2.15	0.58	0.56	4.76	1.67	3.85	10.29
Blade-Box	6'-7'	MFWD 105	1,620	200	20	0.020	0.30	0.24	0.01	0.04	0.61	0.01	0.28	0.91
Blade-Box	8'-10'	MFWD 105	3,830	200	20	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blade-Scraper	6'-7'	MFWD 105	1,330	200	20	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blade-Scraper	8'-10'	MFWD 105	4,100	200	20	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boll Buggy	4R-38(250)	MFWD 190	30,500	200	10	0.257	3.92	5.79	1.96	1.52	13.20	4.37	10.36	27.94
Boll Buggy	4R-38(350)	MFWD 190	30,500	200	10	0.257	3.92	5.79	1.96	1.52	13.20	4.37	10.36	27.94
Boll Buggy	4R2x1(350)	MFWD 190	30,500	200	10	0.172	2.62	3.87	1.31	1.01	8.82	2.92	6.92	18.67
Boll Buggy	6R-30(355)	MFWD 190	30,500	200	10	0.218	3.32	4.90	1.66	1.28	11.18	3.70	8.77	23.65
Boll Buggy	6R-38(355)	MFWD 190	30,500	200	10	0.172	2.62	3.87	1.31	1.01	8.82	2.92	6.92	18.67
Chisel Plow-Folding	24'	MFWD 190	42,200	150	12	0.076	1.16	1.71	1.16	0.45	4.49	2.22	3.07	9.79
Chisel Plow-Folding	32'	MFWD 225	54,200	150	12	0.057	0.87	1.53	1.13	0.40	3.95	2.15	2.78	8.90
Chisel Plow-Folding	42'	MFWD 225	65,100	150	12	0.044	0.66	1.17	1.03	0.31	3.18	1.97	2.12	7.28
Chisel Plow-Folding	50'	MFWD 225	85,200	150	12	0.036	0.56	0.98	1.13	0.26	2.94	2.17	1.78	6.90
Chisel Plow-Folding	61'	MFWD 225	97,700	150	12	0.030	0.46	0.80	1.06	0.21	2.55	2.04	1.46	6.05
Chisel Plow-Rigid	10'	MFWD 170	7,790	150	12	0.184	2.81	3.72	0.52	0.89	7.94	0.99	6.09	15.03
Chisel Plow-Rigid	15'	2WD 130	14,700	150	12	0.123	1.87	1.89	0.65	0.42	4.85	1.24	2.76	8.86
Chisel Plow-Rigid	20'	MFWD 225	12,000	150	12	0.102	1.56	2.73	0.44	0.72	5.47	0.84	4.95	11.28
Cultivate	4R-30	2WD 105	14,600	150	10	0.206	3.13	2.56	0.80	0.44	6.95	2.30	2.92	12.18
Cultivate	4R-38	2WD 105	14,200	150	10	0.162	2.47	2.01	0.61	0.31	5.42	1.76	2.06	9.25
Cultivate	6R-30	MFWD 150	18,500	150	10	0.137	2.09	2.44	0.67	0.60	5.81	1.94	3.93	11.69
Cultivate	6R-38	MFWD 150	19,300	150	10	0.108	1.65	1.92	0.55	0.47	4.61	1.60	3.10	9.32
Cultivate	8R-30	MFWD 190	24,200	150	10	0.103	1.56	2.31	0.66	0.60	5.16	1.91	4.14	11.22
Cultivate	8R-38	MFWD 190	27,300	150	10	0.073	1.12	1.65	0.53	0.43	3.74	1.54	2.96	8.25
Cultivate	8R-38 2x1	MFWD 190	39,300	150	10	0.054	0.82	1.22	0.56	0.32	2.93	1.63	2.18	6.75
Cultivate	12R-30	MFWD 225	45,600	150	10	0.068	1.04	1.83	0.83	0.48	4.20	2.40	3.31	9.92
Cultivate	12R-38	MFWD 225	44,600	150	10	0.054	0.82	1.44	0.64	0.38	3.30	1.85	2.62	7.77
Cultivate	16R-30	MFWD 225	58,400	150	10	0.051	0.78	1.37	0.80	0.36	3.32	2.30	2.48	8.12
Cultivate & Post	4R-30	2WD 105	21,900	150	10	0.220	4.34	2.73	1.28	0.42	8.79	3.69	2.80	15.28
Cultivate & Post	4R-38	2WD 105	21,600	150	10	0.173	3.42	2.15	0.99	0.33	6.90	2.86	2.20	11.98
Cultivate & Post	6R-30	MFWD 150	25,900	150	10	0.146	2.89	2.60	1.01	0.64	7.15	2.91	4.19	14.26
Cultivate & Post	6R-38	MFWD 150	26,600	150	10	0.115	2.28	2.05	0.82	0.50	5.67	2.36	3.31	11.34
Cultivate & Post	8R-30	MFWD 190	31,500	150	10	0.110	2.17	2.47	0.92	0.64	6.22	2.65	4.42	13.29
Cultivate & Post	8R-38	MFWD 190	34,700	150	10	0.086	1.71	1.95	0.80	0.51	4.99	2.31	3.49	10.79
Cultivate & Post	8R-38 2x1	MFWD 190	47,900	150	10	0.057	1.14	1.30	0.73	0.34	3.52	2.12	2.32	7.97
Cultivate & Post	12R-30	MFWD 225	52,900	150	10	0.073	1.44	1.95	1.03	0.52	4.95	2.97	3.53	11.46
Cultivate & Post	12R-38	MFWD 225	53,200	150	10	0.057	1.14	1.54	0.82	0.41	3.91	2.36	2.79	9.07
Cultivate & Post	16R-30	MFWD 225	61,700	150	10	0.055	1.08	1.46	0.90	0.39	3.84	2.60	2.65	9.10
Disk & Incorporate	14'	2WD 130	33,200	200	10	0.149	2.95	2.30	1.49	0.51	7.26	2.85	3.36	13.48
Disk & Incorporate	20'	MFWD 190	75,700	200	10	0.092	1.40	2.07	2.09	0.54	6.13	4.02	3.71	13.86
Disk & Incorporate	24'	MFWD 190	51,800	200	10	0.087	1.72	1.96	1.35	0.51	5.56	2.59	3.50	11.66
Disk & Incorporate	28'	MFWD 225	61,200	200	10	0.074	1.47	1.99	1.37	0.53	5.37	2.63	3.61	11.62
Disk & Incorporate	32'	MFWD 225	66,900	200	10	0.065	1.29	1.74	1.31	0.46	4.81	2.51	3.16	10.49
Disk Harrow	14'	2WD 130	25,900	180	10	0.140	2.13	2.15	1.00	0.48	5.78	2.32	3.15	11.26
Disk Harrow	20'	MFWD 190	45,000	180	10	0.098	1.49	2.20	1.22	0.58	5.51	2.82	3.94	12.28
Disk Harrow	24'	MFWD 190	44,400	180	10	0.081	1.24	1.84	1.00	0.48	4.57	2.32	3.28	10.19
Disk Harrow	28'	MFWD 225	53,800	180	10	0.070	1.06	1.86	1.04	0.49	4.48	2.41	3.38	10.27
Disk Harrow	32'	MFWD 225	59,500	180	10	0.061	0.93	1.63	1.01	0.43	4.01	2.33	2.96	9.31

(continued)

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

Item Name	Size	Power Unit	Purchase Price	Annual Use	Useful Life	Perf Rate	Labor	Fuel	---R&M---- Imp.	P.U.	Total Direct	--Fixed--- Imp.	P.U.	Total Cost
			dollars	hours	years	hr/ac	----------$/acre----------							
Disk Harrow	42'	MFWD 225	98,700	180	10	0.046	0.71	1.24	1.28	0.33	3.57	2.94	2.25	8.77
Disk Harrow 40-100hp	14'	2WD 75	16,700	180	10	0.140	2.13	1.24	0.65	0.15	4.18	1.49	1.02	6.71
Disk Heavy	14'	MFWD 150	25,900	180	10	0.145	2.22	2.59	1.05	0.63	6.50	2.41	4.17	13.09
Disk Heavy	20'	MFWD 190	45,000	180	10	0.097	1.48	2.18	1.21	0.57	5.46	2.79	3.91	12.16
Disk Heavy	28'	MFWD 225	53,800	180	10	0.075	1.15	2.01	1.13	0.53	4.83	2.60	3.65	11.08
Disk Ripper	15'	MFWD 225	49,200	180	10	0.136	2.07	3.62	1.86	0.96	8.52	4.28	6.57	19.38
Ditcher		2WD 130	6,100	200	10	0.020	0.30	0.30	0.04	0.06	0.72	0.07	0.44	1.24
Ditcher (1m/160a)		2WD 130	6,100	200	10	0.009	0.14	0.14	0.02	0.03	0.34	0.03	0.21	0.58
Fert Appl (Liquid)	4R-38	MFWD 150	12,900	150	8	0.154	3.05	2.74	1.33	0.67	7.80	1.63	4.42	13.86
Fert Appl (Liquid)	6R-30	MFWD 170	18,500	150	8	0.130	2.58	2.63	1.61	0.63	7.47	1.97	4.31	13.76
Fert Appl (Liquid)	6R-38	MFWD 170	18,500	150	8	0.103	2.04	2.08	1.27	0.50	5.89	1.56	3.40	10.86
Fert Appl (Liquid)	8R-30	MFWD 190	18,400	150	8	0.098	1.93	2.20	1.20	0.58	5.93	1.47	3.94	11.35
Fert Appl (Liquid)	8R-38	MFWD 190	19,000	150	8	0.077	1.53	1.74	0.98	0.45	4.72	1.20	3.12	9.04
Fert Appl (Liquid)	8R-38 2x1	MFWD 190	21,600	150	8	0.051	1.02	1.16	0.74	0.30	3.23	0.91	2.07	6.22
Fert Appl (Liquid)	12R-30	MFWD 225	23,100	150	8	0.078	1.55	2.09	1.20	0.55	5.41	1.48	3.79	10.68
Fert Appl (Liquid)	12R-38	MFWD 225	21,600	150	8	0.051	1.02	1.37	0.74	0.36	3.50	0.91	2.49	6.91
Field Cult & Inc	42'	MFWD 225	67,100	100	10	0.037	0.74	1.00	0.63	0.26	2.65	2.91	1.82	7.39
Field Cult & Inc	50'	MFWD 225	81,500	100	10	0.031	0.62	0.84	0.64	0.22	2.34	2.97	1.53	6.84
Field Cult & Inc Fld	24'	MFWD 170	37,900	100	10	0.066	1.30	1.33	0.62	0.32	3.58	2.88	2.17	8.64
Field Cult & Inc Fld	32'	MFWD 190	51,500	100	10	0.049	0.97	1.11	0.63	0.29	3.02	2.93	1.99	7.95
Field Cult & Inc Rdg	12'	2WD 150	19,600	100	10	0.132	2.61	2.34	0.64	0.44	6.05	2.97	2.91	11.94
Field Cultivate Fld	24'	MFWD 170	30,600	100	10	0.062	0.94	1.25	0.47	0.30	2.97	2.18	2.05	7.21
Field Cultivate Fld	32'	MFWD 190	42,900	100	10	0.046	0.71	1.04	0.50	0.27	2.53	2.30	1.87	6.71
Field Cultivate Fld	42'	MFWD 225	58,400	100	10	0.035	0.54	0.94	0.51	0.25	2.25	2.38	1.71	6.36
Field Cultivate Fld	50'	MFWD 225	67,800	100	10	0.029	0.45	0.79	0.50	0.21	1.96	2.32	1.44	5.73
Field Cultivate Rdg	12'	2WD 150	12,300	100	10	0.124	1.89	2.20	0.38	0.41	4.90	1.75	2.74	9.41
Grain Cart Corn	500 bu	MFWD 190	25,700	200	12	0.025	0.38	0.56	0.17	0.14	1.27	0.33	1.01	2.63
Grain Cart Corn	700 bu	MFWD 190	37,300	200	12	0.025	0.38	0.56	0.25	0.14	1.35	0.48	1.01	2.86
Grain Cart Corn	1000 bu	MFWD 225	54,700	200	12	0.025	0.38	0.67	0.37	0.17	1.61	0.71	1.22	3.54
Grain Cart Rice	500 bu	MFWD 190	25,700	200	12	0.062	0.95	1.40	0.43	0.36	3.16	0.83	2.51	6.50
Grain Cart Rice	700 bu	MFWD 190	37,300	200	12	0.055	0.83	1.23	0.55	0.32	2.95	1.06	2.21	6.22
Grain Cart Rice	1000 bu	MFWD 190	54,700	200	12	0.045	0.69	1.03	0.67	0.27	2.67	1.29	1.84	5.81
Grain Cart Soybean	500 bu	MFWD 190	25,700	200	12	0.025	0.38	0.57	0.17	0.15	1.28	0.33	1.02	2.65
Grain Cart Soybean	700 bu	MFWD 190	37,300	200	12	0.021	0.32	0.47	0.21	0.12	1.14	0.40	0.85	2.40
Grain Cart Soybean	1000 bu	MFWD 190	54,700	200	12	0.021	0.32	0.47	0.31	0.12	1.24	0.60	0.85	2.69
Grain Cart Wht/Sor	500 bu	MFWD 190	25,700	200	12	0.025	0.38	0.57	0.17	0.15	1.28	0.33	1.02	2.65
Grain Cart Wht/Sor	700 bu	MFWD 190	37,300	200	12	0.021	0.32	0.47	0.21	0.12	1.14	0.40	0.85	2.40
Grain Cart Wht/Sor	1000 bu	MFWD 190	54,700	200	12	0.021	0.32	0.47	0.31	0.12	1.24	0.60	0.85	2.69
Grain Drill	10'	2WD 130	28,000	150	8	0.188	4.57	2.90	1.97	0.64	10.10	4.13	4.23	18.48
Grain Drill	12'	2WD 130	27,500	150	8	0.157	3.81	2.41	1.62	0.54	8.39	3.38	3.53	15.31
Grain Drill	15'	MFWD 150	33,100	150	8	0.125	3.05	2.23	1.56	0.54	7.39	3.26	3.59	14.25
Grain Drill	20'	MFWD 170	39,400	150	8	0.094	2.28	1.89	1.39	0.45	6.03	2.91	3.10	12.05
Grain Drill	24'	MFWD 190	65,600	150	8	0.078	1.90	1.76	1.93	0.46	6.07	4.03	3.15	13.26
Grain Drill	30'	MFWD 225	63,800	150	8	0.062	1.52	1.67	1.50	0.44	5.15	3.14	3.03	11.32
Grain Drill	35'	MFWD 225	91,000	150	8	0.053	1.30	1.43	1.83	0.38	4.96	3.84	2.60	11.40
Grain Drill & Pre	10'	2WD 130	35,400	150	8	0.203	4.93	3.12	2.69	0.69	11.45	5.63	4.56	21.64
Grain Drill & Pre	12'	2WD 130	34,800	150	8	0.169	4.10	2.60	2.20	0.58	9.50	4.61	3.80	17.92
Grain Drill & Pre	15'	MFWD 150	40,400	150	8	0.135	3.28	2.40	2.05	0.59	8.33	4.28	3.87	16.49
Grain Drill & Pre	20'	MFWD 170	46,700	150	8	0.101	2.46	2.04	1.77	0.49	6.77	3.71	3.34	13.84
Grain Drill & Pre	24'	MFWD 190	73,000	150	8	0.084	2.05	1.90	2.31	0.49	6.77	4.84	3.40	15.01
Grain Drill & Pre	30'	MFWD 225	71,200	150	8	0.067	1.64	1.80	1.80	0.48	5.73	3.77	3.26	12.77
Grain Drill & Pre	35'	MFWD 225	98,300	150	8	0.058	1.40	1.54	2.13	0.41	5.50	4.47	2.80	12.77
Grain Drill & Pre T	8R-38	MFWD 225	51,900	150	8	0.062	1.52	1.67	1.22	0.44	4.86	2.55	3.03	10.46
Harrow - Folding	24'	MFWD 190	13,700	200	10	0.064	0.98	1.45	0.31	0.38	3.13	0.50	2.60	6.24
Harrow - Folding	30'	MFWD 190	14,800	200	10	0.051	0.78	1.16	0.26	0.30	2.52	0.44	2.08	5.04
Harrow - Folding	40'	MFWD 190	20,200	200	10	0.038	0.59	0.87	0.27	0.22	1.96	0.45	1.56	3.97
Harrow - Folding	48'	MFWD 225	24,900	200	10	0.032	0.49	0.86	0.28	0.22	1.86	0.46	1.56	3.89
Header - Corn	6R-30	265 hp	50,800	300	8	0.170	2.59	5.34	2.16	6.24	16.33	3.53	26.49	46.36
Header - Corn	6R-38	265 hp	51,400	300	8	0.134	2.04	4.21	1.72	4.92	12.91	2.82	20.91	36.65
Header - Corn	8R-30	265 hp	62,000	300	8	0.127	1.94	4.00	1.97	4.68	12.61	3.23	19.86	35.71
Header - Corn	8R-38	325 hp	67,000	300	8	0.100	1.53	3.88	1.69	4.02	11.14	2.76	17.09	30.99
Header - Corn	12R-20	325 hp	102,000	300	8	0.127	1.94	4.91	3.25	5.09	15.20	5.32	21.61	42.15
Header - Corn	12R-30	325 hp	103,000	300	8	0.085	1.29	3.27	2.19	3.39	10.16	3.58	14.41	28.15
Header - Draper (CL)	25' Rigid	265 hp	61,400	300	8	0.203	3.09	6.37	2.85	7.44	19.76	4.88	31.59	56.24
Header - Draper (CL)	30' Rigid	325 hp	71,500	300	8	0.169	2.57	6.51	2.77	6.75	18.61	4.74	28.64	52.00
Header - Draper (CL)	36' Rigid	355 hp	75,800	300	8	0.141	2.14	5.92	2.44	5.80	16.32	4.18	24.62	45.13
Header - Draper (CL)	40' Rigid	425 hp	80,300	300	8	0.126	1.93	6.38	2.33	5.61	16.27	3.99	23.84	44.10
Header - Draper (SL)	25' Rigid	325 hp	61,400	300	8	0.176	2.67	6.77	2.47	7.02	18.94	4.23	29.79	52.97
Header - Draper (SL)	30' Rigid	325 hp	71,500	300	8	0.146	2.23	5.64	2.40	5.85	16.13	4.10	24.82	45.06
Header - Draper (SL)	36' Rigid	355 hp	75,800	300	8	0.122	1.86	5.13	2.12	5.02	14.14	3.63	21.33	39.11
Header - Drapper	40' Rigid	425 hp	80,300	300	8	0.110	1.67	5.53	2.02	4.86	14.10	3.46	20.66	38.22
Header -RiceStrp(CL)	20'	265 hp	50,000	300	8	0.253	3.86	7.96	3.17	9.30	24.30	5.18	39.49	68.98
Header -RiceStrp(CL)	24'	325 hp	55,400	300	8	0.211	3.21	8.13	2.92	8.43	22.72	4.78	35.80	63.32
Header -RiceStrp(CL)	32'	325 hp	60,800	300	8	0.158	2.41	6.10	2.41	6.32	17.26	3.94	26.85	48.05
Header -RiceStrp(SL)	20'	265 hp	50,000	300	8	0.220	3.34	6.90	2.75	8.06	21.06	4.49	34.22	59.78
Header -RiceStrp(SL)	24'	325 hp	55,400	300	8	0.183	2.79	7.05	2.53	7.31	19.69	4.14	31.03	54.88
Header -RiceStrp(SL)	32'	325 hp	60,800	300	8	0.137	2.09	5.29	2.09	5.48	14.95	3.41	23.27	41.65

(continued)

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

Item Name	Size	Power Unit	Purchase Price	Annual Use	Useful Life	Perf Rate	Labor	Fuel	---R&M---- Imp.	P.U.	Total Direct	--Fixed--- Imp.	P.U.	Total Cost
			dollars	hours	years	hr/ac	$/acre							
Header -Soybean	22' Flex	265 hp	33,500	300	8	0.116	1.76	3.64	0.97	4.25	10.63	1.58	18.06	30.29
Header -Soybean	25' Flex	325 hp	35,900	300	8	0.102	1.55	3.93	0.91	4.07	10.47	1.49	17.29	29.27
Header -Soybean	30' Flex	325 hp	42,400	300	8	0.085	1.29	3.27	0.90	3.39	8.87	1.47	14.41	24.75
Header -Soybean	35' Flex	355 hp	48,700	300	8	0.072	1.11	3.06	0.88	3.00	8.06	1.45	12.74	22.26
Header Wheat/Sorghum	22' Rigid	265 hp	19,800	300	8	0.116	1.76	3.64	0.57	4.25	10.24	0.93	18.06	29.24
Header Wheat/Sorghum	25' Rigid	325 hp	21,000	300	8	0.102	1.55	3.93	0.53	4.07	10.09	0.87	17.29	28.27
Header Wheat/Sorghum	30' Rigid	325 hp	25,700	300	8	0.085	1.29	3.27	0.54	3.39	8.51	0.89	14.41	23.82
Land Plane	50'x16'	MFWD 190	10,800	200	10	0.151	2.30	3.41	0.32	0.89	6.94	0.94	6.09	13.97
Levee Pull & Seed	8 Blade	MFWD 170	9,000	100	10	0.003	0.05	0.07	0.00	0.01	0.14	0.03	0.11	0.30
Levee Pull (1m/80a)	8 blade	MFWD 170	8,160	100	10	0.003	0.05	0.07	0.00	0.01	0.14	0.03	0.11	0.30
Levee Splitter (1/80	32"	MFWD 150	8,160	100	10	0.004	0.06	0.07	0.00	0.01	0.16	0.03	0.11	0.32
Module Builder	4R-38(250)	MFWD 190	34,700	200	10	0.257	6.25	5.79	2.23	1.52	15.81	4.97	10.36	31.15
Module Builder	4R-38(350)	MFWD 190	34,700	200	10	0.257	6.25	5.79	2.23	1.52	15.81	4.97	10.36	31.15
Module Builder	4R2x1(350)	MFWD 190	34,700	200	10	0.172	4.18	3.87	1.49	1.01	10.57	3.32	6.92	20.82
Module Builder	6R-30(355)	MFWD 190	34,700	200	10	0.218	5.29	4.90	1.89	1.28	13.39	4.21	8.77	26.37
Module Builder	6R-38(355)	MFWD 190	34,700	200	10	0.172	4.18	3.87	1.49	1.01	10.57	3.32	6.92	20.82
NT Grain Drill	10'	2WD 130	34,100	150	8	0.235	5.72	3.62	3.01	0.81	13.17	6.30	5.29	24.77
NT Grain Drill	12'	2WD 130	46,100	150	8	0.163	3.97	2.51	2.82	0.56	9.88	5.91	3.67	19.47
NT Grain Drill	15'	MFWD 150	55,500	150	8	0.130	3.17	2.32	2.72	0.57	8.80	5.69	3.74	18.24
NT Grain Drill	20'	MFWD 170	65,100	150	8	0.098	2.38	1.97	2.39	0.47	7.23	5.01	3.23	15.48
NT Grain Drill	24'	MFWD 190	90,400	150	8	0.081	1.98	1.84	2.77	0.48	7.08	5.79	3.28	16.17
NT Grain Drill	30'	MFWD 225	103,000	150	8	0.065	1.58	1.74	2.52	0.46	6.32	5.28	3.16	14.77
NT Grain Drill & Pre	10'	2WD 130	41,500	150	8	0.211	5.13	3.25	3.29	0.72	12.41	6.88	4.75	24.04
NT Grain Drill & Pre	12'	2WD 130	53,400	150	8	0.176	4.28	2.71	3.53	0.60	11.12	7.37	3.96	22.46
NT Grain Drill & Pre	15'	MFWD 150	62,900	150	8	0.141	3.42	2.50	3.32	0.61	9.87	6.95	4.03	20.85
NT Grain Drill & Pre	20'	MFWD 170	72,500	150	8	0.105	2.56	2.12	2.87	0.51	8.08	6.01	3.48	17.58
NT Grain Drill & Pre	24'	MFWD 190	97,800	150	8	0.088	2.14	1.98	3.23	0.52	7.87	6.75	3.54	18.17
NT Grain Drill & Pre	30'	MFWD 225	110,700	150	8	0.070	1.71	1.87	2.92	0.50	7.01	6.11	3.40	16.53
NT Plant&Pre-Folding	8R-38	MFWD 170	67,100	150	8	0.083	2.03	1.68	2.10	0.40	6.22	4.39	2.75	13.37
NT Plant&Pre-Folding	8R-38 2x1	MFWD 170	99,600	150	8	0.055	1.35	1.12	2.07	0.26	4.82	4.34	1.83	11.00
NT Plant&Pre-Folding	12R-20	MFWD 190	83,300	150	8	0.105	2.56	2.37	3.30	0.62	8.87	6.90	4.25	20.03
NT Plant&Pre-Folding	12R-30	MFWD 190	89,600	150	8	0.070	1.71	1.58	2.36	0.41	6.08	4.95	2.83	13.86
NT Plant&Pre-Folding	12R-38	MFWD 190	99,600	150	8	0.055	1.35	1.25	2.07	0.32	5.01	4.34	2.23	11.59
NT Plant&Pre-Folding	16R-30	MFWD 190	129,000	150	8	0.052	1.28	1.18	2.55	0.31	5.34	5.34	2.12	12.81
NT Plant&Pre-Folding	23R-15	MFWD 190	163,000	150	8	0.073	1.78	1.65	4.48	0.43	8.35	9.38	2.95	20.69
NT Plant&Pre-Folding	24R-20	MFWD 190	182,000	150	8	0.052	1.28	1.18	3.60	0.31	6.39	7.54	2.12	16.06
NT Plant&Pre-Folding	24R-30	MFWD 190	208,000	150	8	0.035	0.85	0.79	2.75	0.20	4.60	5.74	1.41	11.77
NT Plant&Pre-Folding	31R-15	MFWD 225	194,000	150	8	0.054	1.32	1.45	3.97	0.38	7.14	8.31	2.63	18.09
NT Plant&Pre-Folding	32R-15	MFWD 225	210,000	150	8	0.052	1.28	1.40	4.16	0.37	7.23	8.70	2.55	18.48
NT Plant&Pre-Rigid	4R-30	2WD 130	34,600	150	8	0.211	5.13	3.25	2.74	0.72	11.86	5.73	4.75	22.35
NT Plant&Pre-Rigid	4R-38	2WD 130	35,600	150	8	0.166	4.04	2.56	2.22	0.57	9.40	4.64	3.74	17.79
NT Plant&Pre-Rigid	6R-30	MFWD 150	43,700	150	8	0.141	3.42	2.50	2.31	0.61	8.85	4.83	4.03	17.72
NT Plant&Pre-Rigid	6R-38	MFWD 150	42,900	150	8	0.111	2.70	1.97	1.79	0.48	6.95	3.74	3.18	13.88
NT Plant&Pre-Rigid	8R-30	MFWD 170	54,300	150	8	0.105	2.56	2.12	2.15	0.51	7.36	4.50	3.48	15.35
NT Plant&Pre-Rigid	8R-38	MFWD 170	51,700	150	8	0.083	2.03	1.68	1.62	0.40	5.73	3.38	2.75	11.88
NT Plant&Pre-Rigid	11R-15	MFWD 170	63,600	150	8	0.143	3.49	2.89	3.43	0.69	10.51	7.17	4.74	22.43
NT Plant&Pre-Rigid	11R-20	MFWD 170	62,900	150	8	0.115	2.80	2.32	2.72	0.55	8.41	5.69	3.80	17.92
NT Plant&Pre-Rigid	12R-20	MFWD 190	65,900	150	8	0.105	2.56	2.37	2.61	0.62	8.18	5.46	4.25	17.90
NT Plant&Pre-Rigid	12R-30	MFWD 190	79,300	150	8	0.070	1.71	1.58	2.09	0.41	5.81	4.38	2.83	13.02
NT Plant&Pre-Rigid	15R-15	MFWD 190	80,900	150	8	0.113	2.74	2.54	3.43	0.66	9.39	7.17	4.54	21.11
NT Plant&Pre-TwinRow	12R-30/40	MFWD 225	154,000	150	8	0.055	1.35	1.48	3.21	0.39	6.44	6.71	2.68	15.85
NT Plant&Pre-TwinRow	8R-30/40	MFWD 225	123,000	150	8	0.083	2.03	2.22	3.85	0.59	8.70	8.06	4.03	20.80
NT Plant-Folding	8R-38	MFWD 170	59,700	150	8	0.077	1.88	1.56	1.73	0.37	5.56	3.63	2.55	11.75
NT Plant-Folding	8R-38 2x1	MFWD 170	91,000	150	8	0.051	1.25	1.04	1.76	0.25	4.30	3.68	1.70	9.70
NT Plant-Folding	12R-20	MFWD 190	75,900	150	8	0.098	2.38	2.20	2.79	0.58	7.96	5.84	3.94	17.75
NT Plant-Folding	12R-30	MFWD 190	81,000	150	8	0.065	1.58	1.47	1.98	0.38	5.43	4.15	2.63	12.22
NT Plant-Folding	12R-38	MFWD 190	91,000	150	8	0.051	1.25	1.16	1.76	0.30	4.48	3.68	2.07	10.25
NT Plant-Folding	16R-30	MFWD 190	120,000	150	8	0.049	1.19	1.10	2.20	0.29	4.79	4.61	1.97	11.38
NT Plant-Folding	23R-15	MFWD 190	155,000	150	8	0.068	1.65	1.53	3.96	0.40	7.55	8.28	2.74	18.58
NT Plant-Folding	24R-20	MFWD 190	174,000	150	8	0.049	1.19	1.10	3.20	0.29	5.79	6.69	1.97	14.46
NT Plant-Folding	24R-30	MFWD 190	194,000	150	8	0.032	0.79	0.73	2.38	0.19	4.10	4.97	1.31	10.40
NT Plant-Folding	31R-15	MFWD 225	185,000	150	8	0.050	1.23	1.35	3.52	0.36	6.46	7.36	2.45	16.27
NT Plant-Folding	32R-15	MFWD 225	201,000	150	8	0.049	1.19	1.30	3.70	0.34	6.55	7.73	2.37	16.65
NT Plant-Rigid	4R-30	2WD 130	27,200	150	8	0.196	4.76	3.02	2.00	0.67	10.47	4.18	4.41	19.07
NT Plant-Rigid	4R-38	2WD 130	28,200	150	8	0.154	3.75	2.38	1.63	0.53	8.30	3.41	3.47	15.19
NT Plant-Rigid	6R-30	MFWD 150	36,300	150	8	0.130	3.17	2.32	1.78	0.57	7.86	3.72	3.74	15.33
NT Plant-Rigid	6R-38	MFWD 150	35,600	150	8	0.103	2.51	1.83	1.38	0.45	6.17	2.88	2.95	12.01
NT Plant-Rigid	8R-30	MFWD 170	46,900	150	8	0.098	2.38	1.97	1.72	0.47	6.56	3.61	3.23	13.41
NT Plant-Rigid	8R-38	MFWD 170	44,300	150	8	0.077	1.88	1.56	1.28	0.37	5.11	2.69	2.55	10.36
NT Plant-Rigid	11R-15	MFWD 170	56,200	150	8	0.133	3.24	2.68	2.81	0.64	9.39	5.88	4.40	19.68
NT Plant-Rigid	11R-20	MFWD 170	55,500	150	8	0.107	2.60	2.16	2.23	0.51	7.52	4.66	3.53	15.72
NT Plant-Rigid	12R-20	MFWD 190	58,600	150	8	0.098	2.38	2.20	2.15	0.58	7.33	4.51	3.94	15.78
NT Plant-Rigid	12R-30	MFWD 190	70,700	150	8	0.065	1.58	1.47	1.73	0.38	5.18	3.62	2.63	11.44
NT Plant-Rigid	15R-15	MFWD 190	72,300	150	8	0.105	2.55	2.36	2.84	0.62	8.38	5.95	4.22	18.55
NT Plant-TwinRow	12R-30/40	MFWD 225	145,000	150	8	0.051	1.25	1.37	2.81	0.36	5.80	5.87	2.49	14.17
NT Plant-TwinRow	8R-30/40	MFWD 225	115,000	150	8	0.077	1.88	2.06	3.34	0.55	7.85	6.99	3.74	18.59
Peanut Cond.& Lifter	6-Row	MFWD 190	14,400	300	20	0.100	1.52	2.24	0.24	0.59	4.60	0.40	4.01	9.02
Peanut Conditioner	6-Row	MFWD 190	16,900	300	20	0.100	1.52	2.24	0.33	0.59	4.69	0.42	4.01	9.14
Peanut Dig/Invertor	4R-30	MFWD 190	32,500	300	15	0.235	3.58	5.30	1.90	1.39	12.19	2.51	9.47	24.18
Peanut Dig/Invertor	4R-38	MFWD 190	32,500	300	15	0.186	2.83	4.18	1.50	1.09	9.62	1.98	7.48	19.09

(continued)

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

Item Name	Size	Power Unit	Purchase Price	Annual Use	Useful Life	Perf Rate	Labor	Fuel	---R&M---- Imp.	P.U.	Total Direct	--Fixed--- Imp.	P.U.	Total Cost
			dollars	hours	years	hr/ac	$/acre							
Peanut Dig/Invertor	6R-38	MFWD 190	46,500	300	15	0.124	1.88	2.79	1.01	0.73	6.42	1.89	4.98	13.30
Peanut Dump Cart	6-Row	MFWD 190	52,400	300	20	0.310	4.71	6.97	0.94	1.83	14.46	4.38	12.45	31.31
Peanut Harvester	4R-30	MFWD 225	150,000	300	20	0.849	12.93	22.64	7.22	6.02	48.83	32.18	41.02	122.04
Peanut Harvester	4R-38	MFWD 225	150,000	300	20	0.934	14.22	24.89	7.94	6.62	53.69	36.62	45.11	135.42
Peanut Harvester	6R-38	MFWD 225	165,000	300	20	0.625	9.51	16.64	4.98	4.43	35.57	26.94	30.16	92.68
Peanut Lifter	6-Row	MFWD 225	7,160	300	20	0.100	1.52	2.66	0.14	0.70	5.04	0.18	4.82	10.05
Peanut Plt&Pre Fold.	12R-38	MFWD 190	88,900	150	8	0.080	1.95	1.80	2.68	0.47	6.91	5.60	3.23	15.75
Peanut Plt&Pre Rigid	8R-30	MFWD 190	47,100	150	8	0.152	3.70	3.43	2.69	0.90	10.74	5.64	6.14	22.52
Peanut Plt&Pre Rigid	8R-38	MFWD 190	44,600	150	8	0.120	2.93	2.71	2.01	0.71	8.38	4.22	4.85	17.45
Peanut Plt&Pre Twin	8R-30/40	MFWD 190	114,000	150	8	0.120	2.93	2.71	5.16	0.71	11.52	10.79	4.85	27.17
Pipe Spool 160ac	1/4m roll	2WD 130	5,400	15	12	0.003	0.10	0.04	0.00	0.01	0.17	0.11	0.07	0.35
Pipe Trailer 1m/160a	30'	2WD 130	2,700	100	15	0.003	0.19	0.05	0.00	0.01	0.26	0.00	0.08	0.35
Plant & Pre-Folding	8R-38	MFWD 170	59,900	150	8	0.080	1.94	1.61	1.80	0.38	5.75	3.76	2.64	12.17
Plant & Pre-Folding	8R-38 2x1	MFWD 170	88,900	150	8	0.053	1.29	1.07	1.78	0.25	4.41	3.72	1.76	9.89
Plant & Pre-Folding	12R-20	MFWD 190	72,600	150	8	0.101	2.46	2.28	2.76	0.59	8.11	5.77	4.08	17.97
Plant & Pre-Folding	12R-30	MFWD 190	78,900	150	8	0.067	1.64	1.52	2.00	0.39	5.56	4.18	2.72	12.47
Plant & Pre-Folding	12R-38	MFWD 190	88,900	150	8	0.053	1.29	1.20	1.78	0.31	4.59	3.72	2.14	10.46
Plant & Pre-Folding	16R-30	MFWD 190	115,000	150	8	0.050	1.23	1.14	2.18	0.29	4.86	4.57	2.04	11.48
Plant & Pre-Folding	23R-15	MFWD 190	143,000	150	8	0.070	1.71	1.58	3.78	0.41	7.49	7.90	2.83	18.23
Plant & Pre-Folding	24R-20	MFWD 190	161,000	150	8	0.050	1.23	1.14	3.06	0.29	5.73	6.40	2.04	14.18
Plant & Pre-Folding	24R-30	MFWD 190	186,000	150	8	0.033	0.82	0.76	2.36	0.19	4.14	4.93	1.36	10.43
Plant & Pre-Folding	31R-15	MFWD 225	166,000	150	8	0.052	1.27	1.39	3.26	0.37	6.31	6.82	2.53	15.66
Plant & Pre-Folding	32R-15	MFWD 225	181,000	150	8	0.050	1.23	1.35	3.44	0.36	6.39	7.20	2.45	16.04
Plant & Pre-Rigid	4R-30	2WD 130	31,000	150	8	0.203	4.93	3.12	2.36	0.69	11.11	4.93	4.56	20.61
Plant & Pre-Rigid	4R-38	2WD 130	32,000	150	8	0.159	3.88	2.46	1.91	0.54	8.81	4.01	3.59	16.41
Plant & Pre-Rigid	6R-30	MFWD 150	38,300	150	8	0.135	3.28	2.40	1.94	0.59	8.22	4.06	3.87	16.16
Plant & Pre-Rigid	6R-38	MFWD 150	37,600	150	8	0.106	2.59	1.89	1.50	0.46	6.46	3.14	3.05	12.67
Plant & Pre-Rigid	8R-30	MFWD 170	47,100	150	8	0.101	2.46	2.04	1.79	0.49	6.79	3.74	3.34	13.88
Plant & Pre-Rigid	8R-38	MFWD 170	44,600	150	8	0.080	1.94	1.61	1.34	0.38	5.29	2.80	2.64	10.74
Plant & Pre-Rigid	11R-15	MFWD 170	53,800	150	8	0.148	3.59	2.98	2.99	0.71	10.29	6.25	4.88	21.42
Plant & Pre-Rigid	11R-20	MFWD 170	53,000	150	8	0.110	2.69	2.23	2.20	0.53	7.67	4.60	3.65	15.93
Plant & Pre-Rigid	12R-20	MFWD 190	55,200	150	8	0.101	2.46	2.28	2.10	0.59	7.45	4.39	4.08	15.92
Plant & Pre-Rigid	12R-30	MFWD 190	68,600	150	8	0.067	1.64	1.52	1.74	0.39	5.30	3.63	2.72	11.66
Plant & Pre-Rigid	15R-15	MFWD 190	67,500	150	8	0.108	2.63	2.44	2.74	0.64	8.46	5.74	4.36	18.58
Plant & Pre-TwinRow	12R-30/40	MFWD 225	143,000	150	8	0.053	1.29	1.42	2.86	0.37	5.96	5.98	2.57	14.53
Plant & Pre-TwinRow	8R-30/40	MFWD 225	116,000	150	8	0.080	1.94	2.13	3.49	0.56	8.14	7.29	3.87	19.32
Plant - Folding	8R-38	MFWD 170	52,600	150	8	0.074	1.80	1.49	1.47	0.36	5.14	3.07	2.45	10.66
Plant - Folding	8R-38 2x1	MFWD 170	80,200	150	8	0.049	1.20	0.99	1.49	0.24	3.93	3.11	1.63	8.69
Plant - Folding	12R-20	MFWD 190	65,200	150	8	0.094	2.28	2.12	2.30	0.55	7.27	4.81	3.78	15.88
Plant - Folding	12R-30	MFWD 190	70,300	150	8	0.062	1.52	1.41	1.65	0.37	4.96	3.46	2.52	10.95
Plant - Folding	12R-38	MFWD 190	80,200	150	8	0.049	1.20	1.11	1.49	0.29	4.10	3.11	1.99	9.21
Plant - Folding	16R-30	MFWD 190	10,600	150	8	0.047	1.14	1.06	0.18	0.27	2.67	0.39	1.89	4.95
Plant - Folding	23R-15	MFWD 190	134,000	150	8	0.065	1.58	1.47	3.29	0.38	6.73	6.87	2.63	16.24
Plant - Folding	24R-20	MFWD 190	152,000	150	8	0.047	1.14	1.06	2.68	0.27	5.17	5.61	1.89	12.68
Plant - Folding	24R-30	MFWD 190	178,000	150	8	0.031	0.76	0.70	2.09	0.18	3.75	4.38	1.26	9.40
Plant - Folding	31R-15	MFWD 225	157,000	150	8	0.048	1.18	1.29	2.86	0.34	5.69	5.99	2.35	14.04
Plant - Folding	32R-15	MFWD 225	173,000	150	8	0.047	1.14	1.25	3.05	0.33	5.79	6.39	2.27	14.46
Plant - Rigid	4R-30	2WD 130	23,600	150	8	0.188	4.57	2.90	1.66	0.64	9.79	3.48	4.23	17.52
Plant - Rigid	4R-38	2WD 130	24,700	150	8	0.148	3.60	2.28	1.37	0.51	7.77	2.87	3.33	13.98
Plant - Rigid	6R-30	MFWD 150	30,900	150	8	0.125	3.05	2.23	1.45	0.54	7.29	3.04	3.59	13.93
Plant - Rigid	6R-38	MFWD 150	30,200	150	8	0.099	2.40	1.76	1.12	0.43	5.73	2.34	2.83	10.91
Plant - Rigid	8R-30	MFWD 170	39,800	150	8	0.094	2.28	1.89	1.40	0.45	6.05	2.94	3.10	12.10
Plant - Rigid	8R-38	MFWD 170	37,200	150	8	0.074	1.80	1.49	1.03	0.36	4.71	2.17	2.45	9.33
Plant - Rigid	11R-15	MFWD 170	46,400	150	8	0.137	3.34	2.77	2.39	0.66	9.17	5.00	4.53	18.71
Plant - Rigid	11R-20	MFWD 170	45,700	150	8	0.103	2.50	2.07	1.76	0.49	6.84	3.69	3.39	13.92
Plant - Rigid	12R-20	MFWD 190	47,900	150	8	0.094	2.28	2.12	1.69	0.55	6.66	3.54	3.78	13.99
Plant - Rigid	12R-30	MFWD 190	60,000	150	8	0.062	1.52	1.41	1.41	0.37	4.72	2.95	2.52	10.20
Plant - Rigid	15R-15	2WD 150	58,900	150	8	0.094	2.28	1.67	2.08	0.31	6.36	4.35	2.08	12.79
Plant - TwinRow	12R-30/40	MFWD 225	134,000	150	8	0.049	1.20	1.32	2.49	0.35	5.37	5.21	2.39	12.97
Plant - TwinRow	8R-30/40	MFWD 225	108,000	150	8	0.074	1.80	1.98	3.01	0.52	7.34	6.30	3.59	17.24
Roller/Cultipacker	20'	MFWD 150	15,800	300	12	0.074	1.13	1.32	0.27	0.32	3.06	0.41	2.13	5.62
Roller/Cultipacker	30'	MFWD 170	19,400	300	12	0.049	0.75	1.00	0.22	0.24	2.22	0.34	1.64	4.21
Roller/Cultipacker	38'	MFWD 225	21,800	300	12	0.039	0.59	1.04	0.20	0.27	2.12	0.30	1.89	4.32
Roller/Stubble	20'	2WD 50	13,800	300	12	0.074	1.13	0.44	0.24	0.05	1.87	0.36	0.32	2.56
Roller/Stubble	32'	MFWD 225	23,300	300	12	0.046	0.71	1.24	0.25	0.33	2.54	0.38	2.25	5.17
Rotary Cutter	7'	MFWD 130	5,280	185	10	0.168	2.56	2.59	0.72	0.65	6.53	0.55	4.29	11.38
Rotary Cutter	12'	2WD 150	12,100	185	10	0.098	1.49	1.74	0.96	0.33	4.53	0.73	2.16	7.43
Rotary Cutter-Flex	15'	MFWD 150	22,100	185	10	0.078	1.19	1.39	1.40	0.34	4.34	1.07	2.24	7.66
Rotary Cutter-Flex	20'	MFWD 150	29,900	185	10	0.058	0.89	1.04	1.42	0.25	3.62	1.09	1.68	6.41
Row Cond & Inc-Fold.	26'	MFWD 190	28,500	100	10	0.063	1.25	1.42	0.45	0.37	3.50	2.07	2.55	8.13
Row Cond & Inc-Fold.	38'	MFWD 225	38,200	100	10	0.043	0.85	1.15	0.41	0.30	2.73	1.90	2.09	6.73
Row Cond & Inc-Rigid	13'	2WD 130	16,900	100	10	0.126	2.50	1.95	0.53	0.43	5.43	2.46	2.85	10.75
Row Cond & Inc-Rigid	21'	2WD 170	20,800	100	10	0.078	1.55	1.58	0.40	0.29	3.83	1.87	1.98	7.70
Row Cond & Inc-Rigid	26'	MFWD 190	24,000	100	10	0.026	0.52	0.59	0.15	0.15	1.44	0.73	1.06	3.24
Row Cond Folding	26'	MFWD 225	21,100	100	10	0.059	0.90	1.59	0.31	0.42	3.23	1.44	2.88	7.57
Row Cond Folding	38'	MFWD 225	29,600	100	10	0.040	0.62	1.08	0.30	0.28	2.30	1.39	1.97	5.66
Row Cond Rigid	13'	2WD 130	9,540	100	10	0.119	1.81	1.83	0.28	0.41	4.35	1.31	2.68	8.34
Row Cond Rigid	21'	2WD 170	13,400	100	10	0.073	1.12	1.48	0.24	0.27	3.13	1.13	1.87	6.14
Row Cond Rigid	26'	MFWD 190	16,700	100	10	0.059	0.90	1.34	0.24	0.35	2.85	1.14	2.40	6.40
Row Cond./Roll-Fold.	26'	MFWD 190	19,800	160	10	0.072	1.09	1.62	0.35	0.42	3.50	1.02	2.89	7.42

(continued)

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

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

Notes:
Labor: Includes labor from Power unit plus additional labor from the implement.
Total Direct: Does not include interest on operating capital.

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

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

(continued)

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

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

(continued)

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

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

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

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

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

Item name	Unit	Wage Rate
OPERATOR LABOR	hour	15.22
IRRIGATE LABOR	hour	9.06
HAND LABOR	hour	9.06
HAND. & STOR. LABOR	hour	9.06
RICE MGT. LABOR	hour	9.06

CROP ENTERPRISE	UNALLOCATED LABOR MULTIPLIERS (%)
Corn	90
Cotton	80
Grain Sorghum	90
Peanuts	80
Rice	90
Soybeans	90
Wheat	80

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

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

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

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

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

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

[e] Price used in MSU Extension Service Planning Budgets.

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

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

OPERATION/ OPERATING INPUT	SIZE/ UNIT	DIRECT COST							FIXED COST	TOTAL COST
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL		
		dollars								
Set Up Engine										
IRRIGATE LABOR	hour				0.27		0.01	0.28		0.28
Maintenance										
IRRIGATE LABOR	hour				1.07		0.03	1.10		1.10
Apply Water										
IRRIGATE LABOR	hour				0.15			0.15		0.15
Apply Water										
IRRIGATE LABOR	hour				0.20			0.20		0.20
Apply Water										
IRRIGATE LABOR	hour				0.15			0.15		0.15
Pivot, 1/4 CP	each			13.48			0.29	13.77	59.97	73.74
Well & Pump, 1/4 CP	each			3.50			0.08	3.58	11.69	15.27
Engine, 1/4 CP, 65	each								11.07	11.07
June Irr. 3app@.75"	ac-in		7.73	1.40			0.20	9.33		9.33
July Irr. 4app@.75"	ac-in		10.31	1.87			0.21	12.39		12.39
Aug Irr. 3app@.75"	ac-in		7.73	1.40			0.12	9.25		9.25
TOTALS		0.00	25.77	21.65	1.84	0.00	0.94	50.20	82.73	132.93

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

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

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

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

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