

**CORN, GRAIN  
SORGHUM & WHEAT  
2019  
PLANNING BUDGETS**

**Mississippi State University  
Department of Agricultural Economics  
Budget Report 2018-03**

**October 2018**



## 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 2019 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.

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

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# 2019 Planning Budgets

## Budgets for Agricultural Enterprises

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

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

- by farmers for planning,
- by extension personnel 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. The Mississippi Agricultural Statistics Service conducts a survey of producers of major field crops in Mississippi. Data collected from producers are a part of the information used in selecting the practices included in each budget.

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

### Machinery

Machinery manufacturers form the basis for machinery prices used in these publications. Prices by size of equipment are determined from the most common sales in each category as reported by machinery dealers. Prices used in the budgets reflect prices paid by farmers in 2018. (Appendix Tables 1, 2, and 3).

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

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

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

### Estimates of Direct Costs

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

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

$$RPA = RPH \times PR$$

where:

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

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

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

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

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

### Estimates of Fixed Costs

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

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

where:

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

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

where:

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



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

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

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

where:

CRCPH = Capital recovery charge per hour

HAU = Hours of annual use

CRCPA = Capital recovery charge per acre

PR = Performance rate

### Estimates of Returns

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

To estimate returns, a price for the commodity must be used. Individual producers must determine their own expected price for the commodity. Commodity prices used in this report represent the higher of a calculated forward contract price or the loan rate that was applicable for the 2018 crop year. Government payments for commodities are not included in the budgets except to the extent that they are included in loan rates.

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

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

### Irrigation Costs

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

### Net Returns

Net returns are generally considered to be the amount left after subtracting all costs from all incomes for a particular enterprise. In these budgets, "RETURNS ABOVE DIRECT EXPENSES" and "RETURNS ABOVE TOTAL SPECIFIED EXPENSES" are used as a proxy for the economic concepts of net returns above variable costs and net returns above variable plus fixed costs, respectively. Some items are intentionally left out of these calculations, 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, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air ( 5 gal)	appl	6.50	1.0000	6.50	_____
App by Air ( 3 gal)	appl	5.00	0.2000	1.00	_____
FERTILIZERS					
Phosphorus(46% P2O5)	cwt	23.75	1.9570	46.48	_____
Potash (60% K2O)	cwt	20.00	1.5000	30.00	_____
Fert 10-34-0	gal	2.59	4.0000	10.36	_____
Zinc Plus	pt	4.99	2.0000	9.98	_____
UAN + Sulfur (28%)	gal	1.38	32.1712	44.40	_____
UAN (32%)	gal	1.24	39.5570	49.05	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
Clarity	pt	11.51	0.5000	5.76	_____
Select Max	pt	12.71	1.0000	12.71	_____
Atrazine 4L	pt	1.98	4.0000	7.92	_____
Halex GT	pt	7.80	3.6000	28.08	_____
INSECTICIDES					
Bifenthrin	oz	0.76	1.2800	0.97	_____
IRRIGATION SUPPLIES					
Roll-Out Pipe	ft	0.25	33.0000	8.25	_____
SEED/PLANTS					
Corn Seed BtRR	thous	3.63	34.0000	123.42	_____
CUSTOM FERTILIZE					
Custom Apply Fert	acre	7.50	1.0000	7.50	_____
HAULING					
Haul Corn	bu	0.23	220.0000	50.60	_____
CUSTOM LIME					
Lime (Spread)	ton	38.00	0.6660	25.31	_____
CROP CONSULTANT					
Corn Consultant	acre	6.00	1.0000	6.00	_____
SOIL TEST					
Soil Test	acre	10.00	0.3330	3.33	_____
OPERATOR LABOR					
Tractors	hour	14.23	0.4242	6.04	_____
Harvesters	hour	14.23	0.1009	1.44	_____
IRRIGATE LABOR					
Special Labor	hour	9.06	0.3250	2.96	_____
Implements	hour	9.06	0.0625	0.57	_____
HAND LABOR					
Implements	hour	9.06	0.1354	1.22	_____
UNALLOCATED LABOR					
	hour	14.20	0.4020	5.71	_____
DIESEL FUEL					
Tractors	gal	2.60	4.7302	12.29	_____
Harvesters	gal	2.60	1.6890	4.39	_____
Roll-Out Pipe Irr.	gal	2.60	10.5901	27.52	_____
REPAIR & MAINTENANCE					
Implements	acre	7.91	1.0000	7.91	_____
Tractors	acre	2.46	1.0000	2.46	_____
Harvesters	acre	3.81	1.0000	3.81	_____
Roll-Out Pipe Irr.	acre	6.88	1.0000	6.88	_____
INTEREST ON OP. CAP.	acre	18.80	1.0000	18.80	_____
TOTAL DIRECT EXPENSES				584.10	_____
FIXED EXPENSES					
Implements	acre	13.49	1.0000	13.49	_____
Tractors	acre	16.98	1.0000	16.98	_____
Harvesters	acre	16.38	1.0000	16.38	_____
Roll-Out Pipe Irr.	acre	61.50	1.0000	61.50	_____
TOTAL FIXED EXPENSES				108.35	_____
TOTAL SPECIFIED EXPENSES				692.45	_____

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

Table 1.B Summary of estimated costs and returns per acre  
 Corn, stale seedbed, BtRR, 12-row 38", 220 bu yield goal  
 Furrow Irrigated, 13 ac-in., Delta Area, Mississippi, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.80	220.0000	836.00	_____
				-----	
TOTAL INCOME				836.00	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	7.50	1.0000	7.50	_____
FERTILIZERS	acre	190.27	1.0000	190.27	_____
HERBICIDES	acre	58.95	1.0000	58.95	_____
INSECTICIDES	acre	0.97	1.0000	0.97	_____
IRRIGATION SUPPLIES	acre	8.25	1.0000	8.25	_____
SEED/PLANTS	acre	123.42	1.0000	123.42	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	50.60	1.0000	50.60	_____
CUSTOM LIME	acre	25.31	1.0000	25.31	_____
CROP CONSULTANT	acre	6.00	1.0000	6.00	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1354	1.22	_____
IRRIGATE LABOR	hour	9.06	0.3875	3.53	_____
OPERATOR LABOR	hour	14.23	0.5252	7.48	_____
UNALLOCATED LABOR	hour	14.20	0.4020	5.71	_____
DIESEL FUEL	gal	2.60	17.0094	44.20	_____
REPAIR & MAINTENANCE	acre	21.06	1.0000	21.06	_____
INTEREST ON OP. CAP.	acre	18.80	1.0000	18.80	_____
				-----	
TOTAL DIRECT EXPENSES				584.10	_____
RETURNS ABOVE DIRECT EXPENSES				251.90	_____
TOTAL FIXED EXPENSES				108.35	_____
				-----	
TOTAL SPECIFIED EXPENSES				692.45	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				143.55	_____

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

Table 1.C Estimated resource use for field operations, per acre  
 Corn, stale seedbed, BtRR, 12-row 38", 220 bu yield goal  
 Furrow Irrigated, 13 ac-in., Delta Area, Mississippi, 2019

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

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

Table 1.D Estimated costs for field operations, per acre  
 Corn, stale seedbed, BtRR, 12-row 38", 220 bu yield goal  
 Furrow Irrigated, 13 ac-in., Delta Area, Mississippi, 2019

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----							FIXED COST	TOTAL COST	
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL			
-----dollars-----											
Soil Test	acre	3.33						0.20	3.53		3.53
Lime (Spread)	ton	25.31						1.52	26.83		26.83
Spin Spreader	5 ton		1.27	0.54	1.52			0.20	3.53	2.39	5.92
Phosphorus (46% P2O5)	cwt	46.48						2.79	49.27		49.27
Potash (60% K2O)	cwt	30.00						1.80	31.80		31.80
Bed/Disk w/roller	12R-30/40		1.88	1.10	1.69			0.28	4.95	4.73	9.68
App by Air ( 5 gal)	appl	6.50						0.26	6.76		6.76
Glyphosate 3lbs a.e	oz	4.48						0.18	4.66		4.66
Clarity	pt	5.76						0.23	5.99		5.99
Select Max	pt	12.71						0.51	13.22		13.22
Plant & Pre-Folding	12R-38		1.61	2.14	1.92			0.20	5.87	6.08	11.95
Corn Seed BtRR	thous	123.42						4.32	127.74		127.74
Fert 10-34-0	gal	10.36						0.36	10.72		10.72
Zinc Plus	pt	9.98						0.35	10.33		10.33
Custom Apply Fert	acre	7.50						0.22	7.72		7.72
UAN + Sulfur (28%)	gal	44.40						1.33	45.73		45.73
Spray (Broadcast)	60'		0.85	0.38	0.89			0.06	2.18	1.43	3.61
Atrazine 4L	pt	7.92						0.24	8.16		8.16
Halex GT	pt	28.08						0.84	28.92		28.92
App by Air ( 3 gal)	appl	1.00						0.03	1.03		1.03
Bifenthrin	oz	0.97						0.02	0.99		0.99
Corn Consultant	acre	6.00						0.15	6.15		6.15
Fert Appl (Liquid)	12R-38		1.56	1.00	1.63			0.10	4.29	2.98	7.27
UAN (32%)	gal	49.05						1.23	50.28		50.28
Header - Corn	8R-38		4.39	5.40	2.73			0.06	12.58	19.02	31.60
Grain Cart Corn	700 bu		0.76	0.41	0.68			0.01	1.86	1.54	3.40
Haul Corn	bu	50.60						0.25	50.85		50.85
Stalk Shredder Flex	20'		2.48	2.61	2.23			0.04	7.36	4.81	12.17
Roll-Out Pipe Irr.	acre	8.25	29.40	7.48	4.65			1.02	50.80	65.37	116.17
TOTALS		482.10	44.20	21.06	17.94	0.00	18.80	584.10	108.35	692.45	

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

Table 1.E Estimated monthly income and expense flows per acre  
 Corn, stale seedbed, BtRR, 12-row 38", 220 bu yield goal  
 Furrow Irrigated, 13 ac-in., Delta Area, Mississippi, 2019

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
-----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	836.00
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	6.50	0.00	0.00	1.00	0.00	0.00	0.00	0.00
FERTILIZERS	76.48	0.00	0.00	0.00	0.00	20.34	44.40	49.05	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	22.95	0.00	36.00	0.00	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97	0.00	0.00	0.00	0.00
IRRIGATION SUPPLIES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.25	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	123.42	0.00	0.00	0.00	0.00	0.00	0.00
CUSTOM FERTILIZE	0.00	0.00	0.00	0.00	0.00	0.00	7.50	0.00	0.00	0.00	0.00	0.00
HAULING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.60
CUSTOM LIME	25.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CROP CONSULTANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00	0.00
SOIL TEST	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LABOR	3.75	0.00	0.00	0.00	0.00	1.92	0.89	1.86	3.04	0.23	0.61	5.64
LEASE *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUEL	4.11	0.00	0.00	0.00	0.00	1.61	0.85	1.56	21.13	6.88	0.43	7.63
REPAIR & MAINTENANCE	1.96	0.00	0.00	0.00	0.00	2.14	0.38	1.00	6.05	0.98	0.13	8.42
INTEREST ON OP. CAP.	6.90	0.00	0.00	0.00	1.18	5.23	2.69	1.54	0.77	0.12	0.01	0.36
TOTAL DIRECT EXPENSES	121.84	0.00	0.00	0.00	30.63	154.66	92.71	62.98	39.24	8.21	1.18	72.65
NET INCOME	-121.84	0.00	0.00	0.00	-30.63	-154.66	-92.71	-62.98	-39.24	-8.21	-1.18	763.35
NET INCOME TO DATE	-121.84	-121.84	-121.84	-121.84	-152.47	-307.13	-399.84	-462.82	-502.06	-510.27	-511.45	251.90

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

\* Lease costs are based on hourly usage costs.



Table 1.F Estimated returns for various price/yield combinations, per acre  
 Corn, stale seedbed, BtRR, 12-row 38", 220 bu yield goal  
 Furrow Irrigated, 13 ac-in., Delta Area, Mississippi, 2019

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

The top number in each cell is Returns Above Direct Expenses.  
 The bottom number in each cell is Returns Above Total Specified Expenses.  
 Only the product listed has been varied to calculate net returns.  
 Note: Cost of production estimates are based on 2018 input prices.

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

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air ( 5 gal)	appl	6.50	1.0000	6.50	_____
App by Air ( 3 gal)	appl	5.00	0.2000	1.00	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	23.75	1.6300	38.71	_____
Potash (60% K2O)	cwt	20.00	1.2500	25.00	_____
Fert 10-34-0	gal	2.59	4.0000	10.36	_____
Zinc Plus	pt	4.99	2.0000	9.98	_____
UAN + Sulfur (28%)	gal	1.38	19.3063	26.64	_____
UAN (32%)	gal	1.24	29.6700	36.79	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
Clarity	pt	11.51	0.5000	5.76	_____
Select Max	pt	12.71	1.0000	12.71	_____
Atrazine 4L	pt	1.98	4.0000	7.92	_____
Halex GT	pt	7.80	3.6000	28.08	_____
INSECTICIDES					
Bifenthrin	oz	0.76	1.2800	0.97	_____
SEED/PLANTS					
Corn Seed BtRR	thous	3.63	28.0000	101.64	_____
CUSTOM FERTILIZE					
Custom Apply Fert	acre	7.50	1.0000	7.50	_____
HAULING					
Haul Corn	bu	0.23	170.0000	39.10	_____
CUSTOM LIME					
Lime (Spread)	ton	38.00	0.6660	25.31	_____
CROP CONSULTANT					
Corn Consultant	acre	6.00	1.0000	6.00	_____
SOIL TEST					
Soil Test	acre	10.00	0.3330	3.33	_____
OPERATOR LABOR					
Tractors	hour	14.23	0.3457	4.92	_____
Harvesters	hour	14.23	0.1009	1.44	_____
HAND LABOR					
Implements	hour	9.06	0.1354	1.22	_____
UNALLOCATED LABOR	hour	14.20	0.4020	5.71	_____
DIESEL FUEL					
Tractors	gal	2.60	4.0040	10.41	_____
Harvesters	gal	2.60	1.3770	3.58	_____
REPAIR & MAINTENANCE					
Implements	acre	7.71	1.0000	7.71	_____
Tractors	acre	2.06	1.0000	2.06	_____
Harvesters	acre	3.57	1.0000	3.57	_____
INTEREST ON OP. CAP.	acre	15.36	1.0000	15.36	_____
TOTAL DIRECT EXPENSES				453.76	_____
FIXED EXPENSES					
Implements	acre	12.35	1.0000	12.35	_____
Tractors	acre	14.25	1.0000	14.25	_____
Harvesters	acre	15.34	1.0000	15.34	_____
TOTAL FIXED EXPENSES				41.94	_____
TOTAL SPECIFIED EXPENSES				495.70	_____

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

Table 2.B Summary of estimated costs and returns per acre  
 Corn, stale seedbed, BtRR, non-irrigated, 12row 38"  
 170 bu yield goal, Delta Area, Mississippi, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.80	170.0000	646.00	_____
				-----	
TOTAL INCOME				646.00	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	7.50	1.0000	7.50	_____
FERTILIZERS	acre	147.48	1.0000	147.48	_____
HERBICIDES	acre	58.95	1.0000	58.95	_____
INSECTICIDES	acre	0.97	1.0000	0.97	_____
SEED/PLANTS	acre	101.64	1.0000	101.64	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	39.10	1.0000	39.10	_____
CUSTOM LIME	acre	25.31	1.0000	25.31	_____
CROP CONSULTANT	acre	6.00	1.0000	6.00	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1354	1.22	_____
OPERATOR LABOR	hour	14.23	0.4466	6.36	_____
UNALLOCATED LABOR	hour	14.20	0.4020	5.71	_____
DIESEL FUEL	gal	2.60	5.3810	13.99	_____
REPAIR & MAINTENANCE	acre	13.34	1.0000	13.34	_____
INTEREST ON OP. CAP.	acre	15.36	1.0000	15.36	_____
				-----	
TOTAL DIRECT EXPENSES				453.76	_____
RETURNS ABOVE DIRECT EXPENSES				192.24	_____
TOTAL FIXED EXPENSES				41.94	_____
				-----	
TOTAL SPECIFIED EXPENSES				495.70	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				150.30	_____

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

Table 2.C Estimated resource use for field operations, per acre  
 Corn, stale seedbed, BtRR, non-irrigated, 12row 38"  
 170 bu yield goal, Delta Area, Mississippi, 2019

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	INPUT AMOUNT	IMPLEMENT	POWER UNIT	ALLOC LABOR	UNALL LABOR
						-----hours-----				
Soil Test	acre			0.33	Oct	0.3330				
Lime (Spread)	ton			0.33	Oct	0.6660				
Spin Spreader	5 ton	MFWD 225	0.042	1.00	Oct		0.04	0.04	0.08	0.03
Phosphorus(46% P2O5)	cwt					1.6300				
Potash (60% K2O)	cwt					1.2500				
Bed/Disk w/roller	12R-30/40	MFWD 225	0.062	1.00	Oct		0.06	0.06	0.06	0.05
App by Air ( 5 gal)	appl			1.00	Feb	1.0000				
Glyphosate 3lbs a.e	oz					32.0000				
Clarity	pt					0.5000				
Select Max	pt					1.0000				
Plant & Pre-Folding	12R-38	MFWD 225	0.053	1.00	Mar		0.05	0.05	0.10	0.04
Corn Seed BtRR	thous					28.0000				
Fert 10-34-0	gal					4.0000				
Zinc Plus	pt					2.0000				
Custom Apply Fert	acre			1.00	Apr	1.0000				
UAN + Sulfur (28%)	gal					19.3063				
Spray (Broadcast)	60'	MFWD 225	0.028	1.00	Apr		0.02	0.02	0.04	0.02
Atrazine 4L	pt					4.0000				
Halex GT	pt					3.6000				
App by Air ( 3 gal)	appl			0.20	May	0.2000				
Bifenthrin	oz					1.2800				
Corn Consultant	acre			1.00	May	1.0000				
Fert Appl (Liquid)	12R-38	MFWD 225	0.051	1.00	May		0.05	0.05	0.07	0.04
UAN (32%)	gal					29.6700				
Header - Corn	8R-38	265 hp	0.100	1.00	Sep		0.10	0.10	0.10	0.09
Grain Cart Corn	700 bu	MFWD 225	0.025	1.00	Sep		0.02	0.02	0.02	0.02
Haul Corn	bu					170.0000				
Stalk Shredder Flex	20'	MFWD 225	0.082	1.00	Sep		0.08	0.08	0.08	0.07
TOTALS							0.44	0.44	0.58	0.40

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

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

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----							FIXED COST	TOTAL COST	
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL			
-----dollars-----											
Soil Test	acre	3.33						0.20	3.53		3.53
Lime (Spread)	ton	25.31						1.52	26.83		26.83
Spin Spreader	5 ton		1.27	0.54	1.52			0.20	3.53	2.39	5.92
Phosphorus (46% P2O5)	cwt	38.71						2.32	41.03		41.03
Potash (60% K2O)	cwt	25.00						1.50	26.50		26.50
Bed/Disk w/roller	12R-30/40		1.88	1.10	1.69			0.28	4.95	4.73	9.68
App by Air ( 5 gal)	appl	6.50						0.26	6.76		6.76
Glyphosate 3lbs a.e	oz	4.48						0.18	4.66		4.66
Clarity	pt	5.76						0.23	5.99		5.99
Select Max	pt	12.71						0.51	13.22		13.22
Plant & Pre-Folding	12R-38		1.61	2.14	1.92			0.20	5.87	6.08	11.95
Corn Seed BtRR	thous	101.64						3.56	105.20		105.20
Fert 10-34-0	gal	10.36						0.36	10.72		10.72
Zinc Plus	pt	9.98						0.35	10.33		10.33
Custom Apply Fert	acre	7.50						0.22	7.72		7.72
UAN + Sulfur (28%)	gal	26.64						0.80	27.44		27.44
Spray (Broadcast)	60'		0.85	0.38	0.89			0.06	2.18	1.43	3.61
Atrazine 4L	pt	7.92						0.24	8.16		8.16
Halex GT	pt	28.08						0.84	28.92		28.92
App by Air ( 3 gal)	appl	1.00						0.03	1.03		1.03
Bifenthrin	oz	0.97						0.02	0.99		0.99
Corn Consultant	acre	6.00						0.15	6.15		6.15
Fert Appl (Liquid)	12R-38		1.56	1.00	1.63			0.10	4.29	2.98	7.27
UAN (32%)	gal	36.79						0.92	37.71		37.71
Header - Corn	8R-38		3.58	5.16	2.73			0.06	11.53	17.98	29.51
Grain Cart Corn	700 bu		0.76	0.41	0.68			0.01	1.86	1.54	3.40
Haul Corn	bu	39.10						0.20	39.30		39.30
Stalk Shredder Flex	20'		2.48	2.61	2.23			0.04	7.36	4.81	12.17
TOTALS		397.78	13.99	13.34	13.29	0.00	15.36	453.76	41.94	495.70	

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

Table 2.E Estimated monthly income and expense flows per acre  
 Corn, stale seedbed, BtRR, non-irrigated, 12row 38"  
 170 bu yield goal, Delta Area, Mississippi, 2019

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
-----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	646.00
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	6.50	0.00	0.00	1.00	0.00	0.00	0.00	0.00
FERTILIZERS	63.71	0.00	0.00	0.00	0.00	20.34	26.64	36.79	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	22.95	0.00	36.00	0.00	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97	0.00	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	101.64	0.00	0.00	0.00	0.00	0.00	0.00
CUSTOM FERTILIZE	0.00	0.00	0.00	0.00	0.00	0.00	7.50	0.00	0.00	0.00	0.00	0.00
HAULING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.10
CUSTOM LIME	25.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CROP CONSULTANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00	0.00
SOIL TEST	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LABOR	3.21	0.00	0.00	0.00	0.00	1.92	0.89	1.63	0.00	0.00	0.00	5.64
LEASE *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUEL	3.15	0.00	0.00	0.00	0.00	1.61	0.85	1.56	0.00	0.00	0.00	6.82
REPAIR & MAINTENANCE	1.64	0.00	0.00	0.00	0.00	2.14	0.38	1.00	0.00	0.00	0.00	8.18
INTEREST ON OP. CAP.	6.02	0.00	0.00	0.00	1.18	4.47	2.16	1.22	0.00	0.00	0.00	0.31
TOTAL DIRECT EXPENSES	106.37	0.00	0.00	0.00	30.63	132.12	74.42	50.17	0.00	0.00	0.00	60.05
NET INCOME	-106.37	0.00	0.00	0.00	-30.63	-132.12	-74.42	-50.17	0.00	0.00	0.00	585.95
NET INCOME TO DATE	-106.37	-106.37	-106.37	-106.37	-137.00	-269.12	-343.54	-393.71	-393.71	-393.71	-393.71	192.24

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

\* Lease costs are based on hourly usage costs.

Table 2.F Estimated returns for various price/yield combinations, per acre  
 Corn, stale seedbed, BtRR, non-irrigated, 12row 38"  
 170 bu yield goal, Delta Area, Mississippi, 2019

PRODUCT	PERCENT												
	75	80	85	90	95	100	105	110	115	120	125		
PRODUCT PRICE													
Corn	2.85	3.04	3.23	3.42	3.61	3.80	3.99	4.18	4.37	4.56	4.75		
PERCENT	YIELD	UNIT	dollars										
50	85.00	bu	-191 -233	-175 -217	-159 -201	-143 -185	-127 -169	-111 -153	-94 -136	-78 -120	-62 -104	-46 -88	-30 -72
60	102.00	bu	-147 -189	-127 -169	-108 -150	-89 -131	-69 -111	-50 -92	-31 -73	-11 -53	7 -34	27 -14	46 4
70	119.00	bu	-102 -144	-80 -122	-57 -99	-34 -76	-12 -54	10 -31	32 -9	55 13	78 36	100 58	123 81
80	136.00	bu	-58 -100	-32 -74	-6 -48	19 -22	45 3	70 28	96 54	122 80	148 106	174 132	200 158
90	153.00	bu	-13 -55	15 -26	44 2	73 31	102 60	131 89	160 118	189 147	218 176	247 205	276 234
100	170.00	bu	30 -11	63 21	95 53	127 85	159 118	192 150	224 182	256 214	289 247	321 279	353 311
110	187.00	bu	75 33	110 68	146 104	181 139	217 175	252 210	288 246	323 282	359 317	395 353	430 388
120	204.00	bu	119 77	158 116	197 155	236 194	274 232	313 271	352 310	391 349	429 387	468 426	507 465
130	221.00	bu	164 122	206 164	248 206	290 248	332 290	374 332	416 374	458 416	500 458	542 500	584 542
140	238.00	bu	208 166	254 212	299 257	344 302	389 347	434 392	480 438	525 483	570 528	615 573	661 619
150	255.00	bu	253 211	301 259	350 308	398 356	447 405	495 453	544 502	592 550	640 599	689 647	737 695

The top number in each cell is Returns Above Direct Expenses.  
 The bottom number in each cell is Returns Above Total Specified Expenses.  
 Only the product listed has been varied to calculate net returns.  
 Note: Cost of production estimates are based on 2018 input prices.

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

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air ( 5 gal)	appl	6.50	1.0000	6.50	_____
App by Air ( 3 gal)	appl	5.00	1.2000	6.00	_____
FERTILIZERS					
Phosphorus(46% P2O5)	cwt	23.75	1.9570	46.48	_____
Potash (60% K2O)	cwt	20.00	1.5000	30.00	_____
UAN + Sulfur (28%)	gal	1.38	32.1712	44.40	_____
UAN (32%)	gal	1.24	39.5570	49.05	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
Clarity	pt	11.51	0.5000	5.76	_____
Select Max	pt	12.71	1.0000	12.71	_____
Atrazine 4L	pt	1.98	4.0000	7.92	_____
Halex GT	pt	7.80	3.6000	28.08	_____
INSECTICIDES					
Bifenthrin	oz	0.76	1.2804	0.97	_____
Intrepid 2F	oz	2.03	4.0000	8.12	_____
IRRIGATION SUPPLIES					
Roll-Out Pipe	ft	0.25	33.0000	8.25	_____
SEED/PLANTS					
Corn Seed RR2	thous	3.36	34.0000	114.24	_____
CUSTOM FERTILIZE					
Custom Apply Fert	acre	7.50	1.0000	7.50	_____
HAULING					
Haul Corn	bu	0.23	220.0000	50.60	_____
CUSTOM LIME					
Lime (Spread)	ton	38.00	0.6660	25.31	_____
CROP CONSULTANT					
Corn Consultant	acre	6.00	1.0000	6.00	_____
SOIL TEST					
Soil Test	acre	10.00	0.3330	3.33	_____
OPERATOR LABOR					
Tractors	hour	14.23	0.6930	9.86	_____
Harvesters	hour	14.23	0.1009	1.44	_____
Self-Propelled	hour	14.23	0.0176	0.25	_____
IRRIGATE LABOR					
Special Labor	hour	9.06	0.3250	2.96	_____
Implements	hour	9.06	0.0625	0.57	_____
HAND LABOR					
Implements	hour	9.06	0.1175	1.06	_____
Self-Propelled	hour	9.06	0.0088	0.08	_____
UNALLOCATED LABOR					
	hour	14.24	0.6597	9.40	_____
DIESEL FUEL					
Tractors	gal	2.60	7.8429	20.37	_____
Harvesters	gal	2.60	1.3770	3.58	_____
Self-Propelled	gal	2.60	0.1586	0.41	_____
Roll-Out Pipe Irr.	gal	2.60	10.5901	27.52	_____
REPAIR & MAINTENANCE					
Implements	acre	9.71	1.0000	9.71	_____
Tractors	acre	4.06	1.0000	4.06	_____
Harvesters	acre	3.57	1.0000	3.57	_____
Self-Propelled	acre	0.20	1.0000	0.20	_____
Roll-Out Pipe Irr.	acre	6.88	1.0000	6.88	_____
INTEREST ON OP. CAP.	acre	19.02	1.0000	19.02	_____
TOTAL DIRECT EXPENSES				586.64	_____
FIXED EXPENSES					
Implements	acre	18.71	1.0000	18.71	_____
Tractors	acre	28.07	1.0000	28.07	_____
Harvesters	acre	15.34	1.0000	15.34	_____
Self-Propelled	acre	1.41	1.0000	1.41	_____
Roll-Out Pipe Irr.	acre	61.50	1.0000	61.50	_____
TOTAL FIXED EXPENSES				125.03	_____
TOTAL SPECIFIED EXPENSES				711.67	_____

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**



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

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.80	220.0000	836.00	_____
				-----	
TOTAL INCOME				836.00	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	12.50	1.0000	12.50	_____
FERTILIZERS	acre	169.93	1.0000	169.93	_____
HERBICIDES	acre	58.95	1.0000	58.95	_____
INSECTICIDES	acre	9.09	1.0000	9.09	_____
IRRIGATION SUPPLIES	acre	8.25	1.0000	8.25	_____
SEED/PLANTS	acre	114.24	1.0000	114.24	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	50.60	1.0000	50.60	_____
CUSTOM LIME	acre	25.31	1.0000	25.31	_____
CROP CONSULTANT	acre	6.00	1.0000	6.00	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1263	1.14	_____
IRRIGATE LABOR	hour	9.06	0.3875	3.53	_____
OPERATOR LABOR	hour	14.23	0.8116	11.55	_____
UNALLOCATED LABOR	hour	14.24	0.6597	9.40	_____
DIESEL FUEL	gal	2.60	19.9688	51.88	_____
REPAIR & MAINTENANCE	acre	24.42	1.0000	24.42	_____
INTEREST ON OP. CAP.	acre	19.02	1.0000	19.02	_____
				-----	
TOTAL DIRECT EXPENSES				586.64	_____
RETURNS ABOVE DIRECT EXPENSES				249.36	_____
TOTAL FIXED EXPENSES				125.03	_____
				-----	
TOTAL SPECIFIED EXPENSES				711.67	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				124.33	_____

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

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

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	INPUT AMOUNT	POWER UNIT	ALLOC LABOR	UNALL LABOR	
						-----hours-----				
Subsoiler	3 shank	MFWD 225	0.204	0.50	Oct		0.10	0.10	0.09	
Disk Harrow	24'	MFWD 225	0.081	1.00	Oct		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	0.03	
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	0.05	
App by Air ( 5 gal)	appl			1.00	Feb	1.0000				
Glyphosate 3lbs a.e	oz					32.0000				
Clarity	pt					0.5000				
Select Max	pt					1.0000				
Row Cond./Roll-Fol	30'	MFWD 225	0.062	1.00	Mar		0.06	0.06	0.05	
Plant - Folding	12R-38	MFWD 225	0.049	1.00	Mar		0.04	0.04	0.04	
Corn Seed RR2	thous					34.0000				
Custom Apply Fert	acre			1.00	Apr	1.0000				
UAN + Sulfur (28%)	gal					32.1712				
Sprayer 600-750gal	60' 175hp		0.017	1.00	Apr		0.01	0.02	0.01	
Atrazine 4L	pt					4.0000				
Halex GT	pt					3.6000				
Corn Consultant	acre			1.00	May	1.0000				
				0.20	May					
App by Air ( 3 gal)	appl					0.2000				
Bifenthrin	oz					1.2804				
Fert Appl (Liquid)	12R-38	MFWD 225	0.051	1.00	May		0.05	0.05	0.04	
UAN (32%)	gal					39.5570				
Cultivate	12R-38	MFWD 225	0.054	1.00	May		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	0.09	
Grain Cart Corn	700 bu	MFWD 225	0.025	1.00	Sep		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	0.07	
Roll-Out Pipe Irr.	acre				Jul	1.0000	0.07	0.07	0.46	
<b>TOTALS</b>							<b>0.81</b>	<b>0.79</b>	<b>1.32</b>	<b>0.65</b>

Note: Cost of production estimates are based on 2018 input prices.  
**Fertilization decisions should be based on soil tests.**  
**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**  
**Lime cost prorated for application every 3<sup>rd</sup> year.**

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

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

Note: Cost of production estimates are based on 2018 input prices.  
**Fertilization decisions should be based on soil tests.**  
**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**  
**Lime cost prorated for application every 3<sup>rd</sup> year.**

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

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
-----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	836.00
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	6.50	0.00	0.00	1.00	5.00	0.00	0.00	0.00
FERTILIZERS	76.48	0.00	0.00	0.00	0.00	0.00	44.40	49.05	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	22.95	0.00	36.00	0.00	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97	8.12	0.00	0.00	0.00
IRRIGATION SUPPLIES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.25	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	114.24	0.00	0.00	0.00	0.00	0.00	0.00
CUSTOM FERTILIZE	0.00	0.00	0.00	0.00	0.00	0.00	7.50	0.00	0.00	0.00	0.00	0.00
HAULING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.60
CUSTOM LIME	25.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CROP CONSULTANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00	0.00
SOIL TEST	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LABOR	8.72	0.00	0.00	0.00	0.00	3.49	0.56	3.33	3.04	0.23	0.61	5.64
LEASE *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUEL	9.65	0.00	0.00	0.00	0.00	3.37	0.41	3.19	21.13	6.88	0.43	6.82
REPAIR & MAINTENANCE	4.23	0.00	0.00	0.00	0.00	2.76	0.20	1.89	6.05	0.98	0.13	8.18
INTEREST ON OP. CAP.	7.67	0.00	0.00	0.00	1.18	4.34	2.67	1.64	1.03	0.12	0.01	0.36
TOTAL DIRECT EXPENSES	135.39	0.00	0.00	0.00	30.63	128.20	91.74	67.07	52.62	8.21	1.18	71.60
NET INCOME	-135.39	0.00	0.00	0.00	-30.63	-128.20	-91.74	-67.07	-52.62	-8.21	-1.18	764.40
NET INCOME TO DATE	-135.39	-135.39	-135.39	-135.39	-166.02	-294.22	-385.96	-453.03	-505.65	-513.86	-515.04	249.36

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

\* Lease costs are based on hourly usage costs.

Table 3.F Estimated returns for various price/yield combinations, per acre  
 Corn, conventional tillage, RR2 seed, 12-row 38",  
 220 bu yield goal, furrow irrigated, 13 ac-in., Delta Area, Mississippi, 2019

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

The top number in each cell is Returns Above Direct Expenses.  
 The bottom number in each cell is Returns Above Total Specified Expenses.  
 Only the product listed has been varied to calculate net returns.  
 Note: Cost of production estimates are based on 2018 input prices.

Table 4.A Estimated costs per acre  
 Corn, conventional tillage, RR2 seed, 12-row 38"  
 170 bu yield goal, non-irrigated, Delta Area, Mississippi, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air ( 5 gal)	appl	6.50	1.0000	6.50	_____
App by Air ( 3 gal)	appl	5.00	1.2000	6.00	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	23.75	1.6300	38.71	_____
Potash (60% K2O)	cwt	20.00	1.2500	25.00	_____
UAN + Sulfur (28%)	gal	1.38	19.3063	26.64	_____
UAN (32%)	gal	1.24	29.6700	36.79	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
Clarity	pt	11.51	0.5000	5.76	_____
Select Max	pt	12.71	1.0000	12.71	_____
Atrazine 4L	pt	1.98	4.0000	7.92	_____
Halex GT	pt	7.80	3.6000	28.08	_____
INSECTICIDES					
Bifenthrin	oz	0.76	1.2804	0.97	_____
Intrepid 2F	oz	2.03	4.0000	8.12	_____
SEED/PLANTS					
Corn Seed RR2	thous	3.36	28.0000	94.08	_____
CUSTOM FERTILIZE					
Custom Apply Fert	acre	7.50	1.0000	7.50	_____
HAULING					
Haul Corn	bu	0.23	170.0000	39.10	_____
CUSTOM LIME					
Lime (Spread)	ton	38.00	0.6660	25.31	_____
CROP CONSULTANT					
Corn Consultant	acre	6.00	1.0000	6.00	_____
SOIL TEST					
Soil Test	acre	10.00	0.3330	3.33	_____
OPERATOR LABOR					
Tractors	hour	14.23	0.5690	8.09	_____
Harvesters	hour	14.23	0.1009	1.44	_____
Self-Propelled	hour	14.23	0.0176	0.25	_____
HAND LABOR					
Implements	hour	9.06	0.1175	1.06	_____
Self-Propelled	hour	9.06	0.0088	0.08	_____
UNALLOCATED LABOR					
	hour	14.23	0.6188	8.81	_____
DIESEL FUEL					
Tractors	gal	2.60	6.5903	17.13	_____
Harvesters	gal	2.60	1.3770	3.58	_____
Self-Propelled	gal	2.60	0.1586	0.41	_____
REPAIR & MAINTENANCE					
Implements	acre	8.23	1.0000	8.23	_____
Tractors	acre	3.40	1.0000	3.40	_____
Harvesters	acre	3.57	1.0000	3.57	_____
Self-Propelled	acre	0.20	1.0000	0.20	_____
INTEREST ON OP. CAP.	acre	15.53	1.0000	15.53	_____
TOTAL DIRECT EXPENSES				454.78	_____
FIXED EXPENSES					
Implements	acre	14.27	1.0000	14.27	_____
Tractors	acre	23.46	1.0000	23.46	_____
Harvesters	acre	15.34	1.0000	15.34	_____
Self-Propelled	acre	1.41	1.0000	1.41	_____
TOTAL FIXED EXPENSES				54.48	_____
TOTAL SPECIFIED EXPENSES				509.26	_____

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

Table 4.B Summary of estimated costs and returns per acre  
 Corn, conventional tillage, RR2 seed, 12-row 38"  
 170 bu yield goal, non-irrigated, Delta Area, Mississippi, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.80	170.0000	646.00	_____
				-----	
TOTAL INCOME				646.00	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	12.50	1.0000	12.50	_____
FERTILIZERS	acre	127.14	1.0000	127.14	_____
HERBICIDES	acre	58.95	1.0000	58.95	_____
INSECTICIDES	acre	9.09	1.0000	9.09	_____
SEED/PLANTS	acre	94.08	1.0000	94.08	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	39.10	1.0000	39.10	_____
CUSTOM LIME	acre	25.31	1.0000	25.31	_____
CROP CONSULTANT	acre	6.00	1.0000	6.00	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1263	1.14	_____
OPERATOR LABOR	hour	14.23	0.6876	9.78	_____
UNALLOCATED LABOR	hour	14.23	0.6188	8.81	_____
DIESEL FUEL	gal	2.60	8.1261	21.12	_____
REPAIR & MAINTENANCE	acre	15.40	1.0000	15.40	_____
INTEREST ON OP. CAP.	acre	15.53	1.0000	15.53	_____
				-----	
TOTAL DIRECT EXPENSES				454.78	_____
RETURNS ABOVE DIRECT EXPENSES				191.22	_____
TOTAL FIXED EXPENSES				54.48	_____
				-----	
TOTAL SPECIFIED EXPENSES				509.26	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				136.74	_____

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

Table 4.C Estimated resource use for field operations, per acre  
 Corn, conventional tillage, RR2 seed, 12-row 38"  
 170 bu yield goal, non-irrigated, Delta Area, Mississippi, 2019

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	INPUT AMOUNT	IMPLEMENT	POWER UNIT	ALLOC LABOR	UNALL LABOR
							-----hours-----			
Subsoiler	3 shank	MFWD 225	0.204	0.50	Oct		0.10	0.10	0.10	0.09
Disk Harrow	24'	MFWD 225	0.081	1.00	Oct		0.08	0.08	0.08	0.07
Soil Test	acre			0.33	Oct	0.3330				
Lime (Spread)	ton			0.33	Oct	0.6660				
Spin Spreader	5 ton	MFWD 225	0.042	1.00	Oct		0.04	0.04	0.08	0.03
Phosphorus(46% P2O5)	cwt					1.6300				
Potash (60% K2O)	cwt					1.2500				
Bed/Disk (Hipper)Rd	8R-38	MFWD 225	0.074	1.00	Oct		0.07	0.07	0.07	0.06
App by Air ( 5 gal)	appl			1.00	Feb	1.0000				
Glyphosate 3lbs a.e	oz					32.0000				
Clarity	pt					0.5000				
Select Max	pt					1.0000				
Row Cond Rigid	26'	MFWD 225	0.059	1.00	Mar		0.05	0.05	0.05	0.05
Plant - Folding	12R-38	MFWD 225	0.049	1.00	Mar		0.04	0.04	0.09	0.04
Corn Seed RR2	thous					28.0000				
Custom Apply Fert	acre			1.00	Apr	1.0000				
UAN + Sulfur (28%)	gal					19.3063				
Sprayer 600-750gal	60' 175hp		0.017	1.00	Apr			0.01	0.02	0.01
Atrazine 4L	pt					4.0000				
Halex GT	pt					3.6000				
Corn Consultant	acre			1.00	May	1.0000				
App by Air ( 3 gal)	appl			0.20	May	0.2000				
Bifenthrin	oz					1.2804				
Fert Appl (Liquid)	12R-38	MFWD 225	0.051	1.00	May		0.05	0.05	0.07	0.04
UAN (32%)	gal					29.6700				
App by Air ( 3 gal)	appl			1.00	Jun	1.0000				
Intrepid 2F	oz					4.0000				
Header - Corn	8R-38	265 hp	0.100	1.00	Sep		0.10	0.10	0.10	0.09
Grain Cart Corn	700 bu	MFWD 225	0.025	1.00	Sep		0.02	0.02	0.02	0.02
Haul Corn	bu					170.0000				
Stalk Shredder Flex	20'	MFWD 225	0.082	1.00	Sep		0.08	0.08	0.08	0.07
<b>TOTALS</b>							<b>0.68</b>	<b>0.67</b>	<b>0.81</b>	<b>0.61</b>

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

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



Table 4.D Estimated costs for field operations, per acre  
 Corn, conventional tillage, RR2 seed, 12-row 38"  
 170 bu yield goal, non-irrigated, Delta Area, Mississippi, 2019

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

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

Table 4.E Estimated monthly income and expense flows per acre  
 Corn, conventional tillage, RR2 seed, 12-row 38"  
 170 bu yield goal, non-irrigated, Delta Area, Mississippi, 2019

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
-----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	646.00
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	6.50	0.00	0.00	1.00	5.00	0.00	0.00	0.00
FERTILIZERS	63.71	0.00	0.00	0.00	0.00	0.00	26.64	36.79	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	22.95	0.00	36.00	0.00	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97	8.12	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	94.08	0.00	0.00	0.00	0.00	0.00	0.00
CUSTOM FERTILIZE	0.00	0.00	0.00	0.00	0.00	0.00	7.50	0.00	0.00	0.00	0.00	0.00
HAULING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.10
CUSTOM LIME	25.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CROP CONSULTANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00	0.00
SOIL TEST	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LABOR	8.49	0.00	0.00	0.00	0.00	3.41	0.56	1.63	0.00	0.00	0.00	5.64
LEASE *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUEL	9.04	0.00	0.00	0.00	0.00	3.29	0.41	1.56	0.00	0.00	0.00	6.82
REPAIR & MAINTENANCE	3.59	0.00	0.00	0.00	0.00	2.43	0.20	1.00	0.00	0.00	0.00	8.18
INTEREST ON OP. CAP.	6.81	0.00	0.00	0.00	1.18	3.61	2.14	1.22	0.26	0.00	0.00	0.31
TOTAL DIRECT EXPENSES	120.28	0.00	0.00	0.00	30.63	106.82	73.45	50.17	13.38	0.00	0.00	60.05
NET INCOME	-120.28	0.00	0.00	0.00	-30.63	-106.82	-73.45	-50.17	-13.38	0.00	0.00	585.95
NET INCOME TO DATE	-120.28	-120.28	-120.28	-120.28	-150.91	-257.73	-331.18	-381.35	-394.73	-394.73	-394.73	191.22

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

\* Lease costs are based on hourly usage costs.

Table 4.F Estimated returns for various price/yield combinations, per acre  
 Corn, conventional tillage, RR2 seed, 12-row 38"  
 170 bu yield goal, non-irrigated, Delta Area, Mississippi, 2019

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

The top number in each cell is Returns Above Direct Expenses.

The bottom number in each cell is Returns Above Total Specified Expenses.

Only the product listed has been varied to calculate net returns.

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

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

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air ( 5 gal)	appl	6.50	1.0000	6.50	_____
App by Air ( 3 gal)	appl	5.00	1.2000	6.00	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	23.75	1.6300	38.71	_____
Potash (60% K2O)	cwt	20.00	1.2500	25.00	_____
UAN + Sulfur (28%)	gal	1.38	48.5856	67.05	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
Clarity	pt	11.51	0.5000	5.76	_____
Select Max	pt	12.71	1.0000	12.71	_____
Atrazine 4L	pt	1.98	4.0000	7.92	_____
Halex GT	pt	7.80	3.6000	28.08	_____
INSECTICIDES					
Bifenthrin	oz	0.76	1.2804	0.97	_____
Intrepid 2F	oz	2.03	4.0000	8.12	_____
SEED/PLANTS					
Corn Seed RR2	thous	3.36	28.0000	94.08	_____
CUSTOM FERTILIZE					
Custom Apply Fert	acre	7.50	1.0000	7.50	_____
HAULING					
Haul Corn	bu	0.23	170.0000	39.10	_____
CUSTOM LIME					
Lime (Spread)	ton	38.00	0.6660	25.31	_____
CROP CONSULTANT					
Corn Consultant	acre	6.00	1.0000	6.00	_____
SOIL TEST					
Soil Test	acre	10.00	0.3330	3.33	_____
OPERATOR LABOR					
Tractors	hour	14.23	0.4823	6.85	_____
Harvesters	hour	14.23	0.1277	1.82	_____
Self-Propelled	hour	14.23	0.0176	0.25	_____
HAND LABOR					
Implements	hour	9.06	0.1442	1.31	_____
Self-Propelled	hour	9.06	0.0088	0.08	_____
UNALLOCATED LABOR					
	hour	14.26	0.5649	8.06	_____
DIESEL FUEL					
Tractors	gal	2.60	4.2208	10.98	_____
Harvesters	gal	2.60	1.7419	4.53	_____
Self-Propelled	gal	2.60	0.1586	0.41	_____
REPAIR & MAINTENANCE					
Implements	acre	8.85	1.0000	8.85	_____
Tractors	acre	2.22	1.0000	2.22	_____
Harvesters	acre	4.51	1.0000	4.51	_____
Self-Propelled	acre	0.20	1.0000	0.20	_____
INTEREST ON OP. CAP.	acre	15.14	1.0000	15.14	_____
TOTAL DIRECT EXPENSES				451.83	_____
FIXED EXPENSES					
Implements	acre	14.47	1.0000	14.47	_____
Tractors	acre	15.41	1.0000	15.41	_____
Harvesters	acre	19.41	1.0000	19.41	_____
Self-Propelled	acre	1.41	1.0000	1.41	_____
TOTAL FIXED EXPENSES				50.70	_____
TOTAL SPECIFIED EXPENSES				502.53	_____

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

Table 5.B Summary of estimated costs and returns per acre  
 Corn, stale seedbed, RR2 seed, 12-row 30",  
 170 bu yield goal, Non-Delta, Mississippi, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.80	170.0000	646.00	_____
				-----	
TOTAL INCOME				646.00	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	12.50	1.0000	12.50	_____
FERTILIZERS	acre	130.76	1.0000	130.76	_____
HERBICIDES	acre	58.95	1.0000	58.95	_____
INSECTICIDES	acre	9.09	1.0000	9.09	_____
SEED/PLANTS	acre	94.08	1.0000	94.08	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	39.10	1.0000	39.10	_____
CUSTOM LIME	acre	25.31	1.0000	25.31	_____
CROP CONSULTANT	acre	6.00	1.0000	6.00	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1530	1.39	_____
OPERATOR LABOR	hour	14.23	0.6277	8.92	_____
UNALLOCATED LABOR	hour	14.26	0.5649	8.06	_____
DIESEL FUEL	gal	2.60	6.1215	15.92	_____
REPAIR & MAINTENANCE	acre	15.78	1.0000	15.78	_____
INTEREST ON OP. CAP.	acre	15.14	1.0000	15.14	_____
				-----	
TOTAL DIRECT EXPENSES				451.83	_____
RETURNS ABOVE DIRECT EXPENSES				194.17	_____
TOTAL FIXED EXPENSES				50.70	_____
				-----	
TOTAL SPECIFIED EXPENSES				502.53	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				143.47	_____

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

Table 5.C Estimated resource use for field operations, per acre  
 Corn, stale seedbed, RR2 seed, 12-row 30",  
 170 bu yield goal, Non-Delta, Mississippi, 2019

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	INPUT AMOUNT	IMPLEMENT	POWER UNIT	ALLOC LABOR	UNALL LABOR
						-----hours-----				
Soil Test	acre			0.33	Oct	0.3330				
Lime (Spread)	ton			0.33	Oct	0.6660				
Spin Spreader	5 ton	MFWD 170	0.042	1.00	Oct		0.04	0.04	0.08	0.03
Phosphorus (46% 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					14.8018				
Sprayer 600-750gal	60' 175hp		0.017	1.00	Apr			0.01	0.02	0.01
Atrazine 4L	pt					4.0000				
Halex GT	pt					3.6000				
Fert Appl (Liquid)	12R-30	MFWD 170	0.078	1.00	May		0.07	0.07	0.11	0.07
UAN + Sulfur (28%)	gal					33.7838				
Corn Consultant	acre			1.00	May	1.0000				
App by Air ( 3 gal)	appl			0.20	May	0.2000				
Bifenthrin	oz					1.2804				
App by Air ( 3 gal)	appl			1.00	Jun	1.0000				
Intrepid 2F	oz					4.0000				
Header - Corn	8R-30	265 hp	0.127	1.00	Sep		0.12	0.12	0.12	0.11
Grain Cart Corn	500 bu	MFWD 170	0.025	1.00	Sep		0.02	0.02	0.02	0.02
Haul Corn	bu					170.0000				
Stalk Shredder Flex	20'	MFWD 170	0.082	1.00	Sep		0.08	0.08	0.08	0.07
TOTALS							0.62	0.61	0.78	0.56

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

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

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----							FIXED COST	TOTAL COST	
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL			
-----dollars-----											
Soil Test	acre	3.33						0.20	3.53		3.53
Lime (Spread)	ton	25.31						1.52	26.83		26.83
Spin Spreader	5 ton		0.96	0.48	1.52			0.18	3.14	1.99	5.13
Phosphorus(46% P2O5)	cwt	38.71						2.32	41.03		41.03
Potash (60% K2O)	cwt	25.00						1.50	26.50		26.50
Disk Heavy	20'		2.21	1.51	2.63			0.38	6.73	5.59	12.32
Bed/Disk w/roller	8R-30		2.13	1.05	2.53			0.34	6.05	4.81	10.86
App by Air ( 5 gal)	appl	6.50						0.26	6.76		6.76
Glyphosate 3lbs a.e	oz	4.48						0.18	4.66		4.66
Clarity	pt	5.76						0.23	5.99		5.99
Select Max	pt	12.71						0.51	13.22		13.22
Plant - Rigid	12R-30		1.43	1.70	2.27			0.19	5.59	5.01	10.60
Corn Seed RR2	thous	94.08						3.29	97.37		97.37
Custom Apply Fert	acre	7.50						0.22	7.72		7.72
UAN + Sulfur (28%)	gal	20.43						0.61	21.04		21.04
Sprayer 600-750gal	60' 175hp		0.41	0.20	0.56			0.04	1.21	1.41	2.62
Atrazine 4L	pt	7.92						0.24	8.16		8.16
Halex GT	pt	28.08						0.84	28.92		28.92
Fert Appl (Liquid)	12R-30		1.79	1.54	2.49			0.15	5.97	3.98	9.95
UAN + Sulfur (28%)	gal	46.62						1.17	47.79		47.79
Corn Consultant	acre	6.00						0.15	6.15		6.15
App by Air ( 3 gal)	appl	1.00						0.03	1.03		1.03
Bifenthrin	oz	0.97						0.02	0.99		0.99
App by Air ( 3 gal)	appl	5.00						0.10	5.10		5.10
Intrepid 2F	oz	8.12						0.16	8.28		8.28
Header - Corn	8R-30		4.53	6.50	3.46			0.07	14.56	22.71	37.27
Grain Cart Corn	500 bu		0.58	0.30	0.68			0.01	1.57	1.15	2.72
Haul Corn	bu	39.10						0.20	39.30		39.30
Stalk Shredder Flex	20'		1.88	2.50	2.23			0.03	6.64	4.05	10.69
TOTALS		386.62	15.92	15.78	18.37	0.00	15.14	451.83	50.70	502.53	

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

Table 5.E Estimated monthly income and expense flows per acre  
 Corn, stale seedbed, RR2 seed, 12-row 30",  
 170 bu yield goal, Non-Delta, Mississippi, 2019

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
-----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	646.00
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	6.50	0.00	0.00	1.00	5.00	0.00	0.00	0.00
FERTILIZERS	63.71	0.00	0.00	0.00	0.00	0.00	20.43	46.62	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	22.95	0.00	36.00	0.00	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97	8.12	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	94.08	0.00	0.00	0.00	0.00	0.00	0.00
CUSTOM FERTILIZE	0.00	0.00	0.00	0.00	0.00	0.00	7.50	0.00	0.00	0.00	0.00	0.00
HAULING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.10
CUSTOM LIME	25.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CROP CONSULTANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00	0.00
SOIL TEST	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LABOR	6.68	0.00	0.00	0.00	0.00	2.27	0.56	2.49	0.00	0.00	0.00	6.37
LEASE *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUEL	5.30	0.00	0.00	0.00	0.00	1.43	0.41	1.79	0.00	0.00	0.00	6.99
REPAIR & MAINTENANCE	3.04	0.00	0.00	0.00	0.00	1.70	0.20	1.54	0.00	0.00	0.00	9.30
INTEREST ON OP. CAP.	6.44	0.00	0.00	0.00	1.18	3.48	1.95	1.52	0.26	0.00	0.00	0.31
TOTAL DIRECT EXPENSES	113.81	0.00	0.00	0.00	30.63	102.96	67.05	61.93	13.38	0.00	0.00	62.07
NET INCOME	-113.81	0.00	0.00	0.00	-30.63	-102.96	-67.05	-61.93	-13.38	0.00	0.00	583.93
NET INCOME TO DATE	-113.81	-113.81	-113.81	-113.81	-144.44	-247.40	-314.45	-376.38	-389.76	-389.76	-389.76	194.17

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

\* Lease costs are based on hourly usage costs.



Table 5.F Estimated returns for various price/yield combinations, per acre  
 Corn, stale seedbed, RR2 seed, 12-row 30",  
 170 bu yield goal, Non-Delta, Mississippi, 2019

PRODUCT	PERCENT												
	75	80	85	90	95	100	105	110	115	120	125		
PRODUCT PRICE													
Corn	2.85	3.04	3.23	3.42	3.61	3.80	3.99	4.18	4.37	4.56	4.75		
PERCENT	YIELD	UNIT	dollars										
50	85.00	bu	-189 -240	-173 -224	-157 -208	-141 -192	-125 -176	-109 -159	-93 -143	-76 -127	-60 -111	-44 -95	-28 -79
60	102.00	bu	-145 -196	-126 -176	-106 -157	-87 -137	-67 -118	-48 -99	-29 -79	-9 -60	9 -41	29 -21	48 -2
70	119.00	bu	-100 -151	-78 -128	-55 -106	-33 -83	-10 -61	12 -38	34 -15	57 6	79 29	102 51	125 74
80	136.00	bu	-56 -107	-30 -81	-4 -55	21 -29	46 -3	72 22	98 47	124 73	150 99	176 125	202 151
90	153.00	bu	-11 -62	17 -33	46 -4	75 24	104 53	133 82	162 111	191 140	220 170	249 199	278 228
100	170.00	bu	32 -18	64 14	97 46	129 78	161 111	194 143	226 175	258 208	291 240	323 272	355 304
110	187.00	bu	77 26	112 62	148 97	183 133	219 168	254 204	290 239	325 275	361 310	396 346	432 381
120	204.00	bu	121 71	160 109	199 148	237 187	276 226	315 264	354 303	393 342	431 381	470 419	509 458
130	221.00	bu	166 115	208 157	250 199	292 241	334 283	376 325	418 367	460 409	502 451	544 493	586 535
140	238.00	bu	210 160	255 205	301 250	346 295	391 340	436 386	482 431	527 476	572 521	617 567	662 612
150	255.00	bu	255 204	303 253	352 301	400 349	449 398	497 446	545 495	594 543	642 592	691 640	739 689

The top number in each cell is Returns Above Direct Expenses.  
 The bottom number in each cell is Returns Above Total Specified Expenses.  
 Only the product listed has been varied to calculate net returns.  
 Note: Cost of production estimates are based on 2018 input prices.

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

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air ( 5 gal)	appl	6.50	1.0000	6.50	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	23.75	1.6300	38.71	_____
Potash (60% K2O)	cwt	20.00	1.2500	25.00	_____
Fert 10-34-0	gal	2.59	5.0000	12.95	_____
UAN (32%)	gal	1.24	45.2080	56.06	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
Clarity	pt	11.51	0.5000	5.76	_____
Select Max	pt	12.71	1.0000	12.71	_____
Atrazine 4L	pt	1.98	4.0000	7.92	_____
Halex GT	pt	7.80	3.6000	28.08	_____
SEED/PLANTS					
Corn Seed BtRR	thous	3.63	28.0000	101.64	_____
HAULING					
Haul Corn	bu	0.23	170.0000	39.10	_____
CUSTOM LIME					
Lime (Spread)	ton	38.00	0.6660	25.31	_____
CROP CONSULTANT					
Corn Consultant	acre	6.00	1.0000	6.00	_____
SOIL TEST					
Soil Test	acre	10.00	0.3330	3.33	_____
OPERATOR LABOR					
Tractors	hour	14.23	0.4165	5.93	_____
Harvesters	hour	14.23	0.1277	1.82	_____
HAND LABOR					
Implements	hour	9.06	0.2283	2.06	_____
UNALLOCATED LABOR					
	hour	14.22	0.4898	6.97	_____
DIESEL FUEL					
Tractors	gal	2.60	3.6449	9.49	_____
Harvesters	gal	2.60	1.7419	4.53	_____
REPAIR & MAINTENANCE					
Implements	acre	8.01	1.0000	8.01	_____
Tractors	acre	1.92	1.0000	1.92	_____
Harvesters	acre	4.51	1.0000	4.51	_____
INTEREST ON OP. CAP.	acre	13.10	1.0000	13.10	_____
TOTAL DIRECT EXPENSES				431.89	_____
FIXED EXPENSES					
Implements	acre	11.84	1.0000	11.84	_____
Tractors	acre	13.31	1.0000	13.31	_____
Harvesters	acre	19.41	1.0000	19.41	_____
TOTAL FIXED EXPENSES				44.56	_____
TOTAL SPECIFIED EXPENSES				476.45	_____

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

Table 6.B Summary of estimated costs and returns per acre  
 Corn, no-tillage, BtRR, 12-row 30", 170 bu yield goal  
 Non-Delta Areas, Mississippi, 2019

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.80	170.0000	646.00	_____
				-----	
TOTAL INCOME				646.00	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	6.50	1.0000	6.50	_____
FERTILIZERS	acre	132.72	1.0000	132.72	_____
HERBICIDES	acre	58.95	1.0000	58.95	_____
SEED/PLANTS	acre	101.64	1.0000	101.64	_____
HAULING	acre	39.10	1.0000	39.10	_____
CUSTOM LIME	acre	25.31	1.0000	25.31	_____
CROP CONSULTANT	acre	6.00	1.0000	6.00	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.2283	2.06	_____
OPERATOR LABOR	hour	14.23	0.5442	7.75	_____
UNALLOCATED LABOR	hour	14.22	0.4898	6.97	_____
DIESEL FUEL	gal	2.60	5.3869	14.02	_____
REPAIR & MAINTENANCE	acre	14.44	1.0000	14.44	_____
INTEREST ON OP. CAP.	acre	13.10	1.0000	13.10	_____
				-----	
TOTAL DIRECT EXPENSES				431.89	_____
RETURNS ABOVE DIRECT EXPENSES				214.11	_____
TOTAL FIXED EXPENSES				44.56	_____
				-----	
TOTAL SPECIFIED EXPENSES				476.45	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				169.55	_____

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

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

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	INPUT AMOUNT	IMPLEMENT	POWER UNIT	ALLOC LABOR	UNALL LABOR
						-----hours-----				
Soil Test	acre			0.33	Oct	0.3330				
Lime (Spread)	ton			0.33	Oct	0.6660				
App by Air ( 5 gal)	appl			1.00	Feb	1.0000				
Glyphosate 3lbs a.e	oz					32.0000				
Clarity	pt					0.5000				
Select Max	pt					1.0000				
Spin Spreader	5 ton	MFWD 170	0.042	1.00	Mar		0.04	0.04	0.08	0.03
Phosphorus(46% P2O5)	cwt					1.6300				
Potash (60% K2O)	cwt					1.2500				
NT Plant&Pre-Rigid	8R-30	MFWD 170	0.105	1.00	Mar		0.10	0.10	0.21	0.09
Corn Seed BtRR	thous					28.0000				
Fert 10-34-0	gal					5.0000				
Spray (Broadcast)	27'	MFWD 170	0.062	1.00	Apr		0.06	0.06	0.09	0.05
Atrazine 4L	pt					4.0000				
Halex GT	pt					3.6000				
Fert Appl (Liquid)	8R-30	MFWD 170	0.098	1.00	Apr		0.09	0.09	0.14	0.08
UAN (32%)	gal					45.2080				
Corn Consultant	acre			1.00	May	1.0000				
Header - Corn	8R-30	265 hp	0.127	1.00	Sep		0.12	0.12	0.12	0.11
Grain Cart Corn	500 bu	MFWD 170	0.025	1.00	Sep		0.02	0.02	0.02	0.02
Haul Corn	bu					170.0000				
Stalk Shredder Flex	20'	MFWD 170	0.082	1.00	Sep		0.08	0.08	0.08	0.07
<b>TOTALS</b>							<b>0.54</b>	<b>0.54</b>	<b>0.77</b>	<b>0.48</b>

Note: Cost of production estimates are based on 2018 input prices.  
**Fertilization decisions should be based on soil tests.**  
**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**  
**Lime cost prorated for application every 3<sup>rd</sup> year.**

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

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----							FIXED COST	TOTAL COST
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL		
-----dollars-----										
Soil Test	acre	3.33						0.20	3.53	3.53
Lime (Spread)	ton	25.31						1.52	26.83	26.83
App by Air ( 5 gal)	appl	6.50						0.26	6.76	6.76
Glyphosate 3lbs a.e	oz	4.48						0.18	4.66	4.66
Clarity	pt	5.76						0.23	5.99	5.99
Select Max	pt	12.71						0.51	13.22	13.22
Spin Spreader	5 ton		0.96	0.48	1.52			0.10	3.06	1.99
Phosphorus(46% P2O5)	cwt	38.71						1.35	40.06	40.06
Potash (60% K2O)	cwt	25.00						0.88	25.88	25.88
NT Plant&Pre-Rigid	8R-30		2.41	2.60	3.82			0.31	9.14	7.86
Corn Seed BtRR	thous	101.64						3.56	105.20	105.20
Fert 10-34-0	gal	12.95						0.45	13.40	13.40
Spray (Broadcast)	27'		1.43	0.50	1.97			0.12	4.02	2.28
Atrazine 4L	pt	7.92						0.24	8.16	8.16
Halex GT	pt	28.08						0.84	28.92	28.92
Fert Appl (Liquid)	8R-30		2.23	1.56	3.10			0.21	7.10	4.52
UAN (32%)	gal	56.06						1.68	57.74	57.74
Corn Consultant	acre	6.00						0.15	6.15	6.15
Header - Corn	8R-30		4.53	6.50	3.46			0.07	14.56	22.71
Grain Cart Corn	500 bu		0.58	0.30	0.68			0.01	1.57	1.15
Haul Corn	bu	39.10						0.20	39.30	39.30
Stalk Shredder Flex	20'		1.88	2.50	2.23			0.03	6.64	4.05
TOTALS		373.55	14.02	14.44	16.78	0.00	13.10	431.89	44.56	476.45

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

Table 6.E Estimated monthly income and expense flows per acre  
 Corn, no-tillage, BtRR, 12-row 30", 170 bu yield goal  
 Non-Delta Areas, Mississippi, 2019

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
-----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	646.00
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	6.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FERTILIZERS	0.00	0.00	0.00	0.00	0.00	76.66	56.06	0.00	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	22.95	0.00	36.00	0.00	0.00	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	101.64	0.00	0.00	0.00	0.00	0.00	0.00
HAULING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.10
CUSTOM LIME	25.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CROP CONSULTANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00	0.00
SOIL TEST	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LABOR	0.00	0.00	0.00	0.00	0.00	5.34	5.07	0.00	0.00	0.00	0.00	6.37
LEASE *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUEL	0.00	0.00	0.00	0.00	0.00	3.37	3.66	0.00	0.00	0.00	0.00	6.99
REPAIR & MAINTENANCE	0.00	0.00	0.00	0.00	0.00	3.08	2.06	0.00	0.00	0.00	0.00	9.30
INTEREST ON OP. CAP.	1.72	0.00	0.00	0.00	1.18	6.65	3.09	0.15	0.00	0.00	0.00	0.31
TOTAL DIRECT EXPENSES	30.36	0.00	0.00	0.00	30.63	196.74	105.94	6.15	0.00	0.00	0.00	62.07
NET INCOME	-30.36	0.00	0.00	0.00	-30.63	-196.74	-105.94	-6.15	0.00	0.00	0.00	583.93
NET INCOME TO DATE	-30.36	-30.36	-30.36	-30.36	-60.99	-257.73	-363.67	-369.82	-369.82	-369.82	-369.82	214.11

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

\* Lease costs are based on hourly usage costs.

Table 6.F Estimated returns for various price/yield combinations, per acre  
 Corn, no-tillage, BtRR, 12-row 30", 170 bu yield goal  
 Non-Delta Areas, Mississippi, 2019

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

The top number in each cell is Returns Above Direct Expenses.  
 The bottom number in each cell is Returns Above Total Specified Expenses.  
 Only the product listed has been varied to calculate net returns.  
 Note: Cost of production estimates are based on 2018 input prices.

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

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air ( 5 gal)	appl	6.50	1.0000	6.50	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	23.75	1.3000	30.88	_____
Potash (60% K2O)	cwt	20.00	1.0000	20.00	_____
UAN + Sulfur (28%)	gal	1.38	38.2883	52.84	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.14	32.0000	4.48	_____
2,4-D Amine 4	pt	2.40	2.0000	4.80	_____
Select Max	pt	12.71	1.0000	12.71	_____
Lexar	pt	8.01	6.0000	48.06	_____
INSECTICIDES					
Sivanto Prime	oz	2.52	8.0000	20.16	_____
Karate Z	oz	2.74	1.5000	4.11	_____
Prevathon	oz	1.32	14.0000	18.48	_____
SEED/PLANTS					
Sorghum Concept+ Po	lb	3.96	4.5000	17.82	_____
ADJUVANTS					
Surfactant	pt	3.59	0.3000	1.08	_____
HAULING					
Haul Sorghum	bu	0.25	100.0000	25.00	_____
CUSTOM LIME					
Lime (Spread)	ton	38.00	0.6660	25.31	_____
CROP CONSULTANT					
Sorghum Consultant	acre	6.00	1.0000	6.00	_____
SOIL TEST					
Soil Test	acre	10.00	0.3330	3.33	_____
OPERATOR LABOR					
Tractors	hour	14.23	0.3120	4.43	_____
Harvesters	hour	14.23	0.1021	1.45	_____
Self-Propelled	hour	14.23	0.0661	0.95	_____
HAND LABOR					
Implements	hour	9.06	0.1442	1.31	_____
Self-Propelled	hour	9.06	0.0330	0.30	_____
UNALLOCATED LABOR					
	hour	14.27	0.4322	6.17	_____
DIESEL FUEL					
Tractors	gal	2.60	2.7303	7.10	_____
Harvesters	gal	2.60	1.3935	3.62	_____
Self-Propelled	gal	2.60	0.8505	2.20	_____
REPAIR & MAINTENANCE					
Implements	acre	5.10	1.0000	5.10	_____
Tractors	acre	1.44	1.0000	1.44	_____
Harvesters	acre	3.61	1.0000	3.61	_____
Self-Propelled	acre	0.90	1.0000	0.90	_____
INTEREST ON OP. CAP.	acre	9.65	1.0000	9.65	_____
TOTAL DIRECT EXPENSES				349.79	_____
FIXED EXPENSES					
Implements	acre	11.06	1.0000	11.06	_____
Tractors	acre	9.96	1.0000	9.96	_____
Harvesters	acre	15.52	1.0000	15.52	_____
Self-Propelled	acre	6.50	1.0000	6.50	_____
TOTAL FIXED EXPENSES				43.04	_____
TOTAL SPECIFIED EXPENSES				392.83	_____

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**



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

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Grain Sorghum	bu	3.61	100.0000	361.00	_____
				-----	
TOTAL INCOME				361.00	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	6.50	1.0000	6.50	_____
FERTILIZERS	acre	103.72	1.0000	103.72	_____
HERBICIDES	acre	70.05	1.0000	70.05	_____
INSECTICIDES	acre	42.75	1.0000	42.75	_____
SEED/PLANTS	acre	17.82	1.0000	17.82	_____
ADJUVANTS	acre	1.08	1.0000	1.08	_____
HAULING	acre	25.00	1.0000	25.00	_____
CUSTOM LIME	acre	25.31	1.0000	25.31	_____
CROP CONSULTANT	acre	6.00	1.0000	6.00	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1772	1.61	_____
OPERATOR LABOR	hour	14.23	0.4803	6.83	_____
UNALLOCATED LABOR	hour	14.27	0.4322	6.17	_____
DIESEL FUEL	gal	2.60	4.9745	12.92	_____
REPAIR & MAINTENANCE	acre	11.05	1.0000	11.05	_____
INTEREST ON OP. CAP.	acre	9.65	1.0000	9.65	_____
				-----	
TOTAL DIRECT EXPENSES				349.79	_____
RETURNS ABOVE DIRECT EXPENSES				11.21	_____
TOTAL FIXED EXPENSES				43.04	_____
				-----	
TOTAL SPECIFIED EXPENSES				392.83	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				-31.83	_____

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

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

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

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

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

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----							FIXED COST	TOTAL COST	
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL			
-----dollars-----											
Soil Test	acre	3.33						0.20	3.53		3.53
Lime (Spread)	ton	25.31						1.52	26.83		26.83
Disk Harrow	24'		1.86	1.35	2.21			0.30	5.72	4.88	10.60
App by Air ( 5 gal)	appl	6.50						0.26	6.76		6.76
Glyphosate 3lbs a.e	oz	4.48						0.18	4.66		4.66
2,4-D Amine 4	pt	4.80						0.19	4.99		4.99
Select Max	pt	12.71						0.51	13.22		13.22
Surfactant	pt	1.08						0.04	1.12		1.12
Spin Spreader	5 ton		0.96	0.48	1.52			0.09	3.05	1.99	5.04
Phosphorus(46% P2O5)	cwt	30.88						0.93	31.81		31.81
Potash (60% K2O)	cwt	20.00						0.60	20.60		20.60
Field Cultivate Fld	32'		1.06	0.73	1.26			0.09	3.14	3.85	6.99
Plant - Folding	12R-30		1.43	1.90	2.27			0.17	5.77	5.43	11.20
Sorghum Concept+ Po	lb	17.82						0.53	18.35		18.35
Sprayer 800gal	80' 250hp		0.44	0.18	0.42			0.03	1.07	1.30	2.37
Lexar	pt	48.06						1.44	49.50		49.50
Sorghum Consultant	acre	6.00						0.15	6.15		6.15
Fert Appl (Liquid)	12R-30		1.79	1.54	2.49			0.15	5.97	3.98	9.95
UAN + Sulfur (28%)	gal	52.84						1.32	54.16		54.16
Sprayer 800gal	80' 250hp		0.44	0.18	0.42			0.02	1.06	1.30	2.36
Sivanto Prime	oz	10.08						0.20	10.28		10.28
Sprayer 800gal	80' 250hp		0.44	0.18	0.42			0.02	1.06	1.30	2.36
Karate Z	oz	4.11						0.06	4.17		4.17
Sprayer 800gal	80' 250hp		0.44	0.18	0.42			0.02	1.06	1.30	2.36
Prevathon	oz	18.48						0.28	18.76		18.76
Sprayer 800gal	80' 250hp		0.44	0.18	0.42			0.02	1.06	1.30	2.36
Sivanto Prime	oz	10.08						0.15	10.23		10.23
Header Wheat/Sorghum	25' Rigid		3.62	4.15	2.76			0.05	10.58	16.41	26.99
Haul Sorghum	bu	25.00						0.13	25.13		25.13
TOTALS		301.56	12.92	11.05	14.61	0.00	9.65	349.79	43.04	392.83	

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

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

ITEM	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
-----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	361.00
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	6.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	50.88	52.84	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	21.99	0.00	48.06	0.00	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.08	32.67	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	0.00	17.82	0.00	0.00	0.00	0.00	0.00
ADJUVANTS	0.00	0.00	0.00	0.00	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HAULING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00
CUSTOM LIME	25.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CROP CONSULTANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00	0.00
SOIL TEST	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LABOR	0.00	2.21	0.00	0.00	0.00	0.00	5.47	2.49	0.42	1.26	0.00	2.76
LEASE *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUEL	0.00	1.86	0.00	0.00	0.00	0.00	3.89	1.79	0.44	1.32	0.00	3.62
REPAIR & MAINTENANCE	0.00	1.35	0.00	0.00	0.00	0.00	3.29	1.54	0.18	0.54	0.00	4.15
INTEREST ON OP. CAP.	1.72	0.30	0.00	0.00	1.18	0.00	3.88	1.62	0.22	0.55	0.00	0.18
TOTAL DIRECT EXPENSES	30.36	5.72	0.00	0.00	30.75	0.00	133.29	66.28	11.34	36.34	0.00	35.71
NET INCOME	-30.36	-5.72	0.00	0.00	-30.75	0.00	-133.29	-66.28	-11.34	-36.34	0.00	325.29
NET INCOME TO DATE	-30.36	-36.08	-36.08	-36.08	-66.83	-66.83	-200.12	-266.40	-277.74	-314.08	-314.08	11.21

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

\* Lease costs are based on hourly usage costs.

Table 7.F Estimated returns for various price/yield combinations, per acre  
 Grain sorghum, 12-row 30", 100 bu yield goal  
 All Areas, Mississippi, 2019

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

The top number in each cell is Returns Above Direct Expenses.  
 The bottom number in each cell is Returns Above Total Specified Expenses.  
 Only the product listed has been varied to calculate net returns.  
 Note: Cost of production estimates are based on 2018 input prices.

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

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air ( 5 gal)	appl	6.50	2.0000	13.00	_____
App by Air ( 3 gal)	appl	5.00	1.0000	5.00	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	23.75	1.0000	23.75	_____
Potash (60% K2O)	cwt	20.00	0.7500	15.00	_____
Fert 41-0-0-4	cwt	14.25	3.0480	43.43	_____
FUNGICIDES					
CruiserMaxx	oz	4.28	4.5000	19.26	_____
Prosaro	oz	2.56	8.0000	20.48	_____
HERBICIDES					
Axiom	oz	1.92	10.0000	19.20	_____
Harmony Extra SG	oz	13.79	0.7500	10.34	_____
Axial XL	oz	1.18	16.4000	19.35	_____
INSECTICIDES					
Karate Z	oz	2.74	1.5000	4.11	_____
SEED/PLANTS					
Wheat Seed Private	lb	0.22	90.0000	19.80	_____
CUSTOM FERTILIZE					
App Fert by Air	cwt	7.00	3.0480	21.34	_____
HAULING					
Haul Wheat	bu	0.26	70.0000	18.20	_____
CUSTOM LIME					
Lime (Spread)	ton	38.00	0.6660	25.31	_____
CROP CONSULTANT					
Wheat Consultant	acre	5.50	1.0000	5.50	_____
SOIL TEST					
Soil Test	acre	10.00	0.3330	3.33	_____
OPERATOR LABOR					
Tractors	hour	14.23	0.2648	3.76	_____
Harvesters	hour	14.23	0.1021	1.45	_____
HAND LABOR					
Implements	hour	9.06	0.1363	1.23	_____
UNALLOCATED LABOR					
	hour	14.20	0.2936	4.17	_____
DIESEL FUEL					
Tractors	gal	2.60	2.3178	6.03	_____
Harvesters	gal	2.60	1.3935	3.62	_____
REPAIR & MAINTENANCE					
Implements	acre	3.68	1.0000	3.68	_____
Tractors	acre	1.23	1.0000	1.23	_____
Harvesters	acre	3.61	1.0000	3.61	_____
INTEREST ON OP. CAP.	acre	10.27	1.0000	10.27	_____
TOTAL DIRECT EXPENSES				325.46	_____
FIXED EXPENSES					
Implements	acre	9.09	1.0000	9.09	_____
Tractors	acre	8.45	1.0000	8.45	_____
Harvesters	acre	15.52	1.0000	15.52	_____
TOTAL FIXED EXPENSES				33.06	_____
TOTAL SPECIFIED EXPENSES				358.52	_____

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

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

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Wheat	bu	5.37	70.0000	375.90	_____
				-----	
TOTAL INCOME				375.90	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	18.00	1.0000	18.00	_____
FERTILIZERS	acre	82.19	1.0000	82.19	_____
FUNGICIDES	acre	39.74	1.0000	39.74	_____
HERBICIDES	acre	48.89	1.0000	48.89	_____
INSECTICIDES	acre	4.11	1.0000	4.11	_____
SEED/PLANTS	acre	19.80	1.0000	19.80	_____
CUSTOM FERTILIZE	acre	21.34	1.0000	21.34	_____
HAULING	acre	18.20	1.0000	18.20	_____
CUSTOM LIME	acre	25.31	1.0000	25.31	_____
CROP CONSULTANT	acre	5.50	1.0000	5.50	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1363	1.23	_____
OPERATOR LABOR	hour	14.23	0.3670	5.21	_____
UNALLOCATED LABOR	hour	14.20	0.2936	4.17	_____
DIESEL FUEL	gal	2.60	3.7114	9.65	_____
REPAIR & MAINTENANCE	acre	8.52	1.0000	8.52	_____
INTEREST ON OP. CAP.	acre	10.27	1.0000	10.27	_____
				-----	
TOTAL DIRECT EXPENSES				325.46	_____
RETURNS ABOVE DIRECT EXPENSES				50.44	_____
TOTAL FIXED EXPENSES				33.06	_____
				-----	
TOTAL SPECIFIED EXPENSES				358.52	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				17.38	_____

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

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

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	INPUT AMOUNT	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 2018 input prices.  
**Fertilization decisions should be based on soil tests.**  
**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**  
**Lime cost prorated for application every 3<sup>rd</sup> year.**



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

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----							FIXED COST	TOTAL COST
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL		
-----dollars-----										
Soil Test	acre	3.33						0.17	3.50	3.50
Lime (Spread)	ton	25.31						1.27	26.58	26.58
Disk Harrow	24'		1.86	1.35	2.09			0.27	5.57	4.88 10.45
Spin Spreader	5 ton		0.96	0.48	1.46			0.14	3.04	1.99 5.03
Phosphorus (46% P2O5)	cwt	23.75						1.19	24.94	24.94
Potash (60% K2O)	cwt	15.00						0.75	15.75	15.75
Field Cultivate Fld	32'		1.06	0.73	1.19			0.15	3.13	3.85 6.98
Grain Drill	20'		2.15	1.81	3.26			0.32	7.54	5.93 13.47
Wheat Seed Private	lb	19.80						0.89	20.69	20.69
CruiserMaxx	oz	19.26						0.87	20.13	20.13
Wheat Consultant	acre	5.50						0.25	5.75	5.75
App by Air ( 5 gal)	appl	6.50						0.26	6.76	6.76
Axiom	oz	19.20						0.77	19.97	19.97
App by Air ( 3 gal)	appl	5.00						0.13	5.13	5.13
Karate Z	oz	4.11						0.10	4.21	4.21
Harmony Extra SG	oz	10.34						0.26	10.60	10.60
Axial XL	oz	19.35						0.48	19.83	19.83
App Fert by Air	cwt	10.67						0.27	10.94	10.94
Fert 41-0-0-4	cwt	21.72						0.54	22.26	22.26
App Fert by Air	cwt	10.67						0.21	10.88	10.88
Fert 41-0-0-4	cwt	21.72						0.43	22.15	22.15
App by Air ( 5 gal)	appl	6.50						0.10	6.60	6.60
Prosaro	oz	20.48						0.31	20.79	20.79
Header Wheat/Sorghum	25' Rigid		3.62	4.15	2.61			0.05	10.43	16.41 26.84
Haul Wheat	bu	18.20						0.09	18.29	18.29
TOTALS		286.41	9.65	8.52	10.61	0.00	10.27	325.46	33.06	358.52

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

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

ITEM	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
-----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	375.90
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	6.50	0.00	0.00	5.00	0.00	6.50	0.00	0.00
FERTILIZERS	0.00	0.00	38.75	0.00	0.00	0.00	0.00	21.72	21.72	0.00	0.00	0.00
FUNGICIDES	0.00	0.00	0.00	19.26	0.00	0.00	0.00	0.00	0.00	20.48	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	19.20	0.00	0.00	29.69	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.11	0.00	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	19.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CUSTOM FERTILIZE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.67	10.67	0.00	0.00	0.00
HAULING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.20
CUSTOM LIME	0.00	0.00	25.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CROP CONSULTANT	0.00	0.00	0.00	5.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SOIL TEST	0.00	0.00	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LABOR	0.00	0.00	4.74	3.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.61
LEASE *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUEL	0.00	0.00	3.88	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.62
REPAIR & MAINTENANCE	0.00	0.00	2.56	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.15
INTEREST ON OP. CAP.	0.00	0.00	3.94	2.33	1.03	0.00	0.00	1.78	0.64	0.41	0.00	0.14
TOTAL DIRECT EXPENSES	0.00	0.00	82.51	54.11	26.73	0.00	0.00	72.97	33.03	27.39	0.00	28.72
NET INCOME	0.00	0.00	-82.51	-54.11	-26.73	0.00	0.00	-72.97	-33.03	-27.39	0.00	347.18
NET INCOME TO DATE	0.00	0.00	-82.51	-136.62	-163.35	-163.35	-163.35	-236.32	-269.35	-296.74	-296.74	50.44

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

**Fertilization decisions should be based on soil tests.**

**Soil test cost is prorated for a test every 3<sup>rd</sup> year.**

**Lime cost prorated for application every 3<sup>rd</sup> year.**

\* Lease costs are based on hourly usage costs.

Table 8.F Estimated returns for various price/yield combinations, per acre  
Wheat followed by soybeans, 70 bu yield goal  
All Areas, Mississippi, 2019

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

The top number in each cell is Returns Above Direct Expenses.  
The bottom number in each cell is Returns Above Total Specified Expenses.  
Only the product listed has been varied to calculate net returns.  
Note: Cost of production estimates are based on 2018 input prices.



## APPENDIX

Appendix Table 1. Tractors/Harvesters: estimated purchase price, annual use, useful life, fuel use, and direct and fixed cost per hour, Mississippi, 2019

Item Name	Size	Purchase Price	Annual Use	Useful Life	Fuel Use	Labor	Fuel	R&M	Total Direct	Fixed	Total Cost
		dollars	hours	years	gal/hr	-----\$/hour-----					
Combine (250-299 hp)	265 hp	339,000	300	8	13.64	13.51	35.46	35.31	84.28	151.94	236.23
Combine (300-349 hp)	325 hp	362,000	300	8	16.73	13.51	43.49	37.70	94.71	162.25	256.97
Combine (350-399 hp)	355 hp	391,000	300	8	18.27	13.51	47.50	40.72	101.74	175.25	276.99
Combine (400-449 hp)	425 hp	412,000	300	8	21.87	13.51	56.87	42.91	113.30	184.66	297.97
Combine (450-499hp)	475 hp	434,000	300	8	24.44	13.51	63.56	45.20	122.28	194.52	316.81
Tractor( 20-39hp)CB	MFWD 30	25,500	600	8	1.54	13.51	4.01	0.79	18.32	5.29	23.61
Tractor( 20-39hp)RB	MFWD 30	20,400	600	8	1.54	13.51	4.01	0.63	18.16	4.23	22.39
Tractor( 40-59hp)CB	2WD 50	29,400	600	8	2.57	13.51	6.69	0.91	21.12	6.10	27.22
Tractor( 40-59hp)CB	MFWD 50	39,500	600	8	2.57	13.51	6.69	1.23	21.43	8.19	29.63
Tractor( 40-59hp)RB	2WD 50	22,900	600	8	2.57	13.51	6.69	0.71	20.91	4.75	25.67
Tractor( 40-59hp)RB	MFWD 50	27,800	600	8	2.57	13.51	6.69	0.86	21.07	5.77	26.84
Tractor( 60-89hp)CB	2WD 75	52,800	600	8	3.86	13.51	10.03	1.65	25.19	10.95	36.15
Tractor( 60-89hp)CB	MFWD 75	62,500	600	8	3.86	13.51	10.03	1.95	25.50	12.97	38.47
Tractor( 60-89hp)RB	2WD 75	38,600	600	8	3.86	13.51	10.03	1.20	24.75	8.01	32.76
Tractor( 60-89hp)RB	MFWD 75	40,100	600	8	3.86	13.51	10.03	1.25	24.80	8.32	33.12
Tractor( 90-119hp)CB	2WD 105	69,200	600	8	5.40	13.51	14.05	2.16	29.72	14.36	44.08
Tractor( 90-119hp)CB	MFWD 105	83,000	600	8	5.40	13.51	14.05	2.59	30.15	17.22	47.38
Tractor( 90-119hp)RB	2WD 105	61,200	600	8	5.40	13.51	14.05	1.91	29.47	12.70	42.17
Tractor( 90-119hp)RB	MFWD 105	67,500	600	8	5.40	13.51	14.05	2.10	29.67	14.01	43.68
Tractor(120-139hp)CB	2WD 130	103,000	600	8	6.69	13.51	17.39	3.21	34.12	21.37	55.50
Tractor(120-139hp)CB	MFWD 130	114,000	600	8	6.69	13.51	17.39	3.56	34.47	23.66	58.13
Tractor(140-159hp)	2WD 150	109,000	600	8	7.72	13.51	20.07	3.40	36.99	22.62	59.61
Tractor(140-159hp)CB	MFWD 150	130,000	600	8	7.72	13.51	20.07	4.06	37.64	26.98	64.63
Tractor(160-179hp)CB	MFWD 170	148,000	600	8	8.75	13.51	22.75	4.62	40.88	31.94	72.83
Tractor(180-199hp)CB	MFWD 190	175,000	600	8	9.77	13.51	25.42	5.46	44.40	37.77	82.17
Tractor(200-249hp)CB	MFWD 225	191,000	600	8	11.58	13.51	30.11	5.96	49.59	41.22	90.81
Tractor(250-349hp)CB	4WD 300	286,000	600	8	15.44	13.51	40.14	8.93	62.59	61.73	124.32
Tractor(250-349hp)CB	MFWD 300	278,000	600	8	15.44	13.51	40.14	8.68	62.34	60.00	122.34
Tractor(250-349hp)CB	Track 300	317,000	600	8	15.44	13.51	40.14	9.90	63.56	68.42	131.98
Tractor(350-449hp)	Track 400	420,000	600	8	20.58	13.51	53.53	13.12	80.16	90.65	170.81
Tractor(350-449hp)CB	4WD 400	328,000	600	8	20.58	13.51	53.53	10.25	77.29	70.79	148.08
Tractor(450-550hp)CB	4WD 500	394,000	600	8	25.73	13.51	66.91	12.31	92.73	85.04	177.77
Tractor(450-550hp)CB	Track 500	444,000	600	8	25.73	13.51	66.91	13.87	94.29	95.83	190.13
Utility Vehicle	800 CC	12,200	200	8	0.70	13.51	1.75	1.90	17.16	8.20	25.36
Utility Vehicle	900 CC	15,800	200	8	1.00	13.51	2.50	2.46	18.47	10.62	29.10

## Notes:

Labor: Includes allocated labor from power unit.

Total Direct: Does not include interest on operating capital.

Appendix Table 2. Self-propelled machines: estimated purchase price, annual use, useful life, fuel use, performance rate, and direct and fixed cost per acre, Mississippi, 2019

Item Name	Size	Purchase Price	Annual Use	Useful Life	Fuel Use	Perf Rate	Labor	Fuel	R&M	Total Direct	Fixed	Total Cost
		dollars	hours	years	gal/hr	hr/ac	-----\$/acre-----					
Cotton Picker	4R-38 (250)	268,000	200	8	12.86	0.257	5.81	8.62	10.79	25.23	46.44	71.68
Cotton Picker	4R-38 (350)	351,000	200	8	18.01	0.257	5.81	12.07	14.13	32.02	60.83	92.86
Cotton Picker	4R2x1 (350)	357,000	200	8	18.01	0.172	3.88	8.07	9.61	21.57	41.35	62.92
Cotton Picker	6R-30 (355)	465,000	200	8	18.27	0.218	4.92	10.36	15.85	31.15	68.23	99.38
Cotton Picker	6R-38 (355)	465,000	200	8	18.27	0.172	3.88	8.18	12.51	24.59	53.86	78.46
Cotton Picker/Module	4R-38 (365)	536,000	200	8	20.58	0.257	5.81	13.79	21.58	41.20	92.89	134.10
Cotton Picker/Module	6R-30 (500)	776,000	200	8	25.73	0.218	4.92	14.60	26.46	45.99	113.86	159.85
Cotton Picker/Module	6R-38 (500)	777,000	200	8	25.73	0.172	3.88	11.52	20.91	36.33	90.01	126.35
Dry Applicator SP	70'300cuft	347,000	350	8	16.98	0.015	0.27	0.66	0.28	1.22	2.01	3.23
Sprayer 600-750gal	60' 175hp	208,000	350	8	9.00	0.017	0.31	0.41	0.19	0.92	1.40	2.33
Sprayer 600-825gal	80' 175hp	210,000	350	8	11.81	0.013	0.23	0.40	0.14	0.79	1.06	1.85
Sprayer 600-825gal	90' 250hp	288,000	350	8	12.73	0.011	0.21	0.38	0.18	0.78	1.30	2.08
Sprayer 800gal	100' 250hp	303,000	350	8	14.15	0.010	0.19	0.38	0.17	0.75	1.23	1.98
Sprayer 800gal	80' 250hp	255,000	350	8	12.86	0.013	0.23	0.44	0.18	0.86	1.29	2.15
Sprayer 1000-1400gal	90' 275hp	289,000	350	8	14.15	0.010	0.19	0.38	0.16	0.74	1.17	1.91
Sprayer 1000gal	100' 300hp	328,000	350	8	15.44	0.010	0.19	0.42	0.18	0.80	1.33	2.13
Sprayer 1200+gal	120' 300hp	332,000	350	8	15.44	0.008	0.15	0.35	0.15	0.66	1.12	1.79

Notes:

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

Direct: Does not include interest on operating capital.

Appendix Table 3. Towed equipment: estimated purchase price, annual use, useful life, performance rate, and direct and fixed cost per acre, Mississippi, 2019

Item Name	Size	Power Unit	Purchase Price	Annual Use	Useful Life	Perf Rate	Labor	Fuel	---R&M---		Total Direct	--Fixed--		Total Cost	
									Imp.	P.U.		Imp.	P.U.		
				dollars	hours	years	hr/ac	-----\$/acre-----							
Bed-Paratill	Fold	8R-38	MFWD 225	54,400	150	12	0.080	1.09	2.43	1.58	0.48	5.59	3.08	3.32	12.00
Bed-Paratill	Fold	8R-38 2x1	MFWD 225	69,100	150	12	0.053	0.72	1.61	1.34	0.32	4.00	2.60	2.21	8.83
Bed-Paratill	Fold	12R-38	MFWD 225	69,100	150	12	0.053	0.72	1.61	1.34	0.32	4.00	2.60	2.21	8.83
Bed-Paratill	Rigid	4R-30	MFWD 225	12,300	150	12	0.204	2.76	6.15	0.90	1.21	11.04	1.76	8.42	21.22
Bed-Paratill	Rigid	4R-38	MFWD 225	12,300	150	12	0.160	2.17	4.84	0.71	0.96	8.69	1.38	6.63	16.71
Bed-Paratill	Rigid	6R-30	MFWD 225	17,300	150	12	0.136	1.84	4.10	0.85	0.81	7.60	1.65	5.61	14.87
Bed-Paratill	Rigid	6R-38	MFWD 225	17,200	150	12	0.107	1.45	3.23	0.66	0.64	6.00	1.29	4.43	11.73
Bed-Paratill	Rigid	8R-30	MFWD 225	22,600	150	12	0.102	1.38	3.07	0.83	0.60	5.90	1.62	4.21	11.73
Bed-Paratill	Rigid	8R-38	MFWD 225	22,600	150	12	0.080	1.09	2.43	0.65	0.48	4.66	1.28	3.32	9.27
Bed-Rip/Disk	Fold.	8R-38	MFWD 190	36,900	300	20	0.073	0.98	1.85	0.13	0.39	3.37	0.74	2.76	6.88
Bed-Rip/Disk	Fold.	12R-30	MFWD 225	56,600	300	20	0.061	0.83	1.85	0.17	0.36	3.23	0.96	2.54	6.73
Bed-Rip/Disk	Fold.	12R-38	MFWD 225	56,600	300	20	0.046	0.62	1.39	0.13	0.27	2.42	0.72	1.90	5.05
Bed-Rip/Disk	Rigid	4R-30	MFWD 190	17,300	300	20	0.184	2.49	4.70	0.15	1.01	8.36	0.88	6.98	16.23
Bed-Rip/Disk	Rigid	4R-38	MFWD 190	17,300	300	20	0.146	1.98	3.73	0.12	0.80	6.64	0.70	5.54	12.88
Bed-Rip/Disk	Rigid	6R-38	MFWD 190	23,900	300	20	0.097	1.31	2.47	0.11	0.53	4.43	0.64	3.67	8.75
Bed-Rip/Disk	Rigid	8R-30	MFWD 190	31,300	300	20	0.139	1.87	3.53	0.21	0.76	6.39	1.20	5.25	12.84
Bed-Rip/Disk	Rigid	8R-38	MFWD 190	31,300	300	20	0.073	0.98	1.85	0.11	0.39	3.35	0.63	2.76	6.75
Bed-Rip/Disk	Rigid	6R-30	MFWD 190	23,900	300	20	0.123	1.66	3.13	0.14	0.67	5.62	0.81	4.65	11.09
Bed-Rip/Disk/Cond.		6-Row	MFWD 225	24,600	150	12	0.107	1.45	3.23	0.95	0.64	6.28	1.85	4.43	12.57
Bed-Rip/Disk/Cond.		8-Row	MFWD 225	32,700	150	12	0.080	1.09	2.43	0.95	0.48	4.95	1.85	3.32	10.14
Bed/Disk (Hipper)		4R-38	MFWD 150	9,200	160	10	0.147	1.99	2.96	0.33	0.59	5.89	0.99	3.98	10.87
Bed/Disk (Hipper)		6R-38	MFWD 170	13,000	160	10	0.098	1.33	2.24	0.32	0.45	4.35	0.93	3.15	8.44
Bed/Disk (Hipper)		8R-30	MFWD 190	17,800	160	10	0.093	1.26	2.38	0.41	0.51	4.58	1.21	3.54	9.34
Bed/Disk (Hipper)		8R-38 2x1	MFWD 190	29,200	160	10	0.049	0.66	1.25	0.36	0.26	2.55	1.05	1.86	5.46
Bed/Disk (Hipper)		12R-30	MFWD 225	31,000	160	10	0.062	0.84	1.88	0.48	0.37	3.58	1.41	2.57	7.57
Bed/Disk (Hipper)		12R-38	MFWD 225	29,200	160	10	0.049	0.66	1.48	0.36	0.29	2.80	1.05	2.03	5.89
Bed/Disk (Hipper)Fl		8R-38	MFWD 190	2,000	160	10	0.074	1.00	1.88	0.03	0.40	3.32	0.10	2.79	6.23
Bed/Disk (Hipper)Rd		8R-38	MFWD 190	18,400	160	10	0.074	1.00	1.88	0.34	0.40	3.63	0.99	2.79	7.42
Bed/Disk w/roller		8R-30	MFWD 190	26,600	160	10	0.093	1.26	2.38	0.62	0.51	4.78	1.82	3.54	10.14
Bed/Disk w/roller		8R-38	MFWD 190	26,600	160	10	0.074	1.00	1.88	0.49	0.40	3.78	1.43	2.79	8.02
Bed/Disk w/roller		12R-30/40	MFWD 225	47,000	160	10	0.062	0.84	1.88	0.73	0.37	3.83	2.14	2.57	8.55
Bed/Lister		4R-38	MFWD 150	18,200	160	8	0.228	3.08	4.58	0.97	0.92	9.57	3.36	6.16	19.09
Bed/Lister		6R-38	MFWD 150	19,100	160	8	0.120	1.62	2.41	0.53	0.48	5.06	1.85	3.24	10.16
Bed/Lister		8R-30	MFWD 190	23,100	160	8	0.114	1.54	2.90	0.61	0.62	5.68	2.13	4.31	12.13
Bed/Lister		8R-38	MFWD 190	23,400	160	8	0.090	1.21	2.29	0.49	0.49	4.50	1.70	3.40	9.62
Bed/Lister		8R-38 2x1	MFWD 190	46,700	160	8	0.060	0.81	1.52	0.65	0.32	3.32	2.27	2.27	7.86
Bed/Lister		12R-38	MFWD 225	46,700	160	8	0.060	0.81	1.80	0.65	0.35	3.63	2.27	2.47	8.38
Bed/Lister		16R-30	MFWD 225	58,100	160	8	0.035	0.47	1.05	0.47	0.20	2.22	1.65	1.44	5.32
Bed/Lister		16R40	MFWD 300	60,900	160	8	0.043	0.58	1.73	0.61	0.37	3.30	2.12	2.58	8.01
Bed/Lister-Roll-Fold		8R-38	MFWD 190	24,300	160	10	0.074	1.00	1.88	0.45	0.40	3.74	1.31	2.79	7.85
Bed/Lister-Roll-Fold		12R-30	MFWD 225	29,200	160	10	0.062	0.84	1.88	0.45	0.37	3.55	1.33	2.57	7.46
Bed/Lister-Roll-Fold		12R-38	MFWD 225	33,700	160	10	0.049	0.66	1.48	0.41	0.29	2.86	1.21	2.03	6.11
Bed/Lister-Roll-Fold		16R-30	MFWD 225	34,800	160	10	0.046	0.63	1.41	0.40	0.27	2.73	1.19	1.93	5.85
Bed/Lister-Roll-Rig.		8R-38	MFWD 190	20,300	160	10	0.074	1.00	1.88	0.37	0.40	3.66	1.09	2.79	7.56
Blade-Box		6'-7'	MFWD 105	1,221	200	20	0.020	0.27	0.28	0.01	0.04	0.60	0.01	0.28	0.89
Blade-Box		8'-10'	MFWD 105	3,700	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	1,213	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	3,550	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	3.48	6.55	1.96	1.40	13.41	4.44	9.73	27.59
Boll Buggy		4R-38 (350)	MFWD 190	30,500	200	10	0.257	3.48	6.55	1.96	1.40	13.41	4.44	9.73	27.59
Boll Buggy		4R2x1 (350)	MFWD 190	30,500	200	10	0.172	2.32	4.38	1.31	0.94	8.96	2.97	6.50	18.44
Boll Buggy		6R-30 (355)	MFWD 190	30,500	200	10	0.218	2.94	5.54	1.66	1.19	11.35	3.76	8.24	23.36
Boll Buggy		6R-38 (355)	MFWD 190	30,500	200	10	0.172	2.32	4.38	1.31	0.94	8.96	2.97	6.50	18.44
Chisel Plow-Folding		24'	MFWD 190	39,900	150	12	0.076	1.03	1.94	1.10	0.41	4.49	2.14	2.88	9.52
Chisel Plow-Folding		32'	MFWD 225	51,900	150	12	0.057	0.78	1.73	1.08	0.34	3.94	2.10	2.38	8.43
Chisel Plow-Folding		42'	MFWD 225	62,500	150	12	0.044	0.59	1.32	0.99	0.26	3.17	1.93	1.81	6.92
Chisel Plow-Folding		50'	MFWD 225	81,900	150	10	0.036	0.49	1.11	1.31	0.22	3.14	2.35	1.52	7.02
Chisel Plow-Folding		61'	MFWD 225	92,400	150	12	0.030	0.40	0.91	1.01	0.18	2.51	1.96	1.24	5.72
Chisel Plow-Rigid		10'	MFWD 170	7,090	150	12	0.184	2.49	4.20	0.47	0.85	8.03	0.92	5.90	14.85
Chisel Plow-Rigid		15'	2WD 130	11,800	150	12	0.123	1.66	2.14	0.52	0.39	4.73	1.02	2.63	8.38
Chisel Plow-Rigid		20'	MFWD 225	11,300	150	12	0.102	1.38	3.09	0.41	0.61	5.51	0.81	4.23	10.56
Chisel Plow-Rigid		24'	MFWD 190	11,700	150	12	0.077	1.04	1.95	0.32	0.42	3.74	0.63	2.90	7.28
Cultivate		4R-30	2WD 105	12,100	150	10	0.206	2.78	2.89	0.66	0.44	6.79	1.94	2.96	11.70
Cultivate		4R-38	2WD 105	12,200	150	10	0.162	2.19	2.28	0.52	0.31	5.31	1.54	2.06	8.92
Cultivate		6R-30	MFWD 150	16,300	150	10	0.137	1.85	2.76	0.59	0.55	5.77	1.74	3.71	11.23
Cultivate		6R-38	MFWD 150	17,200	150	10	0.108	1.46	2.17	0.49	0.44	4.58	1.45	2.92	8.96
Cultivate		8R-30	MFWD 190	21,400	150	10	0.103	1.39	2.62	0.58	0.56	5.16	1.71	3.89	10.78
Cultivate		8R-38	MFWD 190	22,600	150	10	0.073	0.99	1.87	0.44	0.40	3.71	1.29	2.78	7.79
Cultivate		8R-38 2x1	MFWD 190	35,400	150	10	0.054	0.73	1.38	0.51	0.29	2.92	1.49	2.05	6.47
Cultivate		12R-30	MFWD 225	39,900	150	10	0.068	0.92	2.07	0.73	0.41	4.14	2.13	2.83	9.11
Cultivate		12R-38	MFWD 225	39,100	150	10	0.054	0.73	1.63	0.56	0.32	3.25	1.65	2.23	7.14
Cultivate		16R-30	MFWD 225	47,800	150	10	0.051	0.69	1.55	0.65	0.30	3.21	1.92	2.12	7.25
Cultivate & Post		4R-30	2WD 105	19,400	150	10	0.220	3.96	3.09	1.13	0.42	8.61	3.32	2.79	14.73
Cultivate & Post		4R-38	2WD 105	19,500	150	10	0.173	3.12	2.43	0.90	0.33	6.79	2.63	2.20	11.62
Cultivate & Post		6R-30	MFWD 150	23,600	150	10	0.146	2.64	2.94	0.92	0.59	7.10	2.69	3.95	13.76
Cultivate & Post		6R-38	MFWD 150	24,500	150	10	0.115	2.08	2.32	0.75	0.47	5.64	2.21	3.12	10.97
Cultivate & Post		8R-30	MFWD 190	28,700	150	10	0.110	1.98	2.79	0.84	0.60	6.22	2.45	4.15	12.83
Cultivate & Post		8R-38	MFWD 190	29,800	150	10	0.086	1.56	2.21	0.69	0.47	4.94	2.01	3.28	10.25
Cultivate & Post		8R-38 2x1	MFWD 190	47,800	150	10	0.057	1.04	1.47	0.73	0.31	3.57	2.15	2.18	7.91

(continued)



Appendix Table 3. Towed equipment: estimated purchase price, annual use, useful life, performance rate, and direct and fixed cost per acre, Mississippi, 2019 (continued)

Item Name	Size	Power Unit	Purchase Price	Annual Use	Useful Life	Perf Rate	Labor	Fuel	---R&M---		Total Direct	--Fixed--		Total Cost
									Imp.	P.U.		Imp.	P.U.	
			dollars	hours	years	hr/acre	-----\$/acre-----							
Cultivate & Post	12R-30	MFWD 225	47,200	150	10	0.073	1.32	2.20	0.92	0.43	4.89	2.69	3.02	10.61
Cultivate & Post	12R-38	MFWD 225	47,800	150	10	0.057	1.04	1.74	0.73	0.34	3.87	2.15	2.38	8.41
Cultivate & Post	16R-30	MFWD 225	56,500	150	10	0.055	0.99	1.65	0.82	0.32	3.80	2.42	2.26	8.49
Disk & Incorporate	14'	2WD 130	31,900	200	10	0.149	2.69	2.60	1.43	0.48	7.21	2.78	3.19	13.20
Disk & Incorporate	20'	MFWD 190	44,500	180	10	0.092	1.24	2.35	1.37	0.50	5.47	2.67	3.49	11.63
Disk & Incorporate	24'	MFWD 190	50,000	200	10	0.087	1.57	2.21	1.30	0.47	5.58	2.55	3.29	11.42
Disk & Incorporate	28'	MFWD 225	59,200	200	10	0.074	1.34	2.25	1.32	0.44	5.37	2.58	3.08	11.05
Disk & Incorporate	32'	MFWD 225	66,000	200	10	0.065	1.18	1.97	1.29	0.39	4.84	2.52	2.69	10.06
Disk Harrow	14'	2WD 130	24,600	180	10	0.140	1.89	2.44	0.95	0.45	5.74	2.24	2.99	10.98
Disk Harrow	20'	MFWD 190	39,200	180	10	0.098	1.32	2.49	1.06	0.53	5.43	2.49	3.70	11.63
Disk Harrow	24'	MFWD 190	42,700	180	10	0.081	1.10	2.08	0.97	0.44	4.60	2.26	3.09	9.96
Disk Harrow	28'	MFWD 225	52,000	180	10	0.070	0.94	2.11	1.01	0.41	4.49	2.36	2.89	9.75
Disk Harrow	32'	MFWD 225	58,700	180	10	0.061	0.82	1.84	1.00	0.36	4.04	2.33	2.53	8.91
Disk Harrow	42'	MFWD 225	104,000	180	10	0.046	0.63	1.40	1.35	0.27	3.67	3.15	1.92	8.75
Disk Harrow 40-100hp	14'	2WD 75	15,000	180	10	0.140	1.89	1.40	0.58	0.16	4.05	1.36	1.12	6.54
Disk Heavy	14'	MFWD 150	31,900	180	10	0.145	1.97	2.92	1.29	0.59	6.78	3.02	3.93	13.74
Disk Heavy	20'	MFWD 190	39,200	180	10	0.097	1.31	2.47	1.05	0.53	5.38	2.47	3.67	11.53
Disk Heavy	28'	MFWD 225	52,000	180	10	0.075	1.02	2.27	1.09	0.45	4.84	2.55	3.11	10.52
Disk Ripper	15'	MFWD 225	45,200	180	10	0.136	1.84	4.10	1.71	0.81	8.46	3.99	5.61	18.07
Ditcher		2WD 130	5,700	200	10	0.020	0.27	0.34	0.04	0.06	0.72	0.06	0.42	1.22
Ditcher (1m/160a)		2WD 130	5,700	200	10	0.009	0.12	0.16	0.02	0.03	0.34	0.03	0.20	0.57
Fert Appl (Liquid)	4R-38	MFWD 150	12,900	150	8	0.154	2.79	3.10	1.33	0.62	7.85	1.65	4.17	13.68
Fert Appl (Liquid)	6R-30	MFWD 170	16,700	150	8	0.130	2.36	2.97	1.45	0.60	7.40	1.81	4.18	13.40
Fert Appl (Liquid)	6R-38	MFWD 170	16,100	150	8	0.103	1.86	2.35	1.10	0.47	5.80	1.38	3.30	10.48
Fert Appl (Liquid)	8R-30	MFWD 190	16,900	150	8	0.098	1.77	2.49	1.10	0.53	5.91	1.37	3.70	11.00
Fert Appl (Liquid)	8R-38	MFWD 190	19,000	150	8	0.077	1.40	1.97	0.98	0.42	4.78	1.22	2.93	8.94
Fert Appl (Liquid)	8R-38 2x1	MFWD 190	20,300	150	8	0.051	0.93	1.31	0.69	0.28	3.22	0.87	1.95	6.05
Fert Appl (Liquid)	12R-30	MFWD 225	22,600	150	8	0.078	1.41	2.36	1.18	0.46	5.43	1.47	3.23	10.14
Fert Appl (Liquid)	12R-38	MFWD 225	19,900	150	8	0.051	0.93	1.55	0.68	0.30	3.48	0.85	2.13	6.46
Field Cult & Inc	42'	MFWD 225	69,400	100	10	0.037	0.68	1.13	0.65	0.22	2.69	3.06	1.55	7.32
Field Cult & Inc	50'	MFWD 225	81,500	100	10	0.031	0.57	0.95	0.64	0.18	2.36	3.02	1.30	6.69
Field Cult & Inc Fld	24'	MFWD 170	34,000	100	10	0.066	1.19	1.50	0.56	0.30	3.56	2.62	2.11	8.30
Field Cult & Inc Fld	32'	MFWD 190	48,700	100	10	0.049	0.89	1.26	0.60	0.27	3.02	2.82	1.87	7.72
Field Cult & Inc Rdg	12'	2WD 150	15,800	100	10	0.132	2.38	2.65	0.52	0.45	6.01	2.44	2.99	11.44
Field Cultivate Fld	24'	MFWD 170	28,600	100	10	0.062	0.84	1.41	0.44	0.28	2.98	2.07	1.98	7.05
Field Cultivate Fld	32'	MFWD 190	43,300	100	10	0.046	0.63	1.18	0.50	0.25	2.57	2.36	1.76	6.70
Field Cultivate Fld	42'	MFWD 225	60,700	100	10	0.035	0.48	1.07	0.53	0.21	2.30	2.52	1.46	6.28
Field Cultivate Fld	50'	MFWD 225	65,900	100	10	0.029	0.40	0.89	0.49	0.17	1.97	2.29	1.23	5.50
Field Cultivate Rdg	12'	2WD 150	10,400	100	10	0.124	1.68	2.49	0.32	0.42	4.92	1.51	2.81	9.25
Grain Cart Corn	500 bu	MFWD 190	25,700	200	12	0.025	0.34	0.64	0.17	0.13	1.29	0.34	0.95	2.59
Grain Cart Corn	700 bu	MFWD 190	37,300	200	12	0.025	0.34	0.64	0.25	0.13	1.37	0.49	0.95	2.83
Grain Cart Corn	1000 bu	MFWD 225	46,900	200	12	0.025	0.34	0.76	0.32	0.15	1.57	0.62	1.04	3.24
Grain Cart Rice	500 bu	MFWD 190	25,700	200	12	0.062	0.84	1.58	0.43	0.34	3.21	0.84	2.36	6.41
Grain Cart Rice	700 bu	MFWD 190	37,300	200	12	0.055	0.74	1.39	0.55	0.30	2.99	1.08	2.07	6.15
Grain Cart Rice	1000 bu	MFWD 190	46,900	200	12	0.045	0.61	1.16	0.58	0.25	2.61	1.13	1.73	5.48
Grain Cart Soybean	500 bu	MFWD 190	25,700	200	12	0.025	0.34	0.64	0.17	0.13	1.30	0.34	0.96	2.61
Grain Cart Soybean	700 bu	MFWD 190	37,300	200	12	0.021	0.28	0.54	0.21	0.11	1.15	0.41	0.80	2.37
Grain Cart Soybean	1000 bu	MFWD 190	46,900	200	12	0.021	0.28	0.54	0.26	0.11	1.21	0.52	0.80	2.54
Grain Cart Wht/Sor	500 bu	MFWD 190	25,700	200	12	0.025	0.34	0.64	0.17	0.13	1.30	0.34	0.96	2.61
Grain Cart Wht/Sor	700 bu	MFWD 190	37,300	200	12	0.021	0.28	0.54	0.21	0.11	1.15	0.41	0.80	2.37
Grain Cart Wht/Sor	1000 bu	MFWD 190	46,900	200	12	0.021	0.28	0.54	0.26	0.11	1.21	0.52	0.80	2.54
Grain Drill	10'	2WD 130	26,700	150	8	0.188	4.25	3.28	1.88	0.60	10.03	4.01	4.03	18.07
Grain Drill	12'	2WD 130	26,800	150	8	0.157	3.54	2.73	1.57	0.50	8.36	3.35	3.35	15.08
Grain Drill	15'	MFWD 150	32,600	150	8	0.125	2.83	2.52	1.53	0.51	7.40	3.26	3.39	14.06
Grain Drill	20'	MFWD 170	38,800	150	8	0.094	2.12	2.14	1.37	0.43	6.08	2.91	3.01	12.00
Grain Drill	24'	MFWD 190	65,600	150	8	0.078	1.77	1.99	1.93	0.42	6.13	4.10	2.96	13.21
Grain Drill	30'	MFWD 225	63,800	150	8	0.062	1.41	1.89	1.50	0.37	5.19	3.19	2.59	10.97
Grain Drill	35'	MFWD 225	91,000	150	8	0.053	1.21	1.62	1.83	0.32	4.99	3.90	2.22	11.12
Grain Drill & Pre	10'	2WD 130	33,900	150	8	0.203	4.58	3.53	2.58	0.65	11.35	5.48	4.34	21.18
Grain Drill & Pre	12'	2WD 130	34,100	150	8	0.169	3.81	2.94	2.16	0.54	9.47	4.60	3.61	17.69
Grain Drill & Pre	15'	MFWD 150	39,900	150	8	0.135	3.05	2.71	2.02	0.54	8.34	4.30	3.65	16.30
Grain Drill & Pre	20'	MFWD 170	46,000	150	8	0.101	2.29	2.31	1.75	0.46	6.82	3.72	3.24	13.79
Grain Drill & Pre	24'	MFWD 190	71,000	150	8	0.084	1.90	2.15	2.25	0.46	6.77	4.78	3.19	14.76
Grain Drill & Pre	30'	MFWD 225	71,000	150	8	0.067	1.52	2.03	1.80	0.40	5.77	3.83	2.79	12.39
Grain Drill & Pre	35'	MFWD 225	98,200	150	8	0.058	1.30	1.74	2.13	0.34	5.53	4.54	2.39	12.47
Grain Drill & Pre T	8R-38	MFWD 225	51,800	150	8	0.062	1.41	1.89	1.22	0.37	4.90	2.59	2.59	10.09
Harrow - Rigid	21'	2WD 150	6,750	200	10	0.073	0.99	1.48	0.17	0.25	2.91	0.29	1.67	4.87
Harrow - Folding	24'	MFWD 190	15,800	200	10	0.064	0.87	1.64	0.35	0.35	3.23	0.59	2.44	6.27
Harrow - Folding	30'	MFWD 190	17,700	200	10	0.051	0.69	1.31	0.32	0.28	2.61	0.53	1.95	5.10
Harrow - Folding	40'	MFWD 190	20,200	200	10	0.038	0.52	0.98	0.27	0.21	1.99	0.45	1.46	3.92
Harrow - Folding	48'	MFWD 225	23,700	200	10	0.032	0.43	0.97	0.26	0.19	1.87	0.44	1.33	3.65
Harrow - Rigid	13'	2WD 130	4,950	200	10	0.119	1.61	2.07	0.20	0.38	4.28	0.34	2.55	7.18
Header - Corn	6R-30	265 hp	48,500	300	8	0.170	2.30	6.03	2.06	6.01	16.41	3.42	25.87	45.71
Header - Corn	6R-38	265 hp	48,800	300	8	0.134	1.81	4.76	1.64	4.74	12.97	2.72	20.42	36.12
Header - Corn	8R-30	265 hp	62,300	300	8	0.127	1.72	4.52	1.98	4.50	12.75	3.30	19.40	35.46
Header - Corn	8R-38	325 hp	63,000	300	8	0.100	1.36	4.39	1.59	3.80	11.15	2.64	16.38	30.17
Header - Corn	12R-20	325 hp	95,600	300	8	0.127	1.72	5.55	3.05	4.81	15.14	5.06	20.72	40.93

(continued)

Appendix Table 3. Towed equipment: estimated purchase price, annual use, useful life, performance rate, and direct and fixed cost per acre, Mississippi, 2019 (continued)

Item Name	Size	Power Unit	Purchase Price	Annual Use	Useful Life	Perf Rate	Labor	Fuel	---R&M---		Total Direct	--Fixed--		Total Cost
									Imp.	P.U.		Imp.	P.U.	
			dollars	hours	years	hr/ac	-----\$/acre-----							
Header - Corn	12R-30	325 hp	98,200	300	8	0.085	1.15	3.70	2.09	3.21	10.15	3.47	13.81	27.43
Header - Draper (CL)	25' Rigid	265 hp	60,300	300	8	0.203	2.74	7.20	2.80	7.17	19.92	4.88	30.85	55.66
Header - Draper (CL)	30' Rigid	325 hp	70,600	300	8	0.169	2.28	7.36	2.73	6.38	18.76	4.76	27.45	50.98
Header - Draper (CL)	36' Rigid	355 hp	74,100	300	8	0.141	1.90	6.69	2.39	5.74	16.74	4.16	24.71	45.62
Header - Draper (CL)	40' Rigid	425 hp	79,500	30	8	0.126	1.71	7.21	23.12	5.44	37.50	40.21	23.43	101.16
Header - Draper (SL)	25' Rigid	325 hp	60,300	300	8	0.176	2.37	7.65	2.43	6.63	19.11	4.23	28.55	51.88
Header - Draper (SL)	30' Rigid	325 hp	70,600	300	8	0.146	1.98	6.37	2.37	5.53	16.26	4.12	23.79	44.19
Header - Draper (SL)	36' Rigid	355 hp	74,100	300	8	0.122	1.65	5.80	2.07	4.97	14.51	3.60	21.41	39.53
Header - Draper	40' Rigid	425 hp	79,500	30	8	0.110	1.48	6.25	20.04	4.72	32.50	34.85	20.31	87.67
Header -RiceStrp(CL)	20'	265 hp	50,000	300	8	0.253	3.42	9.00	3.17	8.96	24.56	5.26	38.57	68.41
Header -RiceStrp(CL)	24'	325 hp	55,400	300	8	0.211	2.85	9.20	2.92	7.97	22.96	4.86	34.32	62.15
Header -RiceStrp(CL)	32'	325 hp	60,800	300	8	0.158	2.14	6.90	2.41	5.98	17.43	4.00	25.74	47.18
Header -RiceStrp(SL)	20'	265 hp	50,000	300	8	0.220	2.97	7.80	2.75	7.76	21.29	4.56	33.42	59.28
Header -RiceStrp(SL)	24'	325 hp	55,400	300	8	0.183	2.47	7.97	2.53	6.91	19.90	4.21	29.74	53.86
Header -RiceStrp(SL)	32'	325 hp	60,800	300	8	0.137	1.85	5.98	2.09	5.18	15.11	3.47	22.31	40.89
Header -Soybean	22' Flex	265 hp	32,600	300	8	0.116	1.56	4.11	0.94	4.09	10.73	1.57	17.64	29.94
Header -Soybean	25' Flex	325 hp	35,000	300	8	0.102	1.38	4.44	0.89	3.85	10.57	1.48	16.57	28.63
Header -Soybean	30' Flex	325 hp	40,900	300	8	0.085	1.15	3.70	0.87	3.21	8.93	1.44	13.81	24.19
Header -Soybean	35' Flex	355 hp	47,000	300	8	0.072	0.98	3.46	0.85	2.97	8.28	1.42	12.79	22.49
Header Wheat/Sorghum	22' Rigid	265 hp	19,800	300	8	0.116	1.56	4.11	0.57	4.09	10.36	0.95	17.64	28.95
Header Wheat/Sorghum	25' Rigid	325 hp	21,000	300	8	0.102	1.38	4.44	0.53	3.85	10.21	0.89	16.57	27.68
Header Wheat/Sorghum	30' Rigid	325 hp	25,700	300	8	0.085	1.15	3.70	0.54	3.21	8.61	0.90	13.81	23.33
Land Plane	50'x16'	MFWD 190	14,300	200	10	0.151	2.04	3.85	0.43	0.82	7.16	1.26	5.72	14.16
Levee Pull & Seed	8 Blade	MFWD 170	10,400	100	10	0.003	0.04	0.08	0.00	0.01	0.15	0.04	0.11	0.31
Levee Pull (1m/80a)	8 blade	MFWD 170	7,180	100	10	0.003	0.04	0.08	0.00	0.01	0.15	0.02	0.11	0.29
Levee Splitter (1/80)	32"	MFWD 150	7,180	100	10	0.004	0.05	0.08	0.00	0.01	0.16	0.03	0.11	0.31
Module Builder	4R-38(250)	MFWD 190	34,700	200	10	0.257	5.81	6.55	2.23	1.40	16.01	5.06	9.73	30.81
Module Builder	4R-38(350)	MFWD 190	34,700	200	10	0.257	5.81	6.55	2.23	1.40	16.01	5.06	9.73	30.81
Module Builder	4R2x1(350)	MFWD 190	34,700	200	10	0.172	3.88	4.38	1.49	0.94	10.70	3.38	6.50	20.59
Module Builder	6R-30(355)	MFWD 190	34,700	200	10	0.218	4.92	5.54	1.89	1.19	13.56	4.28	8.24	26.09
Module Builder	6R-38(355)	MFWD 190	34,700	200	10	0.172	3.88	4.38	1.49	0.94	10.70	3.38	6.50	20.59
NT Grain Drill	10'	2WD 130	34,100	150	8	0.235	5.31	4.10	3.01	0.75	13.19	6.40	5.03	24.64
NT Grain Drill	12'	2WD 130	47,900	150	8	0.163	3.69	2.84	2.94	0.52	10.00	6.25	3.49	19.75
NT Grain Drill	15'	MFWD 150	55,200	150	8	0.130	2.95	2.62	2.71	0.53	8.82	5.76	3.53	18.12
NT Grain Drill	20'	MFWD 170	71,200	150	8	0.098	2.21	2.23	2.62	0.45	7.52	5.57	3.13	16.23
NT Grain Drill	24'	MFWD 190	90,400	150	8	0.081	1.84	2.08	2.77	0.44	7.15	5.89	3.09	16.14
NT Grain Drill	30'	MFWD 225	103,000	150	8	0.065	1.47	1.97	2.52	0.39	6.36	5.37	2.69	14.44
NT Grain Drill & Pre	10'	2WD 130	41,400	150	8	0.211	4.77	3.68	3.28	0.68	12.41	6.98	4.52	23.92
NT Grain Drill & Pre	12'	2WD 130	55,200	150	8	0.176	3.97	3.06	3.64	0.56	11.26	7.75	3.76	22.78
NT Grain Drill & Pre	15'	MFWD 150	62,400	150	8	0.141	3.18	2.83	3.30	0.57	9.88	7.01	3.80	20.70
NT Grain Drill & Pre	20'	MFWD 170	78,400	150	8	0.105	2.38	2.40	3.10	0.48	8.39	6.61	3.37	18.38
NT Grain Drill & Pre	24'	MFWD 190	97,700	150	8	0.088	1.98	2.24	3.22	0.48	7.94	6.86	3.32	18.13
NT Grain Drill & Pre	30'	MFWD 225	111,000	150	8	0.070	1.59	2.12	2.93	0.42	7.07	6.23	2.90	16.21
NT Plant&Pre-Folding	8R-38	MFWD 170	65,000	150	8	0.083	1.88	1.90	2.03	0.38	6.21	4.33	2.67	13.21
NT Plant&Pre-Folding	8R-38 2x1	MFWD 170	102,000	150	8	0.055	1.25	1.26	2.12	0.25	4.90	4.52	1.77	11.21
NT Plant&Pre-Folding	12R-20	MFWD 190	78,300	150	8	0.105	2.38	2.68	3.10	0.57	8.76	6.60	3.99	19.35
NT Plant&Pre-Folding	12R-30	MFWD 190	87,500	150	8	0.070	1.59	1.79	2.31	0.38	6.08	4.91	2.66	13.66
NT Plant&Pre-Folding	12R-38	MFWD 190	102,000	150	8	0.055	1.25	1.41	2.12	0.30	5.10	4.52	2.10	11.73
NT Plant&Pre-Folding	16R-30	MFWD 190	130,000	150	8	0.052	1.19	1.34	2.57	0.28	5.40	5.48	1.99	12.88
NT Plant&Pre-Folding	23R-15	MFWD 190	163,000	150	8	0.073	1.65	1.86	4.48	0.40	8.41	9.54	2.77	20.73
NT Plant&Pre-Folding	24R-20	MFWD 190	182,000	150	8	0.052	1.19	1.34	3.60	0.28	6.43	7.67	1.99	16.10
NT Plant&Pre-Folding	24R-30	MFWD 190	200,000	150	8	0.035	0.79	0.89	2.64	0.19	4.52	5.62	1.33	11.48
NT Plant&Pre-Folding	31R-15	MFWD 225	194,000	150	8	0.054	1.23	1.64	3.97	0.32	7.18	8.45	2.25	17.88
NT Plant&Pre-Folding	32R-15	MFWD 225	210,000	150	8	0.052	1.19	1.59	4.16	0.31	7.26	8.85	2.18	18.29
NT Plant&Pre-Rigid	4R-30	2WD 130	29,300	150	8	0.211	4.77	3.68	2.32	0.68	11.45	4.94	4.52	20.92
NT Plant&Pre-Rigid	4R-38	2WD 130	35,200	150	8	0.166	3.75	2.89	2.19	0.53	9.39	4.67	3.56	17.62
NT Plant&Pre-Rigid	6R-30	MFWD 150	43,100	150	8	0.141	3.18	2.83	2.27	0.57	8.86	4.84	3.80	17.51
NT Plant&Pre-Rigid	6R-38	MFWD 150	41,800	150	8	0.111	2.51	2.23	1.74	0.45	6.94	3.71	3.00	13.66
NT Plant&Pre-Rigid	8R-30	MFWD 170	53,100	150	8	0.105	2.38	2.40	2.10	0.48	7.38	4.47	3.37	15.24
NT Plant&Pre-Rigid	8R-38	MFWD 170	50,600	150	8	0.083	1.88	1.90	1.58	0.38	5.76	3.37	2.67	11.80
NT Plant&Pre-Rigid	11R-15	MFWD 170	63,500	150	8	0.143	3.24	3.27	3.42	0.66	10.61	7.28	4.59	22.49
NT Plant&Pre-Rigid	11R-20	MFWD 170	62,300	150	8	0.115	2.60	2.62	2.70	0.53	8.47	5.74	3.69	17.90
NT Plant&Pre-Rigid	12R-20	MFWD 190	65,000	150	8	0.105	2.38	2.68	2.57	0.57	8.23	5.48	3.99	17.70
NT Plant&Pre-Rigid	12R-30	MFWD 190	79,300	150	8	0.070	1.59	1.79	2.09	0.38	5.86	4.45	2.66	12.98
NT Plant&Pre-Rigid	15R-15	MFWD 190	80,900	150	8	0.113	2.55	2.87	3.43	0.61	9.47	7.29	4.27	21.04
NT Plant&Pre-TwinRow	12R-30/40	MFWD 225	148,000	150	8	0.055	1.25	1.67	3.08	0.33	6.35	6.56	2.29	15.21
NT Plant&Pre-TwinRow	8R-30/40	MFWD 225	121,000	150	8	0.083	1.88	2.51	3.79	0.49	8.69	8.06	3.44	20.20
NT Plant-Folding	8R-38	MFWD 170	57,800	150	8	0.077	1.75	1.76	1.68	0.35	5.56	3.57	2.48	11.61
NT Plant-Folding	8R-38 2x1	MFWD 170	93,000	150	8	0.051	1.16	1.17	1.80	0.23	4.38	3.83	1.65	9.86
NT Plant-Folding	12R-20	MFWD 190	71,100	150	8	0.098	2.21	2.49	2.61	0.53	7.86	5.56	3.70	17.14
NT Plant-Folding	12R-30	MFWD 190	78,900	150	8	0.065	1.47	1.66	1.93	0.35	5.43	4.11	2.47	12.03
NT Plant-Folding	12R-38	MFWD 190	93,000	150	8	0.051	1.16	1.31	1.80	0.28	4.56	3.83	1.95	10.35
NT Plant-Folding	16R-30	MFWD 190	122,000	150	8	0.049	1.10	1.24	2.24	0.26	4.87	4.77	1.85	11.50
NT Plant-Folding	23R-15	MFWD 190	155,000	150	8	0.068	1.53	1.73	3.96	0.37	7.61	8.42	2.57	18.61
NT Plant-Folding	24R-20	MFWD 190	174,000	150	8	0.049	1.10	1.24	3.20	0.26	5.83	6.81	1.85	14.49
NT Plant-Folding	24R-30	MFWD 190	184,000	150	8	0.032	0.73	0.83	2.25	0.17	4.00	4.80	1.23	10.04
NT Plant-Folding	31R-15	MFWD 225	185,000	150	8	0.050	1.14	1.52	3.52	0.30	6.49	7.48	2.09	16.07
NT Plant-Folding	32R-15	MFWD 225	201,000	150	8	0.049	1.10	1.47	3.70	0.29	6.58	7.86	2.02	16.47
NT Plant-Rigid	4R-30	2WD 130	22,100	150	8	0.196	4.43	3.41	1.62	0.63	10.11	3.46	4.19	17.77
NT Plant-Rigid	4R-38	2WD 130	27,900	150	8	0.154	3.49	2.69	1.61	0.49	8.29	3.44	3.30	15.04

(continued)

Appendix Table 3. Towed equipment: estimated purchase price, annual use, useful life, performance rate, and direct and fixed cost per acre, Mississippi, 2019 (continued)

Item Name	Size	Power Unit	Purchase Price	Annual Use	Useful Life	Perf Rate	Labor	Fuel	---R&M---	Total Direct	---Fixed---	Total Cost		
			dollars	hours	years	hr/ac	-----\$/acre-----							
							Imp.	P.U.	Imp.	P.U.				
NT Plant-Rigid	6R-30	MFWD 150	35,800	150	8	0.130	2.95	2.62	1.75	0.53	7.87	3.73	3.53	15.14
NT Plant-Rigid	6R-38	MFWD 150	34,500	150	8	0.103	2.33	2.07	1.33	0.41	6.16	2.84	2.78	11.79
NT Plant-Rigid	8R-30	MFWD 170	45,800	150	8	0.098	2.21	2.23	1.68	0.45	6.59	3.58	3.13	13.31
NT Plant-Rigid	8R-38	MFWD 170	43,300	150	8	0.077	1.75	1.76	1.26	0.35	5.13	2.68	2.48	10.29
NT Plant-Rigid	11R-15	MFWD 170	56,200	150	8	0.133	3.01	3.03	2.81	0.61	9.48	5.98	4.26	19.74
NT Plant-Rigid	11R-20	MFWD 170	55,000	150	8	0.107	2.42	2.44	2.21	0.49	7.57	4.70	3.42	15.71
NT Plant-Rigid	12R-20	MFWD 190	57,800	150	8	0.098	2.21	2.49	2.12	0.53	7.37	4.52	3.70	15.61
NT Plant-Rigid	12R-30	MFWD 190	70,700	150	8	0.065	1.47	1.66	1.73	0.35	5.23	3.69	2.47	11.40
NT Plant-Rigid	15R-15	MFWD 190	72,300	150	8	0.105	2.37	2.67	2.84	0.57	8.46	6.05	3.96	18.48
NT Plant-TwinRow	12R-30/40	MFWD 225	139,000	150	8	0.051	1.16	1.55	2.69	0.30	5.72	5.72	2.13	13.58
NT Plant-TwinRow	8R-30/40	MFWD 225	114,000	150	8	0.077	1.75	2.33	3.31	0.46	7.87	7.05	3.20	18.12
Peanut Cond.& Lifter	6-Row	MFWD 190	13,300	300	20	0.100	1.35	2.54	0.22	0.54	4.66	0.37	3.77	8.81
Peanut Conditioner	6-Row	MFWD 190	15,300	300	20	0.100	1.35	2.54	0.30	0.54	4.74	0.39	3.77	8.92
Peanut Dig/Invertor	4R-30	MFWD 190	29,800	300	15	0.235	3.18	5.99	1.74	1.28	12.22	2.34	8.90	23.47
Peanut Dig/Invertor	4R-38	MFWD 190	29,800	300	15	0.186	2.51	4.73	1.38	1.01	9.65	1.85	7.03	18.53
Peanut Dig/Invertor	6R-38	MFWD 190	43,400	300	15	0.124	1.67	3.15	0.94	0.67	6.45	1.79	4.68	12.93
Peanut Dump Cart	6-Row	MFWD 190	48,500	300	20	0.310	4.18	7.88	0.87	1.69	14.64	4.16	11.70	30.51
Peanut Harvester	4R-30	MFWD 225	137,000	300	20	0.849	11.48	25.59	6.59	5.07	48.75	30.22	35.04	114.02
Peanut Harvester	4R-38	MFWD 225	137,000	300	20	0.934	12.62	28.14	7.25	5.57	53.60	34.33	38.52	126.46
Peanut Harvester	6R-38	MFWD 225	151,000	300	20	0.625	8.44	18.81	4.56	3.73	35.55	25.30	25.76	86.63
Peanut Lifter	6-Row	MFWD 225	6,500	300	20	0.100	1.35	3.01	0.13	0.59	5.09	0.16	4.12	9.38
Peanut Plt&Pre Fold.	12R-38	MFWD 190	91,000	150	8	0.080	1.81	2.04	2.74	0.43	7.04	5.83	3.03	15.91
Peanut Plt&Pre Rigid	8R-30	MFWD 190	46,000	150	8	0.152	3.44	3.88	2.63	0.83	10.80	5.60	5.77	22.17
Peanut Plt&Pre Rigid	8R-38	MFWD 190	43,400	150	8	0.120	2.72	3.07	1.96	0.66	8.42	4.17	4.56	17.16
Pipe Spool 160ac	1/4m roll	2WD 130	3,600	15	12	0.003	0.09	0.05	0.00	0.01	0.16	0.07	0.06	0.31
Pipe Trailer 1m/160a	30'	2WD 130	1,380	100	15	0.003	0.18	0.06	0.00	0.01	0.26	0.00	0.08	0.35
Plant & Pre-Folding	8R-38	MFWD 170	57,900	150	8	0.080	1.81	1.82	1.74	0.37	5.75	3.70	2.56	12.02
Plant & Pre-Folding	8R-38 2x1	MFWD 170	91,000	150	8	0.053	1.20	1.21	1.82	0.24	4.49	3.87	1.70	10.07
Plant & Pre-Folding	12R-20	MFWD 190	67,600	150	8	0.101	2.29	2.58	2.57	0.55	8.00	5.47	3.83	17.31
Plant & Pre-Folding	12R-30	MFWD 190	76,800	150	8	0.067	1.52	1.72	1.94	0.37	5.56	4.14	2.55	12.26
Plant & Pre-Folding	12R-38	MFWD 190	91,000	150	8	0.053	1.20	1.35	1.82	0.29	4.68	3.87	2.01	10.57
Plant & Pre-Folding	16R-30	MFWD 190	116,000	150	8	0.050	1.14	1.29	2.20	0.27	4.92	4.69	1.91	11.53
Plant & Pre-Folding	23R-15	MFWD 190	143,000	150	8	0.070	1.59	1.79	3.78	0.38	7.55	8.03	2.66	18.25
Plant & Pre-Folding	24R-20	MFWD 190	161,000	150	8	0.050	1.14	1.29	3.06	0.27	5.77	6.51	1.91	14.21
Plant & Pre-Folding	24R-30	MFWD 190	178,000	150	8	0.033	0.76	0.86	2.25	0.18	4.06	4.80	1.27	10.15
Plant & Pre-Folding	31R-15	MFWD 225	166,000	150	8	0.052	1.18	1.57	3.26	0.31	6.34	6.94	2.16	15.45
Plant & Pre-Folding	32R-15	MFWD 225	181,000	150	8	0.050	1.14	1.52	3.44	0.30	6.42	7.32	2.09	15.84
Plant & Pre-Rigid	4R-30	2WD 130	25,800	150	8	0.203	4.58	3.53	1.96	0.65	10.73	4.17	4.34	19.25
Plant & Pre-Rigid	4R-38	2WD 130	31,600	150	8	0.159	3.60	2.78	1.89	0.51	8.80	4.02	3.41	16.24
Plant & Pre-Rigid	6R-30	MFWD 150	25,900	150	8	0.135	3.05	2.71	1.31	0.54	7.63	2.79	3.65	14.08
Plant & Pre-Rigid	6R-38	MFWD 150	36,400	150	8	0.106	2.41	2.14	1.45	0.43	6.45	3.10	2.88	12.43
Plant & Pre-Rigid	8R-30	MFWD 170	46,000	150	8	0.101	2.29	2.31	1.75	0.46	6.82	3.72	3.24	13.79
Plant & Pre-Rigid	8R-38	MFWD 170	43,400	150	8	0.080	1.81	1.82	1.30	0.37	5.31	2.77	2.56	10.65
Plant & Pre-Rigid	11R-15	MFWD 170	53,700	150	8	0.148	3.34	3.37	2.98	0.68	10.38	6.34	4.73	21.46
Plant & Pre-Rigid	11R-20	MFWD 170	52,500	150	8	0.110	2.50	2.52	2.18	0.51	7.72	4.64	3.54	15.91
Plant & Pre-Rigid	12R-20	MFWD 190	54,300	150	8	0.101	2.29	2.58	2.06	0.55	7.49	4.39	3.83	15.72
Plant & Pre-Rigid	12R-30	MFWD 190	68,600	150	8	0.067	1.52	1.72	1.74	0.37	5.36	3.70	2.55	11.61
Plant & Pre-Rigid	15R-15	MFWD 190	67,500	150	8	0.108	2.45	2.76	2.74	0.59	8.55	5.84	4.10	18.50
Plant & Pre-TwinRow	12R-30/40	MFWD 225	137,000	150	8	0.053	1.20	1.60	2.74	0.31	5.87	5.83	2.20	13.91
Plant & Pre-TwinRow	8R-30/40	MFWD 225	114,000	150	8	0.080	1.81	2.41	3.43	0.47	8.13	7.29	3.30	18.74
Plant - Folding	8R-38	MFWD 170	50,600	150	8	0.074	1.68	1.69	1.41	0.34	5.13	3.00	2.38	10.52
Plant - Folding	8R-38 2x1	MFWD 170	82,300	150	8	0.049	1.11	1.12	1.53	0.22	4.00	3.25	1.58	8.85
Plant - Folding	12R-20	MFWD 190	60,400	150	8	0.094	2.12	2.39	2.13	0.51	7.17	4.54	3.56	15.27
Plant - Folding	12R-30	MFWD 190	68,200	150	8	0.062	1.41	1.59	1.60	0.34	4.96	3.41	2.37	10.76
Plant - Folding	12R-38	MFWD 190	82,300	150	8	0.049	1.11	1.26	1.53	0.27	4.18	3.25	1.87	9.31
Plant - Folding	16R-30	MFWD 190	10,700	150	8	0.047	1.06	1.19	0.18	0.25	2.70	0.40	1.78	4.89
Plant - Folding	23R-15	MFWD 190	134,000	150	8	0.065	1.47	1.66	3.29	0.35	6.79	6.99	2.47	16.25
Plant - Folding	24R-20	MFWD 190	152,000	150	8	0.047	1.06	1.19	2.68	0.25	5.20	5.71	1.78	12.70
Plant - Folding	24R-30	MFWD 190	178,000	150	8	0.031	0.70	0.79	2.09	0.17	3.77	4.45	1.18	9.42
Plant - Folding	31R-15	MFWD 225	157,000	150	8	0.048	1.09	1.46	2.86	0.29	5.72	6.09	2.00	13.83
Plant - Folding	32R-15	MFWD 225	173,000	150	8	0.047	1.06	1.41	3.05	0.28	5.82	6.50	1.94	14.26
Plant - Rigid	4R-30	2WD 130	18,500	150	8	0.188	4.25	3.28	1.30	0.60	9.45	2.78	4.03	16.26
Plant - Rigid	4R-38	2WD 130	24,300	150	8	0.148	3.35	2.58	1.35	0.47	7.76	2.87	3.17	13.81
Plant - Rigid	6R-30	MFWD 150	30,500	150	8	0.125	2.83	2.52	1.43	0.51	7.30	3.05	3.39	13.75
Plant - Rigid	6R-38	MFWD 150	29,200	150	8	0.099	2.24	1.99	1.08	0.40	5.72	2.31	2.67	10.71
Plant - Rigid	8R-30	MFWD 170	38,700	150	8	0.094	2.12	2.14	1.36	0.43	6.07	2.90	3.01	11.99
Plant - Rigid	8R-38	MFWD 170	36,200	150	8	0.074	1.68	1.69	1.01	0.34	4.73	2.15	2.38	9.26
Plant - Rigid	11R-15	MFWD 170	46,400	150	8	0.137	3.10	3.13	2.39	0.63	9.26	5.09	4.39	18.75
Plant - Rigid	11R-20	MFWD 170	45,200	150	8	0.103	2.32	2.34	1.74	0.47	6.89	3.71	3.29	13.89
Plant - Rigid	12R-20	MFWD 190	47,100	150	8	0.094	2.12	2.39	1.66	0.51	6.70	3.54	3.56	13.80
Plant - Rigid	12R-30	MFWD 190	59,900	150	8	0.062	1.41	1.59	1.41	0.34	4.77	3.00	2.37	10.14
Plant - Rigid	15R-15	2WD 150	58,900	150	8	0.094	2.12	1.89	2.08	0.32	6.42	4.42	2.13	12.98
Plant - TwinRow	12R-30/40	MFWD 225	128,000	150	8	0.049	1.11	1.49	2.38	0.29	5.29	5.06	2.04	12.40
Plant - TwinRow	8R-30/40	MFWD 225	107,000	150	8	0.074	1.68	2.24	2.99	0.44	7.36	6.35	3.07	16.79
Roller/Cultipacker	12'	2WD 130	6,910	300	12	0.124	1.68	2.16	0.20	0.40	4.44	0.31	2.66	7.41
Roller/Cultipacker	20'	MFWD 150	17,000	300	12	0.074	1.00	1.49	0.29	0.30	3.11	0.45	2.01	5.58
Roller/Cultipacker	30'	MFWD 170	19,100	300	12	0.049	0.67	1.13	0.22	0.23	2.25	0.34	1.58	4.19
Roller/Cultipacker	38'	MFWD 225	21,300	300	12	0.039	0.53	1.18	0.19	0.23	2.14	0.30	1.62	4.06
Roller/Stubble	20'	2WD 50	13,500	300	12	0.074	1.00	0.49	0.23	0.05	1.79	0.36	0.35	2.51
Roller/Stubble	32'	MFWD 225	22,800	300	12	0.046	0.63	1.40	0.25	0.27	2.56	0.38	1.92	4.87

(continued)

Appendix Table 3. Towed equipment: estimated purchase price, annual use, useful life, performance rate, and direct and fixed cost per acre, Mississippi, 2019 (continued)

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

## Notes:

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

Total Direct: Does not include interest on operating capital.

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

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

(continued)

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

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

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

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

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

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

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

Item name	Unit	Wage Rate
OPERATOR LABOR	hour	14.23
IRRIGATE LABOR	hour	9.06
HAND LABOR	hour	9.06
HAND. & STOR. LABOR	hour	9.06
RICE MGT. LABOR	hour	9.06
CROP ENTERPRISE	UNALLOCATED LABOR MULTIPLIERS (%)	
Corn		90
Cotton		80
Grain Sorghum		90
Peanuts		80
Rice		90
Soybeans		90
Wheat		80



Appendix Table 7. Futures contract prices, basis levels, forward contract prices, and loan rates used in row crop budgets, Mississippi, 2019

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

<sup>a</sup> Average of the daily closing futures contract prices during the first 5 trading days in October 2018 for the stated contract months.

<sup>b</sup> Basis is the cash price minus the futures contract price for the stated contract month. The reported basis is a daily average from 2009 to 2018 for corn, soybeans and wheat at Greenville, MS. Rice basis is a weekly average price for river point delivery. June harvest delivery for wheat. September harvest delivery for corn, rice and soybeans. October harvest delivery for cotton.

<sup>c</sup> 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.

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

<sup>e</sup> Price used in MSU Extension Service Planning Budgets.

<sup>f</sup> Cottonseed price is the average marketing year price over the years 2008-2017.

Appendix Table 8. Estimated costs for field operations, per acre  
 Irrigation with a 1/4-mile center pivot system  
 135-acre system, 7.5 ac-in., Delta Area, Mississippi, 2019

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----							FIXED COST	TOTAL COST
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL		
-----dollars-----										
Set Up Engine										
IRRIGATE LABOR	hour				0.27			0.01	0.28	0.28
Maintenance										
IRRIGATE LABOR	hour				1.07			0.03	1.10	1.10
Apply Water										
IRRIGATE LABOR	hour				0.15				0.15	0.15
Apply Water										
IRRIGATE LABOR	hour				0.20				0.20	0.20
Apply Water										
IRRIGATE LABOR	hour				0.15				0.15	0.15
Pivot, 1/4 CP	each			13.48				0.34	13.82	61.18
Well & Pump, 1/4 CP	each			3.50				0.09	3.59	11.96
Engine, 1/4 CP, 65	each									11.29
June Irr. 3app@.75"	ac-in		8.74	1.40				0.25	10.39	10.39
July Irr. 4app@.75"	ac-in		11.65	1.87				0.27	13.79	13.79
Aug Irr. 3app@.75"	ac-in		8.74	1.40				0.15	10.29	10.29
TOTALS		0.00	29.13	21.65	1.84	0.00	1.14	53.76	84.43	138.19

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

Appendix Table 9 Estimated costs for field operations, per acre  
 Corn irrigated with roll-out pipe  
 160-acre system, 13 ac-in., Delta Area, Mississippi, 2019

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

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



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