

**CORN, GRAIN  
SORGHUM & WHEAT  
2021  
PLANNING BUDGETS**

**Mississippi State University  
Department of Agricultural Economics  
Budget Report 2020-03**

**October 2020**



## 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 2021 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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# 2021 Planning Budgets

## Budgets for Agricultural Enterprises

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

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

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

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

## Methods and Procedures

### Production Practices

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

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

### Machinery

Machinery manufacturers form the basis for machinery prices used in these publications. Prices by size of equipment are determined from the most common sales in each category as reported by machinery dealers. Prices used in the budgets reflect prices paid by farmers in 2020. (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 2020 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, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air ( 5 gal)	appl	7.00	1.0000	7.00	_____
App by Air ( 3 gal)	appl	5.50	0.2000	1.10	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	17.31	1.9570	33.88	_____
Potash (60% K2O)	cwt	22.11	1.5000	33.17	_____
Fert 10-34-0	gal	2.80	4.0000	11.20	_____
Zinc Plus	pt	2.99	2.0000	5.98	_____
UAN + Sulfur (28%)	gal	1.61	32.1712	51.80	_____
UAN (32%)	gal	1.34	39.5570	53.01	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.13	32.0000	4.16	_____
Clarity	pt	10.73	0.5000	5.37	_____
Select Max	pt	12.74	1.0000	12.74	_____
Atrazine 4L	pt	1.91	4.0000	7.64	_____
Halex GT	pt	7.13	3.6000	25.67	_____
INSECTICIDES					
Bifenthrin	oz	0.94	1.2800	1.20	_____
IRRIGATION SUPPLIES					
Roll-Out Pipe	ft	0.24	33.0000	7.92	_____
SEED/PLANTS					
Corn Seed BtRR	thous	3.99	34.0000	135.66	_____
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	47.45	0.6660	31.60	_____
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	14.68	0.4242	6.23	_____
Harvesters	hour	14.68	0.1009	1.48	_____
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	14.67	0.4020	5.90	_____
DIESEL FUEL					
Tractors	gal	1.53	4.7302	7.26	_____
Harvesters	gal	1.53	1.6890	2.58	_____
Roll-Out Pipe Irr.	gal	1.53	10.5901	16.20	_____
REPAIR & MAINTENANCE					
Implements	acre	8.36	1.0000	8.36	_____
Tractors	acre	2.96	1.0000	2.96	_____
Harvesters	acre	4.15	1.0000	4.15	_____
Roll-Out Pipe Irr.	acre	7.16	1.0000	7.16	_____
INTEREST ON OP. CAP.	acre	12.55	1.0000	12.55	_____
TOTAL DIRECT EXPENSES				576.11	_____
FIXED EXPENSES					
Implements	acre	12.52	1.0000	12.52	_____
Tractors	acre	17.97	1.0000	17.97	_____
Harvesters	acre	15.90	1.0000	15.90	_____
Roll-Out Pipe Irr.	acre	51.84	1.0000	51.84	_____
TOTAL FIXED EXPENSES				98.23	_____
TOTAL SPECIFIED EXPENSES				674.34	_____

Note: Cost of production estimates are based on 2020 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, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.73	220.0000	820.60	_____
				-----	
TOTAL INCOME				820.60	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	8.10	1.0000	8.10	_____
FERTILIZERS	acre	189.04	1.0000	189.04	_____
HERBICIDES	acre	55.58	1.0000	55.58	_____
INSECTICIDES	acre	1.20	1.0000	1.20	_____
IRRIGATION SUPPLIES	acre	7.92	1.0000	7.92	_____
SEED/PLANTS	acre	135.66	1.0000	135.66	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	50.60	1.0000	50.60	_____
CUSTOM LIME	acre	31.60	1.0000	31.60	_____
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	14.68	0.5252	7.71	_____
UNALLOCATED LABOR	hour	14.67	0.4020	5.90	_____
DIESEL FUEL	gal	1.53	17.0094	26.04	_____
REPAIR & MAINTENANCE	acre	22.63	1.0000	22.63	_____
INTEREST ON OP. CAP.	acre	12.55	1.0000	12.55	_____
				-----	
TOTAL DIRECT EXPENSES				576.11	_____
RETURNS ABOVE DIRECT EXPENSES				244.49	_____
TOTAL FIXED EXPENSES				98.23	_____
				-----	
TOTAL SPECIFIED EXPENSES				674.34	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				146.26	_____

Note: Cost of production estimates are based on 2020 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, 2021

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 2020 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, 2021

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						0.13	3.46		3.46
Lime (Spread)	ton	31.60						1.26	32.86		32.86
Spin Spreader	5 ton		0.75	0.58	1.56			0.12	3.01	2.40	5.41
Phosphorus(46% P2O5)	cwt	33.88						1.36	35.24		35.24
Potash (60% K2O)	cwt	33.17						1.33	34.50		34.50
Bed/Disk w/roller	12R-30/40		1.11	1.26	1.75			0.16	4.28	4.80	9.08
App by Air ( 5 gal)	appl	7.00						0.19	7.19		7.19
Glyphosate 3lbs a.e	oz	4.16						0.11	4.27		4.27
Clarity	pt	5.37						0.14	5.51		5.51
Select Max	pt	12.74						0.34	13.08		13.08
Plant & Pre-Folding	12R-38		0.95	2.25	1.97			0.12	5.29	5.79	11.08
Corn Seed BtRR	thous	135.66						3.17	138.83		138.83
Fert 10-34-0	gal	11.20						0.26	11.46		11.46
Zinc Plus	pt	5.98						0.14	6.12		6.12
Custom Apply Fert	acre	7.50						0.15	7.65		7.65
UAN + Sulfur (28%)	gal	51.80						1.04	52.84		52.84
Spray (Broadcast)	60'		0.50	0.38	0.91			0.04	1.83	1.45	3.28
Atrazine 4L	pt	7.64						0.15	7.79		7.79
Halex GT	pt	25.67						0.51	26.18		26.18
App by Air ( 3 gal)	appl	1.10						0.02	1.12		1.12
Bifenthrin	oz	1.20						0.02	1.22		1.22
Corn Consultant	acre	6.00						0.10	6.10		6.10
Fert Appl (Liquid)	12R-38		0.92	1.05	1.67			0.06	3.70	3.01	6.71
UAN (32%)	gal	53.01						0.88	53.89		53.89
Header - Corn	8R-38		2.58	5.86	2.81			0.04	11.29	18.39	29.68
Grain Cart Corn	700 bu		0.45	0.48	0.70			0.01	1.64	1.62	3.26
Haul Corn	bu	50.60						0.17	50.77		50.77
Stalk Shredder Flex	20'		1.46	2.99	2.30			0.02	6.77	5.05	11.82
Roll-Out Pipe Irr.	acre	7.92	17.32	7.78	4.69			0.51	38.22	55.72	93.94
TOTALS		496.53	26.04	22.63	18.36	0.00	12.55	576.11	98.23	674.34	

Note: Cost of production estimates are based on 2020 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, 2021

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	820.60
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	7.00	0.00	0.00	1.10	0.00	0.00	0.00	0.00
FERTILIZERS	67.05	0.00	0.00	0.00	0.00	17.18	51.80	53.01	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	22.27	0.00	33.31	0.00	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20	0.00	0.00	0.00	0.00
IRRIGATION SUPPLIES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.92	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	135.66	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	31.60	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	3.87	0.00	0.00	0.00	0.00	1.97	0.91	1.90	3.05	0.23	0.62	5.81
LEASE *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUEL	2.43	0.00	0.00	0.00	0.00	0.95	0.50	0.92	12.45	4.05	0.25	4.49
REPAIR & MAINTENANCE	2.14	0.00	0.00	0.00	0.00	2.25	0.38	1.05	6.28	1.05	0.15	9.33
INTEREST ON OP. CAP.	4.42	0.00	0.00	0.00	0.78	3.69	1.89	1.08	0.39	0.05	0.01	0.24
TOTAL DIRECT EXPENSES	114.84	0.00	0.00	0.00	30.05	161.70	96.29	66.26	30.09	5.38	1.03	70.47
NET INCOME	-114.84	0.00	0.00	0.00	-30.05	-161.70	-96.29	-66.26	-30.09	-5.38	-1.03	750.13
NET INCOME TO DATE	-114.84	-114.84	-114.84	-114.84	-144.89	-306.59	-402.88	-469.14	-499.23	-504.61	-505.64	244.49

Note: Cost of production estimates are based on 2020 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, 2021

			PERCENT										
PRODUCT			75	80	85	90	95	100	105	110	115	120	125
-----			-----PRODUCT PRICE-----										
Corn			2.79	2.98	3.17	3.35	3.54	3.73	3.91	4.10	4.28	4.47	4.66
PERCENT	YIELD	UNIT	-----dollars-----										
50	110.00	bu	-243	-222	-201	-181	-160	-140	-119	-99	-78	-58	-37
			-341	-320	-300	-279	-259	-238	-218	-197	-177	-156	-136
60	132.00	bu	-186	-161	-137	-112	-88	-63	-38	-14	10	35	59
			-284	-260	-235	-210	-186	-161	-137	-112	-87	-63	-38
70	154.00	bu	-130	-101	-72	-43	-15	13	42	70	99	128	157
			-228	-199	-170	-142	-113	-84	-55	-27	1	30	58
80	176.00	bu	-73	-40	-7	24	57	90	123	156	188	221	254
			-171	-139	-106	-73	-40	-7	25	57	90	123	156
90	198.00	bu	-17	19	56	93	130	167	204	241	278	315	352
			-115	-78	-41	-4	32	69	106	143	180	216	253
100	220.00	bu	39	80	121	162	203	244	285	326	367	408	449
			-58	-17	23	64	105	146	187	228	269	310	351
110	242.00	bu	95	140	186	231	276	321	366	411	456	502	547
			-2	42	87	132	178	223	268	313	358	403	448
120	264.00	bu	152	201	250	299	349	398	447	496	546	595	644
			54	103	152	201	250	300	349	398	447	497	546
130	286.00	bu	208	262	315	368	422	475	528	582	635	688	742
			110	163	217	270	323	377	430	483	537	590	643
140	308.00	bu	265	322	380	437	494	552	609	667	724	782	839
			166	224	281	339	396	454	511	569	626	683	741
150	330.00	bu	321	383	444	506	567	629	690	752	814	875	937
			223	284	346	408	469	531	592	654	715	777	838

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 2020 input prices.

Table 2.A Estimated costs per acre  
 Corn, stale seedbed, BtRR, non-irrigated, 12row 38"  
 170 bu yield goal, Delta Area, Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air ( 5 gal)	appl	7.00	1.0000	7.00	_____
App by Air ( 3 gal)	appl	5.50	0.2000	1.10	_____
FERTILIZERS					
Phosphorus(46% P2O5)	cwt	17.31	1.6300	28.22	_____
Potash (60% K2O)	cwt	22.11	1.2500	27.64	_____
Fert 10-34-0	gal	2.80	4.0000	11.20	_____
Zinc Plus	pt	2.99	2.0000	5.98	_____
UAN + Sulfur (28%)	gal	1.61	19.3063	31.08	_____
UAN (32%)	gal	1.34	36.7200	49.20	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.13	32.0000	4.16	_____
Clarity	pt	10.73	0.5000	5.37	_____
Select Max	pt	12.74	1.0000	12.74	_____
Atrazine 4L	pt	1.91	4.0000	7.64	_____
Halex GT	pt	7.13	3.6000	25.67	_____
INSECTICIDES					
Bifenthrin	oz	0.94	1.2800	1.20	_____
SEED/PLANTS					
Corn Seed BtRR	thous	3.99	28.0000	111.72	_____
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	47.45	0.6660	31.60	_____
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	14.68	0.3457	5.07	_____
Harvesters	hour	14.68	0.1009	1.48	_____
HAND LABOR					
Implements	hour	9.06	0.1354	1.22	_____
UNALLOCATED LABOR					
	hour	14.67	0.4020	5.90	_____
DIESEL FUEL					
Tractors	gal	1.53	4.0040	6.14	_____
Harvesters	gal	1.53	1.3770	2.11	_____
REPAIR & MAINTENANCE					
Implements	acre	8.17	1.0000	8.17	_____
Tractors	acre	2.53	1.0000	2.53	_____
Harvesters	acre	4.11	1.0000	4.11	_____
INTEREST ON OP. CAP.	acre	10.51	1.0000	10.51	_____
TOTAL DIRECT EXPENSES				464.69	_____
FIXED EXPENSES					
Implements	acre	11.28	1.0000	11.28	_____
Tractors	acre	15.33	1.0000	15.33	_____
Harvesters	acre	15.74	1.0000	15.74	_____
TOTAL FIXED EXPENSES				42.35	_____
TOTAL SPECIFIED EXPENSES				507.04	_____

Note: Cost of production estimates are based on 2020 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, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.73	170.0000	634.10	_____
				-----	
TOTAL INCOME				634.10	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	8.10	1.0000	8.10	_____
FERTILIZERS	acre	153.32	1.0000	153.32	_____
HERBICIDES	acre	55.58	1.0000	55.58	_____
INSECTICIDES	acre	1.20	1.0000	1.20	_____
SEED/PLANTS	acre	111.72	1.0000	111.72	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	39.10	1.0000	39.10	_____
CUSTOM LIME	acre	31.60	1.0000	31.60	_____
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	14.68	0.4466	6.55	_____
UNALLOCATED LABOR	hour	14.67	0.4020	5.90	_____
DIESEL FUEL	gal	1.53	5.3810	8.25	_____
REPAIR & MAINTENANCE	acre	14.81	1.0000	14.81	_____
INTEREST ON OP. CAP.	acre	10.51	1.0000	10.51	_____
				-----	
TOTAL DIRECT EXPENSES				464.69	_____
RETURNS ABOVE DIRECT EXPENSES				169.41	_____
TOTAL FIXED EXPENSES				42.35	_____
				-----	
TOTAL SPECIFIED EXPENSES				507.04	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				127.06	_____

Note: Cost of production estimates are based on 2020 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, 2021

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					36.7200				
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 2020 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, 2021

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						0.13	3.46		3.46
Lime (Spread)	ton	31.60						1.26	32.86		32.86
Spin Spreader	5 ton		0.75	0.58	1.56			0.12	3.01	2.40	5.41
Phosphorus (46% P2O5)	cwt	28.22						1.13	29.35		29.35
Potash (60% K2O)	cwt	27.64						1.11	28.75		28.75
Bed/Disk w/roller	12R-30/40		1.11	1.26	1.75			0.16	4.28	4.80	9.08
App by Air ( 5 gal)	appl	7.00						0.19	7.19		7.19
Glyphosate 3lbs a.e	oz	4.16						0.11	4.27		4.27
Clarity	pt	5.37						0.14	5.51		5.51
Select Max	pt	12.74						0.34	13.08		13.08
Plant & Pre-Folding	12R-38		0.95	2.25	1.97			0.12	5.29	5.79	11.08
Corn Seed BtRR	thous	111.72						2.61	114.33		114.33
Fert 10-34-0	gal	11.20						0.26	11.46		11.46
Zinc Plus	pt	5.98						0.14	6.12		6.12
Custom Apply Fert	acre	7.50						0.15	7.65		7.65
UAN + Sulfur (28%)	gal	31.08						0.62	31.70		31.70
Spray (Broadcast)	60'		0.50	0.38	0.91			0.04	1.83	1.45	3.28
Atrazine 4L	pt	7.64						0.15	7.79		7.79
Halex GT	pt	25.67						0.51	26.18		26.18
App by Air ( 3 gal)	appl	1.10						0.02	1.12		1.12
Bifenthrin	oz	1.20						0.02	1.22		1.22
Corn Consultant	acre	6.00						0.10	6.10		6.10
Fert Appl (Liquid)	12R-38		0.92	1.05	1.67			0.06	3.70	3.01	6.71
UAN (32%)	gal	49.20						0.82	50.02		50.02
Header - Corn	8R-38		2.11	5.82	2.81			0.04	10.78	18.23	29.01
Grain Cart Corn	700 bu		0.45	0.48	0.70			0.01	1.64	1.62	3.26
Haul Corn	bu	39.10						0.13	39.23		39.23
Stalk Shredder Flex	20'		1.46	2.99	2.30			0.02	6.77	5.05	11.82
TOTALS		417.45	8.25	14.81	13.67	0.00	10.51	464.69	42.35	507.04	

Note: Cost of production estimates are based on 2020 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, 2021

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	634.10
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	7.00	0.00	0.00	1.10	0.00	0.00	0.00	0.00
FERTILIZERS	55.86	0.00	0.00	0.00	0.00	17.18	31.08	49.20	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	22.27	0.00	33.31	0.00	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20	0.00	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	111.72	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	31.60	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	3.31	0.00	0.00	0.00	0.00	1.97	0.91	1.67	0.00	0.00	0.00	5.81
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	1.86	0.00	0.00	0.00	0.00	0.95	0.50	0.92	0.00	0.00	0.00	4.02
REPAIR & MAINTENANCE	1.84	0.00	0.00	0.00	0.00	2.25	0.38	1.05	0.00	0.00	0.00	9.29
INTEREST ON OP. CAP.	3.91	0.00	0.00	0.00	0.78	3.13	1.47	1.02	0.00	0.00	0.00	0.20
TOTAL DIRECT EXPENSES	101.71	0.00	0.00	0.00	30.05	137.20	75.15	62.16	0.00	0.00	0.00	58.42
NET INCOME	-101.71	0.00	0.00	0.00	-30.05	-137.20	-75.15	-62.16	0.00	0.00	0.00	575.68
NET INCOME TO DATE	-101.71	-101.71	-101.71	-101.71	-131.76	-268.96	-344.11	-406.27	-406.27	-406.27	-406.27	169.41

Note: Cost of production estimates are based on 2020 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, 2021

PRODUCT	PERCENT												
	75	80	85	90	95	100	105	110	115	120	125		
PRODUCT PRICE													
Corn	2.79	2.98	3.17	3.35	3.54	3.73	3.91	4.10	4.28	4.47	4.66		
PERCENT	YIELD	UNIT	dollars										
50	85.00	bu	-207 -249	-191 -233	-175 -217	-159 -202	-143 -186	-128 -170	-112 -154	-96 -138	-80 -122	-64 -106	-48 -91
60	102.00	bu	-163 -206	-144 -186	-125 -167	-106 -148	-87 -129	-68 -110	-49 -91	-30 -72	-11 -53	7 -34	26 -15
70	119.00	bu	-120 -162	-97 -140	-75 -117	-53 -95	-31 -73	-9 -51	13 -29	35 -7	57 15	79 37	101 59
80	136.00	bu	-76 -118	-51 -93	-25 -68	-0 -42	25 -17	50 8	75 33	101 58	126 84	151 109	177 134
90	153.00	bu	-32 -75	-4 -46	24 -18	52 10	81 39	109 67	138 96	166 124	195 153	224 181	252 210
100	170.00	bu	10 -31	42 0	74 31	106 63	137 95	169 127	201 158	232 190	264 222	296 253	327 285
110	187.00	bu	54 12	89 47	124 81	159 116	194 151	228 186	263 221	298 256	333 291	368 326	403 360
120	204.00	bu	98 55	136 93	174 131	212 169	250 207	288 246	326 284	364 322	402 360	440 398	478 436
130	221.00	bu	141 99	183 140	224 181	265 223	306 264	347 305	389 346	430 387	471 429	512 470	553 511
140	238.00	bu	185 143	229 187	274 231	318 276	362 320	407 365	451 409	496 453	540 498	584 542	629 586
150	255.00	bu	229 186	276 234	324 281	371 329	419 376	466 424	514 472	561 519	609 567	657 614	704 662

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 2020 input prices.

Table 3.A Estimated costs per acre  
 Corn, conventional tillage, RR2 seed, 12-row 38",  
 220 bu yld goal, furrow irrigated, 13 ac-in., Delta Area, Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air ( 5 gal)	appl	7.00	1.0000	7.00	_____
App by Air ( 3 gal)	appl	5.50	1.2000	6.60	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	17.31	1.9570	33.88	_____
Potash (60% K2O)	cwt	22.11	1.5000	33.17	_____
UAN + Sulfur (28%)	gal	1.61	32.1712	51.80	_____
UAN (32%)	gal	1.34	39.5570	53.01	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.13	32.0000	4.16	_____
Clarity	pt	10.73	0.5000	5.37	_____
Select Max	pt	12.74	1.0000	12.74	_____
Atrazine 4L	pt	1.91	4.0000	7.64	_____
Halex GT	pt	7.13	3.6000	25.67	_____
INSECTICIDES					
Bifenthrin	oz	0.94	1.2800	1.20	_____
Intrepid 2F	oz	1.94	4.0000	7.76	_____
IRRIGATION SUPPLIES					
Roll-Out Pipe	ft	0.24	33.0000	7.92	_____
SEED/PLANTS					
Corn Seed RR2	thous	3.03	34.0000	103.02	_____
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	47.45	0.6660	31.60	_____
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	14.68	0.6423	9.45	_____
Harvesters	hour	14.68	0.1009	1.48	_____
Self-Propelled	hour	14.68	0.0176	0.26	_____
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	14.68	0.6141	9.02	_____
DIESEL FUEL					
Tractors	gal	1.53	7.2557	11.12	_____
Harvesters	gal	1.53	1.3770	2.11	_____
Self-Propelled	gal	1.53	0.1586	0.24	_____
Roll-Out Pipe Irr.	gal	1.53	10.5901	16.20	_____
REPAIR & MAINTENANCE					
Implements	acre	10.52	1.0000	10.52	_____
Tractors	acre	4.54	1.0000	4.54	_____
Harvesters	acre	4.11	1.0000	4.11	_____
Self-Propelled	acre	0.20	1.0000	0.20	_____
Roll-Out Pipe Irr.	acre	7.16	1.0000	7.16	_____
INTEREST ON OP. CAP.	acre	12.02	1.0000	12.02	_____
TOTAL DIRECT EXPENSES				553.07	_____
FIXED EXPENSES					
Implements	acre	17.74	1.0000	17.74	_____
Tractors	acre	27.65	1.0000	27.65	_____
Harvesters	acre	15.74	1.0000	15.74	_____
Self-Propelled	acre	1.30	1.0000	1.30	_____
Roll-Out Pipe Irr.	acre	51.84	1.0000	51.84	_____
TOTAL FIXED EXPENSES				114.27	_____
TOTAL SPECIFIED EXPENSES				667.34	_____

Note: Cost of production estimates are based on 2020 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 yld goal, furrow irrigated, 13 ac-in., Delta Area, Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.73	220.0000	820.60	_____
				-----	
TOTAL INCOME				820.60	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	13.60	1.0000	13.60	_____
FERTILIZERS	acre	171.86	1.0000	171.86	_____
HERBICIDES	acre	55.58	1.0000	55.58	_____
INSECTICIDES	acre	8.96	1.0000	8.96	_____
IRRIGATION SUPPLIES	acre	7.92	1.0000	7.92	_____
SEED/PLANTS	acre	103.02	1.0000	103.02	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	50.60	1.0000	50.60	_____
CUSTOM LIME	acre	31.60	1.0000	31.60	_____
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	14.68	0.7609	11.19	_____
UNALLOCATED LABOR	hour	14.68	0.6141	9.02	_____
DIESEL FUEL	gal	1.53	19.3816	29.67	_____
REPAIR & MAINTENANCE	acre	26.53	1.0000	26.53	_____
INTEREST ON OP. CAP.	acre	12.02	1.0000	12.02	_____
				-----	
TOTAL DIRECT EXPENSES				553.07	_____
RETURNS ABOVE DIRECT EXPENSES				267.53	_____
TOTAL FIXED EXPENSES				114.27	_____
				-----	
TOTAL SPECIFIED EXPENSES				667.34	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				153.26	_____

Note: Cost of production estimates are based on 2020 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 yld goal, furrow irrigated, 13 ac-in., Delta Area, Mississippi, 2021

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	42'	MFWD 225	0.046	1.00	Oct		0.04	0.04	0.04	0.04
Soil Test	acre			0.33	Oct	0.3330				
Lime (Spread)	ton			0.33	Oct	0.6660				
Spin Spreader	5 ton	MFWD 225	0.042	1.00	Oct		0.04	0.04	0.08	0.03
Phosphorus(46% P2O5)	cwt					1.9570				
Potash (60% K2O)	cwt					1.5000				
Bed/Disk w/roller	12R-30/40	MFWD 225	0.062	1.00	Oct		0.06	0.06	0.06	0.05
App by Air ( 5 gal)	appl			1.00	Feb	1.0000				
Glyphosate 3lbs a.e	oz					32.0000				
Clarity	pt					0.5000				
Select Max	pt					1.0000				
Row Cond./Roll-Fold.	40'	MFWD 225	0.046	1.00	Mar		0.04	0.04	0.04	0.04
Plant - Folding	12R-38	MFWD 225	0.049	1.00	Mar		0.04	0.04	0.09	0.04
Corn Seed RR2	thous					34.0000				
Custom Apply Fert	acre			1.00	Apr	1.0000				
UAN + Sulfur (28%)	gal					32.1712				
Sprayer 600-750gal	60' 175hp		0.017	1.00	Apr			0.01	0.02	0.01
Atrazine 4L	pt					4.0000				
Halex GT	pt					3.6000				
Corn Consultant	acre			1.00	May	1.0000				
App by Air ( 3 gal)	appl			0.20	May	0.2000				
Bifenthrin	oz					1.2800				
Fert Appl (Liquid)	12R-38	MFWD 225	0.051	1.00	May		0.05	0.05	0.07	0.04
UAN (32%)	gal					39.5570				
Cultivate	12R-38	MFWD 225	0.054	1.00	May		0.05	0.05	0.05	0.04
App by Air ( 3 gal)	appl			1.00	Jun	1.0000				
Intrepid 2F	oz					4.0000				
Header - Corn	8R-38	265 hp	0.100	1.00	Sep		0.10	0.10	0.10	0.09
Grain Cart Corn	700 bu	MFWD 225	0.025	1.00	Sep		0.02	0.02	0.02	0.02
Haul Corn	bu					220.0000				
Stalk Shredder Flex	20'	MFWD 225	0.082	1.00	Sep		0.08	0.08	0.08	0.07
Roll-Out Pipe Irr.	acre				Jul	1.0000	0.07	0.07	0.46	
TOTALS							0.76	0.74	1.27	0.61

Note: Cost of production estimates are based on 2020 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 yld goal, furrow irrigated, 13 ac-in., Delta Area, Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----							FIXED COST	TOTAL COST
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL		
-----dollars-----										
Subsoiler	3 shank		1.81	0.96	2.85		0.22	5.84	5.04	10.88
Disk Harrow	42'		0.83	1.73	1.31		0.15	4.02	4.91	8.93
Soil Test	acre	3.33					0.13	3.46		3.46
Lime (Spread)	ton	31.60					1.26	32.86		32.86
Spin Spreader	5 ton		0.75	0.58	1.56		0.12	3.01	2.40	5.41
Phosphorus (46% P2O5)	cwt	33.88					1.36	35.24		35.24
Potash (60% K2O)	cwt	33.17					1.33	34.50		34.50
Bed/Disk w/roller	12R-30/40		1.11	1.26	1.75		0.16	4.28	4.80	9.08
App by Air ( 5 gal)	appl	7.00					0.19	7.19		7.19
Glyphosate 3lbs a.e	oz	4.16					0.11	4.27		4.27
Clarity	pt	5.37					0.14	5.51		5.51
Select Max	pt	12.74					0.34	13.08		13.08
Row Cond./Roll-Fold.	40'		0.83	0.74	1.31		0.07	2.95	3.10	6.05
Plant - Folding	12R-38		0.88	1.91	1.84		0.11	4.74	5.06	9.80
Corn Seed RR2	thous	103.02					2.40	105.42		105.42
Custom Apply Fert	acre	7.50					0.15	7.65		7.65
UAN + Sulfur (28%)	gal	51.80					1.04	52.84		52.84
Sprayer 600-750gal	60' 175hp		0.24	0.20	0.57		0.02	1.03	1.30	2.33
Atrazine 4L	pt	7.64					0.15	7.79		7.79
Halex GT	pt	25.67					0.51	26.18		26.18
Corn Consultant	acre	6.00					0.10	6.10		6.10
App by Air ( 3 gal)	appl	1.10					0.02	1.12		1.12
Bifenthrin	oz	1.20					0.02	1.22		1.22
Fert Appl (Liquid)	12R-38		0.92	1.05	1.67		0.06	3.70	3.01	6.71
UAN (32%)	gal	53.01					0.88	53.89		53.89
Cultivate	12R-38		0.96	1.03	1.52		0.06	3.57	4.03	7.60
App by Air ( 3 gal)	appl	5.50					0.07	5.57		5.57
Intrepid 2F	oz	7.76					0.10	7.86		7.86
Header - Corn	8R-38		2.11	5.82	2.81		0.04	10.78	18.23	29.01
Grain Cart Corn	700 bu		0.45	0.48	0.70		0.01	1.64	1.62	3.26
Haul Corn	bu	50.60					0.17	50.77		50.77
Stalk Shredder Flex	20'		1.46	2.99	2.30		0.02	6.77	5.05	11.82
Roll-Out Pipe Irr.	acre	7.92	17.32	7.78	4.69		0.51	38.22	55.72	93.94
TOTALS		459.97	29.67	26.53	24.88	0.00	12.02	553.07	114.27	667.34

Note: Cost of production estimates are based on 2020 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 yld goal, furrow irrigated, 13 ac-in., Delta Area, Mississippi, 2021

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	820.60
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	7.00	0.00	0.00	1.10	5.50	0.00	0.00	0.00
FERTILIZERS	67.05	0.00	0.00	0.00	0.00	0.00	51.80	53.01	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	22.27	0.00	33.31	0.00	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20	7.76	0.00	0.00	0.00
IRRIGATION SUPPLIES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.92	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	103.02	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	31.60	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	8.03	0.00	0.00	0.00	0.00	3.15	0.57	3.42	3.05	0.23	0.62	5.81
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	5.07	0.00	0.00	0.00	0.00	1.71	0.24	1.88	12.45	4.05	0.25	4.02
REPAIR & MAINTENANCE	4.83	0.00	0.00	0.00	0.00	2.65	0.20	2.08	6.28	1.05	0.15	9.29
INTEREST ON OP. CAP.	4.79	0.00	0.00	0.00	0.78	2.58	1.87	1.14	0.56	0.05	0.01	0.24
TOTAL DIRECT EXPENSES	124.70	0.00	0.00	0.00	30.05	113.11	95.49	69.83	43.52	5.38	1.03	69.96
NET INCOME	-124.70	0.00	0.00	0.00	-30.05	-113.11	-95.49	-69.83	-43.52	-5.38	-1.03	750.64
NET INCOME TO DATE	-124.70	-124.70	-124.70	-124.70	-154.75	-267.86	-363.35	-433.18	-476.70	-482.08	-483.11	267.53

Note: Cost of production estimates are based on 2020 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 yld goal, furrow irrigated, 13 ac-in., Delta Area, Mississippi, 2021

PRODUCT	PERCENT												
	75	80	85	90	95	100	105	110	115	120	125		
	PRODUCT PRICE												
Corn	2.79	2.98	3.17	3.35	3.54	3.73	3.91	4.10	4.28	4.47	4.66		
PERCENT	YIELD	UNIT	dollars										
50	110.00	bu	-219 -334	-199 -313	-178 -293	-158 -272	-137 -252	-117 -231	-96 -211	-76 -190	-55 -170	-35 -149	-14 -129
60	132.00	bu	-163 -277	-138 -253	-114 -228	-89 -203	-65 -179	-40 -154	-15 -130	8 -105	33 -80	58 -56	82 -31
70	154.00	bu	-107 -221	-78 -192	-49 -163	-20 -135	7 -106	36 -77	65 -48	94 -20	122 8	151 37	180 65
80	176.00	bu	-50 -164	-17 -132	15 -99	47 -66	80 -33	113 -0	146 32	179 64	212 97	244 130	277 163
90	198.00	bu	5 -108	42 -71	79 -34	116 2	153 39	190 76	227 113	264 150	301 187	338 223	375 260
100	220.00	bu	62 -51	103 -10	144 30	185 71	226 112	267 153	308 194	349 235	390 276	431 317	472 358
110	242.00	bu	118 4	163 49	209 94	254 139	299 185	344 230	389 275	434 320	479 365	525 410	570 455
120	264.00	bu	175 61	224 110	273 159	323 208	372 257	421 307	470 356	519 405	569 454	618 504	667 553
130	286.00	bu	231 117	285 170	338 224	391 277	445 330	498 384	551 437	605 490	658 544	711 597	765 650
140	308.00	bu	288 173	345 231	403 288	460 346	518 403	575 461	632 518	690 576	747 633	805 690	862 748
150	330.00	bu	344 230	406 291	467 353	529 415	590 476	652 538	713 599	775 661	837 722	898 784	960 845

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 2020 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, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air ( 5 gal)	appl	7.00	1.0000	7.00	_____
App by Air ( 3 gal)	appl	5.50	1.2000	6.60	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	17.31	1.6300	28.22	_____
Potash (60% K2O)	cwt	22.11	1.2500	27.64	_____
UAN + Sulfur (28%)	gal	1.61	19.3063	31.08	_____
UAN (32%)	gal	1.34	36.7200	49.20	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.13	32.0000	4.16	_____
Clarity	pt	10.73	0.5000	5.37	_____
Select Max	pt	12.74	1.0000	12.74	_____
Atrazine 4L	pt	1.91	4.0000	7.64	_____
Halex GT	pt	7.13	3.6000	25.67	_____
INSECTICIDES					
Bifenthrin	oz	0.94	1.2804	1.20	_____
Intrepid 2F	oz	1.94	4.0000	7.76	_____
SEED/PLANTS					
Corn Seed RR2	thous	3.03	28.0000	84.84	_____
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	47.45	0.6660	31.60	_____
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	14.68	0.4903	7.20	_____
Harvesters	hour	14.68	0.1009	1.48	_____
Self-Propelled	hour	14.68	0.0176	0.26	_____
HAND LABOR					
Implements	hour	9.06	0.1175	1.06	_____
Self-Propelled	hour	9.06	0.0088	0.08	_____
UNALLOCATED LABOR					
	hour	14.67	0.5480	8.04	_____
DIESEL FUEL					
Tractors	gal	1.53	5.6788	8.69	_____
Harvesters	gal	1.53	1.3770	2.11	_____
Self-Propelled	gal	1.53	0.1586	0.24	_____
REPAIR & MAINTENANCE					
Implements	acre	9.41	1.0000	9.41	_____
Tractors	acre	3.57	1.0000	3.57	_____
Harvesters	acre	4.11	1.0000	4.11	_____
Self-Propelled	acre	0.20	1.0000	0.20	_____
INTEREST ON OP. CAP.	acre	10.02	1.0000	10.02	_____
				-----	
TOTAL DIRECT EXPENSES				443.12	_____
FIXED EXPENSES					
Implements	acre	14.61	1.0000	14.61	_____
Tractors	acre	21.75	1.0000	21.75	_____
Harvesters	acre	15.74	1.0000	15.74	_____
Self-Propelled	acre	1.30	1.0000	1.30	_____
				-----	
TOTAL FIXED EXPENSES				53.40	_____
				-----	
TOTAL SPECIFIED EXPENSES				496.52	_____

Note: Cost of production estimates are based on 2020 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, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.73	170.0000	634.10	_____
				-----	
TOTAL INCOME				634.10	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	13.60	1.0000	13.60	_____
FERTILIZERS	acre	136.14	1.0000	136.14	_____
HERBICIDES	acre	55.58	1.0000	55.58	_____
INSECTICIDES	acre	8.96	1.0000	8.96	_____
SEED/PLANTS	acre	84.84	1.0000	84.84	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	39.10	1.0000	39.10	_____
CUSTOM LIME	acre	31.60	1.0000	31.60	_____
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	14.68	0.6089	8.94	_____
UNALLOCATED LABOR	hour	14.67	0.5480	8.04	_____
DIESEL FUEL	gal	1.53	7.2145	11.04	_____
REPAIR & MAINTENANCE	acre	17.29	1.0000	17.29	_____
INTEREST ON OP. CAP.	acre	10.02	1.0000	10.02	_____
				-----	
TOTAL DIRECT EXPENSES				443.12	_____
RETURNS ABOVE DIRECT EXPENSES				190.98	_____
TOTAL FIXED EXPENSES				53.40	_____
				-----	
TOTAL SPECIFIED EXPENSES				496.52	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				137.58	_____

Note: Cost of production estimates are based on 2020 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, 2021

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	42'	MFWD 225	0.046	1.00	Oct		0.04	0.04	0.04	0.04
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)	12R-38	MFWD 225	0.049	1.00	Oct		0.04	0.04	0.04	0.04
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 Folding	38'	MFWD 225	0.040	1.00	Mar		0.04	0.04	0.04	0.03
Plant - Folding	12R-38	MFWD 225	0.049	1.00	Mar		0.04	0.04	0.09	0.04
Corn Seed RR2	thous					28.0000				
Custom Apply Fert	acre			1.00	Apr	1.0000				
UAN + Sulfur (28%)	gal					19.3063				
Sprayer 600-750gal	60' 175hp		0.017	1.00	Apr			0.01	0.02	0.01
Atrazine 4L	pt					4.0000				
Halex GT	pt					3.6000				
Corn Consultant	acre			1.00	May	1.0000				
App by Air ( 3 gal)	appl			0.20	May	0.2000				
Bifenthrin	oz					1.2804				
Fert Appl (Liquid)	12R-38	MFWD 225	0.051	1.00	May		0.05	0.05	0.07	0.04
UAN (32%)	gal					36.7200				
App by Air ( 3 gal)	appl			1.00	Jun	1.0000				
Intrepid 2F	oz					4.0000				
Header - Corn	8R-38	265 hp	0.100	1.00	Sep		0.10	0.10	0.10	0.09
Grain Cart Corn	700 bu	MFWD 225	0.025	1.00	Sep		0.02	0.02	0.02	0.02
Haul Corn	bu					170.0000				
Stalk Shredder Flex	20'	MFWD 225	0.082	1.00	Sep		0.08	0.08	0.08	0.07
<b>TOTALS</b>							<b>0.60</b>	<b>0.59</b>	<b>0.73</b>	<b>0.54</b>

Note: Cost of production estimates are based on 2020 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, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----							FIXED COST	TOTAL COST
		OP INPUT	FUEL	R&M	LABOR	LEASE	INTER	TOTAL		
-----dollars-----										
Subsoiler	3 shank		1.81	0.96	2.85		0.22	5.84	5.04	10.88
Disk Harrow	42'		0.83	1.73	1.31		0.15	4.02	4.91	8.93
Soil Test	acre	3.33					0.13	3.46		3.46
Lime (Spread)	ton	31.60					1.26	32.86		32.86
Spin Spreader	5 ton		0.75	0.58	1.56		0.12	3.01	2.40	5.41
Phosphorus (46% P2O5)	cwt	28.22					1.13	29.35		29.35
Potash (60% K2O)	cwt	27.64					1.11	28.75		28.75
Bed/Disk (Hipper)	12R-38		0.87	0.99	1.37		0.13	3.36	3.81	7.17
App by Air ( 5 gal)	appl	7.00					0.19	7.19		7.19
Glyphosate 3lbs a.e	oz	4.16					0.11	4.27		4.27
Clarity	pt	5.37					0.14	5.51		5.51
Select Max	pt	12.74					0.34	13.08		13.08
Row Cond Folding	38'		0.72	0.58	1.14		0.06	2.50	2.97	5.47
Plant - Folding	12R-38		0.88	1.91	1.84		0.11	4.74	5.06	9.80
Corn Seed RR2	thous	84.84					1.98	86.82		86.82
Custom Apply Fert	acre	7.50					0.15	7.65		7.65
UAN + Sulfur (28%)	gal	31.08					0.62	31.70		31.70
Sprayer 600-750gal	60' 175hp		0.24	0.20	0.57		0.02	1.03	1.30	2.33
Atrazine 4L	pt	7.64					0.15	7.79		7.79
Halex GT	pt	25.67					0.51	26.18		26.18
Corn Consultant	acre	6.00					0.10	6.10		6.10
App by Air ( 3 gal)	appl	1.10					0.02	1.12		1.12
Bifenthrin	oz	1.20					0.02	1.22		1.22
Fert Appl (Liquid)	12R-38		0.92	1.05	1.67		0.06	3.70	3.01	6.71
UAN (32%)	gal	49.20					0.82	50.02		50.02
App by Air ( 3 gal)	appl	5.50					0.07	5.57		5.57
Intrepid 2F	oz	7.76					0.10	7.86		7.86
Header - Corn	8R-38		2.11	5.82	2.81		0.04	10.78	18.23	29.01
Grain Cart Corn	700 bu		0.45	0.48	0.70		0.01	1.64	1.62	3.26
Haul Corn	bu	39.10					0.13	39.23		39.23
Stalk Shredder Flex	20'		1.46	2.99	2.30		0.02	6.77	5.05	11.82
TOTALS		386.65	11.04	17.29	18.12	0.00	10.02	443.12	53.40	496.52

Note: Cost of production estimates are based on 2020 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, 2021

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	634.10
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	7.00	0.00	0.00	1.10	5.50	0.00	0.00	0.00
FERTILIZERS	55.86	0.00	0.00	0.00	0.00	0.00	31.08	49.20	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	22.27	0.00	33.31	0.00	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20	7.76	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	84.84	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	31.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CROP CONSULTANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00	0.00
SOIL TEST	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LABOR	7.09	0.00	0.00	0.00	0.00	2.98	0.57	1.67	0.00	0.00	0.00	5.81
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	4.26	0.00	0.00	0.00	0.00	1.60	0.24	0.92	0.00	0.00	0.00	4.02
REPAIR & MAINTENANCE	4.26	0.00	0.00	0.00	0.00	2.49	0.20	1.05	0.00	0.00	0.00	9.29
INTEREST ON OP. CAP.	4.25	0.00	0.00	0.00	0.78	2.15	1.45	1.02	0.17	0.00	0.00	0.20
TOTAL DIRECT EXPENSES	110.65	0.00	0.00	0.00	30.05	94.06	74.35	62.16	13.43	0.00	0.00	58.42
NET INCOME	-110.65	0.00	0.00	0.00	-30.05	-94.06	-74.35	-62.16	-13.43	0.00	0.00	575.68
NET INCOME TO DATE	-110.65	-110.65	-110.65	-110.65	-140.70	-234.76	-309.11	-371.27	-384.70	-384.70	-384.70	190.98

Note: Cost of production estimates are based on 2020 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, 2021

PRODUCT	PERCENT												
	75	80	85	90	95	100	105	110	115	120	125		
	PRODUCT PRICE												
Corn	2.79	2.98	3.17	3.35	3.54	3.73	3.91	4.10	4.28	4.47	4.66		
PERCENT	YIELD	UNIT	dollars										
50	85.00	bu	-185 -239	-169 -223	-154 -207	-138 -191	-122 -175	-106 -159	-90 -144	-74 -128	-58 -112	-43 -96	-27 -80
60	102.00	bu	-142 -195	-123 -176	-104 -157	-85 -138	-65 -119	-46 -100	-27 -81	-8 -62	10 -43	29 -24	48 -5
70	119.00	bu	-98 -151	-76 -129	-54 -107	-31 -85	-9 -63	12 -40	34 -18	56 3	79 25	101 47	123 70
80	136.00	bu	-54 -108	-29 -82	-4 -57	21 -32	46 -6	72 18	97 43	122 69	148 94	173 120	198 145
90	153.00	bu	-11 -64	17 -36	45 -7	74 21	102 49	131 78	160 106	188 135	217 163	245 192	274 220
100	170.00	bu	32 -20	64 10	95 42	127 74	159 105	190 137	222 169	254 200	286 232	317 264	349 296
110	187.00	bu	76 22	110 57	145 92	180 127	215 162	250 197	285 231	320 266	355 301	389 336	424 371
120	204.00	bu	119 66	157 104	195 142	233 180	271 218	309 256	348 294	386 332	424 370	462 408	500 446
130	221.00	bu	163 109	204 151	245 192	287 233	328 274	369 316	410 357	451 398	493 439	534 480	575 522
140	238.00	bu	206 153	251 197	295 242	340 286	384 331	428 375	473 419	517 464	562 508	606 553	650 597
150	255.00	bu	250 197	298 244	345 292	393 339	440 387	488 435	535 482	583 530	631 577	678 625	726 672

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 2020 input prices.

Table 5.A Estimated costs per acre  
 Corn, stale seedbed, RR2 seed, 12-row 30",  
 170 bu yield goal, Non-Delta, Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air ( 5 gal)	appl	7.00	1.0000	7.00	_____
App by Air ( 3 gal)	appl	5.50	1.2000	6.60	_____
FERTILIZERS					
Phosphorus (46% P2O5)	cwt	17.31	1.6300	28.22	_____
Potash (60% K2O)	cwt	22.11	1.2500	27.64	_____
UAN + Sulfur (28%)	gal	1.61	56.0263	90.20	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.13	32.0000	4.16	_____
Clarity	pt	10.73	0.5000	5.37	_____
Select Max	pt	12.74	1.0000	12.74	_____
Atrazine 4L	pt	1.91	4.0000	7.64	_____
Halex GT	pt	7.13	3.6000	25.67	_____
INSECTICIDES					
Bifenthrin	oz	0.94	1.2804	1.20	_____
Intrepid 2F	oz	1.94	4.0000	7.76	_____
SEED/PLANTS					
Corn Seed RR2	thous	3.03	28.0000	84.84	_____
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	47.45	0.6660	31.60	_____
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	14.68	0.4295	6.30	_____
Harvesters	hour	14.68	0.1277	1.87	_____
Self-Propelled	hour	14.68	0.0176	0.26	_____
HAND LABOR					
Implements	hour	9.06	0.1442	1.31	_____
Self-Propelled	hour	9.06	0.0088	0.08	_____
UNALLOCATED LABOR					
	hour	14.69	0.5173	7.60	_____
DIESEL FUEL					
Tractors	gal	1.53	4.9741	7.61	_____
Harvesters	gal	1.53	1.7419	2.67	_____
Self-Propelled	gal	1.53	0.1586	0.24	_____
REPAIR & MAINTENANCE					
Implements	acre	9.74	1.0000	9.74	_____
Tractors	acre	3.13	1.0000	3.13	_____
Harvesters	acre	5.20	1.0000	5.20	_____
Self-Propelled	acre	0.20	1.0000	0.20	_____
INTEREST ON OP. CAP.	acre	10.07	1.0000	10.07	_____
TOTAL DIRECT EXPENSES				452.85	_____
FIXED EXPENSES					
Implements	acre	13.92	1.0000	13.92	_____
Tractors	acre	19.06	1.0000	19.06	_____
Harvesters	acre	19.91	1.0000	19.91	_____
Self-Propelled	acre	1.30	1.0000	1.30	_____
TOTAL FIXED EXPENSES				54.19	_____
TOTAL SPECIFIED EXPENSES				507.04	_____

Note: Cost of production estimates are based on 2020 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, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.73	170.0000	634.10	_____
				-----	
TOTAL INCOME				634.10	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	13.60	1.0000	13.60	_____
FERTILIZERS	acre	146.06	1.0000	146.06	_____
HERBICIDES	acre	55.58	1.0000	55.58	_____
INSECTICIDES	acre	8.96	1.0000	8.96	_____
SEED/PLANTS	acre	84.84	1.0000	84.84	_____
CUSTOM FERTILIZE	acre	7.50	1.0000	7.50	_____
HAULING	acre	39.10	1.0000	39.10	_____
CUSTOM LIME	acre	31.60	1.0000	31.60	_____
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	14.68	0.5748	8.43	_____
UNALLOCATED LABOR	hour	14.69	0.5173	7.60	_____
DIESEL FUEL	gal	1.53	6.8748	10.52	_____
REPAIR & MAINTENANCE	acre	18.27	1.0000	18.27	_____
INTEREST ON OP. CAP.	acre	10.07	1.0000	10.07	_____
				-----	
TOTAL DIRECT EXPENSES				452.85	_____
RETURNS ABOVE DIRECT EXPENSES				181.25	_____
TOTAL FIXED EXPENSES				54.19	_____
				-----	
TOTAL SPECIFIED EXPENSES				507.04	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				127.06	_____

Note: Cost of production estimates are based on 2020 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, 2021

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				
Disk Heavy	28'	MFWD 225	0.075	1.00	Oct		0.07	0.07	0.07	0.06
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 - Rigid	12R-30	MFWD 225	0.062	1.00	Mar		0.06	0.06	0.12	0.05
Corn Seed RR2	thous					28.0000				
Custom Apply Fert	acre			1.00	Apr	1.0000				
UAN + Sulfur (28%)	gal					19.3063				
Sprayer 600-750gal	60' 175hp		0.017	1.00	Apr			0.01	0.02	0.01
Atrazine 4L	pt					4.0000				
Halex GT	pt					3.6000				
Fert Appl (Liquid)	12R-30	MFWD 225	0.078	1.00	May		0.07	0.07	0.11	0.07
UAN + Sulfur (28%)	gal					36.7200				
Corn Consultant	acre			1.00	May	1.0000				
App by Air ( 3 gal)	appl			0.20	May	0.2000				
Bifenthrin	oz					1.2804				
App by Air ( 3 gal)	appl			1.00	Jun	1.0000				
Intrepid 2F	oz					4.0000				
Header - Corn	8R-30	265 hp	0.127	1.00	Sep		0.12	0.12	0.12	0.11
Grain Cart Corn	500 bu	MFWD 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							0.57	0.55	0.72	0.51

Note: Cost of production estimates are based on 2020 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, 2021

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						0.13	3.46		3.46
Lime (Spread)	ton	31.60						1.26	32.86		32.86
Spin Spreader	5 ton		0.75	0.58	1.56			0.12	3.01	2.40	5.41
Phosphorus(46% P2O5)	cwt	28.22						1.13	29.35		29.35
Potash (60% K2O)	cwt	27.64						1.11	28.75		28.75
Disk Heavy	28'		1.34	1.73	2.11			0.21	5.39	5.76	11.15
Bed/Disk w/roller	12R-30/40		1.11	1.26	1.75			0.16	4.28	4.80	9.08
App by Air ( 5 gal)	appl	7.00						0.19	7.19		7.19
Glyphosate 3lbs a.e	oz	4.16						0.11	4.27		4.27
Clarity	pt	5.37						0.14	5.51		5.51
Select Max	pt	12.74						0.34	13.08		13.08
Plant - Rigid	12R-30		1.11	1.95	2.32			0.13	5.51	5.54	11.05
Corn Seed RR2	thous	84.84						1.98	86.82		86.82
Custom Apply Fert	acre	7.50						0.15	7.65		7.65
UAN + Sulfur (28%)	gal	31.08						0.62	31.70		31.70
Sprayer 600-750gal	60' 175hp		0.24	0.20	0.57			0.02	1.03	1.30	2.33
Atrazine 4L	pt	7.64						0.15	7.79		7.79
Halex GT	pt	25.67						0.51	26.18		26.18
Fert Appl (Liquid)	12R-30		1.39	1.86	2.55			0.10	5.90	4.90	10.80
UAN + Sulfur (28%)	gal	59.12						0.99	60.11		60.11
Corn Consultant	acre	6.00						0.10	6.10		6.10
App by Air ( 3 gal)	appl	1.10						0.02	1.12		1.12
Bifenthrin	oz	1.20						0.02	1.22		1.22
App by Air ( 3 gal)	appl	5.50						0.07	5.57		5.57
Intrepid 2F	oz	7.76						0.10	7.86		7.86
Header - Corn	8R-30		2.67	7.33	3.56			0.05	13.61	23.01	36.62
Grain Cart Corn	500 bu		0.45	0.37	0.70			0.01	1.53	1.43	2.96
Haul Corn	bu	39.10						0.13	39.23		39.23
Stalk Shredder Flex	20'		1.46	2.99	2.30			0.02	6.77	5.05	11.82
TOTALS		396.57	10.52	18.27	17.42	0.00	10.07	452.85	54.19	507.04	

Note: Cost of production estimates are based on 2020 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, 2021

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	634.10
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	7.00	0.00	0.00	1.10	5.50	0.00	0.00	0.00
FERTILIZERS	55.86	0.00	0.00	0.00	0.00	0.00	31.08	59.12	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	22.27	0.00	33.31	0.00	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20	7.76	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	84.84	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	31.60	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	5.42	0.00	0.00	0.00	0.00	2.32	0.57	2.55	0.00	0.00	0.00	6.56
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	3.20	0.00	0.00	0.00	0.00	1.11	0.24	1.39	0.00	0.00	0.00	4.58
REPAIR & MAINTENANCE	3.57	0.00	0.00	0.00	0.00	1.95	0.20	1.86	0.00	0.00	0.00	10.69
INTEREST ON OP. CAP.	4.12	0.00	0.00	0.00	0.78	2.11	1.45	1.23	0.17	0.00	0.00	0.21
TOTAL DIRECT EXPENSES	107.10	0.00	0.00	0.00	30.05	92.33	74.35	74.45	13.43	0.00	0.00	61.14
NET INCOME	-107.10	0.00	0.00	0.00	-30.05	-92.33	-74.35	-74.45	-13.43	0.00	0.00	572.96
NET INCOME TO DATE	-107.10	-107.10	-107.10	-107.10	-137.15	-229.48	-303.83	-378.28	-391.71	-391.71	-391.71	181.25

Note: Cost of production estimates are based on 2020 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, 2021

			-----PERCENT-----										
PRODUCT			75	80	85	90	95	100	105	110	115	120	125
			-----PRODUCT PRICE-----										
Corn			2.79	2.98	3.17	3.35	3.54	3.73	3.91	4.10	4.28	4.47	4.66
			-----dollars-----										
PERCENT	YIELD	UNIT											
50	85.00	bu	-195 -249	-179 -233	-163 -217	-147 -202	-132 -186	-116 -170	-100 -154	-84 -138	-68 -122	-52 -106	-36 -91
60	102.00	bu	-151 -206	-132 -186	-113 -167	-94 -148	-75 -129	-56 -110	-37 -91	-18 -72	0 -53	19 -34	38 -15
70	119.00	bu	-108 -162	-85 -140	-63 -117	-41 -95	-19 -73	2 -51	24 -29	47 -7	69 15	91 37	113 59
80	136.00	bu	-64 -118	-39 -93	-13 -68	11 -42	36 -17	62 8	87 33	113 58	138 84	163 109	189 134
90	153.00	bu	-20 -75	7 -46	36 -18	64 10	93 39	121 67	150 96	178 124	207 153	235 181	264 210
100	170.00	bu	22 -31	54 0	86 31	117 63	149 95	181 127	212 158	244 190	276 222	308 253	339 285
110	187.00	bu	66 12	101 47	136 81	170 116	205 151	240 186	275 221	310 256	345 291	380 326	415 360
120	204.00	bu	109 55	148 93	186 131	224 169	262 207	300 246	338 284	376 322	414 360	452 398	490 436
130	221.00	bu	153 99	194 140	236 181	277 223	318 264	359 305	400 346	442 387	483 429	524 470	565 511
140	238.00	bu	197 143	241 187	286 231	330 276	374 320	419 365	463 409	507 453	552 498	596 542	641 586
150	255.00	bu	240 186	288 234	336 281	383 329	431 376	478 424	526 472	573 519	621 567	668 614	716 662

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 2020 input prices.

Table 6.A Estimated costs per acre  
 Corn, no-tillage, BtRR, 12-row 30", 170 bu yield goal  
 Non-Delta Areas, Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air ( 5 gal)	appl	7.00	1.0000	7.00	_____
App by Air ( 3 gal)	appl	5.50	1.0000	5.50	_____
FERTILIZERS					
DAP	cwt	20.99	1.6300	34.21	_____
Potash (60% K2O)	cwt	22.11	1.2500	27.64	_____
Fert 10-34-0	gal	2.80	5.0000	14.00	_____
UAN (32%)	gal	1.34	43.8348	58.74	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.13	32.0000	4.16	_____
Clarity	pt	10.73	0.5000	5.37	_____
Select Max	pt	12.74	1.0000	12.74	_____
Atrazine 4L	pt	1.91	4.0000	7.64	_____
Halex GT	pt	7.13	3.6000	25.67	_____
INSECTICIDES					
Bifenthrin	oz	0.94	6.4020	6.02	_____
SEED/PLANTS					
Corn Seed BtRR	thous	3.99	28.0000	111.72	_____
HAULING					
Haul Corn	bu	0.23	170.0000	39.10	_____
CUSTOM LIME					
Lime (Spread)	ton	47.45	0.6660	31.60	_____
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	14.68	0.3616	5.31	_____
Harvesters	hour	14.68	0.1277	1.87	_____
HAND LABOR					
Implements	hour	9.06	0.1832	1.66	_____
UNALLOCATED LABOR	hour	14.69	0.4404	6.47	_____
DIESEL FUEL					
Tractors	gal	1.53	4.1883	6.41	_____
Harvesters	gal	1.53	1.7419	2.67	_____
REPAIR & MAINTENANCE					
Implements	acre	8.68	1.0000	8.68	_____
Tractors	acre	2.63	1.0000	2.63	_____
Harvesters	acre	5.20	1.0000	5.20	_____
INTEREST ON OP. CAP.	acre	9.30	1.0000	9.30	_____
TOTAL DIRECT EXPENSES				450.64	_____
FIXED EXPENSES					
Implements	acre	11.02	1.0000	11.02	_____
Tractors	acre	16.05	1.0000	16.05	_____
Harvesters	acre	19.91	1.0000	19.91	_____
TOTAL FIXED EXPENSES				46.98	_____
TOTAL SPECIFIED EXPENSES				497.62	_____

Note: Cost of production estimates are based on 2020 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, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Corn	bu	3.73	170.0000	634.10	_____
				-----	
TOTAL INCOME				634.10	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	12.50	1.0000	12.50	_____
FERTILIZERS	acre	134.59	1.0000	134.59	_____
HERBICIDES	acre	55.58	1.0000	55.58	_____
INSECTICIDES	acre	6.02	1.0000	6.02	_____
SEED/PLANTS	acre	111.72	1.0000	111.72	_____
HAULING	acre	39.10	1.0000	39.10	_____
CUSTOM LIME	acre	31.60	1.0000	31.60	_____
CROP CONSULTANT	acre	6.00	1.0000	6.00	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1832	1.66	_____
OPERATOR LABOR	hour	14.68	0.4893	7.18	_____
UNALLOCATED LABOR	hour	14.69	0.4404	6.47	_____
DIESEL FUEL	gal	1.53	5.9303	9.08	_____
REPAIR & MAINTENANCE	acre	16.51	1.0000	16.51	_____
INTEREST ON OP. CAP.	acre	9.30	1.0000	9.30	_____
				-----	
TOTAL DIRECT EXPENSES				450.64	_____
RETURNS ABOVE DIRECT EXPENSES				183.46	_____
TOTAL FIXED EXPENSES				46.98	_____
				-----	
TOTAL SPECIFIED EXPENSES				497.62	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				136.48	_____

Note: Cost of production estimates are based on 2020 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, 2021

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 225	0.042	1.00	Mar		0.04	0.04	0.08	0.03
DAP	cwt					1.6300				
Potash (60% K2O)	cwt					1.2500				
NT Plant&Pre-Rigid	12R-30	MFWD 225	0.070	1.00	Mar		0.07	0.07	0.14	0.06
Corn Seed BtRR	thous					28.0000				
Fert 10-34-0	gal					5.0000				
Spray (Broadcast)	27'	MFWD 225	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)	12R-30	MFWD 225	0.078	1.00	Apr		0.07	0.07	0.11	0.07
UAN (32%)	gal					43.8348				
Corn Consultant	acre			1.00	May	1.0000				
App by Air ( 3 gal)	appl			1.00	May	1.0000				
Bifenthrin	oz					6.4020				
Header - Corn	8R-30	265 hp	0.127	1.00	Sep		0.12	0.12	0.12	0.11
Grain Cart Corn	500 bu	MFWD 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							0.48	0.48	0.67	0.44

Note: Cost of production estimates are based on 2020 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, 2021

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						0.13	3.46	3.46
Lime (Spread)	ton	31.60						1.26	32.86	32.86
App by Air ( 5 gal)	appl	7.00						0.19	7.19	7.19
Glyphosate 3lbs a.e	oz	4.16						0.11	4.27	4.27
Clarity	pt	5.37						0.14	5.51	5.51
Select Max	pt	12.74						0.34	13.08	13.08
Spin Spreader	5 ton		0.75	0.58	1.56			0.07	2.96	2.40
DAP	cwt	34.21						0.80	35.01	35.01
Potash (60% K2O)	cwt	27.64						0.64	28.28	28.28
NT Plant&Pre-Rigid	12R-30		1.25	2.70	2.61			0.15	6.71	7.16
Corn Seed BtRR	thous	111.72						2.61	114.33	114.33
Fert 10-34-0	gal	14.00						0.33	14.33	14.33
Spray (Broadcast)	27'		1.11	0.68	2.03			0.08	3.90	3.03
Atrazine 4L	pt	7.64						0.15	7.79	7.79
Halex GT	pt	25.67						0.51	26.18	26.18
Fert Appl (Liquid)	12R-30		1.39	1.86	2.55			0.12	5.92	4.90
UAN (32%)	gal	58.74						1.17	59.91	59.91
Corn Consultant	acre	6.00						0.10	6.10	6.10
App by Air ( 3 gal)	appl	5.50						0.09	5.59	5.59
Bifenthrin	oz	6.02						0.10	6.12	6.12
Header - Corn	8R-30		2.67	7.33	3.56			0.05	13.61	23.01
Grain Cart Corn	500 bu		0.45	0.37	0.70			0.01	1.53	1.43
Haul Corn	bu	39.10						0.13	39.23	39.23
Stalk Shredder Flex	20'		1.46	2.99	2.30			0.02	6.77	5.05
TOTALS		400.44	9.08	16.51	15.31	0.00	9.30	450.64	46.98	497.62

Note: Cost of production estimates are based on 2020 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, 2021

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	634.10
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	7.00	0.00	0.00	5.50	0.00	0.00	0.00	0.00
FERTILIZERS	0.00	0.00	0.00	0.00	0.00	75.85	58.74	0.00	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	22.27	0.00	33.31	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	6.02	0.00	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	111.72	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	31.60	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	4.17	4.58	0.00	0.00	0.00	0.00	6.56
LEASE *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUEL	0.00	0.00	0.00	0.00	0.00	2.00	2.50	0.00	0.00	0.00	0.00	4.58
REPAIR & MAINTENANCE	0.00	0.00	0.00	0.00	0.00	3.28	2.54	0.00	0.00	0.00	0.00	10.69
INTEREST ON OP. CAP.	1.39	0.00	0.00	0.00	0.78	4.60	2.03	0.29	0.00	0.00	0.00	0.21
TOTAL DIRECT EXPENSES	36.32	0.00	0.00	0.00	30.05	201.62	103.70	17.81	0.00	0.00	0.00	61.14
NET INCOME	-36.32	0.00	0.00	0.00	-30.05	-201.62	-103.70	-17.81	0.00	0.00	0.00	572.96
NET INCOME TO DATE	-36.32	-36.32	-36.32	-36.32	-66.37	-267.99	-371.69	-389.50	-389.50	-389.50	-389.50	183.46

Note: Cost of production estimates are based on 2020 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, 2021

PRODUCT	PERCENT												
	75	80	85	90	95	100	105	110	115	120	125		
PRODUCT PRICE													
Corn	2.79	2.98	3.17	3.35	3.54	3.73	3.91	4.10	4.28	4.47	4.66		
PERCENT	YIELD	UNIT	dollars										
50	85.00	bu	-193 -240	-177 -224	-161 -208	-145 -192	-129 -176	-113 -160	-98 -145	-82 -129	-66 -113	-50 -97	-34 -81
60	102.00	bu	-149 -196	-130 -177	-111 -158	-92 -139	-73 -120	-54 -101	-35 -82	-16 -63	2 -44	21 -25	40 -6
70	119.00	bu	-105 -152	-83 -130	-61 -108	-39 -86	-17 -64	4 -41	27 -19	49 2	71 24	93 46	115 68
80	136.00	bu	-62 -109	-36 -83	-11 -58	13 -33	39 -7	64 17	89 42	115 68	140 93	165 118	191 144
90	153.00	bu	-18 -65	9 -37	38 -8	66 19	95 48	123 76	152 105	181 134	209 162	238 191	266 219
100	170.00	bu	24 -22	56 9	88 41	120 73	151 104	183 136	215 168	246 199	278 231	310 263	341 295
110	187.00	bu	68 21	103 56	138 91	173 126	208 161	242 195	277 230	312 265	347 300	382 335	417 370
120	204.00	bu	112 65	150 103	188 141	226 179	264 217	302 255	340 293	378 331	416 369	454 407	492 445
130	221.00	bu	155 108	197 150	238 191	279 232	320 273	361 314	403 356	444 397	485 438	526 479	568 521
140	238.00	bu	199 152	243 196	288 241	332 285	377 330	421 374	465 418	510 463	554 507	598 551	643 596
150	255.00	bu	243 196	290 243	338 291	385 338	433 386	480 433	528 481	576 529	623 576	671 624	718 671

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 2020 input prices.

Table 7.A Estimated costs per acre  
 Grain sorghum, 12-row 30", 100 bu yield goal  
 All Areas, Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air ( 5 gal)	appl	7.00	1.0000	7.00	_____
FERTILIZERS					
DAP	cwt	20.99	1.3000	27.29	_____
Potash (60% K2O)	cwt	22.11	1.0000	22.11	_____
UAN + Sulfur (28%)	gal	1.61	38.2883	61.64	_____
HERBICIDES					
Glyphosate 3lbs a.e	oz	0.13	32.0000	4.16	_____
2,4-D Amine 4	pt	2.25	2.0000	4.50	_____
Select Max	pt	12.74	1.0000	12.74	_____
Lexar	pt	7.55	6.0000	45.30	_____
INSECTICIDES					
Sivanto Prime	oz	2.67	8.0000	21.36	_____
Karate Z	oz	2.52	1.5000	3.78	_____
Prevathon	oz	1.05	14.0000	14.70	_____
SEED/PLANTS					
Sorghum Concept+ Po	lb	3.82	4.5000	17.19	_____
ADJUVANTS					
Surfactant	pt	3.30	0.3000	0.99	_____
HAULING					
Haul Sorghum	bu	0.25	100.0000	25.00	_____
CUSTOM LIME					
Lime (Spread)	ton	47.45	0.6660	31.60	_____
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	14.68	0.2915	4.27	_____
Harvesters	hour	14.68	0.1021	1.50	_____
Self-Propelled	hour	14.68	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	14.64	0.4138	6.06	_____
DIESEL FUEL					
Tractors	gal	1.53	3.3766	5.17	_____
Harvesters	gal	1.53	1.3935	2.13	_____
Self-Propelled	gal	1.53	0.8505	1.30	_____
REPAIR & MAINTENANCE					
Implements	acre	5.46	1.0000	5.46	_____
Tractors	acre	2.13	1.0000	2.13	_____
Harvesters	acre	4.16	1.0000	4.16	_____
Self-Propelled	acre	1.05	1.0000	1.05	_____
INTEREST ON OP. CAP.	acre	6.65	1.0000	6.65	_____
TOTAL DIRECT EXPENSES				351.13	_____
FIXED EXPENSES					
Implements	acre	10.19	1.0000	10.19	_____
Tractors	acre	12.94	1.0000	12.94	_____
Harvesters	acre	15.93	1.0000	15.93	_____
Self-Propelled	acre	6.60	1.0000	6.60	_____
TOTAL FIXED EXPENSES				45.66	_____
TOTAL SPECIFIED EXPENSES				396.79	_____

Note: Cost of production estimates are based on 2020 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, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Grain Sorghum	bu	3.55	100.0000	355.00	_____
				-----	
TOTAL INCOME				355.00	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	7.00	1.0000	7.00	_____
FERTILIZERS	acre	111.04	1.0000	111.04	_____
HERBICIDES	acre	66.70	1.0000	66.70	_____
INSECTICIDES	acre	39.84	1.0000	39.84	_____
SEED/PLANTS	acre	17.19	1.0000	17.19	_____
ADJUVANTS	acre	0.99	1.0000	0.99	_____
HAULING	acre	25.00	1.0000	25.00	_____
CUSTOM LIME	acre	31.60	1.0000	31.60	_____
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	14.68	0.4598	6.72	_____
UNALLOCATED LABOR	hour	14.64	0.4138	6.06	_____
DIESEL FUEL	gal	1.53	5.6208	8.60	_____
REPAIR & MAINTENANCE	acre	12.80	1.0000	12.80	_____
INTEREST ON OP. CAP.	acre	6.65	1.0000	6.65	_____
				-----	
TOTAL DIRECT EXPENSES				351.13	_____
RETURNS ABOVE DIRECT EXPENSES				3.87	_____
TOTAL FIXED EXPENSES				45.66	_____
				-----	
TOTAL SPECIFIED EXPENSES				396.79	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				-41.79	_____

Note: Cost of production estimates are based on 2020 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, 2021

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	32'	MFWD 225	0.061	1.00	Nov		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				
2,4-D Amine 4	pt					2.0000				
Select Max	pt					1.0000				
Surfactant	pt					0.3000				
Spin Spreader	5 ton	MFWD 225	0.042	1.00	Apr		0.04	0.04	0.08	0.03
DAP	cwt					1.3000				
Potash (60% K2O)	cwt					1.0000				
Field Cultivate Fld	32'	MFWD 225	0.046	1.00	Apr		0.04	0.04	0.04	0.04
Plant - Folding	12R-30	MFWD 225	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 225	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							0.45	0.39	0.63	0.41

Note: Cost of production estimates are based on 2020 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, 2021

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						0.13	3.46		3.46
Lime (Spread)	ton	31.60						1.26	32.86		32.86
Disk Harrow	32'		1.09	1.50	1.71			0.16	4.46	4.85	9.31
App by Air ( 5 gal)	appl	7.00						0.19	7.19		7.19
Glyphosate 3lbs a.e	oz	4.16						0.11	4.27		4.27
2,4-D Amine 4	pt	4.50						0.12	4.62		4.62
Select Max	pt	12.74						0.34	13.08		13.08
Surfactant	pt	0.99						0.03	1.02		1.02
Spin Spreader	5 ton		0.75	0.58	1.56			0.06	2.95	2.40	5.35
DAP	cwt	27.29						0.55	27.84		27.84
Potash (60% K2O)	cwt	22.11						0.44	22.55		22.55
Field Cultivate Fld	32'		0.83	0.85	1.30			0.06	3.04	4.14	7.18
Plant - Folding	12R-30		1.11	2.15	2.32			0.11	5.69	5.90	11.59
Sorghum Concept+ Po	lb	17.19						0.34	17.53		17.53
Sprayer 800gal	80' 250hp		0.26	0.21	0.42			0.02	0.91	1.32	2.23
Lexar	pt	45.30						0.91	46.21		46.21
Sorghum Consultant	acre	6.00						0.10	6.10		6.10
Fert Appl (Liquid)	12R-30		1.39	1.86	2.55			0.10	5.90	4.90	10.80
UAN + Sulfur (28%)	gal	61.64						1.03	62.67		62.67
Sprayer 800gal	80' 250hp		0.26	0.21	0.42			0.01	0.90	1.32	2.22
Sivanto Prime	oz	10.68						0.14	10.82		10.82
Sprayer 800gal	80' 250hp		0.26	0.21	0.42			0.01	0.90	1.32	2.22
Karate Z	oz	3.78						0.04	3.82		3.82
Sprayer 800gal	80' 250hp		0.26	0.21	0.42			0.01	0.90	1.32	2.22
Prevathon	oz	14.70						0.15	14.85		14.85
Sprayer 800gal	80' 250hp		0.26	0.21	0.42			0.01	0.90	1.32	2.22
Sivanto Prime	oz	10.68						0.11	10.79		10.79
Header Wheat/Sorghum	25' Rigid		2.13	4.81	2.85			0.03	9.82	16.87	26.69
Haul Sorghum	bu	25.00						0.08	25.08		25.08
TOTALS		308.69	8.60	12.80	14.39	0.00	6.65	351.13	45.66	396.79	

Note: Cost of production estimates are based on 2020 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, 2021

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	355.00
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	7.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	49.40	61.64	0.00	0.00	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	21.40	0.00	45.30	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	10.68	29.16	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	0.00	0.00	0.00	17.19	0.00	0.00	0.00	0.00	0.00
ADJUVANTS	0.00	0.00	0.00	0.00	0.99	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	31.60	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	1.71	0.00	0.00	0.00	0.00	5.60	2.55	0.42	1.26	0.00	2.85
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	1.09	0.00	0.00	0.00	0.00	2.95	1.39	0.26	0.78	0.00	2.13
REPAIR & MAINTENANCE	0.00	1.50	0.00	0.00	0.00	0.00	3.79	1.86	0.21	0.63	0.00	4.81
INTEREST ON OP. CAP.	1.39	0.16	0.00	0.00	0.79	0.00	2.49	1.23	0.15	0.33	0.00	0.11
TOTAL DIRECT EXPENSES	36.32	4.46	0.00	0.00	30.18	0.00	126.72	74.67	11.72	32.16	0.00	34.90
NET INCOME	-36.32	-4.46	0.00	0.00	-30.18	0.00	-126.72	-74.67	-11.72	-32.16	0.00	320.10
NET INCOME TO DATE	-36.32	-40.78	-40.78	-40.78	-70.96	-70.96	-197.68	-272.35	-284.07	-316.23	-316.23	3.87

Note: Cost of production estimates are based on 2020 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, 2021

PRODUCT	PERCENT												
	75	80	85	90	95	100	105	110	115	120	125		
PRODUCT PRICE													
Grain Sorghum	2.66	2.84	3.01	3.19	3.37	3.55	3.72	3.90	4.08	4.26	4.43		
PERCENT	YIELD	UNIT	dollars										
50	50.00	bu	-205	-196	-187	-178	-169	-161	-152	-143	-134	-125	-116
			-251	-242	-233	-224	-215	-206	-197	-189	-180	-171	-162
60	60.00	bu	-181	-170	-160	-149	-138	-128	-117	-106	-96	-85	-74
			-227	-216	-205	-195	-184	-173	-163	-152	-141	-131	-120
70	70.00	bu	-157	-144	-132	-119	-107	-95	-82	-70	-57	-45	-32
			-202	-190	-178	-165	-153	-140	-128	-115	-103	-91	-78
80	80.00	bu	-133	-118	-104	-90	-76	-62	-47	-33	-19	-5	8
			-178	-164	-150	-136	-121	-107	-93	-79	-65	-50	-36
90	90.00	bu	-108	-93	-77	-61	-45	-29	-13	2	18	34	50
			-154	-138	-122	-106	-90	-74	-58	-42	-26	-10	5
100	100.00	bu	-84	-67	-49	-31	-13	3	21	39	57	74	92
			-130	-112	-95	-77	-59	-41	-24	-6	11	29	46
110	110.00	bu	-60	-41	-21	-2	17	36	56	75	95	114	134
			-106	-86	-67	-47	-28	-8	10	30	49	69	88
120	120.00	bu	-36	-15	5	27	48	69	91	112	133	155	176
			-82	-61	-39	-18	2	24	45	66	88	109	130
130	130.00	bu	-12	10	33	56	79	102	125	148	172	195	218
			-58	-35	-12	11	34	57	80	103	126	149	172
140	140.00	bu	11	36	61	86	110	135	160	185	210	235	260
			-34	-9	15	40	65	90	115	139	164	189	214
150	150.00	bu	35	62	88	115	142	168	195	222	248	275	301
			-9	16	43	69	96	123	149	176	203	229	256

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 2020 input prices.

Table 8.A Estimated costs per acre  
 Wheat followed by soybeans, 70 bu yield goal  
 All Areas, Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air ( 5 gal)	appl	7.00	2.0000	14.00	_____
App by Air ( 3 gal)	appl	5.50	1.0000	5.50	_____
FERTILIZERS					
DAP	cwt	20.99	1.0000	20.99	_____
Potash (60% K2O)	cwt	22.11	0.7500	16.58	_____
Fert 41-0-0-4	cwt	18.22	3.0480	55.53	_____
FUNGICIDES					
CruiserMaxx Vibrance	oz	4.75	4.5000	21.38	_____
Prosaro	oz	2.42	8.0000	19.36	_____
HERBICIDES					
Axiom	oz	1.94	10.0000	19.40	_____
Harmony Extra SG	oz	11.06	0.7500	8.30	_____
Axial XL	oz	1.15	16.4000	18.86	_____
INSECTICIDES					
Karate Z	oz	2.52	1.5000	3.78	_____
SEED/PLANTS					
Wheat Seed Private	lb	0.28	90.0000	25.20	_____
CUSTOM FERTILIZE					
App Fert by Air	cwt	7.50	3.0480	22.86	_____
HAULING					
Haul Wheat	bu	0.26	70.0000	18.20	_____
CUSTOM LIME					
Lime (Spread)	ton	47.45	0.6660	31.60	_____
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	14.68	0.2129	3.12	_____
Harvesters	hour	14.68	0.1021	1.50	_____
HAND LABOR					
Implements	hour	9.06	0.1049	0.95	_____
UNALLOCATED LABOR	hour	14.67	0.2521	3.70	_____
DIESEL FUEL					
Tractors	gal	1.53	2.4667	3.78	_____
Harvesters	gal	1.53	1.3935	2.13	_____
REPAIR & MAINTENANCE					
Implements	acre	4.09	1.0000	4.09	_____
Tractors	acre	1.56	1.0000	1.56	_____
Harvesters	acre	4.16	1.0000	4.16	_____
INTEREST ON OP. CAP.	acre	7.30	1.0000	7.30	_____
TOTAL DIRECT EXPENSES				342.67	_____
FIXED EXPENSES					
Implements	acre	8.64	1.0000	8.64	_____
Tractors	acre	9.45	1.0000	9.45	_____
Harvesters	acre	15.93	1.0000	15.93	_____
TOTAL FIXED EXPENSES				34.02	_____
TOTAL SPECIFIED EXPENSES				376.69	_____

Note: Cost of production estimates are based on 2020 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, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Wheat	bu	5.75	70.0000	402.50	_____
				-----	
TOTAL INCOME				402.50	_____
DIRECT EXPENSES					
CUSTOM SPRAY	acre	19.50	1.0000	19.50	_____
FERTILIZERS	acre	93.11	1.0000	93.11	_____
FUNGICIDES	acre	40.74	1.0000	40.74	_____
HERBICIDES	acre	46.56	1.0000	46.56	_____
INSECTICIDES	acre	3.78	1.0000	3.78	_____
SEED/PLANTS	acre	25.20	1.0000	25.20	_____
CUSTOM FERTILIZE	acre	22.86	1.0000	22.86	_____
HAULING	acre	18.20	1.0000	18.20	_____
CUSTOM LIME	acre	31.60	1.0000	31.60	_____
CROP CONSULTANT	acre	5.50	1.0000	5.50	_____
SOIL TEST	acre	3.33	1.0000	3.33	_____
HAND LABOR	hour	9.06	0.1049	0.95	_____
OPERATOR LABOR	hour	14.68	0.3151	4.62	_____
UNALLOCATED LABOR	hour	14.67	0.2521	3.70	_____
DIESEL FUEL	gal	1.53	3.8602	5.91	_____
REPAIR & MAINTENANCE	acre	9.81	1.0000	9.81	_____
INTEREST ON OP. CAP.	acre	7.30	1.0000	7.30	_____
				-----	
TOTAL DIRECT EXPENSES				342.67	_____
RETURNS ABOVE DIRECT EXPENSES				59.83	_____
TOTAL FIXED EXPENSES				34.02	_____
				-----	
TOTAL SPECIFIED EXPENSES				376.69	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				25.81	_____

Note: Cost of production estimates are based on 2020 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, 2021

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	32'	MFWD 225	0.061	1.00	Sep		0.06	0.06	0.06	0.04
Spin Spreader	5 ton	MFWD 225	0.042	1.00	Sep		0.04	0.04	0.08	0.03
DAP	cwt					1.0000				
Potash (60% K2O)	cwt					0.7500				
Field Cultivate Fld	32'	MFWD 225	0.046	1.00	Sep		0.04	0.04	0.04	0.03
Grain Drill	30'	MFWD 225	0.062	1.00	Oct		0.06	0.06	0.12	0.05
Wheat Seed Private	lb					90.0000				
CruiserMaxx Vibrance	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							0.31	0.31	0.42	0.25

Note: Cost of production estimates are based on 2020 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, 2021

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						0.11	3.44	3.44
Lime (Spread)	ton	31.60						1.05	32.65	32.65
Disk Harrow	32'		1.09	1.50	1.62			0.14	4.35	4.85
Spin Spreader	5 ton		0.75	0.58	1.49			0.09	2.91	2.40
DAP	cwt	20.99						0.70	21.69	21.69
Potash (60% K2O)	cwt	16.58						0.55	17.13	17.13
Field Cultivate Fld	32'		0.83	0.85	1.23			0.10	3.01	4.14
Grain Drill	30'		1.11	2.07	2.23			0.16	5.57	5.76
Wheat Seed Private	lb	25.20						0.76	25.96	25.96
CruiserMaxx Vibrance	oz	21.38						0.64	22.02	22.02
Wheat Consultant	acre	5.50						0.17	5.67	5.67
App by Air ( 5 gal)	appl	7.00						0.19	7.19	7.19
Axiom	oz	19.40						0.52	19.92	19.92
App by Air ( 3 gal)	appl	5.50						0.09	5.59	5.59
Karate Z	oz	3.78						0.06	3.84	3.84
Harmony Extra SG	oz	8.30						0.14	8.44	8.44
Axial XL	oz	18.86						0.31	19.17	19.17
App Fert by Air	cwt	11.43						0.19	11.62	11.62
Fert 41-0-0-4	cwt	27.77						0.46	28.23	28.23
App Fert by Air	cwt	11.43						0.15	11.58	11.58
Fert 41-0-0-4	cwt	27.77						0.37	28.14	28.14
App by Air ( 5 gal)	appl	7.00						0.07	7.07	7.07
Prosaro	oz	19.36						0.19	19.55	19.55
Header Wheat/Sorghum	25' Rigid		2.13	4.81	2.70			0.03	9.67	16.87
Haul Wheat	bu	18.20						0.06	18.26	18.26
TOTALS		310.38	5.91	9.81	9.27	0.00	7.30	342.67	34.02	376.69

Note: Cost of production estimates are based on 2020 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, 2021

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	402.50
DIRECT EXPENSES												
CUSTOM SPRAY	0.00	0.00	0.00	0.00	7.00	0.00	0.00	5.50	0.00	7.00	0.00	0.00
FERTILIZERS	0.00	0.00	37.57	0.00	0.00	0.00	0.00	27.77	27.77	0.00	0.00	0.00
FUNGICIDES	0.00	0.00	0.00	21.38	0.00	0.00	0.00	0.00	0.00	19.36	0.00	0.00
HERBICIDES	0.00	0.00	0.00	0.00	19.40	0.00	0.00	27.16	0.00	0.00	0.00	0.00
INSECTICIDES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.78	0.00	0.00	0.00	0.00
SEED/PLANTS	0.00	0.00	0.00	25.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CUSTOM FERTILIZE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.43	11.43	0.00	0.00	0.00
HAULING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.20
CUSTOM LIME	0.00	0.00	31.60	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	4.34	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.70
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	2.67	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.13
REPAIR & MAINTENANCE	0.00	0.00	2.93	2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.81
INTEREST ON OP. CAP.	0.00	0.00	2.74	1.73	0.71	0.00	0.00	1.25	0.52	0.26	0.00	0.09
TOTAL DIRECT EXPENSES	0.00	0.00	85.18	59.22	27.11	0.00	0.00	76.89	39.72	26.62	0.00	27.93
NET INCOME	0.00	0.00	-85.18	-59.22	-27.11	0.00	0.00	-76.89	-39.72	-26.62	0.00	374.57
NET INCOME TO DATE	0.00	0.00	-85.18	-144.40	-171.51	-171.51	-171.51	-248.40	-288.12	-314.74	-314.74	59.83

Note: Cost of production estimates are based on 2020 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, 2021

			PERCENT										
PRODUCT			75	80	85	90	95	100	105	110	115	120	125
Wheat			4.31	4.60	4.88	5.17	5.46	5.75	6.03	6.32	6.61	6.90	7.18
PERCENT			dollars										
YIELD	UNIT												
50	35.00	bu	-182	-172	-162	-152	-142	-132	-122	-112	-102	-92	-81
			-216	-206	-196	-186	-176	-166	-156	-146	-136	-126	-115
60	42.00	bu	-154	-142	-130	-118	-105	-93	-81	-69	-57	-45	-33
			-188	-176	-164	-152	-139	-127	-115	-103	-91	-79	-67
70	49.00	bu	-125	-111	-97	-83	-69	-55	-41	-27	-13	0	14
			-159	-145	-131	-117	-103	-89	-75	-61	-47	-33	-19
80	56.00	bu	-97	-81	-65	-49	-33	-17	-0	15	31	47	63
			-131	-115	-99	-83	-67	-51	-34	-18	-2	13	29
90	63.00	bu	-69	-51	-32	-14	3	21	39	57	75	93	111
			-103	-85	-66	-48	-30	-12	5	23	41	59	77
100	70.00	bu	-40	-20	-0	19	39	59	79	100	120	140	160
			-74	-54	-34	-14	5	25	45	66	86	106	126
110	77.00	bu	-12	9	31	53	76	98	120	142	164	186	208
			-46	-24	-2	19	42	64	86	108	130	152	174
120	84.00	bu	15	40	64	88	112	136	160	184	209	233	257
			-18	6	30	54	78	102	126	150	175	199	223
130	91.00	bu	44	70	96	122	148	175	201	227	253	279	305
			10	36	62	88	114	141	167	193	219	245	271
140	98.00	bu	72	100	129	157	185	213	241	269	298	326	354
			38	66	94	123	151	179	207	235	264	292	320
150	105.00	bu	101	131	161	191	221	251	282	312	342	372	402
			66	97	127	157	187	217	248	278	308	338	368

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 2020 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, 2021

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	391,000	300	8	13.64	14.68	20.86	40.72	76.27	155.91	232.19
Combine (300-349 hp)	325 hp	395,000	300	8	16.73	14.68	25.59	41.14	81.42	157.50	238.93
Combine (350-399 hp)	355 hp	401,000	300	8	18.27	14.68	27.95	41.77	84.40	159.90	244.30
Combine (400-449 hp)	425 hp	436,000	300	8	21.87	14.68	33.47	45.41	93.56	173.85	267.42
Combine (450-499hp)	475 hp	462,000	300	8	24.44	14.68	37.40	48.12	100.21	184.22	284.43
Tractor( 20-39hp)CB	MFWD 30	30,100	600	8	1.54	14.68	2.36	0.94	17.98	5.46	23.44
Tractor( 20-39hp)RB	MFWD 30	20,700	600	8	1.54	14.68	2.36	0.64	17.68	3.75	21.44
Tractor( 40-59hp)CB	2WD 50	30,900	600	8	2.57	14.68	3.93	0.96	19.58	5.61	25.19
Tractor( 40-59hp)CB	MFWD 50	41,400	600	8	2.57	14.68	3.93	1.29	19.91	7.51	27.43
Tractor( 40-59hp)RB	2WD 50	21,700	600	8	2.57	14.68	3.93	0.67	19.29	3.94	23.23
Tractor( 40-59hp)RB	MFWD 50	27,200	600	8	2.57	14.68	3.93	0.85	19.46	4.93	24.40
Tractor( 60-89hp)CB	2WD 75	53,200	600	8	3.86	14.68	5.90	1.66	22.24	9.66	31.91
Tractor( 60-89hp)CB	MFWD 75	57,600	600	8	3.86	14.68	5.90	1.80	22.38	10.46	32.84
Tractor( 60-89hp)RB	2WD 75	38,400	600	8	3.86	14.68	5.90	1.20	21.78	6.97	28.76
Tractor( 60-89hp)RB	MFWD 75	41,800	600	8	3.86	14.68	5.90	1.30	21.89	7.59	29.48
Tractor( 90-119hp)CB	2WD 105	71,200	600	8	5.40	14.68	8.26	2.22	25.17	12.93	38.10
Tractor( 90-119hp)CB	MFWD 105	91,700	600	8	5.40	14.68	8.26	2.86	25.81	16.65	42.46
Tractor( 90-119hp)RB	2WD 105	64,600	600	8	5.40	14.68	8.26	2.01	24.96	11.73	36.69
Tractor( 90-119hp)RB	MFWD 105	71,900	600	8	5.40	14.68	8.26	2.24	25.19	13.05	38.25
Tractor(120-139hp)CB	2WD 130	113,000	600	8	6.69	14.68	10.23	3.53	28.44	20.52	48.97
Tractor(120-139hp)CB	MFWD 130	126,000	600	8	6.69	14.68	10.23	3.93	28.85	22.88	51.73
Tractor(140-159hp)	2WD 150	111,000	600	8	7.72	14.68	11.81	3.46	29.96	20.15	50.12
Tractor(140-159hp)CB	MFWD 150	143,000	600	8	7.72	14.68	11.81	4.46	30.96	25.97	56.93
Tractor(160-179hp)CB	MFWD 170	160,000	600	8	8.75	14.68	13.38	5.00	33.06	30.47	63.54
Tractor(180-199hp)CB	MFWD 190	194,000	600	8	9.77	14.68	14.96	6.06	35.70	36.95	72.66
Tractor(200-249hp)CB	MFWD 225	233,000	600	8	11.58	14.68	17.71	7.28	39.68	44.38	84.06
Tractor(250-349hp)CB	4WD 300	314,000	600	8	15.44	14.68	23.62	9.81	48.11	59.81	107.93
Tractor(250-349hp)CB	MFWD 300	321,000	600	8	15.44	14.68	23.62	10.03	48.33	61.14	109.48
Tractor(250-349hp)CB	Track 300	329,000	600	8	15.44	14.68	23.62	10.28	48.58	62.67	111.25
Tractor(350-449hp)	Track 400	453,000	600	8	20.58	14.68	31.50	14.15	60.33	86.29	146.63
Tractor(350-449hp)CB	4WD 400	366,000	600	8	20.58	14.68	31.50	11.43	57.61	69.72	127.33
Tractor(450-550hp)CB	4WD 500	412,000	600	8	25.73	14.68	39.37	12.87	66.93	78.48	145.41
Tractor(450-550hp)CB	Track 500	470,000	600	8	25.73	14.68	39.37	14.68	68.74	89.53	158.27
Utility Vehicle	800 CC	12,200	200	8	0.70	14.68	1.32	1.90	17.90	7.29	25.20
Utility Vehicle	900 CC	15,800	200	8	1.00	14.68	1.89	2.46	19.03	9.45	28.48

## 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, 2021

Item Name	Size	Purchase	Annual	Useful	Fuel	Perf	Labor	Fuel	R&M	Total	Fixed	Total
		Price	Use	Life	Use	Rate				Direct	Cost	
		dollars	hours	years	gal/hr	hr/ac	-----\$/acre-----					
Cotton Picker	4R-38(250)	268,000	200	8	12.86	0.257	6.11	5.07	10.79	21.98	41.32	63.31
Cotton Picker	4R-38(350)	351,000	200	8	18.01	0.257	6.11	7.10	14.13	27.36	54.11	81.48
Cotton Picker	4R2x1(350)	357,000	200	8	18.01	0.172	4.09	4.74	9.61	18.45	36.79	55.24
Cotton Picker	6R-30(355)	465,000	200	8	18.27	0.218	5.18	6.10	15.85	27.14	60.70	87.84
Cotton Picker	6R-38(355)	465,000	200	8	18.27	0.172	4.09	4.81	12.51	21.42	47.92	69.35
Cotton Picker/Modu	4R-38(365)	536,000	200	8	20.58	0.257	6.11	8.12	21.58	35.82	82.64	118.47
Cotton Picker/Module	6R-30(500)	808,000	200	8	25.73	0.218	5.18	8.59	27.55	41.32	105.47	146.80
Cotton Picker/Module	6R-38(500)	807,000	200	8	25.73	0.172	4.09	6.78	21.72	32.60	83.17	115.77
Dry Applicator SP	70'300cuft	365,000	350	8	16.98	0.015	0.29	0.39	0.29	0.97	1.88	2.86
Sprayer 600-750gal	60' 175hp	216,000	350	8	9.00	0.017	0.33	0.24	0.20	0.78	1.30	2.08
Sprayer 600-825gal	80' 175hp	225,000	350	8	11.81	0.013	0.25	0.23	0.15	0.65	1.01	1.66
Sprayer 600-825gal	90' 250hp	322,000	350	8	12.73	0.011	0.22	0.22	0.20	0.65	1.29	1.95
Sprayer 800gal	100' 250hp	324,000	350	8	14.15	0.010	0.20	0.22	0.18	0.61	1.17	1.78
Sprayer 800gal	80' 250hp	292,000	350	8	12.86	0.013	0.25	0.26	0.20	0.72	1.31	2.04
Sprayer 1000-1400gal	90' 275hp	322,000	350	8	14.15	0.010	0.20	0.22	0.18	0.61	1.16	1.77
Sprayer 1000gal	100' 300hp	365,000	350	8	15.44	0.010	0.20	0.24	0.20	0.66	1.31	1.97
Sprayer 1200+gal	120' 300hp	392,000	350	8	15.44	0.008	0.16	0.20	0.18	0.56	1.18	1.74

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, 2021

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 w/ro	4R-30	MFWD 225	18,700	150	12	0.204	2.99	3.62	1.37	1.48	9.48	2.29	9.06	20.85
Bed-Paratill w/ro	4R-38	MFWD 225	18,700	150	12	0.160	2.36	2.85	1.08	1.17	7.47	1.81	7.14	16.42
Bed-Paratill w/ro	6R-38	MFWD 225	25,500	150	12	0.107	1.57	1.90	0.99	0.78	5.25	1.65	4.77	11.68
Bed-Rip/Disk Fold.	8R-38	MFWD 190	46,900	300	20	0.073	1.07	1.09	0.17	0.44	2.78	0.76	2.70	6.24
Bed-Rip/Disk Fold.	12R-30	MFWD 225	67,900	300	20	0.061	0.90	1.09	0.20	0.44	2.65	0.93	2.73	6.32
Bed-Rip/Disk Fold.	12R-38	MFWD 225	67,900	300	20	0.046	0.67	0.81	0.15	0.33	1.99	0.70	2.05	4.74
Bed-Rip/Disk Rigid	4R-30	MFWD 190	21,300	300	20	0.184	2.71	2.76	0.19	1.12	6.79	0.88	6.83	14.51
Bed-Rip/Disk Rigid	4R-38	MFWD 190	21,300	300	20	0.146	2.15	2.19	0.15	0.88	5.39	0.70	5.42	11.51
Bed-Rip/Disk Rigid	6R-30	MFWD 190	29,700	300	20	0.123	1.80	1.84	0.18	0.74	4.58	0.82	4.55	9.95
Bed-Rip/Disk Rigid	6R-38	MFWD 190	29,700	300	20	0.097	1.42	1.45	0.14	0.58	3.61	0.64	3.59	7.86
Bed-Rip/Disk Rigid	8R-30	MFWD 190	39,800	300	20	0.139	2.04	2.07	0.27	0.84	5.23	1.24	5.13	11.61
Bed-Rip/Disk Rigid	8R-38	MFWD 190	39,800	300	20	0.073	1.07	1.09	0.14	0.44	2.75	0.65	2.70	6.10
Bed-Rip/Disk/Cond.	6-Row	MFWD 225	24,800	150	12	0.107	1.57	1.90	0.96	0.78	5.23	1.60	4.77	11.60
Bed-Rip/Disk/Cond.	8-Row	MFWD 225	33,000	150	12	0.080	1.18	1.43	0.96	0.58	4.16	1.60	3.58	9.35
Bed-Subsoil Fold	8R-38	MFWD 225	46,900	150	12	0.080	1.18	1.43	1.36	0.58	4.57	2.27	3.58	10.43
Bed-Subsoil Fold	8R-38 2x1	MFWD 225	67,900	150	12	0.053	0.78	0.95	1.31	0.39	3.45	2.19	2.38	8.03
Bed-Subsoil Fold	12R-38	MFWD 225	67,900	150	12	0.053	0.78	0.95	1.31	0.39	3.45	2.19	2.38	8.03
Bed-Subsoil Rigid	4R-30	MFWD 225	17,500	150	12	0.204	2.99	3.62	1.29	1.48	9.39	2.15	9.06	20.62
Bed-Subsoil Rigid	4R-38	MFWD 225	16,800	150	12	0.160	2.36	2.85	0.97	1.17	7.36	1.62	7.14	16.12
Bed-Subsoil Rigid	6R-30	MFWD 225	24,300	150	12	0.136	1.99	2.41	1.19	0.99	6.60	1.99	6.04	14.63
Bed-Subsoil Rigid	6R-38	MFWD 225	25,300	150	12	0.107	1.57	1.90	0.98	0.78	5.24	1.63	4.77	11.66
Bed-Subsoil Rigid	8R-30	MFWD 225	32,500	150	12	0.102	1.49	1.81	1.19	0.74	5.25	1.99	4.53	11.78
Bed-Subsoil Rigid	8R-38	MFWD 225	33,600	150	12	0.080	1.18	1.43	0.97	0.58	4.18	1.63	3.58	9.40
Bed/Disk (Hipper)	4R-38	MFWD 150	10,500	160	10	0.147	2.16	1.74	0.38	0.65	4.95	0.98	3.83	9.78
Bed/Disk (Hipper)	6R-38	MFWD 170	16,200	160	10	0.098	1.44	1.32	0.39	0.49	3.66	1.01	3.00	7.68
Bed/Disk (Hipper)	8R-30	MFWD 190	20,800	160	10	0.093	1.37	1.40	0.48	0.56	3.83	1.24	3.46	8.54
Bed/Disk (Hipper)	8R-38 2x1	MFWD 190	51,400	160	10	0.049	0.72	0.73	0.63	0.29	2.39	1.61	1.82	5.83
Bed/Disk (Hipper)	12R-30	MFWD 225	40,100	160	10	0.062	0.91	1.10	0.62	0.45	3.10	1.59	2.77	7.47
Bed/Disk (Hipper)	12R-38	MFWD 225	51,400	160	10	0.049	0.72	0.87	0.63	0.35	2.59	1.61	2.18	6.39
Bed/Disk (Hipper)	16R40	MFWD 300	60,800	160	10	0.035	0.51	0.83	0.53	0.35	2.24	1.37	2.16	5.78
Bed/Disk (Hipper)Fl	8R-38	MFWD 190	22,000	160	10	0.074	1.08	1.10	0.40	0.44	3.05	1.03	2.73	6.83
Bed/Disk (Hipper)Rd	8R-38	MFWD 190	19,700	160	10	0.074	1.08	1.10	0.36	0.44	3.01	0.93	2.73	6.68
Bed/Disk w/roller	8R-30	MFWD 190	26,900	160	10	0.093	1.37	1.40	0.63	0.56	3.97	1.60	3.46	9.04
Bed/Disk w/roller	8R-38	MFWD 190	30,800	160	10	0.074	1.08	1.10	0.57	0.44	3.21	1.45	2.73	7.41
Bed/Disk w/roller	12R-30/40	MFWD 225	50,900	160	10	0.062	0.91	1.10	0.79	0.45	3.27	2.02	2.77	8.07
Bed/Lister	4R-38	MFWD 150	18,100	160	8	0.228	3.35	2.69	0.96	1.02	8.03	2.95	5.93	16.92
Bed/Lister	6R-38	MFWD 150	20,400	160	8	0.120	1.76	1.41	0.57	0.53	4.29	1.75	3.12	9.16
Bed/Lister	8R-30	MFWD 190	24,900	160	8	0.114	1.67	1.70	0.66	0.69	4.74	2.03	4.21	10.99
Bed/Lister	8R-38	MFWD 190	25,000	160	8	0.090	1.32	1.35	0.52	0.54	3.75	1.61	3.33	8.70
Bed/Lister	8R-38 2x1	MFWD 190	40,400	160	8	0.060	0.88	0.89	0.56	0.36	2.71	1.73	2.22	6.67
Bed/Lister	12R-38	MFWD 225	40,400	160	8	0.060	0.88	1.06	0.56	0.43	2.95	1.73	2.66	7.35
Bed/Lister	16R-30	MFWD 225	54,700	160	8	0.035	0.51	0.62	0.45	0.25	1.84	1.37	1.55	4.77
Bed/Lister	16R40	MFWD 300	57,000	160	8	0.043	0.63	1.01	0.57	0.43	2.65	1.75	2.63	7.04
Bed/Lister-Roll-Fo	8R-38	MFWD 190	24,300	160	10	0.095	1.40	1.43	0.58	0.58	4.00	1.48	3.54	9.03
Bed/Lister-Roll-Fo	12R-30	MFWD 225	37,800	160	10	0.080	1.18	1.43	0.76	0.58	3.97	1.94	3.58	9.51
Bed/Lister-Roll-Fo	12R-38	MFWD 225	36,700	160	10	0.063	0.93	1.13	0.58	0.46	3.11	1.49	2.83	7.44
Bed/Lister-Roll-Fo	16R-30	MFWD 225	48,700	160	10	0.060	0.89	1.07	0.73	0.44	3.14	1.88	2.69	7.72
Bed/Lister-Roll-Ri	8R-38	MFWD 190	25,000	160	10	0.095	1.40	1.43	0.59	0.58	4.02	1.52	3.54	9.09
Blade-Box	6'-7'	MFWD 105	1,470	200	20	0.020	0.29	0.16	0.01	0.04	0.51	0.01	0.26	0.78
Blade-Box	8'-10'	MFWD 105	3,830	200	20	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blade-Box	12'-16'	MFWD 105	6,190	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	1,270	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	3,870	200	20	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blade-Scraper	12'-16'	MFWD 105	9,810	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	3.78	3.85	1.96	1.56	11.16	3.84	9.52	24.54
Boll Buggy	4R-38 (350)	MFWD 190	30,500	200	10	0.257	3.78	3.85	1.96	1.56	11.16	3.84	9.52	24.54
Boll Buggy	4R2x1 (350)	MFWD 190	30,500	200	10	0.172	2.52	2.57	1.31	1.04	7.46	2.57	6.36	16.40
Boll Buggy	6R-30 (355)	MFWD 190	30,500	200	10	0.218	3.20	3.26	1.66	1.32	9.45	3.25	8.06	20.78
Boll Buggy	6R-38 (355)	MFWD 190	30,500	200	10	0.172	2.52	2.57	1.31	1.04	7.46	2.57	6.36	16.40
Chisel Plow-Folding	24'	MFWD 190	43,500	150	12	0.076	1.12	1.14	1.20	0.46	3.93	2.00	2.82	8.75
Chisel Plow-Folding	32'	MFWD 225	54,500	150	12	0.057	0.84	1.02	1.13	0.42	3.42	1.89	2.56	7.88
Chisel Plow-Folding	42'	MFWD 225	65,700	150	12	0.044	0.64	0.78	1.04	0.32	2.79	1.74	1.95	6.48
Chisel Plow-Folding	50'	MFWD 225	85,900	150	12	0.036	0.54	0.65	1.14	0.26	2.61	1.91	1.64	6.16
Chisel Plow-Folding	61'	MFWD 225	99,100	150	12	0.030	0.44	0.53	1.08	0.22	2.28	1.80	1.34	5.44
Chisel Plow-Rigid	10'	MFWD 170	7,790	150	12	0.184	2.71	2.47	0.52	0.92	6.63	0.86	5.63	13.13
Chisel Plow-Rigid	15'	2WD 130	13,200	150	12	0.123	1.80	1.26	0.58	0.43	4.09	0.97	2.52	7.60
Chisel Plow-Rigid	20'	MFWD 225	13,400	150	12	0.102	1.50	1.81	0.49	0.74	4.57	0.82	4.55	9.95
Cultivate	4R-30	2WD 105	14,600	150	10	0.206	3.02	1.70	0.80	0.45	5.99	2.04	2.66	10.70
Cultivate	4R-38	2WD 105	14,200	150	10	0.162	2.38	1.34	0.61	0.32	4.66	1.56	1.90	8.14
Cultivate	6R-30	MFWD 150	18,500	150	10	0.137	2.01	1.62	0.67	0.61	4.93	1.72	3.57	10.23
Cultivate	6R-38	MFWD 150	19,300	150	10	0.108	1.59	1.28	0.55	0.48	3.91	1.42	2.81	8.16
Cultivate	8R-30	MFWD 190	23,800	150	10	0.103	1.51	1.54	0.65	0.62	4.33	1.66	3.81	9.81

(continued)



Appendix Table 3. Towed equipment: estimated purchase price, annual use, useful life, performance rate, and direct and fixed cost per acre, Mississippi, 2021 (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-----							
Cultivate	8R-38	MFWD 190	28,400	150	10	0.073	1.08	1.10	0.55	0.44	3.18	1.42	2.72	7.33
Cultivate	8R-38 2x1	MFWD 190	35,200	150	10	0.054	0.79	0.81	0.50	0.32	2.44	1.29	2.00	5.75
Cultivate	12R-30	MFWD 225	42,500	150	10	0.068	1.00	1.21	0.77	0.50	3.50	1.98	3.05	8.54
Cultivate	12R-38	MFWD 225	43,800	150	10	0.054	0.79	0.96	0.63	0.39	2.78	1.61	2.40	6.81
Cultivate	16R-30	MFWD 225	58,400	150	10	0.051	0.75	0.91	0.80	0.37	2.84	2.04	2.28	7.18
Cultivate & Post	4R-30	2WD 105	21,900	150	10	0.220	4.22	1.81	1.28	0.44	7.77	3.27	2.58	13.63
Cultivate & Post	4R-38	2WD 105	21,600	150	10	0.173	3.32	1.43	0.99	0.34	6.10	2.54	2.03	10.68
Cultivate & Post	6R-30	MFWD 150	25,900	150	10	0.146	2.81	1.73	1.01	0.65	6.21	2.58	3.80	12.60
Cultivate & Post	6R-38	MFWD 150	26,600	150	10	0.115	2.22	1.36	0.82	0.51	4.93	2.09	3.00	10.03
Cultivate & Post	8R-30	MFWD 190	31,200	150	10	0.110	2.11	1.64	0.91	0.66	5.34	2.33	4.06	11.73
Cultivate & Post	8R-38	MFWD 190	35,800	150	10	0.086	1.67	1.30	0.83	0.52	4.32	2.11	3.21	9.65
Cultivate & Post	8R-38 2x1	MFWD 190	45,400	150	10	0.057	1.11	0.86	0.70	0.35	3.03	1.78	2.13	6.95
Cultivate & Post	12R-30	MFWD 225	49,800	150	10	0.073	1.40	1.29	0.97	0.53	4.21	2.48	3.25	9.95
Cultivate & Post	12R-38	MFWD 225	54,000	150	10	0.057	1.11	1.02	0.83	0.42	3.39	2.12	2.56	8.08
Cultivate & Post	16R-30	MFWD 225	68,600	150	10	0.055	1.05	0.97	1.00	0.40	3.43	2.56	2.44	8.44
Disk & Incorporate	14'	2WD 130	33,700	200	10	0.149	2.87	1.53	1.51	0.52	6.44	2.57	3.07	12.09
Disk & Incorporate	20'	MFWD 190	52,400	200	10	0.092	1.77	1.38	1.45	0.56	5.17	2.46	3.41	11.05
Disk & Incorporate	24'	MFWD 190	53,600	200	10	0.087	1.67	1.30	1.40	0.52	4.91	2.38	3.22	10.52
Disk & Incorporate	28'	MFWD 225	63,300	200	10	0.074	1.43	1.32	1.42	0.54	4.72	2.41	3.32	10.46
Disk & Incorporate	32'	MFWD 225	68,700	200	10	0.065	1.25	1.16	1.34	0.47	4.24	2.29	2.90	9.44
Disk Harrow	14'	2WD 130	26,400	180	10	0.140	2.05	1.43	1.02	0.49	5.02	2.09	2.87	9.99
Disk Harrow	20'	MFWD 190	45,000	180	10	0.098	1.44	1.46	1.22	0.59	4.73	2.50	3.62	10.86
Disk Harrow	24'	MFWD 190	46,200	180	10	0.081	1.20	1.22	1.05	0.49	3.97	2.14	3.02	9.13
Disk Harrow	28'	MFWD 225	56,000	180	10	0.070	1.02	1.24	1.09	0.51	3.87	2.22	3.11	9.21
Disk Harrow	32'	MFWD 225	61,400	180	10	0.061	0.90	1.08	1.04	0.44	3.48	2.13	2.72	8.34
Disk Harrow	42'	MFWD 225	107,000	180	10	0.046	0.68	0.82	1.39	0.34	3.24	2.83	2.07	8.15
Disk Harrow 40-100hp	14'	2WD 75	16,700	180	10	0.140	2.05	0.82	0.65	0.16	3.70	1.32	0.97	6.01
Disk Heavy	14'	MFWD 150	26,400	180	10	0.145	2.14	1.72	1.07	0.65	5.58	2.18	3.79	11.56
Disk Heavy	20'	MFWD 190	45,000	180	10	0.097	1.42	1.45	1.21	0.58	4.69	2.48	3.59	10.76
Disk Heavy	28'	MFWD 225	56,000	180	10	0.075	1.11	1.34	1.17	0.55	4.18	2.40	3.35	9.94
Disk Ripper	15'	MFWD 225	50,800	180	10	0.136	1.99	2.41	1.92	0.99	7.32	3.91	6.04	17.29
Ditcher		2WD 130	6,120	200	10	0.020	0.29	0.20	0.04	0.07	0.61	0.06	0.41	1.09
Ditcher (1m/160a)		2WD 130	6,120	200	10	0.009	0.13	0.09	0.02	0.03	0.28	0.02	0.19	0.51
Fert Appl (Liquid)	4R-38	MFWD 150	15,200	150	8	0.154	2.97	1.82	1.56	0.69	7.05	1.70	4.01	12.78
Fert Appl (Liquid)	6R-30	MFWD 170	17,900	150	8	0.130	2.51	1.75	1.56	0.65	6.48	1.70	3.99	12.18
Fert Appl (Liquid)	6R-38	MFWD 170	17,900	150	8	0.103	1.98	1.38	1.23	0.51	5.12	1.34	3.15	9.61
Fert Appl (Liquid)	8R-30	MFWD 190	18,600	150	8	0.098	1.88	1.46	1.21	0.59	5.16	1.32	3.62	10.12
Fert Appl (Liquid)	8R-38	MFWD 190	20,600	150	8	0.077	1.49	1.16	1.06	0.47	4.19	1.16	2.86	8.22
Fert Appl (Liquid)	8R-38 2x1	MFWD 190	21,000	150	8	0.051	0.99	0.77	0.72	0.31	2.80	0.78	1.91	5.50
Fert Appl (Liquid)	12R-30	MFWD 225	24,700	150	8	0.078	1.50	1.39	1.29	0.57	4.76	1.40	3.48	9.66
Fert Appl (Liquid)	12R-38	MFWD 225	19,300	150	8	0.051	0.99	0.91	0.66	0.37	2.95	0.72	2.29	5.96
Field Cult & Inc	42'	MFWD 225	69,500	100	10	0.037	0.72	0.66	0.65	0.27	2.32	2.67	1.67	6.67
Field Cult & Inc	50'	MFWD 225	82,200	100	10	0.031	0.60	0.56	0.65	0.23	2.05	2.65	1.40	6.12
Field Cult & Inc Fld	24'	MFWD 170	38,500	100	10	0.066	1.26	0.88	0.63	0.33	3.12	2.59	2.01	7.73
Field Cult & Inc Fld	32'	MFWD 190	50,900	100	10	0.049	0.95	0.74	0.63	0.30	2.62	2.57	1.83	7.03
Field Cult & Inc Rdg	12'	2WD 150	19,600	100	10	0.132	2.53	1.56	0.64	0.45	5.20	2.64	2.66	10.51
Field Cultivate Fld	24'	MFWD 170	31,100	100	10	0.062	0.91	0.83	0.48	0.31	2.54	1.97	1.89	6.41
Field Cultivate Fld	32'	MFWD 190	43,500	100	10	0.046	0.68	0.69	0.50	0.28	2.17	2.06	1.72	5.96
Field Cultivate Fld	42'	MFWD 225	59,400	100	10	0.035	0.52	0.62	0.52	0.25	1.93	2.15	1.57	5.66
Field Cultivate Fld	50'	MFWD 225	69,000	100	10	0.029	0.43	0.52	0.51	0.21	1.69	2.10	1.32	5.12
Field Cultivate Rdg	12'	2WD 150	12,300	100	10	0.124	1.82	1.46	0.38	0.43	4.11	1.56	2.50	8.17
Grain Cart Corn	500 bu	MFWD 190	27,300	200	12	0.025	0.37	0.37	0.18	0.15	1.09	0.31	0.93	2.33
Grain Cart Corn	700 bu	MFWD 190	44,000	200	12	0.025	0.37	0.37	0.30	0.15	1.20	0.50	0.93	2.64
Grain Cart Corn	1000 bu	MFWD 225	57,900	200	12	0.025	0.37	0.44	0.39	0.18	1.40	0.66	1.12	3.18
Grain Cart Rice	500 bu	MFWD 190	27,300	200	12	0.062	0.91	0.93	0.46	0.37	2.69	0.77	2.30	5.77
Grain Cart Rice	700 bu	MFWD 190	44,000	200	12	0.055	0.80	0.82	0.65	0.33	2.61	1.09	2.03	5.74
Grain Cart Rice	1000 bu	MFWD 190	57,900	200	12	0.045	0.67	0.68	0.71	0.27	2.35	1.19	1.69	5.24
Grain Cart Soybean	500 bu	MFWD 190	27,300	200	12	0.025	0.37	0.38	0.18	0.15	1.09	0.31	0.94	2.35
Grain Cart Soybean	700 bu	MFWD 190	44,000	200	12	0.021	0.31	0.31	0.25	0.12	1.01	0.42	0.78	2.21
Grain Cart Soybean	1000 bu	MFWD 190	57,900	200	12	0.021	0.31	0.31	0.33	0.12	1.09	0.55	0.78	2.43
Grain Cart Wht/Sor	500 bu	MFWD 190	27,300	200	12	0.025	0.37	0.38	0.18	0.15	1.09	0.31	0.94	2.35
Grain Cart Wht/Sor	700 bu	MFWD 190	44,000	200	12	0.021	0.31	0.31	0.25	0.12	1.01	0.42	0.78	2.21
Grain Cart Wht/Sor	1000 bu	MFWD 190	57,900	200	12	0.021	0.31	0.31	0.33	0.12	1.09	0.55	0.78	2.43
Grain Drill	10'	2WD 130	28,000	150	8	0.188	4.47	1.93	1.97	0.66	9.05	3.64	3.86	16.57
Grain Drill	12'	2WD 130	28,100	150	8	0.157	3.73	1.60	1.65	0.55	7.55	3.05	3.22	13.82
Grain Drill	15'	MFWD 150	33,900	150	8	0.125	2.98	1.48	1.59	0.56	6.62	2.94	3.26	12.83
Grain Drill	20'	MFWD 170	41,400	150	8	0.094	2.23	1.26	1.46	0.47	5.43	2.69	2.87	11.00
Grain Drill	24'	MFWD 190	66,800	150	8	0.078	1.86	1.17	1.96	0.47	5.48	3.62	2.90	12.01
Grain Drill	30'	MFWD 225	68,500	150	8	0.062	1.49	1.11	1.61	0.45	4.67	2.97	2.79	10.44
Grain Drill	35'	MFWD 225	91,900	150	8	0.053	1.27	0.95	1.85	0.39	4.48	3.42	2.39	10.29
Grain Drill & Pre	10'	2WD 130	35,400	150	8	0.203	4.82	2.07	2.69	0.71	10.31	4.96	4.16	19.44
Grain Drill & Pre	12'	2WD 130	35,400	150	8	0.169	4.01	1.73	2.24	0.59	8.59	4.13	3.47	16.20

(continued)

Appendix Table 3. Towed equipment: estimated purchase price, annual use, useful life, performance rate, and direct and fixed cost per acre, Mississippi, 2021 (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-----							
Grain Drill & Pre	15'	MFWD 150	41,200	150	8	0.135	3.21	1.59	2.09	0.60	7.50	3.85	3.51	14.87
Grain Drill & Pre	20'	MFWD 170	48,800	150	8	0.101	2.41	1.35	1.85	0.50	6.13	3.42	3.09	12.65
Grain Drill & Pre	24'	MFWD 190	74,200	150	8	0.084	2.00	1.26	2.35	0.51	6.14	4.33	3.12	13.60
Grain Drill & Pre	30'	MFWD 225	75,800	150	8	0.067	1.60	1.19	1.92	0.49	5.22	3.54	3.00	11.77
Grain Drill & Pre	35'	MFWD 225	101,000	150	8	0.058	1.37	1.02	2.19	0.42	5.02	4.04	2.57	11.64
Grain Drill & Pre T	8R-38	MFWD 225	59,000	150	8	0.062	1.49	1.11	1.39	0.45	4.45	2.56	2.79	9.80
Harrow - Folding	24'	MFWD 190	13,800	200	10	0.064	0.94	0.96	0.31	0.39	2.62	0.45	2.39	5.46
Harrow - Folding	30'	MFWD 190	15,300	200	10	0.051	0.75	0.77	0.27	0.31	2.12	0.40	1.91	4.44
Harrow - Folding	40'	MFWD 190	21,300	200	10	0.038	0.56	0.58	0.28	0.23	1.67	0.42	1.43	3.53
Harrow - Folding	48'	MFWD 225	26,000	200	10	0.032	0.47	0.57	0.29	0.23	1.57	0.42	1.43	3.44
Header - Corn	6R-30	265 hp	51,400	300	8	0.170	2.49	3.55	2.18	6.93	15.17	3.17	26.54	44.90
Header - Corn	6R-38	265 hp	52,300	300	8	0.134	1.97	2.80	1.75	5.47	12.01	2.55	20.95	35.52
Header - Corn	8R-30	265 hp	66,800	300	8	0.127	1.87	2.66	2.13	5.20	11.87	3.09	19.91	34.88
Header - Corn	8R-38	325 hp	67,900	300	8	0.100	1.48	2.58	1.71	4.15	9.93	2.48	15.90	28.32
Header - Corn	12R-20	325 hp	102,000	300	8	0.127	1.87	3.26	3.25	5.25	13.65	4.73	20.11	38.50
Header - Corn	12R-30	325 hp	112,000	300	8	0.085	1.24	2.17	2.38	3.50	9.31	3.46	13.41	26.19
Header - Draper (CL)	25' Rigid	265 hp	61,400	300	8	0.203	2.98	4.23	2.85	8.27	18.34	4.30	31.66	54.31
Header - Draper (CL)	30' Rigid	325 hp	73,700	300	8	0.169	2.48	4.33	2.85	6.96	16.63	4.30	26.65	47.60
Header - Draper (CL)	36' Rigid	355 hp	77,300	300	8	0.141	2.07	3.94	2.49	5.89	14.40	3.76	22.55	40.71
Header - Draper (CL)	40' Rigid	425 hp	82,700	300	8	0.126	1.86	4.24	2.40	5.76	14.28	3.62	22.06	39.97
Header - Draper (SL)	25' Rigid	325 hp	61,400	300	8	0.176	2.58	4.50	2.47	7.24	16.80	3.73	27.72	48.26
Header - Draper (SL)	30' Rigid	325 hp	73,700	300	8	0.146	2.15	3.75	2.47	6.03	14.41	3.73	23.10	41.25
Header - Draper (SL)	36' Rigid	355 hp	77,300	300	8	0.122	1.79	3.41	2.16	5.10	12.48	3.26	19.54	35.28
Header - Draper (SL)	40' Rigid	425 hp	82,700	300	8	0.110	1.61	3.68	2.08	4.99	12.37	3.14	19.12	34.64
Header -RiceStrp(CL)	20'	265 hp	50,600	300	8	0.253	3.72	5.29	3.21	10.33	22.57	4.66	39.57	66.81
Header -RiceStrp(CL)	24'	325 hp	54,000	300	8	0.211	3.10	5.41	2.85	8.70	20.07	4.14	33.31	57.54
Header -RiceStrp(CL)	32'	325 hp	60,800	300	8	0.158	2.32	4.06	2.41	6.52	15.32	3.50	24.98	43.82
Header -RiceStrp(SL)	20'	265 hp	50,600	300	8	0.220	3.22	4.59	2.78	8.96	19.56	4.04	34.30	57.90
Header -RiceStrp(SL)	24'	325 hp	54,000	300	8	0.183	2.69	4.69	2.47	7.54	17.40	3.59	28.87	49.87
Header -RiceStrp(SL)	32'	325 hp	60,800	300	8	0.137	2.01	3.51	2.09	5.65	13.28	3.03	21.67	37.97
Header -Soybean	22' Flex	265 hp	33,700	300	8	0.116	1.70	2.42	0.97	4.72	9.83	1.42	18.10	29.35
Header -Soybean	25' Flex	325 hp	36,200	300	8	0.102	1.49	2.61	0.92	4.20	9.24	1.34	16.09	26.67
Header -Soybean	30' Flex	325 hp	43,800	300	8	0.085	1.24	2.17	0.93	3.50	7.86	1.35	13.41	22.62
Header -Soybean	35' Flex	355 hp	50,100	300	8	0.072	1.07	2.04	0.91	3.04	7.07	1.32	11.66	20.07
Header Wheat/Sorghum	22' Rigid	265 hp	19,800	300	8	0.116	1.70	2.42	0.57	4.72	9.43	0.83	18.10	28.36
Header Wheat/Sorghum	25' Rigid	325 hp	25,400	300	8	0.102	1.49	2.61	0.64	4.20	8.96	0.94	16.09	26.00
Header Wheat/Sorghum	30' Rigid	325 hp	29,100	300	8	0.085	1.24	2.17	0.61	3.50	7.55	0.89	13.41	21.86
Land Plane	50'x16'	MFWD 190	9,700	200	10	0.151	2.22	2.26	0.29	0.91	5.70	0.74	5.60	12.06
Levee Pull & Seed	8 Blade	MFWD 170	9,700	100	10	0.003	0.05	0.04	0.00	0.01	0.12	0.03	0.10	0.26
Levee Pull (1m/80a)	8 blade	MFWD 170	8,270	100	10	0.003	0.05	0.04	0.00	0.01	0.12	0.03	0.10	0.26
Levee Splitter (1/80)	32"	MFWD 150	8,270	100	10	0.004	0.06	0.04	0.00	0.01	0.13	0.03	0.10	0.27
Module Builder	4R-38(250)	MFWD 190	34,700	200	10	0.257	6.11	3.85	2.23	1.56	13.77	4.37	9.52	27.68
Module Builder	4R-38(350)	MFWD 190	34,700	200	10	0.257	6.11	3.85	2.23	1.56	13.77	4.37	9.52	27.68
Module Builder	4R2x1(350)	MFWD 190	34,700	200	10	0.172	4.09	2.57	1.49	1.04	9.20	2.92	6.36	18.50
Module Builder	6R-30(355)	MFWD 190	34,700	200	10	0.218	5.18	3.26	1.89	1.32	11.66	3.70	8.06	23.43
Module Builder	6R-38(355)	MFWD 190	34,700	200	10	0.172	4.09	2.57	1.49	1.04	9.20	2.92	6.36	18.50
NT Grain Drill	10'	2WD 130	34,400	150	8	0.235	5.59	2.41	3.04	0.83	11.88	5.60	4.83	22.32
NT Grain Drill	12'	2WD 130	46,600	150	8	0.163	3.88	1.67	2.86	0.57	9.00	5.27	3.35	17.62
NT Grain Drill	15'	MFWD 150	56,000	150	8	0.130	3.10	1.54	2.74	0.58	7.99	5.06	3.40	16.45
NT Grain Drill	20'	MFWD 170	67,400	150	8	0.098	2.33	1.31	2.48	0.49	6.61	4.57	2.99	14.18
NT Grain Drill	24'	MFWD 190	98,000	150	8	0.081	1.94	1.22	3.00	0.49	6.67	5.54	3.02	15.23
NT Grain Drill	30'	MFWD 225	104,300	150	8	0.065	1.55	1.16	2.56	0.47	5.75	4.71	2.90	13.37
NT Grain Drill & Pre	10'	2WD 130	41,800	150	8	0.211	5.02	2.16	3.31	0.74	11.25	6.10	4.34	21.70
NT Grain Drill & Pre	12'	2WD 130	54,000	150	8	0.176	4.18	1.80	3.56	0.62	10.18	6.57	3.61	20.37
NT Grain Drill & Pre	15'	MFWD 150	63,300	150	8	0.141	3.34	1.66	3.34	0.63	8.99	6.16	3.66	18.82
NT Grain Drill & Pre	20'	MFWD 170	74,700	150	8	0.105	2.51	1.41	2.96	0.52	7.41	5.45	3.22	16.10
NT Grain Drill & Pre	24'	MFWD 190	105,000	150	8	0.088	2.09	1.31	3.47	0.53	7.41	6.39	3.25	17.06
NT Grain Drill & Pre	30'	MFWD 225	112,000	150	8	0.070	1.67	1.24	2.96	0.51	6.39	5.45	3.12	14.98
NT Plant&Pre-Folding	8R-38	MFWD 170	67,700	150	8	0.083	1.98	1.11	2.12	0.41	5.64	3.91	2.54	12.10
NT Plant&Pre-Folding	8R-38 2x1	MFWD 170	103,000	150	8	0.055	1.32	0.74	2.15	0.27	4.49	3.96	1.69	10.15
NT Plant&Pre-Folding	12R-20	MFWD 190	82,600	150	8	0.105	2.51	1.58	3.27	0.64	8.01	6.03	3.90	17.95
NT Plant&Pre-Folding	12R-30	MFWD 190	91,000	150	8	0.070	1.67	1.05	2.40	0.42	5.56	4.43	2.60	12.60
NT Plant&Pre-Folding	12R-38	MFWD 190	103,000	150	8	0.055	1.32	0.83	2.15	0.33	4.64	3.96	2.05	10.66
NT Plant&Pre-Folding	16R-30	MFWD 190	137,000	150	8	0.052	1.25	0.79	2.71	0.32	5.08	5.00	1.95	12.04
NT Plant&Pre-Folding	23R-15	MFWD 190	186,000	150	8	0.073	1.74	1.09	5.12	0.44	8.41	9.43	2.71	20.56
NT Plant&Pre-Folding	24R-20	MFWD 190	207,000	150	8	0.052	1.25	0.79	4.10	0.32	6.47	7.56	1.95	15.98
NT Plant&Pre-Folding	24R-30	MFWD 190	217,000	150	8	0.035	0.83	0.52	2.86	0.21	4.44	5.28	1.30	11.03
NT Plant&Pre-Folding	31R-15	MFWD 225	222,000	150	8	0.054	1.29	0.96	4.55	0.39	7.21	8.38	2.42	18.02
NT Plant&Pre-Folding	32R-15	MFWD 225	216,200	150	8	0.052	1.25	0.93	4.28	0.38	6.86	7.89	2.34	17.11
NT Plant&Pre-Rigid	4R-30	2WD 130	34,600	150	8	0.211	5.02	2.16	2.74	0.74	10.67	5.05	4.34	20.07
NT Plant&Pre-Rigid	4R-38	2WD 130	36,000	150	8	0.166	3.95	1.70	2.24	0.58	8.49	4.14	3.41	16.05
NT Plant&Pre-Rigid	6R-30	MFWD 150	44,300	150	8	0.141	3.34	1.66	2.34	0.63	7.98	4.31	3.66	15.96

(continued)

Appendix Table 3. Towed equipment: estimated purchase price, annual use, useful life, performance rate, and direct and fixed cost per acre, Mississippi, 2021 (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-----							
NT Plant&Pre-Rigid	6R-38	MFWD 150	43,500	150	8	0.111	2.64	1.31	1.81	0.49	6.27	3.34	2.89	12.51
NT Plant&Pre-Rigid	8R-30	MFWD 170	54,500	150	8	0.105	2.51	1.41	2.16	0.52	6.61	3.98	3.22	13.82
NT Plant&Pre-Rigid	8R-38	MFWD 170	52,400	150	8	0.083	1.98	1.11	1.64	0.41	5.16	3.02	2.54	10.74
NT Plant&Pre-Rigid	11R-15	MFWD 170	63,900	150	8	0.143	3.41	1.92	3.44	0.71	9.51	6.35	4.38	20.24
NT Plant&Pre-Rigid	11R-20	MFWD 170	63,200	150	8	0.115	2.74	1.54	2.73	0.57	7.60	5.04	3.52	16.17
NT Plant&Pre-Rigid	12R-20	MFWD 190	65,700	150	8	0.105	2.51	1.58	2.60	0.64	7.34	4.80	3.90	16.05
NT Plant&Pre-Rigid	12R-30	MFWD 190	82,800	150	8	0.070	1.67	1.05	2.18	0.42	5.34	4.03	2.60	11.98
NT Plant&Pre-Rigid	15R-15	MFWD 190	82,000	150	8	0.113	2.68	1.69	3.47	0.68	8.54	6.40	4.18	19.13
NT Plant&Pre-TwinRow	12R-30/40	MFWD 225	170,000	150	8	0.055	1.32	0.98	3.54	0.40	6.26	6.53	2.47	15.27
NT Plant&Pre-TwinRow	8R-30/40	MFWD 225	135,000	150	8	0.083	1.98	1.48	4.23	0.60	8.30	7.79	3.71	19.81
NT Plant-Folding	8R-38	MFWD 170	60,400	150	8	0.077	1.84	1.03	1.75	0.38	5.02	3.23	2.36	10.63
NT Plant-Folding	8R-38 2x1	MFWD 170	93,400	150	8	0.051	1.22	0.69	1.81	0.25	3.98	3.33	1.57	8.89
NT Plant-Folding	12R-20	MFWD 190	75,200	150	8	0.098	2.33	1.46	2.76	0.59	7.16	5.10	3.62	15.89
NT Plant-Folding	12R-30	MFWD 190	81,700	150	8	0.065	1.55	0.97	2.00	0.39	4.93	3.69	2.41	11.05
NT Plant-Folding	12R-38	MFWD 190	93,400	150	8	0.051	1.22	0.77	1.81	0.31	4.12	3.33	1.91	9.37
NT Plant-Folding	16R-30	MFWD 190	128,000	150	8	0.049	1.16	0.73	2.35	0.29	4.55	4.34	1.81	10.71
NT Plant-Folding	23R-15	MFWD 190	176,000	150	8	0.068	1.61	1.02	4.50	0.41	7.55	8.29	2.52	18.36
NT Plant-Folding	24R-20	MFWD 190	197,000	150	8	0.049	1.16	0.73	3.62	0.29	5.82	6.68	1.81	14.32
NT Plant-Folding	24R-30	MFWD 190	204,000	150	8	0.032	0.77	0.48	2.50	0.19	3.97	4.61	1.20	9.79
NT Plant-Folding	31R-15	MFWD 225	213,000	150	8	0.050	1.20	0.89	4.05	0.36	6.52	7.46	2.25	16.25
NT Plant-Folding	32R-15	MFWD 225	207,000	150	8	0.049	1.16	0.87	3.81	0.35	6.20	7.02	2.17	15.40
NT Plant-Rigid	4R-30	2WD 130	27,200	150	8	0.196	4.66	2.01	2.00	0.69	9.37	3.69	4.03	17.09
NT Plant-Rigid	4R-38	2WD 130	28,600	150	8	0.154	3.67	1.58	1.65	0.54	7.46	3.05	3.17	13.69
NT Plant-Rigid	6R-30	MFWD 150	37,000	150	8	0.130	3.10	1.54	1.81	0.58	7.05	3.34	3.40	13.80
NT Plant-Rigid	6R-38	MFWD 150	36,100	150	8	0.103	2.45	1.22	1.39	0.46	5.53	2.57	2.68	10.80
NT Plant-Rigid	8R-30	MFWD 170	47,100	150	8	0.098	2.33	1.31	1.73	0.49	5.87	3.19	2.99	12.06
NT Plant-Rigid	8R-38	MFWD 170	45,000	150	8	0.077	1.84	1.03	1.31	0.38	4.58	2.41	2.36	9.36
NT Plant-Rigid	11R-15	MFWD 170	56,500	150	8	0.133	3.17	1.78	2.83	0.66	8.46	5.21	4.07	17.74
NT Plant-Rigid	11R-20	MFWD 170	55,800	150	8	0.107	2.54	1.43	2.24	0.53	6.76	4.13	3.27	14.17
NT Plant-Rigid	12R-20	MFWD 190	58,400	150	8	0.098	2.33	1.46	2.15	0.59	6.54	3.96	3.62	14.13
NT Plant-Rigid	12R-30	MFWD 190	73,500	150	8	0.065	1.55	0.97	1.80	0.39	4.73	3.32	2.41	10.48
NT Plant-Rigid	15R-15	MFWD 190	72,700	150	8	0.105	2.49	1.57	2.86	0.63	7.56	5.27	3.88	16.72
NT Plant-TwinRow	12R-30/40	MFWD 225	160,000	150	8	0.051	1.22	0.91	3.10	0.37	5.62	5.71	2.29	13.62
NT Plant-TwinRow	8R-30/40	MFWD 225	128,000	150	8	0.077	1.84	1.37	3.72	0.56	7.51	6.86	3.44	17.82
Peanut Cond. & Lifter	6-Row	MFWD 190	14,800	300	20	0.100	1.46	1.49	0.24	0.60	3.81	0.34	3.69	7.86
Peanut Conditioner	6-Row	MFWD 190	17,500	300	20	0.100	1.46	1.49	0.35	0.60	3.92	0.35	3.69	7.97
Peanut Dig/Invertor	4R-30	MFWD 190	33,500	300	15	0.235	3.46	3.52	1.96	1.42	10.38	2.26	8.71	21.36
Peanut Dig/Invertor	4R-38	MFWD 190	33,500	300	15	0.186	2.73	2.78	1.55	1.12	8.20	1.78	6.88	16.86
Peanut Dig/Invertor	6R-38	MFWD 190	47,900	300	15	0.124	1.82	1.85	1.04	0.75	5.47	1.70	4.58	11.75
Peanut Dump Cart	6-Row	MFWD 190	55,800	300	20	0.310	4.55	4.63	1.00	1.87	12.07	3.88	11.45	27.41
Peanut Harvester	4R-30	MFWD 225	155,000	300	20	0.849	12.47	15.06	7.46	6.18	41.19	26.76	37.72	105.68
Peanut Harvester	4R-38	MFWD 225	155,000	300	20	0.934	13.71	16.56	8.20	6.80	45.29	30.96	41.48	117.73
Peanut Harvester	6R-38	MFWD 225	172,000	300	20	0.625	9.17	11.07	5.19	4.55	29.99	22.97	27.74	80.71
Peanut Lifter	6-Row	MFWD 225	7,440	300	20	0.100	1.46	1.77	0.15	0.72	4.12	0.15	4.43	8.71
Peanut Plt&Pre Fold.	12R-38	MFWD 190	92,700	150	8	0.080	1.90	1.20	2.79	0.48	6.39	5.14	2.97	14.51
Peanut Plt&Pre Rigid	8R-30	MFWD 190	47,800	150	8	0.152	3.62	2.28	2.73	0.92	9.57	5.04	5.64	20.26
Peanut Plt&Pre Rigid	8R-38	MFWD 190	45,700	150	8	0.120	2.86	1.80	2.06	0.73	7.47	3.81	4.46	15.75
Peanut Ptl&PreTwin	8R-30/40	MFWD 190	129,000	150	8	0.120	2.86	1.80	5.84	0.73	11.24	10.76	4.46	26.47
Pipe Spool 160ac	1/4m roll	2WD 130	5,400	15	12	0.003	0.10	0.03	0.00	0.01	0.15	0.10	0.06	0.32
Pipe Trailer 1m/160a	30'	2WD 130	2,700	100	15	0.003	0.19	0.03	0.00	0.01	0.24	0.00	0.07	0.32
Plant & Pre-Folding	8R-38	MFWD 170	61,000	150	8	0.080	1.90	1.07	1.83	0.40	5.21	3.38	2.44	11.04
Plant & Pre-Folding	8R-38 2x1	MFWD 170	92,700	150	8	0.053	1.26	0.71	1.85	0.26	4.10	3.42	1.62	9.16
Plant & Pre-Folding	12R-20	MFWD 190	72,600	150	8	0.101	2.41	1.51	2.76	0.61	7.30	5.09	3.75	16.15
Plant & Pre-Folding	12R-30	MFWD 190	81,000	150	8	0.067	1.60	1.01	2.05	0.41	5.08	3.78	2.50	11.37
Plant & Pre-Folding	12R-38	MFWD 190	92,700	150	8	0.053	1.26	0.79	1.85	0.32	4.24	3.42	1.97	9.64
Plant & Pre-Folding	16R-30	MFWD 190	124,000	150	8	0.050	1.20	0.75	2.36	0.30	4.63	4.34	1.87	10.85
Plant & Pre-Folding	23R-15	MFWD 190	166,000	150	8	0.070	1.67	1.05	4.38	0.42	7.54	8.08	2.60	18.23
Plant & Pre-Folding	24R-20	MFWD 190	187,000	150	8	0.050	1.20	0.75	3.56	0.30	5.83	6.55	1.87	14.26
Plant & Pre-Folding	24R-30	MFWD 190	197,000	150	8	0.033	0.80	0.50	2.50	0.20	4.01	4.60	1.25	9.87
Plant & Pre-Folding	31R-15	MFWD 225	196,000	150	8	0.052	1.24	0.92	3.85	0.38	6.41	7.10	2.32	15.84
Plant & Pre-Folding	32R-15	MFWD 225	189,000	150	8	0.050	1.20	0.89	3.59	0.36	6.07	6.62	2.25	14.95
Plant & Pre-Rigid	4R-30	2WD 130	31,600	150	8	0.203	4.82	2.07	2.40	0.71	10.02	4.43	4.16	18.62
Plant & Pre-Rigid	4R-38	2WD 130	32,600	150	8	0.159	3.79	1.63	1.95	0.56	7.95	3.60	3.28	14.83
Plant & Pre-Rigid	6R-30	MFWD 150	39,300	150	8	0.135	3.21	1.59	1.99	0.60	7.41	3.67	3.51	14.60
Plant & Pre-Rigid	6R-38	MFWD 150	38,500	150	8	0.106	2.53	1.26	1.54	0.47	5.82	2.84	2.77	11.43
Plant & Pre-Rigid	8R-30	MFWD 170	47,800	150	8	0.101	2.41	1.35	1.82	0.50	6.09	3.35	3.09	12.54
Plant & Pre-Rigid	8R-38	MFWD 170	45,700	150	8	0.080	1.90	1.07	1.37	0.40	4.75	2.53	2.44	9.73
Plant & Pre-Rigid	11R-15	MFWD 170	54,700	150	8	0.148	3.51	1.98	3.04	0.74	9.28	5.60	4.51	19.40
Plant & Pre-Rigid	11R-20	MFWD 170	54,000	150	8	0.110	2.63	1.48	2.24	0.55	6.92	4.14	3.38	14.44
Plant & Pre-Rigid	12R-20	MFWD 190	55,700	150	8	0.101	2.41	1.51	2.12	0.61	6.66	3.90	3.75	14.32
Plant & Pre-Rigid	12R-30	MFWD 190	72,700	150	8	0.067	1.60	1.01	1.84	0.41	4.87	3.39	2.50	10.77
Plant & Pre-Rigid	15R-15	MFWD 190	69,500	150	8	0.108	2.57	1.62	2.83	0.65	7.69	5.21	4.01	16.92

(continued)

Appendix Table 3. Towed equipment: estimated purchase price, annual use, useful life, performance rate, and direct and fixed cost per acre, Mississippi, 2021 (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-----							
Plant & Pre-TwinRow	12R-30/40	MFWD 225	160,000	150	8	0.053	1.26	0.94	3.20	0.38	5.81	5.90	2.37	14.09
Plant & Pre-TwinRow	8R-30/40	MFWD 225	129,000	150	8	0.080	1.90	1.42	3.88	0.58	7.79	7.15	3.56	18.51
Plant - Folding	8R-38	MFWD 170	53,700	150	8	0.074	1.76	0.99	1.50	0.37	4.64	2.76	2.27	9.67
Plant - Folding	8R-38 2x1	MFWD 170	83,400	150	8	0.049	1.17	0.66	1.55	0.24	3.64	2.85	1.51	8.01
Plant - Folding	12R-20	MFWD 190	65,200	150	8	0.094	2.23	1.41	2.30	0.57	6.52	4.24	3.48	14.25
Plant - Folding	12R-30	MFWD 190	71,700	150	8	0.062	1.49	0.94	1.69	0.38	4.50	3.11	2.32	9.94
Plant - Folding	12R-38	MFWD 190	83,400	150	8	0.049	1.17	0.74	1.55	0.30	3.77	2.85	1.83	8.46
Plant - Folding	16R-30	MFWD 190	114,000	150	8	0.047	1.11	0.70	2.01	0.28	4.12	3.71	1.74	9.58
Plant - Folding	23R-15	MFWD 190	157,000	150	8	0.065	1.55	0.97	3.85	0.39	6.78	7.10	2.41	16.30
Plant - Folding	24R-20	MFWD 190	177,000	150	8	0.047	1.11	0.70	3.12	0.28	5.23	5.76	1.74	12.74
Plant - Folding	24R-30	MFWD 190	184,000	150	8	0.031	0.74	0.47	2.16	0.19	3.57	3.99	1.16	8.73
Plant - Folding	31R-15	MFWD 225	187,000	150	8	0.048	1.15	0.86	3.41	0.35	5.79	6.29	2.16	14.25
Plant - Folding	32R-15	MFWD 225	180,000	150	8	0.047	1.11	0.83	3.18	0.34	5.47	5.86	2.09	13.43
Plant - Rigid	4R-30	2WD 130	24,200	150	8	0.188	4.47	1.93	1.71	0.66	8.78	3.15	3.86	15.80
Plant - Rigid	4R-38	2WD 130	25,300	150	8	0.148	3.52	1.52	1.40	0.52	6.97	2.59	3.04	12.62
Plant - Rigid	6R-30	MFWD 150	32,000	150	8	0.125	2.98	1.48	1.50	0.56	6.53	2.77	3.26	12.58
Plant - Rigid	6R-38	MFWD 150	31,100	150	8	0.099	2.35	1.17	1.15	0.44	5.12	2.13	2.57	9.83
Plant - Rigid	8R-30	MFWD 170	40,500	150	8	0.094	2.23	1.26	1.43	0.47	5.40	2.63	2.87	10.91
Plant - Rigid	8R-38	MFWD 170	38,400	150	8	0.074	1.76	0.99	1.07	0.37	4.21	1.97	2.27	8.46
Plant - Rigid	11R-15	MFWD 170	47,300	150	8	0.137	3.26	1.84	2.44	0.68	8.23	4.49	4.19	16.93
Plant - Rigid	11R-20	MFWD 170	46,600	150	8	0.103	2.44	1.37	1.80	0.51	6.14	3.31	3.14	12.59
Plant - Rigid	12R-20	MFWD 190	48,300	150	8	0.094	2.23	1.41	1.70	0.57	5.92	3.14	3.48	12.55
Plant - Rigid	12R-30	MFWD 190	63,400	150	8	0.062	1.49	0.94	1.49	0.38	4.30	2.75	2.32	9.38
Plant - Rigid	15R-15	2WD 150	60,200	150	8	0.094	2.23	1.11	2.12	0.32	5.80	3.92	1.90	11.63
Plant - TwinRow	12R-30/40	MFWD 225	150,000	150	8	0.049	1.17	0.87	2.79	0.36	5.20	5.14	2.20	12.55
Plant - TwinRow	8R-30/40	MFWD 225	121,000	150	8	0.074	1.76	1.32	3.38	0.54	7.01	6.23	3.30	16.55
Roller/Cultipacker	12'	2WD 130	6,720	300	12	0.124	1.82	1.27	0.19	0.43	3.73	0.26	2.55	6.55
Roller/Cultipacker	20'	MFWD 150	10,900	300	12	0.074	1.09	0.88	0.19	0.33	2.50	0.25	1.93	4.69
Roller/Cultipacker	30'	MFWD 170	14,300	300	12	0.049	0.73	0.66	0.16	0.24	1.81	0.22	1.51	3.55
Roller/Cultipacker	38'	MFWD 225	19,600	300	12	0.039	0.57	0.69	0.18	0.28	1.74	0.24	1.74	3.72
Roller/Stubble	20'	2WD 50	12,700	300	12	0.074	1.09	0.29	0.22	0.05	1.66	0.29	0.29	2.25
Roller/Stubble	32'	MFWD 225	22,200	300	12	0.046	0.68	0.82	0.24	0.33	2.09	0.32	2.07	4.48
Rotary Cutter	7'	MFWD 130	4,500	185	10	0.168	2.47	1.72	0.61	0.66	5.47	0.41	3.85	9.74
Rotary Cutter	12'	2WD 150	13,100	185	10	0.098	1.44	1.16	1.04	0.34	3.98	0.70	1.97	6.67
Rotary Cutter-Flex	15'	MFWD 150	22,100	185	10	0.078	1.15	0.92	1.40	0.35	3.84	0.95	2.04	6.83
Rotary Cutter-Flex	20'	MFWD 150	30,000	185	10	0.058	0.86	0.69	1.43	0.26	3.25	0.97	1.53	5.76
Row Cond & Inc-Fold.	26'	MFWD 190	28,500	100	10	0.063	1.21	0.94	0.45	0.38	3.00	1.84	2.34	7.19
Row Cond & Inc-Fold.	38'	MFWD 225	38,000	100	10	0.043	0.83	0.76	0.41	0.31	2.33	1.68	1.92	5.94
Row Cond & Inc-Rigid	13'	2WD 130	16,000	100	10	0.126	2.43	1.29	0.50	0.44	4.69	2.07	2.60	9.36
Row Cond & Inc-Rigid	21'	2WD 170	21,600	100	10	0.078	1.50	1.05	0.42	0.29	3.27	1.73	1.78	6.78
Row Cond & Inc-Rigid	26'	MFWD 190	24,700	100	10	0.026	0.51	0.39	0.16	0.16	1.23	0.67	0.98	2.88
Row Cond Folding	26'	MFWD 225	21,100	100	10	0.059	0.87	1.05	0.31	0.43	2.68	1.28	2.65	6.62
Row Cond Folding	38'	MFWD 225	27,800	100	10	0.040	0.59	0.72	0.28	0.29	1.90	1.15	1.81	4.87
Row Cond Rigid	13'	2WD 130	8,670	100	10	0.119	1.75	1.22	0.25	0.42	3.65	1.05	2.45	7.16
Row Cond Rigid	21'	2WD 170	14,200	100	10	0.073	1.08	0.99	0.26	0.27	2.61	1.07	1.67	5.36
Row Cond Rigid	26'	MFWD 190	17,300	100	10	0.059	0.87	0.89	0.25	0.36	2.39	1.05	2.20	5.65
Row Cond./Roll-Fol	30'	MFWD 190	46,200	160	10	0.062	0.91	0.93	0.72	0.37	2.95	1.84	2.30	7.10
Row Cond./Roll-Fold.	26'	MFWD 190	26,500	160	10	0.072	1.05	1.07	0.47	0.43	3.05	1.21	2.66	6.93
Row Cond./Roll-Fold.	40'	MFWD 225	34,000	160	10	0.046	0.68	0.83	0.39	0.34	2.25	1.01	2.08	5.35
Row Cond./Roll-Rig	21'	MFWD 190	25,800	160	10	0.089	1.31	1.33	0.57	0.54	3.76	1.46	3.29	8.53
Row Cond./Roll-Rig	26'	MFWD 190	28,400	160	10	0.072	1.05	1.07	0.51	0.43	3.08	1.30	2.66	7.05
Spin Spreader	5 ton	MFWD 190	11,600	100	8	0.042	0.99	0.62	0.27	0.25	2.15	0.53	1.55	4.24
Spray (ATV Ropewick)	75"	800 CC	720	200	8	0.260	5.00	0.34	0.08	0.49	5.92	0.10	1.89	7.93
Spray (ATV)	20'	800 CC	1,690	200	8	0.084	1.62	0.11	0.06	0.16	1.96	0.07	0.61	2.66
Spray (Band)	27' Fold	MFWD 170	7,400	200	8	0.062	1.20	0.83	0.21	0.31	2.57	0.25	1.91	4.73
Spray (Band)	40' Fold	MFWD 170	9,300	200	8	0.042	0.81	0.56	0.18	0.21	1.77	0.21	1.28	3.27
Spray (Band)	50' Fold	MFWD 170	10,100	200	8	0.033	0.65	0.45	0.16	0.16	1.43	0.18	1.03	2.65
Spray (Band)	60' Fold	MFWD 170	13,200	200	8	0.028	0.54	0.37	0.17	0.14	1.23	0.20	0.85	2.29
Spray (Bcast/HB)	13' Rigid	MFWD 150	7,860	200	8	0.130	2.50	1.53	0.47	0.58	5.09	0.55	3.38	9.03
Spray (Bcast/HB)	20' Rigid	MFWD 150	9,400	200	8	0.084	1.62	0.99	0.37	0.37	3.37	0.43	2.19	6.00
Spray (Bcast/HB)	27' Fold	MFWD 170	16,200	200	8	0.062	1.20	0.83	0.47	0.31	2.83	0.55	1.91	5.29
Spray (Bcast/HB)	27' Rigid	MFWD 170	10,900	200	8	0.062	1.20	0.83	0.32	0.31	2.67	0.37	1.91	4.95
Spray (Bcast/HB)	30' Fold	MFWD 170	18,900	200	8	0.056	1.08	0.75	0.49	0.28	2.62	0.58	1.71	4.92
Spray (Bcast/HB)	40' Fold	MFWD 170	19,100	200	8	0.042	0.81	0.56	0.37	0.21	1.96	0.44	1.28	3.69
Spray (Broadcast)	27'	MFWD 170	7,400	200	8	0.062	1.20	0.83	0.21	0.31	2.57	0.25	1.91	4.73
Spray (Broadcast)	40'	MFWD 170	9,300	200	8	0.042	0.81	0.56	0.18	0.21	1.77	0.21	1.28	3.27
Spray (Broadcast)	50'	MFWD 170	10,100	200	8	0.033	0.65	0.45	0.16	0.16	1.43	0.18	1.03	2.65
Spray (Broadcast)	60'	MFWD 170	13,200	200	8	0.028	0.54	0.37	0.17	0.14	1.23	0.20	0.85	2.29
Spray (Direct/Hood)	8R-30	MFWD 170	17,000	200	8	0.084	1.62	1.13	0.67	0.42	3.85	0.78	2.57	7.21
Spray (Direct/Hood)	8R-38	MFWD 170	17,900	200	8	0.066	1.28	0.89	0.56	0.33	3.07	0.65	2.03	5.76
Spray (Direct/Hood)	12R-30	MFWD 170	23,900	200	8	0.056	1.08	0.75	0.63	0.28	2.75	0.73	1.71	5.20
Spray (Direct/Hood)	12R-38	MFWD 170	25,100	200	8	0.044	0.85	0.59	0.52	0.22	2.19	0.60	1.35	4.16

(continued)

Appendix Table 3. Towed equipment: estimated purchase price, annual use, useful life, performance rate, and direct and fixed cost per acre, Mississippi, 2021 (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-----							
Spray (Direct/Layby)	8R-30	MFWD 170	15,500	200	8	0.084	1.62	1.13	0.61	0.42	3.79	0.71	2.57	7.09
Spray (Direct/Layby)	8R-38	MFWD 170	15,500	200	8	0.066	1.28	0.89	0.48	0.33	3.00	0.56	2.03	5.60
Spray (Direct/Layby)	8R-38 2x1	MFWD 170	19,400	200	8	0.044	0.85	0.59	0.40	0.22	2.07	0.47	1.35	3.90
Spray (Direct/Layby)	12R-30	MFWD 170	19,400	200	8	0.056	1.08	0.75	0.51	0.28	2.63	0.59	1.71	4.94
Spray (Direct/Layby)	12R-38	MFWD 170	19,400	200	8	0.044	0.85	0.59	0.40	0.22	2.07	0.47	1.35	3.90
Spray (Direct/Layby)	16R-20/30	MFWD 225	22,500	200	8	0.062	1.20	1.11	0.66	0.45	3.43	0.76	2.78	6.98
Spray (Levee Leaper)	50'	MFWD 225	12,800	200	8	0.033	0.65	0.59	0.20	0.24	1.69	0.23	1.50	3.43
Spray (Pull Type)	60'	MFWD 225	40,700	200	8	0.028	0.54	0.49	0.53	0.20	1.78	0.62	1.25	3.66
Spray (Pull Type)	80'	MFWD 225	52,000	200	8	0.021	0.40	0.37	0.51	0.15	1.45	0.59	0.93	2.98
Spray (Pull Type)	90'	MFWD 225	52,900	200	8	0.018	0.36	0.33	0.46	0.13	1.29	0.54	0.83	2.67
Spray (Pull Type)	120'	MFWD 225	80,900	200	8	0.014	0.27	0.24	0.53	0.10	1.15	0.62	0.62	2.40
Spray (Ropewick)	20'	MFWD 190	4,100	200	8	0.084	1.62	1.26	0.16	0.51	3.56	0.18	3.12	6.88
Spray (Spot)	27'	MFWD 170	7,400	200	8	0.062	1.20	0.83	0.21	0.31	2.57	0.25	1.91	4.73
Spray (Spot)	40'	MFWD 170	9,300	200	8	0.042	0.81	0.56	0.18	0.21	1.77	0.21	1.28	3.27
Spray (Spot)	50'	MFWD 170	10,100	200	8	0.033	0.65	0.45	0.16	0.16	1.43	0.18	1.03	2.65
Spray (Spot)	60'	MFWD 225	13,200	200	8	0.028	0.54	0.49	0.17	0.20	1.42	0.20	1.25	2.87
Stalk Shredder	14'	MFWD 150	14,900	200	10	0.117	1.73	1.39	1.53	0.52	5.18	0.89	3.06	9.14
Stalk Shredder Flex	20'	MFWD 150	33,100	200	10	0.082	1.21	0.97	2.38	0.36	4.94	1.39	2.14	8.47
Stalk Shredder-Flail	12'	MFWD 150	21,700	200	10	0.137	2.01	1.62	2.61	0.61	6.86	1.52	3.57	11.96
Stalk Shredder-Flail	15'	MFWD 150	24,500	200	10	0.110	1.61	1.29	2.35	0.49	5.76	1.37	2.85	9.99
Stalk Shredder-Flail	18'	MFWD 150	28,900	200	10	0.091	1.34	1.08	2.31	0.40	5.15	1.35	2.38	8.88
Stalk Shredder-Flail	20'	MFWD 150	30,400	200	10	0.082	1.21	0.97	2.19	0.36	4.74	1.27	2.14	8.17
Stalk Shredder-Flail	25'	MFWD 150	46,400	200	10	0.066	0.96	0.77	2.67	0.29	4.72	1.56	1.71	7.99
Strip Till	8R-38	MFWD 225	28,100	150	10	0.061	0.90	1.09	0.75	0.44	3.19	1.17	2.73	7.10
Strip Till	12R-30	MFWD 225	68,900	150	10	0.061	0.90	1.09	1.83	0.44	4.28	2.88	2.73	9.90
Strip Till	12R-40	MFWD 225	67,200	150	10	0.046	0.67	0.81	1.34	0.33	3.17	2.11	2.05	7.34
Subsoiler	3 shank	MFWD 190	6,360	100	15	0.204	2.99	3.05	0.43	1.23	7.72	1.02	7.55	16.30
Subsoiler	4 shank	MFWD 225	11,210	100	15	0.153	2.25	2.72	0.57	1.11	6.67	1.35	6.81	14.84
Subsoiler	5 shank	MFWD 225	14,300	100	15	0.122	1.79	2.16	0.58	0.89	5.43	1.37	5.43	12.24
Subsoiler low-till	6 shank	MFWD 225	19,400	100	15	0.102	1.49	1.81	0.66	0.74	4.71	1.55	4.53	10.80
Subsoiler low-till	8 shank	MFWD 225	21,400	100	15	0.076	1.12	1.35	0.54	0.55	3.58	1.28	3.39	8.26

## 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, 2021

ITEM NAME	UNIT	PRICE	ITEM NAME	UNIT	PRICE
		dollars			dollars
ADJUVANTS			Approach Prima	pt	28.11
Agri-Dex	pt	2.42	Apron Maxx RTA	oz	1.69
AMS SuperMax	pt	3.81	Artisan	oz	0.23
Class Act NG	pt	1.75	Avaris	oz	0.35
Crop Oil Conc.(Pet.)	pt	2.86	Avicta Complete Bean	oz	3.91
Crop Oil Conc.(Veg.)	pt	2.90	Bravo Weather Stick	pt	5.30
Dyne-A-Pak	pt	5.16	Captan 50 WP	lb	5.94
Fire-Zone	pt	3.40	Convoy	oz	0.95
Herbimax	pt	3.99	Cotton Seed Trt.	acre	20.00
Induce	pt	3.48	CruiserMaxx Vibrance	oz	4.75
M50	pt	2.40	Elatus	oz	2.94
Penetrator Plus	pt	2.90	Flint Extra	oz	8.88
Surfactant	pt	3.30	Headline EC	oz	1.83
CLEANING			Miravis Top	oz	1.44
Cleaning Peanuts	ton	18.00	Prior Xemium	oz	4.53
CROP CONSULTANT			Propimax EC	pt	11.10
Corn Consultant	acre	6.00	Prosaro	oz	2.42
Cotton Consultant	acre	8.00	Provost Optimum	oz	2.43
Peanut Consultant	acre	9.25	Quadris	oz	1.50
Rice Consultant	acre	8.00	Quadris Top	oz	2.37
Sorghum Consultant	acre	6.00	Quadris Top SBX	oz	1.99
Soybeans Consultant	acre	6.50	Quilt	pt	16.63
Wheat Consultant	acre	5.50	Quilt XCEL	pt	19.82
CUSTOM FERTILIZE			Stratego	pt	21.97
App Fert by Air	cwt	7.50	Stratego YLD	oz	3.46
App Fert by Air(Mi)	appl	7.50	Tilt 3.6 EC	oz	0.76
Custom Apply Fert	acre	7.50	Tilt/ Bravo SE	oz	0.76
CUSTOM LIME			Trivapro	oz	1.53
Lime (Spread)	ton	47.45	GINNING		
CUSTOM PLANT			Gin & Haul	lb	0.11
Custom Plant	acre	7.50	GROWTH REGULATORS		
Custom Plant Air	cwt	7.50	Mepex	oz	0.06
CUSTOM SPRAY			Mepichlor 4.2%	oz	0.06
App by Air ( 3 gal)	appl	5.50	Mepiquat	oz	0.06
App by Air ( 5 gal)	appl	7.00	Mepstar 6	oz	0.08
App by Air (10 gal)	appl	9.00	Palisade	oz	1.13
Custom Spray Ground	acre	7.00	Pentia	oz	0.45
DRYING			Pix WSB	oz	1.37
Dry Corn	bu	0.19	Stance	oz	1.24
Dry Grain Sorghum	cwt	0.25	Veto	oz	0.06
Dry Peanuts	ton	24.00	HARVEST AIDS		
Dry Rice	bu	0.40	Adios	oz	0.99
ERADICATION FEE			Boll Buster	oz	0.24
Eradication	acre	1.00	Def/Folex	pt	10.21
FERTILIZERS			Defol 5	gal	6.77
Agrotain Ultra	pt	11.30	Display	oz	9.63
Amm Sulfate (21% N)	cwt	18.66	Ethephon 6E	pt	4.00
Boron Plus	pt	2.56	Finish 6	pt	8.00
DAP	cwt	20.99	Folex 6EC	pt	10.21
Fert 10-34-0	cwt	24.08	Freefall SC	oz	1.59
Fert 10-34-0	gal	2.80	Ginstar EC	pt	26.68
Fert 11-37-0	cwt	28.53	Gramoxone SL	oz	0.19
Fert 41-0-0-4	cwt	18.22	Sharpen	oz	6.04
Lime	ton	37.45	Sodium Chlorate 5L	gal	6.77
NEPT	pt	11.06	SuperBoll	oz	0.27
Phosphorus (46% P2O5)	cwt	17.31	Thidiazuron 4lb	oz	1.49
Potash (60% K2O)	cwt	22.11	Tribufos 6lb	pt	10.21
Sulfur Plus	pt	2.62	Vacate	oz	1.39
UAN (32% N)	cwt	12.03	HAULING		
UAN (32%)	gal	1.34	Haul Corn	bu	0.23
UAN + Sulfur (28%)	cwt	14.49	Haul Peanuts	ton	14.50
UAN + Sulfur (28%)	gal	1.61	Haul Rice	bu	0.35
Urea, Solid (46% N)	cwt	19.74	Haul Sorghum	bu	0.25
Zinc Plus	pt	2.99	Haul Soybeans	bu	0.27
FUNGICIDES			Haul Wheat	bu	0.26
Abound	oz	1.83	HERBICIDES		
Alfa Guard	lb	1.31	2,4-D Amine 4	pt	2.25
Allegiance Flowabl	oz	5.27	2,4-D Ester	pt	2.68
Ameristar Top	oz	2.51	AAtrex 4L	pt	2.23

(continued)

Appendix Table 4. Operating inputs: estimated prices, Mississippi, 2021 (continued)

ITEM NAME	UNIT	PRICE	ITEM NAME	UNIT	PRICE
		dollars			dollars
Accent Q	oz	19.09	Halex GT	pt	7.13
Acuron	oz	0.53	Halomax	oz	19.93
Aim	oz	5.67	Harmony Extra SG	oz	11.06
Anthem Flex	oz	2.67	Helmet	oz	0.26
Anthem Maxx	oz	4.94	Huskie	oz	0.78
Armezon Pro	oz	1.22	Impact	oz	17.60
Atrazine 4L	pt	1.91	Intimidator	oz	0.59
Atrazine 90DF	lb	3.59	Leadoff	oz	5.61
Authority First	lb	73.87	League	oz	3.83
Authority Elite	pt	16.43	Lexar	pt	7.55
Authority Maxx	lb	58.84	Liberty 280	oz	0.44
Authority MTZ	lb	43.24	Loyant	oz	2.21
Avatar	pt	8.50	Makaze	oz	0.14
Avenger	pt	4.52	Metolachlor	pt	5.59
Axial XL	oz	1.15	Metribuzin 4L	pt	9.04
Axiom	oz	1.94	Metribuzin 75	lb	18.30
Banvel	pt	6.67	MSMA	pt	3.86
Barrage	pt	4.15	Newpath	oz	3.83
Basagran	pt	5.43	Obey	oz	0.98
Boundary	pt	11.07	Osprey	oz	3.50
Brake	oz	1.46	Outlook	pt	17.66
Broadaxe	pt	16.31	Panther Pro	oz	1.60
Broadhead	lb	58.21	Parallel	pt	5.65
Bucaneer Plus	pt	2.90	Paraquat	oz	0.18
Bucril	pt	4.28	Parazone 3SL	oz	0.18
Butyrac 200 (2,4-DB)	pt	3.64	Permit	oz	21.99
Cadre	oz	2.90	Permit Plus	oz	21.18
Canopy	oz	2.32	PowerFlex	oz	6.99
Caparol	pt	4.67	Preface	oz	4.05
Capreno	oz	4.93	Prefix	pt	6.64
Cinch	pt	14.18	Provisia	oz	0.85
Cinch ATZ	pt	5.20	Prowl 3.3 EC	pt	6.49
Clarity	pt	10.73	Quelex	oz	7.85
Classic	oz	16.86	RealmQ	oz	5.08
Clearpath	lb	60.12	RebelEx	oz	2.13
Clethodim 2E	oz	0.50	Reflex	pt	6.20
Clincher SF	oz	2.26	Regiment	oz	43.56
Cobra	oz	1.70	Resicore	oz	0.48
Command 3ME	pt	18.17	Resource	oz	1.82
Corvus	oz	6.48	RiceBeaux	pt	5.95
Cotoran	pt	6.01	Riceshot	pt	4.69
Cotton Pro	pt	3.45	Ricestar HT	pt	24.49
Dicamba	pt	5.50	Ringside	pt	4.88
Direx	pt	3.02	Roundup Power Max	oz	0.20
Diuron	pt	3.03	Roundup PowerMax	pt	3.25
Dual II Magnum	pt	13.98	Roundup PowerMax ii	oz	0.19
Dual Magnum	pt	13.33	Roundup Pro	pt	0.20
Duet	pt	5.63	Scepter 70 DG	oz	4.82
Engenia	oz	0.89	Select Max	pt	12.74
Envive	oz	4.76	Sencor/Tricor.Metrib	lb	19.00
Envoke	oz	0.80	Sequence	pt	5.45
Facet L	pt	14.57	Sharpen	oz	6.04
Fierce	oz	7.40	Sinister	pt	14.96
Fierce XLT	oz	6.64	Sonic	oz	5.48
Finesse	oz	15.79	Stalwart	pt	3.95
Firestorm	pt	3.44	Stam 80 EDF	lb	9.45
First Rate	oz	42.57	Stam M4	qt	7.72
Flexstar	pt	8.33	Staple LX	oz	0.74
Flexstar GT	pt	4.66	Storm	pt	11.91
Fusilade DX	oz	1.15	Strada	oz	7.34
Gambit	oz	16.32	Strada Pro	oz	7.70
Glyphosate 3lbs a.e	pt	2.11	Strada XT2	pt	3.20
Glyphosate 3lbs a.e	oz	0.13	Superwham	qt	8.61
Goal 2XL	pt	7.52	Suprend	lb	13.52
Gramoxone SL 2.0	oz	0.19	SureStart II	oz	0.56
Grandstand R	pt	15.39	Surveil	oz	6.32
Grasp	oz	12.07	Synchrony XP	oz	11.99
Grasp Xtra	oz	1.58	Tempest	pt	29.82

(continued)

Appendix Table 4. Operating inputs: estimated prices, Mississippi, 2021 (continued)

ITEM NAME	UNIT	PRICE	ITEM NAME	UNIT	PRICE
		dollars			dollars
Touchdown Total	qt	10.21	Macho	oz	0.78
Treflan	pt	3.49	Malathion 8E	pt	10.56
Trifluralin	pt	3.68	Mustang Max	oz	1.10
Triflurex	pt	3.30	Nuprid 4F	oz	0.88
Ultra Blazer	pt	8.58	Oberon	oz	3.09
Valor EZ	oz	5.04	Orthene 90	lb	7.45
Valor SX	oz	4.51	Permethrin	oz	0.48
Valor XLT	oz	5.28	Portal XLO	oz	0.74
Vamos	pt	6.49	Pounce 25WP	lb	16.50
Verdict	oz	1.73	Prevathon	oz	1.05
Veritas	pt	7.49	Python WDG	oz	14.32
Villain	pt	5.24	Radiant	oz	5.74
Volunteer	pt	10.63	Sevin 4F	pt	6.97
Warrant	pt	4.39	Sevin XLR Plus	qt	15.43
XtendiMax	oz	0.56	Sivanto Prime	oz	2.67
Zidua DF	oz	8.72	Tempest	oz	1.86
Zidua SC	oz	5.55	Transform WG	oz	7.35
INOCULANT			Up-Cyde	oz	0.44
Inoculant-Soybean	acre	1.55	Warrior ZT	oz	2.43
Optimize LIFT	oz	0.53	Zeal	oz	17.67
INSECTICIDES			IRRIGATION SUPPLIES		
Abamectin .15EC	oz	1.89	Roll-Out Pipe	ft	0.24
Acephate 90%	lb	6.94	SEED/PLANTS		
Acephate 90SP	lb	6.42	Corn Seed BtRR	thous	3.99
Admire Pro	oz	1.80	Corn Seed Conv.	thous	2.76
Agri-Mek	oz	2.72	Corn Seed Op Leptra	thous	3.66
Asana .66 XL	oz	0.55	Corn Seed RR2	thous	3.03
Avenger	oz	0.28	Corn Seed VT2P	thous	3.98
Baythroid XL	oz	2.38	Cot. Seed B3XF/W3FE	thous	2.58
Belt	oz	7.50	Cotton Seed B3XF	thous	2.66
Besiege	oz	2.31	Cotton Seed GLB2	thous	2.05
Bidrin 8EC	oz	1.16	Cotton Seed W3FE	thous	2.49
Bifenthrin	oz	0.94	Cotton Seed W3RF	thous	1.98
Bifenture 2EC	oz	0.91	Peanut Seed	lb	0.87
Brigade EC	pt	16.30	Rice Conv Hyb Trt	lb	6.19
Capture LFR	oz	2.32	Rice Fullpage Hyb Tr	lb	6.97
Centric 40WG	oz	5.08	Rice Seed CF(Levees)	lb	0.96
Cypermethrin	oz	0.44	Rice Seed Clearfield	lb	0.96
Declare	oz	1.89	Rice Seed Conv.	lb	0.32
Diamond .83EC	oz	1.28	Rice Seed Cv(Levees)	lb	0.32
Dimethoate 4E	pt	5.44	Rice Seed CvH(Levee)	lb	1.93
Dimilin 2L	oz	2.16	Rice Seed FPH(Levee)	lb	2.67
Endigo	oz	1.48	Rice Seed Provisia	lb	1.23
Force 3G	lb	7.28	Rice Seed Trt/Insect	lbseed	0.29
Hero	oz	1.30	Sorghum Concept	lb	2.64
Imidacloprid 4F	oz	1.31	Sorghum Concept+ Po	lb	3.82
Imidan 70 WSB	oz	0.89	Soybean Enlist E3	lb	1.20
IncidentalPestTrt \$8	acre	8.00	Soybean Seed LL	lb	1.16
IncidentalPestTrt\$15	acre	15.00	Soybean Seed RR2	lb	1.16
IncidentalPestTrt\$22	acre	22.00	Soybean Seed RR2X	lb	1.34
IncidentalPestTrt\$30	acre	30.00	Wheat Seed Private	lb	0.28
Intrepid 2F	oz	1.94	SOIL TEST		
Intruder 70WSP	oz	1.13	Soil Test	acre	10.00
Karate Z	oz	2.52	SURVEY & MARK LEVEES		
Lambda	oz	0.95	Survey & Mark Levees	acre	4.50
Lannate LV	pt	9.00	Survey & Mark Levees	acre	4.50



Appendix Table 5. Estimated fuel prices  
and interest rates, Mississippi, 2021

ITEM NAME	UNIT	PRICE
		dollars
FUEL TYPES		
Diesel Fuel	gal	1.53
Gasoline	gal	1.89
INTEREST RATES		
Short-term	%	4.00
Intermediate-term	%	4.50

Appendix Table 6. Labor types, wage rates and unallocated labor  
Multipliers for crop enterprises, Mississippi, 2021

Item name	Unit	Wage Rate
OPERATOR LABOR	hour	14.68
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, 2021

Crop	uni	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 '21	3.93	-0.20	3.73	2.35	3.73
Cotton Lint	lb	Dec '21	0.66	-0.0158	0.6442	0.52	0.6442
Cottonseed	lb						0.08 <sup>f</sup>
Grain Sorghum	bu				3.55	4.08	3.55
Peanuts	ton				400.00	354.55	400.00
Soybeans	bu	Nov '21	9.69	-0.02	9.67	6.41	9.67
Rice	bu	Nov '21	5.47	-0.37	5.10	3.21	5.10
Wheat	bu	Jul '21	5.90	-0.15	6.75	3.35	5.75

<sup>a</sup> Average of the daily closing futures contract prices during the first 5 trading days in October 2020 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 2019 for corn, soybeans and wheat at Greenville, MS. Rice basis is a weekly average price for river point delivery. June harvest delivery for wheat. September harvest delivery for corn, rice and soybeans. October harvest delivery for cotton.

<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 2020 crop year for corn, grain sorghum, soybeans and wheat. Mississippi CCC 2020 Farm-stored Loan Rate for long grain rough rice. National 2020 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 2008-2020.

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, 2021

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			0.02	1.09	1.09
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				0.22	13.70	51.82
Well & Pump, 1/4 CP	each			3.50				0.06	3.56	9.84
Engine, 1/4 CP, 65	each									10.19
June Irr. 3app@.75"	ac-in		5.14	1.49				0.11	6.74	6.74
July Irr. 4app@.75"	ac-in		6.86	1.99				0.12	8.97	8.97
Aug Irr. 3app@.75"	ac-in		5.14	1.49				0.07	6.70	6.70
TOTALS		0.00	17.14	21.95	1.84	0.00	0.61		41.54	71.85
										113.39

Note: Cost of production estimates are based on 2020 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, 2021

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'		0.57	0.30	0.56			0.06	1.49	1.59	3.08
Set Up Engine											
IRRIGATE LABOR	hour				0.23				0.23		0.23
Ditcher (1m/160a)			0.13	0.07	0.14				0.34	0.32	0.66
Roll-Out Pipe	ft	7.92						0.11	8.03		8.03
Lay Roll-out Pipe											
Pipe Spool 160ac	1/4m roll		0.17	0.10	0.41			0.01	0.69	0.79	1.48
IRRIGATE LABOR	hour				1.81			0.02	1.83		1.83
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		0.25	0.15	0.62			0.01	1.03	1.18	2.21
Land Forming (\$450)	each									30.35	30.35
Well & Pump, Furrow	each			2.96				0.04	3.00	8.30	11.30
Main Line Pipe	each									4.59	4.59
Engine, RPF, Corn	each									8.60	8.60
1st June Irrigation	ac-in		4.05	1.05				0.07	5.17		5.17
2nd June Irrigation	ac-in		4.05	1.05				0.07	5.17		5.17
3rd June Irrigation	ac-in		4.05	1.05				0.07	5.17		5.17
July Irrigation	ac-in		4.05	1.05				0.05	5.15		5.15
TOTALS		7.92	17.32	7.78	4.69	0.00		0.51	38.22	55.72	93.94

Note: Cost of production estimates are based on 2020 input prices.

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