

# **FORAGE 2021 PLANNING BUDGETS**

**Mississippi State University  
Department of Agricultural Economics  
Budget Report 2020-08**

**June 2020**



## **Foreword**

This report is designed to provide necessary planning data to farmers, research and extension staffs, lending agencies, and others in agriculture. Estimated costs for land, management, and general farm overhead are not included in this report.

## **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 farm supply dealers, equipment dealers, custom operators, and chemical companies who provided prices for crop production inputs.

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 forage crops 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 for each enterprise (14). The purpose of this section is to present the methods and procedures used to calculate costs 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 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 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 individual and collective judgment of the committee members. Quantities of materials listed in each budget are based on generally accepted recommendations.

### Machinery

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

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 short-term 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 and hand 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

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:

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

$$CRCPA = CRCPH \times PR$$

where:

CRCPH = Capital recovery charge per hour  
 HAU = Hours of annual use  
 CRCPA = Capital recovery charge per acre  
 PR = Performance rate



## Enterprise Budgets

Table 1.A Estimated resource use and costs for field operations, per acre  
 Conventional Alfalfa hay establishment, prepared  
 seedbed, Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF TIMES			POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
			RATE	OVER	MTH	DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Soil Testing	8.00	acre		0.33	Aug							0.3300	8.00	2.64	2.64
Lime (Spread)	43.00	ton		1.00	Aug							0.5000	43.00	21.50	21.50
Chisel Plow Rigid	15'	2WD 75	0.123	1.00	Aug	0.80	0.90	0.65	1.25	0.12	1.88				5.48
Disk Harrow	14'	2WD 75	0.140	2.00	Aug	1.80	2.05	2.02	4.64	0.28	4.27				14.78
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Aug	0.40	0.46	0.22	0.28	0.09	1.23				2.59
Pursuit	oz											3.0000	3.13	9.39	9.39
Clethodim	oz											8.0000	0.75	6.00	6.00
Surfactant	pt											0.3000	5.31	1.59	1.59
Custom Spread(Truck)	appl			1.00	Sep							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.0000	17.30	17.30	17.30
Potash (60% K2O)	cwt											3.0000	22.11	66.33	66.33
Boron Plus	gal											0.5000	20.50	10.25	10.25
Disk Harrow	14'	2WD 75	0.140	1.00	Sep	0.91	1.03	1.01	2.32	0.14	2.14				7.41
Section Harrow	13'	2WD 75	0.119	1.00	Sep	0.77	0.87	0.12	0.20	0.11	1.82				3.78
Grain Drill	12'	2WD 75	0.157	1.00	Sep	1.02	1.15	1.62	3.39	0.31	3.81				10.99
Alfalfa Seed	lb											20.0000	4.01	80.20	80.20
Cultipacker	12'	2WD 75	0.124	1.00	Sep	0.80	0.91	0.14	0.20	0.12	1.89				3.94
TOTALS						6.50	7.37	5.78	12.28	1.19	17.04			222.70	271.67
INTEREST ON OPERATING CAPITAL															12.36
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															284.03

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**

Table 1.B Estimated costs per acre  
 Conventional Alfalfa hay establishment, prepared  
 seedbed, Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	17.30	1.0000	17.30	_____
Potash (60% K2O)	cwt	22.11	3.0000	66.33	_____
Boron Plus	gal	20.50	0.5000	10.25	_____
HERBICIDE					
Pursuit	oz	3.13	3.0000	9.39	_____
Clethodim	oz	0.75	8.0000	6.00	_____
SEED/PLANTS					
Alfalfa Seed	lb	4.01	20.0000	80.20	_____
ADJUVANTS					
Surfactant	pt	5.31	0.3000	1.59	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	1.0000	7.50	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.5000	21.50	_____
OPERATOR LABOR					
Tractors	hour	15.22	1.0078	15.34	_____
HAND LABOR					
Implements	hour	9.06	0.1884	1.70	_____
DIESEL FUEL					
Tractors	gal	1.38	3.8908	5.37	_____
REPAIR & MAINTENANCE					
Implements	acre	5.78	1.0000	5.78	_____
Tractors	acre	1.13	1.0000	1.13	_____
INTEREST ON OP. CAP.	acre	12.36	1.0000	12.36	_____
TOTAL DIRECT EXPENSES				264.38	_____
FIXED EXPENSES					
Implements	acre	12.28	1.0000	12.28	_____
Tractors	acre	7.37	1.0000	7.37	_____
TOTAL FIXED EXPENSES				19.65	_____
TOTAL SPECIFIED EXPENSES				284.03	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Table 2.A Estimated resource use and costs for field operations, per acre  
 Conventional Alfalfa hay maintenance  
 Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC HOURS	LABOR COST	OPERATING/DURABLE INPUT			TOTAL COST		
						DIRECT	FIXED	DIRECT	FIXED			AMOUNT	PRICE	COST			
-----dollars-----												-----dollars-----			-----dollars-----		
Soil Testing 8.00	acre			0.33	Nov							0.3300	8.00	2.64	2.64		
Lime (Spread) 43.00	ton			1.00	Nov							0.5000	43.00	21.50	21.50		
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Nov	0.40	0.46	0.22	0.28	0.09	1.23				2.59		
Metribuzin 75	lb.											1.0000	18.75	18.75	18.75		
Custom Spread(Truck)	appl			1.00	Mar							1.0000	7.50	7.50	7.50		
Phosphate (46% P2O5)	cwt											2.0000	17.30	34.60	34.60		
Potash (60% K2O)	cwt											1.5000	22.11	33.17	33.17		
Boron Plus	gal											0.5000	20.50	10.25	10.25		
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Mar	0.40	0.46	0.22	0.28	0.09	1.23				2.59		
Pursuit	oz											3.0000	3.13	9.39	9.39		
Surfactant	pt											0.3000	5.31	1.59	1.59		
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Mar	0.40	0.46	0.22	0.28	0.09	1.23				2.59		
Mustang Max	oz											4.0000	0.95	3.80	3.80		
Hay Cut-Cond	9'	2WD 75	0.229	1.00	May	1.48	1.68	4.03	4.75	0.22	3.49				15.43		
Hay Tedder	17'	2WD 75	0.101	1.00	May	6.03	0.74	0.41	0.60	0.10	1.54				9.32		
Hay Rake-Double	17'	2WD 75	0.101	2.00	May	1.31	1.48	0.73	1.08	0.20	3.08				7.68		
Hay Baler	Conv	2WD 75	0.229	1.00	May	1.48	1.68	3.02	4.46	0.22	3.49				14.13		
Twine	bun											0.0800	39.00	3.12	3.12		
Hay Trailer	20'	2WD 75	0.090	1.00	May	0.58	0.66	0.11	0.21	0.09	1.37				2.93		
Hay Haul (Conv)	25.00 ton											1.5000	25.00	37.50	37.50		
Spray (Broadcast)	27'	2WD 75	0.062	1.00	May	0.43	0.64	0.22	0.28	0.09	1.23				2.80		
Gramoxone SL	oz											12.0000	0.17	2.04	2.04		
Surfactant	pt											0.3000	5.31	1.59	1.59		
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Jun	0.43	0.64	0.22	0.28	0.09	1.23				2.80		
Mustang Max	oz											4.0000	0.95	3.80	3.80		
Hay Cut-Cond	9'	2WD 75	0.229	1.00	Jun	1.48	1.68	4.03	4.75	0.22	3.49				15.43		
Hay Tedder	17'	2WD 75	0.101	1.00	Jun	6.03	0.74	0.41	0.60	0.10	1.54				9.32		
Hay Rake-Double	17'	2WD 75	0.101	2.00	Jun	1.31	1.48	0.73	1.08	0.20	3.08				7.68		
Hay Baler	Conv	2WD 75	0.229	1.00	Jun	1.48	1.68	3.02	4.46	0.22	3.49				14.13		
Twine	bun											0.0800	39.00	3.12	3.12		
Hay Trailer	20'	2WD 75	0.090	1.00	Jun	0.58	0.66	0.11	0.21	0.09	1.37				2.93		
Hay Haul (Conv)	25.00 ton											1.5000	25.00	37.50	37.50		
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Jun	0.43	0.64	0.22	0.28	0.09	1.23				2.80		
Gramoxone SL	oz											12.0000	0.17	2.04	2.04		
Surfactant	pt											0.3000	5.31	1.59	1.59		
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Jun	0.43	0.64	0.22	0.28	0.09	1.23				2.80		
Poast	pt											1.0000	14.12	14.12	14.12		
Crop Oil (veg)	pt											2.0000	3.22	6.44	6.44		
Custom Spread(Truck)	appl			1.00	Jul							1.0000	7.50	7.50	7.50		
Potash (60% K2O)	cwt											1.5000	22.11	33.17	33.17		
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Aug	0.43	0.64	0.22	0.28	0.09	1.23				2.80		
Mustang Max	oz											4.0000	0.95	3.80	3.80		
Hay Cut-Cond	9'	2WD 75	0.229	1.00	Aug	1.48	1.68	4.03	4.75	0.22	3.49				15.43		
Hay Tedder	17'	2WD 75	0.101	1.00	Aug	6.03	0.74	0.41	0.60	0.10	1.54				9.32		
Hay Rake-Double	17'	2WD 75	0.101	2.00	Aug	1.31	1.48	0.73	1.08	0.20	3.08				7.68		
Hay Baler	Conv	2WD 75	0.229	1.00	Aug	1.48	1.68	3.02	4.46	0.22	3.49				14.13		
Twine	bun											0.0500	39.00	1.95	1.95		
Hay Trailer	20'	2WD 75	0.090	1.00	Aug	0.58	0.66	0.11	0.21	0.09	1.37				2.93		
Hay Haul (Conv)	25.00 ton											1.0000	25.00	25.00	25.00		
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Aug	0.43	0.64	0.22	0.28	0.09	1.23				2.80		
Gramoxone SL	oz											12.0000	0.17	2.04	2.04		
Surfactant	pt											0.3000	5.31	1.59	1.59		
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Sep	0.43	0.64	0.22	0.28	0.09	1.23				2.80		
Mustang Max	oz											4.0000	0.95	3.80	3.80		
Hay Cut-Cond	9'	2WD 75	0.229	1.00	Sep	1.48	1.68	4.03	4.75	0.22	3.49				15.43		
Hay Tedder	17'	2WD 75	0.101	1.00	Sep	6.03	0.74	0.41	0.60	0.10	1.54				9.32		
Hay Rake-Double	17'	2WD 75	0.101	2.00	Sep	1.31	1.48	0.73	1.08	0.20	3.08				7.68		
Hay Baler	Conv	2WD 75	0.229	1.00	Sep	1.48	1.68	3.02	4.46	0.22	3.49				14.13		
Twine	bun											0.0500	39.00	1.95	1.95		
Hay Trailer	20'	2WD 75	0.090	1.00	Sep	0.58	0.66	0.11	0.21	0.09	1.37				2.93		
Hay Haul (Conv)	25.00 ton											1.0000	25.00	25.00	25.00		
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Sep	0.43	0.64	0.22	0.28	0.09	1.23				2.80		
Gramoxone SL	oz											12.0000	0.17	2.04	2.04		
Surfactant	pt											0.3000	5.31	1.59	1.59		
Prorated Est Cost	acre				Sep							1.0000			39.05		
TOTALS																	
INTEREST ON OPERATING CAPITAL							48.07	30.92	35.62	47.48	4.44	65.41			365.48	632.03	
UNALLOCATED LABOR																12.58	
TOTAL SPECIFIED COST																0.00	
																644.61	

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**

Table 2.B Estimated costs per acre  
 Conventional Alfalfa hay maintenance  
 Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	17.30	2.0000	34.60	_____
Potash (60% K2O)	cwt	22.11	3.0000	66.33	_____
Boron Plus	gal	20.50	0.5000	10.25	_____
HERBICIDE					
Metribuzin 75	lb.	18.75	1.0000	18.75	_____
Pursuit	oz	3.13	3.0000	9.39	_____
Gramoxone SL	oz	0.17	48.0000	8.16	_____
Poast	pt	14.12	1.0000	14.12	_____
INSECTICIDE					
Mustang Max	oz	0.95	16.0000	15.20	_____
HAUL					
Hay Haul (Conv)25.00	ton	25.00	5.0000	125.00	_____
OTHER					
Twine	bun	39.00	0.2600	10.14	_____
ADJUVANTS					
Surfactant	pt	5.31	1.5000	7.97	_____
Crop Oil (veg)	pt	3.22	2.0000	6.44	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	2.0000	15.00	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.5000	21.50	_____
OPERATOR LABOR					
Tractors	hour	15.22	4.0960	62.33	_____
HAND LABOR					
Implements	hour	9.06	0.3447	3.08	_____
DIESEL FUEL					
Tractors	gal	1.38	31.4238	43.31	_____
REPAIR & MAINTENANCE					
Implements	acre	35.62	1.0000	35.62	_____
Tractors	acre	4.76	1.0000	4.76	_____
INTEREST ON OP. CAP.	acre	12.58	1.0000	12.58	_____
TOTAL DIRECT EXPENSES				527.16	_____
FIXED EXPENSES					
Implements	acre	47.48	1.0000	47.48	_____
Tractors	acre	30.92	1.0000	30.92	_____
Prorated Est Cost	acre	39.05	1.0000	39.05	_____
TOTAL FIXED EXPENSES				117.45	_____
TOTAL SPECIFIED EXPENSES				644.61	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Table 3.A Estimated resource use and costs for field operations, per acre  
 Bahiagrass establishment, broadcast  
 Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Chisel Plow Rigid	15'	2WD 75	0.123	1.00	Mar	0.80	0.90	0.65	1.25	0.12	1.88				5.48
Soil Testing	8.00 acre			0.33	Apr							0.3300	8.00	2.64	2.64
Lime (Spread)	43.00 ton			1.00	Apr							0.3300	43.00	14.19	14.19
Disk Harrow	14'	2WD 75	0.140	1.00	Apr	0.91	1.03	1.01	2.32	0.14	2.14				7.41
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Apr	0.43	0.64	0.22	0.28	0.09	1.23				2.80
Glyphosate 3lbs a.e.	pt											2.0000	2.16	4.32	4.32
Surfactant	pt											1.0000	5.31	5.31	5.31
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	17.30	25.95	25.95
Potash (60% K2O)	cwt											1.0000	22.11	22.11	22.11
Disk Harrow	14'	2WD 75	0.140	1.00	Apr	0.91	1.03	1.01	2.32	0.14	2.14				7.41
Section Harrow	13'	2WD 75	0.119	1.00	Apr	0.77	0.87	0.12	0.20	0.11	1.82				3.78
Cyclone Spin	750Lb	2WD 105	0.200	1.00	Apr	1.88	2.55	0.23	0.90	0.30	3.95				9.51
Bahiagrass Seed	lb											20.0000	2.82	56.40	56.40
Cultipacker	12'	2WD 75	0.124	1.00	Apr	0.80	0.91	0.14	0.20	0.12	1.89				3.94
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											2.2500	16.50	37.13	37.13
Rotary Mower	12'	2WD 75	0.098	1.00	Jun	0.63	0.72	0.96	0.74	0.09	1.49				4.54
TOTALS						7.13	8.65	4.34	8.21	1.13	16.54			183.05	227.92
INTEREST ON OPERATING CAPITAL															9.76
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															237.68

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**

Table 3.B Estimated costs per acre  
 Bahiagrass establishment, broadcast  
 Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	17.30	1.5000	25.95	_____
Potash (60% K2O)	cwt	22.11	1.0000	22.11	_____
Fert 33-0-0-12S	cwt	16.50	2.2500	37.13	_____
HERBICIDE					
Glyphosate 3lbs a.e.	pt	2.16	2.0000	4.32	_____
SEED/PLANTS					
Bahiagrass Seed	lb	2.82	20.0000	56.40	_____
ADJUVANTS					
Surfactant	pt	5.31	1.0000	5.31	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	2.0000	15.00	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	1.0086	15.35	_____
HAND LABOR					
Implements	hour	9.06	0.1313	1.19	_____
DIESEL FUEL					
Tractors	gal	1.38	4.2026	5.80	_____
REPAIR & MAINTENANCE					
Implements	acre	4.34	1.0000	4.34	_____
Tractors	acre	1.33	1.0000	1.33	_____
INTEREST ON OP. CAP.	acre	9.76	1.0000	9.76	_____
TOTAL DIRECT EXPENSES				220.82	_____
FIXED EXPENSES					
Implements	acre	8.21	1.0000	8.21	_____
Tractors	acre	8.65	1.0000	8.65	_____
TOTAL FIXED EXPENSES				16.86	_____
TOTAL SPECIFIED EXPENSES				237.68	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Table 4.A Estimated resource use and costs for field operations, per acre  
 Bahiagrass establishment, drilled on prepared seed bed  
 Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Chisel Plow Rigid	15'	2WD 75	0.123	1.00	Mar	0.80	0.90	0.65	1.25	0.12	1.88				5.48
Soil Testing	8.00	acre		0.33	Apr							0.3300	8.00	2.64	2.64
Lime (Spread)	43.00	ton		0.33	Apr							0.3300	43.00	14.19	14.19
Disk Harrow	14'	2WD 75	0.140	1.00	Apr	0.91	1.03	1.01	2.32	0.14	2.14				7.41
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Apr	0.40	0.46	0.22	0.28	0.09	1.23				2.59
Glyphosate 3lbs a.e.	pt											2.0000	2.16	4.32	4.32
Surfactant	pt											1.0000	5.31	5.31	5.31
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	17.30	25.95	25.95
Potash (60% K2O)	cwt											1.0000	22.11	22.11	22.11
Disk Harrow	14'	2WD 75	0.140	1.00	Apr	0.91	1.03	1.01	2.32	0.14	2.14				7.41
Section Harrow	13'	2WD 75	0.119	1.00	Apr	0.77	0.87	0.12	0.20	0.11	1.82				3.78
Grain Drill	12'	2WD 75	0.157	1.00	Apr	1.02	1.15	1.62	3.39	0.31	3.81				10.99
Bahiagrass Seed	lb											20.0000	2.82	56.40	56.40
Cultipacker	12'	2WD 75	0.124	1.00	Apr	0.80	0.91	0.14	0.20	0.12	1.89				3.94
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											2.2500	16.50	37.13	37.13
Rotary Mower	12'	2WD 75	0.098	1.00	Jun	0.63	0.72	0.96	0.74	0.09	1.49				4.54
TOTALS						6.24	7.07	5.73	10.70	1.15	16.40			183.05	229.19
INTEREST ON OPERATING CAPITAL															9.78
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															238.97

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**



Table 4.B Estimated costs per acre  
 Bahiagrass establishment, drilled on prepared seed bed  
 Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	17.30	1.5000	25.95	_____
Potash (60% K2O)	cwt	22.11	1.0000	22.11	_____
Fert 33-0-0-12S	cwt	16.50	2.2500	37.13	_____
HERBICIDE					
Glyphosate 3lbs a.e.	pt	2.16	2.0000	4.32	_____
SEED/PLANTS					
Bahiagrass Seed	lb	2.82	20.0000	56.40	_____
ADJUVANTS					
Surfactant	pt	5.31	1.0000	5.31	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	2.0000	15.00	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.9657	14.70	_____
HAND LABOR					
Implements	hour	9.06	0.1884	1.70	_____
DIESEL FUEL					
Tractors	gal	1.38	3.7283	5.15	_____
REPAIR & MAINTENANCE					
Implements	acre	5.73	1.0000	5.73	_____
Tractors	acre	1.09	1.0000	1.09	_____
INTEREST ON OP. CAP.	acre	9.78	1.0000	9.78	_____
TOTAL DIRECT EXPENSES				221.20	_____
FIXED EXPENSES					
Implements	acre	10.70	1.0000	10.70	_____
Tractors	acre	7.07	1.0000	7.07	_____
TOTAL FIXED EXPENSES				17.77	_____
TOTAL SPECIFIED EXPENSES				238.97	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Table 5.A Estimated resource use and costs for field operations, per acre  
 Bahiagrass establishment, no-till  
 Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF TIMES			POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
			RATE	OVER	MTH	DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Chisel Plow Rigid	15'	2WD 75	0.123	1.00	Mar	0.80	0.90	0.65	1.25	0.12	1.88				5.48
Soil Testing	8.00	acre		0.33	Apr							0.3300	8.00	2.64	2.64
Lime (Spread)	43.00	ton		0.33	Apr							0.3300	43.00	14.19	14.19
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Apr	0.40	0.46	0.22	0.28	0.09	1.23				2.59
Glyphosate 3lbs a.e.	pt											2.0000	2.16	4.32	4.32
Surfactant	pt											1.0000	5.31	5.31	5.31
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	17.30	25.95	25.95
Potash (60% K2O)	cwt											1.0000	22.11	22.11	22.11
NT Grain Drill	12'	2WD 75	0.196	1.00	Apr	1.27	1.44	3.40	7.10	0.39	4.77				17.98
Bahiagrass Seed	lb											20.0000	2.82	56.40	56.40
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											2.2500	16.50	37.13	37.13
Rotary Mower	12'	2WD 75	0.098	1.00	Jun	0.63	0.72	0.96	0.74	0.09	1.49				4.54
TOTALS						3.10	3.52	5.23	9.37	0.70	9.37			183.05	213.64
INTEREST ON OPERATING CAPITAL															9.25
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															222.89

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**

Table 5.B Estimated costs per acre  
 Bahiagrass establishment, no-till  
 Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	17.30	1.5000	25.95	_____
Potash (60% K2O)	cwt	22.11	1.0000	22.11	_____
Fert 33-0-0-12S	cwt	16.50	2.2500	37.13	_____
HERBICIDE					
Glyphosate 3lbs a.e.	pt	2.16	2.0000	4.32	_____
SEED/PLANTS					
Bahiagrass Seed	lb	2.82	20.0000	56.40	_____
ADJUVANTS					
Surfactant	pt	5.31	1.0000	5.31	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	2.0000	15.00	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.4805	7.31	_____
HAND LABOR					
Implements	hour	9.06	0.2277	2.06	_____
DIESEL FUEL					
Tractors	gal	1.38	1.8551	2.56	_____
REPAIR & MAINTENANCE					
Implements	acre	5.23	1.0000	5.23	_____
Tractors	acre	0.54	1.0000	0.54	_____
INTEREST ON OP. CAP.	acre	9.25	1.0000	9.25	_____
TOTAL DIRECT EXPENSES				210.00	_____
FIXED EXPENSES					
Implements	acre	9.37	1.0000	9.37	_____
Tractors	acre	3.52	1.0000	3.52	_____
TOTAL FIXED EXPENSES				12.89	_____
TOTAL SPECIFIED EXPENSES				222.89	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Table 6.A Estimated resource use and costs for field operations, per acre  
Seeded Bermudagrass establishment, broadcast seed  
Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Chisel Plow Rigid	15'	2WD 75	0.123	1.00	Mar	0.80	0.90	0.65	1.25	0.12	1.88				5.48
Soil Testing	8.00 acre			0.33	Apr							0.3300	8.00	2.64	2.64
Lime (Spread)	43.00 ton			1.00	Apr							0.3300	43.00	14.19	14.19
Disk Harrow	14'	2WD 75	0.140	1.00	Apr	0.91	1.03	1.01	2.32	0.14	2.14				7.41
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Apr	0.40	0.46	0.22	0.28	0.09	1.23				2.59
Glyphosate 3lbs a.e.	pt											2.0000	2.16	4.32	4.32
Surfactant	pt											1.0000	5.31	5.31	5.31
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	17.30	25.95	25.95
Potash (60% K2O)	cwt											1.0000	22.11	22.11	22.11
Disk Harrow	14'	2WD 75	0.140	1.00	Apr	0.91	1.03	1.01	2.32	0.14	2.14				7.41
Section Harrow	13'	2WD 75	0.119	1.00	Apr	0.77	0.87	0.12	0.20	0.11	1.82				3.78
Cyclone Spin	750Lb	2WD 75	0.200	1.00	Apr	1.29	1.46	0.23	0.90	0.30	3.95				7.83
Bermudagrass Seed	lb											10.0000	5.00	50.00	50.00
Cultipacker	12'	2WD 75	0.124	1.00	Apr	0.80	0.91	0.14	0.20	0.12	1.89				3.94
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											2.2500	16.50	37.13	37.13
Rotary Mower	12'	2WD 75	0.098	1.00	Jun	0.63	0.72	0.96	0.74	0.09	1.49				4.54
TOTALS						6.51	7.38	4.34	8.21	1.13	16.54			176.65	219.63
INTEREST ON OPERATING CAPITAL															9.43
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															229.06

Note: Cost of production estimates are based on 2019 input prices.  
Fertilization decisions should be based on soil test recommendations.

Table 6.B Estimated costs per acre  
Seeded Bermudagrass establishment, broadcast seed  
Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	17.30	1.5000	25.95	_____
Potash (60% K2O)	cwt	22.11	1.0000	22.11	_____
Fert 33-0-0-12S	cwt	16.50	2.2500	37.13	_____
HERBICIDE					
Glyphosate 3lbs a.e.	pt	2.16	2.0000	4.32	_____
SEED/PLANTS					
Bermudagrass Seed	lb	5.00	10.0000	50.00	_____
ADJUVANTS					
Surfactant	pt	5.31	1.0000	5.31	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	2.0000	15.00	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	1.0086	15.35	_____
HAND LABOR					
Implements	hour	9.06	0.1313	1.19	_____
DIESEL FUEL					
Tractors	gal	1.38	3.8937	5.38	_____
REPAIR & MAINTENANCE					
Implements	acre	4.34	1.0000	4.34	_____
Tractors	acre	1.13	1.0000	1.13	_____
INTEREST ON OP. CAP.	acre	9.43	1.0000	9.43	_____
TOTAL DIRECT EXPENSES				213.47	_____
FIXED EXPENSES					
Implements	acre	8.21	1.0000	8.21	_____
Tractors	acre	7.38	1.0000	7.38	_____
TOTAL FIXED EXPENSES				15.59	_____
TOTAL SPECIFIED EXPENSES				229.06	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Table 7.A Estimated resource use and costs for field operations, per acre  
Seeded Bermudagrass establishment, no-till  
Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Chisel Plow Rigid	15'	2WD 75	0.123	1.00	Mar	0.80	0.90	0.65	1.25	0.12	1.88				5.48
Soil Testing	8.00 acre			0.33	Apr							0.3300	8.00	2.64	2.64
Lime (Spread)	43.00 ton			0.33	Apr							0.3300	43.00	14.19	14.19
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Apr	0.40	0.46	0.22	0.28	0.09	1.23				2.59
Glyphosate 3lbs a.e.	pt											2.0000	2.16	4.32	4.32
Surfactant	pt											1.0000	5.31	5.31	5.31
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	17.30	25.95	25.95
Potash (60% K2O)	cwt											1.0000	22.11	22.11	22.11
NT Grain Drill	12'	2WD 75	0.196	1.00	Apr	1.27	1.44	3.40	7.10	0.39	4.77				17.98
Bermudagrass Seed	lb											10.0000	5.00	50.00	50.00
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											2.2500	16.50	37.13	37.13
Rotary Mower	12'	2WD 75	0.098	1.00	Jun	0.63	0.72	0.96	0.74	0.09	1.49				4.54
TOTALS						3.10	3.52	5.23	9.37	0.70	9.37			176.65	207.24
INTEREST ON OPERATING CAPITAL															8.95
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															216.19

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**

Table 7.B Estimated costs per acre  
Seeded Bermudagrass establishment, no-till  
Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	17.30	1.5000	25.95	_____
Potash (60% K2O)	cwt	22.11	1.0000	22.11	_____
Fert 33-0-0-12S	cwt	16.50	2.2500	37.13	_____
HERBICIDE					
Glyphosate 3lbs a.e.	pt	2.16	2.0000	4.32	_____
SEED/PLANTS					
Bermudagrass Seed	lb	5.00	10.0000	50.00	_____
ADJUVANTS					
Surfactant	pt	5.31	1.0000	5.31	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	2.0000	15.00	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.4805	7.31	_____
HAND LABOR					
Implements	hour	9.06	0.2277	2.06	_____
DIESEL FUEL					
Tractors	gal	1.38	1.8551	2.56	_____
REPAIR & MAINTENANCE					
Implements	acre	5.23	1.0000	5.23	_____
Tractors	acre	0.54	1.0000	0.54	_____
INTEREST ON OP. CAP.	acre	8.95	1.0000	8.95	_____
TOTAL DIRECT EXPENSES				203.30	_____
FIXED EXPENSES					
Implements	acre	9.37	1.0000	9.37	_____
Tractors	acre	3.52	1.0000	3.52	_____
TOTAL FIXED EXPENSES				12.89	_____
TOTAL SPECIFIED EXPENSES				216.19	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Table 8.A Estimated resource use and costs for field operations, per acre  
 Seeded Bermudagrass, drill in prepared seed bed  
 Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Chisel Plow Rigid	15'	2WD 75	0.123	1.00	Mar	0.80	0.90	0.65	1.25	0.12	1.88				5.48
Soil Testing	8.00 acre			0.33	Apr							0.3300	8.00	2.64	2.64
Lime (Spread)	43.00 ton			1.00	Apr							0.3300	43.00	14.19	14.19
Disk Harrow	14'	2WD 75	0.140	1.00	Apr	0.91	1.03	1.01	2.32	0.14	2.14				7.41
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Apr	0.40	0.46	0.22	0.28	0.09	1.23				2.59
Glyphosate 3lbs a.e.	pt											2.0000	2.16	4.32	4.32
Surfactant	pt											1.0000	5.31	5.31	5.31
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	17.30	25.95	25.95
Potash (60% K2O)	cwt											1.0000	22.11	22.11	22.11
Disk Harrow	14'	2WD 75	0.140	1.00	Apr	0.91	1.03	1.01	2.32	0.14	2.14				7.41
Section Harrow	13'	2WD 75	0.119	1.00	Apr	0.77	0.87	0.12	0.20	0.11	1.82				3.78
Grain Drill	12'	2WD 130	0.157	1.00	Apr	1.99	3.53	1.62	3.39	0.31	3.81				14.34
Bermudagrass Seed	lb											10.0000	5.00	50.00	50.00
Cultipacker	12'	2WD 75	0.124	1.00	Apr	0.80	0.91	0.14	0.20	0.12	1.89				3.94
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											2.2500	16.50	37.13	37.13
Rotary Mower	12'	2WD 75	0.098	1.00	Jun	0.63	0.72	0.96	0.74	0.09	1.49				4.54
TOTALS						7.21	9.45	5.73	10.70	1.15	16.40			176.65	226.14
INTEREST ON OPERATING CAPITAL															9.53
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															235.67

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**



Table 8.B Estimated costs per acre  
Seeded Bermudagrass, drill in prepared seed bed  
Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	17.30	1.5000	25.95	_____
Potash (60% K2O)	cwt	22.11	1.0000	22.11	_____
Fert 33-0-0-12S	cwt	16.50	2.2500	37.13	_____
HERBICIDE					
Glyphosate 3lbs a.e.	pt	2.16	2.0000	4.32	_____
SEED/PLANTS					
Bermudagrass Seed	lb	5.00	10.0000	50.00	_____
ADJUVANTS					
Surfactant	pt	5.31	1.0000	5.31	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	2.0000	15.00	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.9657	14.70	_____
HAND LABOR					
Implements	hour	9.06	0.1884	1.70	_____
DIESEL FUEL					
Tractors	gal	1.38	4.1731	5.76	_____
REPAIR & MAINTENANCE					
Implements	acre	5.73	1.0000	5.73	_____
Tractors	acre	1.45	1.0000	1.45	_____
INTEREST ON OP. CAP.	acre	9.53	1.0000	9.53	_____
TOTAL DIRECT EXPENSES				215.52	_____
FIXED EXPENSES					
Implements	acre	10.70	1.0000	10.70	_____
Tractors	acre	9.45	1.0000	9.45	_____
TOTAL FIXED EXPENSES				20.15	_____
TOTAL SPECIFIED EXPENSES				235.67	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Table 9.A Estimated resource use and costs for field operations, per acre  
 Permanent summer pasture maintenance (i.e. Bahiagrass,  
 Bermudagrass, Dallisgrass, mixed grasses), Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF TIMES			POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
			RATE	OVER	MTH	DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Soil Testing	8.00 acre			0.33	Apr							0.3300	8.00	2.64	2.64
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											1.5000	16.50	24.75	24.75
Phosphate (46% P2O5)	cwt											1.0000	17.30	17.30	17.30
Potash (60% K20)	cwt											1.0000	22.11	22.11	22.11
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Apr	0.40	0.46	0.22	0.28	0.09	1.23				2.59
Grazon P+D	pt											2.0000	3.73	7.46	7.46
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											1.5000	16.50	24.75	24.75
Rotary Mower	12'	2WD 75	0.098	1.00	Aug	0.63	0.72	0.96	0.74	0.09	1.49				4.54
Lime (Spread)	43.00 ton			1.00	Aug							0.3300	43.00	14.19	14.19
Prorated Est Cost	acre				Aug							1.0000			21.14
TOTALS						1.03	1.18	1.18	1.02	0.19	2.72			128.20	156.47
INTEREST ON OPERATING CAPITAL															6.41
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															162.88

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**

Table 9.B Estimated costs per acre  
 Permanent summer pasture maintenance (i.e. Bahiagrass,  
 Bermudagrass, Dallisgrass, mixed grasses), Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Fert 33-0-0-12S	cwt	16.50	3.0000	49.50	_____
Phosphate (46% P2O5)	cwt	17.30	1.0000	17.30	_____
Potash (60% K2O)	cwt	22.11	1.0000	22.11	_____
HERBICIDE					
Grazon P+D	pt	3.73	2.0000	7.46	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	2.0000	15.00	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.1608	2.44	_____
HAND LABOR					
Implements	hour	9.06	0.0313	0.28	_____
DIESEL FUEL					
Tractors	gal	1.38	0.6210	0.85	_____
REPAIR & MAINTENANCE					
Implements	acre	1.18	1.0000	1.18	_____
Tractors	acre	0.18	1.0000	0.18	_____
INTEREST ON OP. CAP.	acre	6.41	1.0000	6.41	_____
TOTAL DIRECT EXPENSES				139.54	_____
FIXED EXPENSES					
Implements	acre	1.02	1.0000	1.02	_____
Tractors	acre	1.18	1.0000	1.18	_____
Prorated Est Cost	acre	21.14	1.0000	21.14	_____
TOTAL FIXED EXPENSES				23.34	_____
TOTAL SPECIFIED EXPENSES				162.88	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Table 10.A Estimated resource use and costs for field operations, per acre  
 Permanent summer grass-White Clover pasture maintenance  
 Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Rotary Mower	12'	2WD 75	0.098	1.00	Jun	0.63	0.72	0.96	0.74	0.09	1.49				4.54
Soil Testing	8.00 acre			0.33	Jun							0.3300	8.00	2.64	2.64
Lime (Spread)	43.00 ton			1.00	Jun							0.3300	43.00	14.19	14.19
Rotary Mower	12'	2WD 75	0.098	1.00	Sep	0.63	0.72	0.96	0.74	0.09	1.49				4.54
Tailgate Seeder		2WD 50	0.200	1.00	Sep	0.85	0.88	0.31	0.37	0.20	3.04				5.45
White Clover Seed	1b											3.0000	5.14	15.42	15.42
Custom Spread(Truck)	appl			1.00	Oct							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											1.0000	16.50	16.50	16.50
Phosphate (46% P2O5)	cwt											1.0000	17.30	17.30	17.30
Potash (60% K2O)	cwt											1.0000	22.11	22.11	22.11
Prorated Est Cost	acre				Oct							1.0000			21.14
TOTALS						2.11	2.32	2.23	1.85	0.39	6.02			95.66	131.33
INTEREST ON OPERATING CAPITAL															4.16
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															135.49

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil tests recommendations.**

Table 10.B Estimated costs per acre  
 Permanent summer grass-White Clover pasture maintenance  
 Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Fert 33-0-0-12S	cwt	16.50	1.0000	16.50	_____
Phosphate (46% P2O5)	cwt	17.30	1.0000	17.30	_____
Potash (60% K2O)	cwt	22.11	1.0000	22.11	_____
SEED/PLANTS					
White Clover Seed	lb	5.14	3.0000	15.42	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	1.0000	7.50	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.3964	6.02	_____
DIESEL FUEL					
Tractors	gal	1.38	1.2729	1.75	_____
REPAIR & MAINTENANCE					
Implements	acre	2.23	1.0000	2.23	_____
Tractors	acre	0.36	1.0000	0.36	_____
INTEREST ON OP. CAP.	acre	4.16	1.0000	4.16	_____
				-----	
TOTAL DIRECT EXPENSES				110.18	_____
FIXED EXPENSES					
Implements	acre	1.85	1.0000	1.85	_____
Tractors	acre	2.32	1.0000	2.32	_____
Prorated Est Cost	acre	21.14	1.0000	21.14	_____
				-----	
TOTAL FIXED EXPENSES				25.31	_____
				-----	
TOTAL SPECIFIED EXPENSES				135.49	_____

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**

Table 11.A Estimated resource use and costs for field operations, per acre  
 Mixed grass hay maintenance  
 Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST	
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST		
						-----dollars-----				dollars		-----dollars-----				
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Mar	0.40	0.46	0.22	0.28	0.09	1.23					2.59
Grazon P+D	pt											2.0000	3.73	7.46		7.46
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50		7.50
Fert 33-0-0-12S	cwt											1.2500	16.50	20.63		20.63
Phosphate (46% P2O5)	cwt											1.0000	17.30	17.30		17.30
Potash (60% K2O)	cwt											1.5000	22.11	33.17		33.17
Hay Disc Mower	8'	2WD 75	0.257	1.00	Jun	1.66	1.89	1.82	2.15	0.25	3.92					11.44
Hay Rake	8.5'	2WD 50	0.202	2.00	Jun	1.71	1.78	1.26	1.85	0.40	6.16					12.76
Hay Baler	Lg Round	2WD 75	0.211	1.00	Jun	1.37	1.55	5.69	7.47	0.21	3.22					19.30
Twine	bun											0.0400	39.00	1.56		1.56
Hay Carrier	1B Lift	2WD 50	0.300	1.00	Jun	1.27	1.32	0.04	0.11	0.30	4.57					7.31
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50		7.50
Fert 33-0-0-12S	cwt											1.5000	16.50	24.75		24.75
Hay Disc Mower	8'	2WD 75	0.257	1.00	Jul	1.66	1.89	1.82	2.15	0.25	3.92					11.44
Hay Rake	8.5'	2WD 50	0.202	2.00	Jul	1.71	1.78	1.26	1.85	0.40	6.16					12.76
Hay Baler	Lg Round	2WD 75	0.211	1.00	Jul	1.37	1.55	5.69	7.47	0.21	3.22					19.30
Twine	bun											0.0400	39.00	1.56		1.56
Hay Carrier	1B Lift	2WD 75	0.300	1.00	Jul	1.94	2.19	0.04	0.11	0.30	4.57					8.85
Custom Spread(Truck)	appl			1.00	Jul							1.0000	7.50	7.50		7.50
Fert 33-0-0-12S	cwt											1.7500	16.50	28.88		28.88
Hay Disc Mower	8'	2WD 75	0.257	1.00	Oct	1.66	1.89	1.82	2.15	0.25	3.92					11.44
Hay Rake	8.5'	2WD 50	0.202	2.00	Oct	1.71	1.78	1.26	1.85	0.40	6.16					12.76
Hay Baler	Lg Round	2WD 75	0.211	1.00	Oct	1.37	1.55	5.69	7.47	0.21	3.22					19.30
Twine	bun											0.0200	39.00	0.78		0.78
Hay Carrier	1B Lift	2WD 75	0.300	1.00	Oct	1.94	2.19	0.04	0.11	0.30	4.57					8.85
Soil Testing 8.00	acre			0.33	Oct							0.3300	8.00	2.64		2.64
Lime (Spread) 43.00	ton			1.00	Oct							0.3300	43.00	14.19		14.19
Prorated Est Cost	acre				Oct							1.0000				21.14
TOTALS						19.77	21.82	26.65	35.02	3.61	54.84			175.42		354.66
INTEREST ON OPERATING CAPITAL																10.48
UNALLOCATED LABOR																0.00
TOTAL SPECIFIED COST																365.14

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**

Table 11.B Estimated costs per acre  
Mixed grass hay maintenance  
Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Fert 33-0-0-12S	cwt	16.50	4.5000	74.25	_____
Phosphate (46% P2O5)	cwt	17.30	1.0000	17.30	_____
Potash (60% K2O)	cwt	22.11	1.5000	33.17	_____
HERBICIDE					
Grazon P+D	pt	3.73	2.0000	7.46	_____
OTHER					
Twine	bun	39.00	0.1000	3.90	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	3.0000	22.50	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	3.5839	54.56	_____
HAND LABOR					
Implements	hour	9.06	0.0313	0.28	_____
DIESEL FUEL					
Tractors	gal	1.38	11.8883	16.42	_____
REPAIR & MAINTENANCE					
Implements	acre	26.65	1.0000	26.65	_____
Tractors	acre	3.35	1.0000	3.35	_____
INTEREST ON OP. CAP.	acre	10.48	1.0000	10.48	_____
TOTAL DIRECT EXPENSES				287.16	_____
FIXED EXPENSES					
Implements	acre	35.02	1.0000	35.02	_____
Tractors	acre	21.82	1.0000	21.82	_____
Prorated Est Cost	acre	21.14	1.0000	21.14	_____
TOTAL FIXED EXPENSES				77.98	_____
TOTAL SPECIFIED EXPENSES				365.14	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Table 12.A Estimated resource use and costs for field operations, per acre  
Hybrid Bermudagrass establishment, 1 cutting of hay  
Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF TIMES			POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
			RATE	OVER	MTH	DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Chisel Plow Rigid	15'	2WD 75	0.123	1.00	Mar	0.80	0.90	0.65	1.25	0.12	1.88				5.48
Soil Testing	8.00 acre			0.33	Apr							0.3300	8.00	2.64	2.64
Lime (Spread)	43.00 ton			1.00	Apr							0.3300	43.00	14.19	14.19
Disk Harrow	14'	2WD 75	0.140	2.00	Apr	1.80	2.05	2.02	4.64	0.28	4.27				14.78
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											0.9000	16.50	14.85	14.85
Phosphate (46% P205)	cwt											1.5000	17.30	25.95	25.95
Potash (60% K20)	cwt											1.0000	22.11	22.11	22.11
Custom Sprig	acre			1.00	May							1.0000	100.00	100.00	100.00
Cultipacker	12'	2WD 75	0.124	1.00	May	0.80	0.91	0.14	0.20	0.12	1.89				3.94
Spray (Broadcast)	27'	2WD 75	0.062	1.00	May	0.40	0.46	0.22	0.28	0.09	1.23				2.59
Diuron 4L	pt											3.0000	3.53	10.59	10.59
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											2.1000	16.50	34.65	34.65
Hay Disc Mower	8'	2WD 75	0.257	1.00	Aug	1.66	1.89	1.82	2.15	0.25	3.92				11.44
Hay Tedder	17'	2WD 75	0.101	1.00	Aug	6.03	0.74	0.41	0.60	0.10	1.54				9.32
Hay Rake-Double	17'	2WD 75	0.101	1.00	Aug	0.65	0.74	0.36	0.54	0.10	1.54				3.83
Hay Baler	Lg Round	2WD 75	0.211	1.00	Aug	1.37	1.55	5.69	7.47	0.21	3.22				19.30
Twine	bun											0.0300	39.00	1.17	1.17
TOTALS						13.51	9.24	11.31	17.13	1.29	19.49			241.15	311.83
INTEREST ON OPERATING CAPITAL															12.35
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															324.18

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

**Fertilization decisions should be based on soil test recommendations.**



Table 12.B Estimated costs per acre  
 Hybrid Bermudagrass establishment, 1 cutting of hay  
 Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Fert 33-0-0-12S	cwt	16.50	3.0000	49.50	_____
Phosphate (46% P2O5)	cwt	17.30	1.5000	25.95	_____
Potash (60% K2O)	cwt	22.11	1.0000	22.11	_____
HERBICIDE					
Diuron 4L	pt	3.53	3.0000	10.59	_____
OTHER					
Twine	bun	39.00	0.0300	1.17	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	2.0000	15.00	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM PLANT					
Custom Sprig	acre	100.00	1.0000	100.00	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	1.2625	19.21	_____
HAND LABOR					
Implements	hour	9.06	0.0313	0.28	_____
DIESEL FUEL					
Tractors	gal	1.38	8.7767	12.10	_____
REPAIR & MAINTENANCE					
Implements	acre	11.31	1.0000	11.31	_____
Tractors	acre	1.41	1.0000	1.41	_____
INTEREST ON OP. CAP.	acre	12.35	1.0000	12.35	_____
TOTAL DIRECT EXPENSES				297.81	_____
FIXED EXPENSES					
Implements	acre	17.13	1.0000	17.13	_____
Tractors	acre	9.24	1.0000	9.24	_____
TOTAL FIXED EXPENSES				26.37	_____
TOTAL SPECIFIED EXPENSES				324.18	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Table 13.A Estimated resource use and costs for field operations, per acre  
 Hybrid Bermudagrass hay maintenance  
 Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Mar	0.40	0.46	0.22	0.28	0.09	1.23				2.59
Grazon P+D	pt											2.0000	3.73	7.46	7.46
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											1.5000	16.50	24.75	24.75
Phosphate (46% P2O5)	cwt											1.5000	17.30	25.95	25.95
Potash (60% K2O)	cwt											2.0000	22.11	44.22	44.22
Hay Disc Mower	8'	2WD 75	0.257	1.00	Jun	1.66	1.89	1.82	2.15	0.25	3.92				11.44
Hay Tedder	17'	2WD 75	0.101	1.00	Jun	6.03	0.74	0.41	0.60	0.10	1.54				9.32
Hay Rake-Double	17'	2WD 75	0.101	2.00	Jun	1.31	1.48	0.73	1.08	0.20	3.08				7.68
Hay Baler	Lg Round	2WD 75	0.211	1.00	Jun	1.37	1.55	5.69	7.47	0.21	3.22				19.30
Twine	bun											0.0600	39.00	2.34	2.34
Hay Carrier	1B Lift	2WD 75	0.300	1.00	Jun	1.94	2.19	0.04	0.11	0.30	4.57				8.85
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											1.5000	16.50	24.75	24.75
Hay Disc Mower	8'	2WD 75	0.257	1.00	Jul	1.66	1.89	1.82	2.15	0.25	3.92				11.44
Hay Tedder	17'	2WD 75	0.101	1.00	Jul	6.03	0.74	0.41	0.60	0.10	1.54				9.32
Hay Rake-Double	17'	2WD 75	0.101	2.00	Jul	1.31	1.48	0.73	1.08	0.20	3.08				7.68
Hay Baler	Lg Round	2WD 75	0.211	1.00	Jul	1.37	1.55	5.69	7.47	0.21	3.22				19.30
Twine	bun											0.0600	39.00	2.34	2.34
Hay Carrier	1B Lift	2WD 75	0.300	1.00	Jul	1.94	2.19	0.04	0.11	0.30	4.57				8.85
Custom Spread(Truck)	appl			1.00	Jul							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											1.5000	16.50	24.75	24.75
Soil Testing 8.00	acre			1.00	Aug							0.3300	8.00	2.64	2.64
Lime (Spread) 43.00	ton			1.00	Aug							0.5000	43.00	21.50	21.50
Hay Disc Mower	8'	2WD 75	0.257	1.00	Aug	1.66	1.89	1.82	2.15	0.25	3.92				11.44
Hay Tedder	17'	2WD 75	0.101	1.00	Aug	6.03	0.74	0.41	0.60	0.10	1.54				9.32
Hay Rake-Double	17'	2WD 75	0.101	2.00	Aug	1.31	1.48	0.73	1.08	0.20	3.08				7.68
Hay Baler	Lg Round	2WD 75	0.211	1.00	Aug	1.37	1.55	5.69	7.47	0.21	3.22				19.30
Twine	bun											0.0300	39.00	1.17	1.17
Hay Carrier	1B Lift	2WD 75	0.300	1.00	Aug	1.94	2.19	0.04	0.11	0.30	4.57				8.85
Custom Spread(Truck)	appl			1.00	Aug							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											1.5000	16.50	24.75	24.75
Potash (60% K2O)	cwt											1.0000	22.11	22.11	22.11
Hay Disc Mower	8'	2WD 75	0.257	1.00	Sep	1.66	1.89	1.82	2.15	0.25	3.92				11.44
Hay Tedder	17'	2WD 75	0.101	1.00	Sep	6.03	0.74	0.41	0.60	0.10	1.54				9.32
Hay Rake-Double	17'	2WD 75	0.101	2.00	Sep	1.31	1.48	0.73	1.08	0.20	3.08				7.68
Hay Baler	Lg Round	2WD 75	0.211	1.00	Sep	1.37	1.55	5.69	7.47	0.21	3.22				19.30
Twine	bun											0.0300	39.00	1.17	1.17
Hay Carrier	1B Lift	2WD 75	0.300	1.00	Sep	1.94	2.19	0.04	0.11	0.30	4.57				8.85
Prorated Est Cost	acre				Sep							1.0000			28.84
TOTALS						49.64	31.86	34.98	45.92	4.38	66.55			259.90	517.69
INTEREST ON OPERATING CAPITAL															15.35
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															533.04

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**

Table 13.B Estimated costs per acre  
 Hybrid Bermudagrass hay maintenance  
 Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Fert 33-0-0-12S	cwt	16.50	6.0000	99.00	_____
Phosphate (46% P2O5)	cwt	17.30	1.5000	25.95	_____
Potash (60% K2O)	cwt	22.11	3.0000	66.33	_____
HERBICIDE					
Grazon P+D	pt	3.73	2.0000	7.46	_____
OTHER					
Twine	bun	39.00	0.1800	7.02	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	4.0000	30.00	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.5000	21.50	_____
OPERATOR LABOR					
Tractors	hour	15.22	4.3532	66.27	_____
HAND LABOR					
Implements	hour	9.06	0.0313	0.28	_____
DIESEL FUEL					
Tractors	gal	1.38	32.4168	44.73	_____
REPAIR & MAINTENANCE					
Implements	acre	34.98	1.0000	34.98	_____
Tractors	acre	4.91	1.0000	4.91	_____
INTEREST ON OP. CAP.	acre	15.35	1.0000	15.35	_____
TOTAL DIRECT EXPENSES				426.42	_____
FIXED EXPENSES					
Implements	acre	45.92	1.0000	45.92	_____
Tractors	acre	31.86	1.0000	31.86	_____
Prorated Est Cost	acre	28.84	1.0000	28.84	_____
TOTAL FIXED EXPENSES				106.62	_____
TOTAL SPECIFIED EXPENSES				533.04	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Table 14.A Estimated resource use and costs for field operations, per acre  
Tall Fescue-White Clover pasture establishment,  
prepared seedbed, Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC HOURS	LABOR COST	OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED			AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Soil Testing	8.00 acre			0.33	Aug							0.3300	8.00	2.64	2.64
Lime (Spread)	43.00 ton			1.00	Aug							0.3300	43.00	14.19	14.19
Chisel Plow Rigid	15'	2WD 75	0.123	1.00	Aug	0.80	0.90	0.65	1.25	0.12	1.88				5.48
Custom Spread(Truck)	appl			1.00	Sep							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	17.30	25.95	25.95
Potash (60% K2O)	cwt											1.0000	22.11	22.11	22.11
Disk Harrow	14'	2WD 75	0.140	2.00	Sep	1.80	2.05	2.02	4.64	0.28	4.27				14.78
Section Harrow	13'	2WD 75	0.119	1.00	Sep	0.77	0.87	0.12	0.20	0.11	1.82				3.78
Grain Drill	12'	2WD 75	0.157	1.00	Sep	1.02	1.15	1.62	3.39	0.31	3.81				10.99
Fescue Seed	lb											20.0000	1.75	35.00	35.00
Cultipacker	12'	2WD 75	0.124	1.00	Sep	0.80	0.91	0.14	0.20	0.12	1.89				3.94
Tailgate Seeder		2WD 50	0.200	1.00	Sep	0.85	0.88	0.31	0.37	0.20	3.04				5.45
White Clover Seed	lb											3.0000	5.14	15.42	15.42
Custom Spread(Truck)	appl			1.00	Oct							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											1.0000	16.50	16.50	16.50
TOTALS						6.04	6.76	4.86	10.05	1.16	16.71			146.81	191.23
INTEREST ON OPERATING CAPITAL															8.36
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															199.59

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**

Table 14.B Estimated costs per acre  
Tall Fescue-White Clover pasture establishment,  
prepared seedbed, Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	17.30	1.5000	25.95	_____
Potash (60% K2O)	cwt	22.11	1.0000	22.11	_____
Fert 33-0-0-12S	cwt	16.50	1.0000	16.50	_____
SEED/PLANTS					
Fescue Seed	lb	1.75	20.0000	35.00	_____
White Clover Seed	lb	5.14	3.0000	15.42	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	2.0000	15.00	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	1.0049	15.29	_____
HAND LABOR					
Implements	hour	9.06	0.1571	1.42	_____
DIESEL FUEL					
Tractors	gal	1.38	3.6219	5.00	_____
REPAIR & MAINTENANCE					
Implements	acre	4.86	1.0000	4.86	_____
Tractors	acre	1.04	1.0000	1.04	_____
INTEREST ON OP. CAP.	acre	8.36	1.0000	8.36	_____
TOTAL DIRECT EXPENSES				182.78	_____
FIXED EXPENSES					
Implements	acre	10.05	1.0000	10.05	_____
Tractors	acre	6.76	1.0000	6.76	_____
TOTAL FIXED EXPENSES				16.81	_____
TOTAL SPECIFIED EXPENSES				199.59	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Table 15.A Estimated resource use and costs for field operations, per acre  
Tall Fescue-White Clover pasture establishment,  
novel/endophyte free, sod-seeding, Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF TIMES			POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
			RATE	OVER	MTH	DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Soil Testing	8.00	acre		0.33	Aug							0.3300	8.00	2.64	2.64
Lime (Spread)	43.00	ton		1.00	Aug							0.3300	43.00	14.19	14.19
Spray (Broadcast)	27'		2WD 75	0.062	Sep	0.40	0.46	0.22	0.28	0.09	1.23				2.59
Glyphosate	3lbs a.e.	pt										2.5000	2.16	5.40	5.40
Custom Spread(Truck)	appl			1.00	Sep							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S		cwt										1.0000	16.50	16.50	16.50
Phosphate (46% P205)		cwt										1.5000	17.30	25.95	25.95
Potash (60% K20)		cwt										1.0000	22.11	22.11	22.11
Grain Drill	12'		2WD 75	0.157	Sep	1.02	1.15	1.62	3.39	0.31	3.81				10.99
Fescue Seed		lb										20.0000	1.75	35.00	35.00
Grain Drill	12'		2WD 75	0.157	Sep	1.02	1.15	1.62	3.39	0.31	3.81				10.99
White Clover Seed		lb										3.0000	5.14	15.42	15.42
TOTALS						2.44	2.76	3.46	7.06	0.72	8.85			144.71	169.28
INTEREST ON OPERATING CAPITAL															7.73
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															177.01

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

**Fertilization decisions should be based on soil test recommendations.**

Table 15.B Estimated costs per acre  
Tall Fescue-White Clover pasture establishment,  
novel/endophyte free, sod-seeding, Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Fert 33-0-0-12S	cwt	16.50	1.0000	16.50	_____
Phosphate (46% P2O5)	cwt	17.30	1.5000	25.95	_____
Potash (60% K2O)	cwt	22.11	1.0000	22.11	_____
HERBICIDE					
Glyphosate 3lbs a.e.	pt	2.16	2.5000	5.40	_____
SEED/PLANTS					
Fescue Seed	lb	1.75	20.0000	35.00	_____
White Clover Seed	lb	5.14	3.0000	15.42	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	1.0000	7.50	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.3769	5.73	_____
HAND LABOR					
Implements	hour	9.06	0.3456	3.12	_____
DIESEL FUEL					
Tractors	gal	1.38	1.4552	2.01	_____
REPAIR & MAINTENANCE					
Implements	acre	3.46	1.0000	3.46	_____
Tractors	acre	0.43	1.0000	0.43	_____
INTEREST ON OP. CAP.	acre	7.73	1.0000	7.73	_____
TOTAL DIRECT EXPENSES				167.19	_____
FIXED EXPENSES					
Implements	acre	7.06	1.0000	7.06	_____
Tractors	acre	2.76	1.0000	2.76	_____
TOTAL FIXED EXPENSES				9.82	_____
TOTAL SPECIFIED EXPENSES				177.01	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Table 16.A Estimated resource use and costs for field operations, per acre  
Tall Fescue-White Clover pasture maintenance  
novel/endophyte free, Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF TIMES			POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
			RATE	OVER	MTH	DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Rotary Mower	12'	2WD 75	0.098	1.00	Aug	0.63	0.72	0.96	0.74	0.09	1.49				4.54
Soil Testing	8.00 acre			0.33	Aug							0.3300	8.00	2.64	2.64
Lime (Spread)	43.00 ton			1.00	Aug							0.3300	43.00	14.19	14.19
Tailgate Seeder		2WD 50	0.200	1.00	Oct	0.85	0.88	0.31	0.37	0.20	3.04				5.45
White Clover Seed	1b											2.0000	5.14	10.28	10.28
Custom Spread(Truck)	appl			1.00	Oct							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	17.30	25.95	25.95
Potash (60% K2O)	cwt											1.0000	22.11	22.11	22.11
Fert 33-0-0-12S	cwt											0.7500	16.50	12.38	12.38
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Mar	0.40	0.46	0.22	0.28	0.09	1.23				2.59
2,4-D amine	pt											1.5000	2.73	4.10	4.10
Prorated Est Cost	acre				Oct							1.0000			15.75
TOTALS						1.88	2.06	1.49	1.39	0.39	5.76			99.15	127.48
INTEREST ON OPERATING CAPITAL															4.78
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															132.26

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

**Fertilization decisions should be based on soil test recommendations.**



Table 16.B Estimated costs per acre  
Tall Fescue-White Clover pasture maintenance  
novel/endophyte free, Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	17.30	1.5000	25.95	_____
Potash (60% K2O)	cwt	22.11	1.0000	22.11	_____
Fert 33-0-0-12S	cwt	16.50	0.7500	12.38	_____
HERBICIDE					
2,4-D amine	pt	2.73	1.5000	4.10	_____
SEED/PLANTS					
White Clover Seed	lb	5.14	2.0000	10.28	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	1.0000	7.50	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.3608	5.48	_____
HAND LABOR					
Implements	hour	9.06	0.0313	0.28	_____
DIESEL FUEL					
Tractors	gal	1.38	1.1358	1.56	_____
REPAIR & MAINTENANCE					
Implements	acre	1.49	1.0000	1.49	_____
Tractors	acre	0.32	1.0000	0.32	_____
INTEREST ON OP. CAP.	acre	4.78	1.0000	4.78	_____
TOTAL DIRECT EXPENSES				113.06	_____
FIXED EXPENSES					
Implements	acre	1.39	1.0000	1.39	_____
Tractors	acre	2.06	1.0000	2.06	_____
Prorated Est Cost	acre	15.75	1.0000	15.75	_____
TOTAL FIXED EXPENSES				19.20	_____
TOTAL SPECIFIED EXPENSES				132.26	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Table 17.A Estimated resource use and costs for field operations, per acre  
 No-till renovation of old Tall Fescue pasture with  
 novel endophyte/endophyte free tall fescue, Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Soil Testing	8.00 acre			0.33	Mar							0.3300	8.00	2.64	2.64
Lime (Spread)	43.00 ton			1.00	Mar							0.3300	43.00	14.19	14.19
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Apr	0.40	0.46	0.22	0.28	0.09	1.23				2.59
Glyphosate	3lbs a.e. pt											2.5000	2.16	5.40	5.40
Surfactant	pt											0.4000	5.31	2.12	2.12
NT Grain Drill	12'	2WD 75	0.196	1.00	May	1.27	1.44	3.40	7.10	0.39	4.77				17.98
SS, PM, Seed	lb											25.0000	0.99	24.75	24.75
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Sep	0.40	0.46	0.22	0.28	0.09	1.23				2.59
Glyphosate	3lbs a.e. pt											2.5000	2.16	5.40	5.40
NT Grain Drill	12'	2WD 75	0.196	1.00	Sep	1.27	1.44	3.40	7.10	0.39	4.77				17.98
White Clover Seed	lb											3.0000	5.14	15.42	15.42
NT Grain Drill	12'	2WD 75	0.196	1.00	Sep	1.27	1.44	3.40	7.10	0.39	4.77				17.98
Fescue Seed	lb											20.0000	1.75	35.00	35.00
Custom Spread(Truck)	appl			1.00	Oct							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											1.0000	16.50	16.50	16.50
Phosphate (46% P2O5)	cwt											1.5000	17.30	25.95	25.95
Potash (60% K2O)	cwt											1.0000	22.11	22.11	22.11
TOTALS						4.61	5.24	10.64	21.86	1.36	16.77			176.98	236.10
INTEREST ON OPERATING CAPITAL															6.40
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															242.50

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**  
 Research suggests tall fescue renovation to novel endophyte fescue will  
 require 2 years glyphosate applications to completely eliminate existing stand.  
 SS = Sorghum x Sudan Hybrid, PM = Pearl Millet.

Table 17.B Estimated costs per acre  
 No-till renovation of old Tall Fescue pasture with  
 novel endophyte/endophyte free tall fescue, Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Fert 33-0-0-12S	cwt	16.50	1.0000	16.50	_____
Phosphate (46% P2O5)	cwt	17.30	1.5000	25.95	_____
Potash (60% K2O)	cwt	22.11	1.0000	22.11	_____
HERBICIDE					
Glyphosate 3lbs a.e.	pt	2.16	5.0000	10.80	_____
SEED/PLANTS					
SS, PM, Seed	lb	0.99	25.0000	24.75	_____
White Clover Seed	lb	5.14	3.0000	15.42	_____
Fescue Seed	lb	1.75	20.0000	35.00	_____
ADJUVANTS					
Surfactant	pt	5.31	0.4000	2.12	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	1.0000	7.50	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.7146	10.87	_____
HAND LABOR					
Implements	hour	9.06	0.6519	5.90	_____
DIESEL FUEL					
Tractors	gal	1.38	2.7588	3.81	_____
REPAIR & MAINTENANCE					
Implements	acre	10.64	1.0000	10.64	_____
Tractors	acre	0.80	1.0000	0.80	_____
INTEREST ON OP. CAP.	acre	6.40	1.0000	6.40	_____
TOTAL DIRECT EXPENSES				215.40	_____
FIXED EXPENSES					
Implements	acre	21.86	1.0000	21.86	_____
Tractors	acre	5.24	1.0000	5.24	_____
TOTAL FIXED EXPENSES				27.10	_____
TOTAL SPECIFIED EXPENSES				242.50	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Research suggests tall fescue renovation to novel endophyte fescue will require 2 years glyphosate applications to completely eliminate existing stand.

SS = Sorghum x Sudan Hybrid, PM = Pearl Millet.

Table 18.A Estimated resource use and costs for field operations, per acre  
Ryegrass annual pasture, prepared seedbed  
Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Soil Testing	8.00	acre		0.33	Aug							0.3300	8.00	2.64	2.64
Lime (Spread)	43.00	ton		1.00	Aug							0.3300	43.00	14.19	14.19
Chisel Plow Rigid	15'	2WD 75	0.123	1.00	Aug	0.80	0.90	0.65	1.25	0.12	1.88				5.48
Disk Harrow	14'	2WD 75	0.140	2.00	Aug	1.80	2.05	2.02	4.64	0.28	4.27				14.78
Custom Spread(Truck)	appl			1.00	Sep							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	17.30	25.95	25.95
Potash (60% K2O)	cwt											1.0000	22.11	22.11	22.11
Ryegrass Seed	lb											25.0000	0.67	16.75	16.75
Section Harrow	13'	2WD 75	0.119	1.00	Sep	0.77	0.87	0.12	0.20	0.11	1.82				3.78
Cultipacker	12'	2WD 75	0.124	1.00	Sep	0.80	0.91	0.14	0.20	0.12	1.89				3.94
Custom Spread(Truck)	appl			1.00	Oct							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											1.0000	16.50	16.50	16.50
Custom Spread(Truck)	appl			1.00	Dec							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											2.0000	16.50	33.00	33.00
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Dec	0.40	0.46	0.22	0.28	0.09	1.23				2.59
2,4-D amine	pt											1.0000	2.73	2.73	2.73
Custom Spread(Truck)	appl			1.00	Mar							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											2.0000	16.50	33.00	33.00
TOTALS						4.57	5.19	3.15	6.57	0.74	11.09			196.87	227.44
INTEREST ON OPERATING CAPITAL															8.72
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															236.16

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**

Table 18.B Estimated costs per acre  
 Ryegrass annual pasture, prepared seedbed  
 Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	17.30	1.5000	25.95	_____
Potash (60% K2O)	cwt	22.11	1.0000	22.11	_____
Fert 33-0-0-12S	cwt	16.50	5.0000	82.50	_____
HERBICIDE					
2,4-D amine	pt	2.73	1.0000	2.73	_____
SEED/PLANTS					
Ryegrass Seed	lb	0.67	25.0000	16.75	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	4.0000	30.00	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.7104	10.81	_____
HAND LABOR					
Implements	hour	9.06	0.0313	0.28	_____
DIESEL FUEL					
Tractors	gal	1.38	2.7425	3.78	_____
REPAIR & MAINTENANCE					
Implements	acre	3.15	1.0000	3.15	_____
Tractors	acre	0.79	1.0000	0.79	_____
INTEREST ON OP. CAP.	acre	8.72	1.0000	8.72	_____
TOTAL DIRECT EXPENSES				224.40	_____
FIXED EXPENSES					
Implements	acre	6.57	1.0000	6.57	_____
Tractors	acre	5.19	1.0000	5.19	_____
TOTAL FIXED EXPENSES				11.76	_____
TOTAL SPECIFIED EXPENSES				236.16	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Table 19.A Estimated resource use and costs for field operations, per acre  
 Ryegrass-Small Grains, annual pasture, prepared seedbed  
 Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Soil Testing	8.00	acre		0.33	Aug							0.3300	8.00	2.64	2.64
Lime (Spread)	43.00	ton		1.00	Aug							0.3300	43.00	14.19	14.19
Chisel Plow Rigid	15'		2WD 75	0.123	Aug	0.80	0.90	0.65	1.25	0.12	1.88				5.48
Disk Harrow	14'		2WD 75	0.140	Aug	1.80	2.05	2.02	4.64	0.28	4.27				14.78
Custom Spread(Truck)	appl			1.00	Sep							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											1.0000	16.50	16.50	16.50
Phosphate (46% P2O5)	cwt											1.0000	17.30	17.30	17.30
Potash (60% K2O)	cwt											1.0000	22.11	22.11	22.11
Section Harrow	13'		2WD 75	0.119	Sep	0.77	0.87	0.12	0.20	0.11	1.82				3.78
Grain Drill	12'		2WD 75	0.157	Sep	1.02	1.15	1.62	3.39	0.31	3.81				10.99
Small Grains	lb											90.0000	0.42	37.80	37.80
Ryegrass Seed	lb											25.0000	0.67	16.75	16.75
Custom Spread(Truck)	appl			1.00	Dec							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											2.0000	16.50	33.00	33.00
Spray (Broadcast)	27'		2WD 75	0.062	Dec	0.40	0.46	0.22	0.28	0.09	1.23				2.59
2,4-D amine	pt											1.0000	2.73	2.73	2.73
Custom Spread(Truck)	appl			1.00	Mar							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											2.0000	16.50	33.00	33.00
TOTALS						4.79	5.43	4.63	9.76	0.93	13.01			218.52	256.14
INTEREST ON OPERATING CAPITAL															10.03
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															266.17

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**

Table 19.B Estimated costs per acre  
 Ryegrass-Small Grains, annual pasture, prepared seedbed  
 Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Fert 33-0-0-12S	cwt	16.50	5.0000	82.50	_____
Phosphate (46% P2O5)	cwt	17.30	1.0000	17.30	_____
Potash (60% K2O)	cwt	22.11	1.0000	22.11	_____
HERBICIDE					
2,4-D amine	pt	2.73	1.0000	2.73	_____
SEED/PLANTS					
Small Grains	lb	0.42	90.0000	37.80	_____
Ryegrass Seed	lb	0.67	25.0000	16.75	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	3.0000	22.50	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.7431	11.31	_____
HAND LABOR					
Implements	hour	9.06	0.1884	1.70	_____
DIESEL FUEL					
Tractors	gal	1.38	2.8688	3.96	_____
REPAIR & MAINTENANCE					
Implements	acre	4.63	1.0000	4.63	_____
Tractors	acre	0.83	1.0000	0.83	_____
INTEREST ON OP. CAP.	acre	10.03	1.0000	10.03	_____
TOTAL DIRECT EXPENSES				250.98	_____
FIXED EXPENSES					
Implements	acre	9.76	1.0000	9.76	_____
Tractors	acre	5.43	1.0000	5.43	_____
TOTAL FIXED EXPENSES				15.19	_____
TOTAL SPECIFIED EXPENSES				266.17	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Table 20.A Estimated resource use and costs for field operations, per acre  
 No-till Ryegrass into volunteer summer grasses  
 Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF TIMES			POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
			RATE	OVER	MTH	DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Lime (Spread)	43.00 ton			1.00	Aug							0.3300	43.00	14.19	14.19
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Aug	0.40	0.46	0.22	0.28	0.09	1.23				2.59
Glyphosate	3lbs a.e. pt											2.0000	2.16	4.32	4.32
Custom Spread(Truck)	appl			1.00	Sep							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.0000	17.30	17.30	17.30
Potash (60% K2O)	cwt											1.0000	22.11	22.11	22.11
NT Grain Drill	12'	2WD 75	0.196	1.00	Sep	1.27	1.44	3.40	7.10	0.39	4.77				17.98
Ryegrass Seed	lb											35.0000	0.67	23.45	23.45
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Sep	0.40	0.46	0.22	0.28	0.09	1.23				2.59
Mustang Max	oz											3.0000	0.95	2.85	2.85
Soil Testing	8.00 acre			1.00	Oct							0.3300	8.00	2.64	2.64
Custom Spread(Truck)	appl			1.00	Oct							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											1.0000	16.50	16.50	16.50
Custom Spread(Truck)	appl			1.00	Dec							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											2.0000	16.50	33.00	33.00
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Dec	0.40	0.46	0.22	0.28	0.09	1.23				2.59
Gramoxone SL	oz											16.0000	0.17	2.72	2.72
Custom Spread(Truck)	appl			1.00	Mar							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											2.0000	16.50	33.00	33.00
TOTALS						2.47	2.82	4.06	7.94	0.67	8.46			202.08	227.83
INTEREST ON OPERATING CAPITAL															8.75
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															236.58

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**



Table 20.B Estimated costs per acre  
 No-till Ryegrass into volunteer summer grasses  
 Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	17.30	1.0000	17.30	_____
Potash (60% K2O)	cwt	22.11	1.0000	22.11	_____
Fert 33-0-0-12S	cwt	16.50	5.0000	82.50	_____
HERBICIDE					
Glyphosate 3lbs a.e.	pt	2.16	2.0000	4.32	_____
Gramoxone SL	oz	0.17	16.0000	2.72	_____
INSECTICIDE					
Mustang Max	oz	0.95	3.0000	2.85	_____
SEED/PLANTS					
Ryegrass Seed	lb	0.67	35.0000	23.45	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	4.0000	30.00	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.3844	5.84	_____
HAND LABOR					
Implements	hour	9.06	0.2904	2.62	_____
DIESEL FUEL					
Tractors	gal	1.38	1.4842	2.04	_____
REPAIR & MAINTENANCE					
Implements	acre	4.06	1.0000	4.06	_____
Tractors	acre	0.43	1.0000	0.43	_____
INTEREST ON OP. CAP.	acre	8.75	1.0000	8.75	_____
TOTAL DIRECT EXPENSES				225.82	_____
FIXED EXPENSES					
Implements	acre	7.94	1.0000	7.94	_____
Tractors	acre	2.82	1.0000	2.82	_____
TOTAL FIXED EXPENSES				10.76	_____
TOTAL SPECIFIED EXPENSES				236.58	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Table 21.A Estimated resource use and costs for field operations, per acre  
 Overseeded Annual Ryegrass pasture maintenance,  
 broadcast Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Soil Testing	8.00	acre		0.33	Aug							0.3300	8.00	2.64	2.64
Lime (Spread)	43.00	ton		1.00	Aug							0.3300	43.00	14.19	14.19
Rotary Mower	12'	2WD 75	0.098	1.00	Aug	0.63	0.72	0.96	0.74	0.09	1.49				4.54
Disk Harrow	14'	2WD 75	0.140	1.00	Oct	0.91	1.03	1.01	2.32	0.14	2.14				7.41
Custom Spread + Seed appl				1.00	Oct							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)		cwt										2.0000	17.30	34.60	34.60
Potash (60% K2O)		cwt										1.5000	22.11	33.17	33.17
Ryegrass Seed		lb										30.0000	0.67	20.10	20.10
Section Harrow	13'	2WD 75	0.119	1.00	Oct	0.77	0.87	0.12	0.20	0.11	1.82				3.78
Custom Spread(Truck)	appl			1.00	Dec							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S		cwt										0.9000	16.50	14.85	14.85
Custom Spread(Truck)	appl			1.00	Mar							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S		cwt										1.2000	16.50	19.80	19.80
Rotary Mower	12'	2WD 75	0.098	1.00	Jun	0.63	0.72	0.96	0.74	0.09	1.49				4.54
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Jun	0.40	0.46	0.22	0.28	0.09	1.23				2.59
Weedmaster		pt										2.0000	3.00	6.00	6.00
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S		cwt										2.1000	16.50	34.65	34.65
Prorated Est Cost	acre				Jun							1.0000			21.14
TOTALS						3.34	3.80	3.27	4.28	0.55	8.17			210.00	254.00
INTEREST ON OPERATING CAPITAL															7.35
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															261.35

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**

Table 21.B Estimated costs per acre  
Overseeded Annual Ryegrass pasture maintenance,  
broadcast Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	17.30	2.0000	34.60	_____
Potash (60% K2O)	cwt	22.11	1.5000	33.17	_____
Fert 33-0-0-12S	cwt	16.50	4.2000	69.30	_____
HERBICIDE					
Weedmaster	pt	3.00	2.0000	6.00	_____
SEED/PLANTS					
Ryegrass Seed	lb	0.67	30.0000	20.10	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	3.0000	22.50	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM PLANT					
Custom Spread + Seed	appl	7.50	1.0000	7.50	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.5188	7.89	_____
HAND LABOR					
Implements	hour	9.06	0.0313	0.28	_____
DIESEL FUEL					
Tractors	gal	1.38	2.0030	2.76	_____
REPAIR & MAINTENANCE					
Implements	acre	3.27	1.0000	3.27	_____
Tractors	acre	0.58	1.0000	0.58	_____
INTEREST ON OP. CAP.	acre	7.35	1.0000	7.35	_____
TOTAL DIRECT EXPENSES				232.13	_____
FIXED EXPENSES					
Implements	acre	4.28	1.0000	4.28	_____
Tractors	acre	3.80	1.0000	3.80	_____
Prorated Est Cost	acre	21.14	1.0000	21.14	_____
TOTAL FIXED EXPENSES				29.22	_____
TOTAL SPECIFIED EXPENSES				261.35	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Table 22.A Estimated resource use and costs for field operations, per acre  
Sorghum x Sudan (SS), Pearl Millet (PM),  
Forage Sorghum (FS), annual hay Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Soil Testing	8.00	acre		0.33	Apr							0.3300	8.00	2.64	2.64
Lime (Spread)	43.00	ton		1.00	Apr							0.3300	43.00	14.19	14.19
Chisel Plow Rigid	15'	2WD 75	0.123	1.00	Apr	0.80	0.90	0.65	1.25	0.12	1.88				5.48
Disk Harrow	14'	2WD 75	0.140	2.00	Apr	1.80	2.05	2.02	4.64	0.28	4.27				14.78
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											1.5000	16.50	24.75	24.75
Phosphate (46% P2O5)	cwt											1.0000	17.30	17.30	17.30
Potash (60% K2O)	cwt											1.0000	22.11	22.11	22.11
Grain Drill	12'	2WD 75	0.157	1.00	May	1.02	1.15	1.62	3.39	0.31	3.81				10.99
SS, PM, FS Seed	lb											30.0000	0.99	29.70	29.70
Spray (Broadcast)	27'	2WD 75	0.062	1.00	May	0.40	0.46	0.22	0.28	0.09	1.23				2.59
2,4-D amine	pt											1.5000	2.73	4.10	4.10
Hay Cut-Cond	9'	2WD 75	0.229	1.00	Jun	1.48	1.68	4.03	4.75	0.22	3.49				15.43
Hay Rake	8.5'	2WD 50	0.202	2.00	Jun	1.71	1.78	1.26	1.85	0.40	6.16				12.76
Hay Baler	Lg Round	2WD 75	0.211	1.00	Jun	1.37	1.55	5.69	7.47	0.21	3.22				19.30
Twine	bun											0.0800	39.00	3.12	3.12
Hay Carrier	1B Lift	2WD 75	0.300	1.00	Jun	1.94	2.19	0.04	0.11	0.30	4.57				8.85
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											1.5000	16.50	24.75	24.75
Hay Cut-Cond	9'	2WD 75	0.229	1.00	Jul	1.48	1.68	4.03	4.75	0.22	3.49				15.43
Hay Rake	8.5'	2WD 50	0.202	2.00	Jul	1.71	1.78	1.26	1.85	0.40	6.16				12.76
Hay Baler	Lg Round	2WD 75	0.211	1.00	Jul	1.37	1.55	5.69	7.47	0.21	3.22				19.30
Twine	bun											0.0600	39.00	2.34	2.34
Hay Carrier	1B Lift	2WD 75	0.300	1.00	Jul	1.94	2.19	0.04	0.11	0.30	4.57				8.85
Custom Spread(Truck)	appl			1.00	Aug							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											1.5000	16.50	24.75	24.75
Potash (60% K2O)	cwt											1.0000	22.11	22.11	22.11
Hay Cut-Cond	9'	2WD 75	0.229	1.00	Aug	1.48	1.68	4.03	4.75	0.22	3.49				15.43
Hay Rake	8.5'	2WD 50	0.202	2.00	Aug	1.71	1.78	1.26	1.85	0.40	6.16				12.76
Hay Baler	Lg Round	2WD 75	0.211	1.00	Aug	1.37	1.55	5.69	7.47	0.21	3.22				19.30
Twine	bun											0.0400	39.00	1.56	1.56
Hay Carrier	1B Lift	2WD 75	0.300	1.00	Aug	1.94	2.19	0.04	0.11	0.30	4.57				8.85
Hay Cut-Cond	9'	2WD 75	0.229	1.00	Sep	1.48	1.68	4.03	4.75	0.22	3.49				15.43
Hay Rake	8.5'	2WD 50	0.202	2.00	Sep	1.71	1.78	1.26	1.85	0.40	6.16				12.76
Hay Baler	Lg Round	2WD 75	0.211	1.00	Sep	1.37	1.55	5.69	7.47	0.21	3.22				19.30
Twine	bun											0.0300	39.00	1.17	1.17
Hay Carrier	1B Lift	2WD 75	0.300	1.00	Sep	1.94	2.19	0.04	0.11	0.30	4.57				8.85
TOTALS						30.02	33.36	48.59	66.28	5.39	80.95			217.09	476.29
INTEREST ON OPERATING CAPITAL															16.08
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															492.37

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**  
**2,4-D applied when sorghum/sudan is 4 to 6 inches tall.**

Table 22.B Estimated costs per acre  
Sorghum x Sudan (SS), Pearl Millet (PM),  
Forage Sorghum (FS), annual hay Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Fert 33-0-0-12S	cwt	16.50	4.5000	74.25	_____
Phosphate (46% P2O5)	cwt	17.30	1.0000	17.30	_____
Potash (60% K2O)	cwt	22.11	2.0000	44.22	_____
HERBICIDE					
2,4-D amine	pt	2.73	1.5000	4.10	_____
SEED/PLANTS					
SS, PM, FS Seed	lb	0.99	30.0000	29.70	_____
OTHER					
Twine	bun	39.00	0.2100	8.19	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	3.0000	22.50	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	5.2042	79.25	_____
HAND LABOR					
Implements	hour	9.06	0.1884	1.70	_____
DIESEL FUEL					
Tractors	gal	1.38	18.0087	24.88	_____
REPAIR & MAINTENANCE					
Implements	acre	48.59	1.0000	48.59	_____
Tractors	acre	5.14	1.0000	5.14	_____
INTEREST ON OP. CAP.	acre	16.08	1.0000	16.08	_____
				-----	
TOTAL DIRECT EXPENSES				392.73	_____
FIXED EXPENSES					
Implements	acre	66.28	1.0000	66.28	_____
Tractors	acre	33.36	1.0000	33.36	_____
				-----	
TOTAL FIXED EXPENSES				99.64	_____
				-----	
TOTAL SPECIFIED EXPENSES				492.37	_____

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

**Fertilization decisions should be based on soil test recommendations.**  
**2,4-D applied when sorghum/sudan is 4 to 6 inches tall.**

Table 23.A Estimated resource use and costs for field operations, per acre  
 Sorghum x Sudan SS), Pearl Millet (PM),  
 Forage Sorghum (FS), annual pasture Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT		TOTAL COST	
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE		COST
						-----dollars-----				dollars		-----dollars-----			
Soil Testing 8.00	acre			0.33	Apr							0.3300	8.00	2.64	2.64
Lime (Spread) 43.00	ton			1.00	Apr							0.3300	43.00	14.19	14.19
Chisel Plow Rigid 15'		2WD 75	0.123	1.00	Apr	0.80	0.90	0.65	1.25	0.12	1.88				5.48
Custom Spread(Truck) appl				1.00	May							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											1.0000	16.50	16.50	16.50
Phosphate (46% P205)	cwt											1.0000	17.30	17.30	17.30
Potash (60% K20)	cwt											1.0000	22.11	22.11	22.11
Disk Harrow 14'		2WD 75	0.140	2.00	May	1.80	2.05	2.02	4.64	0.28	4.27				14.78
Spray (Broadcast) 27'		2WD 75	0.062	1.00	May	0.40	0.46	0.22	0.28	0.09	1.23				2.59
2,4-D amine	pt											1.5000	2.73	4.10	4.10
Grain Drill 12'		2WD 75	0.157	1.00	May	1.02	1.15	1.62	3.39	0.31	3.81				10.99
SS, PM, FS Seed	lb											30.0000	0.99	29.70	29.70
Custom Spread(Truck) appl				1.00	Jul							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											1.0000	16.50	16.50	16.50
Custom Spread(Truck) appl				1.00	Aug							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											1.0000	16.50	16.50	16.50
TOTALS						4.02	4.56	4.51	9.56	0.81	11.19			162.04	195.88
INTEREST ON OPERATING CAPITAL															8.30
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															204.18

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**  
**2,4-D applied when sorghum/sudan is 4 to 6 inches tall.**

Table 23.B Estimated costs per acre  
 Sorghum x Sudan SS), Pearl Millet (PM),  
 Forage Sorghum (FS), annual pasture Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Fert 33-0-0-12S	cwt	16.50	3.0000	49.50	_____
Phosphate (46% P2O5)	cwt	17.30	1.0000	17.30	_____
Potash (60% K2O)	cwt	22.11	1.0000	22.11	_____
HERBICIDE					
2,4-D amine	pt	2.73	1.5000	4.10	_____
SEED/PLANTS					
SS, PM, FS Seed	lb	0.99	30.0000	29.70	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	3.0000	22.50	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.6236	9.49	_____
HAND LABOR					
Implements	hour	9.06	0.1884	1.70	_____
DIESEL FUEL					
Tractors	gal	1.38	2.4076	3.32	_____
REPAIR & MAINTENANCE					
Implements	acre	4.51	1.0000	4.51	_____
Tractors	acre	0.70	1.0000	0.70	_____
INTEREST ON OP. CAP.	acre	8.30	1.0000	8.30	_____
TOTAL DIRECT EXPENSES				190.06	_____
FIXED EXPENSES					
Implements	acre	9.56	1.0000	9.56	_____
Tractors	acre	4.56	1.0000	4.56	_____
TOTAL FIXED EXPENSES				14.12	_____
TOTAL SPECIFIED EXPENSES				204.18	_____

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**  
**2,4-D applied when sorghum/sudan is 4 to 6 inches tall.**

Table 24.A Estimated resource use and costs for field operations, per acre  
 Corn silage  
 Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Lime (Spread)	43.00 ton			1.00	Sep							0.5000	43.00	21.50	21.50
Chisel Plow Rigid	15'	2WD 75	0.123	1.00	Sep	0.80	0.90	0.65	1.25	0.12	1.88				5.48
Disk Harrow	14'	2WD 75	0.140	1.00	Mar	0.91	1.03	1.01	2.32	0.14	2.14				7.41
Spin Spreader	5 Ton	2WD 75	0.042	1.00	Mar	0.27	0.31	0.31	0.67	0.08	1.02				2.58
Fert 33-0-0-12S	cwt											1.8000	16.50	29.70	29.70
Phosphate (46% P2O5)	cwt											1.0000	17.30	17.30	17.30
Potash (60% K2O)	cwt											2.0000	22.11	44.22	44.22
Disk Bed (Hipper)	4R-38	2WD 75	0.147	1.00	Mar	0.96	1.08	0.34	0.98	0.14	2.25				5.61
Row Cond Rigid	13'	2WD 75	0.119	1.00	Mar	0.77	0.87	0.85	1.35	0.11	1.82				5.66
Plant & Pre Rigid	4R-38	2WD 75	0.159	1.00	Mar	1.03	1.17	1.92	4.01	0.31	3.88				12.01
Atrazine 4L	pt											2.5000	2.24	5.60	5.60
Dual II Magnum	pt											1.3300	12.63	16.80	16.80
Corn Seed RR2	thous											22.0000	3.50	77.00	77.00
Fert Appl (Liquid)	4R-38	2WD 75	0.154	1.00	Apr	0.99	1.13	1.33	1.63	0.23	3.05				8.13
UAN (32% N)	cwt											4.0000	12.03	48.12	48.12
Spray (Spot)	27'	2WD 75	0.062	1.00	May	0.40	0.46	0.22	0.28	0.09	1.23				2.59
Accent	oz											0.6700	31.94	21.40	21.40
Cultivate	4R-38	2WD 75	0.162	1.00	Jun	1.05	1.19	0.61	1.77	0.16	2.47				7.09
Silage Harvester	2-Row	2WD 75	0.510	1.00	Aug	3.29	3.73	15.24	18.00	0.51	7.77				48.03
Silage Wagon 12T	12-Ton	2WD 75	0.510	1.00	Aug	3.29	3.73	2.14	5.26	0.51	7.77				22.19
TOTALS						13.76	15.60	24.62	37.52	2.44	35.28			281.64	408.42
INTEREST ON OPERATING CAPITAL															8.61
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															417.03

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

**Fertilization decisions should be based on soil test recommendations.**



Table 24.B Estimated costs per acre  
Corn silage  
Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Fert 33-0-0-12S	cwt	16.50	1.8000	29.70	_____
Phosphate (46% P2O5)	cwt	17.30	1.0000	17.30	_____
Potash (60% K2O)	cwt	22.11	2.0000	44.22	_____
UAN (32% N)	cwt	12.03	4.0000	48.12	_____
HERBICIDE					
Atrazine 4L	pt	2.24	2.5000	5.60	_____
Dual II Magnum	pt	12.63	1.3300	16.80	_____
Accent	oz	31.94	0.6700	21.40	_____
SEED/PLANTS					
Corn Seed RR2	thous	3.50	22.0000	77.00	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.5000	21.50	_____
OPERATOR LABOR					
Tractors	hour	15.22	2.1328	32.47	_____
HAND LABOR					
Implements	hour	9.06	0.3106	2.81	_____
DIESEL FUEL					
Tractors	gal	1.38	8.2334	11.37	_____
REPAIR & MAINTENANCE					
Implements	acre	24.62	1.0000	24.62	_____
Tractors	acre	2.39	1.0000	2.39	_____
INTEREST ON OP. CAP.	acre	8.61	1.0000	8.61	_____
				-----	
TOTAL DIRECT EXPENSES				363.91	_____
FIXED EXPENSES					
Implements	acre	37.52	1.0000	37.52	_____
Tractors	acre	15.60	1.0000	15.60	_____
				-----	
TOTAL FIXED EXPENSES				53.12	_____
				-----	
TOTAL SPECIFIED EXPENSES				417.03	_____

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

**Fertilization decisions should be based on soil test recommendations.**

Table 25.A Estimated resource use and costs for field operations, per acre  
Sorghum silage  
Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Lime (Spread)	43.00 ton			1.00	Sep							0.5000	43.00	21.50	21.50
Chisel Plow Rigid	15'	2WD 75	0.123	2.00	Apr	1.59	1.80	1.31	2.50	0.24	3.75				10.95
Spin Spreader	5 Ton	2WD 75	0.042	1.00	May	0.27	0.31	0.31	0.67	0.08	1.02				2.58
Fert 33-0-0-12S	cwt											1.0000	16.50	16.50	16.50
Phosphate (46% P2O5)	cwt											1.5000	17.30	25.95	25.95
Potash (60% K2O)	cwt											2.0000	22.11	44.22	44.22
Field Cultivate	12'	2WD 75	0.124	1.00	May	0.80	0.91	0.38	1.76	0.12	1.89				5.74
Disk Bed (Hipper)	4R-38	2WD 75	0.147	1.00	May	0.96	1.08	0.34	0.98	0.14	2.25				5.61
Row Cond Rigid	13'	2WD 75	0.119	1.00	May	0.77	0.87	0.85	1.35	0.11	1.82				5.66
Plant & Pre Rigid	4R-38	2WD 75	0.159	1.00	May	1.03	1.17	1.92	4.01	0.31	3.88				12.01
Forage Sorghum Seed	lb											20.0000	1.06	21.20	21.20
Bicep 11 Magnum	qt											2.0000	10.24	20.48	20.48
Cultivate	4R-38	2WD 75	0.162	1.00	May	1.05	1.19	0.61	1.77	0.16	2.47				7.09
Spin Spreader	5 Ton	2WD 75	0.042	1.00	May	0.27	0.31	0.31	0.67	0.08	1.02				2.58
Fert 33-0-0-12S	cwt											3.0000	16.50	49.50	49.50
Cultivate	4R-38	2WD 75	0.162	1.00	Jun	1.05	1.19	0.61	1.77	0.16	2.47				7.09
Silage Harvester	2-Row	2WD 75	0.510	1.00	Sep	3.29	3.73	15.24	18.00	0.51	7.77				48.03
Silage Wagon 12T	12-Ton	2WD 75	0.510	1.00	Sep	3.29	3.73	2.14	5.26	0.51	7.77				22.19
TOTALS						14.37	16.29	24.02	38.74	2.47	36.11			199.35	328.88
INTEREST ON OPERATING CAPITAL															6.93
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															335.81

Note: Cost of production estimates are based on 2019 input prices.  
Fertilization decisions should be based on soil test recommendations.

Table 25.B Estimated costs per acre  
Sorghum silage  
Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Fert 33-0-0-12S	cwt	16.50	4.0000	66.00	_____
Phosphate (46% P2O5)	cwt	17.30	1.5000	25.95	_____
Potash (60% K2O)	cwt	22.11	2.0000	44.22	_____
HERBICIDE					
Bicep 11 Magnum	qt	10.24	2.0000	20.48	_____
SEED/PLANTS					
Forage Sorghum Seed	lb	1.06	20.0000	21.20	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.5000	21.50	_____
OPERATOR LABOR					
Tractors	hour	15.22	2.2273	33.90	_____
HAND LABOR					
Implements	hour	9.06	0.2440	2.21	_____
DIESEL FUEL					
Tractors	gal	1.38	8.5983	11.87	_____
REPAIR & MAINTENANCE					
Implements	acre	24.02	1.0000	24.02	_____
Tractors	acre	2.50	1.0000	2.50	_____
INTEREST ON OP. CAP.	acre	6.93	1.0000	6.93	_____
				-----	
TOTAL DIRECT EXPENSES				280.78	_____
FIXED EXPENSES					
Implements	acre	38.74	1.0000	38.74	_____
Tractors	acre	16.29	1.0000	16.29	_____
				-----	
TOTAL FIXED EXPENSES				55.03	_____
				-----	
TOTAL SPECIFIED EXPENSES				335.81	_____

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

**Fertilization decisions should be based on soil test recommendations**

Table 26.A Estimated resource use and costs for field operations, per acre  
 Ryegrass, Small Grains(oat,cereal rye,triticale),Annual  
 Clover, Brassica Mix, annual pasture, prepared seedbed, Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF TIMES			POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
			RATE	OVER	MTH	DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Soil Testing	8.00	acre		0.33	Aug							0.3300	8.00	2.64	2.64
Lime (Spread)	43.00	ton		0.33	Aug							0.3300	43.00	14.19	14.19
Chisel Plow Rigid	15'	2WD 75	0.123	1.00	Aug	0.80	0.90	0.65	1.25	0.12	1.88				5.48
Disk Harrow	14'	2WD 75	0.140	1.00	Aug	0.91	1.03	1.01	2.32	0.14	2.14				7.41
Custom Spread(Truck)	appl			1.00	Sep							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											1.0000	16.50	16.50	16.50
Phosphate (46% P205)	cwt											1.0000	17.30	17.30	17.30
Potash (60% K20)	cwt											1.0000	22.11	22.11	22.11
Section Harrow	13'	2WD 75	0.119	1.00	Sep	0.77	0.87	0.12	0.20	0.11	1.82				3.78
Grain Drill	12'	2WD 75	0.157	1.00	Sep	1.02	1.15	1.62	3.39	0.31	3.81				10.99
Ryegrass Seed	1b											18.0000	0.67	12.06	12.06
Small Grains	1b											60.0000	0.42	25.20	25.20
Brassica Seed	1b											2.0000	3.42	6.84	6.84
Crimson Clover Seed	1b											15.0000	1.06	15.90	15.90
TOTALS						3.50	3.95	3.40	7.16	0.69	9.65			140.24	167.90
INTEREST ON OPERATING CAPITAL															7.63
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															175.53

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**

Table 26.B Estimated costs per acre  
 Ryegrass, Small Grains(oat,cereal rye,triticale),Annual  
 Clover, Brassica Mix, annual pasture, prepared seedbed, Mississippi 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Fert 33-0-0-12S	cwt	16.50	1.0000	16.50	_____
Phosphate (46% P2O5)	cwt	17.30	1.0000	17.30	_____
Potash (60% K2O)	cwt	22.11	1.0000	22.11	_____
SEED/PLANTS					
Ryegrass Seed	lb	0.67	18.0000	12.06	_____
Small Grains	lb	0.42	60.0000	25.20	_____
Brassica Seed	lb	3.42	2.0000	6.84	_____
Crimson Clover Seed	lb	1.06	15.0000	15.90	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	1.0000	7.50	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.5401	8.23	_____
HAND LABOR					
Implements	hour	9.06	0.1571	1.42	_____
DIESEL FUEL					
Tractors	gal	1.38	2.0852	2.89	_____
REPAIR & MAINTENANCE					
Implements	acre	3.40	1.0000	3.40	_____
Tractors	acre	0.61	1.0000	0.61	_____
INTEREST ON OP. CAP.	acre	7.63	1.0000	7.63	_____
				-----	
TOTAL DIRECT EXPENSES				164.42	_____
FIXED EXPENSES					
Implements	acre	7.16	1.0000	7.16	_____
Tractors	acre	3.95	1.0000	3.95	_____
				-----	
TOTAL FIXED EXPENSES				11.11	_____
				-----	
TOTAL SPECIFIED EXPENSES				175.53	_____

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**

Table 27.A Estimated resource use and costs for field operations, per acre  
 Ryegrass-Oat annual pasture, prepared seedbed  
 Mississippi, 2021

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF TIMES			POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
			RATE	OVER	MTH	DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Soil Testing 8.00	acre			1.00	Aug							0.3300	8.00	2.64	2.64
Lime (Spread) 43.00	ton			1.00	Aug							0.3300	43.00	14.19	14.19
Chisel Plow Rigid	15'	2WD 75	0.123	1.00	Aug	0.80	0.90	0.65	1.25	0.12	1.88				5.48
Disk Harrow	14'	2WD 75	0.140	1.00	Aug	0.91	1.03	1.01	2.32	0.14	2.14				7.41
Custom Spread(Truck)	appl			1.00	Sep							1.0000	7.50	7.50	7.50
Fert 33-0-0-12S	cwt											1.0000	16.50	16.50	16.50
Phosphate (46% P2O5)	cwt											1.0000	17.30	17.30	17.30
Potash (60% K2O)	cwt											1.0000	22.11	22.11	22.11
Section Harrow	13'	2WD 75	0.119	1.00	Sep	0.77	0.87	0.12	0.20	0.11	1.82				3.78
Grain Drill	12'	2WD 75	0.157	1.00	Sep	1.02	1.15	1.62	3.39	0.31	3.81				10.99
Ryegrass Seed	1b											20.0000	0.67	13.40	13.40
Small Grains	1b											20.0000	0.42	8.40	8.40
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Mar	0.40	0.46	0.22	0.28	0.09	1.23				2.59
2,4-D amine	pt											1.5000	2.73	4.10	4.10
TOTALS						3.90	4.41	3.62	7.44	0.79	10.88			106.14	136.39
INTEREST ON OPERATING CAPITAL															5.91
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															142.30

Note: Cost of production estimates are based on 2019 input prices.  
**Fertilization decisions should be based on soil test recommendations.**

Table 27.B Estimated costs per acre  
 Ryegrass-Oat annual pasture, prepared seedbed  
 Mississippi, 2021

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Fert 33-0-0-12S	cwt	16.50	1.0000	16.50	_____
Phosphate (46% P2O5)	cwt	17.30	1.0000	17.30	_____
Potash (60% K2O)	cwt	22.11	1.0000	22.11	_____
HERBICIDE					
2,4-D amine	pt	2.73	1.5000	4.10	_____
SEED/PLANTS					
Ryegrass Seed	lb	0.67	20.0000	13.40	_____
Small Grains	lb	0.42	20.0000	8.40	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	1.0000	7.50	_____
SERVICE FEE					
Soil Testing 8.00	acre	8.00	0.3300	2.64	_____
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	0.3300	14.19	_____
OPERATOR LABOR					
Tractors	hour	15.22	0.6028	9.18	_____
HAND LABOR					
Implements	hour	9.06	0.1884	1.70	_____
DIESEL FUEL					
Tractors	gal	1.38	2.3272	3.22	_____
REPAIR & MAINTENANCE					
Implements	acre	3.62	1.0000	3.62	_____
Tractors	acre	0.68	1.0000	0.68	_____
INTEREST ON OP. CAP.	acre	5.91	1.0000	5.91	_____
TOTAL DIRECT EXPENSES				130.45	_____
FIXED EXPENSES					
Implements	acre	7.44	1.0000	7.44	_____
Tractors	acre	4.41	1.0000	4.41	_____
TOTAL FIXED EXPENSES				11.85	_____
TOTAL SPECIFIED EXPENSES				142.30	_____

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

**Fertilization decisions should be based on soil test recommendations.**





## 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-----					
Tractor( 40-59hp)CAB	2WD 50	30,400	600	8	2.57	15.22	3.55	0.95	19.72	6.21	25.93
Tractor( 40-59hp)CAB	MFWD 50	40,300	600	8	2.57	15.22	3.55	1.25	20.03	8.23	28.26
Tractor( 40-59hp)RB	2WD 50	21,600	600	8	2.57	15.22	3.55	0.67	19.44	4.41	23.85
Tractor( 40-59hp)RB	MFWD 50	27,500	600	8	2.57	15.22	3.55	0.85	19.63	5.61	25.24
Tractor( 60-89hp)CAB	2WD 75	50,200	600	8	3.86	15.22	5.32	1.56	22.11	10.25	32.37
Tractor( 60-89hp)CAB	MFWD 75	56,800	600	8	3.86	15.22	5.32	1.77	22.32	11.60	33.92
Tractor( 60-89hp)RB	2WD 75	35,800	600	8	3.86	15.22	5.32	1.11	21.66	7.31	28.98
Tractor( 60-89hp)RB	MFWD 75	42,000	600	8	3.86	15.22	5.32	1.31	21.85	8.58	30.44
Tractor( 90-119hp)CB	2WD 105	69,300	600	8	5.40	15.22	7.45	2.16	24.84	14.15	39.00
Tractor( 90-119hp)CB	MFWD 105	88,100	600	8	5.40	15.22	7.45	2.75	25.43	17.99	43.43
Tractor( 90-119hp)RB	2WD 105	62,300	600	8	5.40	15.22	7.45	1.94	24.62	12.72	37.35
Tractor( 90-119hp)RB	MFWD 105	69,700	600	8	5.40	15.22	7.45	2.17	24.85	14.23	39.09
Tractor(120-139hp)CB	2WD 130	110,000	600	8	6.69	15.22	9.23	3.43	27.89	22.47	50.36
Tractor(120-139hp)CB	MFWD 130	125,000	600	8	6.69	15.22	9.23	3.90	28.36	25.53	53.89
Tractor(140-159hp)CB	2WD 150	108,000	600	8	7.72	15.22	10.65	3.37	29.24	22.06	51.31
Tractor(140-159hp)CB	MFWD 150	140,000	600	8	7.72	15.22	10.65	4.37	30.24	28.60	58.85

## Notes:

Labor: Includes allocated labor from power unit.

Total Direct: Does not include interest on operating capital.

Appendix Table 2. Implements: 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-----							
Chisel Plow Folding	24''	2WD 105	42,200	150	12	0.115	1.75	0.86	1.76	0.22	4.60	3.36	1.47	9.43
Chisel Plow Rigid	15'	2WD 105	14,700	150	12	0.123	1.87	0.91	0.65	0.23	3.68	1.24	1.56	6.50
Cult & Post	4R-38	2WD 105	21,600	150	10	0.173	3.42	1.29	0.99	0.33	6.04	2.86	2.20	11.12
Cult & Post	6R-30	MFWD 150	25,900	150	10	0.146	2.89	1.56	1.01	0.64	6.11	2.91	4.19	13.22
Cult & Post	6R-38	MFWD 150	26,600	150	10	0.115	2.28	1.23	0.82	0.50	4.84	2.36	3.31	10.52
Cult & Post	8R-30	MFWD 150	31,500	150	10	0.110	2.17	1.17	0.92	0.48	4.74	2.65	3.14	10.55
Cultipacker	12'	2WD 105	4,640	300	12	0.124	1.89	0.92	0.13	0.24	3.20	0.20	1.58	4.98
Cultipacker	20'	MFWD 150	15,800	300	12	0.074	1.13	0.79	0.27	0.32	2.53	0.41	2.13	5.09
Cultivate	4R-38	2WD 105	14,200	150	10	0.162	2.47	1.21	0.61	0.31	4.61	1.76	2.06	8.44
Cultivate	6R-30	MFWD 150	18,500	150	10	0.137	2.09	1.46	0.67	0.60	4.83	1.94	3.93	10.72
Cultivate	6R-38	MFWD 150	19,300	150	10	0.108	1.65	1.15	0.55	0.47	3.84	1.60	3.10	8.55
Cultivate	8R-30	MFWD 150	24,200	150	10	0.103	1.56	1.09	0.66	0.45	3.78	1.91	2.94	8.64
Cyclone Spin	750Lb	2WD 105	1,524	50	8	0.200	3.95	1.49	0.22	0.38	6.05	0.89	2.54	9.50
Disk & Incorporate	14'	2WD 130	33,200	200	10	0.147	2.90	1.36	1.46	0.50	6.24	2.81	3.31	12.36
Disk & Incorporate	24'	MFWD 150	51,800	200	10	0.085	1.69	0.91	1.33	0.37	4.32	2.55	2.45	9.34
Disk & Incorporate	32'	MFWD 150	66,900	200	10	0.064	1.27	0.68	1.29	0.28	3.53	2.47	1.84	7.85
Disk Bed (Hipper)	4R-38	MFWD 150	9,200	160	10	0.147	2.24	1.57	0.33	0.64	4.80	0.97	4.22	10.00
Disk Bed (Hipper)	6R-38	MFWD 150	15,200	160	10	0.098	1.50	1.05	0.37	0.43	3.36	1.07	2.82	7.26
Disk Bed (Hipper)	8R-30	MFWD 150	19,500	160	10	0.093	1.42	0.99	0.45	0.41	3.29	1.31	2.68	7.28
Disk Harrow	14'	2WD 130	25,900	180	10	0.140	2.13	1.29	1.00	0.48	4.92	2.32	3.15	10.39
Disk Harrow	24'	MFWD 150	44,400	180	10	0.081	1.24	0.87	1.00	0.35	3.48	2.32	2.34	8.14
Disk Harrow	32'	MFWD 150	59,500	180	10	0.061	0.93	0.65	1.01	0.26	2.87	2.33	1.75	6.95
Fert Appl (Liquid)	4R-38	MFWD 150	12,900	150	8	0.154	3.05	1.64	1.33	0.67	6.70	1.63	4.42	12.76
Fert Appl (Liquid)	6R-30	MFWD 150	18,500	150	8	0.130	2.58	1.39	1.61	0.57	6.16	1.97	3.74	11.89
Fert Appl (Liquid)	6R-38	MFWD 150	18,500	150	8	0.103	2.04	1.10	1.27	0.45	4.87	1.56	2.95	9.39
Fert Appl (Liquid)	8R-30	MFWD 150	18,400	150	8	0.098	1.93	1.04	1.20	0.42	4.62	1.47	2.80	8.90
Field Cult & Inc	12'	2WD 150	19,600	100	10	0.132	2.61	1.40	0.64	0.44	5.11	2.97	2.91	11.01
Field Cult & Inc	24'	MFWD 150	37,900	100	10	0.066	1.30	0.70	0.62	0.28	2.92	2.88	1.89	7.69
Field Cultivate	12'	2WD 150	12,300	100	10	0.124	1.89	1.32	0.38	0.41	4.02	1.75	2.74	8.52
Field Cultivate Fld	24'	MFWD 150	30,600	100	10	0.062	0.94	0.66	0.47	0.27	2.35	2.18	1.77	6.32
Front Loader	.5 yd	2WD 75	5,538	100	10	0.120	1.82	0.63	0.19	0.13	2.79	0.83	0.87	4.51
Grain Drill	12'	2WD 130	27,500	150	8	0.157	3.81	1.45	1.62	0.54	7.42	3.38	3.53	14.34
Hay Baler	Conv	2WD 50	26,361	200	8	0.229	3.48	0.81	3.02	0.15	7.47	4.45	1.01	12.94
Hay Baler	Lg Round	2WD 75	47,829	200	8	0.211	3.21	1.12	5.69	0.23	10.27	7.46	1.54	19.28
Hay Baler	Med Rnd	2WD 75	34,112	200	8	0.211	3.21	1.12	4.05	0.23	8.64	5.32	1.54	15.51
Hay Carrier	1B Lift	2WD 50	594	200	10	0.300	4.56	1.06	0.04	0.20	5.87	0.11	1.32	7.31
Hay Cut-Cond	9'	2WD 105	28,111	200	8	0.229	3.48	1.70	4.02	0.44	9.66	4.75	2.91	17.34
Hay Cut-Cond	12'	2WD 105	35,808	200	8	0.171	2.61	1.28	3.84	0.33	8.07	4.54	2.18	14.80
Hay Disc Mower	8'	2WD 75	11,300	200	8	0.257	3.92	1.37	1.82	0.28	7.40	2.15	1.88	11.44
Hay Disc Mower	10'	2WD 75	12,713	200	8	0.206	3.13	1.09	1.63	0.32	6.20	1.93	2.11	10.25
Hay Rake	8.5'	2WD 75	6,208	200	8	0.202	3.07	1.07	0.62	0.31	5.09	0.92	2.07	8.10
Hay Rake-Double	17'	2WD 75	7,215	200	8	0.101	1.53	0.53	0.36	0.11	2.55	0.53	0.73	3.83
Hay Tedder	17'	2WD 105	8,052	200	8	0.101	1.53	0.75	0.40	0.19	2.89	0.60	1.28	4.78
Hay Trailer	20'	2WD 75	4,638	200	15	0.090	1.36	0.47	0.11	0.10	2.06	0.20	0.65	2.92
NT Grain Drill	12'	2WD 130	46,100	150	8	0.196	4.76	1.81	3.39	0.67	10.65	7.09	4.41	22.16
NT Plant & Pre Rigid	4R-38	2WD 130	35,600	150	8	0.166	4.04	1.53	2.22	0.57	8.37	4.64	3.74	16.77
NT Plant & Pre Rigid	6R-30	MFWD 150	43,700	150	8	0.141	3.42	1.50	2.31	0.61	7.85	4.83	4.03	16.71
NT Plant & Pre Rigid	6R-38	MFWD 150	42,900	150	8	0.111	2.70	1.18	1.79	0.48	6.16	3.74	3.18	13.09
NT Plant Rigid	4R-38	2WD 130	28,200	150	8	0.148	3.60	1.37	1.57	0.51	7.05	3.28	3.33	13.67
NT Plant Rigid	6R-30	MFWD 150	36,300	150	8	0.125	3.05	1.33	1.71	0.54	6.65	3.57	3.59	13.82
NT Plant Rigid	6R-38	MFWD 150	35,600	150	8	0.099	2.40	1.05	1.32	0.43	5.22	2.76	2.83	10.83
Plant & Pre Rigid	4R-38	2WD 130	32,000	150	8	0.159	3.88	1.47	1.91	0.54	7.82	4.01	3.59	15.43
Plant & Pre Rigid	6R-30	MFWD 150	38,300	150	8	0.135	3.28	1.44	1.94	0.59	7.26	4.06	3.87	15.20
Plant & Pre Rigid	6R-38	MFWD 150	37,600	150	8	0.106	2.59	1.13	1.50	0.46	5.70	3.14	3.05	11.91
Plant Rigid	4R-38	2WD 130	24,700	150	8	0.148	3.60	1.37	1.37	0.51	6.86	2.87	3.33	13.07
Plant Rigid	6R-30	MFWD 150	30,900	150	8	0.125	3.05	1.33	1.45	0.54	6.39	3.04	3.59	13.03
Plant Rigid	6R-38	MFWD 150	30,200	150	8	0.099	2.40	1.05	1.12	0.43	5.02	2.34	2.83	10.21
Rotary Mower	7'	MFWD 130	5,280	185	10	0.168	2.56	1.55	0.72	0.65	5.49	0.55	4.29	10.34
Rotary Mower	12'	2WD 150	12,100	185	10	0.098	1.49	1.04	0.96	0.33	3.83	0.73	2.16	6.74
Rotary Mower	15'	MFWD 150	22,100	185	10	0.078	1.19	0.83	1.40	0.34	3.78	1.07	2.24	7.11
Row Cond & Inc	21'	2WD 150	20,800	100	10	0.078	1.55	0.83	0.40	0.26	3.06	1.87	1.73	6.67
Row Cond & Inc Rigid	13'	2WD 130	16,900	100	10	0.126	2.50	1.17	0.53	0.43	4.65	2.46	2.85	9.96
Row Cond Rigid	13'	2WD 130	9,540	100	10	0.119	1.81	1.10	0.85	0.41	4.18	1.35	2.68	8.22
Row Cond Rigid	21'	2WD 150	13,400	100	10	0.073	1.12	0.78	0.24	0.24	2.41	1.13	1.63	5.18
Section Harrow	13'	2WD 105	2,845	200	10	0.119	1.81	0.89	0.11	0.23	3.06	0.19	1.52	4.77
Silage Harvester	2-Row	2WD 105	47,793	200	8	0.510	7.76	3.80	15.23	0.99	27.80	17.99	6.49	52.29
Silage Harvester 3-R	3-Row	2WD 105	53,015	200	8	0.336	5.12	2.51	11.15	0.72	19.52	13.17	4.76	37.46
Silage Wagon	10-Ton	2WD 75	11,838	200	15	0.510	7.76	2.71	1.20	0.57	12.26	2.96	3.73	18.96
Silage Wagon 12T	12-Ton	2WD 105	20,985	200	15	0.510	7.76	3.80	2.14	1.10	14.81	5.26	7.22	27.30
Spin Spreader	5 Ton	MFWD 150	12,900	100	8	0.042	1.02	0.44	0.30	0.18	1.95	0.66	1.20	3.82
Spray (Broadcast)	27'	MFWD 150	7,400	200	8	0.062	1.23	0.66	0.21	0.27	2.39	0.28	1.79	4.47
Spray (Spot)	27'	MFWD 150	7,400	200	8	0.062	1.23	0.66	0.21	0.27	2.39	0.28	1.79	4.47
Subsoiler	3 Shank	MFWD 150	5,920	100	15	0.204	3.10	2.17	0.40	0.89	6.58	1.11	5.84	13.54
Tailgate Seeder	2WD 50		1,238	100	8	0.200	3.04	0.71	0.30	0.13	4.19	0.36	0.88	5.44

## Notes:

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

Total Direct: Does not include interest on operating capital.

Appendix Table 3. Operating inputs: estimated prices, Mississippi, 2021

ITEM NAME	UNIT	PRICE	ITEM NAME	UNIT	PRICE
		dollars			dollars
ADJUVANTS					
Crop Oil (pet.)	pt	3.00	Diuron 4L	pt	3.53
Crop Oil (veg)	pt	3.22	Dual II Magnum	pt	12.63
Surfactant	pt	5.31	Glyphosate 3lbs a.e.	pt	2.16
CUSTOM FERT					
App Fert by Air	cwt	7.50	Gramoxone SL	oz	0.17
App Fert by Air(Min)	appl	7.50	Grazon P+D	pt	3.73
Custom Spread(Truck)	appl	7.50	GrazonNext	pt	6.24
CUSTOM LIME					
Lime (Spread) 43.00	ton	43.00	Metribuzin 75	lb.	18.75
CUSTOM PLANT					
Custom Spread + Seed	appl	7.50	Poast	pt	14.12
Custom Sprig	acre	100.00	Poast Plus	pt	9.49
Plant by Air	cwt	7.50	Pursuit	oz	3.13
CUSTOM SPRAY					
App by Air ( 10 gal)	appl	9.00	Remedy Ultra	pt	9.75
App by Air (3 gal)	appl	5.50	Roundup Power Max	oz	0.20
App by Air (5 gal)	appl	7.00	Roundup Power Max	pt	3.25
FERTILIZER					
Boron Plus	gal	20.50	Weedmaster	pt	3.00
Fert 10-34-0	cwt	24.08	INSECTICIDE		
Fert 13-13-13	cwt	24.74	Baythroid XL	oz	1.06
Fert 33-0-0-12S	cwt	16.50	Lannate LV	pt	9.85
Phosphate (46% P2O5)	cwt	17.30	Mustang Max	oz	0.95
Potash (60% K2O)	cwt	22.11	Sevin XLR Plus	qt	15.09
UAN (32% N)	cwt	12.03	OTHER		
UAN + Sulfur (28%)	cwt	14.49	Twine	bun	39.00
Urea, Solid (46% N)	cwt	19.74	SEED/PLANTS		
HAUL					
Hay Haul (Conv)25.00	ton	25.00	Alfalfa Seed	lb	4.01
HERBICIDE					
2,4-D amine	pt	2.73	Bahiagrass Seed	lb	2.82
2,4-D ester	pt	3.28	Bermudagrass Seed	lb	5.00
2,4-DB 200	pt	4.29	Brassica Seed	lb	3.42
AAtrex 4L	pt	2.24	Corn Seed RR2	thous	3.50
Accent	oz	31.94	Crimson Clover Seed	lb	1.06
Atrazine 4L	pt	2.24	Dallisgrass Seed	lb	10.95
Balan	lb	12.00	Fescue Seed	lb	1.75
Banvel	pt	15.04	Forage Sorghum Seed	lb	1.06
Basagran	pt	5.43	MaxQ Fescue Seed	lb	3.30
Bicep 1l Magnum	qt	10.24	Millet Seed	lb	1.58
Blazer Ultra	pt	6.76	Red Clover Seed	lb	2.69
Buctril 4EC	pt	4.28	Ryegrass Seed	lb	0.67
Clethodim	oz	0.75	Small Grains	lb	0.42
			SS, PM, FS Seed	lb	0.99
			SS, PM, Seed	lb	0.99
			Wheat Seed	lb	0.62
			White Clover Seed	lb	5.14
			SERVICE FEE		
			Soil Testing 6.00	acre	6.00
			Soil Testing 8.00	acre	8.00

Appendix Table 4. Estimated fuel prices  
and interest rates, Mississippi, 2021

ITEM NAME	UNIT	PRICE
		dollars
FUEL TYPES		
Diesel Fuel	gal	1.38
Gasoline	gal	1.52
INTEREST RATES		
Short-term	%	5.25
Intermediate-term	%	6.25

Appendix Table 5. Labor names, units and wage rates,  
Mississippi, 2021.

Item name	Unit	Wage Rate
OPERATOR LABOR	hour	15.22
HAND LABOR	hour	9.06



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