FORAGE
2024
PLANNING BUDGETS

Mississippi State University
Department of Agricultural Economics
Budget Report 2023-08

April 2023

Foreword

This report is designed to provide necessary planning data to farmers, research and extension staff, 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 staff for the excellent cooperation that made this report possible.

2024 Budget Committees

Forage Committee
Josh Maples, MSU-ES, Chairman (Agricultural Economics)
John Byrd, MSU-ES (Weed Science)
Rocky Lemus, MSU-ES (Forages)
Brian Mills, MSU-ES (Agricultural Economics)

Supporting Committees

Equipment
Evan Gregory, MSU-ES

Prices
Evan Gregory, MSU-ES

Documentation and Data Processing
Evan Gregory, MSU-ES

Publication Review
Josh Maples, MSU-ES
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2024 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 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 the 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 2022. (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 costs are estimated for the life of the equipment and include oil and lubricants (1, 4, and 6).

Estimates of Direct Costs

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

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

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

where:

RPH = R&M cost per hour of use
RLC = Replacement cost of the 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 the 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 the 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 that computes the annual capital recovery charge (2, p. 143). When a combination of machines or equipment is required to perform a single operation, the total cost per acre for all equipment used in the operation is estimated. The fixed cost of machinery ownership is calculated by first computing the capital recovery factor and then using it to estimate the annual capital recovery charge.

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

where:

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

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

where:

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

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

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

$$CRCPA = CRCPH \; x \; PR$$

where:

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

Enterprise Budgets

Table 1A. Estimated resource use and costs for field operations, per acre
Conventional Alfalfa hay establishment, prepared
seedbed, Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Soil Testing	acre			0.33	Jul							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			1.00	Jul							2.0000	58.00	116.00	116.00
Chisel Plow	15'	2WD 75	0.130	1.00	Aug	2.48	1.51	0.89	1.79	0.13	2.17				8.84
Disk Harrow	14'	2WD 75	0.140	2.00	Aug	5.32	3.23	3.07	7.37	0.28	4.64				23.63
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Aug	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Pursuit	oz											3.0000	3.22	9.66	9.66
Clethodim	oz											8.0000	0.53	4.24	4.24
Surfactant	pt											0.3000	3.30	0.99	0.99
Custom Spread(Truck)	appl			1.00	Sep							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.0000	50.00	50.00	50.00
Potash (60% K2O)	cwt											1.3000	46.60	60.58	60.58
Boron Plus	gal											2.0000	34.48	68.96	68.96
Molybdenum	lb											1.0000	33.00	33.00	33.00
Disk Harrow	14'	2WD 75	0.140	1.00	Sep	2.67	1.62	1.54	3.68	0.14	2.32				11.83
Section Harrow	13'	2WD 75	0.119	1.00	Sep	2.27	1.38	0.13	0.23	0.11	1.98				5.99
Grain Drill	12'	2WD 75	0.157	1.00	Sep	2.99	1.81	2.40	5.24	0.31	4.02				16.46
Alfalfa Seed	lb											20.0000	4.46	89.20	89.20
Cultipacker	12'	2WD 75	0.124	1.00	Sep	2.36	1.43	0.22	0.34	0.12	2.06				6.41
TOTALS						19.28	11.70	8.42	18.88	1.20	18.51			443.43	520.22
INTEREST ON OPERATING CAPITAL															14.00
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															534.22

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.

Table 1B. Estimated costs per acre
Conventional Alfalfa hay establishment, prepared seedbed, Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	50.00	1.0000	50.00	
Potash (60% K2O)	cwt	46.60	1.3000	60.58	
Boron Plus	gal	34.48	2.0000	68.96	
Molybdenum	lb	33.00	1.0000	33.00	
HERBICIDE					
Pursuit	oz	3.22	3.0000	9.66	
Clethodim	oz	0.53	8.0000	4.24	
SEED/PLANTS					
Alfalfa Seed	lb	4.46	20.0000	89.20	
ADJUVANTS					
Surfactant	pt	3.30	0.3000	0.99	
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	1.0000	7.50	
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	
CUSTOM LIME					
Lime (Spread)	ton	58.00	2.0000	116.00	
OPERATOR LABOR					
Tractors	hour	16.54	1.0155	16.81	
HAND LABOR					
Implements	hour	9.06	0.1884	1.70	
DIESEL FUEL					
Tractors	gal	4.48	3.9205	17.56	
REPAIR & MAINTENANCE					
Implements	acre	8.42	1.0000	8.42	
Tractors	acre	1.72	1.0000	1.72	
INTEREST ON OP. CAP.	acre	14.00	1.0000	14.00	
TOTAL DIRECT EXPENSES				503.64	
FIXED EXPENSES					
Implements	acre	18.88	1.0000	18.88	
Tractors	acre	11.70	1.0000	11.70	
TOTAL FIXED EXPENSES				30.58	
TOTAL SPECIFIED EXPENSES				534.22	

Note: Cost of production estimates are based on 2022 input prices. **Fertilization and lime decisions should be based on soil test recommendations.**

Table 2A. Estimated resource use and costs for field operations, per acre
Conventional Alfalfa hay maintenance,
Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Soil Testing	acre			0.33	Nov							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			1.00	Nov							0.5000	58.00	29.00	29.00
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Nov	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Metribuzin 75	lb											1.0000	14.80	14.80	14.80
Custom Spread(Truck)	appl			1.00	Mar							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											2.0000	50.00	100.00	100.00
Potash (60% K2O)	cwt											1.5000	46.60	69.90	69.90
Boron Plus	gal											0.5000	34.48	17.24	17.24
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Mar	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Pursuit	oz											3.0000	3.22	9.66	9.66
Surfactant	pt											0.3000	3.30	0.99	0.99
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Mar	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Mustang Max	oz											4.0000	1.48	5.92	5.92
Hay Cut-Cond	9'	2WD 75	0.229	1.00	May	4.35	2.64	4.79	5.83	0.22	3.79				21.40
Hay Tedder	17'	2WD 75	0.101	1.00	May	19.40	1.16	0.58	0.88	0.10	1.67				23.69
Hay Rake-Double	17'	2WD 75	0.101	2.00	May	3.84	2.33	0.80	1.22	0.20	3.34				11.53
Hay Baler	Square	2WD 75	0.229	1.00	May	4.35	2.64	3.85	5.86	0.22	3.79				20.49
Twine	bun											0.0800	33.50	2.68	2.68
Hay Trailer	20'	2WD 75	0.090	1.00	May	1.71	1.04	0.12	0.22	0.09	1.49				4.58
Hay Haul (Conv)	ton											1.5000	25.00	37.50	37.50
Spray (Broadcast)	27'	2WD 75	0.062	1.00	May	1.21	0.86	0.17	0.23	0.09	1.32				3.79
Gramoxone SL 2.0	oz											12.0000	0.37	4.44	4.44
Surfactant	pt											0.3000	3.30	0.99	0.99
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Jun	1.21	0.86	0.17	0.23	0.09	1.32				3.79
Mustang Max	oz											4.0000	1.48	5.92	5.92
Hay Cut-Cond	9'	2WD 75	0.229	1.00	Jun	4.35	2.64	4.79	5.83	0.22	3.79				21.40
Hay Tedder	17'	2WD 75	0.101	1.00	Jun	19.40	1.16	0.58	0.88	0.10	1.67				23.69
Hay Rake-Double	17'	2WD 75	0.101	2.00	Jun	3.84	2.33	0.80	1.22	0.20	3.34				11.53
Hay Baler	Square	2WD 75	0.229	1.00	Jun	4.35	2.64	3.85	5.86	0.22	3.79				20.49
Twine	bun											0.0800	33.50	2.68	2.68
Hay Trailer	20'	2WD 75	0.090	1.00	Jun	1.71	1.04	0.12	0.22	0.09	1.49				4.58
Hay Haul (Conv)	ton											1.5000	25.00	37.50	37.50
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Jun	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Gramoxone SL 2.0	oz											12.0000	0.37	4.44	4.44
Surfactant	pt											0.3000	3.30	0.99	0.99
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Jun	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Poast	pt											1.0000	16.68	16.68	16.68
Crop Oil (veg)	pt											2.0000	2.90	5.80	5.80
Custom Spread(Truck)	appl			1.00	Jul							1.0000	7.50	7.50	7.50
Potash (60% K2O)	cwt											1.5000	46.60	69.90	69.90
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Aug	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Mustang Max	oz											4.0000	1.48	5.92	5.92
Hay Cut-Cond	9'	2WD 75	0.229	1.00	Aug	4.35	2.64	4.79	5.83	0.22	3.79				21.40
Hay Tedder	17'	2WD 75	0.101	1.00	Aug	19.40	1.16	0.58	0.88	0.10	1.67				23.69
Hay Rake-Double	17'	2WD 75	0.101	2.00	Aug	3.84	2.33	0.80	1.22	0.20	3.34				11.53
Hay Baler	Square	2WD 75	0.229	1.00	Aug	4.35	2.64	3.85	5.86	0.22	3.79				20.49
Twine	bun											0.0500	33.50	1.68	1.68
Hay Trailer	20'	2WD 75	0.090	1.00	Aug	1.71	1.04	0.12	0.22	0.09	1.49				4.58
Hay Haul (Conv)	ton											1.0000	25.00	25.00	25.00
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Aug	1.21	0.86	0.17	0.23	0.09	1.32				3.79
Gramoxone SL 2.0	oz											12.0000	0.37	4.44	4.44
Surfactant	pt											0.3000	3.30	0.99	0.99
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Sep	1.21	0.86	0.17	0.23	0.09	1.32				3.79
Mustang Max	oz											4.0000	1.48	5.92	5.92
Hay Cut-Cond	9'	2WD 75	0.229	1.00	Sep	4.35	2.64	4.79	5.83	0.22	3.79				21.40
Hay Tedder	17'	2WD 75	0.101	1.00	Sep	19.40	1.16	0.58	0.88	0.10	1.67				23.69
Hay Rake-Double	17'	2WD 75	0.101	2.00	Sep	3.84	2.33	0.80	1.22	0.20	3.34				11.53
Hay Baler	Square	2WD 75	0.229	1.00	Sep	4.35	2.64	3.85	5.86	0.22	3.79				20.49
Twine	bun											0.0500	33.50	1.68	1.68
Hay Trailer	20'	2WD 75	0.090	1.00	Sep	1.71	1.04	0.12	0.22	0.09	1.49				4.58
Hay Haul (Conv)	ton											1.0000	25.00	25.00	25.00
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Sep	1.21	0.86	0.17	0.23	0.09	1.32				3.79
Gramoxone SL 2.0	oz											12.0000	0.37	4.44	4.44
Surfactant	pt											0.3000	3.30	0.99	0.99
Prorated Est Cost	acre				Sep							1.0000			50.04
TOTALS						147.79	47.86	42.43	58.57	4.44	70.84			531.39	948.92
INTEREST ON OPERATING CAPITAL															8.63
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															957.55

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.

Table 2B. Estimated costs per acre
Conventional Alfalfa hay maintenance,
Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	50.00	2.0000	100.00	_____
Potash (60% K2O)	cwt	46.60	3.0000	139.80	_____
Boron Plus	gal	34.48	0.5000	17.24	_____
HERBICIDE					
Metribuzin 75	lb	14.80	1.0000	14.80	_____
Pursuit	oz	3.22	3.0000	9.66	_____
Gramoxone SL 2.0	oz	0.37	48.0000	17.76	_____
Poast	pt	16.68	1.0000	16.68	_____
INSECTICIDE					
Mustang Max	oz	1.48	16.0000	23.68	_____
HAUL					
Hay Haul (Conv)	ton	25.00	5.0000	125.00	_____
OTHER					
Twine	bun	33.50	0.2600	8.71	_____
ADJUVANTS					
Surfactant	pt	3.30	1.5000	4.95	_____
Crop Oil (veg)	pt	2.90	2.0000	5.80	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	2.0000	15.00	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
CUSTOM LIME					
Lime (Spread)	ton	58.00	0.5000	29.00	_____
OPERATOR LABOR					
Tractors	hour	16.54	4.0960	67.76	_____
HAND LABOR					
Implements	hour	9.06	0.3447	3.08	_____
DIESEL FUEL					
Tractors	gal	4.48	31.4238	140.72	_____
REPAIR & MAINTENANCE					
Implements	acre	42.43	1.0000	42.43	_____
Tractors	acre	7.07	1.0000	7.07	_____
INTEREST ON OP. CAP.	acre	8.63	1.0000	8.63	_____

TOTAL DIRECT EXPENSES				801.08	_____
FIXED EXPENSES					
Implements	acre	58.57	1.0000	58.57	_____
Tractors	acre	47.86	1.0000	47.86	_____
Prorated Est Cost	acre	50.04	1.0000	50.04	_____

TOTAL FIXED EXPENSES				156.47	_____

TOTAL SPECIFIED EXPENSES				957.55	_____

Note: Cost of production estimates are based on 2022 input prices. **Fertilization and lime decisions should be based on soil test recommendations.**

Table 3A. Estimated resource use and costs for field operations, per acre
Bahiagrass establishment, broadcast,
Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Chisel Plow	15'	2WD 75	0.130	1.00	Mar	2.48	1.51	0.89	1.79	0.13	2.17				8.84
Soil Testing	acre			0.33	Apr							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			1.00	Apr								58.00		
Disk Harrow	14'	2WD 75	0.140	1.00	Apr	2.67	1.62	1.54	3.68	0.14	2.32				11.83
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Apr	1.21	0.86	0.17	0.23	0.09	1.32				3.79
Glyphosate 3lbs a.e.	pt											2.0000	5.38	10.76	10.76
Surfactant	pt											1.0000	3.30	3.30	3.30
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	50.00	75.00	75.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
Disk Harrow	14'	2WD 75	0.140	1.00	Apr	2.67	1.62	1.54	3.68	0.14	2.32				11.83
Section Harrow	13'	2WD 75	0.119	1.00	Apr	2.27	1.38	0.13	0.23	0.11	1.98				5.99
Cyclone Spin	750Lb	2WD 105	0.200	1.00	Apr	5.30	3.12	0.31	1.27	0.30	4.22				14.22
Bahiagrass Seed	lb											20.0000	3.50	70.00	70.00
Cultipacker	12'	2WD 75	0.124	1.00	Apr	2.36	1.43	0.22	0.34	0.12	2.06				6.41
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
Rotary Mower	12'	2WD 75	0.098	1.00	Jun	1.87	1.13	1.61	1.29	0.09	1.62				7.52
Custom Spread(Truck)	appl			1.00	Jul							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
TOTALS						20.83	12.67	6.41	12.51	1.14	18.01			326.58	397.01
INTEREST ON OPERATING CAPITAL															12.37
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															409.38

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 40 units of nitrogen being applied after emergence and 40 units applied after the first grazing cycle.

Table 3B. Estimated costs per acre
Bahiagrass establishment, broadcast,
Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	50.00	1.5000	75.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
Nitrogen	cwt	44.45	2.1400	95.12	_____
HERBICIDE					
Glyphosate 3lbs a.e.	pt	5.38	2.0000	10.76	_____
SEED/PLANTS					
Bahiagrass Seed	lb	3.50	20.0000	70.00	_____
ADJUVANTS					
Surfactant	pt	3.30	1.0000	3.30	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	3.0000	22.50	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	1.0163	16.82	_____
HAND LABOR					
Implements	hour	9.06	0.1313	1.19	_____
DIESEL FUEL					
Tractors	gal	4.48	4.2323	18.96	_____
REPAIR & MAINTENANCE					
Implements	acre	6.41	1.0000	6.41	_____
Tractors	acre	1.87	1.0000	1.87	_____
INTEREST ON OP. CAP.	acre	12.37	1.0000	12.37	_____

TOTAL DIRECT EXPENSES				384.20	_____
FIXED EXPENSES					
Implements	acre	12.51	1.0000	12.51	_____
Tractors	acre	12.67	1.0000	12.67	_____

TOTAL FIXED EXPENSES				25.18	_____

TOTAL SPECIFIED EXPENSES				409.38	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 40 units of nitrogen being applied after emergence and 40 units applied after the first grazing cycle.

Table 4A. Estimated resource use and costs for field operations, per acre
Bahiagrass establishment, drilled on a prepared seed bed,
Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Chisel Plow	15'	2WD 75	0.130	1.00	Mar	2.48	1.51	0.89	1.79	0.13	2.17				8.84
Soil Testing	acre			0.33	Apr							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			0.33	Apr								58.00		
Disk Harrow	14'	2WD 75	0.140	1.00	Apr	2.67	1.62	1.54	3.68	0.14	2.32				11.83
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Apr	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Glyphosate 3lbs a.e.	pt											2.0000	5.38	10.76	10.76
Surfactant	pt											1.0000	3.30	3.30	3.30
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	50.00	75.00	75.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
Disk Harrow	14'	2WD 75	0.140	1.00	Apr	2.67	1.62	1.54	3.68	0.14	2.32				11.83
Section Harrow	13'	2WD 75	0.119	1.00	Apr	2.27	1.38	0.13	0.23	0.11	1.98				5.99
Grain Drill	12'	2WD 75	0.157	1.00	Apr	2.99	1.81	2.40	5.24	0.31	4.02				16.46
Bahiagrass Seed	lb											20.0000	3.50	70.00	70.00
Cultipacker	12'	2WD 75	0.124	1.00	Apr	2.36	1.43	0.22	0.34	0.12	2.06				6.41
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
Rotary Mower	12'	2WD 75	0.098	1.00	Jun	1.87	1.13	1.61	1.29	0.09	1.62				7.52
Custom Spread(Truck)	appl			1.00	Jul							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
TOTALS						18.50	11.22	8.50	16.48	1.16	17.81			326.58	399.09
INTEREST ON OPERATING CAPITAL															14.36
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															413.45

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 40 units of nitrogen being applied after emergence and 40 units applied after the first grazing cycle.

Table 4B. Estimated costs per acre
Bahiagrass establishment, drilled on a prepared seed bed,
Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	50.00	1.5000	75.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
Nitrogen	cwt	44.45	2.1400	95.12	_____
HERBICIDE					
Glyphosate 3lbs a.e.	pt	5.38	2.0000	10.76	_____
SEED/PLANTS					
Bahiagrass Seed	lb	3.50	20.0000	70.00	_____
ADJUVANTS					
Surfactant	pt	3.30	1.0000	3.30	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	3.0000	22.50	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	0.9734	16.11	_____
HAND LABOR					
Implements	hour	9.06	0.1884	1.70	_____
DIESEL FUEL					
Tractors	gal	4.48	3.7580	16.84	_____
REPAIR & MAINTENANCE					
Implements	acre	8.50	1.0000	8.50	_____
Tractors	acre	1.66	1.0000	1.66	_____
INTEREST ON OP. CAP.	acre	14.36	1.0000	14.36	_____

TOTAL DIRECT EXPENSES				385.75	_____
FIXED EXPENSES					
Implements	acre	16.48	1.0000	16.48	_____
Tractors	acre	11.22	1.0000	11.22	_____

TOTAL FIXED EXPENSES				27.70	_____

TOTAL SPECIFIED EXPENSES				413.45	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 40 units of nitrogen being applied after emergence and 40 units applied after the first grazing cycle.

Table 5A. Estimated resource use and costs for field operations, per acre
Bahiagrass establishment, no-till,
Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Soil Testing	acre			0.33	Apr							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			0.33	Apr								58.00		
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Apr	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Glyphosate 3lbs a.e.	pt											2.0000	5.38	10.76	10.76
Surfactant	pt											1.0000	3.30	3.30	3.30
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	50.00	75.00	75.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
NT Grain Drill	12'	2WD 75	0.196	1.00	Apr	3.73	2.26	3.70	8.07	0.39	5.03				22.79
Bahiagrass Seed	lb											20.0000	3.50	70.00	70.00
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
Rotary Mower	12'	2WD 75	0.098	1.00	Jun	1.87	1.13	1.61	1.29	0.09	1.62				7.52
Custom Spread(Truck)	appl			1.00	Jul							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
TOTALS						6.79	4.11	5.48	9.59	0.58	7.97			326.58	360.52
INTEREST ON OPERATING CAPITAL															13.27
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															373.79

Note: Cost of production estimates are based on 2022 input prices.
Bahiagrass planted to increase the production of an existing stand.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 40 units of nitrogen being applied after emergence and 40 units applied after the first grazing cycle.

Table 5B. Estimated costs per acre
Bahiagrass establishment, no-till,
Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	50.00	1.5000	75.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
Nitrogen	cwt	44.45	2.1400	95.12	_____
HERBICIDE					
Glyphosate 3lbs a.e.	pt	5.38	2.0000	10.76	_____
SEED/PLANTS					
Bahiagrass Seed	lb	3.50	20.0000	70.00	_____
ADJUVANTS					
Surfactant	pt	3.30	1.0000	3.30	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	3.0000	22.50	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	0.3573	5.91	_____
HAND LABOR					
Implements	hour	9.06	0.2277	2.06	_____
DIESEL FUEL					
Tractors	gal	4.48	1.3793	6.18	_____
REPAIR & MAINTENANCE					
Implements	acre	5.48	1.0000	5.48	_____
Tractors	acre	0.61	1.0000	0.61	_____
INTEREST ON OP. CAP.	acre	13.27	1.0000	13.27	_____

TOTAL DIRECT EXPENSES				360.09	_____
FIXED EXPENSES					
Implements	acre	9.59	1.0000	9.59	_____
Tractors	acre	4.11	1.0000	4.11	_____

TOTAL FIXED EXPENSES				13.70	_____

TOTAL SPECIFIED EXPENSES				373.79	_____

Note: Cost of production estimates are based on 2022 input prices.
Bahigrass planted to increase the production of an existing stand.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 40 units of nitrogen being applied after emergence and 40 units applied after the first grazing cycle.

Table 6A. Estimated resource use and costs for field operations, per acre
Bahiagrass establishment, no-till pasture renovation,
Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Soil Testing	acre			0.33	Apr							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			0.33	Apr								58.00		
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Apr	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Gramoxone SL 2.0	oz											16.0000	0.37	5.92	5.92
Surfactant	pt											0.3000	3.30	0.99	0.99
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	50.00	75.00	75.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
NT Grain Drill	12'	2WD 75	0.196	1.00	Apr	3.73	2.26	3.70	8.07	0.39	5.03				22.79
Bahiagrass Seed	lb											20.0000	3.50	70.00	70.00
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
Rotary Mower	12'	2WD 75	0.098	1.00	Jun	1.87	1.13	1.61	1.29	0.09	1.62				7.52
Custom Spread(Truck)	appl			1.00	Jul							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
TOTALS						6.79	4.11	5.48	9.59	0.58	7.97			319.43	353.37
INTEREST ON OPERATING CAPITAL															12.96
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															366.33

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate Prices.
This budget assumes 40 units of nitrogen being applied after emergence and 40 units applied after the first grazing cycle.

Table 6B. Estimated costs per acre
Bahiagrass establishment, no-till pasture renovation,
Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	50.00	1.5000	75.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
Nitrogen	cwt	44.45	2.1400	95.12	_____
HERBICIDE					
Gramoxone SL 2.0	oz	0.37	16.0000	5.92	_____
SEED/PLANTS					
Bahiagrass Seed	lb	3.50	20.0000	70.00	_____
ADJUVANTS					
Surfactant	pt	3.30	0.3000	0.99	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	3.0000	22.50	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	0.3573	5.91	_____
HAND LABOR					
Implements	hour	9.06	0.2277	2.06	_____
DIESEL FUEL					
Tractors	gal	4.48	1.3793	6.18	_____
REPAIR & MAINTENANCE					
Implements	acre	5.48	1.0000	5.48	_____
Tractors	acre	0.61	1.0000	0.61	_____
INTEREST ON OP. CAP.	acre	12.96	1.0000	12.96	_____

TOTAL DIRECT EXPENSES				352.63	_____
FIXED EXPENSES					
Implements	acre	9.59	1.0000	9.59	_____
Tractors	acre	4.11	1.0000	4.11	_____

TOTAL FIXED EXPENSES				13.70	_____

TOTAL SPECIFIED EXPENSES				366.33	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 40 units of nitrogen being applied after emergence and 40 units applied after the first grazing cycle

Table 7A. Estimated resource use and costs for field operations, per acre
Seeded bermudagrass establishment, broadcast seed,
Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Chisel Plow	15'	2WD 75	0.130	1.00	Mar	2.48	1.51	0.89	1.79	0.13	2.17				8.84
Soil Testing	acre			0.33	Apr							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			1.00	Apr								58.00		
Disk Harrow	14'	2WD 75	0.140	1.00	Apr	2.67	1.62	1.54	3.68	0.14	2.32				11.83
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Apr	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Glyphosate 3lbs a.e.	pt											2.0000	5.38	10.76	10.76
Surfactant	pt											1.0000	3.30	3.30	3.30
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	50.00	75.00	75.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
Disk Harrow	14'	2WD 75	0.140	1.00	Apr	2.67	1.62	1.54	3.68	0.14	2.32				11.83
Section Harrow	13'	2WD 75	0.119	1.00	Apr	2.27	1.38	0.13	0.23	0.11	1.98				5.99
Cyclone Spin	750Lb	2WD 75	0.200	1.00	Apr	3.80	2.30	0.31	1.27	0.30	4.22				11.90
Common Bermuda Seed	lb											10.0000	5.37	53.70	53.70
Cultipacker	12'	2WD 75	0.124	1.00	Apr	2.36	1.43	0.22	0.34	0.12	2.06				6.41
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
Rotary Mower	12'	2WD 75	0.098	1.00	Jun	1.87	1.13	1.61	1.29	0.09	1.62				7.52
Custom Spread(Truck)	appl			1.00	Jul							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
TOTALS						19.31	11.71	6.41	12.51	1.14	18.01			310.28	378.23
INTEREST ON OPERATING CAPITAL															11.70
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															389.93

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 40 units of nitrogen being applied after emergence and 40 units applied after the first grazing cycle.

Table 7B. Estimated costs per acre
Seeded bermudagrass establishment, broadcast seed,
Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	50.00	1.5000	75.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
Nitrogen	cwt	44.45	2.1400	95.12	_____
HERBICIDE					
Glyphosate 3lbs a.e.	pt	5.38	2.0000	10.76	_____
SEED/PLANTS					
Common Bermuda Seed	lb	5.37	10.0000	53.70	_____
ADJUVANTS					
Surfactant	pt	3.30	1.0000	3.30	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	3.0000	22.50	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	1.0163	16.82	_____
HAND LABOR					
Implements	hour	9.06	0.1313	1.19	_____
DIESEL FUEL					
Tractors	gal	4.48	3.9235	17.58	_____
REPAIR & MAINTENANCE					
Implements	acre	6.41	1.0000	6.41	_____
Tractors	acre	1.73	1.0000	1.73	_____
INTEREST ON OP. CAP.	acre	11.70	1.0000	11.70	_____

TOTAL DIRECT EXPENSES				365.71	_____
FIXED EXPENSES					
Implements	acre	12.51	1.0000	12.51	_____
Tractors	acre	11.71	1.0000	11.71	_____

TOTAL FIXED EXPENSES				24.22	_____

TOTAL SPECIFIED EXPENSES				389.93	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 40 units of nitrogen being applied after emergence and 40 units applied after the first grazing cycle.

Table 8A. Estimated resource use and costs for field operations, per acre
Seeded bermudagrass establishment, no-till,
Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Soil Testing	acre			0.33	Apr							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			0.33	Apr								58.00		
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Apr	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Glyphosate 3lbs a.e.	pt											2.0000	5.38	10.76	10.76
Surfactant	pt											1.0000	3.30	3.30	3.30
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	50.00	75.00	75.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
NT Grain Drill	12'	2WD 75	0.196	1.00	Apr	3.73	2.26	3.70	8.07	0.39	5.03				22.79
Common Bermuda Seed	lb											10.0000	5.37	53.70	53.70
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
Rotary Mower	12'	2WD 75	0.098	1.00	Jun	1.87	1.13	1.61	1.29	0.09	1.62				7.52
Custom Spread(Truck)	appl			1.00	Jul							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
TOTALS						6.79	4.11	5.48	9.59	0.58	7.97			310.28	344.22
INTEREST ON OPERATING CAPITAL															12.57
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															356.79

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 40 units of nitrogen being applied after emergence and 40 units applied after the first grazing cycle.

Table 8B. Estimated costs per acre
Seeded bermudagrass establishment, no-till,
Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	50.00	1.5000	75.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
Nitrogen	cwt	44.45	2.1400	95.12	_____
HERBICIDE					
Glyphosate 3lbs a.e.	pt	5.38	2.0000	10.76	_____
SEED/PLANTS					
Common Bermuda Seed	lb	5.37	10.0000	53.70	_____
ADJUVANTS					
Surfactant	pt	3.30	1.0000	3.30	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	3.0000	22.50	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	0.3573	5.91	_____
HAND LABOR					
Implements	hour	9.06	0.2277	2.06	_____
DIESEL FUEL					
Tractors	gal	4.48	1.3793	6.18	_____
REPAIR & MAINTENANCE					
Implements	acre	5.48	1.0000	5.48	_____
Tractors	acre	0.61	1.0000	0.61	_____
INTEREST ON OP. CAP.	acre	12.57	1.0000	12.57	_____

TOTAL DIRECT EXPENSES				343.09	_____
FIXED EXPENSES					
Implements	acre	9.59	1.0000	9.59	_____
Tractors	acre	4.11	1.0000	4.11	_____

TOTAL FIXED EXPENSES				13.70	_____

TOTAL SPECIFIED EXPENSES				356.79	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 40 units of nitrogen being applied after emergence and 40 units applied after the first grazing cycle.

Table 9A. Estimated resource use and costs for field operations, per acre
Seeded bermudagrass establishment, no-till pasture
Renovation, Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Soil Testing	acre			0.33	Apr							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			0.33	Apr								58.00		
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Apr	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Gramoxone SL 2.0	oz											16.0000	0.37	5.92	5.92
Surfactant	pt											0.3000	3.30	0.99	0.99
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	50.00	75.00	75.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
NT Grain Drill	12'	2WD 75	0.196	1.00	Apr	3.73	2.26	3.70	8.07	0.39	5.03				22.79
Common Bermuda Seed	lb											10.0000	5.37	53.70	53.70
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
Rotary Mower	12'	2WD 75	0.098	1.00	Jun	1.87	1.13	1.61	1.29	0.09	1.62				7.52
Custom Spread(Truck)	appl			1.00	Jul							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
TOTALS						6.79	4.11	5.48	9.59	0.58	7.97			303.13	337.07
INTEREST ON OPERATING CAPITAL															12.26
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															349.33

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 40 units of nitrogen being applied after emergence and 40 units applied after the first grazing cycle.

Table 9B. Estimated costs per acre
Seeded bermudagrass establishment, no-till pasture
Renovation, Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	50.00	1.5000	75.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
Nitrogen	cwt	44.45	2.1400	95.12	_____
HERBICIDE					
Gramoxone SL 2.0	oz	0.37	16.0000	5.92	_____
SEED/PLANTS					
Common Bermuda Seed	lb	5.37	10.0000	53.70	_____
ADJUVANTS					
Surfactant	pt	3.30	0.3000	0.99	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	3.0000	22.50	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	0.3573	5.91	_____
HAND LABOR					
Implements	hour	9.06	0.2277	2.06	_____
DIESEL FUEL					
Tractors	gal	4.48	1.3793	6.18	_____
REPAIR & MAINTENANCE					
Implements	acre	5.48	1.0000	5.48	_____
Tractors	acre	0.61	1.0000	0.61	_____
INTEREST ON OP. CAP.	acre	12.26	1.0000	12.26	_____

TOTAL DIRECT EXPENSES				335.63	_____
FIXED EXPENSES					
Implements	acre	9.59	1.0000	9.59	_____
Tractors	acre	4.11	1.0000	4.11	_____

TOTAL FIXED EXPENSES				13.70	_____

TOTAL SPECIFIED EXPENSES				349.33	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 40 units of nitrogen being applied after emergence and 40 units applied after the first grazing cycle

Table 10A. Estimated resource use and costs for field operations, per acre
Seeded bermudagrass, drill in a prepared seed bed,
Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Chisel Plow	15'	2WD 75	0.130	1.00	Mar	2.48	1.51	0.89	1.79	0.13	2.17				8.84
Soil Testing	acre			0.33	Apr							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			1.00	Apr								58.00		
Disk Harrow	14'	2WD 75	0.140	1.00	Apr	2.67	1.62	1.54	3.68	0.14	2.32				11.83
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Apr	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Glyphosate 3lbs a.e.	pt											2.0000	5.38	10.76	10.76
Surfactant	pt											1.0000	3.30	3.30	3.30
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	50.00	75.00	75.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
Disk Harrow	14'	2WD 75	0.140	1.00	Apr	2.67	1.62	1.54	3.68	0.14	2.32				11.83
Section Harrow	13'	2WD 75	0.119	1.00	Apr	2.27	1.38	0.13	0.23	0.11	1.98				5.99
Grain Drill	12'	2WD 130	0.157	1.00	Apr	5.29	3.93	2.40	5.24	0.31	4.02				20.88
Common Bermuda Seed	lb											10.0000	5.37	53.70	53.70
Cultipacker	12'	2WD 75	0.124	1.00	Apr	2.36	1.43	0.22	0.34	0.12	2.06				6.41
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
Rotary Mower	12'	2WD 75	0.098	1.00	Jun	1.87	1.13	1.61	1.29	0.09	1.62				7.52
Custom Spread(Truck)	appl			1.00	Jul							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
TOTALS						20.80	13.34	8.50	16.48	1.16	17.81			310.28	387.21
INTEREST ON OPERATING CAPITAL															11.83
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															399.04

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 40 units of nitrogen being applied after emergence and 40 units applied after the first grazing cycle.

Table 10B. Estimated costs per acre
Seeded bermudagrass, drill in a prepared seed bed,
Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	50.00	1.5000	75.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
Nitrogen	cwt	44.45	2.1400	95.12	_____
HERBICIDE					
Glyphosate 3lbs a.e.	pt	5.38	2.0000	10.76	_____
SEED/PLANTS					
Common Bermuda Seed	lb	5.37	10.0000	53.70	_____
ADJUVANTS					
Surfactant	pt	3.30	1.0000	3.30	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	3.0000	22.50	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	0.9734	16.11	_____
HAND LABOR					
Implements	hour	9.06	0.1884	1.70	_____
DIESEL FUEL					
Tractors	gal	4.48	4.2029	18.83	_____
REPAIR & MAINTENANCE					
Implements	acre	8.50	1.0000	8.50	_____
Tractors	acre	1.97	1.0000	1.97	_____
INTEREST ON OP. CAP.	acre	11.83	1.0000	11.83	_____

TOTAL DIRECT EXPENSES				369.22	_____
FIXED EXPENSES					
Implements	acre	16.48	1.0000	16.48	_____
Tractors	acre	13.34	1.0000	13.34	_____

TOTAL FIXED EXPENSES				29.82	_____

TOTAL SPECIFIED EXPENSES				399.04	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 40 units of nitrogen being applied after emergence and 40 units applied after the first grazing cycle

Table 11A. Estimated resource use and costs for field operations, per acre
Permanent summer pasture maintenance (i.e. bahiagrass,
bermudagrass, dallisgrass, mixed grasses),Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Soil Testing	acre			0.33	Apr							0.3300	10.00	3.30	3.30
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
Phosphate (46% P2O5)	cwt											1.0000	50.00	50.00	50.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Apr	1.19	0.72	0.17	0.23	0.09	1.32				3.63
GrazonNext	pt											1.5000	6.60	9.90	9.90
Surfactant	pt											1.0000	3.30	3.30	3.30
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
Rotary Mower	12'	2WD 75	0.098	1.00	Aug	1.87	1.13	1.61	1.29	0.09	1.62				7.52
Lime (Spread)	ton			1.00	Aug								58.00		
Prorated Est Cost	acre				Aug							1.0000			38.72
TOTALS						3.06	1.85	1.78	1.52	0.19	2.94			223.22	273.09
INTEREST ON OPERATING CAPITAL															9.15
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															282.24

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 40 units of nitrogen being applied after emergence and 40 units applied after the first grazing cycle.

Table 11B. Estimated costs per acre
Permanent summer pasture maintenance (i.e. bahiagrass, bermudagrass, dallisgrass, mixed grasses), Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Nitrogen	cwt	44.45	2.1400	95.12	_____
Phosphate (46% P2O5)	cwt	50.00	1.0000	50.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
HERBICIDE					
GrazonNext	pt	6.60	1.5000	9.90	_____
ADJUVANTS					
Surfactant	pt	3.30	1.0000	3.30	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	2.0000	15.00	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	0.1608	2.66	_____
HAND LABOR					
Implements	hour	9.06	0.0313	0.28	_____
DIESEL FUEL					
Tractors	gal	4.48	0.6210	2.78	_____
REPAIR & MAINTENANCE					
Implements	acre	1.78	1.0000	1.78	_____
Tractors	acre	0.28	1.0000	0.28	_____
INTEREST ON OP. CAP.	acre	9.15	1.0000	9.15	_____

TOTAL DIRECT EXPENSES				240.15	_____
FIXED EXPENSES					
Implements	acre	1.52	1.0000	1.52	_____
Tractors	acre	1.85	1.0000	1.85	_____
Prorated Est Cost	acre	38.72	1.0000	38.72	_____

TOTAL FIXED EXPENSES				42.09	_____

TOTAL SPECIFIED EXPENSES				282.24	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 40 units of nitrogen being applied after emergence and 40 units applied after the first grazing cycle

Table 12A. Estimated resource use and costs for field operations, per acre
Permanent summer grass-white clover pasture maintenance,
Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Rotary Mower	12'	2WD 75	0.098	1.00	Jun	1.87	1.13	1.61	1.29	0.09	1.62				7.52
Soil Testing	acre			0.33	Jun							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			1.00	Jun								58.00		
Rotary Mower	12'	2WD 75	0.098	1.00	Sep	1.87	1.13	1.61	1.29	0.09	1.62				7.52
Tailgate Seeder		2WD 50	0.200	1.00	Sep	2.46	1.04	0.35	0.43	0.20	3.31				7.59
White Clover Seed	lb											3.0000	4.52	13.56	13.56
Custom Spread(Truck)	appl			1.00	Oct							1.0000	7.50	7.50	7.50
Nitrogen	cwt											0.3000	44.45	13.34	13.34
Phosphate (46% P2O5)	cwt											1.0000	50.00	50.00	50.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
Prorated Est Cost	acre				Oct							1.0000			38.72
TOTALS						6.20	3.30	3.57	3.01	0.39	6.55			134.30	195.65
INTEREST ON OPERATING CAPITAL															3.52
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															199.17

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.

Table 12B. Estimated costs per acre
Permanent summer grass-white clover pasture maintenance, Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Nitrogen	cwt	44.45	0.3000	13.34	_____
Phosphate (46% P2O5)	cwt	50.00	1.0000	50.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
SEED/PLANTS					
White Clover Seed	lb	4.52	3.0000	13.56	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	1.0000	7.50	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	0.3964	6.55	_____
DIESEL FUEL					
Tractors	gal	4.48	1.2729	5.71	_____
REPAIR & MAINTENANCE					
Implements	acre	3.57	1.0000	3.57	_____
Tractors	acre	0.49	1.0000	0.49	_____
INTEREST ON OP. CAP.	acre	3.52	1.0000	3.52	_____

TOTAL DIRECT EXPENSES				154.14	_____
FIXED EXPENSES					
Implements	acre	3.01	1.0000	3.01	_____
Tractors	acre	3.30	1.0000	3.30	_____
Prorated Est Cost	acre	38.72	1.0000	38.72	_____

TOTAL FIXED EXPENSES				45.03	_____

TOTAL SPECIFIED EXPENSES				199.17	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices

Table 13A. Estimated resource use and costs for field operations, per acre
Mixed grass hay maintenance,
Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Mar	1.19	0.72	0.17	0.23	0.09	1.32				3.63
GrazonNext	pt											1.5000	6.60	9.90	9.90
Surfactant	pt											1.0000	3.30	3.30	3.30
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.3500	44.45	60.01	60.01
Phosphate (46% P2O5)	cwt											1.0000	50.00	50.00	50.00
Potash (60% K2O)	cwt											1.5000	46.60	69.90	69.90
Hay Disc Mower	8'	2WD 75	0.257	1.00	Jun	4.90	2.97	2.27	2.77	0.25	4.26				17.17
Hay Rake	8.5'	2WD 50	0.202	2.00	Jun	4.97	2.11	1.67	2.54	0.40	6.69				17.98
Hay Baler	Lg Round	2WD 75	0.211	1.00	Jun	4.02	2.44	6.71	9.08	0.21	3.50				25.75
Twine	bun											0.0400	33.50	1.34	1.34
Hay Mover	1B Lift	2WD 50	0.300	1.00	Jun	3.69	1.56	0.06	0.16	0.30	4.96				10.43
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.3500	44.45	60.01	60.01
Hay Disc Mower	8'	2WD 75	0.257	1.00	Jul	4.90	2.97	2.27	2.77	0.25	4.26				17.17
Hay Rake	8.5'	2WD 50	0.202	2.00	Jul	4.97	2.11	1.67	2.54	0.40	6.69				17.98
Hay Baler	Lg Round	2WD 75	0.211	1.00	Jul	4.02	2.44	6.71	9.08	0.21	3.50				25.75
Twine	bun											0.0400	33.50	1.34	1.34
Hay Mover	1B Lift	2WD 75	0.300	1.00	Jul	5.70	3.45	0.06	0.16	0.30	4.96				14.33
Custom Spread(Truck)	appl			1.00	Jul							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.3500	44.45	60.01	60.01
Hay Baler	Lg Round	2WD 75	0.211	1.00	Oct	4.02	2.44	6.71	9.08	0.21	3.50				25.75
Twine	bun											0.0200	33.50	0.67	0.67
Hay Disc Mower	8'	2WD 75	0.257	1.00	Oct	4.90	2.97	2.27	2.77	0.25	4.26				17.17
Hay Rake	8.5'	2WD 50	0.202	2.00	Oct	4.97	2.11	1.67	2.54	0.40	6.69				17.98
Hay Mover	1B Lift	2WD 75	0.300	1.00	Oct	5.70	3.45	0.06	0.16	0.30	4.96				14.33
Soil Testing	acre			0.33	Oct							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			1.00	Oct								58.00		
Prorated Est Cost	acre				Oct							1.0000			38.34
TOTALS						57.95	31.74	32.30	43.88	3.61	59.55			342.28	606.04
INTEREST ON OPERATING CAPITAL															13.59
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															619.63

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 50 units of nitrogen being applied after emergence and 50 units applied after each cutting of hay.

Table 13B. Estimated costs per acre
Mixed grass hay maintenance,
Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Nitrogen	cwt	44.45	4.0500	180.02	_____
Phosphate (46% P2O5)	cwt	50.00	1.0000	50.00	_____
Potash (60% K2O)	cwt	46.60	1.5000	69.90	_____
HERBICIDE					
GrazonNext	pt	6.60	1.5000	9.90	_____
OTHER					
Twine	bun	33.50	0.1000	3.35	_____
ADJUVANTS					
Surfactant	pt	3.30	1.0000	3.30	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	3.0000	22.50	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	3.5839	59.27	_____
HAND LABOR					
Implements	hour	9.06	0.0313	0.28	_____
DIESEL FUEL					
Tractors	gal	4.48	11.8883	53.26	_____
REPAIR & MAINTENANCE					
Implements	acre	32.30	1.0000	32.30	_____
Tractors	acre	4.69	1.0000	4.69	_____
INTEREST ON OP. CAP.	acre	13.59	1.0000	13.59	_____

TOTAL DIRECT EXPENSES				505.67	_____
FIXED EXPENSES					
Implements	acre	43.88	1.0000	43.88	_____
Tractors	acre	31.74	1.0000	31.74	_____
Prorated Est Cost	acre	38.34	1.0000	38.34	_____

TOTAL FIXED EXPENSES				113.96	_____

TOTAL SPECIFIED EXPENSES				619.63	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 50 units of nitrogen being applied after emergence and 50 units applied after each cutting of hay

Table 14A. Estimated resource use and costs for field operations, per acre
Hybrid bermudagrass establishment, 1 cutting of hay,
Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Chisel Plow	15'	2WD 75	0.130	1.00	Mar	2.48	1.51	0.89	1.79	0.13	2.17				8.84
Soil Testing	acre			0.33	Apr							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			1.00	Apr								58.00		
Disk Harrow	14'	2WD 75	0.140	2.00	Apr	5.32	3.23	3.07	7.37	0.28	4.64				23.63
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.3500	44.45	60.01	60.01
Phosphate (46% P2O5)	cwt											1.5000	50.00	75.00	75.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
Custom Sprig	acre			1.00	May							1.0000	100.00	100.00	100.00
Cultipacker	12'	2WD 75	0.124	1.00	May	2.36	1.43	0.22	0.34	0.12	2.06				6.41
Spray (Broadcast)	27'	2WD 75	0.062	1.00	May	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Diuron 4L	pt											3.0000	3.47	10.41	10.41
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.3500	44.45	60.01	60.01
Hay Disc Mower	8'	2WD 75	0.257	1.00	Aug	4.90	2.97	2.27	2.77	0.25	4.26				17.17
Hay Tedder	17'	2WD 75	0.101	1.00	Aug	19.40	1.16	0.58	0.88	0.10	1.67				23.69
Hay Rake-Double	17'	2WD 75	0.101	1.00	Aug	1.92	1.16	0.40	0.61	0.10	1.67				5.76
Hay Baler	Lg Round	2WD 75	0.211	1.00	Aug	4.02	2.44	6.71	9.08	0.21	3.50				25.75
Twine	bun											0.0300	33.50	1.00	1.00
TOTALS						41.59	14.62	14.31	23.07	1.30	21.29			371.33	486.21
INTEREST ON OPERATING CAPITAL															14.32
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															500.53

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 50 units of nitrogen being applied after emergence and 50 units applied after hay cutting.

Table 14B. Estimated costs per acre
Hybrid bermudagrass establishment, 1 cutting of hay,
Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Nitrogen	cwt	44.45	2.7000	120.02	_____
Phosphate (46% P2O5)	cwt	50.00	1.5000	75.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
HERBICIDE					
Diuron 4L	pt	3.47	3.0000	10.41	_____
OTHER					
Twine	bun	33.50	0.0300	1.00	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	2.0000	15.00	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
CUSTOM PLANT					
Custom Sprig	acre	100.00	1.0000	100.00	_____
OPERATOR LABOR					
Tractors	hour	16.54	1.2702	21.01	_____
HAND LABOR					
Implements	hour	9.06	0.0313	0.28	_____
DIESEL FUEL					
Tractors	gal	4.48	8.8064	39.44	_____
REPAIR & MAINTENANCE					
Implements	acre	14.31	1.0000	14.31	_____
Tractors	acre	2.15	1.0000	2.15	_____
INTEREST ON OP. CAP.	acre	14.32	1.0000	14.32	_____

TOTAL DIRECT EXPENSES				462.84	_____
FIXED EXPENSES					
Implements	acre	23.07	1.0000	23.07	_____
Tractors	acre	14.62	1.0000	14.62	_____

TOTAL FIXED EXPENSES				37.69	_____

TOTAL SPECIFIED EXPENSES				500.53	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 50 units of nitrogen being applied after emergence and 50 units applied after hay cutting

Table 15A. Estimated resource use and costs for field operations, per acre
Hybrid bermudagrass hay maintenance,
4 cuttings of hay, Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Mar	1.19	0.72	0.17	0.23	0.09	1.32				3.63
GrazonNext	pt											1.5000	6.60	9.90	9.90
Surfactant	pt											1.0000	3.30	3.30	3.30
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.3500	44.45	60.01	60.01
Phosphate (46% P2O5)	cwt											1.5000	50.00	75.00	75.00
Potash (60% K2O)	cwt											2.0000	46.60	93.20	93.20
Hay Disc Mower	8'	2WD 75	0.257	1.00	Jun	4.90	2.97	2.27	2.77	0.25	4.26				17.17
Hay Tedder	17'	2WD 75	0.101	1.00	Jun	19.40	1.16	0.58	0.88	0.10	1.67				23.69
Hay Rake-Double	17'	2WD 75	0.101	2.00	Jun	3.84	2.33	0.80	1.22	0.20	3.34				11.53
Hay Baler	Lg Round	2WD 75	0.211	1.00	Jun	4.02	2.44	6.71	9.08	0.21	3.50				25.75
Twine	bun											0.0600	33.50	2.01	2.01
Hay Mover	1B Lift	2WD 75	0.300	1.00	Jun	5.70	3.45	0.06	0.16	0.30	4.96				14.33
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.3500	44.45	60.01	60.01
Hay Disc Mower	8'	2WD 75	0.257	1.00	Jul	4.90	2.97	2.27	2.77	0.25	4.26				17.17
Hay Tedder	17'	2WD 75	0.101	1.00	Jul	19.40	1.16	0.58	0.88	0.10	1.67				23.69
Hay Rake-Double	17'	2WD 75	0.101	2.00	Jul	3.84	2.33	0.80	1.22	0.20	3.34				11.53
Hay Baler	Lg Round	2WD 75	0.211	1.00	Jul	4.02	2.44	6.71	9.08	0.21	3.50				25.75
Twine	bun											0.0600	33.50	2.01	2.01
Hay Mover	1B Lift	2WD 75	0.300	1.00	Jul	5.70	3.45	0.06	0.16	0.30	4.96				14.33
Custom Spread(Truck)	appl			1.00	Jul							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.3500	44.45	60.01	60.01
Soil Testing	acre			1.00	Aug							1.0000	10.00	10.00	10.00
Lime (Spread)	ton			1.00	Aug								58.00		
Hay Disc Mower	8'	2WD 75	0.257	1.00	Aug	4.90	2.97	2.27	2.77	0.25	4.26				17.17
Hay Tedder	17'	2WD 75	0.101	1.00	Aug	19.40	1.16	0.58	0.88	0.10	1.67				23.69
Hay Rake-Double	17'	2WD 75	0.101	2.00	Aug	3.84	2.33	0.80	1.22	0.20	3.34				11.53
Hay Baler	Lg Round	2WD 75	0.211	1.00	Aug	4.02	2.44	6.71	9.08	0.21	3.50				25.75
Twine	bun											0.0300	33.50	1.00	1.00
Hay Mover	1B Lift	2WD 75	0.300	1.00	Aug	5.70	3.45	0.06	0.16	0.30	4.96				14.33
Custom Spread(Truck)	appl			1.00	Aug							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.3500	44.45	60.01	60.01
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
Hay Disc Mower	8'	2WD 75	0.257	1.00	Sep	4.90	2.97	2.27	2.77	0.25	4.26				17.17
Hay Tedder	17'	2WD 75	0.101	1.00	Sep	19.40	1.16	0.58	0.88	0.10	1.67				23.69
Hay Rake-Double	17'	2WD 75	0.101	2.00	Sep	3.84	2.33	0.80	1.22	0.20	3.34				11.53
Hay Baler	Lg Round	2WD 75	0.211	1.00	Sep	4.02	2.44	6.71	9.08	0.21	3.50				25.75
Twine	bun											0.0300	33.50	1.00	1.00
Hay Mover	1B Lift	2WD 75	0.300	1.00	Sep	5.70	3.45	0.06	0.16	0.30	4.96				14.33
Prorated Est Cost	acre				Sep							1.0000			46.88
TOTALS						152.63	50.12	41.85	56.67	4.38	72.24			514.06	934.45
INTEREST ON OPERATING CAPITAL															19.74
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															954.19

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 50 units of nitrogen being applied after emergence and 50 units applied after each cutting of hay.

Table 15B. Estimated costs per acre
Hybrid bermudagrass hay maintenance,
4 cuttings of hay, Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Nitrogen	cwt	44.45	5.4000	240.03	_____
Phosphate (46% P2O5)	cwt	50.00	1.5000	75.00	_____
Potash (60% K2O)	cwt	46.60	3.0000	139.80	_____
HERBICIDE					
GrazonNext	pt	6.60	1.5000	9.90	_____
OTHER					
Twine	bun	33.50	0.1800	6.03	_____
ADJUVANTS					
Surfactant	pt	3.30	1.0000	3.30	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	4.0000	30.00	_____
SERVICE FEE					
Soil Testing	acre	10.00	1.0000	10.00	_____
OPERATOR LABOR					
Tractors	hour	16.54	4.3532	71.96	_____
HAND LABOR					
Implements	hour	9.06	0.0313	0.28	_____
DIESEL FUEL					
Tractors	gal	4.48	32.4168	145.24	_____
REPAIR & MAINTENANCE					
Implements	acre	41.85	1.0000	41.85	_____
Tractors	acre	7.39	1.0000	7.39	_____
INTEREST ON OP. CAP.	acre	19.74	1.0000	19.74	_____

TOTAL DIRECT EXPENSES				800.52	_____
FIXED EXPENSES					
Implements	acre	56.67	1.0000	56.67	_____
Tractors	acre	50.12	1.0000	50.12	_____
Prorated Est Cost	acre	46.88	1.0000	46.88	_____

TOTAL FIXED EXPENSES				153.67	_____

TOTAL SPECIFIED EXPENSES				954.19	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 50 units of nitrogen being applied after emergence and 50 units applied after each cutting of hay

Table 16A. Estimated resource use and costs for field operations, per acre
Tall fescue-white clover pasture establishment,
prepared seedbed, Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Soil Testing	acre			0.33	Aug							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			1.00	Aug								58.00		
Chisel Plow	15'	2WD 75	0.130	1.00	Aug	2.48	1.51	0.89	1.79	0.13	2.17				8.84
Custom Spread(Truck)	appl			1.00	Sep							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	50.00	75.00	75.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
Disk Harrow	14'	2WD 75	0.140	2.00	Sep	5.32	3.23	3.07	7.37	0.28	4.64				23.63
Section Harrow	13'	2WD 75	0.119	1.00	Sep	2.27	1.38	0.13	0.23	0.11	1.98				5.99
Grain Drill	12'	2WD 75	0.157	1.00	Sep	2.99	1.81	2.40	5.24	0.31	4.02				16.46
Fescue Seed	lb											20.0000	2.70	54.00	54.00
Cultipacker	12'	2WD 75	0.124	1.00	Sep	2.36	1.43	0.22	0.34	0.12	2.06				6.41
Tailgate Seeder		2WD 50	0.200	1.00	Sep	2.46	1.04	0.35	0.43	0.20	3.31				7.59
White Clover Seed	lb											3.0000	4.52	13.56	13.56
Custom Spread(Truck)	appl			1.00	Oct							1.0000	7.50	7.50	7.50
Nitrogen	cwt											0.3000	44.45	13.34	13.34
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Nitrogen	cwt											0.3000	44.45	13.34	13.34
TOTALS						17.88	10.40	7.06	15.40	1.16	18.18			241.64	310.56
INTEREST ON OPERATING CAPITAL															9.80
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															320.36

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.

Table 16B. Estimated costs per acre
Tall fescue-white clover pasture establishment,
prepared seedbed, Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	50.00	1.5000	75.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
Nitrogen	cwt	44.45	0.6000	26.67	_____
SEED/PLANTS					
Fescue Seed	lb	2.70	20.0000	54.00	_____
White Clover Seed	lb	4.52	3.0000	13.56	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	3.0000	22.50	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	1.0126	16.76	_____
HAND LABOR					
Implements	hour	9.06	0.1571	1.42	_____
DIESEL FUEL					
Tractors	gal	4.48	3.6516	16.36	_____
REPAIR & MAINTENANCE					
Implements	acre	7.06	1.0000	7.06	_____
Tractors	acre	1.52	1.0000	1.52	_____
INTEREST ON OP. CAP.	acre	9.80	1.0000	9.80	_____

TOTAL DIRECT EXPENSES				294.56	_____
FIXED EXPENSES					
Implements	acre	15.40	1.0000	15.40	_____
Tractors	acre	10.40	1.0000	10.40	_____

TOTAL FIXED EXPENSES				25.80	_____

TOTAL SPECIFIED EXPENSES				320.36	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.

Table 17A. Estimated resource use and costs for field operations, per acre
Tall fescue-white clover pasture establishment,
novel/endophyte free, sod-seeding, Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Soil Testing	acre			0.33	Aug							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			1.00	Aug								58.00		
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Sep	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Glyphosate 3lbs a.e.	pt											2.5000	5.38	13.45	13.45
Custom Spread(Truck)	appl			1.00	Sep							1.0000	7.50	7.50	7.50
Nitrogen	cwt											0.3000	44.45	13.34	13.34
Phosphate (46% P2O5)	cwt											1.5000	50.00	75.00	75.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
Grain Drill	12'	2WD 75	0.157	1.00	Sep	2.99	1.81	2.40	5.24	0.31	4.02				16.46
Fescue Seed	lb											20.0000	2.70	54.00	54.00
Grain Drill	12'	2WD 75	0.157	1.00	Sep	2.99	1.81	2.40	5.24	0.31	4.02				16.46
White Clover Seed	lb											3.0000	4.52	13.56	13.56
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Nitrogen	cwt											0.3000	44.45	13.34	13.34
TOTALS						7.17	4.34	4.97	10.71	0.72	9.36			247.59	284.14
INTEREST ON OPERATING CAPITAL															9.29
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															293.43

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.

Table 17B. Estimated costs per acre
Tall fescue-white clover pasture establishment,
novel/endophyte free, sod-seeding, Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Nitrogen	cwt	44.45	0.6000	26.67	_____
Phosphate (46% P2O5)	cwt	50.00	1.5000	75.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
HERBICIDE					
Glyphosate 3lbs a.e.	pt	5.38	2.5000	13.45	_____
SEED/PLANTS					
Fescue Seed	lb	2.70	20.0000	54.00	_____
White Clover Seed	lb	4.52	3.0000	13.56	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	2.0000	15.00	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	0.3769	6.24	_____
HAND LABOR					
Implements	hour	9.06	0.3456	3.12	_____
DIESEL FUEL					
Tractors	gal	4.48	1.4552	6.52	_____
REPAIR & MAINTENANCE					
Implements	acre	4.97	1.0000	4.97	_____
Tractors	acre	0.65	1.0000	0.65	_____
INTEREST ON OP. CAP.	acre	9.29	1.0000	9.29	_____

TOTAL DIRECT EXPENSES				278.38	_____
FIXED EXPENSES					
Implements	acre	10.71	1.0000	10.71	_____
Tractors	acre	4.34	1.0000	4.34	_____

TOTAL FIXED EXPENSES				15.05	_____

TOTAL SPECIFIED EXPENSES				293.43	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.

Table 18A. Estimated resource use and costs for field operations, per acre
Tall fescue-white clover pasture maintenance,
novel-endophyte free, Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Rotary Mower	12'	2WD 75	0.098	1.00	Aug	1.87	1.13	1.61	1.29	0.09	1.62				7.52
Soil Testing	acre			0.33	Aug							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			1.00	Aug								58.00		
Tailgate Seeder		2WD 50	0.200	1.00	Oct	2.46	1.04	0.35	0.43	0.20	3.31				7.59
White Clover Seed	lb											2.0000	4.52	9.04	9.04
Custom Spread(Truck)	appl			1.00	Oct							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	50.00	75.00	75.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
Nitrogen	cwt											0.3000	44.45	13.34	13.34
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Mar	1.19	0.72	0.17	0.23	0.09	1.32				3.63
2,4-D amine	pt											1.5000	3.33	5.00	5.00
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Nitrogen	cwt											0.3000	44.45	13.34	13.34
Prorated Est Cost	acre				Oct							1.0000			27.48
TOTALS						5.52	2.89	2.13	1.95	0.39	6.25			180.62	226.84
INTEREST ON OPERATING CAPITAL															5.45
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															232.29

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.

Table 18B. Estimated costs per acre
Tall fescue-white clover pasture maintenance,
novel-endophyte free, Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	50.00	1.5000	75.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
Nitrogen	cwt	44.45	0.6000	26.67	_____
HERBICIDE					
2,4-D amine	pt	3.33	1.5000	5.00	_____
SEED/PLANTS					
White Clover Seed	lb	4.52	2.0000	9.04	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	2.0000	15.00	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	0.3608	5.97	_____
HAND LABOR					
Implements	hour	9.06	0.0313	0.28	_____
DIESEL FUEL					
Tractors	gal	4.48	1.1358	5.09	_____
REPAIR & MAINTENANCE					
Implements	acre	2.13	1.0000	2.13	_____
Tractors	acre	0.43	1.0000	0.43	_____
INTEREST ON OP. CAP.	acre	5.45	1.0000	5.45	_____

TOTAL DIRECT EXPENSES				199.97	_____
FIXED EXPENSES					
Implements	acre	1.95	1.0000	1.95	_____
Tractors	acre	2.89	1.0000	2.89	_____
Prorated Est Cost	acre	27.48	1.0000	27.48	_____

TOTAL FIXED EXPENSES				32.32	_____

TOTAL SPECIFIED EXPENSES				232.29	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.

Table 19A. Estimated resource use and costs for field operations, per acre
No-till renovation of old K-31 tall fescue pasture with
novel endophyte/endophyte free tall fescue, Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Soil Testing	acre			0.33	Mar							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			1.00	Mar								58.00		
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Apr	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Glyphosate 3lbs a.e.	pt											2.5000	5.38	13.45	13.45
Surfactant	pt											0.4000	3.30	1.32	1.32
NT Grain Drill	12'	2WD 75	0.196	1.00	May	3.73	2.26	3.70	8.07	0.39	5.03				22.79
SS, PM, FS Seed	lb											25.0000	1.36	34.00	34.00
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Sep	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Glyphosate 3lbs a.e.	pt											2.5000	5.38	13.45	13.45
NT Grain Drill	12'	2WD 75	0.196	1.00	Sep	3.73	2.26	3.70	8.07	0.39	5.03				22.79
White Clover Seed	lb											3.0000	4.52	13.56	13.56
NT Grain Drill	12'	2WD 75	0.196	1.00	Sep	3.73	2.26	3.70	8.07	0.39	5.03				22.79
Fescue Seed	lb											20.0000	2.70	54.00	54.00
Custom Spread(Truck)	appl			1.00	Oct							1.0000	7.50	7.50	7.50
Nitrogen	cwt											0.5000	44.45	22.23	22.23
Phosphate (46% P2O5)	cwt											1.5000	50.00	75.00	75.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Nitrogen	cwt											0.5000	44.45	22.23	22.23
TOTALS						13.57	8.22	11.44	24.67	1.36	17.73			314.14	389.77
INTEREST ON OPERATING CAPITAL															5.35
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															395.12

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
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 19B. Estimated costs per acre
No-till renovation of old K-31 tall fescue pasture with
novel endophyte/endophyte free tall fescue, Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Nitrogen	cwt	44.45	1.0000	44.45	_____
Phosphate (46% P2O5)	cwt	50.00	1.5000	75.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
HERBICIDE					
Glyphosate 3lbs a.e.	pt	5.38	5.0000	26.90	_____
SEED/PLANTS					
SS, PM, FS Seed	lb	1.36	25.0000	34.00	_____
White Clover Seed	lb	4.52	3.0000	13.56	_____
Fescue Seed	lb	2.70	20.0000	54.00	_____
ADJUVANTS					
Surfactant	pt	3.30	0.4000	1.32	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	2.0000	15.00	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	0.7146	11.83	_____
HAND LABOR					
Implements	hour	9.06	0.6519	5.90	_____
DIESEL FUEL					
Tractors	gal	4.48	2.7588	12.36	_____
REPAIR & MAINTENANCE					
Implements	acre	11.44	1.0000	11.44	_____
Tractors	acre	1.21	1.0000	1.21	_____
INTEREST ON OP. CAP.	acre	5.35	1.0000	5.35	_____

TOTAL DIRECT EXPENSES				362.23	_____
FIXED EXPENSES					
Implements	acre	24.67	1.0000	24.67	_____
Tractors	acre	8.22	1.0000	8.22	_____

TOTAL FIXED EXPENSES				32.89	_____

TOTAL SPECIFIED EXPENSES				395.12	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
Research suggests tall fescue renovation to novel endophyte fescue will require 2 years glyphosate applications to completely eliminate existing stand.

Table 20A. Estimated resource use and costs for field operations, per acre
Ryegrass annual pasture, prepared seedbed,
Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Soil Testing	acre			0.33	Aug							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			1.00	Aug								58.00		
Chisel Plow	15'	2WD 75	0.130	1.00	Aug	2.48	1.51	0.89	1.79	0.13	2.17				8.84
Disk Harrow	14'	2WD 75	0.140	2.00	Aug	5.32	3.23	3.07	7.37	0.28	4.64				23.63
Custom Spread(Truck)	appl			1.00	Sep							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	50.00	75.00	75.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
Ryegrass Seed	lb											25.0000	0.85	21.25	21.25
Section Harrow	13'	2WD 75	0.119	1.00	Sep	2.27	1.38	0.13	0.23	0.11	1.98				5.99
Cultipacker	12'	2WD 75	0.124	1.00	Sep	2.36	1.43	0.22	0.34	0.12	2.06				6.41
Custom Spread(Truck)	appl			1.00	Oct							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0000	44.45	44.45	44.45
Custom Spread(Truck)	appl			1.00	Dec							1.0000	7.50	7.50	7.50
Nitrogen	cwt											2.0000	44.45	88.90	88.90
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Dec	1.19	0.72	0.17	0.23	0.09	1.32				3.63
2,4-D amine	pt											1.0000	3.33	3.33	3.33
Custom Spread(Truck)	appl			1.00	Mar							1.0000	7.50	7.50	7.50
Nitrogen	cwt											2.0000	44.45	88.90	88.90
TOTALS						13.62	8.27	4.48	9.96	0.74	12.17			401.73	450.23
INTEREST ON OPERATING CAPITAL															11.24
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															461.47

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.

Table 20B. Estimated costs per acre
Ryegrass annual pasture, prepared seedbed,
Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	50.00	1.5000	75.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
Nitrogen	cwt	44.45	5.0000	222.25	_____
HERBICIDE					
2,4-D amine	pt	3.33	1.0000	3.33	_____
SEED/PLANTS					
Ryegrass Seed	lb	0.85	25.0000	21.25	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	4.0000	30.00	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	0.7181	11.89	_____
HAND LABOR					
Implements	hour	9.06	0.0313	0.28	_____
DIESEL FUEL					
Tractors	gal	4.48	2.7723	12.41	_____
REPAIR & MAINTENANCE					
Implements	acre	4.48	1.0000	4.48	_____
Tractors	acre	1.21	1.0000	1.21	_____
INTEREST ON OP. CAP.	acre	11.24	1.0000	11.24	_____

TOTAL DIRECT EXPENSES				443.24	_____
FIXED EXPENSES					
Implements	acre	9.96	1.0000	9.96	_____
Tractors	acre	8.27	1.0000	8.27	_____

TOTAL FIXED EXPENSES				18.23	_____

TOTAL SPECIFIED EXPENSES				461.47	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.

Table 21A. Estimated resource use and costs for field operations, per acre
No-till ryegrass into volunteer summer grasses,
Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Soil Testing	acre			0.33	Aug							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			1.00	Aug								58.00		
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Aug	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Glyphosate 3lbs a.e.	pt											2.0000	5.38	10.76	10.76
Custom Spread(Truck)	appl			1.00	Sep							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.0000	50.00	50.00	50.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
NT Grain Drill	12'	2WD 75	0.196	1.00	Sep	3.73	2.26	3.70	8.07	0.39	5.03				22.79
Ryegrass Seed	lb											35.0000	0.85	29.75	29.75
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Sep	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Mustang Max	oz											0.1900	1.48	0.28	0.28
Custom Spread(Truck)	appl			1.00	Oct							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0000	44.45	44.45	44.45
Custom Spread(Truck)	appl			1.00	Dec							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0000	44.45	44.45	44.45
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Dec	1.19	0.72	0.17	0.23	0.09	1.32				3.63
Gramoxone SL 2.0	oz											1.0000	0.37	0.37	0.37
Custom Spread(Truck)	appl			1.00	Mar							1.0000	7.50	7.50	7.50
Nitrogen	cwt											2.0000	44.45	88.90	88.90
TOTALS						7.30	4.42	4.21	8.76	0.67	8.99			348.86	382.54
INTEREST ON OPERATING CAPITAL															9.64
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															392.18

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.

Table 21B. Estimated costs per acre
No-till ryegrass into volunteer summer grasses,
Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	50.00	1.0000	50.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
Nitrogen	cwt	44.45	4.0000	177.80	_____
HERBICIDE					
Glyphosate 3lbs a.e.	pt	5.38	2.0000	10.76	_____
Gramoxone SL 2.0	oz	0.37	1.0000	0.37	_____
INSECTICIDE					
Mustang Max	oz	1.48	0.1900	0.28	_____
SEED/PLANTS					
Ryegrass Seed	lb	0.85	35.0000	29.75	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	4.0000	30.00	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	0.3844	6.37	_____
HAND LABOR					
Implements	hour	9.06	0.2904	2.62	_____
DIESEL FUEL					
Tractors	gal	4.48	1.4842	6.64	_____
REPAIR & MAINTENANCE					
Implements	acre	4.21	1.0000	4.21	_____
Tractors	acre	0.66	1.0000	0.66	_____
INTEREST ON OP. CAP.	acre	9.64	1.0000	9.64	_____

TOTAL DIRECT EXPENSES				379.00	_____
FIXED EXPENSES					
Implements	acre	8.76	1.0000	8.76	_____
Tractors	acre	4.42	1.0000	4.42	_____

TOTAL FIXED EXPENSES				13.18	_____

TOTAL SPECIFIED EXPENSES				392.18	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.

Table 22A. Estimated resource use and costs for field operations, per acre
Overseeded annual ryegrass pasture maintenance,
Broadcast, Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Soil Testing	acre			0.33	Aug							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			1.00	Aug								58.00		
Rotary Mower	12'	2WD 75	0.098	1.00	Aug	1.87	1.13	1.61	1.29	0.09	1.62				7.52
Disk Harrow	14'	2WD 75	0.140	1.00	Oct	2.67	1.62	1.54	3.68	0.14	2.32				11.83
Custom Spread + Seed	appl			1.00	Oct							1.0000	5.00	5.00	5.00
Phosphate (46% P2O5)	cwt											2.0000	50.00	100.00	100.00
Potash (60% K2O)	cwt											1.5000	46.60	69.90	69.90
Ryegrass Seed	lb											30.0000	0.85	25.50	25.50
Section Harrow	13'	2WD 75	0.119	1.00	Oct	2.27	1.38	0.13	0.23	0.11	1.98				5.99
Custom Spread(Truck)	appl			1.00	Dec							1.0000	7.50	7.50	7.50
Nitrogen	cwt											0.9000	44.45	40.01	40.01
Custom Spread(Truck)	appl			1.00	Mar							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.2000	44.45	53.34	53.34
Prorated Est Cost	acre				Jun							1.0000			43.22
TOTALS						6.81	4.13	3.28	5.20	0.35	5.92			312.05	380.61
INTEREST ON OPERATING CAPITAL															8.46
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															389.07

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.

Table 22B. Estimated costs per acre
Overseeded annual ryegrass pasture maintenance,
Broadcast, Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	50.00	2.0000	100.00	_____
Potash (60% K2O)	cwt	46.60	1.5000	69.90	_____
Nitrogen	cwt	44.45	2.1000	93.35	_____
SEED/PLANTS					
Ryegrass Seed	lb	0.85	30.0000	25.50	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	2.0000	15.00	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
CUSTOM PLANT					
Custom Spread + Seed	appl	5.00	1.0000	5.00	_____
OPERATOR LABOR					
Tractors	hour	16.54	0.3579	5.92	_____
DIESEL FUEL					
Tractors	gal	4.48	1.3819	6.20	_____
REPAIR & MAINTENANCE					
Implements	acre	3.28	1.0000	3.28	_____
Tractors	acre	0.61	1.0000	0.61	_____
INTEREST ON OP. CAP.	acre	8.46	1.0000	8.46	_____

TOTAL DIRECT EXPENSES				336.52	_____
FIXED EXPENSES					
Implements	acre	5.20	1.0000	5.20	_____
Tractors	acre	4.13	1.0000	4.13	_____
Prorated Est Cost	acre	43.22	1.0000	43.22	_____

TOTAL FIXED EXPENSES				52.55	_____

TOTAL SPECIFIED EXPENSES				389.07	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.

Table 23A. Estimated resource use and costs for field operations, per acre
Sorghum x Sudan (SS), Pearl Millet (PM),
Forage Sorghum (FS) annual hay, Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Soil Testing	acre			0.33	Apr							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			1.00	Apr								58.00		
Chisel Plow	15'	2WD 75	0.130	1.00	Apr	2.48	1.51	0.89	1.79	0.13	2.17				8.84
Disk Harrow	14'	2WD 75	0.140	2.00	Apr	5.32	3.23	3.07	7.37	0.28	4.64				23.63
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.5000	44.45	66.68	66.68
Phosphate (46% P2O5)	cwt											1.0000	50.00	50.00	50.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
Grain Drill	12'	2WD 75	0.157	1.00	May	2.99	1.81	2.40	5.24	0.31	4.02				16.46
SS, PM, FS Seed	lb											30.0000	1.36	40.80	40.80
Spray (Broadcast)	27'	2WD 75	0.062	1.00	May	1.19	0.72	0.17	0.23	0.09	1.32				3.63
2,4-D amine	pt											1.5000	3.33	5.00	5.00
Hay Cut-Cond	9'	2WD 75	0.229	1.00	Jun	4.35	2.64	4.79	5.83	0.22	3.79				21.40
Hay Rake	8.5'	2WD 50	0.202	2.00	Jun	4.97	2.11	1.67	2.54	0.40	6.69				17.98
Hay Baler	Lg Round	2WD 75	0.211	1.00	Jun	4.02	2.44	6.71	9.08	0.21	3.50				25.75
Twine	bun											0.0800	33.50	2.68	2.68
Hay Mover	1B Lift	2WD 75	0.300	1.00	Jun	5.70	3.45	0.06	0.16	0.30	4.96				14.33
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.5000	44.45	66.68	66.68
Hay Cut-Cond	9'	2WD 75	0.229	1.00	Jul	4.35	2.64	4.79	5.83	0.22	3.79				21.40
Hay Rake	8.5'	2WD 50	0.202	2.00	Jul	4.97	2.11	1.67	2.54	0.40	6.69				17.98
Hay Baler	Lg Round	2WD 75	0.211	1.00	Jul	4.02	2.44	6.71	9.08	0.21	3.50				25.75
Twine	bun											0.0600	33.50	2.01	2.01
Hay Mover	1B Lift	2WD 75	0.300	1.00	Jul	5.70	3.45	0.06	0.16	0.30	4.96				14.33
Custom Spread(Truck)	appl			1.00	Aug							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.5000	44.45	66.68	66.68
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
Hay Cut-Cond	9'	2WD 75	0.229	1.00	Aug	4.35	2.64	4.79	5.83	0.22	3.79				21.40
Hay Rake	8.5'	2WD 50	0.202	2.00	Aug	4.97	2.11	1.67	2.54	0.40	6.69				17.98
Hay Baler	Lg Round	2WD 75	0.211	1.00	Aug	4.02	2.44	6.71	9.08	0.21	3.50				25.75
Twine	bun											0.0400	33.50	1.34	1.34
Hay Mover	1B Lift	2WD 75	0.300	1.00	Aug	5.70	3.45	0.06	0.16	0.30	4.96				14.33
Hay Cut-Cond	9'	2WD 75	0.229	1.00	Sep	4.35	2.64	4.79	5.83	0.22	3.79				21.40
Hay Rake	8.5'	2WD 50	0.202	2.00	Sep	4.97	2.11	1.67	2.54	0.40	6.69				17.98
Hay Baler	Lg Round	2WD 75	0.211	1.00	Sep	4.02	2.44	6.71	9.08	0.21	3.50				25.75
Twine	bun											0.0300	33.50	1.00	1.00
Hay Mover	1B Lift	2WD 75	0.300	1.00	Sep	5.70	3.45	0.06	0.16	0.30	4.96				14.33
TOTALS						88.14	49.83	59.45	85.07	5.40	87.91			421.87	792.27
INTEREST ON OPERATING CAPITAL															20.44
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															812.71

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
2,4-D applied when sorghum/sudan is 4 to 6 inches tall.

Table 23B. Estimated costs per acre
Sorghum x Sudan (SS), Pearl Millet (PM),
Forage Sorghum (FS) annual hay, Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Nitrogen	cwt	44.45	4.5000	200.03	_____
Phosphate (46% P2O5)	cwt	50.00	1.0000	50.00	_____
Potash (60% K2O)	cwt	46.60	2.0000	93.20	_____
HERBICIDE					
2,4-D amine	pt	3.33	1.5000	5.00	_____
SEED/PLANTS					
SS, PM, FS Seed	lb	1.36	30.0000	40.80	_____
OTHER					
Twine	bun	33.50	0.2100	7.04	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	3.0000	22.50	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	5.2119	86.21	_____
HAND LABOR					
Implements	hour	9.06	0.1884	1.70	_____
DIESEL FUEL					
Tractors	gal	4.48	18.0384	80.79	_____
REPAIR & MAINTENANCE					
Implements	acre	59.45	1.0000	59.45	_____
Tractors	acre	7.35	1.0000	7.35	_____
INTEREST ON OP. CAP.	acre	20.44	1.0000	20.44	_____

TOTAL DIRECT EXPENSES				677.81	_____
FIXED EXPENSES					
Implements	acre	85.07	1.0000	85.07	_____
Tractors	acre	49.83	1.0000	49.83	_____

TOTAL FIXED EXPENSES				134.90	_____

TOTAL SPECIFIED EXPENSES				812.71	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
2,4-D applied when sorghum/sudan is 4 to 6 inches tall.

Table 24A. Estimated resource use and costs for field operations, per acre
Sorghum x Sudan (SS), Pearl Millet (PM),
Forage Sorghum (FS) annual pasture, Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Soil Testing	acre			0.33	Apr							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			1.00	Apr								58.00		
Chisel Plow	15'	2WD 75	0.130	1.00	Apr	2.48	1.51	0.89	1.79	0.13	2.17				8.84
Custom Spread(Truck)	appl			1.00	May							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0000	44.45	44.45	44.45
Phosphate (46% P2O5)	cwt											1.0000	50.00	50.00	50.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
Disk Harrow	14'	2WD 75	0.140	2.00	May	5.32	3.23	3.07	7.37	0.28	4.64				23.63
Spray (Broadcast)	27'	2WD 75	0.062	1.00	May	1.19	0.72	0.17	0.23	0.09	1.32				3.63
2,4-D amine	pt											1.5000	3.33	5.00	5.00
Grain Drill	12'	2WD 75	0.157	1.00	May	2.99	1.81	2.40	5.24	0.31	4.02				16.46
SS, PM, FS Seed	lb											30.0000	1.36	40.80	40.80
Custom Spread(Truck)	appl			1.00	Jul							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0000	44.45	44.45	44.45
TOTALS						11.98	7.27	6.53	14.63	0.81	12.15			249.60	302.16
INTEREST ON OPERATING CAPITAL															9.97
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															312.13

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
2,4-D applied when sorghum/sudan is 4 to 6 inches tall.

Table 24B. Estimated costs per acre
Sorghum x Sudan (SS), Pearl Millet (PM),
Forage Sorghum (FS) annual pasture, Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Nitrogen	cwt	44.45	2.0000	88.90	_____
Phosphate (46% P2O5)	cwt	50.00	1.0000	50.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
HERBICIDE					
2,4-D amine	pt	3.33	1.5000	5.00	_____
SEED/PLANTS					
SS, PM, FS Seed	lb	1.36	30.0000	40.80	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	2.0000	15.00	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	0.6313	10.45	_____
HAND LABOR					
Implements	hour	9.06	0.1884	1.70	_____
DIESEL FUEL					
Tractors	gal	4.48	2.4374	10.91	_____
REPAIR & MAINTENANCE					
Implements	acre	6.53	1.0000	6.53	_____
Tractors	acre	1.07	1.0000	1.07	_____
INTEREST ON OP. CAP.	acre	9.97	1.0000	9.97	_____

TOTAL DIRECT EXPENSES				290.23	_____
FIXED EXPENSES					
Implements	acre	14.63	1.0000	14.63	_____
Tractors	acre	7.27	1.0000	7.27	_____

TOTAL FIXED EXPENSES				21.90	_____

TOTAL SPECIFIED EXPENSES				312.13	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
2,4-D applied when sorghum/sudan is 4 to 6 inches tall.

Table 25A. Estimated resource use and costs for field operations, per acre
Sorghum silage,
Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Lime (Spread)	ton			1.00	Sep								58.00		
Chisel Plow	15'	2WD 75	0.130	2.00	Apr	4.97	3.02	1.78	3.57	0.26	4.33				17.67
Spin Spreader	5 Ton	2WD 75	0.042	1.00	May	0.80	0.48	0.34	0.78	0.08	1.08				3.48
Nitrogen	cwt											1.0700	44.45	47.56	47.56
Phosphate (46% P2O5)	cwt											1.5000	50.00	75.00	75.00
Potash (60% K2O)	cwt											2.0000	46.60	93.20	93.20
Field Cultivate	12'	2WD 75	0.124	1.00	May	2.36	1.43	0.53	2.55	0.12	2.06				8.93
Disk Bed (Hipper)	4R-38	2WD 75	0.147	1.00	May	2.80	1.70	0.58	1.74	0.14	2.44				9.26
Row Cond	13'	2WD 75	0.119	1.00	May	2.27	1.38	1.16	1.90	0.11	1.98				8.69
Plant & Pre Rigid	4R-38	2WD 75	0.153	1.00	May	2.92	1.77	1.75	3.83	0.30	3.93				14.20
Forage Sorghum Seed	lb											6.0000	0.88	5.28	5.28
Bicep ll Magnum	qt											2.0000	14.50	29.00	29.00
Cultivate	4R-38	2WD 75	0.162	1.00	May	3.08	1.87	0.82	2.47	0.16	2.69				10.93
Spin Spreader	5 Ton	2WD 75	0.042	1.00	May	0.80	0.48	0.34	0.78	0.08	1.08				3.48
Nitrogen	cwt											2.6500	44.45	117.79	117.79
Cultivate	4R-38	2WD 75	0.162	1.00	Jun	3.08	1.87	0.82	2.47	0.16	2.69				10.93
Silage Harvester	2-Row	2WD 75	0.510	1.00	Sep	9.68	5.87	26.18	31.87	0.51	8.44				82.04
Silage Wagon 12T	12-Ton	2WD 75	0.510	1.00	Sep	9.68	5.87	3.49	8.99	0.51	8.44				36.47
TOTALS						42.44	25.74	37.79	60.95	2.47	39.16			367.83	573.91
INTEREST ON OPERATING CAPITAL															2.87
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															576.78

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.

Table 25B. Estimated costs per acre
Sorghum silage,
Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Nitrogen	cwt	44.45	3.7200	165.35	_____
Phosphate (46% P2O5)	cwt	50.00	1.5000	75.00	_____
Potash (60% K2O)	cwt	46.60	2.0000	93.20	_____
HERBICIDE					
Bicep ll Magnum	qt	14.50	2.0000	29.00	_____
SEED/PLANTS					
Forage Sorghum Seed	lb	0.88	6.0000	5.28	_____
OPERATOR LABOR					
Tractors	hour	16.54	2.2365	37.01	_____
HAND LABOR					
Implements	hour	9.06	0.2379	2.15	_____
DIESEL FUEL					
Tractors	gal	4.48	8.6340	38.68	_____
REPAIR & MAINTENANCE					
Implements	acre	37.79	1.0000	37.79	_____
Tractors	acre	3.76	1.0000	3.76	_____
INTEREST ON OP. CAP.	acre	2.87	1.0000	2.87	_____

TOTAL DIRECT EXPENSES				490.09	_____
FIXED EXPENSES					
Implements	acre	60.95	1.0000	60.95	_____
Tractors	acre	25.74	1.0000	25.74	_____

TOTAL FIXED EXPENSES				86.69	_____

TOTAL SPECIFIED EXPENSES				576.78	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.

Table 26A. 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, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Soil Testing	acre			0.33	Aug							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			1.00	Aug								58.00		
Chisel Plow	15'	2WD 75	0.130	1.00	Aug	2.48	1.51	0.89	1.79	0.13	2.17				8.84
Disk Harrow	14'	2WD 75	0.140	1.00	Aug	2.67	1.62	1.54	3.68	0.14	2.32				11.83
Custom Spread(Truck)	appl			1.00	Sep							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
Phosphate (46% P2O5)	cwt											1.0000	50.00	50.00	50.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
Section Harrow	13'	2WD 75	0.119	1.00	Sep	2.27	1.38	0.13	0.23	0.11	1.98				5.99
Grain Drill	12'	2WD 130	0.157	1.00	Sep	5.29	3.93	2.40	5.24	0.31	4.02				20.88
Ryegrass Seed	lb											18.0000	0.85	15.30	15.30
Small Grains Seed	lb											60.0000	0.89	53.40	53.40
Brassica Seed	lb											2.0000	0.98	1.96	1.96
Balansa Clover	lb.											15.0000	2.45	36.75	36.75
TOTALS						12.71	8.44	4.96	10.94	0.70	10.49			262.37	309.91
INTEREST ON OPERATING CAPITAL															11.74
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															321.65

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.

Table 26B. Estimated costs per acre
Ryegrass, Small Grains (oat, cereal rye, triticale),
Annual Clover, Brassica mix annual pasture, prepared seedbed,
Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Nitrogen	cwt	44.45	1.0700	47.56	_____
Phosphate (46% P2O5)	cwt	50.00	1.0000	50.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
SEED/PLANTS					
Ryegrass Seed	lb	0.85	18.0000	15.30	_____
Small Grains Seed	lb	0.89	60.0000	53.40	_____
Brassica Seed	lb	0.98	2.0000	1.96	_____
Balansa Clover	lb.	2.45	15.0000	36.75	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	1.0000	7.50	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	0.5478	9.07	_____
HAND LABOR					
Implements	hour	9.06	0.1571	1.42	_____
DIESEL FUEL					
Tractors	gal	4.48	2.5598	11.47	_____
REPAIR & MAINTENANCE					
Implements	acre	4.96	1.0000	4.96	_____
Tractors	acre	1.24	1.0000	1.24	_____
INTEREST ON OP. CAP.	acre	11.74	1.0000	11.74	_____

TOTAL DIRECT EXPENSES				302.27	_____
FIXED EXPENSES					
Implements	acre	10.94	1.0000	10.94	_____
Tractors	acre	8.44	1.0000	8.44	_____

TOTAL FIXED EXPENSES				19.38	_____

TOTAL SPECIFIED EXPENSES				321.65	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.

Table 27A. Estimated resource use and costs for field operations, per acre
Ryegrass-Small grains annual pasture, prepared seedbed,
Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Soil Testing	acre			0.33	Aug							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			1.00	Aug								58.00		
Chisel Plow	15'	2WD 75	0.130	1.00	Aug	2.48	1.51	0.89	1.79	0.13	2.17				8.84
Disk Harrow	14'	2WD 75	0.140	1.00	Aug	2.67	1.62	1.54	3.68	0.14	2.32				11.83
Custom Spread(Truck)	appl			1.00	Sep							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
Phosphate (46% P2O5)	cwt											1.0000	50.00	50.00	50.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
Section Harrow	13'	2WD 75	0.119	1.00	Sep	2.27	1.38	0.13	0.23	0.11	1.98				5.99
Grain Drill	12'	2WD 75	0.157	1.00	Sep	2.99	1.81	2.40	5.24	0.31	4.02				16.46
Ryegrass Seed	lb											20.0000	0.85	17.00	17.00
Small Grains Seed	lb											70.0000	0.89	62.30	62.30
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Mar	1.19	0.72	0.17	0.23	0.09	1.32				3.63
2,4-D amine	pt											1.5000	3.33	5.00	5.00
TOTALS						11.60	7.04	5.13	11.17	0.79	11.81			239.26	286.01
INTEREST ON OPERATING CAPITAL															9.84
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															295.85

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.

Table 27B. Estimated costs per acre
Ryegrass-Small grains annual pasture, prepared seedbed,
Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Nitrogen	cwt	44.45	1.0700	47.56	_____
Phosphate (46% P2O5)	cwt	50.00	1.0000	50.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
HERBICIDE					
2,4-D amine	pt	3.33	1.5000	5.00	_____
SEED/PLANTS					
Ryegrass Seed	lb	0.85	20.0000	17.00	_____
Small Grains Seed	lb	0.89	70.0000	62.30	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	1.0000	7.50	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	0.6105	10.11	_____
HAND LABOR					
Implements	hour	9.06	0.1884	1.70	_____
DIESEL FUEL					
Tractors	gal	4.48	2.3569	10.56	_____
REPAIR & MAINTENANCE					
Implements	acre	5.13	1.0000	5.13	_____
Tractors	acre	1.04	1.0000	1.04	_____
INTEREST ON OP. CAP.	acre	9.84	1.0000	9.84	_____

TOTAL DIRECT EXPENSES				277.64	_____
FIXED EXPENSES					
Implements	acre	11.17	1.0000	11.17	_____
Tractors	acre	7.04	1.0000	7.04	_____

TOTAL FIXED EXPENSES				18.21	_____

TOTAL SPECIFIED EXPENSES				295.85	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.

Table 28A. Estimated resource use and costs for field operations, per acre
Crabgrass establishment, broadcast,
Mississippi, 2024

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST DIRECT	POWER UNIT COST FIXED	EQUIPMENT COST DIRECT	EQUIPMENT COST FIXED	ALLOC LABOR HOURS	ALLOC LABOR COST	OPERATING/DURABLE INPUT AMOUNT	OPERATING/DURABLE INPUT PRICE	OPERATING/DURABLE INPUT COST	TOTAL COST
						dollars					dollars			dollars	
Chisel Plow	15'	2WD 75	0.130	1.00	Mar	2.48	1.51	0.89	1.79	0.13	2.17				8.84
Soil Testing	acre			0.33	Apr							0.3300	10.00	3.30	3.30
Lime (Spread)	ton			1.00	Apr								58.00		
Disk Harrow	14'	2WD 75	0.140	1.00	Apr	2.67	1.62	1.54	3.68	0.14	2.32				11.83
Spray (Broadcast)	27'	2WD 75	0.062	1.00	Apr	1.21	0.86	0.17	0.23	0.09	1.32				3.79
Glyphosate 3lbs a.e.	pt											2.0000	5.38	10.76	10.76
Surfactant	pt											1.0000	3.30	3.30	3.30
Custom Spread(Truck)	appl			1.00	Apr							1.0000	7.50	7.50	7.50
Phosphate (46% P2O5)	cwt											1.5000	50.00	75.00	75.00
Potash (60% K2O)	cwt											1.0000	46.60	46.60	46.60
Disk Harrow	14'	2WD 75	0.140	1.00	Apr	2.67	1.62	1.54	3.68	0.14	2.32				11.83
Section Harrow	13'	2WD 75	0.119	1.00	Apr	2.27	1.38	0.13	0.23	0.11	1.98				5.99
Cyclone Spin	750Lb	2WD 105	0.200	1.00	Apr	5.30	3.12	0.31	1.27	0.30	4.22				14.22
Crabgrass seed	lb											20.0000	8.10	162.00	162.00
Cultipacker	12'	2WD 75	0.124	1.00	Apr	2.36	1.43	0.22	0.34	0.12	2.06				6.41
Custom Spread(Truck)	appl			1.00	Jun							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
Rotary Mower	12'	2WD 75	0.098	1.00	Jun	1.87	1.13	1.61	1.29	0.09	1.62				7.52
Custom Spread(Truck)	appl			1.00	Jul							1.0000	7.50	7.50	7.50
Nitrogen	cwt											1.0700	44.45	47.56	47.56
TOTALS						20.83	12.67	6.41	12.51	1.14	18.01			418.58	489.01
INTEREST ON OPERATING CAPITAL															15.81
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															504.82

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 40 units of nitrogen being applied after emergence and 40 units applied after the first grazing cycle.

Table 28B. Estimated costs per acre
Crabgrass establishment, broadcast,
Mississippi, 2024

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
FERTILIZER					
Phosphate (46% P2O5)	cwt	50.00	1.5000	75.00	_____
Potash (60% K2O)	cwt	46.60	1.0000	46.60	_____
Nitrogen	cwt	44.45	2.1400	95.12	_____
HERBICIDE					
Glyphosate 3lbs a.e.	pt	5.38	2.0000	10.76	_____
SEED/PLANTS					
Crabgrass seed	lb	8.10	20.0000	162.00	_____
ADJUVANTS					
Surfactant	pt	3.30	1.0000	3.30	_____
CUSTOM FERT					
Custom Spread(Truck)	appl	7.50	3.0000	22.50	_____
SERVICE FEE					
Soil Testing	acre	10.00	0.3300	3.30	_____
OPERATOR LABOR					
Tractors	hour	16.54	1.0163	16.82	_____
HAND LABOR					
Implements	hour	9.06	0.1313	1.19	_____
DIESEL FUEL					
Tractors	gal	4.48	4.2323	18.96	_____
REPAIR & MAINTENANCE					
Implements	acre	6.41	1.0000	6.41	_____
Tractors	acre	1.87	1.0000	1.87	_____
INTEREST ON OP. CAP.	acre	15.81	1.0000	15.81	_____

TOTAL DIRECT EXPENSES				479.64	_____
FIXED EXPENSES					
Implements	acre	12.51	1.0000	12.51	_____
Tractors	acre	12.67	1.0000	12.67	_____

TOTAL FIXED EXPENSES				25.18	_____

TOTAL SPECIFIED EXPENSES				504.82	_____

Note: Cost of production estimates are based on 2022 input prices.
Fertilization and lime decisions should be based on soil test recommendations.
Nitrogen price is an average of Urea, Ammonium Nitrate, and Ammonium Sulfate prices.
This budget assumes 40 units of nitrogen being applied after emergence and 40 units applied after the first grazing cycle.

Appendix

Appendix Table 1. Tractors/Harvesters: estimated purchase price, annual use, useful life, fuel use, and direct and fixed cost per hour, Mississippi, 2024

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	34,600	600	8	2.57	16.54	11.52	1.08	29.15	7.36	36.51
Tractor(40-59hp)CAB	MFWD 50	47,000	600	8	2.57	16.54	11.52	1.46	29.53	10.00	39.54
Tractor(40-59hp)RB	2WD 50	24,500	600	8	2.57	16.54	11.52	0.76	28.83	5.21	34.04
Tractor(40-59hp)RB	MFWD 50	31,400	600	8	2.57	16.54	11.52	0.98	29.05	6.68	35.73
Tractor(60-89hp)CAB	2WD 75	64,300	600	8	3.86	16.54	17.29	2.00	35.84	13.68	49.52
Tractor(60-89hp)CAB	MFWD 75	72,000	600	8	3.86	16.54	17.29	2.25	36.08	15.32	51.40
Tractor(60-89hp)RB	2WD 75	54,100	600	8	3.86	16.54	17.29	1.69	35.52	11.51	47.03
Tractor(60-89hp)RB	MFWD 75	48,100	600	8	3.86	16.54	17.29	1.50	35.33	10.23	45.57
Tractor(90-119hp)CB	2WD 105	83,900	600	8	5.40	16.54	24.21	2.62	43.37	17.85	61.23
Tractor(90-119hp)CB	MFWD 105	104,000	600	8	5.40	16.54	24.21	3.25	44.00	22.13	66.13
Tractor(90-119hp)RB	2WD 105	73,400	600	8	5.40	16.54	24.21	2.29	43.04	15.62	58.66
Tractor(90-119hp)RB	MFWD 105	81,100	600	8	5.40	16.54	24.21	2.53	43.28	17.25	60.54
Tractor(120-139hp)CB	2WD 130	117,600	600	8	6.69	16.54	29.97	3.67	50.19	25.02	75.22
Tractor(120-139hp)CB	MFWD 130	133,300	600	8	6.69	16.54	29.97	4.16	50.68	28.36	79.05
Tractor(140-159hp)CB	2WD 150	131,200	600	8	7.72	16.54	34.58	4.10	55.22	27.92	83.15
Tractor(140-159hp)CB	MFWD 150	158,000	600	8	7.72	16.54	34.58	4.93	56.06	33.62	89.69

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, 2024

Item Name	Size	Power Unit	Purchase Price	Annual Use	Useful Life	Perf Rate	Labor	Fuel	---R&M---- Imp.	P.U.	Total Direct	--Fixed--- Imp.	P.U.	Total Cost
			dollars	hours	years	hr/ac	----------$/acre----------							
Chisel Plow	15'	2WD 130	18,870	150	12	0.130	2.16	3.92	0.89	0.48	7.46	1.78	3.27	12.52
Cult & Post	4R-38	2WD 105	24,700	150	10	0.162	3.42	3.93	1.06	0.37	8.79	3.20	2.53	14.53
Cult & Post	6R-30	MFWD 150	30,900	150	10	0.137	2.89	4.75	1.13	0.67	9.46	3.39	4.62	17.48
Cult & Post	6R-38	MFWD 150	32,000	150	10	0.108	2.28	3.75	0.92	0.53	7.50	2.77	3.65	13.93
Cult & Post	8R-30	MFWD 150	38,300	150	10	0.103	2.17	3.56	1.05	0.50	7.30	3.15	3.46	13.92
Cultipacker	12'	2WD 105	7,470	300	12	0.124	2.05	3.01	0.21	0.28	5.57	0.34	1.94	7.86
Cultipacker	20'	MFWD 150	13,400	300	12	0.074	1.23	2.58	0.23	0.36	4.42	0.37	2.51	7.30
Cultivate	4R-38	2WD 105	19,000	150	10	0.162	2.68	3.93	0.82	0.37	7.81	2.46	2.53	12.81
Cultivate	6R-30	MFWD 150	25,200	150	10	0.137	2.27	4.75	0.92	0.67	8.63	2.76	4.62	16.02
Cultivate	6R-38	MFWD 150	26,300	150	10	0.108	1.79	3.75	0.76	0.53	6.84	2.28	3.65	12.77
Cultivate	8R-30	MFWD 150	32,600	150	10	0.103	1.70	3.56	0.89	0.50	6.67	2.68	3.46	12.83
Cyclone Spin	750Lb	2WD 105	2,090	50	8	0.200	4.21	4.84	0.31	0.45	9.82	1.27	3.12	14.22
Disk & Incorporate	14'	2WD 130	45,200	200	10	0.147	3.10	4.41	1.99	0.54	10.05	3.99	3.68	17.73
Disk & Incorporate	24'	MFWD 150	71,300	200	10	0.085	1.81	2.97	1.83	0.42	7.04	3.67	2.88	13.60
Disk & Incorporate	32'	MFWD 150	87,300	200	10	0.064	1.35	2.22	1.68	0.31	5.59	3.37	2.16	11.13
Disk Bed (Hipper)	4R-38	MFWD 150	15,700	160	10	0.147	2.44	5.10	0.57	0.72	8.85	1.73	4.96	15.55
Disk Bed (Hipper)	6R-38	MFWD 150	23,900	160	10	0.098	1.63	3.41	0.58	0.48	6.12	1.76	3.31	11.20
Disk Bed (Hipper)	8R-30	MFWD 150	30,700	160	10	0.093	1.55	3.24	0.71	0.46	5.97	2.15	3.15	11.28
Disk Harrow	14'	2WD 130	39,400	180	10	0.140	2.32	4.20	1.53	0.51	8.57	3.68	3.51	15.77
Disk Harrow	24'	MFWD 150	65,600	180	10	0.081	1.35	2.83	1.49	0.40	6.08	3.57	2.75	12.40
Disk Harrow	32'	MFWD 150	81,500	180	10	0.061	1.01	2.12	1.38	0.30	4.83	3.33	2.06	10.22
Fert Appl (Liquid)	4R-38	MFWD 150	25,400	150	8	0.154	3.25	5.34	2.61	0.76	11.99	3.34	5.20	20.53
Fert Appl (Liquid)	6R-30	MFWD 150	25,300	150	8	0.130	2.75	4.52	2.20	0.64	10.14	2.82	4.40	17.36
Fert Appl (Liquid)	6R-38	MFWD 150	25,300	150	8	0.103	2.17	3.57	1.74	0.51	8.00	2.22	3.47	13.71
Fert Appl (Liquid)	8R-30	MFWD 150	26,300	150	8	0.098	2.06	3.39	1.72	0.48	7.67	2.19	3.30	13.17
Field Cult & Inc	12'	2WD 150	22,800	100	10	0.124	2.62	4.30	0.70	0.51	8.14	3.40	3.47	15.02
Field Cult & Inc	24'	MFWD 150	43,700	100	10	0.062	1.31	2.15	0.67	0.30	4.45	3.26	2.09	9.80
Field Cultivate	12'	2WD 150	17,100	100	10	0.124	2.05	4.30	0.53	0.51	7.40	2.55	3.47	13.42
Field Cultivate	24'	MFWD 150	38,000	100	10	0.062	1.02	2.15	0.59	0.30	4.07	2.83	2.09	9.00
Front Loader	.5 yd	2WD 75	6,490	100	10	0.120	1.98	2.07	0.46	0.20	4.73	1.01	1.38	7.13
Grain Drill	12'	2WD 130	40,700	150	8	0.157	4.02	4.71	2.39	0.57	11.70	5.23	3.93	20.87
Hay Baler	Lg Round	2WD 105	56,410	200	8	0.211	3.49	5.12	6.71	0.48	15.81	9.07	3.30	28.20
Hay Baler	Med Rnd	2WD 75	43,410	200	8	0.211	3.49	3.65	5.16	0.35	12.68	6.98	2.43	22.10
Hay Baler	Square	2WD 50	33,620	200	8	0.229	3.79	2.64	3.85	0.17	10.46	5.86	1.19	17.51
Hay Cut-Cond	9'	2WD 105	33,460	200	8	0.229	3.79	5.54	4.79	0.52	14.65	5.83	3.57	24.07
Hay Cut-Cond	12'	2WD 105	43,200	200	8	0.171	2.84	4.16	4.64	0.39	12.03	5.64	2.68	20.37
Hay Disc Mower	8'	2WD 75	14,100	200	8	0.257	4.26	4.45	2.27	0.43	11.43	2.76	2.96	17.16
Hay Disc Mower	10'	2WD 50	16,200	200	8	0.206	3.41	2.37	2.08	0.15	8.03	2.54	1.07	11.65
Hay Mover	1B Lift	2WD 50	800	200	10	0.300	4.96	3.45	0.06	0.22	8.71	0.15	1.56	10.43
Hay Rake	8.5'	2WD 50	8,260	200	8	0.202	3.34	2.33	0.83	0.15	6.66	1.27	1.05	8.99
Hay Rake-Double	17'	2WD 75	7,960	200	8	0.101	1.67	1.74	0.40	0.17	3.99	0.61	1.16	5.77
Hay Tedder	17'	2WD 105	11,430	200	8	0.101	1.67	2.44	0.57	0.23	4.92	0.87	1.57	7.38
Hay Trailer	20'	2WD 75	4,837	200	15	0.090	1.48	1.55	0.11	0.15	3.31	0.22	1.03	4.57
NT Grain Drill	12'	2WD 130	50,200	150	8	0.196	5.02	5.88	3.69	0.72	15.33	8.07	4.91	28.32
NT Plant & Pre Rigid	4R-38	2WD 130	34,500	150	8	0.153	3.93	4.60	1.98	0.56	11.09	4.34	3.84	19.28
NT Plant & Pre Rigid	6R-30	MFWD 150	47,400	150	8	0.130	3.33	4.50	2.31	0.64	10.79	5.05	4.37	20.22
NT Plant & Pre Rigid	6R-38	MFWD 150	47,500	150	8	0.102	2.63	3.55	1.83	0.50	8.52	3.99	3.45	15.97
NT Plant Rigid	4R-38	2WD 130	28,800	150	8	0.148	3.79	4.43	1.59	0.54	10.37	3.49	3.70	17.56
NT Plant Rigid	6R-30	MFWD 150	41,600	150	8	0.125	3.20	4.33	1.95	0.61	10.11	4.26	4.21	18.60
NT Plant Rigid	6R-38	MFWD 150	41,800	150	8	0.098	2.53	3.42	1.55	0.48	7.99	3.38	3.32	14.71
Plant & Pre Rigid	4R-38	2WD 130	30,400	150	8	0.153	3.93	4.60	1.75	0.56	10.86	3.82	3.84	18.53
Plant & Pre Rigid	6R-30	MFWD 150	41,200	150	8	0.126	3.23	4.36	1.95	0.62	10.17	4.25	4.24	18.68
Plant & Pre Rigid	6R-38	MFWD 150	41,400	150	8	0.102	2.63	3.55	1.59	0.50	8.28	3.48	3.45	15.22
Plant Rigid	4R-38	2WD 130	24,700	150	8	0.148	3.79	4.43	1.37	0.54	10.14	2.99	3.70	16.84
Plant Rigid	6R-30	MFWD 150	35,500	150	8	0.125	3.20	4.33	1.66	0.61	9.83	3.64	4.21	17.69
Plant Rigid	6R-38	MFWD 150	35,700	150	8	0.098	2.53	3.42	1.32	0.48	7.77	2.89	3.32	13.99
Rotary Mower	7'	MFWD 130	6,140	185	10	0.168	2.78	5.04	0.83	0.70	9.37	0.67	4.77	14.81
Rotary Mower	12'	2WD 150	20,200	185	10	0.098	1.62	3.39	1.60	0.40	7.03	1.28	2.74	11.06
Rotary Mower	15'	MFWD 150	28,700	185	10	0.078	1.29	2.71	1.82	0.38	6.23	1.46	2.64	10.33
Row Cond	13'	2WD 130	12,900	100	10	0.119	1.97	3.58	1.15	0.43	7.15	1.90	2.98	12.04
Row Cond	21'	2WD 150	21,200	100	10	0.078	1.29	2.71	0.41	0.32	4.75	1.99	2.19	8.94
Row Cond & Inc	13'	2WD 130	18,700	100	10	0.126	2.67	3.80	0.59	0.46	7.53	2.84	3.17	13.56
Row Cond & Inc	21'	2WD 150	26,900	100	10	0.078	1.65	2.71	0.52	0.32	5.22	2.53	2.19	9.95
Section Harrow	13'	2WD 105	3,210	200	10	0.119	1.97	2.89	0.13	0.27	5.27	0.22	1.86	7.37
Silage Harvester	2-Row	2WD 105	82,100	200	8	0.510	8.43	12.35	26.17	1.17	48.14	31.86	7.96	87.97
Silage Harvester 3-R	3-Row	2WD 105	65,700	200	8	0.336	5.56	8.15	13.82	0.88	28.43	16.82	6.01	51.27
Silage Wagon	10-Ton	2WD 75	11,838	200	15	0.510	8.43	8.82	1.20	0.86	19.33	3.11	5.87	28.32
Silage Wagon 12T	12-Ton	2WD 105	34,170	200	15	0.510	8.43	12.35	3.48	1.33	25.61	8.98	9.10	43.71
Spin Spreader	5 Ton	MFWD 150	14,500	100	8	0.042	1.07	1.45	0.34	0.20	3.08	0.77	1.41	5.27
Spray (Broadcast)	27'	MFWD 150	5,720	200	8	0.062	1.32	2.16	0.16	0.30	3.96	0.22	2.10	6.30
Spray (Spot)	27'	MFWD 150	5,720	200	8	0.062	1.32	2.16	0.16	0.30	3.96	0.22	2.10	6.30
Subsoiler	3 Shank	MFWD 150	5,400	100	15	0.020	0.33	0.70	0.03	0.10	1.18	0.10	0.68	1.97
Tailgate Seeder		2WD 50	1,410	100	8	0.200	3.30	2.30	0.35	0.15	6.11	0.42	1.04	7.59

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, 2024

ITEM NAME	UNIT	PRICE	ITEM NAME	UNIT	PRICE
		dollars			dollars
ADJUVANTS			Gramoxone SL 2.0	oz	0.
Crop Oil (veg)	pt	2.90	Grazon P+D	pt	4.50
Surfactant	pt	3.30	GrazonNext	pt	6.60
CUSTOM FERT			Metribuzin 75	lb	14.80
App Fert by Air	cwt	8.00	Pendimethalin	pt	6.63
App Fert by Air(Min)	appl	7.50	Poast	pt	16.68
Custom Spread(Truck)	appl	7.50	Poast Plus	pt	9.49
CUSTOM LIME			Pursuit	oz	3.22
Lime (Spread)	ton	58.00	Remedy Ultra	pt	11.21
CUSTOM PLANT			Roundup Original	pt	7.33
Custom Spread + Seed	appl	5.00	Roundup Power Max	pt	7.33
Custom Sprig	acre	100.00	Roundup Power Max	oz	0.46
Plant by Air	cwt	8.00	Ultra Blazer	pt	7.50
CUSTOM SPRAY			Weedmaster	pt	6.06
App by Air (10 gal)	appl	9.70	INSECTICIDE		
App by Air (2 gal)	appl	3.00	Baythroid XL	oz	1.32
App by Air (3 gal)	appl	6.40	Blackhawk 36 WG	oz	12.19
App by Air (5 gal)	appl	7.60	Coragen	oz	8.89
FERTILIZER			Intrepid 2F	oz	1.99
Boron Plus	gal	34.48	Lannate LV	pt	8.33
Fert 10-34-0	cwt	45.99	Malathion 57 EC	pt	7.48
Fert 13-13-13	cwt	38.86	Mustang Max	oz	1.48
Fert 33-0-0-12S	cwt	50.00	Prevathon	oz	1.16
Molybdenum	lb	33.00	Sevin XLR Plus	qt	17.53
Nitrogen	cwt	44.45	OTHER		
Phosphate (46% P2O5)	cwt	50.00	Twine	bun	33.50
Potash (60% K2O)	cwt	46.60	SEED/PLANTS		
UAN (32% N)	cwt	38.90	Alfalfa Seed	lb	4.46
UAN + Sulfur (28%)	cwt	39.65	Bahiagrass Seed	lb	3.50
Urea, Solid (46% N)	cwt	41.58	Balansa Clover	lb.	2.45
HAUL			Brassica Seed	lb	0.98
Hay Haul (Conv)	ton	25.00	Common Bermuda Seed	lb	5.37
HERBICIDE			Corn Seed RR2	thous	2.93
2,4-D amine	pt	3.33	Crabgrass seed	lb	8.10
2,4-D ester	pt	5.03	Crimson Clover Seed	lb	1.80
2,4-DB	pt	5.49	Dallisgrass Seed	lb	8.33
AAtrex 4L	pt	2.62	Fescue Seed	lb	2.70
Accent Q	oz	20.47	Forage Sorghum Seed	lb	0.88
Atrazine 4L	pt	3.00	MaxQ Fescue Seed	lb	5.60
Balan	lb	1.35	Millet Seed	lb	1.41
Banvel	pt	4.81	Red Clover Seed	lb	3.00
Basagran	pt	5.43	Ryegrass Seed	lb	0.85
Bicep ll Magnum	qt	14.50	Small Grains Seed	lb	0.89
Buctril 4EC	pt	4.28	SS, PM, FS Seed	lb	1.36
Clethodim	oz	0.53	SS, PM, Seed	lb	1.36
Dicamba	pt	5.88	Wheat Seed	lb	0.38
Diuron 4L	pt	3.47	White Clover Seed	lb	4.52
Dual II Magnum	pt	11.60	SERVICE FEE		
Dual Magnum	pt	11.45	Soil Testing	acre	10.00
Glyphosate 3lbs a.e.	pt	5.38			
Gramoxone Inteon	oz	0.17			

Appendix Table 4. Estimated fuel prices and interest rates, Mississippi, 2024

ITEM NAME	UNIT	PRICE
		dollars
FUEL TYPES		
Diesel Fuel	gal	4.48
Gasoline	gal	3.19
INTEREST RATES		
Short-term	%	6.40
Intermediate-term	%	6.90

Appendix Table 5. Labor names, units and wage rates, Mississippi, 2024.

Item name	Unit	Wage Rate
OPERATOR LABOR	hour	16.54
HAND LABOR	hour	9.06

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