

Projected Costs and Returns Crop Enterprise Budgets for Sorghum Production in Louisiana, 2023

Michael A. Deliberto and Brian M. Hilbun



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by

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Introduction

This publication presents estimates of projected costs and returns for grain sorghum production in Louisiana for the 2023 crop year. Crop producers are annually faced with critical management decisions that impact the employment of production inputs for various crop enterprises and the combination of crops that will be assembled into a cropping system. The need for reliable information is crucial if sound production decisions are to be made. Planning information plays a pivotal role in the development of annual crop production plans by producers and is important in supporting their efforts to secure the necessary resources to carry out their plans. In addition, information regarding production alternatives and costs and returns for major crop enterprises is needed by extension personnel, researchers, lending institutions, and others involved in agriculture or agribusiness. The purpose of this report is to provide planning information regarding crop production costs and market returns for the 2023 crop year.

Crop enterprise budgets in this report are presented in two budget formats. The first budget format (table A) is a summary of costs and returns for the crop enterprise. The second budget format (table B) provides a table listing the sequence of production operations, indicating the equipment and

implements used, month of operation, labor required, machine time required, and materials used. Labor costs, material costs, custom costs, and direct and fixed costs for tractors and equipment are also included for each operation. All costs are summed giving the total cost per operation or practice. In addition, breakeven prices to cover direct production costs and total specified production costs are presented in tables C and D.

Procedure

The general procedure used in this study was to project machinery and other input price data and apply these data to the production practice data for crop enterprises produced in Louisiana. Input prices were obtained from surveys of farm suppliers, machinery dealers, and aerial applicators to provide a basis for estimating 2023 planning budgets. Machinery and other input cost data are presented in the Appendix.

The budgets included in this report are categorized by per acre total direct expenses and per acre total fixed expenses for a production season. Within these two broad categories, the various inputs are itemized with their respective costs. Although a particular enterprise budget is presented on a per acre basis, some individual cost items are specified on an hourly or price per unit

basis. Direct expenses include such cost items as seed, fertilizer, chemicals, fuel, labor, repairs, and irrigation. Fixed expenses include such items as depreciation and interest on investment which are generally incurred during the production period.

Due to the detailed nature of the cost computations, a computerized budget generator procedure was utilized. The Mississippi State Budget Generator Program, developed at Mississippi State University, is utilized by the LSU Agricultural Center in developing these crop enterprise costs and returns budgets. The budget generator provides a standard format for crop and livestock budgets and this computational procedure is widely accepted for estimating projected commodity costs and returns information for upcoming crop year planning purposes.

Expected Crop Yields and Market Prices

Projected crop enterprise budgets in this report include a calculation of expected market returns for the crop. Expected crop yields and market prices are selected at the beginning of the crop year. Projected crop yields are determined based on recent production history for expected yield given normal weather conditions. Projected market prices are specified as expected marketing year average prices for the commodity, based on harvest time futures price quotes as well as other market information at the beginning of the crop year. No estimate of income from farm program participation or crop insurance is included in this budgets due to the wide variety of farm program and crop insurance choices available to producers.

Direct Production Costs

Direct or variable production costs were estimated by utilizing updated crop production input price data. Input price data for various crop production inputs were updated by obtaining prices from farm input suppliers in the fall and winter prior to the crop year. Herbicide, fertilizer, and insecticide expenditures for each enterprise budget are based upon the types of chemicals producers generally reported using for that situation. Suggested prices for selected farm inputs and aerial application rates are presented in the appendix.

Hired labor was charged at \$13.67 per hour for all classes of labor except for harvest machinery and laser leveling operator labor. This wage rate include a basic wage rate plus additional costs for social security, Medicare, and workman's compensation. Operator labor was charged at \$16.54 per hour, which includes a basic wage rate plus additional costs for social security, Medicare, and workman's compensation. The higher wage rate was charged for these classes of operators because of the relatively higher skills required to run these types of machinery and the general consensus that these operators are generally twelve month (salaried) employees i.e. foremen. Farm labor may not be generally available on an hourly basis; however, an hourly charge represents a practical method for charging labor to the respective crop enterprises on a per acre basis.

Interest on operating capital (short term) was charged at a nominal rate of 6.40% per year. Operating capital was assumed to be borrowed in a manner consistent with timely acquisition of inputs. Fuel price for diesel was \$4.00 per gallon. Variable costs for tractors, self-propelled

machinery, and irrigation machinery include the cost of fuel, lubrication, and repair.

The intermediate term interest rate was charged at an historical real rate of 6.90%. The reasoning behind the difference in short and intermediate term rates is that longer term nominal rates are highly variable and closely follow the trend set by the rate of inflation. Intermediate term interest rates above the real rate of interest can overstate true interest costs because they overlook the value gained by an asset due solely to inflation.

Farm Machinery Costs

Machinery cost data were obtained from a sample of machinery dealers. New machinery prices were used to reflect the economic cost of acquiring and maintaining capital assets in current dollar values. Purchase prices for selected power and machinery items included in this report are presented in the appendix. Other data included in the appendix indicate hours of annual use and years of life for each selected machinery item. Fuel consumption, accumulated repair costs, and other machinery performance data are based on ASAE standards. Machinery fixed costs are calculated using the capital recovery method which includes estimates of both annual depreciation and interest on investment.

Overhead Costs

Overhead costs reflect significant expenses associated with the operation of the entire farm business, but are not necessarily attributable to a specific crop enterprise. Examples of farm overhead costs include tax services, record keeping, utilities, farmstead maintenance, and insurance and property taxes where

applicable. General farm overhead costs can vary greatly from farm to farm based on many factors including farm size, land tenure and crop production technology utilized. A single general farm overhead charge is included in each crop enterprise budget included in this report. This single overhead charge is based on production cost data published by the Economic Research Service, USDA for major crops produced in this region of the United States.

Acknowledgments

Several individuals were instrumental in making this report possible. The authors are particularly indebted to Louisiana crop producers and LSU Agricultural Center Extension Service agents and Experiment Station scientists for their cooperation and assistance in providing specific production practice information, as well as farm suppliers and agribusiness firms for supplying input price information.

Internet Access

This publication, along with projected costs and returns reports for other major agricultural crop commodities produced in Louisiana, as well as other farm management publications, are available on the Internet on the LSU AgCenter web page under the “*Extension and Outreach*” section of the Department of Agricultural Economics and Agribusiness web page. These projected costs and returns reports are also available on the LSU Ag Center crop commodities web pages. The web address for the LSU AgCenter is: www.lsuagcenter.com

Table 1.A Estimated costs per Acre
Grain Sorghum, 8-row equipment, 38 inch rows, non-irrigated,
Northeast Louisiana, 2023.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air (5 gal)	appl	7.60	1.5000	11.40	_____
App by Air (3 gal)	appl	6.40	2.0000	12.80	_____
FERTILIZERS					
LA Nitrogen	lb	0.78	110.0000	85.80	_____
LA Phosphate	lb	0.90	40.0000	36.00	_____
LA Potash	lb	0.67	40.0000	26.80	_____
FUNGICIDES					
Cruiser 5FS	oz	0.90	1.2800	1.15	_____
Quadris	oz	6.73	6.0000	40.38	_____
HERBICIDES					
Roundup WeatherMax	oz	0.19	55.0000	10.45	_____
2,4-D Amine 4	pt	3.25	2.0000	6.50	_____
Atrazine 4L	pt	3.15	4.0000	12.60	_____
Dual II Magnum	pt	15.00	1.0000	15.00	_____
INSECTICIDES					
Karate Z	oz	1.41	2.1300	3.00	_____
Belt	oz	6.80	2.5000	17.00	_____
Transform	oz	9.34	1.0000	9.34	_____
Sivanto	oz	2.73	4.0000	10.92	_____
SEED/PLANTS					
Sorghum Concept	lb	2.42	6.0000	14.52	_____
SERVICE FEE					
Lime (Spread)	ton	59.00	0.3300	19.47	_____
Digital Ag Fee	acre	10.00	1.0000	10.00	_____
Soil Test	acre	10.00	0.3300	3.30	_____
CUSTOM HARVEST/HAUL					
Haul Sorghum	bu	0.25	100.0000	25.00	_____
OPERATOR LABOR					
Harvesters	hour	16.54	0.0851	1.41	_____
LA Hired Labor					
Implements	hour	13.67	0.1190	1.63	_____
Tractors	hour	13.67	0.4011	5.48	_____
DIESEL FUEL					
Tractors	gal	4.00	3.4993	14.01	_____
Harvesters	gal	4.00	1.2047	4.82	_____
REPAIR & MAINTENANCE					
Implements	Acre	7.93	1.0000	7.93	_____
Tractors	Acre	2.14	1.0000	2.14	_____
Harvesters	Acre	3.47	1.0000	3.47	_____
INTEREST ON OP. CAP.	Acre	13.91	1.0000	13.91	_____

TOTAL DIRECT EXPENSES				426.23	_____
FIXED EXPENSES					
Implements	Acre	12.17	1.0000	12.17	_____
Tractors	Acre	15.01	1.0000	15.01	_____
Harvesters	Acre	15.25	1.0000	15.25	_____

TOTAL FIXED EXPENSES				42.43	_____

TOTAL SPECIFIED EXPENSES				468.66	_____

Table 1.B Estimated resource use and costs for field operations, per Acre
Grain Sorghum, 8-row equipment, 38 inch rows, non-irrigated,
Northeast Louisiana, 2023.

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Lime (Spread)	ton			0.33	Oct							0.3300	59.00	19.47	19.47
Disk Bed (Hipper)Rdg	8R-38	MFWD 190	0.074	1.00	Oct	3.38	3.37	0.57	1.71	0.07	1.01				10.04
Roller	32'	MFWD 170	0.046	1.00	Oct	1.87	1.69	0.18	1.15	0.04	0.64				5.53
Ditcher		2WD 130	0.020	1.00	Oct	0.61	0.50	0.07	0.11	0.02	0.27				1.56
App by Air (5 gal)	appl			1.00	Mar							1.0000	7.60	7.60	7.60
Roundup WeatherMax	oz											22.0000	0.19	4.18	4.18
2,4-D Amine 4	pt											2.0000	3.25	6.50	6.50
Ditcher		2WD 130	0.020	1.00	Apr	0.61	0.50	0.07	0.11	0.02	0.27				1.56
Plant & Pre Rigid	8R-38	MFWD 170	0.080	1.00	Apr	3.22	2.91	1.44	3.15	0.16	2.20				12.92
Sorghum Concept	lb											6.0000	2.42	14.52	14.52
Cruiser 5FS	oz											1.2800	0.90	1.15	1.15
Fert Appl (Liquid)	8R-38	MFWD 190	0.077	1.00	Apr	3.54	3.53	1.53	1.95	0.11	1.59				12.14
LA Nitrogen	lb											110.0000	0.78	85.80	85.80
LA Phosphate	lb											40.0000	0.90	36.00	36.00
LA Potash	lb											40.0000	0.67	26.80	26.80
Atrazine 4L	pt			1.00	Apr							4.0000	3.15	12.60	12.60
Roundup WeatherMax	oz											22.0000	0.19	4.18	4.18
Dual II Magnum	pt											1.0000	15.00	15.00	15.00
App by Air (3 gal)	appl			1.00	Jul							1.0000	6.40	6.40	6.40
Karate Z	oz											2.1300	1.41	3.00	3.00
Quadris	oz											6.0000	6.73	40.38	40.38
App by Air (3 gal)	appl			1.00	Jul							1.0000	6.40	6.40	6.40
Belt	oz											2.5000	6.80	17.00	17.00
Transform	oz											1.0000	9.34	9.34	9.34
Sivanto	oz											4.0000	2.73	10.92	10.92
App by Air (5 gal)	appl			0.50	Aug							0.5000	7.60	3.80	3.80
Roundup WeatherMax	oz											11.0000	0.19	2.09	2.09
Header Wheat/Sorghum	30' Rigid	275hp	0.085	1.00	Aug	8.29	15.25	1.17	2.00	0.08	1.41				28.12
Haul Sorghum	bu			1.00	Aug							100.0000	0.25	25.00	25.00
Digital Ag Fee	acre			1.00	Aug							1.0000	10.00	10.00	10.00
Soil Test	acre											0.3300	10.00	3.30	3.30
Stalk Shredder-Flail	20'	MFWD 150	0.082	1.00	Sep	2.92	2.51	2.90	1.99	0.08	1.13				11.45
TOTALS						24.44	30.26	7.93	12.17	0.60	8.52			371.43	454.75
INTEREST ON OPERATING CAPITAL															13.91
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															468.66

Table 1.C Breakeven price above direct expenses and net returns for price/yield combinations, per Acre
Grain Sorghum, 8-row equipment, 38 inch rows, non-irrigated,
Northeast Louisiana, 2023.

Grain Sorghum			-----BREAKEVEN PRICE-----										
			2.92	3.11	3.33	3.59	3.89	4.26	4.70	5.26	5.97	6.93	8.26
PERCENT	YIELD	UNIT	-----dollars-----										
50	50.00	bu	-267	-257	-246	-233	-218	-200	-178	-150	-114	-66	0
			-309	-300	-289	-276	-260	-242	-220	-192	-156	-109	-42
60	60.00	bu	-240	-228	-215	-200	-182	-160	-133	-100	-57	0	80
			-282	-271	-258	-242	-224	-202	-175	-142	-99	-42	37
70	70.00	bu	-213	-200	-184	-166	-145	-120	-89	-50	0	66	160
			-256	-242	-227	-209	-188	-162	-131	-92	-42	24	117
80	80.00	bu	-186	-171	-154	-133	-109	-80	-44	0	57	133	240
			-229	-214	-196	-175	-151	-122	-86	-42	14	91	197
90	90.00	bu	-160	-143	-123	-100	-72	-40	0	50	114	200	320
			-202	-185	-165	-142	-115	-82	-42	7	72	157	278
100	100.00	bu	-133	-114	-92	-66	-36	0	44	100	171	267	400
			-175	-156	-134	-109	-78	-42	2	57	129	224	358
110	110.00	bu	-106	-85	-61	-33	0	40	89	150	228	333	480
			-149	-128	-104	-75	-42	-2	46	107	186	291	438
120	120.00	bu	-80	-57	-30	0	36	80	133	200	286	400	560
			-122	-99	-73	-42	-6	37	91	157	243	358	518
130	130.00	bu	-53	-28	0	33	72	120	178	250	343	467	641
			-95	-71	-42	-9	30	77	135	208	301	425	598
140	140.00	bu	-26	0	30	66	109	160	222	300	400	534	721
			-69	-42	-11	24	66	117	180	258	358	491	678
150	150.00	bu	0	28	61	100	145	200	267	350	457	601	801
			-42	-13	19	57	103	157	224	308	415	558	758

The top number in each cell is Returns Above Direct Expenses.
The bottom number in each cell is Returns Above Total Specified Expenses.
Only the product listed has been varied to calculate net returns.

Table 1.D Breakeven price above total expenses and net returns for price/yield combinations, per Acre
Grain Sorghum, 8-row equipment, 38 inch rows, non-irrigated,
Northeast Louisiana, 2023.

Grain Sorghum			-----BREAKEVEN PRICE-----										
			3.20	3.42	3.66	3.94	4.28	4.68	5.17	5.79	6.58	7.64	9.11
PERCENT	YIELD	UNIT	-----dollars-----										
50	50.00	bu	-252	-242	-230	-216	-199	-179	-154	-123	-84	-31	42
			-295	-284	-272	-258	-241	-221	-196	-166	-126	-73	0
60	60.00	bu	-223	-210	-196	-179	-158	-134	-105	-68	-20	42	131
			-265	-253	-238	-221	-201	-177	-147	-110	-63	0	88
70	70.00	bu	-193	-179	-162	-142	-118	-90	-56	-12	42	116	219
			-236	-221	-204	-184	-161	-132	-98	-55	0	73	177
80	80.00	bu	-164	-147	-128	-105	-78	-46	-6	42	105	190	308
			-206	-189	-170	-147	-120	-88	-49	0	63	147	265
90	90.00	bu	-134	-115	-93	-68	-38	-1	42	97	169	263	396
			-177	-158	-136	-110	-80	-44	0	55	126	221	354
100	100.00	bu	-105	-84	-59	-31	2	42	91	153	232	337	485
			-147	-126	-102	-73	-40	0	49	110	189	295	443
110	110.00	bu	-75	-52	-25	5	42	86	140	208	295	411	574
			-118	-94	-68	-36	0	44	98	166	253	369	531
120	120.00	bu	-46	-20	8	42	82	131	190	263	358	485	662
			-88	-63	-34	0	40	88	147	221	316	443	620
130	130.00	bu	-16	10	42	79	122	175	239	319	422	559	751
			-59	-31	0	36	80	132	196	276	379	516	709
140	140.00	bu	12	42	76	116	163	219	288	374	485	633	840
			-29	0	34	73	120	177	246	332	443	590	797
150	150.00	bu	42	74	110	153	203	263	337	430	548	707	928
			0	31	68	110	161	221	295	387	506	664	886

The top number in each cell is Returns Above Direct Expenses.
The bottom number in each cell is Returns Above Total Specified Expenses.
Only the product listed has been varied to calculate net returns.

Table 2.A Estimated costs per Acre
Grain Sorghum, drill planted, conventional tillage, non-irrigated,
Southwest Louisiana, 2023.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air (3 gal)	appl	6.40	1.0000	6.40	
LA Rice GPS Charge-SW	acre	0.35	2.0000	0.70	
App by Air (5 gal)	appl	7.60	1.0000	7.60	
FERTILIZERS					
Custom Spread(Truc	appl	4.50	1.0000	4.50	
LA Nitrogen	lb	0.78	104.0000	81.12	
LA Phosphate	lb	0.90	48.0000	43.20	
LA Potash	lb	0.67	48.0000	32.16	
FUNGICIDES					
Quadris	oz	6.73	6.0000	40.38	
HERBICIDES					
Londax 60DF	oz	18.08	2.4000	43.39	
INSECTICIDES					
Belt	oz	6.80	2.5000	17.00	
Sivanto	oz	2.73	4.0000	10.92	
Transform	oz	9.34	1.0000	9.34	
SEED/PLANTS					
Sorghum Concept	lb	2.42	9.0000	21.78	
SERVICE FEE					
Digital Ag Fee	acre	10.00	1.0000	10.00	
Soil Test	acre	10.00	0.3300	3.30	
CUSTOM HARVEST/HAUL					
Haul Sorghum	bu	0.25	100.0000	25.00	
HAND LABOR					
Implements	hour	13.67	0.0942	1.29	
LA OPERATOR LABOR					
Self-Propelled	hour	16.54	0.2310	3.82	
LA Hired Labor					
Tractors	hour	13.67	0.3812	5.21	
DIESEL FUEL					
Tractors	gal	4.00	3.7828	15.14	
Self-Propelled	gal	4.00	1.4915	5.97	
REPAIR & MAINTENANCE					
Implements	acre	5.68	1.0000	5.68	
Tractors	acre	2.27	1.0000	2.27	
Self-Propelled	acre	8.40	1.0000	8.40	
INTEREST ON OP. CAP.	acre	8.47	1.0000	8.47	
TOTAL DIRECT EXPENSES				413.04	
FIXED EXPENSES					
Implements	acre	14.59	1.0000	14.59	
Tractors	acre	16.05	1.0000	16.05	
Self-Propelled	acre	14.12	1.0000	14.12	
TOTAL FIXED EXPENSES				44.76	
TOTAL SPECIFIED EXPENSES				457.80	

Table 2.B Estimated resource use and costs for field operations, per Acre
Grain Sorghum, drill planted, conventional tillage, non-irrigated,
Southwest Louisiana, 2023.

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Disk Harrow	28'	MFWD 225	0.070	1.00	Feb	3.75	3.53	1.46	3.49	0.07	0.96				13.19
Disk Harrow	28'	MFWD 225	0.070	1.00	Mar	3.75	3.53	1.46	3.49	0.07	0.96				13.19
Ditcher		MFWD 130	0.020	1.00	Mar	0.61	0.49	0.07	0.11	0.02	0.27				1.55
LA Boom Sprayer	30 ft	MFWD 170	0.059	1.00	Apr	2.41	2.20	0.13	0.16	0.05	0.82				5.72
Londax 60DF	oz											2.4000	18.08	43.39	43.39
Custom Spread(Truc	appl			1.00	Apr							1.0000	4.50	4.50	4.50
LA Nitrogen	lb											104.0000	0.78	81.12	81.12
LA Phosphate	lb											48.0000	0.90	43.20	43.20
LA Potash	lb											48.0000	0.67	32.16	32.16
Field Cultivate	32'	MFWD 225	0.046	1.00	Apr	2.49	2.35	0.69	3.31	0.04	0.64				9.48
Grain Drill	20'	MFWD 170	0.094	1.00	Apr	3.79	3.46	1.80	3.92	0.18	2.58				15.55
Sorghum Concept	lb											9.0000	2.42	21.78	21.78
Ditcher		MFWD 130	0.020	1.00	Apr	0.61	0.49	0.07	0.11	0.02	0.27				1.55
App by Air (3 gal)	appl			1.00	Jun							1.0000	6.40	6.40	6.40
Quadris	oz											6.0000	6.73	40.38	40.38
LARice GPS Charge-SW acre												1.0000	0.35	0.35	0.35
App by Air (5 gal)	appl			1.00	Jul							1.0000	7.60	7.60	7.60
Belt	oz											2.5000	6.80	17.00	17.00
LARice GPS Charge-SW acre												1.0000	0.35	0.35	0.35
Sivantto	oz											4.0000	2.73	10.92	10.92
Transform	oz											1.0000	9.34	9.34	9.34
LARice Combine Med	20 ft		0.210	1.00	Aug	14.37	14.12			0.23	3.82				32.31
Haul Sorghum	bu			1.00	Aug							100.0000	0.25	25.00	25.00
Digital Ag Fee	acre			1.00	Aug							1.0000	10.00	10.00	10.00
Soil Test	acre											0.3300	10.00	3.30	3.30
TOTALS						31.78	30.17	5.68	14.59	0.70	10.32			356.79	449.33
INTEREST ON OPERATING CAPITAL															8.47
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															457.80

Table 2.C Breakeven price above direct expenses and net returns for price/yield combinations, per Acre
Grain Sorghum, drill planted, conventional tillage, non-irrigated,
Southwest Louisiana, 2023.

			-----BREAKEVEN PRICE-----										
LA Sorghum			2.83	3.02	3.23	3.48	3.77	4.13	4.56	5.10	5.79	6.71	8.00
PERCENT	YIELD	UNIT	-----dollars-----										
50	50.00	bu.	-258	-249	-238	-226	-211	-193	-172	-145	-110	-64	0
			-303	-294	-283	-271	-256	-238	-217	-190	-155	-109	-44
60	60.00	bu.	-232	-221	-208	-193	-176	-155	-129	-96	-55	0	77
			-277	-266	-253	-238	-221	-199	-174	-141	-100	-44	32
70	70.00	bu.	-206	-193	-179	-161	-141	-116	-86	-48	0	64	155
			-251	-238	-223	-206	-185	-161	-130	-93	-44	19	110
80	80.00	bu.	-181	-166	-149	-129	-105	-77	-43	0	55	129	232
			-225	-211	-193	-174	-150	-122	-87	-44	10	84	187
90	90.00	bu.	-155	-138	-119	-96	-70	-38	0	48	110	193	310
			-199	-183	-164	-141	-115	-83	-44	3	66	149	265
100	100.00	bu.	-129	-110	-89	-64	-35	0	43	96	166	258	387
			-174	-155	-134	-109	-80	-44	-1	52	121	213	343
110	110.00	bu.	-103	-83	-59	-32	0	38	86	145	221	323	465
			-148	-127	-104	-77	-44	-5	41	100	176	278	420
120	120.00	bu.	-77	-55	-29	0	35	77	129	193	277	387	543
			-122	-100	-74	-44	-9	32	84	149	232	343	498
130	130.00	bu.	-51	-27	0	32	70	116	172	242	332	452	620
			-96	-72	-44	-12	25	71	127	197	287	407	575
140	140.00	bu.	-25	0	29	64	105	155	215	290	387	517	698
			-70	-44	-14	19	61	110	170	246	343	472	653
150	150.00	bu.	0	27	59	96	141	193	258	339	443	581	775
			-44	-17	14	52	96	149	213	294	398	537	731

The top number in each cell is Returns Above Direct Expenses.
The bottom number in each cell is Returns Above Total Specified Expenses.
Only the product listed has been varied to calculate net returns.

Table 2.D Breakeven price above total expenses and net returns for price/yield combinations, per Acre
Grain Sorghum, drill planted, conventional tillage, non-irrigated,
Southwest Louisiana, 2023.

			-----BREAKEVEN PRICE-----										
LA Sorghum			3.13	3.34	3.57	3.85	4.18	4.57	5.05	5.65	6.43	7.46	8.90
PERCENT	YIELD	UNIT	-----dollars-----										
50	50.00	bu.	-243	-233	-221	-207	-191	-171	-147	-117	-78	-27	44
			-288	-278	-266	-252	-236	-216	-192	-162	-123	-72	0
60	60.00	bu.	-214	-202	-188	-171	-151	-128	-99	-63	-17	44	131
			-259	-247	-232	-216	-196	-173	-144	-108	-61	0	86
70	70.00	bu.	-185	-171	-154	-135	-112	-85	-51	-9	44	116	217
			-230	-216	-199	-180	-157	-129	-96	-54	0	72	173
80	80.00	bu.	-157	-140	-121	-99	-73	-41	-3	44	106	188	304
			-201	-185	-166	-144	-118	-86	-48	0	61	144	259
90	90.00	bu.	-128	-109	-88	-63	-33	1	44	98	168	261	390
			-173	-154	-133	-108	-78	-43	0	54	123	216	346
100	100.00	bu.	-99	-78	-55	-27	5	44	92	152	230	333	477
			-144	-123	-99	-72	-39	0	48	108	185	288	432
110	110.00	bu.	-70	-47	-21	8	44	88	140	207	292	405	563
			-115	-92	-66	-36	0	43	96	162	247	360	519
120	120.00	bu.	-41	-17	11	44	84	131	188	261	353	477	650
			-86	-61	-33	0	39	86	144	216	309	432	605
130	130.00	bu.	-12	13	44	80	123	174	237	315	415	549	737
			-57	-30	0	36	78	129	192	270	370	504	692
140	140.00	bu.	15	44	78	116	162	217	285	369	477	621	823
			-28	0	33	72	118	173	240	324	432	576	778
150	150.00	bu.	44	75	111	152	202	261	333	423	539	693	910
			0	30	66	108	157	216	288	378	494	649	865

The top number in each cell is Returns Above Direct Expenses.
The bottom number in each cell is Returns Above Total Specified Expenses.
Only the product listed has been varied to calculate net returns.

Appendix Table 1. Operating Inputs: Estimated Prices for 2023.

ITEM NAME	UNIT	PRICE
dollars		
ADJUVANTS		
Surfactant	pt	3.30
CUSTOM FERT/LIME		
Lime (Spread)	ton	59.00
CUSTOM HARVEST/HAUL		
Haul Rice	bu	0.35
Haul Rice (cwt)	cwt	0.25
Haul Sorghum	bu	0.25
Haul Soybeans	bu	0.27
Haul Wheat	bu	0.26
LARice Haul	cwt	0.30
CUSTOM PLANT		
Custom Spread + Seed	appl	0.00
LARice Air Plant SW	cwt	5.60
Plant by Air	cwt	8.00
CUSTOM SPRAY		
App 2,4-D Helicopter	appl	0.00
App by Air (1 gal)	appl	2.50
App by Air (2 gal)	appl	9.00
App by Air (3 gal)	appl	6.40
App by Air (5 gal)	appl	7.60
App by Air (10 gal)	appl	9.70
App Furadan by Air	appl	0.00
App Ordram by Air	appl	0.00
Custom Terragator	acre	5.00
LARice GPS Charge-SW	acre	0.35
LARice GPS Charge_NE	acre	0.25
Spray Levees, 4whlr	acre	0.00
FERTILIZERS		
Amm Nitrate (34% N)	cwt	22.50
Amm Sulfate (21% N)	cwt	50.00
Anhy Ammonia (82% N)	cwt	28.00
Boron (Solubor)	lb	0.75
Crop Oil (Seed Oil)	pt	2.90
DAP	cwt	55.40
Fert 0-20-20	cwt	0.00
Fert 10-10-10	cwt	0.00
Fert 10-34-0	cwt	45.99
Fert 10-34-0	gal	5.36
Fert 13-13-13	cwt	0.00
Fert 41-0-0-4	cwt	37.06
Fert 5-20-20	cwt	0.00
Haul Corn	bu	0.23
Haul Cotton	lb	0.02
LA Nitrogen	lb	0.78
LA Phosphate	lb	0.90
LA Potash	lb	0.67
Phosphorus (46% P2O5)	cwt	50.00
Potash (60% K2O)	cwt	46.61
Sulfur	lb	0.34
UAN (32% N)	cwt	38.90
UAN + Sulfur (28% N)	cwt	14.49
Urea, Solid (46% N)	cwt	28.63
Zinc	lb	0.50
FUNGICIDES		
Apron Maxx RTA	oz	1.00
Apron XL	oz	6.98
Apron XL LS	oz	5.27
Benlate 50 WP	lb	15.95
Captan 4L	pt	2.83
Captan 50 WP	lb	6.13
Crop Oil (Petroleum)	pt	2.90
Cruiser 5FS	oz	0.90
Delta Coat AD	oz	3.75
Dithane F-45	qt	7.81
Dithane Rainsheild	lb	4.08
Fungicide	lb	2.82
Gem 25 WG	oz	3.70
Manzate 75 DF	lb	4.86
Manzate Flowable	pt	4.60
Moncut 70 DF	lb	32.81
Orbit	oz	2.75
Prevail	lb	28.50
Quadris	oz	6.73
Ridomil GoldPC 10G	lb	2.08

Appendix Table 1. Operating inputs: estimated prices Louisiana, 2023.

ITEM NAME	UNIT	PRICE
		dollars
FUNGICIDES CONT'D		
Rovral 4F	pt	14.90
Rovral WG	lb	0.00
Shelter	oz	8.50
Stiletto	oz	0.58
Stratego	pt	23.93
Terrachlor Flowable	pt	4.74
Terraclor 2EC	pt	1.87
Terraclor Super X EC	pt	3.95
Terraclor Super X G	lb	2.82
Tilt 3.6 EC	oz	1.00
Vitavax 200	oz	0.47
Vitavax M Flowable	oz	1.06
Vitavax RTU-Thiram	oz	0.40
Vitavax T-L	oz	0.29
GIN/DRY		
Dry Corn	bu	0.19
Dry Grain Sorghum	cwt	0.25
Dry Rice	bu	0.40
Dry Rice (cwt)	cwt	0.90
Gin	lb	0.11
LARice Dry	cwt	0.90
GROWTH REGULATORS		
Early Harvest PGR	oz	1.55
LA Polado	oz	0.46
Mepex	oz	0.09
PGR IV	oz	1.55
Pix Plus	oz	0.40
Pix Ultra	oz	0.21
HARVEST AIDS		
Accelerate	pt	2.59
Ammonium Sulfate	lb	0.24
Boll'd	pt	3.84
CottonQuik	pt	6.06
Def 6	pt	7.50
Def/Folex	pt	12.50
Dropp 50 WP	lb	45.45
Dropp SC	oz	1.56
Ethephon 6E	pt	3.56
Finish 6	pt	11.74
Folex 6EC	pt	12.50
Ginstar EC	pt	29.72
Gramoxone Extra	pt	4.86
Gramoxone Inteon	oz	0.19
Gramoxone Max	pt	4.16
Harvade 5F	oz	0.67
Leafless	pt	18.56
Prep	pt	3.84
Sodium Chlorate 3L	gal	3.50
Sodium Chlorate 6L	gal	6.77
Starfire	pt	0.00
HERBICIDES		
2,4-D Amine 4	pt	3.25
2,4-D Ester	pt	5.03
AAtrex 4L	pt	2.62
AAtrex NINE-O	lb	3.96
Accent Gold	oz	6.12
Accent SP	oz	31.94
Aim 2EC	oz	4.90
Aim DF	oz	9.65
App Fert by Air	cwt	7.00
Arrosolo	qt	7.88
Assure II	oz	0.74
Atrazine 4L	pt	3.15
Atrazine 90DF	lb	4.50
Authority 75DF	lb	26.95
Axiom 68DF	lb	25.74
Backdraft	pt	2.40
Banvel	pt	4.81
Basagran	pt	5.43
Basis Gold	lb	9.00
Beacon 75% WSP	oz	34.87
Beyond	oz	4.48
Bicep II Magnum	qt	11.80

Appendix Table 1. Operating inputs: estimated prices Louisiana, 2023.

ITEM NAME	UNIT	PRICE
		dollars
HERBICIDES CONT'D		
Bicep II zmsgnum	qt	11.18
Bladex 4L	qt	0.00
Bladex 90DF	lb	0.00
Blazer 2L	pt	0.00
Blazer Ultra	pt	9.79
Boa	pt	3.63
Bolero 8EC	pt	7.73
Boundary	pt	11.07
Buctril 4EC	pt	4.28
Butoxone 175 (2,4-DB)	pt	3.24
Butoxone 200 (2,4-DB)	pt	3.92
Butyrac 175 (2,4-DB)	pt	3.29
Butyrac 200 (2,4-DB)	pt	4.06
Canopy 75%	oz	3.25
Canopy XL	oz	3.25
Caparol 4L	pt	4.97
Caparol Accu-Pak	lb	0.00
Celebrity Plus	lb	84.50
Clarity	pt	14.30
Classic	oz	18.50
Clincher EC	oz	2.09
Cobra 2EC	oz	1.23
Command 3ME	pt	18.00
Command XTRA	pt	0.00
Conclude Ultra	pt	0.00
Conclude Ultra	pt	0.00
Conclude XACT	pt	11.32
Conclude XTRA	pt	8.32
Cornerstone	pt	2.50
Cotoran 4L	pt	6.37
Cotoran DF	lb	7.92
Cotton Pro Flowable	pt	3.75
Crossbow	pt	8.05
Cy-Pro 4L	qt	0.00
Cypro 90DF	lb	0.00
Delta Goal	pt	9.44
Denim 0.16 EC	pt	24.06
Detail	pt	7.99
Direx 4L	pt	3.02
Direx 80 DF	lb	6.20
Diuron 4L	pt	3.25
Diuron 80 DF	lb	5.50
Domain 60DF	lb	12.75
DSMA 4	pt	0.90
Dual 8E	pt	0.00
Dual II Magnum	pt	11.60
Dual Magnum	pt	11.45
Duet	pt	6.09
Evik DF 80W	lb	11.22
Exceed	oz	10.71
Exceed Custom Pak	oz	11.50
Expert	pt	4.39
Facet 75DF	lb	50.00
First Rate	oz	37.99
Flexstar HL	pt	6.88
FloMet 4L	pt	4.74
Freedom	qt	2.51
Front Row	oz	21.92
Frontier 6.0	oz	0.63
Fultime	pt	6.29
Fusilade DX	oz	1.19
Fusion	pt	29.86
Glyfos	pt	1.80
Glyphomax	pt	3.49
Glyphosate Plus 4L	pt	4.95
Glystar Plus	pt	2.17
Goal 2XL	pt	8.75
Gramoxone Extra	pt	0.00
Gramoxone Max	pt	3.00
Gramoxone Max	pt	3.00
Grandstand R	qt	18.68
Guardzman	pt	4.66
Guardzman Max	pt	7.22
Harmony Extra	oz	10.34

Appendix Table 1. Operating Inputs: Estimated Prices for 2023.

ITEM NAME	UNIT	PRICE
		dollars
HERBICIDES CONT'D		
Hoelon 3EC	pt	11.03
Karmex DF	lb	5.93
LA Asulox/Asulam	gal	53.26
LA Weedmaster	qt	10.00
Lariat	qt	7.58
Lasso 4EC	qt	6.60
Lasso II 15G	lb	0.00
Layby Pro	qt	3.87
Lexone 75DF	lb	18.90
Liberty	pt	8.84
Lightning	oz	14.25
Lightning	oz	14.25
Linex 4L	pt	9.28
Londax 60DF	oz	18.08
Lorox 50DF	lb	24.12
Matador	pt	0.00
MSMA 6.6	pt	6.35
MSMA6 + Surfactant	pt	6.35
Newpath 2SL	oz	4.15
Ordram 15-G	lb	1.34
Ordram 8-E	pt	9.42
Outlook	pt	14.77
Pendimax 3.3	pt	2.47
Permit 75DF	oz	20.07
Poast 1.53	pt	12.77
Poast Plus	pt	9.69
Propanil 4E	qt	5.15
Prowl 3.3 EC	pt	6.63
Pursuit DG	oz	11.59
Pursuit Plus EC	pt	7.10
Python WDG	oz	15.10
Raptor	oz	4.38
Reflex 2LC	pt	7.34
Regiment 80WP	oz	4.38
Remedy	pt	8.45
Resource .86EC	pt	26.88
Ricestar	pt	26.01
Roundup Original	pt	6.00
Roundup Original Max	oz	0.38
Roundup Power Max	pt	6.25
Roundup Ultra MAX	pt	5.97
Roundup Ultra Dry	lb	6.14
Roundup WeatherMax	oz	0.19
Scepter 70 DG	oz	4.64
Select 2EC	oz	0.87
Sencor 4F	pt	14.74
Sencor DF	lb	17.78
Squadron CE	pt	12.50
Stam 4E	qt	7.72
Stam 80 EDF	lb	9.45
Staple 85%	oz	16.01
Staple Plus	oz	8.55
Steadfast	oz	12.26
Steel	pt	10.28
Storm	pt	12.65
Strongarm	oz	56.42
Superwham	qt	9.82
Suprend	lb	13.52
Surpass 20G	lb	2.36
Surpass EC	qt	26.36
Touchdown	qt	10.21
Touchdown 4 IQ	pt	3.33
Touchdown Total	qt	10.21
Treflan HFP	pt	4.36
Treflan TR-10	lb	1.10
Tri-Scept	pt	5.24
Trifluralin 4EC	pt	3.50
Trilin 10G	lb	0.79
Trilin 4EC	pt	2.12
Typhoon	qt	13.06
Valor WP	oz	3.20
Whip 360	pt	25.08
Zorial Rapid 80DF	lb	14.10

Appendix Table 1. Operating Inputs: Estimated Prices for 2023.

ITEM NAME	UNIT	PRICE
		dollars
INSECTICIDES		
Acephate 80SP	lb	0.00
Acephate 90SP	lb	6.62
Admire 2 Flowable	oz	4.78
Ammo 2.5 EC	oz	0.85
App Fert by Air (Min)	appl	7.50
Asana .66 XL	oz	0.58
Aztec 2.1% G	lb	3.88
Baythroid 2	oz	2.58
Belt	oz	7.00
Besiege	oz	2.75
Bidrin 8L	oz	1.43
Brigade EC	pt	9.60
Brigade WSB	lb	26.04
Capture 2EC	oz	2.28
Carbamate	oz	0.00
Centric 40WG	oz	5.95
Comite	pt	8.45
Condor XL	pt	0.00
Confirm 2F	oz	1.88
Counter 15G	lb	4.51
Counter CR	lb	2.65
Curacron 8E	pt	10.75
Custom Apply Fert	acre	7.00
Decis 1.5EC	oz	2.84
Declare	pt	4.08
Denim 0.16EC	pt	32.63
Di-Syston 15G	lb	3.48
Di-Syston 8	pt	14.32
Diamond .83EC	pt	19.52
Dimethoate 4E	pt	6.45
Dimilin 2L	oz	1.63
Dipel DF	lb	13.13
Dipel ES	pt	4.89
Force 3G	lb	7.28
Furadan 3G	lb	0.00
Furadan 4F	pt	9.81
Fury 1.5 EC	oz	1.30
Gaucho 480	oz	5.80
Intrepid 2F	oz	1.94
Intruder 70WP	oz	1.80
Karate Z	oz	1.41
Lannate LV	pt	8.33
Lannate SP	oz	2.42
Larvin 3.2	oz	0.63
Leverage 2.7	oz	2.17
Lorsban 15G	lb	2.35
Lorsban 4E	pt	6.10
Malathion 57EC	pt	6.43
Malathion 8E	pt	9.84
Malathion ULV	pt	4.93
Mepichlor 4.2% Liq	pt	5.91
Methyl Parathion	pt	5.79
Monitor 4	pt	16.50
Monitor 4	pt	16.50
Mustang Max	oz	1.17
Organophosphate	oz	0.00
Orthene 90S	lb	7.00
Orthene 97	lb	11.66
Ovasyn	pt	0.00
Ovicide	oz	0.00
Penncap M	pt	6.71
Phaser 3E	qt	8.13
Pirate 3SC	oz	0.00
Pounce 25WP	lb	19.52
Pounce 3.2 EC	oz	0.34
Prevathon	oz	1.05
Provado 1.6F	oz	1.94
Scout X-TRA	oz	0.00
Sevin 80S	lb	7.40
Sevin XLR Plus	qt	17.53
Sivanto	oz	2.50
Spintor 2SC	oz	4.93
Steward	pt	39.51

Appendix Table 1. Operating Inputs: Estimated Prices for 2023.

ITEM NAME	UNIT	PRICE
		dollars
INSECTICIDES CONT'D		
Temik 15G Grit	lb	4.00
Thimet 20-G	lb	3.65
Thionex 3EC	pt	4.17
Thionex 50W	lb	10.45
Tracer	oz	9.73
Transform	oz	7.81
Trimax	oz	1.85
Vydate C-LV	oz	0.93
Warrior Z	oz	1.80
Warrior ZT	oz	3.13
IRRIGATION SUPPLIES		
Rice Gates	each	3.65
Roll-Out Pipe	ft	0.24
OVERHEAD		
Farmstead & Drainage	Dol	1.00
LARice Insurance	Dollar	1.00
LARice Misc. Overhd	dollar	1.00
LARice Property Tax	dollar	1.00
Shops Bldg & Equip.	Dol	6.55
SERVICE FEE		
Utilities	Dol	1.00
SEED/PLANTS		
Corn Seed Bt	thous	3.75
Corn Seed BtRR	thous	3.75
Corn Seed Conv.	thous	2.36
Corn Seed RR	thous	3.38
Corn Seed VT3	thous	3.91
Corn Seed VT3Pro	thous	3.91
Cotton Seed BG/RR	thous	0.62
Cotton Seed BGII/RRF	thous	2.70
Cotton Seed Bt	thous	2.60
Cotton Seed BtRR	thous	3.15
Cotton Seed Liberty	thous	1.05
Cotton Seed Liberty	thous	1.05
Cotton Seed RR	thous	0.63
Cotton Seed RR	thous	0.63
Cotton Seed WS	thous	0.49
Cotton Seed WS/RRF	thous	0.59
Rice Clearfield 161	lb	1.14
Rice Clearfield XL8	lb	6.12
Rice Seed (Levees)	lb	0.90
Rice Seed CF(Levees)	lb	0.95
Rice Seed Conv.	lb	0.33
Rice Seed Hybrid	lb	5.66
SC Cultured seedcane	acre	665.00
Sorghum Concept	lb	2.42
Sorghum Hybrid Sudax	lb	1.20
Sorghum NonConcept	lb	1.18
Soybean Seed LL	lb	1.16
Soybean Seed Private	lb	0.38
Soybean Seed Public	lb	0.00
Soybean Seed RR	lb	1.16
Soybean Seed Stack	lb	1.28
Wheat Seed Private	lb	0.38
Wheat Seed Public	lb	0.00
SERVICE FEE		
Cotton Checkoff	bale	2.56
Cotton Storage	bale	25.00
Crop Consultant	acre	9.00
Custom Apply	acre	8.00
Custom Combine Rice	acre	0.00
Custom Spread(Truc	appl	4.50
Digital Ag Fee	acre	10.00
Insect Scouting	acre	7.00
LARice Air Plant NE	cwt	5.50
Rice Consultant	acre	9.00

Appendix Table 1. Operating Inputs: Estimated Prices for 2023.

ITEM NAME	UNIT	PRICE
		dollars
SERVICE FEE CONT'D		
RRF Cotton Tech Fee	cap/ac	48.25
SC Treating Charge	acre	0.00
Soil Test	acre	10.00
Survey & Mark Levees	acre	4.50
Survey & Mark Levees	acre	4.50
TECHNOLOGY FEE		
BG Cot Tech Fee	thous	0.28
BG Cot Tech Fee	cap/ac	19.50
BG II Cot Tech Fee	thous	0.76
BG II Cot Tech Fee	cap/ac	31.91
BG II/RR Tech Fee	thous	1.49
BG II/RR Tech Fee	cap/ac	62.69
BGII/RRF Cot Tech Fe	thous	1.49
BGII/RRF Cot Tech Fe	cap/ac	62.69
Eradication Fee	acre	6.00
Eradication Zone 1	acre	6.00
Eradication Zone 1A	acre	6.00
Eradication Zone 1B	acre	6.00
Eradication Zone 2	acre	6.00
Eradication Zone 3	acre	6.00
Eradication Zone 4	acre	6.00
RR Cotton Tech Fee	thous	1.04
RR Cotton Tech Fee	cap/ac	43.66
RR Cotton Tech Fee	thous	1.04
RR Cotton Tech Fee	cap/ac	43.66
RRF Cotton Tech Fee	thous	1.04

Appendix Table 2. Tractors: estimated purchase price, annual use, useful life, fuel use, and direct and fixed cost per hour, Louisiana 2023.

Item Name	Size	Purchase Price	Annual Use	Useful Life	Fuel Use	Labor	Fuel	R&M	Total Direct	Fixed	Total Cost
		dollars	hours	years	gal/hr	-----\$/hour-----					
Combine (200-249 hp)	240hp	161,548	300	8	12.35	16.54	49.40	16.82	82.76	74.02	156.79
Combine (250-299 hp)	275hp	463,000	300	8	14.15	16.54	56.60	48.22	121.36	212.16	333.53
Combine (250-299hp)	Grass295hp	218,222	300	8	15.18	16.54	60.72	22.73	99.99	99.99	199.99
Combine (300-349 hp)	325hp	468,000	300	8	16.73	16.54	66.92	48.75	132.21	214.45	346.66
Combine (350-379 hp)	370hp	500,000	300	8	19.04	16.54	76.16	52.08	144.78	229.12	373.90
Cotton Stripper	173hp	170,000	200	8	8.08	16.54	32.32	26.56	75.42	116.85	192.27
Tractor(40-59hp)Cab	2WD 50	34,600	600	8	2.57	13.67	10.29	1.08	25.04	7.36	32.40
Tractor(40-59hp)Cab	MFWD 50	47,000	600	8	2.57	13.67	10.29	1.46	25.43	10.00	35.43
Tractor(40-59hp)RB	2WD 50	30,900	600	8	2.57	13.67	10.29	0.96	24.93	6.57	31.50
Tractor(40-59hp)RB	MFWD 50	31,400	600	8	2.57	13.67	10.29	0.98	24.94	6.68	31.62
Tractor(60-89hp)CAB	2WD 75	64,300	600	8	3.86	13.67	15.44	2.00	31.12	13.68	44.80
Tractor(60-89hp)CAB	MFWD 75	72,000	600	8	3.86	13.67	15.44	2.25	31.36	15.32	46.68
Tractor(60-89hp)RB	2WD 75	54,100	600	8	3.86	13.67	15.44	1.69	30.80	11.51	42.31
Tractor(60-89hp)RB	MFWD 75	48,100	600	8	3.86	13.67	15.44	1.50	30.61	10.23	40.85
Tractor(90-119hp)CB	2WD 105	83,900	600	8	5.40	13.67	21.61	2.62	37.91	17.85	55.76
Tractor(90-119hp)CB	MFWD 105	104,000	600	8	5.40	13.67	21.61	3.25	38.53	22.13	60.67
Tractor(90-119hp)RB	2WD 105	73,400	600	8	5.40	13.67	21.61	2.29	37.58	15.62	53.20
Tractor(90-119hp)RB	MFWD 105	81,100	600	8	5.40	13.67	21.61	2.53	37.82	17.25	55.08
Tractor(120-139hp)CB	2WD 130	117,600	600	8	6.69	13.67	26.76	3.67	44.11	25.02	69.13
Tractor(120-139hp)CB	MFWD 130	133,300	600	8	6.69	13.67	26.76	4.16	44.60	28.36	72.97
Tractor(140-159hp)CB	2WD 150	131,200	600	8	7.72	13.67	30.88	4.10	48.65	27.92	76.57
Tractor(140-159hp)CB	MFWD 150	158,000	600	8	7.72	13.67	30.88	4.93	49.49	33.62	83.11
Tractor(160-179hp)CB	2WD 170	166,000	600	8	8.75	13.67	35.00	5.18	53.85	36.68	90.53
Tractor(160-179hp)CB	MFWD 170	186,000	600	8	8.75	13.67	35.00	5.81	54.48	41.10	95.58
Tractor(160-199hp)CB	Track 180	142,710	600	8	9.26	13.67	37.06	4.45	55.19	31.53	86.72
Tractor(180-199hp)CB	2WD 190	143,000	600	8	9.77	13.67	39.11	4.46	57.25	31.59	88.85
Tractor(180-199hp)CB	MFWD 190	216,000	600	8	9.77	13.67	39.11	6.75	59.53	47.72	107.26
Tractor(200-249hp)CB	4WD 225	147,066	600	8	11.58	13.67	46.32	4.59	64.59	32.49	97.08
Tractor(200-249hp)CB	MFWD 225	276,000	600	8	11.58	13.67	46.32	8.62	68.62	60.98	129.60
Tractor(200-249hp)CB	Track 225	277,000	600	8	11.58	13.67	46.32	8.65	68.65	61.20	129.86
Tractor(250-349hp)CB	4WD 300	377,000	600	8	15.44	13.67	61.76	11.78	87.21	83.30	170.52
Tractor(250-349hp)CB	Track 300	329,000	600	8	15.44	13.67	61.76	10.28	85.71	72.69	158.41
Tractor(350-449hp)CB	4WD 400	428,000	600	8	20.58	13.67	82.35	13.37	109.40	94.57	203.97
Tractor(350-449hp)CB	Track 400	547,000	600	8	20.58	13.67	82.35	17.09	113.11	120.87	233.99
Tractor(450-uphp)CB	TRACK-475	279,879	600	8	24.44	13.67	97.79	8.74	120.21	61.84	182.05

Appendix Table 3. Self-propelled machines: estimated purchase price, annual use, useful life, fuel use, performance rate, and direct and fixed cost per acre, Louisiana 2023.

Item Name	Size	Purchase Price	Annual Use	Useful Life	Fuel Use	Perf Rate	Labor	Fuel	R&M	Total Direct	Fixed	Total Cost
		dollars	hours	years	gal/hr	hr/acre				\$/acre		
ATV - 4 Wheeler	12'	0	100	8	1.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
ATV - 4 Wheeler	20'	9,360	100	8	1.00	0.200	3.30	0.50	0.46	4.27	2.48	6.75
Butt Levee (Backhoe)	70 HP	73,000	150	8	5.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
Cotton Picker-1st-BB	2R38"157hp	144,912	200	8	8.08	0.519	15.69	16.79	11.76	44.25	51.76	96.02
Cotton Picker-1st-BB	4R2X1260hp	317,399	200	8	13.33	0.172	5.20	9.18	8.54	22.93	37.59	60.53
Cotton Picker-1st-BB	4R30"250hp	262,000	200	8	12.86	0.327	9.89	16.85	13.40	40.14	58.95	99.10
Cotton Picker-1st-BB	4R30"325hp	350,000	200	8	18.01	0.327	9.89	23.58	17.90	51.37	78.76	130.13
Cotton Picker-1st-BB	4R38"255hp	268,000	200	8	13.12	0.257	7.78	13.53	10.79	32.11	47.48	79.60
Cotton Picker-1st-BB	4R38"325hp	351,000	200	8	18.01	0.257	7.78	18.57	14.13	40.49	62.19	102.68
Cotton Picker-1st-BB	5R30"255hp	285,000	200	8	12.86	0.261	7.91	13.47	11.66	33.04	51.30	84.35
Cotton Picker-1st-BB	5R38"250hp	284,601	200	8	12.86	0.207	6.25	10.66	9.21	26.13	40.53	66.67
Cotton Picker-1st-BB	6R30"325hp	465,000	200	8	18.27	0.218	6.59	15.94	15.85	38.40	69.75	108.15
Cotton Picker-1st-BB	6R38"330hp	465,000	200	8	18.27	0.172	5.20	12.59	12.51	30.31	55.07	85.39
Cotton Picker-1st-Tr	2R38"157hp	144,912	200	8	8.08	0.519	15.69	16.79	11.76	44.25	51.76	96.02
Cotton Picker-1st-Tr	4R2X1255hp	322,137	200	8	18.01	0.172	5.20	12.41	8.67	26.29	38.15	64.44
Cotton Picker-1st-Tr	4R30"250hp	261,825	200	8	12.86	0.327	9.89	16.85	13.39	40.13	58.91	99.05
Cotton Picker-1st-Tr	4R30"325hp	311,088	200	8	16.72	0.327	9.89	21.90	15.91	47.71	70.00	117.71
Cotton Picker-1st-Tr	4R38"255hp	268,000	200	8	13.12	0.257	7.78	13.53	10.79	32.11	47.48	79.60
Cotton Picker-1st-Tr	4R38"325hp	351,000	200	8	18.01	0.257	7.78	18.57	14.13	40.49	62.19	102.68
Cotton Picker-1st-Tr	5R30"255hp	285,303	200	8	13.12	0.261	7.91	13.74	11.67	33.33	51.36	84.69
Cotton Picker-1st-Tr	5R38"250hp	290,471	200	8	12.86	0.207	6.25	10.66	9.40	26.32	41.36	67.69
Cotton Picker-1st-Tr	6R30"325hp	465,000	200	8	16.72	0.218	6.59	14.60	15.85	37.05	69.75	106.81
Cotton Picker-1st-Tr	6R38"330hp	465,000	200	8	18.01	0.172	5.20	12.41	12.51	30.13	55.07	85.21
Cotton Picker-2nd-BB	2R38"157hp	144,912	200	8	8.08	0.440	13.29	14.22	9.96	37.49	43.84	81.33
Cotton Picker-2nd-BB	4R2x1260hp	322,187	200	8	18.01	0.145	4.40	10.51	7.34	22.27	32.32	54.59
Cotton Picker-2nd-BB	4R30"250hp	261,825	200	8	12.86	0.277	8.37	14.27	11.34	33.99	49.90	83.90
Cotton Picker-2nd-BB	4R30"325hp	311,088	200	8	16.72	0.277	8.37	18.55	13.47	40.41	59.29	99.71
Cotton Picker-2nd-BB	4R38"255hp	268,000	200	8	13.12	0.218	6.59	11.46	9.14	27.20	40.22	67.42
Cotton Picker-2nd-BB	4R38"325hp	351,000	200	8	18.01	0.218	6.59	15.72	11.97	34.30	52.68	86.98
Cotton Picker-2nd-BB	5R30"255hp	285,303	200	8	13.12	0.221	6.70	11.64	9.88	28.23	43.50	71.74
Cotton Picker-2nd-BB	5R38"250hp	284,601	200	8	12.86	0.175	5.30	9.03	7.80	22.14	34.33	56.47
Cotton Picker-2nd-BB	6R30"325hp	465,000	200	8	18.01	0.184	5.58	13.31	13.43	32.33	59.08	91.42
Cotton Picker-2nd-BB	6R38"330hp	465,000	200	8	18.01	0.145	4.40	10.51	10.60	25.52	46.64	72.17
Cotton Picker-2nd-Tr	2R38"157hp	144,912	200	8	8.08	0.440	13.29	14.22	9.96	37.49	43.84	81.33
Cotton Picker-2nd-Tr	4R2X1260hp	322,137	200	8	18.01	0.145	4.40	10.51	7.34	22.27	32.31	54.58
Cotton Picker-2nd-Tr	4R30"250hp	261,825	200	8	12.86	0.277	8.37	14.27	11.34	33.99	49.90	83.90
Cotton Picker-2nd-Tr	4R30"325hp	311,088	200	8	16.72	0.277	8.37	18.55	13.47	40.41	59.29	99.71
Cotton Picker-2nd-Tr	4R38"255hp	268,000	200	8	13.12	0.218	6.59	11.46	9.14	27.20	40.22	67.42
Cotton Picker-2nd-Tr	4R38"325hp	351,000	200	8	18.01	0.218	6.59	15.72	11.97	34.30	52.68	86.98
Cotton Picker-2nd-Tr	5R30"255hp	285,303	200	8	13.12	0.221	6.70	11.64	9.88	28.23	43.50	71.74
Cotton Picker-2nd-Tr	5R38"250hp	290,471	200	8	12.86	0.175	5.30	9.03	7.96	22.30	35.04	57.34
Cotton Picker-2nd-Tr	6R30"325hp	465,000	200	8	16.72	0.184	5.58	12.37	13.43	31.38	59.08	90.47
Cotton Picker-2nd-Tr	6R38"330hp	465,000	200	8	18.01	0.145	4.40	10.51	10.60	25.52	46.64	72.17
Cotton Picker/Module	6R-30 (500)	854,000	200	8	25.73	0.218	6.59	22.46	29.12	58.18	128.11	186.29
LA Pickup Truck	1/2 ton	28,000	800	5	2.50	1.000	13.67	6.25	3.15	23.07	7.90	30.97
LA Rice Combine	25 ft	181,500	300	10	8.60	0.300	5.46	10.33	14.53	30.32	24.42	54.75
LA Rice Combine-2	25 ft	181,500	300	10	8.60	0.300	5.46	10.33	14.53	30.32	24.42	54.75
LARice Combine Med	20 ft	165,000	300	10	7.10	0.210	3.82	5.96	9.24	19.03	15.53	34.56
Levee Sprayer	27'	30,768	350	8	2.57	0.038	0.89	0.39	0.06	1.35	0.46	1.81
Sprayer(300-450Gal)	47'	0	350	8	5.40	0.022	0.52	0.48	0.00	1.01	0.00	1.01
Sprayer(300-450Gal)	60'	103,000	350	8	5.66	0.017	0.41	0.39	0.09	0.90	0.71	1.62
Sprayer(300-450Gal)	80'	103,000	350	8	5.66	0.013	0.30	0.29	0.07	0.68	0.53	1.21
Sprayer(600-750Gal)	60'	216,000	350	8	10.29	0.017	0.41	0.72	0.20	1.34	1.49	2.83
Sprayer(600-825Gal)	80'	269,000	350	8	10.29	0.013	0.30	0.54	0.19	1.04	1.39	2.44
Sprayer(600-825Gal)	90'	328,000	350	8	10.29	0.011	0.27	0.48	0.20	0.96	1.51	2.47
Sprayer(1000-1400Gal)	90'	328,000	350	8	14.15	0.014	0.32	0.79	0.24	1.37	1.81	3.19
Sprayer(1200PlusGal)	120'	489,000	350	8	15.44	0.008	0.20	0.54	0.23	0.98	1.69	2.67
Sprayer(600-750Gal)	60'	216,000	350	8	10.29	0.017	0.31	0.44	0.20	0.96	1.44	2.40
Sprayer(600-825Gal)	80'	234,000	350	8	10.29	0.013	0.26	0.38	0.16	0.81	1.02	1.83
Sprayer(600-825Gal)	90'	328,000	350	8	10.29	0.011	0.23	0.34	0.20	0.78	1.27	2.06
Sprayer(1000-1400Gal)	90'	328,000	350	8	14.15	0.014	0.27	0.56	0.24	1.09	1.53	2.62
Sprayer(1200PlusGal)	120'	401,000	350	8	15.44	0.008	0.17	0.38	0.18	0.75	1.17	1.92

Appendix Table 4. Implements: estimated purchase price, annual use, useful life, performance rate, and direct and fixed cost per acre, Louisiana 2023.

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-----			
Blade-Box	6'	2WD 130	2,070	200	20	0.020	0.27	0.53	0.01 0.07	0.90	0.01 0.50	1.42
Blade-Box	10'	2WD 50	3,890	200	20	0.000	0.00	0.00	0.00 0.00	0.00	0.00 0.00	0.00
Blade-Box	14'	2WD 50	6,190	200	20	0.000	0.00	0.00	0.00 0.00	0.00	0.00 0.00	0.00
Blade-Scraper	6'	2WD 50	1,270	200	20	1.176	16.08	12.11	0.70 1.13	30.03	0.67 7.73	38.44
Blade-Scraper	10'	2WD 50	3,870	200	20	1.176	16.08	12.11	2.16 1.13	31.49	2.04 7.73	41.27
Blade-Scraper	14'	2WD 50	10,790	200	20	0.000	0.00	0.00	0.00 0.00	0.00	0.00 0.00	0.00
Boll Buggy-1st Pick	2R38"157hp	MFWD 190	30,500	200	10	0.519	7.10	20.32	3.96 3.50	34.90	9.21 24.80	68.91
Boll Buggy-1st pick	4R2x1260hp	MFWD 190	30,500	200	10	0.172	2.35	6.74	1.31 1.16	11.57	3.05 8.22	22.85
Boll Buggy-1st pick	4R30"255hp	MFWD 190	30,500	200	10	0.327	4.47	12.80	2.49 2.20	21.98	5.80 15.62	43.41
Boll Buggy-1st pick	4R30"325hp	MFWD 190	30,500	200	10	0.327	4.47	12.80	2.49 2.20	21.98	5.80 15.62	43.41
Boll Buggy-1st pick	4R38"255hp	MFWD 190	30,500	200	10	0.257	3.52	10.08	1.96 1.74	17.31	4.57 12.30	34.18
Boll Buggy-1st pick	4R38"325hp	MFWD 190	30,500	200	10	0.257	3.52	10.08	1.96 1.74	17.31	4.57 12.30	34.18
Boll Buggy-1st pick	5R30"255hp	MFWD 190	30,500	200	10	0.261	3.58	10.24	1.99 1.76	17.59	4.64 12.50	34.73
Boll Buggy-1st pick	5R38"255hp	MFWD 190	30,500	200	10	0.207	2.83	8.10	1.57 1.39	13.91	3.67 9.88	27.47
Boll Buggy-1st pick	6R30"325hp	MFWD 190	30,500	200	10	0.218	2.98	8.53	1.66 1.47	14.65	3.86 10.41	28.94
Boll Buggy-1st pick	6R38"325hp	MFWD 190	30,500	200	10	0.172	2.35	6.74	1.31 1.16	11.57	3.05 8.22	22.85
Boll Buggy-2nd pick	2R38"157hp	MFWD 190	30,500	200	10	0.440	6.01	17.21	3.35 2.97	29.56	7.80 21.00	58.37
Boll Buggy-2nd pick	4R2x1260hp	MFWD 190	30,500	200	10	0.145	1.99	5.70	1.11 0.98	9.80	2.58 6.96	19.35
Boll Buggy-2nd pick	4R30"255hp	MFWD 190	30,500	200	10	0.277	3.79	10.84	2.11 1.87	18.62	4.91 13.23	36.77
Boll Buggy-2nd pick	4R30"325hp	MFWD 190	30,500	200	10	0.277	3.79	10.84	2.11 1.87	18.62	4.91 13.23	36.77
Boll Buggy-2nd pick	4R38 255hp	MFWD 190	30,500	200	10	0.218	2.98	8.54	1.66 1.47	14.66	3.87 10.42	28.95
Boll Buggy-2nd pick	4R38 325hp	MFWD 190	30,500	200	10	0.218	2.98	8.54	1.66 1.47	14.66	3.87 10.42	28.95
Boll Buggy-2nd pick	5R30"255hp	MFWD 190	30,500	200	10	0.221	3.03	8.67	1.69 1.49	14.90	3.93 10.58	29.42
Boll Buggy-2nd pick	5R38"255hp	MFWD 190	30,500	200	10	0.175	2.39	6.86	1.33 1.18	11.78	3.11 8.37	23.27
Boll Buggy-2nd pick	6R30"325hp	MFWD 190	30,500	200	10	0.184	2.52	7.23	1.40 1.24	12.41	3.27 8.82	24.51
Boll Buggy-2nd pick	6R38"325hp	MFWD 190	30,500	200	10	0.145	1.99	5.70	1.11 0.98	9.80	2.58 6.96	19.35
Boll Buggy-Stripper	13' Bcast	MFWD 150	30,500	200	10	0.251	3.44	7.77	1.92 1.24	14.38	4.46 8.46	27.31
Boll Buggy-Stripper	16' Bcast	MFWD 150	30,500	200	10	0.204	2.79	6.31	1.56 1.01	11.68	3.62 6.88	22.19
Boll Buggy-Stripper	19' Bcast	MFWD 150	30,500	200	10	0.172	2.35	5.32	1.31 0.85	9.84	3.05 5.79	18.69
Boll Buggy-Stripper	4R30"2X1Br	MFWD 150	30,500	200	10	0.218	2.98	6.74	1.66 1.07	12.46	3.86 7.33	23.67
Boll Buggy-Stripper	4R30"Brush	MFWD 150	30,500	200	10	0.327	4.47	10.11	2.49 1.61	18.69	5.80 11.00	35.51
Boll Buggy-Stripper	4R38"2X1Br	MFWD 150	30,500	200	10	0.172	2.35	5.32	1.31 0.85	9.84	3.05 5.79	18.69
Boll Buggy-Stripper	4R38"Brush	MFWD 150	30,500	200	10	0.257	3.52	7.96	1.96 1.27	14.72	4.57 8.66	27.96
Boll Buggy-Stripper	5R30"Brush	MFWD 150	30,500	200	10	0.261	3.58	8.08	1.99 1.29	14.95	4.64 8.80	28.40
Boll Buggy-Stripper	5R38"Brush	MFWD 150	30,500	200	10	0.207	2.83	6.39	1.57 1.02	11.83	3.67 6.96	22.47
Boll Buggy-Stripper	6R30"Brush	MFWD 150	30,500	200	10	0.218	2.98	6.74	1.66 1.07	12.46	3.86 7.33	23.67
Chisel Plow(Folding)	16'	2WD 130	22,500	150	12	0.115	1.57	3.09	0.93 0.42	6.03	1.87 2.89	10.80
Chisel Plow(Folding)	24'	MFWD 190	48,500	150	12	0.076	1.04	2.99	1.33 0.51	5.89	2.67 3.64	12.21
Chisel Plow(Folding)	32'	MFWD 225	69,000	150	12	0.057	0.78	2.67	1.43 0.49	5.40	2.87 3.52	11.80
Chisel Plow(Folding)	42'	MFWD 225	71,900	150	12	0.044	0.60	2.03	1.14 0.37	4.16	2.28 2.68	9.13
Chisel Plow(Rigid)	15'	2WD 130	18,870	150	12	0.123	1.68	3.29	0.83 0.45	6.27	1.68 3.08	11.04
Chisel Plow(Rigid)	24'	MFWD 190	16,000	150	12	0.077	1.05	3.01	0.44 0.51	5.03	0.89 3.67	9.59
Chisel-Harrow	21 shank	2WD 190	6,750	150	12	0.088	1.20	3.44	0.21 0.39	5.25	0.42 2.78	8.46
Chisel-Harrow	27 shank	MFWD 225	14,100	150	12	0.068	0.93	3.17	0.34 0.59	5.04	0.69 4.17	9.92
Colter-Chisel-Harrow	21 shank	2WD 190	19,200	150	12	0.088	1.20	3.44	0.61 0.39	5.65	1.22 2.78	9.65
Colter-Chisel-Harrow	27 shank	MFWD 225	24,000	150	12	0.068	0.93	3.17	0.59 0.59	5.29	1.18 4.17	10.65
Corn Grain Cart 8R30	500 bu	MFWD 190	34,100	200	12	0.031	0.43	1.24	0.29 0.21	2.19	0.58 1.52	4.30
Corn Grain Cart 8R40	700bu	MFWD 190	51,600	200	12	0.025	0.34	0.97	0.34 0.16	1.83	0.69 1.19	3.73
Cult & Post	4R-38	2WD 105	24,700	150	10	0.173	3.55	3.74	1.14 0.39	8.83	3.42 2.70	14.96
Cult & Post	6R-30	MFWD 150	30,900	150	10	0.146	6.01	4.52	1.20 0.72	12.47	3.62 4.93	21.03
Cult & Post	6R-38	MFWD 150	32,000	150	10	0.115	2.37	3.57	0.98 0.57	7.51	2.96 3.89	14.36
Cult & Post	8R-30	MFWD 190	31,200	150	10	0.110	2.25	4.30	0.91 0.74	8.21	2.74 5.25	16.21
Cult & Post	8R-38	MFWD 190	41,500	150	10	0.086	1.78	3.40	0.96 0.58	6.73	2.88 4.15	13.76
Cult & Post	8R-38 2x1	MFWD 190	56,400	150	10	0.057	1.18	2.26	0.87 0.39	4.71	2.61 2.76	10.08
Cult & Post	10R-30	MFWD 225	32,000	150	10	0.088	1.80	4.07	0.75 0.75	7.39	2.25 5.36	15.00
Cult & Post	10R-38	MFWD 225	0	150	10	0.065	1.33	3.01	0.00 0.56	4.90	0.00 3.96	8.87
Cult & Post	12R-30	MFWD 225	56,500	150	10	0.073	1.50	3.39	1.10 0.63	6.63	3.31 4.47	14.42
Cult & Post	12R-38	MFWD 225	56,400	150	10	0.057	1.18	2.68	0.87 0.49	5.23	2.61 3.53	11.38
Cultipacker	12'	2WD 130	6,720	300	12	0.124	1.70	3.33	0.19 0.45	5.68	0.30 3.11	9.11
Cultipacker	20'	MFWD 150	10,900	300	12	0.074	1.02	2.30	0.19 0.36	3.88	0.30 2.51	6.69
Cultivate	4R-38	2WD 105	19,000	150	10	0.162	2.22	3.51	0.82 0.37	6.92	2.46 2.53	11.92
Cultivate	6R-30	MFWD 150	25,200	150	10	0.137	1.87	4.24	0.92 0.67	7.72	2.76 4.62	15.12
Cultivate	6R-38	MFWD 150	26,300	150	10	0.108	1.48	3.35	0.76 0.53	6.13	2.28 3.65	12.06
Cultivate	8R-30	MFWD 190	32,600	150	10	0.103	1.40	4.03	0.89 0.69	7.03	2.68 4.92	14.64
Cultivate	8R-38	MFWD 190	39,800	150	10	0.081	1.11	3.18	0.86 0.55	5.71	2.59 3.89	12.20
Cultivate	8R-38 2x1	MFWD 190	50,100	150	10	0.054	0.74	2.12	0.72 0.36	3.95	2.17 2.59	8.72
Cultivate	10R-30	MFWD 225	28,200	150	10	0.082	1.12	3.82	0.62 0.71	6.28	1.85 5.03	13.17
Cultivate	10R-38	MFWD 225	0	150	10	0.065	0.88	3.01	0.00 0.56	4.46	0.00 3.96	8.43
Cultivate	12R-30	MFWD 225	50,800	150	10	0.068	0.93	3.18	0.93 0.59	5.64	2.79 4.19	12.63
Cultivate	12R-38	MFWD 225	50,700	150	10	0.054	0.74	2.51	0.73 0.46	4.45	2.19 3.31	9.96
Disk & Incorporate	14'	2WD 130	45,200	200	10	0.149	3.06	4.00	2.02 0.55	9.65	4.05 3.74	17.45
Disk & Incorporate	24'	MFWD 190	71,300	200	10	0.087	1.79	3.41	1.86 0.58	7.66	3.73 4.16	15.56
Disk & Incorporate	32'	4WD 225	87,300	200	10	0.068	1.40	3.18	1.80 0.31	6.71	3.59 2.23	12.54
Disk & Incorporate	42'	MFWD 225	30,542	200	10	0.049	1.00	2.27	0.44 0.42	4.15	0.89 2.99	8.04
Disk Bed (Hipper)	4R-38	MFWD 150	15,700	160	10	0.147	2.01	4.55	0.57 0.72	7.88	1.73 4.96	14.58
Disk Bed (Hipper)	6R-30	MFWD 170	23,900	160	10	0.125	1.70	4.37	0.74 0.72	7.55	2.23 5.13	14.93
Disk Bed (Hipper)	6R-38	MFWD 170	23,900	160	10	0.098	1.34	3.45	0.58 0.57	5.96	1.76 4.05	11.78
Disk Bed (Hipper)	8R-30	MFWD 190	30,700	160	10	0.093	1.28	3.66	0.71 0.63	6.30	2.15 4.47	12.93
Disk Bed (Hipper)	8R-38 2x1	MFWD 190	76,700	160	10	0.049	0.67	1.93	0.94 0.33	3.88	2.83 2.35	9.07
Disk Bed (Hipper)	10R-30	MFWD 225	19,900	160	10	0.075	1.02	3.47	0.37 0.64	5.51	1.11 4.57	11.21
Disk Bed (Hipper)	10R-38	MFWD 225	23,100	160	10	0.059	0.80	2.74	0.34 0.51	4.40	1.02 3.60	9.03
Disk Bed (Hipper)	12R-30	MFWD 225	59,900	160	10	0.062	0.85	2.89	0.93 0.53	5.22	2.80 3.81	11.84

Appendix Table 4. Implements: estimated purchase price, annual use, useful life, performance rate, and direct and fixed cost per acre, Louisiana 2023.

Item Name	Size	Power Unit	Purchase Price	Annual Use	Useful Life	Perf Rate	Labor	Fuel	---R&M--- Imp. P.U.		Total Direct	--Fixed-- Imp. P.U.		Total Cost
			dollars	hours	years	hr/ac	-----\$/acre-----							
Disk Bed (Hipper)	12R-38	MFWD 225	76,700	160	10	0.049	0.67	2.28	0.94	0.42	4.33	2.83	3.00	10.17
Disk Bed (Hipper)Fld	8R-38	MFWD 190	33,400	160	10	0.074	1.01	2.89	0.61	0.50	5.03	1.85	3.53	10.42
Disk Bed (Hipper)Rdg	8R-38	MFWD 190	30,800	160	10	0.074	1.01	2.89	0.57	0.50	4.98	1.71	3.53	10.23
Disk Bed w/roller	8R-30	2WD 190	40,100	160	10	0.093	1.28	3.66	0.93	0.41	6.30	2.81	2.96	12.08
Disk Bed w/roller	12R-30	MFWD 225	76,000	160	10	0.062	0.85	2.89	1.18	0.53	5.47	3.55	3.81	12.84
Disk Harrow	14'	2WD 130	39,400	180	10	0.140	1.91	3.75	1.53	0.51	7.72	3.68	3.51	14.91
Disk Harrow	24'	MFWD 190	65,600	180	10	0.081	1.11	3.20	1.49	0.55	6.36	3.57	3.90	13.84
Disk Harrow	28'	MFWD 225	74,700	180	10	0.070	0.95	3.24	1.45	0.60	6.26	3.49	4.27	14.03
Disk Harrow	32'		81,500	180	10	0.061	1.01	0.00	1.38	0.00	0.00	3.33	0.00	0.00
Disk Harrow	42'	MFWD 225	134,800	180	10	0.046	0.63	2.16	1.75	0.40	4.96	4.19	2.85	12.01
Ditcher		2WD 130	8,760	200	10	0.020	0.27	0.53	0.07	0.07	0.95	0.10	0.50	1.55
Ditcher (1m/160a)		2WD 130	8,760	200	10	0.009	0.12	0.25	0.03	0.03	0.44	0.04	0.23	0.73
Fert Appl (Liquid)	4R-38	MFWD 150	25,400	150	8	0.154	3.17	4.77	2.61	0.76	11.33	3.34	5.20	19.87
Fert Appl (Liquid)	6R-30	MFWD 170	25,300	150	8	0.130	2.68	4.58	2.20	0.76	10.23	2.82	5.38	18.44
Fert Appl (Liquid)	6R-38	MFWD 170	25,300	150	8	0.103	2.11	3.61	1.74	0.60	8.08	2.22	4.24	14.55
Fert Appl (Liquid)	8R-30	MFWD 190	26,300	150	8	0.098	2.01	3.84	1.72	0.66	8.24	2.19	4.68	15.12
Fert Appl (Liquid)	8R-38	MFWD 190	29,500	150	8	0.077	1.59	3.03	1.52	0.52	6.68	1.94	3.70	12.33
Fert Appl (Liquid)	8R-38 2x1	MFWD 190	32,900	150	8	0.051	1.05	2.02	1.13	0.34	4.56	1.44	2.46	8.47
Fert Appl (Liquid)	10R-30	MFWD 225	18,600	150	8	0.078	1.61	3.63	0.97	0.67	6.90	1.24	4.79	12.93
Fert Appl (Liquid)	10R-38	MFWD 225	20,300	150	8	0.061	1.27	2.87	0.83	0.53	5.51	1.07	3.77	10.36
Fert Appl (Liquid)	12R-30	MFWD 225	30,600	150	8	0.078	1.61	3.63	1.60	0.67	7.53	2.04	4.79	14.36
Fert Appl (Liquid)	12R-38	MFWD 225	31,100	150	8	0.051	1.05	2.39	1.07	0.44	4.97	1.36	3.15	9.49
Field Cult & Inc	12'	2WD 150	22,800	100	10	0.132	2.71	4.08	0.75	0.54	8.08	3.61	3.69	15.39
Field Cult & Inc	24'	MFWD 170	38,500	100	10	0.066	1.35	2.31	0.63	0.38	4.68	3.05	2.71	10.45
Field Cult & Inc	32'	MFWD 190	59,100	100	10	0.049	1.01	1.93	0.73	0.33	4.02	3.51	2.36	9.90
Field Cult & Inc	42'	MFWD 225	73,200	100	10	0.037	0.77	1.74	0.69	0.32	3.54	3.31	2.30	9.16
Field Cultivate	12'	2WD 150	22,800	100	10	0.124	1.70	3.84	0.70	0.51	6.76	3.40	3.47	13.63
Field Cultivate	24'	MFWD 170	38,000	100	10	0.062	0.85	2.17	0.59	0.36	3.98	2.83	2.55	9.37
Field Cultivate	32'	MFWD 190	59,100	100	10	0.046	0.63	1.82	0.68	0.31	3.46	3.30	2.22	9.00
Field Cultivate	42'	MFWD 225	73,200	100	10	0.035	0.48	1.64	0.65	0.30	3.09	3.12	2.16	8.37
Field Cultivate	50'	MFWD 225	82,900	100	10	0.029	0.40	1.38	0.61	0.25	2.66	2.96	1.82	7.45
Gate Installer		2WD 130	2,960	10	10	0.020	0.54	0.53	0.17	0.07	1.33	0.68	0.50	2.52
Grain Drill	12'	2WD 130	40,700	150	8	0.157	4.29	4.20	2.39	0.57	11.47	5.23	3.93	20.64
Grain Drill	15'	MFWD 150	38,900	150	8	0.125	3.43	3.88	1.83	0.62	9.77	4.00	4.22	18.00
Grain Drill	20'	MFWD 170	45,400	150	8	0.094	2.57	3.30	1.60	0.54	8.03	3.50	3.87	15.41
Grain Drill	24'	MFWD 190	68,900	150	8	0.078	2.14	3.07	2.03	0.53	7.78	4.43	3.75	15.96
Grain Drill	30'	MFWD 225	82,500	150	8	0.062	1.71	2.91	1.94	0.54	7.11	4.24	3.83	15.19
Grain Drill & Pre	12'	2WD 130	46,100	150	8	0.169	4.62	4.52	2.92	0.62	12.70	6.38	4.23	23.32
Grain Drill & Pre	15'	MFWD 150	44,200	150	8	0.135	3.70	4.18	2.24	0.66	10.79	4.89	4.55	20.24
Grain Drill & Pre	20'	MFWD 170	50,800	150	8	0.101	2.77	3.55	1.93	0.59	8.85	4.22	4.17	17.25
Grain Drill & Pre	24'	MFWD 190	74,200	150	8	0.084	2.31	3.31	2.35	0.57	8.54	5.13	4.03	17.72
Grain Drill & Pre	30'	MFWD 225	87,800	150	8	0.067	1.85	3.13	2.22	0.58	7.79	4.86	4.12	16.79
Harrow	13'	2WD 130	4,360	200	10	0.119	1.63	3.19	0.18	0.43	5.45	0.31	2.98	8.75
Harrow	21'	2WD 150	6,750	200	10	0.073	1.01	2.28	0.17	0.30	3.77	0.29	2.06	6.13
Harrow	40'	MFWD 190	21,300	200	10	0.038	0.53	1.51	0.28	0.26	2.60	0.49	1.85	4.94
Harrow	47'	MFWD 190	26,000	200	10	0.033	0.45	1.29	0.30	0.22	2.26	0.51	1.57	4.35
Header - Corn	4R-38	240hp	25,147	300	8	0.201	3.32	9.93	1.26	3.38	17.91	2.15	14.88	34.95
Header - Corn	6R30"	240hp	64,800	300	8	0.170	2.81	8.41	2.75	2.86	16.85	4.69	12.60	34.15
Header - Corn	6R38"	240hp	64,900	300	8	0.134	2.22	6.64	2.18	2.26	13.30	3.71	9.95	26.97
Header - Corn	8R-30	240hp	87,400	300	8	0.127	2.11	6.30	2.79	2.14	13.36	4.75	9.45	27.56
Header - Corn	8R-38	275hp	80,000	300	8	0.100	1.66	5.71	2.01	4.86	14.27	3.43	21.42	39.13
Header - Corn	12R-20	275hp	129,500	300	8	0.127	2.11	7.22	4.13	6.15	19.63	7.03	27.09	53.76
Header - Corn	12R-30	275hp	125,000	300	8	0.085	1.40	4.81	2.66	4.10	12.99	4.52	18.06	35.58
Header - Rice (CL)	22' Rigid	240hp	77,900	300	8	0.288	4.77	14.24	5.61	4.85	29.49	9.56	21.35	60.41
Header - Rice (CL)	25' Rigid	240hp	77,900	300	8	0.253	4.19	12.54	4.94	4.27	25.95	8.41	18.79	53.16
Header - Rice (CL)	30' Rigid	275hp	81,600	300	8	0.211	3.49	11.97	4.31	10.20	29.98	7.34	44.88	82.21
Header - Rice (SL)	22' Rigid	240hp	77,900	300	8	0.250	4.13	12.35	4.86	4.20	25.56	8.28	18.50	52.35
Header - Rice (SL)	25' Rigid	240hp	77,900	300	8	0.220	3.63	10.86	4.28	3.70	22.49	7.29	16.28	46.07
Header - Rice (SL)	30' Rigid	275hp	81,600	300	8	0.183	3.03	10.37	3.73	8.84	25.99	6.36	38.89	71.25
Header - Soybean	15' Flex	240hp	0	300	8	0.170	2.81	8.41	0.00	2.86	14.09	0.00	12.60	26.69
Header - Soybean	18' Flex	240hp	20,309	300	8	0.141	2.34	7.00	0.72	2.38	12.46	1.22	10.50	24.19
Header - Soybean	22' Flex	240hp	38,700	300	8	0.116	1.92	5.73	1.12	1.95	10.73	1.91	8.59	21.23
Header - Soybean	25' Flex	275hp	39,600	300	8	0.102	1.68	5.78	1.01	4.92	13.41	1.72	21.67	36.81
Header - Soybean	30' Flex	275hp	47,100	300	8	0.085	1.40	4.81	1.00	4.10	11.33	1.70	18.06	31.10
Header Wheat/Sorghum	18' Rigid	240hp	19,069	300	8	0.141	2.34	7.00	0.67	2.38	12.42	1.15	10.50	24.07
Header Wheat/Sorghum	22' Rigid	240hp	19,800	300	8	0.116	1.92	5.73	0.57	1.95	10.18	0.97	8.59	19.75
Header Wheat/Sorghum	25' Rigid	240hp	41,800	300	8	0.102	1.68	5.04	1.06	1.71	9.52	1.81	7.56	18.90
Header Wheat/Sorghum	30' Rigid	275hp	55,100	300	8	0.085	1.40	4.81	1.17	4.10	11.50	1.99	18.06	31.56
Header-Cotton-Bcast	13'	173hp	21,300	200	8	0.251	7.60	8.13	1.00	6.68	23.44	3.42	29.42	56.29
Header-Cotton-Bcast	16'	173hp	23,800	200	8	0.204	6.18	6.61	0.91	5.43	19.14	3.10	23.90	46.16
Header-Cotton-Bcast	19'	173hp	26,200	200	8	0.172	5.20	5.56	0.84	4.57	16.19	2.88	20.13	39.21
Header-Cotton-Brush	4R30"	173hp	20,520	200	8	0.327	9.89	10.58	1.25	8.69	30.42	4.28	38.25	72.97
Header-Cotton-Brush	4R30"2X1	173hp	34,400	200	8	0.218	6.59	7.05	1.40	5.79	20.85	4.79	25.50	51.14
Header-Cotton-Brush	4R38"	173hp	34,000	200	8	0.257	7.78	8.33	1.64	6.84	24.60	5.59	30.12	60.32
Header-Cotton-Brush	4R38"2X1	173hp	36,000	200	8	0.172	5.20	5.56	1.16	4.57	16.51	3.96	20.13	

Appendix Table 4. Implements: estimated purchase price, annual use, useful life, performance rate,
(Continued) and direct and fixed cost per acre, Louisiana 2023.

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---			
Heavy Disk	21'	MFWD 170	40,600	180	10	0.097	1.33	3.40	1.09 0.56	6.39	2.63 3.99	13.02
Heavy Disk	27'	MFWD 190	50,400	180	10	0.075	1.03	2.96	1.05 0.51	5.56	2.54 3.61	11.71
LA Boom Sprayer	30 ft	MFWD 150	3,000	150	10	0.059	0.82	1.85	0.13 0.29	3.10	0.16 2.01	5.27
Land Plane	40'x10'	MFWD 190	6,020	200	10	0.242	3.31	9.49	0.29 1.63	14.73	0.87 11.58	27.19
Land Plane	50'x16'	MFWD 190	13,000	200	10	0.151	2.07	5.93	0.39 1.02	9.42	1.18 7.23	17.84
LARice Backhoe-Rmnt	2 ft	MFWD 150	6,000	100	10	0.500	6.83	15.44	2.64 2.46	27.38	4.03 16.81	48.23
LARice Land Level	13 ft	MFWD 150	7,500	200	15	0.190	2.59	5.87	0.15 0.93	9.56	0.74 6.39	16.70
LARice Levee Plow	8 ft	4WD 300	4,600	150	10	0.050	0.68	3.08	0.07 0.58	4.43	0.20 4.16	8.80
LARice Water Level	24 ft	4WD 300	3,500	100	15	0.149	2.04	9.26	0.23 1.76	13.30	0.55 12.48	26.34
Levee Splitter (1/80	2 blade	2WD 150	9,220	50	10	0.004	0.05	0.12	0.00 0.01	0.20	0.09 0.11	0.41
Lo-Till & Bed	4R-38	MFWD 190	5,100	150	12	0.145	1.98	5.69	0.26 0.98	8.93	0.55 6.94	16.43
Middle Buster	6R-38	MFWD 150	12,800	160	8	0.120	1.64	3.71	0.36 0.59	6.30	1.27 4.04	11.62
Middle Buster	8R-30	MFWD 190	20,800	160	8	0.114	1.56	4.46	0.55 0.77	7.35	1.96 5.45	14.77
Middle Buster	8R-38	MFWD 190	18,100	160	8	0.090	1.23	3.53	0.38 0.60	5.75	1.35 4.30	11.42
Middle Buster	8R-40 2x1	MFWD 190	29,200	160	8	0.060	0.82	2.35	0.41 0.40	3.98	1.45 2.86	8.31
Middle Buster	10R-30	MFWD 225	29,300	160	8	0.091	1.24	4.23	0.62 0.78	6.89	2.21 5.57	14.68
Middle Buster	10R-38	MFWD 225	32,100	160	8	0.072	0.98	3.33	0.54 0.62	5.48	1.91 4.39	11.79
Middle Buster	12R-38	MFWD 225	29,200	160	8	0.060	0.82	2.78	0.41 0.51	4.53	1.45 3.66	9.65
Module Builder-1st	2R-38(157)	MFWD 190	31,300	200	10	0.519	14.20	20.32	4.06 3.50	42.10	9.45 24.80	76.36
Module Builder-1st	4R-30(255)	MFWD 190	34,700	200	10	0.327	8.95	12.80	2.84 2.20	26.80	6.60 15.62	49.03
Module Builder-1st	4R-30(325)	MFWD 190	34,700	200	10	0.327	8.95	12.80	2.84 2.20	26.80	6.60 15.62	49.03
Module Builder-1st	4R-38(255)	MFWD 190	34,700	200	10	0.257	7.04	10.08	2.23 1.74	21.10	5.20 12.30	38.61
Module Builder-1st	4R-38(325)	MFWD 190	34,700	200	10	0.257	7.04	10.08	2.23 1.74	21.10	5.20 12.30	38.61
Module Builder-1st	4R2x1260hp	MFWD 190	34,700	200	10	0.172	4.71	6.74	1.49 1.16	14.10	3.47 8.22	25.80
Module Builder-1st	5R-30(255)	MFWD 190	34,700	200	10	0.261	7.16	10.24	2.27 1.76	21.44	5.28 12.50	39.22
Module Builder-1st	5R-38(255)	MFWD 190	34,700	200	10	0.207	5.66	8.10	1.79 1.39	16.96	4.17 9.88	31.03
Module Builder-1st	6R-30(325)	MFWD 190	34,700	200	10	0.218	5.96	8.53	1.89 1.47	17.87	4.40 10.41	32.69
Module Builder-1st	6R-38(325)	MFWD 190	34,700	200	10	0.172	4.71	6.74	1.49 1.16	14.10	3.47 8.22	25.80
Module Builder-2nd	2R-38(157)	MFWD 190	34,700	200	10	0.440	12.03	17.21	3.81 2.97	36.04	8.87 21.00	65.93
Module Builder-2nd	4R-30(255)	MFWD 190	34,700	200	10	0.277	7.58	10.84	2.40 1.87	22.70	5.59 13.23	41.53
Module Builder-2nd	4R-30(325)	MFWD 190	34,700	200	10	0.277	7.58	10.84	2.40 1.87	22.70	5.59 13.23	41.53
Module Builder-2nd	4R-38(255)	MFWD 190	34,700	200	10	0.218	5.96	8.54	1.89 1.47	17.87	4.40 10.42	32.70
Module Builder-2nd	4R-38(325)	MFWD 190	34,700	200	10	0.218	5.96	8.54	1.89 1.47	17.87	4.40 10.42	32.70
Module Builder-2nd	4R2x1 255	MFWD 190	34,700	200	10	0.145	3.99	5.70	1.26 0.98	11.95	2.94 6.96	21.86
Module Builder-2nd	5R-30(255)	MFWD 190	34,700	200	10	0.221	6.06	8.67	1.92 1.49	18.16	4.47 10.58	33.22
Module Builder-2nd	5R-38(255)	MFWD 190	34,700	200	10	0.175	4.79	6.86	1.52 1.18	14.37	3.54 8.37	26.28
Module Builder-2nd	6R-30(325)	MFWD 190	34,700	200	10	0.184	5.05	7.23	1.60 1.24	15.13	3.72 8.82	27.69
Module Builder-2nd	6R-38(325)	MFWD 190	34,700	200	10	0.145	3.99	5.70	1.26 0.98	11.95	2.94 6.96	21.86
Module Builder-Strip	13' Bcast	MFWD 150	34,700	200	10	0.251	6.88	7.77	2.18 1.24	18.09	5.08 8.46	31.63
Module Builder-Strip	16' Bcast	MFWD 150	34,700	200	10	0.204	5.59	6.31	1.77 1.01	14.69	4.12 6.88	25.70
Module Builder-Strip	19' Brush	MFWD 150	34,700	200	10	0.172	4.71	5.32	1.49 0.85	12.37	3.47 5.79	21.64
Module Builder-Strip	4R-30	MFWD 150	34,700	200	10	0.327	8.95	10.11	2.84 1.61	23.51	6.60 11.00	41.13
Module Builder-Strip	4R-30 2X1	MFWD 150	34,700	200	10	0.218	5.96	6.74	1.89 1.07	15.67	4.40 7.33	27.41
Module Builder-Strip	4R-38	MFWD 150	34,700	200	10	0.257	7.04	7.96	2.23 1.27	18.51	5.20 8.66	32.38
Module Builder-Strip	4R-38 2X1	MFWD 150	34,700	200	10	0.172	4.71	5.32	1.49 0.85	12.37	3.47 5.79	21.64
Module Builder-Strip	5R-30	MFWD 150	34,700	200	10	0.261	7.16	8.08	2.27 1.29	18.81	5.28 8.80	32.90
Module Builder-Strip	5R-38	MFWD 150	34,700	200	10	0.207	5.66	6.39	1.79 1.02	14.88	4.17 6.96	26.03
Module Builder-Strip	6R-30	MFWD 150	34,700	200	10	0.218	5.96	6.74	1.89 1.07	15.67	4.40 7.33	27.41
NT Grain Drill	12'	2WD 130	50,200	150	8	0.163	4.47	4.38	3.08 0.60	12.53	6.72 4.09	23.36
NT Grain Drill & Pre	15'	MFWD 150	68,700	150	8	0.141	3.85	4.35	3.63 0.69	12.54	7.93 4.74	25.21
NT Grain Drill & Pre	20'	MFWD 170	86,500	150	8	0.105	2.89	3.70	3.43 0.61	10.63	7.49 4.34	22.47
NT Grain Drill & Pre	24'	MFWD 190	116,600	150	8	0.088	2.40	3.44	3.85 0.59	10.30	8.41 4.20	22.92
NT Grain Drill & Pre	30'	MFWD 225	115,500	150	8	0.070	1.92	3.26	3.05 0.60	8.85	6.66 4.30	19.82
NT Plant&Pre-Folding	8R-38	MFWD 170	67,800	150	8	0.083	2.28	2.92	2.12 0.48	7.82	4.64 3.43	15.90
NT Plant&Pre-Folding	8R-38 2x1	MFWD 170	107,000	150	8	0.055	1.52	1.94	2.23 0.32	6.02	4.87 2.28	13.19
NT Plant&Pre-Folding	10R-30	MFWD 190	57,555	150	8	0.084	2.31	3.31	1.82 0.57	8.02	3.98 4.03	16.04
NT Plant&Pre-Folding	10R-38	MFWD 190	52,893	150	8	0.066	1.82	2.61	1.32 0.45	6.20	2.88 3.18	12.28
NT Plant&Pre-Folding	12R-20	MFWD 190	82,800	150	8	0.105	2.89	4.13	3.28 0.71	11.02	7.16 5.04	23.24
NT Plant&Pre-Folding	12R-30	MFWD 190	101,000	150	8	0.070	1.92	2.75	2.67 0.47	7.83	5.83 3.36	17.02
NT Plant&Pre-Folding	12R-38	MFWD 190	111,800	150	8	0.055	1.52	2.17	2.33 0.37	6.40	5.09 2.65	14.16
NT Plant&Pre-Folding	16R-30	MFWD 190	149,400	150	8	0.052	1.44	2.06	2.96 0.35	6.83	6.46 2.52	15.82
NT Plant&Pre-Folding	23R-15	MFWD 190	203,900	150	8	0.073	2.00	2.87	5.61 0.49	10.99	12.26 3.50	26.75
NT Plant&Pre-Folding	24R-20	MFWD 190	238,100	150	8	0.052	1.44	2.06	4.72 0.35	8.59	10.30 2.52	21.42
NT Plant&Pre-Folding	24R-30	MFWD 190	224,900	150	8	0.035	0.96	1.37	2.97 0.23	5.55	6.49 1.68	13.72
NT Plant&Pre-Rigid	4R-30	2WD 130	37,700	150	8	0.211	5.78	5.66	2.99 0.77	15.21	6.52 5.29	27.03
NT Plant&Pre-Rigid	4R-38	2WD 130	34,500	150	8	0.166	4.55	4.45	2.15 0.61	11.77	4.70 4.16	20.65
NT Plant&Pre-Rigid	6R-30	MFWD 150	47,400	150	8	0.141	3.85	4.35	2.50 0.69	11.41	5.47 4.74	21.62
NT Plant&Pre-Rigid	6R-38	MFWD 150	47,500	150	8	0.111	3.04	3.43	1.98 0.54	9.01	4.32 3.74	17.08
NT Plant&Pre-Rigid	8R-22	MFWD 170	26,219	150	8	0.143	3.93	5.03	1.41 0.83	11.22	3.08 5.91	20.22
NT Plant&Pre-Rigid	8R-30	MFWD 170	60,300	150	8	0.105	2.89	3.70	2.39 0.61	9.60	5.22 4.34	19.16
NT Plant&Pre-Rigid	8R-38	MFWD 170	56,200	150	8	0.077	2.11	2.70	1.62 0.44	6.88	3.55 3.17	13.60
NT Plant&Pre-Rigid	10R-30	MFWD 190	51,900	150	8	0.084	2.31	3.31	1.64 0.57	7.84	3.59 4.03	15.47
NT Plant&Pre-Rigid	12R-20	MFWD 190	66,600	150	8	0.105	2.89	4.13	2.64 0.71	10.38	5.76 5.04	21.20
NT Plant&Pre-Rigid	12R-30	MFWD 190	86,600	150	8	0.070	1.92	2.75	2.28 0.47	7.45	4.99 3.36	15.81
NT Plant&Pre-Rigid	8R-38	MFWD 170	72,900	150	8	0.077	2.12	2.71	2.12 0.45	7.41	4.63 3.19	15.23
NT Plant&Pre-Rigid	8R-38 2x1	MFWD 170	102,200	150	8	0.051	1.41	1.80	1.98 0.30	5.50	4.32 2.12	11.95
NT Plant&Pre-Rigid	10R-30	MFWD 190	52,061	150	8	0.078	2.14	3.07	1.53 0.53	7.28	3.34 3.75	14.38
NT Plant&Pre-Rigid	10R-38	MFWD 190	47,646	150	8	0.061	1.69	2.42	1.10 0.41	5.64	2.41 2.95	11.01
NT Plant&Pre-Rigid	12R-20	MFWD 190	77,500	150	8	0.098	2.68	3.84	2.85 0.66	10.04	6.23 4.68	20.96
NT Plant&Pre-Rigid	12R-30	MFWD 190	91,300	150	8	0.065	1.79	2.56	2.24 0.44	7.03	4.89 3.12	15.05

Appendix Table 4. Implements: estimated purchase price, annual use, useful life, performance rate,
(Continued) and direct and fixed cost per acre, Louisiana 2023.

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								
NT Plant-Rigid	4R-30	2WD 130	31,900	150	8	0.196	5.37	5.25	2.34	0.72	13.69	5.12	4.91	23.74	
NT Plant-Rigid	4R-38	2WD 130	29,500	150	8	0.154	4.22	4.13	1.71	0.56	10.64	3.73	3.87	18.25	
NT Plant-Rigid	6R-30	MFWD 150	41,600	150	8	0.130	3.58	4.04	2.04	0.64	10.31	4.45	4.40	19.17	
Plant & Pre Rigid	6R-38	MFWD 150	41,400	150	8	0.106	2.92	3.30	1.65	0.52	8.41	3.62	3.59	15.62	
Plant & Pre Rigid	8R-22	MFWD 170	23,550	150	8	0.138	3.77	4.83	1.22	0.80	10.63	2.66	5.67	18.97	
Plant & Pre Rigid	8R-30	MFWD 170	52,200	150	8	0.101	2.77	3.55	1.98	0.59	8.90	4.33	4.17	17.42	
Plant & Pre Rigid	8R-38	MFWD 170	48,000	150	8	0.080	2.19	2.80	1.44	0.46	6.91	3.15	3.29	13.36	
Plant & Pre Rigid	10R-30	MFWD 190	46,000	150	8	0.081	2.22	3.17	1.40	0.54	7.34	3.05	3.87	14.28	
Plant & Pre Rigid	12R-20	MFWD 190	60,800	150	8	0.101	2.77	3.97	2.31	0.68	9.74	5.05	4.84	19.64	
Plant & Pre Rigid	12R-30	MFWD 190	74,400	150	8	0.067	1.85	2.64	1.88	0.45	6.84	4.12	3.23	14.19	
Plant - Folding	8R-38	MFWD 170	64,700	150	8	0.074	2.03	2.60	1.80	0.43	6.88	3.94	3.06	13.89	
Plant - Folding	8R-38 2x1	MFWD 170	89,800	150	8	0.049	1.35	1.73	1.67	0.28	5.05	3.64	2.03	10.74	
Plant - Folding	10R-30	MFWD 190	47,426	150	8	0.075	2.06	2.95	1.34	0.50	6.86	2.92	3.60	13.39	
Plant - Folding	10R-38	MFWD 190	43,011	150	8	0.059	1.62	2.32	0.95	0.40	5.31	2.09	2.83	10.24	
Plant - Folding	12R-20	MFWD 190	65,200	150	8	0.094	2.57	3.68	2.30	0.63	9.20	5.03	4.50	18.74	
Plant - Folding	12R-30	MFWD 190	79,000	150	8	0.062	1.71	2.45	1.86	0.42	6.46	4.06	3.00	13.52	
Plant - Folding	12R-38	MFWD 190	89,800	150	8	0.049	1.35	1.94	1.67	0.33	5.30	3.64	2.36	11.32	
Plant - Folding	16R-30	MFWD 190	123,000	150	8	0.047	1.28	1.84	2.17	0.31	5.62	4.74	2.25	12.62	
Plant - Folding	23R-15	MFWD 190	170,000	150	8	0.065	1.79	2.56	4.17	0.44	8.96	9.11	3.12	21.20	
Plant - Folding	24R-20	MFWD 190	204,000	150	8	0.047	1.28	1.84	3.60	0.31	7.05	7.87	2.25	17.18	
Plant - Folding	24R-30	MFWD 190	284,000	150	8	0.031	0.85	1.22	3.34	0.21	5.64	7.30	1.50	14.45	
Plant - Rigid	4R-30	2WD 130	27,900	150	8	0.188	5.15	5.04	1.97	0.69	12.86	4.30	4.71	21.89	
Plant - Rigid	4R-38	2WD 130	25,400	150	8	0.148	4.05	3.97	1.41	0.54	9.99	3.08	3.71	16.79	
Plant - Rigid	6R-30	MFWD 150	35,500	150	8	0.125	3.43	3.88	1.67	0.62	9.61	3.65	4.22	17.49	
Plant - Rigid	6R-38	MFWD 150	35,700	150	8	0.099	2.71	3.06	1.32	0.49	7.59	2.90	3.33	13.83	
Plant - Rigid	8R-22	MFWD 170	18,473	150	8	0.127	3.49	4.47	0.88	0.74	9.60	1.93	5.25	16.79	
Plant - Rigid	8R-30	MFWD 170	46,500	150	8	0.094	2.57	3.30	1.64	0.54	8.06	3.58	3.87	15.53	
Plant - Rigid	8R-38	MFWD 170	42,300	150	8	0.074	2.03	2.60	1.18	0.43	6.26	2.58	3.06	11.90	
Plant - Rigid	10R-30	MFWD 190	40,700	150	8	0.075	2.06	2.95	1.15	0.50	6.67	2.51	3.60	12.78	
Plant - Rigid	12R-20	MFWD 190	55,000	150	8	0.094	2.57	3.68	1.94	0.63	8.84	4.24	4.50	17.59	
Plant - Rigid	12R-30	MFWD 190	64,600	150	8	0.062	1.71	2.45	1.52	0.42	6.12	3.32	3.00	12.44	
Plant - Rigid	15R-15	2WD 150	64,600	150	8	0.094	2.57	2.91	2.28	0.38	8.16	4.98	2.63	15.77	
Pull Levee (1m/80a))	4 blade	2WD 50	3,180	100	10	0.003	0.04	0.03	0.00	0.00	0.09	0.01	0.02	0.12	
Rice Grain Cart	500 Bu	MFWD 190	34,100	200	12	0.057	0.78	2.23	0.52	0.38	3.92	1.05	2.72	7.70	
Rice Grain Cart	700 Bu	MFWD 190	51,600	200	12	0.063	0.86	2.48	0.88	0.42	4.66	1.77	3.02	9.46	
Roller	32'	MFWD 170	22,800	100	12	0.046	0.63	1.63	0.17	0.27	2.71	1.15	1.91	5.79	
Rotary Cutter	7'	MFWD 130	4,500	185	10	0.168	2.30	4.50	0.61	0.70	8.12	0.49	4.77	13.39	
Rotary Cutter	12'	2WD 150	20,200	185	10	0.098	1.34	3.03	1.60	0.40	6.38	1.28	2.74	10.41	
Rotary Cutter	15'	MFWD 150	28,700	185	10	0.078	1.07	2.42	1.82	0.38	5.71	1.46	2.64	9.82	
Row Cond & Inc	13'	2WD 130	18,700	100	10	0.137	2.82	3.69	0.64	0.50	7.67	3.09	3.45	14.21	
Row Cond & Inc	21'	2WD 170	26,900	100	10	0.085	1.75	2.98	0.57	0.44	5.75	2.75	3.13	11.64	
Row Cond & Inc	26'	MFWD 190	29,300	100	10	0.063	1.30	2.48	0.46	0.42	4.67	2.22	3.02	9.92	
Row Cond & Inc	38'	MFWD 225	40,100	100	10	0.047	0.96	2.18	0.47	0.40	4.03	2.26	2.87	9.18	
Row Cond & Inc	42'	MFWD 225	20,400	100	10	0.040	0.82	1.86	0.20	0.34	3.23	0.98	2.45	6.67	
Row Cond (Harrow)	13'	2WD 130	7,300	100	10	0.114	1.57	3.07	0.20	0.42	5.27	1.00	2.87	9.15	
Row Cond (Harrow)	21'	2WD 170	12,000	100	10	0.071	0.97	2.48	0.21	0.36	4.04	1.02	2.60	7.67	
Row Cond (Harrow)	27'	MFWD 190	12,400	100	10	0.057	0.78	2.24	0.17	0.38	3.59	0.85	2.74	7.19	
Row Cond (Harrow)	38'	MFWD 225	22,200	100	10	0.039	0.53	1.82	0.21	0.33	2.91	1.04	2.39	6.35	
Row Cond (Harrow)	42'	MFWD 225	15,582	100	10	0.035	0.48	1.64	0.13	0.30	2.57	0.66	2.16	5.41	
Row Cond (Plant)	13'	2WD 130	7,120	100	10	0.157	2.14	4.20	0.27	0.57	7.21	1.34	3.93	12.48	
Row Cond (Plant)	21'	2WD 170	11,700	100	10	0.097	1.33	3.40	0.28	0.50	5.52	1.36	3.56	10.45	
Row Cond (Plant)	27'	MFWD 190	12,400	100	10	0.078	1.07	3.07	0.24	0.53	4.92	1.16	3.75	9.84	
Row Cond (Plant)	38'	MFWD 225	16,587	100	10	0.053	0.73	2.49	0.22	0.46	3.91	1.06	3.27	8.26	
Row Cond (Plant)	42'	MFWD 225	15,582	100	10	0.048	0.66	2.25	0.18	0.41	3.52	0.90	2.96	7.40	
RT Cult (Early)	8R-30	2WD 170	20,774	200	12	0.103	1.40	3.60	1.02	0.53	6.58	1.19	3.78	11.55	
RT Cult (Early)	12R-30	2WD 190	29,998	200	12	0.068	0.93	2.68	0.98	0.30	4.92	1.14	2.17	8.24	
RT Cult (Late)	8R-30	2WD 170	20,774	200	12	0.128	1.76	4.51	1.28	0.66	8.22	1.48	4.72	14.44	
RT Cult (Late)	12R-30	2WD 190	29,998	200	12	0.085	1.17	3.36	1.23	0.38	6.15	1.43	2.71	10.30	
RT Cult + PD (Early)	8R-30	2WD 150	20,774	200	12	0.110	2.25	3.39	1.09	0.45	7.19	1.27	3.07	11.54	
RT Cult + PD (Early)	12R-30	MFWD 225	29,998	200	12	0.073	1.50	3.39	1.05	0.63	6.58	1.22	4.47	12.28	
RT Cult + PD (Late)	8R-30	2WD 170	26,264	200	12	0.137	2.81	4.81	1.73	0.71	10.07	2.00	5.04	17.12	
RT Cult + PD (Late)	12R-30	2WD 190	35,493	200	12	0.091	1.87	3.58	1.55	0.40	7.43	1.80	2.89	12.13	
Spin Spreader	5 ton	MFWD 190	14,500	100	8	0.042	1.15	1.64	0.34	0.28	3.42	0.77	2.00	6.21	
Spin Spreader	5 ton	MFWD 190	14,500	100	8	0.042	1.15	1.64	0.34	0.28	3.42	0.77	2.00	6.21	
Spray (Band)	27'	MFWD 170	7,400	200	8	0.062	1.28	2.19	0.21	0.36	4.06	0.29	2.57	6.93	
Spray (Band)	40'	MFWD 170	10,200	200	8	0.042	0.86	1.48	0.20	0.24	2.79	0.27	1.73	4.81	
Spray (Band)	50'	MFWD 170	10,100	200	8	0.033	0.69	1.18	0.16	0.19	2.23	0.21	1.39	3.84	
Spray (Band)	53'	MFWD 170	9,940	200	8	0.031	0.65	1.11	0.14	0.18	2.10	0.20	1.31	3.62	
Spray (Band)	60'	MFWD 170	13,200	200	8	0.028	0.57	0.98	0.17	0.16	1.90	0.23	1.15	3.30	
Spray (Bcast/HB)	13' Rigid	MFWD 150	8,700	200	8	0.130	2.66	4.02	0.53	0.64	7.86	0.72	4.37	12.96	
Spray (Bcast/HB)	20' Rigid	2WD 50	10,000	200	8	0.084	1.73	0.87	0.39	0.08	3.08	0.54	0.55	4.18	
Spray (Bcast/HB)	27' Fold	MFWD 170	16,200	200	8	0.062	1.28	2.							

Appendix Table 4. Implements: estimated purchase price, annual use, useful life, performance rate,
(Continued) and direct and fixed cost per acre, Louisiana 2023.

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-----		
Spray (Direct/Hood)	12R-38	MFWD 170	28,600	200	8	0.044	0.91	1.55	0.59 0.25	3.32	0.81 1.83	5.97
Spray (Direct/Layby)	8R-30	MFWD 170	19,500	200	8	0.084	1.73	2.96	0.77 0.49	5.96	1.05 3.47	10.49
Spray (Direct/Layby)	8R-38	MFWD 170	19,500	200	8	0.066	1.37	2.34	0.61 0.38	4.71	0.83 2.74	8.29
Spray (Direct/Layby)	8R-38 2x1	MFWD 170	29,900	200	8	0.044	0.91	1.55	0.62 0.25	3.35	0.85 1.83	6.03
Spray (Direct/Layby)	10R-30	MFWD 170	12,200	200	8	0.067	1.38	2.36	0.38 0.39	4.53	0.52 2.78	7.84
Spray (Direct/Layby)	12R-30	MFWD 170	29,500	200	8	0.056	1.15	1.97	0.78 0.32	4.23	1.06 2.31	7.61
Spray (Direct/Layby)	12R-38	MFWD 170	29,500	200	8	0.044	0.91	1.55	0.61 0.25	3.34	0.83 1.83	6.01
Spray (Direct/Layby)	16R-20	MFWD 170	34,600	200	8	0.063	1.29	2.21	1.02 0.36	4.91	1.40 2.60	8.91
Spray (Spot)	27'	MFWD 170	7,400	200	8	0.062	1.28	2.19	0.21 0.36	4.06	0.29 2.57	6.93
Spray (Spot)	40'	MFWD 170	10,200	200	8	0.042	0.86	1.48	0.20 0.24	2.79	0.27 1.73	4.81
Spray (Spot)	50'	MFWD 170	13,700	200	8	0.033	0.69	1.18	0.21 0.19	2.29	0.29 1.39	3.98
Spray (Spot)	53'	MFWD 170	10,100	200	8	0.031	0.65	1.11	0.15 0.18	2.10	0.20 1.31	3.62
Spray (Spot)	60'	MFWD 170	16,700	200	8	0.028	0.57	0.98	0.22 0.16	1.95	0.30 1.15	3.41
Stalk Shredder	14'	MFWD 150	36,300	200	10	0.117	1.61	3.63	3.74 0.58	9.57	2.56 3.96	16.10
Stalk Shredder	20'	MFWD 150	36,300	200	10	0.082	1.12	2.54	2.62 0.40	6.70	1.79 2.77	11.27
Stalk Shredder-Flail	12'	MFWD 150	26,200	200	10	0.137	1.87	4.24	3.15 0.67	9.95	2.15 4.62	16.74
Stalk Shredder-Flail	20'	MFWD 150	40,200	200	10	0.082	1.12	2.54	2.90 0.40	6.98	1.98 2.77	11.74
Subsoiler	3 shank	MFWD 190	6,500	100	15	0.204	2.79	7.99	0.44 1.37	12.60	1.28 9.75	23.65
Subsoiler	4 shank	MFWD 225	12,200	100	15	0.153	2.10	7.11	0.62 1.32	11.16	1.81 9.36	22.35
Subsoiler	5 shank	MFWD 225	17,100	100	15	0.122	1.67	5.66	0.69 1.05	9.09	2.03 7.46	18.58
Subsoiler low-till	4 shank	MFWD 225	9,830	100	15	0.153	2.10	7.11	0.50 1.32	11.04	1.46 9.36	21.88
Subsoiler low-till	6 shank	MFWD 225	20,000	100	15	0.102	1.39	4.73	0.68 0.88	7.69	1.98 6.23	15.90
Subsoiler low-till	8 shank	MFWD 225	24,300	100	15	0.076	1.04	3.54	0.61 0.66	5.87	1.80 4.66	12.34
TerraTill Bed w/roll	4R-38	MFWD 225	14,300	150	12	0.160	2.19	7.45	0.83 1.38	11.87	1.66 9.81	23.34
TerraTill Bed w/roll	6R-38	MFWD 225	19,400	150	12	0.107	1.47	4.98	0.75 0.92	8.13	1.50 6.55	16.19
TerraTill Bed w/roll	4R-30	MFWD 225	14,300	150	12	0.204	2.79	9.46	1.05 1.76	15.07	2.11 12.46	29.64
TerraTill Bed w/roll	6R-30	MFWD 225	15,310	150	12	0.136	1.86	6.31	0.75 1.17	10.10	1.50 8.30	19.91