

Projected Costs and Returns Crop Enterprise Budgets for Wheat Production in Louisiana, 2021

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by

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Introduction

This publication presents estimates of projected costs and returns for wheat production in Louisiana for the 2021 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 2021 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 2021 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 \$11.83 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 \$15.30 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 4.00% per year. Operating capital was assumed to be borrowed in a manner consistent with timely acquisition of inputs. Fuel price for diesel was \$1.73 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 4.50%. 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. As the primary purpose of this report is to estimate production costs associated with a specific commodity, no charges for general farm overhead are included.

Land and Management Charges

The estimated production expenses included in this report include only direct and fixed expenses associated with the production of the specific crop enterprise. Labor charges included in the enterprise budgets only include charges for field labor. No charges for management are included. In addition, no charges for land are included in the enterprise cost tables. Following each set of enterprise cost tables, two sets of net return tables are included. One set, representing owner operators, includes estimates of net returns above direct and total specified costs, which would represent returns to land, management and general farm overhead. Another set, representing tenant operators, includes estimates net returns above direct and total specified costs with a crop share taken out of revenue, representing net returns to management and general farm overhead.

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
Wheat, 8-row equipment, drill planted, non-irrigated,
alluvial soil, Northeast Louisiana, 2021.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air (5 gal)	appl	7.00	1.0000	7.00	_____
App by Air (3 gal)	appl	5.50	2.0000	11.00	_____
FERTILIZERS					
LA Phosphate	lb	0.39	40.0000	15.60	_____
LA Potash	lb	0.28	40.0000	11.20	_____
LA Nitrogen	lb	0.38	90.0000	34.20	_____
HERBICIDES					
Harmony Extra	oz	11.03	0.4500	4.96	_____
INSECTICIDES					
Surfactant	pt	3.30	0.2000	0.66	_____
App Fert by Air(Min)	appl	7.50	1.0000	7.50	_____
Mustang Max	oz	1.50	4.0000	6.00	_____
Karate Z	oz	1.00	2.1300	2.13	_____
SEED/PLANTS					
Wheat Seed Private	lb	0.28	90.0000	25.20	_____
SERVICE FEE					
Lime (Spread)	ton	38.00	0.3300	12.54	_____
Digital Ag Fee	acre	8.50	1.0000	8.50	_____
CUSTOM HARVEST/HAUL					
Haul Wheat	bu	0.26	60.0000	15.60	_____
OPERATOR LABOR					
Harvesters	hour	15.30	0.0851	1.30	_____
LA Hired Labor					
Implements	hour	11.83	0.1097	1.30	_____
Tractors	hour	11.83	0.2785	3.30	_____
DIESEL FUEL					
Tractors	gal	1.73	2.9104	5.04	_____
Harvesters	gal	1.73	1.2047	2.08	_____
REPAIR & MAINTENANCE					
Implements	Acre	4.12	1.0000	4.12	_____
Tractors	Acre	1.78	1.0000	1.78	_____
Harvesters	Acre	3.12	1.0000	3.12	_____
INTEREST ON OP. CAP.	Acre	3.01	1.0000	3.01	_____

TOTAL DIRECT EXPENSES				187.14	_____
FIXED EXPENSES					
Implements	Acre	8.15	1.0000	8.15	_____
Tractors	Acre	10.87	1.0000	10.87	_____
Harvesters	Acre	11.95	1.0000	11.95	_____

TOTAL FIXED EXPENSES				30.97	_____

TOTAL SPECIFIED EXPENSES				218.11	_____

Table 1.B Estimated resource use and costs for field operations, per Acre
Wheat, 8-row equipment, drill planted, non-irrigated,
alluvial soil, Northeast Louisiana, 2021.

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Spin Spreader	5 ton	MFWD 190	0.042	1.00	Oct	0.96	1.52	0.27	0.53	0.08	1.00				4.28
LA Phosphate	lb											40.0000	0.39	15.60	15.60
LA Potash	lb											40.0000	0.28	11.20	11.20
Lime (Spread)	ton			0.33	Oct							0.3300	38.00	12.54	12.54
Disk Harrow	28'	MFWD 225	0.070	1.00	Oct	1.92	3.11	1.09	2.23	0.07	0.83				9.18
Row Cond (Plant)	27'	MFWD 190	0.078	1.00	Oct	1.79	2.83	0.24	0.99	0.07	0.93				6.78
Ditcher		2WD 130	0.020	1.00	Oct	0.30	0.41	0.05	0.06	0.02	0.24				1.06
Grain Drill & Pre	30'	MFWD 225	0.067	1.00	Dec	1.85	3.00	1.92	3.55	0.13	1.60				11.92
Wheat Seed Private	lb											90.0000	0.28	25.20	25.20
App by Air (5 gal)	appl			1.00	Dec							1.0000	7.00	7.00	7.00
Harmony Extra	oz											0.4500	11.03	4.96	4.96
Surfactant	pt											0.2000	3.30	0.66	0.66
App Fert by Air (Min)	appl			1.00	Feb							1.0000	7.50	7.50	7.50
LA Nitrogen	lb											90.0000	0.38	34.20	34.20
App by Air (3 gal)	appl			1.00	Feb							1.0000	5.50	5.50	5.50
Mustang Max	oz											4.0000	1.50	6.00	6.00
App by Air (3 gal)	appl			1.00	Apr							1.0000	5.50	5.50	5.50
Karate Z	oz											2.1300	1.00	2.13	2.13
Header Wheat/Sorghum	30' Rigid	275hp	0.085	1.00	May	5.20	11.95	0.55	0.79	0.08	1.30				19.79
Haul Wheat	bu			1.00	May							60.0000	0.26	15.60	15.60
Digital Ag Fee	acre			1.00	May							1.0000	8.50	8.50	8.50
TOTALS						12.02	22.82	4.12	8.15	0.47	5.90			162.09	215.10
INTEREST ON OPERATING CAPITAL															3.01
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															218.11

Table 1.C Breakeven price above direct expenses and net returns for price/yield combinations, per Acre
Wheat, 8-row equipment, drill planted, non-irrigated,
alluvial soil, Northeast Louisiana, 2021.

			-----BREAKEVEN PRICE-----										
LA Wheat			2.16	2.30	2.46	2.64	2.85	3.11	3.43	3.83	4.34	5.02	5.97
PERCENT	YIELD	UNIT	-----dollars-----										
50	30.00	bu	-114	-110	-105	-99	-93	-85	-76	-64	-48	-28	0
			-145	-141	-136	-130	-124	-116	-107	-95	-79	-59	-30
60	36.00	bu	-102	-97	-92	-85	-77	-68	-57	-42	-24	0	34
			-133	-128	-123	-116	-108	-99	-88	-73	-55	-30	3
70	42.00	bu	-91	-85	-79	-71	-62	-51	-38	-21	0	28	68
			-122	-116	-109	-102	-93	-82	-69	-52	-30	-2	37
80	48.00	bu	-79	-73	-65	-57	-46	-34	-19	0	24	57	102
			-110	-104	-96	-88	-77	-65	-49	-30	-6	26	71
90	54.00	bu	-68	-61	-52	-42	-31	-17	0	21	48	85	136
			-99	-92	-83	-73	-62	-48	-30	-9	17	54	105
100	60.00	bu	-57	-48	-39	-28	-15	0	19	42	73	114	171
			-88	-79	-70	-59	-46	-30	-11	11	42	83	140
110	66.00	bu	-45	-36	-26	-14	0	17	38	64	97	142	205
			-76	-67	-57	-45	-30	-13	7	33	66	111	174
120	72.00	bu	-34	-24	-13	0	15	34	57	85	122	171	239
			-65	-55	-44	-30	-15	3	26	54	91	140	208
130	78.00	bu	-22	-12	0	14	31	51	76	106	146	199	273
			-53	-43	-30	-16	0	20	45	76	115	168	242
140	84.00	bu	-11	0	13	28	46	68	95	128	171	228	308
			-42	-30	-17	-2	15	37	64	97	140	197	277
150	90.00	bu	0	12	26	42	62	85	114	149	195	256	342
			-30	-18	-4	11	31	54	83	118	164	225	311

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
Wheat, 8-row equipment, drill planted, non-irrigated,
alluvial soil, Northeast Louisiana, 2021.

			-----BREAKEVEN PRICE-----										
LA Wheat			2.51	2.67	2.85	3.07	3.32	3.63	4.00	4.47	5.07	5.88	7.00
PERCENT	YIELD	UNIT	-----dollars-----										
50	30.00	bu	-103	-98	-93	-86	-79	-70	-58	-44	-26	-2	30
			-134	-129	-124	-117	-110	-101	-89	-75	-57	-33	0
60	36.00	bu	-90	-84	-77	-70	-60	-49	-36	-19	2	30	71
			-121	-115	-108	-101	-91	-80	-67	-50	-28	0	40
70	42.00	bu	-76	-70	-62	-53	-42	-29	-13	5	30	64	111
			-107	-101	-93	-84	-73	-60	-44	-25	0	33	80
80	48.00	bu	-63	-55	-46	-36	-24	-9	8	30	59	98	152
			-94	-86	-77	-67	-55	-40	-22	0	28	67	121
90	54.00	bu	-49	-41	-31	-19	-5	10	30	56	88	132	192
			-80	-72	-62	-50	-36	-20	0	25	57	101	161
100	60.00	bu	-36	-26	-15	-2	12	30	53	81	117	165	233
			-67	-57	-46	-33	-18	0	22	50	86	134	202
110	66.00	bu	-22	-12	-0	14	30	51	75	106	146	199	273
			-53	-43	-31	-16	0	20	44	75	115	168	242
120	72.00	bu	-9	2	15	30	49	71	98	132	175	233	313
			-40	-28	-15	0	18	40	67	101	144	202	283
130	78.00	bu	4	16	30	47	67	91	120	157	204	266	354
			-26	-14	0	16	36	60	89	126	173	235	323
140	84.00	bu	17	30	46	64	86	111	143	182	233	300	394
			-13	0	15	33	55	80	112	151	202	269	363
150	90.00	bu	30	45	62	81	104	132	165	207	261	334	435
			0	14	31	50	73	101	134	176	231	303	404

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 and returns per Acre,
Wheat, 8-row equipment, drill planted, non-irrigated,
Clay soils, Southwest Louisiana, 2021.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
LARice GPS Charge-SW	acre	0.35	2.0000	0.70	_____
App by Air (5 gal)	appl	7.00	1.0000	7.00	_____
FERTILIZERS					
LA Nitrogen	lb	0.38	70.5000	26.79	_____
LA Phosphate	lb	0.39	45.0000	17.55	_____
LA Potash	lb	0.28	45.0000	12.60	_____
INSECTICIDES					
Methyl Parathion	pt	5.79	1.5000	8.69	_____
SEED/PLANTS					
Wheat Seed Private	lb	0.28	75.0000	21.00	_____
SERVICE FEE					
Digital Ag Fee	acre	8.50	1.0000	8.50	_____
CUSTOM FERT/LIME					
Custom Spread(Truc	appl	4.50	1.0000	4.50	_____
App Fert by Air	cwt	7.50	0.9000	6.75	_____
CUSTOM HARVEST/HAUL					
Haul Wheat	bu	0.26	60.0000	15.60	_____
HAND LABOR					
Implements	hour	9.06	0.0942	0.85	_____
LA OPERATOR LABOR					
Self-Propelled	hour	15.30	0.2310	3.54	_____
LA Hired Labor					
Tractors	hour	11.83	0.2837	3.36	_____
DIESEL FUEL					
Tractors	gal	1.73	3.4985	6.06	_____
Self-Propelled	gal	1.73	1.4915	2.58	_____
REPAIR & MAINTENANCE					
Implements	acre	4.11	1.0000	4.11	_____
Tractors	acre	2.08	1.0000	2.08	_____
Self-Propelled	acre	9.24	1.0000	9.24	_____
INTEREST ON OP. CAP.	acre	2.50	1.0000	2.50	_____
TOTAL DIRECT EXPENSES				164.00	_____
FIXED EXPENSES					
Implements	acre	8.93	1.0000	8.93	_____
Tractors	acre	12.38	1.0000	12.38	_____
Self-Propelled	acre	13.47	1.0000	13.47	_____
TOTAL FIXED EXPENSES				34.78	_____
TOTAL SPECIFIED EXPENSES				198.78	_____

Table 2.B Estimated resource use and costs for field operations, per acre,
Wheat, 8-row equipment, drill planted, non-irrigated,
Clay soils, Southwest Louisiana, 2021.

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						-----dollars-----				dollars		-----dollars-----			
Disk Harrow	32'	4WD 300	0.061	2.00	Nov	4.42	6.85	2.09	4.19	0.12	1.45				19.00
Custom Spread(Truc	appl			1.00	Nov							1.0000	4.50	4.50	4.50
LA Nitrogen	lb											30.0000	0.38	11.40	11.40
LA Phosphate	lb											45.0000	0.39	17.55	17.55
LA Potash	lb											45.0000	0.28	12.60	12.60
Field Cultivate	32'	4WD 300	0.046	1.00	Nov	1.68	2.61	0.51	2.03	0.04	0.55				7.38
Grain Drill	20'	MFWD 150	0.094	1.00	Nov	1.68	2.41	1.46	2.65	0.18	1.97				10.17
Wheat Seed Private	lb											75.0000	0.28	21.00	21.00
Ditcher		MFWD 150	0.020	1.00	Nov	0.36	0.51	0.05	0.06	0.02	0.24				1.22
App Fert by Air	cwt			1.00	Feb							0.9000	7.50	6.75	6.75
LA Nitrogen	lb											40.5000	0.38	15.39	15.39
LARice GPS Charge-SW	acre											1.0000	0.35	0.35	0.35
App by Air (5 gal)	appl			1.00	Apr							1.0000	7.00	7.00	7.00
Methyl Parathion	pt											1.5000	5.79	8.69	8.69
LARice GPS Charge-SW	acre											1.0000	0.35	0.35	0.35
LARice Combine Med	20 ft		0.210	1.00	May	11.82	13.47			0.23	3.54				28.83
Haul Wheat	bu			1.00	May							60.0000	0.26	15.60	15.60
Digital Ag Fee	acre			1.00	May							1.0000	8.50	8.50	8.50
TOTALS						19.96	25.85	4.11	8.93	0.60	7.75			129.68	196.28
INTEREST ON OPERATING CAPITAL															2.50
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															198.78

Table 2.C Breakeven price above direct expenses and net returns for price/yield combinations, per Acre
Wheat, 8-row equipment, drill planted, non-irrigated,
Clay soils, Southwest Louisiana, 2021.

LA Wheat			-----BREAKEVEN PRICE-----										
			1.90	2.02	2.16	2.32	2.50	2.73	3.00	3.35	3.79	4.38	5.20
PERCENT	YIELD	UNIT	-----dollars-----										
50	30.00	bu	-98	-95	-91	-86	-80	-74	-65	-55	-42	-24	0
			-133	-130	-126	-121	-115	-108	-100	-90	-77	-59	-34
60	36.00	bu	-89	-84	-79	-74	-67	-59	-49	-37	-21	0	29
			-123	-119	-114	-108	-102	-94	-84	-71	-55	-34	-5
70	42.00	bu	-79	-74	-68	-61	-53	-44	-32	-18	0	24	59
			-113	-108	-103	-96	-88	-79	-67	-53	-34	-10	24
80	48.00	bu	-69	-63	-57	-49	-40	-29	-16	0	21	49	89
			-104	-98	-91	-84	-75	-64	-51	-34	-13	14	54
90	54.00	bu	-59	-52	-45	-37	-26	-14	0	18	42	74	118
			-94	-87	-80	-71	-61	-49	-34	-16	7	39	83
100	60.00	bu	-49	-42	-34	-24	-13	0	16	37	63	98	148
			-84	-77	-69	-59	-48	-34	-18	2	28	64	113
110	66.00	bu	-39	-31	-22	-12	0	14	32	55	84	123	178
			-74	-66	-57	-47	-34	-19	-1	20	49	88	143
120	72.00	bu	-29	-21	-11	0	13	29	49	74	105	148	207
			-64	-55	-46	-34	-21	-5	14	39	71	113	172
130	78.00	bu	-19	-10	0	12	26	44	65	92	127	173	237
			-54	-45	-34	-22	-7	9	31	57	92	138	202
140	84.00	bu	-9	0	11	24	40	59	82	111	148	197	267
			-44	-34	-23	-10	5	24	47	76	113	163	232
150	90.00	bu	0	10	22	37	53	74	98	129	169	222	296
			-34	-24	-11	2	19	39	64	95	134	187	261

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
Wheat, 8-row equipment, drill planted, non-irrigated,
Clay soils, Southwest Louisiana, 2021.

LA Wheat			-----BREAKEVEN PRICE-----										
			2.29	2.44	2.60	2.80	3.03	3.31	3.65	4.07	4.62	5.34	6.36
PERCENT	YIELD	UNIT	-----dollars-----										
50	30.00	bu	-87	-82	-77	-72	-65	-56	-46	-33	-17	4	34
			-122	-117	-112	-106	-99	-91	-81	-68	-52	-30	0
60	36.00	bu	-75	-69	-63	-56	-48	-38	-26	-11	8	34	71
			-109	-104	-98	-91	-83	-73	-61	-45	-26	0	36
70	42.00	bu	-62	-56	-49	-41	-31	-20	-5	11	34	65	108
			-97	-91	-84	-76	-66	-54	-40	-22	0	30	73
80	48.00	bu	-50	-43	-35	-26	-15	-1	14	34	60	95	144
			-85	-78	-70	-61	-49	-36	-20	0	26	61	109
90	54.00	bu	-38	-30	-21	-11	1	16	34	57	87	126	181
			-73	-65	-56	-45	-33	-18	0	22	52	91	146
100	60.00	bu	-26	-17	-7	4	18	34	55	80	113	156	217
			-61	-52	-42	-30	-16	0	20	45	78	122	183
110	66.00	bu	-14	-4	6	19	34	53	75	103	139	187	254
			-48	-39	-28	-15	0	18	40	68	104	152	219
120	72.00	bu	-1	8	20	34	51	71	95	126	165	217	291
			-36	-26	-14	0	16	36	61	91	130	183	256
130	78.00	bu	10	21	34	50	68	89	116	149	191	248	327
			-24	-13	0	15	33	54	81	114	156	213	293
140	84.00	bu	22	34	48	65	84	108	136	172	217	278	364
			-12	0	14	30	49	73	101	137	183	244	329
150	90.00	bu	34	47	62	80	101	126	156	195	244	309	401
			0	13	28	45	66	91	122	160	209	274	366

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 2021.

ITEM NAME	UNIT	PRICE
dollars		
CUSTOM HARVEST/HAUL		
Haul Corn	bu	0.23
Haul Cotton	lb	0.02
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 NE	cwt	5.50
LARice Air Plant SW	cwt	5.60
Plant by Air	cwt	7.00
CUSTOM SPRAY		
App 2,4-D Helicopter	appl	0.00
App by Air (1 gal)	appl	2.50
App by Air (2 gal)	appl	4.00
App by Air (3 gal)	appl	5.50
App by Air (5 gal)	appl	7.00
App by Air (10 gal)	appl	9.00
App Furadan by Air	appl	0.00
App Ordram by Air	appl	0.00
Custom Apply	acre	7.50
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	18.62
Anhy Ammonia (82% N)	cwt	28.00
Boron (Solubor)	lb	0.75
Crop Oil (Seed Oil)	pt	3.00
DAP	cwt	20.99
Fert 0-20-20	cwt	0.00
Fert 10-10-10	cwt	0.00
Fert 10-34-0	cwt	24.08
Fert 10-34-0	gal	2.80
Fert 13-13-13	cwt	0.00
Fert 41-0-0-4	cwt	18.22
Fert 5-20-20	cwt	0.00
LA Nitrogen	lb	0.38
LA Phosphate	lb	0.39
LA Potash	lb	0.28
Phosphorus(46% P2O5)	cwt	23.75
Potash (60% K2O)	cwt	20.00
Sulfur	lb	0.34
UAN (32% N)	cwt	12.03
UAN + Sulfur (28% N)	cwt	14.49
Urea, Solid (46% N)	cwt	19.74
Zinc	lb	0.50
FUNGICIDES		
Apron Maxx RTA	oz	0.90
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	5.94
Crop Oil (Petroleum)	pt	2.86
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	0.94
Ridomil GoldPC 10G	lb	2.08

Appendix Table 1. Operating inputs: estimated prices Louisiana, 2021.

ITEM NAME	UNIT	PRICE
		dollars
Ridomil Gold PC	lb	5.30
Ridomil Gold PC Liq	oz	6.42
Rovral 4F	pt	14.90
Rovral WG	lb	0.00
Shelter	oz	8.50
Stiletto	oz	0.58
Stratego	pt	77.60
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	0.76
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	0.19
Mepex	oz	0.06
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	7.68
Def/Folex	pt	7.68
Dropp 50 WP	lb	45.45
Dropp SC	oz	1.70
Ethephon 6E	pt	4.00
Finish 6	pt	8.00
Folex 6EC	pt	10.21
Ginstar EC	pt	26.68
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	1.85
2,4-D Ester	pt	2.68
AAtrex 4L	pt	2.23
AAtrex NINE-O	lb	3.96
Accent Gold	oz	6.12
Accent SP	oz	36.25
Aim 2EC	oz	5.00
Aim DF	oz	9.65
App Fert by Air	cwt	7.00
Arrosolo	qt	7.88
Assure II	oz	0.74
Atrazine 4L	pt	1.50
Atrazine 90DF	lb	3.59
Authority 75DF	lb	26.95
Axiom 68DF	lb	25.74
Backdraft	pt	2.40
Banvel	pt	6.67
Basagran	pt	5.43
Basis Gold	lb	9.00

Appendix Table 1. Operating inputs: estimated prices Louisiana, 2021.

ITEM NAME	UNIT	PRICE
		dollars
Beacon 75% WSP	oz	34.87
Beyond	oz	4.48
Bicep II Magnum	qt	11.01
Bicep II zmsgnum	qt	10.97
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
Bucril 4EC	pt	17.06
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	3.64
Canopy 75%	oz	2.74
Canopy XL	oz	2.32
Caparol 4L	pt	4.67
Caparol Accu-Pak	lb	0.00
Celebrity Plus	lb	84.50
Clarity	pt	10.73
Classic	oz	16.86
Clincher EC	oz	1.95
Cobra 2EC	oz	1.70
Command 3ME	pt	18.56
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	6.01
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	3.03
Diuron 80 DF	lb	5.09
Domain 60DF	lb	12.75
DSMA 4	pt	0.90
Dual 8E	pt	0.00
Dual II Magnum	pt	14.56
Dual Magnum	pt	13.33
Duet	pt	5.63
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	42.57
Flexstar HL	pt	4.66
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	1.15
Fusion	pt	29.86
Glyfos	pt	1.80
Glyphomax	pt	3.49
Glyphosate Plus 4L	pt	2.08
Glystar Plus	pt	2.17
Goal 2XL	pt	7.52
Gramoxone Extra	pt	0.00
Gramoxone Max	pt	3.00
Gramoxone Max	pt	3.00

Appendix Table 1. Operating inputs: estimated prices Louisiana, 2021.

ITEM NAME	UNIT	PRICE
		dollars
Grandstand R	qt	17.15
Guardsman	pt	4.66
Guardsman Max	pt	7.22
Harmony Extra	oz	11.03
Hoelon 3EC	pt	11.03
Karmex DF	lb	5.93
LA Asulox/Asulam	gal	42.00
LA Weedmaster	qt	5.76
Lariat	qt	7.58
Lasso 4EC	qt	6.60
Lasso II 15G	lb	0.00
Layby Pro	qt	12.60
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	3.86
MSMA6 + Surfactant	pt	3.86
Newpath 2SL	oz	3.83
Ordram 15-G	lb	1.34
Ordram 8-E	pt	9.42
Outlook	pt	17.66
Pendimax 3.3	pt	2.47
Permit 75DF	oz	15.00
Poast 1.53	pt	12.77
Poast Plus	pt	9.69
Propanil 4E	qt	5.15
Prowl 3.3 EC	pt	5.76
Pursuit DG	oz	11.59
Pursuit Plus EC	pt	7.10
Python WDG	oz	15.10
Raptor	oz	4.38
Reflex 2LC	pt	6.20
Regiment 80WP	oz	4.38
Remedy	pt	8.45
Resource .86EC	pt	24.49
Ricestar	pt	24.35
Roundup Original	pt	6.00
Roundup Original Max	oz	0.38
Roundup Power Max	pt	3.04
Roundup Ultra MAX	pt	5.97
Roundup Ultra Dry	lb	6.14
Roundup WeatherMax	oz	0.19
Scepter 70 DG	oz	4.82
Select 2EC	oz	0.71
Sencor 4F	pt	14.74
Sencor DF	lb	14.25
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	11.91
Strongarm	oz	56.42
Superwham	qt	8.61
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	2.88
Treflan TR-10	lb	1.10

Appendix Table 1. Operating inputs: estimated prices Louisiana, 2021.

ITEM NAME	UNIT	PRICE
dollars		
Tri-Scept	pt	5.24
Trifluralin 4EC	pt	3.68
Trilin 10G	lb	0.79
Trilin 4EC	pt	2.12
Typhoon	qt	13.06
Valor WP	oz	5.83
Whip 360	pt	25.08
Zorial Rapid 80DF	lb	14.10
INSECTICIDES		
Acephate 80SP	lb	0.00
Acephate 90SP	lb	6.42
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	0.55
Aztec 2.1% G	lb	3.88
Baythroid 2	oz	2.58
Besiege	oz	1.95
Bidrin 8L	oz	1.33
Brigade EC	pt	9.60
Brigade WSB	lb	26.04
Capture 2EC	oz	2.28
Carbamate	oz	0.00
Centric 40WG	oz	5.08
Comite	pt	8.45
Condor XL	pt	0.00
Confirm 2F	oz	1.86
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	5.44
Dimilin 2L	oz	2.16
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	1.00
Lannate LV	pt	9.00
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	4.23
Malathion 8E	pt	10.56
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	1.50
Organophosphate	oz	0.00
Orthene 90S	lb	6.00
Orthene 97	lb	10.90
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	16.50
Pounce 3.2 EC	oz	0.34

Appendix Table 1. Operating inputs: estimated prices Louisiana, 2021.

ITEM NAME	UNIT	PRICE
dollars		
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	12.16
Spintor 2SC	oz	4.93
Steward	pt	39.51
Surfactant	pt	3.30
Synthetic Pyrethroid	oz	0.00
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
Trimax	oz	1.85
Vydate C-LV	oz	0.93
Warrior Z	oz	1.80
Warrior ZT	oz	2.57
IRRIGATION SUPPLIES		
Rice Gates	each	3.65
Roll-Out Pipe	ft	0.24
OVERHEAD		
Farmstead & Drainage	Dol	1.00
LA Rice Insurance	Dollar	1.00
LA Rice Misc. Overhd	dollar	1.00
LA Rice Property Tax	dollar	1.00
Shops Bldg & Equip.	Dol	6.55
SERVICE FEE		
Utilities	Dol	1.00
SEED/PLANTS		
Corn Seed Bt	thous	2.60
Corn Seed BtRR	thous	4.38
Corn Seed Conv.	thous	2.76
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	2.61
Cotton Seed Bt	thous	2.60
Cotton Seed BtRR	thous	3.15
Cotton Seed Bxn	thous	0.00
Cotton Seed Conv.	thous	0.00
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/RR	thous	0.00
Cotton Seed WS/RRF	thous	0.59
Rice Clearfield 161	lb	0.90
Rice Clearfield XL8	lb	6.12
Rice Seed (Levees)	lb	0.90
Rice Seed CF (Levees)	lb	0.95
Rice Seed Conv.	lb	0.32
Rice Seed Hybrid	lb	5.66
SC Cultured seedcane	acre	484.00
Sorghum Concept	lb	2.64
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	0.84
Soybean Seed Stack	lb	1.28
Wheat Seed Private	lb	0.28
Wheat Seed Public	lb	0.00

Appendix Table 1. Operating inputs: estimated prices Louisiana, 2021.

ITEM NAME	UNIT	PRICE
dollars		
SERVICE FEE		
Cotton Checkoff	bale	2.56
Cotton Storage	bale	25.00
Crop Consultant	acre	7.00
Custom Combine Rice	acre	0.00
Custom Spread(Truc	appl	4.50
Digital Ag Fee	acre	8.50
Digital Ag Fee	acre	8.50
Insect Scouting	acre	7.00
Lime (Spread)	ton	38.00
Rice Consultant	acre	8.00
RRF Cotton Tech Fee	cap/ac	48.25
SC Treating Charge	acre	0.00
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 2021.

Item Name	Size	Purchase Price	Annual Use	Useful Life	Fuel Use	Labor	Fuel	R&M	Total Direct	Fixed	Total Cost
		dollars	hours	years	gal/hr	-----\$/hour-----					
Combine (170-199 hp)	190hp	0	300	8	9.78	13.51	16.91	0.00	30.42	0.00	30.42
Combine (200-249 hp)	240hp	161,548	300	8	12.35	13.51	21.36	16.82	51.70	64.41	116.12
Combine (225-274 hp)	Track250hp	0	300	8	12.87	13.51	22.26	0.00	35.77	0.00	35.77
Combine (250-299 hp)	275hp	352,000	300	8	14.15	13.51	24.47	36.66	74.65	140.36	215.01
Combine (250-299hp)	Grass295hp	218,222	300	8	15.18	13.51	26.26	22.73	62.50	87.01	149.52
Combine (275-299 hp)	Track290hp	0	300	8	14.93	13.51	25.82	0.00	39.33	0.00	39.33
Combine (300-349 hp)	325hp	383,000	300	8	16.73	13.51	28.94	39.89	82.34	152.72	235.07
Combine (300-349hp)	Track320hp	0	300	8	16.47	13.51	28.49	0.00	42.00	0.00	42.00
Combine (350-379 hp)	370hp	390,000	300	8	19.04	13.51	32.93	40.62	87.07	155.51	242.58
Combine (350-379 hp)	Track365hp	0	300	8	18.79	13.51	32.50	0.00	46.01	0.00	46.01
Cotton Stripper	173hp	170,000	200	8	8.08	13.51	13.97	26.56	54.05	101.68	155.73
SC Tractor 93 MDR	93	46,683	600	10	4.79	11.83	8.28	2.72	22.83	7.55	30.39
SC Tractpr 68 MDR	68	27,049	600	10	3.50	11.83	6.05	1.57	19.46	4.37	23.83
Tractor (40-59hp)Cab	2WD 50	30,900	600	8	2.57	11.83	4.45	0.96	17.24	5.61	22.85
Tractor (40-59hp)Cab	MFWD 50	41,400	600	8	2.57	11.83	4.45	1.29	17.57	7.51	25.09
Tractor (40-59hp)RB	2WD 50	30,900	600	8	2.57	11.83	4.45	0.96	17.24	5.61	22.85
Tractor (40-59hp)RB	MFWD 50	27,200	600	8	2.57	11.83	4.45	0.85	17.13	4.93	22.07
Tractor (60-89hp)CAB	2WD 75	53,200	600	8	3.86	11.83	6.67	1.66	20.17	9.66	29.83
Tractor (60-89hp)CAB	MFWD 75	57,600	600	8	3.86	11.83	6.67	1.80	20.30	10.46	30.76
Tractor (60-89hp)RB	2WD 75	38,400	600	8	3.86	11.83	6.67	1.20	19.70	6.97	26.68
Tractor (60-89hp)RB	MFWD 75	41,800	600	8	3.86	11.83	6.67	1.30	19.81	7.59	27.40
Tractor (90-119hp)CB	2WD 105	71,200	600	8	5.40	11.83	9.34	2.22	23.40	12.93	36.33
Tractor (90-119hp)CB	MFWD 105	91,700	600	8	5.40	11.83	9.34	2.86	24.04	16.65	40.69
Tractor (90-119hp)RB	2WD 105	64,600	600	8	5.40	11.83	9.34	2.01	23.19	11.73	34.93
Tractor (90-119hp)RB	MFWD 105	71,900	600	8	5.40	11.83	9.34	2.24	23.42	13.05	36.48
Tractor (120-139hp)CB	2WD 130	113,000	600	8	6.69	11.83	11.57	3.53	26.93	20.52	47.45
Tractor (120-139hp)CB	MFWD 130	126,000	600	8	6.69	11.83	11.57	3.93	27.34	22.88	50.22
Tractor (140-159hp)CB	2WD 150	111,000	600	8	7.72	11.83	13.35	3.46	28.65	20.15	48.81
Tractor (140-159hp)CB	MFWD 150	143,000	600	8	7.72	11.83	13.35	4.46	29.65	25.97	55.62
Tractor (160-179hp)CB	2WD 170	160,000	600	8	8.75	11.83	15.13	5.00	31.96	30.47	62.44
Tractor (160-179hp)CB	MFWD 170	160,000	600	8	8.75	11.83	15.13	5.00	31.96	30.47	62.44
Tractor (160-199hp)CB	Track 180	142,710	600	8	9.26	11.83	16.02	4.45	32.31	27.18	59.50
Tractor (180-199hp)CB	2WD 190	143,000	600	8	9.77	11.83	16.91	4.46	33.21	27.24	60.45
Tractor (180-199hp)CB	MFWD 190	189,000	600	8	9.77	11.83	16.91	5.90	34.65	36.00	70.65
Tractor (200-249hp)CB	4WD 225	147,066	600	8	11.58	11.83	20.03	4.59	36.46	28.01	64.47
Tractor (200-249hp)CB	MFWD 225	233,000	600	8	11.58	11.83	20.03	7.28	39.14	44.38	83.53
Tractor (200-249hp)CB	Track 225	277,000	600	8	11.58	11.83	20.03	8.65	40.52	52.76	93.28
Tractor (250-349hp)CB	4WD 300	298,000	600	8	15.44	11.83	26.71	9.31	47.85	56.76	104.62
Tractor (250-349hp)CB	Track 300	329,000	600	8	15.44	11.83	26.71	10.28	48.82	62.67	111.49
Tractor (350-449hp)CB	4WD 400	366,000	600	8	20.58	11.83	35.61	11.43	58.88	69.72	128.60
Tractor (350-449hp)CB	Track 400	453,000	600	8	20.58	11.83	35.61	14.15	61.60	86.29	147.89
Tractor (450-uphp)CB	TRACK-475	279,879	600	8	24.44	11.83	42.29	8.74	62.87	53.31	116.18

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 2021.

Item Name	Size	Purchase Price	Annual Use	Useful Life	Fuel Use	Perf Rate	Labor	Fuel	R&M	Total Direct	Fixed	Total Cost
		dollars	hours	years	gal/hr	hr/ac	-----\$/acre-----					
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'	8,750	100	8	1.00	0.200	2.70	0.50	0.43	3.63	2.23	5.87
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	11.72	10.24	11.76	33.73	49.92	83.66
Cotton Picker-1st-BB	4R2X1260hp	317,399	200	8	13.33	0.172	3.88	5.60	8.54	18.03	36.25	54.29
Cotton Picker-1st-BB	4R30"250hp	262,000	200	8	12.86	0.327	7.38	10.27	13.40	31.07	56.86	87.93
Cotton Picker-1st-BB	4R30"325hp	350,000	200	8	18.01	0.327	7.38	14.38	17.90	39.67	75.96	115.64
Cotton Picker-1st-BB	4R38"255hp	268,000	200	8	13.12	0.257	5.81	8.25	10.79	24.86	45.80	70.66
Cotton Picker-1st-BB	4R38"325hp	351,000	200	8	18.01	0.257	5.81	11.32	14.13	31.28	59.98	91.26
Cotton Picker-1st-BB	5R30"255hp	285,000	200	8	12.86	0.261	5.91	8.21	11.66	25.79	49.48	75.27
Cotton Picker-1st-BB	5R38"250hp	284,601	200	8	12.86	0.207	4.67	6.50	9.21	20.39	39.09	59.49
Cotton Picker-1st-BB	6R30"325hp	465,000	200	8	18.27	0.218	4.92	9.72	15.85	30.51	67.28	97.79
Cotton Picker-1st-BB	6R38"330hp	465,000	200	8	18.27	0.172	3.88	7.68	12.51	24.08	53.11	77.20
Cotton Picker-1st-Tr	2R38"157hp	144,912	200	8	8.08	0.519	11.72	10.24	11.76	33.73	49.92	83.66
Cotton Picker-1st-Tr	4R2X1255hp	322,137	200	8	18.01	0.172	3.88	7.57	8.67	20.13	36.79	56.93
Cotton Picker-1st-Tr	4R30"250hp	261,825	200	8	12.86	0.327	7.38	10.27	13.39	31.06	56.82	87.88
Cotton Picker-1st-Tr	4R38"325hp	311,088	200	8	16.72	0.327	7.38	13.36	15.91	36.66	67.51	104.18
Cotton Picker-1st-Tr	4R38"255hp	268,000	200	8	13.12	0.257	5.81	8.25	10.79	24.86	45.80	70.66
Cotton Picker-1st-Tr	4R38"325hp	351,000	200	8	18.01	0.257	5.81	11.32	14.13	31.28	59.98	91.26
Cotton Picker-1st-Tr	5R30"255hp	285,303	200	8	13.12	0.261	5.91	8.38	11.67	25.97	49.53	75.51
Cotton Picker-1st-Tr	5R38"250hp	290,471	200	8	12.86	0.207	4.67	6.50	9.40	20.58	39.90	60.48
Cotton Picker-1st-Tr	6R30"325hp	465,000	200	8	16.72	0.218	4.92	8.90	15.85	29.69	67.28	96.97
Cotton Picker-1st-Tr	6R38"330hp	465,000	200	8	18.01	0.172	3.88	7.57	12.51	23.98	53.11	77.10
Cotton Picker-2nd-BB	2R38"157hp	144,912	200	8	8.08	0.440	9.93	8.67	9.96	28.57	42.28	70.86
Cotton Picker-2nd-BB	4R2x1260hp	322,187	200	8	18.01	0.145	3.29	6.41	7.34	17.05	31.17	48.23
Cotton Picker-2nd-BB	4R30"250hp	261,825	200	8	12.86	0.277	6.25	8.70	11.34	26.31	48.13	74.44
Cotton Picker-2nd-BB	4R30"325hp	311,088	200	8	16.72	0.277	6.25	11.31	13.47	31.05	57.19	88.25
Cotton Picker-2nd-BB	4R38"255hp	268,000	200	8	13.12	0.218	4.92	6.99	9.14	21.06	38.79	59.85
Cotton Picker-2nd-BB	4R38"325hp	351,000	200	8	18.01	0.218	4.92	9.59	11.97	26.49	50.81	77.30
Cotton Picker-2nd-BB	5R30"255hp	285,303	200	8	13.12	0.221	5.00	7.10	9.88	22.00	41.96	63.96
Cotton Picker-2nd-BB	5R38"250hp	284,601	200	8	12.86	0.175	3.96	5.51	7.80	17.27	33.11	50.39
Cotton Picker-2nd-BB	6R30"325hp	465,000	200	8	18.01	0.184	4.17	8.12	13.43	25.72	56.99	82.72
Cotton Picker-2nd-BB	6R38"330hp	465,000	200	8	18.01	0.145	3.29	6.41	10.60	20.31	44.99	65.30
Cotton Picker-2nd-Tr	2R38"157hp	144,912	200	8	8.08	0.440	9.93	8.67	9.96	28.57	42.28	70.86
Cotton Picker-2nd-Tr	4R2X1260hp	322,137	200	8	18.01	0.145	3.29	6.41	7.34	17.05	31.16	48.22
Cotton Picker-2nd-Tr	4R30"250hp	261,825	200	8	12.86	0.277	6.25	8.70	11.34	26.31	48.13	74.44
Cotton Picker-2nd-Tr	4R30"325hp	311,088	200	8	16.72	0.277	6.25	11.31	13.47	31.05	57.19	88.25
Cotton Picker-2nd-Tr	4R38"255hp	268,000	200	8	13.12	0.218	4.92	6.99	9.14	21.06	38.79	59.85
Cotton Picker-2nd-Tr	4R38"325hp	351,000	200	8	18.01	0.218	4.92	9.59	11.97	26.49	50.81	77.30
Cotton Picker-2nd-Tr	5R30"255hp	285,303	200	8	13.12	0.221	5.00	7.10	9.88	22.00	41.96	63.96
Cotton Picker-2nd-Tr	5R38"250hp	290,471	200	8	12.86	0.175	3.96	5.51	7.96	17.43	33.79	51.23
Cotton Picker-2nd-Tr	6R30"325hp	465,000	200	8	16.72	0.184	4.17	7.54	13.43	25.15	56.99	82.14
Cotton Picker-2nd-Tr	6R38"330hp	465,000	200	8	18.01	0.145	3.29	6.41	10.60	20.31	44.99	65.30
LA Pickup Truck	1/2 ton	28,000	800	5	2.50	1.000	11.33	6.25	3.15	20.73	7.74	28.47
LA Rice Combine	25 ft	181,500	300	10	8.60	0.300	5.05	6.30	14.53	25.89	23.61	49.50
LA Rice Combine-2	25 ft	181,500	300	10	8.60	0.300	5.05	6.30	14.53	25.89	23.61	49.50
LARice Combine Med	20 ft	165,000	300	10	7.10	0.210	3.53	3.63	9.24	16.41	15.01	31.43
Levee Sprayer	27'	30,768	350	8	2.57	0.038	0.69	0.24	0.06	0.99	0.44	1.44
SC Billet Harvester	6 ft	319,000	750	10	12.00	0.700	11.78	20.49	29.77	62.05	38.25	100.30
SC Harvester 1Rw	6 ft	126,500	400	12	6.80	0.875	14.72	14.51	23.05	52.30	31.84	84.14
SC Harvester 2Rw	12 ft	231,000	400	12	8.00	0.388	6.53	7.57	18.67	32.77	25.78	58.56
SC Loader 1Rw	6 ft	93,500	425	10	5.10	0.598	7.46	7.45	9.61	24.53	17.12	41.65
SC Loader 2Rw	12 ft	165,000	425	10	7.00	0.300	3.74	5.12	8.51	17.38	15.15	32.53
SC Transloader		33,000	120	12	4.70	0.250	3.11	2.86	4.12	10.10	7.91	18.01
SC Truck&Trailer	30 Ton	49,500	400	10	7.00	1.000	12.46	17.08	8.66	38.20	16.08	54.29
Sprayer(300-450Gal)	47'	0	350	8	5.40	0.022	0.40	0.29	0.00	0.70	0.00	0.70
Sprayer(300-450Gal)	60'	103,000	350	8	5.66	0.017	0.31	0.24	0.09	0.65	0.68	1.34
Sprayer(300-450Gal)	80'	103,000	350	8	5.66	0.013	0.23	0.18	0.07	0.49	0.51	1.00
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'	215,000	350	8	10.29	0.013	0.23	0.33	0.15	0.72	1.07	1.79
Sprayer(600-825Gal)	90'	316,000	350	8	10.29	0.011	0.21	0.29	0.19	0.70	1.40	2.11
Sprayer(1000-1400Gal)	90'	316,000	350	8	14.15	0.014	0.25	0.48	0.23	0.98	1.68	2.66
Sprayer(1200PlusGal)	120'	376,000	350	8	15.44	0.008	0.15	0.33	0.17	0.66	1.25	1.92

Appendix Table 4. Implements: estimated purchase price, annual use, useful life, performance rate, (Continued) and direct and fixed cost per acre, Louisiana 2021.

Item Name	Size	Power Unit	Purchase Price	Annual Use	Useful Life	Perf Rate	Labor	Fuel	---R&M---		Total Direct	--Fixed--		Total Cost
									Imp.	P.U.		Imp.	P.U.	
			dollars	hours	years	hr/ac	-----\$/acre-----							
Spray (Bcast/HB)	27' Rigid	MFWD 170	10,900	200	8	0.062	1.11	0.94	0.32	0.31	2.69	0.37	1.91	4.97
Spray (Bcast/HB)	30' Fold	MFWD 170	18,900	200	8	0.056	1.00	0.85	0.49	0.28	2.63	0.58	1.71	4.93
Spray (Bcast/HB)	40' Fold	MFWD 170	19,100	200	8	0.042	0.75	0.64	0.37	0.21	1.98	0.44	1.28	3.71
Spray (Bcast/HB/HD)	27'	MFWD 170	22,400	200	8	0.062	1.11	0.94	0.65	0.31	3.03	0.76	1.91	5.70
Spray (Bcast/HB/HD)	40'	MFWD 170	32,200	200	8	0.042	0.75	0.64	0.63	0.21	2.24	0.74	1.28	4.27
Spray (Broadcast)	27'	MFWD 170	7,400	200	8	0.062	1.11	0.94	0.21	0.31	2.59	0.25	1.91	4.75
Spray (Broadcast)	40'	MFWD 170	9,300	200	8	0.042	0.75	0.64	0.18	0.21	1.78	0.21	1.28	3.29
Spray (Broadcast)	50'	MFWD 170	10,100	200	8	0.033	0.60	0.51	0.16	0.16	1.44	0.18	1.03	2.66
Spray (Broadcast)	53'	MFWD 170	9,940	200	8	0.031	0.56	0.48	0.14	0.15	1.35	0.17	0.97	2.50
Spray (Broadcast)	60'	MFWD 170	13,200	200	8	0.028	0.50	0.42	0.17	0.14	1.24	0.20	0.85	2.30
Spray (Direct/Hood)	8R-30	MFWD 170	17,000	200	8	0.084	1.50	1.28	0.67	0.42	3.87	0.78	2.57	7.24
Spray (Direct/Hood)	8R-38	MFWD 170	17,900	200	8	0.066	1.18	1.01	0.56	0.33	3.09	0.65	2.03	5.78
Spray (Direct/Hood)	12R-30	MFWD 170	23,900	200	8	0.056	1.00	0.85	0.63	0.28	2.76	0.73	1.71	5.22
Spray (Direct/Hood)	12R-38	MFWD 170	25,100	200	8	0.044	0.79	0.67	0.52	0.22	2.21	0.60	1.35	4.17
Spray (Direct/Layby)	8R-30	MFWD 170	15,500	200	8	0.084	1.50	1.28	0.61	0.42	3.82	0.71	2.57	7.11
Spray (Direct/Layby)	8R-38	MFWD 170	15,500	200	8	0.066	1.18	1.01	0.48	0.33	3.01	0.56	2.03	5.62
Spray (Direct/Layby)	8R-38 2x1	MFWD 170	19,400	200	8	0.044	0.79	0.67	0.40	0.22	2.09	0.47	1.35	3.91
Spray (Direct/Layby)	10R-30	MFWD 170	12,200	200	8	0.067	1.20	1.02	0.38	0.33	2.95	0.44	2.06	5.46
Spray (Direct/Layby)	12R-30	MFWD 170	19,400	200	8	0.056	1.00	0.85	0.51	0.28	2.64	0.59	1.71	4.96
Spray (Direct/Layby)	12R-38	MFWD 170	19,400	200	8	0.044	0.79	0.67	0.40	0.22	2.09	0.47	1.35	3.91
Spray (Direct/Layby)	16R-20	MFWD 170	22,300	200	8	0.063	1.12	0.95	0.66	0.31	3.06	0.77	1.93	5.76
Spray (Spot)	27'	MFWD 170	7,400	200	8	0.062	1.11	0.94	0.21	0.31	2.59	0.25	1.91	4.75
Spray (Spot)	40'	MFWD 170	9,300	200	8	0.042	0.75	0.64	0.18	0.21	1.78	0.21	1.28	3.29
Spray (Spot)	50'	MFWD 170	13,700	200	8	0.033	0.60	0.51	0.21	0.16	1.49	0.25	1.03	2.78
Spray (Spot)	53'	MFWD 170	10,100	200	8	0.031	0.56	0.48	0.15	0.15	1.36	0.17	0.97	2.50
Spray (Spot)	60'	MFWD 170	15,600	200	8	0.028	0.50	0.42	0.20	0.14	1.27	0.23	0.85	2.37
Stalk Shredder	14'	MFWD 150	14,900	200	10	0.117	1.39	1.57	1.53	0.52	5.03	0.89	3.06	8.98
Stalk Shredder	20'	MFWD 150	33,100	200	10	0.082	0.97	1.10	2.38	0.36	4.83	1.39	2.14	8.37
Stalk Shredder-Flail	12'	MFWD 150	21,700	200	10	0.137	1.62	1.83	2.61	0.61	6.68	1.52	3.57	11.78
Stalk Shredder-Flail	20'	MFWD 150	30,400	200	10	0.082	0.97	1.10	2.19	0.36	4.64	1.27	2.14	8.06
Subsoiler	3 shank	MFWD 190	6,360	100	15	0.204	2.41	3.45	0.43	1.20	7.51	1.02	7.35	15.89
Subsoiler	4 shank	MFWD 225	11,210	100	15	0.153	1.81	3.07	0.57	1.11	6.58	1.35	6.81	14.76
Subsoiler	5 shank	MFWD 225	14,300	100	15	0.122	1.44	2.45	0.58	0.89	5.37	1.37	5.43	12.18
Subsoiler low-till	4 shank	MFWD 225	9,830	100	15	0.153	1.81	3.07	0.50	1.11	6.51	1.18	6.81	14.52
Subsoiler low-till	6 shank	MFWD 225	19,400	100	15	0.102	1.20	2.04	0.66	0.74	4.66	1.55	4.53	10.75
Subsoiler low-till	8 shank	MFWD 225	21,400	100	15	0.076	0.90	1.53	0.54	0.55	3.54	1.28	3.39	8.22
TerraTill Bed w/roll	4R-38	MFWD 225	14,300	150	12	0.160	1.90	3.22	0.83	1.17	7.12	1.38	7.14	15.65
TerraTill Bed w/roll	6R-38	MFWD 225	19,400	150	12	0.107	1.27	2.15	0.75	0.78	4.96	1.25	4.77	10.99
TerraTill Bed w/roll	4R-30	MFWD 225	14,300	150	12	0.204	2.41	4.09	1.05	1.48	9.05	1.75	9.06	19.88
TerraTill Bed w/roll	6R-30	MFWD 225	15,310	150	12	0.136	1.61	2.72	0.75	0.99	6.08	1.25	6.04	13.38