

# **Projected Costs and Returns Crop Enterprise Budgets for Sorghum Production in Louisiana, 2015**

**Michael A. Deliberto, Michael E. Salassi and Brian M. Hilbun**



**Farm Management Research & Extension  
Department of Agricultural Economics & Agribusiness  
Louisiana State University Agricultural Center  
A.E.A. Information Series No. 303 - January 2015**

January 2015

A.E.A. Information Series No. 303

**PROJECTED COSTS AND RETURNS  
CROP ENTERPRISE BUDGETS  
FOR SORGHUM PRODUCTION IN LOUISIANA, 2015**

by

**Michael A. Deliberto, Michael E. Salassi, and Brian M. Hilbun**



**Department of Agricultural Economics & Agribusiness  
Louisiana State University Agricultural Center  
[www.lsuagcenter.com](http://www.lsuagcenter.com)**

## TABLE OF CONTENTS

	<u>PAGE</u>
Introduction .....	1
Procedure .....	1
Expected Crop Yields and Market Prices .....	2
Direct Production Costs .....	2
Farm Machinery Costs .....	3
Overhead Costs .....	3
Acknowledgements.....	3
Internet Access .....	3
 <b><u>SORGHUM ENTERPRISE BUDGETS:</u></b>	
<u>Table</u>	
1 Sorghum, 8-row equipment 38 inch rows, non-irrigated, Northeast Louisiana, 2015 .....	4
2 Sorghum, drill planted, conventional tillage, non-irrigated, Southwest Louisiana, 2015 .....	7
Appendices .....	8
<u>App. Table</u>	
1 Operating inputs, estimated prices, Louisiana, 2015 .....	x
2 Tractors, performance rates and costs, Louisiana, 2015 .....	x
3 Self-propelled machines, performance rates and costs, Louisiana, 2015 .....	x
4 Implements, performance rates and costs, Louisiana, 2015 .....	x

# PROJECTED COSTS AND RETURNS CROP ENTERPRISE BUDGETS FOR SORGHUM PRODUCTION IN LOUISIANA, 2015

by

Michael A. Deliberto, Michael E. Salassi, and Brian M. Hilbun<sup>1</sup>

<sup>1</sup> Research Associate, Professor and Research Associate, Department of Agricultural Economics and Agribusiness, LSU Agricultural Center, Baton Rouge, LA.

## Introduction

This publication presents estimates of projected costs and returns for grain sorghum production in Louisiana for the 2015 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 2015 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 2015 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 \$9.60 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 3.75% per year. Operating capital was assumed to be borrowed in a manner consistent with timely acquisition of inputs. Fuel prices for diesel and gasoline were \$3.30 per gallon and \$3.30 per gallon,

respectively. 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. 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](http://www.lsuagcenter.com)

Table 1.A Estimated costs per Acre  
 Grain Sorghum, 8-row equipment, 38 inch rows, non-irrigated,  
 Northeast Louisiana, 2015.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Grain Sorghum	bu	3.60	100.0000	360.00	_____
				-----	
TOTAL INCOME				360.00	_____
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air ( 5 gal)	appl	6.00	1.5000	9.00	_____
App by Air ( 3 gal)	appl	4.75	2.0000	9.50	_____
FERTILIZERS					
LA Nitrogen	lb	0.50	110.0000	55.00	_____
LA Phosphate	lb	0.61	40.0000	24.40	_____
LA Potash	lb	0.34	40.0000	13.60	_____
HERBICIDES					
Roundup WeatherMax	oz	0.27	55.0000	14.85	_____
2,4-D Amine 4	pt	1.85	2.0000	3.70	_____
Atrazine 4L	pt	1.50	4.0000	6.00	_____
Dual II Magnum	pt	14.50	1.0000	14.50	_____
INSECTICIDES					
Karate Z	oz	3.40	2.0000	6.80	_____
Belt	oz	6.13	2.5000	15.33	_____
Transform	oz	7.42	1.5000	11.13	_____
SEED/PLANTS					
Sorghum Concept	lb	2.28	6.0000	13.68	_____
Cruiser 5FS Seed Tmt	oz	17.38	0.4560	7.93	_____
CUSTOM FERT/LIME					
Lime (Spread)	ton	48.00	0.3300	15.84	_____
CUSTOM HARVEST/HAUL					
Haul Sorghum	bu	0.25	100.0000	25.00	_____
OPERATOR LABOR					
Harvesters	hour	12.55	0.0851	1.07	_____
LA Hired Labor					
Implements	hour	9.60	0.1190	1.14	_____
Tractors	hour	9.60	0.4011	3.85	_____
DIESEL FUEL					
Tractors	gal	2.74	3.4993	9.60	_____
Harvesters	gal	2.74	1.2047	3.30	_____
REPAIR & MAINTENANCE					
Implements	Acre	5.20	1.0000	5.20	_____
Tractors	Acre	1.91	1.0000	1.91	_____
Harvesters	Acre	2.58	1.0000	2.58	_____
INTEREST ON OP. CAP.	Acre	6.53	1.0000	6.53	_____
TOTAL DIRECT EXPENSES				281.44	_____
RETURNS ABOVE DIRECT EXPENSES				78.56	_____
FIXED EXPENSES					
Implements	Acre	6.92	1.0000	6.92	_____
Tractors	Acre	11.50	1.0000	11.50	_____
Harvesters	Acre	9.88	1.0000	9.88	_____
TOTAL FIXED EXPENSES				28.30	_____
TOTAL SPECIFIED EXPENSES				309.74	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				50.26	_____
RESIDUAL ITEMS					
Overhead (Owner)	acre	30.00	1.0000	30.00	_____
RESIDUAL RETURNS				20.26	_____

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, 2015.

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	
Lime (Spread)	ton			0.33	Oct										
Crop Oil ( Seed Oil)	pt											0.3300	48.00	15.84	15.84
Disk Bed (Hipper)Rdg	8R-38	MFWD 190	0.074	1.00	Oct	2.36	2.26	0.37	0.94	0.07	0.71		4.60		6.64
Roller	32'	MFWD 170	0.046	1.00	Oct	1.36	1.48	0.14	0.74	0.04	0.45				4.17
Ditcher		2WD 130	0.020	1.00	Oct	0.43	0.35	0.04	0.05	0.02	0.19				1.06
App by Air ( 5 gal)	appl			1.00	Mar							1.0000	6.00	6.00	6.00
Roundup WeatherMax	oz											22.0000	0.27	5.94	5.94
2,4-D Amine 4	pt											2.0000	1.85	3.70	3.70
Ditcher		2WD 130	0.020	1.00	Apr	0.43	0.35	0.04	0.05	0.02	0.19				1.06
Plant & Pre Rigid	8R-38	MFWD 170	0.080	1.00	Apr	2.34	2.55	1.13	2.09	0.16	1.54				9.65
Sorghum Concept	lb											6.0000	2.28	13.68	13.68
Cruiser 5FS Seed Tmt	oz											0.4560	17.38	7.93	7.93
Fert Appl (Liquid)	8R-38	MFWD 190	0.077	1.00	Apr	2.47	2.37	0.90	0.98	0.11	1.12				7.84
LA Nitrogen	lb											110.0000	0.50	55.00	55.00
LA Phosphate	lb											40.0000	0.61	24.40	24.40
LA Potash	lb											40.0000	0.34	13.60	13.60
Atrazine 4L	pt			1.00	Apr							4.0000	1.50	6.00	6.00
Roundup WeatherMax	oz											22.0000	0.27	5.94	5.94
Dual II Magnum	pt											1.0000	14.50	14.50	14.50
App by Air ( 3 gal)	appl			1.00	Jun							1.0000	4.75	4.75	4.75
Karate Z	oz											1.0000	3.40	3.40	3.40
App by Air ( 3 gal)	appl			1.00	Jul							1.0000	4.75	4.75	4.75
Karate Z	oz											1.0000	3.40	3.40	3.40
Belt	oz											2.5000	6.13	15.33	15.33
Transform	oz											1.5000	7.42	11.13	11.13
App by Air ( 5 gal)	appl			0.50	Aug							0.5000	6.00	3.00	3.00
Roundup WeatherMax	oz											11.0000	0.27	2.97	2.97
Header Wheat/Sorghum	30' Rigid	275hp	0.085	1.00	Aug	5.88	9.88	0.64	0.94	0.08	1.07				18.41
Haul Sorghum	bu			1.00	Aug							100.0000	0.25	25.00	25.00
Stalk Shredder-Flail	20'	MFWD 150	0.082	1.00	Sep	2.12	2.14	1.94	1.13	0.08	0.79				8.12
TOTALS						17.39	21.38	5.20	6.92	0.60	6.06			246.26	303.21
INTEREST ON OPERATING CAPITAL															6.53
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															309.74



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, 2015.

			-----BREAKEVEN PRICE-----										
Grain Sorghum			1.96	2.08	2.22	2.38	2.58	2.81	3.09	3.45	3.91	4.52	5.37
PERCENT	YIELD	UNIT	-----dollars-----										
50	50.00	bu	-170	-164	-157	-149	-139	-128	-113	-96	-73	-42	0
			-199	-192	-185	-177	-167	-156	-142	-124	-101	-70	-28
60	60.00	bu	-153	-146	-137	-128	-116	-102	-85	-64	-36	0	51
			-181	-174	-166	-156	-144	-130	-113	-92	-64	-28	22
70	70.00	bu	-136	-128	-118	-106	-93	-76	-56	-32	0	42	102
			-164	-156	-146	-134	-121	-105	-85	-60	-28	14	74
80	80.00	bu	-119	-109	-98	-85	-69	-51	-28	0	36	85	153
			-147	-138	-126	-113	-98	-79	-56	-28	8	57	125
90	90.00	bu	-102	-91	-78	-64	-46	-25	0	32	73	128	204
			-130	-119	-107	-92	-74	-53	-28	3	44	99	176
100	100.00	bu	-85	-73	-59	-42	-23	0	28	64	109	170	256
			-113	-101	-87	-70	-51	-28	0	35	81	142	227
110	110.00	bu	-68	-54	-39	-21	0	25	56	96	146	213	307
			-96	-83	-67	-49	-28	-2	28	67	118	185	278
120	120.00	bu	-51	-36	-19	0	23	51	85	128	182	256	358
			-79	-64	-47	-28	-5	22	57	99	154	227	330
130	130.00	bu	-34	-18	0	21	46	76	113	160	219	298	409
			-62	-46	-28	-6	18	48	85	131	191	270	381
140	140.00	bu	-17	0	19	42	69	102	142	192	256	341	460
			-45	-28	-8	14	41	74	113	163	227	313	432
150	150.00	bu	0	18	39	64	93	128	170	224	292	384	512
			-28	-10	11	35	64	99	142	195	264	355	483

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, 2015.

			-----BREAKEVEN PRICE-----										
Grain Sorghum			2.14	2.28	2.44	2.62	2.83	3.09	3.41	3.80	4.31	4.99	5.94
PERCENT	YIELD	UNIT	-----dollars-----										
50	50.00	bu	-161	-154	-146	-137	-126	-113	-98	-78	-52	-19	28
			-189	-182	-174	-165	-155	-142	-126	-106	-81	-47	0
60	60.00	bu	-142	-134	-124	-113	-100	-85	-66	-42	-12	28	85
			-170	-162	-153	-142	-129	-113	-94	-71	-40	0	56
70	70.00	bu	-123	-113	-102	-90	-75	-57	-34	-7	28	75	142
			-151	-142	-131	-118	-103	-85	-63	-35	0	47	113
80	80.00	bu	-104	-93	-81	-66	-49	-28	-3	28	68	123	198
			-132	-121	-109	-94	-77	-56	-31	0	40	94	170
90	90.00	bu	-85	-73	-59	-42	-23	-0	28	63	109	170	255
			-113	-101	-87	-71	-51	-28	0	35	81	142	227
100	100.00	bu	-66	-52	-37	-19	2	28	59	99	150	217	312
			-94	-81	-65	-47	-25	0	31	71	121	189	284
110	110.00	bu	-47	-32	-15	4	28	56	91	134	190	265	369
			-75	-60	-43	-23	0	28	63	106	162	236	341
120	120.00	bu	-28	-12	6	28	54	85	123	170	231	312	426
			-56	-40	-21	0	25	56	94	142	203	284	398
130	130.00	bu	-9	7	28	51	80	113	154	206	272	360	483
			-37	-20	0	23	51	85	126	177	243	331	454
140	140.00	bu	9	28	50	75	105	142	186	241	312	407	540
			-18	0	21	47	77	113	157	213	284	379	511
150	150.00	bu	28	48	72	99	131	170	217	277	353	454	597
			0	20	43	71	103	142	189	248	324	426	568

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, 2015.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
CUSTOM SPRAY					
App by Air ( 5 gal)	appl	6.00	1.0000	6.00	_____
LARice GPS Charge-SW	acre	0.35	1.0000	0.35	_____
FERTILIZERS					
LA Nitrogen	lb	0.50	104.0000	52.00	_____
LA Phosphate	lb	0.61	48.0000	29.28	_____
LA Potash	lb	0.34	48.0000	16.32	_____
HERBICIDES					
Londax 60DF	oz	17.25	2.4000	41.40	_____
INSECTICIDES					
Sevin XLR Plus	qt	12.50	1.0000	12.50	_____
SEED/PLANTS					
Sorghum Concept	lb	2.28	9.0000	20.52	_____
CUSTOM FERT/LIME					
Custom Spread(Truc	appl	4.50	1.0000	4.50	_____
CUSTOM HARVEST/HAUL					
Haul Sorghum	bu	0.25	100.0000	25.00	_____
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	9.60	0.3812	3.66	_____
DIESEL FUEL					
Tractors	gal	2.75	3.7828	10.40	_____
Self-Propelled	gal	2.75	1.4915	4.10	_____
REPAIR & MAINTENANCE					
Implements	acre	3.76	1.0000	3.76	_____
Tractors	acre	2.27	1.0000	2.27	_____
Self-Propelled	acre	8.40	1.0000	8.40	_____
INTEREST ON OP. CAP.	acre	3.72	1.0000	3.72	_____
TOTAL DIRECT EXPENSES				248.57	_____
FIXED EXPENSES					
Implements	acre	8.17	1.0000	8.17	_____
Tractors	acre	13.78	1.0000	13.78	_____
Self-Propelled	acre	12.42	1.0000	12.42	_____
TOTAL FIXED EXPENSES				34.37	_____
TOTAL SPECIFIED EXPENSES				282.94	_____



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, 2015.

LA Sorghum			-----BREAKEVEN PRICE-----										
			1.74	1.84	1.96	2.11	2.28	2.48	2.73	3.04	3.44	3.97	4.72
PERCENT	YIELD	UNIT	-----dollars-----										
50	50.00	bu.	-148	-143	-137	-130	-121	-111	-99	-83	-63	-37	0
			-183	-178	-171	-164	-156	-146	-133	-118	-98	-71	-34
60	60.00	bu.	-134	-127	-120	-111	-101	-89	-74	-55	-31	0	44
			-168	-162	-154	-146	-135	-123	-108	-90	-66	-34	10
70	70.00	bu.	-119	-111	-103	-93	-81	-67	-49	-27	0	37	89
			-153	-146	-137	-127	-115	-101	-84	-62	-34	2	55
80	80.00	bu.	-104	-95	-85	-74	-60	-44	-24	0	31	74	134
			-138	-130	-120	-108	-95	-79	-59	-34	-2	40	99
90	90.00	bu.	-89	-79	-68	-55	-40	-22	0	27	63	111	178
			-123	-114	-103	-90	-75	-56	-34	-6	29	77	144
100	100.00	bu.	-74	-63	-51	-37	-20	0	24	55	95	148	223
			-108	-98	-85	-71	-54	-34	-9	21	61	114	189
110	110.00	bu.	-59	-47	-34	-18	0	22	49	83	127	186	268
			-93	-82	-68	-52	-34	-12	15	49	93	151	233
120	120.00	bu.	-44	-31	-17	0	20	44	74	111	159	223	312
			-79	-66	-51	-34	-14	10	40	77	125	189	278
130	130.00	bu.	-29	-15	0	18	40	67	99	139	191	260	357
			-64	-50	-34	-15	6	32	64	105	157	226	323
140	140.00	bu.	-14	0	17	37	60	89	124	167	223	297	402
			-49	-34	-17	2	26	55	89	133	189	263	367
150	150.00	bu.	0	15	34	55	81	111	148	195	255	335	446
			-34	-18	0	21	46	77	114	161	221	300	412

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, 2015.

LA Sorghum			-----BREAKEVEN PRICE-----										
			1.96	2.09	2.23	2.39	2.59	2.82	3.11	3.47	3.93	4.54	5.40
PERCENT	YIELD	UNIT	-----dollars-----										
50	50.00	bu.	-137	-131	-124	-116	-106	-94	-80	-62	-39	-8	34
			-171	-165	-158	-150	-140	-128	-114	-96	-73	-42	0
60	60.00	bu.	-120	-112	-104	-94	-82	-68	-51	-30	-2	34	85
			-154	-147	-138	-128	-117	-103	-85	-64	-36	0	51
70	70.00	bu.	-103	-94	-84	-73	-59	-42	-22	2	34	77	137
			-137	-128	-119	-107	-93	-77	-57	-32	0	42	103
80	80.00	bu.	-85	-76	-64	-51	-35	-17	5	34	71	120	189
			-120	-110	-99	-85	-70	-51	-28	0	36	85	154
90	90.00	bu.	-68	-57	-44	-30	-12	8	34	66	108	163	240
			-103	-92	-79	-64	-46	-25	0	32	73	128	206
100	100.00	bu.	-51	-39	-25	-8	10	34	63	98	144	206	292
			-85	-73	-59	-42	-23	0	28	64	110	171	257
110	110.00	bu.	-34	-20	-5	12	34	60	91	131	181	249	343
			-68	-55	-39	-21	0	25	57	96	147	214	309
120	120.00	bu.	-17	-2	14	34	57	85	120	163	218	292	395
			-51	-36	-19	0	23	51	85	128	184	257	360
130	130.00	bu.	-0	15	34	55	81	111	148	195	255	335	446
			-34	-18	0	21	46	77	114	161	221	300	412
140	140.00	bu.	17	34	54	77	104	137	177	227	292	378	498
			-17	0	19	42	70	103	143	193	257	343	464
150	150.00	bu.	34	52	74	98	128	163	206	259	329	421	550
			0	18	39	64	93	128	171	225	294	386	515

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 2015.

ITEM NAME	UNIT	PRICE	ITEM NAME	UNIT	PRICE
		dollars			dollars
ADJUVANTS			Terraclor Super X G	lb	2.82
Crop Oil ( Seed Oil)	pt	4.60	Tilt 3.6 EC	oz	0.84
Crop Oil (Petroleum)	pt	3.60	Vitavax 200	oz	0.47
Surfactant	pt	3.60	Vitavax M Flowable	oz	1.06
CUSTOM FERT/LIME			Vitavax RTU-Thiram	oz	0.40
App Fert by Air	cwt	6.50	Vitavax T-L	oz	0.29
App Fert by Air(Min)	appl	6.50	GIN/DRY		
Custom Apply Fert	acre	7.50	Dry Corn	bu	0.19
Custom Spread(Truc	appl	4.50	Dry Grain Sorghum	cwt	0.25
Lime (Spread)	ton	48.00	Dry Rice	bu	0.40
CUSTOM HARVEST/HAUL			Dry Rice (cwt)	cwt	0.90
Custom Combine Rice	acre	0.00	GROWTH REGULATORS		
Haul Corn	bu	0.23	Early Harvest PGR	oz	1.55
Haul Cotton	lb	0.02	LA Polado	oz	0.38
Haul Sorghum	bu	0.25	Mepex	oz	0.09
Haul Soybeans	bu	0.27	PGR IV	oz	1.55
Haul Wheat	bu	0.26	Pix Plus	oz	0.19
LARice Haul	cwt	0.30	Pix Ultra	oz	0.39
CUSTOM PLANT			HARVEST AIDS		
LARice Air Plant NE	cwt	5.50	Accelerate	pt	2.59
LARice Air Plant SW	cwt	5.60	Ammonium Sulfate	lb	0.20
CUSTOM SPRAY			Boll'd	pt	7.01
App by Air ( 2 gal)	appl	3.25	CottonQuik	pt	4.25
App by Air ( 3 gal)	appl	4.75	Def 6	pt	8.25
App by Air ( 5 gal)	appl	6.00	Def/Folex	pt	8.62
App by Air (10 gal)	appl	8.00	Dropp 50 WP	lb	45.45
LARice GPS Charge-SW	acre	0.35	Dropp SC	oz	1.09
LARice GPS Charge_NE	acre	0.25	Ethephon 6E	pt	3.27
FERTILIZERS			Finish 6	pt	8.59
Amm Nitrate (34% N)	cwt	22.50	Folex 6EC	pt	7.55
Amm Sulfate (21% N)	cwt	18.60	Ginstar EC	pt	27.89
Fert 10-34-0	cwt	26.00	Gramoxone Extra	pt	4.86
Fert 41-0-0-4	cwt	23.50	Gramoxone Inteon	oz	0.25
LA Nitrogen	lb	0.50	Gramoxone Max	pt	4.06
LA Phosphate	lb	0.61	Harvade 5F	oz	0.67
LA Potash	lb	0.34	Leafless	pt	18.56
Phosphorus(46% P2O5)	cwt	24.50	Prep	pt	4.00
Potash (60% K2O)	cwt	23.60	Sodium Chlorate 3L	gal	3.50
Sulfur	lb	0.26	Solium Chlorate 6L	gal	5.57
UAN (32% N)	cwt	18.50	Starfire	pt	0.00
UAN + Sulfur (28% N)	cwt	17.90	HERBICIDES		
Urea, Solid (46% N)	cwt	25.25	2,4-D Amine 4	pt	1.85
Zinc	lb	0.50	2,4-D Ester	pt	3.00
FUNGICIDES			AAtrex 4L	pt	2.08
Apron Maxx RTA	oz	0.81	AAtrex NINE-0	lb	3.93
Apron XL	oz	7.93	Accent Gold	oz	6.12
Apron XL LS	oz	7.93	Accent SP	oz	36.25
Benlate 50 WP	lb	15.95	Aim 2EC	oz	7.19
Captan 4L	pt	2.83	Aim DF	oz	9.65
Captan 50 WP	lb	6.00	Arrosolo	qt	7.88
Delta Coat AD	oz	3.75	Assure II	oz	0.70
Dithane F-45	qt	7.94	Atrazine 4L	pt	1.50
Dithane Rainsheild	lb	2.75	Atrazine 90DF	lb	2.80
Fungicide	lb	2.82	Authority 75DF	lb	26.95
Gem 25 WG	oz	3.70	Axiom 68DF	lb	25.74
Manzate 75 DF	lb	4.83	Backdraft	pt	2.40
Manzate Flowable	pt	4.60	Banvel	pt	11.10
Moncut 70 DF	lb	25.00	Basagran	pt	11.88
Orbit	oz	2.75	Basis Gold	lb	9.00
Prevail	lb	28.25	Beacon 75% WSP	oz	34.87
Quadris	oz	1.95	Beyond	oz	4.29
Ridomil GoldPC 10G	lb	2.08	Bicep II Magnum	qt	10.97
Ridomil Gold PC	lb	4.00	Bicep II zmsgnum	qt	10.97
Ridomil Gold PC Liq	oz	6.54	Bladex 4L	qt	0.00
Rovral 4F	pt	14.20	Bladex 90DF	lb	0.00
Rovral WG	lb	0.00	Blazer 2L	pt	0.00
Shelter	oz	8.50	Blazer Ultra	pt	9.56
Stiletto	oz	0.56	Boa	pt	3.63
Stratego	pt	24.91	Bolero 8EC	pt	7.50
Terrachlor Flowable	pt	4.74	Boundary	pt	10.05
Terraclor 2EC	pt	1.87	Buctril 4EC	pt	17.06
Terraclor Super X EC	pt	3.95	Butoxone 175(2,4-DB)	pt	3.24

HERBICIDES (CON'T)					
Butoxone 200(2,4-DB)	pt	3.92	Lightning	oz	14.25
Butyrac 175 (2,4-DB)	pt	3.27	Linex 4L	pt	12.12
Butyrac 200 (2,4-DB)	pt	4.20	Londax 60DF	oz	17.25
Canopy 75%	oz	2.69	Lorox 50DF	lb	18.70
Canopy XL	oz	2.23	MSMA 6.6	pt	3.50
Caparol 4L	pt	3.69	MSMA6 + Surfactant	pt	2.63
Caparol Accu-Pak	lb	0.00	Newpath 2SL	oz	3.47
Celebrity Plus	lb	84.50	Ordram 15-G	lb	1.34
Clarity	pt	11.88	Ordram 8-E	pt	9.42
Classic	oz	16.28	Outlook	pt	16.88
Clincher EC	oz	2.30	Pendimax 3.3	pt	2.47
Cobra 2EC	oz	1.61	Permit 75DF	oz	18.50
Command 3ME	pt	18.50	Poast 1.53	pt	11.95
Command XTRA	pt	0.00	Poast Plus	pt	8.66
Conclude Ultra	pt	0.00	Propanil 4E	qt	5.15
Conclude Ultra	pt	0.00	Prowl 3.3 EC	pt	3.44
Conclude XACT	pt	11.32	Pursuit DG	oz	11.59
Conclude XTRA	pt	8.32	Pursuit Plus EC	pt	7.10
Cornerstone	pt	2.50	Python WDG	oz	13.04
Cotoran 4L	pt	5.98	Raptor	oz	4.18
Cotoran DF	lb	7.92	Reflex 2LC	pt	7.04
Cotton Pro Flowable	pt	3.44	Regiment 80WP	oz	4.38
Crossbow	pt	8.05	Remedy	pt	8.45
Cy-Pro 4L	qt	0.00	Resource .86EC	pt	28.75
Cypro 90DF	lb	0.00	Ricestar	pt	22.55
Delta Goal	pt	9.44	Roundup Original	pt	6.00
Denim 0.16 EC	pt	24.06	Roundup Original Max	oz	0.38
Detail	pt	7.99	Roundup Power Max	pt	3.16
Direx 4L	pt	2.81	Roundup Ultra MAX	pt	5.97
Direx 80 DF	lb	7.37	Roundup Ultra Dry	lb	6.14
Diuron 4L	pt	2.81	Roundup WeatherMax	oz	0.27
Diuron 80 DF	lb	2.70	Scepter 70 DG	oz	4.52
Domain 60DF	lb	12.75	Select 2EC	oz	0.77
DSMA 4	pt	0.90	Sencor 4F	pt	14.74
Dual 8E	pt	0.00	Sencor DF	lb	11.20
Dual II Magnum	pt	14.50	Squadron CE	pt	12.50
Dual Magnum	pt	13.49	Stam 4E	qt	5.12
Duet	pt	4.99	Stam 80 EDF	lb	8.04
Evik DF 80W	lb	11.75	Staple 85%	oz	16.01
Exceed	oz	10.71	Staple Plus	oz	8.55
Exceed Custom Pak	oz	11.50	Steadfast	oz	11.85
Expert	pt	4.27	Steel	pt	10.28
Facet 75DF	lb	50.00	Storm	pt	11.50
First Rate	oz	38.78	Strongarm	oz	51.20
Flexstar HL	pt	4.50	Superwham	qt	8.83
FloMet 4L	pt	4.74	Suprend	lb	12.92
Freedom	qt	2.51	Surpass 20G	lb	2.36
Front Row	oz	21.92	Surpass EC	qt	26.25
Frontier 6.0	oz	0.63	Touchdown	qt	9.32
Fultime	pt	5.25	Touchdown 4 IQ	pt	3.33
Fusilade DX	oz	1.14	Touchdown Total	qt	6.74
Fusion	pt	27.00	Treflan HFP	pt	2.90
Glyphos	pt	1.80	Treflan TR-10	lb	1.10
Glyphomax	pt	3.49	Tri-Scept	pt	5.24
Glyphosate Plus 4L	pt	3.19	Trifluralin 4EC	pt	3.34
Glystar Plus	pt	2.25	Trilin 10G	lb	0.79
Goal 2XL	pt	10.00	Trilin 4EC	pt	2.12
Gramoxone Max	pt	5.46	Typhoon	qt	13.06
Gramoxone Max	pt	4.06	Valor WP	oz	4.23
Grandstand R	qt	28.38	Whip 360	pt	25.08
Guardzman	pt	4.66	Zorial Rapid 80DF	lb	14.10
Guardzman Max	pt	6.93			
Harmony Extra	oz	14.35	INSECTICIDES		
Hoelon 3EC	pt	11.03	Acephate 80SP	lb	0.00
Karmex DF	lb	5.93	Acephate 90SP	lb	7.23
LA Asulox/Asulam	gal	37.00	Admire 2 Flowable	oz	4.78
LA Weedmaster	qt	6.50	Ammo 2.5 EC	oz	0.92
Lariat	qt	7.49	Asana .66 XL	oz	0.64
Lasso 4EC	qt	6.60	Aztec 2.1% G	lb	3.68
Lasso II 15G	lb	0.00	Baythroid 2	oz	2.30
Layby Pro	qt	6.30	Belt	oz	6.13
Lexone 75DF	lb	18.90	Bidrin 8L	oz	0.98
Liberty	pt	8.84	Brigade EC	pt	15.10
Lightning	oz	14.25	Brigade WSB	lb	21.00
			Capture 2EC	oz	2.40
			Carbamate	oz	0.00

## INSECTICIDES (CON'T)

Centric 40WG	oz	4.83	Warrior Z	oz	1.80
Comite	pt	8.46	Warrior ZT	oz	1.88
Condor XL	pt	0.00	SEED/PLANTS		
Confirm 2F	oz	2.05	Corn Seed Bt	thous	2.60
Counter 15G	lb	4.22	Corn Seed BtRR	thous	3.47
Counter CR	lb	2.65	Corn Seed Conv.	thous	2.88
Curacron 8E	pt	10.74	Corn Seed RR	thous	3.08
Decis 1.5EC	oz	2.84	Corn Seed VT3	thous	2.84
Declare	pt	4.08	Corn Seed VT3Pro	thous	3.12
Denim 0.16EC	pt	32.63	Cotton Seed BG/RR	thous	0.62
Di-Syston 15G	lb	3.48	Cotton Seed BGII/RRF	thous	0.61
Di-Syston 8	pt	14.32	Cotton Seed Bt	thoud	0.28
Diamond .83EC	pt	16.28	Cotton Seed BtRR	thous	0.74
Dimethoate 4E	pt	6.27	Cotton Seed Bxn	thous	0.00
Dimilin 2L	oz	2.02	Cotton Seed Conv.	thous	0.00
Dipel DF	lb	13.50	Cotton Seed Liberty	thous	1.05
Dipel ES	pt	5.00	Cotton Seed Liberty	thous	1.05
Force 3G	lb	6.73	Cotton Seed RR	thous	0.63
Furadan 3G	lb	0.00	Cotton Seed RR	thous	0.63
Furadan 4F	pt	9.81	Cotton Seed WS	thous	0.49
Fury 1.5 EC	oz	1.30	Cotton Seed WS/RR	thous	0.00
Gaucho 480	oz	5.80	Cotton Seed WS/RRF	thous	0.59
Intrepid 2F	oz	1.76	Cruiser 5FS Seed Tmt	oz	17.38
Intruder 70WP	oz	9.65	Sorghum Concept	lb	2.28
Karate Z	oz	3.40	Sorghum Hybrid Sudax	lb	1.20
Lannate LV	pt	10.34	Sorghum NonConcept	lb	1.18
Lannate SP	oz	1.93	Soybean Seed LL	lb	0.89
Larvin 3.2	oz	0.63	Soybean Seed Private	lb	0.38
Leverage 2.7	oz	1.66	Soybean Seed Public	lb	0.00
Lorsban 15G	lb	2.15	Soybean Seed RR	lb	1.11
Lorsban 4E	pt	5.63	Soybean Seed Stack	lb	1.28
Malathion 57EC	pt	4.23	Wheat Seed Private	lb	0.32
Malathion 8E	pt	5.60	Wheat Seed Public	lb	0.00
Malathion ULV	pt	4.93	SERVICE FEE		
Mepichlor 4.2% Liq	pt	5.91	Cotton Checkoff	bale	2.56
Methyl Parathion	pt	5.79	Cotton Storage	bale	25.00
Monitor 4	pt	16.50	Crop Consultant	acre	7.00
Monitor 4	pt	16.50	Insect Scouting	acre	7.00
Mustang Max	oz	1.60	Rice Consultant	acre	7.00
Organophosphate	oz	0.00	SC Treating Charge	acre	0.00
Orthene 90S	lb	5.75	Survey & Mark Levees	acre	4.50
Orthene 97	lb	10.59	Survey & Mark Levees	acre	4.50
Ovasyn	pt	0.00	BG Cot Tech Fee	thous	0.28
Ovicide	oz	0.00	BG Cot Tech Fee	cap/ac	19.50
Penncap M	pt	6.71	BG II Cot Tech Fee	thous	0.76
Phaser 3E	qt	8.13	BG II Cot Tech Fee	cap/ac	31.91
Pirate 3SC	oz	0.00	BG II/RR Tech Fee	thous	1.49
Pounce 25WP	lb	12.85	BG II/RR Tech Fee	cap/ac	62.69
Pounce 3.2 EC	oz	0.91	BGII/RRF Cot Tech Fe	thous	1.49
Provado 1.6F	oz	1.94	BGII/RRF Cot Tech Fe	cap/ac	69.25
Scout X-TRA	oz	0.00	Eradication Fee	acre	6.00
Sevin 80S	lb	7.40	Eradication Zone 1	acre	6.00
Sevin XLR Plus	qt	12.50	Eradication Zone 1A	acre	6.00
Spintor 2SC	oz	4.93	Eradication Zone 1B	acre	6.00
Steward	pt	29.30	Eradication Zone 2	acre	6.00
Synthetic Pyrethroid	oz	0.00	Eradication Zone 3	acre	6.00
Temik 15G Grit	lb	4.00	Eradication Zone 4	acre	6.00
Thimet 20-G	lb	3.60	RR Cotton Tech Fee	thous	1.04
Thionex 3EC	pt	4.65	RR Cotton Tech Fee	cap/ac	43.66
Thionex 50W	lb	10.45	RR Cotton Tech Fee	thous	1.04
Tracer	oz	9.73	RR Cotton Tech Fee	cap/ac	43.66
Transform	oz	7.42	RRF Cotton Tech Fee	thous	1.04
Trimax	oz	1.85	RRF Cotton Tech Fee	cap/ac	48.25
Vydate C-LV	oz	0.89			

Appendix Table 2. Tractors: estimated purchase price, annual use, useful life, fuel use, and direct and fixed cost per hour, Louisiana 2015.

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	12.55	26.79	0.00	39.34	0.00	39.34
Combine (200-249 hp)	240hp	161,548	300	8	12.35	12.55	33.83	16.82	63.21	64.41	127.63
Combine (225-274 hp)	Track250hp	0	300	8	12.87	12.55	35.26	0.00	47.81	0.00	47.81
Combine (250-299 hp)	275hp	291,000	300	8	14.15	12.55	38.77	30.31	81.63	116.03	197.67
Combine (250-299hp)	Grass295hp	218,222	300	8	15.18	12.55	41.59	22.73	76.87	87.01	163.89
Combine (275-299 hp)	Track290hp	0	300	8	14.93	12.55	40.90	0.00	53.45	0.00	53.45
Combine (300-349 hp)	325hp	325,000	300	8	16.73	12.55	45.84	33.85	92.24	129.59	221.84
Combine (300-349hp)	Track320hp	0	300	8	16.47	12.55	45.12	0.00	57.67	0.00	57.67
Combine (350-379 hp)	370hp	344,000	300	8	19.04	12.55	52.16	35.83	100.55	137.17	237.72
Combine (350-379 hp)	Track365hp	0	300	8	18.79	12.55	51.48	0.00	64.03	0.00	64.03
Cotton Stripper	173hp	170,000	200	8	8.08	12.55	22.13	26.56	61.25	101.68	162.93
Tractor( 40-59hp)Cab	2WD 50	33,700	600	8	2.57	9.60	7.05	1.05	17.70	6.12	23.82
Tractor( 40-59hp)Cab	MFWD 50	38,900	600	8	2.57	9.60	7.05	1.21	17.86	7.06	24.93
Tractor( 40-59hp)RB	2WD 50	18,900	600	8	2.57	9.60	7.05	0.59	17.24	3.43	20.67
Tractor( 40-59hp)RB	MFWD 50	26,200	600	8	2.57	9.60	7.05	0.81	17.47	4.75	22.22
Tractor( 60-89hp)CAB	2WD 75	43,400	600	8	3.86	9.60	10.57	1.35	21.53	7.88	29.41
Tractor( 60-89hp)CAB	MFWD 75	47,900	600	8	3.86	9.60	10.57	1.49	21.67	8.69	30.37
Tractor( 60-89hp)RB	2WD 75	35,000	600	8	3.86	9.60	10.57	1.09	21.27	6.35	27.62
Tractor( 60-89hp)RB	MFWD 75	39,600	600	8	3.86	9.60	10.57	1.23	21.41	7.19	28.60
Tractor( 90-119hp)CB	2WD 105	63,100	600	8	5.40	9.60	14.80	1.97	26.38	11.45	37.84
Tractor( 90-119hp)CB	MFWD 105	74,400	600	8	5.40	9.60	14.80	2.32	26.73	13.51	40.24
Tractor( 90-119hp)RB	2WD 105	54,300	600	8	5.40	9.60	14.80	1.69	26.10	9.86	35.96
Tractor( 90-119hp)RB	MFWD 105	56,900	600	8	5.40	9.60	14.80	1.77	26.18	10.33	36.52
Tractor(120-139hp)CB	2WD 130	96,300	600	8	6.69	9.60	18.33	3.00	30.94	17.48	48.43
Tractor(120-139hp)CB	MFWD 130	114,000	600	8	6.69	9.60	18.33	3.56	31.49	20.70	52.20
Tractor(140-159hp)CB	2WD 150	127,000	600	8	7.72	9.60	21.15	3.96	34.72	23.06	57.78
Tractor(140-159hp)CB	MFWD 150	143,000	600	8	7.72	9.60	21.15	4.46	35.22	25.97	61.19
Tractor(160-179hp)CB	2WD 170	156,000	600	8	8.75	9.60	23.97	4.87	38.45	29.71	68.16
Tractor(160-179hp)CB	MFWD 170	167,000	600	8	8.75	9.60	23.97	5.21	38.79	31.81	70.60
Tractor(160-199hp)CB	Track 180	142,710	600	8	9.26	9.60	25.38	4.45	39.44	27.18	66.63
Tractor(180-199hp)CB	2WD 190	143,000	600	8	9.77	9.60	26.79	4.46	40.86	27.24	68.10
Tractor(180-199hp)CB	MFWD 190	160,000	600	8	9.77	9.60	26.79	5.00	41.39	30.47	71.87
Tractor(200-249hp)CB	4WD 225	147,066	600	8	11.58	9.60	31.73	4.59	45.92	28.01	73.94
Tractor(200-249hp)CB	MFWD 225	226,000	600	8	11.58	9.60	31.73	7.06	48.39	43.05	91.44
Tractor(200-249hp)CB	Track 225	277,000	600	8	11.58	9.60	31.73	8.65	49.98	52.76	102.75
Tractor(250-349hp)CB	4WD 300	277,000	600	8	15.44	9.60	42.31	8.65	60.56	52.76	113.33
Tractor(250-349hp)CB	Track 300	281,000	600	8	15.44	9.60	42.31	8.78	60.69	53.52	114.22
Tractor(350-449hp)CB	4WD 400	313,000	600	8	20.58	9.60	56.41	9.78	75.79	59.62	135.41
Tractor(350-449hp)CB	Track 400	364,000	600	8	20.58	9.60	56.41	11.37	77.38	69.33	146.72
Tractor(450-uphp)CB	TRACK-475	279,879	600	8	24.44	9.60	66.99	8.74	85.33	53.31	138.65



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 2015.

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'	8,750	100	8	1.00	0.200	2.51	0.68	0.43	3.62	2.00	5.62
Butt Levee (Backhoe)	70 HP	73,300	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	11.51	11.50	11.76	34.78	45.04	79.82
Cotton Picker-1st-BB	4R2X1260hp	317,399	200	8	13.33	0.172	3.81	6.29	8.54	18.65	32.71	51.36
Cotton Picker-1st-BB	4R30"250hp	262,000	200	8	12.86	0.327	7.25	11.54	13.40	32.19	51.30	83.50
Cotton Picker-1st-BB	4R30"325hp	350,000	200	8	18.01	0.327	7.25	16.15	17.90	41.31	68.53	109.84
Cotton Picker-1st-BB	4R38"255hp	267,000	200	8	13.12	0.257	5.70	9.27	10.75	25.73	41.16	66.90
Cotton Picker-1st-BB	4R38"325hp	406,000	200	8	18.01	0.257	5.70	12.72	16.35	34.78	62.59	97.38
Cotton Picker-1st-BB	5R30"255hp	285,000	200	8	12.86	0.261	5.80	9.22	11.66	26.69	44.64	71.33
Cotton Picker-1st-BB	5R38"250hp	284,601	200	8	12.86	0.207	4.58	7.30	9.21	21.10	35.27	56.38
Cotton Picker-1st-BB	6R30"255hp	465,000	200	8	18.27	0.218	4.83	10.92	15.85	31.61	60.70	92.31
Cotton Picker-1st-BB	6R38"330hp	478,000	200	8	18.27	0.172	3.81	8.62	12.86	25.31	49.26	74.57
Cotton Picker-1st-Tr	2R38"157hp	144,912	200	8	8.08	0.519	11.51	11.50	11.76	34.78	45.04	79.82
Cotton Picker-1st-Tr	4R2X1255hp	322,137	200	8	18.01	0.172	3.81	8.50	8.67	20.99	33.20	54.19
Cotton Picker-1st-Tr	4R30"325hp	261,825	200	8	12.86	0.327	7.25	11.54	13.39	32.18	51.26	83.45
Cotton Picker-1st-Tr	4R30"325hp	311,088	200	8	16.72	0.327	7.25	15.00	15.91	38.17	60.91	99.08
Cotton Picker-1st-Tr	4R38"255hp	262,818	200	8	13.12	0.257	5.70	9.27	10.58	25.56	40.52	66.08
Cotton Picker-1st-Tr	4R38"325hp	325,618	200	8	18.01	0.257	5.70	12.72	13.11	31.54	50.20	81.75
Cotton Picker-1st-Tr	5R30"255hp	285,303	200	8	13.12	0.261	5.80	9.41	11.67	26.89	44.69	71.58
Cotton Picker-1st-Tr	5R38"250hp	290,471	200	8	12.86	0.207	4.58	7.30	9.40	21.29	35.99	57.29
Cotton Picker-1st-Tr	6R30"325hp	429,000	200	8	16.72	0.218	4.83	10.00	14.62	29.46	56.00	85.47
Cotton Picker-1st-Tr	6R38"330hp	429,000	200	8	18.01	0.172	3.81	8.50	11.55	23.86	44.21	68.08
Cotton Picker-2nd-BB	2R38"157hp	144,912	200	8	8.08	0.440	9.74	9.74	9.96	29.46	38.15	67.61
Cotton Picker-2nd-BB	4R2x1260hp	322,187	200	8	18.01	0.145	3.23	7.20	7.34	17.78	28.12	45.91
Cotton Picker-2nd-BB	4R30"250hp	261,825	200	8	12.86	0.277	6.14	9.77	11.34	27.26	43.42	70.69
Cotton Picker-2nd-BB	4R30"325hp	311,088	200	8	16.72	0.277	6.14	12.71	13.47	32.33	51.59	83.93
Cotton Picker-2nd-BB	4R38"255hp	262,818	200	8	13.12	0.218	4.83	7.85	8.96	21.65	34.32	55.98
Cotton Picker-2nd-BB	4R38"325hp	325,618	200	8	18.01	0.218	4.83	10.77	11.10	26.72	42.52	69.24
Cotton Picker-2nd-BB	5R30"255hp	285,303	200	8	13.12	0.221	4.91	7.97	9.88	22.78	37.85	60.64
Cotton Picker-2nd-BB	5R38"250hp	284,601	200	8	12.86	0.175	3.88	6.18	7.80	17.88	29.87	47.75
Cotton Picker-2nd-BB	6R30"325hp	405,906	200	8	18.01	0.184	4.09	9.12	11.72	24.94	44.88	69.82
Cotton Picker-2nd-BB	6R38"330hp	404,462	200	8	18.01	0.145	3.23	7.20	9.22	19.65	35.30	54.96
Cotton Picker-2nd-Tr	2R38"157hp	144,912	200	8	8.08	0.440	9.74	9.74	9.96	29.46	38.15	67.61
Cotton Picker-2nd-Tr	4R2X1260hp	322,137	200	8	18.01	0.145	3.23	7.20	7.34	17.78	28.12	45.90
Cotton Picker-2nd-Tr	4R30"250hp	261,825	200	8	12.86	0.277	6.14	9.77	11.34	27.26	43.42	70.69
Cotton Picker-2nd-Tr	4R30"325hp	311,088	200	8	16.72	0.277	6.14	12.71	13.47	32.33	51.59	83.93
Cotton Picker-2nd-Tr	4R38"255hp	262,818	200	8	13.12	0.218	4.83	7.85	8.96	21.65	34.32	55.98
Cotton Picker-2nd-Tr	4R38"325hp	325,618	200	8	18.01	0.218	4.83	10.77	11.10	26.72	42.52	69.24
Cotton Picker-2nd-Tr	5R30"255hp	285,303	200	8	13.12	0.221	4.91	7.97	9.88	22.78	37.85	60.64
Cotton Picker-2nd-Tr	5R38"250hp	290,471	200	8	12.86	0.175	3.88	6.18	7.96	18.04	30.49	48.53
Cotton Picker-2nd-Tr	6R30"325hp	381,665	200	8	16.72	0.184	4.09	8.47	11.02	23.59	42.20	65.79
Cotton Picker-2nd-Tr	6R38"330hp	404,462	200	8	18.01	0.145	3.23	7.20	9.22	19.65	35.30	54.96
LA Pickup Truck	1/2 ton	25,000	800	5	2.50	1.000	9.60	8.50	2.81	20.91	6.54	27.45
Levee Sprayer	27'	30,768	350	8	2.57	0.038	0.66	0.27	0.06	0.99	0.40	1.40
Sprayer( 300-450Gal)	60'	103,000	350	8	5.66	0.017	0.30	0.27	0.09	0.67	0.62	1.29
Sprayer( 300-450Gal)	80'	103,000	350	8	5.66	0.013	0.22	0.20	0.07	0.50	0.46	0.97
Sprayer( 600-750Gal)	60'	174,000	350	8	10.29	0.017	0.30	0.49	0.16	0.96	1.04	2.01
Sprayer( 600-825Gal)	80'	254,000	350	8	10.29	0.013	0.22	0.37	0.17	0.78	1.14	1.92
Sprayer( 600-825Gal)	90'	240,000	350	8	10.29	0.011	0.20	0.33	0.15	0.68	0.96	1.65
Sprayer(1000-1400Gal)	90'	290,000	350	8	14.15	0.014	0.24	0.54	0.21	1.01	1.39	2.40
Sprayer(1200PlusGal)	120'	318,000	350	8	15.44	0.008	0.15	0.37	0.15	0.67	0.95	1.63

Appendix Table 4. Implements: estimated purchase price, annual use, useful life, performance rate, and direct and fixed cost per acre, Louisiana 2015.

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-----							
Blade-Box	6'	2WD 130	1,090	200	20	0.020	0.19	0.36	0.01	0.06	0.62	0.00	0.34	0.98
Blade-Box	10'	2WD 50	5,060	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	7,550	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	1,150	200	20	1.176	11.29	8.29	0.64	0.69	20.92	0.48	4.03	25.45
Blade-Scraper	10'	2WD 50	3,310	200	20	1.176	11.29	8.29	1.84	0.69	22.13	1.40	4.03	27.57
Blade-Scraper	14'	2WD 50	6,730	200	20	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chisel Plow(Folding)	16'	2WD 130	22,500	150	12	0.115	1.10	2.11	0.93	0.34	4.51	1.56	2.02	8.09
Chisel Plow(Folding)	24'	MFWD 190	37,200	150	12	0.076	0.73	2.04	1.02	0.38	4.19	1.71	2.33	8.23
Chisel Plow(Folding)	32'	MFWD 225	48,000	150	12	0.057	0.55	1.83	1.00	0.40	3.79	1.66	2.48	7.95
Chisel Plow(Folding)	42'	MFWD 225	55,200	150	12	0.044	0.42	1.39	0.87	0.31	3.00	1.46	1.89	6.36
Chisel Plow(Rigid)	15'	2WD 130	11,900	150	12	0.123	1.18	2.25	0.52	0.37	4.34	0.88	2.15	7.38
Chisel Plow(Rigid)	24'	MFWD 190	13,100	150	12	0.077	0.73	2.06	0.36	0.38	3.55	0.60	2.34	6.50
Chisel-Harrow	21 shank	2WD 190	12,500	150	12	0.088	0.84	2.35	0.39	0.39	3.99	0.66	2.39	7.05
Chisel-Harrow	27 shank	MFWD 225	14,100	150	12	0.068	0.65	2.17	0.34	0.48	3.66	0.58	2.94	7.19
Colter-Chisel-Harrow	21 shank	2WD 190	19,200	150	12	0.088	0.84	2.35	0.61	0.39	4.20	1.01	2.39	7.62
Colter-Chisel-Harrow	27 shank	MFWD 225	24,000	150	12	0.068	0.65	2.17	0.59	0.48	3.90	0.98	2.94	7.84
Corn Grain Cart 8R30	500 bu	MFWD 190	24,700	200	12	0.031	0.30	0.85	0.21	0.15	1.53	0.35	0.97	2.86
Corn Grain Cart 8R40	700bu	MFWD 190	34,200	200	12	0.025	0.24	0.66	0.23	0.12	1.26	0.38	0.76	2.41
Cult & Post	4R-38	2WD 105	17,800	150	10	0.173	2.49	2.56	0.82	0.29	6.17	2.09	1.70	9.98
Cult & Post	6R-30	MFWD 150	21,900	150	10	0.146	4.22	3.10	0.85	0.65	8.83	2.18	3.80	14.83
Cult & Post	6R-38	MFWD 150	21,700	150	10	0.115	1.66	2.44	0.67	0.51	5.30	1.70	3.00	10.01
Cult & Post	8R-30	MFWD 190	25,600	150	10	0.110	1.58	2.94	0.75	0.55	5.83	1.91	3.35	11.09
Cult & Post	8R-38	MFWD 190	17,800	150	10	0.086	1.25	2.33	0.41	0.43	4.42	1.05	2.65	8.13
Cult & Post	8R-38 2x1	MFWD 190	37,100	150	10	0.057	0.83	1.55	0.57	0.28	3.24	1.46	1.76	6.47
Cult & Post	10R-30	MFWD 225	34,600	150	10	0.088	1.26	2.79	0.81	0.62	5.49	2.06	3.78	11.35
Cult & Post	10R-38	MFWD 225	0	150	10	0.065	0.93	2.06	0.00	0.45	3.46	0.00	2.80	6.26
Cult & Post	12R-30	MFWD 225	42,200	150	10	0.073	1.05	2.32	0.82	0.51	4.72	2.10	3.15	9.98
Cult & Post	12R-38	MFWD 225	44,700	150	10	0.057	0.83	1.83	0.69	0.40	3.76	1.75	2.49	8.02
Cultipacker	12'	2WD 130	4,846	300	12	0.124	1.19	2.28	0.14	0.37	3.99	0.18	2.17	6.35
Cultipacker	20'	MFWD 150	15,200	300	12	0.074	0.71	1.57	0.26	0.33	2.89	0.35	1.93	5.19
Cultivate	4R-38	2WD 105	11,900	150	10	0.162	1.55	2.40	0.51	0.27	4.75	1.31	1.60	7.67
Cultivate	6R-30	MFWD 150	15,900	150	10	0.137	1.32	2.90	0.58	0.61	5.42	1.48	3.57	10.48
Cultivate	6R-38	MFWD 150	15,700	150	10	0.108	1.04	2.29	0.45	0.48	4.27	1.15	2.81	8.25
Cultivate	8R-30	MFWD 190	20,600	150	10	0.103	0.99	2.76	0.56	0.51	4.83	1.44	3.14	9.42
Cultivate	8R-38	MFWD 190	21,800	150	10	0.081	0.78	2.18	0.47	0.40	3.84	1.20	2.48	7.54
Cultivate	8R-38 2x1	MFWD 190	29,700	150	10	0.054	0.52	1.45	0.42	0.27	2.67	1.09	1.65	5.42
Cultivate	10R-30	MFWD 225	28,200	150	10	0.082	0.79	2.61	0.62	0.58	4.61	1.58	3.55	9.74
Cultivate	10R-38	MFWD 225	0	150	10	0.065	0.62	2.06	0.00	0.45	3.14	0.00	2.80	5.94
Cultivate	12R-30	MFWD 225	36,300	150	10	0.068	0.66	2.18	0.66	0.48	3.99	1.69	2.95	8.64
Cultivate	12R-38	MFWD 225	37,400	150	10	0.054	0.52	1.72	0.54	0.38	3.16	1.37	2.33	6.88
Disk & Incorporate	14'	2WD 130	27,800	200	10	0.149	2.15	2.74	1.24	0.45	6.59	2.12	2.61	11.33
Disk & Incorporate	24'	MFWD 190	41,400	200	10	0.087	1.25	2.33	1.08	0.43	5.11	1.84	2.66	9.62
Disk & Incorporate	32'	4WD 225	56,800	200	10	0.068	0.99	2.18	1.17	0.31	4.65	1.99	1.92	8.57
Disk & Incorporate	42'	MFWD 225	30,542	200	10	0.049	0.70	1.55	0.44	0.34	3.06	0.76	2.11	5.94
Disk Bed (Hipper)	4R-38	MFWD 150	7,820	160	10	0.147	1.41	3.12	0.28	0.65	5.48	0.73	3.83	10.05
Disk Bed (Hipper)	6R-30	MFWD 170	12,800	160	10	0.125	1.20	2.99	0.40	0.65	5.24	1.01	3.97	10.24
Disk Bed (Hipper)	6R-38	MFWD 170	13,500	160	10	0.098	0.94	2.36	0.33	0.51	4.16	0.84	3.13	8.14
Disk Bed (Hipper)	8R-30	MFWD 190	17,400	160	10	0.093	0.90	2.51	0.40	0.46	4.28	1.03	2.85	8.18
Disk Bed (Hipper)	8R-38 2x1	MFWD 190	31,900	160	10	0.049	0.47	1.32	0.39	0.24	2.43	1.00	1.50	4.94
Disk Bed (Hipper)	10R-30	MFWD 225	19,900	160	10	0.075	0.72	2.37	0.37	0.52	4.00	0.95	3.22	8.18
Disk Bed (Hipper)	10R-38	MFWD 225	23,000	160	10	0.059	0.56	1.87	0.34	0.41	3.20	0.86	2.54	6.61
Disk Bed (Hipper)	12R-30	MFWD 225	28,100	160	10	0.062	0.60	1.98	0.43	0.44	3.46	1.11	2.69	7.27
Disk Bed (Hipper)	12R-38	MFWD 225	31,900	160	10	0.049	0.47	1.56	0.39	0.34	2.78	1.00	2.12	5.90
Disk Bed (Hipper)Fld	8R-38	MFWD 190	21,300	160	10	0.074	0.71	1.98	0.39	0.37	3.46	1.00	2.25	6.72
Disk Bed (Hipper)Rdg	8R-38	MFWD 190	19,800	160	10	0.074	0.71	1.98	0.36	0.37	3.43	0.93	2.25	6.62
Disk Bed w/roller	8R-30	2WD 190	22,100	160	10	0.093	0.90	2.51	0.51	0.41	4.34	1.32	2.55	8.22
Disk Bed w/roller	12R-30	MFWD 225	47,200	160	10	0.062	0.60	1.98	0.73	0.44	3.76	1.87	2.69	8.33
Disk Harrow	14'	2WD 130	21,800	180	10	0.140	1.34	2.57	0.84	0.42	5.19	1.73	2.45	9.37
Disk Harrow	24'	MFWD 190	42,600	180	10	0.081	0.78	2.19	0.96	0.40	4.35	1.97	2.49	8.82
Disk Harrow	28'	MFWD 225	45,200	180	10	0.070	0.67	2.22	0.88	0.49	4.27	1.79	3.02	9.09
<b>Disk Harrow</b>	<b>32'</b>	<b>MFWD 225</b>	<b>50,800</b>	<b>180</b>	<b>10</b>	<b>0.061</b>	<b>0.58</b>	<b>1.95</b>	<b>0.86</b>	<b>0.43</b>	<b>3.84</b>	<b>1.76</b>	<b>2.64</b>	<b>8.25</b>
Disk Harrow	42'	MFWD 225	99,500	180	10	0.046	0.44	1.48	1.29	0.33	3.55	2.63	2.01	8.20
Ditcher		2WD 130	4,910	200	10	0.020	0.19	0.36	0.03	0.06	0.65	0.05	0.34	1.05
Ditcher (1m/160a)		2WD 130	4,910	200	10	0.009	0.09	0.17	0.01	0.02	0.30	0.02	0.16	0.49
Fert Appl (Liquid)	4R-38	MFWD 150	13,500	150	8	0.154	2.22	3.27	1.39	0.69	7.58	1.51	4.01	13.11
Fert Appl (Liquid)	6R-30	MFWD 170	16,300	150	8	0.130	1.88	3.13	1.42	0.68	7.13	1.55	4.16	12.84
Fert Appl (Liquid)	6R-38	MFWD 170	14,500	150	8	0.103	1.48	2.47	0.99	0.53	5.50	1.08	3.28	9.88
Fert Appl (Liquid)	8R-30	MFWD 190	15,200	150	8	0.098	1.41	2.63	0.99	0.49	5.53	1.08	2.99	9.60
Fert Appl (Liquid)	8R-38	MFWD 190	17,300	150	8	0.077	1.11	2.08	0.89	0.38	4.48	0.97	2.36	7.82
Fert Appl (Liquid)	8R-38 2x1	MFWD 190	16,900	150	8	0.051	0.74	1.38	0.58	0.25	2.97	0.63	1.57	5.18
Fert Appl (Liquid)	10R-30	MFWD 225	18,600	150	8	0.078	1.13	2.49	0.97	0.55	5.15	1.06	3.38	9.59
Fert Appl (Liquid)	10R-38	MFWD 225	20,300	150	8	0.061	0.89	1.96	0.83	0.43	4.13	0.91	2.66	7.71
Fert Appl (Liquid)	12R-30	MFWD 225	19,400	150	8	0.078	1.13	2.49	1.01	0.55	5.19	1.10	3.38	9.68
Fert Appl (Liquid)	12R-38	MFWD 225	17,400	150	8	0.051	0.74	1.64	0.59	0.36	3.34	0.65	2.22	6.22
Field Cult & Inc	12'	2WD 150	13,605	100	10	0.132	1.90	2.79	0.44	0.52	5.67	1.83	3.04	10.55
Field Cult & Inc	24'	MFWD 170	24,679	100	10	0.066	0.95	1.58	0.40	0.34	3.28	1.66	2.10	7.05

Appendix Table 4. Implements: estimated purchase price, annual use, useful life, performance rate, and direct and fixed cost per acre, Louisiana 2015.

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.	
-----\$/acre-----														
Field Cultivate	12'	2WD 150	16,600	100	10	0.124	1.19	2.63	0.51	0.49	4.83	2.10	2.86	9.81
Field Cultivate	24'	MFWD 170	26,000	100	10	0.062	0.59	1.49	0.40	0.32	2.81	1.64	1.97	6.44
Field Cultivate	32'	MFWD 190	39,500	100	10	0.046	0.44	1.25	0.46	0.23	2.39	1.87	1.42	5.69
Field Cultivate	42'	MFWD 225	51,500	100	10	0.035	0.34	1.12	0.45	0.25	2.17	1.86	1.53	5.57
Field Cultivate	50'	MFWD 225	61,300	100	10	0.029	0.28	0.94	0.45	0.21	1.90	1.86	1.28	5.05
Gate Installer		2WD 130	2,960	10	10	0.020	0.38	0.36	0.17	0.06	0.98	0.57	0.34	1.91
Grain Drill	12'	2WD 130	22,700	150	8	0.157	3.01	2.88	1.33	0.47	7.70	2.46	2.74	12.92
Grain Drill	15'	MFWD 150	30,500	150	8	0.125	2.41	2.65	1.43	0.56	7.07	2.64	3.26	12.98
Grain Drill	20'	MFWD 170	37,600	150	8	0.094	1.81	2.26	1.32	0.49	5.89	2.44	2.99	11.34
Grain Drill	24'	MFWD 190	56,700	150	8	0.078	1.50	2.10	1.67	0.39	5.67	3.07	2.39	11.15
Grain Drill	30'	MFWD 225	61,300	150	8	0.062	1.20	1.99	1.44	0.44	5.09	2.66	2.70	10.45
Grain Drill & Pre	12'	2WD 130	28,700	150	8	0.169	3.24	3.10	1.82	0.50	8.68	3.35	2.95	14.99
Grain Drill & Pre	15'	MFWD 150	36,500	150	8	0.135	2.59	2.86	1.85	0.60	7.92	3.41	3.51	14.85
Grain Drill & Pre	20'	MFWD 170	43,500	150	8	0.101	1.94	2.43	1.65	0.52	6.57	3.05	3.23	12.85
Grain Drill & Pre	24'	MFWD 190	59,500	150	8	0.084	1.62	2.26	1.88	0.42	6.20	3.47	2.57	12.26
Grain Drill & Pre	30'	MFWD 225	68,700	150	8	0.067	1.29	2.14	1.74	0.47	5.66	3.21	2.91	11.79
Harrow	13'	2WD 130	4,360	200	10	0.119	1.14	2.19	0.18	0.35	3.87	0.26	2.08	6.23
Harrow	21'	2WD 150	5,400	200	10	0.073	0.70	1.56	0.13	0.29	2.70	0.20	1.70	4.61
Harrow	40'	MFWD 190	16,700	200	10	0.038	0.37	1.04	0.22	0.19	1.83	0.33	1.18	3.34
Harrow	47'	MFWD 190	21,000	200	10	0.033	0.31	0.88	0.24	0.16	1.61	0.35	1.00	2.97
Header - Corn	4R-38	240hp	25,147	300	8	0.201	2.52	6.80	1.26	3.38	13.97	1.83	12.95	28.77
Header - Corn	6R30"	240hp	43,500	300	8	0.170	2.13	5.76	1.85	2.86	12.61	2.69	10.96	26.27
Header - Corn	6R38"	240hp	44,700	300	8	0.134	1.68	4.54	1.50	2.26	10.00	2.18	8.65	20.84
Header - Corn	8R-30	240hp	56,200	300	8	0.127	1.60	4.32	1.79	2.14	9.86	2.60	8.22	20.70
Header - Corn	8R-38	275hp	57,600	300	8	0.100	1.26	3.91	1.45	3.06	9.69	2.11	11.71	23.52
Header - Corn	12R-20	275hp	76,400	300	8	0.127	1.60	4.95	2.43	3.87	12.86	3.54	14.81	31.22
Header - Corn	12R-30	275hp	87,700	300	8	0.085	1.06	3.30	1.86	2.58	8.81	2.71	9.87	21.40
Header - Rice (CL)	22' Rigid	240hp	21,887	300	8	0.288	3.62	9.76	1.57	4.85	19.81	2.29	18.58	40.68
Header - Rice (CL)	25' Rigid	240hp	51,600	300	8	0.253	3.18	8.59	3.27	4.27	19.32	4.75	16.35	40.43
Header - Rice (CL)	30' Rigid	275hp	59,000	300	8	0.211	2.65	8.20	3.12	6.41	20.38	4.53	24.54	49.46
Header - Rice (SL)	22' Rigid	240hp	21,887	300	8	0.250	3.13	8.45	1.36	4.20	17.17	1.98	16.10	35.26
Header - Rice (SL)	25' Rigid	240hp	51,600	300	8	0.220	2.76	7.44	2.83	3.70	16.74	4.12	14.17	35.04
Header - Rice (SL)	30' Rigid	275hp	59,000	300	8	0.183	2.30	7.10	2.70	5.55	17.66	3.92	21.27	42.87
Header - Soybean	15' Flex	240hp	0	300	8	0.170	2.13	5.76	0.00	2.86	10.76	0.00	10.96	21.73
Header - Soybean	18' Flex	240hp	20,309	300	8	0.141	1.78	4.80	0.72	2.38	9.69	1.04	9.14	19.87
Header - Soybean	22' Flex	240hp	28,900	300	8	0.116	1.45	3.92	0.83	1.95	8.17	1.21	7.47	16.87
Header - Soybean	25' Flex	275hp	32,700	300	8	0.102	1.28	3.96	0.83	3.09	9.17	1.21	11.85	22.24
Header - Soybean	30' Flex	275hp	31,200	300	8	0.085	1.06	3.30	0.66	2.58	7.61	0.96	9.87	18.45
Header Wheat/Sorghum	18' Rigid	240hp	19,069	300	8	0.141	1.78	4.80	0.67	2.38	9.64	0.98	9.14	19.77
Header Wheat/Sorghum	22' Rigid	240hp	19,500	300	8	0.116	1.45	3.92	0.56	1.95	7.90	0.82	7.47	16.20
Header Wheat/Sorghum	25' Rigid	240hp	27,300	300	8	0.102	1.28	3.45	0.69	1.71	7.15	1.01	6.58	14.75
Header Wheat/Sorghum	30' Rigid	275hp	30,300	300	8	0.085	1.06	3.30	0.64	2.58	7.59	0.93	9.87	18.41
Heavy Disk	14'	MFWD 150	21,900	180	10	0.145	1.40	3.08	0.88	0.65	6.02	1.81	3.79	11.62
Heavy Disk	21'	MFWD 170	34,500	180	10	0.097	0.93	2.33	0.93	0.50	4.70	1.90	3.09	9.70
Heavy Disk	27'	MFWD 190	41,400	180	10	0.075	0.72	2.02	0.87	0.37	4.00	1.77	2.30	8.08
LA Boom Sprayer	30 ft	MFWD 150	3,000	150	10	0.059	0.57	1.26	0.13	0.26	2.24	0.14	1.55	3.94
Land Plane	40'x10'	MFWD 190	6,020	200	10	0.242	2.32	6.50	0.29	1.21	10.33	0.74	7.39	18.47
Land Plane	50'x16'	MFWD 190	12,300	200	10	0.151	1.45	4.06	0.37	0.75	6.65	0.95	4.62	12.22
LARice Backhoe-Rrmnt	2 ft	MFWD 150	6,000	100	10	0.500	4.80	10.57	2.64	2.23	20.25	3.54	12.98	36.78
LARice Land Level	13 ft	MFWD 150	7,500	200	15	0.190	1.82	4.02	0.15	0.84	6.85	0.62	4.93	12.42
LARice Levee Plow	8 ft	4WD 300	4,600	150	10	0.050	0.48	2.11	0.07	0.43	3.10	0.18	2.63	5.92
LARice Water Level	24 ft	4WD 300	3,500	100	15	0.149	1.43	6.34	0.23	1.29	9.31	0.46	7.91	17.68
Levee Splitter (1/80	2 blade	2WD 150	3,280	50	10	0.004	0.04	0.08	0.00	0.01	0.14	0.02	0.09	0.27
Lo-Till & Bed	4R-38	MFWD 190	5,100	150	12	0.145	1.39	3.90	0.26	0.72	6.29	0.46	4.43	11.19
Middle Buster	6R-38	MFWD 150	12,800	160	8	0.120	1.15	2.54	0.36	0.53	4.59	1.09	3.12	8.81
Middle Buster	8R-30	MFWD 190	20,800	160	8	0.114	1.09	3.05	0.55	0.57	5.28	1.69	3.48	10.46
Middle Buster	8R-38	MFWD 190	18,100	160	8	0.090	0.86	2.41	0.38	0.45	4.11	1.16	2.75	8.03
Middle Buster	8R-40 2x1	MFWD 190	29,200	160	8	0.060	0.57	1.61	0.41	0.30	2.89	1.25	1.83	5.98
Middle Buster	10R-30	MFWD 225	29,300	160	8	0.091	0.87	2.89	0.62	0.64	5.04	1.91	3.93	10.89
Middle Buster	10R-38	MFWD 225	32,100	160	8	0.072	0.69	2.28	0.54	0.50	4.02	1.65	3.10	8.78
Middle Buster	12R-38	MFWD 225	29,200	160	8	0.060	0.57	1.90	0.41	0.42	3.31	1.25	2.58	7.16
Mulcher Plow	30'	MFWD 225	0	100	10	0.068	0.65	2.16	0.00	0.48	3.29	0.00	2.93	6.22
NT Grain Drill	12'	2WD 130	42,000	150	8	0.163	3.14	3.00	2.57	0.49	9.21	4.74	2.86	16.82
NT Grain Drill	15'	MFWD 150	48,800	150	8	0.130	2.51	2.77	2.39	0.58	8.26	4.41	3.40	16.08
NT Grain Drill	20'	MFWD 170	64,400	150	8	0.098	1.88	2.35	2.37	0.51	7.12	4.36	3.12	14.61
NT Grain Drill	24'	MFWD 190	79,200	150	8	0.081	1.57	2.19	2.43	0.40	6.60	4.47	2.49	13.57
NT Grain Drill	30'	MFWD 225	90,600	150	8	0.065	1.25	2.07	2.22	0.46	6.02	4.09	2.81	12.93
NT Grain Drill & Pre	12'	2WD 130	39,500	150	8	0.176	3.38	3.23	2.61	0.53	9.75	4.81	3.08	17.65
NT Grain Drill & Pre	15'	MFWD 150	54,800	150	8	0.141	2.70	2.98	2.89	0.63	9.21	5.33	3.66	18.22
NT Grain Drill & Pre	20'	MFWD 170	70,400	150	8	0.105	2.03	2.53	2.79	0.55	7.91	5.14	3.36	16.42
NT Grain Drill & Pre	24'	MFWD 190	85,200	150	8	0.088	1.69	2.36	2.81	0.44	7.31	5.18	2.68	15.18
NT Grain Drill & Pre	30'	MFWD 225	98,000	150	8	0.070	1.35	2.23	2.59	0.49	6.68	4.77	3.03	14.49
NT Plant&Pre-Folding	8R-38	MFWD 170	48,000	150	8	0.083	1.60	2.00	1.50	0.43	5.55	2.77	2.65	10.98

Appendix Table 4. Implements: estimated purchase price, annual use, useful life, performance rate, (Continued) and direct and fixed cost per acre, Louisiana 2015.

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.	
-----\$/acre-----														
NT Grain Drill & Pre	15'	MFWD 150	54,800	150	8	0.141	2.70	2.98	2.89	0.63	9.21	5.33	3.66	18.22
NT Grain Drill & Pre	20'	MFWD 170	70,400	150	8	0.105	2.03	2.53	2.79	0.55	7.91	5.14	3.36	16.42
NT Grain Drill & Pre	24'	MFWD 190	85,200	150	8	0.088	1.69	2.36	2.81	0.44	7.31	5.18	2.68	15.18
NT Grain Drill & Pre	30'	MFWD 225	98,000	150	8	0.070	1.35	2.23	2.59	0.49	6.68	4.77	3.03	14.49
NT Plant&Pre-Folding	8R-38	MFWD 170	48,000	150	8	0.083	1.60	2.00	1.50	0.43	5.55	2.77	2.65	10.98
NT Plant&Pre-Folding	8R-38 2x1	MFWD 170	80,800	150	8	0.055	1.06	1.33	1.68	0.29	4.38	3.10	1.77	9.25
NT Plant&Pre-Folding	10R-30	MFWD 190	57,555	150	8	0.084	1.62	2.26	1.82	0.42	6.14	3.36	2.57	12.08
NT Plant&Pre-Folding	10R-38	MFWD 190	52,893	150	8	0.066	1.28	1.78	1.32	0.33	4.72	2.43	2.03	9.19
NT Plant&Pre-Folding	12R-20	MFWD 190	70,200	150	8	0.105	2.03	2.83	2.78	0.52	8.17	5.12	3.22	16.53
NT Plant&Pre-Folding	12R-30	MFWD 190	72,000	150	8	0.070	1.35	1.88	1.90	0.35	5.49	3.50	2.14	11.15
NT Plant&Pre-Folding	12R-38	MFWD 190	80,800	150	8	0.055	1.06	1.49	1.68	0.27	4.52	3.10	1.69	9.32
NT Plant&Pre-Folding	16R-30	MFWD 190	101,000	150	8	0.052	1.01	1.41	2.00	0.26	4.69	3.69	1.61	10.00
NT Plant&Pre-Folding	23R-15	MFWD 190	129,000	150	8	0.073	1.41	1.96	3.55	0.36	7.29	6.54	2.23	16.08
NT Plant&Pre-Folding	24R-20	MFWD 190	143,000	150	8	0.052	1.01	1.41	2.83	0.26	5.53	5.22	1.61	12.36
NT Plant&Pre-Folding	24R-30	MFWD 190	188,000	150	8	0.035	0.67	0.94	2.48	0.17	4.28	4.57	1.07	9.93
NT Plant&Pre-Rigid	4R-30	2WD 130	26,600	150	8	0.211	4.06	3.87	2.11	0.63	10.68	3.88	3.69	18.27
NT Plant&Pre-Rigid	4R-38	2WD 130	28,800	150	8	0.166	3.19	3.05	1.79	0.50	8.55	3.31	2.91	14.77
NT Plant&Pre-Rigid	6R-30	MFWD 150	36,900	150	8	0.141	2.70	2.98	1.95	0.63	8.27	3.59	3.66	15.53
NT Plant&Pre-Rigid	6R-38	MFWD 150	33,100	150	8	0.111	2.13	2.35	1.38	0.49	6.37	2.54	2.89	11.81
NT Plant&Pre-Rigid	8R-22	MFWD 170	26,219	150	8	0.143	2.76	3.45	1.41	0.75	8.37	2.60	4.57	15.56
NT Plant&Pre-Rigid	8R-30	MFWD 170	42,200	150	8	0.105	2.03	2.53	1.67	0.55	6.79	3.08	3.36	13.24
NT Plant&Pre-Rigid	8R-38	MFWD 170	39,300	150	8	0.077	1.48	1.85	1.13	0.40	4.87	2.09	2.45	9.42
NT Plant&Pre-Rigid	10R-30	MFWD 190	46,300	150	8	0.084	1.62	2.26	1.46	0.42	5.78	2.70	2.57	11.06
NT Plant&Pre-Rigid	12R-20	MFWD 190	52,100	150	8	0.105	2.03	2.83	2.06	0.52	7.46	3.80	3.22	14.49
NT Plant&Pre-Rigid	12R-30	MFWD 190	64,700	150	8	0.070	1.35	1.88	1.71	0.35	5.30	3.15	2.14	10.60
Paratill & Bed	4R-30	MFWD 225	16,500	150	12	0.204	1.96	6.48	1.21	1.44	11.10	2.02	8.79	21.93
Paratill & Bed	4R-38	MFWD 225	15,200	150	12	0.160	1.54	5.10	0.88	1.13	8.66	1.47	6.92	17.06
Paratill & Bed	6R-30	MFWD 225	22,600	150	12	0.136	1.30	4.32	1.11	0.96	7.70	1.85	5.86	15.42
Paratill & Bed	6R-38	MFWD 225	20,300	150	12	0.107	1.03	3.41	0.78	0.75	5.99	1.31	4.62	11.93
Paratill & Bed	8R-30	MFWD 225	28,100	150	12	0.102	0.98	3.24	1.03	0.72	5.98	1.72	4.39	12.10
Paratill & Bed	8R382X1	MFWD 225	69,100	150	12	0.053	0.51	1.70	1.34	0.37	3.94	2.23	2.31	8.49
Paratill & Bed Fold.	8R-38	MFWD 225	54,400	150	12	0.080	0.77	2.56	1.58	0.57	5.49	2.64	3.47	11.61
Paratill & Bed Fold.	12R-38	MFWD 225	69,100	150	12	0.053	0.51	1.70	1.34	0.37	3.94	2.23	2.31	8.49
Paratill & Bed Rigid	8R-38	MFWD 225	24,500	150	12	0.080	0.77	2.56	0.71	0.57	4.62	1.19	3.47	9.29
Pipe Drag	30'	2WD 150	500	100	12	0.051	0.49	1.09	0.00	0.20	1.80	0.02	1.19	3.02
Pipe Spool 160ac	1/4m roll	2WD 130	3,380	15	12	0.003	0.09	0.05	0.00	0.00	0.16	0.06	0.05	0.28
Pipe Trailer 1m/160a	30'	2WD 130	1,330	100	15	0.003	0.18	0.06	0.00	0.01	0.26	0.00	0.06	0.33
Plant & Pre Folding	8R-38	MFWD 170	45,900	150	8	0.080	1.54	1.92	1.38	0.41	5.26	2.54	2.55	10.36
Plant & Pre Folding	8R38 2x1	MFWD 170	77,600	150	8	0.053	1.02	1.28	1.55	0.27	4.14	2.86	1.70	8.70
Plant & Pre Folding	10R-30	MFWD 190	52,920	150	8	0.081	1.55	2.17	1.61	0.40	5.75	2.96	2.47	11.20
Plant & Pre Folding	10R-38	MFWD 190	48,258	150	8	0.064	1.22	1.71	1.15	0.32	4.42	2.13	1.95	8.51
Plant & Pre Folding	12R-20	MFWD 190	66,900	150	8	0.101	1.94	2.72	2.54	0.50	7.72	4.69	3.09	15.51
Plant & Pre Folding	12R-30	MFWD 190	68,700	150	8	0.067	1.29	1.81	1.74	0.33	5.19	3.21	2.06	10.47
Plant & Pre Folding	12R-38	MFWD 190	77,600	150	8	0.053	1.02	1.43	1.55	0.26	4.28	2.86	1.62	8.77
Plant & Pre Folding	16R-30	MFWD 190	96,200	150	8	0.050	0.97	1.36	1.83	0.25	4.42	3.37	1.54	9.34
Plant & Pre Folding	23R-15	MFWD 190	123,000	150	8	0.070	1.35	1.88	3.25	0.35	6.84	5.99	2.14	14.98
Plant & Pre Folding	24R-20	MFWD 190	137,000	150	8	0.050	0.97	1.36	2.60	0.25	5.19	4.80	1.54	11.55
Plant & Pre Folding	24R-30	MFWD 190	182,000	150	8	0.033	0.64	0.90	2.30	0.16	4.03	4.25	1.03	9.32
Plant & Pre Rigid	4R-30	2WD 130	22,500	150	8	0.203	3.89	3.72	1.71	0.61	9.94	3.15	3.55	16.65
Plant & Pre Rigid	4R-38	2WD 130	27,700	150	8	0.159	3.07	2.93	1.66	0.48	8.14	3.06	2.79	14.00
Plant & Pre Rigid	6R-30	MFWD 150	33,100	150	8	0.135	2.59	2.86	1.68	0.60	7.74	3.09	3.51	14.36
Plant & Pre Rigid	6R-38	MFWD 150	31,400	150	8	0.106	2.05	2.26	1.25	0.47	6.04	2.31	2.77	11.14
Plant & Pre Rigid	8R-22	MFWD 170	23,550	150	8	0.138	2.65	3.31	1.22	0.72	7.90	2.24	4.39	14.54
Plant & Pre Rigid	8R-30	MFWD 170	40,100	150	8	0.101	1.94	2.43	1.52	0.52	6.44	2.81	3.23	12.48
Plant & Pre Rigid	8R-38	MFWD 170	37,600	150	8	0.080	1.54	1.92	1.13	0.41	5.01	2.08	2.55	9.65
Plant & Pre Rigid	10R-30	MFWD 190	43,600	150	8	0.081	1.55	2.17	1.32	0.40	5.47	2.44	2.47	10.39
Plant & Pre Rigid	12R-20	MFWD 190	48,900	150	8	0.101	1.94	2.72	1.86	0.50	7.04	3.43	3.09	13.56
Plant & Pre Rigid	12R-30	MFWD 190	61,400	150	8	0.067	1.29	1.81	1.55	0.33	5.01	2.87	2.06	9.94
Plant - Folding	8R-38	MFWD 170	39,900	150	8	0.074	1.43	1.78	1.11	0.38	4.72	2.05	2.37	9.14
Plant - Folding	8R-38 2x1	MFWD 170	70,200	150	8	0.049	0.95	1.18	1.30	0.25	3.70	2.40	1.57	7.69
Plant - Folding	10R-30	MFWD 190	47,426	150	8	0.075	1.44	2.02	1.34	0.37	5.18	2.47	2.29	9.95
Plant - Folding	10R-38	MFWD 190	43,011	150	8	0.059	1.14	1.59	0.95	0.29	3.99	1.76	1.81	7.57
Plant - Folding	12R-20	MFWD 190	61,000	150	8	0.094	1.81	2.52	2.15	0.47	6.96	3.97	2.87	13.81
Plant - Folding	12R-30	MFWD 190	61,400	150	8	0.062	1.20	1.68	1.44	0.31	4.65	2.66	1.91	9.23
Plant - Folding	12R-38	MFWD 190	70,200	150	8	0.049	0.95	1.32	1.30	0.24	3.83	2.40	1.51	7.75
Plant - Folding	16R-30	MFWD 190	88,900	150	8	0.047	0.90	1.26	1.57	0.23	3.97	2.89	1.43	8.30
Plant - Folding	23R-15	MFWD 190	116,000	150	8	0.065	1.25	1.75	2.84	0.32	6.18	5.24	1.99	13.43
Plant - Folding	24R-20	MFWD 190	129,000	150	8	0.047	0.90	1.26	2.28	0.23	4.68	4.20	1.43	10.32
Plant - Folding	24R-30	MFWD 190	172,000	150	8	0.031	0.60	0.84	2.02	0.15	3.62	3.73	0.95	8.32
Plant - Rigid	4R-30	2WD 130	19,600	150	8	0.188	3.62	3.45	1.38	0.56	9.03	2.55	3.29	14.88
Plant - Rigid	4R-38	2WD 130	21,500	150	8	0.148	2.85	2.72	1.19	0.44	7.21	2.20	2.59	12.01
Plant - Rigid	6R-30	MFWD 150	29,300	150	8	0.125	2.41	2.65	1.38	0.56	7.01	2.54	3.26	12.82
Plant - Rigid	6R-38	MFWD 150	25,500	150	8	0.099	1.90	2.09	0.94	0.44	5.39	1.74	2.57	9.72
Plant - Rigid	8R-22	MFWD 170	18,473	150	8	0.127	2.45	3.06	0.88	0.66	7.07	1.63	4.06	12.77
Plant - Rigid	8R-30	MFWD 170	34,100	150	8	0.094	1.81	2.26	1.20	0.49	5.76	2.22	2.99	10.98
Plant - Rigid	8R-38	MFWD 170	31,700	150	8	0.074	1.43	1.78	0.88	0.38	4.49	1.63	2.37	8.49
Plant - Rigid	10R-30	MFWD 190	37,600	150	8	0.075	1.44	2.02	1.06	0.37	4.91	1.95	2.29	9.16
Plant - Rigid	12R-20	MFWD 190	42,900	150	8	0.094	1.81	2.52	1.51	0.47	6.32	2.79	2.87	11.99
Plant - Rigid	12R-30	MFWD 190	54,100	150	8	0.062	1.20	1.68	1.27	0.31	4.48	2.34	1.91	8.74
Plant - Rigid	15R-15	2WD 150	51,400	150	8	0.094	1.81	1.99	1.81	0.37	5.99	3.34	2.17	11.51
Pull Levee (1m/80a)	4 blade	2WD 50	3,180	100	10	0.003	0.03	0.02	0.00	0.00	0.06	0.01	0.01	0.08

Appendix Table 4. Implements: estimated purchase price, annual use, useful life, performance rate, and direct and fixed cost per acre, Louisiana 2015.

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.	
-----\$/acre-----														
Rice Grain Cart	500 Bu	MFWD 190	24,700	200	12	0.057	0.54	1.53	0.38	0.28	2.74	0.63	1.74	5.12
Rice Grain Cart	700 Bu	MFWD 190	34,200	200	12	0.063	0.60	1.70	0.58	0.31	3.21	0.97	1.93	6.12
Roller	32'	MFWD 170	17,500	100	12	0.046	0.44	1.11	0.13	0.24	1.94	0.73	1.48	4.16
Rotary Cutter	7'	MFWD 130	4,380	185	10	0.168	1.61	3.08	0.59	0.59	5.90	0.40	3.48	9.79
Rotary Cutter	12'	2WD 150	12,600	185	10	0.098	0.94	2.07	1.00	0.38	4.41	0.68	2.26	7.36
Rotary Cutter	15'	MFWD 150	19,000	185	10	0.078	0.75	1.66	1.21	0.35	3.97	0.82	2.04	6.84
Row Cond & Inc	13'	2WD 130	13,300	100	10	0.137	1.98	2.52	0.45	0.41	5.38	1.87	2.41	9.67
Row Cond & Inc	21'	2WD 170	19,700	100	10	0.085	1.22	2.04	0.42	0.41	4.11	1.71	2.53	8.36
Row Cond & Inc	26'	MFWD 190	18,700	100	10	0.063	0.91	1.69	0.29	0.31	3.22	1.20	1.93	6.36
Row Cond & Inc	38'	MFWD 225	27,100	100	10	0.047	0.67	1.49	0.31	0.33	2.83	1.30	2.03	6.16
Row Cond & Inc	42'	MFWD 225	20,400	100	10	0.040	0.57	1.27	0.20	0.28	2.34	0.83	1.73	4.90
Row Cond (Harrow)	13'	2WD 130	7,300	100	10	0.114	1.10	2.10	0.20	0.34	3.76	0.85	2.00	6.62
Row Cond (Harrow)	21'	2WD 170	12,000	100	10	0.071	0.68	1.70	0.21	0.34	2.94	0.87	2.11	5.93
Row Cond (Harrow)	27'	MFWD 190	12,400	100	10	0.057	0.55	1.53	0.17	0.28	2.55	0.72	1.75	5.03
Row Cond (Harrow)	38'	MFWD 225	22,200	100	10	0.039	0.37	1.24	0.21	0.27	2.12	0.88	1.69	4.70
Row Cond (Harrow)	42'	MFWD 225	15,582	100	10	0.035	0.34	1.12	0.13	0.25	1.85	0.56	1.53	3.95
Row Cond (Plant)	13'	2WD 130	7,120	100	10	0.157	1.50	2.88	0.27	0.47	5.14	1.14	2.74	9.03
Row Cond (Plant)	21'	2WD 170	11,700	100	10	0.097	0.93	2.33	0.28	0.47	4.02	1.16	2.89	8.07
Row Cond (Plant)	27'	MFWD 190	12,400	100	10	0.078	0.75	2.10	0.24	0.39	3.49	0.99	2.39	6.88
Row Cond (Plant)	38'	MFWD 225	16,587	100	10	0.053	0.51	1.70	0.22	0.37	2.82	0.90	2.31	6.04
Row Cond (Plant)	42'	MFWD 225	15,582	100	10	0.048	0.46	1.54	0.18	0.34	2.54	0.77	2.09	5.41
RT Cult (Early)	8R-30	2WD 170	20,774	200	12	0.103	0.99	2.47	1.02	0.50	4.99	1.00	3.06	9.05
RT Cult (Early)	12R-30	2WD 190	29,998	200	12	0.068	0.66	1.84	0.98	0.30	3.79	0.96	1.87	6.63
RT Cult (Late)	8R-30	2WD 170	20,774	200	12	0.128	1.23	3.09	1.28	0.62	6.23	1.25	3.83	11.32
RT Cult (Late)	12R-30	2WD 190	29,998	200	12	0.085	0.82	2.30	1.23	0.38	4.74	1.20	2.34	8.29
RT Cult + PD (Early)	8R-30	2WD 150	26,264	200	12	0.110	1.58	2.32	1.38	0.43	5.73	1.35	2.53	9.61
RT Cult + PD (Early)	12R-30	MFWD 225	35,493	200	12	0.073	1.05	2.32	1.24	0.51	5.14	1.21	3.15	9.52
RT Cult + PD (Late)	8R-30	2WD 170	26,264	200	12	0.137	1.97	3.29	1.73	0.67	7.67	1.68	4.08	13.45
RT Cult + PD (Late)	12R-30	2WD 190	35,493	200	12	0.091	1.31	2.45	1.55	0.40	5.74	1.52	2.49	9.76
Spin Spreader	5 ton	MFWD 190	10,800	100	8	0.042	0.80	1.12	0.25	0.21	2.40	0.49	1.28	4.18
Spin Spreader	5 ton	MFWD 190	10,800	100	8	0.042	0.80	1.12	0.25	0.21	2.40	0.49	1.28	4.18
Spray (Band)	27'	MFWD 170	5,940	200	8	0.062	0.90	1.50	0.17	0.32	2.90	0.20	1.99	5.10
Spray (Band)	40'	MFWD 170	7,350	200	8	0.042	0.60	1.01	0.14	0.22	1.99	0.16	1.34	3.50
Spray (Band)	50'	MFWD 170	6,730	200	8	0.033	0.48	0.81	0.10	0.17	1.58	0.12	1.07	2.78
Spray (Band)	53'	MFWD 170	7,650	200	8	0.031	0.45	0.76	0.11	0.16	1.50	0.13	1.01	2.65
Spray (Band)	60'	MFWD 170	10,000	200	8	0.028	0.40	0.67	0.13	0.14	1.36	0.15	0.89	2.41
Spray (Bcast/HB)	13' Rigid	MFWD 150	5,810	200	8	0.130	1.87	2.75	0.35	0.58	5.56	0.41	3.38	9.35
Spray (Bcast/HB)	20' Rigid	2WD 50	6,840	200	8	0.084	1.21	0.59	0.27	0.04	2.13	0.31	0.29	2.74
Spray (Bcast/HB)	27' Fold	MFWD 170	10,700	200	8	0.062	0.90	1.50	0.31	0.32	3.04	0.36	1.99	5.40
Spray (Bcast/HB)	27' Rigid	MFWD 170	7,890	200	8	0.062	0.90	1.50	0.23	0.32	2.96	0.26	1.99	5.22
Spray (Bcast/HB)	30' Fold	MFWD 170	15,300	200	8	0.056	0.81	1.35	0.40	0.29	2.86	0.47	1.79	5.12
Spray (Bcast/HB)	40' Fold	MFWD 170	17,400	200	8	0.042	0.60	1.01	0.34	0.22	2.18	0.40	1.34	3.93
Spray (Bcast/HB/HD)	27'	MFWD 170	22,400	200	8	0.062	0.90	1.50	0.65	0.32	3.39	0.76	1.99	6.14
Spray (Bcast/HB/HD)	40'	MFWD 170	32,200	200	8	0.042	0.60	1.01	0.63	0.22	2.48	0.74	1.34	4.57
Spray (Broadcast)	27'	MFWD 170	5,940	200	8	0.062	0.90	1.50	0.17	0.32	2.90	0.20	1.99	5.10
Spray (Broadcast)	40'	MFWD 170	7,350	200	8	0.042	0.60	1.01	0.14	0.22	1.99	0.16	1.34	3.50
Spray (Broadcast)	50'	MFWD 170	6,730	200	8	0.033	0.48	0.81	0.10	0.17	1.58	0.12	1.07	2.78
Spray (Broadcast)	53'	MFWD 170	7,650	200	8	0.031	0.45	0.76	0.11	0.16	1.50	0.13	1.01	2.65
Spray (Broadcast)	60'	MFWD 170	10,000	200	8	0.028	0.40	0.67	0.13	0.14	1.36	0.15	0.89	2.41
Spray (Direct/Hood)	8R-30	MFWD 170	17,700	200	8	0.084	1.21	2.02	0.70	0.44	4.39	0.81	2.69	7.89
Spray (Direct/Hood)	8R-38	MFWD 170	18,900	200	8	0.066	0.96	1.60	0.59	0.34	3.50	0.68	2.12	6.32
Spray (Direct/Hood)	12R-30	MFWD 170	25,600	200	8	0.056	0.81	1.35	0.67	0.29	3.13	0.78	1.79	5.71
Spray (Direct/Hood)	12R-38	MFWD 170	26,200	200	8	0.044	0.64	1.06	0.54	0.23	2.48	0.63	1.41	4.54
Spray (Direct/Layby)	8R-30	MFWD 170	12,300	200	8	0.084	1.21	2.02	0.48	0.44	4.17	0.56	2.69	7.43
Spray (Direct/Layby)	8R-38	MFWD 170	12,200	200	8	0.066	0.96	1.60	0.38	0.34	3.29	0.44	2.12	5.87
Spray (Direct/Layby)	8R-38 2x1	MFWD 170	16,200	200	8	0.044	0.64	1.06	0.33	0.23	2.27	0.39	1.41	4.08
Spray (Direct/Layby)	10R-30	MFWD 170	12,200	200	8	0.067	0.97	1.62	0.38	0.35	3.33	0.44	2.15	5.94
Spray (Direct/Layby)	12R-30	MFWD 170	17,900	200	8	0.056	0.81	1.35	0.47	0.29	2.93	0.55	1.79	5.27
Spray (Direct/Layby)	12R-38	MFWD 170	16,200	200	8	0.044	0.64	1.06	0.33	0.23	2.27	0.39	1.41	4.08
Spray (Direct/Layby)	16R-20	MFWD 170	10,000	200	8	0.063	0.91	1.51	0.29	0.33	3.06	0.34	2.01	5.42
Spray (Spot)	27'	MFWD 170	5,940	200	8	0.062	0.90	1.50	0.17	0.32	2.90	0.20	1.99	5.10
Spray (Spot)	40'	MFWD 170	7,350	200	8	0.042	0.60	1.01	0.14	0.22	1.99	0.16	1.34	3.50
Spray (Spot)	50'	MFWD 170	7,420	200	8	0.033	0.48	0.81	0.11	0.17	1.59	0.13	1.07	2.80
Spray (Spot)	53'	MFWD 170	7,650	200	8	0.031	0.45	0.76	0.11	0.16	1.50	0.13	1.01	2.65
Spray (Spot)	60'	MFWD 170	10,000	200	8	0.028	0.40	0.67	0.13	0.14	1.36	0.15	0.89	2.41
Stalk Shredder	14'	MFWD 150	13,200	200	10	0.117	1.13	2.49	1.36	0.52	5.51	0.79	3.06	9.36
Stalk Shredder	20'	MFWD 150	30,500	200	10	0.082	0.79	1.74	2.20	0.36	5.10	1.28	2.14	8.53
Stalk Shredder-Flail	12'	MFWD 150	15,800	200	10	0.137	1.32	2.90	1.90	0.61	6.74	1.10	3.57	11.42
Stalk Shredder-Flail	20'	MFWD 150	26,900	200	10	0.082	0.79	1.74	1.94	0.36	4.84	1.13	2.14	8.12
Subsoiler	3 shank	MFWD 190	3,550	100	15	0.204	1.96	5.47	0.24	1.02	8.70	0.57	6.22	15.49
Subsoiler	4 shank	MFWD 225	8,230	100	15	0.153	1.47	4.87	0.42	1.08	7.85	0.99	6.61	15.46
Subsoiler	5 shank	MFWD 225	11,100	100	15	0.122	1.17	3.88	0.45	0.86	6.37	1.06	5.26	12.71
Subsoiler low-till	4 shank	MFWD 225	12,400	100	15	0.153	1.47	4.87	0.63	1.08	8.06	1.49	6.61	16.18
Subsoiler low-till	6 shank	MFWD 225	14,800	100	15	0.102	0.98	3.24	0.50	0.72	5.44	1.18	4.39	11.03
Subsoiler low-till	8 shank	MFWD 225	19,600	100	15	0.076	0.73	2.42	0.50	0.54	4.20	1.18	3.29	8.67
TerraTill Bed w/roll	4R-38	MFWD 225	14,300	150	12	0.160	1.54	5.10	0.83	1.13	8.61	1.38	6.92	16.92

Appendix Table 4. Implements: estimated purchase price, annual use, useful life, performance rate, (Continued) and direct and fixed cost per acre, Louisiana 2015.

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-----							
TerraTill Bed w/roll	6R-38	MFWD 225	19,400	150	12	0.107	1.03	3.41	0.75	0.75	5.95	1.25	4.62	11.84
TerraTill Bed w/roll	4R-30	MFWD 225	14,300	150	12	0.204	1.96	6.48	1.05	1.44	10.94	1.75	8.79	21.49
TerraTill Bed w/roll	6R-30	MFWD 225	15,310	150	12	0.136	1.30	4.32	0.75	0.96	7.34	1.25	5.86	14.46
Boll Buggy-1st Pick	2R38*157hp	MFWD 190	26,200	200	10	0.519	4.98	13.92	3.40	2.59	24.91	6.66	15.83	47.41
Boll Buggy-1st pick	4R2x1260hp	MFWD 190	26,200	200	10	0.172	1.65	4.61	1.12	0.86	8.26	2.20	5.25	15.72
Boll Buggy-1st pick	4R30*255hp	MFWD 190	26,200	200	10	0.327	3.14	8.77	2.14	1.63	15.69	4.19	9.97	29.87
Boll Buggy-1st pick	4R30*325hp	MFWD 190	30,600	200	10	0.327	3.14	8.77	2.50	1.63	16.05	4.90	9.97	30.93
Boll Buggy-1st pick	4R38*255hp	MFWD 190	30,600	200	10	0.257	2.47	6.90	1.97	1.28	12.64	3.86	7.85	24.36
Boll Buggy-1st pick	4R38*325hp	MFWD 190	30,600	200	10	0.257	2.47	6.90	1.97	1.28	12.64	3.86	7.85	24.36
Boll Buggy-1st pick	5R30*255hp	MFWD 190	30,600	200	10	0.261	2.51	7.01	2.00	1.30	12.84	3.92	7.98	24.75
Boll Buggy-1st pick	5R38*255hp	MFWD 190	30,600	200	10	0.207	1.98	5.55	1.58	1.03	10.16	3.10	6.31	19.58
Boll Buggy-1st pick	6R30*325hp	MFWD 190	30,600	200	10	0.218	2.09	5.84	1.66	1.09	10.70	3.26	6.65	20.62
Boll Buggy-1st pick	6R38*325hp	MFWD 190	30,600	200	10	0.172	1.65	4.61	1.31	0.86	8.45	2.58	5.25	16.28
Boll Buggy-2nd pick	2R38*157hp	MFWD 190	30,600	200	10	0.440	4.22	11.79	3.36	2.20	21.58	6.59	13.41	41.59
Boll Buggy-2nd pick	4R2x1260hp	MFWD 190	30,600	200	10	0.145	1.40	3.91	1.11	0.72	7.15	2.18	4.44	13.79
Boll Buggy-2nd pick	4R30*255hp	MFWD 190	30,600	200	10	0.277	2.66	7.43	2.12	1.38	13.60	4.15	8.45	26.20
Boll Buggy-2nd pick	4R30*325hp	MFWD 190	30,600	200	10	0.277	2.66	7.43	2.12	1.38	13.60	4.15	8.45	26.20
Boll Buggy-2nd pick	4R38 255hp	MFWD 190	30,600	200	10	0.218	2.09	5.85	1.67	1.09	10.70	3.27	6.65	20.63
Boll Buggy-2nd pick	4R38 325hp	MFWD 190	30,600	200	10	0.218	2.09	5.85	1.67	1.09	10.70	3.27	6.65	20.63
Boll Buggy-2nd pick	5R30*255hp	MFWD 190	30,600	200	10	0.221	2.12	5.94	1.69	1.10	10.88	3.32	6.76	20.96
Boll Buggy-2nd pick	5R38*255hp	MFWD 190	30,600	200	10	0.175	1.68	4.70	1.34	0.87	8.60	2.62	5.34	16.58
Boll Buggy-2nd pick	6R30*325hp	MFWD 190	30,600	200	10	0.184	1.77	4.95	1.41	0.92	9.06	2.76	5.63	17.47
Boll Buggy-2nd pick	6R38*325hp	MFWD 190	30,600	200	10	0.145	1.40	3.91	1.11	0.72	7.15	2.18	4.44	13.79
Boll Buggy-Stripper	13' Bcast	MFWD 150	30,600	200	10	0.251	2.41	5.32	1.92	1.12	10.79	3.77	6.54	21.10
Boll Buggy-Stripper	16' Bcast	MFWD 150	30,600	200	10	0.204	1.96	4.32	1.56	0.91	8.77	3.06	5.31	17.15
Boll Buggy-Stripper	19' Bcast	MFWD 150	30,600	200	10	0.172	1.65	3.64	1.31	0.77	7.38	2.58	4.47	14.44
Boll Buggy-Stripper	4R30*2X1Br	MFWD 150	30,600	200	10	0.218	2.09	4.61	1.66	0.97	9.35	3.26	5.66	18.29
Boll Buggy-Stripper	4R30*Brush	MFWD 150	30,600	200	10	0.327	3.14	6.92	2.50	1.46	14.03	4.90	8.50	27.44
Boll Buggy-Stripper	4R38*2X1Br	MFWD 150	30,600	200	10	0.172	1.65	3.64	1.31	0.77	7.38	2.58	4.47	14.44
Boll Buggy-Stripper	4R38*Brush	MFWD 150	30,600	200	10	0.257	2.47	5.45	1.97	1.15	11.05	3.86	6.69	21.60
Boll Buggy-Stripper	5R30*Brush	MFWD 150	30,600	200	10	0.261	2.51	5.54	2.00	1.17	11.22	3.92	6.80	21.95
Boll Buggy-Stripper	5R38*Brush	MFWD 150	30,600	200	10	0.207	1.98	4.38	1.58	0.92	8.88	3.10	5.38	17.36
Boll Buggy-Stripper	6R30*Brush	MFWD 150	30,600	200	10	0.218	2.09	4.61	1.66	0.97	9.35	3.26	5.66	18.29
Module Builder-1st	4R-30(255)	MFWD 190	34,700	200	10	0.327	6.28	8.77	2.84	1.63	19.53	5.56	9.97	35.07
Module Builder-1st	4R-30(325)	MFWD 190	34,700	200	10	0.327	6.28	8.77	2.84	1.63	19.53	5.56	9.97	35.07
Module Builder-1st	4R-38(255)	MFWD 190	34,700	200	10	0.257	4.94	6.90	2.23	1.28	15.38	4.37	7.85	27.61
Module Builder-1st	4R-38(325)	MFWD 190	34,700	200	10	0.257	4.94	6.90	2.23	1.28	15.38	4.37	7.85	27.61
Module Builder-1st	4R2x1260hp	MFWD 190	34,700	200	10	0.172	3.30	4.61	1.49	0.86	10.28	2.92	5.25	18.46
Module Builder-1st	5R-30(255)	MFWD 190	34,700	200	10	0.261	5.02	7.01	2.27	1.30	15.62	4.44	7.98	28.05
Module Builder-1st	5R-38(255)	MFWD 190	34,700	200	10	0.207	3.97	5.55	1.79	1.03	12.36	3.51	6.31	22.19
Module Builder-1st	6R-30(325)	MFWD 190	34,700	200	10	0.218	4.19	5.84	1.89	1.09	13.02	3.70	6.65	23.38
Module Builder-1st	6R-38(325)	MFWD 190	34,700	200	10	0.172	3.30	4.61	1.49	0.86	10.28	2.92	5.25	18.46
Module Builder-2nd	2R-38(157)	MFWD 190	34,700	200	10	0.440	8.45	11.79	3.81	2.20	26.26	7.47	13.41	47.15
Module Builder-2nd	4R-30(255)	MFWD 190	34,700	200	10	0.277	5.32	7.43	2.40	1.38	16.54	4.71	8.45	29.70
Module Builder-2nd	4R-30(325)	MFWD 190	34,700	200	10	0.277	5.32	7.43	2.40	1.38	16.54	4.71	8.45	29.70
Module Builder-2nd	4R-38(255)	MFWD 190	34,700	200	10	0.218	4.19	5.85	1.89	1.09	13.02	3.70	6.65	23.39
Module Builder-2nd	4R-38(325)	MFWD 190	34,700	200	10	0.218	4.19	5.85	1.89	1.09	13.02	3.70	6.65	23.39
Module Builder-2nd	4R2x1 255	MFWD 190	34,700	200	10	0.145	2.80	3.91	1.26	0.72	8.70	2.47	4.44	15.63
Module Builder-2nd	5R-30(255)	MFWD 190	34,700	200	10	0.221	4.25	5.94	1.92	1.10	13.23	3.76	6.76	23.76
Module Builder-2nd	5R-38(255)	MFWD 190	34,700	200	10	0.175	3.36	4.70	1.52	0.87	10.47	2.98	5.34	18.80
Module Builder-2nd	6R-30(325)	MFWD 190	34,700	200	10	0.184	3.54	4.95	1.60	0.92	11.03	3.14	5.63	19.80
Module Builder-2nd	6R-38(325)	MFWD 190	34,700	200	10	0.145	2.80	3.91	1.26	0.72	8.70	2.47	4.44	15.63
Module Builder-Strip	13' Bcast	MFWD 150	34,700	200	10	0.251	4.83	5.32	2.18	1.12	13.47	4.27	6.54	24.29
Module Builder-Strip	16' Brush	MFWD 150	34,700	200	10	0.204	3.92	4.32	1.77	0.91	10.94	3.47	5.31	19.73
Module Builder-Strip	19' Brush	MFWD 150	34,700	200	10	0.172	3.30	3.64	1.49	0.77	9.21	2.92	4.47	16.62
Module Builder-Strip	4R-30	MFWD 150	34,700	200	10	0.327	6.28	6.92	2.84	1.46	17.51	5.56	8.50	31.57
Module Builder-Strip	4R-30 2X1	MFWD 150	34,700	200	10	0.218	4.19	4.61	1.89	0.97	11.67	3.70	5.66	21.05
Module Builder-Strip	4R-38	MFWD 150	34,700	200	10	0.257	4.94	5.45	2.23	1.15	13.79	4.37	6.69	24.86
Module Builder-Strip	4R-38 2X1	MFWD 150	34,700	200	10	0.172	3.30	3.64	1.49	0.77	9.21	2.92	4.47	16.62
Module Builder-Strip	5R-30	MFWD 150	34,700	200	10	0.261	5.02	5.54	2.27	1.17	14.01	4.44	6.80	25.26
Module Builder-Strip	5R-38	MFWD 150	34,700	200	10	0.207	3.97	4.38	1.79	0.92	11.08	3.51	5.38	19.98
Module Builder-Strip	6R-30	MFWD 150	34,700	200	10	0.218	4.19	4.61	1.89	0.97	11.67	3.70	5.66	21.05