Staff Report No. 2020-01 **January 2020**

2020 Projected Sugarcane Production Farm Costs and Returns Model

A Farm Planning/Decision Tool for Louisiana Sugarcane Growers

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The 2020 Projected Sugarcane Farm Costs and Returns Model was developed to assist sugarcane producers in planning for the 2020 crop year. The model is an Excel spreadsheet which allows sugarcane producers to enter projected sugarcane acreage of plant cane, first stubble, second stubble, and third stubble; associated projected yield levels per acre (tons); raw sugar and molasses price for the new crop year; and production cost data for 2020 to estimate net returns above variable and total production costs and to easily evaluate the impact of changing sugarcane yields, input prices, and input application rates on net returns per acre. The primary purpose of this model is to serve as a producer farm planning and decision tool to project and evaluate the impact on net returns above variable and total production costs from sugarcane production for the 2020 crop year. Calculations for the weighted average of yield, mill share, and land rent are provided within the model so that producers can examine an overall average economic performance for the farm.

The model also includes entry cells for whole farm fixed expenses to estimate projected net returns above all sugarcane farm production costs. This model can be used in conjunction with the *2020 Projected Sugarcane Costs and Returns* published by the LSU Agricultural Center. Both serve as farm management tools that allow producers to document their management strategies and production goals by providing a detailed economic analysis of how those strategies can be better managed to increase farm profitability.

Worksheet # 1: Projected Sugarcane Farm Costs and Returns Model Index

Worksheet page one of this Excel model serves as an index or table of contents to identify the production, income and expense worksheet pages included in the model. Pages within model allow for entry of sugarcane production expenses for fallow land, purchases seed cane, farm propagated seed cane, planting operations (hand, mechanical, wholestalk, billet), field operations for plant cane and stubble cane, and harvest operations (billet or wholestalk). Titles on expense worksheet tables match those used in the *2020 Projected Sugarcane Costs and Returns* published by the LSU Agricultural Center A.E.I.R.S. Publication No. 345 which is available via the LSU Agricultural Center or via the internet at:

http://www.lsuagcenter.com/en/crops_livestock/crops/sugarcane/economics

Projected production cost estimates from the 2020 projected costs and returns report are already entered into the model. On each worksheet, the producer can change information, in cells that are highlighted in blue (blue text font), to more closely match an individual farm operation. Those production expense estimates, along with acreage values and yield projections, are then automatically incorporated into calculations of farm costs and returns for an instant determination of overall projected farm profitability (Worksheet # 2) and breakeven production and price values (Worksheet # 3).

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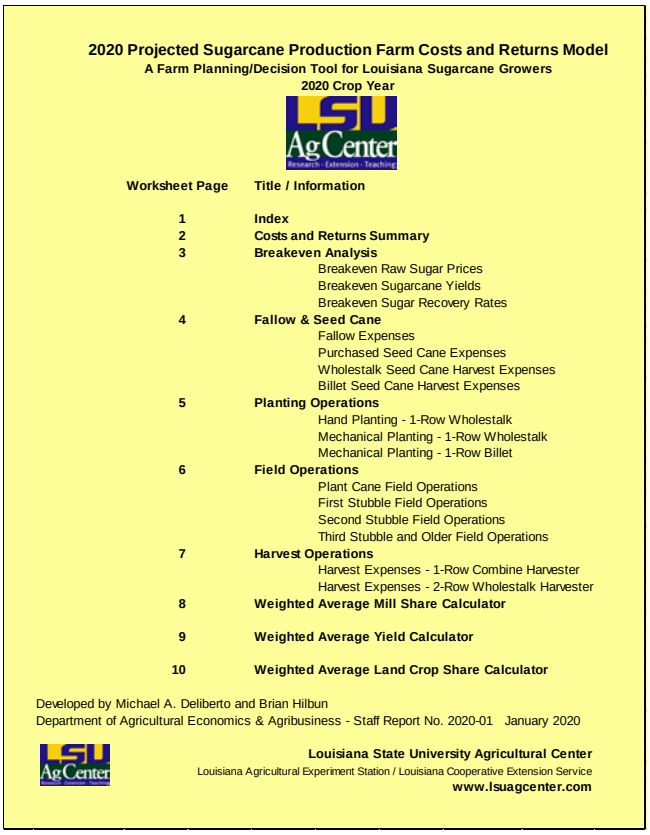

2020 Projected Sugarcane Production Farm Costs and Returns Model
A Farm Planning/Decision Tool for Louisiana Sugarcane Growers
2020 Crop Year

Worksheet Page	Title / Information
1	**Index**
2	**Costs and Returns Summary**
3	**Breakeven Analysis**
	Breakeven Raw Sugar Prices
	Breakeven Sugarcane Yields
	Breakeven Sugar Recovery Rates
4	**Fallow & Seed Cane**
	Fallow Expenses
	Purchased Seed Cane Expenses
	Wholestalk Seed Cane Harvest Expenses
	Billet Seed Cane Harvest Expenses
5	**Planting Operations**
	Hand Planting - 1-Row Wholestalk
	Mechanical Planting - 1-Row Wholestalk
	Mechanical Planting - 1-Row Billet
6	**Field Operations**
	Plant Cane Field Operations
	First Stubble Field Operations
	Second Stubble Field Operations
	Third Stubble and Older Field Operations
7	**Harvest Operations**
	Harvest Expenses - 1-Row Combine Harvester
	Harvest Expenses - 2-Row Wholestalk Harvester
8	**Weighted Average Mill Share Calculator**
9	**Weighted Average Yield Calculator**
10	**Weighted Average Land Crop Share Calculator**

Developed by Michael A. Deliberto and Brian Hilbun
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Worksheet # 2: Projected Whole Farm Sugarcane Costs and Returns Summary

Information regarding the total number of farm acres (E5), total numbers of acres harvested for sugar (E6), the projected raw sugar price per pound (E7), and projected molasses price per gallon (E8) are entered into the model by the producer. The producer then will enter information used to calculate the gross value of production, which is the yield in tons per acre for plant cane (D14), first stubble (D15), second stubble (D16), third stubble (D17), and older stubble cane harvested (D18). The sugar per acre is based off an average CRS of 210 (E14 to E18). This CRS value can be changed for each category of sugarcane crop (plant cane and stubble cane). The dollar per acre value is then multiplied by the number of acres of cane in each growth stage, entered by the producer (I14 to I18). Molasses is calculated by assuming that three gallons of molasses can be produced with every 100 pounds of sugar harvested (F22). Hence, molasses is calculated from the total pounds of sugarcane harvested as entered into the model by the producer. Mill charges for sugar (F31) and molasses (F32) along with land rent (F38 and F39) is calculated by the producer entering the percent of the crop paid for each. Net returns available to the producers are then achieved.

This model also allows a producer to enter income from other activities on-farm, such income from other crops or custom work performed, etc. in order to estimate producer income (K47 to K49). Variable production expenses are then calculated from the projected expense totals from sheets 4, 5, 6, and 7. The producer must specify the number of acres (I53 to I68) of which that activity occurs. From this information, net returns above variable production expenses to the producer are calculated. Given the variability of machinery age and purchase price, fixed costs (K73) are estimated over all field operations and entered into the whole farm cash flow statement. The last row of the statement contains the net returns above total production expenses to the producer in a total dollar value, a per-acre value, and a per-pound of sugar value.

Projected Whole Farm Sugarcane Costs and Returns for the 2020 Crop Year

			Dollars Per Acre	Number of Acres	Total Dollar Value	Dollar Value Per Acre	Value Per Pound of Sugar
Total Farm Acres	1,000.0						
Total Acres Harvested for Sugar	760.6						
Raw Sugar Price per Pound	$0.260						
Molasses Price per Gallon	$0.55						
Total Sugarcane Production (tons) =		**25,784**					
Total Raw Sugar Production (lbs) =		**5,801,400**	*($/acre)*	*(acre)*	*($)*	*($/acre)*	*($/lb of sugar)*
Gross Value of Production:							
Sugar:	tons/acre	sugar/ton	sugar/acre				
Plant Cane	40.0	225	9,000	2,340.00	160.6	375,804	375.80	0.260
1st Stubble	37.2	225	8,370	2,176.20	200.0	435,240	435.24	0.260
2nd Stubble	30.8	225	6,930	1,801.80	200.0	360,360	360.36	0.260
3rd Stubble	28.8	225	6,480	1,684.80	200.0	336,960	336.96	0.260
Older Stubble	0.0	0	0	0.00	0.0	0	0.00	0.000
					760.6			
Total Market Value of Sugar Production						**$1,508,364**	**$1,508.36**	**$0.260**
Molasses:	Gal. Mol./Cwt. Sugar	3.0						
Gallons of Molasses		174,042	--	--		**$95,723**	**$95.72**	**$0.017**
Total Market Value of Sugar & Molasses						**$1,604,087**	**$1,604.09**	**$0.277**

Weighted average (tons) calculated from Worksheet # 8

			Dollars Per Acre	Number of Acres	Total Dollar Value	Dollar Value Per Acre	Value Per Pound of Sugar
Mill Charge							
Sugar	Cane Share	39.0%	--	--	588,262	588.26	0.101
Molasses	Molasses Share	50.0%	--	--	47,862	47.86	0.008
Total Mill Charge					**$636,124**	**$636.12**	**$0.110**
Net Returns to Land and Producer					**$967,964**	**$967.96**	**$0.167**
Land Share (Share Basis)							
Sugar	Cane Share	16.7%	--	--	153,657	153.66	0.026
Molasses	Molasses Share	16.7%	--	--	7,993	7.99	0.001
Total Land Charge					**$161,650**	**$161.65**	**$0.028**
Net Returns to Producer					**$806,314**	**$806.31**	**$0.139**

Weighted mill charge from Worksheet # 9

Weighted land rent across all tracts from Worksheet #10

			Dollars Per Acre	Number of Acres	Total Dollar Value	Dollar Value Per Acre	Value Per Pound of Sugar
Producer Income							
Sugar and Molasses			--	--	806,314	806.31	0.139
Other Income			--	--	0		
Other Income			--	--	0		
Other Income			--	--	0		
Total Producer Income					**$806,314**	**$806.31**	**$0.139**
Variable Production Expenses:							
Fallow Field & Seedbed Preparation Operations			$143.35	200.0	28,669		
Cultured Seed Cane			$536.65	3.3	1,771		
Hand Planting Seed Cane			$235.43	3.3	777		
Harvesting Wholestalk Seed Cane			$84.36	39.4	3,324		
Harvesting Billet Seed Cane			$105.86	0.0	0		
Mechanical Planting Wholestalk Seed Cane			$202.28	196.7	39,789		
Mechanical Planting BilletSeed Cane			$175.96	0.0	0		
Plant Cane Field Operations			$254.71	200.0	50,941		
1st Stubble Field Operations			$306.40	200.0	61,281		
2nd Stubble Field Operations			$303.18	200.0	60,637		
3rd Stubble Field Operations			$303.10	200.0	60,621		
Older Stubble Field Operations			$303.10	0.0	0		
Combine Harvest for Sugar			$164.38	760.6	125,028		
Wholestalk Harvest for Sugar			$117.06	0.0	0		
Other Expenses			$0.00	0.0	0		
Other Expenses			$0.00	0.0	0		
Total Variable Production Expenses					**$432,837**	**$432.84**	**$0.075**
Net Returns Above Variable Production Expenses					**$373,476**	**$373.48**	**$0.064**
Fixed Expenses (*total from table below*)					**$135,239**	**$135.24**	**$0.023**
Net Returns Above Total Production Expenses					**$238,237**	**$238.24**	**$0.041**

Variable production expenses per field activity from Worksheet # 4 to # 7

Total from Worksheet below

1. Index | 2. Costs and Returns Summary | 3. Breakeven Analysis | 4. Fallow & Seed Cane | 5. Planting Operations | 6. Field Operations | 7. Harvest Operations | 8. Wtd. Avg.

Worksheet # 3: Breakeven Analysis

The breakeven price analysis requires that a producer only enter the mill share and land rent percentages. Breakeven analysis is for three values: (1) breakeven raw sugar price, (2) breakeven sugarcane yield (tons/acre), and (3) breakeven sugar recovery (pounds per ton). By entering in the 2020 sugar price per pound, the model allows a producer to observe how their breakeven point change with a 5 or 10 percent change in the amount of tons harvested per acre for plant cane, first stubble, second stubble, etc. These tables can help answer such questions as: *What is the new breakeven ton per harvested acre are required with a 5 to 10 percentage change in price?* and *Given a 5 to 10 percentage change in price, how much sugar per ton of cane must recovered to breakeven against total costs?* The breakeven points are calculated to cover total variable production expenses and total specified production expenses.

Breakeven Raw Sugar Prices for 2020

Mill Share	39.0%	Average sugar per ton CRS (lbs/ton)	225			
Land Share	16.7%			**Selected Yield Levels**		
Grower Share	50.8%			Projected		
		- 10%	- 5%	2019 Yield	+ 5%	+ 10%
Cane yield per harvested acre (tons)		30.5	32.2	33.9	35.6	37.3
Cane yield per total farm acre (tons)		23.2	24.5	25.8	27.1	28.4
Sugar yield per harvested acre (lbs)		6,865	7,246	7,627	8,009	8,390
Sugar yield per total farm acre (lbs)		5,221	5,511	5,801	6,091	6,382
				----------cents per lb.----------		
Breakeven Raw Sugar Price to Recover: 1/						
Variable (Direct) Production Expenses		16.31	15.46	14.68	13.98	13.35
Total Production Expenses		21.41	20.29	19.27	18.35	17.52

1/ Estimation of breakeven sugar prices excludes molasses payment.

Breakeven Sugarcane Yields (Tons/ Acre) for 2020

Mill Share	39.0%	Average sugar per ton CRS (lbs/ton)	225			
Land Share	16.7%			**Selected Raw Sugar Price Levels**		
Grower Share	50.8%			Projected		
		- 10%	- 5%	2019 Price	+ 5%	+ 10%
Raw sugar price ($/pound)		$0.234	$0.247	$0.260	$0.273	$0.286
				----------tons per total farm acre----------		
Breakeven Yield/Total Farm Acre to Recover: 1/						
Variable (Direct) Production Expenses		16.2	15.3	14.6	13.9	13.2
Total Production Expenses		21.2	20.1	19.1	18.2	17.4
				----------tons per harvested acre----------		
Breakeven Yield/Harvested Acre to Recover: 1/						
Variable (Direct) Production Expenses		21.3	20.2	19.1	18.2	17.4
Total Production Expenses		27.9	26.4	25.1	23.9	22.8

1/ Estimation of breakeven sugar prices excludes molasses payment.

Breakeven Sugar Recovery (CRS) for 2020

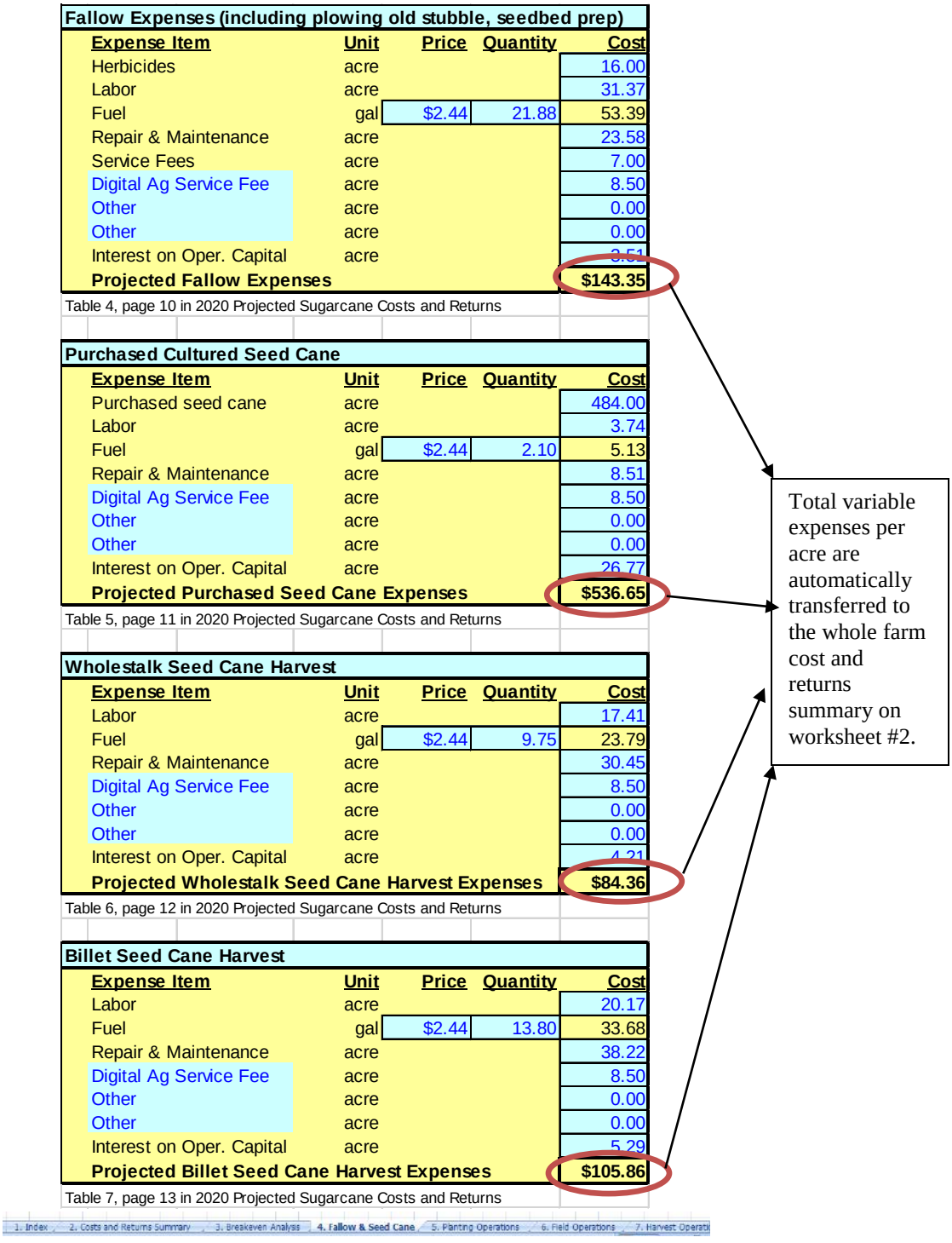
Mill Share	39.0%	Cane yield per harvested acre (tons)	33.9			
Land Share	16.7%	Cane yield per total farm acre (tons)	25.8			
Grower Share	50.8%			**Selected Yield Levels**		
				Projected		
		- 10%	- 5%	2019 Price	+ 5%	+ 10%
Raw sugar price ($/pound)		$0.234	$0.247	$0.260	$0.273	$0.286
				----------pounds of sugar per ton of cane----------		
Breakeven Sugar Recovery (CRS) to Recover: 1/						
Variable (Direct) Production Expenses		141	134	127	121	116
Total Production Expenses		185	176	167	159	152

1/ Estimation of breakeven sugar prices excludes molasses payment.

1. Index | 2. Costs and Returns Summary | 3. Breakeven Analysis | 4. Fallow & Seed Cane | 5. Planting Operations | 6. Field Operations | 7. Harvest Operations | 8. Wtd. Avg.

Worksheet # 4: Fallow and Seed Cane Activities

This section of the model allows a producer to enter cost data on herbicides (H6), labor (H7), fuel (F8 and G8), repair and maintenance (H9), consultant/service fees (H10), interest on capital (H14), as well as other "custom" farm operations that figure into fallow field activated (H11 to H13). These projected expenses are totaled (H15) and calculated into breakeven and cash flow analysis sections of the model. Data also included on this worksheet page are costs for purchasing cultured seed cane and harvesting farm propagated seed cane. Throughout this model fuel price and varying consumption rates, allows a producer to examine the effects per gallon price as to determine its overall effect on the farm's cost structure and profitability.



Fallow Expenses (including plowing old stubble, seedbed prep)

Expense Item	Unit	Price	Quantity	Cost
Herbicides	acre			16.00
Labor	acre			31.37
Fuel	gal	$2.44	21.88	53.39
Repair & Maintenance	acre			23.58
Service Fees	acre			7.00
Digital Ag Service Fee	acre			8.50
Other	acre			0.00
Other	acre			0.00
Interest on Oper. Capital	acre			3.51
Projected Fallow Expenses				**$143.35**

Table 4, page 10 in 2020 Projected Sugarcane Costs and Returns

Purchased Cultured Seed Cane

Expense Item	Unit	Price	Quantity	Cost
Purchased seed cane	acre			484.00
Labor	acre			3.74
Fuel	gal	$2.44	2.10	5.13
Repair & Maintenance	acre			8.51
Digital Ag Service Fee	acre			8.50
Other	acre			0.00
Other	acre			0.00
Interest on Oper. Capital	acre			26.77
Projected Purchased Seed Cane Expenses				**$536.65**

Table 5, page 11 in 2020 Projected Sugarcane Costs and Returns

Wholestalk Seed Cane Harvest

Expense Item	Unit	Price	Quantity	Cost
Labor	acre			17.41
Fuel	gal	$2.44	9.75	23.79
Repair & Maintenance	acre			30.45
Digital Ag Service Fee	acre			8.50
Other	acre			0.00
Other	acre			0.00
Interest on Oper. Capital	acre			4.21
Projected Wholestalk Seed Cane Harvest Expenses				**$84.36**

Table 6, page 12 in 2020 Projected Sugarcane Costs and Returns

Billet Seed Cane Harvest

Expense Item	Unit	Price	Quantity	Cost
Labor	acre			20.17
Fuel	gal	$2.44	13.80	33.68
Repair & Maintenance	acre			38.22
Digital Ag Service Fee	acre			8.50
Other	acre			0.00
Other	acre			0.00
Interest on Oper. Capital	acre			5.29
Projected Billet Seed Cane Harvest Expenses				**$105.86**

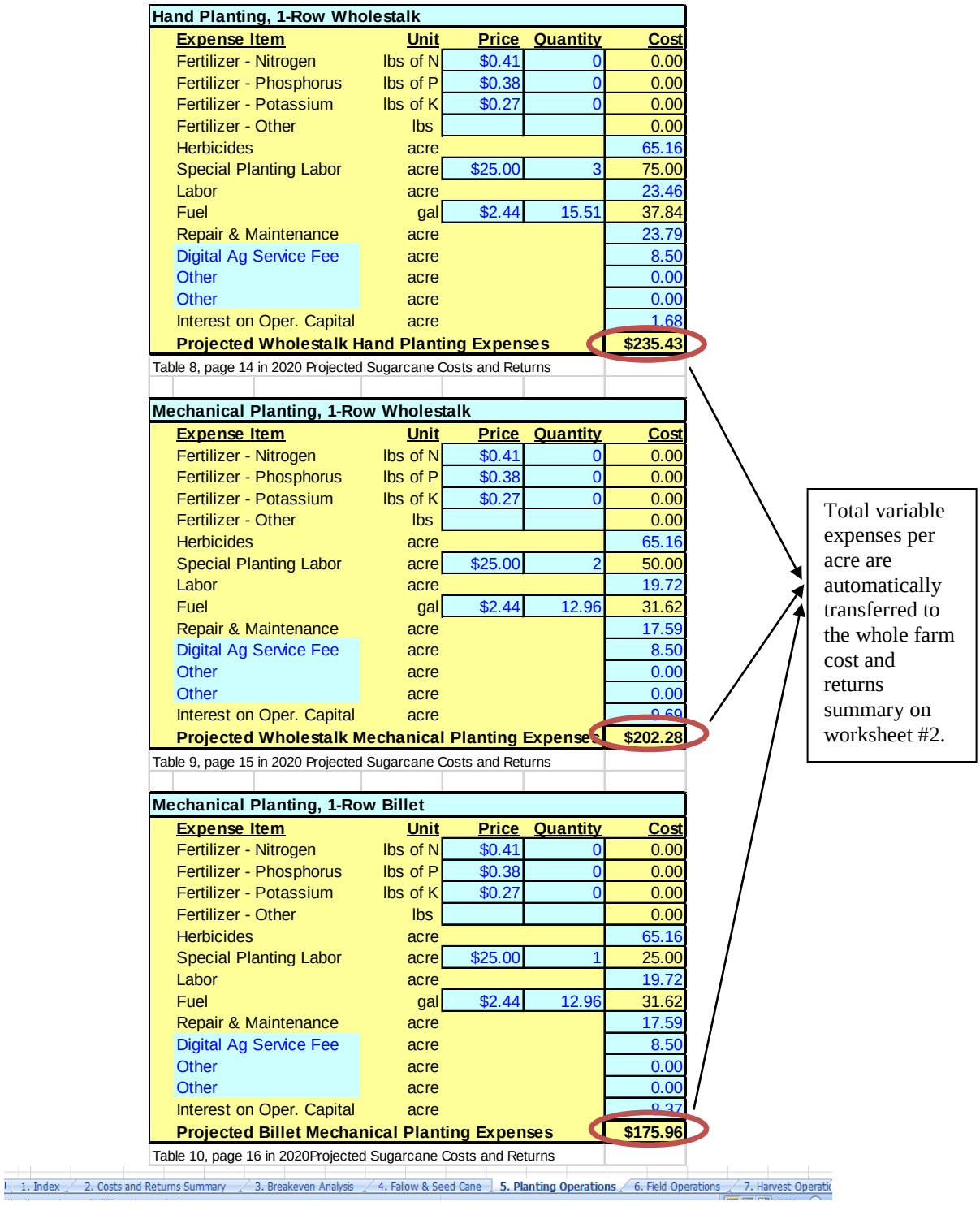
Table 7, page 13 in 2020 Projected Sugarcane Costs and Returns

1. Index | 2. Costs and Returns Summary | 3. Breakeven Analysis | 4. Fallow & Seed Cane | 5. Planting Operations | 6. Field Operations | 7. Harvest Operati

Total variable expenses per acre are automatically transferred to the whole farm cost and returns summary on worksheet #2.

Worksheet # 5: Planting Operations

Planting information requires a larger appropriation of the operating expense compared to the fallow field and seed cane activities. Fertilizer input prices (F6 to F9) and application rates (G6 to G9), special planting labor wages (F11 and G11), and fuel (F13 and G13) can be tailored to reflect hand or mechanical methods of plating the wholestalk or billet cane. These inputs combined with herbicide (H10), repair and maintenance (H14), interest on capital (H18), and "other" cost categories (H15 to H17) are totaled (H19) and used for further economic analysis.



Hand Planting, 1-Row Wholestalk

Expense Item	Unit	Price	Quantity	Cost
Fertilizer - Nitrogen	lbs of N	$0.41	0	0.00
Fertilizer - Phosphorus	lbs of P	$0.38	0	0.00
Fertilizer - Potassium	lbs of K	$0.27	0	0.00
Fertilizer - Other	lbs			0.00
Herbicides	acre			65.16
Special Planting Labor	acre	$25.00	3	75.00
Labor	acre			23.46
Fuel	gal	$2.44	15.51	37.84
Repair & Maintenance	acre			23.79
Digital Ag Service Fee	acre			8.50
Other	acre			0.00
Other	acre			0.00
Interest on Oper. Capital	acre			1.68
Projected Wholestalk Hand Planting Expenses				**$235.43**

Table 8, page 14 in 2020 Projected Sugarcane Costs and Returns

Mechanical Planting, 1-Row Wholestalk

Expense Item	Unit	Price	Quantity	Cost
Fertilizer - Nitrogen	lbs of N	$0.41	0	0.00
Fertilizer - Phosphorus	lbs of P	$0.38	0	0.00
Fertilizer - Potassium	lbs of K	$0.27	0	0.00
Fertilizer - Other	lbs			0.00
Herbicides	acre			65.16
Special Planting Labor	acre	$25.00	2	50.00
Labor	acre			19.72
Fuel	gal	$2.44	12.96	31.62
Repair & Maintenance	acre			17.59
Digital Ag Service Fee	acre			8.50
Other	acre			0.00
Other	acre			0.00
Interest on Oper. Capital	acre			9.69
Projected Wholestalk Mechanical Planting Expenses				**$202.28**

Table 9, page 15 in 2020 Projected Sugarcane Costs and Returns

Mechanical Planting, 1-Row Billet

Expense Item	Unit	Price	Quantity	Cost
Fertilizer - Nitrogen	lbs of N	$0.41	0	0.00
Fertilizer - Phosphorus	lbs of P	$0.38	0	0.00
Fertilizer - Potassium	lbs of K	$0.27	0	0.00
Fertilizer - Other	lbs			0.00
Herbicides	acre			65.16
Special Planting Labor	acre	$25.00	1	25.00
Labor	acre			19.72
Fuel	gal	$2.44	12.96	31.62
Repair & Maintenance	acre			17.59
Digital Ag Service Fee	acre			8.50
Other	acre			0.00
Other	acre			0.00
Interest on Oper. Capital	acre			8.37
Projected Billet Mechanical Planting Expenses				**$175.96**

Table 10, page 16 in 2020Projected Sugarcane Costs and Returns

1. Index | 2. Costs and Returns Summary | 3. Breakeven Analysis | 4. Fallow & Seed Cane | 5. Planting Operations | 6. Field Operations | 7. Harvest Operati

Total variable expenses per acre are automatically transferred to the whole farm cost and returns summary on worksheet #2.

Worksheet # 6: Field Operations

Field operations command the largest share of sugarcane production expenses on a per acre basis. Similar to fallow and planting operations in-field, fertilizer prices and application rate (F6 to F10 and G6 to G10), and fuel consumption rates (F15 and G15) can be customized to reflect on-farm production strategies. General cost categories such as herbicides (H11), insecticides (H12), service fees (H13), labor (H14), repair and maintenance (H16), "other" field expenses (H17 to H19), and interest on capital (H20) are also present for data input. The total variable cost per acre (H21) is totaled for plant cane operations, first stubble operations, and second stubble and older operations. These values are referenced throughout the whole farm costs and returns table as well as the breakeven analysis.

Plant Cane Cultivation and Field Operations

Expense Item	Unit	Price	Quantity	Cost
Custom Aerial Appl.	appl.	$4.00	2	8.00
Fertilizer - Nitrogen	lbs of N	$0.41	80	32.80
Fertilizer - Phosphorus	lbs of P	$0.38	0	0.00
Fertilizer - Potassium	lbs of K	$0.27	80	21.60
Fertilizer - Other	lbs	$0.00	0	0.00
Herbicides	acre			77.47
Insecticides	acre			29.76
Service Fees	acre			7.00
Labor	acre			18.91
Fuel	gal	$2.44	11.33	27.65
Repair & Maintenance	acre			11.28
Surfactant	acre			5.60
Digital Ag Service Fee	acre			8.50
Other	acre			0.00
Interest on Oper. Capital	acre			6.14
Projected Plant Cane Cultivation Expenses				**$254.71**

Table 11, pages 17-18 in 2020 Projected Sugarcane Costs and Returns

First Stubble Cultivation and Field Operations

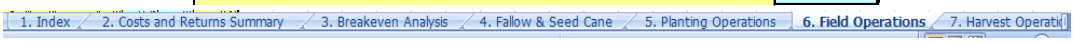
Expense Item	Unit	Price	Quantity	Cost
Custom Aerial Appl.	appl.	$4.00	3	12.00
Fertilizer - Nitrogen	lbs of N	$0.41	100	41.00
Fertilizer - Phosphorus	lbs of P	$0.38	40	15.20
Fertilizer - Potassium	lbs of K	$0.27	100	27.00
Fertilizer - Sulfur	lbs	$0.34	24	8.16
Herbicides	acre			77.47
Insecticides	acre			29.76
Ripener	acre			1.44
Service Fees	acre			7.00
Labor	acre			20.30
Fuel	gal	$2.44	12.28	29.96
Repair & Maintenance	acre			12.60
Surfactant	acre			8.40
Digital Ag Service Fee	acre			8.50
Other	acre			0.00
Interest on Oper. Capital	acre			7.61
Projected First Stubble Cultivation Expenses				**$306.40**

Table 12, pages 19-20 in 2020 Projected Sugarcane Costs and Returns

Second Stubble Cultivation and Field Operations

Expense Item	Unit	Price	Quantity	Cost
Custom Aerial Appl.	appl.	$4.00	3	12.00
Fertilizer - Nitrogen	lbs of N	$0.41	110	45.10
Fertilizer - Phosphorus	lbs of P	$0.38	40	15.20
Fertilizer - Potassium	lbs of K	$0.27	100	27.00
Fertilizer - Sulfur	lbs	$0.34	24	8.16
Herbicides	acre			77.47
Insecticides	acre			29.76

Total variable expenses per acre are automatically transferred to the whole farm cost and returns summary on worksheet #2.



Worksheet # 7: Harvest Operations

There are two harvest methods presented in this section, a one-row combine harvester, and a two-row wholestalk harvester unit. Fuel price and consumption rates (F7 to F8 and G7 to G8) can be tailed to reflect tractor and combine efficiency and performance rates per acre. Data for labor (H6), repair and maintenance (H9), "other" expenses (H10 to H12), and interest on capital (H13) can also be entered. The total variable cost per acre to harvest the sugarcane (H14) is included in the whole farm costs and returns summary as well as the breakeven analysis.

Harvest - 1-Row Combine Harvester

Expense Item	Unit	Price	Quantity	Cost
Labor	acre			35.13
Fuel - Tractors	gal	$2.44	15.60	38.05
Fuel - Combine Harvester	gal	$2.44	8.40	20.50
Repair & Maintenance	acre			54.66
Digital Ag Service Fee	acre			8.50
Other	acre			0.00
Other	acre			0.00
Interest on Oper. Capital	acre			7.54
Projected Combine Harvest Expenses				**$164.38**

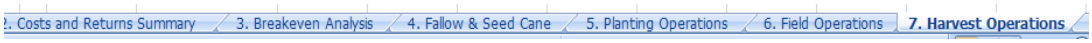
Table 14, page 23 in 2020 Projected Sugarcane Costs and Returns

Harvest - 2-Row Wholestalk Harvester

Expense Item	Unit	Price	Quantity	Cost
Labor	acre			27.55
Fuel - Tractors	gal	$2.44	9.07	22.13
Fuel - Wholestalk Harvester	gal	$2.44	6.38	15.57
Repair & Maintenance	acre			37.93
Digital Ag Service Fee	acre			8.50
Other	acre			0.00
Other	acre			0.00
Interest on Oper. Capital	acre			5.88
Projected Wholestalk Harvest Expenses				**$117.06**

Table 15, page 24 in 2020 Projected Sugarcane Costs and Returns

Total variable expenses per acre are automatically transferred to the whole farm cost and returns summary on worksheet #2.



Worksheet # 8: Calculating Weighted Averages for Mill Share

Each sugar mill that the producers ships sugarcane to can be identified by the total number of tons hauled (F6) and the mill's share of the sugar returns (H6), expressed as a percentage. A weighted average (H11) is then calculated based on the same principle as the previous sheet.

Weighted Average Mill Share for Total Tons of Sugarcane Hauled

	Mill Name	Tons Hauled	Mill Share
1	Mill A	5,000.0	38.0%
2	Mill B	5,000.0	40.0%
3	Mill C	20,000.0	39.0%
4			
5			
	Weighted Average Mill Share for Total Tons of Sugarcane Hauled =		**39.0%**

Worksheet # 9: Calculating Weighted Averages for Plant Cane and Stubble crops (per tract per acre)

A sugarcane producer can enter the tract acreage (F6 to F30), ton per acre yield (H6 to H30), and sugar per ton (J6 to J30) of up to 25 individual tracts of land currently in production (C6 to C30). The model calculates a weighted average for each of the aforementioned categories from the imputed data across the entire farming operation. This table is duplicated so that a producer can enter the same type of data for first, second, third, and older stubble crops by tract. The weighted averages for tons per acre (H31), CRS (L33), and sugar per ton (J32) can then be entered into the cells in the Cost and Returns summary worksheet (Sheet # 2).

Weighted Average Plant Cane Tonnage and Sugar Yields per Harvested Acre

	Tract Name	Acres	Tons/Acre	Sugar/Ton	Sugar/Acre
1	Tract PC - 1	10.0	37.0	223	8,251
2	Tract PC - 2	10.0	35.0	217	7,595
3	Tract PC - 3	20.0	36.0	220	7,920
4					0
5					0
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0
21					0
22					0
23					0
24					0
25					0
	Weighted Average Plant Cane Harvested Yield (Tons/Harv. Acre) =		36.0		
	Weighted Average Plant Cane Sugar per Ton (Pounds/Ton) =			220.0	
	Weighted Average Plant Cane Sugar per Harvested Acre (Pounds/Harv. Acre) =				7,922

Weighted Average First Stubble Tonnage and Sugar Yields per Harvested Acre

	Tract Name	Acres	Tons/Acre	Sugar/Ton	Sugar/Acre
1	Tract FS - 1	10.0	38.0	223	8,474
2	Tract FS - 2	10.0	36.0	217	7,812
3	Tract FS - 3	20.0	37.0	220	8,140
4					0
5					0
6					0

Worksheet # 10: Calculating Weighted Average for Land Rents

The weighted average for land rent (H36) for up to 30 landlords (C6 to C35) is identified by the amount of acres that the producer rents(F6 to F35) and the corresponding crop share paid to that particular landlord (H6 to H35).

Weighted Average Land Rent Crop Share

	Landlord	Acres Rented	Crop Share
1	Landlord 1	250.0	16.7%
2	Landlord 2	250.0	16.7%
3	Landlord 3	500.0	20.0%
4			
5			
6			
7			
8			
9			
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14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
		Weighted Average Land Rent Crop Share =	18.4%

Ending Notes

Information that is entered into this model is intended to serve as a planning tool/production cost estimator to allow the producer to (1) project whole farm costs and returns from sugarcane production, (2) to make adjustments to those projections as the production year progresses and (3) to examine the impact of changes in yields, input prices, and other factors have on the overall projected profitability of the entire farming operation. It can be applied to the sugarcane operation as a forward-planning tool and ongoing analysis method to account for units of input and amount of sugar produced per tract less mill and land charges.

Portions of the worksheet pages are protected to prevent changes or deletions of cells containing formulas. The protections on these cells or worksheet pages can be removed to allow more flexibility in the use of this decision tool. For example, tables could be added to allow entry of individual field data and computation of average values for specific items, e.g. herbicide costs on fallow fields. To unprotect any worksheet page, click on "Tools/Protection/Unprotect Sheet."