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Projected 2019 Rice Farm Cash Flow Model

A Rice Production Farm Income and Expense Producer Decision Tool

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The Projected 2019 Rice Farm Cash Flow Model was developed to assist producers in planning for the 2019 crop year. The model is an Excel spreadsheet which allows rice producers to enter projected acreage, yield, market price and production cost data for 2019 to estimate net returns above variable production costs and to easily evaluate the impact of changing percent of base planted on net returns. The primary purpose of the model is to evaluate the impact on net returns above variable production costs for alternative rice rental arrangements and percent of base acreage planted. *This model does include the Price Loss Coverage (PLC) Program option in the 2014 Farm Bill.* The model also includes entry cells for whole farm fixed expenses to estimate projected returns from rice production over all costs. Five worksheets are included to estimate rice cash flow on five different land tracts. Worksheets can be copied to accommodate additional land tracts if needed.

Data Input

The Projected 2019 Rice Farm Cash Flow Model calculates projected net returns above variable production costs for a rice farm or specific tract of land of a specified acreage. For each farm or tract, data to be entered into the model includes estimates for the 2019 crop season including rice acreage, base acres, percent of base planted, projected first crop and ratoon crop yields, program yields, projected prices and production costs. Gross returns, variable costs and net returns are calculated for the farm or tract based upon the data entered. Spreadsheet cells in which data must be entered are listed and defined below.

Acreage, Production and Price Data:

The first section of the model contains cells to enter data concerning projected 2019 rice acreage, production and market prices. The specific data entry cells in the spreadsheet (shaded in blue) are listed below.

Spreadsheet Cell	Description
C5	Farm Name
C6	Tract Name / Number
G9	Rice Yield Unit (1 = cwt and 2 = bbls)
G10	Total Rice Base Acres
I11	Rice Acres Planted in 2019
I12	Ratoon Crop Acres in 2019
G13	Projected 2019 Rice First Crop Yield (cwt or bbl)
G14	Projected 2019 Rice Ratoon Crop Yield (cwt or bbl)
G15	Rice Sold on a Green-Weight Basis? (1 = no and 2 = yes)
G17	Rice Base Payment Acreage Percent
G18	Rice Price Loss Coverage (PLC) Program Yield (cwt or bbl)
G20	Rice Cash Rent ($ per acre)
G21	Total Acres Cash Rented
G23	Rice Crop Share for Land and Water
G24	Percent of Irrigation Pumping Costs Paid by Grower
G26	Projected 2019 Diesel Price per Gallon
G27	Projected 2019 Nitrogen Price per pound of N
G28	Projected 2019 Phosphorous Price per pound of P
G29	Projected 2019 Potassium Price per pound of K
G31	Rice Reference Price for the PLC program ($ per cwt.)
G32	Projected 2019 Rough Rice Market Price ($ per cwt.)
G33	Projected 2019 World Rice Price ($ per cwt.)

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Rice Variable Production Cost Data:

The second section of the model contains cells to enter data concerning projected variable rice production costs for the 2019 season. Costs are entered on a dollar per planted acre basis and should include the proportionate additional cost for any ratoon crop acreage. The specific data entry cells (shaded in blue) are listed below.

Spreadsheet Cell	Description
G59	Custom Aerial Application Costs ($ per acre)
H59	Percent of Aerial Application Cost paid by grower
D61	Drying Charge per Yield Unit – Dry-Weight Basis
H61	Percent of Drying Cost paid by grower
B64	Fertilizer Material 1 Applied (name)
C64	Pounds of Fertilizer Material 1 Applied (lbs per acre)
E64	Price of Fertilizer Material 1 ($ per ton)
H64	Percent of Fertilizer Material 1 paid by grower (%)
B65	Fertilizer Material 2 Applied (name)
C65	Pounds of Fertilizer Material 2 Applied (lbs per acre)
E65	Price of Fertilizer Material 2 ($ per ton)
H65	Percent of Fertilizer Material 2 paid by grower (%)
B66	Fertilizer Material 3 Applied (name)
C66	Pounds of Fertilizer Material 3 Applied (lbs per acre)
E66	Price of Fertilizer Material 3 ($ per ton)
H66	Percent of Fertilizer Material 3 paid by grower (%)
B67	Fertilizer Material 4 Applied (name)
C67	Pounds of Fertilizer Material 4 Applied (lbs per acre)
E67	Price of Fertilizer Material 4 ($ per ton)
H67	Percent of Fertilizer Material 4 paid by grower (%)
G68	Fungicide Cost ($ per acre)
H68	Percent of Fungicide Cost paid by grower
G69	Herbicide Cost ($ per acre)
H69	Percent of Herbicide Cost paid by grower
G70	Insecticide Cost ($ per acre)
H70	Percent of Insecticide Cost paid by grower
G71	Irrigation Supplies / Gate Cost ($ per acre)
G72	Seed Cost ($ per acre)
G73	Fertilizer Application Costs ($ per acre)
H73	Percent of Fertilizer Application Costs paid by grower
G74	Planting Costs ($ per acre)
G75	Hauling Costs ($ per acre)
G76	Labor Costs ($ per acre)
C77	Gallons of Diesel used for Tillage and Harvest (gallons per acre)
C78	Gallons of Diesel used for Irrigation (gallons per acre)
C79	Electricity Cost for Irrigation ($ per acre)
G80	Repair and Maintenance Costs ($ per acre)
G81	Other Variable Costs ($ per acre)
H81	Percent of Other Costs paid by Grower
C82	Interest Rate on Operating Capital (%)
C83	Term of Operating Loan (months)

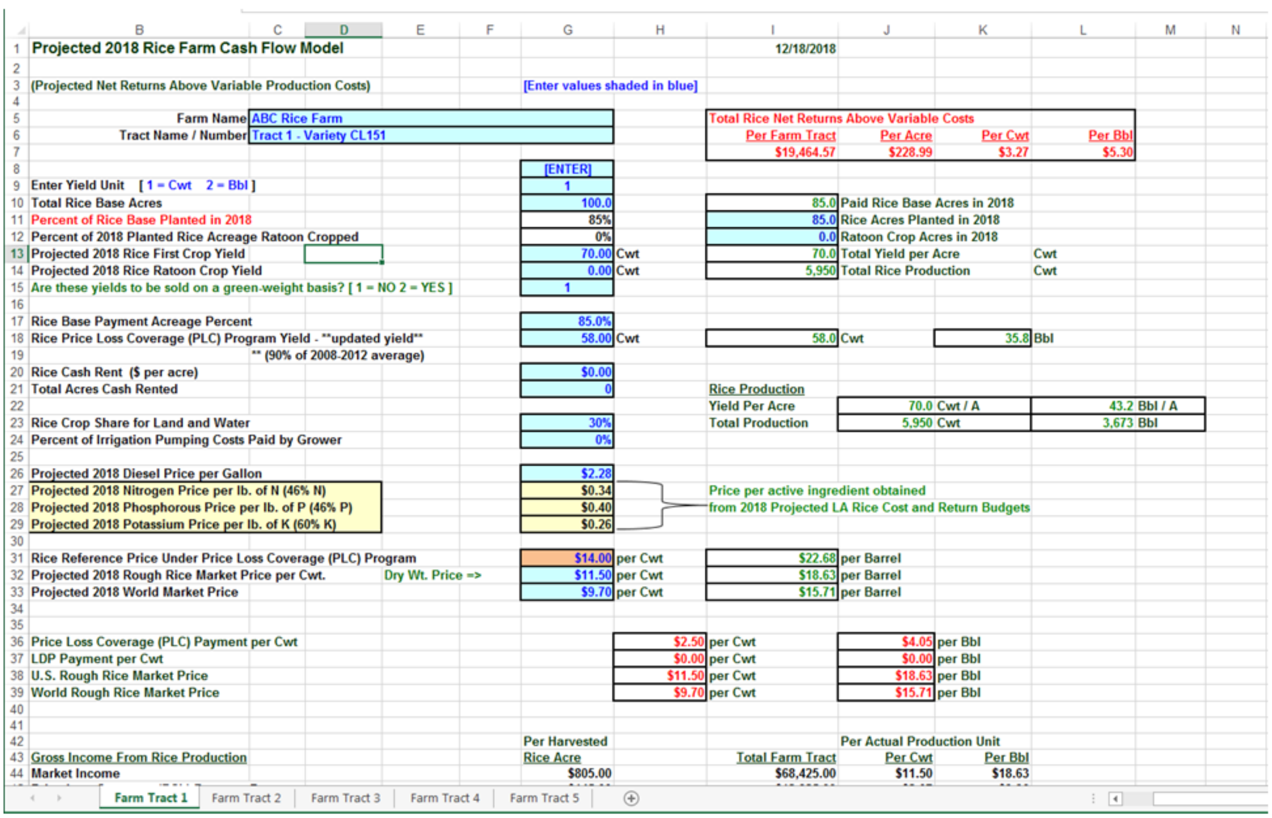
Rice Fixed Production Cost Data:

The next section of the model contains cells to enter data concerning projected fixed rice production costs for the 2019 season. Costs are entered on a total farm or total tract allocated basis. *Fixed costs entered must be relevant to the level of rice acres entered on the worksheet.* Fixed costs per planted acre are calculated by dividing total entered fixed costs by planted acres. The specific data entry cells (shaded in blue) are listed below.

Spreadsheet Cell	Description
B91	Name of Fixed Cost Item 1
I91	Value of Fixed Cost Item 1
B92	Name of Fixed Cost Item 2
I92	Value of Fixed Cost Item 2
B93	Name of Fixed Cost Item 3
I93	Value of Fixed Cost Item 3

Net Return Calculation:

Based on the acreage, production, price and cost data entered, the model calculates net returns above variable costs (for the percent of base planted) on a per farm tract, per acre, per cwt., and per bbl. basis. Net return estimates are also included at the upper portion of the spreadsheet (cells I7:L7) to allow for quick evaluation of the impact of changing percent of base planted on net returns above variable costs. A copy of the entire model along with a set of sample data entered is included below.



	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Projected 2018 Rice Farm Cash Flow Model							12/18/2018					
2													
3	(Projected Net Returns Above Variable Production Costs)					[Enter values shaded in blue]							
4													
5	Farm Name	ABC Rice Farm						Total Rice Net Returns Above Variable Costs					
6	Tract Name / Number	Tract 1 - Variety CL151						Per Farm Tract	Per Acre	Per Cwt	Per Bbl		
7								$19,464.57	$228.99	$3.27	$5.30		
8						[ENTER]							
9	Enter Yield Unit [1 = Cwt 2 = Bbl]					1							
10	Total Rice Base Acres					100.0		85.0	Paid Rice Base Acres in 2018				
11	Percent of Rice Base Planted in 2018					85%		85.0	Rice Acres Planted in 2018				
12	Percent of 2018 Planted Rice Acreage Ratoon Cropped					0%		0.0	Ratoon Crop Acres in 2018				
13	Projected 2018 Rice First Crop Yield					70.00	Cwt	70.0	Total Yield per Acre		Cwt		
14	Projected 2018 Rice Ratoon Crop Yield					0.00	Cwt	5,950	Total Rice Production		Cwt		
15	Are these yields to be sold on a green-weight basis? [1 = NO 2 = YES]					1							
16													
17	Rice Base Payment Acreage Percent					85.0%							
18	Rice Price Loss Coverage (PLC) Program Yield - **updated yield**					58.00	Cwt	58.0	Cwt	35.8	Bbl		
19		** (90% of 2008-2012 average)											
20	Rice Cash Rent ($ per acre)					$0.00							
21	Total Acres Cash Rented					0		Rice Production					
22								Yield Per Acre	70.0 Cwt / A		43.2 Bbl / A		
23	Rice Crop Share for Land and Water					30%		Total Production	5,950 Cwt		3,673 Bbl		
24	Percent of Irrigation Pumping Costs Paid by Grower					0%							
25													
26	Projected 2018 Diesel Price per Gallon					$2.28							
27	Projected 2018 Nitrogen Price per lb. of N (46% N)					$0.34		Price per active ingredient obtained					
28	Projected 2018 Phosphorous Price per lb. of P (46% P)					$0.40		from 2018 Projected LA Rice Cost and Return Budgets					
29	Projected 2018 Potassium Price per lb. of K (60% K)					$0.26							
30													
31	Rice Reference Price Under Price Loss Coverage (PLC) Program					$14.00	per Cwt	$22.68	per Barrel				
32	Projected 2018 Rough Rice Market Price per Cwt.		Dry Wt. Price =>			$11.50	per Cwt	$18.63	per Barrel				
33	Projected 2018 World Market Price					$9.70	per Cwt	$15.71	per Barrel				
34													
35													
36	Price Loss Coverage (PLC) Payment per Cwt						$2.50	per Cwt	$4.05	per Bbl			
37	LDP Payment per Cwt						$0.00	per Cwt	$0.00	per Bbl			
38	U.S. Rough Rice Market Price						$11.50	per Cwt	$18.63	per Bbl			
39	World Rough Rice Market Price						$9.70	per Cwt	$15.71	per Bbl			
40													
41													
42						Per Harvested			Per Actual Production Unit				
43	Gross Income From Rice Production					Rice Acre		Total Farm Tract	Per Cwt	Per Bbl			
44	Market Income					$805.00		$68,425.00	$11.50	$18.63			

Farm Tract 1 | Farm Tract 2 | Farm Tract 3 | Farm Tract 4 | Farm Tract 5

	B	C	D	E	F	G	H	I	J	K	L	M
40												
41												
42						Per Harvested			Per Actual Production Unit			
43	Gross Income From Rice Production					Rice Acre		Total Farm Tract	Per Cwt	Per Bbl		
44	Market Income					$805.00		$68,425.00	$11.50	$18.63		
45	Price Loss Coverage (PCL) Program Payment					$145.00		$12,325.00	$2.07	$3.36		
46	LDP Payment					$0.00		$0.00	$0.00	$0.00		
47	Total Rice Farm Gross Income					$950.00		$80,750.00	$13.57	$21.99		
48												
49	Rent - Land and Water											
50	Share Rent (on Planted/Harvested Rice Acres)					$285.00		$24,225.00				
51	Cash Rent (on Total Rice Crop Land Acres)					$0.00		$0.00				
52												
53	Gross Returns to Grower					$665.00		$56,525.00	$9.50	$15.39		
54												
55						[ENTER]	[ENTER]					
56						Total Costs	Percent Paid					
57	Rice Variable Production Costs					Per Acre	By Grower	Total Farm Tract				
58	[Enter production costs per acre including proportionate share of ratoon crop]											
59	Custom Aerial Application					$35.30	100%	$3,000.50				
60			Charge/Yld Unit									
61	Drying Charge per Yld Unit - Dry Wt. Ba		$0.90	per Dry Cwt		$63.00	70%	$3,748.50				
62												
63	Fertilizer Material Applied			Price/ton	Price/lb							
64	Urea	282	lbs/Acre	$312.50	$0.16	$44.06	100%	$3,745.31				
65	Phosphate	87	lbs/Acre	$361.50	$0.18	$15.73	100%	$1,336.65				
66	Potash	100	lbs/Acre	$315.50	$0.16	$15.78	100%	$1,340.88				
67	Other Fertilizer	0	lbs/Acre	$0.00	$0.00	$0.00	100%	$0.00				
68	Fungicide					$15.60	100%	$1,326.00				
69	Herbicides					$38.90	100%	$3,306.50				
70	Insecticides					$13.60	100%	$1,156.00				
71	Irrigation Supplies / Gates					$3.65		$310.25				
72	Seed					$81.30		$6,910.50				
73	Fertilizer Application Cost					$26.60	100%	$2,261.00				
74	Planting Cost					$0.00		$0.00				
75	Hauling Cost					$21.00		$1,785.00				
76	Labor Costs					$13.98		$1,188.30				
77	Tillage/Harvest Fuel Cost	10	gal/Acre			$22.80		$1,938.00				
78	Irrigation Fuel Cost - Diesel	36	gal/Acre			$82.08	0%	$0.00				
79	Irrigation Fuel Cost - Electric	$0.00	$/Acre			$0.00	0%	$0.00				
80	Repair and Maintainance					$25.42		$2,160.70				
81	Other Variable Costs					$0.00	100%	$0.00				
82	Interest on Operating Capital	4.8%	rate			$18.19		$1,546.34				
83		11	months									
84	Total Rice Variable Costs					$436.01		$37,060.43	$6.23	$10.09		
85												
86						Per Acre		Total Farm Tract	Per Cwt	Per Bbl		
87	Net Returns Above Variable Costs					$228.99		$19,464.57	$3.27	$5.30		
88												
89	Fixed Costs											
90	[Enter fixed expenses relative to the acres represented on this worksheet]											
91	Fixed cost 1					$47.06		$4,000	0.67	$1.09		
92	Fixed cost 2					$11.76		$1,000	0.17	$0.27		
93	Fixed cost 3					$0.00		$0	0.00	$0.00		
94	Total Fixed Costs					$58.82		$5,000	$0.84	$1.36		
95												
96	Net Returns Above Variable and Fixed Costs					$170.17		$14,464.57	$2.43	$3.94		
97												