



Rice Rental Arrangement Net Return Evaluation Model

A Farm Planning/Decision Tool for Louisiana Rice Producers

Michael E. Salassi and Michael A. Deliberto

Department of Agricultural Economics and Agribusiness
Louisiana State University Agricultural Center
Baton Rouge, Louisiana

The Rice Rental Arrangement Net Return Evaluation Model is a spreadsheet-based decision tool developed to assist Louisiana rice producers in evaluating the impacts of alternative crop land rental arrangements on projected net returns above specified rice production costs from the perspective of both the rice producer and the land owner. With expected changes in the U.S. farm program for major commodities, the level of farm program benefits could change substantially from previous benefits under prior farm bills. This could be especially significant for rice, with the potential loss of direct payments which were in place under the 2008 farm bill and had been a major component of the farm bill commodity title since 1996. With major changes in future farm bills expected, crop land rental arrangements should adjust to reflect this change in rice income expectation. This purpose of this decision aid is to assist rice producers and landowners in evaluating alternative rice rental arrangements and to estimate the impact on expected net returns above specified rice production expenses for both the tenant rice producer and the land owner.

Given the complexity of current farm programs, no detailed information regarding farm program provisions is included in this decision aid. Rather, a single value of expected farm program payments per planted rice acre can be entered in cell F24 on a dollars per planted rice acre basis. This expected program payment value is then divided between the rice producer and the landowner based on the crop share percentage entered. For cash leases, the rice producer is assumed to receive all of the expected rice program payment.

This decision aid can evaluate cash and crop share leases for rice production. Rice crop share percentage paid to the landlord (for land and/or water) can be entered as a percentage value in cell F14. Alternatively, a rice cash lease amount can be entered in cell F15 in dollars per acre. An expected rice market price is entered in cell F11 (in dollars per cwt.) and an expected rough rice yield is entered in cell F12 (in pounds per acre, dry yield basis). These price and yield values are then used as the midpoints of a rice price and yield range over which net returns above specified production expenses are calculated.

There is an option to enter per unit values for rice drying and hauling charges (in dollars per cwt.), in cells F19 and F20, which would be charged to the producer and landowner in the same share percentages as the crop share. Alternatively, zeros can be entered in cells F19 and F20 and a per acre charge for drying and/or hauling costs can be entered in the production cost table along with a value for the percent of this cost paid by the landowner, in a similar fashion as the other rice production costs are entered.

This Excel spreadsheet decision tool can be downloaded from the LSU AgCenter Rice Economics web page, and can be saved and used on any desktop or laptop personal computer. The web address for the LSU AgCenter is: www.lsuagcenter.com. A copy of this user's guide along with the spreadsheet decision aid Excel file can also be obtained by contacting the authors by email at msalassi@agcenter.lsu.edu or mdeliberto@agcenter.lsu.edu.



Complete Rice Rental Arrangement Net Return Evaluation Model Spreadsheet

Cell values in blue for price, yield, costs, and other factors can be changed by the user.
Values in the table represent net returns above specified costs per planted rice acre.
Positive net return values are highlighted in yellow.

11/27/2013

Estimation of Rice Grower and Landlord Net Returns Above Specified Costs per Planted Rice Acre

Land Tract Name/Number = **Rice Land Tract No. 1**

Expected Rice Price = **\$14.00** per cwt. \$22.68 per barrel
Expected Rice Yield = **6,800** lbs./acre 42.0 barrels/acre
(dry yield basis)
Rice Share Rent = **30%** crop share
Rice Cash Rent = **\$0** per acre

Drying and hauling rates entered below will be charged to the grower
and the landlord for their proportionate crop shares.

Rice Drying Charge **\$1.00** \$/cwt. (dry yield basis)
Rice Hauling Charge **\$0.30** \$/cwt. (dry yield basis)

To enter alternate charges for drying and/or hauling, enter zero values
in the cells above and enter a cost per acre in the cost table to the right

Rice Farm Program Payment = **\$0** per planted acre
(Assumption that any govt. program payments are shared with landlord
only under crop share arrangements; no payment share under cash leases)

Projected Rice Production Costs Per Planted Acre		Percent of Costs Paid By:	
		Landlord	Grower
Custom	\$60	0%	100%
Fertilizer	\$125	0%	100%
Herbicides	\$40	0%	100%
Fungicides, Insecticides	\$40	0%	100%
Seed	\$75	0%	100%
Labor	\$15	0%	100%
Fuel & Repairs	\$55	0%	100%
Irrigation Pumping	\$190	100%	0%
Other Variable Costs	\$50	0%	100%
Other Variable Costs	\$0	0%	100%
Fixed Costs	\$100	0%	100%
Overhead Costs	\$0	0%	100%
Other Costs	\$0	0%	100%
Other Costs	\$0	0%	100%
Other Costs	\$0	0%	100%

Total Specified Costs **\$750** per planted rice acre
Proportionate total specified costs => **\$190** **\$560**

Estimated Grower Net Returns Above Specified Costs Per Planted Rice Acre

Rice Market Price		Rice Yield (lbs/acre)								
(\$/bbl)	(\$/cwt.)	5,800	6,050	6,300	6,550	6,800	7,050	7,300	7,550	7,800
\$19.85	\$12.25	-\$115	-\$96	-\$77	-\$58	-\$39	-\$20	\$0	\$19	\$38
\$20.25	\$12.50	-\$105	-\$86	-\$66	-\$46	-\$27	-\$7	\$12	\$32	\$52
\$20.66	\$12.75	-\$95	-\$75	-\$55	-\$35	-\$15	\$5	\$25	\$45	\$65
\$21.06	\$13.00	-\$85	-\$65	-\$44	-\$24	-\$3	\$17	\$38	\$58	\$79
\$21.47	\$13.25	-\$75	-\$54	-\$33	-\$12	\$9	\$30	\$51	\$72	\$92
\$21.87	\$13.50	-\$65	-\$43	-\$22	-\$1	\$21	\$42	\$63	\$85	\$106
\$22.28	\$13.75	-\$55	-\$33	-\$11	\$11	\$33	\$54	\$76	\$98	\$120
\$22.68	\$14.00	-\$44	-\$22	\$0	\$22	\$45	\$67	\$89	\$111	\$133
\$23.09	\$14.25	-\$34	-\$12	\$11	\$34	\$56	\$79	\$102	\$124	\$147
\$23.49	\$14.50	-\$24	-\$1	\$22	\$45	\$68	\$91	\$115	\$138	\$161
\$23.90	\$14.75	-\$14	\$10	\$33	\$57	\$80	\$104	\$127	\$151	\$174
\$24.30	\$15.00	-\$4	\$20	\$44	\$68	\$92	\$116	\$140	\$164	\$188
\$24.71	\$15.25	\$6	\$31	\$55	\$80	\$104	\$128	\$153	\$177	\$202
\$25.11	\$15.50	\$17	\$41	\$66	\$91	\$116	\$141	\$166	\$190	\$215
\$25.52	\$15.75	\$27	\$52	\$77	\$103	\$128	\$153	\$178	\$204	\$229

Estimated Landlord Net Returns Above Specified Costs Per Planted Rice Acre

Rice Market Price		Rice Yield (lbs/acre)								
(\$/bbl)	(\$/cwt.)	5,800	6,050	6,300	6,550	6,800	7,050	7,300	7,550	7,800
\$19.85	\$12.25	\$1	\$9	\$17	\$25	\$33	\$42	\$50	\$58	\$66
\$20.25	\$12.50	\$5	\$13	\$22	\$30	\$38	\$47	\$55	\$64	\$72
\$20.66	\$12.75	\$9	\$18	\$26	\$35	\$44	\$52	\$61	\$69	\$78
\$21.06	\$13.00	\$14	\$22	\$31	\$40	\$49	\$57	\$66	\$75	\$84
\$21.47	\$13.25	\$18	\$27	\$36	\$45	\$54	\$63	\$72	\$81	\$90
\$21.87	\$13.50	\$22	\$31	\$41	\$50	\$59	\$68	\$77	\$86	\$95
\$22.28	\$13.75	\$27	\$36	\$45	\$55	\$64	\$73	\$83	\$92	\$101
\$22.68	\$14.00	\$31	\$41	\$50	\$60	\$69	\$79	\$88	\$98	\$107
\$23.09	\$14.25	\$35	\$45	\$55	\$64	\$74	\$84	\$94	\$103	\$113
\$23.49	\$14.50	\$40	\$50	\$59	\$69	\$79	\$89	\$99	\$109	\$119
\$23.90	\$14.75	\$44	\$54	\$64	\$74	\$84	\$94	\$105	\$115	\$125
\$24.30	\$15.00	\$48	\$59	\$69	\$79	\$89	\$100	\$110	\$120	\$131
\$24.71	\$15.25	\$53	\$63	\$74	\$84	\$95	\$105	\$116	\$126	\$136
\$25.11	\$15.50	\$57	\$68	\$78	\$89	\$100	\$110	\$121	\$132	\$142
\$25.52	\$15.75	\$61	\$72	\$83	\$94	\$105	\$116	\$126	\$137	\$148

Developed by Michael Salassi and Michael Deliberto
Department of Agricultural Economics and Agribusiness, LSU Agricultural Center



Data Input Section

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1																	
2																	11/27/2013
3																	
4																	
5																	
6																	
7																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	
25																	
26																	
27																	
28																	

Data to be Entered: (cell values highlighted in blue can be changed by the user)

Cell F7	Land tract reference name or number
Cell F11	Projected rough rice market price (in dollars per cwt.)
Cell F12	Projected rough rice yield (in pounds per acre, dry yield basis) (these price and yield values will be used as the midpoints of a range of market prices and rice yields used to calculate net return values)
Cell F14	Landlord crop share percentage under a rice share lease arrangement (percent)
Cell F15	Cash rent paid under a rice cash lease arrangement (dollars per planted acre)
Cell F19	Rice drying charge (in dollars per cwt., dry yield basis)
Cell F20	Rice hauling charge (in dollars per cwt., dry yield basis)
Cell F24	Projected rice farm program payment (dollars per planted rice acre)
Cells K11-K25	Specified rice production cost category names
Cells M11-M25	Projected rice production cost per planted acre (dollars per acre)
Cells N11-N25	Percent of rice production cost paid by the landlord (percent)

Based on the information entered for percent of production costs paid by the landlord, the percentage of specified production costs paid by the rice grower will be automatically calculated and shown in cells N11-N25. Total specified rice production costs entered will be summed in cell L26, with the specific proportionate share dollar amounts of that total cost paid by the rice grower and landlord shown in cells M27 and N27.

Rice Grower Estimated Net Return Section

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
28																	
29																	
30																	
31																	
32																	
33																	
34																	
35																	
36																	
37																	
38																	
39																	
40																	
41																	
42																	
43																	
44																	
45																	
46																	
47																	

Estimated Grower Net Returns Above Specified Costs Per Planted Rice Acre											
Rice Market Price		Rice Yield (lbs/acre)									
(\$/bbl)	(\$/cwt.)	5,800	6,050	6,300	6,550	6,800	7,050	7,300	7,550	7,800	
\$19.85	\$12.25	-\$115	-\$96	-\$77	-\$58	-\$39	-\$20	\$0	\$19	\$38	
\$20.25	\$12.50	-\$105	-\$86	-\$66	-\$46	-\$27	-\$7	\$12	\$32	\$52	
\$20.66	\$12.75	-\$95	-\$75	-\$55	-\$35	-\$15	\$5	\$25	\$45	\$65	
\$21.06	\$13.00	-\$85	-\$65	-\$44	-\$24	-\$3	\$17	\$38	\$58	\$79	
\$21.47	\$13.25	-\$75	-\$54	-\$33	-\$12	\$9	\$30	\$51	\$72	\$92	
\$21.87	\$13.50	-\$65	-\$43	-\$22	-\$1	\$21	\$42	\$63	\$85	\$106	
\$22.28	\$13.75	-\$55	-\$33	-\$11	\$11	\$33	\$54	\$76	\$98	\$120	
\$22.68	\$14.00	-\$44	-\$22	\$0	\$22	\$45	\$67	\$89	\$111	\$133	
\$23.09	\$14.25	-\$34	-\$12	\$11	\$34	\$56	\$79	\$102	\$124	\$147	
\$23.49	\$14.50	-\$24	-\$1	\$22	\$45	\$68	\$91	\$115	\$138	\$161	
\$23.90	\$14.75	-\$14	\$10	\$33	\$57	\$80	\$104	\$127	\$151	\$174	
\$24.30	\$15.00	-\$4	\$20	\$44	\$68	\$92	\$116	\$140	\$164	\$188	
\$24.71	\$15.25	\$6	\$31	\$55	\$80	\$104	\$128	\$153	\$177	\$202	
\$25.11	\$15.50	\$17	\$41	\$66	\$91	\$116	\$141	\$166	\$190	\$215	
\$25.52	\$15.75	\$27	\$52	\$77	\$103	\$128	\$153	\$178	\$204	\$229	

The first table presents estimates of net returns above specified costs for the rice grower on a per planted rice acre basis. Expected rough rice market price and yield values, entered in cells F11 and F12 are listed in this net return table as the midpoints in cells I31 and D39. The specific estimated net return above specified costs value per planted acre for the rice grower based on these specific expected values of price and yield entered is shown in the box in cell I39. Over the range of rough rice market prices and yields shown in the table, net return values which are positive for the rice grower are highlighted in yellow.

Landowner Estimated Net Return Section

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q																																																																																																																																																																																																																											
50			Estimated Landlord Net Returns Above Specified Costs Per Planted Rice Acre <table> <tr> <th colspan="2">Rice Market Price</th> <th colspan="9">Rice Yield (lbs/acre)</th> </tr> <tr> <th>(\$/bbl)</th> <th>(\$/cwt.)</th> <th>5,800</th> <th>6,050</th> <th>6,300</th> <th>6,550</th> <th>6,800</th> <th>7,050</th> <th>7,300</th> <th>7,550</th> <th>7,800</th> </tr> <tr><td>51</td><td></td><td>\$19.85</td><td>\$12.25</td><td>\$1</td><td>\$9</td><td>\$17</td><td>\$25</td><td>\$33</td><td>\$42</td><td>\$50</td><td>\$58</td><td>\$66</td></tr> <tr><td>52</td><td></td><td>\$20.25</td><td>\$12.50</td><td>\$5</td><td>\$13</td><td>\$22</td><td>\$30</td><td>\$38</td><td>\$47</td><td>\$55</td><td>\$64</td><td>\$72</td></tr> <tr><td>53</td><td></td><td>\$20.66</td><td>\$12.75</td><td>\$9</td><td>\$18</td><td>\$26</td><td>\$35</td><td>\$44</td><td>\$52</td><td>\$61</td><td>\$69</td><td>\$78</td></tr> <tr><td>54</td><td></td><td>\$21.06</td><td>\$13.00</td><td>\$14</td><td>\$22</td><td>\$31</td><td>\$40</td><td>\$49</td><td>\$57</td><td>\$66</td><td>\$75</td><td>\$84</td></tr> <tr><td>55</td><td></td><td>\$21.47</td><td>\$13.25</td><td>\$18</td><td>\$27</td><td>\$36</td><td>\$45</td><td>\$54</td><td>\$63</td><td>\$72</td><td>\$81</td><td>\$90</td></tr> <tr><td>56</td><td></td><td>\$21.87</td><td>\$13.50</td><td>\$22</td><td>\$31</td><td>\$41</td><td>\$50</td><td>\$59</td><td>\$68</td><td>\$77</td><td>\$86</td><td>\$95</td></tr> <tr><td>57</td><td></td><td>\$22.28</td><td>\$13.75</td><td>\$27</td><td>\$36</td><td>\$45</td><td>\$55</td><td>\$64</td><td>\$73</td><td>\$83</td><td>\$92</td><td>\$101</td></tr> <tr><td>58</td><td></td><td>\$22.68</td><td>\$14.00</td><td>\$31</td><td>\$41</td><td>\$50</td><td>\$60</td><td>\$69</td><td>\$79</td><td>\$88</td><td>\$98</td><td>\$107</td></tr> <tr><td>59</td><td></td><td>\$23.09</td><td>\$14.25</td><td>\$35</td><td>\$45</td><td>\$55</td><td>\$64</td><td>\$74</td><td>\$84</td><td>\$94</td><td>\$103</td><td>\$113</td></tr> <tr><td>60</td><td></td><td>\$23.49</td><td>\$14.50</td><td>\$40</td><td>\$50</td><td>\$59</td><td>\$69</td><td>\$79</td><td>\$89</td><td>\$99</td><td>\$109</td><td>\$119</td></tr> <tr><td>61</td><td></td><td>\$23.90</td><td>\$14.75</td><td>\$44</td><td>\$54</td><td>\$64</td><td>\$74</td><td>\$84</td><td>\$94</td><td>\$105</td><td>\$115</td><td>\$125</td></tr> <tr><td>62</td><td></td><td>\$24.30</td><td>\$15.00</td><td>\$48</td><td>\$59</td><td>\$69</td><td>\$79</td><td>\$89</td><td>\$100</td><td>\$110</td><td>\$120</td><td>\$131</td></tr> <tr><td>63</td><td></td><td>\$24.71</td><td>\$15.25</td><td>\$53</td><td>\$63</td><td>\$74</td><td>\$84</td><td>\$95</td><td>\$105</td><td>\$116</td><td>\$126</td><td>\$136</td></tr> <tr><td>64</td><td></td><td>\$25.11</td><td>\$15.50</td><td>\$57</td><td>\$68</td><td>\$78</td><td>\$89</td><td>\$100</td><td>\$110</td><td>\$121</td><td>\$132</td><td>\$142</td></tr> <tr><td>65</td><td></td><td>\$25.52</td><td>\$15.75</td><td>\$61</td><td>\$72</td><td>\$83</td><td>\$94</td><td>\$105</td><td>\$116</td><td>\$126</td><td>\$137</td><td>\$148</td></tr> </table>															Rice Market Price		Rice Yield (lbs/acre)									(\$/bbl)	(\$/cwt.)	5,800	6,050	6,300	6,550	6,800	7,050	7,300	7,550	7,800	51		\$19.85	\$12.25	\$1	\$9	\$17	\$25	\$33	\$42	\$50	\$58	\$66	52		\$20.25	\$12.50	\$5	\$13	\$22	\$30	\$38	\$47	\$55	\$64	\$72	53		\$20.66	\$12.75	\$9	\$18	\$26	\$35	\$44	\$52	\$61	\$69	\$78	54		\$21.06	\$13.00	\$14	\$22	\$31	\$40	\$49	\$57	\$66	\$75	\$84	55		\$21.47	\$13.25	\$18	\$27	\$36	\$45	\$54	\$63	\$72	\$81	\$90	56		\$21.87	\$13.50	\$22	\$31	\$41	\$50	\$59	\$68	\$77	\$86	\$95	57		\$22.28	\$13.75	\$27	\$36	\$45	\$55	\$64	\$73	\$83	\$92	\$101	58		\$22.68	\$14.00	\$31	\$41	\$50	\$60	\$69	\$79	\$88	\$98	\$107	59		\$23.09	\$14.25	\$35	\$45	\$55	\$64	\$74	\$84	\$94	\$103	\$113	60		\$23.49	\$14.50	\$40	\$50	\$59	\$69	\$79	\$89	\$99	\$109	\$119	61		\$23.90	\$14.75	\$44	\$54	\$64	\$74	\$84	\$94	\$105	\$115	\$125	62		\$24.30	\$15.00	\$48	\$59	\$69	\$79	\$89	\$100	\$110	\$120	\$131	63		\$24.71	\$15.25	\$53	\$63	\$74	\$84	\$95	\$105	\$116	\$126	\$136	64		\$25.11	\$15.50	\$57	\$68	\$78	\$89	\$100	\$110	\$121	\$132	\$142	65		\$25.52	\$15.75	\$61	\$72	\$83	\$94	\$105	\$116	\$126	\$137	\$148		
Rice Market Price		Rice Yield (lbs/acre)																																																																																																																																																																																																																																										
(\$/bbl)	(\$/cwt.)	5,800	6,050	6,300	6,550	6,800	7,050	7,300	7,550	7,800																																																																																																																																																																																																																																		
51		\$19.85	\$12.25	\$1	\$9	\$17	\$25	\$33	\$42	\$50	\$58	\$66																																																																																																																																																																																																																																
52		\$20.25	\$12.50	\$5	\$13	\$22	\$30	\$38	\$47	\$55	\$64	\$72																																																																																																																																																																																																																																
53		\$20.66	\$12.75	\$9	\$18	\$26	\$35	\$44	\$52	\$61	\$69	\$78																																																																																																																																																																																																																																
54		\$21.06	\$13.00	\$14	\$22	\$31	\$40	\$49	\$57	\$66	\$75	\$84																																																																																																																																																																																																																																
55		\$21.47	\$13.25	\$18	\$27	\$36	\$45	\$54	\$63	\$72	\$81	\$90																																																																																																																																																																																																																																
56		\$21.87	\$13.50	\$22	\$31	\$41	\$50	\$59	\$68	\$77	\$86	\$95																																																																																																																																																																																																																																
57		\$22.28	\$13.75	\$27	\$36	\$45	\$55	\$64	\$73	\$83	\$92	\$101																																																																																																																																																																																																																																
58		\$22.68	\$14.00	\$31	\$41	\$50	\$60	\$69	\$79	\$88	\$98	\$107																																																																																																																																																																																																																																
59		\$23.09	\$14.25	\$35	\$45	\$55	\$64	\$74	\$84	\$94	\$103	\$113																																																																																																																																																																																																																																
60		\$23.49	\$14.50	\$40	\$50	\$59	\$69	\$79	\$89	\$99	\$109	\$119																																																																																																																																																																																																																																
61		\$23.90	\$14.75	\$44	\$54	\$64	\$74	\$84	\$94	\$105	\$115	\$125																																																																																																																																																																																																																																
62		\$24.30	\$15.00	\$48	\$59	\$69	\$79	\$89	\$100	\$110	\$120	\$131																																																																																																																																																																																																																																
63		\$24.71	\$15.25	\$53	\$63	\$74	\$84	\$95	\$105	\$116	\$126	\$136																																																																																																																																																																																																																																
64		\$25.11	\$15.50	\$57	\$68	\$78	\$89	\$100	\$110	\$121	\$132	\$142																																																																																																																																																																																																																																
65		\$25.52	\$15.75	\$61	\$72	\$83	\$94	\$105	\$116	\$126	\$137	\$148																																																																																																																																																																																																																																
51																																																																																																																																																																																																																																												
52																																																																																																																																																																																																																																												
53																																																																																																																																																																																																																																												
54																																																																																																																																																																																																																																												
55																																																																																																																																																																																																																																												
56																																																																																																																																																																																																																																												
57																																																																																																																																																																																																																																												
58																																																																																																																																																																																																																																												
59																																																																																																																																																																																																																																												
60																																																																																																																																																																																																																																												
61																																																																																																																																																																																																																																												
62																																																																																																																																																																																																																																												
63																																																																																																																																																																																																																																												
64																																																																																																																																																																																																																																												
65																																																																																																																																																																																																																																												
66																																																																																																																																																																																																																																												
67																																																																																																																																																																																																																																												
68																																																																																																																																																																																																																																												
69																																																																																																																																																																																																																																												
70			Developed by Michael Salassi and Michael Deliberto Department of Agricultural Economics and Agribusiness, LSU Agricultural Center 																																																																																																																																																																																																																																									
71																																																																																																																																																																																																																																												
72																																																																																																																																																																																																																																												
73																																																																																																																																																																																																																																												
74																																																																																																																																																																																																																																												

The second table presents estimates of net returns above specified costs for the landowner on a per planted rice acre basis. Expected rough rice market price and yield values, entered in cells F11 and F12 are listed in this net return table as the midpoints in cells I52 and D60. The specific estimated net return above specified costs value per planted acre for the landowner based on these specific expected values of price and yield entered is shown in the box in cell I60. Over the range of rough rice market prices and yields shown in the table, net return values which are positive for the landowner are highlighted in yellow.