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Annex Table 1. Rice Enterprise budget

Unit of analysis: 1 hectare

Inputs	Quantity of Inputs			Private Price			Private Budget			
	Low	Mid	High	Low	Mid	High	Low	Mid	High	
Fertiliser (kg/ha)										
Urea	110	138	52	5.58	5.58	5.58	613.8	770.04	290.16	
Suphala	130	158	31	8.9	8.9	8.9	1157	1406.2	275.9	
Seed (kg/ha)	57	82	57.5	17	17	17	969	1394	977.5	
Chemicals (kg/ha)							0	0	0	
Weedicide		38	26	22.24	22.24	22.24	0	845.12	578.24	
<i>Sub-total</i>							2740	4415	2122	
Labour (Labourdays/ha)										
Nursery preparation	17	19.76	16	80	120	150	1360	2371.2	2400	
Land preparation	36.84	32	13	80	120	150	2947.2	3840	1950	
FYM application	0	17	15	80	120	150	0	2040	2250	
Puddling	12.05		3.41	80	120	150	964	0	511.5	
Transplanting	25.47	30.4	21.7	80	120	150	2037.6	3648	3255	
Fertiliser application	0.62	3.33	0.87	80	120	150	49.6	399.6	130.5	
Herbicide application	0	2.39	1.46	80	120	150	0	286.8	219	
Bunding	10.75	7.29	7.2	80	120	150	860	874.8	1080	
Weeding	22.03	26.5	34	80	120	150	1762.4	3180	5100	
Harvesting	20.38	23.7	17	80	120	150	1630.4	2844	2550	
Stacking	14.97	11.72	10.5	80	120	150	1197.6	1406.4	1575	
Threshing	16.88	15		80	120	150	1350.4	1800	0	
Transport to home stead	8	11	7.6	80	120	150	640	1320	1140	
<i>Sub-total</i>	185	200	148	80	120	150	14799	24011	22161	
Non-tradable							0	0	0	
Draught animals (ox pair days/ha)	15	25	4	200	250	250	3000	6250	1000	
Powertiller (days/ha)				9			1000	0	0	9000
Farm Yard Manure		6440	5310.5	0.25	0.25	0.25	0	1610	1327.6	
<i>Sub-total</i>							3000	7860	11328	
Land (ha)	1	1	1	7400	7400	7400	7400	7400	7400	
Output										
Milled rice (kg/ha)	1144	2582	2509	20	25	25	22880	64550	62725	
Straw (bundles/ha)	2600	2850	3200	0.2	0.2	0.2	520	570	640	
<i>Sub-total</i>							23400	65120	63365	

Annex Table 2. Sensitivity Analysis of private profitability

Situations	Cost of production (Nu/Kg)			Returns to land			Returns to labour		
	Samtse	Lobesa	Paro	Samtse	Lobesa	Paro	Samtse	Lobesa	Paro
Base assumptions	17.50	13.83	13.94	2861.00	28834.00	27755.00	55.46	227.10	287.80
Labour cost +25%	20.70	16.16	16.14	-838.80	22831.10	22214.30	55.46	227.12	287.77
Labour cost - 25%	14.26	11.51	11.72	6560.80	34836.54	33294.83	55.46	227.10	287.80
Yield increases by 25%	14.00	11.07	11.15	8581.00	44971.34	43435.83	86.38	307.77	393.91
Yield decreases by 25%	23.33	18.44	18.58	-2859.00	12696.34	12073.33	24.54	146.47	181.63
Fert & Herb Cost+25%	17.89	14.13	14.05	2418.30	28078.50	27468.50	53.07	223.35	285.84
Fert & Herb Cost-25%	17.11	13.54	13.82	3303.70	29589.18	28040.65	57.86	230.90	289.71
Wagerate+25% & Yield+20%	17.28	13.46	13.46	3737.20	22831.14	34759.33	80.20	227.12	372.69
Price = 20 (Lobesa&Paro)	17.50	13.83	13.94	2861.00	15923.84	15209.58	55.46	162.60	202.86

Annex Table 3. Rice enterprise budget, traditional variety

Unit of analysis: 1 ha

Inputs/Output	Quantity		Private Price		Private Budget	
	Low	Mid	Low	Mid	Low	Mid
Fertiliser (kg/ha)						
Urea	80	80	5.58	5.58	446.4	446.4
Suphala	90	129	8.9	8.9	801	1148.1
Farm Yard Manure		6440	0.5	0.5	0	3220
Seed	57	82	17	17	969	1394
Chemicals (kg/ha)						
Pesticide					0	0
Weedicide		38	22.24	22.24	0	845.12
<i>Sub-total</i>					2216	7054
Labour (Labourdays/ha)						
Nursery preparation	17	19.76	80	120	1360	2371.2
Land preparation	37	32	80	120	2960	3840
FYM application	0	17	80	120	0	2040
Puddling	12		80	120	960	0
Transplanting	25.5	30.4	80	120	2040	3648
Fertiliser application	0.62	3.33	80	120	49.6	399.6
Herbicide application	0	2.39	80	120	0	286.8
Bunding	10.75	7.29	80	120	860	874.8
Weeding	22	26.5	80	120	1760	3180
Harvesting	20	23.7	80	120	1600	2844
Stacking	15	11.72	80	120	1200	1406.4
Threshing	17	15	80	120	1360	1800
Transport to home stead	8	11	80	120	640	1320
<i>Sub-total</i>	185	200	80	120	14790	24011
Draught power					0	0
Draught animals (ox pair days/ha)	15	25	200	250	3000	6250
					3000	6250
<i>Land (ha)</i>	1	1	7400	7400	7400	7400
Output						
Milled rice (kg/ha)	1064	2502	20	25	21280	62550
Straw (bundles/ha)	2600	2850	0.2	0.2	520	570
Summary						
		Samtse		Lobesa		
Gross Returns (Nu/ha)		21800		63120		
Cost of inputs (Nu/ha)		2216.4		7053.62		
Cost of draught power (Nu/ha)		3000		6250		
Labour Cost (Nu/ha)		14789.6		24010.8		
Net returns to land (Nu/ha)		1794		25805.6		
Returns to labour (Nu/labourday)		49.67599		211.987		
Cost of production (Nu/kg)		18.31391		14.686		

Annex Table 4. Rice enterprise budget for modern variety

Unit of analysis: 1 hectare

Inputs/Output	Quantity		Private Price		Private Budget	
	Samtse	Lobesa	Samtse	Lobesa	Samtse	Lobesa
Fertiliser (kg/ha)						
Urea	120	155	5.58	5.58	669.6	864.9
Suphala	140	167	8.9	8.9	1246	1486.3
Farm Yard Manure		6440	0.5	0.5	0	3220
Seed	57	82	17	17	969	1394
Chemicals (kg/ha)					0	0
Pesticide					0	0
Weedicide		38	22.24	22.24	0	845.12
<i>Sub-total</i>					2884.6	7810.32
Labour (Labourdays/ha)						
Nursery preparation	17	19.76	80	120	1360	2371.2
Land preparation	37	32	80	120	2960	3840
FYM application	0	17	80	120	0	2040
Puddling	12		80	120	960	0
Transplanting	25.5	30.4	80	120	2040	3648
Fertiliser application	0.62	3.33	80	120	49.6	399.6
Herbicide application	0	2.39	80	120	0	286.8
Bunding	10.75	7.29	80	120	860	874.8
Irrigation			80	120	0	0
Crop Guarding		0	80	120	0	0
Weeding	22	26.5	80	120	1760	3180
Harvesting	20	23.7	80	120	1600	2844
Stacking	15	11.72	80	120	1200	1406.4
Threshing	17	15	80	120	1360	1800
Transport to home stead	8	11	80	120	640	1320
<i>Sub-total</i>	185	200	80	120	14789.6	24010.8
Draught power					0	0
Draught animals (ox pair days/ha)	15	25	200	250	3000	6250
<i>Land (ha)</i>	1	1	7400	7400	7400	7400
Output						0
Milled rice (kg/ha)	1642	2622	20	25	32840	65550
Straw (bundles/ha)	2600	2850	0.2	0.2	520	570
			Samtse	Lobesa		
Gross Returns (Nu/ha)			33360.00	66120.00		
Cost of inputs (Nu/ha)			2884.60	7810.32		
Cost of draught power (Nu/ha)			3000.00	6250.00		
Labour Cost (Nu/ha)			14789.60	24010.80		
Net returns to land (Nu/ha)			12685.80	28048.88		
Returns to labour (Nu/labourday)			108.59	223.20		
Cost of production (Nu/kg)			12.27	14.30		

Annex Table 5. Social budget by study locations

Unit of analysis: 1 ha

Inputs	Quantity			Social Prices			Social Budget		
	Samtse	Lobesa	Paro	Samtse	Lobesa	Paro	Samtse	Lobesa	Paro
Fertiliser (kg/ha)									
Urea	110	138	52	6.5	6.9	6.7	715	952.2	348.4
Suphala	130	158	31	10.12	10.6	10.4	1315.6	1674.8	322.4
Seed	57.5	82	57.5	17	17	17	977.5	1394	977.5
Chemicals (kg/ha)							0	0	0
Pesticide							0	0	0
Weedicide		38	26	24.8	25.3	25.1	0	961.4	652.6
<i>Sub-total</i>							3008.1	4982.4	2300.9
<i>Labour (Labourdays/ha)</i>							0	0	0
Nursery preparation	17	19.76	16	100	120	150	1700	2371.2	2400
Land preparation	36.84	32	13	100	120	150	3684	3840	1950
FYM application	0	17	15	100	120	150	0	2040	2250
Puddling	12.05		3.41	100	120	150	1205	0	511.5
Transplanting	25.47	30.4	21.7	100	120	150	2547	3648	3255
Fertiliser application	0.62	3.33	0.87	100	120	150	62	399.6	130.5
Herbicide application	0	2.39	1.46	100	120	150	0	286.8	219
Bunding	10.75	7.29	7.2	100	120	150	1075	874.8	1080
Irrigation				100	120	150	0	0	0
Crop Guarding		0		100	120	150	0	0	0
Weeding	22.03	26.5	34	100	120	150	2203	3180	5100
Harvesting	20.38	23.7	17	100	120	150	2038	2844	2550
Stacking	14.97	11.72	10.5	100	120	150	1497	1406.4	1575
Threshing	16.88	15		100	120	150	1688	1800	0
Transport to home stead	8	11	7.6	100	120	150	800	1320	1140
<i>Sub-total</i>	184.99	200.09	147.74	100	120	150	18499	24011	22161
<i>Non-tradable</i>							0	0	0
Draught animals (ox pair days/ha)	15	25	4	200	250	250	3000	6250	1000
Powertiller (days/ha)			9				1000	0	9000
Farm Yard Manure		6440	5310.5	0.5	0.5	0.5	0	3220	2655.25
<i>Sub-total</i>							3000	9470	12655
<i>Land (ha)</i>	1	1	1	7400	7400	7400	7400	7400	7400
Output			22.5				0	0	0
Milled rice (kg/ha)	1144	2582	2509	22	22.5	22.3	25168	58095	55950.7
Straw (bundles/ha)	1000	2850	3200	2	2	2	2000	5700	6400

Annex Table 6. Thailand milled rice prices, f.o.b. Bangkok 1/

Month	100 percent Grade B	5 percent parboiled	5 percent Broken	15 percent Broken	35 percent broken	A.1 Special 2/
January	220	209	213	204	195	171
February	220	214	213	205	197	182
March	244	241	238	231	222	207
April	247	252	241	234	226	215
May	239	252	233	226	220	213
June	234	244	229	222	217	212
July	236	240	231	225	219	210
August	244	253	239	233	225	212
September	240	251	235	229	222	206
October	249	254	244	237	227	201
November	264	264	259	252	241	212
Average 3/	249	256	244	238	229	208

1/ Simple average weekly price quotes. Includes costs of bags

Source: Weekly price reports, U.S. Embassy, Bangkok