

Appendix 8:
List of the buyers
Paddy Transaction Amount by Area(Buyer), 2005-06

List of Rice Miller and Trader Bought Paddy From OPM Svay Antor

From December 2004 to August 31st, 2005

Name	Village	Commune	District	Telephone	Bought Amount (kg)
Mr. Sear	Svay Antor	Svay Antor	Prey Veng	012-453 900	321,120.10
Ms. Houng	Svay Antor	Svay Antor	Prey Veng	011-786 351	32,400.31
Mr. Tech Ngoung	Svay Antor	Svay Antor	Prey Veng	012-961 108	2,535.00
Ms. Sreang	Svay Antor	Svay Antor	Prey Veng	011-658 408	143,258.20
Ms. Mum	Svay Antor	Svay Antor	Prey Veng	012-642 825	709.70
Gnuon Heang	Svay Antor	Svay Antor	Prey Veng	012-680 296	8,272.30
Mr. Boran	Svay Antor	Svay Antor	Prey Veng		44.60
Mr. Thol	Svay Antor	Svay Antor	Prey Veng		98.30
Mr. Yong	Svay Antor	Svay Antor	Prey Veng		510.30
Sub-total					508,948.81
Mr. Ngy Kok Veng	Pour Chendam	Svay Antor	Prey Veng	012-962 352	129,320.40
Mr. Chhun Thom	Pour Chendam	Svay Antor	Prey Veng	012-947 776	14,436.60
Mr. Try	Pour Chendam	Svay Antor	Prey Veng		15,4.10
Mr. Khiev Muor	Pour Chendam	Svay Antor	Prey Veng	011 660 999	15,178.70
Mrs. Mom	Pour Chendam	Svay Antor	Prey Veng		1,112.30
Mr. Sna	Pour Chendam	Svay Antor	Prey Veng		483.70
Nop	Pour Chendam	Svay Antor	Prey Veng		112.10
Pai Sophally	Pour Chendam	Svay Antor	Prey Veng		53.40
Sinak	Pour Chendam	Svay Antor	Prey Veng		600.30
Mr. Chheng Sarak	Pour Chendam	Svay Antor	Prey Veng		27.30
Sub-total					16,732.90
Mrs. Meas	Thlav	Svay Antor	Prey Veng		4,962.30
Mr. Veng	Thlav	Svay Antor	Prey Veng	012-459 227	323,527.80
Sub-total					338,490.10
Mr. Kheang	Mebon	Mebon	Prey Veng	012-371 386	370,567.70
Mrs. Teang	Mebon	Mebon	Prey Veng		3,028.90
Mr. Bun Heang	Mebon	Mebon	Prey Veng		353.80
Mr. Yin	Mebon	Mebon	Prey Veng		540.40
Mr. Lin	Mebon	Mebon	Prey Veng	012-218 769	5.20
Sub-total					406,426.00
Mrs. Meng	Chrey Sar	Chrey	Prey Veng		2,349.30
Sub-total					2,349.30

Mr. Pheoun Pheat	Angkor Tret	Angkor Tret	Prey Veng		426.50
Sub-total					426.50
Mr. Vanny	Beung Veng	Angkor Tret	Prey Veng		438.00
Sub-total					438.00
Mr. Ly Hiek Srong	Prey Ksay	Prey Ksay	Peam Ro		5,705.60
Mrs. Huong Leng	Prey Ksay	Prey Ksay	Peam Ro	011-576 753	37,589.80
Sub-total					43,295.40
Mr. Leng	Neak Loeung	Neak Loeung	Peam Ro	016-750 052	29,415.20
Sub-total					29,415.20
Ms.Sokha	07	Tumnuptek	Cham Mar Man	Phnom Penh	75,999.80
Sub_total					75,999.80
Ms.Gnov Huong	Prek Kandieng	Prey Kandieng	Peam Ror	012-956 445	5,299.40
Sub_total					5,299.40
Mr.Samith	Ou Thom	Banteayneang	Mongkolborei		51.90
Sub_total					51.90
Mr.Dy Rada	Sala Kanseng	Svay Dangkom	Siem Riep		154.50
Sub_total					154.50
Mr. Thong Own	6R	208	Doun Penh		718.60
Sub_total					718.60
Grand-total					1,588,746.41

Paddy Transaction Amount by Area(Buyer)

September 2005 to March 10, 2006

Name	Province	Distrcit	Commune	Village	Bought Amount(kg)
Mr. Kry Yarith	Kampong Cham	Tboung Khmum	Moung Riev	Cheung Khal	2,638.6
Sub-total					2,638.6
Ms. Reoung Sophany	Phnom Penh	Chamkar Mon	Tumnob Tuek	07	28,439.3
Ms. Uch Sokha	Phnom Penh	Chamkar Mon	Tumnob Tuek	07	317,248.5
Sub-total					345,687.8
Mr. Hok Pangawath	Phnom Penh	Ruessei Kaev	Tuek Thla	92	220,442.4
Sub-total					220,442.4
Mr. Dok Luon	Phnom Penh	Tuol Kork	Boeng Kak Muoy	St 349	729,476.9
Sub-total					729,476.9
Mr. Eam Savy	Prey Veng	KAMPONG	Kampong Leav	Phum Buon	31.3
Sub-total					31.3
Mr. Chhean	Prey Veng	KAMPONG	Kampong Leav	Phum Pram	59,783.5
Mr. Yazami	Prey Veng	KAMPONG	Kampong Leav	Phum Pram	362,380.1
Sub-total					422,163.6
Ms. Srey	Prey Veng	KAMPONG	Prasat	Kor Andeok	66,602.0
Sub-total					66,602.0
Mr. Leng	Prey Veng	PEAM RO	Neak Loeang	Neak Loeang	64,278.1
Mr. Nam	Prey Veng	PEAM RO	Neak Loeang	Neak Loeang	18,675.8
Sub-total					82,953.9
Mr. Mai	Prey Veng	PEAM RO	Preaek Khsay Ka	Preaek Khsay	210,735.4
Sub-total					210,735.4
Mr. Ngouv Huong	Prey Veng	PEAM RO	Prey Kandieng	Prey Kandieng	16,071.3
Sub-total					16,071.3
Mr. Rith	Prey Veng	PREY VENG	Angkor Tret	Voat Trach	11,445.4
Sub-total					11,445.4
Ms. Meng	Prey Veng	Prey Veng	Chrey	Chrey sar	2,349.3
Sub-total					2,349.3
Mr. Kheang	Prey Veng	PREY VENG	Me Bon	Me Bon	149,473.1
Mr. Khmor	Prey Veng	PREY VENG	Me Bon	Me Bon	584.6
Ms. Lin	Prey Veng	PREY VENG	Me Bon	Me Bon	6,027.0
Sub-total					156,084.7
Mr. Bog Sag	Prey Veng	PREY VENG	Svay Antor	Pou Chentam	88.4
Mr. Long Vong Sa-	Prey Veng	PREY VENG	Svay Antor	Pou Chentam	1,597.1

Mr. Mon	Prey Veng	PREY VENG	Svay Antor	Pou Chentam	20,472.1
Mr. Nang	Prey Veng	PREY VENG	Svay Antor	Pou Chentam	214.2
Mr. Tong Ngorn	Prey Veng	PREY VENG	Svay Antor	Pou Chentam	41,357.6
Mr. Ngy Kok Veng	Prey Veng	PREY VENG	Svay Antor	Pou Chentam	29,479.5
Mr. Than	Prey Veng	PREY VENG	Svay Antor	Pou Chentam	99.3
Mr. Try	Prey Veng	PREY VENG	Svay Antor	Pou Chentam	7,607.9
Mr. Va Chheng Oeun	Prey Veng	PREY VENG	Svay Antor	Pou Chentam	121,603.1
Mr. Veasna	Prey Veng	PREY VENG	Svay Antor	Pou Chentam	169.3
Sub-total					222,688.5
Ms. Hong	Prey Veng	PREY VENG	Svay Antor	Svay Antor Ti	21.4
Mr. Sear	Prey Veng	PREY VENG	Svay Antor	Svay Antor Ti	135,662.9
Mr. Sreang	Prey Veng	PREY VENG	Svay Antor	Svay Antor Ti	74,912.2
Sub-total					210,596.5
Ms. Keang	Prey Veng	PREY VENG	Svay Antor	Thlav	149,473.1
Ms. Meas	Prey Veng	PREY VENG	Svay Antor	Thlav	5,491.3
Mr. Ra	Prey Veng	PREY VENG	Svay Antor	Thlav	72.4
Mr. Thorn	Prey Veng	PREY VENG	Svay Antor	Thlav	80.8
Mr. Veng	Prey Veng	PREY VENG	Svay Antor	Thlav	209,305.4
Sub-total					364,423.0
Mr. Da	Siem Reap	Siem Reap	Svay Dangcum	Sala Kansaeng	119.3
Sub-total					119.3
Mr. Sok Ty	Svay Rieng	SVAY RIENG	Veal Yon	Veal Yon	554,442.6
Sub-total					554,442.6

Grand Total:

Paddy Transaction Amount by Area (to the Buyers, 2005-2006)
As of Date 31 August, 2006

Name	Province	Distrcit	Commune	Village	Bought Amount (kg)
Mr. Kry Yarith	Kampong Cham	Tboung Khmum	Moung Riev	Cheung Khal	948.70
Sub-total					948.70
Mr. Yazami	Prey Veng	Kampong Leav	Kampong Leav	Phum Buon	471,008.90
Mr. Chhean	Prey Veng	Kampong Leav	Kampong Leav	Phum Pram	59,783.50
Sub-total					530,792.40
Prey Veng PDAFF	Prey Veng	Kampong Leav	Kampong Leav	Phum Pramby	68,711.50
Sub-total					68,711.50
Mr. Dok Luon	Phnom Penh	Tuol Kork	Boeng Kak Muoy	St 349	842,727.60
Sub-total					842,727.60
Mr. Hok Pangawath	Phnom Penh	Ruessei Kaev	Tuek Thla	92	240,933.20
Sub-total					240,933.20
Ms. Reoung Sophany	Phnom Penh	Chamkar Mon	Tumnob Tuek	7	28,439.30
Ms. Uch Sokha	Phnom Penh	Chamkar Mon	Tumnob Tuek	7	304,346.00
Sub-total					332,785.30
Mr. Kheang	Prey Veng	Prey Veng	Me Bon	Me Bon	210,244.10
Ms. Lin	Prey Veng	Prey Veng	Me Bon	Me Bon	6,027.00
Sub-total					216,271.10
Mr. Loem Rit	Prey Veng	Prey Veng	Angkor Tret	Voat Trach	27,474.60
Sub-total					27,474.60
Mr. Nam	Prey Veng	Peam Ro	Neak Loeang	Neak Loeang	18,675.80
Mr. Ly Leng	Prey Veng	Peam Ro	Neak Loeang	Neak Loeang	134,667.50
Sub-total					153,343.30
Mr. Mai	Prey Veng	Peam Ro	Preaek Khsay Ka	Preaek Khsay	474,436.70
Sub-total					474,436.70
Ms. Sea Nai Ear	Prey Veng	Pea Reang	Prey Pnov	Prey Pnov	8,985.20
Sub-total					8,985.20
Ms. Srey	Prey Veng	Kampong Trabaek	Prasat	Kor Andeok	70,304.71
Sub-total					70,304.71
Mr. Sok Ty	Svay Rieng	Svay Rieng	Veal Yon	Veal Yon	576,881.50
Sub-total					576,881.50
Mr. Sear	Prey Veng	Prey Veng	Svay Antor	Svay Antor Ti Pir	160,409.90
Sub-total					160,409.90
Mr. Va Chheng Oeun	Prey Veng	Prey Veng	Svay Antor	Pou Chentam	121,603.10
Sub-total					121,603.10
Mr. Gnam	Prey Veng	Prey Veng	Svay Antor	Pou Chentam	351.20
Mr. Try	Prey Veng	Prey Veng	Svay Antor	Pou Chentam	7,607.90
Mr. Tong Ngorn	Prey Veng	Prey Veng	Svay Antor	Pou Chentam	94,347.20
Mr. Veasna	Prey Veng	Prey Veng	Svay Antor	Pou Chentam	1,477.00
Ms. Vong Samphos	Prey Veng	Prey Veng	Svay Antor	Pou Chentam	90.60
Mr. Long Vong Samith	Prey Veng	Prey Veng	Svay Antor	Pou Chentam	1,527.60
Mr. Nang	Prey Veng	Prey Veng	Svay Antor	Pou Chentam	214.20
Mr. Ngy Kok Veng	Prey Veng	Prey Veng	Svay Antor	Pou Chentam	114,798.50
Mr. Month	Prey Veng	Prey Veng	Svay Antor	Pou Chentam	18,604.60
Mr. Morn	Prey Veng	Prey Veng	Svay Antor	Pou Chentam	1,867.50
Sub-total					240,886.30
Mr. Veng	Prey Veng	Prey Veng	Svay Antor	Thlav	499,458.29
Mr. Bun Hou	Prey Veng	Prey Veng	Svay Antor	Thlav	3,038.00
Mr. Keang	Prey Veng	Prey Veng	Svay Antor	Thlav	5,524.30
Mr. Meas	Prey Veng	Prey Veng	Svay Antor	Thlav	30,231.30
Mr. Oeun	Prey Veng	Prey Veng	Svay Antor	Thlav	106.00
Mr. Ra	Prey Veng	Prey Veng	Svay Antor	Thlav	72.40
Sub-total					538,430.29
Ms. Sreang	Prey Veng	Prey Veng	Svay Antor	Svay Antor Ti Pir	74,912.20
Sub-total					74,912.20
Ms. Y Ngouv	Prey Veng	Peam Ro	Prey Kandieng	Prey Kandieng	16,071.30
Sub-total					16,071.30

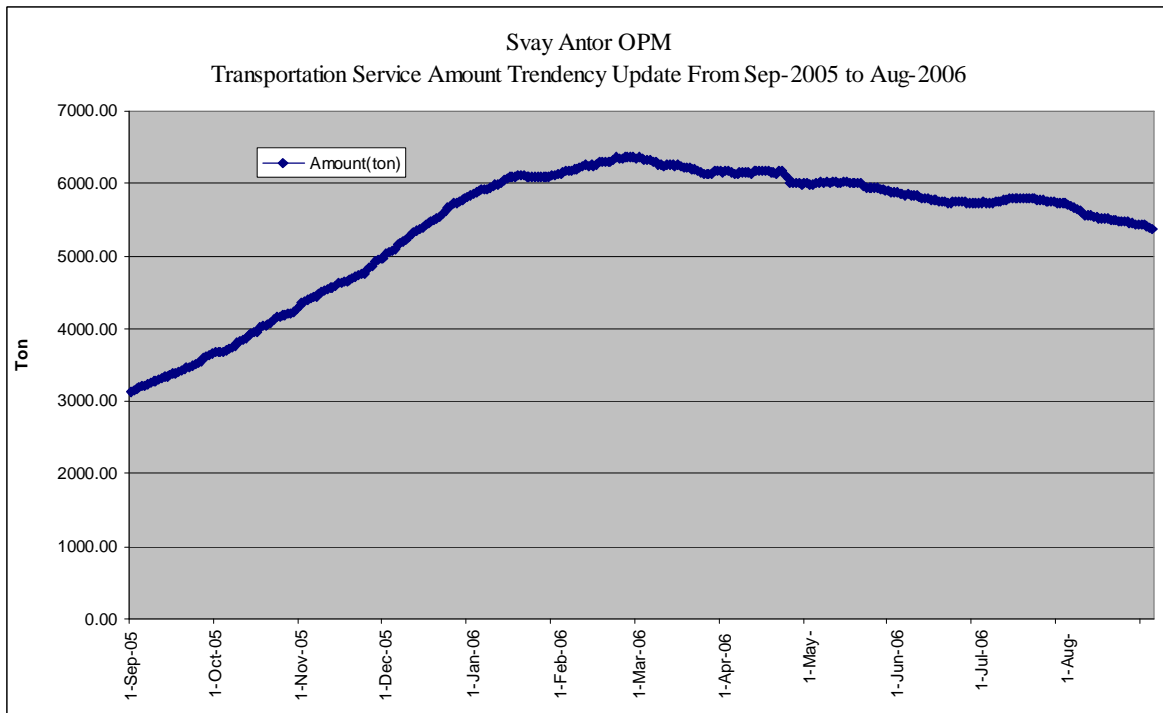
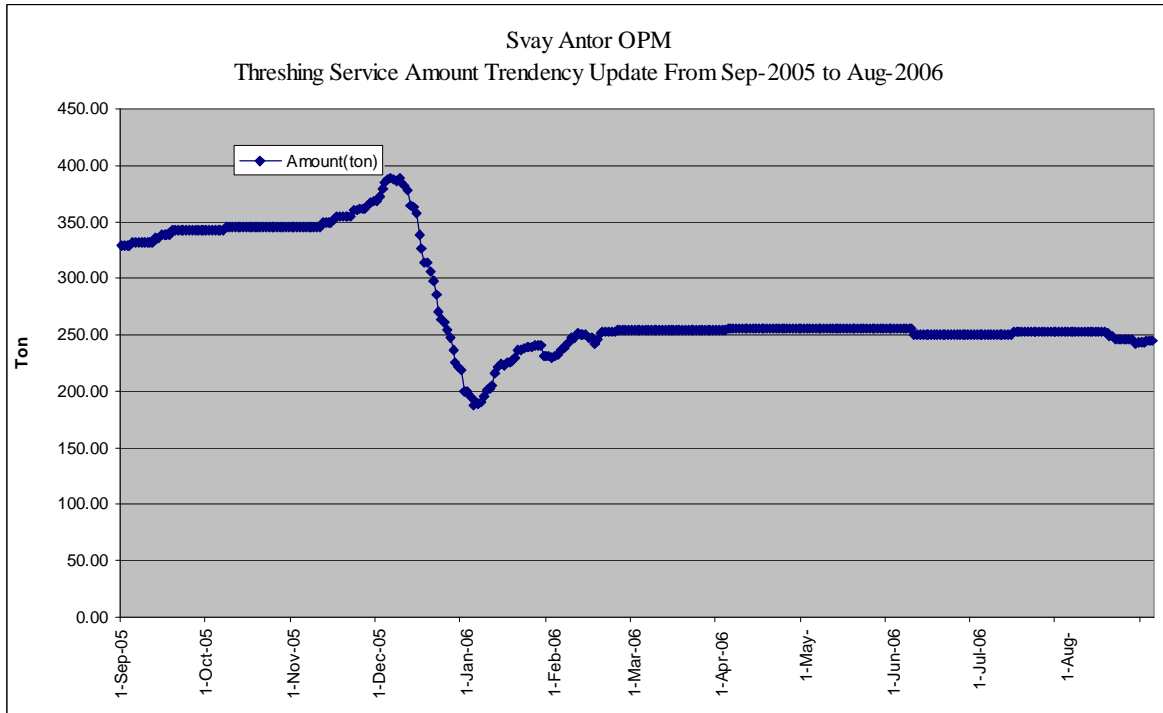
Grand Total: 4,696,908.90

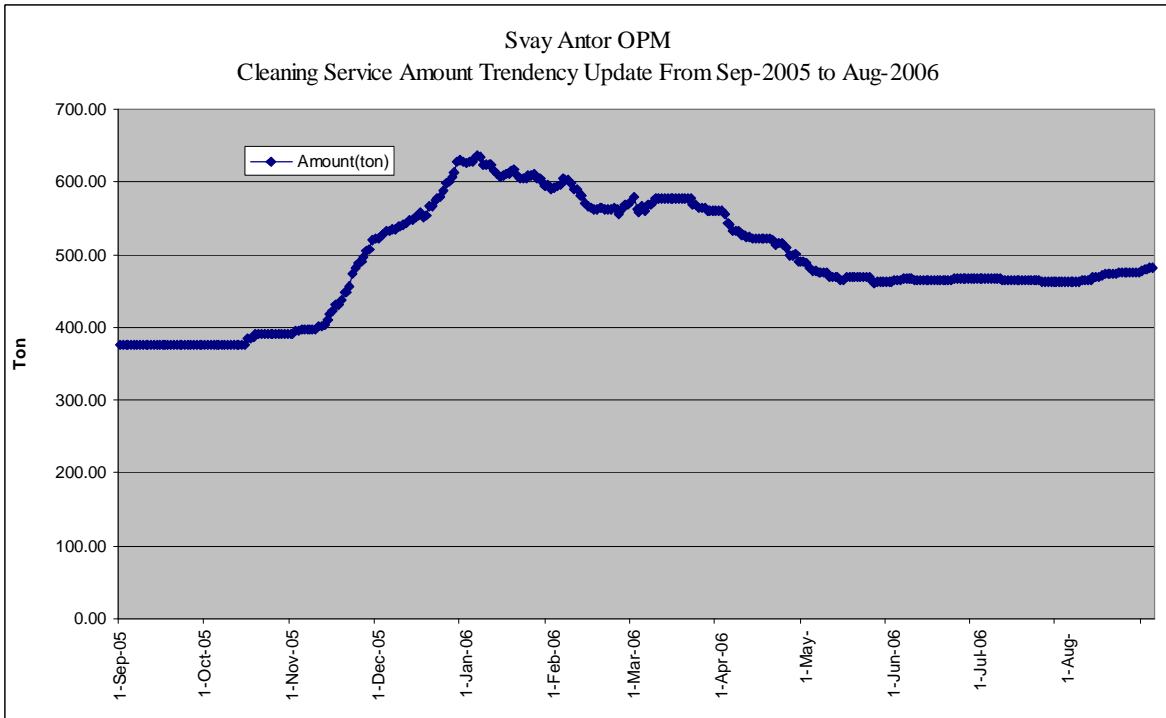
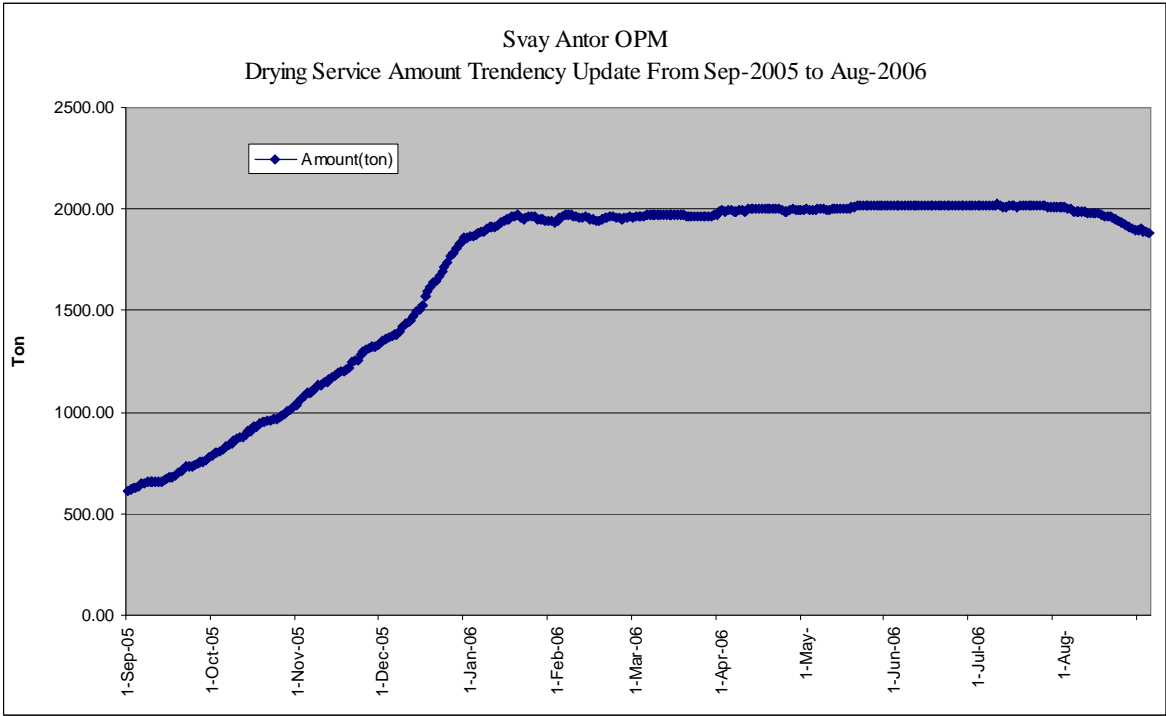
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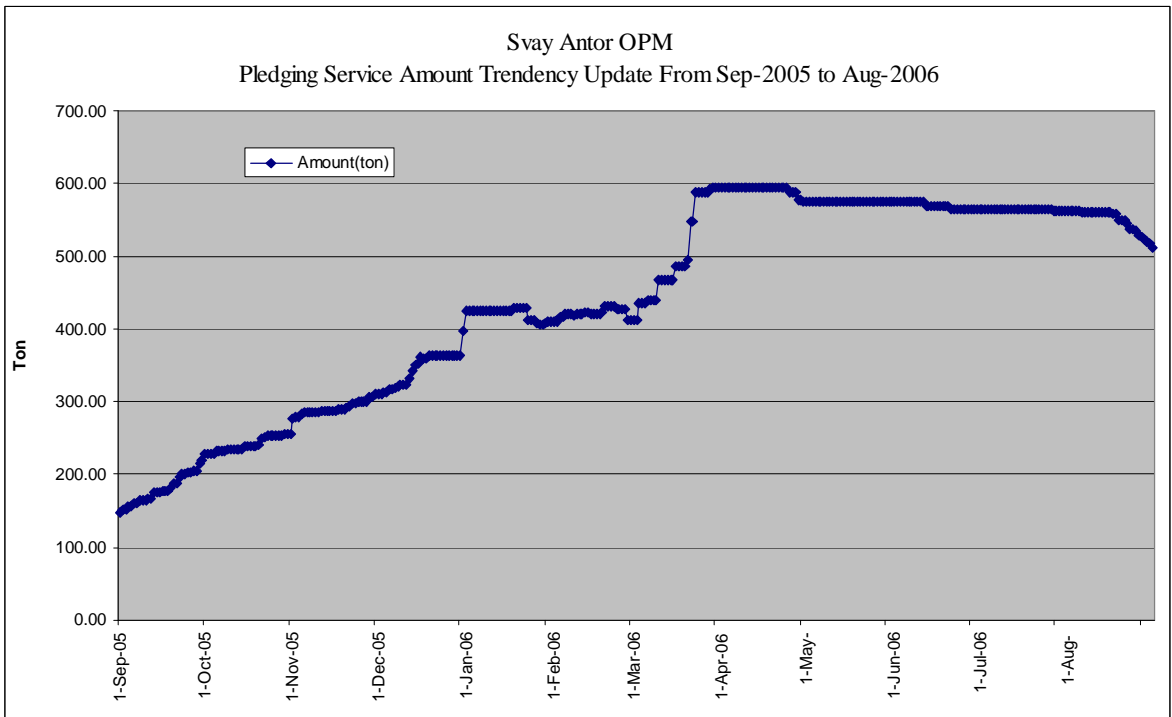
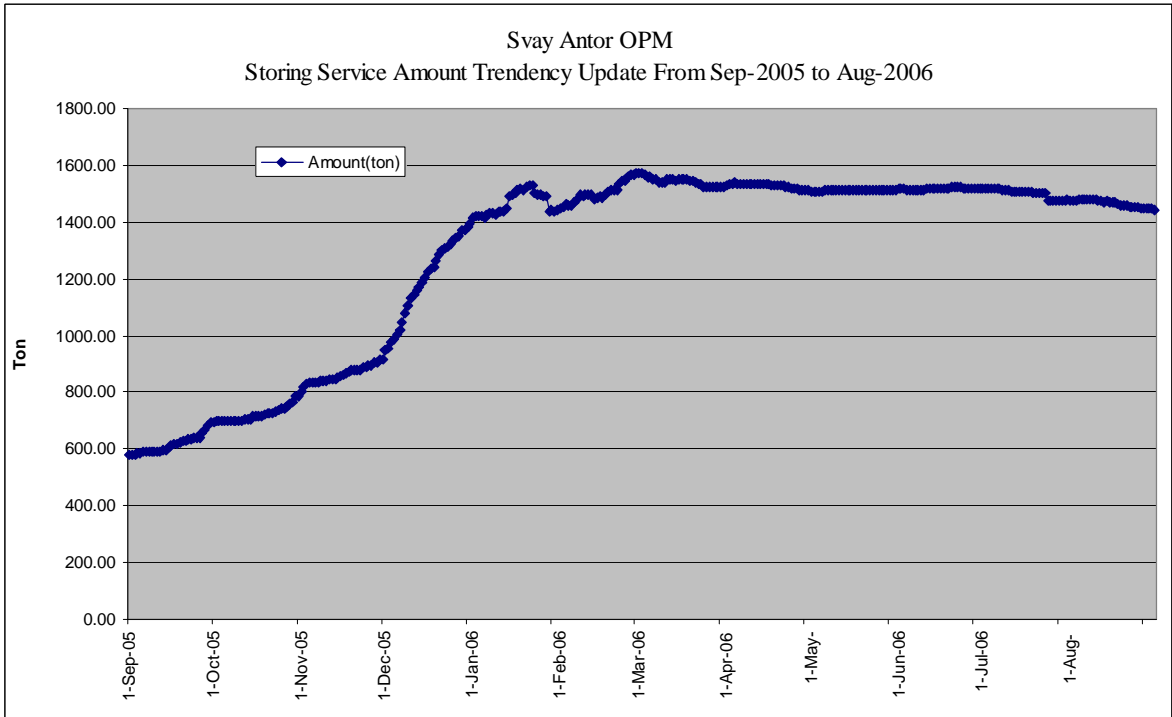
Rice Miller/Trader	Amount (ton)	Percentage (%)
Neak Lueon Rice Miller	153,343.30	3.26%
Svay Antor Rice Miller (near OPM)	1,230,909.79	26.21%
Vietnamese Trader	1,121,622.91	23.88%
Others	122,191.30	
Sub-total:	2,628,067.30	
Svay Antor Mid-Trader (near OPM)	121,603.10	2.59%
Phnom Penh Mid-Trader	1,416,446.10	30.16%
Kampong Leav Mid-Trader (near OPM)	530,792.40	11.30%
Sub-total:	2,068,841.60	
Grand total:	4,696,908.90	

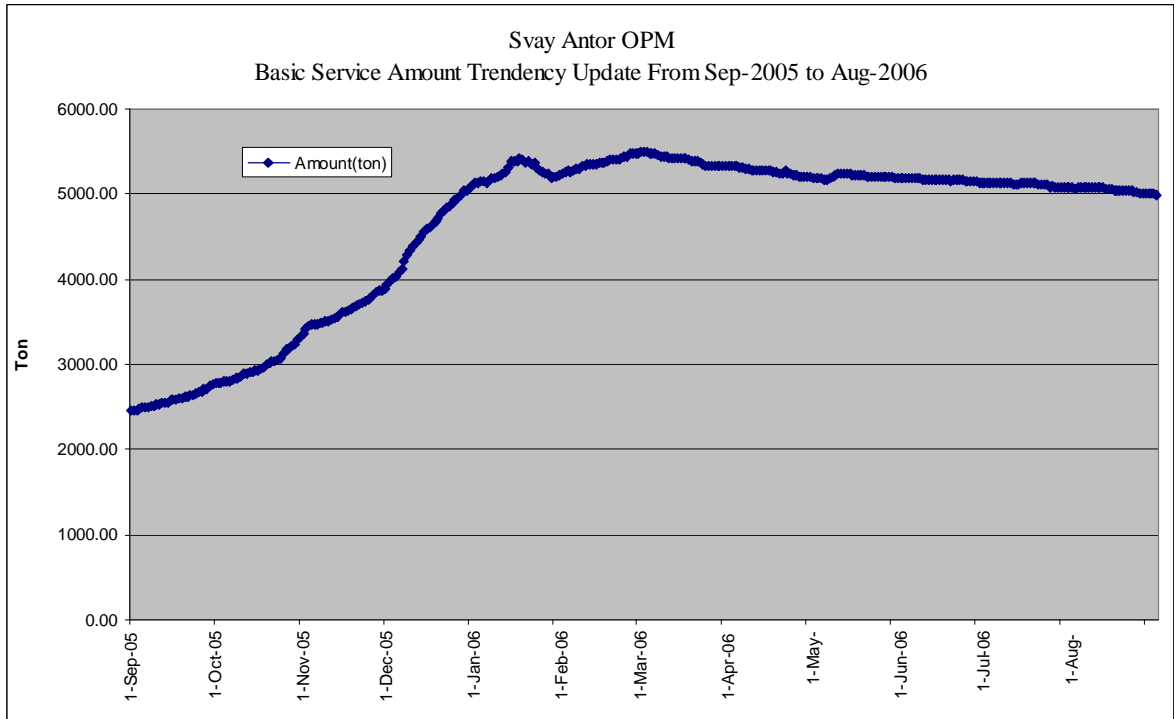
**Appendix 9:
Daily Secular Movement for a Year**

Daily Secular Movement of Paddy Handling Amount by service

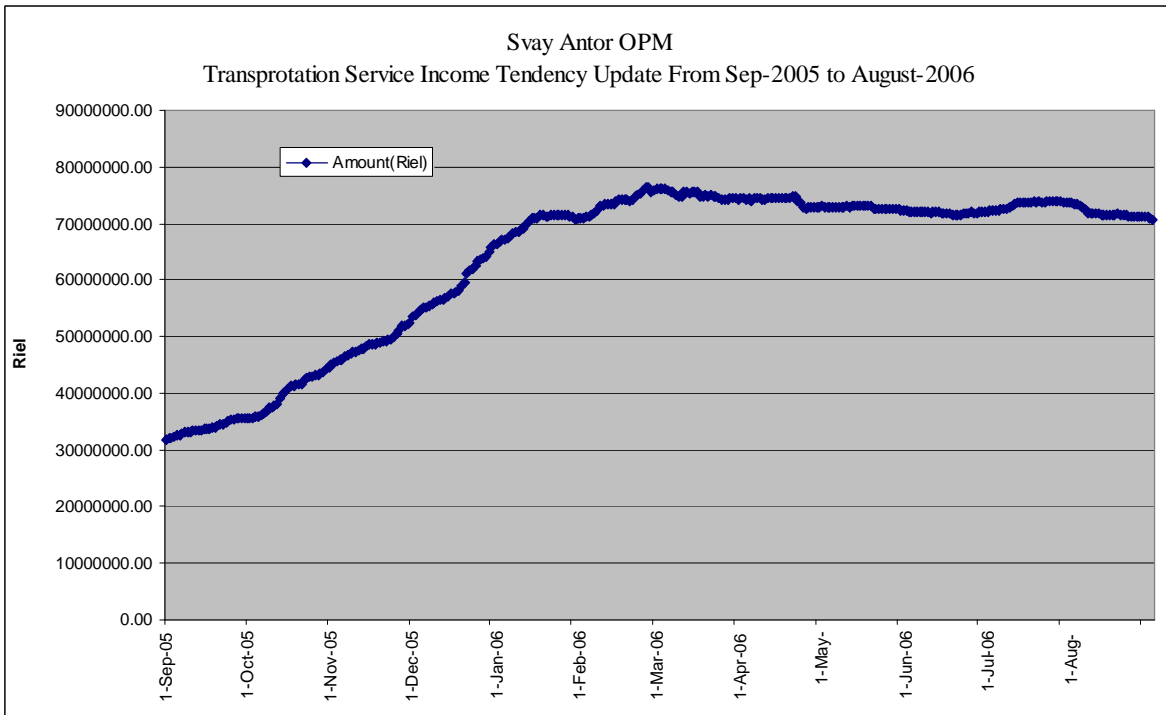
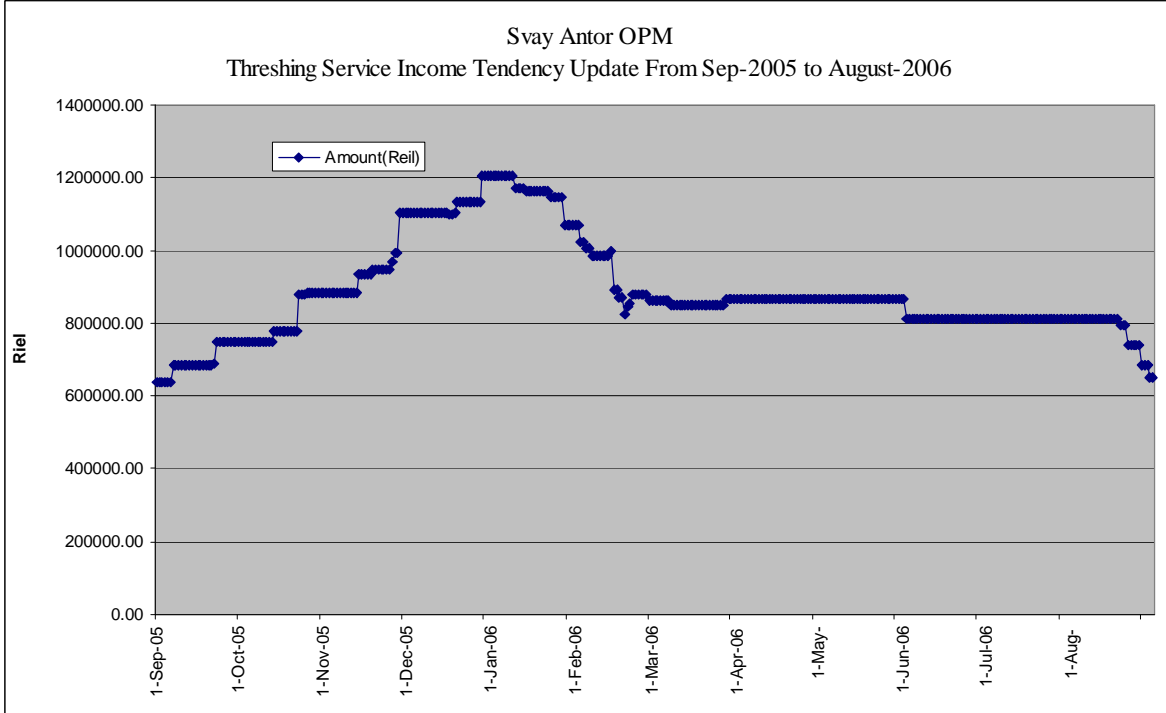


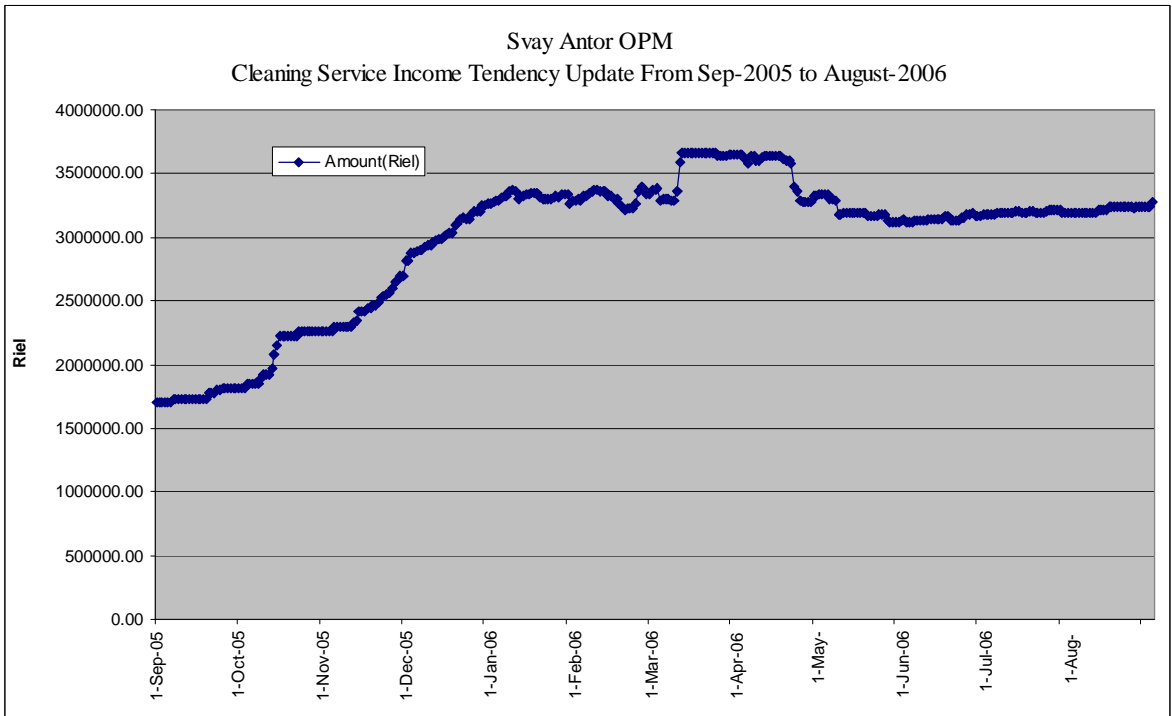
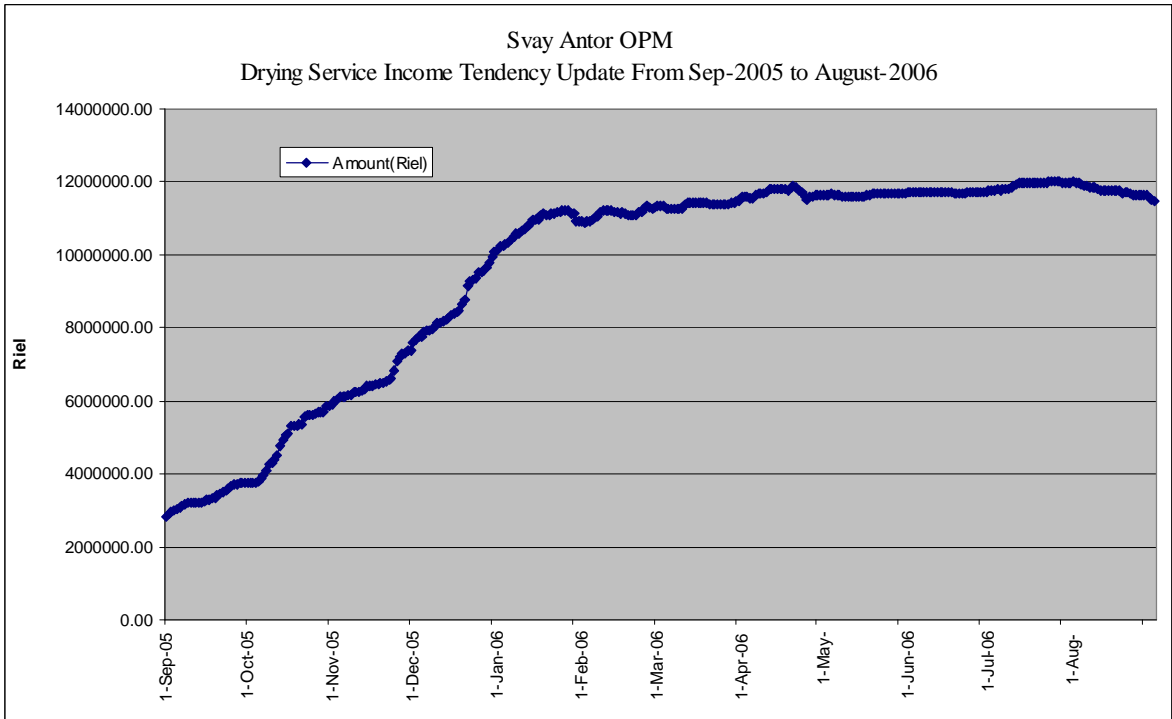


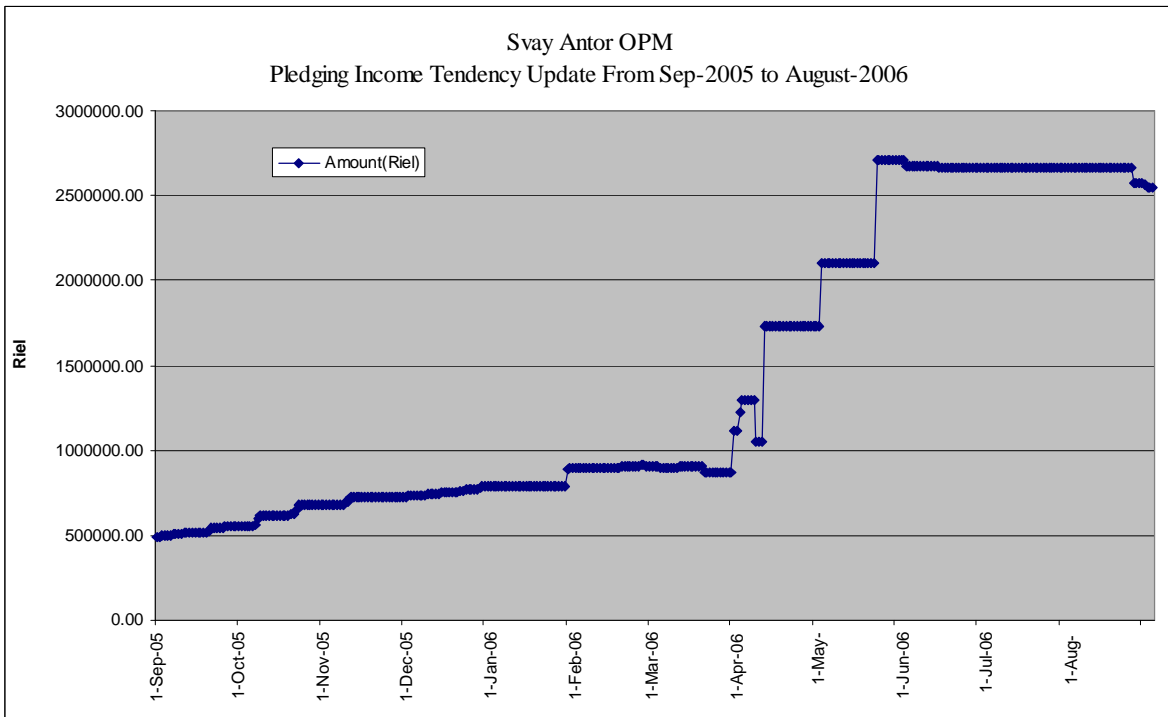
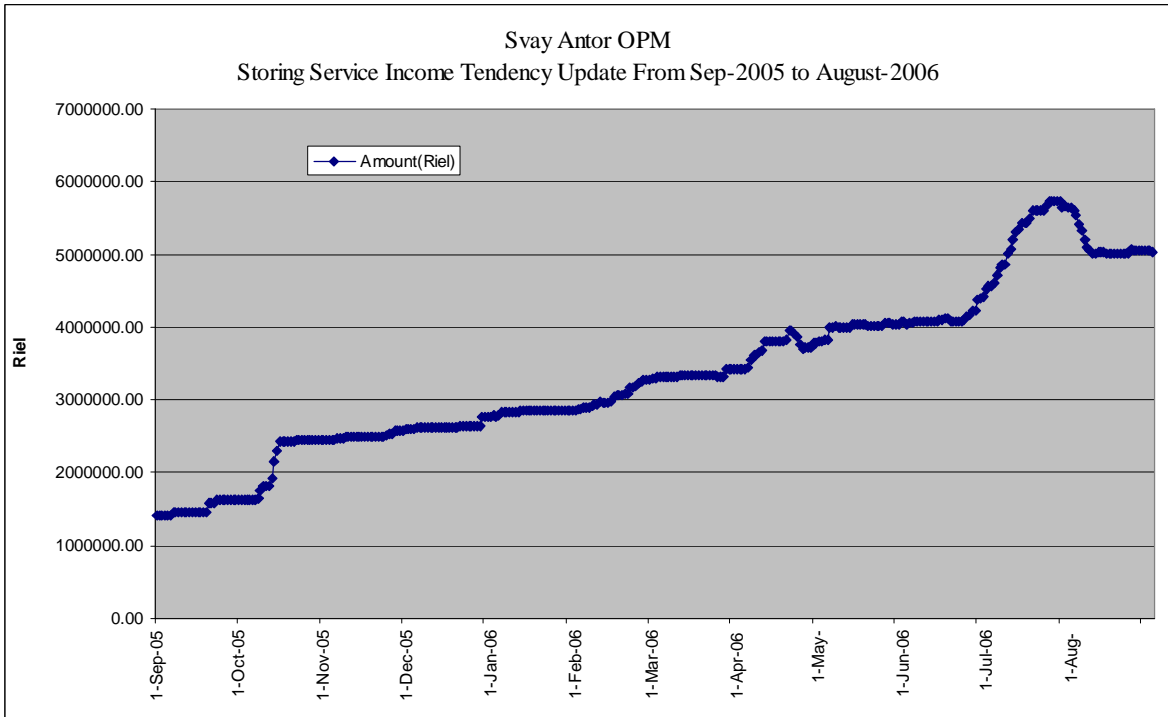


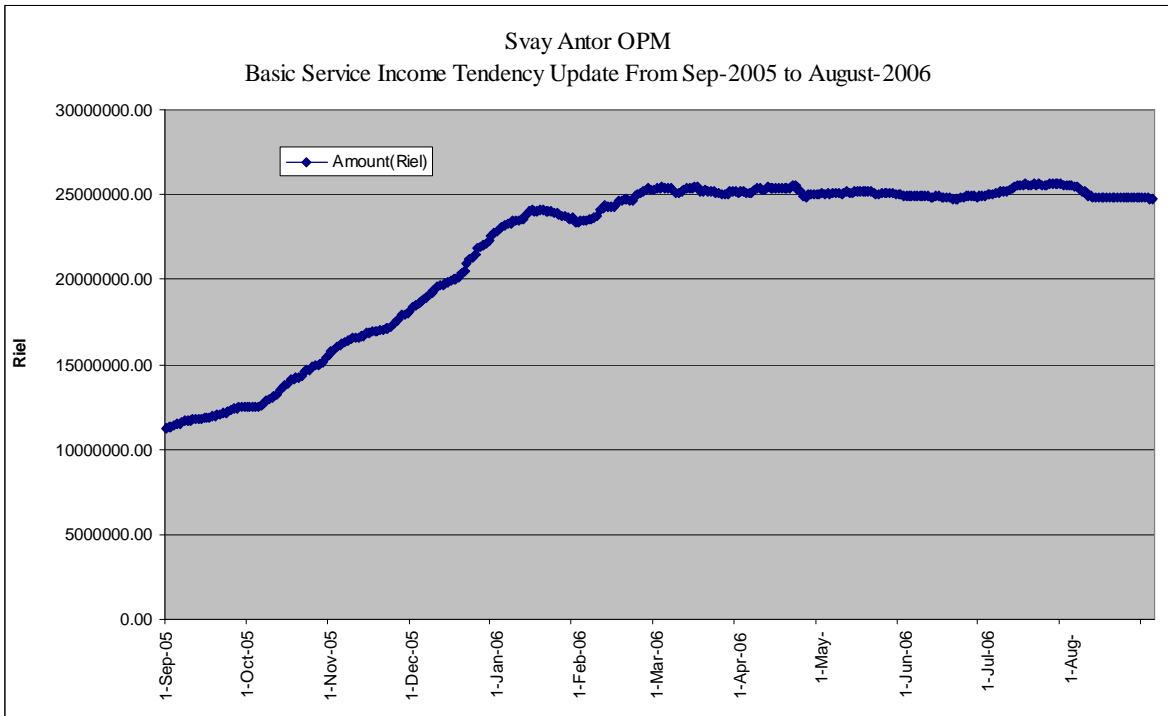
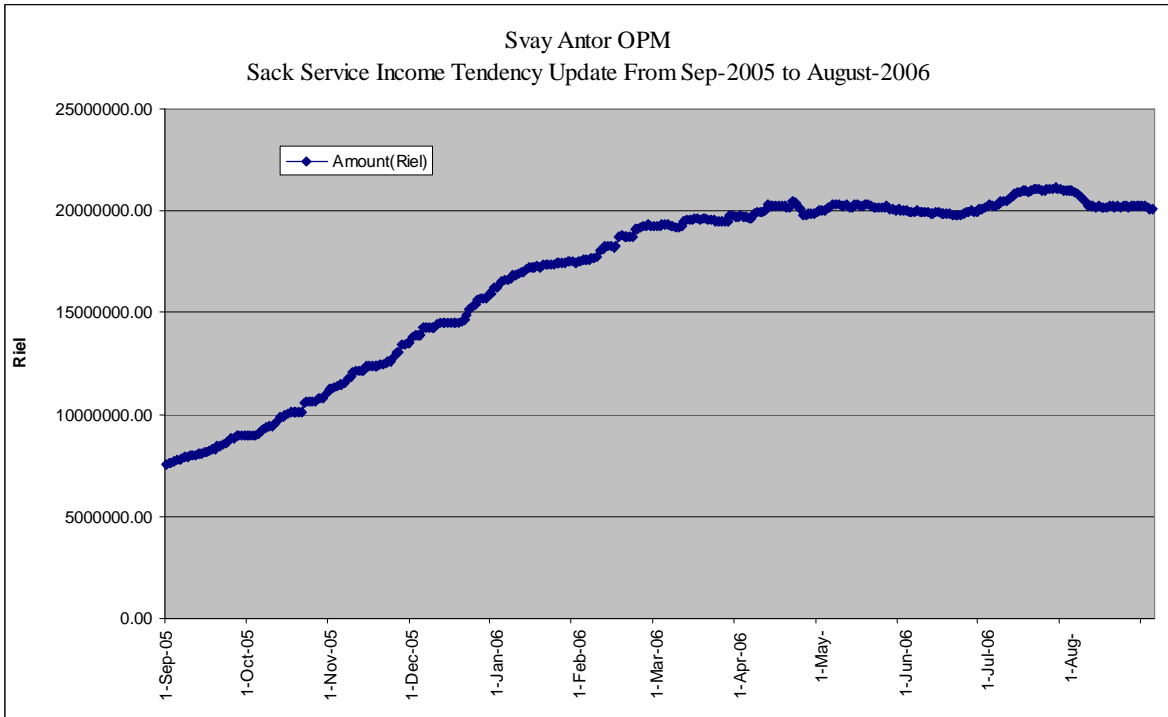


Daily Secular Movement of Income by service









Appendix 10:
Paddy Quality Control
In Svay Antor OPM

Paddy Quality handled at Svay Antor OPM

This is a paddy quality analysis achieving by lot collected for transaction at Svay Antor in Cambodian first attempt. The paddy quality analysis of Svay Antor OPM is achieved based on a self-imposed standard listed in the next table as below:

Table A10-1: Provisional paddy quality standard self-imposed of Svay Antor OPM (March 2006)

%	Moisture content % w.b.	Red kernels %	Cracked grain or broken %	Damaged grain %	Impurities %	Immature grains %	Whole grains %
Grade 1	14.0	<2.0	<2.0	<0.5	<0.5	<1.0	>98.0
Grade 2	14.0	<5.0	<4.0	<1.0	<1.0	<2.0	>96.0

Note: For Grade 2, all the reference values (indicated numbers), except moisture contents, were fixed at the round value within 5 to 10% of all the inspected samples from OPM, which could be cleared. For Grade 1, all the reference values were fixed at almost the half value of the Grade 2 to be a feasible target for quality improvement of paddy.

The next tables show the results of paddy quality analyses for approximately 9,700 sample lots from December 2005 to June 2006 9.700.

Table A10-2: Results of paddy samples by common varieties by production year

Somaly (production year: 2004 - 2005)

	Average amount of lots kg	Moisture content % w.b.	Red kernels %	Cracked grain or broken %	Damaged grain %	Impurities %	Immature grains %	Whole grains %
Average	525.78	14.60	1.21	5.07	1.52	1.13	1.17	96.08
Standard deviation	785.64	5.77	8.98	6.05	7.45	0.89	1.28	8.49

Somaly (production year: 2005 - 2006)

	Average amount of lots kg	Moisture content % w.b.	Red kernels %	Cracked grain or broken %	Damaged grain %	Impurities %	Immature grains %	Whole grains %
Average	559.85	16.46	0.81	6.79	0.87	1.06	0.94	97.16
Standard deviation	705.73	6.72	5.94	10.36	2.04	1.44	0.71	2.65

Kounsrov (2004 - 2005)

	Average amount of lots kg	Moisture content % w.b.	Red kernels %	Cracked grain or broken %	Damaged grain %	Impurities %	Immature grains %	Whole grains %
Average	687.48	15.24	1.37	9.72	0.85	1.35	1.39	96.42
Standard deviation	830.64	2.61	0.95	58.17	0.51	1.00	1.12	1.95

Kounsrov (2005 - 2006)

	Average amount of lots kg	Moisture content % w.b.	Red kernels %	Cracked grain or broken %	Damaged grain %	Impurities %	Immature grains %	Whole grains %
Average	747.75	15.26	1.40	11.60	0.73	1.33	1.20	96.76
Standard deviation	841.51	2.95	0.88	66.96	0.21	1.07	0.74	1.72

Banlapdav (2004 - 2005)

	Average amount of lots kg	Moisture content % w.b.	Red kernels %	Cracked grain or broken %	Damaged grain %	Impurities %	Immature grains %	Whole grains %
Average	573.48	15.15	5.03	4.57	1.20	1.14	1.29	95.67
Standard deviation	774.93	8.40	17.51	6.22	6.39	3.75	3.87	11.68

Banlapdav (2005 - 2006)

	Average amount of lots kg	Moisture content % w.b.	Red kernels %	Cracked grain or broken %	Damaged grain %	Impurities %	Immature grains %	Whole grains %
Average	649.79	15.68	4.86	4.67	0.70	1.04	1.04	97.22
Standard deviation	806.83	9.65	4.05	3.67	0.08	0.50	0.41	0.82

Mixed (2004 - 2005)

	Average amount of lots kg	Moisture content % w.b.	Red kernels %	Cracked grain or broken %	Damaged grain %	Impurities %	Immature grains %	Whole grains %
Average	892.24	15.93	4.65	8.19	0.74	1.41	1.25	96.45
Standard deviation	1300.46	5.43	26.04	63.17	0.51	3.45	3.08	5.97

Mixed (2005 - 2006)

	Average amount of lots kg	Moisture content % w.b.	Red kernels %	Cracked grain or broken %	Damaged grain %	Impurities %	Immature grains %	Whole grains %
Average	649.79	15.68	4.86	4.67	0.70	1.04	1.04	97.22
Standard deviation	806.83	9.65	4.05	3.67	0.08	0.50	0.41	0.82

IR (2004 - 2005)

	Average amount of lots kg	Moisture content % w.b.	Red kernels %	Cracked grain or broken %	Damaged grain %	Impurities %	Immature grains %	Whole grains %
Average	1330.76	16.50	1.70	6.49	1.37	2.74	1.78	93.88
Standard deviation	1596.58	5.33	3.70	53.67	6.46	36.39	1.41	37.36

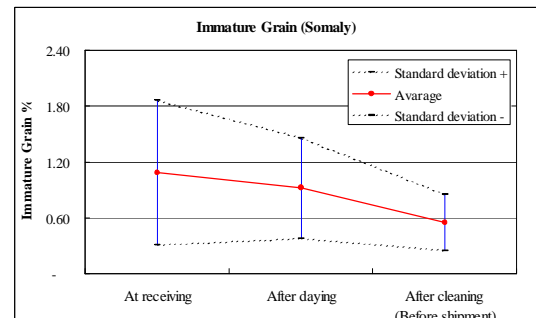
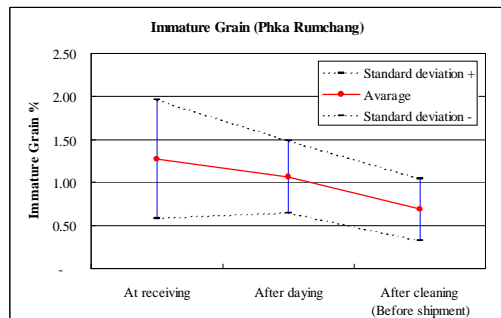
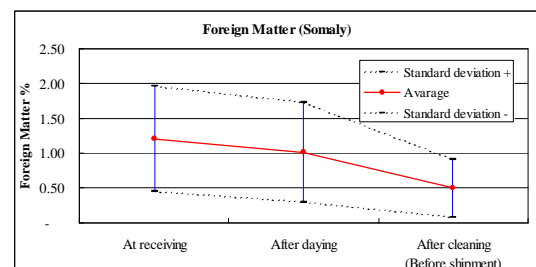
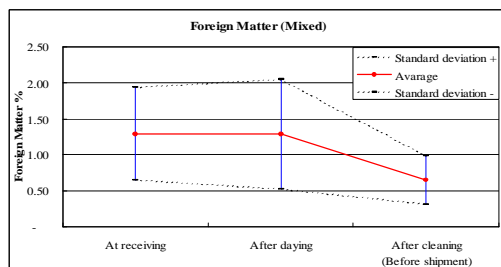
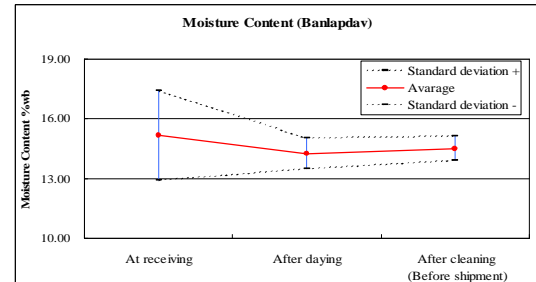
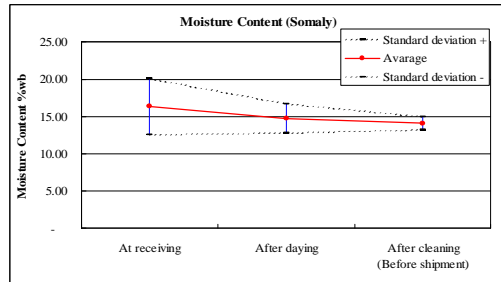
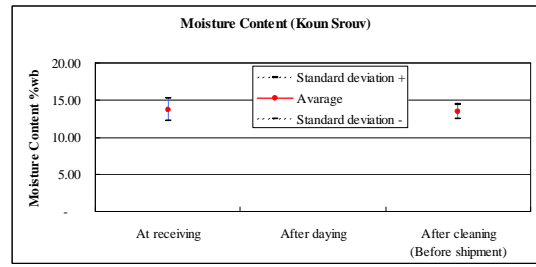
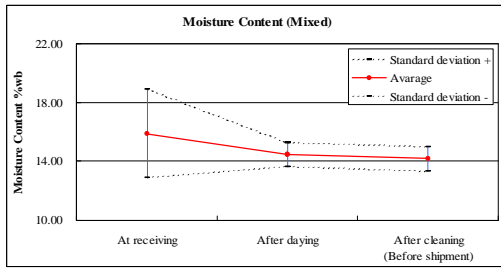
IR (2005 - 2006)

	Average amount of lots kg	Moisture content % w.b.	Red kernels %	Cracked grain or broken %	Damaged grain %	Impurities %	Immature grains %	Whole grains %
Average	790.74	16.50	1.41	5.49	0.77	2.59	1.46	95.88
Standard deviation	900.46	5.67	2.63	13.77	0.41	31.72	0.97	41.35

According to the result of paddy quality inspection (2004-05 & 2005-06) in the Svay Antor OPM, it is confirmed that the quality of paddies handled in Svay Antor OPM in the pilot project operation for the second year was better than for the first year, becoming smaller deviation from the means. Red kernels percentage of Banlapdav was also reduced. It means that OPM information of post harvest technology, mixture of varieties and post-harvest process, is being spread though only gradually. On the other hand, this is to confirm that better quality of paddy was received/ handled in the second year as proof of gaining an appreciation and understanding of the sellers.

The next figures show quality improvement by treating step: functions (drying/ cleaning services) of Svay Antor OPM. Deviations of quality by the step decreased to be uniformed.

FigA10-1: Paddy quality improvement through OPM functions



Paddy quality the market requires is higher than as is widely alleged in Cambodia, especially for Vietnam traders/ buyers, main buyer of surplus paddy. Even though there is some paddy with quality that goes into circulation in the market, the paddy to a large extent is with bad quality that the market requires to improve the quality, (too high/ low) moisture content, high percentage of impurities (foreign matters) and cracked/ damaged/ immature grains, and varieties mixture. Svay Antor OPM has services to improve the paddy quality, drying up to 14 to 15 %w.b. through sun drying and cleaning up to lower than 0.5% of impurities through machine processing. Those functions (services of OPM) give paddy an added value of paddy quality, and require appropriate fees for services, drying, cleaning, storing. On the other hand, there is reasonable shrinkage of paddy weight during the OPM handling, which the paddy owners should have a new price setting for selling paddy. However, the buyer, rice millers who always state that they require higher quality of paddy and Vietnam trader (especially Cambodian side trader) haven't gone down and under-

stood it as yet.

Note: There was many case of yellowish rice without any control of drying and storing because of a lot rainfall in 2005-06. At the paddy quality inspection, if some paddy is fusty and milled rice color is yellow of orange-brown, such the paddy come to a definite of yellowish rice, damaged grain, through OPM inspect percentage of yellowish grain only but identifiable kind of mold.

Paddy price information by Svay Antor OPM/ correlation between paddy quality and price/ Reflect to the service fee and weight shrinkage matrix

The next equation in the flame should be used to calculate based on moisture content and percentage of impurities of paddy in order to reflect the paddy price relevantly. It is important to decide the price when the buyer purchases the paddy. A basic price for calculation is market price of ordinary quality by variety; present outstanding paddy in the market with low quality level. At 14% w.b. of finishing moisture content of paddy,

Parameter:
 P_t: Today's price according to deduction in quality and quantity based on 14%w.b., moisture content grading results, less than 0.5% of foreign matters
 P_c: Converted price for transaction of target paddy with moisturecontent higher than 14%w.b. and foreign matters higher than 0.5%
 P_v: Transaction price OPM could introduce
 Q_d: Percentage of deduction according to moisture content of the target paddy (1-Q_d/100); Co- efficiency for remaining value of the target paddy

Equation:
 In the case that

$$P_t = P_c / (1 - Q_d/100)$$
, being canceled by $(1 - Q_d/100)$

$$P_c = P_t (1 - Q_d/100)$$

Meanwhile, P_b must be considered with OPM's sevicecharge, general cost which will be generally needed all over the place as stated below:

$$P_b = P_c - 5 - 5 - 6 - 6$$
, if the paddy owner use Drying & Cleaning services.
 (Basic charge) (Paddy bag) (Drying S.) (Cleaning S.)

Thereafter,

$$P_b = P_c - 22$$

$$= P_t (1 - Q_d/100) - 22$$

Crosswise, if there is approximetely paddy with high moisture content in the trading market, based on paddy with high moisture content, P_t could be calculated.

$$P_t = (P_b + 22) / (1 - Q_d/100)$$
 or
$$P_t = P_b / (1 - Q_d/100) + 22$$
, in the case that the paddy owner would use drying service only, fix number, 22, shall be canged to 16 in any conversion.

Example:
 In the case that Paddy for transaction has the condition of foreign matters, 1.15% and moisture content, 18.8%w.b. if paddy price with low foreign matters and moisture content, 13.8%w.b. is 570riel/kg, to calculate the transaction(buying) price(riel/kg) of this paddy which is included with Drying & Cleaning service:

$$P_b = 570 \times 0.9346 - 22$$

$$= 510.7(\text{riel}/\text{kg})$$

Moreover, with consideration of another shrinkage (just after dried etc.), 0.2% to 0.4%, its price should be set at 508riel/kg.

ordinary quality by variety; present outstanding paddy in the market with low quality level. At 14% w.b. of finishing moisture content of paddy,

$$W_{14\%} = \frac{W_b (1 - Q_b)}{0.86}$$

W_{14%}: Paddy weight at 14% w.b. of paddy moisture content

W_b: Paddy weight at purchasing from the seller

Q_b: Paddy moisture content at purchasing from the seller

(Please refer the matrix for converting the price after treatment with OPM services in the next page)

OPM should make a judgment/ analysis by lot of paddy on cracked/ damaged/ red grains except moisture content and percentage of impurities

to reflect to the market price. People, however, still have very little interest in paddy quality control, so that a result from force on keeping low quality should be made in the paddy market except quite inadequate quality of paddy, e.g. yellowish one/ high percentage of cracked grains.

paddy weights by Drying (Target Moisture contents: 14%)

Initial Moisture Contents	Percentage of Decrease of Paddy Weights (Q _d)	Percentage of remained Paddy Weights	Co-efficiency for remaining quantity (1-Q _d /100)	Foreign matters						
				< 0.5%	0.5% < 1.0%	1.0% < 1.5%	1.5% < 2.0%	2.0% < 2.5%	2.5% < 3.0%	3.0% <
24.0%	11.63%	88.37%	0.8837	0.8837	0.8793	0.8749	0.8705	0.8660	0.8616	0.8572
23.9%	11.51%	88.49%	0.8849	0.8849	0.8805	0.8760	0.8716	0.8672	0.8628	0.8583
23.8%	11.40%	88.60%	0.8860	0.8860	0.8816	0.8772	0.8728	0.8683	0.8639	0.8595
23.7%	11.28%	88.72%	0.8872	0.8872	0.8828	0.8783	0.8739	0.8695	0.8650	0.8606
23.6%	11.16%	88.84%	0.8884	0.8884	0.8839	0.8795	0.8750	0.8706	0.8662	0.8617
23.5%	11.05%	88.95%	0.8895	0.8895	0.8851	0.8806	0.8762	0.8717	0.8673	0.8629
23.4%	10.93%	89.07%	0.8907	0.8907	0.8862	0.8818	0.8773	0.8729	0.8684	0.8640
23.3%	10.81%	89.19%	0.8919	0.8919	0.8874	0.8829	0.8785	0.8740	0.8696	0.8651
23.2%	10.70%	89.30%	0.8930	0.8930	0.8886	0.8841	0.8796	0.8752	0.8707	0.8662
23.1%	10.58%	89.42%	0.8942	0.8942	0.8897	0.8853	0.8808	0.8763	0.8718	0.8674
23.0%	10.46%	89.54%	0.8954	0.8954	0.8909	0.8864	0.8819	0.8774	0.8730	0.8685
22.9%	10.35%	89.65%	0.8965	0.8965	0.8920	0.8876	0.8831	0.8786	0.8741	0.8696
22.8%	10.23%	89.77%	0.8977	0.8977	0.8932	0.8887	0.8842	0.8797	0.8752	0.8707
22.7%	10.12%	89.88%	0.8988	0.8988	0.8943	0.8898	0.8854	0.8809	0.8764	0.8719
22.6%	10.00%	90.00%	0.9000	0.9000	0.8955	0.8910	0.8865	0.8820	0.8775	0.8730
22.5%	9.88%	90.12%	0.9012	0.9012	0.8966	0.8921	0.8876	0.8831	0.8786	0.8741
22.4%	9.77%	90.23%	0.9023	0.9023	0.8978	0.8933	0.8888	0.8843	0.8798	0.8752
22.3%	9.65%	90.35%	0.9035	0.9035	0.8990	0.8944	0.8899	0.8854	0.8809	0.8764
22.2%	9.54%	90.46%	0.9046	0.9046	0.9001	0.8956	0.8911	0.8865	0.8820	0.8775
22.1%	9.42%	90.58%	0.9058	0.9058	0.9013	0.8967	0.8922	0.8877	0.8831	0.8786
22.0%	9.31%	90.69%	0.9069	0.9069	0.9024	0.8979	0.8933	0.8888	0.8843	0.8797
21.9%	9.19%	90.81%	0.9081	0.9081	0.9036	0.8990	0.8945	0.8900	0.8854	0.8809
21.8%	9.07%	90.93%	0.9093	0.9093	0.9047	0.9002	0.8956	0.8911	0.8866	0.8820
21.7%	8.95%	91.05%	0.9105	0.9105	0.9059	0.9013	0.8968	0.8922	0.8877	0.8831
21.6%	8.84%	91.16%	0.9116	0.9116	0.9071	0.9025	0.8979	0.8934	0.8888	0.8843
21.5%	8.72%	91.28%	0.9128	0.9128	0.9082	0.9037	0.8991	0.8945	0.8900	0.8854
21.4%	8.60%	91.40%	0.9140	0.9140	0.9094	0.9048	0.9002	0.8957	0.8911	0.8865
21.3%	8.49%	91.51%	0.9151	0.9151	0.9105	0.9060	0.9014	0.8968	0.8922	0.8877
21.2%	8.37%	91.63%	0.9163	0.9163	0.9117	0.9071	0.9025	0.8980	0.8934	0.8888
21.1%	8.25%	91.75%	0.9175	0.9175	0.9129	0.9083	0.9037	0.8991	0.8945	0.8899
21.0%	8.14%	91.86%	0.9186	0.9186	0.9140	0.9094	0.9048	0.9003	0.8957	0.8911
20.9%	8.02%	91.98%	0.9198	0.9198	0.9152	0.9106	0.9060	0.9014	0.8968	0.8922
20.8%	7.90%	92.10%	0.9210	0.9210	0.9163	0.9117	0.9071	0.9025	0.8979	0.8933
20.7%	7.79%	92.21%	0.9221	0.9221	0.9175	0.9129	0.9083	0.9037	0.8991	0.8944
20.6%	7.67%	92.33%	0.9233	0.9233	0.9187	0.9140	0.9094	0.9048	0.9002	0.8956
20.5%	7.56%	92.44%	0.9244	0.9244	0.9198	0.9152	0.9106	0.9059	0.9013	0.8967
20.4%	7.44%	92.56%	0.9256	0.9256	0.9210	0.9163	0.9117	0.9071	0.9025	0.8978
20.3%	7.32%	92.68%	0.9268	0.9268	0.9221	0.9175	0.9129	0.9082	0.9036	0.8990
20.2%	7.21%	92.79%	0.9279	0.9279	0.9233	0.9186	0.9140	0.9094	0.9047	0.9001
20.1%	7.09%	92.91%	0.9291	0.9291	0.9244	0.9198	0.9151	0.9105	0.9059	0.9012
20.0%	6.98%	93.02%	0.9302	0.9302	0.9256	0.9209	0.9163	0.9116	0.9070	0.9023
19.9%	6.86%	93.14%	0.9314	0.9314	0.9267	0.9221	0.9174	0.9128	0.9081	0.9034
19.8%	6.75%	93.25%	0.9325	0.9325	0.9279	0.9232	0.9185	0.9139	0.9092	0.9046
19.7%	6.63%	93.37%	0.9337	0.9337	0.9290	0.9243	0.9197	0.9150	0.9103	0.9057
19.6%	6.52%	93.48%	0.9348	0.9348	0.9301	0.9255	0.9208	0.9161	0.9115	0.9068
19.5%	6.40%	93.60%	0.9360	0.9360	0.9313	0.9266	0.9219	0.9173	0.9126	0.9079
19.4%	6.29%	93.71%	0.9371	0.9371	0.9324	0.9277	0.9231	0.9184	0.9137	0.9090
19.3%	6.17%	93.83%	0.9383	0.9383	0.9336	0.9289	0.9242	0.9195	0.9148	0.9101
19.2%	6.06%	93.94%	0.9394	0.9394	0.9347	0.9300	0.9253	0.9206	0.9159	0.9112
19.1%	5.94%	94.06%	0.9406	0.9406	0.9359	0.9311	0.9264	0.9217	0.9170	0.9123
	5.83%									

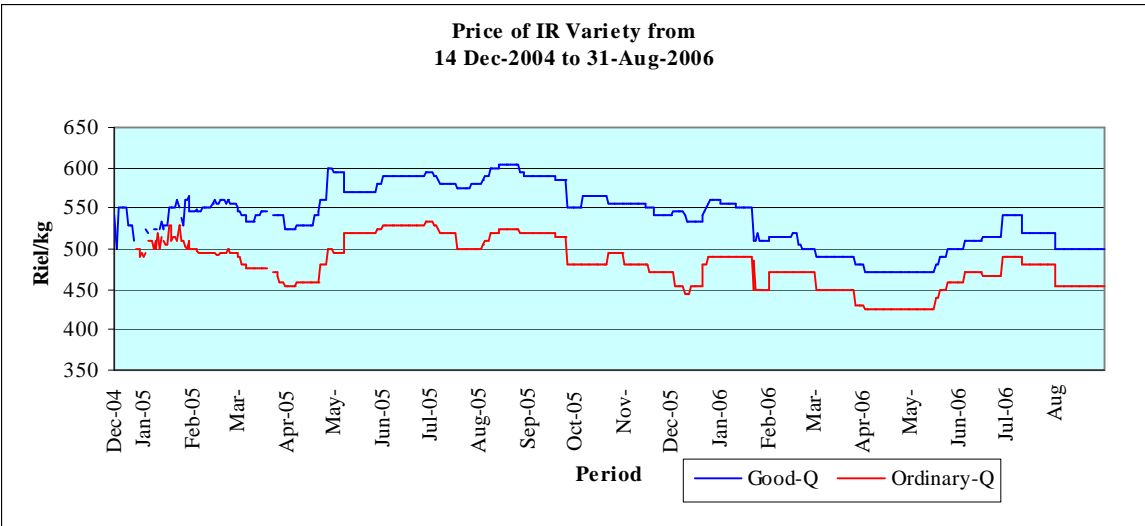
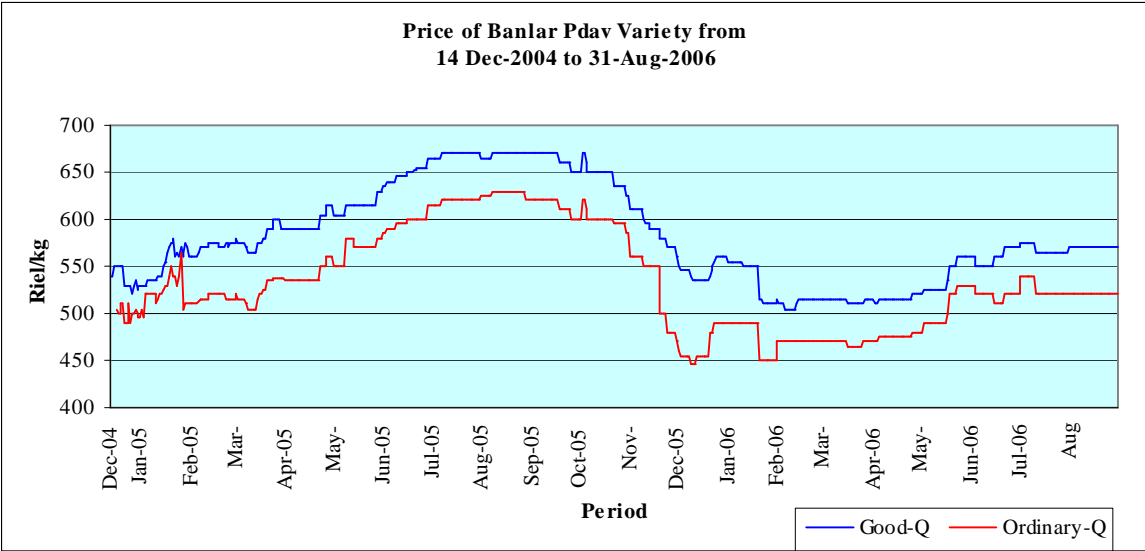
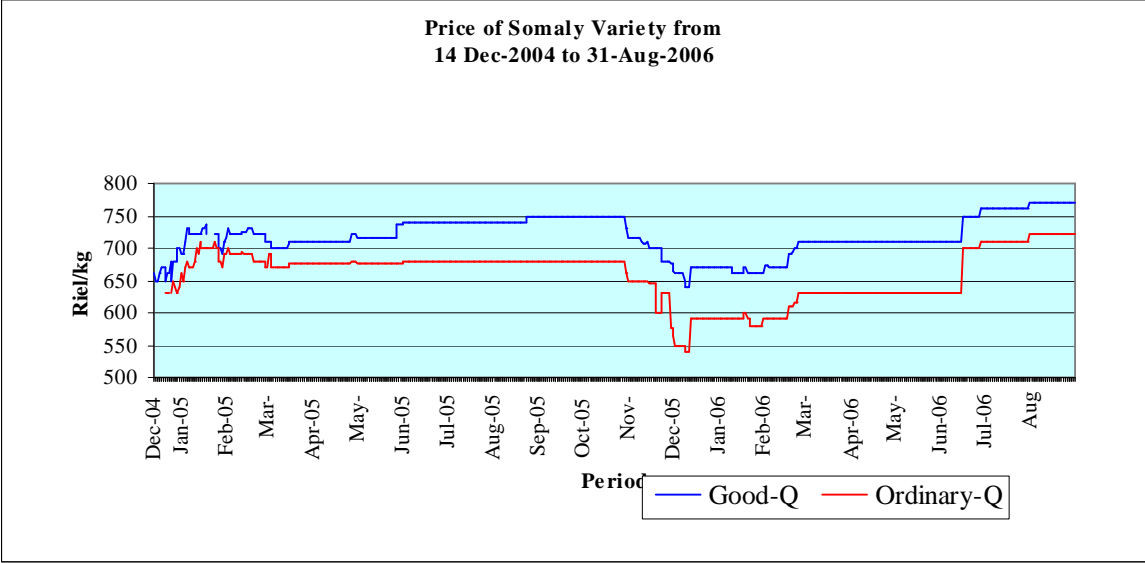
Initial Moisture Contents	Percentage of Decrease of Paddy Weights (Q _d)	Percentage of remained Paddy Weights	Co-efficiency for remaining quantity (1-Q _d /100)	Foreign matters						
				< 0.5%	0.5% < 1.0%	1.0% < 1.5%	1.5% < 2.0%	2.0% < 2.5%	2.5% < 3.0%	3.0% <
19%	5.83%	94.17%	0.9417	0.9417	0.9370	0.9323	0.9276	0.9229	0.9182	0.9134
18.9%	5.71%	94.29%	0.9429	0.9429	0.9382	0.9334	0.9287	0.9240	0.9193	0.9146
18.8%	5.60%	94.40%	0.9440	0.9440	0.9393	0.9346	0.9299	0.9252	0.9204	0.9157
18.7%	5.48%	94.52%	0.9452	0.9452	0.9405	0.9358	0.9310	0.9263	0.9216	0.9169
18.6%	5.36%	94.64%	0.9464	0.9464	0.9416	0.9369	0.9322	0.9275	0.9227	0.9180
18.5%	5.25%	94.76%	0.9476	0.9476	0.9428	0.9381	0.9333	0.9286	0.9239	0.9191
18.4%	5.13%	94.87%	0.9487	0.9487	0.9440	0.9392	0.9345	0.9297	0.9250	0.9203
18.3%	5.01%	94.99%	0.9499	0.9499	0.9451	0.9404	0.9356	0.9309	0.9261	0.9214
18.2%	4.89%	95.11%	0.9511	0.9511	0.9463	0.9415	0.9368	0.9320	0.9273	0.9225
18.1%	4.78%	95.22%	0.9522	0.9522	0.9475	0.9427	0.9379	0.9332	0.9284	0.9237
18.0%	4.66%	95.34%	0.9534	0.9534	0.9486	0.9439	0.9391	0.9343	0.9296	0.9248
17.9%	4.54%	95.46%	0.9546	0.9546	0.9498	0.9450	0.9402	0.9355	0.9307	0.9259
17.8%	4.43%	95.57%	0.9557	0.9557	0.9510	0.9462	0.9414	0.9366	0.9318	0.9271
17.7%	4.31%	95.69%	0.9569	0.9569	0.9521	0.9473	0.9425	0.9378	0.9330	0.9282
17.6%	4.19%	95.81%	0.9581	0.9581	0.9533	0.9485	0.9437	0.9389	0.9341	0.9293
17.5%	4.08%	95.92%	0.9592	0.9592	0.9544	0.9496	0.9448	0.9400	0.9353	0.9305
17.4%	3.96%	96.04%	0.9604	0.9604	0.9556	0.9508	0.9460	0.9412	0.9364	0.9316
17.3%	3.84%	96.16%	0.9616	0.9616	0.9568	0.9519	0.9471	0.9423	0.9375	0.9327
17.2%	3.73%	96.27%	0.9627	0.9627	0.9579	0.9531	0.9483	0.9435	0.9387	0.9338
17.1%	3.61%	96.39%	0.9639	0.9639	0.9591	0.9543	0.9494	0.9446	0.9398	0.9350
17.0%	3.49%	96.51%	0.9651	0.9651	0.9602	0.9554	0.9506	0.9458	0.9409	0.9361
16.9%	3.38%	96.62%	0.9662	0.9662	0.9614	0.9566	0.9517	0.9469	0.9421	0.9372
16.8%	3.26%	96.74%	0.9674	0.9674	0.9626	0.9577	0.9529	0.9481	0.9432	0.9384
16.7%	3.14%	96.86%	0.9686	0.9686	0.9637	0.9589	0.9540	0.9492	0.9444	0.9395
16.6%	3.03%	96.97%	0.9697	0.9697	0.9649	0.9600	0.9552	0.9503	0.9455	0.9406
16.5%	2.91%	97.09%	0.9709	0.9709	0.9661	0.9612	0.9563	0.9515	0.9466	0.9418
16.4%	2.79%	97.21%	0.9721	0.9721	0.9672	0.9624	0.9575	0.9526	0.9478	0.9429
16.3%	2.68%	97.32%	0.9732	0.9732	0.9684	0.9635	0.9586	0.9538	0.9489	0.9440
16.2%	2.56%	97.44%	0.9744	0.9744	0.9695	0.9647	0.9598	0.9549	0.9501	0.9452
16.1%	2.44%	97.56%	0.9756	0.9756	0.9707	0.9658	0.9610	0.9561	0.9512	0.9463
16.0%	2.32%	97.68%	0.9768	0.9768	0.9719	0.9670	0.9621	0.9572	0.9523	0.9475
15.9%	2.21%	97.79%	0.9779	0.9779	0.9730	0.9681	0.9633	0.9584	0.9535	0.9486
15.8%	2.09%	97.91%	0.9791	0.9791	0.9742	0.9693	0.9644	0.9595	0.9546	0.9497
15.7%	1.98%	98.02%	0.9802	0.9802	0.9753	0.9704	0.9655	0.9606	0.9557	0.9508
15.6%	1.86%	98.14%	0.9814	0.9814	0.9765	0.9716	0.9667	0.9618	0.9569	0.9520
15.5%	1.74%	98.26%	0.9826	0.9826	0.9777	0.9728	0.9678	0.9629	0.9580	0.9531
15.4%	1.63%	98.37%	0.9837	0.9837	0.9788	0.9739	0.9690	0.9641	0.9592	0.9542
15.3%	1.51%	98.49%	0.9849	0.9849	0.9800	0.9751	0.9701	0.9652	0.9603	0.9554
15.2%	1.39%	98.61%	0.9861	0.9861	0.9811	0.9762	0.9713	0.9664	0.9614	0.9565
15.1%	1.28%	98.72%	0.9872	0.9872	0.9823	0.9774	0.9724	0.9675	0.9626	0.9576
15.0%	1.16%	98.84%	0.9884	0.9884	0.9835	0.9785	0.9736	0.9686	0.9637	0.9588
14.9%	1.04%	98.96%	0.9896	0.9896	0.9846	0.9797	0.9747	0.9698	0.9648	0.9599
14.8%	0.93%	99.07%	0.9907	0.9907	0.9858	0.9808	0.9759	0.9709	0.9660	0.9610
14.7%	0.81%	99.19%	0.9919	0.9919	0.9869	0.9820	0.9770	0.9720	0.9671	0.9621
14.6%	0.70%	99.30%	0.9930	0.9930	0.9881	0.9831	0.9781	0.9732	0.9682	0.9633
14.5%	0.58%	99.42%	0.9942	0.9942	0.9892	0.9843	0.9793	0.9743	0.9693	0.9644
14.4%	0.46%	99.54%	0.9954	0.9954	0.9904	0.9854	0.9804	0.9755	0.9705	0.9655
14.3%	0.35%	99.65%	0.9965	0.9965	0.9915	0.9866	0.9816	0.9766	0.9716	0.9666
14.2%	0.23%	99.77%	0.9977	0.9977	0.9927	0.9877	0.9827	0.9777	0.9727	0.9678
14.1%	0.12%	99.88%	0.9988	0.9988	0.9938	0.9889	0.9839	0.9789	0.9739	0.9689
14%	0	100.00%	1.0000	1.0000	0.9950	0.9900	0.9850	0.9800	0.9750	0.9700

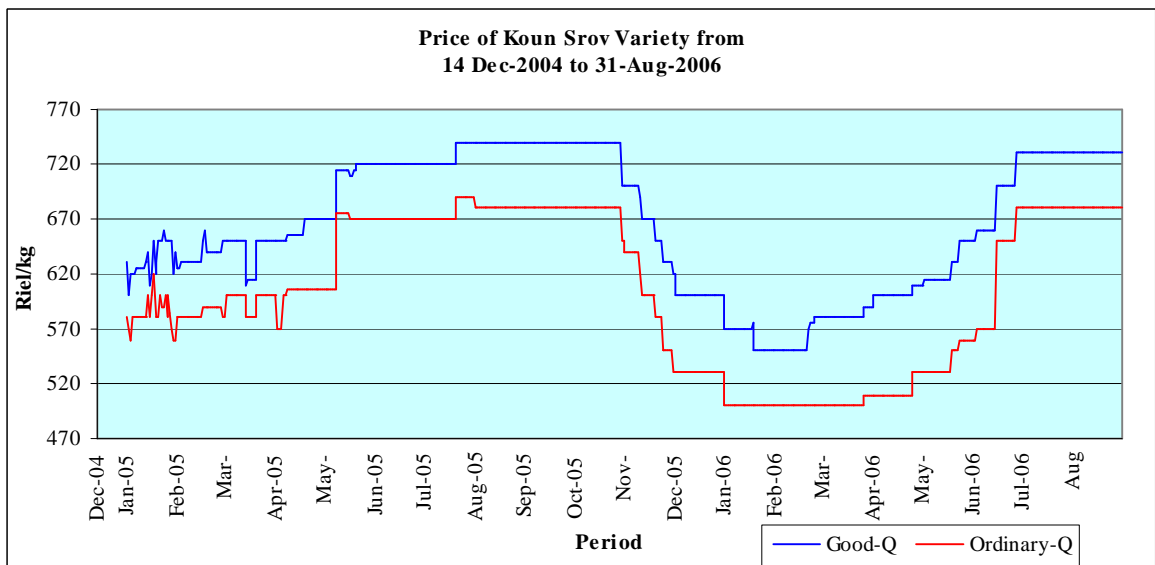
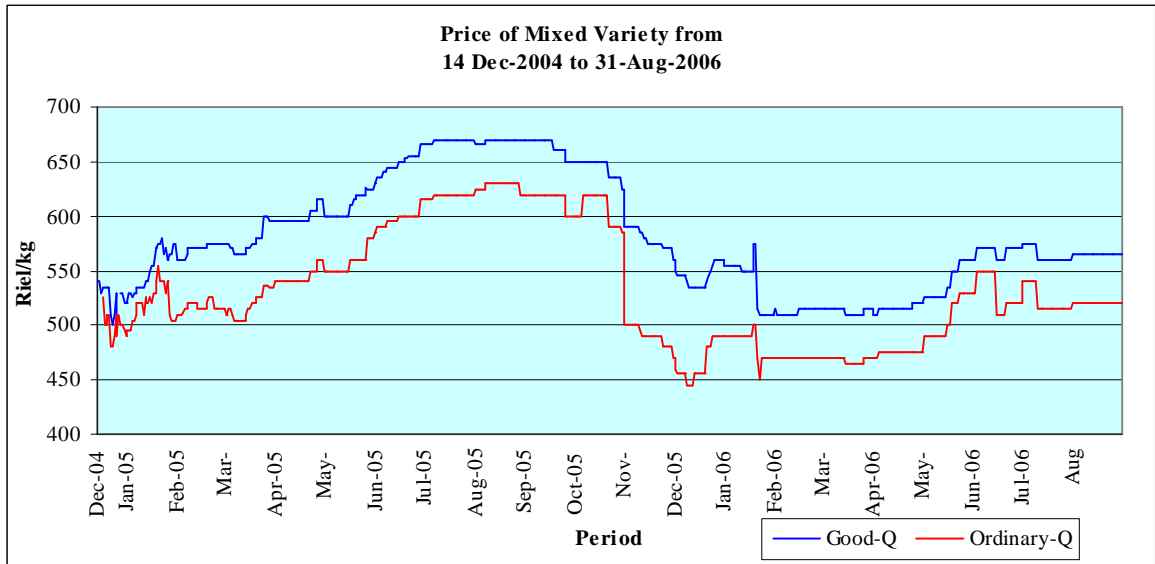
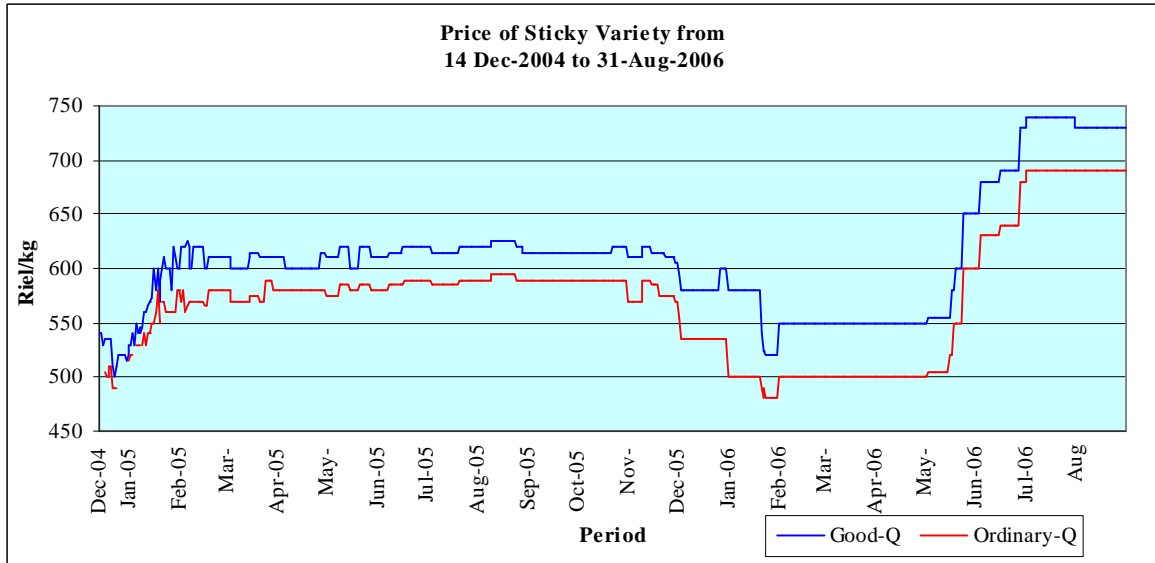
Appendix 11:
OPM Price Information
and Price Information from collectors/rice miller/traders
by district

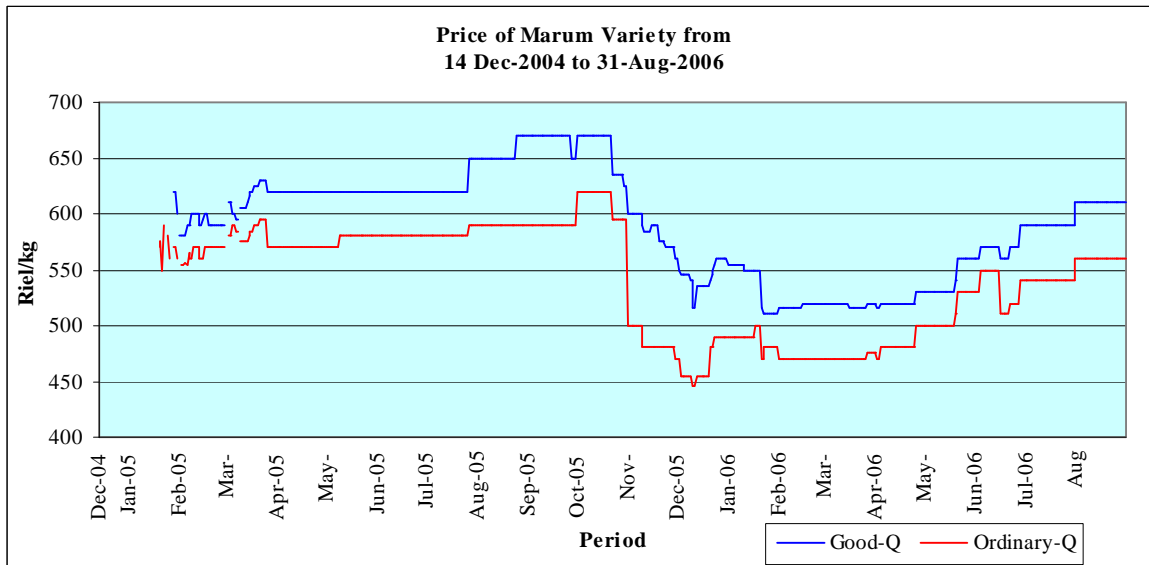
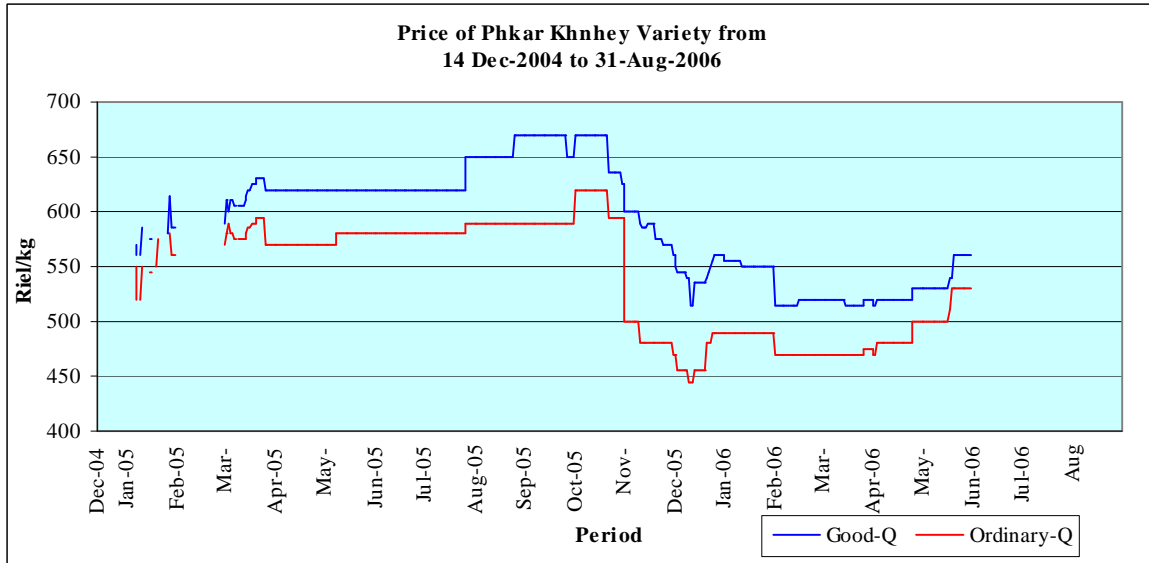
Tendency of Paddy Price from 14 December 2004 to 31 August 2006 (OPM)

		Quality															
		Somaly		Banlar Pdav		IR		Sticky		Mixed		Koun Svov		Pkar Khney		Marum	
		Good-Q	Ordinary-Q	Good-Q	Ordinary-Q	Good-Q	Ordinary-Q	Good-Q	Ordinary-Q	Good-Q	Ordinary-Q	Good-Q	Ordinary-Q	Good-Q	Ordinary-Q	Good-Q	Ordinary-Q
Dec-04	14	660		540	510	540	540	510	540	500							
	15	650		540	500	540	540	500	540								
	16	650		550	550	530	530	530	530								
	17	660	660	550	505	550	535	505	535	525							
	18	660		550	500	550	535	500	535	500							
	19	670		550	500	550	535	500	535	500							
	20	670	630	550	510	550	535	510	535	510							
	21	670		550	510	550	535	510	535	510							
	22	650	630	530	480	530	510	490	510	480							
	23	660	630	530	480	530	500	490	500	480							
	24	660	630	530	480	530	510	490	510	490							
	25	680		530	510	530	520	530	510	510							
	26	650	630	530	480	510	520	500	510	490							
	27	680	650	520	500	520	520	510	510	510							
28	680	640	530	500	500	520	530	500	500								
29	680	630	535	505	500	520	530	500	500								
30	700	630	525	500	490	515	520	495	495								
31	700	640	530	495	495	520	520	490	490								
Jan-05	1	690	660	530	495	490	530	515	520	495	630	580					
	2	690	650	530	505	525	495	530	520	530	600	570					
	3	690	650	530	495	520	540	520	530	495	620	560					
	4	710	670	530	520		510	530	525	505	620	580					
	5	730	680	530	520		510	550	530	505	620	580					
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	13	720	690	540	520	525	570	540	540	520	630	580					
	14	720	710	540	520	530	510	570	540	540	520	640	580				
	15	720	700	550	525	530	505	575	550	550	525	610	580	575	545		
	16	730	700	555	530	530	505	560	555	520	620	600	575	545			
	17	730	700	555	530	560	530	580	565	555	530	605	620				
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	20	715	700	575	550	560	515	580	575	555	560	600	575	575			
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	30	710	690	570	510	545	500	600	580	575	505	640	560	585	560	600	560
	31	710	690	560	510	545	500	600	580	560	510	625	580				
Feb-05	1	715	690	560	510	545	500	600	580	580	510	625	580				
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	25	720	680	570	515	555	495	610	580	575	515	640	590				
	26	720	680	575	515	555	495	610	580	575	515	640	590				
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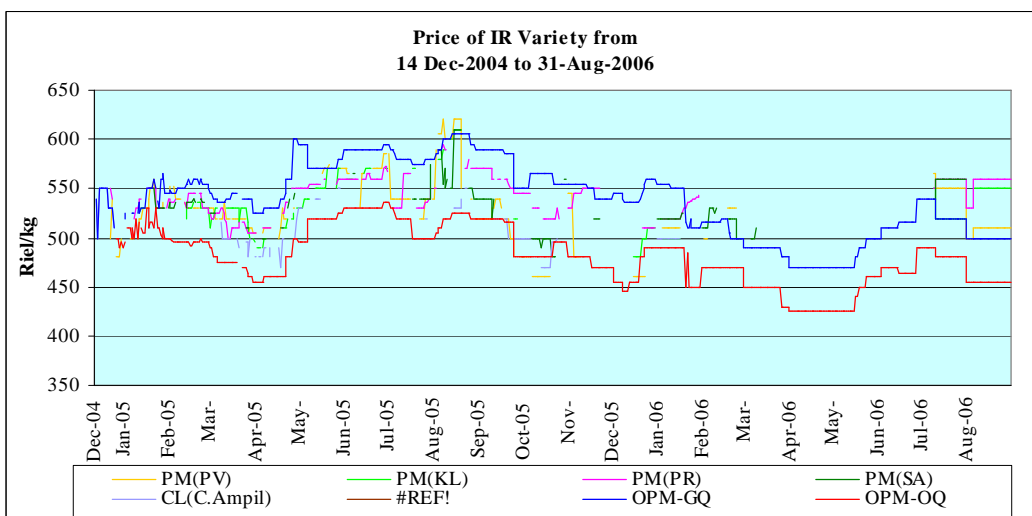
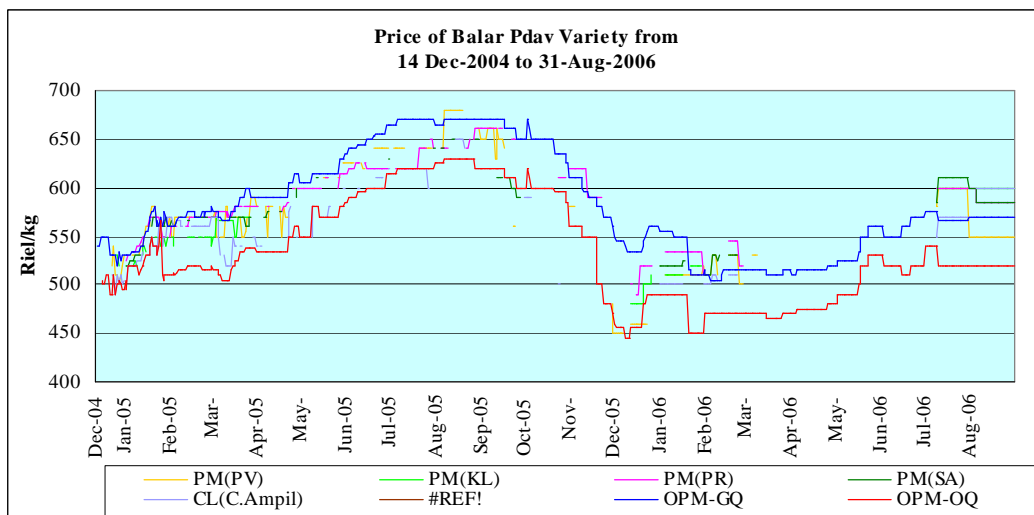
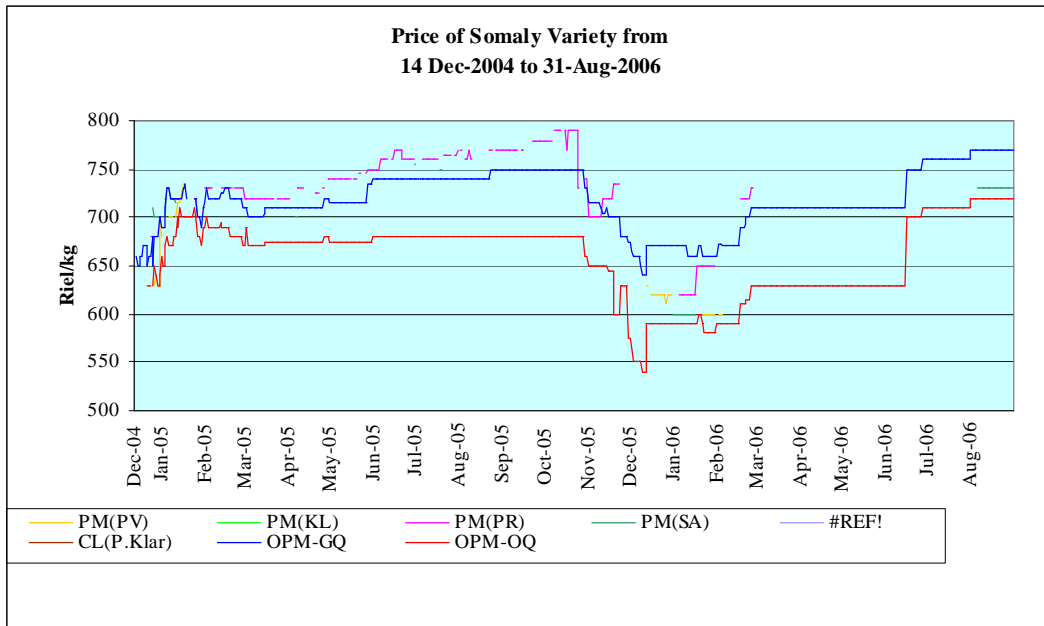
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		Good-Q	Ordinary-Q	Good-Q	Ordinary-Q	Good-Q	Ordinary-Q	Good-Q	Ordinary-Q	Good-Q	Ordinary-Q	Good-Q	Ordinary-Q	Good-Q	Ordinary-Q	Good-Q	Ordinary-Q
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7	700		670	570	510	535	475	600	570	565	505	650	600	605	575	595	585
8	700		670	570	510	535	475	600	570	565	505	650	600	605	575	595	585
9	700		670	565	505	535	475	600	570	565	505	650	600				
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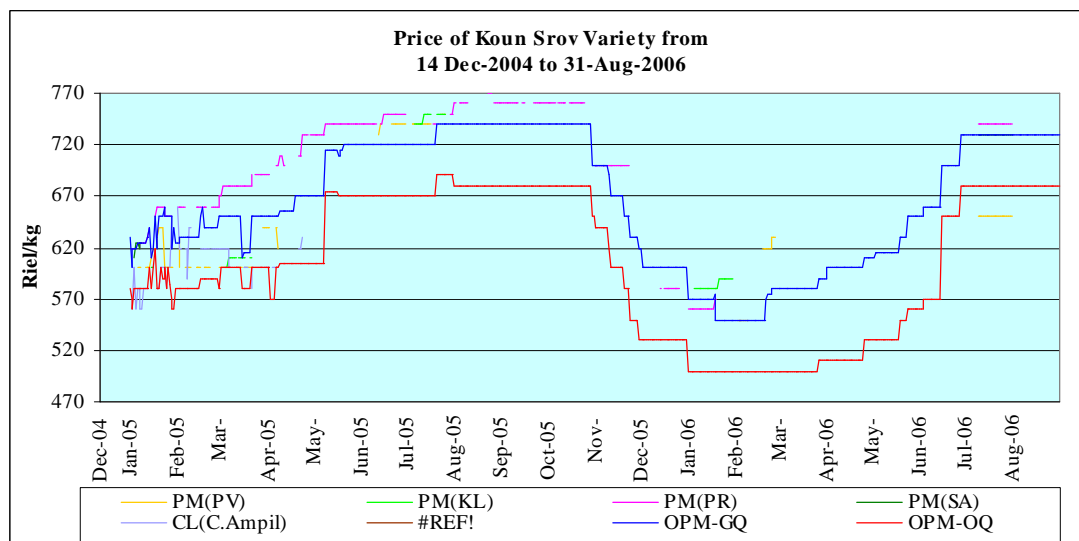
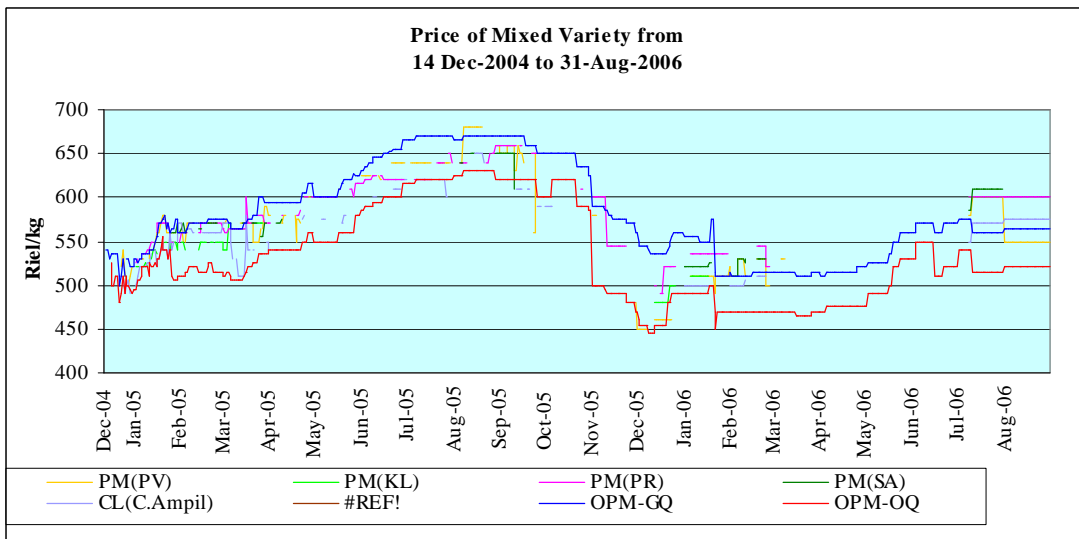
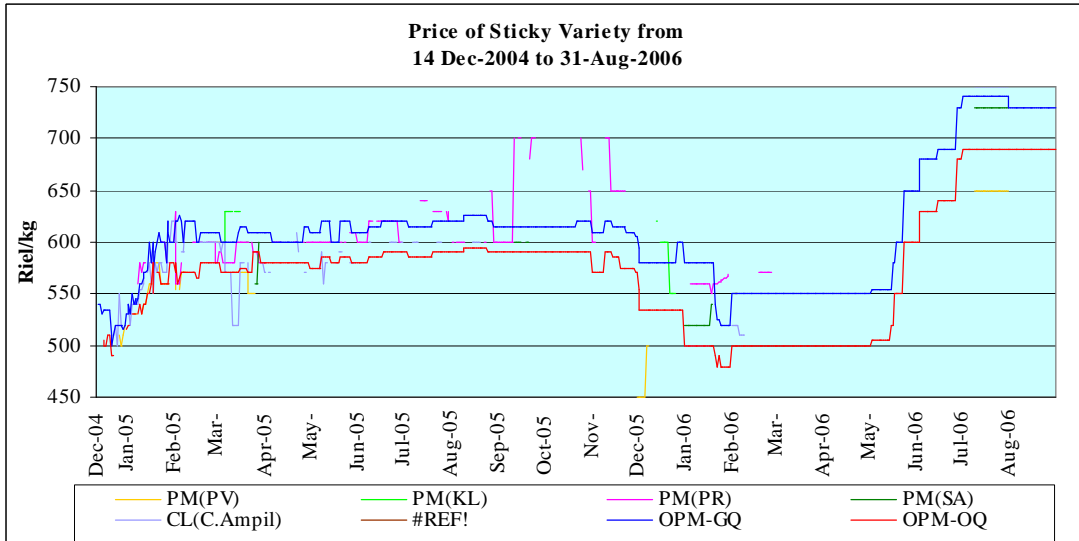


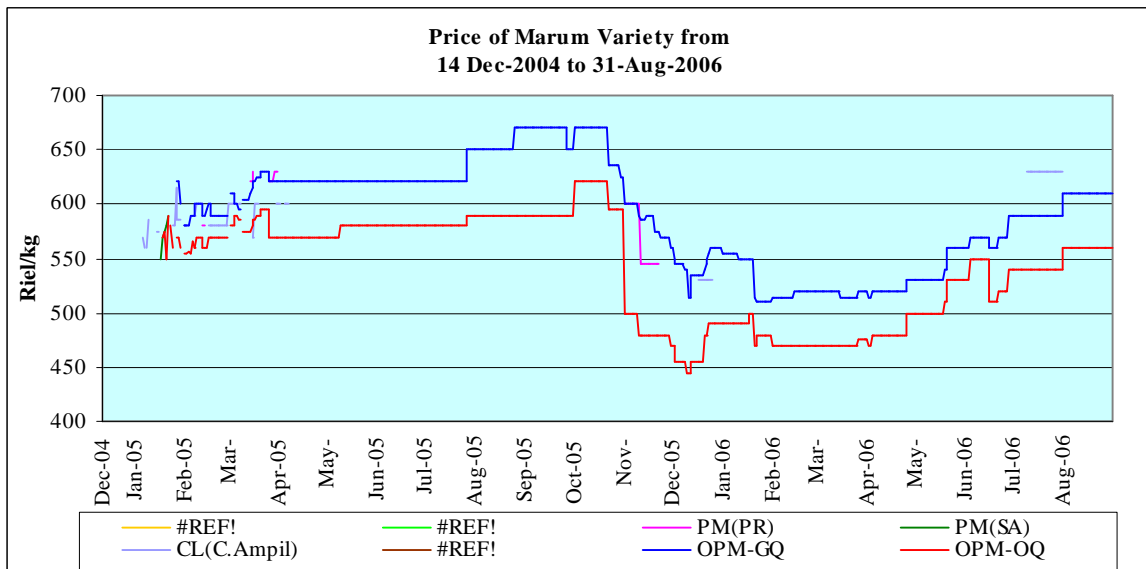
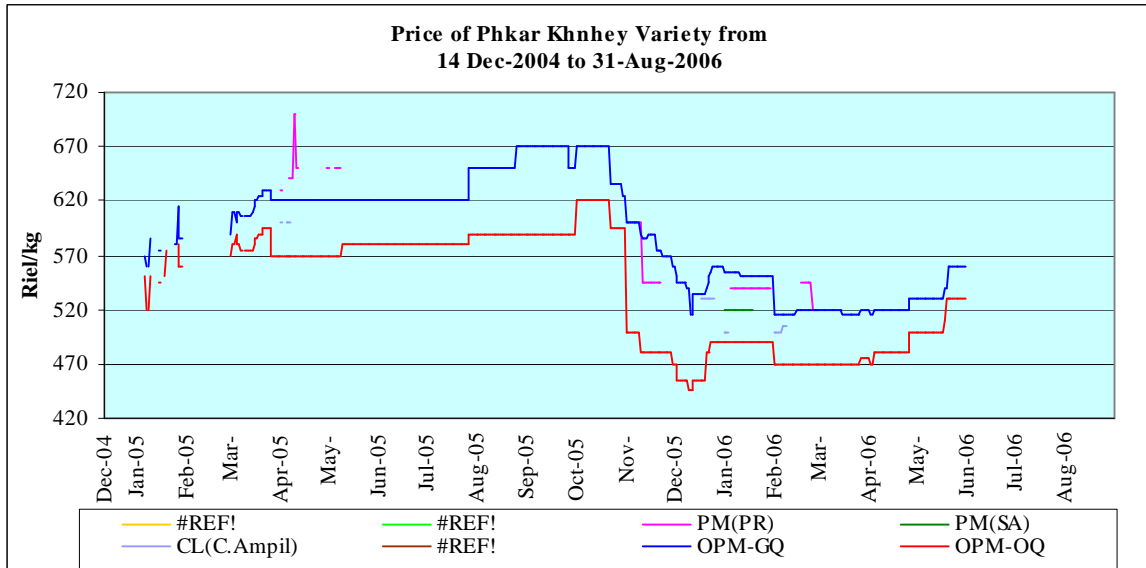




Date	Somaly							Banla Pdav							IR							Sticky							Mixed							Koun Stov							Marum											
	PM(PY)	PM(OL)	PM(PF)	PM(SA)	CL(P-Klu)	OPM-GQ	OPM-OQ	PM(PY)	PM(OL)	PM(PF)	PM(SA)	CL(C-Ampil)	OPM-GQ	OPM-OQ	PM(PY)	PM(OL)	PM(PF)	PM(SA)	CL(C-Ampil)	OPM-GQ	OPM-OQ	PM(PY)	PM(OL)	PM(PF)	PM(SA)	CL(C-Ampil)	OPM-GQ	OPM-OQ	PM(PY)	PM(OL)	PM(PF)	PM(SA)	CL(C-Ampil)	OPM-GQ	OPM-OQ	PM(PY)	PM(OL)	PM(PF)	PM(SA)	CL(C-Ampil)	OPM-GQ	OPM-OQ	PM(PY)	PM(OL)	PM(PF)	PM(SA)	CL(C-Ampil)	OPM-GQ	OPM-OQ					
Apr-05	1			720		710 675	580			540	590	535	505	505	495	505			480	525	455			580			570	610	580	580		570		540	595	540	640		690		600	650	600	630		600	620	570	630		600	620	570	
	2			720		710 675	580			540	590	535	505	505	490	505			480	525	455			580			570	610	580	580		570		540	595	540	640		690		600	650	600	630		600	620	570	630		600	620	570	
	3					710 675			570		590	535		490						525	455						570	610	580				570		540	595	540	640				600	650	570			600	620	570			600	620	570
	4					710 675					540	590	535	490						480	525	455					570	610	580						540	595	540				600	650	570			600	620	570			600	620	570	
	5					710 675				540	590	535	490							480	525	455					570	610	580						540	595	540	640				600	650	570			600	620	570			600	620	570
	6				700		710 675			570		590	535		500					525	455						570	610	580						540	595	540	640				600	650	600	640	570	600	620	570			600	620	570
	7		730	700		710 675	580			570	570	590	535	505	490	510	500	480	525	455				600		570	600	580	580				570	540	595	540	640		700	650	600	650	600	640	570	600	620	570		570	600	620	570	
	8		730			710 675	580			570		590	535	510	500	510	500	490	530	460				600			600	580						570	595	540	620		700		650	600	640			620	570			620	570			
	9		730			710 675	550		580	575		590	535	510	500	510	500	490	530	460				600			600	580	570		580	575		595	540		710	680		655	605	700			620	570			620	570				
	10		730			710 675	580		580	575	540		590	535	510		510		530	460				600		570	600	580	570		580		540	595	540		710	620		655	605	700		590	620	570			600	620	570			
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	13					710 675					590	535						530	460							600	580					595	540				655	605				620	570			620	570			620	570			
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	21			725		710 675	570		580			590	535	520	510	525	510	500	540	460				600			600	580	575		580		595	540		710		620	670	605			620	570			620	570			620	570		
	22			725		710 675	570		585		550	590	535	520	510	535		545	460				600			600	580	570		585	550		595	540		710		620	670	605			620	570			620	570			620	570		
	23			725		710 675	570		585		550	605	550	520	510	535		560	480				600			610	600	580			575	605	550		710		620	670	605			620	570			620	570			620	570			
	24					710 675					575	605	550		520	535	530		560	480				600			590	600	580			580	605	550		730		630	670	605			620	570			620	570			620	570		
	25					710 675					580	605	550		540			560	480				600			600	580				600	605	550		730		670	605			650			620	570			620	570			620	570	
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2			740		715 675		600			605	550		530	550		530	595	495				600			610	575		600		600	550		730		670	605	650			620	570			620	570			620	570					
3			740		715 675		600			605	550		530	550		530	595	495				600			610	575		600		600	550		730		670	605	650			620	570			620	570			620	570					
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5			740		715 675		600			605	550		540	550		595	495					600			610	575		600		600	550		730		670	605	650			620	570			620	570			620	570					
6			740		715 675		600			605	550		540	550		595	495					600			610	575		600		600	550		730		670	605	650			620	570			620	570			620	570					
7			740		715 675																																																	







**Appendix 12:
Conceptual map for marketing**

Appendix 13:
**Memorandum for pilot project in Khanh Chriech area
to each village (Draft)**

Memorandum

Background

The Study Team have found that paddy transaction is unfair and weakness of individual farmer paddy transaction with collector. The disadvantage of paddy transaction by farmer is inaccurate scale, low price, no motivation of good quality. Therefore, the Study team have discussed with villagers to make a project in six villages in Kanh Chriech district Prey Veng Province.

1: Purpose of new pilot project

The purpose of this project is to find beneficial ways for paddy transaction through stronger bargaining power.

2: Activities of Project

- Cooperative shipping of paddy to OPM, collector and rice miller
- Group purchase fertilizer from OPM or private fertilizer shop
- Group utilizing OPM thresher or private thresher.

3: Project Schedule:

Duration of this new pilot project started from the beginning of January, 2006 up to the middle of March, 2006.

4: Project Area

District	Commune	Villages Name	No of Household
Kanh Chriech	Thmor Pon	Prea En Smoth	222
		Beng	208
		Chpeuse	241
	Chong Ampil	Pea Roung	
		Prey Tbal	294
		Chambork	242

5: Responsible of Farmer group

- To cooperate with the Study Team for important data collection
- To cooperate with project to arrange jointly paddy delivery
- To prepare the land for construction of paddy collection depot, table scale and other provided material under control by The Study Team
- To be responsible and manage paddy collection depot, table scale, and provided material under control of OPM as stated below
- To arrange farmer group for jointly purchase fertilizer that supply by OPM or any fertilizer shop
- To arrange farmer group for jointly utilizing OPM or private threshing service
- In Case of Farmer group want to utilize the farmer depot for other purpose to ask permission from The Study Team during the project period and from OPM after the project.

6: List of Facilities/Equipments provided to the farmer groups per set

No	Items description	Quantity	Size	Remark
1	Paddy collection depot	1	4mx8m	3m high
2	Table scale	1		made in China
3	Sign board	1		
4	Pricing board	1		
5	Blue sheet	3		
6	Round Wood	15	2.5m	

Date: _____

The Study Team

The representative of farmer group

Village Chief

Appendix 14:
Meeting Minute of Steering Committee
on the Feasibility Study on Establishment
of Open Paddy Market in Cambodia

Steering Committee Meeting

Place: Meeting hall, DPSIC/MAFF

Date: September 30, 2005

Time: 15:00-17:30

Attendant

- MAFF: H.E Koum Saron, Director General
Mr. Kith Seng, Member, Steering Committee, DPSIC
Mr. Lim Saody, Member, Task Force, DPSIC
Mr. Yuos Monny, Vice Director of PDAFF Prey Veng
Mr. Yasunori Araki, JICA Expert
Mr. Uk Berlina, Deputy Chief of Agri-business
- MOC: Mr. Prak Nork, Member, Steering Committee, DTD
Mr. Un Bun Tha, Member, Steering Committee, DTD
- JICA Cambodia Mr. Jiro TAKEICHI, Project Formation Advisor
- JICA Study Team: Mr. Isamu Yamazaki, Leader
Mr. Masakazu Kanamoto, Member
Mr. Shouhei Natsuda, Study Team Member

Minutes

1. Impact of Svay Antor OPM to users for the 1st year operation (December 200-August 2005)

4%-5% of farmers who have surplus paddy for sale has shipped paddy about 2,600 ton of paddy to OPM and brought back home with the appreciable reasonable price mechanism through accurate weight scaled and paddy quality analyzed by OPM. Moreover, rice millers have also taken advantages of higher milling recovery from the good quality of paddy (dried and cleaned) from OPM.

OPM is able to achieved its paddy handle amount plan, 8,000 ton, for the 2nd operation if it make afford to motivate 20% to 30% of farmers who have surplus production to sell the paddy through OPM.

2. Financial improvement conditions of Svay Antor for the 3rd Year Study (September 2005 ~ March 2006)

To keep the sustainability of independent operation of OPM at the post Pilot Project, the financial conditions is needed to be improved through the following procedure.

- i) The paddy handle amount shall be increased comparing with the first year operation; thus, the Study Team has made a plan with 8,000 tons of paddy handle amount via OPM for 2nd year operation.
- ii) The service charge is revised due to the higher fuel price.
- iii) High valued services such as wild grass-seed elimination and fumigation for insect during paddy storage is created.
- iv) The outgoing as expenditure is reduced.

3. 2nd Pilot Project in Battambang for the 3rd Year Study (September 2005 ~ March 2006)

The 2nd Pilot Project is for paddy marketing strengthening for agricultural corporative, which is needed small assistance of equipment, material and systematic advice for self-operation, is still under the consideration of JICA. Any way, this project is required the firm participation of Extension Office and PDAFF at Battambang because it is only short term , 6 months, that Study Team is able to contribute technical assistance to the corporative to begin its operation with low operation cost.

The Study Team does not construction a new warehouse inside Toul Samraong Seed Station for the 3rd study because it is beyond the fundamental of JICA that supports only renovation.

4. Institutionalization of OPM for the 3rd Year Study (September 2005 ~ March 2006)

The Study Team still propose the operation body of OPM as a Non-Profit Organization. The steering committee members concern whether MOC still donate warehouses, and MAFF still offers KR2 fund to another operation agency of OPM (private or NPO) after the termination of the Study Team. The Paddy Pledging Scheme is needed for the first few years operation of OPM as for to absorb paddy handle amount and income of OPM.

The proposal of the Study Team will be mentioned in the report submitting to the ministers by MAFF and MOC and replied the Study Team latter.

5. How to recruit the general manager of OPM for the 3rd Year Study (September 2005 ~ March 2006)

The Study Team requests the steering committee members to find how to recruit a strong competent person to be a general of OPM. The method and procedure of recruiting will be responded to the Study Team after the steering committee members submit the meeting report to their respective ministers, MOC and MAFF.

6. Others

The effective mechanism of OPM will be found if the existing one performed by the Study Team leads OPM to get benefit after the next drying season paddy at April or May 2005, or it will be not.

**Appendix 15:
Others Meeting Minutes**

Place: Ministry of Commerce (the office of Under Secretary of State)

Date: December 19, 2005

Time: 9:55 am to 11:00 am

Attendant: H.E Mao Thora, Under Secretary of State of MOC

Mr. Prak Nork, Director of DTD, MOC

Mr. Yamazaki, Study Team Leader

Mr. Kanamoto, Study Team Member

Mr. Natsuda, Study Team Member

MINUTES

1. OPM General Manager Recruitment

- a) The Study Team has already proposed the Steering Committee Member about the recruitment of OPM General Manager. OPM General Manager shall be urgently recruited because now it is closed to next March for the termination of Pilot Project of Svay Antor OPM. The Study Team has already announced and stuck the poster at PDOC, PDAFF and Prey Veng Provincial Hall but so far any candidates are not applied for this position.
- b) The OPM General Manager is required to be trained at least one year to understand functions, system and operation of Svay Antor OPM. Before the termination of Pilot Project of Svay Antor OPM, MOC should propose to JICA to provide a new Japanese expert to continuously train OPM General Manager.
- c) In the afternoon on December 27, 2005, the Excellency Mao Thora will have lecture on the explanation of Chamber of Commercial Law at the town of Prey Veng province, meanwhile he invites the Study Team to explain about the system and function, and announce the recruitment of OPM General Manager.

2. The Institutionalization of OPM

- a) The Study Team has 3 times proposed the Steering Committee Member about the operation body of OPM and to establish NPO (Non Profit Organization) that focuses on more financial independence compared to NGO, to continuously operate OPM after March 2006 but it is not yet replied officially.

- b) The Study Team has been trying to find, survey any possible NGOs including Japanese NGOs to continuously operate OPM but it is some difficulty.
- c) OPM should establish its own NPO for the operation. The NPO of OPM could be run by the present staff. The new General Manager of OPM shall be appointed as a representative of NPO for the registration to Ministry of Interior. Moreover, the statute of OPM shall be composed before establishing NPO.
- d) The Ministry of Commerce has no objection for establishment of NPO, and is considering the special condition of rental fee of warehouses and compound of OPM after the termination of Pilot Project in order to continue operation of OPM (one counterpart suggested free for 3 years, a small amount after that).
- e) One of the ways for operating OPM, the Chamber of Commerce that is under the control of MOC can operate OPM. Unfortunately, the Chamber of Commerce of Prey Veng province was not yet established within this year and it takes another 3 years.
- f) The Excellency Mao Thora clearly recognizes OPM in Svay Antor is an important facility like rural roads for economic development for Prey Veng where they mainly produce rice.

3. The New Pilot Project for Farmer Group

- a) The new pilot project of establishment of Farmer Group has just started in Kanh Chriech district, Prey Veng province. The pilot project has selected six villages in two communes for the target area. One of the two communes is located along the national road No. 11, Choung Ampil commune, 20 km from Svay Antor OPM and another one is far from OPM located in Thma Poun commune 17-18 km from the national road No. 11, but the approach road is not good condition and called remote area.
- b) Farmer Group is conducted for collecting paddy and providing paddy prices information. Each selected village will be provided with a shed, scale and white board.

4. Other

Nowadays, the paddy prices at OPM strongly affect on the users (Trader, Rice Miller, Collector, Farmer).

Pre-Steering Committee Meeting

Place: Ministry of Commerce (MOC)

Date: February 3, 2006

Time: 9:00-10:00

Attendants

H.E. Mao Thora, Under Secretary, MOC

Mr. Un Bun Tha, Deputy Director, DTD/MOC

Mr. Mey Bun Ly, Task Force Member, DTD/MOC

Mr. Isamu Yamazaki, Study Team Leader

Mr. Masakazau Kanamoto, Study Team Member

Minute

1. Direction of Svay Antor OPM after termination of pilot project

JICA Office in Cambodia has decided for 2 directions of Svay Antor OPM after termination of pilot project in March 2006.

- i) OPM must be closed (paddy and equipments must be made clearance before the termination)
- ii) OPM must be handed over to a reliable and competent organization managed by Cambodian government.

To continue the operation of Svay Antor OPM, the Government of Cambodia (MOC/MAFF) is required to evident 3 criteria to the Government of Japan (JICA).

- i) Create firm/reliable organization for operating Svay Antor OPM
- ii) Nominate a of competent and qualified full time general manager of Svay Antor OPM (government staff or public)
- iii) Budget for operating Svay Antor OPM

2. MOC's aspect

There are 2 possibilities to succeed the existing Svay Antor OPM after the termination of pilot project.

- i) OPM is operated by private, MOC or MAFF

- ii) OPM is operated by the cooperation between MOC and MAFF

H.E. Mao Thora will raise this issue to the Minister of Commerce in the Annual Conference on Sunday 05 February, 2006. He will also discuss this issue with Mr. Kith Seng, Director of Department of Planning, Statistics and International Cooperation, MAFF, and result of the discussion will be informed to the JICA Study Team after that.

After the Annual Conference of MOC, MOC and MAFF will nominate one? staff as counterparts to attend the operation of OPM with the JICA Study Team until the termination of pilot project. The staff needs transfer of technical assistance from The Study Team and looks after the facilities of OPM at the transitional period.

3. Others

- H.E Mao Thora will visit Svay Antor OPM on February 17 or 18, 2006, and the Steering Committee meeting will be held after that.

Place: Svay Antor OPM

Date: February 19, 2006

Attendant: H.E. Mao Thora, Under Secretary of State

Mr. Un Buntha, Deputy Director of DTD

Mr. Mey Bunly, Vice Chief of DTD

Mr. Kou Yoeun, Director of Prey Veng PDOC

Mr. Nong Sam Hoerng, Co-General Manager, Deputy Director, PDOC

Mr. Yous Mony, Co-General Manager, Director, PDAFF

Mr. Isamu Yamazaki, Co-General Manager, Study Team Leader

Mr. Masakazau Kanamoto, Study Team Member

Mr. Natsuda, Study Team Member

Mr. Soun Veasna, Assistant of Study Team

Mr. Dok Luon, Assistant of Study Team

Mr. Chhoun Sam Art, Marketing Section Manager, OPM

Minutes

1. Extension of Open Paddy Market

H.E. Mao Thora has suggested and requested the JICA (Japanese International Cooperation Agency) to assist and extend Open Paddy Market to other province and it should be disseminated its function of wholesale market to other provinces as well.

The present staff of OPM is very important to be the experience staff for establishment of new OPM in the other provinces.

2. User's Understanding

It is very important and takes time to make users understand the system and function of OPM, wholesale market.

3. User's Requirement

It is wrong idea to say that Vietnamese rice millers and traders need to buy low quality of paddy with high moisture. Vietnamese traders who bought paddy direct at OPM, they need good quality of paddy with low moisture content.

4. Proposal of the operation extension of Svay Antor OPM

H.E. Mao Thora will submit the letter for the senior minister of MOC to sign on the returning day

from Japan (draft of the proposal for the extension of OPM operation). Referring to the proposal, the senior minister of MOC will direct discuss with the Excellency of Japanese ambassador about the extension of OPM operation. Debate day of the proposal will be conducted on February 23, 2006 at the office of H.E. Mao Thora and attended by Study Team and H.E. Mao Thora and Mr. Un Buntha.

5. Plan of the Establishment of New organization of Svay Antor OPM

The establishment of new organization for the extension of OPM operation at the termination of Pilot Project is required to make users understand deeply about function and system of wholesale market. The new Svay Antor OPM shall be operated by the present staff of OPM. The operation of new OPM will be operated independently.

New OPM as a private organization needs the consignment contract with DTD/MOC to operate OPM as an implementation body.

New OPM must be permitted to utilize the existing OPM facilities at least for 3 years.

DTD/MOC will prepare and compose the PRAKAS to implement OPM under the control of DTD's roles and duties. DTD/MOC will supervise and monitor the operation of Svay Antor OPM.

6. Other

- The Steering Committee Meeting maybe conducts on the day of 4 or 6 March, 2006.

Place: Office of Under Secretary of State, MOC

Date: February 23, 2006

Tim: 8:00 am – 9:20 am

Attendant: H.E. Mao Thora, Under Secretary of State, MOC

Mr. Un Buntha, Deputy Director of DTD, MOC

Mr. Mey Bunly, Vice Chief, MOC

Mr. Isamu Yamazaki, Co-General Manager, Study Team Leader

Mr. Masakazau Kanamoto, Study Team Member

Minutes

1. Fund For The New OPM Svay Antor Operation

The New OPM Svay Antor must be operated by its own fund (budget) of the income of services. NGO of OPM Svay Antor could find new donors to continue operating after the termination of study of JICA Study Team.

2. The Dissemination Of New OPM In Other Provinces

OPM needs time to disseminate its concept and knowledge to all stakeholders because this is new concept and knowledge for Cambodian people.

There are three provinces (Battambang, Pursat, Takeo) in the entire country of Cambodia that is available to establish OPM because surplus of paddy production in those provinces are higher.

Takeo province is more convenient to establish OPM than other provinces because it is located along the border of Vietnam and Cambodia that is more compromise to make transaction.

3. The Proceeding Of Operation Of OPM Svay Antor

OPM operation will be set under the monitoring and supervising of DTD/MOC to proceed its own business after the termination of the study of JICA Study Team in March 2006.

Chairman and membership of Board of Director of OPM shall be established and selected from MOC/PDOC, MAFF/PDAFF, Rice Miller Association or Farmer Association.

The application form of the establishment of NGO of OPM Svay Antor will be submitted to the Ministry of Interior soon. The NGO of OPM Svay Antor independently operate its own business.

Facilities and equipment of OPM Svay Antor will be granted to MOC to be responsible after the termination of study of the JICA Study Team in March 2006.

4. Duties and Responsibilities of DTD/MOC

- MOC will issue the PRAKAS on OPM as a wholesale market in order to define the roles and duties by DTD.
- One of the four offices of DTD is in charge of the roles and duties in regards with OPM.
- The roles and duties as for OPM are mentioned in above PRAKAS as follow:
 - i. To disseminate the concept and knowledge of OPM as a wholesale market.
 - ii. To prepare the regulation/law of the establishment and operation of OPM by private sector.
 - iii. To supervise, monitor and audit the operation of OPM by private sector.

5. Other

Ministry of Commerce of Thai will support the project of one village and one product in Cambodia. The project of one village and one product is leaded by H.E. Soun Kouthor, Director of Rural Development Bank.

The Steering Committee Meeting will be conducted at the office of DTD on day of 4 or 6 of March, 2006.

Appendix 16:
Village Characters in the Pilot Project for Khan Chhriech district

Village Character of The second pilot project

I. Paddy Transaction by each village

	Com-mune	Village	No of House holder	1st year (from Dec2004)		2 nd year (from Sep 2005)			
				By the end of Aug 2005		By the end of Jun 2006		By the end of Aug 2006	
				Lots	Amount(kg)	Lots	Amount(kg)	Lots	Amount(kg)
1	Chong Ampil	Chambork	242			67	39,670.2	113	51,591.2
2		Pea ROUNG	73			53	22,261.9	55	19,006.6
3		Prey Tbal	294			15	20,293.7	16	22,169.3
4	Thmor	Beng	208	91	54,733.4	150	82,265.0	152	85,131.4
5	Pun	Chpeus	241	49	46,536.1	115	81,214.3	124	97,222.6
6		Prea En Smoth	222			15	6,062.8	15	6,062.8
Total			1280	140	101,269.5	415	251,867.9	475	281,183.9
Estimated paddy production (2005/06) ; percentage of collection to OPM							30%		37%

II. Paddy Transaction Characteristic of each village

1. Chambork village

- Location: This village is located on the notional road about 14 kilometers from OPM
- Pricing information: Because of the location of this village, farmers there get pricing information easily and comparably of the market price daily from many collector. Before this village is rarely get OPM market price but after that farmer shed was build, farmer and village chief starting to call OPM to get market price.
- Farmer behavior: Farmer here is not so difficult to decide selling paddy to collector because they were passed farmer house every day. For the second year operation of OPM, this village have a few farmer believing OPM system and function but after we have made farmer group and farmer workshop they change the mind for the group shipment to OPM and negotiating paddy price with collector

2. Pea ROUNG village

- Location: It is located around 2 kilometers from national road and around 17 kilometers from OPM. The location of this village is isolate and grouping.
- Pricing information: Farmer can get the price information from collector unless collector go to collect paddy or a farmer goes outside the village to ask collector price and then share this market price to neighboring.
- Farmer behavior: Because of shortage of pricing information, farmer here

can sell their paddy to collector by following neighboring price or only one collector that get into the village, they have no price comparison and weak of bargaining power position.

3. Prey Tbal village

- Location: Distance from OPM to Prey Tbal village is around 16 kilometers but not so easy to access the village during or after rainy one or two days.
- Pricing information: Farmer living here can get market price of paddy easily because there are 4 collectors in the village and farmer can compare the collector price for selling paddy.
- Farmer behavior: Farmers can sell the paddy to collector with the comparable market pricing.

4. Beng village

- Pricing information: villager could get paddy market price from collector agent in village and rice miller at the Kanhchriech town. Mostly collector come from other village and not so popular for this area
- Farmer behavior: Farmer wants their paddy he/she needs to call collector truck passing their house and go to rice miller or calling collector agent in village. And farmer follows the key person for the paddy transaction.

5. Chpeuse village

- Location: It is located on the main road of the commune and can access to the Vietnam boarder occasionally.
- Pricing information: Because of the location farmers are able to get the market pricing information from collector and trader
- Farmer behavior: Paddy is sold by comparing the paddy pricing and benefits of each buyer and farmer. They are thinking about paddy market pricing, which is higher and which is low market price, not the cheating transaction or inaccurate weight for their paddy transaction.

6. Prea En Smoth

- Location: The village is located at the edge of the commune area
- Pricing information: Villager gets the paddy pricing for collector and collector agent in village and moreover, it is possible to get the pricing information from the collector next to that village.
- Farmer behavior: Villagers and village chief do not want to try or adopt new system for paddy transaction. And this village is harvested lately of the harvesting season, so most of collectors go to purchase paddy competitively of pricing and service.

Appendix 17:
Document submitted to CODEX committee on Rice Standard

Standardization of Rice Quality

1. Standards for paddy

Following standards for paddy was applied tentatively at the pilot project of OPM Svay Antor.

This standard has been drafted through not only many sample analysis on field survey carried out in 2004, but also the former Cambodia paddy standard that had been applied in 1960's and Japanese rice standards and united State rice standards.

<u>Temporal Paddy Quality Standard</u>		
<ul style="list-style-type: none"> This Temporal Paddy Quality Standard would be applied on only project site of Open Paddy Market (OPM), which is located in Svay Antor, Prey Veng province, Cambodia. This temporal and unauthorized standard is subject to revision through probationary administration on the OPM 		
1. Definitions		
The meaning of the terminology in this Standard is stated below:		
	Terminology	Meaning
1.	Paddy Standards	The minimum specifications for paddy of each type and grade for domestic and international trade.
2.	Rice	Non-glutinous and glutinous kernels obtained from the species (<i>Oryza sativa</i> L.) in whatever form.
3.	Paddy(paddy rice or paddy)	Rice which has retained its husk after threshing
4.	Brown rice (husked rice or cargo rice)	Paddy rice from which the husk has been removed.
5.	Milled rice (white rice)	Rice obtained after milling which all or part of the bran and germ has been removed from the brown rice.
6.	Rice classification	Rice grains of various lengths and width as specified which are the mixtures of rice kernels of each class in accordance with the specified proportion.
7.	Whole grain	Rice grains without any deterioration.
8.	Red grain	Rice grains that have red bran covering the kernels wholly or partly. Kernels, whole or broken, having a red coloration covering more than three-quarter of their surface, but excluding heat-damaged kernels
9.	Yellow grain	Rice grains that have some parts of the grains turn yellow obviously.
10.	Mix paddy	Paddy that are mixed with different color, sizes and shapes. Several different varieties are mixed up.

11.	Cracked grain	Rice grains that have been cracked in the endosperm wholly or partly.
12.	Chalky grain	Non-glutinous rice kernels, whole or broken, except for glutinous rice, which have an opaque area like chalk covering the kernels as from 50% onward.
13.	Damaged grain	Grains, whole or broken, that are obviously damaged as can be seen by the naked eyes due to moisture, heat, fungi, insects or other causes.
14.	Immature grain	Grains, whole or broken, which are unripe and/or underdeveloped.
15.	Other seeds	Seeds of other plants than rice kernels.
16.	Foreign matter	Other matter than rice grains, whole or broken, such as stone, sands, other seeds/grains. Empty grains and straws are also included in this category.
17.	The unit "percent"	Percentage by weight except for per cent of grain classification which is percentage by quantity.
18.	Moisture contents	Percentage of moisture which are contained in Rice kernels. This is calculated following formula. $\text{Weight of moisture in rice kernels} / (\text{weight of moisture in rice kernels} + \text{weight of dried matter in rice kernels})$
18.	Glutinous rice (waxy rice)	Special varieties of rice (<i>Oryza sativa</i> L. <i>glutinosa</i>) the kernels of which have white and opaque appearances. The starch of glutinous rice consists almost entirely of amylopectin. It has a tendency to stick together after cooking.

2. Specification

1. General, organoleptic and health characteristics

- Rice shall be sound, clean and free from abnormal odors or odor which indicates deterioration.
- Rice shall be safe and suitable for human consumption.
- The presence of living insects, which are visible to the naked eye, is not permitted.

Physical and chemical characteristics

- The moisture content shall be 15% (wet base) or less.
- The maximum contents of foreign matters, defective kernels and other kinds of rice in paddy shall be not greater than the values specified in table 1.

Grade of Paddy	Maximum allowance						
	% Moisture content	% Red (Colored) grains	% Cracked grains	Damaged grains, colored grains, foreign grains and foreign matter			
				Total	Damaged and Diseased grains	Foreign Matter (including Empty grains)	Immature grains
No.1	15.0	4.0	1.0	2.0	1.0	0.1	1.0
No.2	15.0	18.0	2.0	5.0	3.0	0.5	5.0
Unqualified Grade	: shall be paddy rice which is out of above allowance or has any commercially objectionable foreign odor.						

2. Revised paddy standard

According to one month trial applications at OPM Svay Antor, Prey Veng, following revisions had been attempted.

Grade of Paddy	Maximum allowance						
	% Moisture content	% Red (Colored) grains	% Cracked grains	Damaged grains, colored grains, foreign grains and foreign matter			
				Total	Damaged and Diseased grains	Foreign Matter (including Empty grains)	Immature grains
No.1	15.0	4.0	2.0	2.0	1.0	0.1	1.0
No.2	15.0	18.0	5.0	8.0	3.0	0.5	5.0
Unqualified Grade	: shall be paddy rice which is out of above allowance or has any commercially objectionable foreign odor.						

- Cracked grain

Grade No.1:1.0% 2.0%、 No.2 :2.0% 5.0%

- Total allowance value of foreign matters, immature grain, diseased grain

Grade No.2: 5.0% 8.0%

- Item of diseased grain: description of “diseased grain” had been added

• Empty grain : to had been transferred into category of foreign matters

3. Results of monitoring for paddy grading

However, the former standard could not fit in the reality of the paddy quality in Prey Veng province. Most of paddy graded by the OPM quality inspection team has been under defined allowance, so that those had been graded into “Unqualified grade”.

There are so many reasons why this could not be applicable. The reasons are;

- 1) Farmers cannot measure the moisture contents adequately because of lacks of measurement methods. They estimate the moisture contents with their accumulated experience and intuition, without any kinds of measuring equipments. Even worse, their guesstimates were far from true values.
- 2) Farmers would like to use straws for blocking paddy so as not to spill out from bag opening and it shall be categorized as foreign matter. By choking paddy up as much as possible in order to save the paddy sack cost, they can pack around 80kg or more into 70kg paddy sack.
- 3) There are too many immature and empty kernels. The main reason is poor harvesting technology. But behind inadequate threshing or poor cleaning of paddy, it shall be specially noted that most farmers would like to place much values on the weight rather than the quality.

Table Analysis results for immature grains

Percentage of immature grain	1.0%>	1.01<>2.0%	2.01%<>3.0%	3.01%<>4.0%	4.01%<>5.0%	5.01%<
Percentage of samples	10%	20%	35%	10%	20%	5%

Source : JICA Study Team

- 4) There are lots of cracked kernels caused by inadequate sun-drying and/ or passing optimum harvesting time.

Table Result of analysis for cracked grain

Percentage of cracked grain	0 %	0.1%<>1 %	1 .1%<>2%	2.1%<>5 %	5.1%<>10%	>10.1%
Percentage of distribution	0 %	6.7%	7.3%	12.5%	53.8%	19.7%

: JICA Study Team

- 5) There are lots of red kernels. This phenomenon could be observed in some variety, especially in floating rice or recession rice and Banla Pdav .
- 6) There are lots of damaged kernels, caused by disease, fungi, insects etc, and germinated rice. Those has been discolored into black or charcoal.
- 7) Many foreign matters such as weed seeds and stones are included. Weed seeds are contaminated while harvesting, and stones are while sun-drying on improper drying bed.

Table Analysis results for foreign matters

Percentage of foreign matters	0.1%>	0.1%< >1.0%	1.0%< >2.0%	3.0%<
Percentage of samples	5.0%	45.0%	40.0%	10%

Source : JICA Study Team

- 8) Long stored paddy at farmers house or barns contains bugs such as rice weevils. The rice weevils are scarcely generated in normal storing condition for paddy. Such facts tell that paddy includes lots of un-husked rice (cargo rice) or milled rice caused by poor threshing methods.

Evaluation and conclusion

As mentioned before, Most of Cambodian paddy has so poor quality that it cannot to clear even loosen allowance value. In order to apply the paddy quality standard in Cambodia, improvement on rice harvesting technology and establishment of the fair trade system between paddy producers and buyers will be settled as the first priority matter.

Of course, the OPM continue to analyze and grade the paddy quantity in order to make fair trade between producers/farmers and buyers/rice millers whether the paddy standard is applied or not.

As most of rice production countries, as same as Cambodia, do not constitute the paddy quality standard because the paddy trade is free from governmental control. Standardization on milled rice is more critical than paddy standard for promoting export.

4. Standard for milled/ white rice

Draft of standard for milled rice is drafted as follows.

Quality Standards for milled rice (Draft)

1. Definitions

The meanings of the terminology in these Standards are as follows:

	Terminology	Meaning
1.	Rice Standards	The minimum specifications for rice of each type and grade for domestic and international trade.
2.	Rice	Non-glutinous and glutinous kernels obtained from the species (<i>Oryza sativa</i> L.) in whatever form.
3.	Paddy (Rough rice)	Unhusked kernels of rice after threshing.
4.	Brown rice	Paddy from which the husk only has been removed.
5.	Milled rice (White rice)	Rice obtained after milling which all or part of the bran and germ have been removed from the husked rice.
6.	Rice classification	Rice kernels of various lengths as specified which are the mixtures of rice kernels of each class in accordance with the specified proportion.
7.	Classes of rice kernels	Classes of rice kernels which are classified in accordance with the length of the whole kernel.
8.	Parts of rice kernels	Each part of the whole kernel that is divided lengthwise into 10 equal parts.
9.	Whole grain	Rice kernels that are in whole condition without any broken part.
10.	Head rice	Kernel, the length of which is greater than or equal to three-quarters of the average length of the corresponding whole kernel.
11.	Broken	Broken kernels that have the length as from one-quarter of the average length of the corresponding whole kernel but have not reached the length of Head rice.
12.	Small broken kernel	Fragment of kernel, the length of which is less than or equal to one-quarter of the average length of the corresponding whole kernel but which does not pass through a metal sieve with round perforations 1.4 mm in diameter.
13.	Chip	Fragment of kernel which passes through a metal sieve with round perforations 1.4 mm in diameter.
14.	Well-milled rice	Rice obtained by milling husked rice, of which bran and germ have been removed entirely to the extent that the rice kernel has beautiful appearance.
15.	Extra-well-milled rice	Rice obtained by milling husked rice of which bran and germ have been removed entirely to the extent that the rice kernel has an especially beautiful appearance.
16.	Reasonably well-milled rice	Reasonably well milled is the removal of large amount of bran to the extent that the rice kernel has a reasonably beautiful appearance.
17.	Ordinarily milled	Ordinarily milled is the removal of some portions of bran only.
18.	Red kernels	Rice kernels that have red bran covering the kernels wholly or partly.
19.	Red-streaked kernels	Milled-rice kernels that have red streaks in the surface grooves, the lengths of which are greater than or equal to one-half of that of the whole kernel.

20.	Yellow kernels	Rice kernels that have some parts of the kernels turn yellow obviously due to alteration.
21.	Mix rice	Rice kernels that are mixed with different color, sizes and shapes. Several different varieties are mixed up.
22.	Cracked kernels	Rice kernels that have been cracked in the endosperm wholly or partly.
23.	Chalky kernels	Non-glutinous rice kernels, whole or broken, of which at least one-half of the surface has an opaque and floury appearance.
24.	Damaged kernels	Kernels that are obviously discolored or damaged as can be seen by the naked eyes due to moisture, heat, fungi, insects or other causes.
25.	Empty kernels	Kernels that do not develop normally as should be, and are flat without starch.
26.	Immature kernels	Kernels, whole or broken, which are unripe, of which color is green or chalky.
27.	Other seeds	Seeds of any plant other than rice kernels.
28.	Foreign matter	Organic and inorganic components other than rice. This includes empty kernels in paddy, rice husk and bran detached from rice kernels in milled rice.
29.	Milling degree	The degree to which the rice is milled.
30.	The unit "per cent"	Percentage by weight except for percent of grain classification which is percentage by quantity.
31.	Glutinous rice	Special varieties of rice (<i>Oryza sativa</i> L. <i>glutinosa</i>) the kernels of which have white and opaque appearances.
32.	Milling yield	An estimate of the quantity of whole kernels and total milled rice (whole and broken kernels combined) that is produced in the milling of brown rice for processing to a well-milled degree.
33.	Smutty kernels	Whole or broken kernels of rice, which are distinctly infected by smut.

GRADES OF WHITE RICE	GRAIN CLASSIFICATION				GRAIN COMPOSITION							MAXIMUM ALLOWANCE FOR THE FOLLOWING MIXTURES							MOIST.	PADDY	MILLING DEGREE
	EXTRA LONG & LONG	MEDIUM	SHORT	Non-fragrant rice	WHOLE GRAIN	AVER LENGTH	SIZE OF BROKEN	HEAD RICE & BIG BROKEN	BROKEN	SMALL BROKEN & CHIP	CHALKY KERNELS	YELLOW KERNELS	DAMAGED KERNELS	IMMATURE KERNELS	RED & RED STREAK KERNELS	FOREIGN MATTER	GLUTINOUS RICE				
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)				
EXTRA LONG GRAIN & LONG GRAIN	No.1	60	20	10	-	60.0	6.2	0.3-0.75	± 35.0	7.0	0.0	6.0	0.5	0.5	0.0	0.5	0.2	0.5	14.0	15	W.M
	No.2	60	25	25	-	50.0	6.2	0.25-0.60	± 30.0	22.0	0.5	7.0	1.0	1.0	0.5	4.0	0.2	1.0	14.0	25	R..W.M.
	No.3	60	40	40	-	32.0	6.2	0.25-0.50	± 33.0	38.0	2.0	10.0	2.0	3.0	1.0	8.0	1.0	1.5	14.0	35	R..W.M.
MEDIUM & SHORT GRAIN	No.1	-	70	20	-	55.0	5.2-6.2	0.3-0.70	± 35.0	12.0	0.0	7.0	1.0	0.75	0.0	4.0	0.2	1.0	14.0	20	W.M
	No.2	-	60	20	-	40.0	5.2-6.2	0.3-0.65	± 30.0	22.0	0.5	9.0	1.0	1.0	0.5	4.0	0.2	1.0	14.0	30	R..W.M.
	No.3	-	60	25	-	28.0	5.2-6.2	0.25-0.50	± 27.0	48.0	3.0	12.0	2.0	3.0	1.0	14.0	1.0	1.5	14.5	45	R..W.M.
FRAGRANT RICE	No.1	60	20	10	10	60.0	6.2	0.3-0.75	± 35.0	7.0	0.0	6.0	0.5	0.5	0.0	0.5	0.2	0.5	14.0	15	W.M
	No.2	60	25	25	20	50.0	6.2	0.25-0.60	± 30.0	22.0	0.5	7.0	1.0	1.0	0.5	4.0	0.2	1.0	14.0	25	R..W.M.
	No.3	60	40	40	30	32.0	6.2	0.25-0.50	± 33.0	38.0	2.0	10.0	2.0	3.0	1.0	8.0	1.0	1.5	14.0	35	R..W.M.
Milled Glutinous Rice	10%	-	70	20	-	55.0	5.2-6.2	0.3-0.70	± 35.0	12.0	0.0	7.0	1.0	0.75	0.0	4.0	0.2	1.0	14.0	20	W.M
	25%	-	60	25	-	40.0	5.2-6.2	0.25-0.50	± 35.0	28.0	1.0	10.0	1-2	2.5	0.5	8.0	0.5	1.5	14.0	35	R..W.M.

NOTE: SIZE OF BROKEN: LESS THAN BROKEN BUT MORE THAN CHIP

E.W.M.: EXTRA WELL MILLED

W.M.: WELL MILLED

R.W.M.: REASONABLE WELL MILLED

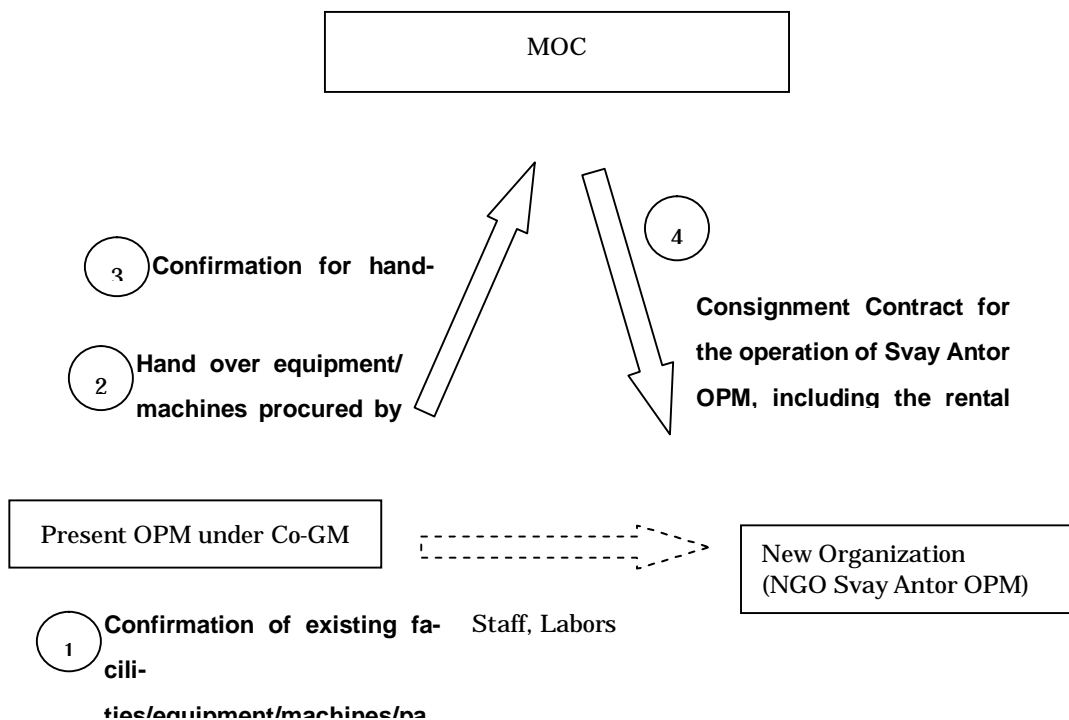
Appendix 18:
Confirmation for Handover of Svay Antor OPM
as Pilot Project to MOC

March 18, 2006

Confirmation for Handover of Svay Antor OPM as Pilot Project to MOC

Co-General Managers (Co-GM) for Svay Antor Open Paddy Market (OPM) as Pilot Project under JICA Feasibility Study hand over the present OPM to Ministry of Commerce (MOC) on this date, on the basis of the letter from Mr. Juro Chikaraishi, Resident Representative, JICA Cambodia Office to H.E. Mr. Mao Thora, Under Secretary of State, MOC of March 14, 2006, and the corresponding PRAKAS by MOC. Hence, MOC takes the full responsibility for the matter of OPM after this hand over.

The procedures to hand over Svay Antor OPM from Co-GM to MOC are illustrated below. And the consignment contract between MOC and the new organization is subject to follow for the implementation of the new OPM.



The descriptions below are important and necessary information of Svay Antor OPM for the implementation of new OPM.

1. Present name:

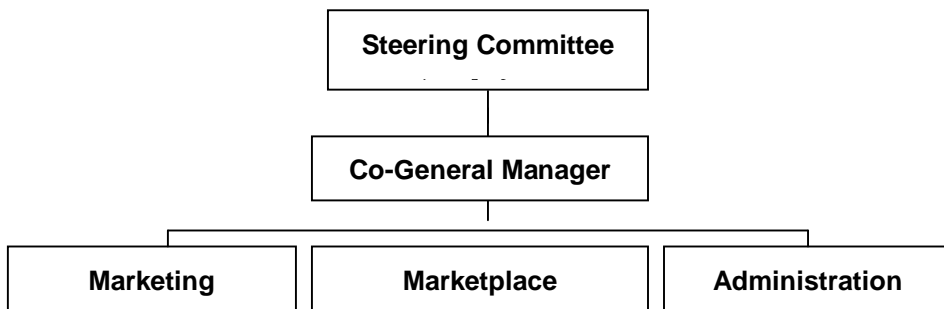
Svay Antor Open Paddy Market (OPM) as Pilot Project under JICA Feasibility Study

2. Address: Pour Chendam Village, Svay Antor Commune, Prey Veng Districe, Prey Veng Province
3. Telephone No. 043-391 362, 012-946 707 / 845 751 / 845 752
ICOM: 14.2700
E-mail address: opms855@yahoo.com
4. Opening: December 14, 2004
5. Business hours: 8:00-10:00, 14:00-16:00 (Closed in Sundays and National Holidays)
6. Logo and catchword:



“FAIR AND EQUITABLE TRADE”

7. Present structure of organization



- | | | |
|---------------------------------|-----------------------------------|------------------------|
| - Price Information | - Store keeping (paddy inventory) | - Personnel management |
| - Paddy collection/sales | - Inspection/ scaling | - Accounting |
| - Fertilizer sales | - Drying/ cleaning | - Security |
| - Promotion of other activities | | |

8. Main staff/labors

Workable Staff and Labor of Svay Antor OPM

No	Name	Sex	Birth (D/M/Y)	Address	Field	Monthly Salary
1	(Vacant)					1,025,000
2	Chhoun Sam Art	M	14/05/83	Chueng Toek Com, Kampong Leav Dist	Manager Marketing	588,000
3	Vong Samphos	F			Assistant Manager Administration, Accountant	560,000
4	Touch Chan Thom	M	10/08/67	Porchendum Vil, Svay Antor Com	Assistant Market-place labor chief	560,000
5	Ut Sopha	F	05/03/83	Mebon Vil, Mebon Com	Inspector	168,000
6	Thom Sopheak	F	17/09/87	Porchendum Vil, Svay Antor Com	Inspector	168,000
7	Sophun	F			Inspector	168,000
8	Chea	M			Driver	336,000
9	Yaem	M			Driver	336,000
10	Peth Sarim	M	15/07/81	Porchendum Vil, Svay Antor Com	Labor	224,000
11	Kim Sokha	M	07/08/62	Porchendum Vil, Svay Antor Com	Labor	224,000
12	Tri Tida	M			Labor	224,000
13	Praek Thy	F	10/11/74	Porchendum Vil, Svay Antor Com	Labor	168,000
14	Sophy	F			Labor	168,000
15	Sor Bun Heng	M		Porchendum Vil, Svay Antor Com	Watchman	210,000

9. Existing Compound Area of Svay Antor OPM

No.	Description	Name of Building	Size (m ²)
1	Compound area of drying bed	Drying Bed	2,274.00
2	Compound area of building	A1	759.40
3	Floor area of building	A1	664.80
4	Compound area of building	C	1,750.60

No.	Description	Name of Building	Size (m ²)
5	Floor area of building	C	1,525.46
6	Compound area of building	C1	1,802.00
7	Floor area of building	C1	1,534.68

10. The inventories for equipment and machines, material for Svay Antor OPM

The contents are listed in the attached sheets include all items exist in the present OPM.

11. The inventory for Kanh Chriech Pilot Project

All items are listed in the attached sheets.

12. The inventory of paddy, fertilizer and funds for Svay Antor OPM as of March 9, 2006 as listed in the attached sheets.

- (1) Paddy of 636,719.8 kg in total was confirmed. Main paddy owners were the mid-traders mentioned later.
- (2) Fertilizer of 251 bags (50 kg/bag) was confirmed. And 899,100 Riel for 625 kg in credit is necessary to be collected.
- (3) Remaining funds for OPM counted for 7,356,750 Riel and US\$76.00 in cash, and 47,300 Riel in the Aceda Bank Plc. (Prey Veng), Account No.1400-20-160486-1-3 under the name of "Open Paddy Market".
- (4) Remaining funds for PMS counted for 4,700,000 Riel in cash, and 402,502,900 Riel in the Aceda Bank. Plc. (Prey Veng), Account No. 1400-20-162898-1-9 under the name of "Open Paddy Market Loan System". Pledging amount was 25,300,000 Riel.

13. Paddy Mortgage Scheme Fund

- (1) Paddy Mortgage Scheme (PMS) Fund shall be returned to the account of PMS Pilot Project/MAFF.
- (2) Amount to be returned: 432,000,000 Riel
- (3) Due date: December 1, 2006 (see copy of the application)

14. Registered mid-traders

The funds of mid-traders shall be strictly managed and clearly separated from other funds. The num-

bers of registered mid-traders are 9 persons as of March 12, 2006 (Ms. Uch Sokha, Mr. Dok Luon, Mr. Yazami, Mr. Hok Pangawath, Mr. Reoung Sophany, Mr. Va Chheng Oeun, Mr. Long Vong Samith, Mr. Lorm Rith, Mr. Sea Nai Ear) .

15. Internal regulations for staff and labors

All staff and labors are strongly requested to follow the internal regulations described in the attached.

16. Keys

All keys and person in charge for keeping are listed in the attached sheets.

17. Present service charges since September 14, 2005

Service Items		Previous charges	Revised from September 14, 2005
Basic		5 Riel/kg from sellers (5 Riel/kg from buyers for sack)	5 Riel/kg from sellers (8 Riel/kg from buyers for sack)
Drying		6 Riel/kg	6 Riel/kg
Cleaning		6 Riel/kg	6 Riel/kg
Storing		1.4 Riel/kg/month	1.5 Riel/kg/month
Threshing		12 Riel/kg including operator	15 Riel/kg including operator
Transportation		0.215 Riel/km/kg + 1.5 Riel/kg (Loading and unloading for farmer, loading only for rice miller)	0.392 Riel/km/kg + (2,3,4,5) Riel/kg
Information		Free of charge	Free of charge
Post-harvest		Free of charge	Free of charge
Fertilizer	AIC		Transportation: 0.392/km/kg+2 Riel/kg Check point 500 Riel/bag Basic fee 250 Riel/bag Ferry boat 200 Riel/bag
	Prey Vor (Cambodia & Vietnam border)		Transportation: 0.392/km+2 Riel/kg Custom 500 Riel/bag CAMCONTROL 200 Riel/bag Check point 700 Riel/bag Basic fee 250 Riel/bag
Paddy mortgage		2%/month	2%/month

From: Svay Antor OPM as Pilot Project

Mr. Yous Mony	Mr.Nong Sam Hoernng	Mr.Isamu Yamazaki
Co-Genera Manager	Co-General Manager	Co-General Manager
PDAFF/MAFF	PDOC/MOC	JICA Study Team