



Improved Livelihood for Sidr-Affected Rice Farmers (ILSAFARM)

**Quarterly Report
(April-June 2010)**

Submitted to

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by



International Fertilizer Development Center

**P.O. Box 2040
Muscle Shoals, Alabama 35662, U.S.A.**

www.ifdc.org

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Acronyms and Abbreviations

ARP	Agriculture Rehabilitation Program
BADC	Bangladesh Agriculture Development Corporation
BCIC	Bangladesh Chemical Industries Corporation
BRDB	Bangladesh Rural Development Board
BRI	Bangladesh Rice Research Institute
CA	Cooperative Agreement
CD	Compact Disc
cif	Cost, Insurance and Freight
DAE	Department of Agricultural Extension
DC	Deputy Commissioner
DD	Deputy Director
FMO	Field Monitoring Officer
GOB	Government of Bangladesh
Gr, gm	Gram
Ha, ha	Hectare
IFDC	International Fertilizer Development Center
ILSAFARM	Improved Livelihood for Sidr-Affected Rice Farmers
ICM	Integrated Crop Management
IPM	Integrated Pest Management
Kg, kg	Kilogram
MT	Metric Tons (Tonnes)
NGO	Non Government Organization
NPK	Nitrogen, Phosphorus, Potassium
PU	Prilled Urea
QPR	Quarterly Progress Report
SAAO	Sub Assistant Agriculture Officer
SRDI	Soil Resources Development Institute
Tk	Taka
UAO	Upazila Agricultural Officer
UDP	Urea Deep Placement
US\$	United States dollar
USAID	United States Agency for International Development
USG	Urea Super Granule

Conversions

1 Hectare	=	2.47 Acres
	=	10,000 square meters
	=	247 Decimals
1 Acre	=	100 Decimals
1 Metric Ton	=	1,000 Kilograms
1 Maund	=	37.5 kg (Traders commonly use 40kg in the market)

Overview

Quarterly Progress Report (April - June 2010)

This is the sixth Quarterly Progress Report (QPR) for the ILSAFARM project. It covers the work completed during April 1 to June 30, 2010. This overview presents a summary of results, the deliverables and key activities for the quarter. Further details and a discussion of issues and outlook are provided in the main text.

Results

Progress in “Achievement of Results” is linked to the contractual indicators reported in the Annual Work Plan for 2010. As shown in the table below, during the quarter ended June 30, 2010, the project remained above or on target for six of its eight results indicators. The indicators on urea saved and reduction in subsidy are influenced by a lower baseline application of nitrogen in the project districts, especially in the Aus season (this quarter) and fertilizer price fluctuations, but even so, they remain within 10-20% of target.

Results Achieved against Targets

Result Indicators	Unit	April-June 2010		% Achieved
		Target	Actual Achievement	
Coverage of rice area under UDP technology	Hectare	28,000	27,434	98%
Farm families adopting UDP technology	Number	28,000	123,998	443%
Incremental rice production	MT	30,000	36,582	122%
Increase in the income of farm families	Million \$	9.7	12.8	132%
Average incremental income per farm	\$	64.7	64.02	99%
Urea saved	MT	756	617	82%
Reduction on subsidy burden on GOB	Million \$	0.09	0.083	92%
Farmers trained	Number	26,000	28,421	109%

Note: 1. Data on Coverage, Farm Families Adopting, Urea Saved, Reduction on Subsidy all refer to the Aus 2010 crop and are FMO/DAE estimates that are filed each week. It is subject to change after the Aus Block Survey is completed.

2. Data on Incremental Rice Production, Increase in Income and Average Incremental Income refer to the Boro 2010 crop and derived from the Boro Block Survey and officially verified by DAE (and FMOs).

3. Data on farmers trained are ILSAFARM records of farmers attending training through the quarter. It is reported for the calendar quarter and includes farmers trained between 1st April and 16th June for Aus (that started 18th March) and Aman from 20th to 30th June (and continues into Qtr 7).

This quarter, the Aus season is the first that is a full repeat for the project. Eighty three percent of farmers using USG in Aus 2009 not only repeated in 2010 but also did so on a larger plot size (increasing from 41 decimals/farmer to 50). Reasons for the 17% dropout relates to short supply of HYV seed, supply of prilled urea under the governments Agriculture Rehabilitation Program, drought, return to planting jute in the northern districts and labor shortages for transplanting within a compressed season.

Rice production and income data applies to the Boro 2010 crop that was harvested this quarter. Income calculations use Government of Bangladesh procurement price of Tk24/kg (US\$350/tonne). It should be noted that while UDP technology is lifting yields by 15-20%, the prices have dropped by some 30% since targets were set in 2008. This does compromise the income achievements. Another unexpected occurrence is that, while many

more farmers are adopting the technology, they are doing so on smaller plot sizes, although, as stated above, it is growing.

Deliverables

All of the required deliverables under the ILSAFARM project were submitted as required during the quarter. The specific required deliverable and delivery date are shown below.

Deliverable	No.	2010		
		April	May	June
SF272	1	≈ and ✓		
SF269	1	≈ and ✓		
Quarterly Performance Report	1	≈ and ✓		

Notes: ≈ indicates date due; ✓ indicates date submitted

Highlights of Project Activities

During this quarter the Boro 2010 crop was harvested and the Aus 2010 crop was planted. Training of Aus crop farmers was completed and training of Aman crop farmers started. The Annual Workplan for 2010 set targets for nine activities. All have been met or exceeded.

Highlights of Project Activities

Type of Activity	Unit	April - June 2010		
		Target	Actual	%
1. Meetings/workshops with stakeholders	Number	9	10	111%
2. Training of extension staff	Batches	12	16	133%
3. Training of farmers*	Batches	650	711	109%
4. Training of briquette producers/fertilizer dealers	Batches	4	4	100%
5. Field demonstration (Aus)	Number	60	60	100%
6. Field Trials (Aus)	Number	20	20	100%
7. Field days (Boro)	Number	46	47	102%
8. Motivational field visits	Number	6	7	117%
9. Selling urea briquette machines at 80% subsidy	Number	35	36	103%

* Farmer training includes 652 batches to complete the Aus crop (that started in Mach) and 59 batches as a start to the Aman crop.

Estimated Budget and Actual Expenditure

The budget up to the quarter i.e, June 2010 was estimated at US\$ 3.59 million, of which actual expense was US\$ 3.17 million up to May 2010 or 88% of the estimated budget. It may, however, be noted that the June 2010 expenses are yet to be finalized.

Improved Livelihood for Sidr-Affected Rice Farmers (ILSAFARM)

USAID-BANGLADESH

Cooperative Agreement (CA) Number 388-A-00-09-00004-00

Quarterly Progress Report

April-June 2010

Introduction

This report is the sixth quarterly progress report (QPR) of the ILSAFARM Project. It presents and interprets the results for the quarter, April - June 2010. It recounts and discusses the status of the deliverables within the key activities. All progress is measured for the calendar quarter to June 30, 2010 against targets as specified in the Annual Work Plan for the period from December 16, 2009 through December 15, 2010 and contractual indicators.

Results¹

The Annual Plan² specifies the indicators and their targeted and expected results for each cropping season in year 2. The cropping seasons from seed bed preparation to harvesting do not fall within the confines of calendar quarters. Table 1 reports the results against target for this second quarter of 2010 along with the first quarter figures that are now updated using the Boro Block Survey Data. The coverage and number of farmers have been adjusted to place all the Boro data into the January-March Quarter, even though there was some deep placement in late December 2009.

Table 1 shows, for this quarter, the project remains above or on target for six of its eight indicators. Its coverage, adoption, production, income and training indicators are above or within 2% of target. The indicators on urea saved and reduction in subsidy are influenced by price fluctuations and traditional farm practice but are still within 10-20% of target.

¹ The results indicators in the Cooperative Agreement (CA) are based upon market price data and assumptions made in late 2008. Market price dynamics and improved estimates of external variables influence the actual achievement of the results indicators.

² ILSAFARM Annual Work Plan (Fiscal Year ending December 15, 2010); USAID-Bangladesh approved the plan on March 9, 2010.

Table 1: Results Achieved through June 2010

Result Indicators	Unit	Year 2009			Year 2010									End of Project		
		Expectd ¹	Actual	%	January – March			April – June			Total Year 2010			Target ²	Actual	%
					Target	Actual	%	Target	Actual	%	Target	Actual	%			
Coverage of rice area under UDP technology ³	Ha	37,411	35,842	96%	50,000	60,802	122%	28,000	27,434	98%	106,000	88,236	83%	140,000	108,962 ⁴	78%
Farm families adopting UDP technology ³	No.	73,355	209,381	285%	50,000	200,124	400%	28,000	123,998	443%	106,000	324,122	306%	280,000	441,719 ⁴	158%
Incremental rice production ⁵	MT	19,828	24,143	121%	NA	NA		30,000	36,582	122%	56,000	36,582	65%	74,000	59,094	80%
Increase in the income of farm families ⁶	Million US \$	9.91	8.25	83%	NA	NA		9.7	12.8	132%	18.1	12.8	71%	37.0	21.05	57%
Average incremental income per farm ⁷	US \$	80	42	53%	NA	NA		64.7	64.02	99%	57.0	64.02	112%	80.0	47.75	60%
Urea saved ⁸	MT	3,741	942	25%	5,000	3,770	75%	756	617	82%	6,260	4,387	70%	13,000	5,329	41%
Reduction on subsidy burden on GOB	Million US\$	1.63	0.18	11%	0.63	0.886	140%	0.09	0.083	92%	0.78	0.965	129%	6.0	1.14	19%
Farmers trained	No.	92,000	96,914	105%	32,000	29,717	93%	26,000	28,421	109%	86,000	58,138	68%	178,000	155,052	87%

¹ The Annual Plan 2009, Table 3, adjusted targets to an expected result to account for the delayed start in the project.

² The total project target set by the CA.

³ The coverage and farm families adopting for Jan-Mar 2010 is derived from Block Survey Data for the Boro season. Coverage and farm families adopting for April-June 2010 is an estimate for the Aus season sourced from weekly FMO reports. Its Block Survey Data will be reported in the next QPR.

⁴ To avoid double counting repeated seasons, the end of project coverage and farmers adopting is the cumulative total of the last three seasons, Aman 2009, Boro 2010 and Aus 2010.

⁵ All rice production data is for milled rice calculated from crop cuts in farmer fields and assuming a millout of 67%, except for Boro 2009 when the yield data was sourced from demonstration plots. There was no harvest in January-March 2010 hence no production data. The April-June 2010 figures are for Boro 2010 harvest.

⁶ The rice prices used in these calculations are GOB procurement prices. In 2009 this was USD342/tonne. In 2010 it was increased to USD350/tonne.

⁷ Average incremental income per farm family for April-June is calculated on the Boro harvest. For end of project the average is calculated across all seasons since project inception.

⁸ Urea saved January-March is based on Boro 2010 Block Survey Data. Average Guti application was 177kg/ha. Average Prilled Urea application was 239kg/ha, a saving of 62kg/ha. Urea saved April-June was calculated from FMO estimates of Aus coverage and an expected savings of 23kg/ha assuming guti applied @ 113kg/ha and prilled urea applied @ 135kg/ha.

Estimation of Coverage and number of farmers adopting

Coverage and adoption for Boro 2010 are now confirmed by the block survey data and reported in Table 1 for the January-March quarter. Both have exceeded target. Using this data to compute plot sizes per farm, it is notable that sizes have increased from 40 decimals in Boro 2009 to 75 decimals in Boro 2010.

Coverage and adoption data reported in Table 1 for this quarter are FMO estimates for the Aus crop. The confirmed data will come from the Aus block survey and reported in the next quarter.

The total UDP coverage for each season to date is presented in Appendix 1. The number of farmers using UDP technology is provided in Appendix 2. This quarter saw the first full season repeated. While there were results from Boro 2009, the project started within the Boro season. The Aus crop 2009 was the first to realize full project benefits and Aus 2010 is the first full repeat. According to the block survey in Aus 2009, over 77,932 farmers used USG on 12,856 ha. It is estimated that 64,508 (83%) of these farmers continued to use USG on 12,953 ha in 2010. These farmers and their area of coverage are included in the 2010 data for this quarter. The same was the case for the Boro data although the numbers for Boro 2009 were small by comparison. To avoid double counting repeated seasons of coverage and adoption, the total project figures are calculated only from the last three seasons as their figures do include the retention from 2009.

With this first repeat crop, it is now possible to see the farmer retention from one year to the next. Table 2 shows that, on average over the whole 8 districts, 83% of the farmers using USG in 2009 continued in 2010. There are a number of reasons for the 17% dropout: (1) some farmers did not plant in Aus crop in 2010 because of low rainfall at the start of the season; (2) some farmers did not plant a HYV crop because of no access to seed (in 2009 BRAC gave out HYV seed as part of its cyclone rehabilitation effort); (3) some received prilled urea (free) from DAE as part of the government Agriculture Rehabilitation Program (ARP); (4) there was shortage of labor to transplant and point place Guti urea in 2010 (caused by late rains compressing the season); (5) in the northern districts some farmers are returning to planting jute and (6) in the southern districts high tides coupled with the heavy rainfall arising from cyclone "Laila" caused excessive flooding. All these go to demonstrate the Aus crop is an unpredictable crop in the south.

Using the data in Table 2, we can see that although the 17% of the 2009 farmers were lost in 2010, their area of coverage has remained largely unchanged. This shows that of those 2009 farmers who did use Guti urea in 2010, they did so on a larger plot size. In fact, average plot sizes for the 2009 farmers increased from 41 decimals to 50 decimals (22%). This is gratifying because it does show that those farmers who have been retained are willing to invest in the technology on a larger plot size.

Table 2: Trend in adoption of UDP technology in the Aus crop from 2009 to 2010

District	2009		2009 Farmers in 2010		New Farmers in 2010		Total 2010		2009 losses in 2010	
	No. Farmers	Area (ha)	No. Farmers	Area (ha)	No. Farmers	Area (ha)	No. Farmers	Area (ha)	% Farmers	% Area lost
Bagerhat	2,003	513	1,894	411	1,420	204	3,314	615	-5%	-20%
Barguna	17,483	2,738	16,463	3,572	14,347	6,189	30,810	9,761	-6%	30%
Barisal	7,006	1,063	4,732	1,210	2,592	481	7,324	1,691	-32%	14%
Patuakhali	24,682	3,502	21,292	3,038	26,012	4,454	47,304	7,492	-14%	-13%
Pirojpur	17,748	2,938	14,200	2,748	11,970	2,565	26,170	5,313	-20%	-6%
Jhalakathi	6,611	1,730	5,516	1,933	2,450	502	7,966	2,435	-17%	12%
Shariatpur	318	35	221	20	394	43	615	62	-31%	-44%
Madaripur	2,081	338	190	22	305	44	495	65	-91%	-94%
TOTAL	77,932	12,857	64,508	12,953	59,490	14,481	123,998	27,434	-17%	1%

Another feature derived from Table 2 is the plot sizes for the new 2010 Aus farmers are now up to 60 decimals. It follows the trend seen for the Boro crop. The project takes credit for this. It shows the training and promotion is building awareness, interest and confidence within the farming community. But there is also a lesson that the farmers of last year cannot be ignored. Their adoption is tenuous. For this reason the project has introduced motivational farmer meetings to reactivate the last year cohort.

Incremental rice production

The incremental rice production for this quarter is measured from the Boro harvest. There were 301 sample crop cuts in farmer fields³ and the paddy yield data is provided in Appendix 8. This is used to calculate incremental (milled) rice production arising from Guti urea application assuming a millout of 67%. Average yield (paddy at 14% moisture) for Guti urea plots was 6.864 tonnes/ha against prilled urea plots with 5.966 tonnes/ha, a yield improvement of 898 kg/ha. This translates to an incremental (milled) rice production of 36,582 tonnes across the 60,802 ha where Guti urea was used. This exceeds the target for Boro 2010. The totals for the years and the project in Table 1 are cumulative across all seasons.

Increase in the income of farm families and average incremental income per farm

The income data in this quarter is reported for the Boro 2010 harvest. The rice prices used in the calculations are derived from Government of Bangladesh (GOB)

³ each "cut" is actually one field using USG and one using prilled urea but each field having the same variety.

procurement prices. This has increased from Tk22/kg in 2009 to Tk24/kg in 2010 or US\$350/tonne⁴. An incremental production of 36,582 tonnes @ \$350/tonne provides an increase in income across all farm families adopting UDP technology of \$12.8 million. For the 200,124 families adopting UDP technology in the Boro season, this represented an average increase in income per family of \$64. As per Table 1, both figures are at or over target for the quarter. However when looking at the end of project situation, the achievements are compromised by targets that were set in 2008 when the price of rice was \$500/tonne. Therefore, while UDP technology is lifting yields by 15-20%, the rice prices have dropped by some 30% since targets were set, thus compromising the income achievements. For the incremental income per farm, it was also expected the adoption would be on plot sizes of 126 decimals. The Block Survey data indicates the average plot size for Boro 2010 is 75 decimals⁵. Therefore while there are many more farmers adopting than expected, they are doing so on smaller areas. That also compromises the incremental income per farm.

Urea saved and reduction on subsidy

In Table 1, the urea saved for January-March has now been adjusted to report the savings derived from the Block Survey data (62 kg/ha). The urea saved for this quarter is calculated for the Aus crop and assumes savings derived from the Baseline Survey data (23 kg/ha).

When the targets were set in 2008, it was assumed that the Sidr affected areas would generate savings as experienced in other parts of Bangladesh and the assumed savings were 100kg/ha for Boro and 80kg/ha for Aus and Aman. In fact, in the southern districts farmers use less prilled urea than the national average, especially in the Aus and Aman crops. The baseline survey shows farmers generally use 268, 135 and 130 kg PU/ha for Boro, Aus and Aman respectively. The UDP technology recommends 169 kg USG/ha for Boro and 113 kg USG/ha for Aus and Aman. The savings against farmer practice in the baseline amount to 100 kg urea/ha for Boro, 23 kg urea/ha for Aus and 18 kg urea/ha for Aman. In the Boro 2010 Block Survey, farmers used 177 kg/ha as USG and 239 kg/ha as prilled urea, a saving of 62 kg urea/ha. It is apparent that the savings for the southern districts are always at least 25% below assumptions used in targets just because farmers are using less prilled urea than the national average.

These lower savings as well as changes in urea price will affect the reduction in subsidy burden. In 2008 the urea price was \$610/tonne. In early 2010 the price was \$375 and is now \$280⁶. Against the GOB price of Tk10/kg (\$145/tonne), the subsidy for Boro 2010 was \$230/tonne and for Aus 2010 it is now \$135/tonne, compared to the subsidy of \$465/tonne in 2008 when project targets were set. The end of project achievements against target for reduction in subsidy will be heavily compromised by these externalities. The reduction in subsidy is now standing at 1.14 million dollars.

⁴ 1USD = Tk 68.65

⁵ In Boro 2009 the average plot size was 40 decimals, confirming the plot size is growing as farmers gain confidence in the technology.

⁶ The 2009 subsidies were \$221/tonne for Boro2009 and \$181/tonne for Aus and Aman.

Farmers trained

There were 28,421 farmers trained this quarter (24,691 men and 3,730 women) against the target of 26,000. These are all new recruits and there are now 155,052 (142,004 men and 13,048 women) who have been trained since project inception. In this quarter the training was completed for the Aus crop and, on the 20th June, the training for the Aman crop started (refer to Table 12).

Deliverables

The submission of all ILSAFARM deliverables followed the requirements of the CA and proceeded according to the Annual Plan. Table 3 provides the list of deliverables and their dates of submission.

Table 3: List of deliverables through to June 2010

Deliverable	2009	2010						Total Project
		Jan	Feb	Mar	Apr	May	Jun	
Annual Work Plan	2							2
Monitoring and Evaluation Report	1							1
SF272	4	≈ √			≈ √			6
SF269	4	≈ √			≈ √			6
Baseline Survey	1							1
Impact Survey								
Quarterly Performance Report	3	≈ √			≈ √			5

Notes: ≈ indicates date due
 √ indicates date submitted

The data collection for the Mid-Term Evaluation Survey was completed on May 16. Sample size was 1,363 farm families. Data analysis has been completed and the report is to be finalized next quarter.

Activities

The activities implemented during the sixth quarter followed the annual work plan. Table 4 shows the achievement this quarter has met or exceeded targets in all activities. Table 4 also shows the project is well within range of achieving all its end of project activity targets.

It should be noted that the Annual Plan is scheduled over the contract year 16th December 2009 to 15th December 2010. Quarterly reports are scheduled over calendar years, 1st January - 31st March etc. In Table 4, the total 2010 targets are copied from the Annual Plan. The total 2010 “Actual” figures are for the summations across the calendar quarters.

Table 4: Achievement of Activities through June 2010

Result Indicators		Unit	Year 2009			Year 2010						Total Year 2010			TOTAL Project		
						January-March			April-June								
			Target	Actual	%	Target	Actual	%	Target	Actual	%	Target ¹	Actual ²	%	Target	Actual	%
1.	National launching Workshop	No.	1	1	100%										1	1	100%
2.	Meeting/Workshop with different stakeholders	No.	20	20	100%	9	9	100%	9	10	111%	30	19	63%	50	39	78%
3.	Training of Extension staff	Batches	35	35	100%	15	16	107%	12	16	133%	35	32	91%	70	67	96%
4.	Training of Farmers-batches ³	Batches	2,350	2,427	103%	800	744	93%	650	711	109%	2,150	1,455	68%	4,450	3,882	87%
5.	Training of urea briquette producers	Batches.	10	10	100%	4	4	100%	4	4	100%	12	8	67%	22	18	82%
6.	Field Demonstration ⁴	No.	210	250	119%	50	76	152%	60	60	100%	170	136	80%	380	386	102%
7.	Field Trials ⁴	No.	50	54	108%	25	25	100%	20	20	100%	60	45	75%	110	99	90%
8.	Field Days ⁵	No.	65	62	95%				46	47	102%	86	47	55%	151	109	72%
9.	Motivational field visit	No.	20	20	100%	4	4	100%	6	7	117%	20	11	55%	40	31	78%
	Open sky shows ⁶	No.		5		12	12	100%	6	5	83%	28	17	61%	33	22	67%
10.	Selling urea briquette machines	No.	28	103	271%	18	18	100%	35	36	103%	60	54	90%	163	157	96%

¹ Targets for 2010 are set in the approved Annual Plans from Mid December 2009 to Mid December 2010.

² Actual figures for 2010 (and 2009) are for the calendar year January-December

³ Training batches are reported for calendar quarters, as opposed to crop seasons as reported in Table 12.

⁴ Field Demonstrations and Trials in January-March were for the Boro crop. Six demos and three trials were established in December 2009 but now deducted from the 2009 data and included in Jan-Mar 2010 data. In April-June, Field Demonstrations and Trials were for the Aus crop.

⁵ Field Days in April-June were for the Boro crop.

⁶ Open sky shows were started as a promotional event late in 2009. It was introduced and approved as part of the 2010 Annual Plan.

The participation of women in project activities (April – June 2010):

The project encourages women farmers and entrepreneurs to take advantage of project support. Special efforts are made to ensure that women have equal access to project resources. Local women entrepreneurs and farmers groups participate in all project activities.

During the reporting period, 8 community meetings, involving 240 participants with 80% women participation, were conducted in the Aus intensive areas. As a result, 3 Aus blocks have been established through the initiative of women farmers, with the help of male family members, at Motbaria (100 and 60 acres) and Bagerhat (20 acres).

The communities in the southern districts in which the project operates are considered conservative and traditionally women are not allowed to involve in direct work in the agriculture field outside their homestead. Despite this, women are being drawn into agriculture, sometimes through necessity within the family caused by issues with food security, labor and income, and sometimes through a relaxation of barriers to participation within the community. The project has approached its efforts to increase participation of women into agriculture with sensitivity. If the leaders, particularly the religious leaders, can be motivated through meetings, workshop and personal contacts, then participation of women in all activities becomes easier. Community meetings with men and women community and religious leaders are proving to be a very positive means to involve the participation of women in project activities. They generally lead to an endorsement from the male members of the community for participation of women in project activities. As a result, and as seen in Table 5, the participation of women in most project activities is rising.

During the quarter the project arranged external motivational field visits to Netrakona under Mymensingh district and Brahmanbaria where 12 and 17 women farmers attended respectively. Six motivational meetings were conducted in Motbaria (2), Pirojpur (2), Dumki (1) and Bagerhat (1) exclusively with women farmers who were actively involved in Aus block establishment. Fourteen Aus demonstration plots have been established by women farmers in Aus intensive areas.

Table 5: Changes in participation of women in selected project activities

Activity	% participation of women		
	2009	2010	
		Jan-Mar	Apr-Jun
Meeting Workshop with different stakeholders	12%	23%	26%
Training of Farmers	7%	8%	13%
Training of urea briquette producers	2%	8%	7%
Motivational field visits	13%	25%	27%
Field Demonstrations	4%	13%	23%
Field Days	17%		29%
Selling urea briquette machines	10%	11%	11%

1. Technology Introduction, Promotion and Transfer Program

The technology introduction, promotion and transfer program includes the production and distribution of promotional material, advertising, field demonstrations, field trials, field days, impact assessment through crop cuts in farmer fields and motivational visits.

- **Production of promotional material and advertising:** Promotional material is used in all project activities. Advertising occurs through documentary and folk songs on the radio, television, and cinemas as well as billboards and signboards outdoor/roadside, advertising on rickshaws and buses, printed material, awards and incentives, and promotional giveaways. Briquette manufacturers are encouraged and do produce promotional and advertising material as posters and t-shirts for their individual shops.

Promotional and Advertising Material

Table 6 shows the promotional materials produced, distributed and displayed by ILSAFARM. Billboards and signboards are all used outdoors and along roadsides. Rickshaw signs are attached to the back of rickshaws. Shopboards are provided to all briquette manufacturers. Sign boards are installed at all demonstrations and field trials.

Sign boards are installed in Blocks that have full coverage of Guti urea and selected for their promotional value. Flipcharts have been distributed to Deputy Commissioners (DCs), Deputy Directors (DDs) of Department of Agricultural Extension (DAE), and district information offices, Bangladesh Rural Development Board (BRDB), non-government organizations (NGOs), Upazil Agriculture Officers (UAOs) and all Sub-assistant Agriculture Officers (SAAOs) of DAE. The other materials listed are used in various activities such as stakeholder workshops, motivational tours, farmer training, field days and public handouts. Materials were also distributed to office bearers of IPM and ICM Clubs and community leaders.

Compact Disc (CD) and slide production and distribution

During the quarter ninety CDs were distributed to briquette owners, media personnel and IPM clubs. Briquette owners show CDs in their Briquette shops. Some of the cable operators swing the CD in their cable network, especially in Madaripur, Gournadi, Shariatpur and Patuakhali Upazilas. Seventy two Cinema slides have been distributed to 35 Upazila Cinema Halls. Upazilas Cinema Halls swing the slides from time to time.

Table 6: Inventory of Promotional Material Produced, Distributed and Displayed by ILSAFARM through June 2010

Items	January – March, 2010		April-June, 2010		Total 2010		Total 2009		Total (2009 & 2010)	
	Number Prduced	Number distribute d	Number Prduced	Number distribute d	Number Prduced	Number distribute d	Number Prduced	Number distribute d	Number Prduced	Number distribute d
Billboard	1	1	12	12	13	13	1	1	14	14
Shop boards	3	-	31	34	34	34	100	100	134	134
Road sign boards	3	-	31	34	34	34	101	101	135	135
Promotional folders	-	-	50	50	50	50	100	100	150	150
Big sign boards	25	25	31	31	56	56	361	361	417	417
Small sign boards	80	80	0	0	80	80	382	382	462	462
Caps	2,000	1,000	0	1,048	2,000	2,048	2,500	1,780	4,500	3,828
T shirts	1,000	500	1,000	1,093	2,000	1,593	2,000	2,000	4,000	3,593
Promotional bags	2000	300	0	440	2,000	740	3000	2150	5,000	2,890
Flags	5,000	6,700	0	500	5,000	7,200	11,000	5,800	16,000	13,000
Brochures	50,000	5,800	0	24,910	50,000	30,710	105,000	104,800	155,000	135,510
Stickers	-	-	0	50	-	50	8,000	7,800	8,000	7,850
Posters	2,000	225	0	1055	2,000	1,280	5,000	4,450	7,000	5,730
Flip charts	-	305	0	205	-	510	2,000	1,484	2,000	1,994
Project profiles	-	-	0	0	-	-	5,500	5,200	5,500	5,200
Flyers	-	10,000	0	3,000	-	13,000	100,000	80,000	100,000	93,000
Bag (Black)	1,360	1,210	935	826	2,295	2,036	3,146	3,146	5,441	5,182
CD	300	100	0	90	300	190	250	240	550	430
Booklet for briquette owners	-	50	0	50	-	100	500	100	500	200
Year Calendar	-	500	0	0	-	500	5,000	4,500	5,000	5,000
Brochures for dealers/SAAO	-	-	0	0	-	-	2,000	2,000	2,000	2,000
Project profile (Bengali)	-	100	0	0	-	100	5,000	4,850	5,000	4,950
Project profile (English)	-	-	0	0	-	-	500	500	500	500
Festoon	-	-	200	80	200	80	100	100	300	180
Signboard for farmers plots	50	40	0	0	50	40	-	-	50	40
Guti urea block signboard	75	71	0	0	75	71	-	-	75	71
Cinema slide	72	72	0	0	72	72	-	-	72	72
Signboard for Rickshaw/ Van	400	240	0	60	400	300	-	-	400	300
Signboards for Mile post/Tree	200	200	400	310	600	510	-	-	600	510

- Field Demonstration:** This quarter coincides with the harvest of the Boro crop and the establishment of the Aus crop. Each has a different agro-ecosystem; the Boro is fully irrigated, either from surface water or ground water using tube wells. The Aus is a short duration crop planted on the opening rains of the monsoon but also using irrigation from tidal flow. As such the Aus crop is at higher risk. Abnormal rainfall and/or tides can adversely affect the early stages of development.

Both the Boro and Aus crops in 2010 were impacted by an extremely severe drought where negligible rainfall was recorded from December 2009 to April 2010 across the project area. In the case of the Boro crop, it required full irrigation. In the case of Aus, the planting was delayed and in some cases farmers abandoned the Aus crop to wait for the planting of an early Aman crop. This environment affected the demonstrations, the Aus more so than the Boro.

Boro 2010. Seventy-six demonstration plots were harvested and yields measured. Appendix 4 contains the detail for each plot. Table 10 provides the averages and compares them with farmer fields. On average there has been a 1,041 kg/ha (18%) increase in paddy yield for USG demo plots (6.82 Tonnes/ha) compared to prilled urea plots (5.779 Tonnes/ha). Highest yields were seen in Shariatpur (7.336 Tonnes/ha). This is an important Boro district with extensive irrigation from tube wells and canals. Lowest yields were in Barguna (4.955 Tonnes/ha) where irrigation was more dependent on tides and was restricted at low tide. In the demonstrations, the application of Guti urea was 170kg/ha compared with 264kg/ha as prilled urea. This represented a urea saving of 94 kg/ha, to be compared with 62kg/ha coming from the Block Survey data. In the Boro season, DAE also established demonstrations under their Seed Project. DAE yields from Guti urea plots averaged 6.2 Tonnes/ha.

Aus 2010. Sixty demonstrations were established between May and June. Fourteen of these were set with women farmer supervision. Appendix 3 lists the demonstrations by Upazila. Table 7 lists the sixteen varieties and the schedule of their planting.

Table 7: Varieties and planting schedule of Aus Demonstrations

Sl #	Variety	No. of planting	Life cycle (days)	May (Week)				June (Week)				
				1	2	3	4	1	2	3	4	5
1.	BR 2	4	125	1	1		2					
2.	BR 3	1	130	1								
3.	BR 12	11	130	2	1	4	2	1	1			
4.	BR 14	1	120			1						
5.	BRRIdhan 26	10	115			1	5	1	1	1	1	
6.	BRRIdhan 27	4	115				2	1	1			
7.	BRRIdhan 28	1	125									1
8.	BRRIdhan 29	1	135						1			
9.	BRRIdhan 42	2	99	1			1					
10.	BRRIdhan 43	2	100		1		1					
11.	BRRIdhan 47	8	130			2	3	2	1			
12.	BRRIdhan 48	5	115			1	2		1		1	
13.	Monsur IRRI	1	125				1					
14.	Gota IRRI	7	125	2	1	2	1	1				
15.	Abdul Hai	1	125			1						
16.	Hybrid	1	130				1					
Total =		60		7	4	12	21	6	6	1	2	1

During the Boro season, there were 24 demonstrations established by Briquette Manufacturers using their own resources and with technical guidance from ILSAFARM staff. Of these, seven were cut under supervision and the data reported in Table 8. The results are comparable to those recorded by ILSAFARM and reported in Table 10.

Table 8: Crop cuts from Demonstrations managed by Briquette Manufacturers

Name of Entrepreneur	No. of demo	District	UDP Yield (kg/ha)	Briquette Manu. Practice Yield (kg/ha)	Yield Diff (kg/ha)	% Yield Change	USG (kg/ha)	Prilled Urea (kg/ha)	Urea Savings (kg/ha)	% Urea Change
Mst. Selina Begum	2	Barisal	7,393	6,184	1,209	20	170	247	77	31
Mst. Sima Begum	1	Barisal	5,766	4,069	1,697	42	170	247	77	31
Mosharef Hossain	1	Barisal	6,742	5,789	953	16	170	301	131	44
Mr. Sushil Baral	1	Barisal	6,556	5,626	930	17	170	296	126	43
Sayed Zabul Haque	1	Shariatpur	7,161	5,859	1,302	22	170	296	126	43
Gour Nitai Paul	1	Shariatpur	6,510	5,487	1,023	19	170	272	102	38
Abul Kalam Azad	1	Bagerhat	6,045	4,557	1,488	33	166	272	106	39
Average			6,596	5,367	1,229	24	169	276	106	38

- **Field Trials:** Nitrogen, Phosphorus and Potassium are essential elements for growth. It is recognised that the efficiency of urea –N in rice culture is very low, generally 30-40%, in some cases even lower. P availability may become limiting under alternate wetting and drying periods such as occurs during the Boro season. Removal of crop residue may lead to K deficiency.

During T.Aus and T.Aman season, the water runoff can lead to significant loss of N, P and K and add to the nutrient load in the waterways, leading to eutrophication. In the rainfed rice growing lands in Southern Bangladesh as well as many irrigated lands especially in the ILSAFARM Project area, there is no effective drainage system. Deep placement of N, P and K in a single briquette has been reported to reduce their concentration in the flood water.

Besides the nutrient use efficiency, one-time deep placement of NPK eliminates the need to apply them separately as is the standard practice. This will consolidate labor requirements.

With the rising costs of fertilizer, the quest for food security and the need to mitigate environmental impacts, losses cannot be tolerated and there is a need for improving management to deliver more efficient and balanced use of plant nutrients and improve soil health.

Considering these points, field trials are being conducted by the ILSAFARM Project using USG and NPK Gutti deep placement technology in the Sidr-affected areas. QPR 5 has reported the establishment of 25 Boro field trials in 22 Upazilas across six districts. For T. Aus season (2010) 20 trials have been established, using 4 treatments in each trial, in 20 Upazila in 6 Districts. Appendix 5 shows the distribution of trials for T. Aus 2010 across Upazilas.

The four T Aus treatments for each farmer field trial are:-

- (T₁) Recommended doses of prilled urea and other fertilizers – P,K,S and Zn (broadcast incorporation);
- (T₂) Deep placement of one 1.80 gram USG briquette at the centre of each four hills and recommended doses of others fertilizers-P, K, S and Zn (broadcast incorporation);
- (T₃) Deep placement of one 2.40 gram NPK briquette at the centre of each four hills and recommended doses of others fertilizer-S and Zn (broadcast incorporation);
- (T₄) Deep placement of one 3.40 gram NPK briquette at the centre of each four hills and recommended doses of others fertilizers-S & Zn (broadcast incorporation).

It should be noted that these treatments are the same for T Aman but different from Boro when the USG size is 2.7gm in T₂ and T₃ is 2x2.4gm NPK briquettes (as described in QPR5).

This quarter observed the harvest of the Boro field trials. All 25 trials were harvested and the yield, plant height, tiller and panicle number recorded. Appendix 6 presents the yield data. It shows, out of 25 trials, a higher yield was recorded in 16 locations with two small size (2.40gm) NPK briquettes. In six locations the USG briquette gave highest yield and in three locations the larger NPK briquette (3.40gm) was highest yielding. Table 9 shows yields from USG and NPK deep placement was statistically superior to broadcast prilled urea. The deep placement of 2x2.4gm NPK briquettes was also statistically superior to the 1x3.4gm NPK briquette. Deep placement also significantly increased the plant height, tiller and panicle number over broadcast incorporation of urea but there was no significant difference between USG and either of the NPK briquette treatments for these parameters.

Table 9: Effect of USG and NPK briquette deep placement on yield, plant height, tiller and panicle number compared with incorporation of N, P and K fertilizer for Boro 2010.

<i>Treatment</i>	<i>Plant height (cm)</i>	<i>Tiller (No/m²)</i>	<i>Panicles (No/m²)</i>	<i>Yield (T/ha)</i>
T ₁ Prilled Urea	101 a	362 a	334 a	6.24 a
T ₂ USG briquette	105 b	433 b	407 b	7.29 bc
T ₃ Two x NPK briquettes (2.4gm)	106 b	445 b	418 b	7.50 c
T ₄ One x NPK briquette (3.4gm)	104 b	430 b	401 b	7.12 b
LSD (0.05)	1.62	47.47	49.24	0.23

Note: The data expressed in this table are means across 25 trials. Treatments with same letters (a, b, c) are not significantly different at a 5% level of significance.

The higher yields, higher number of tillers and panicles in fertilizer deep placement plots may be attributed to less nutrient losses and efficient utilization of NPK fertilizer. Deep placement of 2x2.4gm NPK briquettes did show a significant yield increment at the 5% level of significance but there was no significant difference for the 1x3.4gm NPK briquette. The data shows, when it comes to grain yield, the

performance of the NPK briquette is as good as or better than USG. **It is concluded that deep placement of NPK briquettes offer potential for higher yields, improve fertilizer use efficiency, balanced fertilization and reduced nutrient losses for sustainable improvement of soil health.** While no data is available, there is sound reason to suppose there are also environmental benefits arising from a lower nutrient load in runoff water, and reduced emission of greenhouse gases.

In Boro 2010, the Bangladesh Rice Research Institute collaborated with ILSAFARM with a replicated trial on their Regional Station at Sagardi, Barisal, to evaluate the performance of NPK briquettes. Dr Md. Shahidul Islam, BRRRI Senior Scientific Officer (Agronomy) reported there was no significant difference in grain yield between the NPK Briquette (both sizes), USG and prilled urea treatments. The highest grain yield (7.47 t ha⁻¹) was measured in the NPK treatment using 2x2.4gm briquettes followed by prilled urea treated plots. When compared with the N control and absolute control the yields indicate that N is the only yield limiting factor under the conditions of the trial on the station. Considering the agronomic efficiency, the NPK Briquette performed better, although the crop showed N deficiency at booting to flowering stage in the treatment using 3.4gm briquette.

- **Field Days:** Forty seven field days (demo-41 and trial-6) were held during this quarter with a total participation of 4,409 of which 29% were women. This exceeded the target of 40. Appendix 7 provides the dates, location and participation at each field day.
- **Crop Cuts:** ILSAFARM uses farmer field crop cuts to monitor the impact of UDP technology. This quarter saw the Boro 2010 harvest and there were 301 crop cuts in farmer fields. Each “cut” is actually one field using USG and one without but each field having the same variety. Table 10 provides the average yields by District in comparison with data from the demonstrations. The complete data set is provided in Appendix 8.

Table 10: Comparison of Boro 2010 Crop Yield by District for Demonstrations and Farmer Fields

District	Crop Cut in Farmer Fields			Crop Cut in Demonstration Plots		
	UDP Yield (kg/Ha)	Prilled Urea Yield (kg/Ha)	UDP Yield Increase (kg/Ha)	UDP Yield (kg/Ha)	Prilled Urea Yield (kg/ha)	UDP Yield Increase (kg/Ha)
Bagerhat	6,497	5,606	890	6,609	5,534	1,075
Borguna	5,540	4,629	911	4,955	4,383	573
Barisal	6,744	5,818	925	6,824	5,925	899
Jhalakati	6,910	6,302	608	7,276	6,513	763
Madaripur	6,705	5,862	843	6,746	5,728	1,018
Patuakhali	6,260	5,356	904	5,273	4,376	897
Pirojpur	6,594	5,560	1,035	6,706	4,892	1,815
Shariatpur	7,509	6,510	999	7,336	6,143	1,193
Average	6,864	5,966	898	6,820	5,779	1,041

Note: In farmer practice prilled urea is broadcast at transplanting with topdressing at panicle initiation.

- **Motivational Visits:**

Motivational field visits are mainly organized for farmers along with respective SAAOs and UAOs. Generally farmers from areas that are agriculturally less developed are taken to more developed areas to show them the adoption of modern technologies, including and especially UDP technology. During the April-June quarter, 7 (seven) motivational field visits were organized with farmers, SAAOs, UAOs and entrepreneurs attending against the target 6 (six). Of these, two visits were organized in Netrokona and B. Baria. Another two visits in the project area were organized for media personnel, journalists and BRRI Soil Scientists. The total number of participants for all visits was 283 (male- 208 and female- 75). Realizing the conservative nature of the people in the southern districts, ILSAFARM has been making concerted efforts to bring women in to the motivational field visits. The 27% participation during the quarter is an encouraging result.

During motivational field visits farmers got the opportunity to see for themselves the results of using guti urea and discuss the benefits with those already practicing. For the journalists and media personnel, they saw the UDP technology adoption by farmers. Soil Scientists were shown NPK trials and demonstrations. Appendix 9 provides the list of the motivational visits through April-June 2010.

2. Skill Development on UDP Technology and Balanced Use of Fertilizer

Training is the activity used by ILSAFARM to develop skills and knowledge. The training activities cover DAE field staff, farmers and briquette producers. The project uses the principles of adult education, with each training batch designed for 40 persons and utilizing techniques of presentation, practice and discussion.

- **DAE (SAAO) Training:** The first round of training for DAE staff was completed during 2009. The Annual Plan 2010 includes a second round of training to facilitate the integration of UDP technology into mainstream DAE extension practices. This is seen as essential to prepare DAE for the continuing expansion of the technology beyond December 2010. The training is intended to refresh the SAAOs knowledge and skills in UDP technology after one year in the field as well as prepare them to continue the extension of the technology after the completion of the project.

In this quarter the training sessions were also used to canvass suggestions and opinions of SAAOs for further promotion and expansion of UDP technology at farmer's level.

As shown in Table 11, sixteen batches of training for DAE staff were completed this quarter against the target of 12 batches. The total number participants attending were 344 SAAOs (male- 318 and female- 26). The low percentage of females reflects the male/female ratio of SAAO in DAE and is beyond project control.

Table 11: Progress Report of DAE (SAAO) Training from April-June 2010

Batch #	Date of Training	Upazila	Male	Female	Total
1	12-04-10	Kawkhali	14	2	16
2	13-04-10	Nalchiti	27	1	28
3	19-04-10	Golachipa	28	3	31
4	22-04-10	Damuddya	16	0	16
5	28-04-10	Motbaria	24	4	28
6	11-05-10	Amtoli	21	6	27
7	12-05-10	Borguna Sadar	33	2	35
8	13-05-10	Betagi	14	2	16
9	17-05-10	Bagerhat Sadar	20	3	23
10	31-05-10	Dumki	17	0	17
11	01-06-10	Bauphal	32	2	34
12	02-06-10	Bhandaria	18	1	19
13	07-06-10	Mollarhat	13	0	13
14	08-06-10	Fakirhat	14	0	14
15	09-06-10	Zianagar	11	0	11
16	23-06-10	Bamna	16	0	16
Events- 16		Total participation:	318	26	344

- **Training of Farmers:** In batches of 40, farmers are imparted theoretical and practical training on UDP technology. Sessions run for 2-3 hours and include a methods demonstration and practice on point placement. Trained farmers are also encouraged to motivate family, friends and neighbors to adopt this technology. At each training session the local briquette shop owners get an opportunity to build business relationship with farmers.

This quarter saw the completion of the Aus training, which started in the last week of March, and the start of the Aman training, that started on 20th June. During the quarter a total of 711 batches of farmers were trained, amounting to 28,421 participants (male- 24,691 and female- 3,730), against the target of 650 batches.

Table 12 presents the training achievement by paddy crop season in 2010. During the quarter the participation of women farmers has increased to 13%⁷. DAE has been the principal collaborating agency for conducting farmers training. There were seven NGOs and three Briquette Manufacturers that have collaborated with ILSAFARM to run farmer training this quarter.

Table 12: Training of Farmers – 2009 and Boro, Aus and Aman (to June) 2010

Crop season		Batches of Training			Number of Farmers		
		DAE	NGO	Total	Men	Women	Total
2009	Total	1,736	139	1,875	69,763	5,081	74,844
Boro 2010	Oct-Dec '09	548	4	552	20,299	1,771	22,070
	Jan-Mar	732	2	734	26,915	2,402	29,317
Aus 2010	Mar	10		10	336	64	400
	Apr-Jun	619	33	652	22,608	3,453	26,061
Aman 2010	Jun	59		59	2,083	277	2,360
TOTAL		3,704	178	3,882	142,004	13,048	155,052

⁷ In 2009 the participation was 7%. In January – March 2010 it was 8%.

- **Training of Urea Briquette Producers:** Four training programs for briquette producers were organized during the quarter, meeting the target. Appendix 10 shows venues and the total number of participants at each training event.

Table 13 shows the numbers for the two seasons in 2010. The participation of women is down on last quarter. Participants in these training events include BCIC dealers and retailers. This is a male dominated industry. The project's own manufacturers are maintaining an 11% participation rate.

Table 13: Training of Urea Briquette Producers Boro and Aus 2010

Crop		No. of training	Number of participants		
			Men	Women	Total
Boro 2010	Oct-Dec	2	66	1	67
	Jan-Mar	4	154	13	167
Aus 2010	Apr-Jun	4	114	8	122

- **Orientation for Aus 2010 Demonstration and Trial Farmers:** As the quality of the demos and trials depends upon the knowledge and skill of the selected farmers, one day training courses were organized to orient them with the basic procedures, steps and activities. The courses include soil health & nutrition, selection of appropriate modern/high yielding varieties, rising of healthy seedlings, layout-design of demos and trials, plant establishment per unit area, care and management of crops and proper harvesting. Field Monitoring Officers also received proper instructions and guidance from the training course. Three courses were held in April with 93 persons attending (84 men; 9 women).

3. Business Linkage and Supply Chain Development

The supply chain follows the manufacture and sale of USG. It is regulated by the Ministry of Agriculture and fertilizer dealerships are registered by the Ministry of Industries through the Bangladesh Chemical Industries Corporation (BCIC). The project continues to lobby for its briquette manufacturers for appointment as fertilizer dealers or retailers by committees at Upazila and Union level.

Table 4 reports 36 briquette machines were sold through the quarter April – June with 80% subsidy paid by the project. Four were purchased by women. The project now has sold 157 machines, sixteen purchased by women. Appendix 11 shows the distribution across the 35 Upazilas. On average, there is one machine for every 700 ha covered over three seasons. The highest ratio is in Shariatpur Sadar where one machine covers 1,515 ha and lowest in Dumki, Patuakhali District where one machine covers 292 ha.

Table 14 shows the USG production by season against machine sales. Further detail by Upazila is shown in Appendix 1. Machine sales in October-December 2009 were in preparation for the anticipated quantum leap in coverage for the Boro 2010 crop. They ensured the supply of USG was able to keep pace with demand.

Table 14: USG Production (MT) across ILSAFARM Project Area

	<i>Jan-Mar</i>	<i>Boro</i>	<i>Apr - Jun</i>	<i>Aus</i>	<i>Jul-Sep</i>	<i>Aman</i>	<i>Oct-Dec</i>	<i>Total</i>	
	Machines	Prod ⁿ	Machines	Prod ⁿ	Machines	Prod ⁿ	Machines	Machines	Prod ⁿ
2009		136	49	1,418	30	2,336	24	103	3,890
2010	18	10,209 ¹	36	3,116 ²		57 ³			

¹ 798 MT were produced in December 2009 and 9,410 MT produced in January-March 2010.

² 14 MT were produced in March and 3,102 MT produced in April-June 2010

³ 57 MT were produced in last two weeks of June 2010

4. Information Sharing with Different Stakeholders

The project collects information according to the Monitoring and Evaluation Plan prepared in March 2009. Weekly reports are prepared to announce activity progress. Block-wise information is prepared for each cropping season. This data is reported in the Quarterly Reports as it comes available. The baseline survey was submitted to USAID in June 2009. This will be used as the benchmark to measure project impact. A mid-term evaluation commenced in February and a final impact survey is scheduled for later in 2010. The information is shared with stakeholders within the training sessions and workshops. It is also promulgated during fairs, open air shows and through the media.

- **Mid Term Evaluation:** The mid term evaluation is designed to quantify the impact of the project within the Aus and Aman 2009 seasons. The impact is to be measured against the baseline that was reported in June 2009. From 18th February to 2nd April enumerators conducted interviews with a sample of 1,363 Sidr-affected households, this represented 97% of the 1,400 farmers in the baseline sample. The survey produced a data set on farmers for the Aus and Aman cropping seasons of 2009. This quarter most of the data analysis was completed. The report being prepared will include economic impact assessment of UDP adoption in Aus and Aman 2009 and an analysis of socio-economic and livelihood data.
- **Media Campaign:** The project has appointed a media campaign planner to organise publicity events that will attract publication on print and electronic media. A media workshop was held in Barisal on 21st April 2010. Thirty-nine local journalists and media people attended as well as some government officers, farmers and briquette shop owners, a total of 56 people. This was used to guide the project in its engagement of the electronic and print media. In April a field trip was arranged for eleven local journalists from print and electronic media where they interacted with entrepreneurs, farmers and officials involved with ILSAFARM project. They visited briquette manufacturers, demonstrations, field trials and crop harvests. A second trip was organised for national journalists ex Dhaka on 10-11 May. Two electronic media and five national newspapers assigned their reporters and camera crews to visit the project area. They also talked with farmers, briquette owners, project officials and DAE staff.

As a result of these promotions the project (and UDP technology) enjoyed extensive publicity during the quarter. Appendix 12 lists the newspaper and television reports that refer to the project during this quarter.

- **Partners Meeting:** The third USAID Sidr Livelihood Reconstruction Partners meeting, hosted by World Vision, was attended in Khulna 31st May – 1st June. This has led to a partnering between ILSAFARM and the Post Cyclone Sidr Livelihood Reconstruction Program being implemented by World Vision. An orientation meeting on 28th June at the World Vision Meeting Room, Pirojpur Sadar laid the groundwork for a partnership to promote the use of Guti Urea among PCSLR Producers Groups.

5. Motivational Work with Different Stakeholders

The project emphasizes relationships with stakeholders working among cyclone affected rice farmers. Linkages are managed through stakeholder workshops and informal meetings. Stakeholders include NGOs, local organizations and clubs, government departments, banks and education institutions. Stakeholder workshops have been held at divisional level and at district level and now they have progressed to Upazila, even union level where they have captured a more localized stakeholder community involving community leaders⁸, local farmer clubs, women's groups, religious leaders, teachers, irrigation managers and leading farmers.

- **Motivational Stakeholder Workshops:** Stakeholders workshops on UDP technology are very useful and fruitful activities for creating awareness about UDP technology amongst various sections of the society. During the quarter 10 (ten) workshops were organized, exceeding the target of 9 (nine). One workshop was held in Barisal with local print and electronic media members. During these workshops, participants are briefed about the project, UDP technology adoption by farmers and their role as stakeholders to promote the technology. The participating members are invited to put forward their suggestions for promotion of UDP technology.

The number of participants attending the ten workshops was 364 of whom 94 or (26%) were women. A complete list of workshops and attendance is provided in Appendix 13.

- **Farmers Motivational Meetings:** Motivational meetings have been introduced this quarter as an adjunct to the Workshops. It is well known by extension specialists that farmers need three or four iterations before they lock a new technology into their farming practice. While the project continues to place most of its resources into expanding the awareness of the UDP technology, it still needs to continue to invest in its old clients in this second year of adoption. The Motivational Meetings were used to keep the 2009 adopters interested and reactivate their commitment. The meetings were used for an exchange of ideas with farmers on their post-training activities, on the use of guti urea in their crops and the results arising. In these meetings farmers are reminded of the benefits and encouraged to continue to use guti urea in all seasons.

During the quarter 72 meetings were organized in different Upazilas with the Aus 2009 farmers. A total of 2,894 farmers attended, including 371 women.

⁸ Includes Upazila Parishad Chairmen, Union Parishad Chairmen and women members, Upazila level officials, NGOs, members of the local media and agriculture input dealers and farmers

- **Open Sky Shows:** Open sky shows are organized in the evenings at Upazila level to motivate local people on UDP technology. In these shows the docu drama and folk songs on guti urea produced by the project are exhibited through multimedia projection.

During the quarter five open sky shows were organized in Bakergonj, Pirojpur and Borguna Upazilas where 1,350 local people attended (male-1,080 and female-270).

- **Informal Meetings:** All staff, senior and junior, are holding informal meetings with farmer leaders, union council chairmen and members, BCIC, BADC, BRRI, fertilizer dealers, administrators and DAE field officials whenever they go into the field. These maintain relationships, identify issues and resolve problems before they become substantive.

Key Issues and Outlook

Although the project started in the Boro season of 2009, it was not until the Aus season that it started to make its mark. This was the first quarter where the project could see the carry over/sustainability of the technology adoption.

Sustainability of UDP technology adoption in farmer practice

The Aus season 2009 saw 77,932 farmers using USG on 12,856 ha. In 2010, Table 2 shows the number of farmers is estimated to be 123,998 and the estimate for coverage is 27,434 ha. It indicates 12,953 ha is from 64,508 of the 2009 farmers. That is, 17% of the 2009 farmers dropped out but those who stayed increased their coverage from last year. Whereas in 2009 they were using USG on 0.16ha (41 decimals), in 2010 it is 0.2ha (50 decimals).

In the Aus season 2010, the project pushed its awareness campaign into new areas. It trained 26,461 new farmers⁹ and saw 14,481ha¹⁰ of land coming under USG application for the first time. However it was reluctant to leave the 2009 farmers who it saw as needing a stimulus to continue to use the technology. To that end the project implemented Motivational Meetings for its 2009 farmers to reactivate their interest and remind them of the yield benefits they received.

The response is encouraging but the adoption of the technology remains tentative. This is not surprising to extension practitioners. In his book “*Diffusion of Innovations*”, Everett Rogers¹¹ categorizes the process to adoption in five stages: awareness, interest, evaluation, trial, and adoption. In one year, ILSAFARM can only expect to be at the awareness and interest stage. It can hope to achieve awareness of the technology, it can stimulate interest but it takes more time for farmers to evaluate and trial the technology so that it becomes an adopted practice. ILSAFARM has

⁹ Training in Aus started in March and finished on 16th June

¹⁰ Combined with the 12,953ha covered by 2009 farmers it makes up the 27,434ha reported in Table 1.

¹¹ Everett M Rogers, *Diffusion of Innovations* (New York: Free Press, 2003 [1962]).

achieved its targets by creating awareness, interest and evaluation, and that is resulting in large numbers of farmers trying the technology on small allotments of land. This is the tipping point. Through its training and promotional activities, the project has created a fashion or popular trend. But fashions come and go. It now needs to maintain the interest to become a habit or regular practice. If the project can maintain farmer interest while they learn by experience there will be a cascade to adoption, and what is now a fashion will become a habit.

How fast this will occur depends on the nature of the community. ILSAFARM farmers are known to be conservative and it will take time for a critical mass to be convinced of the usefulness of the technology to the point where they truly adopt it. To build to the critical mass is likely to require at least three, possibly four, repeat seasons.

Estimated Budget and Actual Expenditure

The budget until the reporting quarter is adjusted and estimated at US\$ 3.59 million, of which actual expense was US\$ 3.17 million up to May 2010 or 88% of the estimated budget. It may, however, be noted that the June 2010 expenses are yet to be finalized. Details are shown in the Table 12 below.

Table 12: Estimated Budget through June 2010 and Expenses through May 2010*

Cost Items	Adjusted and Estimated Budget (US\$)	Actual Expense through March 2010		
		Actual Expense (US\$)	% Expended	Balance Remaining (US\$)
Resident and short-term experts	491,143	403,394	82%	87,749
Headquarters Support	57,474	33,876	59%	23,598
In-country staff, office operation and support	639,711	595,584	93%	44,127
Specific Program Activities	1,166,929	1,083,531	93%	83,398
Supplies Equipment and Furnishings	357,717	277,334	78%	80,383
Sub-total	2,712,974	2,393,719	88%	319,255
Overhead	876,129	779,182	89%	96,947
Total	3,589,103	3,172,901	88%	416,202

* Percentages are rounded to the nearest one.

Appendix 1: Area under USG, Number of Briquette Machines and USG produced by Upazila through to June 2010

District	Upazila	Area under USG (Ha)					Total across 3 seasons (Ha)	Briquette machine sold	Guti Urea Produced (MT)					Total across 3 seasons
		Boro 2009	Aus 2009	Aman 2009	Boro 2010 (Dec,09-Mar,10)	Aus 2010			Boro 2009	Aus 2009	Aman 2009	Boro 2010	Aus 2010	
						Apr-Jun 2010							Apr-Jun 2010	
Bagerhat	Sadar	1	17	486	1,870	20	2,376	6	0.03	6	54	333	5	392
	Fakirhart		6	415	1,545	58	2,018	2	0.01	2	48	258	9	315
	Mollarhat	0.34	51	222	2,208	57	2,487	5		6	25	368	7	400
	Morelgonj	0.16	439	370	892	480	1,742	4		49	46	150	54	250
Borguna	Sadar	0.45	964	936	52	3,090	4,078	4	0.04	109	100	-	344	444
	Amtali	0.5	892	1,448	116	3,287	4,851	6	0.04	106	159	29	365	553
	Betagi	0.5	531	301	30	1,899	2,230	4	0.04	65	35	5	214	254
	Bamna	0.67	351	220	30	1,485	1,735	4	0.04	41	26	5	165	196
Barisal	Babugonj	52	62	1,000	1,470	85	2,555	3		9	80	221	11	312
	Uzirpur	1	53	678	4,940	57	5,675	5			77	843	12	932
	Gournadi	181.7	95	212	2,404	75	2,691	5	3.2	12	23	404	10	437
	Banaripara	40.5	41	151	1,658	36	1,845	3	2.4	2	17	278	7	302
	Bakergonj	12.04	812	1,562	217	1,438	3,217	5	1	90	167	44	160	371
Patuakhali	Dumki	11.9	405	696	50	423	1,169	4		45	78	9	47	134
	Sadar	1	531	900	89	716	1,705	4	0.03	59	98	18	83	199
	Mirzagonj	1.48	684	418	40	990	1,448	3	0.06	76	46	10	111	167
	Bauphal	2	641	2,498	653	2,888	6,039	7	0.03	91	270	109	321	700
	Galachipa	2	1,241	3,930	776	2,475	7,181	8	0.05	92	426	127	275	828
Pirojpur	Sadar	35	827	590	996	1,071	2,657	5	3.2	93	65	167	119	351
	Zianagor	7.3	430	390	54	512	956	2	0.08	49	44	9	57	110
	Kaukhali	0.04	398	126	36	1,275	1,437	3		46	13	7	154	174
	Matbaria	6.3	721	514	474	1,095	2,083	10	0.4	77	124	80	122	326
	Bhandaria	25.7	562	453	71	1,360	1,884	3	0.96	59	58	13	164	235
Jhala	Sadar	158.8	720	470	1,401	1,200	3,071	6	1.92	82	53	217	136	406
	Nalcity	198.8	1,010	850	1,870	1,235	3,955	5	4.4	107	95	308	138	541
Shariatpur	Sadar	5.15	5	52	2,970	8	3,030	2	0.36		6	505	3	514
	Zajira		3	14	2,190	5	2,209	2			3	365	2	370
	Noria	14.7	23	9	2,771	14	2,794	4	2.4	3	1	468	2	471
	Bhedergonj	0.02	4	12	2,914	6	2,932	3			2	485	2	489
	Damuddya		-	235	2,425	10	2,670	3			35	405	5	445
	Goshairhat		-	55	3,100	19	3,174	4			6	527	2	535
Madaripur	Sadar	354	57	105	5,873	2	5,980	6	8.64	10	12	980	2	994
	Rajoir	575	31	88	4,585	5	4,678	6	10.8	5	10	778	3	791
	Kalkini	210	105	140	6,009	18	6,167	6	16	10	15	1,002	2	1,019
	Shibchar	360	145	180	4,022	40	4,242	4	80	17	19	682	4	705
Total		2,260	12,857	20,726	60,802	27,434	108,962	156	136	1,418	2,336	10,209	3,116	15,661

Appendix 2: Number of Farmers using UDP Technology by Upazila through June 2010

SI #	District	Upazila	Number of farmers using USG					Total across last 3 seasons
			Boro 2009	Aus 2009	Aman 2009	Boro 2010	Aus 2010	
1	Bagerhat	Sadar	41	83	2,982	5,335	100	8,417
		Fakhirhat		23	1,763	5,517	313	7,593
		Mollarhat	14	241	1,052	7,560	480	9,092
		Morelgonj	2	1,656	2,558	2,923	2,421	7,902
2	Borguna	Sadar	8	6,016	5,508	255	8,846	14,609
		Amtali	5	5,626	8,483	434	9,196	18,113
		Betagi	15	3,534	1,806	236	7,312	9,354
		Bamna	20	2,307	1,320	256	5,456	7,032
3	Barisal	Babugonj		494	6,000	5,045	482	11,527
		Ujirpur	10	424	4,050	17,947	344	22,341
		Gournadi	449	841	1,254	9,225	428	10,907
		Banaripara	687	317	886	6,136	220	7,242
		Bakergonj	88	4,930	9,462	1,125	5,850	16,437
4	Patuakhali	Dumki	160	2,339	4,195	265	3,000	7,460
		Sadar	27	4,318	5,721	396	5,110	11,227
		Mirzagonj	17	5,472	2,720	160	5,782	8,662
		Bauphal	14	5,108	14,988	1,950	18,442	35,380
		Golachipa	17	7,445	19,650	2,190	14,970	36,810
5	Pirojpur	Sadar	426	6,690	3,460	5,334	6,650	15,444
		Zianagar	110	3,499	2,340	357	3,480	6,177
		Kawkhali	7	1,739	756	375	5,550	6,681
		Motbaria	72	3,420	2,835	2,924	4,672	10,431
		Bhandaria	197	2,400	2,648	683	5,818	9,149
6	Jhalokati	Sadar	676	3,083	2,269	3,797	3,848	9,914
		Nalchity	2,224	3,528	3,643	4,806	4,118	12,567
7	Shariatpur	Sadar	110	55	277	9,540	80	9,897
		Zajira		26	79	6,170	44	6,293
		Noria	105	199	51	11,181	170	11,402
		Bhedergonj	351	38	71	11,356	60	11,487
		Damuddya			1,370	8,000	90	9,460
	Goshairhat			330	9,502	171	10,003	
8	Madaripur	Sadar	2,184	315	614	17,623	35	18,272
		Rajoir	3,140	155	472	13,665	50	14,187
		Kalkini	1,219	750	835	17,343	165	18,343
		Shibchar	1,457	861	1,149	10,513	245	11,907
Total			13,852	77,932	117,597	200,124	123,998	441,719

Appendix 3: Demonstration Plots - 2009 and 2010 to date

District	Sl. #	Upazila	Demonstration plots Established by men and women (No.)											
			Boro 2009		Aus 2009		Aman 2009		Boro 2010		Aus 2010		Total	
			Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Bagerhat	1	Sadar	2				2		1	1			5	1
	2	Fakirhart	2				3	1	4		1		10	1
	3	Mollarhat	2		5		3		1				11	0
	4	Morelgonj	1		5		4		1		3		14	0
Borguna	5	Sadar	2		4		4		1		2	2	13	2
	6	Amtali	2		2		4		1		3	2	12	2
	7	Betagi	2		2		4		0		3	1	11	1
	8	Bamna	2		2		3		0		3		10	0
Barisal	9	Babugonj	2		3		4	1	2	1	1		12	2
	10	Uzirpur	2		1		2	1	3	1	1		9	2
	11	Gournadi	2		3		3	0	3	1	1		12	1
	12	Banaripara	2		2		3		1	1			8	1
	13	Bakergonj	2		5		2		1		4		14	0
Patuakhali	14	Dumki	2		1		3		0		1		7	0
	15	Sadar	2		3		3	1	1		2		11	1
	16	Mirzagonj	2		2	1	1	1	0		2		7	2
	17	Bauphal	2		3		4	1	1		1	3	11	4
	18	Galachipa	2		4		5		3		3		17	0
Pirojpur	19	Sadar	2		4		3	1	1	1	2	1	12	3
	20	Zianagor	2		3		3		0		1	1	9	1
	21	Kaukhali	2		6		2		0		2		12	0
	22	Matbaria	2		4		3	1	1		3	2	13	3
	23	Bhandaria	2		6		2	1	0		3		13	1
Jhalakati	24	Sadar	2		4		3	0	4		1	1	14	1
	25	Nalcity	2				1	1	3		2		8	1
Shariatpur	26	Sadar	2						4				6	0
	27	Zajira	2						3				5	0
	28	Noria	2						3	1			5	1
	29	Bhedergonj	2						3				5	0
	30	Damuddya	2				3		4	1			9	1
	31	Goshairhat	2						3				5	0
Madaripur	32	Sadar	2		2		3		4	1		1	11	2
	33	Rajoir	2				3		4				9	0
	34	Kalkini	2		2		2		3				9	0
	35	Shibchar	2		4		3		3		1		13	0
Total			69	0	82	1	88	10	67	9	46	14	352	34

Appendix 4: Results from Boro 2010 Demonstration Plots – ILSAFARM

District	Upazila	Village	Block	Farmer	Seed Variety	Age Seed 'ing (dys)	UDP Yield (kg/ha)	Broadct Urea Yield (kg/ha)	Yield Diff (kg/ha)	% Change	USG (kg/ha)	Broadct Urea (kg/ha)	Urea Savings (kg/ha)	% Change
Bagerhat	Sadar	Chotopaikpara	Karori	Monoti Rani Shil	Hybrid	30	7,383	6,190	1,193	19	175	250	75	(30)
	Sadar	Rasulpur	Rakbalgachi	Gopal Karmaker	BR-28	41	6,464	5,241	1,224	23	175	250	75	(30)
	Fakirhat	Chotto Khajura	Lakhpur	Md. Abul Hasan	BR-28	43	6,656	6,254	401	6	175	250	75	(30)
	Fakirhat	Khajura	Lakhpur	Mohammad Halder	BR-28	45	4,918	3,697	1,221	33	175	250	75	(30)
	Fakirhat	Maskata	Betaga	Abul Hasan Sheikh	BR-28	30	8,540	7,042	1,498	21	175	250	75	(30)
	Fakirhat	Piljongo	Piljongo	Mehdi Hasan	BR-28	60	4,152	3,772	381	10	175	250	75	(30)
	Mollarhat	Gaola	Gaola	Sujan Kumar Adhikari	ACI-2	49	10,101	8,705	1,396	16	175	250	75	(30)
	Morelganj	Balobhadrapur	Balobhadrapur	Mahbubur Rahman (Babul)	BR-28	42	4,656	3,372	1,284	38	175	175	0	0
Average							6,609	5,534	1,075	19	175	241	66	(27)
Barguna	Amtali	Ghatkhali	Ghatkhali	Hemayet Hossain	BR-47	35	4,928	4,032	896	22	169	250	81	(32)
	Sadar	Barguna	Pouroshava	Uttam Kumar	Hira Hybrid	30	4,983	4,733	250	5	170	250	80	(32)
	Average							4,955	4,383	573	13	170	250	81
Barisal	Babuganj	Chandrapara	Chandrapara	Ashrafal Kabir	BR-29	38	8,260	7,550	710	9	165	225	60	(27)
	Babuganj	Rakudia	Rakudia	Hasem Khan	BR-47	30	7,044	5,893	1,151	20	170	225	55	(24)
	Babuganj	Rakudia	Rakudia	Nargis Akter	BR-29	46	4,933	4,393	540	12	165	250	85	(34)
	Bakerganj	Nandapara	Aouliapur	Md. Sahjahan Kazi	BR-29	24	5,491	3,154	2,337	74	170	250	80	(32)
	Banaripara	Chuaripara	Chuaripara	Mojammel Haque Talukder	BR-29	32	6,769	6,041	727	12	170	310	140	(45)
	Banaripara	Marvong	Banaripara	Laxmi Rani	BR-29	30	6,769	6,049	720	12	170	300	130	(43)
	Gournadi	Batajore	Batajore	Yunus Sarder	BR-3	45	6,136	5,358	778	15	170	200	30	(15)
	Gournadi	Bejoher	Mahilara	Moniruzzaman	Aftab LP-70	22	8,338	6,732	1,606	24	170	225	55	(24)
	Gournadi	Gerakul	Mahilara	Azahar Ali	Bina-6	45	5,241	4,719	521	11	165	250	85	(34)
	Gournadi	Khanjapur	Khanjapur	Nurunnahar	BR-29	45	9,120	8,496	624	7	160	200	40	(20)
	Ujirpur	Bamrail	Bamrail	Shamsul Huq Mridha	BR-29	32	6,881	6,060	821	14	170	325	155	(48)
	Ujirpur	Joysree	Joysree	Md. Mokbul Hawlader	Bina-6	35	7,654	6,775	880	13	169	350	181	(52)
	Ujirpur	Keshobhathi	Keshobhathi	Karon Bala	BR-29	30	6,853	5,984	868	15	170	350	180	(51)
	Ujirpur	Promanondo Saha	Madarsi	Shahidul Bari	BR-29	32	6,046	5,751	295	5	170	330	160	(48)
Average							6,824	5,925	899	15	168	271	103	(38)
Jhalokathi	Sadar	Agol Pasa	Bikna	Kuddus Mridha	BR-47	42	7,716	7,068	649	9	170	225	55	(24)
	Sadar	Bikna	Pouroshava	Abdul Halim	BR-29	38	6,849	5,684	1,166	21	170	225	55	(24)
	Sadar	Krisna Kathi	Agar Bari	Belal Molla	Bina-5	54	7,625	7,384	241	3	170	225	55	(24)
	Sadar	Pipolita	Pipolita	Afzal Khalifa	BR-29	36	7,111	6,853	257	4	170	250	80	(32)
	Nalchity	Doherpara	Amirabad	Hannan Hawlader	BR-29	28	7,328	6,425	903	14	160	200	40	(20)
	Nalchity	Protab	Voirab Pasa	Zakir Hossain	BR-29	33	7,148	6,053	1,096	18	170	225	55	(24)
	Nalchity	Protab	Voirabpasa	Md. Zahid Molla	BR-29	40	7,154	6,125	1,029	17	170	200	30	(15)
	Average							7,276	6,513	763	12	169	221	53

District	Upazila	Village	Block	Farmer	Seed Variety	Age Seed 'Ing (dys)	UDP Yield (kg/ha)	Broadct Urea Yield (kg/ha)	Yield Diff (kg/ha)	% Change	USG (kg/ha)	Broadct Urea (kg/ha)	Urea Savings (kg/ha)	% Change
Madaripur	Kalkini	Crukirchar	Crukirchar	Abdul Rahim Hawlader	BR-29	43	6,441	5,475	966	18	170	275	105	(38)
	Kalkini	East Douyashar	East Douyashar	Tobarak Sarder	BR-29	40	7,133	6,114	1,019	17	170	250	80	(32)
	Kalkini	Pourashava	Pourashava	Abdul Hakim Kazi	BR-29	43	7,065	6,081	984	16	170	250	80	(32)
	Sadar	Chapatali	Tatibari	Motaleb Bepari	BR-29	40	6,842	5,846	996	17	170	300	130	(43)
	Sadar	Khagdi	Charmugoria	Azizul Khan	BR-29	42	5,382	3,911	1,471	38	170	350	180	(51)
	Sadar	Mostafapur	Mostafapur	Rahela Akter	BR-29	40	7,707	6,743	964	14	170	350	180	(51)
	Sadar	Mostafapur	Mostafapur	Aynal Bepari	BR-29	30	5,681	4,597	1,085	24	170	300	130	(43)
	Sadar	Newhata	Tatibari	Merzon Matobbar	BR-29	42	5,373	4,369	1,004	23	170	300	130	(43)
	Rajoir	Durgabordi	badarpasha	Habib Sawdagor	BR-29	43	6,617	5,785	831	14	170	300	130	(43)
	Rajoir	Ghosalkandi.	Khalia	Harun Fakir	BR-29	40	6,584	5,381	1,203	22	170	300	130	(43)
	Rajoir	Khalia	Sendia	Nirmol Talukder	BR-29	48	7,898	6,972	927	13	170	300	130	(43)
	Rajoir	Tatikanda	Nagordi	Kawsar Hawlader	BR-29	44	6,026	5,303	723	14	170	325	155	(48)
	Shibchar	Bahadurpur	Bahadurpur	Saken Mollah	BR-29	38	7,479	6,319	1,160	18	170	250	80	(32)
	Shibchar	Dattapara	Dattapara	Rohim Mirdha	BR-29	40	8,497	7,529	968	13	170	275	105	(38)
Shibchar	Panchchar	Panchchar	Abdul Mannan	BR-29	42	6,465	5,491	974	18	170	250	80	(32)	
Average							6,746	5,728	1,018	18	170	292	122	(42)
Patuakhali	Bauphal	Saplakhali	Baga	Lalu Mallick	BR-14	35	5,205	4,354	850	20	170	250	80	(32)
	Galachipa	Baro Gabua	Haridebpur	Manir Miah	BR-29	40	4,954	4,009	945	24	170	250	80	(32)
	Galachipa	Chotosiba	Charsiba	Md. Alauddin Kazi	Hybrid	25	6,293	5,341	952	18	170	275	105	(38)
	Galachipa	Suhari	Haridebpur	Md. Mosharraf Mridha	BR-29	45	5,604	4,424	1,180	27	173	275	103	(37)
	Sadar	T. Kalikapur	Pouroshava	Sekander Mirdha	BR-28	30	4,311	3,752	559	15	155	250	95	(38)
	Average							5,273	4,376	897	21	168	260	93
Pirojpur	Mothbaria	Debipur	Debipur	Rafiqul Islam	BR-47	30	4,370	3,107	1,263	41	175	300	125	(42)
	Sadar	Barniary Kurniary	Panchapara	Niharika Majumder	BR-29	28	6,189	5,465	723	13	170	300	130	(43)
	Sadar	Rayerkathi	Khalishakhati	Fazlu Sikder	BR-29	32	9,560	6,103	3,457	57	170	250	80	(32)
	Average							6,706	4,892	1,815	37	172	283	112
Shariatpur	Bhaderganj	Kartikpur	Kartikpur	Abdul Khalek Dhali	BR-29	53	8,418	6,757	1,661	25	169	289	121	(42)
	Bhaderganj	Mirjapur	Sajonpur	Md. Mosharraf Choukider	BR-29	40	9,944	8,905	1,039	12	175	250	75	(30)
	Bhaderganj	Mohish Kandi	Koraltoli	Md. Munsur Molla	BR-29	55	7,106	6,708	398	6	175	325	150	(46)
	Damuddya	Damuddya	Damuddya	Md. Delwar Hossain	BR-29	46	6,269	4,588	1,681	37	170	250	80	(32)
	Damuddya	Islampur	Islampur	Md. Azad Madbor	BR-29	45	6,152	5,138	1,014	20	170	225	55	(24)
	Damuddya	Koneswar	Tiloi	Md. Motaleb Pada	BR-29	42	7,256	6,325	931	15	170	250	80	(32)
	Damuddya	Kulkuri	Kulkuri	Kushum Begum	BR-29	45	6,996	6,112	884	14	169	275	106	(39)
	Damuddya	Naogaon	Naogaon	A Rashid Bepari	BR-29	48	8,765	6,459	2,306	36	170	225	55	(24)
	Ghoshairhat	Binotia	Machuakhali	Md Yasin Mir	BR-29	45	6,974	5,292	1,682	32	169	225	56	(25)
	Ghoshairhat	Botna	Ghoshairhat	Md. Ajharul Islam	BR-29	46	6,802	5,302	1,500	28	169	175	6	(4)
	Ghoshairhat	Machuakhali	Machuakhali	Rubel Howlader	BR-29	48	6,297	4,858	1,439	30	175	225	51	(22)

District	Upazila	Village	Block	Farmer	Seed Variety	Age Seed 'Ing (dys)	UDP Yield (kg/ha)	Broadct Urea Yield (kg/ha)	Yield Diff (kg/ha)	% Change	USG (kg/ha)	Broadct Urea (kg/ha)	Urea Savings (kg/ha)	% Change
	Naria	Chakdah	Bhumkhara	Muksed Ali Mirdha	BR-29	43	8,609	6,395	2,215	35	175	250	75	(30)
	Naria	Pachupakandi	Mirdakandi	Shahidul Islam Sentu	HYV-Vojon	47	8,178	6,725	1,453	22	175	250	75	(30)
	Naria	Poragacha	Mirdakandi	Anowara Begum	BR-29	44	8,060	6,582	1,478	22	168	243	75	(31)
	Naria	South Chandoni	Dulukhanda	Mojibur Rahman Hawlader	BR-29	47	8,528	6,879	1,649	24	169	260	91	(35)
	Sadar	Kashavhog	Nilkandi	Md. Nazrul Sheikh	BR-3	49	5,986	5,437	549	10	169	275	106	(39)
	Sadar	Kashipur (Hindupara)	Kashipur	Ranjit Halder	BR-29	47	7,008	6,022	986	16	169	300	131	(44)
	Sadar	Kashipur Purbopara	Kashipur	Jugal Shadhu	BR-29	46	7,968	7,054	914	13	169	275	106	(39)
	Sadar	Purbo Sharanga	Shoulpara	Md. Eskander Khan	BR-28	49	4,521	4,336	186	4	170	300	130	(43)
	Zajira	Joy Sagar	Laukhola	Md. Mamun Sarder	BR-29	42	7,657	6,941	716	10	169	300	131	(44)
	Zajira	South Dubuldia	Hariasha	Latif Bepari	BR-29	43	6,750	6,109	640	10	175	300	125	(42)
	Zajira	Uttar Baisha	Hariasha	Nur Mohammad Khan	BR-29	48	7,138	6,212	926	15	169	300	131	(44)
Average							7,336	6,143	1,193	19	171	262	91	(35)
Average(All District)							6,820	5,779	1,041	18	170	264	94	(36)

Data from 76 Demonstration Plots

Appendix 5: T.Aus 2010 Field Trials established by Upazila

District	Sl. No	Upazila	Village	Farmers	Variety	D/S	D/T
Bagerhat	1	Fakirhat	Peeljongo	M. Saiful Islam	BRRIdhan 27	5.5.10	3.6.10
	2	Morelgonj	Hoglapasha	Birendra Nath Halder	BRRIdhan 27	18.4.10	2.6.10
Sub Total = 2							
Borguna	3	Sadar	Khejurtala	Abdul Khabir Badsa	Gota IRRI	21.4.10	20.5.10
	4	Amtali	Baluibunia	Amal Ch. Sarker	Chainees	16.4.10	7.5.10
	5	Betagi	Chandukhali	Md. Haris Mridha	BRRIdhan 42	19.4.10	9.5.10
	6	Bamna	Sonakhali	Babul Mirbor	BRRIdhan 43	15.4.10	14.5.10
Sub Total = 4							
Bari sal	7	Babugonj	Rakudia	Zahidul Islam	BRRIdhan 27	23.4.10	20.5.10
	8	Bakergonj	Rahamgonj	A. Malek Fakir	BRRIdhan 27	29.4.10	24.5.10
Sub Total = 2							
Patuakhali	9	Sadar	Ballavpur	Delwar Gazi	BRRIdhan 27	28.4.10	23.5.10
	10	Dumki	Dumki Satani	Hanif Hawlader	BRRIdhan 27	28.4.10	29.5.10
	11	Mirzagonj	Uttar Subidkhali	Babul	BRRIdhan 27	25.4.10	21.5.10
	12	Bauphal	Nazirpur	Afzal Hossain	BRRIdhan 43	20.4.10	19.5.10
	13	Galachipa	Baro Gabua	Monir Hossain	BRRIdhan 43	24.4.10	24.5.10
Sub Total = 5							
Pirojpur	14	Sadar	Kumirmara	Mostafa Fakir	BRRIdhan 27	22.4.10	18.5.10
	15	Zianagor	Balipara	M. Khalek Majhi	BRRIdhan 27	24.4.10	19.5.10
	16	Kaukhali	Joypur	Sobir Hossain	BRRIdhan 27	20.4.10	19.5.10
	17	Matbaria	Harjinolbunia	Md. Khokon Kazi	BRRIdhan 27	2.5.10	24.5.10
	18	Bhandaria	Southsialkati	Jamal Hossain	BRRIdhan 27	20.4.10	18.5.10
Sub Total = 5							
Jhala katti	19	Sadar	Chatra Kanda	Afzal Hossain	BRRIdhan 27	25.4.10	21.5.10
	20	Nalcity	Nandikati	Saidur Rahman	BRRIdhan 27	22.4.10	22.5.10
Sub Total = 2							
Grand Total = 20							

D/S = Date of seeding

D/T = Date of transplanting

Appendix 6: Effect of USG and NPK briquette deep placement compared to broadcast incorporation of Urea, TSP and MOP on grain yield of rice (T/ha) at 14% moisture content, Boro 2010.

Sl. #	Locations	Varieties	Treatment			
			T ₁	T ₂	T ₃	T ₄
1	Bagerhat Sadar	BRRIdhan 28	6.25	6.75	6.62	6.76
2	Morelgonj	BRRIdhan 28	4.85	5.68	5.63	5.52
3	Mollahhat	BRRIdhan 28	6.91	7.26	7.67	5.98
4	Babugonj	BRRIdhan 47	5.81	7.58	7.94	7.82
5	Ujirpur (Sanuhar)	BRRIdhan 29	6.47	7.70	8.22	7.56
6	Ujirpur (Bamrail)	BRRIdhan 29	6.37	7.95	8.32	8.02
7	Gournadi	BRRIdhan 47	7.49	8.80	8.66	8.50
8	Banaripara	BRRIdhan 29	6.30	6.85	6.94	6.74
9	Bakergonj	Jagoron	4.51	5.65	4.64	4.37
10	Pirojpur Sadar	BRRIdhan 29	5.86	7.30	7.44	7.44
11	Jhalokathi Sadar	BRRIdhan 29	5.95	6.88	6.94	6.50
12	Nalchity	BRRIdhan 29	3.78	4.85	4.59	4.50
13	Shariatpur Sadar	BRRIdhan 29	6.89	8.60	8.15	7.42
14	Zanjira	BRRIdhan 29	5.78	6.62	6.33	6.20
15	Bhedorgonj	BRRIdhan 29	7.30	8.48	8.35	7.45
16	Noria	BRRIdhan 29	8.84	9.88	10.10	9.20
17	Damuddya	BRRIdhan 29	8.02	10.25	10.76	10.30
18	Goshairhat	BRRIdhan 29	6.29	7.62	7.95	7.73
19	Madaripur (Chturpara)	BRRIdhan 29	6.78	7.37	7.83	8.34
20	Madaripur (Jhikarhati)	BRRIdhan 29	5.95	6.88	6.94	6.50
21	Rajoir (Sutarkandi)	BRRIdhan 29	5.84	6.81	7.45	6.96
22	Rajoir (Machkandi)	BRRIdhan 29	7.02	7.08	7.43	8.07
23	Kalkini (Bhurghata)	BRRIdhan 29	6.08	6.66	8.20	6.84
24	Kalkini (Pantapara)	BRRIdhan 29	5.52	6.86	7.45	6.86
25	Shibchar	BRRIdhan 29	5.19	6.05	7.02	6.45
Mean over location and varieties			6.24 a	7.29 bc	7.50 c	7.12 b
LSD (0.05)			0.23			

(T₁) Recommended doses of prilled urea and other fertilizers – P,K,S & Zn (broadcast incorporation);

(T₂) Deep placement of one 2.70 gram USG briquette at the centre of each four hills and recommended doses of others fertilizers-P,K,S & Zn (broadcast incorporation);

(T₃) Deep placement of two 2.40 gram NPK briquettes at the centre of each four hills and recommended doses of others fertilizer-S & Zn (broadcast incorporation);

(T₄) Deep placement of one 3.40 gram NPK briquette at the centre of each four hills and recommended doses of others fertilizers-S & Zn (broadcast incorporation).

Appendix 7: Field Days Organized by Upazila, April to June 2010

SL. #	Date	District	Location	Event	Participants		
			Upazila		Male	Female	Total
1.	19-04-10	Bagerhat	Sadar	Demo	80	20	100
2.	24-04-10	Bagerhat	Mollarhat	Demo	70	30	100
3.	27-04-10	Bagerhat	Morelgonj	Trial	70	20	90
4.	28-04-10	Shariatpur	Noria	Demo	79	26	105
5.	29-04-10	Barisal	Gournadi	Demo	90	25	115
6.	04-05-10	Pirojpur	Sadar	Demo	65	30	95
7.	05-05-10	Barisal	Ujirpur	Demo	66	32	98
8.	04-05-10	Bagerhat	Morelgonj	Demo	35	17	52
9.	05-05-10	Shariatpur	Noria	Demo	45	20	65
10.	05-05-10	Shariatpur	Damuddya	Demo	70	-	70
11.	05-05-10	Shariatpur	Damuddya	Demo	60	40	100
12.	05-05-10	Madaripur	Sadar	Trial	70	12	82
13.	07-05-10	Bagerhat	Fakirhat	Demo	80	20	100
14.	10-05-10	Shariatpur	Sadar	Demo	47	43	90
15.	08-05-10	Shariatpur	Noria	Demo	55	22	77
16.	12-05-10	Shariatpur	Noria	Demo	60	30	90
17.	06-05-10	Shariatpur	Bhedergonj	Demo	62	36	98
18.	10-05-10	Shariatpur	Damuddya	Demo	70	45	115
19.	11-05-10	Shariatpur	Damuddya	Demo	90	5	95
20.	08-05-10	Shariatpur	Goshairhat	Demo	70	20	90
21.	11-05-10	Shariatpur	Goshairhat	Demo	50	45	95
22.	10-05-10	Madaripur	Sadar	Demo	70	40	110
23.	12-05-10	Madaripur	Sadar	Demo	40	60	100
24.	09-05-10	Madaripur	Rajoir	Demo	85	15	100
25.	09-05-10	Madaripur	Rajoir	Demo	85	15	100
26.	11-05-10	Shariatpur	Noria	Trial	62	40	102
27.	09-05-10	Shariatpur	Damuddya	Trial	57	33	90
28.	13-05-10	Barisal	Banaripara	Demo	61	34	95
29.	13-05-10	Barisal	Babugonj	Demo	68	12	80
30.	18-05-10	Barisal	Bakergonj	Demo	60	31	91
31.	13-05-10	Shariatpur	Sadar	Demo	49	43	92
32.	18-05-10	Shariatpur	Sadar	Demo	110	92	202
33.	16-05-10	Shariatpur	Bhedergonj	Demo	52	20	72
34.	17-05-10	Shariatpur	Bhedergonj	Demo	51	15	66
35.	18-05-10	Shariatpur	Damuddya	Demo	60	22	82
36.	18-05-10	Shariatpur	Goshairhat	Demo	60	31	91
37.	16-05-10	Madaripur	Sadar	Demo	73	12	85
38.	19-05-10	Madaripur	Sadar	Demo	30	60	90
39.	16-05-10	Madaripur	Rajoir	Demo	82	20	102
40.	18-05-10	Madaripur	Kalkini	Demo	60	3	63
41.	13-05-10	Madaripur	Shibchar	Demo	61	15	76
42.	13-05-10	Barisal	Babugonj	Trial	80	8	88
43.	16-05-10	Shariatpur	Sadar	Trial	56	44	100
44.	25-05-10	Jhalakati	Nalchiti	Demo	115	7	122
45.	20-05-10	Patuakhali	Golachipa	Demo	72	14	86
46.	20-05-10	Shariatpur	Zanjira	Demo	56	59	115
47.	20-05-10	Madaripur	Shibchar	Demo	83	4	87
Demo= 41 and Trial= 6				47	3,122	1,287	4,409

Appendix 8: Paddy Yield calculated at 14% moisture content by sample from ILSAFARM Crop Cut Survey (Farmer Fields), Boro 2010.

District	Upazila	Village	Block	Farmer	Seed Variety	Age of Seedling (days)	UDP Yield (kg/ha)	Broadcast Urea Yield (kg/ha)	Yield Diff (kg/ha)	% Changed
Bagerhat	Bagerhat Sadar	Bagmara	Bagmara	Md. Abdul Mazid	BR-47	35	6,503	5,801	702	12
Bagerhat	Bagerhat Sadar	Chatopaikpara	Karori	Didarul Alam (Babul)	BR-28	40	6,573	5,875	698	12
Bagerhat	Bagerhat Sadar	Komorpur	Zatrapur	Shankar Kumar Shingh	BR-28	37	7,732	4,244	3,489	82
Bagerhat	Bagerhat Sadar	Komorpur	Zatrapur	Sadhon Chakrabarti	BR-28	35	6,968	5,544	1,425	26
Bagerhat	Bagerhat Sadar	Komorpur	Zatrapur	Moslem Sheikh	BR-28	35	7,110	5,868	1,242	21
Bagerhat	Bagerhat Sadar	Pachali	Utkul	Alamgir Sheikh	BR-47	36	6,689	5,479	1,210	22
Bagerhat	Bagerhat Sadar	Rasulpur	Rakhalgachi	Gopal Karmaker	BR-28	36	6,144	5,271	872	17
Bagerhat	Bagerhat Sadar	Rasulpur	Rakhalgachi	Santosh Karmaker	BR-28	38	6,669	6,074	595	10
Bagerhat	Bagerhat Sadar	Utkul	Utkul	Mohammad Hawlader	BR-28	36	5,917	5,240	677	13
Bagerhat	Bagerhat Sadar	Utkul	Utkul	Md. Jahangir Sheikh	BR-28	37	5,994	5,498	496	9
Bagerhat	Bagerhat Sadar	Uttar Khanpur	Khanpur	Abdur Rahim Hawlader	BR-28	35	6,753	6,172	581	9
Bagerhat	Bagerhat Sadar	Uttar Khanpur	Khanpur	Abu Sayeed Hawlader	BR-28	36	7,029	6,157	872	14
Bagerhat	Fakirhat	Khajura Lakhpur	Lakhpur	Hasan Ali	Hybrid (Aftab)	40	10,066	8,723	1,343	15
Bagerhat	Fakirhat	Maskata	Betaga	Abdul Awal	BR-28	35	5,268	4,499	769	17
Bagerhat	Fakirhat	Maskata	Betaga	Hasan	BR-28	35	4,936	4,115	821	20
Bagerhat	Fakirhat	Piljongo	Piljongo	Khan Saiful Islam	BR-28	42	9,302	7,628	1,674	22
Bagerhat	Fakirhat	Piljongo	Piljongo	Khan Rafiqul Islam	BR-28	43	5,431	4,576	855	19
Bagerhat	Mollarhat	Burigangni	Gangni	Mohidul Fakir	Hybrid (Aftab)	40	8,808	7,765	1,043	13
Bagerhat	Mollarhat	Gangni	Gangni	Zakir Hossain	Hybrid (Hira)	43	8,335	7,501	834	11
Bagerhat	Mollarhat	Gaola	Gaola	Sujan Kumar Adhikari	Hybrid (ACI-2)	45	7,044	6,292	751	12
Bagerhat	Mollarhat	Gaola	Gaola	Mrinal Chowkrabarti	BR-28	39	4,896	4,512	384	9
Bagerhat	Mollarhat	Garfa	Garfa	Sk. Moniruzzaman	Hybrid (Aloron)	39	8,152	7,046	1,106	16
Bagerhat	Mollarhat	Garfa	Garfa	Tutul Sarder	BR-28	40	4,948	4,520	428	9
Bagerhat	Mollarhat	Garfa	Garfa	Mintu Sheikh	BR-29	42	8,426	7,723	703	9
Bagerhat	Mollarhat	Joydehi	Kotalia	Jogodish Biswas	BR-28	40	4,581	3,825	756	20
Bagerhat	Mollarhat	Juteshwari	Kotalia	Jahid Khalifa	Hira	43	8,683	8,032	651	8
Bagerhat	Mollarhat	Kotalia	Kotalia	Rohmat Hasan	BR-28	46	4,740	3,998	742	19
Bagerhat	Morelganj	Banshibawga	Kumarkhali	Anjan Kumar Mallick	BR-47	40	5,125	4,396	728	17
Bagerhat	Morelganj	Baropari	Chaltabunia	Abul Kalam	BR-47	36	4,813	4,250	563	13
Bagerhat	Morelganj	Baropari	Chaltabunia	Dulal Gazi	BR-28	38	5,880	5,313	567	11
Bagerhat	Morelganj	Boilpur	Gobindapur	Moksed Ali Majhi	BR-28	36	5,252	4,489	762	17
Bagerhat	Morelganj	Jhilbunia	Kumarkhali	chitta Ranjan Dakua	Hybrid	35	5,812	5,128	683	13
Bagerhat	Morelganj	Kachikata	Chingrakhali	Md. Rafiqul Sheikh	BR-28	35	5,748	5,219	530	10
Bagerhat	Morelganj	Kismat Bailpur	Gobindapur	Biplob Kumar Dey	BR-28	36	5,662	5,369	293	5
Bagerhat	Morelganj	Singjor	Chandpur	Md. Gias Hawlader	BR-28	36	5,400	4,082	1,318	32
						Average:	6,497	5,606	890	16
Barguna	Amtali	Rawga	Rawga	Abdul Awal	BR-28	35	5,946	4,924	1,022	21

District	Upazila	Village	Block	Farmer	Seed Variety	Age of Seedling (days)	UDP Yield (kg/ha)	Broadcast Urea Yield (kg/ha)	Yield Diff (kg/ha)	% Changed
Barguna	Bamna	Jafrakhali	Talassor	Md. Badrul Hyder	BR-28	35	4,750	3,937	813	21
Barguna	Barguna Sadar	Koroitola Maitha	Koroitola Maitha	Mojibur Rahman	BR-29	32	6,493	5,458	1,035	19
Barguna	Betagi	Fultala	Fultala	A Razzak	BR-14	35	4,971	4,198	773	18
						Average:	5,540	4,629	911	20
Barisal	Babuganj	Chandrapara	Chandrapara	Ashrafal Kabir	BR-29	45	8,268	7,240	1,028	14
Barisal	Babuganj	Dehergati	Dehergati	Shamim Mia	BR-29	45	7,685	6,456	1,229	19
Barisal	Babuganj	E. Rakudia	Rakudia	Yakub Ali	BR-29	42	6,220	4,813	1,407	29
Barisal	Babuganj	Rakudia	Rakudia	Khokan Khan	BR-29	40	7,265	5,402	1,863	34
Barisal	Babuganj	Rakudia	Rakudia	Lokman Sikder	BR-29	38	6,525	5,127	1,398	27
Barisal	Babuganj	Rakudia	Rakudia	Sahidul Islam	BR-47	30	6,178	4,641	1,536	33
Barisal	Babuganj	Rakudia	Rakudia	Sultan Akan	BR-29	45	6,913	5,201	1,712	33
Barisal	Bakerganj	Diatoli	Kalaskatui	Md. Yasin Chawkider	Jagoron	35	7,587	6,199	1,388	22
Barisal	Bakerganj	Durgapur	Durgapur	Md. Raisul Islam Labu	BR-29	27	7,411	5,052	2,359	47
Barisal	Bakerganj	Kafilatoli	Nalua	Md. Zakir Hossain Mridha	BR-29	38	6,297	4,691	1,606	34
Barisal	Bakerganj	Nandapara	Aouliapur	Md. Siraj Matubber	BR-29	30	6,471	5,338	1,133	21
Barisal	Bakerganj	Simultola	Nalua	Md. Hasem Ali	BR-28	30	6,079	5,393	686	13
Barisal	Banaripara	Bahpur	Saliabahpur	Selim Talukder	BR-29	40	6,378	5,830	548	9
Barisal	Banaripara	Baishari	Baishari	Sohag Sarder	BR-29	42	6,892	6,253	639	10
Barisal	Banaripara	Bakpar	Saliabahpur	Abdul Majid Talukder	BR-29	40	6,555	6,008	547	9
Barisal	Banaripara	Banaripara	Banaripara	Ilias Khan	BR-29	40	6,742	6,117	625	10
Barisal	Banaripara	Chauhar	Chauhar	Tamil Khondoker	BR-29	45	7,108	6,264	844	13
Barisal	Banaripara	Chuaripara	Chuaripara	Mahbul Fakir	BR-29	42	6,448	5,621	827	15
Barisal	Banaripara	Manrong	Banaripara	Abbas Molla	BR-29	40	6,938	6,300	638	10
Barisal	Banaripara	Masrong	Banaripara	Alam Talukder	BR-29	38	6,734	6,013	721	12
Barisal	Banaripara	Udaykathi	Udaykathi	Idris Khan	BR-29	47	6,391	3,758	2,633	70
Barisal	Banaripara	Udaykathi	Udaykathi	Jasim Sarder	BR-29	46	6,751	6,292	458	7
Barisal	Banaripara	Udaykathi	Udaykathi	Alom Sarder	BR-29	43	6,932	6,362	570	9
Barisal	Banaripara	uttolkul	Uttolkul	Anwar Khan	BR-29	45	6,878	6,163	715	12
Barisal	Banaripara	Uttolkul	Uttolkul	Md. Ershad	Bina-6	37	6,709	6,259	450	7
Barisal	Gournadi	Batajore	Batajore	Mahabul Hawlader	BR-29	45	6,140	5,550	590	11
Barisal	Gournadi	Batajore	Batajore	Mosharrif Hossain	BR-28	40	6,420	5,456	964	18
Barisal	Gournadi	Batajore (Harhar)	Batajore	Abul Bapary	BR-29	45	6,626	5,566	1,059	19
Barisal	Gournadi	Dewpara	Batajore	Nil Kantu Halder	BR-47	40	6,692	5,665	1,027	18
Barisal	Gournadi	Kasemabad	Mahilara	Md. Anwar Hossain	BR-29	40	7,451	6,295	1,156	18
Barisal	Gournadi	Kasemabad	Mahilara	Md. Aminul Islam	Hybrid Tez	25	8,128	7,225	903	13
Barisal	Gournadi	Khonjapur	Khonjapur	Jamal Fakir	BR-47	40	7,049	5,724	1,325	23
Barisal	Gournadi	Mahilara	Mahilara	Suvash Chandra Halder	Hybrid Tez	25	9,891	7,643	2,248	29
Barisal	Gournadi	Sowlakar	Batajore	Gopal Mistry	BR-29	45	7,164	5,587	1,577	28
Barisal	Gournadi	W. Bejoher	Mahilara	Abu Sayed	Bina-6	40	7,194	5,870	1,324	23
Barisal	Ujirpur	Atipara	Atipara	Sujon Talukder	BR-29	45	6,748	6,125	623	10

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Barisal	Ujirpur	Bamrail	Bamrail	Sarwar Fakir	BR-29	42	6,456	5,731	725	13
Barisal	Ujirpur	Bamrail	Bamrail	Mobarak Ali	BR-29	45	6,528	5,813	715	12
Barisal	Ujirpur	Bamrail	Bamrail	Khalil Talukder	BR-29	47	6,695	6,183	512	8
Barisal	Ujirpur	Chauhar	Chauhar	Jolil Mridha	BR-29	47	6,994	6,355	640	10
Barisal	Ujirpur	Harta	Harta	Jahir Mridha	BR-29	42	6,214	5,573	641	11
Barisal	Ujirpur	Harta	Harta	Sunil Halder	BR-29	46	6,384	5,653	730	13
Barisal	Ujirpur	Harta	Harta	Jahir Hossain	BR-29	40	6,362	5,623	739	13
Barisal	Ujirpur	Jogirkanda	Keshobkathi	Abul Hossain Talukder	BR-29	43	6,368	5,734	634	11
Barisal	Ujirpur	Jogirkanda	Keshobkathi	Soroj Fakir	BR-29	44	6,467	5,743	724	13
Barisal	Ujirpur	Jogirkanda	Keshobkathi	Akkas Ali Talukder	BR-29	43	6,720	6,196	524	8
Barisal	Ujirpur	Joysree	Joysree	Bajlu Miah	BR-29	44	6,539	5,917	622	11
Barisal	Ujirpur	Keshobkathi	Keshobkathi	Iqbal Hossain	BR-29	42	6,013	5,635	378	7
Barisal	Ujirpur	Keshobkathi	Keshobkathi	Kashem Mir	BR-29	36	5,832	5,543	289	5
Barisal	Ujirpur	Keshobkathi	Keshobkathi	Firoj Talukder	BR-29	43	6,180	5,548	633	11
Barisal	Ujirpur	Mundopasha	Joysree	Khokon Ghorami	Bina-6	42	6,751	6,045	705	12
Barisal	Ujirpur	Murdopasha	Joysree	Moslem Molla	BR-29	42	6,607	5,917	691	12
Barisal	Ujirpur	North Satla	Satla	Golam Mostafa	BR-29	40	6,574	6,016	559	9
Barisal	Ujirpur	Satla	Satla	Badsha Mia	BR-29	42	6,206	5,555	651	12
Barisal	Ujirpur	Satla	Satla	Nikhil Borol	BR-29	38	6,485	5,837	648	11
Barisal	Ujirpur	Satla	Satla	Lukhan Talukder	BR-29	40	6,370	5,738	632	11
Barisal	Ujirpur	Satla	Satla	Shonkor Shil	BR-29	42	6,533	5,828	706	12
Barisal	Ujirpur	Satla	Satla	Hannan Kholifa	BR-29	46	6,386	5,750	636	11
Barisal	Ujirpur	Shanuhar	Atipara	Halim Talukder	BR-29	45	6,464	5,750	714	12
Barisal	Ujirpur	Shanuhar	Atipara	Selim Howlader	BR-29	44	6,627	5,909	717	12
						Average:	6,744	5,818	925	16
Jhalokathi	Jhalokathi Sadar	North Pipalita	Pipalita	Narayan Shil	BR-29	38	7,193	6,371	821	13
Jhalokathi	Jhalokathi Sadar	North Pipolita	Pipolita	Swapan Das	BR-29	38	6,980	6,306	674	11
Jhalokathi	Jhalokathi Sadar	Pipolita	Pipolita	Ilyas Dakua	BR-29	38	6,912	6,255	656	10
Jhalokathi	Jhalokathi Sadar	Pipolita	Pipolita	Rafiq Talukder	BR-29	40	7,049	6,340	708	11
Jhalokathi	Jhalokathi Sadar	Pipolita	Pipolita	Abdul Mannan Sikder	BR-29	44	7,070	6,265	805	13
Jhalokathi	Jhalokathi Sadar	Pipolita	Pipolita	Samsul Haque Dakua	BR-29	45	6,686	6,362	324	5
Jhalokathi	Jhalokathi Sadar	Sangramnil	Pipalita	Narayan Sarkar	BR-47	30	5,802	5,258	544	10
Jhalokathi	Jhalokathi Sadar	South Pipolita	Pipolita	Hemayet Khalifa	BR-29	45	6,625	5,749	876	15
Jhalokathi	Jhalokathi Sadar	South Pipolita	Pipolita	Sultan Maji	BR-29	45	6,805	6,094	711	12
Jhalokathi	Jhalokathi Sadar	South Pipolita	Pipolita	Abdul Awal Hawlader	BR-29	45	7,113	6,963	151	2
Jhalokathi	Nalchity	Doharpara	Amirabad	Monir Hawlader	BR-29	45	6,975	6,666	309	5
Jhalokathi	Nalchity	Doharpara	Amirabad	Shajahan	BR-29	45	7,296	6,907	389	6
Jhalokathi	Nalchity	Doharpara	Amirabad	Rezaul Islam	BR-29	45	7,114	6,558	556	8
Jhalokathi	Nalchity	Nandikathi	Nalchity	Md. Milon Talukder	BR-29	40	7,126	6,398	727	11
Jhalokathi	Nalchity	Poram Pasa	Nalchity	Md. Aziz Sarder	BR-28	40	6,846	5,772	1,075	19

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Jhalokathi	Nalchity	Porom Pasa	Nalchity	Md. Yousuf Alil Khan	BR-47	40	7,158	6,262	896	14
Jhalokathi	Nalchity	Teola	Sidde Kathi	Samir Das	BR-29	40	6,669	6,379	290	5
Jhalokathi	Nalchity	Teola	Siddle Kathi	Shahid Khan	BR-29	40	6,954	6,525	429	7
						Average:	6,910	6,302	608	10
Madaripur	Kalkini	Atipara	Cornopara	Mojibur Rahman Hawlader	BR-29	40	8,459	7,869	590	7
Madaripur	Kalkini	Atipara	Cornopura	Rasel Bepari	BR-29	44	7,637	7,204	433	6
Madaripur	Kalkini	Baligram	Baligram	Solayman Munshi	BR-29	46	7,720	7,135	586	8
Madaripur	Kalkini	Bintilok	Gopalpur	Siraj Gorami	BR-29	42	8,068	7,294	774	11
Madaripur	Kalkini	CD Khan	CD Khan	Mobasok Sikdar	BR-29	45	7,012	6,162	849	14
Madaripur	Kalkini	CK Khan	CD Khan	Roshid Bapari	BR-29	45	6,360	5,525	835	15
Madaripur	Kalkini	Cornopara	Cornopara	Abdul Mazid Khan	BR-29	46	7,885	7,288	597	8
Madaripur	Kalkini	Crikirchar	Crukirchar	Mahamudul Hasan	BR-29	44	5,511	4,871	641	13
Madaripur	Kalkini	Crudirchar	Crukirchar	Farid Sikdar	BR-29	40	5,307	4,758	549	12
Madaripur	Kalkini	Crukirchar	Crukirchar	Salim Sikdar	BR-29	43	6,638	5,438	1,200	22
Madaripur	Kalkini	Crukirchar	Crukirchar	Motaleb Bapari	BR-29	45	5,741	5,384	357	7
Madaripur	Kalkini	Crukirohar	Crukirchar	Mizanur Rahman	BR-29	42	6,084	5,736	348	6
Madaripur	Kalkini	Dokin Raydi	Pourashava	Mokades Hossain	BR-29	45	5,635	4,930	705	14
Madaripur	Kalkini	East Minasdi	Kalkini	Abulkalam Mouah	BR-29	45	5,917	5,619	298	5
Madaripur	Kalkini	Gopalpur	Gopalpur	Bahul Sarder	BR-29	40	8,062	7,428	634	9
Madaripur	Kalkini	Gopalpur	Gopalpur	Nagor Sarder	BR-29	45	7,888	7,154	734	10
Madaripur	Kalkini	Mojidbari	Mojidbari	Saken Sarder	BR-29	46	7,873	7,304	568	8
Madaripur	Kalkini	Notun Char Doulat Khan	Uttar CD Khan	Siraj Fakir	BR-29	44	7,026	6,274	751	12
Madaripur	Kalkini	Notur Chor Doudattdam	CD Khan	Abdul Salam Sipai	BR-29	45	7,296	6,680	616	9
Madaripur	Kalkini	Panthapara	Baligram	Malek Talukder	BR-29	40	7,730	7,157	573	8
Madaripur	Kalkini	Panthupara	Cornopara	Abdul Mannan Khan	BR-29	40	8,056	7,408	648	9
Madaripur	Kalkini	Poubali Madaripur	Majidbari	Joynal Molla	BR-29	45	7,730	7,064	666	9
Madaripur	Kalkini	Sokin Jonardondi	Pourasava	Ishak Sikdar	BR-29	45	6,201	5,511	690	13
Madaripur	Kalkini	Uttar Rusdi	Pourashava	Iskandar Gorami	BR-29	45	5,939	5,407	532	10
Madaripur	Kalkini	Vangha Bridge	Cornopura	Abdul Mannan Kazi	BR-29	45	7,774	7,297	477	7
Madaripur	Kalkini	West Mebaeasdi	Kalkini	Abdul Ronid Biswas	BR-29	45	7,389	6,134	1,254	20
Madaripur	Kalkini	West Poubali	Majidbari	Latif Sharif	BR-29	42	7,498	7,167	331	5
Madaripur	Kalkini	West Poubali	Majidbari	Delwar Khan	BR-29	48	7,273	6,699	574	9
Madaripur	Madaripur Sadar	Aos	Aos	Mazid Chowkider	BR-45	42	6,414	5,499	915	17
Madaripur	Madaripur Sadar	Aos	Aos	Asmot Khan	BR-29	45	7,358	6,049	1,309	22
Madaripur	Madaripur Sadar	Aos	Aos	Kabir Morol	BR-28	35	6,392	5,630	762	14
Madaripur	Madaripur Sadar	Baher Char Katta	Baher Char Katta	Motaleb Bepari	BR-29	45	6,004	4,986	1,018	20
Madaripur	Madaripur Sadar	Balia	Tatibari	Zahidul Islam	BR-28	40	5,052	4,441	611	14
Madaripur	Madaripur Sadar	Chapatali	Tatibari	Jahangir Molla	BR-29	45	7,290	6,206	1,084	17
Madaripur	Madaripur Sadar	Char Kalikapur	Baher Char Katta	Zinnat Sikder	BR-29	35	6,460	5,670	790	14
Madaripur	Madaripur Sadar	Char Khagdi	Char Mugoria	Ayub Ali Khan	BR-29	44	6,381	5,308	1,074	20

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Madaripur	Madaripur Sadar	Chasatali	Tatibari	Shorab Bepari	BR-45	45	5,321	4,457	863	19
Madaripur	Madaripur Sadar	Chaturpara	Mostafapur	Monir Howlader	BR-29	50	6,486	5,751	735	13
Madaripur	Madaripur Sadar	Chaturpara	Mostafapur	Alamgir Fakir	BR-29	49	6,986	6,191	795	13
Madaripur	Madaripur Sadar	Hazir Howla	Kordi	Abdul Mozid	BR-29	43	6,006	4,663	1,343	29
Madaripur	Madaripur Sadar	Hazir Howla	Kordi	Abdul Quddus	BR-29	45	5,620	4,486	1,134	25
Madaripur	Madaripur Sadar	Joyar	Mostafapur	Abdul Kader Sikder	BR-29	32	5,996	5,168	829	16
Madaripur	Madaripur Sadar	Joyar	Mostafapur	Alamgir Sharif	BR-28	45	4,640	3,960	679	17
Madaripur	Madaripur Sadar	Maddya Khagdi	Char Muguria	Saheed Bepari	BR-29	45	5,758	4,653	1,105	24
Madaripur	Madaripur Sadar	Mostafapur	Mostafapur	Shamshu Mridha	BR-29	50	6,433	5,648	785	14
Madaripur	Madaripur Sadar	Mostafapur	Mostafapur	Enamul Hawlader	BR-45	52	5,121	4,432	689	16
Madaripur	Madaripur Sadar	Nawhata	Tatibari	Mukul Matobbar	BR-29	42	6,476	5,341	1,135	21
Madaripur	Madaripur Sadar	Nawhata	Tatibari	Ashraf Matobbar	BR-29	44	5,885	4,730	1,155	24
Madaripur	Madaripur Sadar	Nawhata	Tatibari	Abdus Salam	BR-29	40	5,926	4,691	1,235	26
Madaripur	Madaripur Sadar	Seki Nawhata	Khayer Bhanga	Nurul Islam	BR-28	42	5,498	4,320	1,178	27
Madaripur	Madaripur Sadar	Seki Nawhata	Khayer Bhanga	Latif Matobbar	BR-29	45	6,508	5,231	1,277	24
Madaripur	Madaripur Sadar	Uttar Dudhkhali	Boalia	Mofizul Sikder	BR-29	46	5,999	4,771	1,228	26
Madaripur	Madaripur Sadar	Uttar Dudhkhali	Boalia	Khokon Sarder	BR-29	45	5,693	4,682	1,011	22
Madaripur	Madaripur Sadar	Uttar Khagchara	Khayer Bhanga	Sahid Sikder	BR-29	45	6,067	4,807	1,260	26
Madaripur	Rajoir	Char Mostafapur	Nayanagor	Harun Bayati	BR-29	46	6,487	5,599	888	16
Madaripur	Rajoir	Char Prosonyedi	Nagordi	Ohala Miah	BR-29	45	5,641	4,977	664	13
Madaripur	Rajoir	Durgabordi	Badarpasha	Mofazzal Mirdha	BR-29	43	7,690	6,451	1,239	19
Madaripur	Rajoir	Gangabordi	Bajitpur	Rume Fakir	BR-29	42	7,653	6,553	1,100	17
Madaripur	Rajoir	Ghosal Kandi	Khalia	Nuru Fakir	BR-29	44	8,184	6,841	1,343	20
Madaripur	Rajoir	Goaldi	Ishebpur	Siraj Matobbar	BR-45	40	5,490	4,791	699	15
Madaripur	Rajoir	Gopalganj	Badarpasha	Mozibur Howlader	BR-29	45	8,355	6,432	1,923	30
Madaripur	Rajoir	Haridasdi	Mahendradi	Lepon Mahbbar	BR-29	46	7,032	5,729	1,303	23
Madaripur	Rajoir	Haridasdi	Mahendradi	Rowson Ali	BR-28	42	5,082	4,258	824	19
Madaripur	Rajoir	Khalia	Sendia	Mazed Mollah	BR-29	35	7,782	6,967	815	12
Madaripur	Rajoir	Mahadradi	Moheadradi	Sahabuddin Munsu	BR-29	45	6,794	5,910	883	15
Madaripur	Rajoir	Mazkandi	Ishebpur	Ishak Akond	BR-29	45	6,622	5,631	991	18
Madaripur	Rajoir	Mazkandi	Ishebpur	Nazmul Sheikh	BR-45	43	5,748	5,013	735	15
Madaripur	Rajoir	Nagor Goaldi	Ishebpur	Abdul Jalil Hawlader	BR-45	36	5,868	5,220	648	12
Madaripur	Rajoir	Nayanagor	Nayanagor	Birendra Nath Mitra	BR-28	45	4,529	3,865	664	17
Madaripur	Rajoir	Satbaria	Ishebpur	Ayub Ali Sheikh	BR-29	42	8,730	6,767	1,963	29
Madaripur	Rajoir	Sendia	Sendia	Naresh Mondol	BR-29	45	6,563	5,863	700	12
Madaripur	Rajoir	Sutarkandi	Bajitpur	Idris Bepari	BR-29	42	5,799	4,791	1,009	21
Madaripur	Rajoir	Tatikanda	Nagordi	Md. Younus Shekh	BR-29	42	7,990	6,977	1,013	15
Madaripur	Rajoir	Tatikanda	Nagordi	Safisuddin Shekh	BR-29	48	7,367	5,825	1,542	26
Madaripur	Rajoir	West Sarmangol	Khalia	Razzak Sheikh	BR-29	45	7,765	6,429	1,337	21
Madaripur	Rajoir	West Sarmongol	Khalia	Saidur Molla	BR-29	45	7,927	7,002	925	13

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Madaripur	Shibchar	Boheratola	Boronilodae	Routhom Shaque	BR-29	40	6,522	6,069	453	7
Madaripur	Shibchar	Boro Nilokae	Boheratola	Dabir Uddin	BR-29	44	7,763	7,126	637	9
Madaripur	Shibchar	Bugmara	Char Kamar Kandi	Badsha Khalashi	BR-29	48	7,490	6,800	690	10
Madaripur	Shibchar	Bugmara	Char Kamar Kandi	Bashu Kholipa	BR-29	45	7,437	6,745	692	10
Madaripur	Shibchar	Char rogumathpur	Bckerorkandi	Abu Hawladar	BR-29	45	6,646	6,262	384	6
Madaripur	Shibchar	Charrogunathpur	Bakerkandi	Kahem Hawladar	BR-29	40	6,362	5,702	660	12
Madaripur	Shibchar	Dauttapara	Boryunagar	Fahud Mirdher	BR-29	45	7,307	5,637	1,670	30
Madaripur	Shibchar	Duttopara	Dauttapara	Feroz Bapari	BR-29	40	6,347	5,863	484	8
Madaripur	Shibchar	East Nilokai	Nilokai	Razzak Sheikh	BR-29	40	8,125	7,672	452	6
Madaripur	Shibchar	East Nilokai	Nilokai	Dobir Madbor	BR-29	45	8,313	7,776	537	7
Madaripur	Shibchar	Gachikandi	Madborchar	Sofi Kazi	BR-29	44	5,731	5,293	438	8
Madaripur	Shibchar	Gashikandi	Duttapara	Abdul Ohab Bapari	BR-29	45	6,009	5,327	683	13
Madaripur	Shibchar	Goflarchar	Dauttapara	Zahagir Shaque	BR-29	42	6,709	5,978	731	12
Madaripur	Shibchar	Jaduarchar	Boheratola	Habibur Rahman	BR-29	40	6,250	5,763	487	8
Madaripur	Shibchar	Jaduarchar	Boro Nilokae	Nurul Haque	BR-29	42	6,424	5,705	719	13
Madaripur	Shibchar	Sikdarkandi	Badererkandi	Shah Alam Madhor	BR-29	40	6,870	6,006	864	14
						Average:	6,705	5,862	843	14
Patuakhali	Bauphal	Char Adhel	Nazirpur	Razzak Kazi	BR-28	33	5,519	4,773	746	16
Patuakhali	Bauphal	Charadhul	Nazirpur	Basar Musulli	BR-29	38	6,531	5,686	845	15
Patuakhali	Bauphal	Saula	Karpurkathi	Md. Shajahan Howlader	BR-28	35	5,305	4,644	661	14
Patuakhali	Dumki	Labukhali	Labukhali	A Malek Sikder	BR-29	32	6,933	5,821	1,112	19
Patuakhali	Galachipa	Barosiba	Charsiba	Bhutto Bepary	Hybrid	30	6,984	5,852	1,133	19
Patuakhali	Galachipa	Kalikapur	Galachipa	Rajaul Khan	Hybrid	26	6,846	6,095	751	12
Patuakhali	Galachipa	Kapalbura	Charsiba	Shipon Daphadr	BR-29	40	6,145	5,298	846	16
Patuakhali	Patuakhali Sadar	West Sharikhali	Bohalgachia	Ansar Uddin Hawlader	BR-28	32	5,819	4,677	1,142	24
						Average:	6,260	5,356	904	17
Pirojpur	Bhandaria	Singkhali	Singkhali	Md. Abdul Awal	BR-12	34	5,625	4,349	1,276	29
Pirojpur	Kawkhali	Foloybunia	Foloybunia	Ishaq Sarder	BR-29	32	6,016	4,813	1,202	25
Pirojpur	Mathbaria	Boroshowla	Napitkhali	Panna	BR-12	40	5,766	4,978	788	16
Pirojpur	Mathbaria	Patakata	Barohargi	Abdus Sattar	BR-12	30	5,635	5,016	619	12
Pirojpur	Mathbaria	Patakata	Barohargi	Md Yousuf	BR-12	30	5,885	4,853	1,032	21
Pirojpur	Pirojpur Sadar	Kodomtola	Kodomtola	Kalipada Majumder	BR-29	35	7,805	6,767	1,038	15
Pirojpur	Pirojpur Sadar	Mulgram	Khalishakhali	Md. Sujon Halder	BR-29	33	7,908	6,414	1,494	23
Pirojpur	Pirojpur Sadar	Mulgram	Khalishakhali	Shamol Majhi	BR-29	32	7,441	6,681	760	11
Pirojpur	Pirojpur Sadar	Sikdarmollil	Sikdarmollik	Monachor Gazi	BR-29	32	7,314	5,969	1,345	23
Pirojpur	Pirojpur Sadar	Tujkhola	Tujkhola	Krinshnakanto Majhi	Vogon (HYV)	32	6,311	5,457	854	16
Pirojpur	Zianagar	West Balipara	Balipara	Belayet Farazi	Hybrid (Tia)	30	6,832	5,858	974	17
						Average:	6,594	5,560	1,035	19
Shariatpur	Bhaderganj	Arjipom	Lakarta	Paltu Molla	BR-29	45	8,091	6,881	1,210	18
Shariatpur	Bhaderganj	Arjipom	Lakarta	Akhter Hossain	BR-29	46	8,288	7,294	995	14

District	Upazila	Village	Block	Farmer	Seed Variety	Age of Seedling (days)	UDP Yield (kg/ha)	Broadcast Urea Yield (kg/ha)	Yield Diff (kg/ha)	% Changed
Shariatpur	Bhaderganj	Gazipur	North Char Kumaria	Liton Molla	BR-29	46	8,068	6,955	1,113	16
Shariatpur	Bhaderganj	Kash Gazipur	South Char Kumaria	Rezaul Molla	BR-29	43	7,619	6,943	675	10
Shariatpur	Bhaderganj	Mirzapur	Sajonpur	Mosharraf Hossain	BR-29	41	9,302	7,701	1,601	21
Shariatpur	Bhaderganj	Mirzapur	Sajonpur	Akbar Choukider	BR-29	48	8,095	7,181	913	13
Shariatpur	Bhaderganj	Mirzapur	Sajonpur	Ali Ahmed Nantu	BR-29	39	8,105	7,264	840	12
Shariatpur	Bhaderganj	Mohisher	Lakarta	Abdul Mannan Soel	BR-29	48	7,203	6,811	392	6
Shariatpur	Bhaderganj	Thakurta Kandi	Narayanpur	Abdul Matin Hawlader	BR-29	41	8,182	6,744	1,438	21
Shariatpur	Bhaderganj	Thakurta Kandi	Naryanpur	Abdul Gani Hawlader	BR-29	47	8,167	6,803	1,364	20
Shariatpur	Damuddya	Dhanai	Dhanai	A Aziz Howlader	BR-29	47	7,195	5,694	1,502	26
Shariatpur	Damuddya	Dhanoi	Dhanoi	A Ali Ahmed	BR-29	50	6,977	5,122	1,854	36
Shariatpur	Damuddya	Kailara	Ramroykandi	A Rahim Madber	BR-29	42	7,411	6,044	1,367	23
Shariatpur	Damuddya	Kehurbanga	Kutubpur	Mrs Rina Begum	BR-29	46	7,226	5,467	1,759	32
Shariatpur	Damuddya	Konesular	Tiloi	Alamin Sarder	BR-29	48	7,163	5,431	1,732	32
Shariatpur	Damuddya	Kulkuri	amuddya	Md. Hanif	BR-29	45	7,064	5,705	1,359	24
Shariatpur	Damuddya	Nangla	Kutubpur	Abul Kashem	BR-29	46	7,195	5,311	1,884	35
Shariatpur	Damuddya	Purba Erikati	Kutubpur	Ali Akbar Khan	BR-29	48	6,802	5,756	1,047	18
Shariatpur	Damuddya	Purba Erikati	Kutubpur	Siraj Choukider	BR-29	48	6,744	5,186	1,558	30
Shariatpur	Damuddya	Purba Kutubpur	Kutubpur	Mujibor Sarder	BR-29	45	6,023	5,795	229	4
Shariatpur	Damuddya	Ramroykandi	Ramroykandi	Md. Helan Madbor	BR-29	48	7,044	5,739	1,305	23
Shariatpur	Ghoshairhat			Jasim Uddin	BR-29	55	7,165	5,250	1,915	36
Shariatpur	Ghoshairhat	Binotia	Machuakhali	A Rob Dhali	BR-45	48	4,968	4,157	811	20
Shariatpur	Ghoshairhat	Char Monpura	Char Monpura	Jasim Uddin Baburchi	BR-28	42	7,256	5,122	2,133	42
Shariatpur	Ghoshairhat	Dasherjongal	Dasherjongal	Md. Dulal Jomader	BR-45	45	5,946	5,116	829	16
Shariatpur	Ghoshairhat	Depur (Char)	Edilpur	Akkel Ali	BR-29	46	6,021	4,839	1,182	24
Shariatpur	Ghoshairhat	Dhepur	Edilput	Delwar Chowkider	BR-29	48	6,322	4,930	1,391	28
Shariatpur	Ghoshairhat	Ghatakhan	Haturia	Abul Hasan Khan	BR-29	48	7,426	5,267	2,159	41
Shariatpur	Ghoshairhat	Ghatakhan	Haturia	Nazmul Haq Miah	BR-29	47	7,316	5,419	1,897	35
Shariatpur	Ghoshairhat	Kakoisar	Ghoshairhat	Ripon Chowdhuri	BR-29	40	7,535	6,307	1,228	19
Shariatpur	Ghoshairhat	Panchkati	Kuchaipatti	Noor Mohammad Gazi	BR-29	40	7,194	6,105	1,089	18
Shariatpur	Ghoshairhat	Panehkati	Haturia	Noor Mohammad	BR-29	50	6,904	5,732	1,172	20
Shariatpur	Ghoshairhat	Tengra	Ghoshairhat	A Rashid Sarder	BR-29	40	7,318	5,643	1,675	30
Shariatpur	Mirzaganj	Kakonbonia	Rakabunia	Sabid Ali Hawlader	BR-28	35	5,486	4,169	1,317	32
Shariatpur	Naria	Boronpara	Naria	Abdul Halim Sareng	BR-29	38	7,155	6,695	460	7
Shariatpur	Naria	Boronpara	Naria	Billal Soel	BR-29	41	8,210	6,659	1,550	23
Shariatpur	Naria	Boronpara	Naria	Anwar Sarder	BR-29	40	7,623	7,503	120	2
Shariatpur	Naria	Boronpara	Naria	Mohammad Ali	BR-29	48	7,517	6,834	683	10
Shariatpur	Naria	Cerag Ali Bepari Kandi	Mirda Kandi	Abdur Razzak Bepari	BR-29	48	7,431	7,067	364	5
Shariatpur	Naria	Chandoni	Dulu Khanda	Md. Mojibur Rahman	Vojon	47	7,617	6,684	933	14
Shariatpur	Naria	Chandoni	Dulu Khanda	Khalilur Rahman Khan	Vojon (LIV)	46	8,759	7,337	1,422	19
Shariatpur	Naria	Nitira	Bhumkhara	Anwar Sael	BR-29	46	7,346	6,832	514	8

District	Upazila	Village	Block	Farmer	Seed Variety	Age of Seedling (days)	UDP Yield (kg/ha)	Broadcast Urea Yield (kg/ha)	Yield Diff (kg/ha)	% Changed
Shariatpur	Naria	Paikpara	Naria	Abdur Rahim Mirdha	BR-29	45	9,419	7,986	1,433	18
Shariatpur	Naria	Porgacha	Mirda Kandi	Abdul Kader	Vojon	37	8,333	6,642	1,691	25
Shariatpur	Naria	Porogacha	Mirda Kandi	Rasel Ahmed	BR-29	45	7,625	6,865	760	11
Shariatpur	Naria	South Naria	Naria	Year Baksaw Madbor	BR-29	45	8,980	7,382	1,598	22
Shariatpur	Shariatpur Sadar	Aabura	Aabura	Amzad Howlader	BR-29	49	7,280	6,804	476	7
Shariatpur	Shariatpur Sadar	Autpara	Autpara	Hashem Khan	BR-29	48	8,273	7,610	663	9
Shariatpur	Shariatpur Sadar	Darichar	Nilkandi	Nasir Sarder	BR-28	58	6,403	5,287	1,115	21
Shariatpur	Shariatpur Sadar	Dhanuka	Dhanuka	Md. Lal Miah Bepari	BR-29	56	8,174	7,761	413	5
Shariatpur	Shariatpur Sadar	Kashavhog	Nilkandhi	Jalal Gazi	BR-29	48	8,210	7,264	946	13
Shariatpur	Shariatpur Sadar	Kashipur	Kashipur	Umesh Shadhu	BR-29	50	8,930	8,095	835	10
Shariatpur	Shariatpur Sadar	Poschim Porsundhi	Kashipur	Md. Younus Khan	BR-29	60	7,790	7,047	743	11
Shariatpur	Shariatpur Sadar	Shantinagar	Palong	Md. Ali Patoary	Vhojon	44	7,600	7,270	330	5
Shariatpur	Shariatpur Sadar	Shoula	Aabura	Ainal Madbar	BR-29	45	7,619	6,539	1,080	17
Shariatpur	Shariatpur Sadar	South Aatong	Kagdhi	Daud Howlader	BR-29	46	8,180	7,578	602	8
Shariatpur	Shariatpur Sadar	South Aatong	Kagdhi	Alamgir Akan	BR-29	49	7,455	7,125	331	5
Shariatpur	Shariatpur Sadar	South Baluchara	Kagdhi	Halim Bepari	BR-29	48	7,704	7,356	349	5
Shariatpur	Shariatpur Sadar	Tumchar	Chitolia	Afsar Akan	BR-29	55	7,982	7,230	752	10
Shariatpur	Shariatpur Sadar	Tumchar	Chitolia	Md. Saidul Islam	BR-29	58	7,569	6,857	713	10
Shariatpur	Shariatpur Sadar	West Autpara	Autpara	Wahab Madbar	BR-29	51	7,256	6,602	653	10
Shariatpur	Zajira	Aara Chandhi	Hariasha	Jalil Sarder	BR-45	50	6,555	6,124	431	7
Shariatpur	Zajira	Balia Kandi	Pachu Madbar Kandi	Jinnat Madbar	BR-29	45	8,075	7,809	266	3
Shariatpur	Zajira	Bouti Kandi	Hariasha	Jahangir Sikder	BR-29	50	7,661	7,096	565	8
Shariatpur	Zajira	Char Khagutia	Dubisaibar	Monir Chakider	BR-28	52	6,555	6,193	362	6
Shariatpur	Zajira	Char Lau Khola	Lau Khola	Mamun Sarder	BR-29	52	8,630	7,996	634	8
Shariatpur	Zajira	Char Lau Khola	Lau Khola	Samshu Molla	BR-29	53	8,397	7,761	635	8
Shariatpur	Zajira	Dubisaibar	Dubisaibar	Abu Jafor Kazi	BR-29	47	8,540	7,704	835	11
Shariatpur	Zajira	Lankhola	Lankhola	Iqbal Sarder	BR-29	55	7,921	7,473	448	6
Shariatpur	Zajira	Lau Khola	Lau Khola	Latif Bepari	BR-29	49	8,331	7,428	903	12
Shariatpur	Zajira	Sonar Daul	Hariasha	Dabir Mridha	BR-29	49	7,308	6,932	376	5
Shariatpur	Zajira	South Dubuldia	Hariasha	Siraj Bepari	BR-28	56	6,389	6,087	301	5
Shariatpur	Zajira	Tager Kandi	Pachu Madbar Kandi	Abu Bakar Sarder	BR-45	53	6,544	5,811	733	13
						Average:	7,509	6,510	999	15
						Average: (All Districts)	6,864	5,966	898	15

Data from 301 Farmers Plots

Appendix 9: Motivational Field Visits April - June 2010

Sl. #	District Visited	Upazila Visited	Date	Venue	Participants home Upazilas	Male	Female	Total
1	Bagerhat	Bagerhat Sadar	04-01-10	Komorpur (Jatrapur), Bagerhat Sadar	Pirojpur Sadar, Morelgonj & Bagerhat Sadar	30	15	45
2	Madaripur	Rajoir	04-04-10	Sutarkandi, Bajitpur block, Rajoir	Dumki, Bakergonj and Rajoir	34	15	49
3	Mymensingh		6to8-04-10	Different places of Mymensingh & Netrokona	Borguna, Patuakhali, Pirojpur and Barisal district	29	11	40
4	Barisal	Gournadi	17-04-10	Babugonj, Ujirpur & Gournadi	Media persons from Dhaka and Barisal	22	1	23
5	B. Baria		4to5-05-10	Different places of Brahmain Baria	Borguna, Patuakhali, Pirojpur and Barisal district	44	17	61
6	Madaripur	Madaripur Sadar	10-05-10	UDP blocks in Madaripur	Jhalakati & Nalchiti	35	14	49
7	Barisal	Babugonj	10-05-10	Different place of project areas	Journalists and BRRI Soil Scientists from Dhaka	14	2	16
Events		7			Total participants	208	75	283

Appendix 10: Briquette Owners Training on Production and Marketing: April - June 2010

SI. #	Date	District	Venue	No. of Participants			Remarks
				Male	Female	Total	
1	27-04-10	Pirojpur	DAE Conference Rm. Pirojpur	26	1	27	For Aus 2010
2	26-06-10	Barisal	DAE Conference Rm. Barisal	23	3	26	For Aman 2010
3	28-06-10	Pirojpur	DAE Conference Rm. Pirojpur	31	1	32	
4	29-06-10	Patuakhali	DAE Conference Rm. Patuakhali	34	3	37	
Total				114	8	122	

Appendix 11: Upazila wise number of Briquette Machines

District	Upazila	No. Delivered to March 2010	Machine Category	No. Delivered (April-June 2010)	Machine Category	Total up to June, 2010
Bagerhat	Sadar	5	Double	1	Double	6
	Fakirhat	2	Double			2
	Mollarhat	4	Double	1	Double	5
	Morelgonj	3	Double	1	Double	4
Sub-total			14	3		17
Borguna	Sadar	4 (2)	2D+2S (1.8)			4 (2)
	Amtali	5	2D+3S (1.8)	1 (1)	Double	6 (1)
	Betagi	2 (2)	D+S (1.8)	2	Double	4 (2)
	Bamna	2	D+S (1.8)	2	Single (1.8)	4
Sub-total			13 (4)	5 (1)		18 (5)
Barisal	Bakergonj	5 (1)	Double			5 (1)
	Babuganj	2 (1)	Double	1	Double	3 (1)
	Banaripara	2	Double	1	Double	3
	Gournadi	3 (1)	Double	2	Double	5 (1)
	Uzirpur	5 (1)	Double			5 (1)
Sub-total			17 (4)	4		21 (4)
Patuakhali	Sadar	2	D+S (1.8)	2	D+S (1.8)	4
	Mirzagonj	2 (1)	Double	1	Single (1.8)	3 (1)
	Dumki	3	Double	1	Double	4
	Bauphal	4	3D+S (1.8)	3	2D+S (1.8)	7
	Galachipa	6	5D+S (1.8)	2	Double	8
Sub-total			17 (1)	9		26 (1)
Pirojpur	Sadar	4	Double	1 (1)	Double	5 (1)
	Zianagor	1	Double	1	Double	2
	Kaukhali	2	D+S (1.8)	1	Double	3
	Matbaria	5 (1)	Double	5 (2)	D+S (1.8)	10 (3)
	Bhandaria	3	D+S (1.8)			3
Sub-total			15 (1)	8 (3)		23 (4)
Jhalakati	Sadar	3	Double	3	Double	6
	Nalcity	2	Double	3	Double	5
Sub-total			5	6		11
Shariatpur	Sadar	2	D+S (2.7)		D+S (2.7)	2
	Zajira	2	D+S (2.7)		D+S (2.7)	2
	Noria	4	D+3S (2.7)		D+3S (2.7)	4
	Bhedergonj	3	D+2S (2.7)		D+2S (2.7)	3
	Damuddya	3	2D+S (2.7)		2D+S (2.7)	3
	Goshairhat	4 (1)	D+3S (2.7)		D+3S (2.7)	4 (1)
Sub-total			18 (1)	0		18 (1)
Madaripur	Sadar	6	Double			6
	Rajoir	5	3D+2S (2.7)	1	Single (2.7)	6
	Kalkini	6 (1)	Double			6 (1)
	Shibchar	4	3D+S (2.7)			4
Sub-total			21 (1)	1		22 (1)
<i>ILSAFARM Office</i>		Double	1			1
G. Total			121 (12)	36 (4)		157 (16)

* () Number in parentheses indicates female briquette machine owners

Appendix 12: Newspaper and Television Reports/Publicity, April-June 2010

Date	Name of Newspaper/Television	Heading/Content
07.4.2010	BTV	Use of UDP in Bagerhat (BTV News) – 4 times in the day
21.4.2010	Channel i	Success of ILSAFARM (TV News)
22.4.1020	BTV	News on Successful Farmer (TV News) – 4 times in the day
22.4.2010	The Daily Sattya Sangbad, Barisal	Increased yield through guti urea instead of prilled urea
22.4.2010	The Dainik Shahnama, Barisal	Discovery of guti urea-blessings for Bangladesh
22.4.2010	The Daily Ajker Barta, Barisal	Use of guti urea has increased to 23 % in Barisal
22.4.2010	The Daily Ajker Barta, Barisal	There is no alternative to guti urea in Agriculture Extension
22.4.2010	The Dainik Matabad, Barisal	Workshop on guti urea
27.4.2010	The Daily Inqilab, Dhaka	Opening new horizon in rice export
15.5.2010	The Daily Jugantor, Dhaka	Additional 4 (four) lakh tones rice produced through use of guti urea
18.5.2010	The Destini, Dhaka	Additional 4 (four) lakh tones rice produced through use of guti urea
18.5.2010	The Daily Samakal, Dhaka	Production of 60000 MT or rice in Boro season alone.
18.5.2010	The Daily Kalerkantha, Dhaka	Agriculture in Southern region has turned round.
21.5.2010	BTV	TV program Mati O Manush (23 minutes with one repeat)
22.5.2010	New AGE, Dhaka	Good boro yield with prices on downtrend (cover story)
23.5.2010	Baishakhi TV	Krishi o Jibon (on success) – 2 repeats
23.5.2010	The Daily Jugantor, Dhaka	Production of NPK guti will ensure balanced fertilizer use.
24.5.2010	The Daily Samakal, Dhaka	Coordinated initiative is imperative for development in sidr-affective area.
28.5.2010	The Daily Samakal, Dhaka	Barisal gaining its heritage
30.5.2010	Baishakhi TV	Krishi o Jibon (Women success) – 2 repeats
13.5.2010	Baishakhi TV	Krishi o Jibon (on NPK) – 2 repeats

Appendix 13: Stakeholder Workshops April to June 2010

#	District	Upazila	Date	Venue	Participants	Male	Female	Total
1	Barisal	Barisal	21-04-10	BDS conference room, Barisal	Print and electronic media members	42	1	43
2	Barisal	Bakergonj	29-04-10	Bakergonj Upazila conference room, Barisal	Local Govt. bodies, DAE, local NGO and other participants	24	11	35
3	Borguna	Bamna	19-05-10	Bamna Upazila conference room, Bamna	Local Govt. bodies, DAE, local NGO and other participants	26	6	32
4	Pirojpur	Zianagar	24-05-10	Zianagar Upazila conference room, Zianagar	Local Govt. bodies, DAE, local NGO and other participants	23	8	31
5	Pirojpur	Kawkhali	25-05-10	Kawkhali Upazila conference room, Kawkhali	Local Govt. bodies, DAE, local NGO and other participants	22	6	28
6	Jhalakati	Sadar	14-06-10	Jhalakati Upazila conference room, Jhalakati	Local Govt. bodies, DAE, local NGO and other participants	27	13	40
7	Pirojpur	Motbaria	15-06-10	Motbaria Upazila conference room, Motbaria	Local Govt. bodies, DAE, local NGO and other participants	24	17	41
8	Patuakhali	Dumki	17-06-10	Dumki Upazila conference room, Dumki	Local Govt. bodies, DAE, local NGO and other participants	25	6	31
9	Patuakhali	Bauphal	21-06-10	Bauphal Upazila conference room, Bauphal	Local Govt. bodies, DAE, local NGO and other participants	28	11	39
10	Patuakhali	Galachipa	22-06-10	Galachipa Upazila conference room, Galachipa	Local Govt. bodies, DAE, local NGO and other participants	29	15	44
Events		10		Total participant		270	94	364

Appendix 14: Photo Gallery



Farmers attending UDP technology training in Motbaria Upazila



Farmers visiting a UDP plot during motivational field visit in B. Baria district



Farmers visiting a *guti urea* block in Gournadi Upazila



Women farmers participating in Aus UDP block in Motbaria



A picture of demo plot on UDP technology in Motbaria upazila of Pirojpur district



Field Trial within UDP Block at Bamrail in Ujirpur Upazila



Boro 2010 Harvest Field Day at Morelgonj in Bagerhat district



Publicity of UDP technology through rickshaw/vans in Jhalakati