Annual Activity Report-2014

(January-December, 2014)

Agricultural Advisory Society (AAS)

House # 1/6, Block-G, Lalmatia, Dhaka-1207

Phone: 880-2-58152151

Email: harunaas@gmail.com

www.aas-bd.org

Table of Contents

Acronyms/Abbreviations

AAS	Agricultural Advisory Society
AA	Access Agriculture
AI	Agro-Insight
BADC	Bangladesh Agricultural Development Corporation
BAPA	Bangladesh Paribesh Andolon
BARC	Bangladesh Agricultural Research Council
BARI	Bangladesh Agricultural Research Institute
Boro	Winter Rice, Transplanting: December-February
BRAC	Bangladesh Rural Advancement Committee
BRF	Bangladesh Rice Foundation
BRRI	Bangladesh Rice Research Institute
BTV	Bangladesh-Television
BVF	Bio-Village Forum
CABI	-
CBOs	Community Based Organizations
CCs	Community Coordinators
CIAT	Centro Internacial de Agriculture Tropical
CIMMYT	International Maize and Wheat Improvement Center
CPD	Community Plant Doctor
CSISA-BD	Cereal Systems Initiative for South Asia-Bangladesh
DAE	Department of Agricultural Extension
DPs	Demo Plots
DVD	Digital Video Disc
EC	Executive Committee
ED	Executive Director
FAMPAT	Farmer's participatory training
FAO	Food and Agriculture Organization
FARMSEED	Farmer-to-farmer seed exchange system
FGD	Focused Group Discussion
FtF	Feed the Future
GIS	Geographic Information System
gm	Gram
GPS	Global Positioning System
HZRL2	high zinc rice line 2

IFC	International Finance Corporation
IFPRI	International Food Policy Research Institute
IRRI	International Rice Research Institute
IT	Information Technology
JOBS	-
Kg	kilogram
LSPs	Local Service Providers
M & I	Mechanization & Irrigation
MEAS	Modernizing Extension and Advisory Services
MOU	Memorandum of Understanding
MT	Metric Ton
NE	northeast
NGOs	Non-Government Organizations
No.	Number
NPNL	non-pregnant, non-lactating
Nr.	Number
OP	Open Pollinated
PC	Project Coordinator
POs	Partner Organizations
PRICE	Poverty Reduction by Increasing the Competitiveness of Enterprises
PRISM	-
PRODIP	Promoting Democratic Institutions and Practices
PTOS	Power tiller operated seeding
Q & A	question & answer
RDA	Rural Development Academy
RPFs	Resource Poor Farmers
SEDF	Soros Economic Development Fund
SMSPA	SWSPAB
SW	southwest
T.Aman	Late Summer Rice, Transplanting Aman: July-August/September
T.Aus	Early Summer rice, Transplanting: March-April
t/ha	ton/hectare
Tk./kg	Taka/ kilogram
UC'D	University of California, Davis
UISC	Union Information Service Center

I. Vision

To promote sustainable agricultural production strategies in order to improve the livelihood of Bangladesh's rural poor.

II. Mission

To create more wealth in the hands of small and poor farmers, by improving their agricultural skills and capacities and by demonstrating ways in which they can better manage their available resources.

III. Background of AAS

The AAS Approach to Agricultural Development: AAS has, from its earliest days, approached the challenges of agricultural development in Bangladesh from the perspective that Bangladesh, after all, is a rich country, blessed with abundant agricultural resources, (i.e., fertile land, plenty of low cost farm labor and abundant reserves of easily available, continuously renewed fresh water). AAS believes that Bangladesh's endemic poverty is simply a reflection of its lack of capacity to effectively manage its rich endowment of agricultural resources. Furthermore, the nation has been too slow in developing its agricultural production capacity. Accordingly, AAS has focused its available energies on helping Bangladesh's farmers to become more productive; to, in the context of their rich land, small plots, plentiful labor resources and abundant supplies of fresh water, substantially increase their output.

AAS's sustainable agricultural development strategies are focused on:

- ***Modifying traditional agricultural practices to accommodate sustainable higher yielding production practices***
- ***Advocating the use of sustainable intensive cropping, fishery and livestock production and investment strategies***
- ***Using field based demonstrations to model " a higher standard of best practice"***
- ***Popularizing its strategies through a network of community based partners***
- ***Using state of the art training modules: Farmer's participatory training (FAMPAT) and Focused Group Discussions (FGD) to overcome knowledge and skill deficits***
- ***Emphasizing poverty alleviation, gender equity, environmental preservation, value chain and supply chain strategies***
- ***Promoting participatory approaches at every stage of project planning and implementation***

Bangladesh has traditionally been a rice-based society; indeed, it remains so today. Now that the country has reached food-grain self-sufficiency but food and nutrition security for all is the utmost challenge for the nation, AAS is pioneering the introduction and popularization of high value, non-rice and specialty-rice crops along with their in-field irrigation technique. AAS has made a material contribution to the introduction and popularization of new, higher yielding strains of well-known vegetable, fruits, spices and specialty rice varieties. Through its

demonstration based training programs, AAS has helped small plot cultivators adapt their farming practices to accommodate the requirements of higher value, higher yielding crops, fishery (fish fattening strategies) and livestock. AAS is using state of the art training methodologies to accelerate the uptake of promising new varieties and improved agricultural technologies. Accordingly, AAS's agricultural programs have materially affected the capacity of Bangladesh's small plot farmers to increase their wealth on the basis of a more efficient use of their quite formidable resources. Their results have been impressive.

IV. Background of AAS Establishment

The idea of establishing an agricultural NGO to provide quality technical support to other, more generic NGOs; developing their capacity in the field of agricultural was first mooted by a group of prominent professionals including Dr. David Gisselquest, Mr. Harun-Ar-Rashid, Dr. A.J.M Azizul Islam, William H. Derrenger, Dr. Noel P. Magor, Carol M. Gisselquist, Dr. Tariful Islam, Dr. Goyanath Sarker and Dr. Humayun Kabir in 1989. With this end in view, this group formed a non-profit, non-political, rural service provider and civil society organization called Agricultural Advisory Services. To meet government and registration requirements the name was later changed to Agricultural Advisory Society (AAS) from January 1991.

Since its inception, AAS has implemented a numerous projects to alleviate poverty among the resource poor and small farmers of Bangladesh. AAS has been working as a bridging organization for technology transfer between farmers, partner organizations (POs), community based organization (CBOs), input/output traders, private companies, relevant public sector actors, such as Department of Agricultural Extension (DAE) and other research institutions (eg. BRRI for rice technology, BARI for non-rice crop technology and BADC as a source of foundation and certified seed, etc).

V. Project Activities and Achievements

AAS implemented a number of projects/activities to alleviate poverty and create new wealth among the resource poor and small farm families of Bangladesh. The major activities and achievements of AAS during January to December 2014 are as follows:

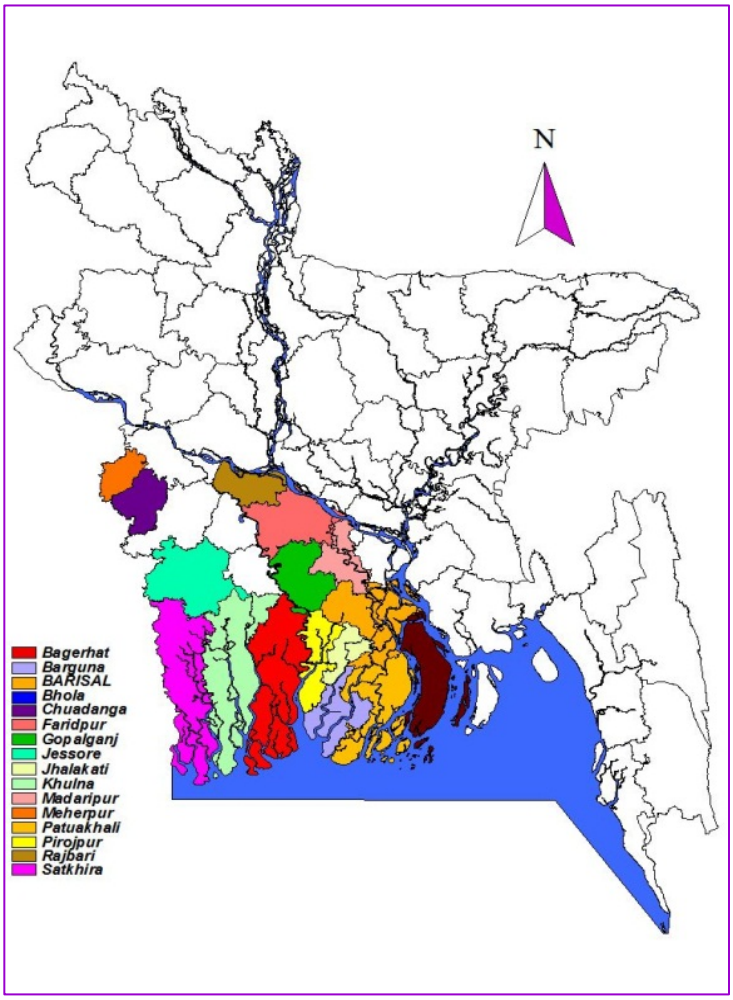
1. Video show research project

As per agreement between the International Maize and Wheat Improvement Centre (CIMMYT) and Agricultural Advisory Society (AAS), CIMMYT has engaged AAS to scale-up and disseminate the video "Scaling up the video Save More, Grow more, Earn more and selected video under CSISA-MI project to promote the use of the CSISA-MI machineries and irrigation pumps through increasing awareness and motivation on CSISA-MI's resource conserving machinery such as seeder-fertilizer-drills (PTOS), raised bed planters, reapers and surface water low lift irrigation pumps such as the Axial Flow pump in combination with lay flat hose pipe (LFHP) among the farmers through video show and practical machinery demonstration in 16 FtF districts within Khulna, Barisal and Dhaka division in southern region of the country during November 2013 to March 2014. Major activities of the video show research project are provided below:

(i) Project location and logistics

The approved activities of the project were implemented in 16 FtF districts (Barguna, Barisal, Bhola, Jhalokathi, Madaripur, Patuakhali, Pirojpur, Faridpur, Gopalganj, Rajbari, Chuadanga, Jessore, Meherpur, Bagerhat, Khulna and Satkhira districts) in southern regions within Jessore, Khulna, Faridpur and Barisal hubs of CIMMYT CSISA-BD (Figure.1).

Figure.1: Location Map of 16 project districts in southern regions



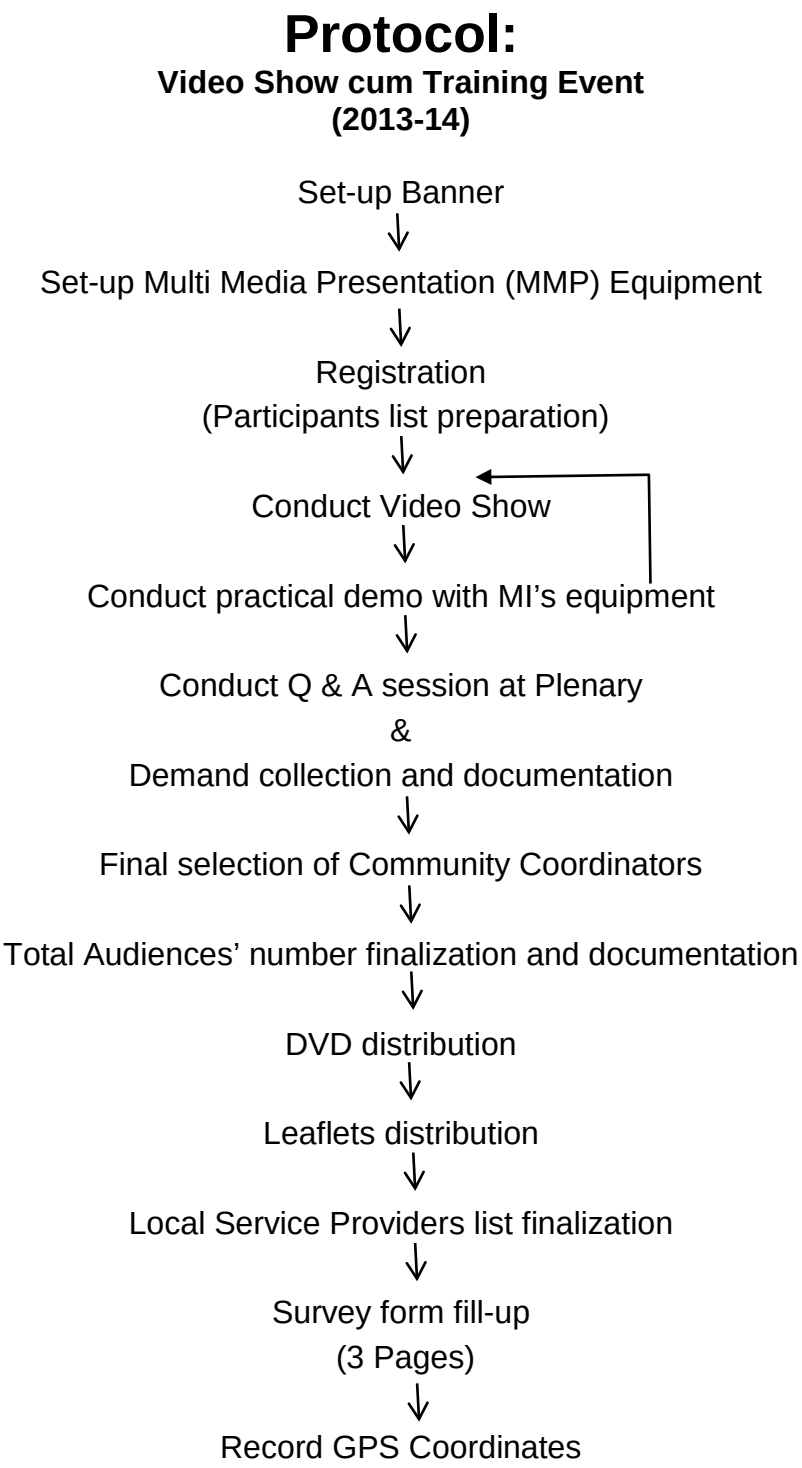
AAS deployed and trained six staffs (1 Area Coordinator, 3 Field Coordinators, 2 IT Coordinators and a part time Central Coordinator) to implement the decided activities of the agreed project in 16 southern districts under 4 CSISA-BD hubs. Harun-Ar-Rashid, Executive Director, AAS worked as the Central Coordinator as part time based in Dhaka. Project hired two small truck for transportation of equipment and machineries for video show cum training at the selected locations in 16 districts within 4 CSISA-BD hubs.

Two video show cum training teams were provided two sets of video show equipment, machineries/equipment of mechanization & irrigation, large screen with stand, banners with stand, tables etc. before administering the video show cum training at the selected locations in 16 districts.

(ii) Administering video show cum training

At the beginning of the video show cum training, project staff selected 150 locations in 16 districts and finalized the scheduled (venue, date and time) for implementation of 150 video show events in consultation with relevant stakeholders. The staff implemented 150 video shows cum training events at 150 communities (140 villages) in 111 unions under 52 upazilas of 16 project districts within 4 CSISA-BD hubs following a decided “Protocol of video show cum training”. The decided protocol of a video show cum training event is presented in Figure.2.

Figure.2: Protocol of Video Show cum Training Event



(iii) Video show cum training events

Total of 150 video show cum training events conducted by two video show teams at 150 communities in 111 unions in 52 upazilas of 16 districts within 4 CSISA-BD hubs during 1 November 2013 to 4 February 2014. Among the 16 project districts, the highest number of video show cum training events conducted in Chuadanga district (34) and the lowest in Jessore district (1). Among the 4 CSISA-BD hubs, the highest number of video show cum training events conducted in Jessore hub (41) followed by Barisal/Faridpur hubs (40) and Khulna hub (29).

Total of 150 events of video show cum training conducted at nine types of venues in the project area, of which highest number of events conducted at market places (63) followed by Educational institutions (34), Road side (13), Farmers house (12), Union Parishad field (8), Tea stall/Bus stand (7), Mosque/Temple field (5) and Cyclone centre (1).

Out or a total of 150 video shwo cum training events conducted with 10 types of service providers in 16 districts, of which the highest number of events conducted with power tiller (2 wheel tractor) owners (77) followed by Agri-inputs dealers (21), Agri-equipment dealers (19), lead farmers (16), Agri-equipment workshop (8), CBOs (5) and rest four LSPs (Agri-equipment manufacturers, computer service center, pharmacy and sweet shop) were with minimum event (1).

(iv) Audiences at video show events

Total of 25,835 audiences watched video shows at 150 events at 150 communities in 111 unions in 52 upazilas of 16 districts, of which 92% male audiences (23,880) and 8% female audiences (1,955) is calculated. Average calculated about 159 audiences watched video shwo per video show cum training event. Among the 16 project districts, the highest number of audiences watched video shows in Chuadanga district (6,050 audiences) and the lowest number of audiences watched video shwo in Jessore district (140 audiences).

(v) Leaflets distribution

Total of 4,350 leaflets (1,450 sets of three types) distributed in 16 project districts during November 2013 to February 2014. Out of total of 4,350 leaflets distributed, 1,450 leaflets for each of conservation agriculture method, Bed planting method and Strip tillage method distributed at the end of the 150 video show cum training events in 16 project districts. Among the 16 project districts, the highest number of leaflets distributed in Chuadanga district (359 sets of leaflets) and the lowest number of leaflets distributed in Jessore districts (12 sets of leaflets).

(vi) Community Coordinators

Total of 300 Community Coordinators (CCs) enlisted at 150 communities (average 2 CCs/community) in 52 upazilas of 16 project districts. Among the 16 project districts, the highest number of Community Coordinators (CCs) enlisted in Chuadanga district (68 CCs) and the lowest number of CCs enlisted in Jessore district (2 CCs). Average 2 CCs per community selected at 150 communities in 52 upazilas of 16 project districts. Such enlisted Community Coordinators (CCs) will be very much useful for future extension of Mechanization & Irrigation (M & I) technology through introducing the appropriate seeder for various suitable crops including wheat and maize and Axial flow pump for surface water irrigation in the southern region of the country.

(vii) Local Service Providers

Local Service Provider (LSPs) such as agri-equipment dealer & manufacturer, agri-inputs dealer, power tiller owner etc. are the major agents for providing services in promotion, marketing, extension and operation of agri-machinery/equipment and irrigation equipment in the country. Such LSPs can play important role in dissemination of the new mechanization and irrigation technology for various relevant crops in rural Bangladesh. Accordingly, the project was undertaken an initiative to enlist the LSPs at 150 working communities during video show cum training events in 16 districts. Assigned field coordinators of the project enlisted 1,372 numbers of 16 types of LSPs in 60 upazilas of 17 districts with the help of community coordinators (CCs) and other relevant elites at the project communities. However, such enlisted LSPs can be used for effective and cost effective expansion of mechanization and irrigation technology on commercial term and incentive basis for the relevant actors and players in near future in southern regions of the country.

(viii) DVD distribution

Total of 290 DVDs on save more, grow more, earn more and additional CSISA-BD videos distributed in 45 upazilas of 17 districts during the project implementation period among the targeted service providers. Among the 17 districts, the highest number of DVDs distributed in Chuadanga district (136) and the lowest number of DVD distributed in Jessore/Jhenaidah/Pirojpur districts (1). Out of a total of 290 DVDs distributed among the 15 types of LSPs, of which the highest number DVDs distributed among the lead farmers (123) followed by tea stalls (38), Power tiller owners (29), UISC (22), Agri-inputs dealers (19), CBOs (15), Agri-equipment dealers (13), Cable network (9), Agri-equipment workshop (8), DAE (6) and rest 8 LSPs received minimum number of DVDs (1-3).

(ix) Demonstration plots

Total 24 demonstration plots established in Chuadanga, Meherpur and Rajbari districts, of which 12 demonstration plots established on Bed planting method and 12 demonstration plots established on Seeder fertilizer drills/power tiller operated seeding (PTOS) method during 2013-14 Rabi season. Out of a total of 12 established Bed planting plots, of which 6 plots established with each of maize and wheat crops in Chuadanga, Meherpur and Rajbari districts. Total of 12 plots established on power tiller operated seeding (PTOS) with wheat in Baliakandi upazila of Rajbari district.

(x) GPS Coordinates

Project trained Field Coordinators collected 150 GPS coordinates of 150 video show-cum training events in 52 upazilas of 16 districts in southern regions of the country by the GPS machines. The collected GPS coordinates were preserved as soft copy in the computers at CIMMYT office for using in GIS mapping.

2. Delivery of Zinc Rice in Bangladesh

Zinc is essential for normal growth and immune faction of the human body. Zinc deficiency is the most prevalent nutritional deficiency in Bangladesh, affect 45% of pre-school children and 57% of NPNL (non-pregnant, non-lactating) women. Rice is the primary food source in Bangladesh, providing 70% of per capita calorie intakes and could thus serve as a useful food vehicle for zinc. This could be achieved by developing high zinc rice variety for cultivation and consumption of high zinc rice would be able to prevent our dietary zinc deficiency:

Accordingly, AAS has been working to disseminate zinc enrich rice varieties through implementing a project on Delivery of High Zinc Rice in Bangladesh under the funding support from HarvestPlus Bangladesh in southwest and northwest districts since 15 November 2013. During 2014 reporting period, AAS was implemented the project activities on Delivery of High Zinc Rice in Bangladesh during 2013-14 Boro season, 2014 T.Aman season and 2014-15 Boro season and their brief description is provided below:

(i) 2013-14 Boro Season

As per agreement between HarvestPlus Bangladesh and AAS, AAS was implemented the project with 100 demo farmers on the high zinc rice line 2 (HZRL2) during 2013-14 Boro season in Magura and Kushtia districts with the funding support from HarvestPlus Bangladesh. AAS

established 100 seed production demo plots with 100 trained and motivated seed farmers at 26 clusters at 26 villages in Magura and Kushtia districts. Out of a total of 100 established demo plots, of which 48 plots established in Magura district and 52 plots established in Kushtia district.

Total of 12.50 ha land was estimated under 100 demo plots with an average about 30.85 decimals per demo plot. Average about 5.82 t/ha grain yield was harvested with average about 135 days growth duration and 90 days field duration. Total of 72,318 kg paddy (seed) of HZRL 2 produced on 12.50 ha land of 100 demo plots, of which 38,878 kg produced in Kushtia district and 32,440 kg produced in Magura district. Out of a total of 72,318 kg paddy (seed) produced, of which about 19% (13,796 kg) used/saved as seed and 81% (58,522 kg) used as food consumption. Out of a total of 13,796 kg saved/used as seed, of which about 19% (1,606 kg) used/saved in Kushtia district and about 81% (11,190 kg) used/saved in Magura district. Out of a total of 58,522 kg consumed/saved as food, of which about 64% consumed/saved as food in Kushtia district (37,272 kg) and about 36% consumed/saved as food as in Magura district (21,250 kg). Out of a total of 13,796 kg seed used under four categories, of which the highest quantity of seed used as exchange (60%) followed by own used/saved (28%), sale to other farmers (6%) and sale to seed company/dealer (6%). On the other hand, out of a total of 58,522 kg paddy used as food for consumption, of which 15,301 kg (20%) consumed by 53 demo farmer families and 43,221 kg (74%) sold to 75 forias (middlemen) in two project districts.

Out of total 100 demo farmers, 53 demo farmers opinioned about the cooked rice quality of HZRL2, of which 35 farmers opinioned as highly sticky (66%), 13 farmers opinioned as medium

sticky (25%) and 5 farmers opinioned as very highly sticky (9%) and none claimed as non-sticky and slightly sticky of cooked rice.

Average gross-return is estimated Tk.159,080/ha with an average about total cost Tk. 14,2133/ha and Tk.78,873/ha on full cost basis and cash cost basis respectively. Average net-return was estimated Tk.16,947/ha and Tk.80,207/ha on full cost basis and cash cost basis respectively. Higher cost-benefit ratio was estimated on cash cost basis (1:2.04) than full cost basis (1:1:12). Average higher paddy production cost (Tk./kg) was estimated for full cost basis (Tk.20.62/kg) than cash cost basis (Tk. 11.37/kg) and the average paddy sale price was estimated Tk.19.48/kg. Total of five farmers field days were implemented at 5 communities in Kushtia and Magura districts, of which two field days were implemented in Kushtia district and three field days were implemented in Magura district during 23 April 2014 to 7 May 2014 on high zinc rice demonstration. Total of 595 farmer's participated and 69 guest specialists attended as resource persons at five field days in 4 project upazilas of Magura and Kushtia districts. Out of a total of 595 participated farmers, 436 were male (73%) and 159 were female (27%) farmers of the five field days.

One day training was conducted for 102 involved seed production demo farmers in 4 project upazilas (4 batches) of Magura and Kushtia districts during 27 January-2 February 2014 in collaboration with DAE and BRRI regional station, Kushtia under the guidance of HarvestPlus Bangladesh. One day training was imparted on varietal characteristics, plant health management, seed production practices, processing, preservation, own use, exchange and sale of high zinc rice line2 in Boro season. Out of a total of 102 trained seed demo farmers, of which 101 were male farmers and only one was female farmer. Total of 102 trained farmers, 52 farmers were in Magura district and 50 farmers in Kushtia districts.

(ii) 2014 T.Aman Season

As per agreement between HarvestPlus Bangladesh and AAS, AAS was implemented the project on Delivery of zinc rice in Bangladesh with 500 demo farmers at 51 villages in 11 upazilas of Jessore, Magura, Jhenaidah and Kushtia districts under technical and financial

support from HarvestPlus Bangladesh during 2014 T.Aman season. Total of 500 demo plots (100 full demo and 400 minikit plots) were established with trained farmers in 4 project districts in southwest (SW) region. Out of a total of 500 demo farmers, of which 392 were male farmers (78%) and 108 were female farmers (22%).

Average about 5.04 MT/ha grain yield was estimated for BRRI dhan62 from 500 demo plots during 2014 T.Aman season. Total of 211.97 MT paddy of BRRI dhan62 produced from 500 demo plots, of which 54.21 MT from 100 full demo plots and 157.76 MT from 400 minikit demo plots. Out of a total of 211.97 MT produced paddy, of which 32.37 MT saved/used as seed and 179.60 MT used as food in 4 project districts. Total of 32.37 MT seed used under four categories, of which the highest quantity paddy sold to seed company/dealers as seed (13.84 MT) followed by 369 demo farmers own used/saved (11.64%), sold to 295 farmers (3.85 MT) and exchanged from demo farmers to 271 non-demo farmers (3.05 MT) as seed. Out of a total of 179.60 MT paddy consumed as food, of which 54.88 MT consumed by the demo farmers families, 124.36 MT sold to forias (middlemen) and 0.34 MT sold to other non-demo farmers.

Average gross-return was estimated about Tk.125,321/ha with average about total cost Tk.92,717/ha and Tk. 49,410/ha on full cost and cash cost basis respectively. Average net-return was estimated Tk.32,604/ha and Tk.75,912/ha on full cost and cash cost basis respectively. Higher cost-benefit ratio was estimated on cash cost basis (2.57) than full cost basis (1.36). Similarly, average higher paddy production cost (Tk/kg) was estimated for full cost basis (Tk.16.13/kg) than cash cost basis (Tk.8.60/kg) and average sale price of paddy was estimated Tk.19.98/kg.

Total of 11,111 farmers participated at 33 field days in 4 project districts, of which 3,177 female farmers (29%) and 7,934 male farmers (71%). Total of 139 resource persons attended and shared their experience and knowledge on BRRI dhan62 among the participated farmers at 33 field days in 4 project districts. Training events, seed distribution and field days news were published in about 70 dailies as a part of large scale promotion of BRRI dhan62 for cultivation during T.Aman season within and outside of the 4 project districts.

(iii) 2014-15 Boro Season

As per agreement between HarvestPlus Bangladesh and AAS, AAS was implemented the project on Delivery of zinc rice in Bangladesh with 500 demo farmers at 69 villages in 16 upazilas of Jessore, Magura, Jhenaidah, Moulvibazar, Habiganj and B'Baria districts within southwest (SW) and northeast (NE) regions under the technical and financial support from HarvestPlus Bangladesh.

Total of 2,000 kg seed distributed (1,900 kg of BRRI dhan64 and 100 kg of BRRI dhan62)

among the 500 selected farmers and they established 500 seedbeds at 69 villages in six

districts. Out of a total of 500 established seedbeds, total of 465 demo plots (DPs) established (445 DPs with BRRI dhan64 and 20 DPs with BRRI dhan62) in six districts. Out of a total of 445 demo plots of BRRI dhan64, of which 230 full demo plots and 215 minikit demo plots of BRRI dhan64. Total of 445 plots were established on 37 ha of land in six districts.

Average growth duration was estimated about 141 days of BRRI dhan64. Average about 4.65 t/ha grain yield was estimated for BRRI dhan64 from 415 DPs in two regions, of which higher grain yield was estimated in SW region (5.78 t/ha) than NE region (3.51 t/ha). Among the six districts, the highest average grain yield was estimated in Jessore district (6.66 t/ha) and the lowest average grain yield was estimated in Moulvibazar district (2.82 t/ha).

Out of a total of 171,280 kg paddy produced on 35 ha of land from 415 DPs, of which 3,767 kg used as seed (2.20%) and 167,513 kg consumed as food (97.80%). Out of total 3,767 kg seed used, of which the highest quantity of paddy saved as seed by the 139 demo farmers (3,092 kg) followed by 405 kg seed exchanged with 38 neighbor farmers and 270 kg seed sold to 27 neighbor farmers.

About 47% higher gross-return was estimated in SW region (Tk. 124,079/ha) than NE region (Tk.84,679/ha) Among the six districts, the highest gross-return was estimated in Magura district (Tk. 125,618/ha) and the lowest gross return was estimated in Moulvibazar district (Tk.74,359/ha). Average net-returns were estimated similar for NE region (Tk. 31,444/ha) and SW region (Tk. 31,661/ha) on cash cost basis. Net-returns were estimated as negative in Habiganj, Moulvibazar, Jessore and Magura districts and such net-return was positive in B'Baria district (Tk. 8,754/ha) on full-cost basis. Average about 34% higher paddy production cost (Tk./ha) was estimated in SW region (Tk.19/kg) than NE region (Tk.14/ka) on full cost basis. On the other hand, average about 37% higher paddy production cost was estimated in SW region (Tk 12/kg) than NE region (Tk.8.77/kg) on cash cost basis. Average about 13% higher paddy sale price was estimated in southwest region (Tk. 15/kg) than NE region (Tk. 13/kg).

Total of 494 farmers participated at 14 training events (10 events in NE and 4 events SW regions) on BRRI dhan64, of which the highest number of farmers participated in Moulvibazar district (190) followed by Habiganj district (111), B'Baria/Magura district (62), Jhenaidah district (39) and Jessore district (30). Out of total 494 trained farmers, of which 104 participants were female and 390 participants were male. Total of 87 resource persons contributed in the 14 training events, of which 58 resource persons in NE region and 29 resource persons in SW region.

Total of 10 field days implemented at 10 communities in five districts under NE (6) and SW regions (4). Total of 88 resource persons contributed in 14 field day events, of which the higher resource persons contributed in SW region (48) than NE region (40. Total of 4,877 farmers attended at 10 field day events in five districts within SW and NE regions, of which 3,311 were male farmers (68%) and 1,566 female farmers (32%). Out of total 4,877 farmers participated at 10 field day events, of which 71% farmers attended in SW region (3,450) and 29% farmers attended in NE region (1,427). Total of 10 field days were implemented in six involved districts to promote BRRI dhan64 as a high zinc rice variety for its large scale dissemination for cultivation with diversified cropping patterns within and outside of the AAS demonstrated communities in two regions through motivation of large number of farmers.

(iv) Performance and potential of BRRI dhan62

HarvestPlus Bangladesh was undertaken an initiative to promote BRRI dhan62 through seed production using 200 seed farmers through 88 seed enterprises of two seed association (SMSPA and SWSPAB) in the southwest region of the country during 2013-14 Boro season.

Out of a total of 200 seed farmers, a total of 22 seed farmers were selected in Jessore and Meherpur districts for the special study as respondents. The special study was conducted on the performance and potential of BRRI dhan62 during 2013-14 Boro season to assess the yield potentiality, grain quality, profitability, acceptability and dissemination of BRRI dhan62 in Jessore and Meherpur districts in collaboration with HarvestPlus Bangladesh. The study conducted with 22 respondent seed farmers (11 in Jessore and 11 in Meherpur districts) in six upazilas of Jessore and Meherpur districts by a four members study team. The relevant field data was collected by the study team members through interviewing individual respondents using two decided questionnaires during 21-30 July 2014.

Total of 176 kg seed of BRRI dhan62 was received by the 22 respondents (seed farmers) from HarvestPlus Bangladesh through two seed associations for seed production in Jessore and Meherpur districts, of which 81 kg seed received by the 11 respondents in Jessore district and 95 kg seed received by the 11 respondents in Meherpur district. Total of 3.2 ha land transplanted by the 22 respondents, of which 1.31 ha land transplanted by 11 respondents in Jessore district and 1.89 ha land transplanted by 11 respondents in Meherpur district during 2013-14 Boro season.

Overall 11% higher grain yield was estimated for BRRI dhan62 (7.22 t/ha) than BRRI dhan28 (6.53 t/ha) during 2013-14 Boro season in two districts. Average higher growth duration was estimated for Meherpur district (137 days) than Jessore district (130 days) with BRRI dhan62 during 2013-14 Boro season with an overall average about 133 days.

Total of 23,026 kg paddy produced as seed of BRRI dhan62 with 22 farmers, of which 9,306 kg in Jessore district (40%) and 13,720 kg in Meherpur district (60%). Out of a total of 23,026 kg paddy produced, of which about 8,970 kg seed used in Jessore districts (45%) and 11,160 kg seed used in Meherpur district (55%). Out of a total of 2896 kg paddy consumed as food, of which only about 336 kg consumed in Jessore district (12%) and about 2,560 kg consumed in Meherpur district (88%).

Average gross-return of BRRI dhan62 was estimated Tk.175,391/ha with average total cost Tk.139,234/ha and Tk.81,735/ha on full cost basis and cash cost basis respectively. Average net-returns of BRRI dhan62 was estimated Tk. 30,251/ha and Tk.87,750/ha on full cost basis

and cash cost basis respectively. Higher average paddy production cost was estimated for full cost basis (Tk.19.54/kg) than cash cost basis (Tk.11.41/kg) and average paddy sale price was estimated Tk.21.14/kg for BRRI dhan62.

3. Plant health management

Total of 725 prescriptions provided among the farmers at 13 plant clinics by the trained 25 community plant doctors (CPDs) in Baraigram upazila of Natore district during 1 January to 31 December 2014. The highest number of prescriptions provided at Moukhara plant clinic (100) and lowest number of prescriptions provided at Tirail plant clinic (30). Plant clinic-wise number of prescriptions provided during 1 January-31 December 2014 by the community plant doctors (CPDs) is provided in Table.1.

Table.1: Plant clinic-wise number of prescriptions

PC #	Plant clinic Name	Prescription (No.)
1	Ahamadpur	64
2	Ramaigari	28
3	Rayna Varot	48
4	Merigachhi	48
5	Perbagdob	72
6	Moukhara	100
7	Tirail	24
8	Chandai	88
9	DK Bazar	40
10	Jonail	36
11	Parcole	64
12	Kachua	25
13	Shibpur	88
Total		**725**

4. Women in seed Entrepreneurship (WISE) Project

To develop rural based sustainable seed business system with 300 vegetable seed producing women at 15 villages in Sadar upazila of Meherpur district under the support from WISE project (a IFC-SEDF funded project for RDA Bogra), an agreement was made between Rural Development Academy (RDA), Bogra and Agricultural Advisory Society (AAS) for implementation the project during 2014. The duration of the agreed project was for 8 months during January-August 2014. Under the agreement, AAS was administered the following activities to achieve the goal and objectives of the project during 8 months project cycle in Sadar upazila of Meherpur district under the guidance and supervision of RDA, Bogra under its WISE project provision and in collaboration with Krish Seba enterprise:

(i). Women seed business group formation

Total of 15 women seed business groups were formed with 300 women seed farmers (20 women seed farmers/group) at 15 villages in Sadar upazila of Meherpur district to implement

the agreed project. Each women seed business group was formed with a women group leader (Table.2).

(ii). Women seed entrepreneurship training

A day long participatory training was implemented to 300 selected women seed entrepreneurs

along with their husband as half family on production, processing and preservation of vegetables seed during 15-30 January 2015 at 15 communities in Sadar upazila of Meherpur district in collaboration with RDA, Bogra. Similarly, a day long participatory training was imparted to 300 selected women seed entrepreneurs along with their husband as half family on vegetable seed business at 15 communities in Sadar upazila of Meherpur district during 10-25 February 2015 in collaboration with RDA, Bogra. Involved women group leaders were played vital role during implementation of two batches of training courses (Table.2).

Table.2: Women seed farmer groups, group leaders and number of group members and members trained

SL #	Group Name	Group Leader	Group Member (No.)	Trained (No.)	
				Female	Male
1	Kulbaria Basini Para	Mst. Sahanara Khatun	20	20	20
2	Kulbaria High School Para	Mst. Salma Khatun	20	20	20
3	Kulbaria Bosudia Para	Mst. Sahinur Khatun	20	20	20
4	Kulbaria Mollah Para	Mst. Afroza Khatun	20	20	20
5	Kulbaria School Para	Mst. Bilkish Khatun	20	20	20
6	Ujolpur Purbo Para	Mst. Nasrin Akter	20	20	20
7	Ujolpur Kuti Para	Mst. Nushrat Jahan	20	20	20
8	Ujolpur Mollahpara	Mst. Jahanara	20	20	20
9	Chardpur Mosjid Para-2	Mst. Jajera Khatun	20	20	20
10	Chardpur Mosjid Para-1	Mst. Shahanara	20	20	20
11	Kulbaria Thakur Para	Mst. Punka Khatun	20	20	20
12	Kulbaria Nitchchandapur	Mst. Tania	20	20	20
13	Kathuli Bazar Para	Mst. Jesmin Akter	20	20	20
14	Kulbaria Bosuti Para	Mst. Sahanara Khatun	20	20	20
15	Kulbaria Schoollar Oper	Mst. Sayara Khatun	20	20	20
Total			**300**	**300**	**300**

(iii). Inputs Support

AAS supplied a total of 164 kg seed of six types of open pollinated vegetables among the 300 trained women seed farmers at 15 communities in five villages of Sadar upazila under Meherpur district during 2014 cropping season in cooperation with women group leaders. Out of a total of 164 kg seed supplied of open pollinated six types of vegetables for seed production, of which the highest quantity seed supplied with Red Amaranth (117 kg) followed by Spinach (25 kg), Indian Spinach (16 kg), Swamp Cabbage (3 kg), String bean (2 kg) and Snake gourd (1 kg). The quantity of seed of six types of vegetables distributed among the 300 trained women seed farmers is provided in Table.3.

Table.3: Quantity of seed distributed of six types of vegetables and their varieties among the trained 300 women seed farmers.

Crop	Variety	Farmer (No)	Seed Quantity (gm/Farmer)	Total Seed (Kg)
Red Amaranth (Lal Shak)	RM	234	500	117
Indian Spinach	Green	32	500	16
Spinach	Kopi Palong	25	1000	25
Swamp Cabbage (Kolmi Shak)	Gima Kalmi	03	1000	03
Snake Gourd	Potenga	04	250	01
String Bean	Kegornotika	02	1000	02
Total		**300**	**-**	**164**

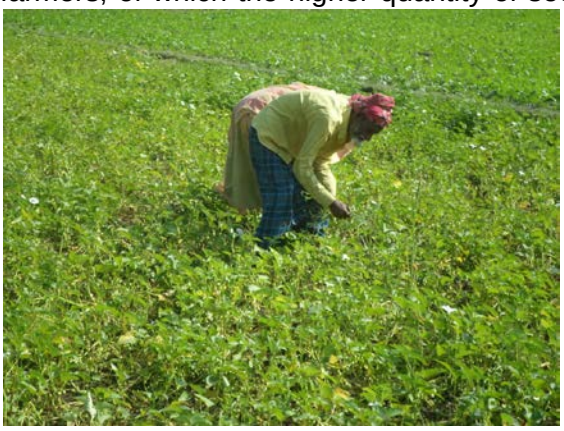
(iv) Supervision and practical advice

Project seed agronomists provided post training practical advice and supervision to involved 300 women seed farmers during seed plots selection, production practices in field, roughting, harvesting and post harvesting practices, processing and preservation of the seed as per their routine visit schedule at 15 communities in sadar upazila of Meherpur district. Project seed agronomists also administered seed monitoring at the processing center to ensure the quality of the preserved seed for selling in the market.

Project staffs also provided required support for marketing the seed with better price in collaboration group leaders and buyers within and outside of the project district.

(v) Seed Production Volume and Value

Out of a total of 47,335 kg seed of six OP vegetables produced by the 300 women seed farmers, of which the higher quantity of seed produced for Red Amaranth (24,050 kg) followed by Indian Spinach (17,960), Spinach (32,000), Swamp Cabbage (1,200 kg), Snake gourd (500 kg) and String Bean (425 kg).



Out of a total of Tk. 6,574,150 estimated total gross value from 47,335 kg produced seeds, of which the highest gross value estimated for Indian Spinach (Tk.4,310,400) followed by Red Amaranth (Tk.1,683,500), Spinach (Tk. 224,000), Snake gourd (Tk. 130,000), Swamp Cabbage (Tk.120,000) and String Bean (Tk.106,250). Average about Tk.21,914/family gross value of seed sell was estimated through production of vegetables seed of the project trained women seed farmers (Table.4) .

Table.4: Total quantity, price and total value of produced seed of six type of vegetables with 300 women seed farmers at 15 communities in Meherpur district, 2014.

Vegetable	Seed Quantity (Kg)	Price (Tk./Kg)	Seed Value (Tk.)
Red Amaranth (Lal Shak)	24,050	70	1,683,500
Indian Spinach	17,960	240	4,310,400
Spinach	3,200	70	224,000
Swamp Cabbage (Kolmi Shak)	1,200	100	120,000
Snake Gourd	500	260	130,000
String Bean	425	250	106,250
Total	**47,335**	**-**	**6,574,150**

5. Bulk Vegetable Seed Production and Marketing

Mostly private seed companies and large seed dealers procure bad quality OP vegetables seed as bulk from seed farmers in the country in general and Meherpur and Chuadanga districts in particular. Accordingly, AAS was developed an approach on the bulk OP vegetables seed production and marketing to seed company and seed dealers in the country during 2008-9. As per MOU between AAS and Krishi Seba have been working with trained seed farmers to produce the selected OP vegetables seed on demand driven basis in Meherpur and Chuadanga districts and business based understanding with selected seed buyers in the country from 2012.

However, Krishi Seba was produced Op vegetables seed with 105 trained seed farmers and sold 107 MT of produced seed of 7 type of OP vegetables to 5 seed companies (Including Mollika Seed Company) and 15 seed dealers across the country during 2014. Out of a total of 107 MT of OP 7 type of vegetables seed, of which the highest quantity of seed produced for Red Amaranth (50 MT) followed by Indian Spinach/Swamp Cabbage (20 MT), String bean (5 MT), Pumpkin (1 MT) and Snake gourd/Bottle gourd (0.5 MT). Similarly, out of a total of Tk. 14,720,000 seed sale value, the highest seed sale value was observed for Indian Spinach (Tk.5,600,000) followed by Red Amaranth (Tk.4,500,000), Swamp Cabbage (Tk.2,600,000) String Bean (Tk. 1,500,000), Pumpkin (Tk. 250,000), Snake gourd (Tk. 160,000) and Bottle gourd (Tk.110,000). Seed sold sale volume and value of seven type of OP vegetables are provided in Table.5.

Krishi Seba was undertaken the initiative as a facilitator on the bulk seed production and marketing of OP vegetables as a non-profit quality seed supply in the market. On the other hand, AAS was undertaken the initiative on the bulk seed production and marketing of OP vegetables to validate the developed approach for its long term sustainability to ensure the quality seed supply on one end and to offer better profitable for the seed farmers on the other end of the equation.

Table.5: Seed sale volume and value of seven OP vegetables during 2014.

Crop	Seed Sold (MT)	Price (Tk./Kg)	Sale Volue (Tk.)
Red Amaranth (Lal Shak)	50	90	4,500,00
Indian Spinach	20	280	5,600,000
Swamp Cabbage (Kolmi Shak)	20	130	2,600,000
Pumpkin	1	250	250,000
Snake Gourd	0.5	320	160,000
String Bean	5	300	1,500,000
Bottle gourd	0.5	220	110,000
Total	**107**	**-**	**14,720,000**

6. Varietal trial of rice trial

AAS was untaken the initiative on the varietal trials of rice during 2014. T.Aus, 2014 T.Aman and 2014-15 Boro season in its working districts within southwest (SW) and northeast (NE) regions of the country and their brief description is provided below:

(i) 2014 T.Aus season

AAS was undertaken an initiative for varietal trail on BRRI dhan48 (NE region) and BRRI dhan62 (SW region) during 2014 Aus season in collaboration with trained community coordinators. Total of 60 trial plots were established, of which 20 trail plots were established with BRRI dhan62 in Jessore, Satkhira, Jhenaidah and Magura districts under SW region and 40 trial plots were established with BRRI dhan48 in Habiganj and Moulvibazar districts under NE region during 2014 T.Aus season. Performance of both varieties was found as encouraging and their acceptability was found very high at the trial communities in six districts under two regions of the country.

(ii) 2014 T.Aman season

Total of 30 trial plots were established with BRRI dhan49 due to its good grain quality in Magura, Jessore and Jhenaidah districts. Performance of BRRI dhan49 was found as encouraging and its acceptability was found as moderate at the trial communities in three districts.

(iii) 2014-15 Boro season

Total of 40 trial plots established during 2014-15 Boro season, of which 25 trial plots were established with BRRI dhan60 in Jhenaidah, Jessore, Magura, B'Baria, Habiganj and Moulvibazar districts and 15 trial plots were established with BRRI dhan63 (Balam rice) in Jhenaidah, Jessore and Magura districts. Performance of BRRI dhan63 was found very much encouraging and its acceptability was found very high in the three trial districts. On the other hand, the performance of BRRI dhan60 was found as encouraging and its acceptability was found as moderate in the six trial districts.

7. Rice hybrids demonstration

The farmers participatory field demonstration was conducted with 30 farmers on the selected five rice hybrids at 9 villages in Jhenaidah, Magura and Jessore districts during 2013-14 Boro season. The purpose of the farmers' participatory rice hybrids field demonstration was to popularize the latest released rice hybrids among the farmers in Jhenaidah, Magura and Jessore districts. Five rice hybrids were selected for the field demonstration (Mukti-1, Rupali-7, Nabin Durbar and Subarno-3) during 2013-14 Boro season. Selected five rice hybrids, their country origin, seed supplier and released year are provided in Table.6.

Table.6: Country origin, seed supplier and released year of 5 rice hybrids.

Rice hybrid	Country Origin	Seed Supplier	Released year
Meghna	China	BRAC	2011
Rupali-7	China	BRAC	2011
Nabin	China	Ispahani Seed	2011
Durbar	China	Ispahani Seed	2011
Subarno	China	Supreme Seed	2011

Total of 2 kg seed was provided for each demo farmer at 6 selected communities in Jhenaidah, Magura and Jessore districts. Cluster demonstration with five farmers at each community was established at 6 communities with 30 trialed farmers in Jhenaidah, Magura and Jessore districts during 2013-14 Boro season. Germination test of seed of the selected five rice hybrids was conducted by AAS after procurement and before distribution of seed among the 30 trained farmers. The post established rice hybrids field demonstration plots were monitored by the field Agronomist of AAS. Farmers demand-led 6 field days were conducted at 6 communities in two working districts before harvesting the crop.

8. Year round sweet corn production and marketing

AAS was undertaken an initiative for piloting year round sweet corn production and marketing with a commercial progressive farmer (Humayun Kabir) in sadar upazila of Jessore district using


hybrid sweet corn varieties. Such year round sweet corn production and marketing was a commercial approach on the basis of self-initiative from a trained and motivated commercially progressive farmer. He planted sweet corn seed on 2 decimals of land within 1st week of each month of 2014 on his own land and using his own resources. He managed to sell his produced fresh sweet corn cob on average Tk.15/ cob in Jessore town.

However, at the beginning the acceptability of fresh sweet corn (cob) among the consumers in Jessore town was found as very much encouraging. Involved trained and motivated farmer become excited to grow year round the sweet corn to sell the fresh sweet corn (cob) among the motivated consumers in and around Jessore town as a commercial enterprise. Moreover, AAS has been working to develop several sweet corn producers in and around Jessore town by next few years to ensure the supply of fresh sweet corn on demand driven basis.

Accordingly, involved farmer decided to continue sweet corn production and marketing in Jessore and out-side of Jessore district. In this regards, Jamalpur Seed Companies offered him to support for selling his fresh sweet corn (cob) at urban and up-scale urban markets in Dhaka with better price.

9. High value cash cropping on dike

Recognizing the potentiality and benefits of high value cash cropping on the dike of shrimp enclosure (Ghaer), AAS has undertaken an initiative to introduce the potential hybrid varieties of



three type of vegetables (Tomato, Bottle gourd and sweet gourd) for dike cropping of shrimp enclosures in Gopalganj district during 2014-15 winter season in collaboration with involved community coordinators. Involved farmers were trained and motivated by the AAS field staff on the intensive cropping system management with high value crops on the dike of shrimp enclosure. AAS field staff provided in-field technical support for the full crop cycle during their routine field visit. AAS staff also provides market information among the farmers for the involved vegetables through community coordinators during their harvesting.

10. High value cash cropping in chars

Recognizing the potentiality and benefits of non-saline chars agriculture, AAS has been undertaking initiative to introduce high value cash cropping system in chars of Tista River in Lalmonirhat district and Padma River in Rajshahi and Chapai Nawabganj districts through using participatory approaches and strategies under the sponsorship of JOBS since 2007. During last five years, AAS demonstrated more than 40 demand-led crop varieties in the selected chars in Tista and Padma rivers of Lalmonirhat, Rajshahi and Chapai Nawabganj districts, of which about 20 crop varieties have been accepted at very high level. Total of 12 high value cash crops were demonstrated during 2014 on 11 chars in Rajshahi and Pabna districts, of which three crops (Banana, Guava and Jujube) were fruits and nine crops (Country Bean, Cauliflower, Cabbage, Okra, Bottle gourd, Radish, Bitter goud, Ash gourd and Chilli), were vegetables. Out of a total of 11 demonstrated chars in three districts, of which four demonstrated chars in Chapai Nawabganj districts (Pakra char, Durlobpur char, Narayanpur char and Alatuli char), three demonstrated chars in Rajshahi district (Ashariadoha char, Fatepur char and Dadpur char) and four demonstrated chars in Pabna district (Bhabanipur char, Kallayanpur char, Nagda char and Dhalar char). The demonstrated crops and their varieties are provided in Table.7.

Table.7: Demonstrated eleven crops and their varieties in 11 chars

SL #	Crop	Variety
I. Fruit		
1	Banana	Sobri
2	Guava	Thai-3
3	Jujube	Thai Kul
II. Vegetable		
1	Country Bean	Ishurdi
2	Cauliflower	Early-35
3	Cabbage	Contesa
4	Okra	Arka Anamika
5	Bottle gourd	Jhenai
6	Radish	Early 40
7	Bitter gourd	Ash gourd
8	Chilli	Baro Mashi
9	Ask gourd	

11. Strengthening FARMSEED approach

It is well accepted that seed is the single most important input for any plant-based agricultural production system. Seed quality determines the upper limits of crop yield potential and therefore the productivity of all other inputs is constrained by the quality of the seed ingredient. Accordingly, improved seed can frequently make a substantial, incremental contribution to overall agricultural productivity, doing so at relatively little incremental cost. A farmer's risk declines substantially if the genetic and physical purity of the seed is maintained. There is evidence that using quality rice seed alone can increase rice yield as much as 20% irrespective of the management practices. In contrast with formal seed systems, which operate at national level, informal seed systems operate mainly at the community level. Informal seed systems are typically quite flexible, involving variety of exchange mechanisms, which facilitate the distribution of seeds between participating households (e.g. cash/barter). Informal seed systems can be regarded as traditional in that they normally involve long-standing, well-established practices and links between seed products and consumers. Little improvement of informal seed system can ensure the availability of quality seed in the hands of farmers, especially resource poor farmers at the community level and FARMSEED (Farmer-to- farmer seed exchange system) is an example. Thus, AAS has developed FARMSEED approach, which is the combination of formal and informal seed system and fully sustainable to ensure quality seed supply of the demanded crops among the farmers in general and rice in specific.

Accordingly, AAS was undertaken initiative for dissemination of latest rice varieties (BRRI dhan60 and BRRI dhan62) through seed production and distribution using FARMSEED approach in Jhenaidah, Magura and Jessore districts during 2013-14 Boro, 2014 T.Aman and 2014 Aus seasons in collaboration with trained seed farmers and community coordinators. Total of 28,000 kg seeds produced and distributed among the motivated farmers through using FARMSEED approach, of which 24,000 kg seeds of BRRI dhan62 and 4,000 kg seeds of BRRI dhan60 during those three rice cropping seasons. On the other hand total of 20 trained onion seed farmers were undertaken initiative for seed production of Shuksagor and Teherpuri varieties of onion under technical guidance from AAS field staff in collaboration with Krishi Seba in Meherpur district during 2013-14 winter season. All the involved commercial onion seed farmers sold their produced and stored onion seed of Shuksagor and Taherpuri varieties during sowing of 2014-15 winter season for bulb onion cultivation.

12. Cost and return analysis of high value cash crops

Large number of high value cash crops are grown in the southern regions of Bangladesh, the latest information from farmers on yield, cost and return, and price of those targeted high value cash crops should be available for the benefit of extensionists, traders, exporters, farmers, policymakers, bureaucrats, project staff and the relevant other stakeholders users. Accordingly,

AAS was undertaken initiative to collect the relevant primary data for cost and return analysis of those targeted crops and their varieties in southern regions of the country during September-December 2014.

AAS staff collected primary data for costs and returns of 36 crops and their 85 varieties from 655 farmers using one page structured questionnaire developed by AAS. Data were collected from the successful farmers at the selected communities in 14 districts in southern regions of the country: Magura, Jhenaidah, Jessore, Satkhira, Khulna, Bagerhat, Gopalganj, Barisal, Shariatpur, Madaripur, Faridpur, Bhola, Chuadanga and Meherpur districts. Out of a total of 36 involved crops, of which the highest number of crop was for vegetables followed by Spices (5), fruits (4), pulses and oil seed crops (3) and seed production crop (1). On the other hand, out of a total of 85 varieties, the highest number of varieties was observed for vegetable crops (54), followed by fruits (10), pulses (9), spices (7), oil seeds (4) and seed production crop (1) (Table.8).

Table.8: Crop type-wise number of crops and their number of variety

SL #	Crop Type	Crop (Nr.)	Variety (Nr.)
1	Vegetable	20	54
2	Fruit	4	10
3	Spices	5	7
4	Pulses	3	9
5	Oil seeds	3	4
6	Seed	1	1
Total		**36**	**85**

13. Extension of fish fattening

Pond fish fattening method was evolved at Moharajpur village in Gurudaspur upazila of Natore district during 1986-95 through stocking of small fishes (instead of fingerlings) in the natural fish pond. The small fish based pond fish polyculture method was named as fish fattening method by AAS in 2011 during implementation of AAS/PRICE fish training project in Natore district. Currently the fish fattening method has disseminated in Gurudaspur, Boraigram, Sadar, Sigra and Nadanga upazilas of Natore district. To achieve large fish, higher yield and profit, the fish fattening method is used through stocking of small fishes; improved fish pond management practices, high quality fish feed use etc. The price of large fish is comparatively very high than small table fish at the markets and accordingly, small fish based fish fattening is found as a higher profitable method for improved fish culture.

In view to promote the pond fish fattening method, AAS was undertaken initiatives to disseminate the pond fish fattening method among the fish farmers across the country, they are: (i) Telecasting the information on the pond fish fattening management practices and (ii) Capturing and documenting on the pond fish fattening management practices. Accordingly, BTV recorded the facts and figures on pond fish fattening management practices from the potential fish farmers and relevant stakeholders on 10 January, 2014 in Gurudaspur upazila of Natore district. Later, BTV telecasted the pond fish fattening method through its Matio-Manush program for about 20 times during 2014. Thus, the fish fattening concept is getting popularity among the fish farmers across the country.

On the other hand, AAS was conducted a participatory experience sharing workshop to capture the relevant information about the pond fish fattening management practices on 5 August 2014 with 9 potential fish farmers from Gurudaspur upazila in the conference room of Bonpara pourashava office, Boraigram, Natore. In the workshop, the information was collected on the background of the method, pond excavation and management, cultural practices of pond fish fattening, fish harvesting and post harvesting practices, fish transportation, fish marketing (live and dead fishes), fish bio-mass production and cost & return to prepare a practical manual on pond fish fattening management practices. The manual preparation is under pipeline to publish for distribution among the fish farmers across the country.

14. Operating fish hatchery

AAS has been operating its fish hatchery at Alampur, Kushtia with trained fishermen on contractual agreement since 2000. Under such sub-contract system a total of 235 Kg quality hatchlings of the five different carps (Ruhu, Catla, Mrigal, Silver Carp & Bata) has produced and sold among the resource poor fish farmers and fishermen in Kushtia district during the reporting period of the Annual report 2014 (Table.9).

Table.9: Hatchlings production of five carps during 2014

SL	Carp type	Hatchlings (Kg)
1	Rohu	40
2	Mrigal	35
3	Catla	20
4	Silver Carp	50
5	Bata	90
Total		**235**

15. Extension of Exotic fruit Orchard

AAS has been introducing exotic fruit orchards (e.g. Jujube, Litchi, Mango etc) since 2005 through establishment of demo orchard in collaboration with private nursery in Natore district. During the reporting period, AAS provided practical motivation on improved fruit orchard management including Jujube orchard establishment and management among the interested farmers and elite orchard owners in Natore, Pabna and Rajshahi districts, Motivation follow-up in field technical services provided by AAS field horticulturists during jujube orchard establishment and post establishment management practices.

16. Uptake of high value crop varieties

AAS, from its earliest days, has focused most of its resources and energy on promoting high value crop production strategy in Bangladesh. The overall fertility of the land, the small plot size and cultivation intensity; the easy availability of supplemental irrigation supplies all are in favor of increased cultivation of high value cash crops in Bangladesh. Accordingly, wherever appropriate, AAS introduces new, high value cash crops and accompanying production packages. The high value crop uptake process is participatory and is demand-led by the involved farmers. AAS has been continuing to introduce new varieties of high value cash crops with appropriate production packages in all of its project areas. AAS has demonstrated about 15 different new cash crop varieties from private seed companies during the reporting period in 3 working zones.

17. Building capacity of partners

AAS has presented a series of agricultural training programmes for the benefit of more than 2400 staff of AAS and its partner organizations (NGOs & CBOs) along with relevant public & private sector organizations since its founding in 1989.

About 100 staff of AAS partner organizations (NGOs & CBOs) along with relevant public and private sector organizations received training from AAS during this reporting period. Chief executives and staff of partner organizations (POs), public and private sector organizations attended in various workshop, seminar, meeting, and field days etc on the relevant issues during this reporting period. Partner organizations participated in various trials, demonstrations, and studies during this reporting cycle.

18. Developing skill and capacity of partner farmers

AAS has been using participatory training and motivational approaches to develop the skills and capacities of its partner farmers since it's founding in 1989. AAS conducted series of training and motivational activities under different projects to develop the skill and capacity of more than 5000 farmers in its three working zones in the country during this reporting period. AAS provided practical training and orientation on several issues including video show, vegetable seed production etc to more than 5000 farmers including resource poor farmers (RPFs); 15% of who were resource poor female farmers.

19. Formation of farmer groups

Since inception of AAS, total more than 1150 farmer groups have been formed with more than 40000 partner farmers in more than 150 upazilas in more than 45 districts under 3 working zones up to December 2014. These are all informal agricultural production/seed production groups and committed to create their own wealth by using AAS's strategies on agriculture throughout the year. Total of 150 farmer groups with partner farmers were formed in 3 working zones during January-December 2014. Each farmer group has received various training courses and motivational activities (including Video shows) since it formed at each community. The zone-wise total number of farmer groups formed and their total number of member farmers during the reporting period is provided in Table.10.

Table.10: Zone-wise total number of farmer groups and their member farmers

Zone	# of farmers group	# of Partner farmers
North	5	125
South	125	3125
East	20	500
Total	**150**	**3750**

VI. Organizational Particulars, Strength and Strategy

Year of Establishment: 1989

Chief Executive: Md. Harun-Ar-Rashid

Contact Person: Md. Harun-Ar-Rashid

Mailing Address

Head Office		
Agricultural Advisory Society (AAS) House # 1/6, Block - G, Lalmatia, Dhaka-1207 Phone: 880-02-58152151, Mobile: 01712094218 E-mail: harunaas@gmail.com Web: www.aas-bd.org		
Zonal Office	**Area Office**	
Northwest		
Agricultural Advisory Society (AAS) Mission Gate Bonpara, Boraigram Natore	Agricultural Advisory Society (AAS) College Road, Tarash Sirajganj	Agricultural Advisory Society (AAS) Ashutospur, Dipchar, Sadar, Pabna
	Agricultural Advisory Society (AAS) Rangpur Road, Bangali Pur Saidpur, Nilphamari	Agricultural Advisory Society (AAS) Niloy, Koigari, Gohail Road, Bogra-5800
Southwest		
Agricultural Advisory Society (AAS) Sheikh Hati, Bablatola Sadar, Jessore	Agricultural Advisory Society (AAS) Adarsha Para, Sadar, Jhenaidah	Agricultural Advisory Society (AAS) Arampara, Kobori Road, Sadar, Chuadanga
	Agricultural Advisory Society (AAS) Harta, Wazirpur Barisal	Agricultural Advisory Society (AAS) PTI Road (Sabujbag Moor), Patuakhali 8600
Northeast		
Agricultural Advisory Society (AAS) Siraj Nagar (Fakir Bari) P.O: Narain Chara-3211 Srimangal, Moulvibazar	Agricultural Advisory Society (AAS) Motkhola Road, Pakundia Bazar Pakundia, Kishoreganj	Agricultural Advisory Society (AAS) College Road, Sadar Jamalpur
	Agricultural Advisory Society (AAS) House # 12, Road # 5, Noakhali House Estate Noakhali	

Legal Status

AAS's Registration information:

Organization / Authority	Registration's #	Date
i) NGO Affairs Bureau	No. 1015	Date: 4.3.1996/31.5.2007/04.03.2011 (renewed)
ii) Society Registration, Joint Stock Companies	No. 1379 (13) 91	Date: 5.2.1991
iii) Seed Wing, Ministry of Agriculture	SPMI/0432/2000	Date: 3.1.2000

Partnership Status with Forum

Sl. No.	Status	Forum	Address
1	Apex NGO (AAS)	AAS partner NGOs Network (100 partners NGOs)	House # 1/6, Block - G, Lalmatia, Dhaka-1207 Phone: 880-2-8113645, Fax: 880-2-8117781 E-mail: harunaas@gmail.com Web: www.aas-bd.org
2	Member	Bangladesh Seed Association (BSA)	145, Siddique Bazar (1st floor), Dhaka-1000 Phone: 880-2-9569677, 7112986 Fax: 880-2-956977, 9566196 E-mail: bsma@agnionline.com
3	Member/ Chairman	Bio-Village Forum (BVF) (50 members NGO forum)	House # 1/6, Block - G, Lalmatia, Dhaka-1207 Phone: 880-2-8113645, Fax: 880-2-8117781 E-mail: harunaas@gmail.com Web: www.aas-bd.org
4	Member	Bangladesh Rice Foundation (BRF)	Flat No. B-1 (1st floor), House No. 7/5, Block-C, Lalmatia Dhaka-1207 E-mail: bsiddiqui04@yahoo.com
5	Member	Bangladesh Paribesh Andolon (BAPA)	9/12, Block-D, Lalmatia, Dhaka-1207 Tel: 8128024, 8113469 E-mail: bapa2000@gmail.com

Operational Areas

Working areas and involved PNGOs:

District	Name of Upazila	Union (No.)	Village (No.)	PNGOs (No.)
Zone-I: Southwest				
Satkhira	Kolarua, Sadar, Tala (3)	9	20	7
Khulna	Fultola, Daulatpur, Sadar, Dumuria, Boitaghata, Dacop (6)	13	30	6
Bagerhat	Sadar, Chitolmari, Fokirhat, Mollahat (4)	8	20	5
Pirojpur	Nazirpur (1)	2	5	1
Chuadanga	Sadar, Damurhuda, Jibonnogar, Alamdanga (4)	16	40	2
Meherpur	Sadar, Gangi, Mujibnagar (3)	6	15	1
Jhenaidah	Sadar, Kaligonj, Horinakunda, Mohespur, Kotchadpur, Shailokupa (6)	25	50	2
Jessore	Sadar, Bagherpara, Jhekorogacha, Monirampur, Kashobpur (5)	8	20	3
Magura	Sadar, Salikha (2)	9	22	1
Kushtia	Sadar, Mirpur, Kumarkhali, Khoksha (4)	8	18	1
Faridpur	Sadar, Boalmari, Bhanga, Modhukhali (5)	18	40	4
Rajbari	Sadar, Baliakandi, Goalanda, Pangsha (4)	13	30	2
Gopalganj	Sadar, Tungipara, Kotalipara, Kasiani, Maksudpur (5)	20	50	3
Madaripur	Kalkini, Shibchar (2)	4	10	1
Barisal	Wazirpur, Banaripara, Babuganj, Agailjhara, Gournadi (5)	20	50	5
Patuakhali	Sadar, Kalapara (2)	5	10	4
Bhola	Sadar, Charfesson, Lalmohan, Borhanuddin (4)	15	40	2
Zone-II: Northwest				
Dinajpur	Phulbari, Parbotipur, Nowabganj, Birampur, Hakimpur, Ghoraghat (6)	20	30	3
Gaibandha	Polashbari, Gobindaganj (2)	2	5	2
Rangpur	Pirgonj, Bodorganj, Mithapukur (3)	3	8	3
Thakurgoan	Sadar, Pirgonj (2)	2	4	2
Sirajgonj	Tarash, Shahzadpur, Ullapara (3)	5	14	6
Natore	Sadar, Gurudashpur, Boraigram, Lalpur (4)	17	39	9
Pabna	Sadar, Atgharia, Ishurdi (3)	7	15	4
Rajshahi	Putia, Bagmara (2)	5	13	2
Bogra	Sadar, Shibhanj (2)	2	4	2
Zone-III: Northeast				
Moulvibazar	Srimangal, Sadar, Kamolganj, Rajnagar (4)	16	40	4
Habiganj	Madhobpur, Chunarughat, Sadar, Bahubal, Chunarughat (5)	18	45	3
Kishoregonj	Pakundia, Kotiadi (2)	4	10	5
Jamalpur	Sadar (1)	1	2	1
Tangail	Kalihati, Sadar, Modhupur, Dhonbari (4)	4	4	1
Mymensingh	Bhaluka, Gaffargaon, Sadar, Muktagachha, Gauripur, Phulpur (6)	6	6	2
Netrakona	Purbadhala (1)	2	4	1
33	**115**	**313**	**713**	**100**

AAS working areas and infrastructures: Since its inception, AAS has implemented a numerous projects to alleviate poverty among the resource poor and small farmers of Bangladesh. Thus AAS has been implementing its project activities at more than 700 villages in more than 300 unions under more than 100 upazilas of 33 working districts with about 100 partner NGOs and more than 600 CBOs in three working zones (Northeast, Northwest and Southwest) of the country. Since inception, AAS has been established offices and relevant infrastructures (Training centers, IT center, fish hatchery etc) in the three working zones in collaboration with partner organizations (NGOs/CBOs) to implement its project activities at the grassroots' levels.

Bankers

1. Arab Bangladesh Bank Limited, Dhanmondi Branch, Dhaka
2. Agrani Bank, Farmgate Branch, Dhaka
3. Islami Bank Bangladesh Ltd., Dhanmondi Branch, Dhaka

The AAS Executive Committee (EC)

Name of Persons	Designation	Years of Term of Office	Occupation
Md. Harun- Ar- Rashid	President	1991- till today	ED, AAS
Mr. Bazlur Rahman	Vice-President	September 2009- till today	Free Lance Consultant
Mr. Muktadir Ahmed	General Secretary	1995- till today	Proprietor, Brothers Polymar & Modern Pipe Industry
Mr. Khandoker Anisur Rahman	Assistant General Secretary	2004- till today	ED, PRISM Foundation
Mazibur Rahman	Treasurer	2010- till today	Proprietor, Jamalpur Seed
Md. Robiul Islam	Member	2010- till today	National Consultant, UNICEF Bangladesh
Abdul Mannan Sarker	Member	1995- till today	Free Lance Consultant

The AAS Advisory Board

Name of Persons	Designation	Years of Term of Office	Occupation
Dr. A. J. M. Azizul Islam	Director	1996-till today	Former DG BRRI
Prof. Dr. Shamsul Haque	Director	1996-till today	Ex Vice Chancellor, Northern University, Bangladesh (NUB)
Md. Harun- Ar- Rashid	Director	1991- till today	Executive Director, AAS
Dr. David Gisselquist	Director	1991- till today	Free Lance Consultant
William H. Derrenger	Director	1991- till today	Professor & Associate Dean, Faculty of Business, NUB

AAS Partner NGO Network

AAS has historically implemented its rural based, agricultural productivity enhancing projects through its large network of rural based Partner Organizations (NGOs/CBOs). AAS has been strengthening and expanding its "partner NGO network" all over the country since 1989. At the beginning, a total of 23 national and international NGOs were involved with AAS partner NGO network during 1989-90 and more than 200 NGOs were involved during later part of 1990s. At present about 100 NGOs directly and indirectly are involved with AAS partner NGO network. Moreover, 30 NGOs are involved for implementing AAS developed intensified crop management strategies and other high value added agricultural activities with their client resource poor farmers in 3 working zones during 2012. The capacity of 20 partner NGOs and more than 100 CBOs have built during 2014 in three working zones of the country.

One of AAS's great strengths is that it is able to work through a large network of experienced grassroots partner organizations (NGOs & CBOs). Trained CBOs, rural youth groups, women groups, and local NGOs representing diverse rural constituencies are all part of the AAS-Partnership Network. Accordingly, AAS gains strength from its network partners. On the other hand, AAS maintains close and collegial relationships with a large number of well-funded and staffed public sector and international organizations that have solid agri-technical credentials. These include IRRI, CIMMYT, BRRI, BARI, BARC, BADC, DAE, FAO, CABI, Rutgers University, RDC, JOBS, GROS, IFPRI, RDA, MEAS, AI, AA, CIAT, HarvestPlus, UC'D and others with whom AAS maintains and sustains long-term collaborative relationships.

Staff strength

Besides its permanent staff, AAS employs personnel as per the requirements of its individual projects. Moreover, AAS also utilizes personnel on a voluntary basis as part time. The personnel of AAS are posted at district, upazila, union and village levels to work in close contact with its client farmers, the resource poor in particular.

AAS has a total of 65 staff, of which 24 is permanent full time and enlisted 44 part time and seasonal staff for implementing its program activities in more than 30 districts. Out of 65 staff, 24 staff is technical staff, specialized in Agriculture, Irrigation and water management, Environment, Seed technology, Food & Nutrition security, Aquaculture, Business Management, Value chain, Supply chain and Poultry farming etc. AAS personnel are all experienced, highly qualified professionals in their own field, who contribute to the success of its projects and the development of Bangladesh's agricultural capacity. The AAS staff is fully committed to building the skill and technical capacity of poor farmers; to create wealth for them in order to improve their livelihoods. Our dedicated staffs play a key role in this.

List of staff (Full time & Part time)

Sl. No.	Name	Designation	Qualification	Full Time	Part Time
1	Md. Harun-Ar-Rashid	Executive Director	MS (Ag)	✓	
2	Mrs. Azima Sultana	Admin. Officer	M.A.	✓	
3	Mr. Ziaur Rahman	Finance Manager	M.Com (A/C)	✓	
4	Dr. M. Nasir Uddin	Consultant, Seed	Ph.D		✓
5	Dr. Tariful Islam	Consultant, Environment	Ph.D		✓
6	Dr. Humayun Kabir	Advisor, Climate Change	Ph.D		✓
7	Dr. Jalal Uddin Iqbal	Advisor-Health	MBBS		✓
8	Dr. Polash Kumar Biswas	Advisor-Health	MBBS		✓
9	Kbd. Rakibul Islam	Zonal Coordinator	B.Sc. Ag (Hons)	✓	
10	S.M. Mobarok Hossain	Irrigation Engineer	B.Sc Ag Eng		✓
11	Ratan Kumar Bhowmik	Agronomist	M.Sc.Ag (Marketing)		✓
12	K.M. Alauddin	Zonal Coordinator & Fishery Specialist	M.Sc (Fishery)	✓	
13	Deb Kumar Nath	Irrigation Specialist	MS (Agri. Engineer)		✓
14	Md. Mohafez Ali	Director (Admin) & Food Security Specialist	M.Sc.Ag		✓
15	Khandaker Aminul Kabir	Zonal Coordinator & Nutrition Specialist	M.Sc (Chemistry)	✓	
16	Sayema Sabina	Computer Engineer	Dipoloma in Electronic Eng.		✓
17	Alok Kumar Biswas	Entomologist	MS (Entomologist)		✓
18	Shahedur Rahman Syem	Horticulturist (Nursery)	MS (Ag)		✓
19	Dr. AHM Asadur Rahman	Plant Pathologist	Ph.D		✓
20	Mostafa Kamal	Field Officer (Seed)	Diploma (Ag)		✓
21	Muhammad Ullah Khan	GIS Specialist	M.Sc		✓
22	Nurun Nabi	Area Coordinator	BS	✓	
23	Dr. Rathi Mahamud Morshed	Agronomist	Ph.D	✓	
24	Aminul Islam	Horticulturist	MS (Ag)		✓
25	Md. Ashraful Alam	Finance Officer	MBA		✓
26	Md. Rezaul Islam	Field Coordinator	BS	✓	
27	Md. Sajidul Islam	Area Coordinator	MSS (Sociology)		✓
28	Md. Sohagh Parvez	Area Coordinator	MSS		✓
29	Md. Nazrul Islam	Area Coordinator	Diploma in		✓

Sl. No.	Name	Designation	Qualification	Full Time	Part Time
			Agricultural		
30	Md. Moinuddin Ahamed	Area Coordinator	H.S.C	✓	
31	Subrota Kumar Ghosh	Field Coordinator	H.S.C	✓	
32	Md. Anowar Hossain	Field Coordinator	H.S.C	✓	
33	Md. Abdus Salam Monju	Field Coordinator	H.S.C	✓	
34	Md. Aqeeb Imtaz Harun	Computer Engineer	Computer Science		✓
35	Md. Ibrahim Hossain	Computer Operator	H.S.C	✓	
36	Md. Mosharaf Hossain	Field Coordinator	S.S.C	✓	
37	Md. Elias Hossain	Field Coordinator	S.S.C	✓	
38	Shaiful Islam (1)	Area Coordinator	S.S.C	✓	
39	Shaiful Islam (2)	Legal Officer	MA		✓
40	Md. Azizur Rahman	Legal Officer	MA		✓
41	Mr. Zahid Iqbal	Zonal Coordinator	MA	✓	
42	Md. Imamul Hossain	Area Coordinator	BBA	✓	
43	Bakker Hossain	Field Coordinator	S.S.C		✓
44	Md. Rafiqul Islam	Field Coordinator	S.S.C	✓	
45	Md. Bayzed Islam	Account Assistant	Bcom	✓	
46	Md. Showqut Ali	Area Coordinator	MS		✓
47	Md. Monirul Islam	Supervisor	M.S.S in Social Work		✓
48	Md. Nazrul Islam	Enumerator	Diploma (Ag)		✓
49	Md. Raju Ahmed	Enumerator	BA		✓
50	Manik Molla	Enumerator	BA		✓
51	Syed Zafor Sadak	Enumerator	MSS		✓
52	Md. Kamrujjaman Sheik	Supervisor	M.Sc.		✓
53	Md. Arshadul Haque	Enumerator	BA		✓
54	Md. Shoriful Islam	Enumerator	BA		✓
55	Md. Anowarul Islam Jahir	Enumerator	MA		✓
56	Md. Waheduzzaman	Enumerator	MA		✓
57	Jalal Uddin Ali Ahamed	Enumerator	MA		✓
58	Md. Thorikul Islam	Enumerator	BSC		✓
59	Md. Rofiqul Islam	Enumerator	BSS		✓
60	Md. Shahidul Islam	Enumerator	MSS		✓
61	Md. Jashim Uddin	Field Coordinator	BBA		✓
62	Md. Nayan Ali	IT Operator	Diploma Computer		✓
63	Md. Shahinur Islam	Field Coordinator	H.S.C		✓
64	Md. Moynuddin	Legal Officer	LLB		✓
65	Md. Rasel Ahamed	Business Officer	BBA		✓

Financial status, experience and management

The financial transactions are maintained following the international accounting standards and rules of the government of Bangladesh. An annual audit is conducted at the close of every calendar year by the reputed audit firm as per approval from general committee.

The internal audit team periodically checks the financial transactions and justifies the utilization of fund and report to the Executive Director. The accounts and finance personnel control the fund utilization according to the budget and physical output. The external audit team of registered audit firm usually checks the books of accounts and records and report to the CEO. The Executive Committee, the Advisory Board and the General Committee of AAS approve the financial Audit report.

Management of AAS

The Executive Committee headed by the president of the society does the project Activities of AAS and policy planning. The Executive Committee is elected/approved by the General Committee. The Executive Director of AAS implements the projects and programs through AAS staff and its partner organizations in the working areas. The Executive Director carries out the activities of AAS with the assistance of a group of professionals appointed by him and approved by the Executive Committee. The Executive Director is accountable to the Executive Committee, General Committee and Advisory board of the AAS. The hierarchy is strictly maintained according to the organogram of the organization. The plan of activities is implemented according to the guideline of the organization through the field personnel and assures the best quality of outputs.

VII. AAS Publications

AAS has published its various document in several forms during the period of this Annual report, the major publications are enlisted below:

1. Final Technical Report: Scaling up the video Save more, Grow More, Earn More and Selected videos under CSISA-MI project, March 2014
2. The story of a video on Mechanical Seeders in Bangladesh, “If we convinced, we will buy it”: MEAS Case Study # 6, November 2013
3. A Special Study: Performance and potential of BRRI dhan62 during 2013-14 Boro season, 10 September 2014
4. Final Technical Report: Delivery of High Zinc Rice in Bangladesh, 15 June 2014
5. Mid Term Technical Report: Delivery of High Zinc Rice in Bangladesh, 31 August 2014
6. Final Report: Household Survey on Rice Production during 2014 T.Aman season, 31 March 2015
7. Annual Progress Report: Delivery of High Zinc Rice in Bangladesh on BRRI dhan62 during 2014 T.Aman season (15 May-31 December 2014), February 2015
8. Distributing and Showing Farmer Learning Videos in Bangladesh, The Journal of Agricultural Education and Extension

   (http://www.tandfonline.com/loi/raee20)

   To link to this article: http://dx.doi.org/10.1080/1389224X.2015.1026365

VIII. AAS's Resources

SL #	Item	No
1	Head Office (Rented)	1
2	Zonal Office (Rented & collaborative with PNGOs)	3
3	Area Office (Rented & collaborative with PNGOs)	11
4	Training Center (Rented)	2
5	Fish Hatchery	1
6	Computers (Sets)	4
7	Laptop	2
8	Multimedia	1
9	AC	2
10	IPS	3
11	Vehicles (Members-EC/Board)	1
12	Motor Cycles	3
13	By Cycles	5
14	Tables (All)	15
15	Chairs (All)	40
16	Moisture Meter (All)	2
17	Digital Camera	3
18	Generator	1
19	Fans (All)	10
20	GPS Machine	2
21	Telephone	3
22	Steel Almirah etc	10
23	Balance Normal	4
24	Electronic Scale	1
25	Sealing Machine	3

ORGANOGRAM OF AAS