

Conservation Agriculture Project

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Overview:



Conservation Agriculture (CA) - based on no or minimum mechanical soil disturbance (no-till seeding and weeding), maintenance of soil mulch cover with crop residue, and diversified cropping system through crop rotations and associations, is practiced on over 157 million hectares world-wide, covering more than one tenth of the global annual cropland surface. The largest expansion has been mostly in USA, Canada, Australia, Brazil, Argentina, Paraguay, Uruguay, Russia, Kazakhstan, India and China. In large-scale and small-scale commercial agriculture, declining soil quality has been effectively addressed in many parts of the world by the adoption of CA.



The CA project in Bangladesh has been active since 1st April, 2012 in Rajshahi, Rajbari, Thakurgaon, and Mymensingh with the funding support of the Australian Centre for International Agricultural Research (ACIAR). The project is a collaboration among the Bangladesh Agricultural University (BAU), Bangladesh Agricultural Research Institute (BARI), Bangladesh Rice Research Institute (BRRI), Bangladesh Agriculture Research Council (BARC), Department of Agriculture and Food of Western Australia (DAFWA), Peoples Resources Oriented Voluntary Association (PROVA), Food and Agriculture Organization of UN (FAO), and Murdoch University (MU) in Australia.

The aim of the project is to develop and accelerate the adoption and spread of CA for selected soils, crops and cropping systems in Bangladesh, especially in rainfed areas and those with supplementary irrigation, so that farmers and households can benefit from cost-saving and productive crop production technologies and sustainable resource management. The objectives are to: (i) Increase adoption of CA led by a service provider network; (ii) Design minimum soil disturbance planters for improved operation and effectiveness; (iii) Redesign best-practice crop agronomy to optimize it for different types of minimum soil disturbance operations, targeted crop rotations and key soils; (iv) Quantify the benefits of CA for soil health and fertility; (v) Develop capacity for on-going research and development of CA in Bangladesh. We have decided to publish regular newsletters. In Vol. 4 we report major achievements of 2nd quarter of 2016 (July to September).

Key Highlights:

- 207 farmers (total 41.3 ha) adopted unpuddled transplanting of rice minimum soil disturbance by after strip tillage in Rajshahi and Thakurgaon districts during Aman season of 2016.
- The 2nd meeting of Bangladesh Conservation Agriculture Service Providers' Association (BCASPA) was held in Rajshahi on 19 July 2016. The BCASPA is formed with the aim to popularize and disseminate the conservation agriculture. The BCASPA comprises 138 farmers' groups from nine districts involving 7,801 farm families. All Executive Committee Members (total 38) of BCASPA attended the meeting. The constitution of BCASPA has been finalized and approved in the meeting. BCASPA has started to generate their own funding with a contribution of Tk. 100 per farm family per month. The raised fund will be used as a revolving loan among the group members to buy CA related implements.
- BCASPA and CA Project has jointly organized 113 awareness-raising training events (covering 2,491 farm families) on Conservation Agriculture, farm mechanization (especially using Versatile Multi-crop Planter [VMP]), safe use of herbicide, unpuddled rice transplanting, etc. The immediate outcomes of the training were to identify 14 new Local Service Providers to buy VMP and operate strip planting business.
- A total of 6 Local Service Providers (LSP) purchased VMPs in Sonatola upazila, Bogra during August 2016. On 21 August, 2016 the Additional Director of Department of Agricultural Extension, Bogra was present as Chief Guest and handed over the VMPs to

LSPs. We also organized two-day training events in Sonatola upazila covering VMP operation, repair and maintenance. A total of 29 persons attend this training program (including Sub-Assistant Agriculture Officer (SAAO) of DAE, repairing workshops, LSPs, manufacturer and marketing company of VMP)

- Professor Richard W. Bell gave a seminar on "Conservation Agriculture and Mechanization for Smallholder Agriculture:

A Win-Win for Agriculture and the Environment" at Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur, Bangladesh on 24 August 2016. A total of 49 participants attended the seminar including the Vice Chancellor, Deans, Departmental Heads, Professors, PhD and MS students, etc.



- The CA Project Review and Planning Meeting was held at the Bangladesh Agricultural University on 25 August 2016. A total of 34 participants



attended the meeting including professors and scientists from Bangladesh Agricultural University (BAU), Bangladesh Agricultural Research Institute (BARI), Bangladesh Rice Research Institute (BRRI), PROVA, Hoque Corporation (HC), Murdoch

University (MU), etc. The meeting discussed the progress made by the project and the work plan for the next year. The latest version of VMP (manufactured by Hoque Corporation) was demonstrated to the participants. All participants commented that the latest version of VMP is much better quality, lighter weight and easy to operate (including seed calibration and seating arrangement for driver).

- During 30 September to 1 October, 2016, a two-day workshop was organized in Rajshahi with all stakeholders of the CA Project. A total of 79

participants attended the workshop (including new and old LSPs, VMP Manufacturer, DAE, BARI, BRRI, MU, HC, Hossain Enterprise, Barind Multipurpose Development Authority (BMDA), Bangladesh Conservation Agriculture Service Providers Association (BCASPA), etc.). During the workshop, topics covered were: i) Selection and registration of new LSP to buy VMP for 2016/17; ii) program finalization for on-farm experiments and farmers'-led demonstration of CA in 2016-17;



iii) payment/installment settlements with new LSP; iv) progress assessment of BCASPA; v) study (survey) on farmers' fertilizer-use practice in different CA project working areas; vi) establishing linkage between private entrepreneurs and dealers (VMP and herbicide) with LSPs to ensure the availability of essential inputs of CA at farm level; vii)



demonstration of the latest version of VMP. In the workshop 36 LSPs targeted to cover a total 1,535 ha of strip/no-till crops in the project working areas during the next year (184 ha unpuddled rice, 145 ha wheat, 163 ha maize, 222

ha lentil, 5 ha mungbean, 164 ha mustard, 6 ha chickpea, 137 ha jute, 249 ha of onion land preparation, 237 ha of potato land preparation, 22 ha of chili). Hossain Enterprise assured that they will make available Roundup for weed control, Asilar for insect, disease and rat control, and Provex for seed treatment at the retailer level in the project working areas. Hoque Corporation assured that production of VMP is going well and they will deliver the quality machine before the upcoming rabi season and make available the spare parts and repairing mechanics at the local level. Hoque

Corporation expressed satisfaction on the collection of installments for new LSPs who will buy VMPs. It was also agreed that the training of VMP operators, and of repair and maintenance personnel, will be organized during the last week of October to middle of November, 2016. The project will organize both group training at regional level and one-by-one (e.g., on the job training) training for new LSP by experienced LSP.

- In collaboration with BMDA, National Bank and Hoque Corporation, the CA Project organized two VMP Commercialization Meetings in two upazilas (Badalgacchi and Mohadebpur) of Naogaon district on 2-3 October 2016. A total of 200 owners of 2WT, farmers, and LSP attended the meetings and registered with @Tk. 10,000 each to buy 59 units of VMP. The project has setup a new model of VMP commercialization and



has been implementing a pilot project in both upazilas. In this model the mode of payment is that the registration money (@Tk. 10,000 each) will directly come to Hoque Corporation and the rest (Tk 50,000) will be provided by the National

Bank to Hoque Corporation upon delivery of the VMP to the LSP. Also, National Bank will provide loans for 2WT (if needed). The interest rate of this loan will be @ 10% per annum and payback period is 2 years, but if needed the period can be extended to 3 years. The CA Project has to coordinate, providing technical support including training, ensuring the quality, etc. The Chairman and other local level Officers of BMDA; Chief Scientific Officer and Head - Farm Machinery and Post-Harvest Technology Division of BRRRI; Principal Scientific Officer and Station In-charge of Regional Wheat Research Center, BARI, Rajshahi; the Upazila Nirbahi Officers and Upazila Agriculture Officers of DAE of the respective upazilas; Manager of National Bank Naogaon Branch; and Executive Director of Hoque Corporation have provided appreciable cooperation that made the program a success.

- The 1st Organizing Committee meeting of CASH-II (The 2nd Conference on Conservation Agriculture for Smallholders) Conference was held at PIO/Liaison Office of Murdoch University on 21 August 2016. Members of the Organizing Committee attended the meeting to review the progress of the CASH-II, discuss the logistics (including venue), funding situation, review of the web page (www.cash-ii.com), various committees, etc. Further the Chair (Prof. RW Bell) and Executive Secretary (Dr ME Haque) of CASH-II met with heads of the organizing institutes (BAU, BARC, BARI, BRRI, IRRI, CIMMYT, HC, BMDA) to discuss venue and required the facilities. Finally, the Bangladesh Agricultural University, Mymensingh was selected as the venue for the CASH-II event and the VC of BAU expressed his interest to host the CASH-II event at BAU, Mymensingh. ACIAR and FAO have approved A\$30,000 and US\$10,000, respectively to hold the CASH-II event.
- CASH-II Conference is planned to be held at Bangladesh Agricultural University, Mymensingh-2202, Bangladesh during 14-16 February, 2017. The Conference will cover the themes that are relevant to smallholders' Conservation Agriculture, namely: (i) Design and development of machinery, implements, and tools; (ii) Soils, water and weed management, and agronomy; (iii) Commercialization and adoption of CA based technologies and practices; and (iv) Policy and institutional framework. The deadline for abstract submission is extended up to 15 November, 2016. Regular updates and various announcements are available in the www.cash-ii.com. The Organizing Committee is inviting abstract submission. Please contact e.haque@murdoch.edu.au or r.bell@murdoch.edu.au for details.

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