



*The extension professionals need more practical, need-based training to address the emerging challenges faced by farmers. Partnership and collaborations with extension professionals in South Asian countries can help in this endeavor.*

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### **What are the major challenges in extension provision in Bangladesh?**

The majority of farmers in Bangladesh have very small farm holdings. About 38% of farm holdings are marginal (less than 0.49) and about 50% farm holdings are small (0.50 to 2.49 acres). These small, marginal and other resource-poor farmers must have adequate access to locally relevant information and advice so that they could take appropriate decisions considering all possible options. This type of support is quite often not available. Agricultural research very often ignores many limitations of the small, marginal and resource poor farmers, such as, unsuitable lands, limited access to quality inputs and credit). Further, farmers' are increasingly demanding

salt tolerant, flood and disease resistant crop varieties which are yet to be developed by the research institutes under the NARS (National Agricultural Research System).

The extension service providers (in the public and NGO sector) have not been able to satisfactory address the information and knowledge needs of the small and marginal farmers. In addition, farmers are often exploited by input dealers and manufacturers who sell spurious seeds and adulterated fertilizers and pesticides. Marketing of agricultural produce is a major issue in Bangladesh. In the case of horticultural produce such as mangoes, jackfruit and pineapple, the farmers are always uncertain on the price they may receive during the season. Farm mechanization, especially the use of two wheel tractors has increased satisfactorily during the last two decades. However this has also increased the need for capital, which the small farmers are finding difficult to mobilize.

### **Box 1. Bangladesh Agriculture**

Agriculture and the rural non-farm economy are the main sources of livelihood for rural communities in Bangladesh. Almost 48% of Bangladesh population is dependent on agriculture. About 10% of Bangladesh population is directly or indirectly depend on fisheries for their livelihood. Agriculture is characterized by small, rice dominated farms, which have greatly contributed to increasing food self-sufficiency over the last 30 years. However, this self sufficiency is continuously threatened by an increasing population and stagnating yields. About 89% of total farm-holdings are below 2.49 acres in size. The tiny, marginal and small holders rent in land under share cropping arrangement, who are called 'barga chashis' are common across the country. The net area available for cultivation is declining due to conversion of agricultural land to non agricultural uses for varied needs of the growing population.

Rice, wheat, maize, jute, sugarcane, vegetables and fruits are the major crops grown in Bangladesh.. *Aus, aman* and *boro* are the three distinct cropping seasons. Nearly 75% of arable land is dedicated to rice production and the intensity of cultivation is 182 percent meaning that almost all fields support two crops per year a rate that, given current agronomic management, degrades soils and depletes fertility. Climate change poses significant risks for Bangladesh. Between 20-30 percent of the country is normally flooded each year. Rising sea levels have increased soil salinity in coastal areas, making it less suitable for agriculture. Arable land loss and extreme weather patterns due in part to climate change compound the threats to food security in Bangladesh.



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**Area under wheat and maize is on an increase in Bangladesh currently. While wheat is replacing boro cultivation in North West Bangladesh, maize is emerging as an important crop in the South Western Regions.**

### **Who are the major extension providers in Bangladesh?**

The major extension providers in Bangladesh are as follows:

- Department of Agricultural Extension (DAE)
- Directorate of Livestock Services (DLS)
- Department of Fisheries (DoF)
- Bangladesh Rural Development Board (BRDB)
- Agriculture Information Service (AIS)
- Department of Agricultural Marketing (DAM)
- Water Development Board (WDB) (through extension wings in large barrage areas)
- NGOs (BRAC, PROSHIKA, TMSS, RDRS and many others)
- Bangladesh Agricultural Development Corporation (BADC)
- Barind Multipurpose Development Authority (BMDA)

In addition to the above government agencies and NGOs, Farmer Producer Organizations (FPOs) also play a vital role disseminating agricultural information to other fellow farmers. As of now (till 2014) a total 198,114 Farmers' Organizations (FOs) are working in Bangladesh. Of these FOs, 81% have been formed with support from government agencies.

Among the above extension service providers, DAE has the highest manpower and it has extensive network up to the union level (the lowest structural unit of the local government). Unfortunately, the DLS and DoF do not have extension staff down to the

union level. The AIS (Agricultural Information Service) is promoting use of ICTs in agriculture. It has already established two Farm Broadcasting Centres (one in the southern district and other in eastern district). Further, some private companies, such as D-Net and BIID are also working and helping farmers to use ICTs to access information on agriculture.

### **What different extension approaches are followed in Bangladesh currently?**

At present the extension activities of the DAE are mainly operated through CIGs (Common Interest Groups) under the project named NATP (National Agricultural Technology Project). The NATP activities are concentrated in selected districts and selected unions. By June 2014 a total of 13,450 CIGs have been formed, each CIG has 20 members (60% male farmers and 40% female farmers). Intensive training is provided to the CIG members based on their needs. Apart from this, there are other projects through which extension activities are being implemented. In some cases, NGO groups are used by the public extension service providers for transferring agricultural technologies to target group of framers. Many NGOs have established SHGs for micro credit and some of the NGOs are using Farmers' Field Schools (FFS) approach and established farmer groups for Integrated Crop Management (ICM). Many NGO groups are working satisfactorily, especially in areas such as women empowerment self-employment, and sustainable use of natural resources. AIS and some private agencies are actively engaged in disseminating



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**The Department of Agricultural Extension (DAE) within the Ministry of Agriculture is the biggest agency employing nearly 14,000 personnel who are providing extension service to rural areas across the country. Its staff also distributes inputs such as seeds and undertake visit to farmer's field to advise them on field problems.**

extension messages through effective use of ICTs. In order to expedite the extension activities, the Ministry Agriculture had formulated New Agricultural Extension Policy in 1996, which has been revised in 2012 in the name of "National Agricultural Extension Policy" (NAEP).

**What changes happened in extension teaching in Bangladesh (UG and PG) during the past three decades?**

Several changes happened in extension teaching in Bangladesh at the under-graduate and post-graduate levels. For instance, extension subject was taught only in two years, but now it is being taught in three years (in a 4 year degree programme).

The course curricula underwent revisions several times through discussion with various stakeholders, such as employers, alumni, students, teachers and others. The head of the department usually requests the class teachers to update the curricula and syllabi. The updated curricula and syllabi are then presented and discussed in the meeting of Board of Studies. The course curricula and syllabi are then forwarded to the Dean of the Faculty for approval in the meeting Faculty Committee (FC), where all the Professors and Associate Professors are the members.

**National Agricultural Extension Policy (2012)**

The NAEP has the following key components:

- (1) Coordinated and Integrated Umbrella for Extension
- (2) Inclusive Farmer Organizations at Village and Higher Levels
- (3) Strengthening the One Stop Service Centre (FIAC)
- (4) Fortifying Information with Supply Chain Development
- (5) Ensuring Food Safety
- (6) Innovative Improvements for e-agriculture
- (7) Demand Responsive Research-Extension-Farmer linkages
- (8) Newer Technology for Sharper Focus on Hot Spots
- (9) Strategic Communication & Policy Governance
- (10) Promoting Urban Agriculture
- (11) Mainstreaming Disaster Preparedness and Adaptation to Climate Change
- (12) Specialized Extension Services for Climatically Distressed Areas
- (13) Strengthening "Public-Private-Partnership (PPP)"

[http://www.dae.gov.bd/Dae\\_Policy/National%20Agricultural%20Extension%20Policy\\_\(NAEP\).pdf](http://www.dae.gov.bd/Dae_Policy/National%20Agricultural%20Extension%20Policy_(NAEP).pdf).



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**Since 1972, The Department of Agricultural Extension Education at the Bangladesh Agricultural University (BAU) offers Masters and PhD programmes in Agricultural Extension. It also offers Agricultural Extension Courses to all the six Faculties of BAU and organises onw week agricultural extension field visits for the students of all the faculties.**

### **Any new courses?**

Some new courses were added during the past three decades: These include:

- Disaster Management
- Gender and Development
- Market-led Extension
- Participatory Technology Development
- Orientations to Rural Development Programs and Approaches
- Agricultural Journalism
- Sustainable Agriculture and Rural Development
- Food Security and Poverty Alleviation
- Data Collection, Data Analysis and Report Writing
- Extension Organization and Management

### **Any change in teaching methodology?**

Traditionally chalk boards were used in the class room to teach students. Computers are extensively used in teaching extension courses currently. Most teachers depend on power point presentations for their lectures.

### **Are more colleges and universities offering agricultural extension courses?**

Until 2000, the UG & PG courses in agricultural extension were offered only from the Bangladesh Agricultural University (BAU). Currently the UG courses are offered from the following universities and colleges too.

- Bangladesh Agricultural University (BAU), Mymensingh
- Sher-e-Bangla Agricultural University (SbSAU), Sher-e-Banglanagar, Dhaka
- Bangabandhu Sheikh Mujibur Rahman Agricultural University (BSMARAU), Gazipur
- Sylhet Agricultural University (SAU), Sylhet
- Hajee Mohammad Danesh Science and Technology University (HSTU), Dinajpur
- Patuakhali Science and Technology University (PSTU), Patuakhali
- Khulna University (KU), Khulna
- Chittagong Veterinary and Animal Sciences University (CVASU), Chittagong
- Rajshahi University (RU), Rajshahi
- Fazilatun Nessa Sheikh Mujib Fisheries College, Nandina, Jamalpur.

The post-graduate programme in agricultural extension are offered from 5 Universities, namely BAU, SbSAU, BSMRAU, HSTU and RU.



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Nearly 80 percent of farmers use two wheel tractors, because they are versatile and can be fitted to a variety of innovative auxiliary equipment for planting, threshing and irrigation

**Where do the students, especially those specialized in extension find their employment?**

In Bangladesh, agricultural graduates are employed in government extension organizations (DAE, DLS, DoF), Research organizations, Bangladesh Agricultural Development Corporation, Water Development Board, Commercial Banks and NGOs. The employment prospects for extension students in Bangladesh are great. The extension students are usually smarter than other students. They have to work with farmers and often stay with the farmers while they collect data for Masters and PhD studies. They have to analyze data, prepare reports and present the findings in seminars and workshops. Apart from this, they do undertake a course on seminar, symposium, conference and workshops. Due to these, their presentation skills are far better than other students and consequently their work performance is often found to be better. However students also face difficulties in meeting the wide expectations of different types of employers as they are not particularly trained to meet the needs of each employer.

**What is the current status of extension research? How are the findings of extension research used?**

Extension research is usually conducted by the Masters and Ph.D. students under the supervision of a faculty member. Apart from this, the teachers at the Department of Agricultural Extension conduct independent research studies funded by the

different national agencies such as BARC (Bangladesh Agricultural Research Council), KGF (*Krishi Gobeshona Foundation*), Ministry of Science and Technology, PKSF (*Palli Karma Shahayak Foundation*) etc. and international agencies such as FAO, World Bank, USAID, UKAID and CGIAR centres such as World Fish Centre.

**Is the extension faculty involved in enhancing capacities of field level extension staff? If so how?**

Yes, extension faculty in the Universities is often involved in enhancing capacities of field level extension staff. There is a Graduate Training Institute (GTI) at the premise of the Bangladesh Agricultural University (BAU). It was established in 1976 and has a good reputation. It received “President’s Gold Medal” in 1984. The government field extension staff very often comes to the GTI for training, where the extension faculty takes classes.

**What is the role of the Bangladesh Agricultural Extension Society? What are its functions?**

Bangladesh Agricultural Extension Society (BAES) usually organizes seminars, symposia, conferences and workshop bi-annually. In addition, lectures by learned extension professionals, from home and abroad are also organised. All these lectures are published and distributed among the life members of the BAES. Further, the BAES publishes a half-yearly journal called “Bangladesh Journal of Extension Education”. Articles from extension

professionals from home and abroad are encouraged. Other professionals too can contribute articles related to extension and rural development.

**What should be done to improve the quality of extension delivery in Bangladesh?**

In order to improve the quality of extension delivery in Bangladesh, the extension professionals' attitude has to change. As farmers have lot of innovative ideas, extension staff should consider farmers as their professional colleagues. Global warming and climate change have added new challenges to

agriculture and extension professionals have to support farmers in adapting to these changes. The extension professionals need more and more practical, need-based training to address the emerging challenges faced by farmers. This would definitely require more funds and competent manpower. It is obvious that the competent manpower to address the changed situation may not be always available in Bangladesh; in that case we have to search for partnership and collaborations with the extension professionals in other South Asian countries. Perhaps, this is something which AESA should start thinking about.

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