

ADAPTIVE RESEARCH AND EXTENSION DIVISION (ARED)

The former name of Adaptive Research and Extension Division (ARED) is Training, Communication and Publication (TCP) Division having the mandate of Technology Transfer and Impact Assessment. It is essential that BINA's technologies make significant impacts on agricultural production and rural welfare. To this effect, ARED has adopted two strategies to ensure transfers of technologies to farmers as well as feedback from them to research programs. In the first strategy, ARED scientists participate in a large number of adaptation trials in collaboration with GO and NGO extension units. These trials serve as a research function (evaluation of the agronomic performance of technologies in diverse agro-ecologies) and an extension function (creating an awareness of the technology among many farming communities and adoption by the farmers). The trials also bring scientists into contact with farmers that help identification of location specific problem. Useful lessons are also obtained from the "Lab to Land" program implemented under the New Agricultural Extension Policy (NAEP).

In the second strategy, impact information is disseminated to extension officers and farmers in the form of pamphlets, guidebooks and other materials and through training course offered by BINA or other organizations with BINA scientists as resource persons. BINA has released 82 mutant varieties and eight biofertilizers for legumes so far. It actively monitors the extent of adoption of these technologies as well as the yield and profit.

Achievements:

A total of 3850 experimental/block demonstrations were implemented for the extension of high yielding crop varieties developed by BINA. A total of 195 field days were organized for motivation of farmers and on-the-spot exposure of mass media personnel on cultivation of various high yielding BINA crop varieties. ARED organized 196 Farmers' Training Courses on high yielding BINA crop varieties and modern technologies participated by 5185 male and female farmers and 976 Sub Assistant Agriculture Officers (SAAOs). A total of 5 of training programs on BINA crop varieties and modern technologies participated by 330 mass media workers. This division organized 44 Workshop/Training-Workshop on high yielding BINA crop varieties and modern technologies participated by 1397 DAE, BADC and NGO personnel. In order to boost agricultural production and dissemination of BINA developed promising varieties, 135 tons of rice, 20 tons of oil seeds and 25 tons of pulse seeds had been produced and distributed among DAE, BADC, NGOs and farmers free of cost. In various TV channels a total of 65 programs on different BINA technologies were telecast, 23 radio talks on BINA technologies had been broadcast and more than 30 reports had been published in various national Dailies. Twenty eight (28) leaflets on rice, mustard, groundnut, sesame, lentil, mungbean etc. each 5000 copies totaling 140,000 copies, 15 annual report, 6 issues of journal, Unnoto Krishi Projukti Porichiti 40,000 copies and BINA A Profile 15000 copies have been published. Twenty one (21) BINA Tech-villages have been developed in the adjacent areas of BINA headquarters and various sub-stations for extension of BINA technologies. Moreover, research activities of MS and Ph D students of Department of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh are being supervised by the divisional scientists.

Technology Development:

1. Farmers' Reasons for cultivating local varieties of T. aman Rice

Farmers' reasons for cultivating local varieties of T. aman rice at Guripur upazila of Mymensingh district were identified. They include: (1) high level of stagnant water due to moderately low land and poor drainage facilities in certain areas of the locality (15.69% area), (2) lack of adequate water due to high land in some other areas (9.17% area), (3) late transplanting due to occurrence of flood (8.76% area), (4) less water holding capacity due to sandy soil (8.58% area), (5) low cost of cultivation (3.91% area), (6) good taste (3.35% area), (7) deep water (3.30% area), high straw production (0.63% area), early maturity (0.59% area), observation for adoption (0.48% area), and lack of seedlings of MV (0.11%). Based on the above information farmers' need based extension program have been undertaken.

2. Factors contributing to communication effectiveness

Some of the factors played a very significant role in contributing to communication effectiveness. These factors include: (1) suitability of messages, (2) profitability of messages, (3) receivers' credit received, (4) print media use, (5) communicators' credibility, (6) electronic media use and (7) receivers' family size. All of these above factors except receivers' family size contributed positively and significantly to the communication effectiveness. Receivers' family size contributed negatively to the communication effectiveness. Hence, it is inferred that the communication effectiveness in relation MV of T. aman rice production program in the Gouripur upazila of Mymensingh district and for similar other areas is the function of independent factors captioned above. These factors are the keys to the success of any communication/ extension effort.

3. Profitability of Binasil cultivation

Comparative economic study on Binasil, Pajam and Nizersail cultivation reveals that profitability of Binasil is closer to Pajam and 1.76 times higher than that of Nizersail. Pajam is not suitable for late transplanting whereas Binasil and Nizersail are suitable for late transplanting. Due to some unavoidable constraints farmers have to cultivate local T. aman varieties. In that case cultivation of Binasil replacing other local varieties may give 1.76 times higher economic return to the farmers.

4. Three profitable cropping patters

ARED has developed three profitable cropping patterns through introducing BINA released improved mustard and sesame varieties, improved package of production and management practices are as follows:

Sl No.	Name of Technology/ Profitable Cropping Pattern along with improved cultivation practices	Developed technology for the locations of	% Increased income over the frmers' practice
1	T Aman (Binadhan-7)-Mustard (Binasarisha-4) -Boro(BRRI dhan28)	Baghar para, Jessore; Alamdanga, Chuadanga; Kotchandpur, Jhenaidah and Sadar Kushtia	58.23%
2	T Aman (Binadhan-7)-Mustard (Binasarisha-4/ BARI Sarisha-14)- Jute	Lohagora, Narail; Madhukhali, Faridpur	30.41%
3	T Aman (Binadhan-7)- Lentil(Binamasur-5/ Binamasur-6)- Sesame(Binatil-1/Binatil-2)	Baghar para, Jessore; Lohagora, Narail; Madhukhali, Faridpur; Alamdanga, Chuadanga; Kotchandpur, Jhenaidah and Sadar Kushtia	45.13 %

Future plan:

1. Conduct Adaptation Trials with newly released rice, oilseeds, pulse and other varieties to identify suitable areas
2. Conduct Block Farming with selected rice, oilseeds, pulse and other BINA varieties in selected suitable areas for the dissemination of larger areas of the country
3. Impact assessment of BINA developed some popular varieties/technologies to know the performances of the varieties/technologies
4. Establishment of more BINA-technology Villages in surrounding areas of BINA HQ and its sub-stations for the dissemination of larger areas
5. Publications, photography, multi-media and laboratory enrichment to popularizes the BINA developed varieties/ technologies