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Research Extension Linkage and Its Importance

People working in the agricultural sector often get a complaint that though agricultural research institutions are inventing so many varieties and technologies every year, the expansion of those improved varieties or technologies in the field are not up to the mark. Therefore, in any meeting, seminar, and workshop on agriculture, emphasis is given on technology dissemination and strengthening research-extension linkages.

Recently, I have participated in about ten regional workshops organised by the Bangladesh Rice Research Institute (BRRI) in different parts of the country. Almost every place, the most common complaint was the poor dissemination of new crop varieties and technologies, which is the result of weak linkage of research and extension. Before discussing this issue in detail, I would like to discuss what research-extension linkage is.

The mandate of various research institutions of the National Agricultural Research System (NARS) under the Ministry of Agriculture is to develop new varieties and production technologies of different crops. The varieties and technologies that the scientists have developed are disseminated to the farmers and end-users by the Department of Agricultural Extension or its officials working at the field level. That's why, the interrelationship between the research institutions, DAE and the farmer is so important, which is known as research-extension-farmer linkage. The administrative aspects of this work are overseen by the Ministry of Agriculture itself and coordinated by the Bangladesh Agricultural Research Council (BARC).

Now, let me highlights why the research-extension-farmer linkage is important? I have already said that the mandate of research institutions and their scientists are to innovate or develop new varieties of crops and production technologies. But it is the responsibility of the extension agents to extend them at the field level. The Bangladesh Agriculture Development Corporation (BADC) provides necessary inputs support like seed, fertilizer, irrigation support, and various production materials. Roughly, this is a brief idea of how major government agricultural government agencies work. Apart from this, various local and international non-governmental organisations play a valuable role in this regard.

Technology development and dissemination is a two way process. Scientists should rigorously study the needs and expectations of the farmers before initiating any research. Similarly, the problems or difficulties faced by the farmers at the field level in the use of technology are communicated to the research institutes by extension workers so that the scientists can find acceptable and affordable solutions through research for them. If this process works smoothly and efficiently, it positively impacts the expansion of technology and increases country's productivity. But the whole process is hampered by the weak relationship.

As an organisation, the Department of Agricultural Extension (DAE) has a vast reach, and its scope of work is extensive at the same time. Increasing production and productivity in agriculture, creating Agril-market linkage, popularising commercial agriculture, creating awareness about environmental protection, ensuring participation of women in agriculture, creating value and supply chain, etc., are among the major activities of DAE in recent times. The Department of Agricultural Extension is conducting extensive activities in these areas through the active participation and partnership of various government, private, autonomous, and privately-owned organisations. The central point of this overall activity is the farmers, and the goal is agriculture and farmer development. And that will only be ensured when the research-extension-farmer linkage is strengthened.

Apart from the Department of Agricultural Extension, Bangladesh Agriculture Development Corporation (BADC) is one of the institutions playing a significant role in developing agriculture in Bangladesh. As an autonomous body under the Ministry of Agriculture, BADC's services extend throughout Bangladesh. It has field offices at the Upazila level, and in some cases, even in more remote areas. Thus they have an extensive network. The essential functions of BADC are to sustain the management of production, procurement, transportation, storage, and distribution of agricultural inputs and equipment's throughout the year. But the limitation of the institute is that they are not keen on producing seeds of any new variety or do not want to take risks unless demand creates at the field level. There is a gap between the Department of Agricultural Extension and BADC in this demand generation, which needs to be addressed.

One thing is clear from the above discussion that both research and development of technology and their expansion and distribution systems are mutually interdependent. One cannot perform its responsibilities without the other. Thus good communication, intensive interaction, and effective collaboration of these organisations are essential. Between researchers and extension workers in Bangladesh, there have some weaknesses in communication and understanding that hinder collaboration and linkages between research and extension. If we can overcome this, the rest of the problems will be solved automatically.

Let me share my recent experience. I went to Rajshahi last year as an instructor in a training programme of journalists organised by Farming Future Bangladesh. I had a presentation on the necessity of new technology. At the end of the presentation, a local journalist asked me, "As an officer of BRRI, why do you think so much improved technology is needed for the farmer?" For example, he said, Bangladesh Rice Research Institute has developed about 106 high-yielding varieties in the last five decades. Now they are developing and releasing on an average 4-5 varieties every year, but in the field, a few old varieties are still in vogue. Then what is the necessity for so many new varieties?

I replied, is the geography and environment of all regions of the country the same? Moreover, are everyone's tastes and preferences similar? Or do you still use the basic mobile phone that you used to use before? He said no. I also told him you never used a face mask before, and now you are using it regularly! Can you tell me, why? He said it was because of my safety and most importantly it is also the demand of time and circumstances. I said you are right! Due to environmental reasons, the demand of farmers and consumers for new variety varies from place to place.

Moreover, earlier the population was small; the demand for food was limited. Now both the population and the demand have increased, so the need for high-yielding varieties is increasing day by day. And people's tastes and preferences also changed with time, so new varieties have to be developed and released considering various aspects. Scientists are making options. It is up to farmers whether to use those. He agreed with my answer, saying he did not think it this way.

Therefore, scientists are finding out better options one after another considering the environment, time, taste, and needs. Not necessarily it has to be used right now. However, the development of technology is a continuous process and it should go on and on keeping in view of the problems or challenges that will arise in the near future. Besides, the abilities and skills of farmers to use new varieties and technologies should be enhanced by increasing the cooperation and partnership of the concerned institutions. Only then the continuity of the current achievements in the agriculture sector can be maintained or sustained, and a new dimension will be added to the overall productivity of the country's agriculture sector.

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