

Quality of agricultural education: Can we opt for a new system?—I

Dr. Md. Mahfuzul Huque

THE importance of agricultural education can hardly be overemphasized in our country. Suffice it to say that we should, for many reasons, help build a productive agriculture sector by producing knowledgeable teachers, skilled researchers, credible extension specialists and workers in our educational institutes and the lone university the Bangladesh Agricultural University (BAU). I understand that a viable agriculture system can guarantee our life, nurture our tradition and culture, make meaningful politics, and sustain our economy. Based on many years of past experience agriculture education must be an integral part of our development plan. For, various forms of agricultural education, ranging from a farmers training to a sophisticated Ph.D. work if linked with that plan, can significantly vitalize the economy.

OBJECTIVE OF AGRICULTURAL EDUCATION

The primary objective of an agricultural institution is to train manpower for teaching, research, extension and related works to build a strong agriculture system. Depending on the level of education given and to the kind of job employed, a graduate (diploma to doctoral level) will be able to—(a) teach pupils effectively in his field of specialization in the formal education system.

(b) Identify significant issue of soils crops, animals and fishes, for example, develop researchable problems, follow sophisticated research methods and

techniques and finally come up with appropriate solutions. (c) Plan, organize, implement and evaluate teaching programmes for the rural poor through non-formal educational approach which we call extension. (d) provide needed supplies and services through efficient delivery and management system. (e) and, finally, at the highest level (national international), demonstrate well the roles of planners, administrators and consultants in various aspects of agricultural development.

GRADUAL GROWTH OF AGRICULTURAL EDUCATION

About half a century ago agriculture as a distinct field of the academic pursuits was not so recognised in many developing countries. In the fifties the African continent, for example, had few institutions that offered undergraduate programmes. However there exist now about 150 colleges universities, 75 of these offer postgraduate studies. Similar development took place in Asian countries. The Philippines, for example, established 271 institutes by 1984 that offer degree programmes in agriculture.

In Bangladesh, agricultural institutes also increased overtime more especially after the departure of the British. The Bangladesh Agricultural University, the biggest seat of agricultural education, was established in 1961. It has six faculties, each offering a bachelor programme in its specific field. Also masteral degrees are generally offered, but doc-

toral programmes are offered only in those subjects where opportunity exists. Besides 13 Agril. Training Institutes (ATIs) that offer diploma course in agriculture, there are Bangladesh Agricultural Institute at Tejgaon and Patuakhali Krishi College at Dumki. One more college, Hajee Dunesh Krishi College at Dinajpur, started functioning very recently. These three offer bachelors programme in agriculture as affiliated institutes of BAU. Further, the Institute of Post Graduate Studies in Agriculture (IPSA, established in 1984) has been offering post-graduate studies in agriculture also as an affiliated institute of BAU. The number of agricultural graduates has thus been increasing day by day although only about 10% of the applicants are being admitted as new students in bachelors degree programmes.

THE PROBLEMS AND CHALLENGES OF AGRICULTURAL EDUCATION

In the decade of 1950-60, much of our optimism stemmed from the "Green Revolution" to feed the hungry mouths of the developing nations. The

new varieties of rice and wheat demonstrated the cutting edge of applied science which Dr. Robert Chandler (first Director General of IRR) depicted in his book, 'An Adventure in Applied Science—A History of IRR'.

The evaluation of Green Revolution is rather mixed. But the fact is true that it could not feed the hungry stomachs of many as expected. We need urgently a second Green Revolution of different type and this time for the small farmers. It seeks new breeds of biologically more efficient plants that could grow on poor soil, in favourable climate in serious flood the kind we just experienced; that need less fertilizers and insecticides because the small farmers can't afford much of these.

To help translate these issues into action plans, the basic question is what kind of graduates can assume the responsibility of this challenging task? The point is relevant because an inefficient agriculture sector in most developing countries rests not only on limited physical endowment and budgetary allocation, but also more on the inability to develop and manage effec-

ntly the human resources—the teachers, scientists and extension experts. This is a big challenge we are confronted with.

The problems of agricultural education however are many—Some are institutional, others are planning and administering the course curricula, while some others are related to resource constraints, and finally there are some that are environmental in the socio-political context in which formal education takes place. The quality of agricultural education largely depends on the extent to which these problems can be solved. The quality issue calls our attention because multiplying the number of ill trained graduates, who already started facing unemployment problem, would really be a liability than an asset to the society.

It should be noted that the quality of agricultural graduate is a concern of most developing countries. Also the same problem (of quality) can be observed in other fields of education—general e.g., graduates of art, science and commerce; and technical e.g., graduates of medicines, architecture and engineering.

Producing quality graduates in any field is a complex process operating in different levels over time. Quality is a function of several components—each affects the other as can be analysed in systems approach. Some quality components, however, are (a) Adequacy of the course contents (b) Relevancy of the course contents (c) Accessibility to resources (d) Economic investment (e) Timeliness of the academic session and (f) Academic environment.

Adequacy means that the course contents of a particular study programme should be so organized that the graduates can prepare themselves in the schools so that they, can, on employment, perform their duties at a given level efficiency. The major employment avenues are (a) teaching and advisory jobs, (b) agricultural research (c) agricultural extension, and (d) occupation in agricultural business, industry and services.

By relevancy in meant that the course curricula in a particular study programme are so reflected that the graduates, on employment, can relate their day-to-day professional problems to what they once learned in the schools.

Thus, to be effective, adequate course contents based on field problems must be reflected in any programme of study. The most searing criticism of our schools is that they are locked into sterile academic exercise.

Accessibility to resources refer to availability of teachers, class rooms, laboratories, farms, green houses, equipment, teaching tools, library services and social laboratory support. Specifically to human resources (teachers, research supervisors, etc), the following issues should be addressed:

(i) Are they of high academic and research quality? Do they possess good teaching skills? Do they also have such personality traits that are conducive to building ideal teacher-student relationship?

(ii) Are there enough teachers employed in each institutions? Is there a clear recruitment policy for such recruitment?

(iii) Does the institute provide motivation to them for the work they do? Such motivational factors many include a clear compensation plan, provision for elevation of position, and professional development through training programmes, seminars, conferences, etc.

At the BAU the above conditions are being maintained in some way or the other. But generally the affiliated institutes have been seriously suffering from inadequate number

of faculty members. This applies more to Patuakhali Krishi College and IPSA, although there is a clear recruitment policy in those institutions.

Another important point is that during elevation of positions of the teachers (even at BAU) the missing link is the lack of evaluation on the job per se. In many countries, evaluation on the teachers' job is an important criterion for promotion, besides length of teaching and number of publications. The top administration could give a thought on this point. Surely, the teaching skill and job performances of all teachers are not the same.

For quality education, economic aspects of conducting educational programmes are a matter of great concern. None of the six universities get the needed funds so far. The allocation for the education sector is only 6.19% of the national budget during the Second Five Year Plan. In India, however, it is 19.24%. The investment in agricultural research in Bangladesh is also insignificant. The per capita expenditure in such research (in US dollars) in selected countries are as follows: Bangladesh—0.03, India—0.05 U. K.—1.16, Japan—2.66 and USA—3.00. It is clear that with such minimum investment in education and research, we can't expect quality education and research in agriculture.