

COMPILATION OF SELECTED PAPERS

PRESENTED AT THE INTERNATIONAL WORKSHOP

**“EXPLORING DESIRABLE PATHS
OF AGRICULTURE AND RURAL
DEVELOPMENT IN ASIA:
CHANGING LIVELIHOODS,
INTERNATIONAL
COLLABORATIONS
AND TRANS-DISCIPLINARY
CHALLENGES”**

Edited by Kobayashi Satoru

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Workshop Program

First day: 20 February 2018

No.	Times	Titles	Speakers	Facilitators
1	08:00-08:30	Registration and exchange name cards		Team
Opening Remarks				
2	08:30-08:45	Agricultural education of the Royal University of Agriculture	Prof. Ngo Bunthan	Dr. Kobayashi Satoru
3	08:45-09:00	Introduction of the workshop "Exploring desirable paths of agriculture and rural development in Asia"	Assoc. Prof. Kobayashi Satoru	Dr. Sanara Hor
Keynote speeches				
4	09:05-09:30	Sustainable Humansphere Studies in CSEAS, Kyoto University	Prof. Kono Yasuyuki	Dr. Borarin Buntong
5	09:30-09:55	Synergy Research and Education for Economic Development	Prof. Men Sarom	Dr. Kobayashi Satoru
	09:55-10:15	Group photo and Coffee break		

Session1: University's roles for contributing to society through agricultural science and rural development

6	10:15-12:00	Extension Approach of Bangladesh Agricultural University: history and current practice	Prof. Muhammad Salim, Bangladesh Agricultural University	Chaired by Prof. Dr. Preap Visarto, Vice-Rector, Royal University of Agriculture
7		RUA's research and extension: the challenge	Dr. Buntong Borarin, RUA	
8		The history, necessity, potential and role of the community development centers of Universities in Myanmar	Dr. Nilar Aung, Yangon University	
9		Gross National Happiness Development Center and its program of the Sherubtse College, Bhutan.	Mr. Sonam Wangdi, Sherubtsue College	
		Discussion, Questions and Answers	Participants	
15	12:00-13:30	Lunch		

Session2: Creation/adaptation of agricultural technologies and management

10	13:30-14:50	Conservation agriculture for soil health improvement in Cambodia	Dr. Hok Lyda, RUA	Chaired by Dr. Nawata Eiji, Graduate School of Agriculture, Kyoto University
11		The Commercialization of Aromatic Rice in Cambodia: A Case Study of Boosting Food Production Project	Dr. Chan Phaloeun, General Directorate of Agriculture, MAFF	

12		Rice and black gram multiple cropping in Maubin, Ayeyarwady Delta	Dr. Ando Kazuo, Kyoto University	
		Discussion, Questions and Answers	Participants	
	14:50-15:10	Coffee break		
Session3: Livelihoods transformation in rural communities under globalization				
13	15:10-16:50	Rural urban migration and agriculture of Hinthada Township, Ayeyarwady Region	Dr. Myint Thida, Hinthada University	Chaired by Dr. Matsuda Masahiko, Ritsumeikan University
14		Migration of rural people from a village of Ayeyarwady Delta: a case study of livelihoods strategy	Mr. Okada Natsuki, Kyoto University	
15		Depopulation and abandoning of farm land in the villages of the east Bhutan	Mr. Rinchen Dorji, Sherubtse College	
16		Transboundary connectivity and Rural Development: A case study in Cambodia-Thai borderland	Dr. Kobayashi Satoru, Kyoto University	
		Discussion, Questions and Answers	Participants	
	16:50-17:30	Discussion, Questions and Answers for Session 1-3		

Second day: 21 February 2018

No.	Times	Titles	Speakers	Facilitators
Session4: Reexamining the reality of rural development and natural resource				
17	08:45-11:00	Cheroots in Myanmar: Rural Development behind the National Policy	Dr. Matsuda Masahiko	Chaired by Dr. Myint Thida, Hithada University
18		Land Resources Assessment for Agricultural Development in Cambodia	Dr. Seng Vang, CARDI	
19		Transformation of Cambodian agriculture: the role of financial institutions and land registration	Dr. Yagura Kenjiro, Hannan University	
20		Land resource management research in Ratanakiri province, Cambodia	Dr. Hor Sanara, RUA	
21		Reaffirming the necessity of an orthodox pathway based on ongoing multiple realities: A case study in a planned REDD+ pilot project area in central Cambodia	Dr. Kurashima Takayuki, Kyoto University	
		Discussion, Questions and Answers	Participants	
	11:00-13:30	Visit RUA research facility and Lunch		
Session5: Participatory approach of rural development				
22	13:30-15:10 15 minutes Presentation and	Practice in fields and services to rural areas by the students of faculty of regional collaboration, Kochi University.	Dr. Ichikawa Masahiro, Kochi University	Chaired by Dr. Kobayashi Satoru, Kyoto University

23	10 minutes Discussion for each	Participatory Learning and Action (PLA) by Students and Young Scholars of Bhutan in Japanese Depopulated Area: Its Implication for Challenging Global Issues.	Dr. Akamatsu Yoshio, Kyoto University	
24		Role of University in community development involvement: Revising Silk sector through provision of disease-free silkworm.	Mr. Dork Vuthy and Mr. Chap Nimol, Royap University of Phnom Penh	
25		An Observation of Rural Development in Trapeang Sankaer Fishing Community by the students of Royal University of Phnom Penh	Mr. Volin and Ms. Sothea, Royal University of Phnom Penh	
Session6: Institutional improvement of research and education in agricultural science and rural development				
26	15:10-15:40	Discussion 1: What is the university role supporting the societies?	Participants	
27	15:40-16:10	Discussion 2: What is the effective regulation and policy setting for the university to ensure sustainable agricultural and rural development?	Participants	
Closing Remarks				
	16:10-16:20	Remarks		

Third day: 22 February 2018

Field visit to RUA's stations in Kampong Cham Province and Tbongkhmom Province



Extension Approach of Bangladesh Agricultural University: History and Current Practice

Salim Muhammad*, Ando Kazuo** and Uchida Haruo***

Abstract

The Bangladesh economy is traditionally and predominantly agricultural. In the 1950s, the Pakistan government recognized the importance of education and research in agriculture and allied fields and indicated the problems connected with the development of agricultural education and research. One result was that the Bangladesh Agricultural University (BAU) was established in 1961 under the recommendation of a National Education Commission of Pakistan, following the pattern of the land grant universities of the United States with financial aid from USAID. The USAID collaboration linking with Texas A&M University provided the initial support for capacity building through professional advisers, manpower development, laboratory equipment and more. The American government tried to introduce the experience of the land grant university for East Pakistan then. However, the initial idea was later converted into the BAU Extension Approach.

Keywords: *Extension Approach, Bangladesh Agricultural University, Land Grant University, BAUEC*

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Introduction

The great Mughal Emperor Akbar introduced the teaching of agriculture into education in India in the middle of the 16th century. He also introduced the Bengali calendar on the basis of the agricultural season. In British India, agriculture was included in the Department of Revenue, Agriculture and Commerce in 1870 during the period of Lord Mayo. Then in 1880, the Famine Commission first recommended an independent Department of Agriculture. Dr. John Augustus Voelcker, Consulting Chemist of the Royal Agricultural Society of England was sent to India to report on improving Indian Agriculture. He submitted his report in 1891, recommending the lines along which agricultural improvement, including agricultural education, was possible. Ultimately, the Bengal Department of Agriculture was established in 1906, followed by the establishment of an agricultural research laboratory at Tejgaon, Dhaka in 1908. Agricultural education started with the establishment of an agricultural school in 1922 (Khan, 1990, 141-44). This article describes the history and current practice of the BAU Extension Approach.

Discussion

Establishment of Bangladesh Agricultural University: Higher education in agriculture started with the establishment of a college, the Bengal Agriculture Institute, at Dhaka that started educating students in 1941. The college acted as an affiliated Faculty of Agriculture of Dhaka University until the establishment of Bangladesh Agricultural University. Bangladesh Agricultural University (BAU) was established in 1961 under the recommendation of a Pakistan national education commission in the pattern of the land grant universities of the United States with financial aid from USAID (Fig. 1). The land grant university, or land grant college, is an institution of higher education in the United States designated by a state to receive the benefits of the Morrill Acts of 1862 and 1890 (Ando *et al.*, 2018, 83-84). The Morrill Acts funded educational institutions by granting federally controlled land to the states for them to sell, raise funds and establish and endow land-grants to teach agriculture and mechanical arts. The Agriculture and Mechanical College of Texas, later renamed Texas A&M University, for instance, was established in 1878 under the provision of the Land Grant Acts. Ultimately,

most land-grant colleges became large public universities that today offer a full spectrum of educational opportunities in the USA.



Fig. 1. Bangladesh Agricultural University

Initially, it was assumed that students with rural backgrounds would get preference for admission to BAU and return to the villages and work with the farmers after completing a degree in agricultural sciences. The main mission of these graduates would be to teach farmers about improved farming practices and motivate the farmers to adopt modern farming practices. It was also planned that, like the land grant universities of the USA, the BAU would be entrusted to conduct agricultural development in the local districts. In the USA, each state has an agricultural university established through the land grants that is responsible for conducting agricultural development in the state. This was the main essence of establishing BAU. Unfortunately, the linkage between agricultural education, research and extension in Bangladesh was weak. Although BAU was established in the pattern of the land grant universities, it did not grow in that pattern. BAU did not even receive proper government patronage and was denied some of the functions it was expected to perform.

Establishment of Bangladesh Agricultural University Extension Centre (BAUEC): After one and half decades since inception, BAU took the initiative for generating and transferring technologies to the farmers to reorient its teaching and research programs in the context of Bangladesh in this new dimension. To perform this job, the Bangladesh Agricultural University Extension Project was established in 1976 and subsequently named the BAU Extension Centre (BAUEC) to connect rural

residents with BAU (Google, 2018). The other government departments and NGOs are also considered for active collaboration in research and extension programs with this center.

BAUEC has the following objectives:

- 1) To evolve an extension approach called the BAU Extension Approach that will be replicable all over Bangladesh with necessary local adjustments.
- 2) To help the BAU teachers and students to obtain practical experience in farmers' fields.
- 3) To organize training programs for farmers and extension workers.
- 4) To motivate and organize farm family members to improve their standard of living by adopting innovations disseminated through BAUEC.
- 5) To establish linkages with different GOs and NGOs to develop the farm, home and community.

Important Features of the BAU Extension Approach

1. Extension activities through organized groups.
2. Extension programs covering all the individuals in a village.
3. BAUEC has its lowest unit at the grass-root level: *para* (a village neighborhood).
4. BAUEC has its field office at the village level.
5. Members of Village Development Societies (VDS) become the dealers of agricultural materials including fertilizers and pesticides.
6. Farmers participate closely in program planning and other agricultural development with the BAUEC field workers and other officials.
7. Farmers receive on-the-spot training.
8. Farmers receive quick solutions to their farm problems as different subject matter specialists are involved with BAUEC.
9. The members of Village Development Society and Village Women Association (VWA) practice the habit of saving as a provision gives some incentive to those who save more.

10. Farmers in the BAUEC project area have the privilege of obtaining the know-how of modern agricultural development by different types of visits to experimental stations and also by interacting with different categories of visitors from Bangladesh and abroad.

11. BAU teachers, students and research specialists are also involved in BAUEC activities and frequently visit the BAUEC villages as per the regular schedule.

BAUEC activities: BAUEC organizes different types of societies such as Village Development Societies, Para Development Societies (PDS), Village Women Associations, and Landless and Marginal Farmers Societies (LMFS). Each society generates funds to ensure continuous capital increases and profit sharing (Sobhan and Karim, 1995, 3). Figure 2-5 shows different BAUEC activities.



Fig. 2. Students and teachers are listening to farmers' problem



Fig. 3. Raising vegetables at the school compound by the students in the school compound



Fig. 4. Animal vaccination program



Fig. 5. Exhibition of the farmer's produce

A learning by doing program includes the students raising vegetables in the school compound. The students raising vegetables in the school compound by themselves obtained nationwide publicity thanks to Bangladesh Television. As a result, a great number of schools have implemented this

program across Bangladesh. Different government, semi-government and non-government organizations have adopted this program as a development activity.

One of the most important BAUEC activities is to organize a training program for village women, BRDB cooperators, field extension workers and farmers. The broad areas in which these training programs are conducted include fruit and vegetable cultivation, fish culture, poultry rearing, cattle rearing, goat and beef fattening, fodder preservation, tree plantation and intensive vegetable cultivation with nutritional consideration.

BAUEC organizes demonstrations of different high yielding variety crops that have been improved by BAU and different research institutions. BAUEC society members receive different types of training regarding livestock, poultry rearing and fish cultivation. As the follow-up program for the training, BAUEC supplies calves, eggs, chickens, hybrid cocks and fish fries to them. To protect the cattle and poultry from diseases, BAUEC provides vaccines and arranges vaccination whenever necessary. BAUEC organizes cock-exchange programs by withdrawing local breeds of cocks from the village and distributing improved cocks to the farmers to improve the poultry breeds.

One of the main BAUEC objectives is to help farmers improve their health, nutrition and sanitation. To complement these activities, BAUEC supplies tube wells with the help of UNICEF for providing pure drinking water and implementing programs on kitchen gardening and mini-ponds for fish culture. BAUEC supplies latrines to farm families with the help of the Department of Health for improving their sanitation.

One important BAUEC objective is to help the BAU teachers and students to obtain practical experience in the farmers' field. The BAU students usually use the BAUEC villages as their field laboratory and perform the following activities:

1. Practice how to conduct benchmark surveys.
2. Motivate farmers during surveys.
3. Identify diseases and vaccinate the livestock and poultry in the village.
4. Motivate farmers towards adopting new technologies.

5. Conduct research, along with their teachers, in the villages on aspects of agricultural and rural development.
6. Conduct research, along with their teachers, in the villages on aspects of agricultural and rural development.
7. Be equipped with information on different aspects of agriculture and related issues.

Conclusion

Most of the Bangladesh farmers are subsistence farmers and have very limited resources. They produce diversified products to meet their consumption requirements and other household needs. A farmer raises field crops, homestead vegetables, trees, cattle, poultry and occasionally fish. Off- and on-farm activities help to supplement cash requirements. Here, all the components are linked together and aimed at improving household welfare. Due to intensive land use and intensification of multiple farm components, the farming system of Bangladesh is highly complex. For addressing complex agricultural scenarios, BAUEC evolved a holistic approach to link all components of the farmers to meet their different needs. To achieve this, BAUEC organized different types of groups such as Village Development Societies (VDS), Para Development Societies (PDS), Village Women Associations (VWA) and Landless and Marginal Farmers Societies (LMFS). The extension approach of the Bangladesh Agricultural University through BAUEC plays an important role in achieving sustainable agricultural development in its project villages.

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