エバリュエーション（英文）リポート

# 7. SUMMARY REPORT OF THE EVALUATION ON THE TECHNICAL COOPERATION OF THE PROJECT OF THE CENTRAL EXTENSION RESOURCES DEVELOPMENT INSTITUTE

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Contents

# SUMMARY REPORT OF EVALUATION ON THE PROJECT OF THE CENTRAL EXTENSION RESOURCES DEVELOPMENT INSTITUTE

## I Introduction

The Government of Japan through the Japan International Cooperation Agency (hereinafter refered to as JICA) despatched to the People's Republic of Bangladesh 15 May to 17 June,1983,a team to evaluate the technical cooperation by the Project of the Central Extension Resources Development Institute (hereinafter refered to as the Project), the cooperation term of which will expire on 12 October, 1983.

The Evaluation Team organized to accomplish the evaluation study by grasping the extent of technology transfer, which is the lifeblood of a project. The Evaluation Team also aimed to formulate the recommendations on the project operation in the future through the evaluation and review on the Project.

The recommendation made from a result of the evaluation will be conveyed to both governments that will make a decision on the project operation in the future.

The evaluation study was carried out through field surveys in the project sites, discussions with officials concerned and interviews with farmers around the project sites.

This report provides findings on the Project, analysis of the achievement and some recommendations as a result of the evaluation. The team sincerely hopes that the lessons derived from this surveys will be considered and necessary measures will be taken by both governments.

## II Background and Objectives of the Project

### 1. Background

For the purpose of increasing the agricultural production and improving standard of living of Bangladesh farmers',the Government of the People's

Republic of Bangladesh requested a possible technical cooperation and financial assistance from the Government of Japan.

In response to the request, the Government of Japan studied the possibility to formulate a project through JICA.

Both governments signed in October, 1978, an agreement to implement a technical cooperation project for five years.

2. Objectives

The objectives of the Project were to introduce, develop and establish technical resources,extension methods,and materials for the agricultural extension training and guidance which are to contribute towards the agricultural development and eventually increase the agricultural production and improve the farmers' living conditions in Bangladesh.

3. Activities

The activities of the Project are specified in the Master Plan. These programmes are as follows :

(1) Collection and analysis of improved agricultural techniques acquired by research institutes and agencies in the People's Republic of Bangladesh and abroad,

(2) Development of technical resources for agricultural extension,

(3) Development of extension methods and materials,

(4) Training and guidance,

(5) Extension and information.

4. Technical Cooperation Programme

A technical cooperation programme was initiated in accordance with the agreement signed in October,1978 between both governments. The Government of Japan undertaken the packaged technology transfer programme related to the Project in collaboration with the Government of the People's Republic of Bangladesh through the following measures:

(1) despatch of Japanese Experts, (2) provision of machinery and equipments, (3) training of Bangladesh counterparts in Japan, and (4) other necessary measures.

III Evaluation Survey

1. Objectives

Prior to the end of technical cooperation term on 12 October, 1983, both governments decided to review and evaluate the progress and achievement made during five years of the technical cooperation period. The evaluation study was conducted by the Evaluation Team from the view point to give particular attention to the achievement on technology transfer. The findings collected were the basis for the recommendations on the Project in the future.

The Evaluation Team and Bangladesh officials concerned agreed that all pieces of information on the Project and the recommendations made should be conveyed and reported to both governments that will make the final decision on the operation of the Project in the future.

2. Methodology

Prior to the actual data collection, Evaluation Team discussed the appropriate methodology to be undertaken so that its objectives could be achieved within the limited survey term.

The Evaluation was carried out through the collection of the progress and achievement with each item as given in the Master Plan in view of the extent of the technology transfer achieved.

Since it is difficult to quantify the extent of technology transfer, the evaluation was done qualitatively after the data and information available were analysed deeply by the Evaluation Team through three steps as follows :

(1) Consolidation and examination of data and information available at the project sites
(2) Survey at the project sites and hearing of supplementary explanation by the officials and counterparts involved in the Project, and interviews with extension workers and farmers around the project sites
(3) Series of discussions with Japanese experts, Bangladesh counterparts and officials of agencies involved in the Project

3. Activities

The Evaluation Team visited the People's Republic of Bangladesh from 15 May to 17 June, 1983. The activities of the Evaluation Team were observation of CERDI,CDC,investigation of farm-house around CDC and ATIs and section wise discussion with counterpart officials.

## VI Results of Study

Progress and achievement made

1 Collection and analysis of improved agricultural techniques acquired by research institutes and agencies in the People's Republic of Bangladesh and abroad.

A. List of reference collected

CERDI maintains a library which has a total collection of about 4,000 volumes. The library also keeps a good number of research magazine , booklet , journal , report and flipcart, folder,pamphlet,list of the color slide,different samples on agricultural materials ready reference etc., of home and abroad. The library has also sufficient documentary films on agriculture.

Above materials are utilizing at the CERDI.

B. Evaluation

1) The Japanese experts and local staffs had been making effort to collect research findings in their respective fields in this country and abroad. The collection of research findings are approximately 4,000 numbers and which are keeping at the library of the project for the utilization.

2) The objective is to make up a comprehensive library. It is used for every trials and extension personnels of whole Bangladesh. It is desirable that the project must have close contact with the organizations concerned further, so the project can collect up-to-date research finding.

3) To make library works satisfactory, two staffs were trained on library management in Japan by the Technical Cooperation in Japan. The staffs had got knowledge of library management and now successfully engage in their job.

2. Development of technical resources for agricultural extension

(1) Agronomy section

A. Achivement made

1) Various kinds of improved rice cultivation partial technologies in Japan have been tested in CERDI field. Those related to seedling raising, transplanting, fertilizer application etc. have been observed to be equally applicable to Bangladesh rice culture.

2) Japanese style high yielding rice cultivation with special emphasis on fertilizer application of the right amount and at right time according to proper nutritional diagnosis proved to be successful in producing 10 ton/ha. grain yield with BR-3, though the weather condition was very stormy during ripening period in Boro, 1980.

3) The following appropriate technology has been proposed to help poor farmers to increase paddy yield even with low rate of fertilizer application. In this cultural practice major nitrogenous fertilizer is applied 7 to 10 days before panicle initiation stage in densely populated condition derived from transplanting in closer spacing. Timely top-dressing is determined by observing particular internode elongation status.

4) The best application method of sulfur source in widespread sulfur deficient paddy field in Bangladesh is to apply low rate of gypsum or ammonium sulfate in mixed state with urea every season. Higher rate application of sulfur source has no further increase in yield as well as profit or sometimes negative effect not only on yield increase but also sulfur uptake.

5) Development of a liner (Masumi liner) for row and square transplanting. This is an effective method to increase the farmers yield besides minimizing the time and labor. It has been observed that most Bangladesh farmers do not use transplanting method. And with the development of this liner, transplanting method will be quickly extended and adopted by the farmers.

6) Several books were published for ATI Instructors and TEOs Agronomy Training. These books were prepared from the basic knowledge and modern technologies of rice production which CERDI collected and verified. Followups of trainers giving technical guidance and information were also done.

7) Many verification or adaptability trials in the farmers and ATI farms were conducted based on the technologies which CERDI collected or developed. And for this,appropriate rice technology programme and integrated technology program for high yield paddy production were developed.

8) Agronomy section prepared a survey questionaire for rice cultivation and management to grasp the farm problems and to know the rice cultivation methods in the farmers field. And these data collected will be utilized for the development of appropriate technology.

9) From research findings all new and improved technologies have compiled in a digestable forms in Rice cultivation Calendar in cooperation with Bangladesh Rice Research Institute. This calender will be very much useful to the ATI Instructors, Extension Workers and advanced farmers.

10) Recommended rice varieties with season of cultivation, growth stages, important time of top dressing and yeild/ ha have been identified through a chart of life history of rice plant.

11) " Rice Cultivation Hand Book " through diagrams has been developed by this section which will be very much useful for training to the trainers.

B. Evaluation

1) At the initial stage, some part of activities of this section overlapped with that of BRRI and BARI etc. But now, good working relationship has been developed with these institutes.

2) So far, 82 demonstrations and verification trials were conducted at CERDI,CEC,ATI and farmer's field to show the effect of each component on rice yield, which were recently found at the Research Institute and they were shown by field visit and used as a class room of practice field for trainees.

3) This section has prepared the valuable training materials like " Rice cultivation Calender". The usefulness of "Masumi Linner" has been tested in BARD and Comilla too.

4) Though the counterparts of this section have succeeded in intaking or transfering technical knowledge, yet still they need more technical assistance.

(2) Horticulture Section.

A. Achivement made

1) New promising varieties of vegetables such as cucumber and onion in the winter season and radish and cabbage in summer season have been introduced from Japan as those suitable for Bangladesh condition. They are making rapid progress for increasing of farmer's income.

2) The modern cultivation with methods of fertilizer use, insect control and grafting have been introduced as yield increasing technologies for water melon,and it has shown the remarkable results in growing districts.

3) Urgent studies have initiated for the first time along-with basic ones in Bangladesh to avoid soil sickness problems in intensive cultivation of various kinds of vegetables which will surely happen in near future.

4) Cropping system studies have been making a drastic reform under the control of water and fertilizer in a new irrigation-drainage combined system.

5) Scientific means for determining the optimum harvest time of fruits based on sugar content have been introduced. One of them is the use of hand refractmeter.

6) Collection of various kinds of fruit trees and ornamental plants has been made to obtain the informations on their cultivation and contribute to CERDI training with real materials. As a result,its participants who face them in their duty area have been free from the ill effects of the lecture given without real materials.

7) Installation of permanent seed bed in CERDI campus and CDC for experiments and distribution of seedlings to the farmers.

B. Evaluation

1. The modern cultivation with methods of fertilizer application, pests control and grafting had been introduced to get the promising yield.

2. New varieties introduced from Japan and cropping system obtained in trails done in CERDI can be used for farmer.

3) Soil and Fertilizer Section

A. Achievement

1) One of the best equipped chemistry laboratory in Bangladesh has been set up to give prompt and accurate nutrition diagnosis to the crop sample sent from the inside and out side of CERDI. Most of nutritional disorders such as sulfur and zinc deficiencies etc.in crop are left uncontrolled yet in large areas.

2) In addition to zinc and sulfur deficiencies and salt injury in rice, sulfur deficiencies in sweet corn,dhancha cabbage and cauliflower, phosphorus toxicity in soya bean and sinc toxicities in green pepper and marigold etc. were for the first time confirmed in Bangladesh. Chemical analysis on Mn/Fe rate of sample can prove any kind of root injury due to wet damages in potato, wheat etc. and also chemical toxicity in radish.

3) Many samples (soils and plants) were collected from CERDI, 3 CDC and ATIs and sometimes other agencies like, BADC,BARI, MCC(on request) and analysed. Above mentioned deficiency were confirmed by chemical analysis of 500 samples.

4) Soil survey work on Bangladesh 17 main soils has been done with a close cooperation of Department of Soil Survey, for preparation of colour slides,coloured pictures,soil profile specimen. Furthermore,the physical and chemical properties of the collected samples have been analysed. Results of the works will be soon published by the name of "Soil of Bangladesh."

5) Conducted 4 elements trials on wheat, rice and soybean cultivation and prepared some slides on fertilizer effects. A special programme has been taken on Jute and cassava on Madhupur soil for its feasibility study and fertilizer effects.

6) Besides colour slides etc., chemicals, pH and available phosphorus colour charts and tinsticks for soil test have been developed for ATI training.

B. Evaluation

1) Many kinds of diagnosis on soil and crop nutritional condition has been done. These results published by CERDI are very useful for crop cultivation in Bangladesh.

2) Furthermore, many guidance materials for example color slides are suitable for the understanding of soil properties or fertilization at the training of CERDI and ATI.

3) Fertilizer trial, field survey and operation of analysis of PH, N, P & S had been already performed by counterparts. If more 2 younger personnels are attached this section, all facilities will be operated themselves and content of training also will be developed.

(4) Plant Protection Section

A. Achievement made

1) Studies on plant protection for the diseases and insects of seasonal crops in Bangladesh have been developed by these observation of the present situation in the country and identified the problems of the farmers in the pest control.

2) Collection of informations has been done on relevent field from other research organization and cerculated to officers in digestable form.

3) Two kinds of calendares have been prepared for the diseases and insects in rice cultivation and distributed for organization concerned. The folder on vegetables pests also has been done.

4) In order to establish the pest surveillance at CERDI, the study has been going on with the sample collection by illumination insect collector in rice.

5) After the study on the existing crops, especially on vegetables insects at CERDI & CDC, the trial and demonstration on available insecticides and fungicides have been carried out.

6) Imparting training of plant protection has been conducted to the mid-level Extension Officers and Plant Protection Instructors of AETI.

7) Plant Protection Officers have been followed up at their AETI's and other organization by the distribution of calendares and guide booklet, and given the useful advice through official tour.

8) The samples of diseases and insects were collected and going on their collection for study and teaching materials is going on to make a well equipped laboratory.

B. Evaluation

1. The equipments supplied from Japan such as microscope and others were utilizing quite efficiently in the laboratory.
2. Collection of samples is satisfactory such as insect pests, diseases and pesticides. Further guidance of Japanese expert is needed for confirmation of effect of pesticides.
3. Trials of resistant variety against major diseases within the leading variety of the country should be conducted by the cooperations of organizations concenred.

(5) Farm Mechanization Section and Mechanical Engineering Section.

A. Achievement made

1) As the farm machinery will take the place of animal power in Bangladesh in near future, it is necessary to clarify the efficiency and economic differences between the mechanized and ordinary farming.

Their related basic result have been got through the several experiment in the past two years.

2) The efficiency and production cost on the different depth of land preparation by the tractor and power tiller have been examined under the trial from T-Amon,1981 and Boro,1981-82.

3) The turning over the soil by mould board plow was confirmed to be not advisable to introduce for the rice cultivation in Bangladesh.

4) The local sickles have been improved through various survey and trials during the past two years. That of saw type sickle was completed, and 2700 numbers were received. Another 200 numbers of bush or grass cutting type and 100 numbers of jute or bamboo cutting type sickles were also received from Japan.

The suitability in their use and possibility in their local manufacture were tried to be reconfirmed by distributing them to the farmers, local black-smith and workshop.

Besides,the improvement of winnower was also completed. The samples distributed to the various agencies and manufactured in Bangladesh.

5) The various text books and manuals on the farm machinery and mechanization have been published such-as Basic knowledge of Agricultural Equipments and Machine elements and others.

6) The attached farm at CERDI had been consolidated as trial and demonstration farm with fully equipped farm machinery and equipments.

7) One of the best equipped workshop had been set up for the repair and maintenance of farm machinery and equipments.

8) Rice processing plant and equipments had been set up to introduce better quality rice.

9) The advanced system on the storing of spare parts and machinery has been introduced.

10) The well organized Central control system for their smooth performance of farm machinery and equipments have been introduced. It is successfully carrying out now.

B. Evaluation

1) Capability of Repairing and maintenance of machineries had been upgraded by the assistance of Japanese experts.

2) It is necessary to formulate an organizational system and to appoint the responsible personnels at the farm mechanization division in order to start leasing management of machineries to the farmers around the CERDI.

3) One Japanese was highly evaluated by the Bangladesh Government and was given a letter of thanks for his activities from Minister, Ministry of Agriculture and Forests.

4) It is desirable that more staffs should be appointed to the farm Mechanization Division to manage effectively.

3. Development of extension methods and materials

A. Achievement made

This section has made the following achievements from 1978-83 April.

1) First of all motivation was given to the farmers, farmwives, and youth groups of CDC command area through film show, study tours, literacy programme and handicraft classess by communicating to individual members of the community and also advice and assistance in respect of knowledge and methods of agricultural technics were given with due consideration of the economic and social circumstances of the individual and other people were given collectively.

The farmers, farmwives and youth groups have been inclined towards the CDC and showed their interest.

2) Farmers were motivating through educational procedures in farming methods and techniques, increasing production efficiency and income, bettering their levels of living and lifting the social and educational standard of rural life.

3) Farmers were taught to determine accurately their own problems to help them to acquire knowledge and inspire them to take action on improved variety and appropriate technique know-how of different agricultural crops through demonstration programme in 3 CDCs and their farmers field.

4) One of the most important function of the extension section is to study and develop the extension methods, methodologies and teaching techniques for Instructors of ATI's and for the continuous studies are going on to reach recommendation decision for the same to be proved by evidence.

5) Moreover, Experts and Specialists of the Section are preparing training programme on respective subject and imparting training for Instructors of ATI's and different field level officer of Department of Agricultural Extension (DAE) since inception of the CERDI.

6) For Extension work, preliminary survey on farmers and agriculture is preconditioned. In this regard, the survey was at first time undertaken in Bangladesh country over 826 farm house holds from 1st June, 1982 to September, 1982 at 12 ATI located Thana and also in Joydevpur Thana were CERDI and its 3 Community Development Centre are located in order to investigate socio-agro-economic profile of the farmers community and to assessment of farm-level resources availability, requirements and to identified constrains to rice technology adoption. All these exercises expected to lead to achive the ultimate goal of evolution and development of appropriate and effective stratagies and action plants implementable by extension workers.

7) The achievements of the different activities of the 3 CDC are shown as follows :

i) Farmer activities

In order to the farmers with technical know-how in the field of crop cultivation, vegetable cultivation, livestock production, diversification of farming, fish culture, etc. through different types of guidance methods like training programme, demonstration, study tour, meeting, personal contact, group approach etc. have been adopted in 3 CDC command area.

ii) Women activities

Different types of guidance programme have been conducting in each CDC in order to increase production efficiency and income and to promote home life improvement activities like - sewing, handicrafts, kitchen gardening, vegetable cultivation, nutritions, food habit, cooking process, souse, jam, jely making and food preservation dress making, child care, etc. among women around the project area from the beginning of CDC.

iii) Youth activities

During the period from 1980-82, 3 CDC have been provided practice and problem oriented guidance among the rural youth groups to bring up skilled successors through practical demonstration, field practice, training, study tour, etc. They have been guided and experienced how to organize a group, how group activities may formulate and perform for the interest of the Community.

8) Extension materials

It has been observed that audio-visual aids are the most effective teaching media for extension work. But present condition of Bangladesh, particularly in village area, it is very difficult to use audio-visual materials like - film projector, overhead projector, slide projector, etc. due to non-availability electricity in most of the villages in the country. For consideration of these problems, the section prepared a display drama (paper picture show) which will be used to display various needful informations without using electricity.

9) According to the survey result of CDC commanding and non-commanding area in consideration of pre-determined objectives on rice cultivation technique, it observed that about 60% of the farmers are growing high yielding varieties of rice and using improved cultivation technique in command area and less in non-commanding area. This remarkable difference for the result is continious guidance and transfering of production technology through the CDC to the farmers of the command area. So, these farmers have been harvesting better yield.

The farmers of the CDC command area have also been motivated to produce more fruits and vegetables by providing better quality and high yielding seeds, seedling and saplings with necessary guidance for getting additional income. Moreover, in all respect of agriculture, CDC command area farmers performance found better than adjacent farmers.

From now, more diversified and continious programme should be taken for better interest of the community and farmers will also be more receiptive for any innovation. If, possible functional area also to be expanded.

10) Publications

To help as well as to give guidance to the extension workers, the extension section published following books/booklets on agricultural extension namely :

(a) Agriculture Extension,
(b) Project Record Book,
(c) CDC activities
(d) Yield contest on rice etc.
(e) One "Hand Book" on Agriculture Extension for worker is under preparation.

The Extension worker accepted these booklets coordially as their guidance

B. Evaluation

1) The farmer's intension for production and farming technical improvement are generated in CDC commanding area through the extension trial done at CDC by making basic concept to grasp farmers needs and promoting their independency and creativity.

Further, it was observed that audio-visual aids especially use of cinema was very much useful for forming of farmer's group.

Furthermore, study tour for farmers is also playing a big role to generate their production will and to motivate their group systematization.

2) Village survey was conducted by CERDI in order to find out extension present situation and problems of agricultural improved technologies of rice growers.

This is the first survey conducted in Bangladesh in the point of the survey details and its scale covering 826 farm house holds.

These results will be expected to become a useful and reliable source to make an extension planning and to promote extension activities in future.

4. Training and Guidance

A. Achivement made

1) One of the objectives of the Project is to provide training of mid-level Agril. Extension Officer, Instructors of ATI of the Organization/Department under the Ministry of Agriculture. Detailed training schedule of training imparted to the Instructors of ATIs, Thana Extension Officers, Thana Agriculture Officers, Plant Protection Inspectors, Agril. Overseers, Sub-divisional Agril.Officers, Mechanic-cum-workshop Officer, etc. at CERDI are attached herewith from 1979 to 1983. Upto May'83 CERDI conducted 34 nos. of training programmes which covered a total nos of 781 practicipants.

CERDI has been planned to conduct practice oriented training which contents of 70% lectures and 30% practice. But the CERDI Officer of Training Section felt that more practice oriented training should be well organised at CERDI and emphasis should be given on practice well oriented training programme.

2) Survey on A.T.I. Instructors concerning CERDI's training. Results obtained through questionnaire and interview at ATI, Sylhet and Sherpur.

i) Regarding Training received at CERDI.

Object of respective Training received at CERDI was clear but the trainings were mostly conducted by lecture oriented method and has been felt some extent of inconveniences in case of transfer of practical technology.

So that well combined lecture and practice oriented training is desired to receive. Preparation of teaching materials such as visual aid and literature were not well done and details of lecture are desired to improve to follow ATIs syllabus. After receiving training of respective subject matter confidence of teaching could have had but lecture of teaching methodology was being desired to receive at CERDI.

ii) Demand of training to be done at CERDI.

As mentioned above, well balanced lecture and practice oriented and well considered to ATI syllabus training are being requested to receive in respective subject matter. Period and number of training in a year are being requested to make it longer (two to three weeks) and twice or three times.

iii) Perfection of ATI facility

What is most requested is to fill up the visual aids as teaching means such as plant disease slides,collection of plant insects,samples of agricultural chemical and soil profil slides and etc. and next is perfection of laboratory and workshop of machinery such as soil analysis appratus (for N.P.K.Ca,Ma,Ph and etc) microscope and tools for farm machineries. Number of answer was less but important matters mentioned are to prefection of books and literatures concerned and allocation of cars to use for followup guidance of B.S.after receiving training at ATI.

3) Improvement of the curriculum

Through the training at CERDI,ATI Instructors have been advised for improvement of carriculum,and in order to make field oriented carriculum,"Project Record Book" have been printed for trainees, and distributed them to all ATIs.

4) Seminar

Seminar on Management and curriculum development of AETI was held in CERDI from May 3 to May 5,1983 where Principals of all AETI,DDAE(Training),ADDE(Training) and Principal Specialists of CERDI were the participants.

5) Others

CERDI has not yet taken any systematized followup guidance programme. But Experts and Specialists of each section have undertaken the followup guidance programme at ATIs to make the training more effective.

B. Evaluation

Training

Training at CERDI is characterized to lay emphasis on practice oriented.

This training method suggests one of best ways of training for Agricultural instructors in future by combining training organically lectures and practices which are desired to have one of important characters of agricultural instructor such as ATI instructors,TAO,TEO and etc.

Hereafter, further efforts are requested to make the training more effective by improving the method of practice oriented training.

Furthermore,at present,planning and implementation of training is not always conducted smoothly. So that it is observed and necessary to pay more efforts for deliberate implementation of the training in order to make it more effective. To meet this purpose,CERDI has to take positive action to make training planning and the implementation under close coordination of the Training Division, DAE.

5. Extension and Information -

A. Achievement made

One of the important functions of CERDI is to conduct trials and demonstrations in CERDI and CDC fields on research findings of BRRI,BARI and other research organizations for the dissemination of information/technique to the extension workers and farmers.

1) CERDI published the following Books,Booklets as teaching materials for extension workers and for the training institutes.

(a) Vegetable cultivation manual in Bangladesh
(b) Rice cultivation techniques by Diagram
(c) Life history of rice plant
(d) Production prospect of short period leaf vegetables of South East Asia during rainy season in Bangladesh
(e) Text book of the field practice (Rice cultivation) and others in total 49.

2) Making leaflet and other teaching materials in Bengali for farmers

(a) Nutun sabji langkon and kailan
(b) China mular chash
(c) Diesel enginer gulogug nirupon-o-ehar pratikar
(d) Gari chalak-o-adhunik kalakaishal
and others in total 11.

3) Publication of the agricultural standard techniques -

publication of the agricultural standard techniques in Bangladesh difficult under the situation of Bangladesh because standard of agricultural techniques was not yet crystallized in Bangladesh.

4) Hand Book for Extension Workers -

1. Draft copy of the Hand Book in Bengali has already prepared for final printing. This Hand Book contains about 3 hundred pages.

Main objectives are
To fulfill the long felt necessary to provide guidance to the Extension Workers in solving the problems on spot and to get all Agril.Informations from one unit.

Main Contents are;

Agricultural Statistics,Data,Climatic Informations, soil and soil management, Crop Management, Package of practices,Crops protection, Vegetable and fruit cultivation,Livestock,Farm Implements and machinery, Agricultural Project Record Book etc.

B. Evaluation

Agricultural Technologies developed by Experts and their counterparts in each section are, on each occasion,printed and book binded and are being utilized by agricultural technicians of organizations concerned. This is a big achievement of the counterparts in the improvement of agricultural Technologies and promotion of their independency for transfer of those information.

Publication of "Extension Hand Book" is soon to be done and this will become a guidance books for B.Ss.who are working at the front and is expected its useful utilization and good results.

6. Measures taken by the Government of Japan

The following measures were taken by the Government of Japan for the promotion of the Project during the period of project implementation.

1) Experts

Nineteen (19) long-term experts and twentyfive (25) short-term experts were dispached in accordance with the agreement. Total assignment period of long-term/short-term experts were 553 man-month and 49 man-month respectively.

2) Supply of equipments and machinery

Total amount of grant aid for equipments and machinery was 237 million yen as of fiscal 1982.

3) Counterparts training

Twentyseven (27) counterparts (133) man-month were trained in Japan as of fiscal 1982. They took part in either group training course,individual training or observation tours.The training courses covered agricultural extension,control of

rice disease and insect pest,rice production and mechanization,rice cultivation and extension,irrigation and drainage, agricultural machinery maintenance and repair,and vegetable production and extension.

4) Grant aid

A. Construction of CERDI building

The buildings of the Central Extension Resources Development Institute and trainees accommodation were constructed with total cost of 880 million yen.

B. Construction of Community Development Centre(CDC)

The building of CDC was constructed by the help of the Government of Japan with total cost of 120 million yen.

5) Model infrastructure

The improvement of three agricultural farms of CDC,i.e., NAOJORE,PORABARI & BHABANIPUR was done with total cost of 8 million yen.

6) Emergency countermeasure budget

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|---|---|
| A. Improvement of drainage canal | 2.0 million yen |
| B. Temporary warehouse construction for agricultural machinery and tools | 1.6 million yen |
| C. Repair of the existing irrigation pond | 2.5 million yen |
| D. Replacement of the shatters at the building of agricultural machinery section | 2.1 million yen |
| E. Repair of the fence around the experimental farm | 1.7 million yen |
| F. Fixation of iron bars in the main building | 1.1 million yen |
| G. Repair of the garage | 2.1 million yen |
| H. Repair of the water resorvoir | 2.7 million yen |

7) Budget for mid-level trainees training

The budget totaling 43 million yen was allocated for the mid-level trainess training from fiscal year 1980 to 1983.

8) Special budget for Bench-mark study

A special budget allocated, 1.3 million yen, to investigate the economic and agricultural conditions of the farmers around CDC and ATI.

7. Measures taken by the Government of the People's Republic of Bangladesh

1) Counterpart allocation

The Government of the People's Republic of Bangladesh allocated 22 counterparts during the period of agreement. Almost nicely allocated and worked together with Japanese experts.

2) Budget allocation for the operation of the project was increased year by year during the period of project implementation, total funding was 373 lakh and which can be classified into six categories such as salary and wage, construction, farm management, purchasing office supply and other materials, customs clearance of grant equipment and its transport.

V. Conclusion

1) The project was provided with enough physical facilities i,e., main administrative buildings, laboratories and lecture rooms, assembly hall, a machinery building, with well equipped workshop, hostel, a cafeteria and so forth. The members of the Evaluation Team confirmed that the facilities have been well utilized for various project activities including mid-level trainings.

2) The Project has been made every efforts to collect research findings in respective fields from Bangladesh and abroad. The collected research findings were approximately 4,000 pieces of information and were classified to be kept at the Library at CERDI. The Evaluation Team hopes that the Project will continue to collect more findings and utilize them effectively in the future.

3) Opportunity for project officers' attendance to the academic meeting was very limited because the project was not recognized as a research institute in Bangladesh. This situation makes it difficult to collect improved Agricultural techniques.

On the other hand, the project was able to collect local agricultural techniques through field survey and field trip.

4) As far as the development of technical resources for agricultural is concerned, technical problems have been grasped by research data, in addition, as the result of field survey which was conducted recently, so the technical problems at farmers' level were identified in detail.

5) The project was conducted verification trials at attached experimental plots of the CERDI and in the field of CDC & ATIs.

Among the results conducted in the fields (a) Verification trial of rice plant, (b) varietal trials of vegetable both in summer and winter seasons, (c) cultivation method of vegetable, (d) diagnosis of crops and nutrition , (e) diseases and pest control of main crops, (f) farm machinery trials provided by Japan and improved machinery and tools and others were highly evaluated.

6) As far as the development of extension method concerned, the project has attempted to motivate the farmers and youth groups in the CDC command areas through film shows, study tours and handicraft, various trials and became successful in this respect.

7) Bench-Marck study on farmers and agriculture were conducted. The results of the survey can be utilized for the developing extension methods and materials.

8) Achievement of Mid-level training has been becoming better. The project has been conducting more than one training course in every month during last one year. And the total number of trainees so far trained in the project come up 781.

It is provided that the progress and achievements made for the training in the last three years were conspicuous due to budget allocation from the Government of Japan.

9) Different organizations of Bangladesh Government and international organizations like - UNDP, FAO, COVERDALE, etc. have been utilizing the Institutional facilities of CERDI.

10) The'Hand Book' for extension workers are prepared. It will be utilized in the training.

VI. Recommendation

The objectives of the project are to introduce and develop technical resources, extension methods and materials for the agricultural extension, training and guidance and dessemination of those to the area through the project.

It is a fact that the project was being promoted alongwith the above objectives under collaboration of both Governments with the countermeasures. In this context,more increasing supports for the project will required by the agencies involved from the Government of the People's Republic of Bangladesh.

The Evaluation study was done from a technical view point to judge the extend of activities related to transfer of technology.

From the results of the study,those activities of various trial tests, study of extension methods,development of agricultural machinery,equipments & tools,and grant aid and infrastructure were making good showing. While the activities of training and guidance were still running on.

Considering the progress and achievements made in the project, the Evaluation Team will recommand following technical cooperation :

We recognize some important activities that should be carried out after the termination of the present cooperation for two years.

1. Technical cooperation of Mid-level trainees training for the Instructors of ATI and TEO, TAO, DAO, etc.is still needed in order to upgrade the practical capability in the field.

2. Seminar on method of agricultural extension and extension activities for the director of ATI, TEO, TAO, DAO,etc.is recommended to be held.

For the above, it is requested that both governments will take necessary measures to support the project.

VII. Acknowledgement

The Evaluation Team appreciates greatly the extensive and intensive preparation and a great help by both the Bangladesh led by Mr. A.M. Anisuzzaman, Secretary, Agriculture and Forests Division and Japanese experts team led by Mr. Takashi Satoh.

The Evaluation Team is also deeply indebted to Mr.A.N.M. Shamsul Huda, Executive Director of CERDI and officials of the Ministry of Agriculture as well as the concerned agencies in Dhaka, who facilitated the implementation of the study.

The Evaluation Team believes that the kind guidance and support by those officials are vital to the acknowledgement of the project objectives in the future.

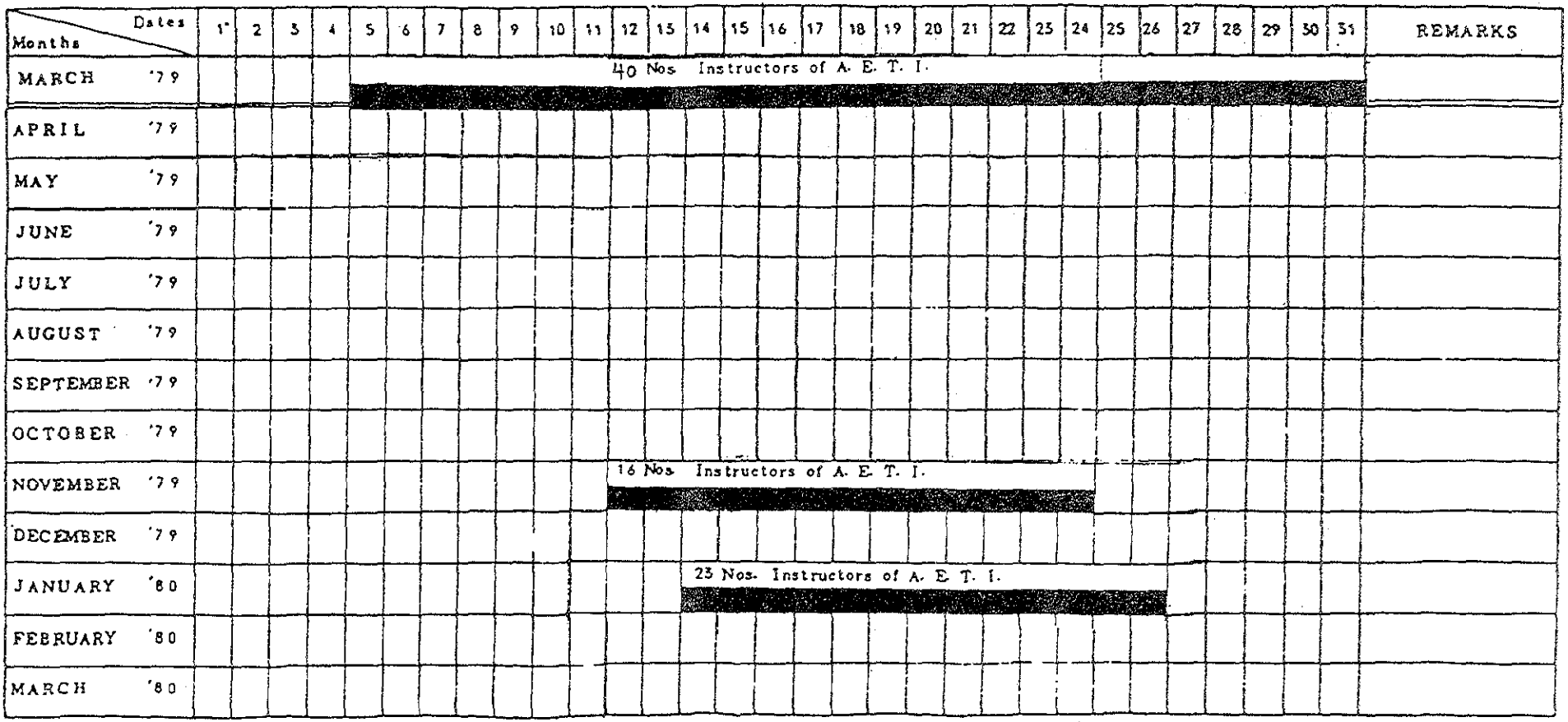
Annexure - I

## List of Japanese Team

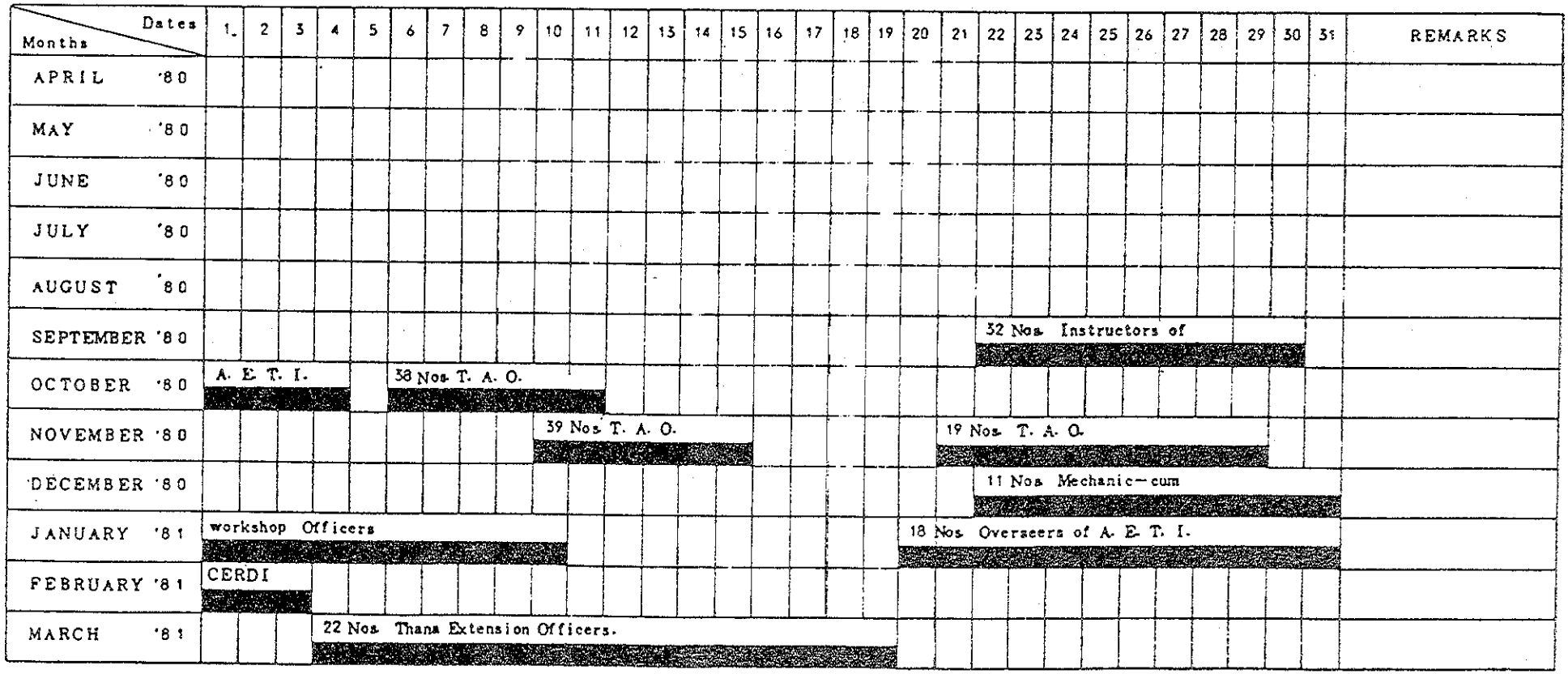
| Name | Field | Position |
|---|---|---|
| Mr. Akira KAWAMATA | Leader | Director,<br>Technical Cooperation Division,<br>Agricultural Development Cooperation Department (JICA) |
| Mr. Masatoshi NUMATA | Cooperative Planning | Chief,<br>Second Technical Cooperation Division,<br>Economic Cooperation Bureau (MFA) |
| Mr. Osamu HARAMAKI | Agronomy | Chief,<br>The Third Laboratory of Pasture,<br>The First Department of Pasture Development,<br>HOKKAIDO National Agricultural Experiment Station (MAFF) |
| Mr. Shigeo MIYAJIMA | Agricultural Extension | Chief,<br>Technical Extension,<br>Health and Higien Group,<br>Animal Health Division,<br>Livestock Industry Bureau (MAFF) |
| Mr. Shizuo SATOH | Bench-mark study | Expert on Agricultural Extension (JICA) |
| Mr. Kimio MIURA | Coordination | Project Officer,<br>Technical Cooperation Division,<br>Agricultural Development Cooperation Department (JICA) |

Annexure II

# TRAINING PROGRAMME OF
# CENTRAL EXTENSION RESOURCES DEVELOPMENT INSTITUTE (CERDI)
# JOYDEVPUR, DHAKA
# MARCH, 1979 TO MARCH, 1980



# TRAINING PROGRAMME OF
# CENTRAL EXTENSION RESOURCES DEVELOPMENT INSTITUTE (CERDI)
# JOYDEVPUR, DHAKA
# APRIL, 1980 TO MARCH, 1981



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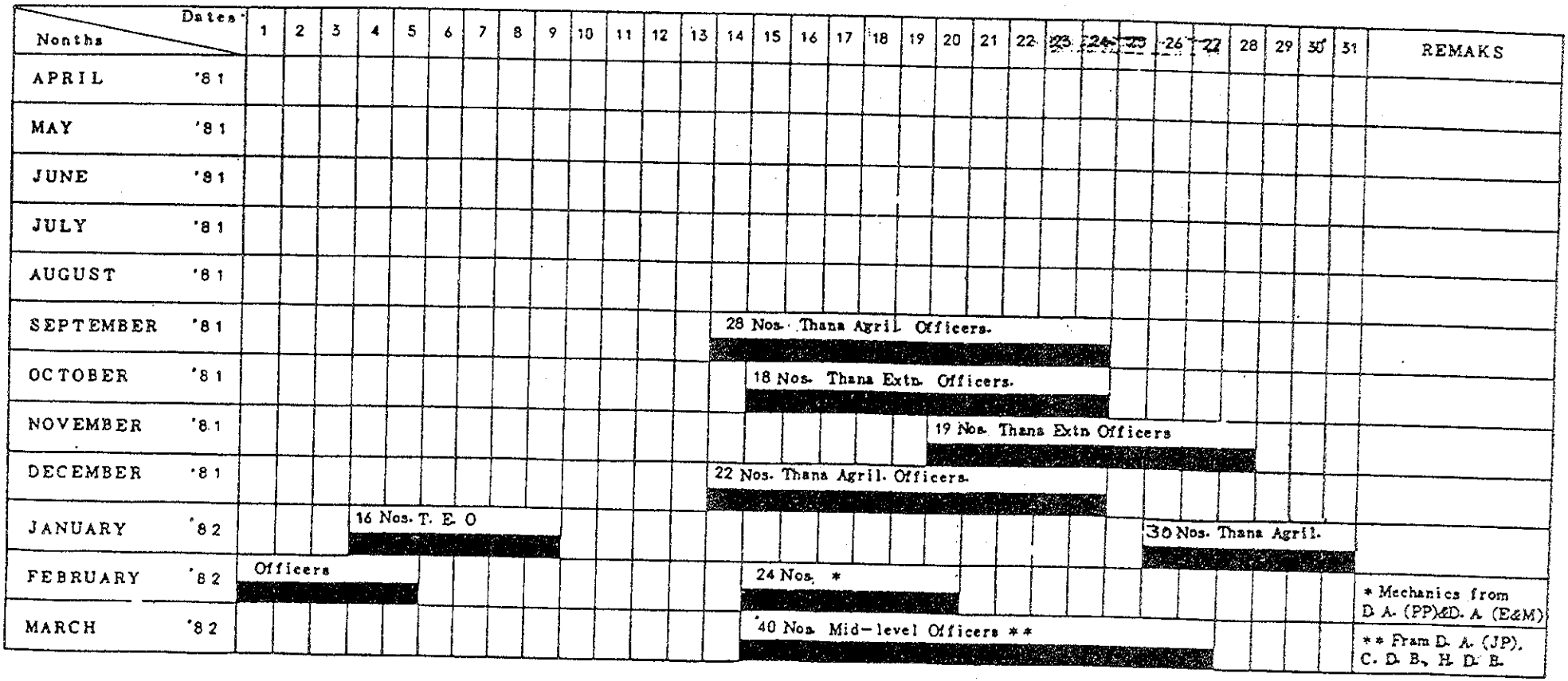
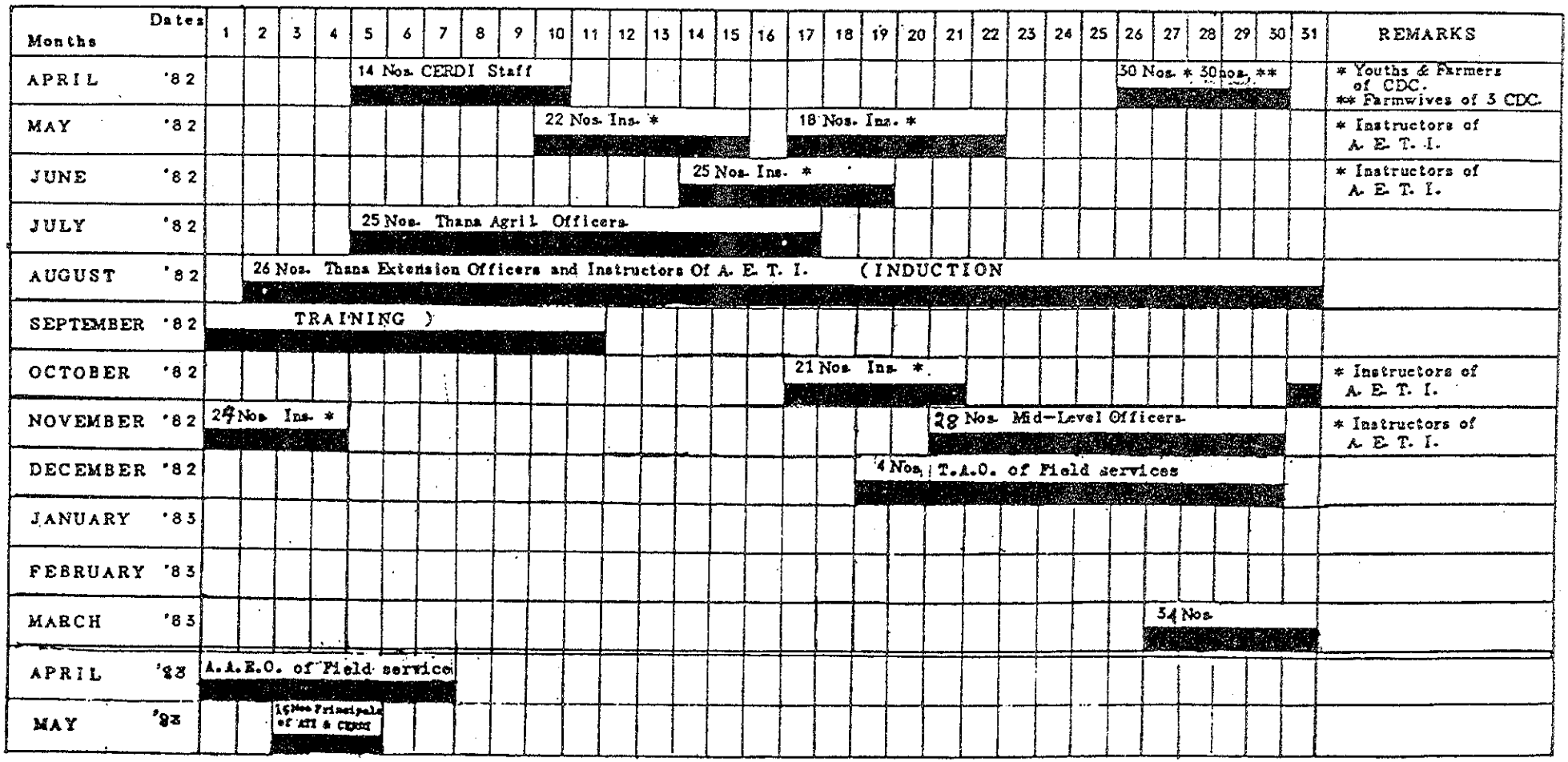


# TRAINING PROGRAMME OF
# CENTRAL EXTENSION RESOURCES DEVELOPMENT INSTITUTE (CERDI)
## JOYDEVPUR, DHAKA
## APRIL, 1982 TO MAY, 1983



" PARTICULARS OF TRAINING ORGANIZED BY CERDI " from MARCH'79 to MAY'83

| | Batch No | Duration | No.of days | Participants | Attended | Remarks |
|---|---|---|---|---|---|---|
| 1979 | 1 | 05-03-79 to 31-03-79 | 27 | Instructors | 40 | |
| | 2 | 12-11-79 to 24-11-79 | 13 | Instructors | 16 | |
| | | | | | 56 | |
| 1980 | 3 | 14-01-80 to 26-01-80 | 13 | Instructors | 23 | |
| | 4 | 22-09-80 to 04-10-80 | 13 | Instructors(P.P.& Hort.) | 32 | |
| | 5 | 06-10-80 to 11-10-80 | 6 | T.A.O. | 38 | |
| | 6 | 10-11-80 to 15-11-80 | 6 | T.A.O. | 39 | |
| | 7 | 21-11-80 to 29-11-80 | 9 | T.A.O. | 19 | |
| | | | | | 151 | |
| 1981 | 8 | 22-12-80 to 10-01-81 | 20 | Mechanic-cum-workshop Officers | 11 | |
| | 9 | 20-01-81 to 03-02-81 | 15 | Overseers of AETI & CERDI | 18 | |
| | 10 | 04-03-81 to 19-03-81 | 16 | T.E.O. | 22 | |
| | 11 | 14-09-81 to 24-09-81 | 11 | T.A.O. | 28 | |
| | 12 | 15-10-81 to 24-10-81 | 10 | T.E.O. | 18 | |
| | 13 | 20-11-81 to 28-11-81 | 9 | T.E.O. | 19 | |
| | 14 | 14-12-81 to 24-12-81 | 11 | T.A.O. | 22 | |
| | | | | | 138 | |
| 1982 | 15 | 04-01-82 to 09-01-82 | 6 | T.E.O. | 16 | |
| | 16 | 26-01-82 to 05-02-82 | 11 | T.A.O. | 30 | |
| | 17 | 15-02-82 to 20-02-82 | 6 | D.A.(E & M) | 24 | |
| | 18 | 15-03-82 to 27-03-82 | 13 | Overseers(mid-level officers of H.D.B.,C.D.B.,I.S.O.of DAJP) | 40 | |
| | 19 | 05-04-82 to 10-04-82 | 6 | Technical staff of farm Mechanization Division | 14 | |
| | 20 | 26-04-82 to 28-04-82 | 3 | Youth & farmers of CDC | 30 | |
| | 21 | 29-04-82 to 30-04-82 | 2 | Farmwives of 3 C.D.C.'s | 30 | |
| | 22 | 10-05-82 to 15-05-82 | 6 | Instructors on Hort.,AETI. | 12 | |
| | 23 | 10-05-82 to 15-05-82 | 6 | Instructors on F.M., AETI | 10 | |
| | 24 | 17-05-82 to 22-05-82 | 6 | Instructors of AETI on HYV | 10 | |
| | 25 | 17-05-82 to 22-05-82 | 6 | Instructors of AETI on P.P. | 8 | |
| | 26 | 14-06-82 to 19-06-82 | 6 | Instructors of AETI on Agronomy I & II | 25 | |
| | 27 | 05-07-82 to 17-07-82 | 13 | T.A.O's | 25 | |
| | 28 | 02-08-82 to 11-09-82 | 41 | T.E.O. & Instructors | 26 | |
| | 29 | 17-10-82 to 21-10-82 | 5 | Instructors(Hort.& Ext$^{n}$) | 21 | |
| | 30 | 31-10-82 to 04-11-82 | 5 | Instructors of AETI on Agronomy I & II | 24 | |
| | 31 | 21-11-82 to 30-11-82 | 10 | Input supply officer,cotton unit officer,Hort.overseer. | 28 | |
| | 32 | 19-12-82 to 30-12-82 | 12 | T.A.O. of Field services | 14 | |
| | | | | | 387 | |
| 1983 | 33 | 27-03-83 to 07-04-83 | 12 | A.A.E.O. of Field service | 34 | |
| | 34 | 03-05-83 to 05-05-83 | 3 | Principals of ATI & CERDI | 15 | |
| | | | | Grand total - 781 | | |

| Sl.No. | Year | Year-wise total nos of participants | Remarks |
|---|---|---|---|
| 1 | 1979 | 56 | |
| 2 | 1980 | 151 | |
| 3 | 1981 | 138 | |
| 4 | 1982 | 387 | |
| 5 | 1983 | 49 | |
| | | Grand total - 781 | |

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8 GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH
MINISTRY OF AGRICULTURE AND FORESTS
AGRICULTURE & FORESTS DIVN.

# REPORT OF THE SPECIAL COMMITTEE SET UP BY THE GOVERNMENT TO EXAMINE THE TRAINING SYSTEM WITHIN THE DEPARTMENT OF AGRICULTURAL EXTENSION WITH PARTICULAR REFERENCE TO THE ROLE OF THE CENTRAL EXTENSION RESOURCES DEVELOPMENT INSTITUTE (CERDI) AND TO SUGGEST MEASURES FOR ITS IMPROVEMENT.

DHAKA, 25TH MAY, 1983

TABLE OF CONTENTS

1. Background

The training of extension personnel in Bangladesh is carried out at the professional and technicians levels. It includes a broad range of activities which cover pre-service, induction (Post-entry Pre-deployment) and in-service courses.

1.1 Professional Level Pre-service Training

Both Bangladesh Agricultural University (BAU) and the Dhaka Agricultural College (DAC) offer bachelors and master's degree programme in agricultural sciences. The total enrollment of the two Institutions taken together is about 3500 with an annual output of approximately 400. BAU's Department of Agricultural Extension and Teachers Training, which is a part of the faculty of agriculture, conducts courses in agricultural extension at the under-graduate and graduate levels and organises field activities of the Agric-varsity Extension Project in about 16 villages of Kotwali Thana of Mymensingh district.

The FAO Agricultural Manpower Study, completed in Dec. 1980, had indicated that the supply of higher level manpower from these two institutions is now sufficient to meet the anticipated needs until 1990. However, the relevance of BAU's teaching has been increasingly questioned. It largely stems as a result of its isolation from the main stream of agricultural development and its lack of involvement with research and practical farm problems.

1.2 Pre-service Training for Agricultural Technicians

Pre-service training for middle level agricultural technicians, viz., Village Extension Agents (VEAs), is conducted at 11 AETIs run by the Department of Agriculture Extension (DAE). Nine of these have an enrollment capacity of 240 students while two have slightly smaller capacities of 160 to 180 students. Seven of the nine institutes with 240 students each are being improved or established under an on-going IDA project (Credit 621 - BD).

Out of the remaining two one has received assistance from DANIDA and the other has been entirely financed by the GOB. One more GOB financed Institute (at Barisal) is under construction.

When completed it will bring the total number of AETIs to 12. The output of existing institutes has gradually increased from 206 in 1976 to about 1300 in 1982 as given in the Table I below:

Table I - OUTPUT OF VEAS FROM 1976 TO 1982

| Year | Total | Cumulative |
|---|---|---|
| 1976 | 206 | 206 |
| 1977 | 266 | 472 |
| 1978 | 462 | 933 |
| 1979 | 510 | 1,443 |
| 1980 | 901 | 2,344 |
| 1981 | 955 | 3,299 |
| 1982 | 1,297 | 4,596 |

Out of the present strength of 12,377 VEAs/UAAs/JEAs, approximately 4,596 have completed the two year diploma course offered by these Institutes.

The two year pre-service course covers subjects like Agronomy, Horticulture, Plant Protection, Agricultural Engineering, Agricultural Extension and Population Education, Cooperatives and Animal Husbandry. It envisages 21 months of training at the Institutes followed by a three month field training in the villages. Roughly one half of the curriculum is devoted to practical training (including the Institute and the village training).

The teaching staff strength at each AETI is eight Instructors and a Principal. The majority of the staff are relatively in-experienced with two or three years service in the Department as Thana Extension Officers. They have limited training in teaching methods and techniques. The building and other physical facilities also vary widely from institution to institution. Recently attempts have been made to equip the Institutes with both "projected" and "non-projected aids". Their use, however, is still limited.

A first crop of 56 women trainees were admitted to two AETIs in 1978 in pursuance of a government policy to have 10% of the student intake assigned to women. This marked a beginning of the Rural Women's extension programme within the Department of Agricul-

tural Extension. By now 208 women VEAs have graduated from AETIs and are posted in the field. However, a number of issues have to be resolved to carry their work forward. Of immediate importance is the organizational and other arrangements needed to provide support to Women VEAs in their field work. A re-examination of the present curriculum and its modification to suit their needs is also considered necessary.

1.3 Induction (Post-entry Pre-deployment) Training

The induction/orientation courses for newly recruited agricultural graduates (to be posted at Thana Level) are being carried out since the last two years at CERDI. These are aimed at acquinting the new officers with DAE organizations, its policies, programmes and methods of work and their role and responsibilities in the field. The functioning of other agencies supporting extension work is also explained. It is expected that as a result of this orientation training the recruits would overcome their sense of strangeness and settle down in their jobs better.

1.4 In-service Training

The DAE is responsible for programming of the periodical in-service training for its staff at different institutes. This training is relatively better organized at the professional level than for the middle level staff. BRRI offers regular courses in rice production, while BARI conducts training for SMSs in various other important crops, such as wheat, pulses, oilseeds etc. The Graduate Training Institute (GTI) of BAU has been organizing courses on extension methodology, water use management, animal husbandry, rural development strategies and techniques etc. Training of AETI teachers in agricultural subjects and training methodology is occasionally conducted at CERDI. They are also running courses for Thana and Subdivisional officers in extension methodology.

In-service training of agricultural technicians (VEAs/UAAs) is conducted at the AETIs. It is also carried out by individual agencies, such as, BADC and BSFC for their personnel. A major bottleneck in running the inservice training for the technicians

is the lack of accomodation and other physical facilities as well as non-availability of funds to meet the board and lodging expenses. A comprehensive overall plan for in-service training is also needed to run the programme in a systematic manner. Such a plan has assumed added importance in the light of merger of extension services and the need to make approximately 3000 field workers (JEAs and others) polyvalent.

Appendix 1 summarises the in-service training courses conducted at various institutes during 1980 and 1981.

1.5 Training Management

The erstwhile Directorate of Agriculture (E&W) was responsible for training of the agricultural technicians. This responsibility has now been taken over by the Training Division of DAE who will plan, organise and coordinate all training activities of the Department. The organizational chart of the Division and its role and responsibilities are given at Appendices II and III.

2. Problems in Extension Training

Although the output capacities of AETIs have increased and they are in a position to meet the manpower requirements of the country, there are a number of problems adversely affecting the quality of training. Some of them stem from policies and procedures adopted by the Government in the past while others relate to the quality and relevance of training.

The policy and procedural bottlenecks include inadequate organizational arrangements for training (ineffective coordinating and supervising mechanism because of involvement of a number of institutions/agencies in providing training to various categories of staff); lack of qualified staff for the Training Division to enable it to perform specialized functions; appointment of trainees at the time of their enrollment to AETIs as full fledged civil servants with the result that they do not devote much time to study as employment is assured; and rapid turnover of teaching staff because of lack of opportunities for career growth within the training system.

The problems effecting the relevance and quality of training have to do with redesigning of the curriculum and training programme, especially in the context of reorganization of extension services; more attention to student practical activities and ensuring that adequate facilities and a minimum level of farm development exists at each AETI; more intensive training of instructors to enhance their teaching skills (training needs assessment, lesson planning, teaching methodology and evaluation); use of AVAs; and provision of sufficient reading and re reference materials.

2.1 Organizational and Institutional arrangements for training

Training designed to change performance of people doing jobs should include both "formal" and "informal" methods. The formal institution - based training is only complementary to the many training activities which must be carried out continuously in the field (on-the-job) largely through informal methods. Training, therefore, should be considered a continuous process and any organisational and institutional arrangement for developing a training system must keep this in view.

The problems faced in instituting an integrated system of training are:

(a) rationalising the training system by establishing an effective coordinating mechanism because of the involvement of a number of institutions/agencies in providing training to various categories of staff

(b) relating the demand for skilled manpower and subsequent arrangements for training to the capacity of the country's economy to pay the costs of training and to absorb staff. Projections of training requirements and arrangements for developing a system must recognise these constraints

(c) considering training an area of specialisation. This implies re-structuring the Training Division to enable it to perform specialized functions, such as, assessment of training needs and evaluation; development of Curriculum, lesson plans etc., promoting use of appropriate instructional methods and techniques

(d) establish linkages within the country and outside between different levels of training with a view to complementing the effort and developing a common understanding of policies and programmes within different categories of staff.

2.2 Job and Career Opportunities

A recent traumatic experience for the AETIs was the mass exodus of all the Instructors due to downgrading of their posts. The difficulties in filling up the posts were augmented bacause of the reluctance of the field staff to work as Instructors without any financial benefit to them. On the contrary they have to give up some privileges which they enjoy in the field. The job and career aspirations of the Instructors, therefore, assumes critical importance in improving the quality of training. The limited opportunities for promotion within the training institutions themselves invariably result in transfer of staff to outside positions. Such movements, which are frequent, again affect the quality of training.

2.3 Systematic Plan of Training

Although training programmes are planned on the basis of job requirements, very little attention is paid to a scientific alalysis of the training needs.

The subsequent steps leading to a precise definition of training objectives, construction of curriculum, preparation of course outlines and lesson plans are also not taken in a systematic manner. Again it boils down to the question of adequate on-the-job training of concerned supervisory and teaching staff in organising training activities. In the context of inadequate expertise within the Training Division convering these areas, it is difficult to provide such continuous on-the-job guidance.

2.4 Training of Trainers

The Instructors of AETIs are drawn from the DAE. For effective teaching they should not only possess adequate subject matter knowledge and field experience but should also have skills in communication.

The majority of staff at the AETIs are fresh graduates with only two or three years field experience as Thana Extension Officers. They lack pedagogic skills. It is important that the Instructors are continuously trained in teaching methods and techniques apart from updating their subject matter knowledge.

2.5 Use of Appropriate Instructional Methods and Training "Aids"

Attempts are underway to introduce better instructional methods and techniques in conducting training courses. This, however, has to be further intensified. A variety of participatory instructional methods could be used, especially for refresher courses. Also much greater use has to be made of AVAs and other training devices in order to enhance the effectiveness of training. The lack of sufficient reading and reference materials and text books at the AETIs gives little opportunity to develop self-study habits and to actively participate in the learning process.

2.6 Follow-up and Evaluation

The organisation of various training courses for staff is an important step in improving their efficiency. However, it must be followed by an evaluation of these courses in terms of changes in knowledge, skills, attitude and behaviour. A system already exists for evaluation before the trainee's return to his job. Very little has been done so far in follow-up of trainees on their job and in evaluating the "ultimate outcome" in terms of changed job behaviour.

2.7 In-service Training of Staff

Although the need for in-service training of staff is recognised, arrangements for organising them have been inadequate. An overall plan for training of various categories of staff together with identification of institutions and agencies responsible for such training (like GTI, BRRI, CERDI, AETIs) has recently been prepared by the lack of physical facilities and financial resources for implementing a comprehensive in-service training programme is an impediment. The task of upgrading the knowledge and skills of extension staff, more particularly of those at the field level (JEAs/others) and continuously updating their (UAA/VEA/JEA) knowledge is an enormous

one. It justifies setting apart a few AETIs only for in-service training activities. These along-with institutions, such as, GTI, cerdi, brri, bari within the framework of a master plan of in-service training, could then be expected to make a dent into this problem.

## 2.8. Training in Management and Supervisory Functions

The senior management staff of DAE have generally come from technical backgrounds. They are usually promoted into supervisory and management positions without any planned training for their new managerial jobs. The supervisory staff (such as TEOs, DEOs, SMSs) have also a dual role of being both supervisor and trainer. But they have received very little training in interpersonal communication process. The need for planned management training, therefore, can be hardly overemphasised. It should comprise of basic principles of management techniques, principles of supervision and supervisory techniques and communication process. Only a beginning has been made in providing such training.

## 2.9 Training of Women Village Extension Agents for Work with Rural Women

Historically there has been no involvement of extension services in work with rural women and youth, the two important constitutents of the "family" approach to extension. The recent steps taken by the Government to build up a cadre of trained women VEAs needs to be followed by:

- a clear definition of tasks and responsibilities of women VEAs.
- the development of an organizational structure within DEM to support the work of women VEAs.
- a re-examination of the curriculum with a view to ensuring an integrated approach to the development of the training courses for women VEAs (understanding of the total agricultural system and management of family resources).
- a study of the question of developing one or two AETIs exclusively as women's AETIs as against co-educational AETIs as planned now.

- provision of laboratory and other facilities (including aids and educational materials) for the AETIs involved in training women VEAs.
- linkage with other institutions and agencies for inservice training a Instructors in Home Economics and for training of supervisory personnel in rural women's programmes at institutions like BAU etc.

A begining has also to be made in organising and training village youth in improved production practices so that they may assist their families in better management of the available resources for food production and income generation and for shouldering future responsibilities.

3. Recommendations

3.1 Over the last decade or more a systematic effort has been made by the Department of Agriculture to strengthen organization and institutions within it that provide support to a comprehensive training programme. A continuous programme of training of staff has also been instituted. This commendable effort has, in recent years, been supported by external assistance received from IDA, DANIDA, Japanese Government and UNDP/FAO.

The IDA credit (621-BD) has expanded and sought to improve agricultural and rural training through the construction of: (a) 3 new AETIs and expansion of 4 existing ones, (b) the Graduate Training Institute of BAU, (c) Rural Development Academy at Bogra, and (d) 15 Thana Training Units. DANIDA has assisted GOB in construction of a new AETI at Begumganj, Noakhali. The Assistance from the Japanese Government has involved setting up the Central Extension Resource Development Institute (CERDI) at Joydebpur. The FAO/UNDP Project on "Strengthening the Agricultural Extension Services" has provided expert service, equipment and fellowships designed to improve the quality of training.

The efforts made by the Government and the support given to it through external assistance have led to the creation of a sound base for an effective training system. However, the problems associated with the quality of training need to be resolved, especially

in view of the reorganization of extension services and induction of a large number (over 3000) of village level workers with verying background, experience and training. The recommendations that follow seek to address some of these problems.

## 3.2 General Considerations

The purpose of training is to provide specific skills for clearly defined tasks. It is a process by which people learn to develop new knowledge, skills and attitudes so that they become confident to put their learning into practice. It basically involves solving problems concerned with human performance.

Training has to be viewed within the total system of human resource development. In case of staff, such a system should be looked upon as a continuous process starting with education and training prior to their joining the service, their induction or orientation to the work soon after they are assigned a job, a programme of in-service/on-the-job training, both formal and informal, spread throughout their service career, and a work environment in which the knowledge and skills acquired can be put into practice.

The "institution based" training conducted at the training Centres should, therefore, be complementary to the many training activities which must be carried out continuously in the field (on-the-job) largely through informal methods. In an extended system of training such as the one envisaged here formal and informal institutions and methods have to be combined to realise the full impact.

The full benefit of training can only be derived if it covers all staff at each level. The system should, therefore, provide for a "multiplier effect" of training to reach the vast numbers of staff in the field. Although, emphasis has to be given to the training at grass roots level, the training system must necessarily include training of staff at the middle and senior levels as well.

For the training to have an impact in terms of improved job performance, the focus should shift from "generalised" to "specific" training so that it is more "problem and job oriented".

The effectiveness of training is contingent upon developing a firm institutional base (both formal and informal) and a system that "reaches out" and concerns itself with conversion of learning to "on-the-job" behaviour. It also implies that effective links should be established between training at various levels.

3.3 Specific Suggestions for Qualitative Improvement of Training

Within the broad context of the above general considerations, the following suggestions are made to improve DAE's training activities.

3.3.1 The elements of an integrated training system combining "formal institution - based" training with largely "informal field-based on-the-job training" already exist. These have been further reinforced by creation of a Training Division within DAE which will be responsible for planning, implementing and coordinating all training activities.

The inclusion of CERDI within the Division has also removed an anomaly which had earlier kept it in relative isolation from the mainstream of training activities.

A number of defeciencies, however, still exist which need to be removed to make the system work effeciently. These are:

(a) Lack of specialisation within Training Division with the result that it cannot perform its specialized functions.

(b) Organizational and Operational defeciencies of CERDI.

(c) Ineffective coordinating and linkage mechanism resulting in unsatisfactory use of facilities available within the country as well as outside for training.

(a) Training Division as a Specialist Unit

The primary responsibility of the Training Division is to plan and implement training programmes of DAE. It should,

therefore, be manned by training process specialists rather than only managers (or administrators) of training. This is frequently ignored in most organizations. Very often courses are planned and conducted by subject matter content specialists with the help of staff of Training units who are primarily concerned with managerial and administrative aspects of training.

"Training" is a discipline in itself. There are interrelated and integrated components of the training process that form a system. The process starts with the determination of training needs (a job/task analysis to determine the gap between what the trainees can do and what they should be able to do), formulation of training objectives, selection and organization of subject matter content, the selection and use of appropriate instructional methods and media, and a plan for evaluation both at the "training site" and follow-up supervision of trainees in the field.

In order to perform the above functions it is necessary to introduce specialist staff in the Training Division. It is, therefore, recommended that apart from the "general purpose" administrators of training, the Division should include:

(i) Specialist in course design (development of curricula, lesson plans etc.).

(ii) Specialist in Instructional techniques (Pedogogy).

(iii) Training Evaluation Specialist.

(iv) Agricultural Manpower planning specialist.

(v) Home Technology and Family Resources Development Specialist.

(Note: The Specialist in Preparation and Production of Teaching Materials and Aids should be located at CERDI).

(b) Organizational and Operational Deficiencies of CERDI

The functions and responsibilities of CERDI impinge, overlap and duplicate the functions of other agencies, such as, BARI, BRRI, AIS and DAE as will be seen from the Table below:

| Functions | Remarks |
|---|---|
| (i) Collection, analysis and testing of research findings (verification/ demonstration trials at CERDI farm, around community Development Centres as well as around AETIs) | This deplicates the functions of BRRI, BARI & DEM. Such trials should be carried out directly by the Research Instituted; the results incorporated in suitable "packages of technologies" and disseminated by DAE (using demonstration and other techniques). It is not practical for separate institution like CERDI to have this dynamic bridging function between research institutes and the extension service. |
| (ii) Trial of agricultural machinery, equipment and tools and identification of types suitable for Bangladesh conditions. | Again trespassing the existing functions of BARI etc. |
| (iii) Development of extension methods and materials (CERDI has brought out some publications on rice cultivation, horiticulture etc.) | The extent to which BRRI, HDB etc. have been involved in checking the authenticity of the texts is not known. CERDI's isolation acts against close collaboration. |
| (iv) Information activities. | No clear cut demarcation between roles of AIS & CERDI. |
| (v) Training and Guidance. | Responsibilities of other institutions, such as, BRRI, GTI vis-a-vis CERDI not clearly defined. |

The functions assigned or intended to be assigned to CERDI have also resulted in the development of an organizational structure which duplicates the technical units of the Research Institutes (Agronomy section, Soil and Fertility section, Farm Mechanization Division Etc.) This is neither necessary nor desirable.

The other organization and operational problems facing CERDI are:

(a) continuous change in CERDIs leadership and lack of direction.

(b) CERDI's relative isolation and lack of coordination with other Institutions/Agencies.

(c) Poor staffing.

(d) Inadequate funding.

Given the organizational and resource constraints of CERDI, and the present activities of the more established institutions/ agencies in the area of agriculture training, research, and extension, CERDI should probably concentrate its activities in the areas which these institutions have not been able to cover, rather than overlap of duplicate certain activities.

CERDI should probably concentrate in areas which no other agency/institution in Bangladesh has conducted intensively and systematically. The four major areas are:

(1) Professional management (including programme planning, monitoring and evaluation) training for mid-level and senior agriculture extension personnel.

(2) Instructional/educational design and development (including training methodology, use of instructional technology or media, etc.) training for agriculture extension trainers (e.g. AETI instructors, DTOs, SMSs, SMOs, etc.)

(3) Planning, development, packaging, and production (at least the prototype) of agriculture extension training materials for pre-service and in-service training programmes, including experimental and innovative learning packages or modules, as well as their audiovisual support materials.

(4) Operate a farm machinery workshop, and use it also as a practical training facility on the development, use, and maintenance of appropriate farm equipment.

3.3.2 The Suggested Set-up

Conceptually, the suggested CERDI set-up would thus consist of (1) Instructional Design and Development Unit, (2) Agricultural Management Development Unit, (3) Farm Equipment Adaptation Unit, (4) Training Materials Development and Packaging Support Unit, and (5) Administrative Support Unit. The functional/organizational charts of the conceptual setup are attached as Annexes IV and V.

Operationalization of the above conceptual set-up would require new (and or additional) personnel for the Agricultural Management Development Unit, the Instructional Design and Development Unit, and probably for the Training Materials Development and Packaging Support Unit. But the required staff changes can easily be made from within the approved posts. The staff would, however, need specialised training in their areas of responsibilities. Any outside assistance (including that of the Japanese Government) should conform to the changed requirements.

In terms of physical facilities, no major additions seem to be required except residential accommodations facilities.

Coordination and Linkage Mechanisms

The Government has established an Inter-ministerial National Committee on Rural Training (NCRT) to plan, review and coordinate the on-going rural training programmes and policies. However, for planning and supervising training activities of DAE it is suggested that a small Coordinating Committee should be established within the Ministry of Agriculture with the following membership:

| | | |
|---|---|---|
| (i) | D.G. DAE | Chairman |
| (ii) | Directors, Field Services, Cash & Food Crops, Plant Protection - | Members |

(iii) Representatives of BARC, BADC, BRRI, GTI (BAU) - Members

(iv) Director, Training, DAE - Member Secretary

The Committee should be made responsible for examining the performance of existing Training Institutes in relation to requirements, establish and approve a comprehensive long term plan for training (both in-country and overseas), review progress and resolve any major policy issue on training.

The secretariat of the committee should be located in the Training Division. The linkage within the proposed integrated training system is given in Appendix VI.

3.3.3 Manpower Requirements

In recent years a number of studies have been carried out on projection of manpower requirements, the most comprehensive being the 1979 FAO Agricultural Manpower Study of Bangladesh, The Ministry of Agriculture had also recently (September '82) undertaken an in-depth review of the demand and output of VEAs upto 1990.

The studies show that at the professional level, there will be adequate supply of trained manpower to meet projected needs until 1990. In case of VEAs the Table 3 below shows the demand and supply upto 1990.

Table 3 - VEA Demand and Supply - 1990*

A. Demand

| Organisation | Stock 1982 | Requirements 1990 |
|---|---|---|
| Dept. of April. Extension (post-merger) | 11,300 | 10,500 |
| B.A.D.C. | 700 | 1,300 |
| CDB | 200 | 200 |
| BARI & BRRI | 450 | 700 |
| SCA | 40 | 40 |
| Sugar Corporation | 1,500 | 1,500 |
| Other Agencies | 1,000 | 1,000 |
| | 15,250 | 15,240 |

* Taken from a note prepared in the Ministry of Agriculture.

B. Supply

| | |
|---|---|
| 1982 stock in 1990 due to attrion - | 11,600 |
| Add new 1982 graduates available for posting - | 1,297 |
| Cumulative output from 7 AETI's in 1990 (at 75 per AETI for 6 years from 1985 to 1990) - | 3,150 |
| Total : | 16,047 |

It is, therefore, recommended that 7 AETIs should be exclusively set apart for pre-service training of VEAs. The remaining 4 (or 5) should be continuously used for in-service training (upgrading courses) for VEAs/UAAs/JEAs.

3.3.4 AETI Trainees Enrollment

The present practice of appointing trainees as VEAs upon their enrollment to AETIs has adversely affected the quality of training. The students are not serious about their studies as their employment is assured from the day they enter the AETIs. Although the adverse effect of this policy has been recognized for long, the Government has not made any move to change it. It is recommended that urgent action should be taken to bring about the change and only employ the students as VEAs (or in other positions) after they have successfully completed the course. The award of TK.220.00 per month as training allowance should be replaced by an offer of scholarships based on academic achievements and economic needs. The students passing out of AETIs should be eligible for employment in all agricultural organisations, such as, Research Institutes, BADC, etc.

3.3.5 Job and Career Opportunities for AETI Instructors

As pointed out earlier (para 2.2), another policy of the Government which had a negative effect on VEA training was the decision, in October 1978, to down grade instructors posts. The Government has now restored four posts in each

AETI to the senior grade level. With the restoration of senior level positions, a career ladder for teachers has emerged. It should result in slowing down the turnover of staff. The development of a career ladder for teachers is essential if the quality of instruction at AETIs is to improve.

### 3.3.6 Course Design and Curriculum Development

Preliminary work on development of the new curriculum has been completed. It is suggested that a Syllabus Committee should scrutinise the curriculum with a view to ensuring that it reflects the needs of all user agencies and finalise it as soon as possible. A separate curriculum will be necessary for women VEAs.

The proposed course design includes the following three aspects:

(i) theoretical instruction
(ii) practical work as AETI campus
(iii) field work in villages

In order to ensure that the above design will lead to a job-oriented training, more time should be given to student practical work. The present ratio of 52:48 between theory and practice should be titled in favour of latter. The proposal to increase the duration of off-campus field experience programme (village work) from the present three months to almost one year needs be carefully examined. It has, however, to be ensured that the field work in villages is organised under the guidance and supervision of AETIs but in close collaboration with DAE field staff. The provision of adequate facilities leading to further farm development at most AETIs (land levelling farm lay-out, irrigation, fencing, etc.) is considered essential for an effective practical training.

A beginning has already been made in the preparation of lesson plans. As further experience is gained, these lesson plans should be revised and updated.

### 3.3.7 Training of Instructors

During the last two years all AETI Instructors including the Principals have been given basic training in Teaching Methods and Techniques. However, this training by itself is not sufficient to bring about a lasting improvement in quality of teaching. It should be supported by:

(a) Organization of trainers training courses at CERDI on a continuing basis, and

(b) a close follow-up and on-the-job assistance to AETI Instructors in development and use of lesson plans and a variety of instructional techniques and "aids". CERDI should be made responsible for this follow-up work.

### 3.3.8 Agricultural Manuals and Text Books

The lack of sufficient reading material has been identified as an important bottleneck in effective teaching. AETI libraries are poorly stocked with books and reference materials, although very recently about 300 titles (books, periodicals, etc.) have been supplied under the IDA credit and by FAO/UNDP Project on Agricultural Extension. There is, however, an urgent need to produce manuals designed to serve the dual function of student text books and reference guides for VEAs in the field. It is recommended that the development of such manuals should be started as soon as possible. An earlier assessment had indicated that about 15 to 20 subject matter areas need to be covered (see Appendix VII for details).

### 3.3.9 Evaluation and Follow-up

The purpose of evaluation of staff training activities is to assess the lacunae in terms of job performance of trained staff so that steps could be taken to improve them. A system of continuous follow-up should be developed by the Training Division involving both CERDI and AETIs.

In an integrated training system where "formal" and "informal on-the-job" training activities are expected to reinforce each other, the responsibility for follow-up should largely rest with the Training Institutions. It is recommended that apart from the national level staff of the Training Division, the follow-up visits to their clients should be undertaken by CERDI and AETIs on regular basis. Such visits should be carried out on the basis of clearly worked out evaluation plans.

3.3.10 Agricultural Management Training

In the long run CERDI's capabilities for organising agricultural management training should be built up. Such a training has necessarily to cover middle level managers and supervisors in addition to senior management staff. They have to be given training in management techniques and assisted with using these techniques to improve management efficiency. For this purpose CERDI should be equipped with full-time trainers on deputation from DAE for 3 to 5 year period and also provided with other facilities. It is understood that a Consultant's report on Coverdale's Training Programme (Phase I) deals with these aspects in detail. Perhaps this could form a basis for developing specific recommendations and for further follow-up action.

3.3.11 In-Service Training

The bulk of effort in in-service training of staff has to be directed to three categories:

(a) VEAs/UAAs/JEAs

(b) SMSs/SMOs

(c) AETI Instructors

In addition some training for supervisory (TEOs/TAOs) and middle/senior managerial staff (ADAs/Dy. DAs/Regional Directors/Directors) would be necessary.

Priority should be given to upgrading courses for JEAs and village level functionaries of other departments marged in DAE. The total number of such staff is estimated at approximately 3,000. They are to undergo a one year upgrading course for which a curriculum has already been developed.

Four of the AETIs should be set apart for continuously organising upgradational and refresher courses. On the assumption that AETIs, Gauripur and Tejgaon would not be closed down before 1985 (Tejgaon to be replaced by a new AETI at Joydebpur in 1986) and two more AETIs (with a capacity for 240 trainees each) would be immediately available for organizing the course, the entire lot can be trained by 1986-87 as indicated below:

Table 4: Output of Block Supervisors (1 year upgrading course)

| Name of AETI | 1983-84 | 1984-85 | 1985-86 | 1986-87 |
|---|---|---|---|---|
| 1. Gouripur | 120 | 120 | - | - |
| 2. Tejgaon | 170 | 170 | 170 | - |
| 3. AETIs (with 240 trainees capacity each) | 480 | 480 | 720 | 960 |
| | 770 | 770 | 890 | 960 |

It should also be possible to organize a limited number of in-service refresher courses for UAAs/VEAs who had either no training or some ad-hoc training in the past. The exact number to be trained would depend upon the space available (including the setting up of the In-serviceTraining Centre at Tajhat).

In the reorganised extension service there will be three categories of SMSs: Sr. SMSs/SMSs/SMOs, numbering about 1,000 in all. Their training programme has largely to deal with latest agricultural technologies and extension/communication methods and techniques. Attempt should be made to cover all the SMSs during the five year period from 1983-87, as indicated in the Master In-Service Training Plan prepared by DAE.

As mentioned earlier, a teacher training programme for AETI Instructors should be established at CERDI on a continuing basis. All teachers must undergo a course (2 to 3 months duration) covering such subjects as lesson planning, methods and techniques of teaching agriculture, course evaluation and educational psychology.

Adequate financial provisions (including allowances for board and lodging) should be made for conducting in-service courses.

3.3.12 Training of Women VEAs

Recently there has been some in-depth examination of women VEAs activities. The results of this examination are not known but a few steps considered necessary to further improve the programme are:

(a) Providing for expert service(s) in the Training division for development of Home Technology and management courses and for the implementation of pilot field extension programmes being carried out by women VEAs.

(b) Developing only 2 or 3 AETIs for women VEAs training rather than spreading it over a number of Institutes.

(c) Equipping the selected AETIs with laboratory and other facilities.

(d) Incorporating and necessary chantes in the curriculum so that it is more oriented to meet women VEAs needs.

(e) Establishing linkages with other Institutes (Food and Nutrition; Institute for Health and Sanitation; Home Science College etc.) for in-service refresher training of women VEAs.

In the long run, the possibility of setting up a Home Development Education Section with the Department of Agricultural Extension and Teachers Training at BAU needs to be

explore. Such an arrangement will ensure a continuous supply of trained women supervisors to guide and support the work of women VEAs.

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Appendix-I

In-service Training Courses conducted during 1980 and 1981

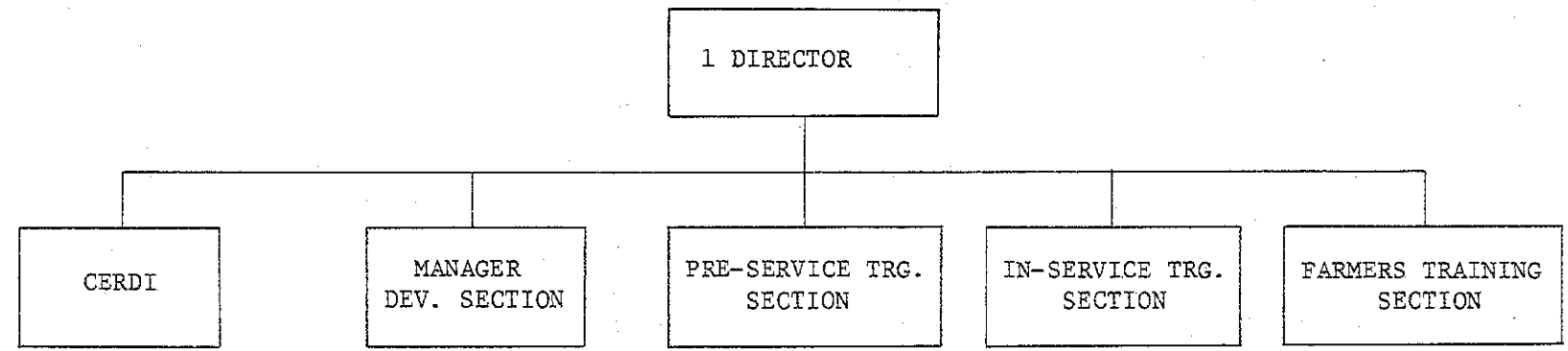
| Sl No. | Type of Training | Location | Duration | Period | No. of artici-pants | Designation |
|---|---|---|---|---|---|---|
| 1. | Training Methodology and Subject Matter. | CERDI | 2 weeks | 1/80 | 21 | AETI Instructors. Agronomy-I & Agronomy-II. |
| 2. | Training in Rice Production and Extension Methods. | BRRI | 4 months | 2/80 | 38 | SADOs,TEOs. |
| 3. | Workshop on Modern Methods of Wheat and Rice Cultivation. | BRRI | 3 days | 2/80 | 174 | Senior Officers Res. Scientist, Extension Officer of 16 Different Organization. |
| 4. | Five-2 Day Workshops on Intensive Aus. Cultivation Programme. | BRRI | 2 day 5 | 3/80 | 250 | TAOs. |
| 5. | Intensive Methods of Rice Cultivation. | BRRI | 3 weeks | 5/80 | 40 | TAOs. |
| 6. | Workshop on T&V Approach to Extension Programme. | BRRI | 2 days | 5/80 | 200 | DA,ADA,RDA, DEOs,SMS & Others. |
| 7. | Workshop on Second Five Year Plan. | COTA | 2 days | 6/80 | 60 | Directors-Agri. P.P. Jut. Hort. Tobacco Cotton, Sugar Cane etc. & Other Senior Officers. |
| 8. | Training Cum-Workshop-Rice Production Problems with Special Reference to ITAP. | BRRI | 2 days | 7/80 | 38 | Sr.SMS,SMS, DTO,RD. |
| 9. | Rice Production and Extension Methodology. | BRRI | 4 months | 8/80 | 27 | SMS,SDAO,TEOs. |
| 10. | Handling Soil Testing Kits. | GTI | 4 days | 8/80 | 10 | AETI Agron. Instructors. |
| 11. | Training Methodology. | CERDI | 15 days | 9/80 | 22 | AETI Instructors Hort. & Plant Patho. |

| Sl No. | Type of Training | Location | Duration | Period | No. of Participants | Designation |
|---|---|---|---|---|---|---|
| 12. | Improved Agricultural Technology and Extension Methods. | CERDI | 1 week | 10/80 | 38 | TAOs. |
| 13. | Improved Agricultural Technology and Extension Methods. | CERDI | 1 week | 11/80 | 39 | TAOs. |
| 14. | Improved Agricultural Technology and Extension Methods. | CERDI | 1 week | 11/80 | 20 | TAOs. |
| 15. | Rice Production and Extension Methodology. | BRRI | 3 weeks | 11/80 | 33 | TAOs. |
| 16. | Training in Workshop Tools, Machines, Engines and their maintenance. | CERDI | 2 weeks | 12/80 | 11 | AETI Farm Mechanics. |
| 17. | Refreshers course: Farm Machines and Maintenance. | CERDI | 2 weeks | 1/81 | 18 | AETI Overseers. |
| 18. | National Workshop on Rice Production Technology. | BRRI | 4 days | 2/81 | 86 | DA,ADA,RD,DEO, AETI Principal, CPS,BADC,CERDI, BARI Staff. |
| 19. | Intensive Cultivation of B. Aman. | BRRI | 1 day | 2/81 | 28 | TEOs,UAAs. |
| 20. | Refreshers course: Extension Methodology. | CERDI | 2 weeks | 3/81 | 21 | TEOs. |
| 21. | Subject Matter Specialist Training. | BRRI | 4 months | 3/81 | 18 | SDAOs,TEOs. |
| 22. | Induction Training. | GTI | 7 weeks | 3/81 | 29 | TAOs. |
| 23. | Training in Extension Methods. | CERDI | 2 weeks | 3/81 | 21 | TAOs. |
| 24. | AETI Principals Workshop: Strengthening Abilities in Management of Agri. Training Institutes. | AETI Tejgaon | 10 days | 3/81 | 23 | AETI Principals, DTOs & CPSs. |
| 25. | Leason Plan Writers Workshop. | -do- | 4 days | 3/81 | 12 | AETI Principals & AIS Officers. |
| 26. | Induction Training. | GTI | 7 weeks | 5/81 | 20 | TEOs. |

| Sl. No. | Type of Training | Location | Duration | Period | No. of Partici-pants | Designation |
|---|---|---|---|---|---|---|
| 27. | Training Methods and Techniques. | AETI Tejgaon | 2 weeks | 8/81 | 36 | AETI Instructors. |
| 28. | Research Review Workshop. | Reg. Res. Station, Ishurdi | 3 days | 8/81 | 27 | Research, and Extension Staff. |
| 29. | Training Methods and Techniques. | AETI Tejgaon | 2 weeks | 9/81 | 41 | AETI Instructors. |
| 30. | Crop Production Technology and Extension Methods. | CERDI | 2 weeks | 9/81 | 28 | TEOs/TAOs. |
| 31. | Crop Production Technology (T. Aman) | AETI Ishurdi | 1 week | 9/81 | 20 | VEAs. |
| 32. | Rice Production and Extension Methodology. | BRRI | 4 months | 10/81 to 2/82 | 17 | SDAOs/TEOs. |
| 33. | Crop Production Technology and Extension Methods. | CERDI | 10 days | 10/81 | 20 | SDAOs/TEOs. |
| 34. | Crop Production Technology (Rabi Crops) | AETI Ishurdi | 1 week | 10/81 | 20 | VEAs. |
| 35. | Lesson Plan Writing. | AETI Tejgaon | 10 days | 11/81 | 15 | AETI Principals. |
| 36. | Crop Production Technology and Extension Methods. | CERDI | 10 days | 11/81 | 19 | TEOs. |
| 37. | Crop Production Technology and Extension Methods. | CERDI | 10 days | 12/81 | 22 | TAOs. |
| 38. | Research Review Workshop. | Reg. Res. St. Ishurdi | 4 days | 12/81 | 64 | Research and Exten. Staff. |

ORGANIZATION & PERSONNEL CHART

TRAINING DIVISION



Roles and Responsibilities of Training Division and its Functional Units.

Training Division

- Assesses training needs, develops curricula, training aids and materials for the institutes and for specialized training programmes.

- Provides staff assistance to Director-General and other Directors on matters relating to staff development and training.

- Exercises line functions over CERDI and all AETIs and ensures that their programmes are in tune with the trained manpower requirements of the Department.

- Ensures that a systematic programme of training is organized either internally by the Division or with the help of other institutes/agencies for staff at each level.

- Plans and administers fellowship/scholarship programmes for overseas training on behalf of the Department.

- Evaluates and continuously analyses the effectiveness of training programmes and takes appropriate steps for introducing changes when necessary.

Functional Units

a. CERDI

1. Conducts field studies, develops, organizes and evaluates specialized training programmes for the Instructors of AETIs and middle level officers of the Department of Agricultural Extension. These courses should focus on development of extension methods, materials and instructional techniques.

2. Coordinates and arranges the services of resource persons/facilitaters including training institutions required in the conduct of the Specialized Training Programme at CERDI.

3. Propares, develops, packages and produces in cooperation with the concerned institutions/divisions teaching materials and aids for its own use and use of other Training Institutions.

4. Establishes and keeps a continuing record of all personnel who have undergone and completed Specialized Training Programmes at CERDI and provides follow up guidance to enhance the effectiveness of their training.

5. Develops and executes an integrated programme for total development of the farmers and their family members on a pilot basis (technical knowledge and support in the field of Agriculture and Home living) through three (3) Community Development Centres established at Naojor, Porabari, and Bhabanipur villages under Joydevpur P.S.

b. Manpower Development Section

1. Maintains an inventory of trained manpower and the records of training received by the technical and administrative staff of DAE.

2. Studies and continuously updates information on trained manpower requirements of the department keeping in view factors, such as, increase in intensity of cropping, diversification attempts, special tarust programmes, etc.

3. Matches availability with requirements and establishes a system for manpower planning and determining agricultural training needs.

4. Reviews and fermulates proposals for career development of the department staff taking into consideration, among others, job requirements, manpower capabilities and related training needs.

5. Plans and administers fellowship/scholarship programmes for local and overseas training on behalf of the department.

6. Evaluates training programmes with a view to determining their effectiveness and suggests appropriate changes wherever necessary.

c. Pre-service Training Section

1. Coordinates and exercises supervision over the functioning of all AETIs in the country (administration, student intake and management, farm operations, care and maintenance of buildings etc.).

3. Ensures that the training at AETIs as well as in the field is carried out as planned and takes appropriate measures for effective supervision.

4. Organizes training of instructors with the help of CERDI and other and institutions.

5. Makes assessment and arranges for the provision of adequate teaching materials and aids (including books, periodicals etc.) for use at AETIs.

6. Conducts periodic examinations, assessment and evaluation, etc. as required.

7. Establishes and keeps a continuing record of all personnel who have undergone and completed pre-service training.

d. In-service Training Section

1. Coordinates and supervises all in-service training programmes of the Department.

2. Assesses training needs and develops courses and curricula in cooperation with the Manpower Development Section and other Divisions/ Institutions and arranges for the organization of such courses at most appropriate Institutions.

3. Coordinates and arranges the services of resource persons/facilitaters coming from within and outside of the Department.

4. Helps Manpower Development Section to evaluate the effectiveness of in-service courses and undertakes appropriate changes as necessary.

5. Establishes and keeps a continuing record of all extension personnel who have undergone and completed in-service training programme.

e. Farmers' Training Section

1. Coordinates and supervises the institutional short duration training of farmers-leaders, progressive farmers to complement the efforts of field extension staff in technology transfer.

2. Assesses training needs of farmers and develops courses and curricula in cooperation with the field extension personnel and Divisions concerned.

3. Coordinates and arranges the services of resource persons/facilitators coming from within and outside of the Department.

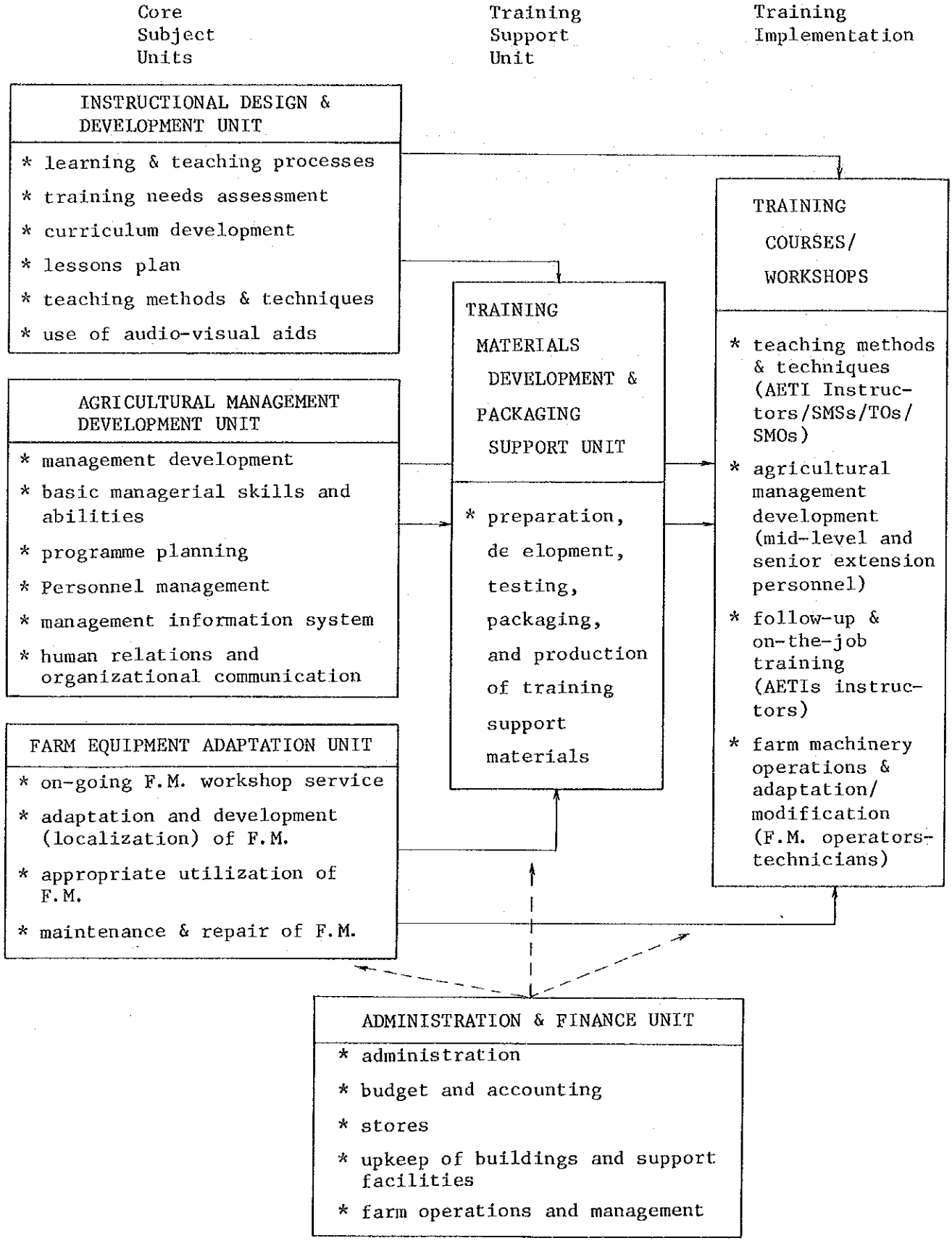
4. Explores and tries out various approaches to farmers training with a view ultimately to institutionalizing them.

5. Helps Manpower Development Section to evaluate the effectiveness of such training activities and make changes as required.

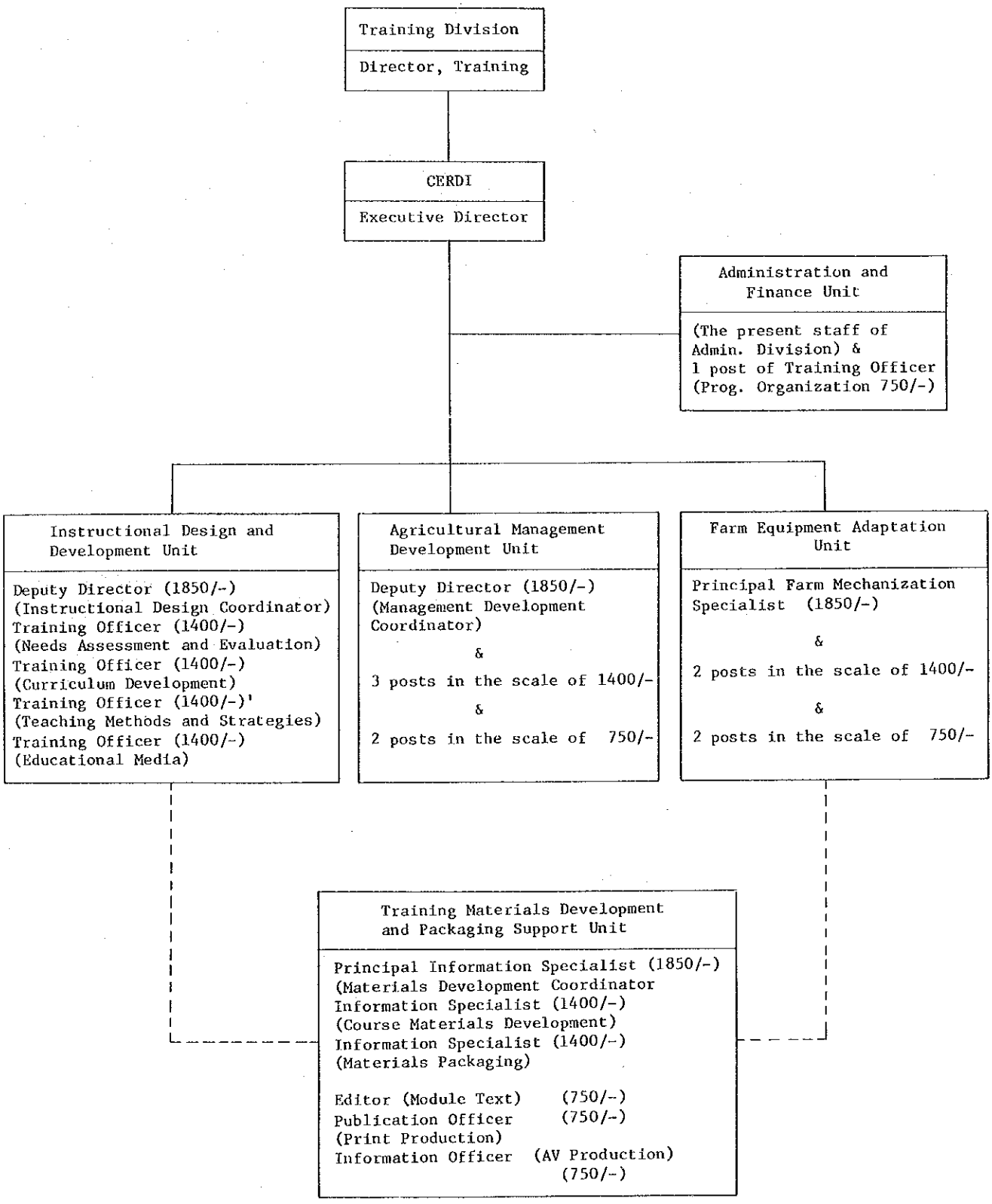
6. Establishes and keeps a continuing record of all farmer leaders who have undergone and completed a farmers' training programme.

Appendix-IV

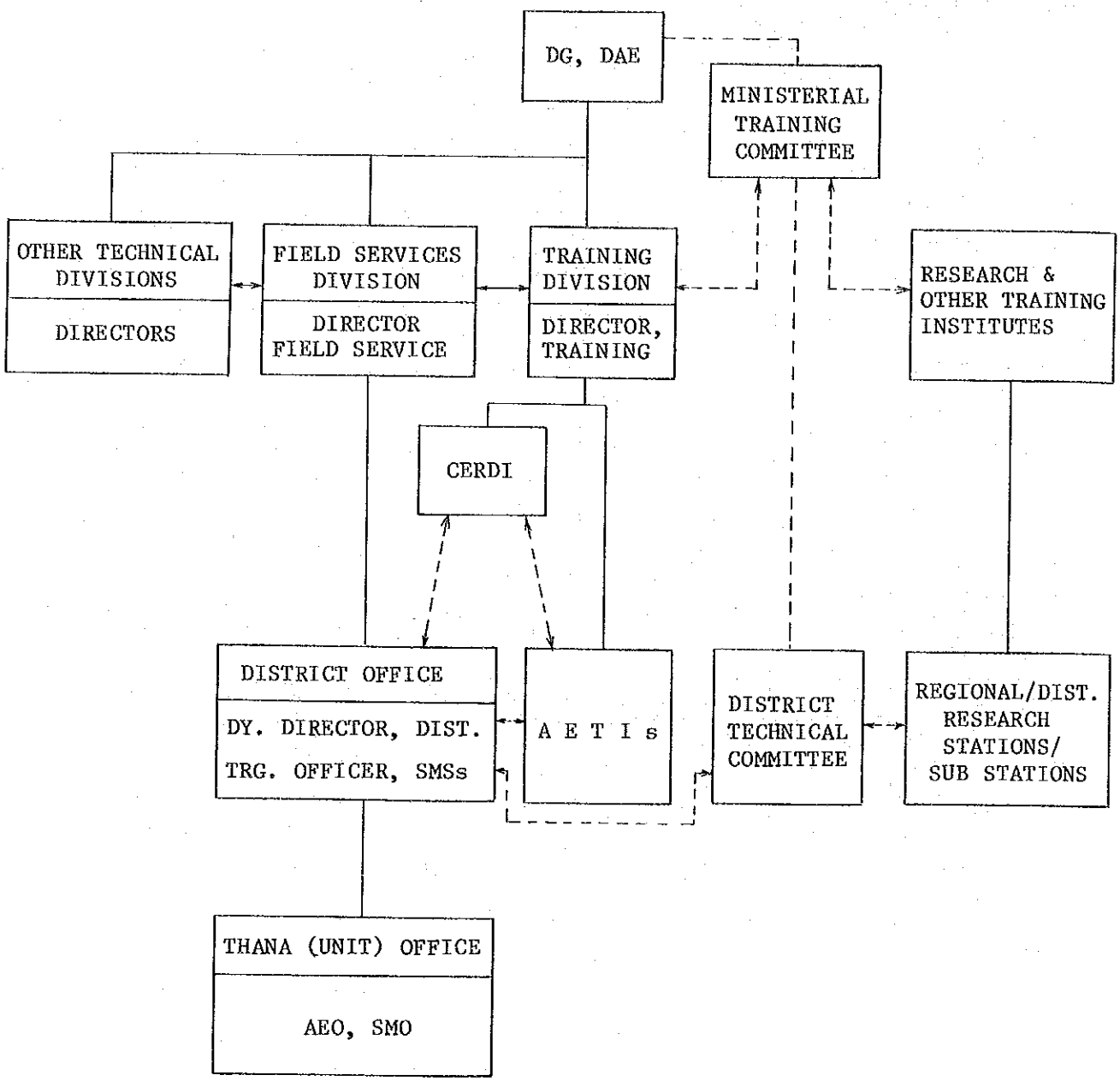
Suggested Conceptual Set-Up for CERDI's Functional Systems-Activity



Suggested Organizational Structure (Core personnel only) of CERDI



Linkage Mechanism of DAE's Integrated Training System



List of reference materials for use of VEAs, DAE

A. General Agriculture

1. Agriculture in the economy of Bangladesh.
2. Management of Agriculture at Thana/Union levels (Planning and Implementation of Agricultural Production Programmes).
3. The modern farm business.
4. High Yielding Varieties of crops and their characteristics.
5. Effective use of irrigation water.
6. Hand-book of manures and fertilizers.
7. Pests and diseases of crops.
8. Weeds and their control.
9. Improved agricultural implements and their use.

B. Field Crop Production Guides

1. Rice
2. Jute
3. Wheat
4. Pulses
5. Oilseeds
6. Sugarcane
7. Cotton
8. Tobacco
9. Roots and Tubers (Potato).

C. Livestock and Fisheries

1. Hand-book of animal husbandry (including large and small (goats and sheep) animals)
2. Backyard Poultry/Duckery production
3. Freshwater fish farming

D. Post Harvest Operations

1. Principles and practices of Grain and Seed Storage
2. Marketing of agricultural products

Evaluation Team

| | | |
|---|---|---|
| 1. | Mr. A.K.M. Mansur | Director<br>Department of Training, MOA |
| 2. | Dr. A.T.M.S. Huda | Joint Secretary<br>Agriculture and Forests Division, MOA |
| 3. | Mr. A.N.M. Huda | Director<br>Central Extension Resources Development Institute, MOA |
| 4. | Mr. F. Rohman | Additional Director<br>Field Service Division, MOA |

# AGREED MINUTES

## 合同委員会議事録及びパ側からの要請書

9. AGREED MINUTES ON THE EVALUATION OF CERDI PROJECT BY THE BANGLADESH AND JAPANESE EVALUATION TEAMS HELD DURING JUNE, 1983

1. The current agreement between the Government of the People's Republic of Bangladesh and the Government of Japan on CERDI will expire on October 12, 1983. The Government of Japan despatched an Evaluation Team in May, 1983 to evaluate the Project and make suitable recommendations on future project operation. The Team prepared an evaluation report and made it available for perusal by the concerned officials of the Bangladesh Government.

2. The Bangladesh Government had also constituted a Committee to examine the role and future direction of CERDI. The report of the Committee was prepared in time to make it available to the visiting Japanese Evaluation Team.

3. The two Evaluation Teams discussed and considered the various recommendations contained in the two Evaluation Reports on CERDI prepared by them.

4. Both the teams expressed their satisfaction on the overall performance of CERDI activities as per agreement despite severe rescure constraints of the Bangladesh Government.

5. After detailed discussion, the two teams agreed on the following statements:-

   (a) The functions of CERDI as envisaged in the Agreement need re-definition in view of the creation of the Department of Agricultural Extension and the assigned role of BARI, BRRI and AIS;

   (b) There is need for upgrading the training capability of CERDI;

   (c) There is need for construction of staff quarters for making CERDI fully operational under the responsibility of GOB.

6. In view of the above, the following recommendations were made:-

   (a) CERDI should be fitted as an apex training institution within the Department of Agricultural Extension by concentrating on the following areas:-

i) Professional agricultural management training

ii) Instructional training design and development & training of trainers;

iii) Planning, development and production of agricultural extension training materials; and

iv) Operating a farm machinery workshop for training purposes

(b) Japanese co-operation may be extended for a further period of two years and may confine to areas identified at (a) above.

7. For the above, the two Evaluation Teams request to the respective Government to take necessary measures to implement the project.

(A.K.M. Mansur)
Director (Training)
Department of Agricultural Extension

09-6-83

A. Kawamata

(A. Kawamata)
Team Leader
Japanese Evaluation Team on CERDI

09-6-83

10. 合同委員会議事録

Proceeding of the Joint Committee meeting on CERDI, held on 9th June, 1983 at BARC Conference Room under the Chairmanship of Mr. A.M. Anisuzzaman, Secretary, Agriculture & Forests Division, Ministry of Agriculture, Government of the People's Republic of Bangladesh.

Members Present

Bangladesh Side.

1. Mr. S.A. Mahmood,
   Director General,
   DAE.
2. Dr. A.T.M. Shamsul Huda,
   Joint Secretary,
   Agriculture & Forests Division,
   Ministry of Agriculture.
3. Dr. S.M.H. Zaman,
   Director,
   BRRI.
4. Mr. Md. Shahidul Islam,
   Director, Field Service,
   DAE.
5. Mr. A.K.M. Mansur,
   Director,
   Training Division,
   DAE.
6. Dr. M.A. Mannan,
   Executive Vice Chairman (Acting),
   BARC.
7. Mr. A.N.M. Shamsul Huda,
   Executive Director,
   CERDI.

Raporteur

Qazi Rezaul Islam,
Asstt. Extension Specialist,
CERDI.

Japanese Side.

1. Mr. T. MURAKOSHI,
   Resident Representative,
   JICA.
2. Mr. T. SATO,
   Team Leader of Japanese Expert,
   CERDI.
3. Dr. S. YOSHIOKA,
   Expert of Soil Fertility,
   CERDI.
4. Dr. M. NEZU,
   Horticulture Expert,
   CERDI.
5. Mr. T. EDAGAWA,
   Expert of Farm Machinery
   Engineering, CERDI.
6. Mr. INOUE,
   Expert of Agril. Extension,
   CERDI.
7. Mr. T. OSHIMA,
   Expert of Agril. Extension,
   CERDI.
8. Mr. K. MASUMI,
   Agronomy Expert,
   CERDI.

Observer

1. Mr. K. NIINO,
   First Secretary,
   Embassy of Japan.
2. Mr. S. SATO,
   Third Secretary,
   Embassy of Japan.

Evaluation Team:

1. Mr. A. KAWAMATA,
   Team Leader,
   Evaluation Team,
   JICA.

2. Mr. K. MIURA,
   Member,
   Evaluation Team,
   JICA.

3. Mr. S. SATOH,
   Member,
   Evaluation Team,
   JICA.

4. Mr. S. MIYAJIMA,
   Member,
   Evaluation Team.

5. Mr. O. HARAMAKI,
   Member,
   Evaluation Team.

6. Mr. M. NUMATA,
   Member,
   Evaluation Team.

Proceedings

1. With the permission of the Chairman, Dr. A.T.M. Shamsul Huda, Joint Secretary, read out the agreed statement made by the two Evaluation Teams.

2. Mr. A. Kawamata, Team Leader of Evaluation Team described about the activities of his Team. He informed that his team had meetings with various concerned Agencies in Bangladesh. Mr. Kawamata also affirmed that the evaluation team fully agreed on the statement circulated in the meeting for the best utilization of CERDI facilities. He concluded his discussion with the assurance that he would try for availability of enough fund for CERDI in future.

3. Mr. A.M. Anisuzzaman, Secretary, Agriculture & Forests Division while emphasizing the continuation of the CERDI project opined that there were a number of administrative preconditions for its successful operation. It was mentioned that the physical facilities of CERDI are still incomplete. The officers and staff of CERDI are regularly travelling

from Dhaka to Joydevpur for their office work which is not at all conducive for satisfactory work. He told that for better relationship between the trainers and trainees, CERDI personnel should live at CERDI Campus for which reasonable accommodations are to be provided.

4. The Japanese Team were requested to consider provision of funds for the completion of complementary physical facilities of CERDI like residential accommodation.

5. Secretary also emphasized on the integration of CERDI in the national system with a right approach. It was informed by him that at present linkage between various agencies are growing. A national system has been developed for national programme. He, therefore, urged that CERDI should not be isolated from this programme.

Decisions

It was finally resolved that:

1. Complementary physical facilities of CERDI should be completed without further delay.
2. CERDI should be integrated in the national system of Agriculture Extension.
3. The Japanese Team may assist in achieving the objective of CERDI in future within the national framework of extension training.

6. The meeting was concluded with thanks to the Japanese team by the Chairman of their assistance and co-operation.

(A.M. Anisuzzaman)
Secretary
Agriculture and Forests Division
Ministry of Agriculture
Government of the People's
Republic of Bangladesh.

No.P&E(PMU-E&R)-JTCP-42/83/ : Dhaka, the 13th June, 1983.

Copy forwarded for information and necessary action to:-

1. The Secretary, External Resources Division, Dhaka.
2. The Member (Agriculture), Planning Commission, Dhaka.
3. The Joint Secretary (PPC), Agriculture & Forests Division, Dhaka.
4. All Participants in the meeting.

(Md. Yasin Miah) 16/6/83
Senior Scale Section Officer
Agriculture & Forests Div.

# 第2次エバリュエーション調査員報告

# Ⅶ　第２次エバリュエーション調査員報告

## 1. フォローアップ調査員派遣の目的

プロジェクトのフォローアップ協力に関する討議議事録（Ｒ／Ｄ）及び２ケ年間の暫定実施計画に署名する目的で当初団長，協力企画及び農業普及の３名を派遣する予定であったが，バ国からの要請書を検討した結果，バ側としては日本人専門家の役割はプロジェクトの中に開設されるTeacher's Training Programコースの中で実施に係る助言または圃場における実習を分担することになると考え，このような限定的な協力は専門家派遣に馴染まず，むしろ協力隊派遣が適当ではないかという意見もあった。

また，バ側の真意が不明なところもあり，真に日本に協力を必要としているのか，それともこれまで８年間の協力実績を踏まえた“外交辞令”的要請なのか判断がつかなかった。

よって，当初の調査団３名の派遣を変更し，団長として派遣を予定していた川又章農業技術協力課長のみ派遣しバ側の意図を確認した。

## 2. 派遣期間

５８年９月２４日～１０月３日

## 3. 調査団員

川　又　　章　　国際協力事業団
農業開発協力部農業技術協力課長

## 4. 調査日程

| 月　日 | 日　　程　　概　　要 | 備考（出席者等） |
|---|---|---|
| ９／２４(土) | 移　　動（東京～バンコク） | |
| ９／２５(日) | 〃　（バンコク～ダッカ） | |
| | 1. ＪＩＣＡ事務所　村越所長打合せ | ＪＩＣＡ　ＯＦＦＩＣＥ<br>佐藤，森下同席 |
| | 2. 大使館表敬 | 大久保参事官<br>新野書記官 |
| ９／２６(月) | 1. ＣＥＲＤＩ　Ｄｉｒｅｃｔｏｒ　ＭＲ．Ｈｕｄａ | ＣＥＲＤＩ　ＣＩＴＹ<br>ＯＦＦＩＣＥ |

| | | |
|---|---|---|
| 9／26(月) | 2. DR. Huda （農業省次官補） | 新野書記官<br>佐藤リーダー<br>森下調整員 |
| 9／27(火) | 1. 新野書記官打合せ | 佐藤リーダー<br>森下調整員 |
| | 2. MR. Huda | |
| | 3. 新野書記官打合せ（BD見解の確認） | 佐藤リーダー |
| | 4. JICA事務所　村越所長 | |
| | 5. 専門家への状況説明 | 全専門家 |
| 9／28(水) | 1. 外務省への国際電話 | |
| | 2. 新野書記官打合せ | |
| | 3. CERDI CITY OFFICE<br>（AIS:Agricultural Information Service） | |
| | 4. DR. Huda<br>大使館へのメモ(写)手交に立会 | 新野書記官<br>佐藤リーダー<br>森下調整員 |
| | 5. 小林大使表敬 | 新野書記官 |
| 9／29(木) | 1. 新野書記官打合せ | 佐藤リーダー |
| | 2. JICA事務所　村越所長打合せ | |
| | 3. CERDI　専門家への状況報告 | 枝川，増見両専門家を除く全員 |
| | 4. BARIにて農業大学の進捗状況聴取<br>(1) 所長　DR. M. Motlubor Rahman<br>(2) 校長　DR. Sharafot Hossain Khan | MR. MD. Quagi R. Islam(CERDI普及担当官） |
| | 5. 新野書記官打合せ | |
| | 6. JICA事務所　村越所長より国際電話内容説明及び協議 | 専門家 |
| 9／30(金) | 1. 経過整理 | |
| | 2. 国際電話（農技協課斉藤代理） | |
| | 3. 同上内容につき専門家へ連絡 | 佐藤リーダー<br>森下調整員 |

| | | |
|---|---|---|
| １０／１(土) | 1. 経過整理<br>2. 文献収集<br>3. 日本側関係者懇談会 | |
| １０／２(日) | 1. 帰国あいさつ<br>(1) MR. A. N. M. Huda CERDI 所長<br>(2) MR. A. K. M. Mansur 訓練部長<br>(3) DR. A. T. M. S. Huda 農業省次官補<br>(4) 在バングラデシュ日本国大使館<br>（小林大使，新野書記官）<br>(5) ＪＩＣＡダッカ事務所<br>（村越所長，石田所員） | 佐藤リーダー<br>森下調整員 |
| １０／３(月) | 2. 移　　動（ダッカ～バンコク）<br>移　　動（バンコク～東京） | |

○ 面談者

(1) 農業者

DR. A. T. M. S. Huda, Joint Secretary

(2) 農業普及局

MR. A. N. M. Huda, ＣＥＲＤＩ所長

MR. A. K. M. Mansan, 訓練部長

(3) ＢＡＲＩ

DR. M. Matlubor Rahman 所長

DR. Sharafat Hossain Khan 農業大学校長

(4) ＢＡＲＣ

DR. Doza

(5) 在バングラデシュ日本大使館

小林俊二　大使

大久保基　参事官

新野健司　一等書記官

佐藤三郎　三等書記官

(6) ＪＩＣＡダッカ事務所

| | |
|---|---|
| 村越俊雄 | 所長 |
| 石田幸男 | 事務所員 |

(7) ＣＥＲＤＩ専門家

| | |
|---|---|
| 佐藤　隆 | リーダー |
| 吉岡真一 | 土壌肥料 |
| 枝川孝男 | 農業機械工学 |
| 井上正敏 | 普及計画 |
| 増見国弘 | 栽培 |
| 大嶋健男 | 農業普及 |
| 森下耕自 | 業務調整 |

## 5. 調査報告

### A. バングラデシュ農業省の日本への協力要請

(1) 結　論

農業省としては，Anisuzzaman次官，Mahmood農業普及局長，Huda次官補の協議により日本からの協力は，プロジェクト方式技術協力ではなく，個別の専門家派遣を希望する。

(2) 根　拠

1) プロジェクトの運営

世銀の訓練計画全般に亘るSecond Agricultural Training Project（ART－Ⅱ）がある。一方日本の協力もＣＥＲＤＩに限定されるが，プロジェクトとしての協力であり，独自の目的，基本計画を有しており，プロジェクト運営上困難が生ずる。

日本側Ｒ／Ｄ案によれば，日本との協力プロジェクトの責任者はＤＧであり，一方ＡＲＴ－Ⅱの責任者も同じくＤＧであるため，問題の生じた場合調整がむづかしい。

また，ＤＧは，農業省実施部門の最高責任者であるため多忙を極め，問題が生じた場合でも，それだけに集中できないことが予想される。

2) 機　材

機材は，既に十分供与されており，新しいものは必要ない。施設，機材は整備されたので，今後は，これらを有効に活用できる人材を養成する方針である。

3) 専門家の活動

組織，機関及びプロジェクト全体にわたる運営，及び専門分野でも自力で可能なものは，ＢＤ側で行い，個々の専門分野のうちでも自力では，どうしても対応できない

分野のみ個別専門家による協力を希望している。

専門家の数そのものは余り問題ではないが，協力の形態が問題である。

これまでも１つのプロジェクトに幾つかの国，機関が協力する例はあるが，夫々専門別の専門家として参加しており，他の部門とは関係のない形となっている。しかしながら日本側Ｒ／Ｄ案では，専門家の活動が他部に関係するように理解される。

外国人専門家に期待するのは，有能な人材の育成であるが，ＣＥＲＤＩの場合，人事体系の制約もあって十分になされなかった。

技術系職員の人事面では同一分野での昇格を認めること，カウンターパートは５ケ年間同一任務を行なわせるなど改善策をとっている。

(3) 外国からの協力についての考え方

今後はできるだけ整理方向で進みたい。Ｐipe line のプロジェクトでも整理したものがある。農業分野以外にも重点を置くべき分野があり，農業分野では生産中心主義で推進してきたが，状況は変化している。種子検定所の設立もその一つである。

これからは漁業，畜産にも力を入れたい。

Ｂ．今後の対応

(1) 個別専門家の派遣

1) ＢＤ側には個別専門家の派遣は別の部の担当であることに加え，現在予算面から不可能であろうと伝えてある。

予算面での問題さえ解決できれば派遣してはどうか。

吉岡専門家は，ＢＤ側も派遣を希望しているし，本人は，ＵＮＤＰにしても技術的な中味にまで口出しはできないとして，ＵＮＤＤとの関係を気にしていない。

機械についても数が多く，到着した機材のうちには，まだ組立てていないものも残っていることからこれについても派遣をすることが望ましい。

2) ＢＤ側に措置させるべき事項があれば，ＡＩフォームの中に記述させるか，あるいは，別の方法で相手側に条件をつけさせてはどうか。

3) 専門家の数については，土壌肥料と栽培は別にしてもよいのではないか。ただＢＤ国内では，土壌肥料は栽培の中に含まれており，ＡＴＩにおけるコースも栽培Ⅰ，土壌肥料，栽培Ⅱ，所謂栽培となっている。

(2) 専門家の身分保証

1) 農業省の感触

訓練部長Mansunに，１０月１２日以降５名の専門家は，２～３ケ月残留するがどうかと質したところ問題はないと答えた。また，農業省Huda 次官補も残留には異議を示さなかった。

しかしながら，ＤＧがどういう意見を持っているかが鍵であろう。

2) 手　　続

最近各種の手続が時間を要するようになってきており，１０月１２日までに正式な文書による手続が完了しない可能性もある。実態は問題が生じないとは思われる。

3) 期　　間

専門家の意見は，１２月１５日頃までとする意見が強いが，ＪＩＣＡ村越所長は，１１月３０日で十分との意見である。

6. バ側からの要請書

Government of the People's Republic of Bangladesh
Ministry of Agriculture
Agriculture & Forests Division
PMU(E&R) Section

No. P&E(PMU-E&R)-JTCP-42/83/137 July 27, 1983

To
Mr. M. Khaled Shams
Joint Secretary
External Resources Division
Ministry of Finance & Planning
Shor-e-Bangla Nagar, Dhaka

(Attention: Mr. A.K.M. Abul Basher, Research Officer)

Sub: Further Japanese Technical Cooperation for CERDI Project

Ref: Your O.M. No. ERD/JAP-II/18/83/392 dated 20.7.83

Reference is invited to the Agreed Minutes on the Evaluation of CERDI project by the Bangladesh and Japanese Evaluation Teams held during June, 1983 (copy of which was sent to ERD vide this office memo. No. P&E(PMU-E&R)-JTCP-42/83/110 dated 20.6.83.

In pursuance of the recommendations of the Agreed Minutes, Japanese Co-operation for the CERDI project may be extended for a further period of two years after October 12, 1983 confining to the areas identified at para 6(a)(i) to (iv). In addition, the government also feels the necessity of Japanese assistance to finance the following project compenents:-

i) Construction of officers and staff quarters at CERDI campus;

ii) Compositing materials (Bengali & English) and facilities for composition and proof making of technical literature; and

iii) Two experts in the fields of farm machinery and agronomy & soils.

It is, therefore, requested to make the formal request to the Government of Japan on the required assistances described above.

(A. Waheed Khan)
Agricultural Economist

c.c.:

1. Mr. S.A. Mahmmod
   Director General
   Deptt. of Agril. Extension.
2. Mr. A.N.M. Shamsul Huda
   Executive Director, CERDI.
3. Mr. Motoi Okubo
   Charge d' Affaires ad'interim
   Embassy of Japan
   Banani, Dhaka.

# Ⅷ プロジェクト終了まで（エバリュエーションから）の経緯

| No. | 内　　容 | 月日 | 備　　考 |
|---|---|---|---|
| 1 | 6月9日，日バ両国のエバ団長である日側川又団長及びバ側農業省訓練部長Mr. Mansurとの間でAgreed Minutedに署名した。その内容は次の通り。<br>1. 確認事項<br>(1) BARI, BRRI, AIS（AGRICULTURAL INFORMATION SERVICE）の役割及び機構改革により新設された普及局の役割を十分に考慮し，CERDIの機能を再定義する必要がある。<br>(2) CERDIにおける訓練能力の向上を図る必要がある。<br>(3) CERDIを十分に活用するため，バ国政府の責任において職員用宿舎を建設する必要がある。<br>2. 上記1.に基づき勧告する事項<br>(1) CERDIは普及局における最高訓練機関として次の分野について訓練を行なう。<br>(イ) 専門的農業経営研修<br>(ロ) 訓練計画の立案及び普及教官の訓練<br>(ハ) 農業普及訓練用教材の開発<br>(ニ) 訓練を目的とした農業機かいの維持管理<br>(2) 上記2. (1)の分野についてのみ更に2年間の協力延長を行なう。<br>3. 要請事項<br>両国エバチームは両国政府がこのプロジェクトの運営に関し，必要な措置をとることを要請する。 | 6/9 | 公電 |
| 2 | 1. 川又団長（エバリュエーション）が農業省次官. Mr. A. M. Anisuzzamanに帰国のあいさつを行った際，同次官はプロジェクトについて次のように述べた。<br>(1) CERDIは施設，運営の面で日本から援助を受けている。職員宿舎の必要性は先日（合同委員会の席上）述べた通りである。<br>(2) 宿舎の建設がない限り，Project の継続には多大の困難が | 6/14 | 団長メモ |

| No. | 内　　容 | 月日 | 備　　考 |
|---|---|---|---|
| | 伴う。<br>(3) 宿舎の建設なしにはProzectの継続は考えられない。<br>(4) 名目は，ドミトリーでもなんでも良いが，実質的な職員宿舎の建設に日本が費用を負担してほしい。<br>尚，建設は，日本側でなく，現地資材を購入して，バングラ側で行いたい。 | | |
| 3 | 大蔵・計画省ERDより書簡にて，2ケ年間の延長及び協力内容を次の3点に限定（Confine）するよう要請があった。<br>(1) 職員宿舎の建設<br>(2) 技術教材印刷用資機材の供与<br>(3) 農業機械及び栽培兼土壌（Agronomy & Soils）<br>日本大使館よりERDにBD側要請の内容は6月エバチームが協議した内容及び日本側の考えから抜本的にかけはなれたものであるので，このままでは本件に対する我が方の協力を継続する可能性は乏しく協力延長も断念せざるを得ないこともあり得ると述べた。<br>先方は右要請はBD政府部内（農業省，計画省，ERD）で協議した結果であると述べた。 | 8/31 | 公電 |
| 4 | 本年7月より5カ年計画で普及分野の全てを網羅するSecond Agricultural Training Projectが世銀の融資でスタートしており，CERDIも同計画の中に含まれトレーニング費用等についてReimbursementを受けられることになっているとバ側関係者は述べた。 | 9/26 | 公電 |
| 5 | 世銀のSECOND AGRICULTUAL TRAINING PROJECTにより農業普及システム全般が援助対象とされており，CERDIもその一部に包含されることになったことから，今後CERDIに対する日本からの協力について引続きプロジェクト方式技術協力のような本格的な形をとれば2重のプロジェクトが出来ることになり，運営に大きな困難が生ずるおそれがある。従って日本 | 9/27 | 公電 |

| No. | 内　　容 | 月日 | 備　　考 |
|---|---|---|---|
| | からの協力としてはプロジェクト方式技術協力という方式によらず，個別の専門家派遣，職員宿舎建設及び印刷機材供与を要請したい。<br>CERDIに対し既に日本政府からは建物建設，機材整備，専門家の派遣等につき8年間にもわたって協力を得てきたところであり，今後のCERDIの課題は日本政府により整備いただいた施設，機材等をBD側職員の手で出来るものは全てBD側自身で実施し，どうしても日本側の協力が不可欠な農業機械，栽培，肥料の分野については専門家派遣等を要請することとし，日本側の協力は最小限度に留めBD側での自立を図っていくというのが基本的考え方であり，日本側の理解を得たい。 | | |
| 6 | 日本側より，分野別の専門家を派遣する場合，専門家は当該分野における訓練の計画立案から実行までの全行程について参画することが出来ることが前提となる旨川又調査員より説明した。これに対し同次官補は次のように述べた。<br>CERDIを含む全体の普及訓練計画は農業普及局において普及システム全般の調整の中で策定されるものであり，分野別専門家の普及訓練計画策定の参画はかなり限定的なものとなると思われる。日本人専門家には，配属されたCERDIのDIVISION内のBD側カウンターパートを2年後にはBD職員が自立して訓練活動に入れるまでに育成してくれるよう期待したい。（日本側よりカウンターパートの定着の悪さが技術移転上大きな問題である旨指摘したのに対し）従来は昇進のためにポストの移動が必至だったことや，任期が短期間であったことがそのような問題を生んできたことを反省し，今後はSUBJECT MATTER SPECIALISTになることを条件に同一ポストでしよう進する途を開くとともに，CERDIのような組織に配属された職員は同一ポストに5年間は移動させないといつた措置をとることとしている。 | 9/29 | 公電 |
| 7 | 1. 世銀報告をふまえバ側の要請を検討したところ，専門家が普及訓練計画の策定に参画できないのであれば協力は継念せざるを得ない。 | 10/1 | 公電 |

| No. | 内　　容 | 月日 | 備　　考 |
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| | 2. 個別専門家として派遣する場合には，制度上我方中堅技術者養成対策費のローカルコスト負担も不可能となるので，訓練計画への協力実施も事実上困難である。<br>3. 藤田，粕谷両団員の派遣をとり止める。 | | |
| 8 | 1. 専門家２名の派遣要請について，わが方としてはあくまで訓練業務の計画から実施まで一貫して協力できるような条件が整った段階で再度要請があったときは，その時点で改めて協議することとし，現行協力に引続き個別の専門家を派遣する考えはない。<br>2. 他の２項目である職員宿舎の建設及び印刷等，機材の供与についても上記専門家を派遣しない限り協力の効果は少ないと思われるので現段階ではとり上げない。<br>3. 従って本件協力は１０月１２日の協力期限満了をもって終結することとなったが，専門家７年のうち，５名についてはＢＤ側への業務引継ぎに伴う報告書，マニュアル，機材等リスト作成とりまとめのため現任期を越えて一定期間残留させる。 | 10/6 | 公電 |