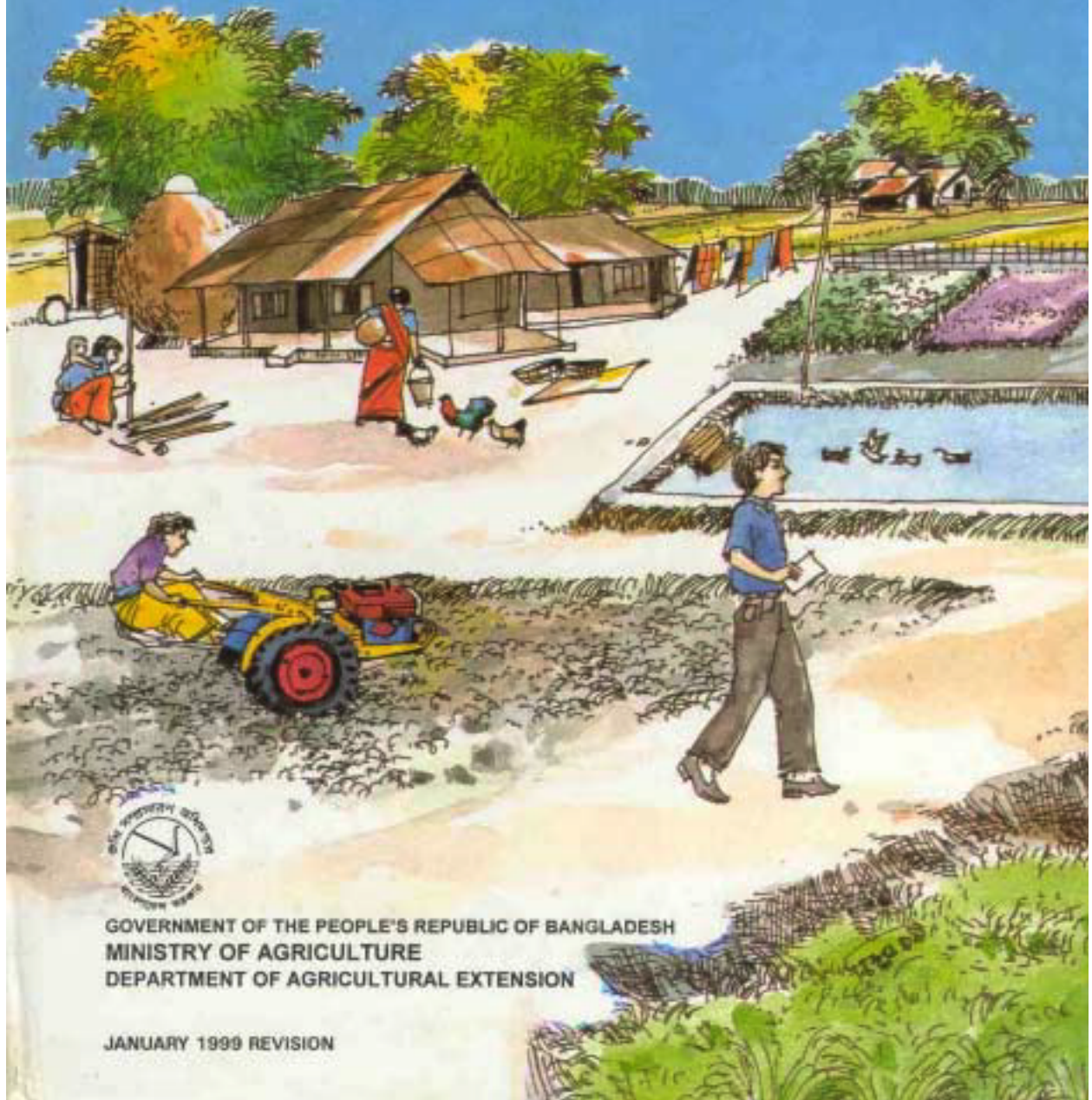


# AGRICULTURAL EXTENSION MANUAL



GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH  
MINISTRY OF AGRICULTURE  
DEPARTMENT OF AGRICULTURAL EXTENSION

JANUARY 1999 REVISION

## **AGRICULTURAL EXTENSION MANUAL** **(WEB VERSION)**

- Chapter 1** : The Extension Approach
- Chapter 2** : Organisational and Management Structure of the Department of Agricultural Extension
- Chapter 3** : Partnership
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### **Note:**

Readers will notice that the text of the Extension Manual refers to Annexes. The Annexes have not been included on our web site as they generally refer to very specific procedures. However, should you wish to see a full copy of the Manual, please contact the Department in writing.

# CHAPTER 1

## THE EXTENSION APPROACH

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### 1.0 INTRODUCTION

Agricultural extension in Bangladesh has followed an evolutionary process of experimentation with components of several recognised extension approaches. These different approaches are detailed in **Annex I**. Until recently the Training and Visit (T&V) Approach which was established during the late seventies formed the backbone of the Department of Agricultural Extension's (DAE's) extension practices. To increase its effectiveness and efficiency DAE has sought to develop its own more pertinent approach to extension. DAE's Revised Extension Approach (REA) specifically embraces the Department's Mission within the context of the New Agricultural Extension Policy (NAEP) described in **Annex II**.

DAE is committed to a full role in implementing the NAEP. To clarify this commitment, and to ensure that all members of staff share the same vision, DAE has a mission statement.

***The Department of Agricultural Extension's mission is to provide efficient and effective needs based extension services to all categories of farmer, to enable them to optimise their use of resources, in order to promote sustainable agricultural and socio-economic development***

To achieve this mission, DAE works in the context of the NAEP, and is committed to:

- *developing partnerships with research organisations and Government and Non-Government agencies involved in extension;*
- *promoting the adoption of appropriate farming practices, through the use of appropriate extension methods, including working with groups;*
- *identifying and using departmental human, financial, information and physical resources efficiently;*
- *promoting environmentally friendly farming practices;*
- *providing development opportunities for DAE personnel;*
- *using participatory approaches with farmers in order to ensure the development of demand driven extension programmes.*

The REA has retained many of the primary elements of the T&V Approach, in combination with relevant aspects of their recognised extension approaches, and features developed locally with Bangladesh extension partners. The result is an approach to extension which is largely demand driven, reliant on client participation, based on working with groups, and integrated among different extension providers.

Experience indicates that agricultural extension practices will continue to evolve. The REA is designed to continue to change in appropriate ways over time. It encourages flexibility and adaptation, incorporating the process of continuing change as an integral part of the extension approach. This is ensured through institutionalising partnerships with Non Governmental Organisations (NGOs), the private sector, and other government sector extension providers, guaranteeing a constant flow of ideas and methodologies.

This chapter introduces DAE's Revised Extension Approach. Effective agricultural extension can help farmers identify and overcome production, management and marketing problems by facilitating the exchange of technical information. In particular, extension can help farmers make better use of existing technology, introduce

new technology, and provide information to agricultural research agencies so that appropriate research programmes can be undertaken. The REA is applied within the Extension Planning Cycle model outlined in **Section 1.1**.

The revised extension approach consists of five principles:

- *decentralisation;*
- *targeting;*
- *responsiveness to farmer needs;*
- *the use of a range of extension methods; and*
- *working with groups.*

**Sections 1.2 to 1.6** describe each of these principles in detail. The principles of the extension approach are put into place by implementing the systems, procedures, tools and techniques which form the remainder of this manual.

**Section 1.7** describes the supportive environment within which DAE activities operate. This includes mechanisms for partnership, research and extension linkages and the flow of technical information between farmers and extension agents.

**Section 1.8** describes conditions which govern all of DAE's activities. These include responsibilities to the environment, social development and cost effectiveness.

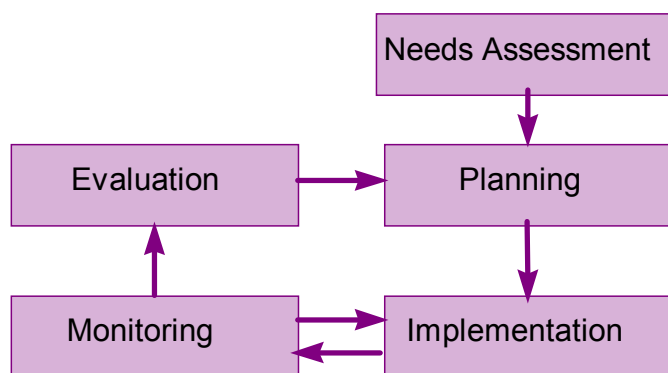
## **1.1 THE EXTENSION PLANNING CYCLE**

The extension planning cycle comprises five processes:

- identifying farmer needs;
- preparing responsive local extension programmes;
- implementing local extension programmes;
- monitoring the implementation of extension programmes; and
- evaluating the outcome.

**Figure 1.1** shows how these processes fit together to form the extension planning cycle.

### **FIGURE 1.1: THE EXTENSION PLANNING CYCLE**



#### ***Needs Assessment***

The first process in the cycle is concerned with identifying farmers needs, in terms of their problems, solutions to their problems and possible opportunities for their agricultural development. Extension plans concentrate on meeting these needs by formulating a range of extension services relevant to their farming and household activities. Extension staff learn about farmer's needs through Farmers Information Needs Assessment (FINA). An overview of FINA is presented in **Section 1.4** and described in detail in **Chapter 6**.

### **Planning**

The information gathered from FINA is fed into the planning stage of the extension cycle. DAE prepare annual plans based on objectives formulated from FINA and the results of the evaluation process. Planning for extension activities takes place formally during Thana Planning Workshops. The planning process used by DAE at thana and district levels is described in **Chapter 7**. Planning also helps managers make sure that they have the resources to implement extension activities and that their staff have the necessary skills to carry out the required activities.

### **Implementation**

The implementation of extension activities takes place on a seasonal basis. Annual plans have separate sections for separate seasons. Prior to each season these sections are reviewed and if required, modified to ensure that they remain appropriate, and that resources are available for implementation and staff have the required skills to implement them. Implementation also means ensuring that the activities which have been planned are conducted as efficiently and as effectively as possible. Work programming (described in **Chapter 2**) has been introduced to assist this.

### **Monitoring**

Monitoring can be defined simply as the systematic recording of information. DAE uses a number of methods to record data about the implementation of extension activities. These include:

- the Seasonal Extension Monitoring System (SEMS), which records **HOW** successful an activity has been;
- various registers which record **WHO** attended certain events and **WHERE** these events took place.

Technical Audits (TAs) are also used by Additional Directors (Region) to record the implementation of current activities.

Monitoring results can be fed directly into the implementation process. For example, any weaknesses identified during a Technical Audit can be fed directly to field staff and their managers in the form of advice to improve the current activity. The various monitoring tools used by DAE are described in detail in **Chapter 12**, with the exception of Technical Audits which are described in **Chapter 2**.

### **Evaluation**

Evaluation is a review and analysis of the data collected during monitoring. It enables extension officers to see whether objectives have been met or whether they were appropriate. The evaluation process usually takes place at the end of each season or at the end of the annual programmes. By analysing monitoring data decisions can be made. For example, if it was found that not many farmers had adopted a new technology introduced in a particular season an analysis would point to the reasons why. These results can then be fed into the planning process for next year. **Chapter 12** provides further details of the evaluation process.

## **1.2 DECENTRALISATION**

Farming systems, household economic activities, agro-ecological conditions, credit and marketing opportunities vary considerably from place to place. For this reason, the department has decentralised responsibilities for the planning, budgeting, implementation, monitoring and evaluation of extension programmes to staff at block, thana, district and regional levels.



The thana level is the basic unit for planning, implementing, monitoring and evaluating local extension programmes. This system ensures that decisions about the services provided by the Department of Agricultural Extension are taken at the lowest possible level, but with the full support of specialist staff at district and regional level. Responsibilities at all levels are summarised in the following sections.

### Block Level Responsibilities

Each Block Supervisor (BS) is responsible for the provision of day to day extension services in the block. Their role is described in detail in **Chapter 5**. A summary of their responsibilities follows.

#### BLOCK SUPERVISOR RESPONSIBILITIES

##### Technical Role

- assisting farmers to identify their problems and possible solutions to them;
- implementing extension events within the block, based on local needs;
- providing ideas for suitable extension activities for farmers during the **Thana Planning Workshop (TPW)**;
- assisting farmers to obtain information and other assistance from other extension partners;
- collecting and recording information about the block on natural resources, population, areas of different crops under cultivation, crop input requirements, marketing systems for locally produced crops, numbers and extent of farmers adapting, testing and adopting technologies.

##### Administrative Role

- maintaining a **Block Supervisors Diary** to record day to day progress, plan future activities and record farmer information needs and responses;
- identifying active farmers groups, including those working with NGOs;
- agreeing a fortnightly **Work Programme** within the block in accordance with the annual extension plan;
- attending and contributing to thana meetings and training days;
- monitoring the implementation of extension events in the block using the **Seasonal Extension Monitoring System (SEMS)** and the registration systems used by DAE (e.g. demonstration registers).

### Thana Responsibilities

The role of the thana is to ensure that an appropriate extension programme is planned and implemented in the thana and that Block Supervisors have the necessary skills and resources to implement the programme. Thana staff also implement some extension activities such as Thana fairs and farmer training. Ensuring service quality is very important at this level. The decentralised responsibilities of the thana agricultural extension office are shown below:

## THANA OFFICE RESPONSIBILITIES

### Technical Responsibilities

- ensuring effective **FINA** within the thana;
- preparing high quality extension plans;
- preparing training material for farmers and technical staff;
- raising farmer's problems, which cannot be resolved at block level by DAE, with other extension partners during the TAECC, or with District Specialists;
- liaising with farmer associations and other related agencies at Thana level, including those responsible for farm inputs and marketing;
- providing high quality advice to Block Supervisors on a range of agricultural subjects, including crop diversification, extension methods, input and credit supplies and technologies for onward transmission to farmers;
- assisting Block Supervisors to organise field events (e.g. farmers rallies, field days and motivational tours);
- planning and implementing thana level extension activities (e.g. thana fairs and farmer training events).

### Administrative / Management Responsibilities

- maintaining links and co-ordinating activities with other extension providers through the **Thana Agricultural Extension Co-ordination Committee (TAECC)**;
- organising and conducting Thana Planning Workshops;
- assessing and responding to staff training needs;
- planning and organising fortnightly thana training days;
- ensuring that the performance of all BSs is monitored through fortnightly **Work Programming** assessment meetings and field visits;
- managing and co-ordinating **SEMS** and **KAP** at thana level;
- ensuring that a senior member of thana staff attends monthly meetings and training workshops held at the District Office including **District Extension Planning Committees (DEPC)**.
- ensuring the management of the thana budget and the timely production of accounts;
- collecting information including ad hoc information on emergencies from Block Supervisors and reporting to Districts, Regions or Headquarters to an agreed format.

### District Responsibilities

The role of the district is to provide technical and management support to thanas in planning, implementing, monitoring and evaluating extension services. It is also the highest level at which detailed extension planning takes place.

The decentralised responsibilities of the District Agricultural Extension office are shown below:

## **DISTRICT OFFICE RESPONSIBILITIES**

### **Technical Responsibilities**

- reviewing and checking thana plans to ensure that they are technically sound, high quality and reflect **FINA**;
- preparing a district extension plan;
- preparing and circulating a monthly **district bulletin** for all technical staff within the district;
- ensuring that thana officers have adequate technical knowledge in current extension messages and assisting them to adjust messages so that they reflect local circumstances;
- implementing **KAP** surveys within the district;
- preparing training materials for effective training of thana officers;
- participating at **ATC** meetings and maintaining direct links with research institutes for the purpose of facilitating the free flow of information on adaptive research, field trials, and new technologies;
- providing the main link between field officers and technical wing directors, passing information to them and receiving advice and programmes of extension messages and methods available for use in the field.

### **Administrative / Management Responsibilities**

- organising and conducting DEPC meetings to review seasonal activities and annual extension plans;
- submitting all thana and district plans to the Additional Director (Region) for technical validation at the **Agricultural Technical Committee (ATC)**;
- supervising the implementation of all thana plans in the district. This includes visiting selected extension events in a technical support capacity;
- supervising the assessment of training needs for all staff and drawing up proposals for training within the district;
- assisting with thana level training if required;
- managing monthly meetings at the district for all TAOs to discuss problems, solutions, progress and extension activities;
- maintaining a training record for all district staff and thana officers;
- maintaining up to date staff records stationed in the district;
- authorising staff to travel outside the district for special training purposes as planned by Training Wing;
- monitoring DAE / NGO partnership within the district and promoting joint DAE / NGO activities among district and thana staff;
- co-ordinating and consolidating SEMS;
- ensuring the effective management of human resources in the district and the assessment of performance and management of their work;
- controlling district expenditure within approved budget ceilings and ensuring timely submission of monthly accounts to Administration and Planning Wing in Headquarters

## **Regional Responsibilities**

The role of the region is to: provide independent quality assessment of extension services in the region; provide technical support in collaboration with research institutes; and, to act as a



focal point for the Management Information System. The main technical and administrative responsibilities of the regional office are outlined below:

### **REGIONAL OFFICE RESPONSIBILITIES**

#### **Technical Responsibilities**

- providing technical advice on extension techniques and agricultural technologies to districts directly, or indirectly through the ATCs;
- reviewing the technical and environmental quality of thana and district plans prior to ATC meetings;
- submitting technical information regarding planned extension activities to Bangladesh Betar for broadcasting;
- conducting regular field visits and spot checks around the districts and thanas for the purpose of providing on the spot technical advice and support;
- conducting training programmes throughout the region as appropriate and when required;
- analysing and reporting of technical information from districts, such as annual crop and input reports and ad hoc reports on emergencies such as pest and disease attacks, flood and emergency relief programmes.

#### **Administrative / Management Responsibilities**

- chairing and co-ordinating the **Agricultural Technical Committees (ATCs)**;
- consolidating extension plans and budgets and submitting them to Field Services Wing for approval;
- updating databases holding regional office information;
- preparing data, summary, consolidation and analysis reports for submission or transfer to Headquarters and the MIS handling centre;
- monitoring the implementation of annual extension plans throughout the region as well as the implementation of all training activities in the region through the **Technical Audit**;
- receiving and reviewing district level DAE / NGO liaison activity reports and forwarding consolidated regional reports to the DAE / NGO Liaison Committee;
- providing support to extension events which foster DAE / NGO partnership;
- consolidating district staffing and training needs assessment reports for submission to headquarters;
- maintaining liaison with farmers associations at regional level;
- maintaining links with Bangladesh Betar;
- preparing draft revenue and development budgets for the region for submission to Administration and Personnel Wing and Project Directors respectively;
- controlling the annual regional revenue budget;
- producing monthly and annual accounts for the regional office's expenditure;
- ensuring the effective management of human resources in the region including Deputy Directors, and the assessment of performance and management of their work;
- approving the transfer and appointment of all Class III and IV staff within the region and where necessary taking disciplinary action according to regulations;
- managing monthly meetings at the region for all Deputy Directors to discuss progress, problems, solutions and extension activities and to deliver training so that they in turn can train other field staff;
- ensuring that problems raised by district officers either through monthly meetings or during ATCs receive timely responses.

## Headquarter Responsibilities

DAE has eight wings based at its Headquarters in Dhaka. Each wing has specific responsibilities which are discussed in detail in **Chapter 2**. Many of the responsibilities traditionally associated with headquarters have been decentralised to regional, district and thana offices. In light of this, the general role of Headquarters in providing the necessary management and technical support for decentralisation is shown below:

### HEADQUARTER RESPONSIBILITIES

#### Technical Responsibilities:

- reviewing, adjusting and approving thana and district extension programmes;
- receiving and responding to requests for technical advice sent by ATCs and District Specialists;
- liaising with national and international research institutes through the **Research Institute Co-ordination Committee (RICC)** and the **National Agricultural Technical Co-ordination Committee (NATCC)** to gain up-to-date information on new agricultural technologies, and providing these to field staff in appropriate formats through the Media Cell;
- raising farmers problems which cannot be resolved at field level with the appropriate research institute, through RICC and the NATCC;
- planning, producing, monitoring and evaluating national mass media materials and campaigns through the **DAE Media Cell** and in partnership with **Agricultural Information Service (AIS)**;
- representing the Department on the **Extension Policy Implementation Co-ordination Committee (EPICC)** in technical matters;
- formulating national policy options on tariffs, production, marketing, distribution and utilisation of agricultural products, and on agricultural extension.

#### Administrative / Managerial Responsibilities:

- working with Government and donors to obtain and manage financial support (revenue and development) for the implementation of appropriate extension programmes;
- providing budgets for the implementation of thana and district extension programmes, and for the payment of staff, maintenance of buildings and equipment, and running costs;
- assessing staff training needs, producing training policy and Master Training Plans, and implementing, monitoring and evaluating these plans;
- producing and implementing Human Resource Management initiatives aimed at improving performance throughout the organisation;
- co-ordinating and supervising the national monitoring and evaluation of extension programmes implementation, and overseeing the maintenance of the **Management Information Systems (MIS)**.

## 1.3 TARGETING

All members of rural households contribute to agricultural activities. Their information needs however vary. Targeting involves developing programmes which will meet the needs of different types of farmers. DAE's Mission Statement emphasises that extension services should be provided to all categories of farmer. This means ensuring that the needs and problems of different farmers are identified and responsive services provided. Thana and

district plans should therefore be developed with specific activities for a range of clients. These include:

- women farmers and other women members of rural households;
- young people, who are the farmers of the future;
- small and marginal farmers;
- large and medium farmers;
- landless households, who have no farmland but may have homestead areas.

The way in which DAE classifies its clients is described below.

### Farm Size Classification

DAE recognises the official farm size classification shown in **Table 1.1**.

**TABLE 1.1: FARM SIZE CLASSIFICATION**

Classification of Agricultural Household by Operated Area	Households in Category (Per cent of Total)	Operated Area (Per cent of Total)
<b>Landless Households</b> Operating below 0.02 hectares	20	1
<b>Marginal Farm Households</b> Operating between 0.02 and 0.2 hectares	19	3
<b>Small Farm Households</b> Operating between 0.2 and 1.0 hectares	37	26
<b>Medium Farm Households</b> Operating between 1.0 and 3.0 hectares	20	44
<b>Large Farm Households</b> Operating above 3.0 hectares	4	26
<b>Total</b>	100	100

**Table 1.1** shows that 75 per cent of farm households in Bangladesh operate below one hectare of land, accounting for a total of 30 per cent of operated land in the country. This indicates that landless, marginal and small farmers are an important target group for DAE. Targeting can be achieved by:

- allocating specific activities in thana and district plans for female headed households and female members of rural households;
- allocating specific activities in thana and district plans for small and marginal farmers;
- ensuring that field staff work on a daily basis with both male and female farmers;
- ensuring that field staff visit schools and work with rural youth groups;
- selecting technologies according to their appropriateness for specific categories of farmers;
- encouraging extension staff to work with groups of specific categories of farmers.

#### 1.4 RESPONSIVENESS TO FARMER NEEDS

A central part of the Extension Approach is the requirement for the Department to meet the needs of farmers. This means that the Department must identify farmer needs. As mentioned above, a Farmer Information Needs Assessment (FINA) has been designed for this purpose. Once farmers needs have been identified DAE is able to plan specific activities in response.

## Farmer Information Needs Assessment

The main elements of FINA are:

**The Block Supervisors Diary**, which has a structured page layout for recording farmer problems during the day to day work of field staff (Block Supervisors).

**The Problem Census**, which is a structured meeting with a group of farmers designed to ensure full farmer participation in identifying needs.

**Participatory Rural Appraisal**, which is a continuously developing set of different techniques designed to ensure full farmer participation in identifying needs for planning appropriate responses.

**Consultation with Other Organisations**, through committees at thana, district and regional levels, where information from different agencies about the needs of farmers can be obtained.

These elements ensure that farmer needs are identified correctly. FINA is discussed in more detail in **Chapter 6**.

## Thana Planning

Each year, Thana Agricultural Officers are responsible for preparing a Thana Master List of farmer problems, which summarises FINA results by target group. Staff are then responsible for planning and implementing extension events which respond to these needs.

When preparing the annual extension plan, all staff in the thana come together at the Thana Planning Workshop, and events for the next financial year are planned.

For example, where the Thana Master List shows that farmers in the thana are having difficulty integrating green manure into their cropping patterns, the Thana Plan might include an objective to increase the use of green manure crops, using activities such as demonstrations, leaflets and group discussion meetings. This annual planning procedure is explained in **Chapter 7**.

### 1.5 USING A RANGE OF EXTENSION METHODS

The Department recognises that there is a wide range of extension methods which can be used. These include:

- mass media, such as television, radio and newspapers and printed material;
- folk media, such as songs, puppet shows and drama;
- agricultural fairs;
- group extension events such as field days and group discussion meetings;
- formal farmer training classes and farmer field schools; and
- individual extension events such as demonstrations and farm visits.

The reasons for using a range of extension methods are briefly examined below.

### ***Extension Activities and the Adoption Process***

Different extension events play different roles in the adoption process. For example, with innovations the Department may wish to make farmers aware that the idea exists, so radio or leaflets might be appropriate methods. To help farmers acquire specific skills about a new idea, face-to-face extension events such as method demonstrations may be useful.

### ***Extension Activities and Cost-Effectiveness***

Different extension activities have different costs. For example, the cost per farmer is lower where one Block Supervisor uses an extension method with a group of 10 farmers rather than an individual farmer.

### ***Extension Activities and Targeting***

Different extension activities are appropriate for different types of farmer. For example, motivational tours are often easier to arrange with a group of male farmers, while group meetings in a homestead are often more appropriate for female farmers.

### ***Integrating Extension Activities***

Extension activities can be mixed together. For example, demonstrations are accompanied by field days. Group discussion meetings can be accompanied by print media. Farmers who attend a demonstration plot might wish to visit a farmer in a neighbouring block who has been using the technology for some time. Innovations displayed in demonstrations could also be displayed at thana fairs. By mixing extension methods together, local campaigns can be planned to meet objectives.

Staff in each thana are responsible for planning the use of a wide range of extension activities in their Annual Thana Plan. **Chapter 9** provides some guidance on how to select the most appropriate methods.

## **1.6 WORKING WITH GROUPS**

Working with groups means working with more than one farmer at a time. The Department recognises that working with groups as well as individual farmers offers many advantages. These are:

- it increases the total number of farmers that have access to extension services;
- it increases contact with categories of farmer that have largely been ignored in the past, such as women or smaller farmers;
- it promotes co-operation and improves the likelihood of farmers working together to address issues that cannot be addressed by individuals;
- it increases cost-effectiveness, as a single member of staff can meet several farmers at one time;
- it improves the quality of extension events, as farmers often learn more in a group, can discuss issues and ideas among themselves particularly when discussing possible solutions to problems;
- it increases the quality of farmer participation in defining extension needs, and in planning appropriate extension events.

The principles of working with groups and guidance for working with groups are described in detail in **Chapter 4**.



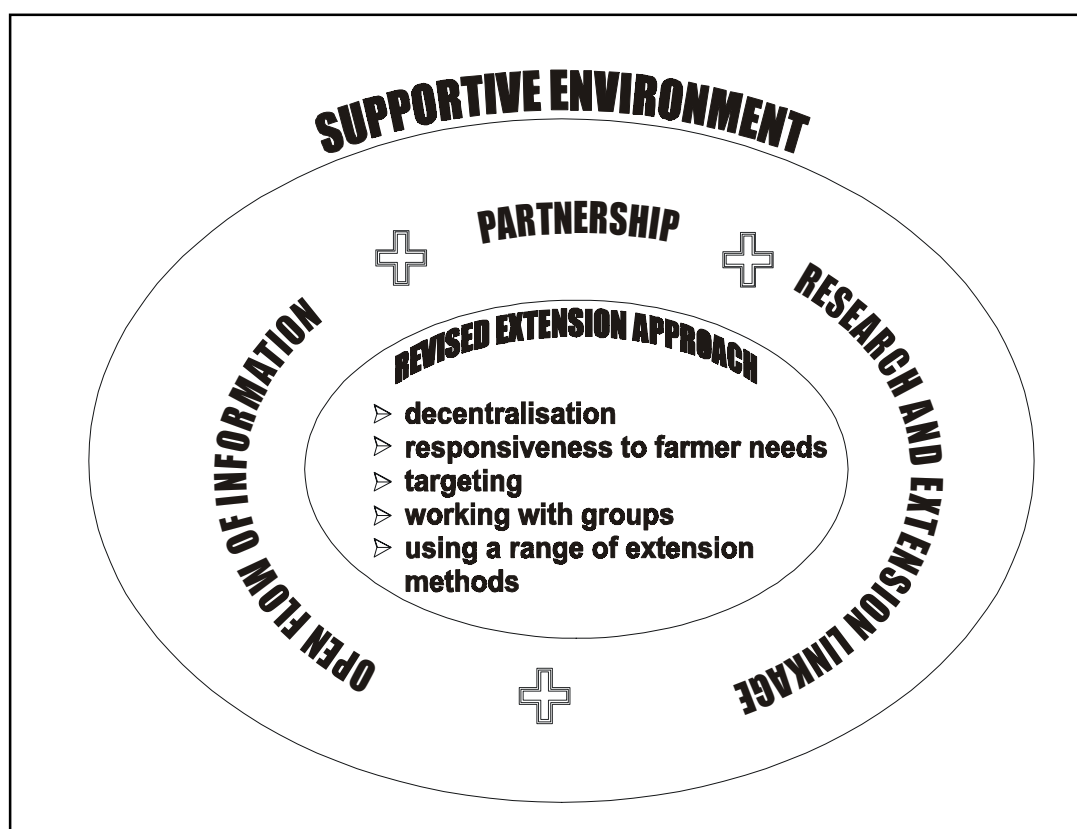
## 1.7 SUPPORTIVE ENVIRONMENT

To assist DAE staff to apply these principles, DAE has developed a supportive environment which encourages:

- partnership with other extension providers;
- a close relationship between research and extension providers; and
- mechanisms for enabling easy flow of information between farmers, extension agents, and research institutes.

This is illustrated below. Each of these components are described in the following sections.

**FIGURE 1.2: SUPPORTIVE ENVIRONMENT**



### Partnership

Agricultural service providers can be broadly divided into three main categories:

- Government Organisations (GOs). For example, DAE or the Bangladesh Rural Development Board;
- Non Governmental Organisations (NGOs); and
- The Private Sector.

Each of these groups has a crucial role to play in the creation of an environment which helps to optimise the utilisation of available resources by farmers in Bangladesh. However, in terms of development approach, resources and competencies, there is much variation between them. For example, some organisations favour working with resource poor

farmers, some have limited field staff, and some lack technical skills required for delivering extension messages or introducing technologies to farmers. Partnership and collaboration between these different groups means working together to share resources, skills and experiences so that farmers receive the best possible agricultural services. Working in partnership is a central theme of the NAEP and DAE's Revised Extension Approach.

By working in partnership the strengths of different extension agencies can be combined and weaknesses minimised. It increases cost effectiveness (see **Section 1.8**), reduces duplication and increases efficiency. For example, DAE could train NGO staff in technical skills to increase the quality of the NGO's services. DAE could also work with NGO formed groups. This would enable field staff to reach more farmers. Partnership also allows extension providers and research agencies to work together to provide an integrated and complimentary service for farmers. For example, DAE can work with the Department of Livestock to promote fodder production or with the Department of Fisheries to develop rice - fish cultivation. Working with the private sector also has advantages. For example, DAE could borrow machinery from equipment suppliers for use in training activities or DAE could assist input suppliers with access to farmers.

### Mechanisms for Partnership

To help make partnership possible, a hierarchy of committees has been put into place as part of the NAEP Implementation Strategy. Some of the committees existed before the NAEP. Their terms of reference and membership have been amended to enable them to act as partnership forums. The committees are summarised in **Table 1.2**. In addition to these committees there are other forums which encourage partnership between Research and Extension and NGOs, such as the Research Institute Co-ordination Committee and the Thana Planning Workshop. These are also summarised in **Table 1.2**.

**TABLE 1.2: MECHANISMS FOR PARTNERSHIP**

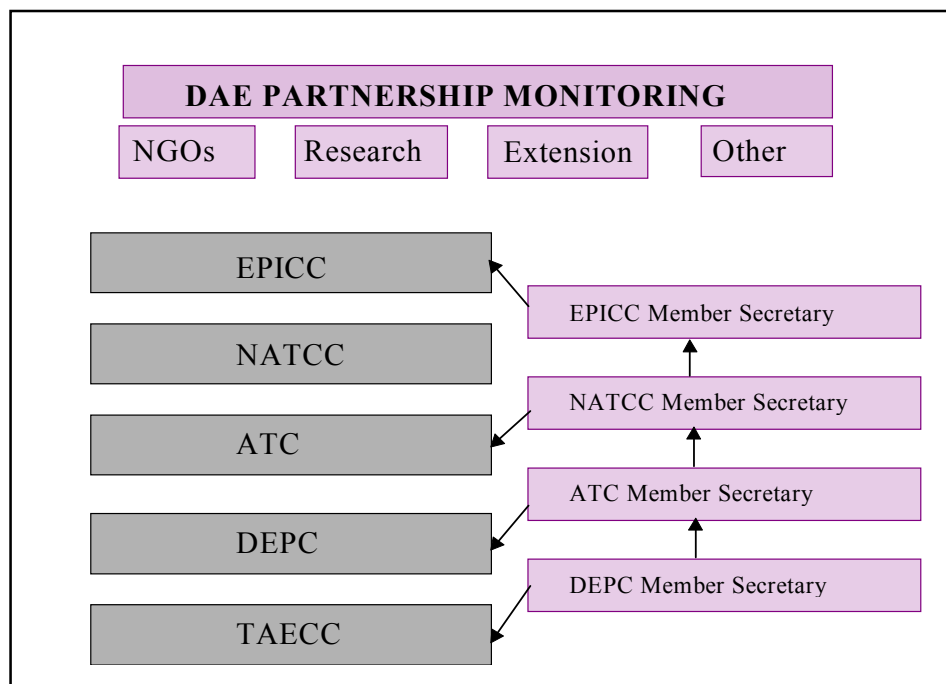
Committee	Function for DAE and Other Agencies
Extension Policy Implementation Co-ordination Committee (EPICC)	<ul style="list-style-type: none"> <li>• Provision of overall extension policy guidance and support.</li> <li>• Encouragement of DAE partners to take an active role in regional, district and thana level co-ordination committees.</li> <li>• Opportunity to consult with donors and other partners through the Donor Consultative Sub-Committee and the Media and Awareness Sub-Committee.</li> <li>• Help to achieve co-ordination of extension related projects through the Institutions Sub-Committee a GoB/Donor Consultative Committee.</li> </ul>
National Agricultural Technical Co-ordination Committee (NATCC)	<ul style="list-style-type: none"> <li>• Provision of high level technical advice.</li> <li>• Provision of new agricultural technology for inclusion in local extension programmes.</li> <li>• Establishment of a link between ATCs and headquarters.</li> <li>• Provision of information relating to farm level constraints, farmers needs and problems and contribution to planning research programmes.</li> </ul>
Research Institute Co-ordination Committee (RICC)	<ul style="list-style-type: none"> <li>• Focused meetings called to address specific technical needs identified at field level, with relevant research staff.</li> <li>• Organisation and management of research programmes contracted by DAE.</li> </ul>
DAE-NGO Liaison Committee	<ul style="list-style-type: none"> <li>• Review of past and present experience with DAE-NGO partnership.</li> <li>• Provision of guidance for regional, district and thana co-ordination committees on partnership development.</li> <li>• Provision of policy advice on partnership development to EPICC.</li> </ul>
Agricultural Technical	<ul style="list-style-type: none"> <li>• Technical validation of the contents of the Annual District Extension Plans.</li> </ul>

Committee	Function for DAE and Other Agencies
Committee (ATC)	<ul style="list-style-type: none"> <li>Review of seasonal activities.</li> <li>Approval of topics for DAE - Research Workshops.</li> <li>Preparation of proposals for research programmes on the basis of unsolved farmer information needs.</li> </ul>
District Extension Planning Committee (DEPC)	<ul style="list-style-type: none"> <li>Approval of Annual Thana Extension Plans, and ideas for the preparation of Annual District Extension Plan (the sum of all thana plans, plus some district level activities).</li> <li>Review of seasonal activities.</li> </ul>
Thana Planning Workshop (TPW)	<ul style="list-style-type: none"> <li>Forum in which all DAE staff and other extension partners come together to prepare the Annual Thana Extension Plan for the next financial year, on the basis of farmer information needs.</li> <li>Discussion of activities to be implemented in support of collaborative programmes.</li> </ul>
Thana Agricultural Extension Co-ordination Committee (TAECC)	<ul style="list-style-type: none"> <li>Forum for sharing an understanding of farmer information needs, available resources and opportunities for co-operation.</li> <li>Discussion of ideas for DAE Extension Plans and review of seasonal activities.</li> <li>Development of ideas for specific collaborative projects.</li> </ul>

### Monitoring NAEP Committees

The NAEP committees are designed to promote and manage extension partnership at national, regional, district and thana levels. DAE's monitoring system includes procedures for monitoring NAEP committees. This procedure is shown in **Figure 1.3**.

**FIGURE 1.3: PROCEDURE FOR MONITORING NAEP COMMITTEES**



The Member Secretary of the DEPC is responsible for collecting information about the occurrence and participation in TAECC meetings, and submitting a summary to the ATC member secretary.

The ATC member secretary is responsible for collecting information about the occurrence of participation in DEPC meetings and submitting a summary to the NATCC member secretary.

The NATCC member secretary, who is the Director in Field Services Wing, is responsible for collecting information about ATC occurrence and participation in the ATCs. The NATCC member secretary provides summary attendance information to the EPICC member secretary.

### Collaborative Programmes

In addition to the NAEP committees DAE can formally work with other extension providers through collaborative programmes. These programmes may require significant additional funds. They are submitted to headquarters as specific programmes incorporated within the normal extension planning, implementing and monitoring procedures.

### Informal Partnership

Extension partners can also work together informally. DAE can extend co-operation to other agencies, Government and Non-Government, without a formal agreement or without meeting formally at any of the committees shown in **Table 1.2**. Informal partnership can take many forms. Examples include:

- BSs visiting NGO or Government department group members to offer advice about an agricultural issue;
- sharing FINA results between agencies to gain a better understanding of the kind of services that farmers need;
- conducting exchange visits between programmes offered by different NAEP partners;
- sharing facilities and resources, such as training halls, trainers and training materials.

It is important to realise that working with other extension agencies (informally or formally), is an essential part of DAE's core responsibilities in the field. Working in partnership is the only way that DAE can fully achieve its mission of providing efficient and effective services to all categories of farmers throughout Bangladesh. **Chapter 3** has been dedicated to describing partnership in detail.

## Research-Extension Linkage

A close working relationship between research and extension is vital in providing high quality agricultural services to farmers. To support the REA, DAE maintain close links with research organisations. The key components of the system for research-extension linkage in Bangladesh are:

- The National Agricultural Technical Co-ordination Committee (NATCC);
- The Research Institute Co-ordination Committee (RICC);
- Research Institute Planning Meetings;
- The Agricultural Technical Committee (ATC);
- Research-Extension Workshops; and
- On-Farm Research.

## National Agricultural Technical Co-ordination Committee (NATCC)

The NATCC is headed by the Chairman, Bangladesh Agricultural Research Council (BARC) and comprises representatives of all research and extension agencies at national level. The member secretary is the Additional Director (Monitoring), Field Services Wing, DAE. The NATCC meets as and when required, but at least once each season. The role of the NATCC is to:

- ensure close working relations between research and extension;
- review and recommend for implementation technologies evolved by research institutes;
- support, monitor and evaluate the impact of extension services and on-farm research results;
- direct research institutes towards conducting research on issues related to FINA results;
- review, co-ordinate and guide ATCs.

## Research Institute Co-ordination Committee (RICC)

The Research Institute Co-ordination Committee is responsible for maintaining national links between research and extension. It is flexible, meeting as required by the emergence of particular needs or problems that require a collaborative research/extension effort. Membership is equally flexible. RICC is convened by the Director General, Department of Agricultural Extension. DAE and BARC are the core institutions represented on RICC but each meeting will have a specific subject focus and those extension or research institutes with a particular interest are invited to attend. Individuals sent to the meeting by concerned institutions will be those people who, regardless of rank, are best able to contribute to discussion and formulate proposals in this subject area.

## Research Planning Meetings

Each member institute of the National Agricultural Research System conducts planning meetings and workshops each year. The main meetings are:

<b>Bangladesh Agricultural Research Institute (BARI)</b>	- July to December
<b>Bangladesh Jute Research Institute (BJRI)</b>	- December to January
<b>Bangladesh Rice Research Institute (BRRI)</b>	- October/November (Rabi) - February/March (Kharif-I) - May/June (Kharif-II)
<b>Bangladesh Institute of Nuclear Agriculture (BINA)</b>	- July to September



DAE staff attend each of these planning workshops and meetings to promote farmer responsive research, share results of Farmer Information Needs Assessment (FINA), and gain a clear understanding of the main research activities to be implemented in the next season or year under the core funded research programmes.

### **Agricultural Technical Committee (ATC)**

This is the first formal forum between extension and research staff. The ATC meets four times each year, once before each cropping season, and once to review annual extension plans. The Additional Director (Region), is responsible for:

- reviewing the technical content of extension plans to ensure the diffusion of the most appropriate technologies;
- reviewing the content of extension plans to ensure that technologies listed are environmentally friendly;
- reviewing farm level problems which could not be solved at district level, and recommending research programmes where necessary;
- making arrangements for research-extension workshops between District Specialists and Senior Scientific Officers (SSOs).

Research programmes which are proposed by the ATC are submitted to Research Institutes Headquarters for approval, often through the NATCC. There are 18 ATCs, shown in **Table 1.3**. Districts have been grouped together to form ATCs according to Agro-Ecological Zones (AEZ) and their proximity to research stations.

Detailed guidelines for effective management of ATCs are included in **Chapter 7**.

**TABLE 1.3: AGRICULTURAL TECHNICAL COMMITTEES IN BANGLADESH**

No	Districts	AEZ	BRRJ	BARI			MLT Sites	BJRI	SRI
				Regional	Sub-Station	OFRD			
1	Panchagar	1 (3)			✓		1		
	Thakurgaon	1			✓	✓	1		✓
	Dinajpur	1 (3,2,5)			✓		1		
2	Nilphamari	3 (2)					1		
	Lalmonirhat	3 (2)					1		
	Rangpur	3 (27, 2)	✓		✓	✓		✓	
	Kurigram	7 (3,2)					1		
	Gaibandha	3 (7,27)					1		
3	Bogra	25 (4, 27, 3)			✓	✓			
	Joypurhat	25 (3)					1		✓
	Naogaon	25 (3, 26, 6, 11)							
4	Sirajgang	4 (7, 25, 12)					1		
	Pabna	12 (11, 10, 4)		✓	✓	✓	3		✓
5	Nawabganj	11 (26, 10, 6)			✓	✓			
	Rajshahi	11 (26, 25, 10)	✓		✓	✓	2		✓
	Natore	11 (5, 12, 10)					1		
6	Jamalpur	8 (9, 7)		✓		✓			✓
	Sherpur	9 (22, 29)					1		
7	Mymensingh	9 (8, 28, 22)				✓	2		
	Netrakona	9 (22, 21)					1		
	Kishoregonj	8 (21, 9, 19, 16)			✓	✓	2	✓	
8	Sylhet	20 (22, 29)		✓	✓	✓			
	Sunamgonj	21 (22, 20, 29)					1		
	Moulvibazar	20 (29, 22)		✓			1		
	Habiganj	19 (20, 21, 22)	✓						
9	B.Barua	19 (16, 21, 22)					4		
	Comilla	19 (16, 22, 29)	✓			✓	3	✓	
	Chandpur	19 (17, 16, 10)							
10	Tangail	8 (28, 7, 9)				✓	3		
	Manikgonj	8 (12, 10)					2	✓	
11	Gazipur	28 (9)	HQ	HQ					✓
	Dhaka	28 (8,12,10,15)					4	HQ	
	Narsingdi	9 (16, 28, 8)					1		
	Narayanganj	9 (19,28,16, 8)					1		
	Munshigonj	19(10,8,16,15)			✓		1		
12	Kustia	11 (10, 12)				✓	2		
	Meherpur	11					1		
	Chuadanga	11	✓						✓
13	Jhenaidah	11					1		
	Magura	11 (12)			✓		1		
	Jessore	11 (14, 12)		✓		✓	2	✓	
	Narail	12 (14)					1		
14	Satkhira	13 (11)					1		
	Khulna	13 (14, 11, 12)	✓			✓	2		
	Bagerhat	13 (11, 14, 12)					1		
15	Rajbari	12 (10)					1		
	Faridpur	12 (10)	✓			✓	1	✓	
	Shariatpur	10 (12, 19, 13)							
	Madaripur	12 (14, 10)					1		
	Gopalganj	14 (12)							
16	Barisal	13 (18, 19, 12)	✓	✓		✓	1		
	Jhalakathi	13					1		
	Pirojpur	13 (19, 12)					1		
	Patuakhali	13 (18)				✓	1		
	Barguna	13					1		
	Bhola	18 (13)					1		
	Laxmipur	18 (17, 19)							
17	Noakhali	18 (19, 17)					2		
	Feni	19 (23, 18, 29)	✓				1		
	Khagrachari	29			✓				
	Rangamati	29			✓		1		
	Chittagong	29 (23)		✓	✓	✓	3		
	Bandarban	29					2		
	Cox's Bazar	29 (23)							

## Research-Extension Workshops

Research-extension workshops at regional level provide an opportunity for research staff to become familiar with extension programmes and farm level constraints, and an opportunity for extension staff to become familiar with current research. These workshops last for one day, and are held at research stations. The main participants are District Specialists (either the Crop Production Specialist, the Plant Protection Specialist, the Horticultural Specialist, the Water Management Specialist or the Agricultural Engineering Specialist) from DAE and Senior Scientific Officers from research institutes.

Part of the workshop comprises a tour of the research institute, to enable extension staff to see in practice the type of research being conducted. Practical hands on sessions are arranged by SSOs so that District Specialists become familiar with emerging technologies. The final part of the workshop consists of DAE explaining their local extension programmes, how they respond to farmers needs, and which farm level problems they are unable to resolve. The output of these workshops includes ideas that might be included in extension plans, and research topics that might be included in research programmes. Detailed guidelines for organising these workshops are given in **Annex III**.

## On-Farm Research

On-farm research is conducted primarily by the On-Farm Research Division (OFRD) of the Bangladesh Agricultural Research Institute (BARI). On Farm Research sites are mainly concerned with: generating technologies which are locally relevant and viable; developing and testing technologies on farms; and testing technologies which have been developed by research or other organisations on farms. There are 18 OFRD sites in 18 districts, these are shown in **Table 1.3**. On farm research programmes are drawn up in consultation between research and extension staff, with the participation of farmers. In addition to OFRD sites there are also 72 Multi Location Test sites. Research conducted at these sites is primarily concerned with verifying new or adapted technologies which have already been tested.

Agricultural Extension Officers and District Specialists participate in the planning, monitoring and evaluation of on-farm research, and work closely with BARI Field Assistants and selected farmers. Results of on-farm research should be discussed at ATC meetings with a view to developing future programmes or including results in extension plans.

## Flow of Technical Information

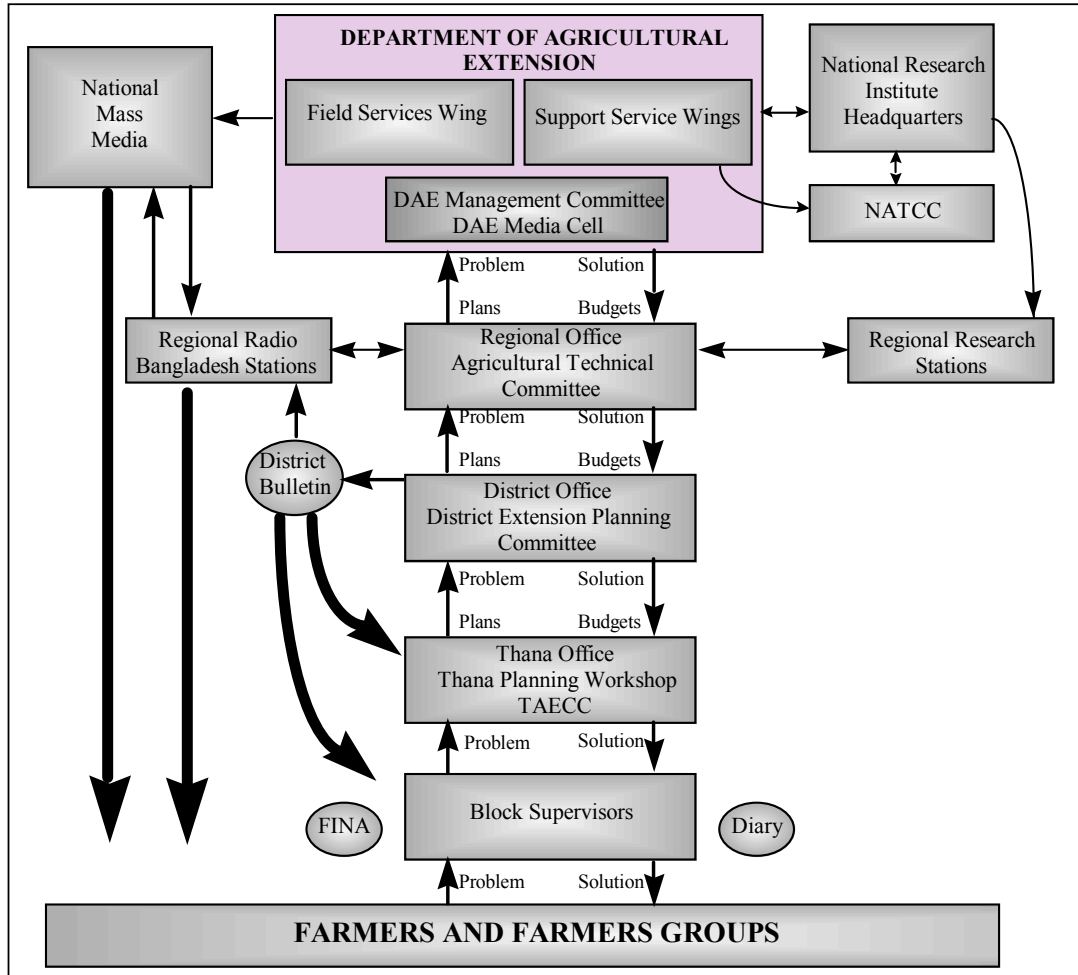
At field level, situations may arise where an extremely urgent request for information from a farmer or group of farmers must be dealt with as rapidly as possible. In this situation, Block Supervisors refer urgent problems and requests for information to the Agricultural Extension Officer (AEO). If the AEO can provide an appropriate solution or response, this is conveyed to the farmer by the Block Supervisor as quickly as possible. If the AEO cannot respond, the request is passed to the Thana Agricultural Officer (TAO), who, in turn, refers it to the relevant District Specialist at district level if he or she is unable to provide an appropriate response. District officers, if necessary, contact the nearest research station for advice, or if this fails, refer the issue to DAE's most appropriate technical support wing.

Each level of the department is responsible for ensuring that responses to urgent requests for information are provided to farmers as soon as possible. The basic principle is that farmers' problems are referred up through the structure of the department until a solution is found. Obviously, there are many farm level problems for which there is no quick solution. In this case, the responsibility of the department should be to work with research institutes to

design appropriate research programmes to investigate possible solutions. In other cases, the problems farmers face are outside the crops sector, and the advice of organisations working in the fields of livestock, fisheries, forestry or social development should be sought.

**Figure 1.4** shows the general flow of technical information within the Department of Agricultural Extension.

**FIGURE 1.4: FLOW OF TECHNICAL INFORMATION**



### Farmer to Block Supervisor

The **Block Supervisors Diary** is the main source of information exchange between Block Supervisors and farmers. The page layout of the diary makes it possible for Block Supervisors to record the information farmers have provided and problems which farmers have raised. Wherever possible, Block Supervisors should provide an immediate response to farmers problems and questions. If this is not possible, the farmers problem, information need or question is written in the diary. In addition to the diary, Block Supervisors also conduct FINA. The output is problems written in the Block Supervisors diary, and FINA results.

### Block Supervisor to Thana

Block Supervisors take recorded unsolved problems to the thana office every week. These entries contain information about farmer problems which the BS has identified during their

weekly programmes. BS also take FINA results to the Thana office once a year to assist with the preparation of the annual thana extension plan.

### **Thana to District**

Each month, Thana Agricultural Officers attend the district office to review implementation of extension programmes, farmer problems and to discuss new initiatives. Each year, the **District Extension Planning Committee (DEPC)** meets to review and approve thana extension plans and prepare a plan of district level activities. The DEPC also meets prior to each season to review the validity of extension plans. One of the items which is included in the district level plan is the production of a **District Bulletin**. The District Bulletin is produced each month for circulation to all DAE staff in the district, Bangladesh Betar and other extension agencies. The bulletin contains agricultural news, news of forthcoming extension events, and responses to farmers problems which could not be solved at thana level. Where there are farm level problems which cannot be resolved at district level, these are submitted to the Agricultural Technical Committee along with the district plan.

### **District to Region**

Each month, Deputy Directors meet the Additional Director (Region) to discuss implementation of extension events and farmers problems. Farmers problems which are resolved are put into the next edition of the district bulletins. Each season, and once per year for the annual extension plan, the Additional Director (Region) calls a meeting of the **Agricultural Technical Committee (ATC)**, which includes research staff and extension staff from crops, forestry, fisheries, livestock and Non-Government organisations. In addition to managing ATCs, Additional Directors (Region) are responsible for maintaining formal and informal relationships with extension agencies and partners in the region.

The Additional Director (Region) is also responsible for liaison with Regional Broadcasting Stations of **Bangladesh Betar**. This includes providing copies of district bulletins, district extension plans, and responses to farmers problems, to link agricultural radio programmes to farmers field problems and local extension programmes.

### **Region to Headquarters**

The Additional Director (Region) submits the consolidated regional extension plan to the Director, Field Services Wing. These are reviewed and approved at a meeting of the **DAE Management Committee**. Where there are farmers problems which could not be resolved at district level, and no response was available from ATC members, the Additional Director (Region) refers the issue to the appropriate technical support wing at headquarters - for example, Plant Protection, Food Crops, Cash Crops or Water Management and Engineering. Responses from these wings are passed to Bangladesh Betar for broadcast, and to the Deputy Directors (District) to include in the bulletin. Where there is an issue which has obvious national importance, national mass media are informed, and the item is covered on television, national radio and newspapers. National mass media production for the Department is managed by the **DAE Media Cell** which includes representatives from the Agricultural Information Service (AIS).

## **1.8 CONDITIONS**

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Although the extension approach operates within a supportive environment, it cannot operate effectively without clearly defined conditions. The conditions which govern all of DAE's activities include:

- a responsibility to the environment;
- a responsibility to social development; and
- a responsibility to cost-effectiveness.



These conditions are described below.

### Environmental Guardianship

Any change in agriculture has a direct impact upon the environment, as agriculture is a process of environmental management. The New Agricultural Extension Policy (NAEP) commits all extension providers to balance the need for environmental preservation with the requirement to improve productivity. DAE recognises this challenge in its mission statement and all extension plans therefore need to be environmentally friendly.

This means that the potential impact of any new agricultural technology should be assessed prior to recommending its use to farmers. Environmental appraisal aims to identify the environmental impact of proposed technologies, and to assist staff in designing extension programmes which promote sustainable environmental management.

Alternative methods of environmental appraisal are currently being evaluated by DAE. After field testing, these will be issued to provide guidance to field staff.

### Social Development

A key feature of the extension approach is responsiveness to farmer needs. In the context of targeting this means that extension plans must ensure that the needs of male and female farmers, and small and large farmers, are addressed. The FINA process ensures that information about farmer needs is collected from all types of farmer. When including extension events in thana and district plans, it is important that selected technologies are appropriate for each of these target groups and that they are socially acceptable.

In general, small and marginal farmers need access to low-cost technologies, as they have less capital for investing in agriculture. Medium and large farmers might be interested in technologies which have a higher capital cost. Female farmers need access to homestead technologies, though female headed households may also be interested in field crop technologies. All technologies promoted in extension plans should result in one or more of the following:

- decreases in input costs (including labour);
- increases in outputs;
- increases in the quality and market value of outputs;
- increases in the production of nutritional foodstuffs for household consumption;
- improvement in agricultural practices to promote environmental sustainability;
- reduced dependence on externally purchased inputs, and greater use of local resources.

In addition to the broader social issues described above DAE also needs to consider gender as part of its extension approach. Gender is the word used to describe the social relationship between women and men. It is one of the ways that society is organised, based on the specific roles women and men play.

Women play three main roles in society:

**Reproductive:** bearing and caring of children.

**Productive:** production of food and other products, processing, contribution to handicrafts, income generation and unpaid work.

**Community:** participation in community affairs, women's groups, societies and clubs, maintaining family obligations, and cultural participation.

The importance of these roles is that for communities, villages, households and families to develop, the active participation of women as well as men is essential.

The Government of Bangladesh policy on agricultural development objectives for women applies to DAE. These policies are:

- to integrate women in the mainstream of economic activities so as to reduce the gender disparity in all socio-economic spheres;
- to raise the productivity and income opportunities of women at national and local level;
- to enhance the participation of women in nutrition based agriculture, and maintain the ecological balance;
- to ensure more effective participation of the poorer 50 per cent of the population in development activities.

For the Department of Agricultural Extension to contribute effectively to agricultural development in Bangladesh both men and women need to be involved. One of the easiest ways to achieve this is to ensure that all activities and operations in the farm household that contribute to agricultural development are supported by extension services, and that these services are provided directly to the family members who are responsible. This is the approach that DAE has adopted for working with women.

For example, most household activities such as cooking and fuel collection, child care and kitchen gardening are usually done by women. Extension services aimed at improving fuel use, or improving vegetable production should therefore be provided directly to women. Most household activities related to field crop production, or marketing, are usually done by men, so extension services aimed at improving field crop management should be provided directly to men. Where households are female headed, women are more likely to be involved in field operations.

### Cost Effectiveness

Obviously, the Government of Bangladesh needs to ensure that the investment they make in agricultural extension is put to good use in providing services to farmers, and hence, is cost effective. DAE's Mission Statement supports this through its commitment to provide *efficient and effective* extension services. There are a number of ways in which DAE staff can help to achieve this.

For example, extension managers could ensure that:

- extension staff do not waste any of their time or other DAE resources;
- farmer responsive extension programmes are implemented;
- extension programme cost-effectiveness and quality is monitored using the Seasonal Extension Monitoring System (SEMS). SEMS is described in detail in **Chapter 12**.
- partnerships with the private sector, Government and Non-Government agencies and farmers are developed to share resources including staff, information and local organisation. These are discussed in **Chapter 3**.

By doing this, extension programmes can:

- be implemented at reduced cost;
- provide services to a larger number of farmers;
- provide higher quality services to farmers;
- develop the capacity of other extension services.

These principles are described in more detail below.

### **Cost-Effectiveness of Staff Time**

Extension managers at headquarters, regions, districts and thanas could use the following checklist to ensure that staff costs are used efficiently for agricultural extension:

#### **STAFF TIME**

- ensure farmer needs are assessed;
- ensure extension plans each year and season are designed to respond to farmer needs;
- ensure that each BS has an up to date **Work Programme** that has been agreed with their supervisor and which is consistent with: a) the thana plan; and b) the BS job description;
- check the progress of officers and staff against the objectives stated in their Work Programmes;
- ensure that as far as possible field staff and officers are working to maximise the time that they spend on extension duties;
- ensure that staff work in partnership with other organisations, and do not duplicate the work of others;
- ensure in-service staff training programmes are planned in such a way that extension staff are not absent from their stations for long periods attending consecutive courses.

### **Cost Effectiveness of Extension Programmes**

Extension managers at headquarters, regions, districts and thanas could use the following checklist to ensure that programme costs are incurred efficiently for agricultural extension activities:

#### **EXTENSION PROGRAMMES**

- check that plans respond to farmer information needs so that services are as useful as possible. All activities should be related to farmer needs;
- use group extension methods where possible to increase the number of farmers who have access to extension services;
- use mass media (radio, television and newspapers) wherever possible and appropriate, to ensure information reaches a large number of farmers quickly and effectively;
- develop partnerships with the private sector;
- develop partnerships with other Government and Non-Government agencies;
- develop partnerships with farmers.

Extension managers at each level can look at some simple indicators of cost effectiveness from the Seasonal Extension Monitoring System (SEMS).