Internship Report

On

“The Extension Planning to Disseminate the Modern Agriculture”

Faculty of Business Studies

HAJEE MOHAMMAD DANESH SCIENCE AND TECHNOLOGY UNIVERSITY (HSTU), DINAJPUR-5200.

October, 2017

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Submitted By

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Masters of Business Administration (Evening)

This internship report is submitted to the faculty of business studies, Hajee Mohammad Danesh Science and Technology University, Dinajpur, in partial fulfillment of the requirements for the degree of MBA (Evening).

Faculty of Business Studies
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A compilation of Internship Report

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DEDICATE TO

Small and Marginal farmers of my country, those are straggling for betterment of their Destiny.

MY HONORABLE TEACHERS As well.

Preamble

Agriculture is the main element of our culture and tradition since the history. Food, live, labor and brains are much related and source of them is Agriculture. More than 45% of total population is earning their livelihood by Agriculture. So ensure food security and progress of country is relies on Agriculture as well.

Now a day the Agriculture has got multi-challenge. There are many threats are existing in this sector. Decline of cultivable land, population exploitation, Production cost being high, natural disaster creating impediment for Agricultural Production. Moreover, “Climate Changing” is a big challenge. In this circumstance, Department of Agricultural Extension is working in field at the doorstep of the farmer tirelessly, staying so close to farmer. Therefore, Sub-Assistant Agriculture officer, Sub-Assistant plant protection officer, Agriculture extension officer and Upazila Agriculture officer is executing their responsibility. To full filling the expectation and information requisite of farmer is delivering by the Department of Agricultural extension (DAE). Department of Agricultural Extension is acting upon for betterment of small, marginal, big farmers also. It is introducing new technology and new approach of Extension.

Background of the study:

There are many organizations under Agricultural ministry in our country. They are Department of Agricultural Extension, Bangladesh Rice Research Institute, Bangladesh Agricultural Research Institute, Bangladesh Agriculture Development Corporation and wheat research institute etc. Some institutes are Research oriented and some are delivering agricultural inputs and some disseminating the technology to the farmer. Department of Agricultural extension (DAE) is such a govt. organization that is helping the modern agriculture to the farmer. Another function of Department of Agricultural extension is collect problems from the farmer and sent it in the research institutions. So that farmer gets easy solution of that particular problem.

Origin of the report:

As a part of Masters of Business studies (MBA) is requirement, i have to do 45 days internship. In a prominent institution regarding the Major subject. As an employee(Sub-Assistant agricultural officer) of department of agricultural extension it's my duty to convey new and effective technology to the farmer. I use extension tools to convince farmer as well as female farmer. Women participation in agriculture is an important thing. We are ensuing the women participation in Agriculture. Now day's agriculture is changing. Got so complexity, Global warming, Climate change, Natural Calamity and flash flood. So such an adverse situation which method can chose and which will effective and fruitful that will be my Observation.

The internship program and the study have following purposes:

- Experience the needs of small and marginal farmer.
- What are the main barriers to Modern agriculture?
- How should be the actual National Agricultural policy?

- Gain fast hand knowledge about the countryside, original scenario of farmer especially the small and marginal farmer.

Scope of Study:

I am doing my job as Sub-Assistant Agriculture officer at department of agriculture extension. So it has been another golden change to go at the door step of farmer. I am always been enthusiastic to learn so I hope i shall able to utilize the chance.

Objective of the Report : The core objective of this study is finding the fittest and viable process of agricultural extension, that will be suitable with socio-economic condition of small, marginal farmer.

There can be two objectives of the Report. They are:

Broad Objective: The functions and interaction between farmer and extension worker, extension tools as well.

Specific Objectives:

- Present an overview of the function of Department of agriculture extension.
- Gather knowledge about the function of Upazila Agriculture office.
- Gather knowledge about the different farmer club.
- Group approach of extension.
- Address the main problem of farmers.
- Know about the block planning.

Importance of Topic :I think the topic carries more importance. I have chosen the topic discuss with our honorable supervisor.“The extension planning to disseminate the Modern Agriculture” is given below.

1. We can`t work traditional method of extension. We have to go new and modern method of cultivation, we have to introduce the modern method of cultivation.

Example: Such as- The prominent Rice Research Institute has resealed the zinc-enriched variety of rice BRRI Dhan 72, it contains Zinc and it will provide zinc to the human being. Besides, met the demand of carbohydrates. So Department of Agricultural Extension (DAE) will make a plan to introduce this variety among farmer.

2. Define useful extension channel and tools to popularize a certain technology.
3. Replacing old agriculture by modern agriculture we may sustain our food security.

Methodology : Methodology describes the manner in which data is collected, analyzed and interpreted. I have collect information following sources, which has helped me to make this report. The source is divided into two parts.

Sample Size:

I have physically got interview of about 30 small farmers and 20 marginal farmers. Those farmer were from Mashipur, Chardangi, Chahelgazi and Ashcorpur village under sadar upazilla gathering such information helped me a lot to this study.

a) Primary source: Discussing with farmer physically, work with different farmer's club, FIAC (Farmer information and advice center), AICC (Agriculture information and communication center) and CIG (Common interest Group), Dinajpur.
b) Secondary Source: That is from DD office Dinajpur and upazila agriculture Office.
c) Another is E-Agriculture. Adopting data form www.dae.gov.bd,www.moa.gov.bd, www.bari.gov.bd, www.brri.gov.bd and so on.
d) Different wings of department of Agricultural Extension. Like- Plant protection section, Horticulture center, Seed certification agency etc.

Data Analysis Methods:

Collected data were analyzed and presented in the from of bar design and pie chat etc. Different types of software like Ms-Excel, Ms-word etc are used to prepare accordingly in the form of word format.

Mission and vision of DAE:

Vision (Rupokolpo) :

The Sustainable and profitable production of Crops.

Mission:

Ensuring sustainable and profitable crop production by providing proficient, fruitful, decentralized service locality and demand based and combined agricultural extension service for enhancing technical knowledge and skills of farmer.

Department of Agricultural extension consists of 8 wings. Those are given below:

1. Administration and Finance Wing.
2. Horticulture Wing.
3. Training Wing.
4. Crops wing.
5. Field service wing.
6. Plant protection wing.
7. Plant Quarantine wing.
8. Planning, project implementation and ICT wing.

I am doing my job as sub-assistant agriculture officer under field service wing. So the objectives and function of field service wing given below:

Objectives of DAE:

- Formulating AEZ, local and farmer need based planning.
- Fixing the annual target and trying to achieve that target.
- Dissemination of information and technology got from different agricultural research organization.
- Estimating seed and agricultural input of farmer and ensuring them.
- Estimating the production cost of different crops

Defining the Extension Method: To disseminate the modern agricultural technology there are many methods available. Those are given below:

1. Personal extension method
2. Farmer group/ Organizational based extension method
3. Mass media and audio-visual instruments

To propagate the modern system of farming or agriculture department of Agricultural extension (DAE) is encouraging their extension worker to work among farmer group/organizational based extension than personal extension method. Because the group based extension is more inflectional and it spread easily.

Personal Extension Method: Although the DAE encouraging the group approach of extension, but sometime personal extension is need. Because individual farmer`s problem can solve by this method. To identify and analyses the problem this method of extension is more important.

The Necessity of Personal Extension Method:

- If the extension worker is requested by an individual farmer about a problem.
- If it is need to identify a problem in a certain land of a certain farmer.
- Follow up meeting.
- To make better relation to targeted farm/farmer.
- Get knowledge about on-farm research.
- To formulate a detailed planning of an individual farmer.

Advantage of Personal Extension Method:

- Resolve a farmer's individual problem.
- A farmer can convince easily.
- Make a better relation with farmer's family.
- Give rapid service.

The under mentioned check list can use

Before visiting :

- Fixed the visiting time, if possible.
- Defining the objectives of visiting.
- Review the previous visit information.
- Developing technical information on relevant subject. If need.

In time of Visit :

- Maintain punctuality.
- Discussing frankly with farmer and his family.
- Asking allabout the farm.
- Listening about problem of farmer and get information.
- Those solution are unknown send them to higher authority.
- Ask about current situation about farm.
- Take note about farm visiting.

After Visit :

- Check the information While visiting
- Next step to visit
- Planning the next activity

Some Points to Consider of visiting:

- Visit Date
- Intension of visit
- The decision agreed upon
- Another aspect

Adoption of New Technology:

There are some steps in Adoption Process. Those are --

- Awareness
- Eagerness
- Evaluation and decision making
- Adoption and Confirmation
- Consolidation

Other norms to defining process:

1. Expense: it is a big factor. It depends on the budget of extension.
2. Extension range: It can be influential.
3. Complexity: Easy and cheap process should be taken.
4. Skill
5. Targeting.

Selecting Process Dements on:

- Message: Extension method may depend on massage.
- Participants
- Affordable resource
- Completeness

Farmer Group/Organization based Extension Method:

Group extension events happen when extension staff works with several farmers at the same time and place. They provide an opportunity for group based learning, can stimulate group development and co-operation between farmers, and are a cost-effective means of delivering extension messages. Group extension events are at the core of the Department's extension approach. This chapter provides details of extension methods, which are suitable.

Result Demonstrations with Farmer's Groups

- Method Demonstrations
- Field Days
- District and Upazila Fairs
- Farm Walks
- Farmers Rallies
- Folk Media
- Group Meetings
- Motivational Tours
- Participatory Technology Development
- Formal Training Days
- Farmer Field Schools

Result demonstrations show what happens because of using a particular technology in the field or homestead. Examples include growing transplanted Aman rice using balanced fertilizer, using

Integrated Pest Management in rice during a season, or demonstrating a new cropping pattern. Result demonstrations can be conducted over a single season, two seasons, or a whole year. Although some result demonstrations are conducted with an individual farmer, others are conducted with groups. Those which are conducted with individuals are only really effective when combined with group extension events at the demonstration site.

Cropping pattern demonstrations;

- Block demonstrations;
- single season demonstrations;
- Single intervention demonstrations; and
- Package demonstrations.

These are described with guidance on planning, implementing and monitoring demonstrations in this section.

Cropping Pattern Demonstrations Cropping pattern demonstrations are implemented throughout a whole year and cover three seasons. This makes it possible to demonstrate a rotation of crops, for example T. Aman in the Kharif-II season, followed by a pulse or an oilseed through the Rabi season, with T. Aus in the Kharif-I season. The advantage of a cropping pattern demonstration is that farmers can learn how to integrate a new crop into their farming system.

Principles of integrated plant nutrition can also be demonstrated,for example by applying full fertilizer to the Rabi crop, and allowing crops in the other two seasons to take advantage of residual effects. In the latter case, cropping pattern demonstrations are based on the normal cropping patterns in the area, and only show adjusted fertilizer doses. All other operations remain the same as the farmer's usual practices.

Block Demonstrations

Block demonstrations are planned and implemented with a group of farmers who operate land next to one another. In this way, the area of the demonstration can be quite large, up to two or three, or perhaps five hectares. Block demonstrations present a strong visual impact, and involve working with a group of 10 to 15 farmers. A block demonstration is simply a large demonstration. This means that they can be cropping pattern demonstrations, single season demonstrations, single intervention demonstrations or package demonstrations.

Single Season Demonstrations

Single season demonstrations last for only one season, Kharif-II, Rabi or Kharif-I. They are usually conducted with a single crop, unless the demonstration involves intercropping. Single season demonstrations are used to demonstrate a single aspect of crop production. A single season demonstration can be any size, so it could be a block demonstration.

Single Intervention Demonstrations

Single intervention demonstrations are conducted on a crop which is already being grown in an area. They show only one adjustment to the farmers practice. A single intervention demonstration has two plots, one control plot which is the farmer's normal practice (variety, fertilizer, water management, or pest and disease management), and one demonstration plot. There is only one difference between the control and the demonstration plot. For example, a different timing to fertilizer applications, or the use of a different water management practice. This is so that the farmer clearly understands the precise benefits of a single change. Single intervention demonstrations also usually show ideas which farmers can adopt at little cost. In theory, a single intervention demonstration could be of any size or duration, so it could be a cropping pattern demonstration, a single season demonstration, a block demonstration, or a single farmer demonstration.

Package Demonstrations

Package demonstrations are conducted mainly for crops which are new in an area. For new crops, a package demonstration shows which variety to plant and when, what fertilizer to use and when, what water management procedures to use, how to control pests and diseases and all other aspects of production. There is no control plot, as the crop is new to the area. A package demonstration could be of any size or duration, so it could form part of a cropping pattern demonstration, be a single season demonstration, or a block demonstration.

Single Farmer Demonstrations

Result demonstrations can also be conducted as an individual event. Single farmer demonstrations are conducted with one farmer,

as opposed to blockdemonstrations which are conducted with a group of farmers over several hectares of land. Single farmer demonstrations are smaller, and often comprise two plots, a demonstration and a control,each of which perhaps cover 200 m2 or 400 m2.

Planning:

Result demonstrations are planned by

- Using the Upazila plan;
- Selecting the demonstration site;
- Planning the inputs required; and
- Training the farmers.

Using the Upazila plan: during the Upazila Planning Workshop, decisions are made as towhich demonstrations will be held, and when. The plan is used to check that the misappropriate type of demonstration single season or cropping pattern, block or single farmer,package or single intervention has been selected. A demonstration schedule is theprepared. This could show for example, when the crop will be planted, when it will beharvested, and when field days would be most appropriate.

Selecting the demonstration site:

Demonstration farmers, or farmers in the case of block demonstrations, are chosen and a site is selected. Demonstration farmers should be representative of the target group which identified the need or problem, and are interested inthe idea. If it is with an individual farmer then they should be a member of the

originalProblem Census Group. Demonstration sites should be easily visible, on a representativeland type and accessible.

Planning the inputs required:based on the plot size and technology, plans are madefor the inputs that are required. For example, types and quantities of fertilizer, seed,laborand signboards. These are agreed with the farmer and a decision is made on who willprovide them. Wherever possible, demonstration farmers should provide some or all of theinputs. Plot sizes are variable, depending on technology and type of demonstration.Signboards should contain the demonstration purpose, the technology, and field dayschedules. DAE has a standard signboard design, which should be used for alldemonstrations.

Training the farmers:

Farmers who host demonstrations need to understand clearly what the demonstration is designed to achieve, and how it will be implemented. This can beachieved in Upazila level briefing sessions, or one-on-one visits by Sub-Assistant Agriculture Officer (SAAO).

Implementation:

Inputs should be organized, and farmers trained, before the demonstration is established.After the demonstration has been established a number of activities should be completed toensure successful implementation. These include:

- Visiting the demonstration plot regularly and meeting the demonstration farmer(s);
- Conducting regular group extension events at the demonstration site; and
- Monitoring and evaluating the demonstration.

Visiting the demonstration plot regularly and meeting the demonstration farmer(s): Sub-Assistant Agriculture Officer (SAAO) should visit regularly, and record progress. Any problems shouldbediscussed with the farmers. This could include, watching for pest and diseases, making sure management operations are implemented appropriately at the correct time. Problemswhichcannot be resolved should be referred to the Agricultural Extension Officer.

Conducting regular group extension events at the demonstration site: demonstrationsare usually quite costly. To get the best value for money from a demonstration,otherfarmers should be encouraged to participate in the learning process. Field days and

othergroup extension events organized at the site are examples of ways to do this, helping toimprove cost effectiveness. Field days and other events are best implemented when there is something important to be done in the field, or where there is a clear visible benefit from the technology being shown. Monitoring and evaluating the demonstration: SEMS and KAP are tools which should be used for this purpose.

Monitoring, Evaluation and Follow-up :

The third step in implementation involves the completion of SEMS. A SEMS Form 1should be completed for every demonstration. The main parts of SEMS 1 are:
Contact: How many farmer(s) attended the demonstration and field days and the totalcost.

Understanding: How many farmer(s) understood the demonstration. This can be gaugedfrom informal discussions with the farmers or by a show of hands during field days.

Testing: How many of the farmers think that they will try the new technology on their ownfarm or homestead. Again, this can be gauged from informal discussions with them or by ashow of hands.

There are also some parts of SEMS Form 1 which are specifically for demonstrations.These include information about the land type, establishment date and appropriateness ofsiting. SEMS 1 also contains information about the cost-benefit ratio of the demonstratedtechnology. For this, the input cost, yield and value of the crop are required. Where there isa control plot, the same information is collected to make a comparison of the profit and loss of

the demonstration technology compared to the farmer's usual practice.

There are also spaces to record information about field days.

FIELD DAYS

A field day is a group extension event conducted at the site of any type of result
demonstration. With single farmer result demonstrations, the field day is important toimprove the cost-effectiveness of the demonstration. Field days provide the opportunity for20 or more farmers to visit a demonstration site, learn about what is being demonstrated,ask questions, and encourage them to try new ideas themselves on their own farms.Aseries of field days, especially those that last for a year and show a cropping pattern, providean ideal opportunity for farmers to meet again.

Planning:

Field days are arranged at key times during the demonstration, when particular managementactivities are implemented, or when the benefits of the demonstration are most visible.Forcrop production demonstrations, appropriate times could be:

- At the time of planting;

- When fertilizers or other inputs are provided;
- At mid-season when differences in crop growth are apparent;
- At harvest time when yields, costs and benefits can be compared.

A useful planning checklist for a field day includes:

- Fixing an appropriate date and time in consultation with the host farmer;
- Checking the Resource Centre for materials which could be useful during the field day;
- Advertising the field day to neighboring farmers and people who participated in earlierfield days at the site. Where possible farmers should be from similar socio-economicbackgrounds;
- Ensuring that the farmer hosting the demonstration can correctly explain the objective ofthe demonstration, what has been done, and the expected benefits, including costs andreturns;
- Visiting the demonstration site to ensure that access is easy, movement through the fieldis possible, that there is a clear visual impact for the field day.

Implementation:

1. The Sub-Assistant Agriculture Officer (SAAO)or other member of staff responsible should arrive early with all the necessary materials and ensure everything is in order. Successful implementation requires:
2. An informal atmosphere where people feel free to raise questions;

   An introduction where the purpose of the field day is explained and farmers are reminded of the original problem or need which the demonstration was designed to address;
3. That the farmer hosting the demonstration is encouraged to take an active role in the field day, explaining the demonstration objective, what has been done, and their impression of the costs and benefits of the technology;
4. That farmers are able to walk around the demonstration, and to take a close look at thecrop. Where there is a demonstration and a control plot, farmers can be encouraged tolook at the differences between them;
5. Extension staff to talk informally with the farmers to find out whether they understood the demonstration clearly, their impressions of the technology and whether they will try the technology on their own farm;
6. Recording the names of participating farmers, and completing a Seasonal Extension.

Monitoring SEMS Form 1 concluding the field day by bringing participants together, reviewing the proceedings and explaining any follow-up activities.

Monitoring, Evaluation and Follow-up:

One of the final points in implementing the field day is the completion of a SEMS Form1.Field days for result demonstrations should be recorded on the same form. This should bedone before the farmers leave the venue. The main parts of SEMS Form 1 are:

Contact: How many farmers (male and female, large and small) attended the field dayandwhat was the cost of the event (this should be zero).

Understanding: How many farmers who attended understood the demonstrated
technology. This can be done by a show of hands, and recording comments made duringinformal discussions with participants.

Testing: How many of the farmers who attended think that they will try the method on theirown farm or homestead. Again, a show of hands, and comments made during informaldiscussions with participants should provide an indication of intention to test.This monitoring process will show how effective the field day was at contacting farmers,enabling farmers to understand a new idea, and encouraging farmers to consider trying anew technique on their farms.

A field day can be evaluated by re-visiting the farmers who participated to see if they have tried new ideas. Knowledge, Attitude and Practice (KAP) surveys are a useful tool to conduct this type of evaluation. In a KAP survey, a sample of farmers who participated areselected, visited and interviewed. It is therefore extremely important that a list ofparticipating farmers is made during the event.

METHOD DEMONSTRATIONS:

Method demonstrations are group extension events conducted over one to two hours todemonstrate and practice a specific skill, step by step. Method demonstrations are low costand relatively efficient as they involve one extension worker and several farmers. They areparticipatory and enable farmers to learn by doing.

Planning:

Topics for method demonstrations should be identified on the basis of farmers needs orproblems and are shown in the Upazila plan. They are defined in detail in consultationwithfarmers. When a specific topic is agreed, a task analysis should be conducted. A taskanalysis is a breakdown of the method into a series of small steps, and a summary of themain learning points for each step. The task analysis provides the format for thedemonstration. An example of a task analysis for grafting Jujuba is shown in Table.

Step	Method	Main Learning Points
Select scion	Choose a twig of 9-12 months of age with prominent buds, growing strongly and free of disease.	Healthy twig, 9-12 months old.
Select stock	Select a new plant growing strongly in a tub. Pick a twig that is the same age as the scion.	Health and age.
Select bud on stock	Choose a bud on the scion that is well developed and prominent.	Well developed bud.
Scion - first cut	Hold the scion in the left hand and the budding knife in the right hand. Make a horizontal cut 0.5 cm beneath the bud half way around the stem. Press the blade of the knife gently until it goes through the bark, and then press firmly until it just enters the wood beneath.	Stem structure, bark and wood.
Scion - second cut	Place the knife horizontally 0.5 cm above the bud and repeat the process for the second cut.	Stem structure, bark and wood.
Cut behind bud	Place the knife horizontally at an angle of 45 degrees to the stem with the blade pointing downwards. Insert blade into second cut. Press firmly and cut downwards behind the bud to join the first cut taking enough wood to avoid damaging the bud.	Care with knife. Hold at 45 degrees and do not damage bud.
Remove bud	Remove the bud and place carefully to one side.	Treat bud gently.
Select internode on stock	Select an internode which has enough space to take the length of the bud with at least 0.5 cm to spare at each end.	Identify an internode.

Stock - first cut	At the top end of the selected internode, make a horizontal cut about one third of the way around the stem. Press gently so as to cut through the bark layer only.	Press knife gently.
Stock - second cut	Place the tip of the knife in the centre of the horizontal cut and make a vertical cut downwards long enough to take the length of the bud. This makes a T-Shaped cut.	T-Shape, bark only.
Loosen bark	Insert the point of the knife behind the bark layer at the junction of the two cuts. With the tip of the knife, gently loosen the bark along the length of the vertical cut on both sides so that you have an open slit big enough to take the bud.	Do not damage bark - it is needed to hold the bud in place.
Insert bud	Hold the bud gently between thumb and forefinger. Insert the base of the bud into the top of the open slit. Push gently down until the length of the bud is inside the slit and held in place by the loosened bark which overlaps it.	Care of bud. Check bark goes over edges of bud.
Tie bud in place	Take a piece of string and make several turns around the stem below the base of the vertical cut. Cross the string up the stem to the top of the bud, making sure that the bud itself is left uncovered. Wind the string around the stem a few times and tie off securely.	Do not cover bud with string.
Cover bud	Wrap a polythene sheet loosely around the stem to cover the length of the inserted bud and string. Tie the polythene in place above and below the inserted bud.	Protect bud from weather. Allow space to grow.

Materials Budding Knife, Stock, String, Polythene, Scion.

Doing a task analysis in consultation with farmers can be useful as it helps to identify whatfarmers already know. It may also show that one of the farmers knows enough to
demonstrate the method to the other farmers in their own words, with the Sub-Assistant Agriculture Officer (SAAO)adding further explanation where necessary.

A useful planning checklist for a method demonstration includes:

- Identifying the need or problem, and defining a topic for the method demonstration;
- Conducting a task analysis in consultation with farmers, including an assessment ofafarmers current knowledge;

- Identifying an appropriate venue (field or homestead), day and time;
- Practicing the task and demonstrating the task;
- Collecting any materials required (flip chart, flash cards, live samples, tools, penandpaper). Real objects and live samples are particularly important;
- Briefing and training farmers who will help in the method demonstration;
- Visiting the venue to make sure it is appropriate.

Implementation:

1. The extension agent responsible for organizing the demonstration should arrive early with allthe necessary materials and ensure everything is in order. Successful implementationrequires:
2. an informal atmosphere where people feel free to raise questions;
3. an introduction to the session where the purpose of the method demonstration isexplained;
4. An overview of the materials that will be used (live samples, tools etc.);
5. That the method demonstration is followed according to the task analysis;
6. That each of the important learning points in each step are explained;
7. A summary at the end of the session;
8. Time for farmers to practice the method;
9. That each participant is confident enough to use the method on their own farm orhomestead after the event;
10. That a Seasonal Extension Monitoring System form (SEMS Form 1) is completed;
11. Participants and the extension agent agree any follow-up actions that may have arisen.

Monitoring, Evaluation and Follow-up :

One of the last points in implementing the method demonstration is the completion of a SEMS Form 1. This is done before the farmers leave the venue.

The main parts of SEMS Form 1 are:

Contact: How many farmers (male and female, large and small) attended the methoddemonstration, and what was the cost of the event.

Understanding: How many farmers who attended understood the method which wasdemonstrated. This can be measured through a show of hands or by observing how well thefarmers who practiced the method were able to complete it correctly.

Testing: How many of the farmers who attended think that they will try the method on theirown farm or homestead. A show of hands can be used.This monitoring process provides an indication on how effective the method demonstration
was at: contacting farmers; enabling farmers to understand a new method; and encouragingfarmers to consider trying a new technique on their farms.

DISTRICT AND UPAZILA FAIRS:

A fair can be an effective way to create awareness about improved technologies to a large number of people within a short time and to stimulate general motivation for agricultural andrural development in the area. It can also play a valuable role in strengthening

relationshipsbetween extension partners. Farmers are able to see a range of technologies and ideas displayed by non-government organizations, other government agencies and dealers anddiscuss them in a lively and informal way.

Every district and Upazila should organize at least one fair every year which is open to allcategories of farmers in the area.

1. Sharing ideas during the TAECC or DEPC about the content, schedule and logisticalarrangements;
2. Deciding responsibilities for each participating extension organization;
3. Inviting other interested parties to sponsor an exhibition stand. For example a fertilizersdealer or seed supplier;
4. Deciding the physical layout of the venue; decoration of stalls; collection of exhibits;arrangements for demonstration of exhibits and technologies;publicity; opening andclosing ceremonies and prizes;
5. Ensuring wide publicity throughout the Upazila or district, for example, by word of mouth,posters and announcements on regional radio stations;
6. Collecting good quality vegetables, fruits and other agricultural commodities from thedifferent parts of the Upazila or district to show as exhibits;
7. Considering demonstrating examples of local farmer innovations;
8. In consultation with other extension providers carefully selecting improved technologieswhich are relevant to farmers in the area, and arranging for their proper demonstration atthe fair;

Implementation :

There are no set formats for organizing or implementing fairs. They should be planned andimplemented locally in partnership with other extension providers. Fairs are usually heldover a week long period. It is important that displays and stands are properly cared for sothat they always look appealing to farmers.

Monitoring and Evaluation and Follow Up :

I. Fairs are not as easy to monitor as face to face extension events. They are very fluid withmany people attending for an uncontrolled period of time. As a result it is difficult to useDAE's standard tool, SEMS, to monitor District and Upazila fairs. However, because fairs areexpensive and require a large amount of resource to organize and implement they do needto be monitored. Some ideas for monitoring fairs include:

II. Having a book available to register attendance. This could simply be a record of the number of people who visited the fair;

III. Asking the person organizing each stand to record basic information about the types ofpeople that showed interest in the technologies that were on display;

IV. Making a "comments/suggestions" book available for people to sign as they leave thefair. This could then be used for making improvements to next year's fair. Some farmersmay comment on useful technologies which could be promoted further. These types ofcomments could also be considered for the next year's annual plan; conducting a brief questionnaire survey with a random selection of people attending thefair.Extension staff can also follow up a Upazila or district fair by:

V. Sending a report of the fair to local radio stations and newspapers;

VI. Discussing the exhibits they saw at the fair during normal contact with farmers andstimulating their interest in new technologies that were displayed or demonstrated.

FARM WALKS:

- Creating an informal atmosphere where people feel free to raise questions;
- Explaining the objectives of the walk, and reminding farmers of the original issue whichled to the idea of a farm walk;
- Briefly explaining the route which will be taken, or place to be visited, and introducing thehost farmers who operate the land and who will be guiding the participants;
- Walking the route, ensuring that the host farmers point out constraints, opportunities, theinnovations they have developed, or new technologies they are trying or adopting;
- Encouraging questions;
- Recording the names of participants, and completing a Seasonal Extension MonitoringSystem form (SEMS Form 1);
- Summarizing the main learning points at the end of the walk. Where appropriate,diagrams can help capture the main points. This is particularly the case where theobjective of the walk was to analyze constraints and opportunities as part of the FINAprocess. An example diagram is shown in Annex VII. Farmers can prepare thesediagrams, with the Sub-Assistant Agriculture Officer (SAAO) acting as a facilitator;
- Agreeing any follow-up actions that may have arisen during the walk.

FARMERS RALLIES:

Farmer's rallies are large extension events which usually involve a combination of activitiescenteredon a main theme (e.g. the use of folk song, drama, banners to support a centralpresentation about IPM). They should only be used for introducing successful

technologies.Although the cost of organizing a farmers rally may appear to be significantly higher thanother extension events they do have the advantage of attracting large numbers of farmersfrom a wide range of backgrounds. This enables them to be potentially cost effective.Inaddition, one rally could be organized by a number of Upazilas to share costs and resourcesor by a district.

FOLK MEDIA:

Folk media is a traditional form of entertainment and communication across Bangladesh. For extension programs, they present the opportunity to convey agricultural information in culturally acceptable way, stimulate discussion about local issues among farmers, andmake extension events enjoyable.

Folk media includes:

- Song;
- Drama;
- Story telling;
- Dance; and
- Puppets.

No modern technology or audio visual aids are required; these methods can be relativelycheap and are useful where literacy levels are low. Folk media can be fun for both extensionstaff and farmers. They are also interesting for radio broadcast, so it may be worthwhile inviting Bangladesh-Betar to record events where songs, drama or story telling are used.

Planning:

A short folk media event can inform a large group of people about a particular issue of localimportance. As with all extension methods, the first step is to identify an issue or topic,through the process of FINA, and Upazila planning. Once an issue is identified, information can be sought. Issues for folk media could be the use of organic matter, homestead gardening, producing and using seed, or storing crops - just as for any other type of extension event. However, folk media is not useful for conveying complex information or numbers such as rates of fertilizer application. Once the issue is defined, the following steps should be considered:

EXAMPLE 1: PROBLEM PRESENTATION

Actors present a problem as a short play. Once the problem is explained, the play stops. The audience are asked how they would solve the problem. Extension staff record farmers suggestions. Suggestions are discussed, the best is selected, then the play starts again to show how the problem is solved. Best suited to events with below 40 participants.

EXAMPLE 2: PROBLEM AND SOLUTION PRESENTATION

Actors present the problem and the solution, and the play stops. The solution should be one that farmers are capable of putting into practice on their own, or with some help from the Department. This type of drama is more suited to folk media events which will involve many more people. Remember that folk media is highly popular, so if events are publicised, over 100 people may attend. In these situations, folk media is best at conveying simple ideas or generating awareness, and not good for encouraging participation.

Deciding what type of folk media to use: the type of folk media used will depend on localcultural preferences. One of the main reasons for this is to involve farmers who may beexperts in drama, or song, or using puppets, in the extension event. There are many waysof using song in extension, or using dramas.

Here are two examples of different types of drama for extension:

Identifying performers: once the type of folk media has been decided, performers areidentified. Farmers can be dancers, story tellers,

actors and singers, and so can extensionstaff. In some areas, there are local cultural academies that can help. For example, in Kamalganj Upazila, Moulvibazar District, there is the Monipuri Cultural Academy. In otherareas, there are local drama groups who can be contracted to perform a folk media event.Developing a story: the core of planning the event is the production of a script for a play, words for a song or a story.The script shows which performer says and does what andwhen. The script should not be too long or elaborate and should keep to one or two simplesubjects. Scripts should place agricultural innovations in a social context but care needs tobe taken to prevent the social drama overshadowing the agricultural subject. There is noneed for costly costumes and make up, although real objects should be used as props. Simple prop objects like agricultural implements or crops can be used. The Resource Centre may also have suitable props. The requirement for props should be detailed in thescript. The Agriculture Information Service (AIS), Bangladesh Betar, Community Radio and local nongovernment organizations may also be able to help in the preparation of scripts. If a localgroup or academy is contracted to perform, they can help write the script.

Planning logistics: a suitable time, date and location should be arranged and relevantauthorities notified. The location should be a fairly open area in a village or small market.The performance itself should be fairly short - less than half an hour, with plenty of time fordiscussion. There is no need for an elaborate stage, lighting, expensive microphones, or opening speeches. Local public representatives, Bangladesh Betar and local newspapers could be given special invitations.

Advertising: where folk media is being arranged for general awareness, and it does notmatter how many people attend, the

district bulletin, radio, local newspapers, posters, miking, leaflets, or informing farmers at other extension events are good ways to publicizethe event. Where large numbers of participants are not desired, advertising is not required.

Implementation :Once a script has been prepared, the event publicized, people invited and the relevant localauthorities informed, the event should be implemented. Useful tips for organizers include:

1. Arriving at the venue early, and making sure that everything is in order, props have readyand actors have arrived;
2. Completing a SEMS Form 1 at the end of the event, before farmers disperse.

GROUP MEETINGS:

Group meetings are opportunities for extension staff and farmers to come together todiscuss and analyses issues and ideas. They are generally short, not exceeding a couple ofhours, and involve no or low cost. There are two basic types of group meetings, with manyvariations:

Small group meetings, which usually comprise one extension agent and not more that 20Farmers, who are either members of an existing group or a temporary group interested in aParticular agricultural issue.Large group or community meetings, which usually comprise several extension agentsand a local community. Such events are most useful for conveying important or urgent information, and are advertised by miking or posters.

Group meetings can serve many different purposes. For example:

- Information Meetings: where farmers attend a meeting to hear an important piece ofnews or information from extension staff;

Planning Meetings: where extension staff and farmers come together to discuss particular problem, suggest potential solutions and decide upon a course of action;

- Special Interest Meetings: where farmers with a common interest come together to discuss it and learn about it in more detail with the help of extension staff.

Planning :

Events should only be arranged if there is a felt need. The topic and structure for a groupmeeting will be defined by the needs and problems that farmers are facing.

These include:

- Working with existing groups where possible;
- Establishing partnerships with other agencies which have affiliated groups;
- Working with temporary as well as permanent groups;
- Working with group members who have similar interests and come from similar socioeconomic backgrounds.
- When arranging a meeting or training session with a group of farmers, there are three basic

Considerations: size, formality and balance:

Size:

Large meetings rarely achieve much, and rarely address the needs of participants, smallMeetings are often more effective. Although it

is important that as many people as possiblehave the opportunity to participate, this may best be achieved by holding several smallermeetings. As a rule of thumb, more than 20 or 30 people in a meeting will lead to difficulties,but it does depend on the situation.

Formality:

Group meetings are successful when they are informal and relaxed, as long as extensionstaff ensures that everybody has equal opportunity to participate. Extremely formal meetings,with a chairperson, agenda, and a formal record of proceedings are usually needed whenthere is a specific item of business which requires a formal recorded decision. When workingwith existing groups, such as those affiliated with non-government organizations, it isimportant to remember that the group may have their own procedure for holding meetings and these procedures should be followed.

Balance

During a meeting, there should be a balance between presentation and discussion, providinginformation and encouraging participation. Some issues may need to be presented byextension staff, for example with pre-prepared flip charts. Other issues should be openlydiscussed and debated. Group meetings need to be lively, participatory and open to achieveobjectives. Lecture style meetings tend to become boring.

Useful points for planning group meetings include:

- Making sure everybody agrees a group meeting is required, and why it is necessary;
- Inviting a small number of people with a similar background and similar interests, orpeople who already belong to a group;

- Agreeing a date, time and location which are appropriate to farmers. Where possible,Events should take place in the village, preferably in the field or homestead area. This is particularly important with female farmers;

Implementation :

For successful meetings consideration should be given to:

- creating an informal atmosphere where people feel free to raise question
- Seating arrangements - outside in a circle on mats is probably the most relaxed seatingarrangement as it enables participants to see each other;
- Explaining the purpose of the meeting and reminding farmers of the original problem orneed for discussion;
- Explaining the materials that will be used (live samples, tools etc.);
- Making the meeting interesting and relevant. For example, by sticking to the topic whichhas been defined and using practical sessions where appropriate. Ensuring that farmersfully participate in discussing issues and ideas, and avoiding speeches and lectures.Where possible visual aids to stimulate discussion such as flip charts and flash cardsshould be used;
- Not taking too much time, an hour or two is usually sufficient;
- Completing a SEMS Form 1 and writing a list of participants names;
- Agreeing any follow-up actions that arise.

Extension staff can follow up group meetings by:

1. Recording the outcome in the Sub-Assistant Agriculture Officer (SAAO) diary;
2. Holding further meetings and training events as required by the farmers;

3. Ensuring that extension staff who agreed to take specific actions are aware of theirresponsibilities;
4. Helping group members implement specific actions that they agreed to during themeeting;
5. Returning to farmers to see if the advice or information discussed was of use, or has beenapplied;
6. Arranging other activities with the same group of farmers. For example, a Problem census, or farm visit, or a method demonstration.

MOTIVATIONAL TOURS:

A motivational tour involves taking a group of up to 30 farmers from their village or block toanother area. Motivational tours usually last a day. Motivational tours expose farmers todevelopments and new technologies which are being used by farmers in another area, orare being developed at research stations, horticultural base nurseries, or activities beingimplemented by other extension organizations such as NGOs. Tours present a goodopportunity for farmers from different areas to exchange ideas with one another.

Planning:

The content of motivational tours is defined in relation to the problems that farmers arefacing, and the information needs that they have. Once a need has been identified,extension staff can search for information and sources of information. A motivational tourcarries quite a high cost, so they should only be used when farmers information needscannot be met locally. If information cannot be provided locally, or if there are good sourcesof practical information available in a neighboring Upazila, district or region, a motivationaltour can be planned.

The following planning checklist is useful for motivational tours:

Defining the technical content and sites to be visited: trying not to plan too much for a tour. An event which covers a few subjects and sites will allow participants greateropportunity to see, learn, practice and try new ideas;

If an organization such as a research institute is involved: the event should be plannedwith them - this can be achieved by visiting them, writing to them to confirm details,telephoning them regularly and establishing whether any costs can be shared;

If farmers in another area are involved, the event can be planned with them: forexample, by visiting them, maintaining contact with them via local extension staff, andensuring that they are capable and prepared to show visiting farmers around their land;

Visiting the area beforehand: ensuring it is appropriate and accessible, becoming familiarwith local conditions and visiting other people who may be involved. For example, staff frompartner organizations.

Defining the route, day, duration and timetable of the tour: making sure that the dayand duration are appropriate to all involved;

Arranging transport: This will be one of the main costs involved. If DAE has an appropriatevehicle, it should be used. If the tour is to another organization, and they have a vehicle, itmay be possible to borrow it or rent it at a subsidized rate;

Arranging refreshments, and accommodation if appropriate: Again, this will be asubstantial cost. Budgets should not be exceeded; it may be possible to share costs.Farmers may be prepared to provide a minimal contribution themselves, even if it is only Tk5 each as this may indicate that they are truly interested in the subjects that the tour willaddress;

Implementation:

If well planned, a motivational tour should be easy to implement. Consideration should be given to the following when conducting tours:

- Making sure farmers are collected on time as planned, and sticking to the schedule androute;
- Encouraging hosts (farmers or staff from other organizations) to do all the explaining andallowing them to answer visitor's questions;
- Summarizing the event, and answering any final questions on the journey home, as wellas discussing possible follow-up activities;
- Completing a SEMS Form 1 and recording farmer names before the end of the tour.

Monitoring, Evaluation and Follow-up :

One of the final points in implementing a motivational tour is the completion of a SEMS Form-

1. This must be done before the farmers leave. The main parts of SEMS Form 1 are:
Contact: How many farmers (male and female, large and small) attended the tour, and the cost of the event.

Understanding: How many farmers who participated understood the agricultural ideas that were seen on the tour. A show of hands can be used. Generally, motivational tours will be small enough for extension staff to get a good informal impression of who understood what.

Informal discussions with farmers during the tour may reveal a lot of information about their understanding. During a motivational tour, farmers may be exposed to more than one new idea - they may understand some, and not others. Ideawhich farmers appeared to understand, and which they did not should be recorded.

Testing: How many of the farmers who attended think that they will try new ideas which were seen on their own farm or homestead. A show of hands and informal discussion duringthe tour may help to provide this information. If farmers have been exposed to more thanone new idea they may wish to try some, and not others. Ideas which farmers are interestedin trying and which they are not should be recorded.

KAP surveys can be used to evaluate motivational tours.

Extension staff can follow up motivational tours by:

1. Sending a report to the local newspaper or radio station;
2. Reporting the event in the District Bulletin;
3. Returning to farmers to see if the advice or information was of use, or has been applied;
4. Arranging other activities with the same group of farmers, especially if they are from thesame village. For example, a method or result demonstration;
5. Encouraging participating farmers to share their experiences with neighbors, in groupdiscussions facilitated by extension staff;
6. Agreeing to host a return visit e.g. for research staff to visit farmer's fields.

PARTICIPATORY TECHNOLOGY DEVELOPMENT:

Participatory Technology Development (PTD) is a process of developing technology which isled by farmers. The purpose of PTD is to: test farmer's technology ideas;

- Test, under local conditions, a technology that has been successful in other areas;
- Try out a modification to an existing or recommended technology to see if it can be moresuccessful under local conditions;
- Develop the capacity of farmers to solve their own problems through experimenting withideas.PTD differs from demonstrations, as it:
- Does not involve showing a farmer a proven or recommended technology;
- Is conducted in a participatory manner and farmers are full partners;
- Cannot be predicted, nothing can be promised, and nothing is guaranteed.

Conducting PTD is a learning process for everybody, with extension staff acting asFacilitators. In return, farmers understand that there is no room for complaint or Compensation if the technology which they test proves to be less suitable than their existing practice. If the idea being tested turns out to be a failure, the process is often a successbecause of the learning that has occurred. Farmers have always been active developers offarming practices. PTD builds on, supports and encourages this capacity. The use of PTDis linked to the Department's revised extension approach which seeks to encourage farmerParticipation.

Planning:

Participatory Technology Development is implemented with a farmer or farmers group who have a problem to which may be solved by experimenting with an existing solution or an ideafor a solution. PTD can be planned using the following steps:

Define a topic with a farmer of group of farmers: topics for testing technologies aredefined by farmers and extension staff together. Sub-Assistant Agriculture Officer (SAAO) have a key role but it isthe Agricultural Extension Officer who is responsible. A Scientific Officer from a researchstation should also be consulted. Ideas for testing begin when farmers identify a problem.The farmers can then be encouraged to think though the problem, opportunities and ideas.This process is supported by Sub-Assistant Agriculture Officer (SAAO) and Upazila level staff that have a thoroughKnowledge of the most appropriate recommendations for the area. Standard Recommendations are only a guide. Many recommendations are those required for amaximum yield. In many areas, sub-optimal yields may produce a better economic return or reducing input levels may reduce yields, but be more cost effective. Other ideas to test cancome from extension staff, research staff, or other organizations. Whereverthe idea comesfrom, the farmer has the final decision about what is done and how.

Plan the test plots: Although the test plot will be on one person's land, it is more beneficial if the test can be a group process. The farmers or farmer's group and Sub-Assistant Agriculture Officer (SAAO), withsupport from the Agricultural Extension Officer, can discuss the principles of testing anddeveloping technologies, and develop a proposal. The proposal is in the form of productionvariable which the farmer wishes to test. Proposals are likely to include fertilizer rates andtiming, pesticide rates and timing, plant spacing, irrigation rates and timing and so on. Thebasic principle is to vary the factor and observe the outcome in terms of yield and costbenefit ratio. As PTD is new to DAE, it is wise to stick to one factor and two plots as successful tests are likely to be simple. Once the factor has

been determined, the farmerdecides what will be done on each of the two plots.

The area for each plot can be decided by the farmer or group of farmers, and does not needto be large. The area for each plot does not even have to be the same, as long as the farmermeasures each area and records it with the help of the Sub-Assistant Agriculture Officer (SAAO). The design of theplots should be recorded by the farmer and extension worker, including the area of differentplots, technology to be applied, and other comments about the land type for example. Anexample of a PTD plan is given below.

During implementation: extension staff should keep close contact with research stations. This can be done formally through the Agricultural Technical Committee and informally,through personal contact between extension staff and local research staff. Plans for PTDwill be vetted in the normal way through ATC meetings. Finally, when considering PTD,extension staff should remember that research stations, particularly BARI, have their ownPrograms of on-farm research, and that overlap between these and PTD should beAvoided.

Monitoring, Evaluation and Follow-up:

One of the final points in implementing PTD is the completion of a SEMS Form 1, for boththe trial and the field days. The main parts of SEMS Form 1 are:

Contact: How many farmer(s) participated in the PTD trail, and what was the total cost.

Understanding: How many farmer(s) understood the trial. This can be gauged frominformal discussions with the farmer(s) during visits and group events at the trial site.Testing: How many of the farmer(s)

think that they will try the new technology on their ownfarm or homestead. This can be gauged from informal discussions with the host farmer(s) during visits and group events at the trial site. The objective of PTD is not justunderstanding a new technology, but understanding a process of developing technologies.If the farmers do not decide to try the technology that was tested, but they decide to trytesting another technology in the same way, this should be recorded as “testing” in SEMSForm 1.

FORMAL TRAINING DAYS:

A formal training day is a group extension event. It is a structured, planned event withobjectives and a written training plan which involves training materials and trainers. Formaltraining days generally last for half or a whole day, generally catering for approximately 20farmers. Formal training days can be held at any venue, at block, union, Upazila or district level. Generally, the closer to farmers homes the better. There are three types of formaltraining day, based on the cost of the event. These are:

- Formal training day with no cost;
- Formal training day with materials cost; and
- Formal training day with all costs.

These are described in the following sections.

Formal Training Day with No-Cost

Formal training days do not need to have an associated cost. The underlying cost is thetime of the trainer, usually a member of staff of the Department, and the cost of the farmerstime. Farmers will not

need to be financially compensated for their time if the topic of thetraining is useful to them, can be applied by them on their farm, and can help increase theirproduction, income or living standards. Similarly, formal training days often require materialssuch as flash cards, leaflets, flip charts, live specimens or tools. However, every office of theDepartment should have a Resource Centre where a collection of materials are kept.Similarly, other organizations, government and non-government, may also have materials.Where existing DAE materials are used, or materials are borrowed from anotherorganization, there is no material cost. However, a formal training day with no-cost stillneeds to be planned, with objectives and a training plan. Formal training days with no-costwill generally be less than a whole day to avoid the cost of lunch or refreshments.

Formal Training Day with Materials Cost

Sometimes, the topic for a formal training day is new in the area, and there are no suitableavailable materials in the Resource Centre, and none of the other local organizations haveanything appropriate. In this case, it may be necessary to prepare new training materialssuch as flip charts, handouts or flash cards. For formal training days with materials cost asmall budget should be provided for preparing new materials.

Formal Training Day with all Costs

Sometimes, the topic for a formal training day is such that a whole day is required, and thevenue is such that farmers need to travel

some distance to attend. This is particularly likelyif trainers are only available at district level, and the event is held in the district office. Atother times, the topic is one with which local DAE staff are not familiar, and outside expertise is required. In these cases, additional costs will be incurred. Formal training days with allcosts can include budgets for participants travelling allowances, food and refreshments,materials and trainers allowances.

Basic Principles

There are three basic principles which apply to formal training events. These are:

- Involvement of participants;
- relevance and practicality;
- and feedback:

Involvement of Participants;Farmers should be 'active' in the process of learning, and are a resource themselves. Training is not a one way flow of information from trainer to farmer. Farmers will gain more by being actively involved. This can be achieved by allowing discussion, by askingquestions, by encouraging people to ask questions, and by constantly relating the subjectmatter to the farmers' interests and circumstances. Farmers should be given as manyopportunities as possible to contribute to training days by giving opinions, makingsuggestions, sharing experiences, asking questions and demonstrating abilities.

Relevance and Practicality

The subject matter should be problem orientated, and related to every-day farmingsituations. Appropriate training is based on a sound

understanding of the participants skills, capacity, experience, knowledge and learning needs. Practicability means that the subjectmatter in a training programme should be useable. So, there should be lots of 'learning bydoing' for example, pruning trees, preparing plots or operating irrigation systems. This can involve learning “what not to do” as well as “what to do”.

Feedback

The training methods used should encourage a response from farmers. By askingquestions, and inviting farmers to comment on the subject matter, it will be possible to judgehow well they understand the subject, and how relevant the information is. In this way theevent can be adjusted to make sure that people are learning something, and that what they are learning is useful to them.Training of any kind should be designed with a specific target group in mind. So, whenplanning training events, are they being planned for male or female farmers? For people with interests and learning needs in homestead vegetables, or pest control? For farmers withhigh incomes, or for farmers with no spare capital to invest in agricultural technology? Theanswers to all these questions should be known before planning an event.

Planning:

Topics for formal training days should be identified on the basis of farmers needs orproblems, and defined in detail in consultation with farmers. For example, where a Problem Census has identified the problem of pest attack in Boro rice, the Sub-Assistant Agriculture Officer (SAAO) and farmers could discuss the appropriateness of Integrated Pest Management. It might be decided that a formal training day is the best way of covering the topic in a fairly short space of time. This could be included in the annual extension plan, or implemented quickly to meet an urgent need. The Sub-Assistant

Agriculture Officer (SAAO) should approach Upazila level staff to make arrangements. This would include:

- Identifying an appropriate trainer;
- Locating a venue and defining a day and time;
- Preparing a training plan;
- Locating or preparing appropriate materials;
- Defining a budget and locating funds.

Identifying an Appropriate Trainer:

A person or a group of people with a good technical understanding of the topic, and trainingand facilitation skills should be identified. Any member of staff in the Upazila, at block or Upazila level, could act as a trainer.

If there is no-body with technical and training skills available, Upazila staff can approach district level staff. If there is no-body with sufficient technical and training skills in the department of Agricultural Extension, someone from an outside agency could be contacted.This might be a member of the livestock, fisheries or forestry departments, someone from alocal NGO, or from any other organization. Where outside staff are used, an allowance orsome form of payment may be needed. There are also specialist staff in DAE in thetechnical support wings at headquarters (e.g. in plant protection, food crops, cash crops,water management and agricultural engineering) who may be able to conduct the training.Staff from the Training Wing may also be able to help with training and facilitation.

Locating a Venue and Defining a Day and Time:

The venue is best defined on the basis of the needs of the trainer and the needs of theParticipating farmers. Where a local trainer is used, it is best to arrange a formal training day at block or union level. Venues could include a local school, union hall, government offices,or offices of local NGOs.Local level training is particularly important for female farmers, who may find it difficult totravel long distances. Even where trainers are coming from outside the Upazila or district, it is usually easier to take one trainer to block or union level than 20 farmers to Upazila or district level. However, in some instances, it may be most appropriate to hold training in a Upazila or district office, perhaps where electrical audio visual aids are required. When a decisionabout the venue has been taken, a suitable day and time can be arranged. This will depend on the availability of the trainers, the participating farmers, and the availability of the venue.

Preparing a Training Plan :

The essence of a formal training day is the preparation of objectives and a written trainingplan. The trainer and the DAE member of staff who identified the farmers' initial need andunderstands the local situation are the most appropriate people to prepare such a plan. Thesteps involved are as follows:

I. Establishing educational objectives for the event. The objectives should define exact measurable learning results which are expected;
II. Selecting the subject matter which is required to achieve the objectives;
III. Structuring the subject matter so that it is relevant, logical and educational;

IV. Selecting training methods which are appropriate to the achievement of the objectives or he selected subject matter, and which encourage farmer participation;

I. Deciding on what equipment and materials will be needed to carry out the event;

II. Allocating the time required to carry out the event.

EXAMPLE

The objective of an event about IPM and beneficial insects might be:

Objective: at the end of this event, participants will be able to identify beneficial insects and describe how they can be encouraged to inhabit a paddy field.

To ensure that participants gain the necessary skills to identify and encourage beneficial insects, the training plan might include:

- showing a flash card with pictures of beneficial insects and their main identifying features;
- showing an insect box with preserved samples of beneficial insects along with a discussion of their advantages and functions;
- a short visit to the field to locate and identify beneficial insects in the wild; and
- an explanation with a flip chart of activities that encourage beneficial insects.

Formal training days need to involve participants, provide an opportunity for feedback, andbe practical. This means that, in addition to lecture style presentations and talks, some ofthe following training methods should be used:

TABLE 10.2: PLANNING FORMAT FOR A FORMAL TRAINING DAY

PREPARED BY:

Name	Designation	Date

PROPOSED SCHEDULE:

Date	Time (From-To)	Location

EDUCATIONAL OBJECTIVE:

By the end of this event, participating farmers will be able to: •

REQUIREMENTS:

Time	
Visual Aids:	Demonstration Materials:

OUTLINE:

Key Technical Information	Training Method	Training Aids

Discussions

Discussions involve two-way communication between the trainer and the trainees, andbetween the trainees themselves. This gives greater opportunities for misunderstandings tobe cleared up; further information to be added; opinions to be shared; and implications to be explored. There are many ways to facilitate discussions:

Question and Answer Session:

Trainees are asked to write down questions on a subject. The questions are collected and read out, one by one. Individuals from the group are askedto give answers. After getting an answer, the trainer should add his or her own comments. Brain-storming: the trainer sets a subject and asks for immediate responses from thetrainees. These are quickly listed on a board. There should be no discussion at this stage,just a rapid collection of ideas; any idea should be recorded, however strange. Once theboard is full, the trainer should go back through the list asking the group to make comments on each item in turn.

Reaction Groups: after a lecture, slide-show or field visit, the group is divided into subgroups of three to four trainees. Each group is then given the task of preparing a statement on a certain aspect of the preceding activity. After five minutes one person from each groupie asked to act as a reporter who will read out the statement to the whole group and answer any questions.

Group Exercises, like discussion, require exchanges of information between trainees. In addition,exercises give the trainees an opportunity to apply information, which leads to the Reinforcement of the trainee's knowledge; a greater understanding of the relevance of thisknowledge; and the ability to put this knowledge to practical use.

There are a number ofreasons why the benefits of using exercises as a training method can be realized better insmall groups rather than in the class as a whole. Most important are that everybody has agreater chance to participate and a sense of competition can be developed between groups. As a result the trainees are collectively more active, maintain more interest, produce moreinformation and complete more tasks.

Role Playing:

Role-plays involve trainees acting out encounters between farmers or between farmers andextension staff. Although role-plays cannot be used for learning factual knowledge, they are a good way of involving farmers in learning events, and a good way for extension staff tolearn about farmers ideas, perceptions and knowledge.

The training plan should be a summary of what the lesson will contain, it is not necessary to write down every word that will be said or every action which will be carried out. Also flexible approach should be adopted when using training plans. It will often be necessary tomodify subject matter and the teaching methods in view of the feedback you get from the trainees during the presentation.

Once a good training plan has been prepared it can be used many times. It should becarefully filed, indexed and kept in the Resource Centre so that they can be used again.

Locating or Preparing Appropriate Materials:

The training plan will have helped to identify the type of training materials which are required.These should be located or prepared well in advance. In the IPM example, flash cards, aninsect box and a flip chart are required. Maximum advantage must be taken of availablematerials in order to keep costs low. Materials available in the Department, at Upazila, district or even regional level should be used. If none are available, partner organizations (government or non-government) can be contacted to see if they have somethingappropriate. If no materials are available, they must be purchased or produced. Use can bemade of the Image Bank, which has pictures of many agricultural activities. These can becopied onto flip charts, photocopied into handouts, traced onto overhead transparencies, orused in other ways to prepare attractive training materials. More complicated or costlymaterial, such as an insect box, takes more time to prepare.

Defining a Budget and Locating Funds:

By this stage, it will be clear what level of funds is required. Wherever possible however,formal training days should be locally implemented by DAE staff with existing materials andshould not require additional funds. However, where absolutely necessary, funds can beused for either materials, or for all costs such as trainers allowances, participants allowancesandrefreshments.

A planning checklist for a formal training day includes:

I. Preparing written objectives which match farmers information needs and address farmersproblems;
II. Preparing a training plan;

III. Making sure the length of time required has been assessed, and is not too long;
IV. Making sure that training events are related to real situations, and do not contain moreinformation than is necessary;
V. Identifying whether participating farmers have experiences and ideas which could beuseful during the event, and planning how to incorporate these;
VI. Planning how to motivate participants by involving them right from the start of the event;
VII. Planning to use a range of visual aids or handouts to increase farmers interest;
VIII. Writing down questions for participants during the event to check that they areunderstanding the subject matter;
IX. Checking the venue before the event, and checking that any visual aids, objectsorsamples are ready, available and working, and that they can be clearly seen from allparts of the room.

Implementation:

Training events should be conducted in a relaxed atmosphere. There should be plenty oftimeallowed for discussion and clarification of any ideas which are not clearly understood. Ifthe event is scheduled to take place over a day then make sure there are some breaks.Each part of the training program me should be timed carefully so that nothing is rushed.Language which will be understood by all the participants should be used. The trainingshould be interesting and lively by using a wide range of visual aids. Care should be taken on the use of written material if the participants are illiterate.

Monitoring, Evaluation and Follow-up:

Informal monitoring and evaluation of training events can be conducted by:

- Careful observation of the trainees in the classroom and in the field;
- Asking questions;
- Checking note-books and practical work;
- Organizing activities which give farmers the opportunity to demonstrate their ability.

A more structured means of monitoring is provided in the Seasonal Extension MonitoringSystem (SEMS). A SEMS Form 1 should be completed before participants leave everyevent, and includes

Contact: How many farmers (male and female, large and small) attended the formal trainingday, and the cost of the event.

Understanding: How many farmers who attended understood the objectives of the trainingday and understood the ideas that were discussed. A show of hands may help to gauge thisas well as personal impressions gained from informal observation.

Testing: How many of the farmers who attended think that they will try new ideas on theirown farm or homestead. A show of hands can be used.Once the assessment has been carried out, the results must be used. If poor performanceis detected, it may be necessary to: arrange additional training on the subjects; change thetraining methods; or try to motivate farmers using alternative techniques.

FARMER FIELD SCHOOLS :

Unlike other farmer training that takes place at Upazila level, Farmer Field Schools (FFS) areusually instigated by DAE Headquarters. This is because they are often organized as partof a national program me for introducing new technology and tend to require a largeinvestment. DAE have used FFS for introducing IPM throughout Bangladesh and for strengthening cereal production and crop diversification.

The FFS approach is field orientated and participatory placing emphasis on learning bydoing. Training takes place over an extended period such as a cropping season and is acombination of classroom and field work. Training is also holistic in that it follows thefarming systems adopted by participants. This means that the training starts from anunderstanding of existing farmers practice e.g. inputs used, resources available forproduction, market prices, availability of inputs etc.

Planning:

Trainers are usually selected by DAE Headquarters and may have different roles assignedto them. For example, core training may be the responsibility of an Agricultural ExtensionOfficer supported by two or three BSs. Core trainers receive extended master training onthe technology to be introduced and how to plan and conduct the FFS. Other staff may alsohave a key role in FFS. For example, Additional Directors or DDs may be selected to monitor the FFS. In this case they receive training on monitoring procedures.Core trainers are taught how to plan a FFS according to the technology concerned during amaster training program me. The master training program can be conducted over anextended period of time. It will usually cover:

- Farmer selection;
- Organizing training materials;
- Organizing the venue and site selection for field work;
- Preparation of each session.

Farmer Selection: Guidelines are prepared by the course designers on how to selectfarmers that should participate. These guidelines may include:

- Ensuring that the training is open to women as well as men, a target number is normallyAttached to this;
- Selecting farmers according to their current practice. For example, IPM training may require that some of the participants are farmers who use high levels of pesticides;
- Selecting framers who live near to one another (e.g. in the same village) so that group formation which takes place during the FFS can be encouraged after the training hasFinished.

Organizing Training Materials: specialist training may require the use of equipment notnormally kept in resource centers. For example, sweeping nets for IPM training. In thesecases funds may be available to purchase equipment. There may also be a long list ofresources required and these will need to be organized prior to each weekly training session.Organizing the Venue and Site Selection for Field Work: training sessions take place in aclassroom environment and in the field. The training room does not have to be in the Upazila office. It could be a school room, a union building or an NGO meeting place. It should belocated as close to the farmers homes as possible. Likewise any plots selected for fieldworkshould be close to farmers houses so that the training is conducted in as near to realconditions as possible.

Preparation of Each Session: the weekly training sessions are normally pre designed bysenior technical staff and are examined during the master training programme. This involves core trainers being trained in the technology and the delivery of the FFS curriculum.Sessions are usually flexible so that any special local knowledge can be incorporated intothe FFS.

Implementation:

Although the main content of the FFS will be predetermined and guidelines for implementation will probably form part of the master training programme some useful points to consider include:

Preparation and Organization: like any other training programme, FFS should be wellprepared and organized. FFS take place over an extended time period so the trainingfacilities need to be booked for the training duration and maintained in a orderly manner.

Maintaining Interest: at the close of each session discuss with the participants thecontent of the next training session. For example, where it will take place what kinds ofthings the group will be looking at; how long fieldwork is expected to last etc. FFSsessions should be as active and participative as possible;

Group Formation: an important part of most FFS is to encourage the participanttowork as a group. Some FFS will therefore intentionally include activities which areintended to support group formation. Where activities do not appear, discussion andsharing of ideas and knowledge between participants should be encouraged as much aspossible;

Support Two Way Learning: through field activities both the participants and trainersshould learn together. This supports action based and problem solving learning which isan important skill for everybody that participates to develop. It also enables DAE staff tounderstand farmer's problems and opportunities at a much more detailed level thannormally encountered.

Monitoring, Evaluation and Follow-up:

An important part of any training programme which takes place over a long time period isquality. There are different ways to monitor FFS but the one most commonly adopted byDAE is as follows:

Benchmark Survey: before the training the core trainer conducts a benchmark survey ofparticipants. The survey is likely to include, gender, size of land being farmed, currentfarming practice (cropping pattern, inputs used and how, homestead production etc.);

Monitor the Quality of the Training: the core trainer records information about the FFSe.g. name of school, core trainers, crops or practices used in the FFS, day of the week thatFFS takes place, planned start and end date, numbers of farmers selected, levels of literacy.

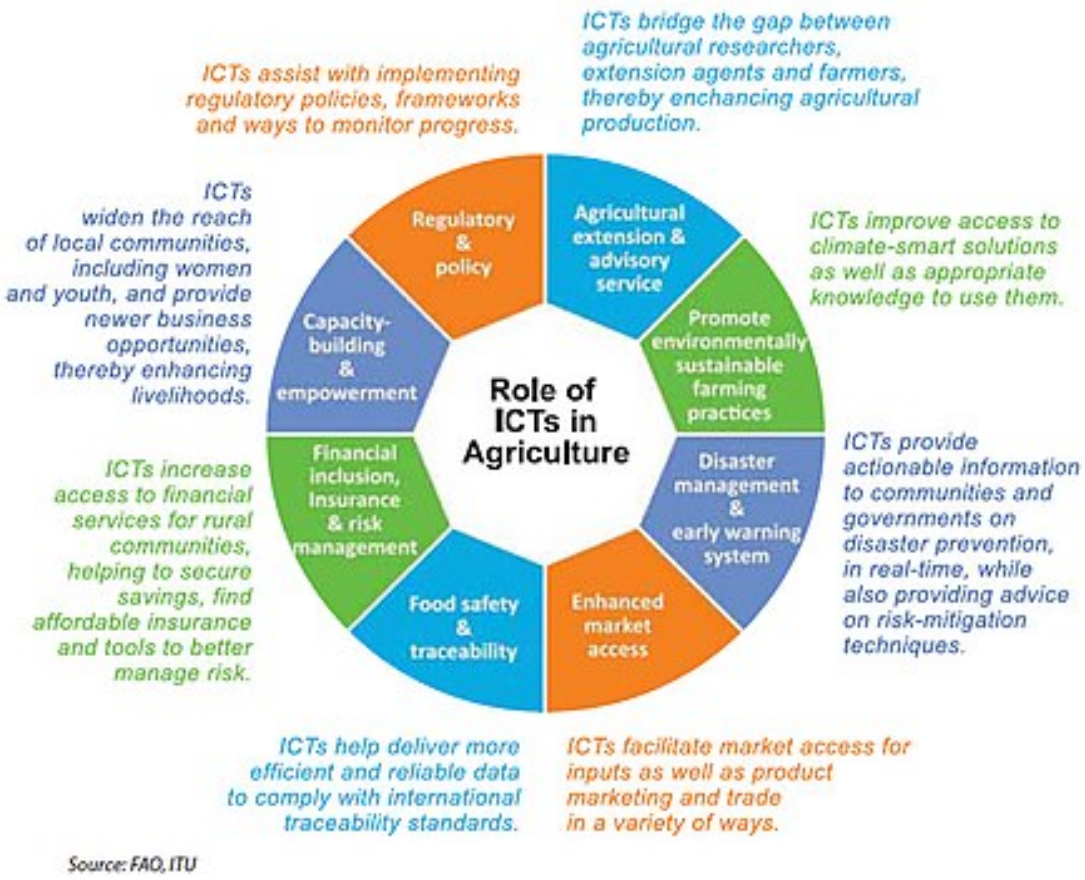
After the Training: In the short term it is important to find out about participants intentions.This can be done by conducting a survey or feedback session with participants about theirknowledge and

intentions after the training has finished. SEMS Form 1 can also be used.

The results can be compared with a sample of untrained neighboring farmers. Longer term monitoring involves visiting the participants in following seasons to verify theimpact of the training. KAP surveys can be used for this.

Modern Technology Dissemination by E-Agriculture:

E-agriculture



Challenges in present Ag Ecosystem of Bangladesh

Limited access to extension agent: One of the primary challenges of the agricultural ecosystem in Bangladesh is the absence or limited presence of expert consultation in rural vicinities. Although there are almost 14 000 government field extension officers, each extension agent has to assist more than 2 000 farm families in his area. Given the working hours, the logistical constrains, the geographical context and the available resources, it’s a mammoth task for each extension agent to provide adequate support to all the assigned farmers. As a result, farmers are forced to take advice from people who are not experts and are prone to be misled or exploited, which hampers the overall productivity of the country and negatively affects farmers' livelihoods. In addition, female farmers are often left out of the traditional extension system: because of gender barriers, many times female farmers do not interact with male extension agent.

The challenge of keeping up-to-date the Knowledge base of extension agents: Like many other domains, agricultural knowledge becomes outdated quite quickly and it is often hard to regularly train extension agents working in the field with up-to-date information. Moreover, currently there is no specific mechanism in place to regularly train extension agents after a certain interval in a proper learning environment. In addition, in the field extension agents are not equipped with any sort of tool or materials that can be used to improve their service delivery.

Decision-makers have limited tools to collect real time information from the field when taking timely decisions: Extension agents in the field collect and prepare a massive amount of ground level data, such as crop statistics and visit log, which is vital for managers and decision makers in order to plan future activities. Currently data

collection is done through a traditional paper-based system, and therefore aggregating all the data collected requires a big amount of staff time. Hence, when it comes to management level, which is far from the ground, it often takes more than fifteen days to elaborate data from the fields, and this means that decision makers have very little time to send out meaningful and effective instructions in emergency situations such as floods and other natural hazards.

To solve these three specific issue, Power has developed in integrated ICT approach which includes a big amount of mobile and web apps, multimedia content for mobile phones, and even community radio programs.

To solve the very first issue, the lack of extension agents, mPower has developed a community based, infomediary driven approach.

In each of the farmer group, the community selects an 'ICT Leader', a member of their community who owns a smartphone. These ICT leaders are trained by the project and they are provided with a mobile application named 'Farmer Query System'. When farmers in the community face a particular agriculture challenge, through this app the ICT Leaders send the details of this problem to a call center where expert agriculturists respond to the query through a phone call, becoming a virtual extension agent. Currently the infomediary are not paid by the project and not given any phones. The social incentive of using this system to solve other farmer's problem actually motivates them to do this work. Though, we are also trying out various revenue models so to give as well a financial incentive to the infomediary. Moreover, female farmers are also more prone to get reliable and certified agricultural information as the person who is sending the query on her behalf is community member himself.

Agriculture Knowledge Bank, an online repository of agricultural content which can also be accessed through mobile app, has been developed in collaboration with various government research institutes and extension department of Bangladesh in order to solve the challenge of updating the extension agent with most recent knowledge. Many research agencies in Bangladesh produce a lot of content which is stored in their own website. Existing rural telecasters, innovative farmers or extension agent who tries to use ICT or mobile web to extract information from web, often face a hard time because for a single piece of information they often have to roam through multiple government websites. Hence this knowledge portal, which is also linked with learning tools and powers the various diagnostic tool, aids extension agents to learn more about each of the topics with updated information.

Photo: Queries sent from field to call center

To automate the reporting and data collection process of extension department which is challenge three, mPower, in collaboration with extension department of Bangladesh, has developed three mobile applications which automate their scheduling process, statistics collection and problem tracking, with the positive result of eliminating a lot of paperwork. This data are being automatically aggregated in real time, and managers sitting remotely can see the

view in a web dashboard and can give timely and meaningful forward instructions.

Results and Learning:

Up to these points, so far 93 users are using these applications and so far 4 970 agro advisory service are being provided.

Farmers are in general very receptive to the recommendations they have been getting from this ICT based system. So far 96.4% of farmers responded that they are happy with the recommendations received, and they have applied practices. To find out adoption and impact more, mPower is working with a team of researchers from ICHASS, So far 10.04% female farmers got agro recommendation through this systems which is a vast number, considering in traditional system the number is very poor Some of the e-Administrative application which are targeted to government extension agent are yet to show significant impact as it's tough to train field extension officers with a new ICT based tool and replace the old paper based method Finding out female infomediary seems to be a challenge due to gender barrier and project is working with INGENAES to develop a strategy to tackle this issueInvolving community people increases 'trust' of the recommendation. Apart from social value, to find out sustainability some revenue based model is required for the infomediary.

Findings:

- Bangladesh is a riverine country. Its soil is very fertile. In Dinajpur too. So it has huge potential to do better in this sector.

- Department of Agriculture Extension is doing service oriented work. Especially extension work is so much difficult in the perspective of Bangladesh.
- The literacy rates of farmers are less.
- Farmers are interested to get advice from neighbor and seed/pesticide dealer than Sub-Assistant agriculture officer or extension worker.
- Farmers are interested to get free seed or fertilizer or any subsidiary or any rehabilitation program.
- They show at fest negative attitude to get the technology.
- Now a day's laborer crisis is a big problem in the crop cutting time i mean peak time.
- The agricultural inputs are expensive.
- Farmers are not getting fair price of Rice. They are not ready to get modern technology.
- Farmers are not eager to get crop diversification or cropping pattern.
- The block level extension workers SAAO`s are very good.
- Farmer does well, when they are trained. Sufficient training, field day, fair and motivational tour.
- Some farmers are progressive the always ready to get new one.
- Literate young stars are severely needed this sector.
- Farm Mechanization should be introduced in this sector. Especially in Dinajpur District.

Limitation of Study :

- In many case up-to date information is not available.
- Large scale study was not probable due to constraints and restrictions posed by the problematic farmer.
- Time frame for the study was very inadequate.
- In many case up to date information is not published.
- Experience makes a man efficient inexperience of the researcher creators obstacle to follow systematic and logical research methodology.

- It is not so easy to collect data from farmer. Because maximum farmers are illiterate.
- Department of agriculture extension has not a rich storage of data processing and preservation.
- Lack of sufficient books, papers and journals etc.

Recommendation:

I have a set of recommendation for Department of Agricultural Extension.

1) Farmers should be trained up.
2) The extension worker especially Sub-Assistant Agriculture office should be trained up.
3) There should be availability audio visual contents at training session.
4) Extension plan should be local need basis; from the block of an union.
5) Department of Agricultural extension may use the electronic and print media for disseminate the modern technology.
6) Department should Emphasis on Farm Mechanization.

Conclusion

The Economy is agro-based economy. To get food security and sustainable development Agriculture Sector is most important. Major percentage of our farmer follows old method of Cultivation. So planning of effective extension policy, method, action plan and implement it very important.

Department of Agricultural extension is doing to helping the farmer by providing information, addressing their problem, giving solution to the farmer.

Moreover, DAE emphasizing modern agriculture, E-Agriculture and farm Mechanization. So that Bangladesh can get her Goal Regarding Agriculture.

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LETTER OF TRANSMITTAL

16 October 2017

Rafia Akhtar

Associate Professor

Department of Management

Faculty of Business Studies

Hajee Mohammad Danesh Science and Technology University, Dinajpur-5200

Subject: Submission of internship report on "The Extension Planning to Disseminate the Modern Agriculture" Department of Agricultural Extension, Dinajpur.

Dear Sir

I beg most respectfully and humbly to state that, opportunity of doing this assignment on this subject to prepare the Report. This task has been given me the opportunity to explore one of the most important aspect of agricultural extension to field level in the doorstep of marginal farmers. The report contains a comprehensive study on the overall Extension policy of DAE. It was a great pleasure for me to have the opportunity to work on the above-mentioned subject. I have put my best effort to come out with a good one.

Would you please kindly accept my report and oblige me thereby.

Thank you

Sincerely Yours

.....

Md. Showkat Hossain Manik

Student ID: E-150506075

6th Batch,

MBA(Evening) Program

Major in Human Resource Management(HRM).

Faculty of Business Studies

HSTU, Dinajpur.

STUDENT'S DECLARATION

I do hereby solemnly declare that the report entitled "The Extension Planning to Disseminate the Modern Agriculture"embodiesthe results of my own solely effort after completion of 45 days' Internship at Department of Agricultural Extension (DAE), Dinajpur. Supervised under the supervisor of Rafia Akhtar, Associate Professor, Department of Management, Faculty of Business Studies, Hajee Mohammad Danesh Science and Technology University, Dinajpur-5200.

I also confirm that, this report is only prepared for my academic requirement not for any other purpose. It has not been previously submitted to any other university/ college/organization for an academic qualification/certificate/diploma or degree.

I further affirm that the work reported in this internship is original and no part has been previously submitted to any books or in any other universities.

.....

Md. Showkat Hossain Manik

Student ID: E-150506075

6th Batch

MBA (Evening) Program

Major in Accounting and Information Systems

Faculty of Business Studies

HSTU, Dinajpur

CERTIFICATE OF SUPERVISOR

I hereby declare that concerned internship report entitled "The Extension Planning to Disseminate the Modern Agriculture"is a work done by Md. Showkat Hossain Manik, Student ID: E-150506075, 6th Batch, MBA (Evening) (Major in Human Resource Management HRM), Hajee Mohammad Danesh Science and Technology University, Dinajpur-5200, completed his internship under my supervision and submitted for the fulfillment of the degree Master of Business Administration MBA (Evening) at Hajee Mohammad Danesh Science and Technology University, Dinajpur.

Therefore, He is directed to submit his report for evaluation.

I wish him every success in life.

.....

Rafia Akhtar

Associate Professor and Supervisor

Department of Management

Faculty of Business Studies

HSTU, Dinajpur-5200

CERTIFICATE OF CO-SUPERVISOR

I hereby declare that the concerned internship report entitled "The Extension Planning to Disseminate the Modern Agriculture" is an work done by Md. Showkat Hossain Manik, Student ID: E-150506075, 6th Batch MBA (Evening) (Major in Human Resource Management HRM), Hajee Mohammad Danesh Science and Technology University, Dinajpur-5200 completed his internship under my Co-supervision and submitted for the fulfillment of the degree Master of Business Administration MBA

(Evening) at Hajee Mohammad Danesh Science and Technology University, Dinajpur.

Therefore, he is directed to submit his report for evaluation.

I wish him every success in life.

.....

Md. Mostfizur Rahman

Assistant Professor and Co-Supervisor

Department of Management

Faculty of Business Studies

HSTU, Dinajpur.

The People's Republic of Government of Bangladesh
Office of Deputy Director
Department of Agricultural Extension
Khamarbari, Balubari, Dinajpur.

Memo: 12.17.2700.039.99.001.13 1972 **Dated: 04 Oct. 2017.**

To Whom it May Concern

This is to certify that Md. Showkat Hossain Manik having ID No. 150506075, MBA (Evening) (Major in HRM) student of Hajee Mohammad Danesh Science and Technology University, Dinajpur completed his 45 (Forty Five) days internship successfully. During the Period of internship his attendance, performance in connection with his assigned duties and behavior with us are outstanding enough. He is Obedient and hard working person also. He adopted all relevant works of different desks within the aforesaid period. During his internee period we found him good moral attitude and sound behavior.

We are satisfied with his performance and wish him success in life.

মোঃ গোলাম মোস্তফা
উপ-পরিচালক
কৃষি সম্প্রসারণ অধিদপ্তর
খামারবাড়ী, দিনাজপুর।
ফোন ঃ ৬৫৪২৭

ACKHOWELDGEMENT

In the name of Allah, With Countless marcyof him I have finished report successfully I give thanks to my honorable teacher Rafia Akhtar Internship Supervisor and Associate Professor, Department of management Faculty of Business Studies of Hajee Mohammad Danesh Science And Technology University who gives me such a attractive prospect to make a report on "The Extension Planning to Disseminate the Modern Agriculture" as well as helped me in every step to accomplish my report and try to provide me a fair practical knowledge as should as it possible. I also will not miser to respect Department of Agriculture Extension (DAE) that give me chance to obtain practical knowledge through their internship program. I thank the Deputy Director, DAE, DinajpurSir and District Training Officer, Department of Agricuturel Extension, Dinajpur Sir who helped me to do internship in his Office and provide me a fear idea about practical knowledge of Agriculture Extension Activities. I will show appreciation to other Sub-Assistant Agiculture officers (SAAO) as well as suggested me to do work.

Finally, I would like to thank authors of the books that I have taken help from, which had made my understanding clear during the making of the report.

EXECUTIVE SUMMURY

Bangladesh is a developing country. It is over populated country as well. The cultivable land is decreasing (Occupied by House, mill, industry and different installation) every day about seven hectors over the country. Therefore, it is being a big challenge to produce sufficient food for about 170 million people. Ensure Food security is big factor here. We have to increase production vertically with limited land. Increase production in per hector. However, on the other hand farmers of our country are not much progressive. They are still following the old system of cultivation. In this Report, I have got a try how to propagate the modern agricultural technology. How the farmer will adopt that technology and implement. How the adoption will sustain in the field. Most compatible extension Concepts, planning and implementation processes have illustrated here.