



Bangladesh Water Development Board (BWDB)



Kingdom of the Netherlands



Department of Agricultural Extension (DAE)

Embassy of the Kingdom of the Netherlands (EKN) Dhaka, Bangladesh



Training report

Second Batch FT –TOT , Khulna

23rd July-03rd August 2017



Training Report, 2nd Batch FT-TOT

September 2017

Blue Gold Program

BWDB Office

23/1 Motijheel Commercial Area, Hasan Court, 8th Floor, Dhaka 1000
(T) +88 02 711 15 25; +88 02 956 98 43

Gulshan Office

Karim Manjil, Ground Floor, House 19, Road 118, Gulshan, Dhaka 1212
(T) +88 02 989 45 53

Green corner – Save a tree today!



Mott MacDonald is committed to integrating sustainability into our operational practices and culture. As a world leading consultancy business, we are always seeking to improve our own performance and reduce the environmental impact of our business. Meanwhile, many of our staff are committed to living sustainably in their personal lives – as an employee-owned company Mott MacDonald shares their concerns. We feel an ethical obligation to reduce our emissions and resource use and have committed to reducing our per capita carbon footprint by a minimum of 5% year on year.

We print our reports and client submissions using recycled, double-sided paper. Compared to printing single sided on A4 virgin paper, double sided printing on recycled paper saves the equivalent of two trees, over a ton of CO₂ and a cubic metre of landfill space for every 100 reams. By choosing the greener path we have been able to achieve efficiencies benefiting both Mott MacDonald and our customers.

We would like to share some of the principles of our own 'Going Green' initiative:

- When possible we scan rather than print and consider what really needs to be on paper
- We use electronic faxing when practicable
- We work on e-forms
- We use recycled paper when possible
- Reducing paper in the office creates a better working environment for our staff and our clients

We believe that you, as one of our esteemed clients, will share our concern to conserve precious resources for the benefit of our planet and its inhabitants.

Issue and revision record

Revision	Date	Originator	Checker	Approver	Description
1	23.07.17	Sumona Rani Das	Munir ahmed, Ashrafal Islam Shahidul Haque	Guy Jones	

This document is issued for the party which commissioned it and for specific purposes connected with the above-captioned project only. It should not be relied upon by any other party or used for any other purpose.

We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties

This document contains confidential information and proprietary intellectual property. It should not be shown to other parties without consent from us and from the party which commissioned it.

Contents

1.	Introduction	3
2.	Day 1	4
2.1	Inaugural _____	4
2.2	Group dynamics, Expectation, training principle _____	4
2.3	Introduction on homestead garden module _____	5
2.4	Farming is a business _____	5
3.	Day 2	7
3.1	Recap _____	7
3.2	WMG formation process, function _____	7
3.3	Value Chain and sustainable homestead production (Hg &Poultry) _____	7
3.4	Community meeting (field work, Polder-25) _____	8
4.	Day 3	9
4.1	Recap _____	9
4.2	Homestead garden vegetable production Importance, production plan and budgeting _____	9
4.3	Homestead garden vegetable production technologies , Seed bed preparation, raised bed and pit preparation , quality seed _____	10
4.4	Organic fertilizer and Farm Yard Manure Preparation _____	10
5.	Day 4	11
5.1	Recap _____	11
5.2	Problem Analysis for Homestead production and Local Poultry _____	11
5.3	Function of Chemical fertilizer for vegetable production _____	11
5.4	Integrated Pest Management _____	12
5.5	Collective Action _____	12
5.6	Intercultural Operation _____	12
6.	Day 5	14
6.1	Recap _____	14
6.2	Vegetable Pest management and trial setup on vegetable and fruit _____	14
6.3	Practical work on Pit, raised bed and Farmyard Manure preparation, Space Planning (P-25)	14
7.	Day 6	16
7.1	Recap _____	16
7.2	Fruit tree management _____	16
7.3	Role play on collective action _____	16
8.	Day 7	17
8.1	Recap _____	17
8.2	Practical on Integrated Pest management on Vegetables, Fruit and fruit tree fertilization _____	17

8.3	Intorduction of Poultry Module , production plan _____	17
9.	Day 8	19
9.1	Recap _____	19
9.2	Information on input market, Poultry Input management _____	19
9.3	Poultry housing and Hazol preparation –Practical _____	19
9.4	Importance of Hazol fro broody Hen management _____	20
10.	Day 9	21
10.1	Recap _____	21
10.2	AESA on vegetables and Fruit, FMA on poultry _____	21
11.	Day 10	22
11.1	Recap _____	22
11.2	Trial set-up on Poultry , Chicks and pullet rearing and its management _____	22
11.3	Poultry Disease management and Vaccination service _____	22
11.4	Ballot Box preparation and Question setting on Hometead and Poultry Module _____	23
11.5	Networking, ICT for marketing and production information _____	23
12.	Day 11	24
12.1	Recap _____	24
12.2	Disaster Risk Reduction and BlueGold Perspective _____	24
12.3	Primary health care of poultry _____	24
12.4	Bio-Security , disease management and disease calender _____	24
12.5	Quiz competition _____	25
12.6	Horizontal learning _____	25
13.	Day 12	26
13.1	Post test _____	26
13.2	Training evaluation _____	26
13.3	FFS register _____	26
13.4	Benchmark Survey _____	27
13.5	Farmer Field Day (FFD) _____	27
13.6	Closing ceremony _____	27

Appendix 1	Participants List
Appendix 2	Result
Appendix 3	Group work Sample
Appendix 4	Group work Sample
Appendix 5	Group work Sample
Appendix 4	Day Schedule

1. Introduction

Blue Gold has started the development of Farmer Trainers at 10 new polders, who will be able to take over the role of Community Development Facilitator (CDF) in organizing Farmer Field Schools (FFS) gradually. A total of 76 Farmer Trainers (FTs) have been selected from different polders of Khulna and Patuakhali. Among them, 41 are men and 35 are women. Some of the selected FTs have previous experience of working with different development and government projects.

Training is pre-requisite for skill development. For FFS it is essential to train FFS facilitators by giving hands-on-training on application of different technologies with concepts on market orientation as well as facilitation skills. Training and capacity building through participatory and experiential learning will help FFS facilitator to give their service effectively.

The selected FTs have already been trained on Fisheries-Beef fattening-Nutrition modules. Now a two-week long Training of Trainers (ToT) course was organized to develop their knowledge and skills to familiarize them with the FFS curriculum on local poultry, homestead garden and market orientation that will be used during the 10th cycle of FFS. The cycle will be scheduled to start from October 2017.

Objectives of the TOT:

- To increase capacity of FFS facilitator following participatory approach
- To provide technical information on Homestead, Poultry with Market Orientation.
- To give orientation on Blue Gold activities
- To serve as a team building exercise for newly recruited FTs and other Blue Gold staffs

The 10th cycle FFS will include 4 modules which were covered in this TOT:

- Introductory sessions
- Poultry (chickens, ducks) with market orientation
- Homestead gardens (vegetables, fruits) with market orientation
- Nutrition

Nutrition module has already been covered with the 1st batch of TOT course.

Venue : CSS AVA Center, Khulna

Duration: 23 July to 03 August 2017

This report covers 12 days schedule of the 2nd TOT for FTs

2. Day 1

2.1 Inaugural

The programme had started with informal activities. At the beginning, all the participants registered their names. Registration forms were filled-up by individual participants. Then participants attended a pre-test. A formal questionnaire was used for pre-test. All the participants spent one hour for the test.

A short formal inaugural session was organized for starting of the training course. District Livestock Officer (DLO) , Zonal Coordinator-Blue Gold Program (BGP), Khulna attended as the chief guest and special guest respectively. DLO thanked Blue Gold for organizing ToT that covered the homestead garden and local poultry modules with market orientation. He mentioned that nowadays cross breed chicken (Sonali) has become popular as a local variety. We need to work on pure local varieties and Blue Gold is doing that. He explained about benefits of rearing local varieties, which were as follows;

- Less disease suspected
- Require less feed compared to cross and commercial breeds
- Local poultry can adapt easily with local condition
- It can be reared in a semi-scavenging condition
- High market price of bird/meat

The DLO informed participants about an electric incubator available at market. A small women group can use this incubator for local chick hatching. The DLO suggested that FTs should share this information to the FFS members and if any group was found interested, Directorate of Livestock Services (DLS) will provide all sorts of technical cooperation. He thanked BGP for providing training to some local people as a vaccinator. The zonal coordinator-BGP, Khulna spoke on Blue Gold activities and about the roles of FTs for its sustainability. After that the DLO formally inaugurated the two week long ToT course and wished for its success.

2.2 Group Dynamics, Expectations, Training Principles

Facilitator: Biswas Ali Mortoza (Training Coordinator)

Methods: Game, interactive, group work

The session started with a group dynamics. He talked on importance of group dynamics, how a session become interactive by following group dynamics and how learning message can be disseminated to the participants through it.

Three groups worked out their expectations on local poultry, homestead garden (HG) with market orientation modules. They presented their expectations. An interactive discussion took place after each presentation. Facilitators assured that at the end of the course, participants will be able to fulfill their expectations.

A game took place to outline training principles which were needed to be followed during training period.

2.3 Introduction on homestead garden module

Facilitator: Sumona Rani Das (Agricultural Expert) ,

Methods: Pictorial Presentation , interactive discussion

The facilitator started the session by showing different types of homesteads from Khulna areas. The production status of those homestead and opportunities to increase the production were also discussed. Then she talked on importance of homestead modules, market orientation and shared the content with participants.

The facilitator focused on how FTs will practice this module at the FFS. The steps need to be followed for introducing the module at FFS should be as follows;

- Explain the objectives of this module
- Introduction about homestead garden
- How a small unit of homestead space become a production unit
- Explain the contents with objectives
- Talked about the Homestead Garden (HG) trials
- Duration of FFS.

The discussion will be interactive and show the time schedule in front of the participants and importance of the timeline.

2.4 Farming is a business

Facilitator: Shusanto Roy (Business Development Coordinator)

Methods: Interactive discussion, examples

The facilitator started his discussion with a question- 'what is a market?' Every participant tried to come up with a definition of a market and the characteristics of a market. After the discussion all participants learned about different aspects of a market. as follows;

- what is market
- importance of market
- role of market
- kind of market etc.

Then the discussion took place on 'what is a business?' An example was used for enabling an understanding on why agriculture is a business. Sweet meat shop was considered as an example. For example, why sweet meat seller is a businessman. What activities were needed to start a sweet meat shop and why? After discussion participants learned about ;

- Definition of business
- Activities to start a business like planning, management of input buying and output selling, staff management, record keeping, networking etc.

In any agricultural production farmers are doing almost all the activities in an unplanned manner. Record Keeping is almost not practiced by the homestead producers.

To start HG and Local Poultry modules, farmer need to be aware about how they can make their homestead as a production unit for improving their livelihood.

3. Day 2

3.1 Recap

Facilitator: Host Team Leaders (HTL)

Methods: Interactive and participatory, Game

Recap started with an ice breaking (Rice harvesting song). All participants participated in this session. It was a questions answering session. Host Team Leaders conducted the session.

3.2 WMG formation process, function

Facilitator: Tahmina Begum (Sr. Socio-economist),

Methods: Power Point , interactive discussion

Facilitator focused on;

- What is participatory water management
- Law and by-law for participatory water management
- Necessity of participatory water management
- Water management Group formation process
- Responsibilities of WMG

Then facilitator focused on how farmer trainer can play a role on formation and strengthen of WMG. As a polder dweller FT can help conflict resolution, prepare proper planning, organization strengthening, networking with line departments, increase agricultural production etc. Water Management Group (WMG) will be the entry point to start FFS.

3.3 Value Chain and sustainable homestead production (HG &Poultry)

Facilitator: Shusanto Roy (Business Development Coordinator)

Methods: Power Point , interactive discussion , Examples, Props

Facilitator started the session with an interactive discussion and live examples. He defined value chain for agricultural production and used props to make a value chain for homestead production. Explained every actors role to make market functional, how consumer preference influenced agricultural production and marketing. For making agricultural business profitable, every producer need to have a knowledge on market actor and their role in market.

3.4 Community meeting (field work, Polder-25)

Facilitator: Munir Ahmed (Livestock Expert) , Sumona Rani Das (Agricultural Expert) , Community Development Facilitators

Methods: interactive discussion, Practice at field (Ruprampur)

Meeting place: Ruprampur Club, Facilitator: Munir, Sumona , Co-facilitator : Jahida, Rasel, Time: 3.00-5.00 pm , Presided by: Ad Hoc committee chairman, Participants: Community members

Facilitators explained the objectives of the community meeting to the participants, why we are there, what we are going to do and seek their help of this learning part. It is also explained by the facilitators that FFS is knowledge based learning approach and participants need practical knowledge on how to conduct a community meeting. It is a process of FFS member selection from community. Showed the process how to conduct a community meeting. A selection criteria shared and supplied to the participants .

After that a dummy community meeting took place at Ruprampur club.

All participants divided into four groups. FTs practiced participants selection procedures by using a format. At the end of the meeting a dummy primary list on interested farmers was prepared by the FT.

The Ad. hoc committee president appreciated the selection process, welcomed Blue Gold activities in that area , thanked the Blue Gold staffs for selecting their area and adjourned the meeting.

4. Day 3

4.1 Recap

Facilitators: Host team leaders Methods: Interactive and participatory

Recap started with ice braking. They reviewed the whole session by questions answering methods. .

4.2 Importance of vegetable production, production plan and budgeting

Facilitator: Sumona Rani Das (Agricultural Expert)

Methods: Interactive, Group work, Multimedia presentation

Through interactive discussion facilitator focused on the importance of vegetable production, scope on how to increase the present production level and how we can made homestead as a profitable production unit.

Then the discuscusion took place on what is production planning and for vegetable production how we can make a year round production plan.

Facilitator discussion on preparation of homestead vegetables production calendar to find out the lean or gap period of vegetable production. Homestead space planning to find out the all possible under utilized or unutilized places at homeatead . She shared basic information on what is calendar and why it is important for vegetables cultivation.

Then three groups attended a group work on how to draw a crop calender with presentation. During session conduction, participants can use local materials like coal, jute stick, dry coconut leaf for making crop calender. A dummy space planning was done by participants and identified the unutilized places .

Facilitator talked on importance of budgeting and record keeping for vegetable production. After discussion participants identified some fixed and variable cost for vegetable production .Then they identified the probable yield and income from vegetable garden. Facilitator emphasized the process how it will done with FFS.

4.3 Vegetable production technologies, Seed bed preparation, raised bed and pit preparation, quality seed

Facilitator: Zahangir Alam (Agricultural Expert), Methods: Interactive, Group discussion, print materials (posters)

Facilitator showed the sample of good and bad seeds, saplings and their selection procedure. Discussion took place on how farmer can identify good seed by physical varification. For good quality market seed they need to know the field performance of different company seed and select variety .

Facilitator delivered the technical information on seed bed preparation and its management.

Facilitators discussed on raised bed and pit preparation, mesurement, benefit for year round vegetable production etc. .

Then facilitators explained what kind of prior preparation needed to take this session with FFS members.

4.4 Organic fertilizer and Farm Yard Manure (FYM) Preparation

Facilitator: Sumona Rani Das (Agricultural Expert), Methods: Interactive, Group discussion, print materials (poster)

Facilitatos discussed on what is organic fertilizer, impotence of organic fertilizer for vegetable production etc.

At homestead how farmer can produce organic fertilizer with low cost. A poster showed on Farm Yarm Manure Production. Facilitator reviewed the information on the pit size, ingredients use for farm-yard fertilizer preparation. Two Farm Yard Manure Pits were drawn by two groups.

There was a practical session took place later at the farmer's house.

5. Day 4

5.1 Recap

Facilitator: Host Team Leaders Methods: Interactive and participatory

Recap started with ice braking and then followed the same role as it was done before.

5.2 Problem Analysis for Homestead production and Local Poultry

Facilitator: Munir Ahmed (Livestock Expert) , Sumona Rani Das (Agricultural Expert), Methods: Interactive and participatory, group work

Facilitators explained importance of problem analysis of profitable vegetgables and local pouyltry production. Facilitators showed the process of problem analysis. Participants divided into two groups, one group worked on HG production problem analysis and another group worked on poultry production problem analysis and prioritize the problems. After group work each group went for presentation.

During presentation discussion a participatory discussion took place on how FT will conduct this session . What kind of prior preparation they need to take. It was decided that one dummy problem analysis poster will be prepared by FTs. That will help them to conduct the session easily with FFS members.

5.3 Function of Chemical fertilizer for vegetable production

Facilitator: Abdul Khaleque (Junior Master Trainer), Methods: Group discussion, Interactive, Live materials

Facilitator started his discussion on importance of fertilizer for vegetable production. A participatory discussion took place on fertilizer use, identification of good quality fertilizer, linkage with input dealer etc. He displayed live sample of different kind of inorganic fertilizer. Sample on fertilizer deficiency for symptom of vegetable plants shown to the participants. Then he discussed how FT will conduct this session, which kind of materials they need to use.

5.4 Integrated Pest Management

Facilitator: Md. Ashraful Islam, (Workgroup Leader EWM) Methods: Power point presentation, Interactive discussion

He explained what does pest stands for, why we go for integrated pest management for homestead vegetable production. Facilitator explained the interrelation between beneficial and harmful insect. If we destroy pest totally we will lose our beneficial insects from our field. So we need to know how to manage our pest and disease by following different technique. Which is called integrated pest management . He explained the harmful effect of indiscriminated use pesticide on vegetable and fruit production.

Then he expalined the different techniques of integred pest management and good practice of agriculture. During conduction of FFS session FT need to be use live example of beneficial and harmful insect and their integrated management tools .

5.5 Collective Action

Facilitator: Shusanto Roy (Business Development Coordinator) , Methods: Interactive discussion, Video clip

Facilitator showed four video clips on collective activities by ants, penguin and crabs. Then he explained the benefit of collective actions areas follows;

- To get good quality input- collectively fingerling ling Purchase like high value Pubda Fish)
- To save money
- To save time
- To save labor
- To get technical service
- To get proper price of their product
- To adopt advanced technology on agriculture (ex. Bina dhan-7)

He mentioned here that different input seller company giving technical support to their client. Government has a role to give technical support to a group of farmers. So to get advance knowledge on agriculture technologies it need to make a group. Common interest group from FFS may involve with collective action for input purchase and product selling.

5.6 Intercultural Operation

Facilitator: Agriculture Extension Officer, Dumuria Methods: Interactive discussion

Through interactive discussion facilitator first tried to identify what kind of intercultural operation practiced by farmers at real field. All participants shared their experiences and also from their neighbourhood. After that facilitator focused on the following intercultural operation which are essential for increasing homestead production.

- Weeding and its importance
- Irrigation , drainage and its importance
- Hand pollination and its importance
- Fertilization- Proper dose
- Pest management – Good agriculture practice
- Mulching and importance
- Trellising and importance

Facilitator mentioned that as FFS is an experiential learning methods, so we should first learn about farmers existing practice and then suggest the improved one and explained how the intercultural operation help increase production. She also explained how FT will conduct the session in the field.

6. Day 5

6.1 Recap

Facilitator: Host Team Leaders, Methods: Interactive and participatory

Recap started with ice breaking and then followed the same role as it done before.

6.2 Pest identification and trial setup on vegetable and fruit

Facilitator: Md. Ashraful Islam methods: Interactive discussion, pictures, video clip

Facilitator talked on some common pest and disease management for homestead vegetable production. He described the pest and disease prevalence time, preventive measurement, good agricultural practices, intercultural operation etc. Pest and insect attack narrated by pictures and video clip. Less expensive control measure shared with participants which could be very effective for FFS member. Eg. water spray, digertent water spray, hand collection etc. This session continued with practical field work later on.

Facilitator talked on trial set up for vegetable and fruit cultivation and its importance for experiential learning. It should be on demand based and to solve the existing problem. It could be on

- New variety
- Fruit tree management
- planned vegetables cultivation
- improved vegetables cultivation
- Improved fertilizer management etc.
- Integrated pest management
- Year Round Vegetable production etc.

6.3 Practical work on Pit, raised bed and Farm Yard Manure preparation, Space Planning (P-25)

Facilitator: Sumona Rani Das & Abdul Khaleque, Co-facilitator: CDF Rasel & Jahida, methods: Practical at Farmer Field, Raghunathpur

Facilitators divided the participants into two groups. Alternatively they participated at practical work. Three raised beds prepared by them. Facilitators showed them the bed preparation measurement, irrigation and drainage system, intercultural operation, crop rotation, year round vegetable production with raised bed. Then three pits prepared by

the participants and transplanted seed on it. Facilitators helped them, how they dig the pit, fertilizer application methods and intercultural measurement for pit. How a pit can help increase production was explained to them.

Then the whole group prepared farm yard manure pits by themselves. Facilitators showed the pit measurement, what kind of farm yard wastages use for fertilizer preparation, place of setting farm yard manure pits etc. One pit filled up by the waste materials and covered it in a proper manner.

Space planning practical also done by the participants. AT the end of the practical work FT were briefed on how they will conduct this practical session with FFS. What kind prior materials and preparation they need to take to conduct this session.

7. Day 6

7.1 Recap

Facilitator: Host Team Leaders, Methods: Interactive and participatory

Recap started with ice breaking. All participants divided into two groups and reviewed their learning by answering question.

It was a competitive session and all participants nicely reviewed their learning.

7.2 Fruit tree management

Facilitator: Sumona rani Das, Zahangir Alam , Abdul Khaleque , Methods: Interactive and participatory, Practical, Poster

Facilitators talked about the importance of fruit production, scope of increase production at homestead through proper management .With an interactive discussion facilitators talked on the fruit tree plantation plan for a homstead area.

Sapling selection criteria and plantation technic were discussed by showing a printed poster and a live sapling. Then there was a practical session took place on how to plant a fruit sapling and its management like fertilization, irrigation ,prunning etc. They are suggested to follow the same procedure for conducting FFS session.

7.3 Role play on collective action

Facilitator : Sumona Rani Das, Munir Ahmed Methods: Scripts on collective action

Two scripts on collective action supplied by the BDCs. Participants are divided into two groups. One group played on collective duckling purchase, another group played on collective input purchase for vegetable production . The play focused on

- What kind of problem farmers facing to buy and sell their product
- Who can help them
- How they can organize themselves
- What is the benefct from collective action
- How it help reduce cost, time and labor

The discussion took place on how they can practice those role play during FFS session conduction.

8. Day 7

8.1 Recap

Facilitator: Host Team Leaders, Methods: Interactive and participatory

Recap started with ice breaking. All participants divided into two groups and reviewed their learning by answering question.

It was a competitive session and all participants nicely reviewed their learning.

8.2 Practical on pest identification and control, fruit

Facilitator: Ashraful Islam, Zahangir Alam, Sumona Rani Das, Abdul Khaleque
,Co-facilitator : CDF Hafsa Methods: Practical vegetable field visit, Place Bhdrodia

Facilitators with all participants visited vegetables fields, gher and collected pest and disease affected samples, insects, from fields. Then the collected samples were categorised into three groups, beneficial insects, harmful insects, disease and insect infected fruit and vegetables. Facilitator explained the symptom of different infected fruit and vegetables, identifying mark, their remedies and measurement. Brief introduction on beneficial insect and their preservation techniques. They are suggested to follow the same procedure to conduct the FFS session.

After that practical session on fruit tree fertilization and pruning took place. Then two biological trap preparation procedures were shown to the participants. Farmers also participated the sessions.

8.3 Introduction of Poultry Module , production plan

Facilitator: Munir Ahmed (Livestock expert) , Methods: Interactive and Participatory Discussion, Group Work

Facilitators explained the poultry module and the steps need to follow for introducing the module with FFS. ;

- Explain the objective of this module
- Economic benefit of local poultry production
- Explain the contents with objectives

- Talked about the poultry trials
- Duration of FFS. The discussion will be interactive and show the time schedule in front of the participants and importance of the timeline.

Facilitators talked about the importance of production plan for local poultry. Three groups worked on making year round production plan and prepared an activities calendar and presented it.

9. Day 8

9.1 Recap

Facilitator: Host Team Leaders, Methods: Interactive and participatory

Recap started with ice breaking. All participants divided into two groups and reviewed their learning by answering question.

9.2 Information on input market, Poultry Input management

Facilitator: Gazi Abul Kalam Azad-Director, fertilizer Association , Shusanto Roy

Methods: Interactive and participatory discussion, role play

The session started with a role play on collective action. After that a fertilizer seller association leader Mr. Azad introduced to the participants. He narrated his association's activities, their commitment on supply of good quality input to the farmer. He talked about over all agricultural input market situation in Khulna. He offered his association's support to the farming community. He gave his phone number to the participants .

9.3 Poultry housing and Hazol preparation –Practical

Facilitator: Upazila Livestock Officer , Dumuria , Munir Ahmed Methods:

Interactive and participatory discussion, Live poultry shed, practical

Facilitator first wanted to learn from the participants about the existing housing management of poultry at Khulna areas at homestead level. After that he discussed about the improved housing system. Facilitator emphasized to improve the current existing system not to impose any expensive and costly management. He provided information on standard housing management of poultry. Local materials can be used for preparing poultry shed. A standard two storied poultry shed displayed to the participants, narrated its economic benefit to the participants.

There are four chambers in the shed. Low two chambers used for hatching and keeping adult hens. Upper two chambers used for day old chicks and pullets rearing. About 40 to 50 chickens could be reared in the shed. This improved housing play a vital role to increase poultry production and enhance reducing disease prevalence. It was discussed

that during FFS session , facilitators should emphasized on improved the present housing condition with low cost.

Facilitators discussed about a earthen device called Hazol for broody hen management and its economic benefit. Proper measurement and preparation procedure shown to the participants. After that participants made a hazol with mud . During session conduction, FTs are suggested to learn knowledge from the participants on broody hen management and allow them to make hazol with any other local materials. They might tested any new idea for making processures.

9.4 Importance of Hazol for broody Hen management

Facilitator: Munir Ahmed , Advance farmer Methods: Interactive and participatory discussion, Live sample

Facilitators discussed on the existing laying and broody hen management at farm level. Facilitator shown the live demo on egg selection, feed management, hazal management and egg examination to identify fertile and infertile eggs. Every participants took part with this practical session.

A advance farmer attended the session with her broody hen. She shared her experiences on how hazol is helping her to manage broody hen properly and increasing production AND hatchability.

It was discussed that during FFS session , facilitator should take prior preparation on material collection (fertile and infertile eggs, torch light, broody hen, feed etc

10. Day 9

10.1 Recap

Facilitator: Host Team Leaders, Methods: Interactive and participatory

Recap started with ice breaking. All participants divided into two groups named Blue and Gold reviewed their learning.

10.2 AESA on vegetables and Fruit, FMA on poultry

Facilitator: Munir Ahmed , Sumona Rani Das, Interactive and participatory, Group work , field work

Facilitator discussed on what is Agro-Eco System Analysis (AESA) , why it is essential for vegetables and fruit production. Facilitators discussed on the key points on Farm Management Analysis (FMA) for poultry production and its importance. The basic principles of AESA and FMA are as follows;

- Problem identification
- Observation
- Record keeping
- Analysis
- Decision making and Conclusions

Field practice on AESA and FMA at famer's house. Visited place: Raghunathpur, Polder -25.

Participants divided into three groups. They try to collect information on poultry rearing and its existing management situation by the farmers. The observation focused on housing, feed and disease management of poultry and duck rearing. Then every group did analysis on their visited house and made suggestions for improving the existing management.

After visiting vegetable plots, they collected information on current production practice by the farmers. They collected information on easy access of sunlight, Place selection, fertilizer management Irrigation/drainage management, bed preparation, pest management etc. They made the analysis with suggestions for improvement. Farmers attended the session.

This is a learning tool to learn about the current farm situation for making decision .

11. Day 10

11.1 Recap

Facilitator: Host Team Leaders, Methods: Interactive and participatory

Recap started with ice braking. It was a competitive session and all participants nicely reviewed their learning.

11.2 Trial set-up on Poultry , Chicks and pullet rearing and its management

Facilitator: Munir Ahmed , Interactive and participatory, practical (Live demo)

Facilitator focused on the objective of trial on poultry. Facilitator emphasized on farmers' selection criteria for trial, set-up trial , importance, record keeping etc. He showed a demo on record keeping .

Facilitator discussion on chick rearing and their feed management . and different poultry feed. Discussion has taken place on creep feeding, technique chick seperation, period of seperation, benefit of chicks seperation, vaccines for chicks, other management of chicks and duckling. After that a practical session took place was on one kg feed formulation processures and chick management. All participants took part this session.

11.3 Poultry Disease management and Vaccination service

Facilitator: Upazila Livestock officer Batiaghata , Vaccinator Methods: Interactive and participatory

Facilitator discussion general disease and disease management. The discussed disease on:

- New castle (Symptom and management)
- Pigeon fox
- Fowl pox
- Fowl cholera
- Duck plague
- Duck viral hepatitis
- Dysentery (Symptom and management)
- Diarrhoea (Symptom and management)
- De-warming (Symptom and management)
- Pneumonia (Symptom and management)
- Bird flu (Symptom and management)
- Lice management

Facilitator discussed on how this session need to be conduct with FFS. Community Poultry Worker shared her working experinces at field level. How she organized vaccination camp, communicate with farmer , recor keeing etc.

11.4 Ballot Box preparation and Question setting on Homestead and Poultry Module

Facilitator: Sumona Rani Das, Munir Ahmed ,Abdul Khaleque , Interactive and participatory, Practical

Facilitator discussed on the importance of ballot box test on Homestead and poultry module. Show them how to prepare ballot box. Show the question setting system on HG and Poultry module with samples and keep record on it. Every participants made a ballot box with art paper, set questions with sample.

Participants shared their experince on beef fattening and fisheries module ballot box test.

11.5 Networking, ICT for marketing and production information

Facilitator: Shusanto Roy , methods: Power Point , interactive discussion , video clip

Facilitator started his discussion on what is networking, why netwroking is important , which kind of people can get together for networking, process of networking etc. Through power point presentation he showed some pictorial view on networking process.

After that promotional video clips on agricultural marketing shown to the participants. Web portal of different organization, call centers information shared with them. Facilitators also explained how they can use apps for collecting information on different issues. call center services etc.

12. Day 11

12.1 Recap

Facilitator: Host Team Leaders, Methods: Interactive and participatory

Recap started with ice breaking. It was a competitive session and all participants nicely reviewed their learning by question answering

12.2 Disaster Risk Reduction and BlueGold Perspective

Facilitator: Joynal Abedin (Environmental Expert), Methods: Interactive and participatory discussion, Power Point presentation

Through power point presentation facilitators shared some government role for implementing any development project in Bangladesh. Then he discussed on the coastal areas senarion and Blue Gold Programe activities. He shared some Blue Gold following rules to implement LCS activities like ;

- Do not use fertile soil from agricultural land
- Do not hamper bio-diversity
- Do not cut tree during embankment preparation
- Do not make obstacle in canal to flow water
- Do not create water logging

Facilitator discussed that facilitators should aware on those issues to the FFS members.

12.3 Primary health care of poultry

Facilitator: Upazila Livestock Officer , Fultola , Methods: Interactive discussion

Facilitator talked on the common disease they found in khulna area for local poultry rearing. He explained the good practices for poultry rearing and can help farmer to reduce disease prevalence at their homestead poultry rearing. Proper housing management , cleaning, balance diet, vaccination is the key for prevention of poultry disease.

12.4 Bio-Security , disease management and disease calender

Facilitator: Munir Ahmed Methods: Interactive discussion , Group work

Facilitator discussed what is participatory epidemiology and bio-security. That is the precautionary measurement for saving poultry farm from disease and other external factors, the considering factors for poultry rearing regarding bio-security, planning for disease management. Facilitator showed how to prepare a disease management calendar for poultry rearing with FFS. After that three groups prepared three calendars on common diseases and explained their precautionary measurement.

It was discussed that before going to conduct this session facilitator should prepare a disease calendar and bring it to the session .

12.5 Quiz competition

Facilitator: Sumona Rani Das , Munir Ahmed , Upazila Livestock Officer , Fultola
Methods: Questions answer

Facilitator divided the participants into three groups. Forty short questions on HG and Poultry module used for the competition. After asking questions, first hand raiser team got the chance and then the follower. ULO played as a judge to conduct the competition.

First, second and third positions belonging team selected depending on their score.

12.6 Horizontal learning

Facilitator: Munir Ahmed , Methods: Power point presentation

Facilitator focused on the definition of horizontal learning, its objectives, process, and cycle of learning. Why this is important for disseminating FFS learning and how FFS member could do it. This is the process also to encourage best performing team . The learning may disseminate by following different means like exchange visit, group meeting, printing materials, video materials etc.

There was a discussion took place on how this process could be adopted with FFS. During FFS there is an option kept for the learner to disseminate or share his/her learning to two others farmers. Farmer Field Day is another means for horizontal learning . FFS trial set up is also a way to disseminate the learning.

13. Day 12

13.1 Post test

Participants attended a Post-test. A formal question set was used for post-test. All Participants spend one hour for the test.

13.2 Training evaluation

Facilitator: Sumona Rani Das, Munir Ahmed, Methods: Question set

Every participant evaluated individually with a questionnaire covered by following contents:

- Usefulness of topic discussed with different modules
- Facilitators' facilitation technique (usefulness/improvement)
- Scope of participation by participants with different session
- Methods/input use by the facilitators
- Practical class (usefulness/improvement)
- Logistic support
- Others

All most every participants expressed their highest satisfaction with the course .

One comments on improvements ;

- One comments came to increase use of more inputs on broody hen management session

13.3 FFS register

Facilitator: Sumona Rani Das, Abdul Khaleque Methods: Interactive discussion, Review

Facilitator discussed on FFS record keeping by register and its importance. Participants shared their experiences on going FFS and record keeping system. Then four groups overviewd four old registerd on HG and Poultry modules.

13.4 Benchmark Survey

Facilitator: Sumona rani Das Methods: Interactive discussion, ODK form

Facilitator shared the benchmark and endline survey form and explained every field elaborately to the participants. Showed them the ODK form. After that along with Facilitators all participants fill up benchmark survey form by using tablet.

13.5 Farmer Field Day (FFD)

Facilitator: Sumona Rani Das, Munir Ahmed , Abdul Khaleque Co-Facilitator: CDFs , Rasel, Monalisa Methods: Interactive discussion, Display

Facilitators first discussed what is FFD, its importance and the process to conduct a FFD on HG and Poultry module. CDFs prepared two display stalls on Homestead and Poultry Modules. Participants visited the stalls, learned about the process, display materials etc. Facilitators reviewed the whole process as they had an experience with fish-beef fattening-nutrition modules before.

13.6 Closing ceremony

District Livestock Officer (DLO), Deputy Director (DAE), Blue Gold Socio-economist, Agriculture Expert attended the closing ceremony.

One FT spoke on closing event. He gave an over all opinion on training programme. He mentioned that on HG and Poultry modules they learned new technologies and will adopt the technologies by themselves first. As a polder dweller they will try to help farmers for increasing their homestead production.

Deputy Director DAE reminded the role of FTs and suggested them to play their role properly. He mentioned that at field level FTs are playing a good role for increasing production

DLO thanked Blue Gold programme for providing intensive training to the FTs. He hoped that they will try to help the farmers to increase local poultry production at rural level .

Blue Gold Socio-economist and agriculturalist thanked the participants for attending two weeklong training course and their hard work. Hope that they will be able to help WMG people at polder to increase their production and income.

From training organization part, the facilitators thanked the regional team, CDFs for continuous support for organizing the field work and other logistic support .

After that the best performer on training post evaluation, quiz competition and games are awarded by gifts

Note:

- During the TOT, every day a planning meeting took place in the evening. All facilitators and house team leaders attended these meetings. House team leaders and facilitators reviewed the whole day activities to learn from the participants their views regarding the facilitation, topics discussed, practical sessions and others. They noted down the issues and action taken according to meeting and then discussed the plan for the following day.
- During the course there was a playing and leisure time for participants . They participated two competitive games. From each game first, second and third position belonging participants were selected for award.

Appendix 1 Participants list

SL	Name	Village	Union	Upazila
1	Nuton Biswas	Lota	Gutudia	Dumuria
2	Suvendra Biswas	Baradanga	Gutudia	Dumuria
3	Shamoli Kabiraj	Gutudia	Gutudia	Dumuria
4	Shekh Ismail Hossain	Gutudia	Gutudia	Dumuria
5	Tanmoy Mollick	Ghona Mather danga	Rangpur	Dumuria
6	Dipali Biswas	Rangpur	Rangpur	Dumuria
7	Md. Abdus Sattar Shekh	Dumuria	Dumuria	Dumuria
8	GM Abu Baker Siddique	Chhabaria	Dhamalia	Dumuria
9	Nasima Parveen	Chhechuri	Dhamalia	Dumuria
10	SM Younus Ahmed	Andulia	Raghunathpur	Dumuria
11	Kazi Motiur Rahman	Telighati	Jogipoll	Dighalia
12	Anando Roy	Rangemari	1 no. Jalma	Batiaghata
13	Md. Enayetur Rahman	Hadirabad	7 no.Amirpur	Batiaghata
14	Taposh Kumar Biswas	Damudar	2 No. Damudar	Fultala
15	Tapan Kumar Mondal	Dargatala	1 no. Jalma	Batiaghata
16	Md. Salim Gazi	Shiromoni	1 No. Atra Gilatala	Fultala
17	Shathi Khatun	Sholghatia	3 No.Rudaghara	Dumuria
18	Md. Sirajul Islam	Kismat Sholakura	Baliadanga	Batiaghata
19	Md. Emran Hossen	Kultia	5 No.Vandercort	Batiaghata

Appendix 2 – Result

		Pre test (70)	Post Test ()	
Sl. No	Name of the FTs	Markrs Obtained		Remarks
1	Nuton Biswas	34.5	54.5	
2	Suvendra Biswas	31.5	64	First
3	Shamoli Kabiraj	16.5	54	
4	Shekh Ismail Hossain	10	39.5	
5	Tanmoy Mollick	23.5	49.5	
6	Dipali Biswas	20	58	Third
7	Md. Abdus Sattar Shekh	23	52.5	
8	GM Abu Baker Siddique	20	48	
9	Nasima Parveen	12.5	55	
10	SM Younus Ahmed	10	40	
11	Kazi Motiur Rahman	35.5	59.5	Second
12	Anando Roy	21	41.5	
13	Md. Enayetur Rahman	17.5	42.5	
14	Taposh Kumar Biswas	12	46	
15	Tapan Kumar Mondal	14	45	
16	Md. Salim Gazi	17.5	41	
17	Md. Sirajul Islam	14	50	
18	Md. Emran Hossen	24.5	48	

Appendix 3 Group work sample

Local Poultry production plan

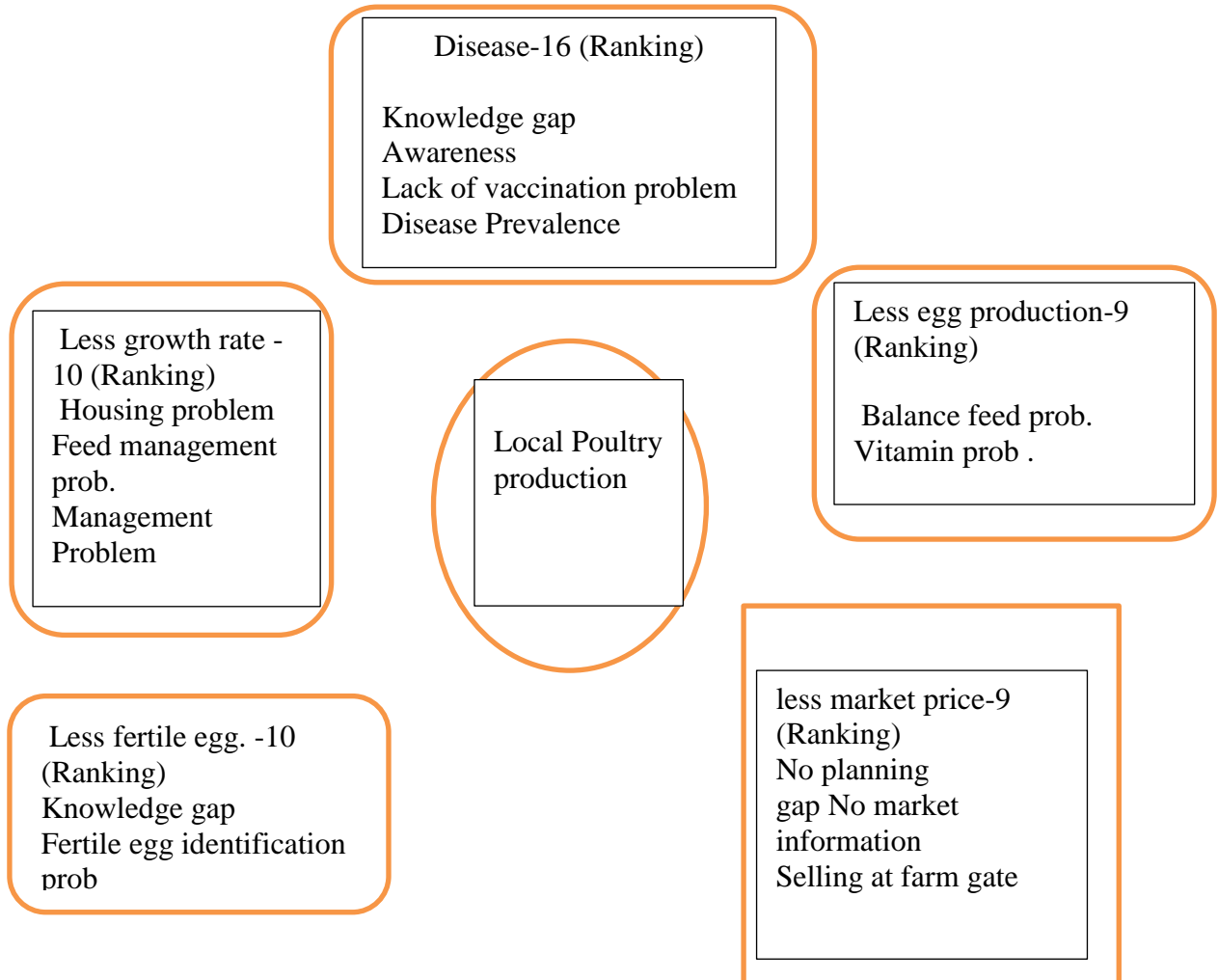
Sl no.	Activity	Summer	Rainy season	Autumn	Late Autumn	Winter	Spring
1	House preparation						
2	Feed						
3	Money						
4	Laying						
5	Hatching						
6	Chick rearing						
7	Marketing						

Vegetable production calendar

Name	Boishakh	Joishtho	Ashaḥ	Srabon	Bhadro	Ashshin	Kartik	Ôgrohaeon	Poush	Mag h	Falgun	Choitro
Gourd												
Spinach												
Bean												
Yardlong bean												
Radish												
Tomato												
Green chili												
Potato												

Appendix 4 Group work sample

Problem analysis for local poultry production



Appendix 5 Group work sample

Problem Analysis (HG)

Seed problem -25

Non-availability of quality seed
preservation problem
Germination problem
Non-availability of quality seed
in time

**Fertilizer and pesticide
problem-12**

Lack of knowledge on
proper dose
Lack of knowledge on
judicial use pesticide
Lack of knowledge on
organic fertilizer
production

**Homestead
garden**

Marketing problem -11

Transportation problem in
time
Lack of information on
market
Bad road condition

Irrigation problem -14

Water Logging
Drought

Appendix 6 –Day Schedule

Day-1- Sunday (23.07.17)

Date & Time	Content	Facilitator
9.00-9.15	Registration/Welcome	Sumona, Munir
9.15-10:00	Pre-test (Written)	Munir, Sumona
10:00-11:00	Inaugural session	DLO, Zonal Coordinator
11:00-11:15	Tea Break	
11:15-12:00	Group dynamics	Training Coordinator
12:00-1:00	Expectation, training principle, objectives	Training Coordinator
1:00-2:00	Lunch Break	
2.00-3.00	Introduction of Homestead Module	Sumona
3.00-5.00	Farming is a business	Susanto
6.00-7.00	Planning meeting	HTL, Facilitators

Day-2 Monday (24.07.17), Tapon,Salim Gazi

Date & Time	Content	Facilitator
8.30-9.15	Recap, Ice breaking	HTL
9.15-10:00	WMG formation process , function	Tahmina
10:00-11:00	Value chain and sustainable homestead production (Hg&Poultry)	Shusanto
11:00-11:15	Tea break	
11:15-12:00	What is Community meeting & Necessity	Munir
1:00-2:00	Lunch	
2:00-5:00	Community meeting field practice (Ruprampur)	Sumona, Munir, CDFs Rasel, Jahida
6.00-7.00	Planning meeting	HTL, Facilitators

Day-3 Tuesday (25.07.17), Nuton, Shamoli

Date & Time	Content	Facilitator
9:00-9:30	Recap, Ice breaking	HTL
9:30-11:15	Importance of Hg Production Plan, budgeting	Sumona
11:15-11:30	Tea Break	
11:30:12:30	Crop calendar, space planning, group work	Sumona
12:30-1:00	Seed bed preparation ,	Zahangir
1030-2:00	Lunch break	
2:00-3:30	Raised bed , Pit , quality seed	Zahangir
3:30-5:00	Organic fertilizer and Farm Yard manure preparation	Sumona
5.00-7.00	Tea time, Planning meeting	HTL, Facilitators

Day-4 Wednesday (26.07.17), Emran Enayet

Date & Time	Content	Facilitator
9.00-9.30	Recap, Ice breaking	HTL
9.30-11:00	Problem analysis of Local Poultry and HG production	Munir, Sumona
11:00-11:15	Tea Break	Sumona
11:15-12:30	Function of organic and inorganic fertilizer	Khaleque
12:30-1.45	Pest management for vegetable and fruit production	Asharaf
1:45-2:15	Lunch break	Zahangir
2:15-3:15	Collective action	Susanto
3:15-5:00	Intercultural Operation for vegetable production	AEO, Dumuria
6.00-8.00	Tea time, Planning meeting , Play time	HTL, Facilitators

Day-5 Thursday (27.07.17) , Tapos, Anando

Date & Time	Content	Facilitator
9.00-9.30	Recap, Ice breaking	HTL
9.30-11:00	Integrated pest management and trial set up on HG module	Ashraf
11:00-11:15	Tea break	
11:15-1:00	Integrated pest management and trial set up on HG module	Ashraf
1:00-2:00	Lunch	
2:00-5:00	Pit, raised bed, Farm Yard Manure –Raghunathpur –Practical	Khaleque, Sumona, CDF Rasel, Jahida
5:00-7:00	Planning meeting, Play time	Sumona, Munir, All participants

Day-6 Friday (28.07.17) , Motiur, Nasima

Date & Time	Content	Facilitator
9.00-9.30	Recap, Ice breaking	HTL
9.30-11:00	Fruit tree management	Sumona, Zahangir, Khaleq
11:00-11:15	Tea break	
11:15-1:00	Fruit tree management , practical	Khaleq , sumona
1:00-3:00	Lunch, prayer	
3:00-5:00	Role play collective action (Practical)	Sumona
6.00-8.00	Planning meeting, Play time	Sumona, Munir, All participants

Day-8 30. 07.17 (Sunday) , Shubendu, Abu Bokkor

Date & Time	Content	Facilitator
9.00-9.30	Recap, Ice breaking	HTL
9.30-11:00	Information on input Market , poultry input management	Anwar , Susanto
11:00-11:15	Tea break	
11:15-1:00	Poultry housing and Hazol preparation -Practical	ULO Dumuria , Munir
1:00-2:00	Lunch	
2.00-5.00	Importance of Hazol and broody hen management	Munir , Advance farmer
5.00-7.00	Tea break, Planning meeting	Sumona, Munir, All participants

Day-9 31.07.17 (Monday) HTL: Sattar, Dipali

Date & Time	Content	Facilitator
9.00-9.30	Recap, Ice breaking	HTL
9.30-11:00	AESA, Group work	Sumona
11:00-11:15	Tea break	
11:15-1:00	FMA , Group work	Munir
1:00-2:00	Lunch	
2:00-5:00	Practical FMA & AESA at Raghunathpur	Munir , Sumona, Khaleque , Rasel, Jahida
6.00-8.00	Planning meeting, Play time	Sumona, Munir, All participants

Day-10 (Tuesday) 01. 09.17 , Sirajul, Yunus

Date & Time	Content	Facilitator
9.00-9.30	Recap, Ice breaking	HTL
9.30-11:00	Poultry trial	Munir
11:00-11:15	Tea break	
11:15-1:00	Chick rearing	Munir
1:00-2:15	Lunch	
2:15-4:15	Poultry Disease management and Vaccination	ULO, Batiaghata, CPW
4.15-4.30	Tea break	
4.30-5:00	Ballot Box test for HG and Poultry module	Sumona, Munir, Khaleque
6.00-7.00	Planning meeting	Sumona, Munir, All participants
7:00-8:30	Networking, ICT for marketing and production information	Susanto

Day-11 02. 08.17 (Wednesday), Neuton, Motiur

Date & Time	Content	Facilitator
9.00-9.30	Recap, Ice breaking	HTL
9.30-11:00	Disaster Risk Reduce and Blue Gold perspective	Joynal
11:00-11:15	Tea break	
11:15-12:00	Primary health care of Poultry	ULO Dumuria
12:00-1:00	Horizontal learning	Munir
1:00-2:00	Lunch	
2:00-3:00	Women empowerment by Homestead management	Sumona
3:00-5:00	Bio-security , disease management calendar of poultry	Munir
6.00-8.00	Planning meeting, Play time	Sumona, Munir, All participants

Day-12 03. 08.17 (Thursday)

Date & Time	Content	Facilitator
9:00-10:00	Post test	Sumona, Munir
10:00-11:00	FFS register	Sumona, Khaleque
11:00-11:15	Tea break	
11:15-12:00	Benchmark Survey form	Sumona, Munir
12:00-1:00	Dummy FFD	Rasel, Monalisa
1:00-2:00	Lunch	
2:00-4:00	Closing ceremony, prize distribution	DLO, DD, Blue gold regional experts

Appendix 7 - Photos

