

## **REPORT ON 10 DAYS TRAINING ON**

### **“PIGGERY FARMING & VALUE ADDITION OF PORK FOR PIG ENTERPRISE”**

**Date: 6<sup>th</sup> June 2016-15<sup>th</sup> June 2016**

**Venue: Bolmoram Cluster Training Centre, Bolmoram East Garo Hills**

The II<sup>nd</sup> training program started from the 6<sup>th</sup> June-15<sup>th</sup> June for the EFC Partners of Rongjeng Bock. The inaugural function started with the lighting of the lamp as light represents the presences of God in our midst and also symbolises a new beginning especially for the trainees through these 10 days programme. The training was inaugurated in the presences of Mr. Bryan, Programme Associate MIE Tura, Sir.Nitul Das DPM MBDA East Garo Hills, Sir Remigius Pyngrope & the Team and the Trainees.

Mr,Bryan while interacting with the Trainees spoke about the purpose of the training as it will help getting more knowledge about pig farming and management. He said that livestock plays an important role in an individual's life and also for the Community as it a good source of income especially for the rural poor. He also spoke on the importance of having SHG groups in their area as it helps in the upliftment of the rural poor especially for women in terms of economic status and social status. He also said about maintain group accounts and record books, getting access to loans if they are interested to start an enterprise. Mr.Bryan also encouraged the trainees to be attentive as there are many things to learn from the training, not only about Pigs but also on various extracurricular activities.



**Mr.Bryant speaking during the Inaugural function**

The first session of the Training programme was on Introduction to Piggery Enterprise & Value Addition of Pork. Shri. Remigius Pyngrope the Resource person spoke on the importance of pig farming and its benefit in the upliftment of one's financial status by selling the pigs and piglets, fresh meat products & processed food items and manure from pigs waste. He also stressed on the importance to understand some points like Site Selection, Accessibility to markets, to feed stores, water source and electricity, Distances to other Farms and Permits.

After the 1<sup>st</sup> Session the trainees had an interaction with Madam.Ripamchi BDO of Songsak C & RD Block. During the interaction she said that she was very happy to have such Training Centre under her Block and thanked MIE & CoRP for organising training programme especially on Livestock for the people of Garo Hills. She also welcomed the Trainees to Songsak Block and extended her warm wishes for the Centre and to the Trainees. The BDO encouraged the Trainees to make use of their learning's from the 10 days training Programme and take some initiative for themselves and for the Community as well.



**Madam.Ripamchi BDO Songsak C&RD Block interacting with the trainees**

In the evening before the Screening of Film on Successful Entrepreneur, the Trainees were divided into 4 Groups: Bimung Nokma Dare Group, Rongbang Dare Group, Simsang Group and Bimung Do.Be Dare. The name of the groups has been derived from the famous waterfalls in Garo Hills. Each group has to maintain a group report of each day. The Film explains about the 4 ways to Profitable Production in Pig Farming. The 4 ways are:

- Always select good animals for breeding
- Always maintain good housing
- Always look after health needs
- Always follow the right feeding program.

## **Day 2: 7<sup>th</sup> June 2016**

The first Session was on the Topic: Equipments & Materials required for Pig Slaughtering by Dr.Bicky A Sangma. In this session the Speaker explained the step by step process involved in pig slaughtering in slaughter house to the Trainees, which includes:

1. **Stunning:** A process where the pigs are stunned for slaughtering by using Electrical Stuns/Tongs in their heads or through Carbon Dioxide Stunning process where the animal is immersed or exposed to the mixture of Carbon dioxide for an adequate period making the pig lose its consciousness, Captive Bolt pistol, and Free Bullets.
2. **Bleeding:** After Stunning a sharp weapon or a 6 inch knife is used for inserting midway from the tip of the breastbone along the midline. Here, the animal should be bled within 2 minutes of stunning.
3. **Scalding & Hair removal:** This process is done by pouring hot water in the skin surface or by immersing the animal into a scalding tank containing water at 60°C-65°C until the hair slips from the flank area.
4. **Singeing:** After hair removal the animal is suspended and a blow torch or a gas singer is used to singe the remaining hair in the body.
5. **Evisceration:** it is the process of removing the viscera by cutting loose the anus, through the pelvic canal and pulling out any attachments. While removing one has to be careful to avoid contamination from the carcass.
6. **Head removal:** before the meat is split or cut the head is to be removed.
7. **Splitting:** this is the process of cutting the meat by splitting it into different parts.
8. **Grading or Examining:** here all the internal organs and the carcass should be examined carefully by Veterinarian or a meat inspector for any conditions that might affect the fitness of the meat for consumption.
9. **Chilling the Meat:** the freshly slaughter carcass are kept for chilling at low temperature as it might get contaminated by Bacteria.

The Second session was on demonstration of hygienic pig slaughtering by Mr. Lingdoh Marak, Master Trainer supported by Dr.Henkyl R.Marak and an expert in Piggery Farming. The Resource persons used locally available resources like a sharp knife (Atte in Garo) for the slaughtering. They demonstrated how to measure the weight and the Length and Breadth of the pig and explained the step by step process involved in the slaughtering process. The Trainees were engaged in the slaughtering process by the Resource persons. They were very



participative and showed keen interest in the session.



**Dr.Henkyl R.Marak & Mr.Lingdoh during the practical session on Pig slaughtering**



**The Trainees during practical session on Pig slaughtering**

The third session on Value addition of Pork was taken by Vilazonuo Gloria. The objective of this session is to create awareness on income generating activities through kitchen preparation of various pork food items. In this session the Trainees were taught on Pork Meat Pickle making by Vilazonuo Gloria and Dohkhleh making by Mellora N Marak. The Trainees showed keen interest and were very participative when they were engaged in preparation for the Value Addition session like shredding of meat, cleaning and slicing of ginger & onions.



### **Session on Value Addition: Meat Pickle & Dokhle Making**

**Day 3: 8<sup>th</sup> June 2016**

The morning session was on Kitchen Preparation of Value Added Products by Mellora N. Marak and Vilazonuo Gloria. In this session the Trainees were given task to prepare the Pork Meat Pickle and Dokhle. Accordingly the trainees were asked to divide the work amongst the four groups. Some were engaged in shredding of meat, cleaning and slicing of ginger & onions and some in cooking.



### **Trainees during the Practical session on Value added Products**

The second session was on Integrated Piggery cum Fish Farming by Kanku Sangma Fishery Officer, Songsak Block. In this session the Resource spoke on the process involved in the integrated farming like Site Selection & Construction of pond by understanding the topography, the soil type and availability of water source. In Pond Management one has to check the water regularly as survival of the fishes depends on the water. He gave out some points like:

- If the water is too greenish in colour and the PH (Amonia content) level is too high the fish will not survive.



- Less Oxygen and high CO<sub>2</sub> level affects the fishes
- Dip your hand into the water around 5-6 cms down. If the water is too thick you will not be able to see your hand which means that it is time to change the water.
- Drain out 20-30% of water from the pond and add fresh water

He spoke on Types of Fish that can be reared and said with proper care and management the fish growth will be faster, high demand in the market and less disease and less dead rate. He also said that in Integrated Piggery cum Fish farming the pig waste can be used for feeding as the waste has contents which can be consumed by the fish. Thus one need not spent extra on the fish feeds.



#### **Session on Integrated Piggery cum Fish Farming by Mr.Kanku Sangma.**

The third session was on Feed & Feeding of Pigs/Fish Fodder cultivation by Dr.Bicky Sangma. The speaker in this session focused on the feeding of pigs at different stages of growth as nutrients are essential to increase the sustainability of pig production systems. The Resource Person talked about daily feed requirements of different classes of pigs like Weaner pigs, Grower pigs, Finisher pigs, Lactating sows, Pregnant pigs, Breeding boars and Mature Boars. The speaker also spoke on cultivation of sweet potato for feeding purpose. He also said that one can also cut edible plants and cook and mix with Rice Polish, Wheat Bran, Crushed maize, salt and mineral mix vitamins for pig feed. He also mentioned that pig waste can be used for fish feedings.

The fourth session was on Care & Management (Breeder & fatterer management) by Dr.Henkyl Marak. In this session the Resource person spoke on the Common breeds found in Meghalaya, selection of good breeds eg: body length, weight, vaccinated pigs and select piglets with 14 or 16 mammal treats; to check the time for mating signs, selecting the right boar for mating, proper care during pregnancy, seek experts advice during birth, proper care of piglets, measuring of pigs to know the weight gain, measurement to be taken from Hearth

girth and body length from point of shoulder to the base of tail as demonstrated during the Pig slaughtering session.

The Fifth session was on Diseases & Health Management by Mr.Lingdoh Marak. The resource person spoke on the various viral diseases like Classical Swine Fever (CSF), Foot & Mouth Diseases (FMD), Procine reproductive & respiratory syndrome (PRRS), Swine Flu/Influenza and Japanese Encephalitis. The common bacterial diseases affecting the pigs are Anthrax, Colibacillosis, Salmonellosis, Erysipelas, Brucellosis etc. The resource person explained the importance of vaccines as it is the only way to protect the animals from the disease and it reduces the possibility of infection. He mentioned that on the 4<sup>th</sup> day after the piglets are born Iron tablets are to be given and Swine Fever Vaccinations are mandatory. To avoid swelling of legs and body one can use Penicillin and Himax. Some medicines which can be used for Swine Fever are Antibiotics like Oxytetracycline, Deczametazon and Parasitamol. The resources person also mentioned that major viral diseases like Swine fever, Swine Flu, PRRS and FMD can be controlled by using vaccinations; Sites for vaccination in the pigs body and schedule for vaccination.

#### **Day 4: 9<sup>th</sup> June 2016**

On 9<sup>th</sup> June the Trainees were taken for farm visit to District Pig Farm Rongjeng Block where they met the In-Charge Dr.Archana Sangma and had sessions on Management of Pigs, Piglets, restraining for castration, Vaccination etc.



**Equipments & Medicines being displayed to the Trainees**

Dr. Archana started her session with vaccination on pigs which is always to be kept in low temperatures eg: Ice-Pack, Coolers, fridge etc. She said that before a pig is vaccinated medicine must be administered to reduce the **strength** of viruses. After two months every piglets must but vaccinate to prevent from swine fever but pregnant pigs have to avoid vaccine. The vaccination called Swine Erysipelas must given after 2 Months and Anthrax is given only once in a year. As per her explanation there are varieties of breeds and the most familiar one is Hampshire. The piggery sheds construction must at least 25-40 Sq.Ft. for female and male pigs require around 30 Sq.Ft.



### Dr.Archana Sangma during the session

She explained that feeding of the concentrated food should be according to the weight of the Pigs and spoke on the locally available feeds eg: Rice Polish, Wheat Bran etc. The resource person Dr. Archana highlighted that castration is important as it helps in the improvement of fats and growth, reduction of flesh smell and less tumour infection. For castration minimum 4 – 6 weeks must be cover by piglets which is more safety to do.

#### Steps of Castration:

1. Suspend the pig upside down so that it will not be able to run away.
2. Castration knife and B.P. blade should clean properly with spirit water.
3. Testicle area should clean properly with an antiseptic before castration.
4. The skin must be cut properly so that testicle can be removed easily.
5. While removing testicle the nerve has to taken out properly and cut it properly.
6. Tie the nerve and put antiseptic and stitch it properly.





### **Trainees visiting the District Pig Farm**

In Conclusion the trainees had a very interactive session and got more insight knowledge on Piggery Farming and management. The various equipments, vaccines, medicines and pig feeds used in the farm were also displayed and explained to the Trainees by the In-Charge and the Staff members of the pig farm.

After the Farm visit there was a practical demonstration on the castration process by Mr.Lingdoh Marak. In this session the Resource person explained in details the step by step process in castration of piglets. He said one can also used traditional method of castration but is not safe as it may lead to infection leading to its death. He demonstrated the material used in a castration process like needles, scissors, surgical knife/ B.P blade, Spirit, Iodine, Tetracycline powder. All the equipments are to be sterilized in Potassium. After sterilization inject 1ml of Licnokit (a form of pain killer) in the Testicle area for the piglet to avoid any form of pain. Then use the B.P blade to cut between the testicles, pull it out the nerves and tie a knot below with **Kitcut** to avoid bleeding. Then remove the testicles one by one. After castration apply Himax & Iodine Powder or liquid to prevent from any form of infection and stitch the area properly. **(Please check the medical terms).**



### **Mr.Lingdoh session on Castration of Pig**

#### **Day 5: 10<sup>th</sup> June 2016**

The morning session was on Preparation of different type of pig feed ration by Dr.Henkyl R Marak. The resource person said that Pig farming is an important activity of many households. To have sustainability in the pig production system proper feeding is very important as it will prevent them from diseases and faster growth rate. But this must also be done at an affordable cost. He said that the expenses on feeding of pigs is quite high but one can reduce this by making use of the waste from the kitchen like vegetables, fruits peel, leftover foods like rice and liquid waste like water used for washing vegetables. This can be mixed with the husk and feed the pigs will reduce at least 30% of expenses spent on buying feeding. He gave some on insights on pig feed ration that are used like Rice Polish 30%, Wheat Brand 24%, Crushed maize 35%, Skimmed Milk Powder 10%, Sesame Oil Cake 12%, Fish meal 9.5%, common salt 0.5% and mineral mixture 1%.

The second session was on Cold Chain Management, Procurement of Vaccines by Dr.Bicky A Sangma. The resource person explained the meaning of Cold Chain Management: a processed used to maintain optimal conditions during the transport, storage and handling of vaccines. He explained on the types of refrigerators used for keeping the vaccines, Equipments used for transporting the vaccines to Offsite clinics like coolers, Ice Packs and Insulating machines. He also explained the importance on why these vaccines are kept in low temperatures and Do's & Don'ts when vaccination is stored in a fridge.

The Third session was on Entrepreneurial Skill, Concept of Enterprise, Entrepreneur and Market Analysis by Remigius Pyngrope. During the session the Resource person explained on the Concept of Enterprise, who is an Entrepreneur, Skills of an entrepreneur and Market Analysis. He said that an entrepreneur is one who is innovative, strong desire to achieve its goal, willing to take risk and grasp every opportunity. They need to have ideas and knowledge. He explained about Product, Price, Promotion and place known as the 4Ps of Market.

The Last session of the day was on Developing Business Plan by Mr. Remigius Pyngrope with the help of Ms.Mellora Marak. In this session the Resources person explained the importance of having a Business plan as it will help them in getting profit and also help them in understanding which business to engage in. She said that when one makes a business plan we have to know the market: Demand & Location, Market Strategy, Fund Mobilisation and Capital. If one has less capital to invest they can always get access to loans from the banks. Before venturing into the business it's always good to have interactive sessions with friends and elders and visit banks and FIs to get a better idea; have proper knowledge on financial management, cash flow, project cost and other expenses and maintain proper records. The trainees were also divided into groups and were assigned to develop a business plan for the group.



**Madam Mellora interacting with the trainees**

### **Day 6: 11<sup>th</sup> June 2016**

On 11<sup>th</sup> June 2016 Bolmoram Cluster Training Centre was the host for the World Environment Week celebration programme. Being the host, The Trainees were given important role in welcoming the guests and to be a part of the occasion. They performed song on integration & peace and some action songs





### **The Chief Guest & Deputy Commissioner planting the saplings**

The Programme started with the tree plantation by the Chief Guest, DC and others. Mr.Nihim D.Shira MLA Songsak Constituency graced the occasion along with the Mr. Cyril Diengdoh IAS Deputy Commissioner EGH, P.M. Sangma ADC EGH, Daina Sangma, Nodal Officer, Dr.Daniel Ingty and other dignitaries. Representatives from various Schools & Colleges, Nokmas and the villagers were also present for the Programme. On this occasion the Chief Guest highlighted on the importance on Clean & Green Environment as one's livelihood depends on it and also encouraged on planting of more saplings.

The Deputy Commissioner in his addressed mentioned the importance of preserving the Nature for the present and the future generations as our live is dependent on it. He also said that our ancestors were very wise to have a concept of Sacred Forests which still exist and is an important part of culture and tradition.



### **Presentation by the 2<sup>nd</sup> Batch Trainees**





**The Dignitaries & the audience during the programme**

### **Day 7:12<sup>th</sup> June 2016**

On the 7<sup>th</sup> of June the Trainees were taken for a day out to Tasek Lake. The Trainees were very participative each group taking up one activity like cooking, cleaning and organising other activities.



**Group Song: The Trainees, Resources Person & Centre's Managing Staff**



**View of Tasek Lake**



**Family Prayer before Meal**

### **Day 8: 13<sup>th</sup> June 2016**

The morning session was on Formation of SHG in Livestock Sector shared by Ms. Mellora Marak. This session highlighted the benefits of having SHGs in livestock sector. The Resource Person highlighted that with the introduction of SHGs it has hastened in the economic development of the country. The session started with the concept of a group & the differences between a group & an SHG; brief history, Aims & Objectives, Needs of SHGs, Structure: size, memberships; Functions, Books to be maintained: Minutes book, Attendance Register, Savings & Loan Register, Cash Book, Ledger Book, Weekly/Fortnightly/Monthly Register, Members Pass Books and Bank Pass Book.

The next session was on Establishment of Clean Pork shop as per FSSAI norms by Madam.Thangme Marak. The Resource Person gave some insight knowledge on the Sanitary & Hygienic requirements of Retail meat shop as per FSSAI norms like Location of the Meat Shop: Access to Water source; Size of the Shop, Premises, Ventilation, Equipments & Accessories: Fly Proof, Refrigerator, weighing scales, Knives, Tools & Hooks, geysers, wash basins, chopping block and waste bin; proper Transportation facility and Pest control. The resource person said that many of the meat shops are not able to follow these norms given out by FSSAI.





**Madam.Thangme Marak during the session on  
Establishment of Clean Pork shop as per FSSAI norms**

The last day of the session was on Cash Management by Mr.Andrew Marak.He elaborated onthe importance of Record keeping so that one canknow the profit and lost on any IGA by individuals and Entrepreneur. The session included Cash flow, Investment and operational cost and Bank Linkages.

### **Day 9: 14<sup>th</sup> June 2016**

The first session was on Gender Perspective on Livestock by Vilazonuo Gloria. In this session the Resource person explained the meaning of Gender; the Key Issues associated with Gender and Livestock like:

- Gender Roles in Livestock Management
- Respective access to assets & resources
- Livestock function for women & men
- Division of labour & specific needs
- Economic/Cultural roles (Household & Community).
- Obstacles and Constraints

She also said that Livestock is a key asset to any rural livelihood and offers an advantage over other agricultural sectors. It is also an entry point to promote gender balance in rural areas as in most societies all household members have access to livestock and are involved in production. Livestock activities are daily occupation for both but women holding more responsibility. After the session the Trainees had a short debate session on the Topic: Are Women totally dependent on Men in Livestock Management. The debate was between the Men and Women group. The trainees were very participative and enjoyed the debate session.



**Session on Gender Perspective on Livestock by Vilazonuo Gloria**

The next session was on Cost of Different construction of pig sty & Bokashi system by Dr.Bicky A.Sangma. The Resource Person explained the meaning of Bokashi a Japanese word meaning fermented organic matter which uses IMO to promote growth and management of health pigs. The IMO system prevents offensive smell of manure, prevents flies, reduces fatty layer under the skin of the Pig, Produce robust pigs and improve the digestive system of the pig. The Resource Person highlighted the space and materials required for Pig sty construction in a Bokashi system like Saw dust, Rice Bran, Rice Husk, Dried Biomass, Good Soil, Rice husk charcoal or other charcoal, sprinkling of Black salt, bamboo vinegar, IMO and water. He also explained the process of construction and management of the pigs.

The third session on Demonstration on Construction of Pig sty was taken by Dr.Henkyl R.Marak. In this session the resource person explained on site preparation like one must be accessible to essential services such as feed suppliers or stores, water and electricity sources. The surroundings should be suitable for construction of drainage and manure disposal, with ample distance from the neighbours and other farms. The site should also follow the local policies like zoning and environmental considerations. He also spoke on the requirements for the construction of Pig sty:

- Pig sty wall should be 4-5 ft. from the ground and half of the wall should be fence with bamboo.
- Pig sty wall and the floor are better if it is cemented.
- The height of the pig sty should be approximately 8-10 ft. from the floor.
- The pig sty should be constructed such a way that the air is pass through.
- The pig sty should be sloping floor
- Construct the pig sty according to the number of pigs.

- The floor space should be for female = 25-40 sq.ft. (length 5ft and breadth 5ft-8ft.)  
for Male = 30 – 80 sq ft. ( length 5 ft. Breadth 6ft – 8ft.)
- Breeding room = 80sqft.

Categories	Floor Space	Open Space
Boar	2.5-2.75sqm.	3.0-3.5sqm.
Farrowing	2.75-3sqm.	3.0-3.5sqm.
Weaners	1.0-1.8 sqm.	3.0-3.5sqm.
Growers	1.25-1.5 sqm	3.0-3.5sqm.
Dry Sow & Gilt	1.5-1.75sqm.	1.5-2.9 sqm.

### Day 10: 15<sup>th</sup> June 2016

In the morning the Trainees had a session on Disposal of Piggery Waste and Nitrate management by Dr.Sengkan Marak. The Resources Person spoke on the importance of disposal of piggery waste as it contains poisonous gas like Nitrate, Nitrite, Methane & Amonia which reduces the oxygen carrying capacity. He also spoke on Ihaka Waste Management system which uses all the waste for manure especially for banana plantation. He explained that Piggery waste means the parts which are not fit for consumption like ears , snout , lips , teeth, fetus , gall bladder , trimming , fleshing , hoofs , horn , hairs , bristles. Proper management is also to be taken to improve environmental sanitation.

After the session a short Valedictory function was organised for the Trainees and Certificates were awarded to them. The Chief Guest for the function was Dr.Sengkan Marak and the other guests were the Nokma of Bolmoram Nappakol, Mr.Jinku PA-EFC Rongjeng Block, Mr.Lingdoh Marak Resource Person and Mr.Camport Secretary Bolmoram Nappakol CLF.



**Dr.Sengkan addressing the Trainees during the Valedictory function.**



The Chief Guest during the function said that Livestock rearing is one of the oldest farming activity in the world and even in the Bible one can see that livestock was an important asset to the people. Therefore, one must not stop practicing it, instead should be involved more and more after receiving such trainings. He said that one must not waste the learnings received through this training but make use of it. He also thanked the Trainees for presenting beautiful songs and thanked the organisers of the Training Program for making him a part of such activities.



**Group Photo: The Guests & Resources Persons along with the Trainees & their Certificates**

After the function Mr.Jinku R Marak, PA-EFC Rongjeng Block conducted the evaluation/feedback session with the trainees. With regards to learning's from the Training programme the Trainees mentioned that they got more knowledge on management of pigs: Health & Hygiene and Feeding and how piggery farming can be a good source of income. One of the Trainees mentioned that though he has attended many Livelihood Promotion Trainings this particular training was the best and would like to make use of his learnings. The trainees also mentioned that they enjoyed the session on Developing Business Plan, Integrated Piggery cum Fish Farming and Pork meat Pickle making session as it was new to them. The suggestions given by the Trainees were to provide more facilities like Wall clock, sound system, Proper LCD and good toilets. The Trainees mentioned that they were glad to have such training centre in Garo Hills region and extended their warm wishes to the Centre in the future for better service to the people at the grassroots level.

In conclusion the 2<sup>nd</sup> Batch Training was successful though there were many inconveniences due to the World Environment Week Programme on 11<sup>th</sup> June 2106. The Sessions on this day had to be interrupted. But with the positive support from all the Well Wishers and the Trainees the 10 Days Programme ended successfully.



**See you again..... Mitela!!!!**