

**REPORT ON 10 DAYS TRAINING ON  
“PIGGERY FARMING & VALUE ADDITION OF PORK FOR PIG  
ENTREPRENEURS”**

**Date: 11<sup>th</sup> July 2016-20<sup>th</sup> July 2016**

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

The III<sup>rd</sup> Training Programme started from 11<sup>th</sup> July 2016 to 20<sup>th</sup> July 2016 for the EFC Partners of Songsak Block. The total no. of trainees attending the Training Programme is 23. The inaugural function started with the blessing of the house by Rev.Fr. Dominic Sangma and Bro. James Sangma. After the function an interactive session on the topic **Pig farming as an enterprise** was conducted by Bro. James Sangma. During the session the Speaker explained the meaning of Self Employment and gave various examples on how to be self employed especially through piggery farming as they are getting trained on it. He mentioned that Pig farming will provide employment opportunities to rural farmers and act as a supplementary income to improve their living standards. The Speaker also gave examples of various markets like Rongjeng, Songsak, Samanda and cited that the traders are mostly outsiders so there are lots of opportunities to start one's own business.



**Rev.Fr. Dominic Sangmasharing the word of God.**



**Bro. James Sangma interacting with the Trainees.**

At the end of the session the Trainees were divided into 4 Groups: Capt. Williamson A. Sangma Group, Purno A. Sangma Group, Sonaram R. Sangma Group and Thogan N. Sangma Garo Hills. The groups are named after the prominent leaders of Garo Hills. Each group has to maintain a group report of each day.

In the evening Film on Successful Entrepreneurs was screened. 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 1<sup>st</sup> Session was on the Topic: **Introduction to Piggery Enterprise & Value Addition of Pork** by Dr. Henkyl Marak. During the session the speaker said that Pig farming is an important livelihood activity for the people in North-East but not much focus has been given to piggery production as a business opportunity. He also said that there is high demand for pork but the production is still low. Therefore, venturing into this activity will provide Self Employment opportunities, Generating incomes through Meat production both fresh and processed meat and manure. The resource person also spoke on Value Addition as important for efficient utilization of the livestock resources as there is an increased demand with higher returns. Thus, encouraging the Trainees to not only focus on rearing and selling of the pig but also to focus on the preparation of value added pork products like smoked meat, meat pickles and preparation of different varieties pork dishes.

The second session was on **Equipments & Materials required for Pig Slaughtering**. In this session the Speaker explained the step by step process 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. **Splitting and Head removal:** this is the process of cutting the meat by splitting it into different parts.
7. **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.
8. **Chilling the Meat:** the freshly slaughter carcass are kept for chilling at low temperature as it might get contaminated by Bacteria.



**Dr.HenkylR.Marak during the session on Equipments & Material required for pig slaughtering.**

The second session was on **demonstration of hygienic pig slaughtering** by Dr.HenkylR.Marak&Mr.LingdohMarak, Master Trainer and expert in Piggery Farming. The Resource persons used locally available resources like a sharp knife (Atte in Garo) for the



slaughtering. The Resource person demonstrated how to measure the weight and the Length and Breadth to know the weight and size 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. The trainees were very participative and showed keen interest in the session.



**Practical Session on Hygienic Pig Slaughtering by Dr.HenkylR.Marak and Mr.LingdohMarak**

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 Dokhle making by Vilazonuo Gloria. The Trainees showed keen interest and were very participative when they were assigned to prepare for the Value Addition session.



**Practical Session on Value Addition of Pork: Dokhle Making**

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

The morning session was on **Kitchen Preparation of Value Added Products** by Vilazonuo Gloria. In this session the Trainees were taught how to prepare Pork Meat Pickle. 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.



#### **Practical Session on Value Addition of Pork: Pork Meat Pickle Making.**

##### **Queries raised by the Trainees**

1. Can we make meat pickle other than Pork?

Reply: Yes, we can make with Chicken, Beef etc.

2. How long can we keep the Pickle?

Reply: Best use is within two months.

The second session was on **Feed & Feeding of Pigs/Fish Fodder cultivation** by Dr. Henkyl R. Marak. The speaker in this session spoke on 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 said that one can cut edible plants or use kitchen waste like banana peels, potatoes etc and cook and mix with Rice Polish, Wheat Bran, Crushed maize, salt and mineral mix vitamins for pig feed. He encouraged the trainees for sweet potato cultivation as it provides food for the pigs throughout the year. He also mentioned that pig waste can be used for fish feedings.





**Dr. Henkyl R. Marak interacting with the Trainees during the session.**

The third 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), Porcine 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 resource 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 pig's body and schedule for vaccination.



**Mr. Lingdoh's session on Diseases & Health Management of Pigs**

#### **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.ArchanaSangma and had sessions on **Cold Chain Management of Vaccines, Procurement of Vaccines and Demonstration on how to reconstitute different pig vaccines & route of administration**. She explained the concept of Cold Chain Management: a process used to maintain optimal conditions during the transport, storage and handling of vaccines. She explained the importance on why these vaccines are kept in low temperatures and the Do's & Don'ts when vaccination is stored in a fridge and the Equipments used for transporting the vaccines to Offsite clinics like coolers, Ice Packs. As vaccines for other diseases were not available during the visit to the farm demonstration was done only for FMD by the Doctor and the Team. She also explained on the Sites for vaccination in the pig's body and schedule for vaccination.

The resource person also mentioned that before medicine must be administered to the pig before vaccination as it reduces the strength of virus. After two months every piglets must but vaccinate to prevent from swine fever except pregnant pigs. A vaccination called Swine Erysipelas must be given after 2 Months and Anthrax is once in a year. She explained that there are varieties of breeds but the most familiar one being Hampshire. The size of the pig sheds must be at least 25-40 Sq.Ft. for female and male pigs require around 30 Sq.Ft.

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 Staffmembers of the pig farm.



**Dr.ArchanaSangma during the session**





**Demonstration on how to reconstitute pig Vaccines & Route of Administration**



**The trainees visiting the Pig Sheds along with the Doctor**

### **Queries raised by the Trainees**

1. What is the cost of one piglet in the farm?

Reply: One piglet cost 2500/-

2. How do we get piglets from this farm?

Reply: One needs to book the piglets in advance by visiting the farm or by contacting the farm head.

3. When do we trim the teeth of the piglet?

Reply: As soon as they are born because the sharp teeth may injure the mother.



4. Should we pull out the sharp teeth fully?

Reply: No, we can just remove the sharp points of the teeth. If any more is removed there is a risk of damaging the mouth. When trimming the teeth the tongue of the piglets should be rolled back to avoid injuring it.

After the Farm visit there was a practical demonstration on **Management of Pigs Piglet restraining for castration and vaccination** 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 use traditional method of castration but is not safe as it may lead to infection leading to its death. He demonstrated the materials used in a castration process like needles, surgical scissors, surgical knife/ B.P blade, Spirit, Iodine, Tetracycline powder. All the equipments are to be sterilized in Potassium. After sterilization clean the operation area with potassium and inject 1ml of Licnokent (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 out the attached cord and tie a knot below with Sterilised surgical Needle (CatGut) to avoid bleeding. Then remove the testicles one by one. After castration apply Himax & Iodine Powder or liquid to prevent any form of infection and stitch the area properly.



**Mr. Lingdoh Marak during the Practical session on Castration of Piglets**

#### **Queries raised by the Trainees**

1. When should we castrate the piglet?

Reply: It should be done in the first two weeks of the piglets life.

2. Is there any particular time for castration of piglets?

Reply: No, we can castrate at any time of the day provided we have all the necessary materials & medicines and have proper knowledge on it.

3. What medicine do we apply on the operate area?

Reply: Himax and Iodine can be applied to avoid any infection.

### **Day 5: 15<sup>th</sup> July 2016**

The morning session was on **Gender Prospective on Livestock** by Vilazonuo Gloria. In this session the Resource person explained the meaning of Gender; difference between Gender & Sex, Objective & Outcome of the session, Understanding roles of Men & Women, Identifying Gender Roles, Main benefits for women in livestock activities and Obstacles & Challenges. She also said that Livestock is a key asset to any rural livelihood and women are the major contributors to the economy but not much attention has been given to the role of women in livestock keeping & the opportunities it offers to women. Therefore, women have limited access to productive resources like Land, Water & Credit, Market information & Market prices, limited decision making power due to unequal power relations within the household and the community. Livestock sector 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. 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.

Miss. Mellora N. Marak and Vilazonuo Gloria had a combined session on **Entrepreneurial Skill, concept of Entrepreneurship & Market Analysis**. In this session they explained on the Concept of Entrepreneur, who is an Entrepreneur, Skills required to be an entrepreneur and Market Analysis. An entrepreneur is one who is innovative, strong desire to achieve its goal, willing to take risk and grasp every opportunity to start one's own business. They need to have ideas and knowledge and learn about Product, Price, Promotion and place known as the 4Ps of Market.

The Third session was on **Preparation of Business Developing Plan** by Miss.MelloraN.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.

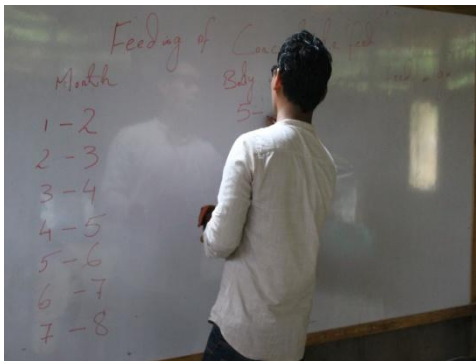




**Miss Mellora& Gloria interacting with the trainees during the Sessions.**

**Day 6: 16<sup>th</sup> July 2016**

The morning session was on **Preparation of different type of pig feed ration** by Dr.Henkyl



R Marak. As Pig farming is an important activity of many households in the rural areas, for sustainable pig production system proper feeding is very important as it will prevent them from any diseases and faster growth rate. 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 which will reduce at least 30% of expenses spent on buying feeding. The resource person explained about the different feed formulation: Creep Ration, Starter, Grower and Finisher. He gave some 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 resource person also mentioned that feedings should be according to the months and body weight of the pigs eg:

Months	Body Weight	Feed (in Grams)
1-2 months	5-12	200-500Gm

The second session was on **Different type of pigsty according to climatic zone** by Dr.HenkylR.Marak. The resource person spoke on the importance of proper housing facility with sufficient sunlight and the direction of the pig sty to be in east-west direction as good housing plays an important role in the growth and well being of the livestock. The housing should provide enough space for the animals to move around and with fresh air through cross ventilation and high ceiling. The pigs also must have access to sufficient clean & fresh water

supply, electricity and with proper feeding time. He also mentioned that a pigsty can be constructed cheaply by using locally available materials eg: Bamboo, Wood etc. provided it is constructed according to climatic conditions and according to the pig production system. The costs of constructing the pigsty should fit the pig production systems. An efficient pig production is required to cover high construction costs.

**Practical: Site selection, orientation of pig sty, mud/hallow block making;**

**Practical: site preparation**

**Day 7: 17<sup>th</sup> July 2016**

The day started with Sunday Service at the Centre before leaving to Tasek Lake for a day out/ picnic. Though the weather was not pleasant due to rain it did not prevent the Trainees from having a good time. The Trainees were very participative each group taking up different activities like cooking, cleaning and organising some group games and songs.



**Busy preparing meal**





**Centre Team along with the Trainees singing Folk Songs**

### **Day 8: 18<sup>th</sup> July 2016**

The morning session on **Cash Management** was conducted by Mr. B.K.Marak (Bank Manager, MCAB Ltd Rongjeng) and Mr. John Martias Sangma (Bank Assistant cum Cashier, MCAB Ltd Rongjeng). They explained the meaning of Cash Management: it is the proper use or management of an individual or organization cash resources by making the best use of it. The purpose of Cash Management is to eliminate any idle Cash Balance; to deposit collections timely and timely disbursement of payments. They said that it is very important to maintaining Cash Book and Ledgers Book as it will help them in maintaining a record of the expenses and inflow of funds.

The resource persons also spoke on financial assistances available from the Banks. For obtaining bank loan the farmers/entrepreneurs should apply to the nearest branch of a Commercial, Co-operative or Regional Rural Bank in the prescribed application form, which is available in the branches of financing bank. Necessary help or guidance can be obtained from the technical officer attached to or the manager of the bank in preparing the project report, which is a prerequisite for sanction of the loan.



**Session on Cash Management by B.K.Marak (Bank Manager) & John Martias (Cashier)**



**The Trainees during the session.**

### **Queries Raised by the Trainees**

1. Can we apply loans from any Banks?

Reply: Yes, you can but you should be free from any other loans. Also the customer should be under the Bank Service area and Block.

2. How do we get Loan?

Reply: It can be processed by designing a good project and should have required documents eg: Land Documents, Diploma Certificate, Identity Proof, Bank Account, identical Proof etc.

3. What is the amount Bank can grant?

Reply: It depends on the person's capacity to refund the money taken and also based on regular deposit in individuals account.

The third session was on **Establishment of Clean Pork Shop as per FSSAI** by Madam. TangmeSangma. 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 & Electricity; 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. She also said that having a clean and hygienic meat shop will not only bring more customers besides setting a good example to others.

The resource person also gave awareness on Food Safety Act 2006. She mentioned that Non-Registration of shops under Food Safety Licence will be fined Rs. 5 Lakhs and 6 months jail non-bail able. Unclean shops will be fined with: 1<sup>st</sup> Rs.1lakhs, 2<sup>nd</sup> 2lakhs, 3<sup>rd</sup> 4lakhs then cancelled licence as per FSSAI-2006. She also mentioned on the requirements for the registration of Retail Meat Shops.





**Madam Tangme during the session**

The last session for the day was on **Formation of SHG for Livestock Sector** by Miss. MelloraMarak. The morning session was on Formation of SHG in Livestock Sector. 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.



**Miss MelloraMarak interacting with the Trainees during the session**

## Day 9: 19<sup>th</sup> July 2016

The morning session was on **How Pigsty is clean in Bokashi system** by Dr.Henkyl R. Marak. 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 second session was on **Construction of Pig sty**. 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:

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

In absences of Dr.Bicky A. Sangma, the session on **Risk Management** was taken by Dr.Henkyl Marak. The resource person explained that risk management in Pig farming described the systematic appraisals of all of the areas in and around the pig farm and the procedures that take place in them. Therefore, one needs to list out the areas for assessment eg: Barns, Feed stores, Pig Sheds, Birth Pens, Hand feeding, Hazardous chemicals - handling / storage / use, Maintenance / repairs, Pest control - rodents / vermin / flies / mites, Sick pigs - handling / treatment / carcase disposal and Veterinary medicines - handling / storage/ use. All

hazards on the farm need to be assessed. It is also very important to look into Human factors as one has to evaluate the risks to one's health and contribution towards reducing or increasing risks to one self and others.



**The Trainees listening to Dr.Henkyl during the Session**

#### **Day 10: 20<sup>th</sup> July 2016**

On the last day of the training the morning session on Disposal of piggery waste, Nitrate Management by Dr. SengkanR.Marakdue some other personal engagement. As there was no session Review of the Learning by Mr.JinkuR.Marak (PA EFC Songsak Block) & his Team was conducted.

The training program ended with a short valedictory function in the presences of Dr.Paul (OSD, MIE) and Dr. B.Lyngdoh (Livestock Consultant, MIE). In their message Dr.Paul and Dr.B.Lyngdoh appreciated the Trainees for taking part in the training programme and encouraged them to start up their own pig farm. Dr. Lyngdoh also said that the Training Centre should be for the people, by the people and of the people. He mentioned that the Training Centre will become a Pig Development Centre for the people of Meghalaya.

Two of the Trainees shared their experiences about the 10 days Training Programme. They shared that they have gained more knowledge about Pig Farming and appreciated the arrangements made. They also said that they enjoyed their stay at the Centre.

Thereafter, Certificates for the Trainees were distributed. The function ended with some entertainment like action songs from the Trainees.