

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

Date: 04th – 13th August 2016

Venue: Cluster Training Centre, Bolmoram East Garo Hills

The 4th Training Programme started from 04th – 13th August 2016 for the EFC Partners of Songsak and Samanda Block. The total no. of trainees attending the Training Programme was 29. The training programme started with a prayer song and lighting of the lamp by Dr. Henkyl R. Marak, Mr. Lingdoh Marak and the Trainees.



Dr.Henkyl & Mr. Lingdoh Lighting the Lamp

During the function Mr. Lingdoh encouraged the Trainees to start up its own pig farm as it will be a good source of income and not only depend on the Government for financial help. He also said that to be engaged in such activity one requires good knowledge, which they will be receiving during the 10 days training course.

Dr. Henkyl R. Marak spoke on **Introduction to Piggery as an enterprise and Value Addition** of Pork. The Speaker started the session by asking the Trainees what is the purpose of attending the training programme and if they are rearing pigs. There was mixed response from the Trainees. He explained the concept of enterprise and said that pig farming will be a boost to one's financial status as income will be generated not only from rearing and selling of pigs/ piglets but also through different food products (fresh & Processed) and manure from the waste.



Dr.Henkyl during the session on Piggery as an Enterprise

After the session the Trainees were divided into 4 Groups: Kram Group, Bangsi Group, Dama Group and Adil Group. The groups are named after the various musical instruments of the Garo's. The Trainees were also assigned to maintain 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: 5th August 2016

The 1st Session was on the Topic **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 stun 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. Henkyl R. Marak during the session on Equipments & Materials required for Pig Slaughtering

Queries raised by the Partners

Q. Will the stunning process kill the pig?

Reply: No, the stunning process is just to make the pig unconscious before it is slaughtered. Besides, the Supreme Court of India has also passed a law that when an animal is slaughtered it has to be done with minimal pain as each living being has life.

Q. What should be the voltage when one uses an electric stunner?

Reply: 1.2 ampere (Maximum: 250 V) but at home Domestic current can also be used but should be very careful as one may get electric shock.

The second session was on **Demonstration of hygienic pig slaughtering** by Dr. Henkyl R. Marak & Mr. Lingdoh Marak, Master Trainer and expert in Piggery Farming. For this Session the Resource persons used locally available resources. They demonstrated how to measure the weight and the Length and Breadth to know the weight and size of the Pig before slaughtering and explained the step by step process involved in the slaughtering process. The Trainees were engaged in the slaughtering process by the Resource persons and were very participative and showed keen interest in the session.



Demonstration 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 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.



Trainees during the Value Addition Session

Day 3: 6th August 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.



Session on Value Addition of Pork: Meat Pickle Making

Queries raised by the Trainees

Q. Can we make meat pickle other than Pork?

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

Q. How long can we keep the Pickle?

Reply: Best use is within two months.

Q. Can we dry the shredded meat in the sun?

Reply: Yes, we can dry it outside for sometime as the meat will be less soggy and will be good to cook.

The Second session was on **Integrated Piggery cum Fishery Farming by Bamchi M. Marak , Fishery Officer.** She mentioned that Pig farming and Pork production in India is mostly in the hands of the traditional pig farmers belonging to low income group and there is a high demand for pork meat. She said that Integrated pig farming with fish is demanding venture to enhance the income of the family especially of the lower strata households. She mentioned why pig is reared with fish farming; Types/ Breeds that can be reared in the Integrated Farming System; Management of Pigs: Space requirement, Feeding requirement, and Health management. The Resource person explained the concept of Integrated Fish Farming/ Culture; Selection of Fish; Stocking of Fish; potentiality of manure; production performance of fish and Constraints in Integrated Farming System. She also mentioned some tips for optimum production in the Integrated Farming System and said that expenses on fish feeds will be very less as the fish can consume most of the waste from the pigs.



Ms. Bamchi M. Marak during the session

The third 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 cultivation of various vegetables, tapioca, sweet potato, colocasia etc which can provide food for the pigs throughout the year. He also mentioned that pig waste can be used for fish feedings.

The fourth session was on **Diseases & Health Management** by Mr. Lingdoh Marak. The resource person said that Health care is the most important issues in pig farming. He 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 4th day after the piglets are born Iron tablets are to be given and Swine Fever Vaccinations are mandatory once the piglets are 2 months old. 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. He explained the Sites for vaccination in the pig's body and schedule for vaccination.



Mr.Lingdoh Marak during the session

The fifth session was on **Gender Prospective on Livestock** by Vilazonuo Gloria. In this session the Resource person explained that the Objective of this session is to identify the daily task of Men and Women and understand the importance of the roles of men and women. She mentioned that both Gender and Sex represents Male and Female but Gender is social representation of the roles and responsibilities of Men and Women and Sex is the biological representation of Men and Women. The Resource person also spoke on Gender Roles, Main benefits for women in livestock activities and Obstacles & Challenges. She 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. Therefore, they 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. She also said that 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.



Session on Gender Prospective

Day 4: 7th August 2016

On the 4th day of the Training Programme the Trainees were taken for outing/picnic to Tasek Lake. For the outing programme the Trainees were assigned to organise it. In the morning there was a Sunday service at the Centre after which they moved out for the Picnic. The Trainees divided the work according to the Groups and organise some activities.



Busy Preparing Meal..!!



Family gathering,,,,,



Group Photo of the Trainees

Day 5: 8th August 2016

The Trainees were taken for farm visit to District Pig Farm Rongjeng Block. As the Farm In-Charge Dr.Archana Sangma was not available, session on **Cold Chain Management of Vaccines, Procurement of Vaccines and Demonstration on how to reconstitute different pig vaccines & route of administration** taken by the Pharmacist Mr. Proster Sangma. He explained the importance on 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. The resource person also mentioned that medicine must be administered to the pig before vaccination as it reduces the strength of virus. A vaccination called Swine Erysipelas must be administered once the piglet is 2 Months and Anthrax once in a year. The piglets must also be dewormed after every three months as the young pigs might suffer from diarrhoea due to infection from roundworm. The Resource person also displayed the various instruments/equipments like Forceps, Ear Tag, Teeth Trimmer, Vaccine carriers, Medicines and pigs feed to the Trainees and explained its uses and purpose. The trainees also visited the pig sheds and interacted with the staff members of the Farm.

Queries raised by the Partners

Q. What is the cost of one piglet in the farm and when do you sell it?

Reply: One piglet cost 2500/- and the piglets are sold once it is 2 months but according to its weight.

Q. 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.

Q. What are the types of breed available in the Farm?

Reply: At present the Farm has Large Black and Hampshire.

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

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



Mr. Proster Sangma interacting with the Trainees





Trainees visiting the pig sheds



Group Photo along with the Pig Farm Staffs,

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 demonstrated the materials used in the castration process like needles, Forceps, B.P blade, Spirit, Iodine, Tetracycline powder, Licnokent. He mentioned that all the equipments like Forceps, Blade and needles are to be sterilized in Potassium before the castration. After sterilization clean the Testicle area with potassium and inject 1ml of Licnokent (a form of pain killer) 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 to prevent any form of infection and stitch the area properly.

Queries raised by the Partners

Q. When should we castrate the piglet?

Reply: It should be done in the first two weeks of the piglet's life.



Demonstration on Castration of Piglet by Mr. Lingdoh Marak

Day 6: 9th August 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. Good feed is necessary for growth, body maintenance and the production of meat and milk and will prevent them from any diseases. He said that one can use waste from the kitchen like vegetables, fruits peel, leftover foods like rice, curry etc. and reduce the expenses on pig's feed which is quite high. 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.

Miss. Mellora N. Marak and Vilazonuo Gloria had a combined session on **Entrepreneurial Skill, Concept of Entrepreneurship & Market Analysis**. In this session they explained the concept of Entrepreneurship and gave a few points like that Why Entrepreneurship is because Opportunities & Support are available, Create Self employment, Promote innovation etc. They also said 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 also spoke on the Skills required to be an entrepreneur. The Resource Persons also said that an entrepreneur needs to have ideas and knowledge about the market 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. Mellora N. 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.



Ms. Mellora interacting during the session

Day 7: 10th August 2016

The morning session was on **Different type of pigsty according to climatic zone** by Dr. Henkyl R. Marak. He said that construction of pig sty differs from region to region. He said that good housing plays an important role in the growth and well being of the livestock. Therefore, it is important to have proper housing facility with sufficient sunlight and the direction of the pig sty to be in east-west direction. 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 second session was **Practical: Site selection, orientation of pig sty, mud/hallow block making**. In this session the resource person said that site selection is the first step in setting up a farm. The site should be at an elevated place that cannot be flooded by rain water. The site should be protected from the sun (shade from trees) and have ample fresh air. It should be away from residences (around 8-10 meter away downwind). In case of a large scale pig farm, the site selected needs also to be: well connected to roads throughout the year, Suitable for manure disposal, connected to reliable water and electricity sources. The site should also follow the local policies like zoning and environmental considerations.

For the Practical session on **Site preparation/Demonstration on construction of pig sty** Dr. Henkyl R. Marak took the Trainees to the Pig sty and explained to them on how to construct a pig sty.



Dr. Henkyl R. Marak during the session

Queries Raised by the Partners

Q. Can we rear pigs near the house?

Reply: Yes, for a small scale you can, provided it does not affect your environment.

Q. Why can't we build the Pig sty in any direction?

Reply: The resource person mentioned that for better productivity the pig sty should be located towards the south and there can be certain deviation on the differences of terrain and latitude eg: to keep the sty warm in winter and cool in summer.

Day 8: 11th August 2016

The morning session was on **Risk Management** by Mr. Remigius Pyngrope. 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. He said that Risk management also includes the risk taken in investing one's money. Therefore it is very important to have a target/goal and focus on it. He also said that one has to understand its own capacity and utilize the locally available resources. He initiated the Trainees to begin small and slow expand its business. He mentioned that it is very important to collect ideas and knowledge from friends, family or from experienced people before venturing into the business. The Resource person also mentioned that in case of a Farm, 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.



Mr. Remigius Pyngrope during the Session on Risk Management

The second session was on **Establishment of Clean Pork Shop as per FSSAI** by Madam. Thangme Sangma. 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: 1st Rs.1lakhs,2nd 2lakhs,3rd 4lakhs then cancelled licence as per FSSAI-2006. She also mentioned on the requirements for the registration of Retail Meat Shops.



Madam Thangme Sangma 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.

Day 9: 12th August 2016

The morning session was on **Disposal of piggery waste, 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.



Dr. Sengkan Marak interacting with the Trainees

The Second session was on **Cost of Construction of pig sty** by Dr. Henkyl R. Marak. In this session the Resource person said that construction of pig sty depends on region to region. It can be constructed according to the owner's economic capacity and base on the number of pigs one is rearing. The construction of pig sty can be by RCC or by locally available materials like bamboo, wood etc. He said that bamboos and woods can be used for making walls and pillars and thatch leaves, bamboo leaves or tree leaves can be used for making roof. But for flooring it is best to make it rough cemented floor. He also said that pigs must not be exposed to excess heat or cold and proper drains are to be made. 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.

On the topic **how Pigsty is clean in Bokashi system** 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.

Day 10: 13th July 2016

The last day of the Training programme was the Valedictory function and Inauguration of the Pig farm of Bolmoram Cluster Training Centre. The programme was chaired by Andrew R. Marak (In-Charge, Bolmoram Training Centre). The programme started with the welcoming of the Chief Guest Smt. Daina Sangma (Asst. Commissioner); Smt. Rupamchi Sangma (BDO Songsak Block), Shri. Nitul Das (DPM BDU), Smt. Thangme Marak (Food Safety Officer), Dr. Sengkan Marak (In-Charge Buffalo Farm Songsak Block), The Nokma and other invitees. The welcome song was presented by the Trainees and welcome note was addressed by Mr. Remigius Pyngrope (President CoRP) followed by sharing of experiences by Two trainees. They shared that they have gained more knowledge about Pig Farming and especially enjoyed the practical sessions and farm visit. They thanked the organisers for giving them such opportunities and said that they enjoyed their stay at the Centre.

A brief message was shared by Shri Nitul Das and Madam Rupamchi Sangma. In their message they appreciated the Trainees for sparing their time and attend the training programme and encouraged them to make the best use of their learning from the 10 days training programme.

A special number was also presented by Walman Momin & Friends followed by message from the Chief Guest Madam Daina Sangma. In her message to the Trainees the Chief Guest said that Songsak has been selected under the MegLamp IFAD Project as a Pig and Pineapple Cluster. Therefore many schemes will be coming and they will be the beneficiaries. Therefore to take their learning's from the training seriously. She also said that Garo Hills must become a Pig production belt not for Meghalaya but even for other states. Thereafter, Certificates for the Trainees were distributed. The function ended with the Inauguration of the Pig farm by Madam Daina & Madam Rupamchi.



Welcoming the Guest...!!!



Address by the Guest..



Trainees sharing their experiences..



4th Batch Trainees & Walman & Friends presenting special number



Inaguration: Cutting of ribbon by Madam Daina & Madam Rupamchi..



Releasing of Piglets....



Group Photo: Guest, Resource Persons & Trainees along with their Certificates