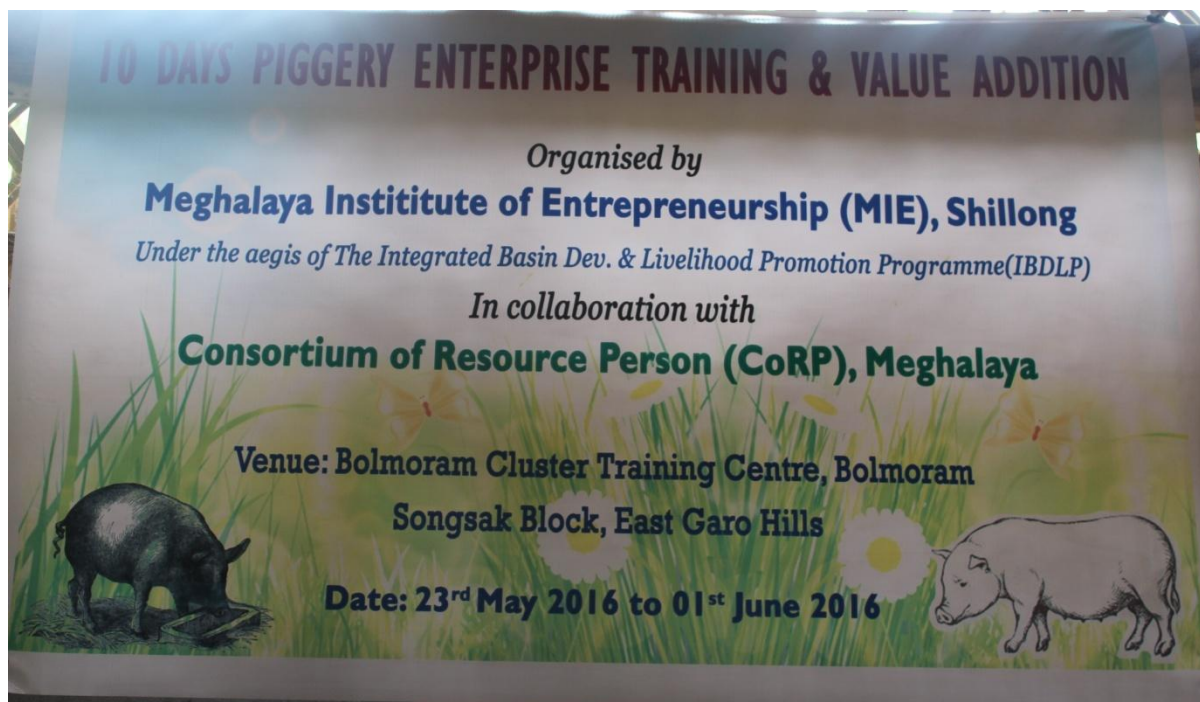


**REPORT ON 10 DAYS TRAINING ON
“PIGGERY FARMING & VALUE ADDITION OF PORK FOR PIG ENTERPRISE”**



The Meghalaya Institute of Entrepreneurship (MIE) in collaboration with Consortium of Resource Persons (CoRP) organized a 10 days training programme on Piggery Farming & Value Addition of Pork for Pig Enterprise for the EFC partners of Rongjeng Block from 23rd May 2016 to 1st June 2016 at Bolmoram Cluster Training Centre, Bolmoram Nappakol. 30 partners registered for the programme. The objective of the training is to promote livelihood through Piggery as an enterprise. The training was inaugurated with the presences of Dr. B. Lyngdoh Consultant Livestock MIE, Dr. H. Paul OSD MIE Shillong, Shri. Remigius Pyngrope President CoRP, Dr. Henkyl Marak Resource Person, Dr. Bickey K Sangma Resource Person and Management team of CoRP. The programme began with Ice breaking Session after which the Trainees were divided into 4 different groups namely Durama Group, Balpakram Group, Nokrek Group and Rongjeng Group for different group activities and were assigned to maintain a group report of each day.

During the function Dr. Paul and Dr. B. Lyngdoh interacted with the participants. Dr. Paul spoke on the importance of the 10 days piggery training and how piggery farming can bring changes to one's financial status especially in the villages. Dr. B. Lyngdoh started by asking question on what is the purpose of coming to the training to the Trainees. He also encouraged the trainees to start piggery farming after the training and shared some facts on the market value & demand of pigs. He cited that in Shillong itself more than 200 pigs are sold per day. Therefore, piggery farming can be good source of income.



Dr Lyngdoh and Dr.Paul interacting with the trainees

Day 1: 23rd May 2016

The first session started from 13:30-15:00 Hours. It was on **Introduction to Piggery Enterprise & Value Addition of Pork** by Dr. Henkyl Marak. During the session the speaker spoke about Piggery as an enterprise and its benefit to the people through Employment opportunities, Generating incomes, Meat production both fresh and processed meat and manure. Therefore, it is important to understand know some points like Site Selection, Accessibility, Distances to other Farms and Permits. 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.

Day 2: 24th May 2016

The 1st Session of the 2nd Day Training was on the Topic: **Equipments & Materials required for Pig Slaughtering** by Dr.Henkyl R.Marak. In this session the Speaker spoke on the process involved in pig slaughtering and the equipments and material used are Captive Bolt pistol, Electrical stunner and Carbon Dioxide Stunner. The speaker also discussed the step by step process of pig slaughtering with the Trainees, which includes:

1. **Stunning:** A process where the pigs are stun for slaughtering by either 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 a adequate period making the pig lose its consciousness.
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.

The second session was **demonstration of hygienic pig slaughtering** by Dr.Henkyl Marak & Mr. Lingdoh Marak, Master Trainer and expert in Piggery Farming. As no equipments mentioned during the class hour was available, the Resource persons used locally available resources like a sharp knife (Atte in Garo) for the slaughtering. The Resource person explained the steps by step process of pig slaughtering. The Trainees were engaged in the slaughtering process by the Resource persons. The trainees were very participative and showed keen interest in the session.



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

The third session on **Value addition of Pork** was taken by Mr. John Delight CoRP and Mr. Shemphang Poshna, CoRP.

The objective of this session is to create more income generating activities through kitchen preparation of various food items. During the sausage making session Mr. John Delight explained on the items which can be used in sausage like Liver, Lungs & Blood mixed with chilli, salt, garlic. All



these are chopped and well mixed after which one has to insert it into the Large intestine and boil it till cooked. Then one can slice the sausage and serve it. Mr. Shemphang showed how to make *Dohkhleh* (Local Khasi name), a famous Khasi Jaintia dish especially made using the head part. Here, the meat is removed, including ears, tongues and brains and boiled. After the meat is cooked, it is cut into thin slice and is mixed with black pepper, salt, ginger and the brain. This session created more interest on the trainees as they got to learn how to make new dish.

Day3: 25th May 2016

The day 3 started with session on **Kitchen Preparation of Value added products** by Mr. Shemphang Pohshna. In this session the speaker focused on making of *Dohkhleh* and *Dohjem*, another famous dish of the Khasi Jaintia using cooked using Black sesame, black pepper and the innards of the meat like liver and intestines. Indigenous food products are very popular because of their ease of preparation and unique taste. Therefore, the speaker encouraged the trainees to learn different indigenous dishes of different communities as food is one of the best income generating activity and most people in Garo hills do not prepare such dishes.

The next session on **Integrated Piggery cum Fish Farming** was conducted by Mr. Bicky R. Marak From Fish Farm Jamge East Garo Hills. During the session the Speaker spoke on the importance of Fishery and gave more insight, knowledge on integrated Farming activity starting with

- Site Selection & Construction of pond by understanding the topography, the soil type and availability of water source.
- Pond Management: Here, the speaker spoke on how to manage Ponds, Types of Fish that can be reared, Feeding, Uses of Lime, Manure and Organic Fertilizers.
- Construction of Pig Sty: the speaker discussed on the ideal type of Pig Sty one can construct in Integrated Piggery cum fish Farming.
- Piggery Farming: in Piggery management one has to select the pigs properly, rear adequate number of pigs according to the size of the ponds, proper Feeding and health care is very important to avoid losses.

In Integrated Piggery cum Fish farming the pig waste can be used for feeding the fish as 70% can be consumed by the fish. Therefore no supplementary food is required for the fish.

The Third & Fourth session of the Day 3 training was on **Diseases and Health Management of Pigs** by Mr.Lingdoh Marak. Health care management is one of the most important issues to be followed in the pig farm as they suffer from various viral diseases, bacterial infections and parasitic infestations. The speaker here discussed some of the common viral diseases affecting the pigs like:

- **Classical Swine Fever:** CSF or Swine fever is found in all tissues, blood, secretions, and excretions of the affected animals. The common sources of infection are through contaminated feed and water and can be transmitted through semen to sows. The symptom of the disease is high fever. Swine Fever Injections are used for prevention of the diseases.
- **Foot and Mouth Disease:** FMD is one of the most important trans-boundary viral diseases. It can be transmitted through Semen and milk. Direct contact is a common FMD transmission route, especially for co-mingling pigs during production process.
- **Swine Flu:** Swine Flu/Influenza is a respiratory disease of the pigs which may circulate throughout the year but mostly occurring during the late fall and winter months. The symptoms of the virus are similar to that of human influenza and can be transmitted to humans also. The symptoms are fever, loss of appetite and coughing.

The common bacterial disease affecting the pigs are Anthrax, Colibacillosis, Salmonellosis, Erysipelas, Brucellosis,etc. And the common parasitic diseases are Taeniasis, Ascariasis, Mange,etc. It is very important for the pigs to get vaccinated on time as it may lead heavy loss due to high mortality rate for the farmers and may also affect the humans as well.

Day4:26th May2016

On the fourth day of the training the Trainees were taken for farm visit to District Piggery Farm in Rongjeng Block. The Trainees were introduced to the Farm by Dr.Archana Sangma, Manager Pig Farm Rongjeng .

The first session of the Day 4 training was on **Cold Chain Management of vaccines, Procurement of vaccines** by Dr.Archana Sangma A&VH officer Rongjeng Farm. 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. The speaker spoke on the major viral diseases that can be controlled by using vaccinations like Swine fever, Swine Flu, PRRS and FMD; Sites for vaccination in the pigs body, schedule for vaccinations and the Do's & Don'ts when vaccination is stored in a fridge. The speaker also spoke on Cold Chain Management, a process used to maintain optimal conditions during the transport, storage and handling of vaccines; Types of refrigerators like bar fridge Units, Domestic Fridge and Commercial Vaccine built Refrigerators; Equipments used for transport to Off Site Clinics like Coolers, Ice Packs and Insulating materials and Transportation of vaccines.

The Practical session on **Management of Pigs** **Piglet restraining for castration and vaccination** was Shared by Mr.Lingdoh Marak.

In this session the Resource person explained in details the step by step process in castration of piglets and demonstrated the equipments & medicines used in a castration process like needles, scissors, B.P blade, Spirit, Iodine, Tetracycline powder. Firstly one has to sterilize all the surgical equipments eg:

needles, scissors, blade etc in Pottasium but incase the surgical needles are not available one can also use regular needle used for stitching clothes. After that inject 1ml of Licnokent (a form of pain killer) in the Testicle area for the piglet to avavoid any form of pain in the surgical area. Then use the blade to cut between the testicles, pull it out 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 flies and stitch the area properly.



He also demonstrated the equipments & medicines 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 Licnokent (a form of pain killer) in the Testicle area for the piglet to avoid any form of pain. After castration apply Himax & Iodine Powder or liquid to prevent from any form of infection and stitch the area properly.

The last session of the day was on **Space required for constructions of sheds** was taken in the farm. The resource person stress on the importance of proper housing facility with sufficient sunlight and the direction of the 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 and with proper feeding time. The Resource person gave some insights on the space required for pig sheds like:

1. For 20 piglets the space requirement = 4m x5m.
2. For 10 pigs for Fattening= 14m x 2m.
3. For a Sow/Boar = 29ft/Sow or Boar.
4. For side wall = 4 or 5 ft.
5. Roof = 8 to 10 ft.
6. Floor = Slope of 3cm/1m of the floor.
7. Feeding Space = 6 to 12 inches/pig

Day 5: 27th May 2016

The first session of day 5 was on **Preparation of Different types of Pig Feed ration** by Henkyl Marak. He said that Pig farming is an important activity of many households in North-East and quite a lot is spent on the feeding of the livestock reared. Around 60% is spent just on feeding of the pigs. But one can also reduce the expenditure by making use of the available resources like waste from the kitchen eg: vegetables and fruit peel, liquid waste like water used for washing vegetables. This can be mixed with the husk and feed the pigs will reduce 30% of expenses spent on feeding. Proper feeding of the pigs or any livestock is very important as it will prevent from any diseases and will bring success in the farming activity if one is an entrepreneur. He gave some insights on pig feed ration like use rice Polish 30%, Wheat Brand 24%, Crushed maize 35%, Fish meal 9.5%, common salt 0.5% and mineral mixture 1%.



The second and Third session started with the **concept of entrepreneurship and skills required** by Mr. Shemphang Pohshna. An entrepreneur is one who is Confident, innovative, responsible, ready to take risk, mobilising potential resources, constant desire for growth, have strong goals, money as a measure etc. Therefore they need to strategise or develop a proper Business plan through interactions, by understanding the Demand and location of the market, strategy of the market, funds and Capital; have proper financial management, cash flow, project cost and other expenses and maintain proper records.

The third session was on **Formation of SHG, VO, CLF**: Self Help Groups a well known concept which is more than two decades old. In this session the Speaker stressed on the importance of formation SHG groups especially in the rural areas as it helps in the upliftment of the living conditions of the people both economically and socially. The speaker discussed on the Concept of SHGs, Needs of SHGs, and Structure: size, Membership, records books that needs to be maintained and Functions of the group. The speaker also encouraged the trainees to form such group or to join any such group if there is in their locality.

Day 6: 28th May 2016

The First session was on **Demonstration of Low Cost Technologies especially designed for the rural areas** promoted by State Council of Science, Technology & Environment, Shillong. The session was conducted by Ms. Mellora and Mr. Shanborlang (Member SCSTE). The trainees were introduced to various low cost technologies with practical demonstration on Solar LED Home Lighting, Pedal Pump and Improved Chulha. During the session the trainees were engaged in the construction of Improved Chulha.



Awareness on Low Cost Technologies

The Second and Third session was on **Site Preparation** by Dr.Bicky Sangma. The Trainees were taken to the field for the practical session to identify the site for pigsty. The site was identified in a place with good water supply and also close to the fish pond. The trainees have taken initiative for cleaning the area and collecting materials which are locally available for construction of the same.

Dr.Henkyl Marak during the practical session highlighted on how to prepare the site for the **Pig sty construction** and stressed on the importance of selection of area for Pig sty construction where 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. The possibility of expansion should also be considered.

The session was concluded with on field **demonstration on Bokasi system** that can be also adopted by the villagers. 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 also highlighted the space and materials required for Pig sty construction in a Bokashi system and explained the process of construction and management of the pigs.

Day 7: 29th May 2016

On the 29th May 2016 the Trainees were taken out for sightseeing/picnic to Tasek Lake around 10Kms away from the Training centre. The lake has an Eco Lodge with boating

facilities managed by Meghalaya Tourism and opposite to the Lodge there is an old Forest Inspection Bungalow constructed during 1975-76. According to the some of the Locals during the 1912 earthquake some part of the lake submerged under water and one can still find trees under the water with variety of fish especially Electric Eel and Turtles.



Trainees enjoying preparing meal



A View of Tasek Lake Old Bungalow constructed in the year 1975-1976

Day 8: 30th May 2016

The First session of the day was on **Risk management** presented by Mr. R. Pyngrope. The resource person explained the meaning of Risk, Risk Management and the process of Risk Management. He said that in order to minimize risk one should know how to manage, identify, analyze, and assess, to implement risk control measures, evaluate and review risks involved. The resource person also highlighted the benefits of risk management and the importance for things to be insured. He pointed out some of the requirements to get things insured especially for piggery. He also gave clarification regarding the needs and requirements at the time of claiming it, which are as follows:

1. Has to be done within 24 hours
2. Death certificate from headman

3. Post-Mortem from veterinary Doctor
4. All documents regarding pig rearing.

The Noon session was on **Cash management** by Mr. R.Pyngrope. Here the resource person highlighted that importance of Record keeping, Financial Management as to ensure proper flow of Business. During the long day session the Resource person has given a practical session on maintenance of cash Book. The Patners have taken a keen interest to learn on Income and Expenditure on Business.



Day 9: 31st May 2016



The session on **Cost of different construction materials of Pig sty** and Practical Session on construction materials of Pig sty was given by Dr.Henkyl Marak and Dr. Bicky Sangma. He explained about the Pig sty construction.

- 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.

Day 10: 1st June 2016



The last day of the Training began by a short Valedictory function organised by the Centre management in which the trainees were awarded with certificates. The function was graced by Madam Daina Sangma, Nodal Officer as the chief Guest, Sir.Nitul Das DPM MBDA East Garo Hills, Sir Remigius Pyngrope & the team, Mr Campport Sangma, Secretary Bolmoram Napakol CLF along with the Resource Persons.

Speaking at the function, Madam Daina motivated the Trainees to take interest in piggery farming as they got more knowledge through the ten days training. She said that livestock rearing is one of the most important farming activities in the rural areas. Therefore one should always keep practicing as it not only helps in the financial status of one family but also for the society as a whole. She also thanked MIE and CoRP for organising such programmes on Livestock especially in Garo Hills and also for setting up training centre for the purpose of uplifting the rural people.



After the function Mr.Jinku R Marak, PA-EFC Rongjeng Block conducted the evaluation/feedback session with the trainees. In the feedback the Trainees mentioned that they have received more knowledge on Piggery Farming and enjoyed the practical sessions. They also mentioned that Topics related to Integrated Piggery cum Fish farming, SHGs and Entrepreneurs, Cash Management, Developing Business Plan was interesting. Apart from that the Trainees enjoyed the Morning Yoga or Physical Fitness session and highly appreciated the programme as well organised. Some of the suggestions given by them were need for electricity in the Training Centre and availability of said resources persons.

In conclusion the 1st Batch Training was successful overcoming all the hurdles and tough situations. Being the 1st training it was a learning experience for both the Trainees as well as for the Organisers. With the positive support from all the Well Wishers and the Trainees the 10 Days Programme ended in the presences of Madam.Daina Sangma Chief Guest for the Valedictory Function on 1st June 2016.



Morning Assembly



Guest Interaction with Partners



Participation on New learning



Practical Session