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In Conversation with People of Meghalaya

Apiculture Mission



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Apiculture Mission

Source - Mission Document (Apiculture)

Introduction

Beekeeping is innately woven with the socio-ecological ethos of Meghalaya. It has been carried out across many generations through indigenous means having the traditional log, grass and bark hives which are low yielding in terms of honey production. Since beekeeping is still carried on as an indigenous activity, its potential for increasing income and supporting sustainable livelihood has not been aptly appreciated because of traditional background and history of beekeeping.

The Apiculture Mission is designed to spur initiatives which are integrative with Meghalaya's biophysical attributes to confer livelihood improvement through gainful employment of the local populace. It is conceived as a mission-mode apiculture development strategy, underpinned on intensifying honey production, expanding domain of honey product development, creating market linkages for profitable marketing of honey and honey products. It also envisages community engagement for creating an effective and sustainable income source through infrastructural and human capacity development. Technical assistance along with innovative financing and market linkages under institutionalised management, would be the key vehicles for implementing the strategy for up scaling and promoting apiculture as an organised industrial enterprise.

In order to promote optimum and effective development, utilisation of basic resources for ensuring livelihood security and inclusive growth within the frame work of sustainable development, Meghalaya State Government has undertaken an initiative of Apiculture Mission under Integrated Basin Development and Livelihood Promotion Programme (IBDLP).

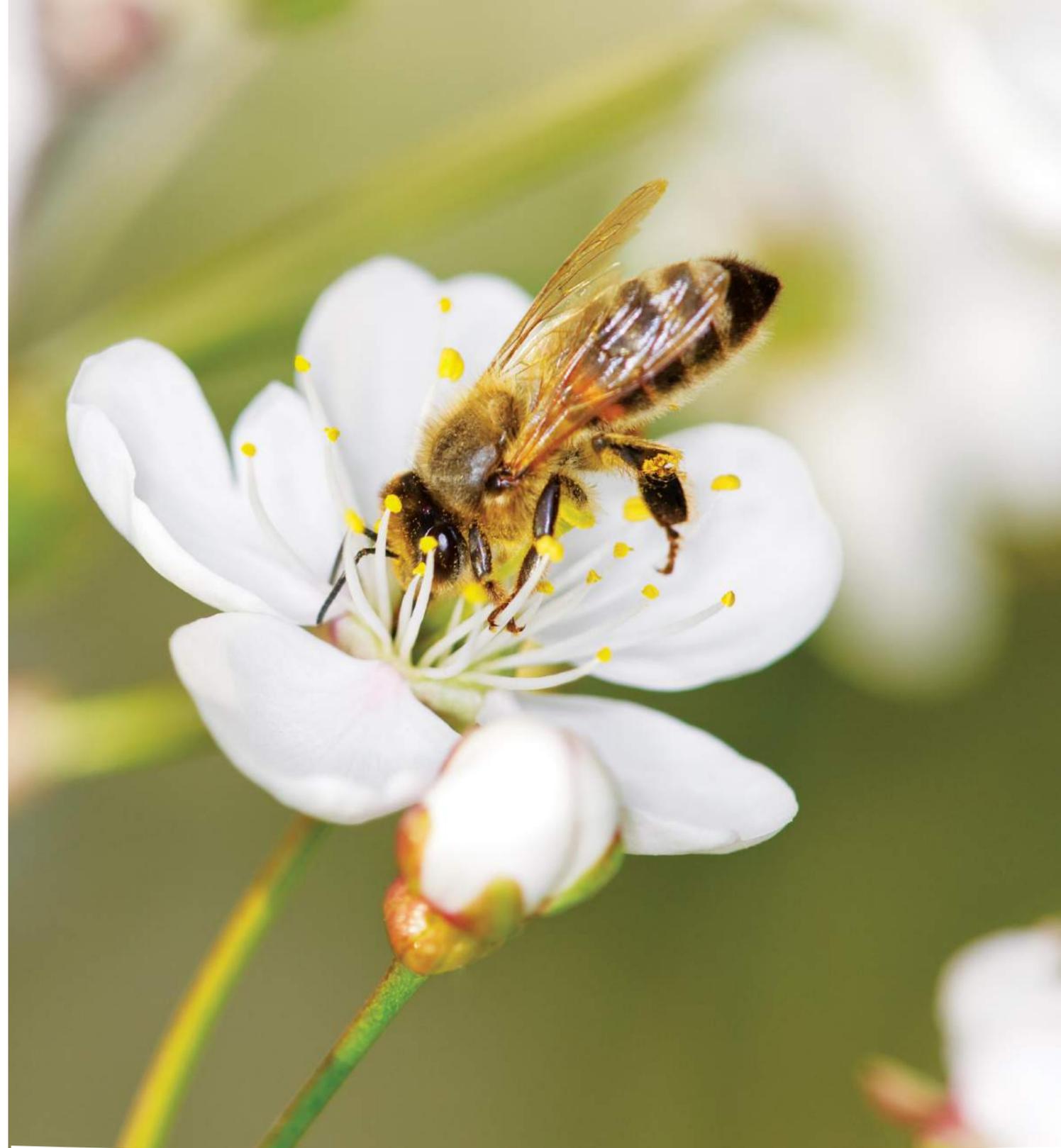
Statement of Purpose

Development strategies in beekeeping should incorporate following imperatives for achieving the desired goals and objectives. A scientific and technical beekeeping action plan must be aimed at integrating economic/business principles with sustainable livelihood and environmental concerns leading to a synergistic effect. Therefore, these imperatives must:

- Envision concise and excellence centered Research & Development (R&D) with a forward-looking long-term perspective.
- Strive for niche based productivity/profitability concomitant with natural resource sustainability and environmental safeguards.
- Envisage programme priorities that ensure value added quality products which are demand driven and need based. Thereby reflecting consensus on a shared vision of all categories of consumers and other stakeholders.
- Facilitate the HRD component by incorporating "Train the Trainer" and "Train the Beekeeper Programme".
- Ensure effective linkages amongst consumers and beekeeper.
- Incorporate programme themes aimed at expansion of industry base in all three geographical zones of the state.
- Ensure consistent and stable pricing policy and global competitiveness of hive products in trade and marketing.
- Encourage production/collection/marketing of organic bee products.
- Seek to make beekeeping locally relevant and internationally competitive.

Vision

The vision of the Apiculture Mission is to upscale and promote apiculture as an organized industrial enterprise that will provide livelihood, gainful employment opportunities, improve rural economy and enhance the ecological system of the state.



Vision Statement

'To motivate honey hunter communities, NGOs, Federations, Primary Societies, SHGs to develop an interactive blend between technology, economy, environment and society for speedy development of honey & beekeeping industry, and build up a substantial base for increase in productivity, production of qualitative honey and value added honey products for domestic and export markets. Strongly emphasise cleaner and user friendly technology and quality, to enable the production, supply and consumption chain, especially focusing on the direct benefits of new technology, environment-friendly products and a strong institutional network for marketing. Ensure adequate availability of honey products for the consumer at affordable prices, and promote sustainable development, employment generation and poverty alleviation through entrepreneurship and enterprise promotion'.

Mission

Beekeeping, as a low-investment and low-input business enterprise, is capable of generating substantial incomes through commercially oriented production despite being a small-scale enterprise. As the apiculture mission takes a people-centred perspective on sustainable livelihoods, the potential of beekeeping enterprise aligns well with the Mission's development strategies.

Apiculture Mission Objectives

- Intensify honey production and profitability in the state in terms of enhanced production and productivity.
- Expand the demand for honey in the emerging social matrix.
- Motivate traditional beekeepers to integrate modern beekeeping practices to increase the productivity of honey.
- Motivate unemployed youth to take up beekeeping enterprise as a means of self-employment and sustainable economic development.
- Engage the community into the modern beekeeping enterprise by way of mobilizing the support of local community leaders in the promotion of beekeeping enterprise for improvement of livelihood standard and preservation of environment.
- Upgrade the skills of the beekeepers by conducting educational and motivational programme so as to enhance quality honey and bee wax production through the use of technologies.
- Expand the domain of honey product development and other bee hive products.
- Motivate entrepreneurs towards the establishment of enterprises for value-added honey, honey product development, and creating market linkages.
- Develop institutional system involving bee farmers and government functionaries to effect better coordination relating to production system, management and marketing of products.

Broad Objective

To coordinate, sponsor and support the value chain process (production, collection, processing and marketing) of different bee products. Integrate pollination of useful crops through training, outreach and infrastructure development in programme, participatory and mission mode.

Mission Programme Framework

The Mission objectives reflect three broad requirements:

- Intensification of beekeeping enterprise by supporting local communities for self employment and sustainable economic development.
- Infrastructural and human resource development to prepare the physical and the human resource base for undertaking the beekeeping enterprise.
- Devising institutional framework for efficient production system management and profitable marketing on sustainable basis.

These requirements combine to form a rationale for the Mission Programme Framework based on situation analysis and problem identification; recognition of issues and initiatives; formulation of strategies; and planning of strategic interventions. This has to be done taking into account the programme implementation realities such as fund management, production resource availability, system functioning, etc. The Mission Programme is focused on building a stable economic base in the form of commercially oriented beekeeping enterprise that secures sustainable livelihood improvement and environmental preservation.



Apiculture Mission launch at Polo Grounds, Shillong

Source - MBDA Media Team

The State Apiculture Mission under the aegis of the IBDLP programme was officially launched by the Chief Minister, Dr. Mukul Sangma, on 16 October 2014 at the Polo Grounds, Shillong. The Chief Minister in his speech said that apiculture is being taken up as a separate mission because there is an understanding that beekeeping business can supplement the livelihood activity. Moreover, it will help in enhancing the productivity level of agricultural and horticultural crops and at the same time will help in conservation of the bio-diversity in general. Smt. Roshan Warjiri, Home Minister, Government of Meghalaya, was the Guest of Honor. Shri. P.B.O. Warjiri, IAS, Chief Secretary to the Government of Meghalaya, Shri. P.W. Ingti, IAS, Principal Secretary to the Government of Meghalaya, Commerce and Industries Department, Shri. P. Jain, Commissioner and Secretary to the Government of Meghalaya, Planning Department, Shri. S. Goyal, IAS, Deputy Commissioner, East Khasi Hills, Shri. C.V.D. Diengdoh, IAS, Additional Deputy Commissioner, East Khasi Hills and Shri. W. Langstang, Director, Commerce and Industries, were the other dignitaries present at the event.

Altogether 21 Master beekeepers of the Khatarshnong villages were felicitated with the beekeeping kits by the Honorable Chief Minister Dr. Mukul Sangma. Prof L.R.Verma was also presented a memento by the Chief Minister for his contribution to beekeeping in Meghalaya.



Hon'ble Chief Minister Dr. Mukul Sangma felicitates a Master Beekeeper



Home Minister Smt. Roshan Warjiri addressing the guests



Smt. M. B. Roy, Director, Commerce and Industries felicitating the Hon'ble Chief Minister Dr. Mukul Sangma



The Principal Secretary (Planning Department) and Deputy CEO, MBDA, Shri Pankaj Jain (IAS) addressing the gathering



Hon'ble Chief Minister, Dr. Mukul Sangma and the Home Minister, Smt. Roshan Warjiri inaugurating the bee boxes



Hon'ble Chief Minister Dr. Mukul Sangma presenting memento to Prof L.R.Verma for his contribution in Apiculture



Professor L.R.Verma demonstrating the different types of bee boxes



Cultural programme during the launch of the Apiculture Mission



Hon'ble Chief Minister, Dr. Mukul Sangma and the Home Minister, Smt. Roshan Warjiri with the 21 Master Beekeepers during the launch of the Apiculture Mission



A Master Beekeeper presenting a gift to the Hon'ble Chief Minister, Dr. Mukul Sangma



Hon'ble Chief Minister, Dr. Mukul Sangma unveiling the Beekeeping Resource manual



Hon'ble Chief Minister Dr. Mukul Sangma addressing the guests at the event



Chief Secretary, Shri P.B.O. Warjiri translating the speech of the Hon'ble Chief Minister, Dr. Mukul Sangma in local language for the gathering

Interview of Smt. M.B. Roy, Director, Department of Commerce and Industries, Government of Meghalaya



Meghalaya has a huge potential in Apiculture sector. What are the key attributes that can lead to further development of this sector?

- Availability of well-trained officers, master beekeepers and beekeepers for dissemination of information on the sector to the grassroots level.
- Tapping the traditional instinct and skill of the local people practicing apiculture and helping them integrate this knowledge with modern methods of beekeeping.
- Tapping the various beehive products-pollen, bee venom, royal jelly & beeswax.
- Availability of advanced technology- eg. testing lab, processing plant, etc.
- Active participation of the Government- assisting in bank linkages, organic certification of honey, etc.
- Creating market linkages to beehive products.

What are the key activities that the Commerce and Industries department is undertaking to promote Apiculture in the state?

- Conducting awareness programmes, SWOT analysis, skill upgradation training to beekeepers and farmers, exposure visits, workshops, seminars, etc.
- Distribution of free bee boxes, tools and equipments to the potentially identified beekeepers.
- Setting up of Honey processing plant and testing lab for honey.
- Departmental training centres and private registered units are engaged in manufacturing of bee boxes, equipment etc.
- Departmental registered apiary unit are involved for propagation of beekeeping activities with the availability of subsidies/facilities of the department.

Since the apiculture mission was launched in a convergent mode. How the schemes of the Department would be interlinked with the IBDLP programme?

The Apiculture Mission is one of the IBDLP programme which has been sourced to the department to act as a nodal agency for implementation. The existing beekeeping scheme of the department is linked with the IBDLP programmes in:-

- Providing awareness and training in beekeeping.
- Encouraging the trained beekeepers to avail the credit linked scheme for eg, PMEGP.
- To register with the department to further avail the facilities provided by the department through the package schemes of incentive.
- Provide market linkage through fairs and exhibitions both at national and international level.

Convergence of various schemes and missions is essential for efficient and effective utilisation of capital, human, and natural resources of the state. In what ways is the Commerce and Industries Department converging with other missions and schemes in this aspect?

Since the department is linked with almost all activities related to different departments and missions, proper coordination and understanding with all stakeholders is our main focus to achieve the desired results. For eg-

- Aquaculture Mission- manufacture of packaging materials for fish products, manufacture of feeds, etc.
- Horticulture Mission- manufacture of packaging materials for different products, providing bee colonies to farmers, to increase pollination, etc.
- Livestock Mission- manufacture of packaging materials for products, developing tanneries, bone milling industries, vermicompost, feed mills, etc.

Capacity building and training farmers about new and improved technology plays a very important role. What measures are being taken in this direction?

Working hand in hand with Agricultural Finance Corporation, Regional Rural Training Centre, Khadi & Village Industries Board Commission, National Bee Board, etc., under the aegis of IBDLP and Meghalaya Institute of Entrepreneurship are the steps undertaken by the department to improve these activities in providing skill upgradation trainings, honey packaging, etc., to rural beekeepers.

What is being done by the Commerce and Industries Department to create better market access for the beekeepers?

Department of Commerce and Industries and Meghalaya Institute of Entrepreneurship have already initiated a long term strategy to provide beekeepers better access to markets and relevant studies are being undertaken on this subject. Presently, Meghalaya Khadi & Village Industries Board along with Meghalaya Institute of Entrepreneurship is undertaking an assessment of the present market.

Any successful Government scheme has to be people centric in its approach. What are the foreseeable benefits that the people of the state would gain from the success of Apiculture Mission?

The successful launching of the mission at Shillong and Tura shows that the mission is people centric. The future benefits would be manifold eg.

- Apart from providing livelihood and gainful employment the mission will also improve the rural economy and ecological system of the State.
- It will also enhance the honey production and promote honey value added products, so as to benefit beekeepers and local entrepreneurs along the entire honey value chain.
- It will also help in poverty alleviation and help traditional beekeepers to transform themselves into entrepreneurs in an organised enterprise sector.

“Only healthy farms can lead to healthy bees...”, the launch of Mission Organic in the State can ensure that the nectar ingested by the bees is organic. What steps has been initiated by the Department till date?

The Department encourages the farmers to go organic in all the awareness programme, workshops, seminars, Entrepreneurship Development Programmes, Entrepreneurship Motivation Programmes and other programmes organised by the Department.

Apiculture Mission launch at Asanang, Garo Hills

Source - MBDA Media Team

The State Apiculture Mission was launched in Asanang, Garo Hills on the 14th of January 2015. Altogether 36 master beekeepers were felicitated from the four districts of the Garo Hills by Honorable Chief Minister, Dr. Mukul Sangma, who was also the Chief Guest on the occasion. The Mission is being implemented by Department of Commerce & Industries in partnership with Meghalaya Institute of Entrepreneurship (MIE) under IBDLP in a convergent mode to upscale and promote apiculture as an organized industrial enterprise to provide livelihood, employment opportunities and enhance the economy of the State.

During the event Dr Mukul Sangma stated that there is a huge capacity for diversification of the product. He also stressed on generating employment by turning Meghalaya into a destination hub for Cosmetology, as beehive products are key components in cosmetic industry. He further added, honey produced in the state has huge medicinal property which can boost the value of honey in the commercial market as well.



Hon'ble Chief Minister, Dr. Mukul Sangma with Master Beekeepers from Garo Hills



Professor L.R. Verma presenting the Beekeeping Kit to a Master Beekeeper



Director of Commerce and Industries, Smt. M.B. Roy and Principal Secretary (Planning Dept) Shri. Pankaj Jain (IAS) handing over the beekeeping kits to Master beekeepers from Garo Hills



Trained carpenters manufacturing the wooden bee boxes



Hon'ble Chief Minister, Dr. Mukul Sangma felicitating a Master Beekeeper



Hon'ble Chief Minister, Dr. Mukul Sangma inaugurating the modern bee boxes made of wood



Hon'ble Chief Minister, Dr. Mukul Sangma, addressing the gathering



Hon'ble Chief Minister, Dr. Mukul Sangma inspecting the stalls with other dignitaries present at the launch of Apiculture Mission



Welcome address by Shri. P. Bakshi (IAS), Deputy Commissioner, West Garo Hills



Hon'ble Chief Minister, Dr. Mukul Sangma unveiling the Beekeeping Resource manual

Interview of Professor L.R.Verma

Source - MBDA Media Team



Prof. L.R. Verma has served in high academic, professional and administrative positions. He has gained rich & varied experience to plan, lead, integrate, coordinate and execute several regional, national and international projects in the area of Honeybees and Beekeeping for more than 40 years: which is not only his profession but also his passion. He was the Dean & Professor, H.P. University (1972-1999), Visiting Professor in Apiculture in Germany (1976-1978 & in 2009) USA, Canada and UK, Senior Scientific Advisor in Apiculture to Govt. of Himachal Pradesh (1982-2008), Vice Chancellor (1993-1999) in Horticulture & Forestry, Solan and H.P. University, Shimla (2003-2006), Senior Professional & Regional Project Coordinator in Apiculture in UNESCO International Centre for Integrated Mountain Development (ICIMOD), Kathmandu, Nepal.

At present he is the team leader/consultant for Apiculture Mission under IBDLP programme of the Govt. of Meghalaya on behalf of AFC India.

What is the difference you find in the quality of honey produced in other parts of the country and the honey produced here in the state?

The honey produced in the state of Meghalaya is almost organic. The farmers keep their beehives in the forest area where no pesticides, fertilizers, weedicides or any other kind of chemicals are used. The plus point in perspective of Meghalaya's honey is that it is free from pollutants. We and many experts have found that the aroma flavor of the Meghalaya honey is one of the best in the country due to the multi floral type of ecology.

What is the change that you find in the approach towards beekeeping in the state then and now?

It is just a beginning here, the farmers have been keeping bees since centuries but in old traditional method. One disadvantage of this old traditional method is that the honey harvested is not hygienic and of good quality, also farmers are not getting remunerative prices from that. Now what we are planning to do through this mission is to introduce modern scientific beekeeping through which quality and hygienic honey can be extracted and maintaining the quality of the honey free from chemicals. With the presence of the aroma flavor they can sell it at a very high premium price than the honey being produced earlier in the state and in the other parts of the country as well.

The production rate of honey is low as compared to other honey producing states in the country. What techniques should a farmer keep in mind to boost the yield of honey?

The farmers of the state were engaged in the traditional way of beekeeping. The quality of the honey

yielded is low and unhygienic. But with the introduction of the modern scientific bee hives the yield of honey will increase and boost the production rate of honey in the state and where the question of high yield is concerned it is the European bees. Meghalaya tried to introduce the European bees but because of the attack by the enemies, long rainy seasons and non-availability of huge land under single crop they haven't succeeded. So taking these circumstances into account the research has shown that the local native bee from Meghalaya, Apis Cerena is the more suitable bee for this type of environment.

What are the key factors a farmer engaged in beekeeping should consider?

The most important thing is that a beekeeper should have good kind of bee boxes and beekeeping equipment. It is not just about cringing the bees in any kind of boxes. There are specifications for bee equipments and they have to be manufactured by well trained carpenters. For Meghalaya we are producing the best quality of these boxes in the country. We have determined the size and specifications of boxes which corresponds to the size of these bees and makes them comfortable for the swarming process. Secondly beekeepers should not think that once the bees are put into the boxes the job is done. He has to do seasonal management which varies from spring season to autumn season; autumn season to rainy season; rainy season to summer season. All the operations, engagement practices are different which we teach the beekeepers at RRTC, Umran and if they will follow it then I am sure that good quality honey can be harvested.

What are the problems that the beekeepers in the state face and what are its solutions?

At present we are lucky that the Meghalaya bees don't have any predator or parasite, but the bees are also affected by bacteria, pathogens, fungi and virus. So far they are very healthy and God forbid nothing should happen.

Secondly, once the bee boxes are introduced to the farmers there should be a constant follow up at the end of the extension agency. For which 12 Industries Promotion Officers (IPO) have been trained in beekeeping. They will ultimately be placed in different districts directly in contact with the beekeepers. In case of any problem in the bee management they will help the farmers to solve it.

Most of the bee boxes are kept in forests and sometimes they are damaged due to the attack of wild animals. What are the possible measures in order to solve the problem?

We are fully aware of the situation faced by the beekeepers. The wood boxes are very light in weight and can easily be damaged or carried away and that remains a fact. Now in order to solve their problem we have introduced what we call a clay or mud hive with bamboo roof. What we have done for Khatarshong is that we have designed cement slabs to be placed on top of beehives to make them safe. On the top of the slab a provision is there where they can put some other heavy materials like stones. Farmers are very astute, and tend to intuitively avoid risky business and beekeeping practices. We are just beginning by introducing the clay hives with heavy cement tops and ultimately they will realize that the honey yield from these clay hives is double than what they are getting from the cement hives.

The semi urban youth of the state are being trained for understanding the entrepreneurial value of honey. What is the probable outcome of these trainings?

Modern Beekeeping has three kinds of production system. First is the production of honey which the farmers are doing in their boxes. But once the honey is produced it has to be processed, bottled, packed and marketed, which has to reach the consumers at the end. We are training them not as honey producer but as an entrepreneur in beekeeping, so they take the processing further and in fact they are showing a keen interest. We are also emphasising programmes that help beekeepers understand the business of apiculture, and become viable entrepreneurs.

The Apiculture Mission has been launched. Is the future for beekeeping in Meghalaya hopeful?

Yes, definitely Meghalaya Government gives a lot of importance to beekeeping. Bees are not only a source of food, employment and income generation, but also play a pivotal role in boosting the productivity of agricultural crops through crop pollination and conservation of the bio-diversity. Beekeeping is the only agro based industry which is eco friendly. In fruits, vegetables and in any other products, chemicals, pesticides, fertilizers and medicines are found which has a negative impact on human health and the environment. Beekeeping is the only activity which leaves a positive environment behind.

What is your first impression when you saw the beekeepers of the state?

Well, I was very hopeful, these farmers in Meghalaya have a better prospect in the near future. Beekeeping includes both art and science within it. They know the art of beekeeping as a tradition, but they did not know the science of modern beekeeping. So, I thought that with this kind of background, it will not be difficult to transform them into modern beekeepers and that has made my job easier.



Beekeeper Training at RRTC, Umran

Source - RRTC, Umran

The State Apiculture Mission was launched in a convergent mode under the IBDLP programme. The training, 'Skill Up-Gradation for the Beekeepers', is sponsored by the District Commerce and Industries Centre (DCIC), Shillong in collaboration with Meghalaya Institute of Entrepreneurship (MIE) and is facilitated by Rural Resource and Training Centre (RRTC), Umran. Altogether 65 batches with an average of 25 to 30 beekeepers have participated and successfully completed their week long training till date.

Trained Beekeepers of Meghalaya Under 'Apiculture Mission'

Sl.No	Name of the District	Number of Trainees
1	East Khasi Hills(EKH)	425
2	West Khasi Hills(WKH)	200
3	South West Khasi Hills(SWKH)	45
4	West Garo Hills(WGH)	164
5	South Garo Hills(SGH)	185
6	South West Garo Hills(SWGH)	131
7	East Garo Hills (EGH)	157
8	North Garo Hills (NGH)	40
9	West Jaintia Hills (WJH)	130
10	East Jaintia Hills (EJH)	1
11	Ri Bhoi	114
	TOTAL	1592

The 5 day intensive training facilitated by the centre includes both technical and practical sessions. The topic covers the entire course on identification of the bee species, its characteristics, the life cycle of the bee, beehives and beekeeping equipment, annual colony management and seasonal management, swarming, absconding, bee parasite management and honey pests, dividing and uniting of bee colonies, transferring bees from traditional hive to a modern moveable frame hive, artificial diet, comb foundation and management, honey production, harvesting, processing, storage and its uses, colony migration, honey bees and pollination, bee pasture, control and management of laying worker bees, control of robbing in a honeybee colony, queen production methods and honey value chain and marketing management.

After the completion of the 'Skill Up-Gradation for the Beekeepers', the trainees are awarded with a participation certificate. The expert team also selects few trainees from each batch for exposure visits within and outside the state under expert supervision.

Interview of Dr. Kanchanmoy Das, Beekeeping and Extraction expert, AFC Shillong

Source - MBDA Media Team



What are the criterias considered to identify a potential beekeeper?

We are selecting those beekeepers who are engaged in the activity since ages. They know something about beekeeping though they don't have an idea of the modern scientific way of beekeeping. They understand the bees, the techniques of collecting the honey. This is how we identify and select the beekeepers.

How are the schemes being monitored?

We have already started the transformation of log hives to modern scientific bee hives in Khrang village under Khatarshonng area. We have also demonstrated on how to prepare the mud hive with low cost bee boxes in Khrang. The Khatarshonng area consists of 12 villages and we have constructed two mud hives in each village for demonstration. Officers from the DCIC are being trained here in RRTC, Umran who will be posted in the different districts directly in touch of the beekeepers. In case of any difficulty faced by the beekeepers the officers will help them in overcoming it.

What are the difficulties faced by the beekeepers?

Beekeepers are facing a lot of difficulties within the region. The reason is that the honey harvesting season has already started in some places. It is almost 5 to 6 months now that the beekeepers haven't received the proper equipments for beekeeping which includes the honey extractor and the queen excluder sheets, apart from other essential equipments.

What is the best season for honey harvesting?

Here in Meghalaya in the month of November and December there is one minor harvesting season which we call as the growth period. The main harvesting usually starts from the last week of February to April and if the monsoon is late then it might extend up to the month of May.

You are working directly at the grassroot level. What are the expectations of the beekeepers from the Apiculture mission?

The expectations are high from the mission as well as the government. They understand the advantages of engaging themselves in an additional activity apart from what they are doing now. They believe that the activity will provide them additional income and boost their socio-economic condition, but it will only be possible when they get the beekeeping equipments on time.



Apiculture Mission: Convergence between DCIC and BDU in East Garo Hills District

Source - DCIC, Williamnagar

Success of Convergence between DCIC and BDU, East Garo Hills

The Apiculture Mission in East Garo Hills District was incorporated during the period of 2014-15. However, the Mission has made tremendous progress and is almost at par in comparison to other districts where implementation had started much earlier. This success was possible due to the active support of the District Administration under the aegis of the Basin Development Unit, East Garo Hills and Meghalaya Institute of Entrepreneurship.

The General Manager, District Commerce & Industries Centre (DCIC), East Garo Hills informed the Deputy Commissioner and Chairman, Basin Development Unit, East Garo Hills, that the district was not incorporated in the first phase of the mission. DCIC submitted five proposals to the Basin Development Unit, East Garo Hills, which was immediately forwarded. Four proposals got instant approval and sanction whereas one proposal, on its merit, is being adopted as a model for all the other districts in the state.

The Proposals that were approved and considered are substantiated as under:

1. Exposure visit to Kolkata for young trainees undergoing training in the departmental training programme
2. Exposure visit to Central Bee Research Institute, Poona and C. B. Kora, Khadi Village Training Institute Mumbai, for prospective beekeepers.
3. Financial assistance to Carpentry Training Centre, Williamnagar
4. Training for bee boxes manufacturing at U.A.S, Bangalore.

1. Exposure Visit to Kolkata: Exposure visit to Kolkata was tailored and designed to meet the future requirement of the Apiculture Mission in terms of accessories, tools and equipments. DCIC tied up the programme with MSME Kolkata for handling all local visit to the industrial estate, garment making, cosmetic making, packaging and shoe making units. The participants also attended an interaction programme with the entrepreneurs of the Industrial Estate, Diamond Harbour, under the aegis of Assistant Director MSME, Government of India.

The visit comprised of two batches of 25 participants each. Small batches were intentionally planned in order to provide every participant a fair chance of attention and to make the visit more meaningful. The trip covered business, fun and educational tours with visit to historical sites, museums, technological cum entertainment parks, centre of learning and education like the Science City, Birla Planetarium etc.

Outcome of the visit: Today all the 50 (fifty) girls are involved in the manufacturing of bee veils, which is a pre-requisites in beekeeping and the products are being supplied to the entire state. The products are subject to strict quality control under careful supervision and adhere to the technical specifications. Presently, all DCIC's of the State have been directed to emulate the BDU and DCIC, East Garo Hills in matters of self reliance and employment generation. DCIC, East Garo Hills, being the pioneer and sole manufacturer of bee veil, beekeeping dresses, and beekeeping shoes in the entire North East state, has also been entrusted with the task of imparting training to all the other DCICs.

2. Exposure Visit to Mumbai and Poona: The visit had a prior arrangement with the Khadi and Village Industries Commission, Mumbai, Government of India, for handling all the field visits to the small village industry units (Agarbati stick and incense making, pottery, handicraft units, etc) and the Khadi Exhibition & Bazaar. Field visits were planned to those units which are relevant to Meghalaya and possible to start that business in the district.

The high point of the visit was a one day hands on training at the prestigious **Central Bee Research Institute & Training Institute, Poona**. The participants spent a complete day at the institute and were motivated by this visit.

These participants were also taken to a ecological park in Goa to give them an exposure of the rich biodiversity of the country and make them understand on how to reap the benefits from proper and sustainable usage of natural resources. Meghalaya's biodiversity can similarly be utilised to provide economic gains and employment through adventure tourism, medicinal hub, traditional sports/festival, centres for entertainment etc.

Outcome of the visit: The benefits of the visit was immediately felt when a good number of participants started manufacturing Bee Boxes under the guidance of instructors and officials. The sample was sent and submitted to AFC and MIE, Shillong. The bee boxes have been rated as the best bee boxes in the country. Today, DCIC East Garo Hills is supplying sample boxes to the entire district within the state to enable others to replicate the same.

Presently 30 participants have taken up manufacturing of bee boxes as their **permanent venture of employment** and source of income. Some of the participants have been selected under the PMEGP scheme for financial assistance in beekeeping. Unfortunately, some of them have opted out of the scheme, because of lack of cooperation from the banks.

3. Financial Assistance to Carpentry Training Centre: DCIC, East Garo Hills, in order to meet the immediate requirement of the mission, suggested to MIE that bee boxes should be manufactured locally as part of employment programme, saving time, cost and above all to be self reliant: considering the volume of boxes that will be required over a period of five years.

A proposal was submitted to MIE, Shillong for financial assistance to purchase some new machineries, repair of working shed and old machines, etc. The proposal was a part of proposed '**Integrated Bee Farm**' to be known in the near future as '**Centre of Excellence**', was readily approved and sanctioned. The training centre is fully functional with this small intervention. Transforming this dying public asset which was on the brink of complete closure into a pioneering training centre to act as a show piece of the district and the state is a complete success.

Results: Employment was given to thirty young boys from the most vulnerable areas hit by insurgency, bringing accolade to the District and the office. The centre has also approved training for all interested bee boxes manufacturers from all the five districts of Garo Hills. The turnover of the training centre today, is more than the combined turnover of all the training centres of the state.

4. Master trainer for bee box making: A total of nine master bee boxes makers were sent to U.A.S., Bangalore for ten days training programme. They were highly appreciated for their sincerity and skills. Today, they are doing an excellent job by rendering their skills to other interested in bee boxes making. The group comprised of three officials and six local carpenters.

5. Other outcomes:

- The training centre has been honoured with the distinction of manufacturing the state mementos. These mementos have been given by the Government to all dignitaries visiting the state and during state functions outside the state. The product was conceptualised and designed in the training centre to propagate IBDLP programme. The centre has also come out with other by-products like designer/custom made candle and chocolate with caramelised honey.
- The district has also been entrusted with the task of designing the Mission T-Shirts, Beekeeping Dresses and Boots for the Master Trainers. It also undertook the construction work during the launch of Apiculture Mission at Asanangre, West Garo Hills.
- Centre of Excellence: DCIC and BDU East Garo Hills have been selected to establish a Centre of Excellence for beekeeping in the state.
- DCIC, Williamnagar has the distinction of being the only DCIC where all the officers and technical staff have been trained for this specifically. The district also has the maximum number of trained master beekeepers in all DCICs.
- Other proposals in the pipeline are:
 - Creation of Artisan Village,
 - Artisan Development Centre,
 - Designing of State product (depicting all the three major constituents of the state.)

Conclusion: At the back of all these success is the collective effort put in by the officers, staff, and the youth from the district. The most befitting appreciation came from the Chief Minister himself, who felicitated the young boys and girls during the launching of Apiculture Mission (Garo Hills chapter) at Asanangre, West Garo Hills.

**Interviews from the Field: Apiculture**

Source - MBDA Media Team

During our field trips to the villages of the Khatarshong and Ri Bhoi area, we met various producers and entrepreneurs who have made beekeeping as their livelihood option. In our interactions with them about the future of honey production in the state, most of them were hopeful and upbeat. To most of them this was a practice that was handed down to them by their elders. Earlier the honey was for personal consumption and would also be distributed to neighbours and friends as a gift when the yield was abundant. It is only now, with the growing realisation that honey production is a very lucrative source of income that it has been taken up as an important livelihood option. With ever increasing demand of honey throughout the state and in the country, the future for beekeeping looks promisingly sweet.

NAME: STEVENSON SHADDAP
VILLAGE: NONGTHYMMAI (BHOIRYMBONG)
DISTRICT: RI BHOI

**How long have you been engaged in this trade?**

For us here in our village, beekeeping is something that has been practiced for generations, we believe that a house with bees is active and healthy household, earlier beekeeping was a hobby but now it has become an income generating practice and a very good source of livelihood.

Why did you take up beekeeping as your livelihood option?

For me beekeeping has always been a passion, right from my childhood. I have always been fascinated by honeybees. In the recent years, with the initiatives taken up by the government, the future of beekeeping seems hopeful. I have also realised that honey has a huge market, that is why I chose this as my livelihood option.

How much income are you able to generate from your venture?

Well, it depends from year to year, but generally we make about Rs. 100,000 to Rs. 200,000 on an average annually.

Where is your market; and how much do you sell it for?

Right now the demand for honey is so high that we cannot even meet the needs of the people within the state, our honey generally goes to Shillong and Nongpoh markets. We sell at Rs. 500 per kilo. Although, if there are opportunities we would like to send our produce to far off markets elsewhere in India and if possible even sell it outside the country.

Are you a registered partner of the programme (IBDLP)? If yes, which EFC are you registered with?

Yes, I am very well aware about the basin programme and I have registered myself in the Umsning EFC.

As it stands now, do you feel beekeeping is a good source of livelihood for you?

Yes, for me bees has become a way of life, it has become my habit to see bees around the house, and lately I seem to be spending more time in beekeeping. For me, individually, this has become my way of life. It is a very good source of livelihood for me and my family. I have been able to provide a better life for my family through beekeeping.

Have you received any other training in beekeeping besides the one at RRTC, Umran?

Yes, I have, but I think that the training at RRTC has been the most helpful. It showed us the traditional and modern ways of beekeeping, through these trainings we have been able to convert most of our beekeeping techniques to modern ones in our village. I can confidently say that almost 80% of the bee keepers of the village are practicing modern methods of beekeeping.

What are your future plans for beekeeping, individually and as a community in general?

Well, individually I am planning to increase the number of my bee colonies this year by 10 or 20 more boxes, where I will incorporate the mud-hives shown to us in the training at RRTC. This will take up my tally to almost 60-70 bee boxes. As a community, we are going to increase the strength of our beekeepers society in the village. We will try to do some value addition to our product besides packaging of our product. Our main aim is to be able to try and meet the demands of honey by increasing our productivity.

With the launch of the Apiculture Mission in the state, are you hopeful about the future of honey production within the state?

I am very happy and hopeful that the government has taken this initiative to focus on apiculture as one of the major source of livelihood. This step will give us a bigger platform to sell and market our products. It will also encourage new bee keepers to take it up as an important source of livelihood.

NAME: MLANSING NONGRUM & RNgUP NONGRUM
VILLAGE: MAWKMA
DISTRICT: EKH, KHATARSHONNG

**How long have you been engaged in this trade?**

(Mlansing) We have been doing this for a long time, I don't quite remember for how long.

(Rngup) I think we have been engaged in this from 1975 or 76, so about 40 years till now.

Is this your Primary Occupation?

(Rngup) No, we are basically farmers, earlier we used to do beekeeping as a hobby.

(Mlansing) Now we do it as an additional source of income, as we have realised that there is good money in this business, though we are primarily engaged in the farming of potatoes, maize etc.

What is your annual average yield of honey?

(Mlansing) It differs from year to year, just like it does with crop yields; we have good years and bad years.

(Rngup).....but on an average we harvest upto 150 to 200 kilos of honey per year.

How much do you sell it for in the Market? Which is the nearest market?

(Mlansing) We sell our product at a wholesale price of Rs. 250 per Kilo (with the combs) at the Sohra market.

As it stands now, do you feel bee-keeping is a good source of livelihood for you?

(Mlansing) According to my estimate, beekeeping is not a very bad option at all, it is not very labour intensive, the bees need just a little care and in turn you can make quite a bit of money out of them, which has helped us provide a good source of additional income for our families.

(Rngup) Yes, and like my brother said, since it is not a very difficult thing to do, making money and providing for our families has been a big help because of bees. I have been able to provide for the school fees of my kids, household expenditure etc.

(Mlansing) Hospital bills, as well, actually this activity has helped us a lot in making our lives a little more comfortable by helping us in providing various things needed in our household.

Have you received any other training in beekeeping besides the training at RRTC Umran?

(Mlansing & Rngup) No, that was our first training.

(Rngup) We are really thankful for the training; we were taught so many new things and have been able to incorporate most of the things that they taught us.

With this new technology do you feel your yield of honey will increase?

(Rngup) Yes, of course it will. I have been able to divide hives using the method taught in the training, this way we can increase the number of our bee boxes thus enhancing our production.

Besides these trainings and capacity building measures, in what other specific areas of honey production is help of government needed?

(Mlansing) We need a lot of help in finding markets, perhaps that will help us in pricing of our product, also right now we have to sell our product at wholesale prices with the combs, hence we get to harvest honey only once or twice a year. We feel with a honey extractor, we can increase our harvest, since we do not have to destroy the bee hives, for this beekeeping tools are important. If the government could help us in this regard it would be good for us.

(Rngup) The bee boxes given by the government was a very nice gesture and we are grateful, although we need more boxes and tools.

With the launch of the Apiculture Mission in the state, are you hopeful about the future of honey production in the state?

(Mlansing) Yes, with the government taking a keen interest in beekeeping we are hopeful that more help would be provided from the government in marketing and packaging of our products.

NAME: BASKO KHONGSIT
VILLAGE: MAWKMA
DISTRICT: EKH, KHATARSHONNG



How long have you been engaged in this trade?

Beekeeping is a hereditary practice, my father was a bee keeper, although I started about 16 years ago.

Is this your Primary Occupation?

No, I am a coal miner by profession.

What is your annual average yield of honey?

I have about 40 hives, so that gives me around 150-200 kg/ yr.

How much do you sell it for in the Market? Where is the nearest market?

We sell it wholesale (with bee combs) at Rs. 250 per kilo in the market, we sell it at Sohra market.

As it stands now, do you feel beekeeping is a good source of livelihood for you?

Yes, I think it is. You see I am a coal miner, which is not a good thing to be one at the moment. Thank God for bees, they have been able to help me in providing a good source of income for me and my family as well. The income generated from the activity has helped me in sending my children to school and has enabled me to incur additional expenditure when need arises.

Are you a registered partner of the programme (IBDLP)? If yes which EFC have you registered in?

Yes, I have heard about the IBDLP programme which is why I have just registered myself with Laitkroh EFC at Khatarshonng Block.

Have you received any other training in beekeeping besides these trainings at RRTC Umran?

Yes, once at Ramakrishna mission but not as detailed as the one at RRTC.

How have you benefitted from these trainings?

The knowledge that we got from the training has helped us in becoming better beekeeper I think, now we can multiply our colonies from existing ones, without going to the forest to collect hives.

With this new technique do you feel yield of honey will increase?

I think it is too early to say that but once we get all our beekeeping equipments, especially the honey extractor it will help us abundantly.

Besides the training and capacity building measures, in what other specific areas of honey production is help of the government needed?

We need a lot of help in making bee boxes, this will help us increase our bee colonies and in turn it will increase production of honey.

With the launch of the Apiculture Mission in the state, are you hopeful about the future of honey production in the state?

Yes, I am hopeful, as the government has already taken the initiative through the mission. The assistance from the government will help us in increasing the yield of honey, but if we don't get the assistance then we will have to continue in the same way as we have been doing so far.

NAME: SYNLAN LANG NONGRUM
VILLAGE: RINGIMAWSAW
DISTRICT: EKH, KHATARSHONNG BLOCK



How long have you been engaged in this trade?

It's been about 15 years since I first started beekeeping.

Is this your Primary Occupation?

No it isn't, I am a seasonal farmer. I also undertake side jobs for a living.

What is your annual average yield of honey?

I make about 150-200 kilos of honey in a year.

How much do you sell it for in the Market? Where is the nearest market?

We sell it at a wholesale rate of Rs. 250 per kilo with the combs at the Sohra Market.

As it stands now, do you feel beekeeping is a good source of livelihood for you?

Yes, I feel this is a very good source of livelihood for me, as it has been able to help provide better living for me and my family. I think beekeeping is a blessing for me.

Are you a registered partner of the programme (IBDLP)? If yes which EFC are you registered with?

Yes I have heard people talking about the IBDLP programme and I am also curious. I am planning to visit the nearest EFC soon.

Have you received any other training in beekeeping besides the training at RRTC, Umran?

No, RRTC was the first training in beekeeping that I have received.

How have you benefitted from the training?

Yes, I have benefitted from the training. It has given me more in-depth knowledge about beekeeping. It

has taught me how to manage better and take care of bees so as to increase my yield.

Besides the training and capacity building measures, in what other specific area of honey production is the help of state government needed?

We, as bee keepers need a lot of help and support from the government, when it comes to beekeeping; I think first and foremost we need help in purchasing honey extractors, since the price of the machine is very high in the market.

With the launch of the Apiculture Mission in the state, are you hopeful about the future of honey production in the state?

Yes, I am hopeful since the government has taken up this mission. I am certain that good things will happen to us.



Success Stories

Source - MBDA Media Team



Mr. Rothel Khongsit,
Kongthong,
Khatarshong Block

Mr. Rothel Khongsit is one of the enterprising master beekeepers of the Kongthong village. Mr. Rothel was felicitated by the Chief Minister during the launch of the Apiculture Mission in Shillong. He is one of the qualified farmers from the village who have completed his Bachelors in Commerce (B. Com) and engaged himself in the trade since 2009. While interacting, he expressed his satisfaction for the contribution he is able to make towards his parents, wife and kids.

He stated that, "beekeeping is my primary occupation and source of livelihood for me and my family. I usually sell honey in Shillong for a price ranging between Rs. 60 to Rs. 100 per kilo and also participate in the events like exhibitions or trade fairs under the name Pure Nectar Honey, which helps in earning more profit compared to the local market. It fetches me around one lakh rupees per year. The modern scientific method helps in yielding more honey compared to other techniques for harvesting. The IBDLP programme is a boon for the farmers of the state and I am happy that the assistance provided by the

EFC has helped me in growing as an entrepreneur. It will be more helpful for the beekeepers of the state if a proper market linkage is there for selling the honey in the local as well as national market".

Mr. Rothel is a registered partner with Laithkroh EFC, East Khasi Hills under the IBDLP programme. He has received training from Rural Resource and Training Centre (RRTC), Umran and Agriculture University, Bangalore. He also works with AFC Shillong Ltd and helps them in services like community mobilization for training. He also acts as interpreter during field visits as well as during training programmes.

Mr. Jipson Roy Sohklet is one of the youngest master beekeeper of his village. He is a degree holder and a registered partner with Laithkroh, EFC under the IBDLP programme. Beekeeping is an additional source of income for him and his family. His primary occupation is farming. He has 26 colonies with an average annual yield of about 70 to 100 liters of honey, which is sold at the local markets with the help of a middleman. The beekeeping activity gives Mr. Jipson an additional income of Rs. 20 to Rs. 40 thousand per annum apart from what he gains from farming of bay leaves and broom grass.

He has undergone a week long training programme at RRTC, Umran, to enhance his beekeeping skills. He expressed his hope and gratitude for ample opportunities provided by the Government of Meghalaya through the launch of the Apiculture Mission.

"Beekeeping activity has become an additional source of income which supports farmers like me during emergency. At present we are selling the honey at an average price but if we can get a better understanding on the proper technique of packaging and bottling, I feel this will be an add-on in getting a premium price for the product in the market", said Mr. Jipson Roy Sohklet.



Mr. Jipson Roy Sohklet,
Kongthong,
Khatarshong Block

Notes



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