

A Brief Study on Bee-Keeping Business in Razeba Village under Phek District

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fulfilment for the degree of Bachelor of Commerce*

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DECLARATION

I declare that the project report entitled “A Brief Study on Bee-Keeping Business in Razeba Village under Phek Distric” submitted by me for the award of the degree of **Bachelor of Commerce** of Nagaland University is my own work. The project report has not been submitted for any other degree of this University or any other university.

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CERTIFICATE

I forward this project report to be placed before the examiners for evaluation.

NGIPLON RACHEL CHOHWANGLIM
Supervisor

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CHAPTER 1 - INTRODUCTION

1.1 Background

The project on Bee-keeping in Razeba village under Phek District has been done in a view to promote the honey business of village by documenting through apiculture (scientific terms) study of bee-keeping. This research work is the first attempt within a native village. It is taking care by some group of youth with the help of some scheme provided by the Government.

The practice or rearing of bee-keeping was first brought up by the young men name Velazho Dome with the collection of two different kinds of Bees called as stingless-bee and apis mellifera. He gives lot of afford and hard labour to store the bees at his interest with the collection of 11 honey-bee boxes. He was the only person in the village who practices this system without the support of government. There is no will practice of rearing bees in the village during those days. But after been support by the Government in the year 2018 lots of young age people start to practice the system and know the value of bee-keeping.

The beekeeping is a male dominating enterprise which is mostly carried out by the young age people having low level of education, landless to small land holding and with low income. The adoption of beekeeping as an enterprise within the village was low because it is due to the various constraints like priority to other activities, lack of resources, and lack of quality equipments etc are not available. At the same time, some factors like low initial investment, less labour intensive, less technical and good return favoured the adoption of beekeeping. To support the adoption of beekeeping to increase in awareness within the village, provision of loan facilities and improve in marketing structure of bee product are the major steps necessary to be taken by the government and other organisations.

1.2 Literature Review

Using stochastic frontier production function given by “Eman T Alropy, Noha E Desouki, Mohamad A Alnafissa” in the year 2019. The study estimates and compares technical efficiency levels among beekeeping projects and the most important economic indicators, estimates the optimum production amount, and investigates use of technical efficiency. It also conclude that the average cost of production of honey decrease when the production capacity increase. However, the results of production function indicate an increased return to scale.

Das Rakesh et al. (Feb. 2019), the study concluded that Naga keep Bees as a kind of hobby and not for commercial purpose. Therefore awareness about the importance and usefulness of native bees has to spread among the farmers. Like the value of honey and other hive products which would help them to improve their economic condition and livelihood.

According to “Moasunep Kichun, Manali Bhattacharya” 2020. Traditional practice of beekeeping is negligible due to little or no domestication technology. Stingless bee is the smallest honey producing bee. The honey of stingless bee taste sweet and sour and is different from common honey. The stingless honey has an ethno-remedy to treat various diseases and usually take it to get strength and energy. It is a high demand in the market because of its great medicinal value. However demand of the market is not fulfilled due to less number of stingless bee keepers.

According to “HK Singh, Avinash Chuhan” in the year 2020. Bee-keeping with the Stingless bees are mostly found in the topical part of North Eastern in Indian. About nine species of stingless bees are found within in Nagaland so far. Floral cycle of stingless bees disclosed important plants for different development season. Stingless bees nesting sites and architecture revealed different forms of cells comprising from queen, males and workers. Bees store honey and pollen in different cells which are

bigger than brood cells. Rearing of bees is discussed with their utilization for pollination of crops.

1.3 Research Objective

- To promote beekeeping for the local business.
- To document the beekeeping practice into productive business.
- The collected data can provide scope of further research.
- To present for reference study of beekeeping business.
- To lay down a base academic research in apiculture.
- The study of Beekeeping business has been mainly focused on the structure of local entrepreneur, how the work of the beekeeping has been carry out to form for the best use of honey production.
- The study research does not accomplish the study of Apiculture, but with the basic findings, it is hoped that from the ground work is for further exploration and research in this beekeeping business.

1.4 Research Question

- a) Is beekeeping business a sustainable business in Razeba village in terms of profitability?
- b) What are the challenges and problems faced by the business?

1.5 Research Method

- Primary sources: In this study the primary sources of data was collected from different person through phone talk from the owner, co-workers and care-taker. The interview was done informal to gain much information as much as possible.

- Secondary sources: The secondary sources of data are collected from the websites and articles to supplement the primary data and to support the study.

CHAPTER 2 – BEEKEEPING ANALYSIS

2.1 INTRODUCTION

Bee-Keeping is the most industrious and valuable creatures for mankind. They are the source of honey and various other products. Honey bees have been working in field tirelessly for millennia and in the process polling our agricultural crops and thus are agriculturalist best friend. They also play an indispensable role in maintenance of our biodiversity.

Phek District which is located under Nagaland State dwelling plentiful bee flora is as a natural endowment. Indigenous techniques, equipment and traditional beekeeping knowledge are goldsmith due to simplicity and low cost input, shows great promise to visionaries for their envisage. The suitable agro-climate, plenty bee flora and immemorial practice with rich traditional knowledge offers enormous potential for development and success of apiculture in the district. A keywords: majority of the beekeepers responded, the wax moth attack is higher in scientific box, while literate new generation, and trend beekeepers were interested with scientific beehive. The Chakesang Tribes know different indigenous method of colony capture different types of traditional bee hives and indigenous method of pest management. Simultaneously traditional honey harvesting method is direct threaten to bees which require scientific intervention for conversation to Honey bee role as a pollinator to enhance the crop productivity and conserve the plant biodiversity are more valuable then bee hive products.



Bee hive

One of the sectors of sustainable development in Beekeeping is also known as Apiculture, it is an agricultural branch in which beekeeper take care of honey bee colonies, usually situated in hives. Beekeepers keep bees in order to collect honey and other products of the hive (Beeswax, Propolis, Pollen, Royal Jelly) and to pollinate crops. Bees play a vital part in our nature ecosystem as they are responsible for the pollination of many fruit, nuts, vegetables and other species.

In a state like Nagaland, where access to income through industrial means is limited, taking up such activities which does not require complex technologies can contribute significantly to livelihood security while providing positive impact to the flora and fauna found within.

2.3 BEEKEEPING PROSPECTS IN NAGALAND

Since time immemorial beekeeping has been in practice in almost all the rural area of the District. Bees are reared by the many beekeepers in simple boxes, tree trunks and logs, bamboos, underground chambers etc. The existence of a rich traditional knowledge on beekeeping practices, ideals climatic conditions and natural abundant forest coverage makes it a variable utopia for honey bees to thrive. The important things

are to recognise people's knowledge and skills and build on them the scientific methods of bee-keeping for greater income generation and to ensure sustainability.

The Village is also blessed with a rich bio-diversity for bees colonies to survive. Diversity of bee resources (different species of honey bees) both wild and domesticated and human resources, the existence of a huge population that are attuned to living off the forest and its resources in a sustained manner paves the way for ushering in thriving beekeeping and honey sector. It also has the potential to produce premium honey due to lesser industrialization and stress being laid on organic farming systems.

People are willing to take up apiculture alongside base on their agriculture activities to bolster their income through honey and increase in crop yield, the farmers are readily able to apply the principles of bee keeping to the climate and vegetation around them. Beekeeping has the scope to enhance and conserve the rich yet fragile plant bio-diversity of the village.



Style / Way of keeping bee box

2.3 ECONOMIC OBJECTIVES

- To develop scientific and sustainable beekeeping industry.
- To increase agricultural productivity through pollination of bees.
- To provide diversified employment opportunities through commercial beekeeping and honey market for the burgeoning educated unemployment youth and reap the benefits through increased levels of income and employment generation.
- To develop effective forward and backward linkages with beekeepers for providing technical know-how, training procurement of honey and other bee products.
- Make the epicentre of honey trade for the whole country and develop access to export markets.
- Develop communication network for enhancing and promoting bee keeping as a major economy boosting industry.



Workers on the progress of making honey on bee hive

2.4 SOCIAL OBJECTIVE

- To promote food and nutritional security, environment security, productivity, profitability through honey revolution in the area.
- To popularize honey consumption as essential food item in daily diet and positioning honey as both a healthy food and as an ingredient in products with medicinal value.

2.5 ENVIRONMENTAL OBJECTIVES

- To protect and conserve the rich bio diversity associated with large bee foraging area.
- Increase the population of bees colonies through active breeding and promotional techniques and maintain ecological balance.
- Honeybees pollinate a large number of plants and crops which helps to increase productivity and maintain the stability of ecosystem.

Things that can be done to save the bees

- Stop indiscriminate usage of pesticides and insecticides
- Stop burning jungle as they destroy natural habitats
- Plant bee foraging plants
- Provide sites for bee hives
- Support your local beekeeper
- Learn about bees and tell others for the practices
- Become a beekeeper



Harvested Honey

2.6 Some of the activities that are done by the Nagaland Beekeeping and Honey Mission (NBHM) are as follow under;

- Survey and documentation
- Sensitization awareness creation
- Capacity building and skill up-gradation programmes
- Research studies
- Apiculture development and promotion
- Post-Harvest Management and Quality control
- Market linkages and value additions
- Consultancy services
- Convergence programs with Line Department

With the interventions of the mission a vibrant and organised beekeeping and honey sector has been established. With the mission initiative 18520 people have been trained on scientific management honey bees. A total of 505 Sensitisation programmes have been conducted and 486 numbers of trainings conducted covering all 11 districts of the State. The growing tribesmen of honey producers in producing around **430** MT of honey annually, making Nagaland and leading honey producing destination of the NE region ‘Nagaland Honey’ is now the first choice of the honey for most honey connoisseurs not only in the state but beyond the region. Demands for Nagaland honey

is ever increasing from various buyers and honey traders from across the country and international buyers. The State is now on mission to work towards meeting this enormous demand.



Development of honey

The State Government has declared NBHM as the State Designated Agency (SDA) for implementing Beekeeping and Honey development programmes in Nagaland. The State Government has declared the 5th of December of every year as the Nagaland Honey Bee Day (NHBD), with the approval of the Cabinet, Vide their OM. No. CAB-2/2013 dated 26th April, 2017 and Government Notification No. APC/CELL/NBHM/2010-11 dated 7th August, 2017. This befitting recognition for the vast scope and potentials of the beekeeping and honey sector. The nascent beekeeping and honey sector of the State promises to be an Investor's destination as it offers an enormous potential for research undertakings on the bee species diversity, honey marketing, value addition, development of apitherapy and bee tourism which is largely lying untapped.



Operation System

Products and Services

The common problem reported by beekeepers managing are the colony's natural response to unfavourable environments, such as limited food or pest and disease pressures. This behaviour is also exacerbated by unfavourable hive design, poor management techniques and poor understanding of honey bees nutrition. Correcting this problem can extend to deter the colony from absconding. This issue could be improved by providing appropriate training, educational materials, and extension services for improving basic bee husbandry, Supplement feeding during death periods, and management of pests and disease.

CHAPTER 3 - CONCLUSION

3.1 Finding

The villager had tough time. Nobody was willing to lend money for their children education, but when they started rearing bees, people tend to lend them money. As there is a secure beekeeping income, now they can afford their children education and manage other miscellaneous expenses. now the villager are into beekeeping as it is a profitable sources of income.

Bee Honey is also a medicine, it gives one of the best medicinal within the world. The villagers usually sells the product at Pfutsaro, Kohima and Dimapur. It was sell it for Rs. 1600 per bottle of 750ml. Honey bee is one of the most important honey among all the honeys. The use of honey is use for all the medicine prepares for the last 20 years.

Beekeeping is also a practiced not only for honey, medicine and food production but it also applied in agricultural for better crop yield. It also helps in conserving the fragile bio-diversity and maintains eco-friendly and provide health in nature. Keeping bees can make our garden more plentiful and larger. It will also dramatically increase the yield of vegetables and plants that require pollination to produce fruit.

Bees are pollinators which transfer pollen from one flower to another. This fertilise plants so that can grow and reproduce. They don't only help the immediate area where they're kept. They can gather nectar and pollen from miles around and spreading diversity and sustainability throughout the ecosystem that they are a part of it.

3.2 Suggestions

- The farmers need to improve beekeeping.
- The awareness programme should be organised for the unemployment youth and motivate the farmers as a suitable sources of income.
- The Government should look forward to the practices and provide necessary equipment and technical for the better production of honey.
- Training or workshop on modern and scientific method of bee rearing alone with the traditional method should be organised.
- Honey beekeeping should be their full occupation by setting up their farm in an open space.
- The farmers with beekeeping must turn into full time prosperous of beekeepers.
- Government or Financial institution should provide loan or financial assistance to prospering beekeepers to expand the business.

3.3 Conclusion

Traditional beekeeping is an incredible technique beyond imagination. The traditional methods of honey harvest is gruesome and directly threaten to bees. The scientific interventions essential in harvesting method for improve honey quality and bee conservation. Integration of indigenous techniques, innovation and envisage can gives best result. Apiculture is also can be a tool for maintaining wild biodiversity through bee pollination and exploits to the nectar, pollen, resin etc. which have been wasting in nature due to un-utilized. Razeba village has huge scope to harvest the bee hive products and employment to the village people. Training and encouragement of small scale beekeeping can lead to the greater success in apiculture.

Beekeeping business research shows that it has a brighter future of business for honey mission within the village to export goods to the state. Beekeeping practices requires little or no investment other than hard work and passion. It has lot of potential to provide income and to generate employment. Farmers should inculcate the habit of hard work, consistency and should change the attitude of looking for subsidy or quick money. The village has abundant forest with nectar-rich flowering plants and favorable climatic condition to start hunting for bees and begin to collect with a colony, and then slowly

increase in numbers. One alarming factor is the lost of foraging plant due to the deforestation or jhum cultivation. It is high time that the plantation of foraging plan for the bees has to be done. Another threat is that the pesticides and it's restricted to the surrounding areas. Beekeeping should be encouraged to be taken up in commercial scale as there is lots of demand and scope. Through this many employment will be generated for the sustainable livelihoods.

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