

TRAINING OF TRAINERS WORKSHOP ON SUSTAINABLE BEEKEEPING



WORKSHOP OBJECTIVE:

- ❖ TO TRAIN MOGHAMO BEE COOPERATIVE MEMBERS AS TRAINERS ON SUSTAINABLE APICULTURE

LOCATION: GUZANG-BATIBO, MOMO DIVISION, NORTH WEST REGION OF CAMEROON

DATES: 14TH - 16TH AUGUST 2017

SPONSOR: DONATIONS FROM INDIVIDUALS THROUGH THE
GLOBALGIVING USA

FOREWORD

Honeybees are an integral part of the human food chain as pollinators of crops. As pollinators they also have an essential role in maintaining biodiversity and the mountain environment. Beekeeping has contributed to rural development through the centuries by supporting agricultural production and providing honey, wax, and other products for home use and sale. Beekeeping has a special significance for farmers in Batibo Sub Division , Momo Division of the North west region Of Cameroon. It offers a way for those with few resources – especially poor and landless farmers and women – to obtain income, as it requires only a small start-up investment, can be carried out in a small space close to the home, and generally yields profits within a year of operation. Farmers have kept bees in local hives for centuries for personal use, but beekeeping is now becoming more popular as an income generating activity. To take full advantage of bees, farmers need to take a modern approach to bee management using frame hives and focusing on production of quality colonies and quality honey. For this they need up-to-date training. The three days training workshop covers the full range of basic topics related to beekeeping development, including the importance of beekeeping in modern agriculture and the use of bees for crop pollination; production of honey, wax and other hive products; honey quality standards; and using value chain and market management to increase the benefits to beekeepers. The focus was on participatory hands-on training, with issues explained in simple/local language and many illustrations. We are confident that this training will be a source of support to the *Moghamo Bee Farmers Cooperative (MBFC)*, and will help poor farmers,youths, women and men, to develop a sustainable livelihood from bees and beekeeping, while contributing to the protection of this valuable social insert and maintenance of a healthy environment

ATABA JUDE FONSAH
DIRECTOR
CISEGD Cameroon
www.ciseged.org

INTRODUCTION:

Sustainable bee farming is completely a new concept in Batibo Sub Division , Momo Division of the North West Region of Cameroon. Consequently, no training programme exists and therefore the training of bee farmers and field technicians has been piece meal.

It is for this reason that CISEGD Cameroon decided to seek assistance through the Globalgiving platform to train members of the newly created ***Moghamo Bee Farmers Cooperative*** as trainers who will intern train other members of the community on sustainable beekeeping.

30 participants were trained for 3 days and a guide provided to them that contains material for trainees who will become field trainers. 20 bee hives was constructed and installed at the Guzang watershed. 500 trees of prunus African and callaindra tree species planted to protect the watershed for biodiversity conservation and livelihood improvement.

We are happy that the training was completed successful thanks to all donors who made individual donations to the project through the Globalgiving platform . Many thanks go to the ***Pollination Project USA*** for the seed grant provided to kick-start the project. We are also grateful to technicians from ANCO and CISEGD who co-facilitated in the training workshop and produced a document that will be used by trainers in the field.

It is our hope that the training will assist members of the ***Moghamo Bee Farmers Cooperative*** to accomplish their mission much more efficiently.



20 kenyan Top Bar Hives(KTBH) constructed for the creation of the Cooperative Apiary at the Guzang community watershed

TRADITIONAL AND MODERN BEEFARMING:

The participants were introduced to the value of beefarming, traditional beefarming, disadvantages of traditional beefarming, modern beefarming and disadvantages of the Top Bar Hive. Some suggested illustrations like A mother feeding a child using pap mixed with honey, A family at breakfast using honey for tea, Bees carrying out cross pollination on flowers, samples of good honey, beeswax, propolis and pollens , a traditional hive installed up in a tree and someone on the tree trying to harvest honey using a flaming straw. All these suggested illustrations were used to support the facts made in the presentations of the above topics and enable participants learn by examples.



Traditional Hive made from raphia palm trunk



Modern Hive (KTBH) made from wood



Practical lessons on the installation of modern hives

CONSTRUCTION OF KTBH AND PARTS OF THE KENYAN TOP BAR HIVES (KTBH)

It was elaborately described to participants how to construct a Kenyan Top Bar Hive and the necessary tools and materials needed to get ready. The trainees learnt that a KTBH can be made with wood or bamboo or some other material and that a KTBH has the shape of oblong box with slanting sides to imitate the normal shape of honey comb. They also learnt that a KTBH has an average of 30 Top bars with 8 parts as follows: (A) The Top Bar with normal width of 3.2mm, length 48cm and width of the honey comb base on the Top bar is 1 cm. (B) The Lid or cover is a normally made of plywood or zinc nailed to a wooden frame with the length of about 97 cm and width of 56 cm. (c) The landing Board which is made on one of the gable sides for the entrance is provides a place for the bees to land before crawling into the hive and the board should not be more than 2 cm otherwise it will provide a comfortable space for bee pest to watch and catch the bees. (d) Long sides made to slant so that the top of the hive is wider than the bottom and two long sides having no openings with normal length of each sides measuring about 75-90cm. (E) The bottom Board is always made of blank with its width 19cm and length 92cm including the landing board. (F) The gable end is the shape of the two gable end that give the KTBH its shape. The gable end is 19 cm wide at the bottom, 30.5cm high and 44.5cm wide at the top. (G) The handles that are provided on the gable ends so that the KTBH can easily be moved by two persons or use to secure a rope or a chain to hang the hive on two sides.



Practical lessons on Hive Construction (KTBH)

STERILIZATION AND BAITING A HIVE.

Participants learnt that the purposed of sterilization is to kill germs and pest in the hive before installation. They were trained to do the following to sterilize a hive: Light a fire using materials that flame fast such as dry grass or paper, remove the hive cover and top bars. Turn the hive up-down over the flames for a few minutes, do the same thing with the cover and top bars particularly those with cracks and crevaces, put back the top bars and cover for baiting .Baiting: This is putting or spraying something in the hive that will attract bees and trainees were told that the following items can be used: bee wax to melt and coat the honey comb base of the top bar, corn beer/ sweet raffia or palm wine use to spray a quantity of any of these in the hive., dry cassava flour place a quantity in the hive and some close to the entrance. This is very effective in the dry season. propolis: warm and stick a small quantity in the hive. Honey: place a small quantity comb on the top bar and cover the bars with the lid. Honey chaff: put some honey chaffs in the hive or hang some in a cloth bag from one of the top bars.



Practical lessons on Hive sterilization and Baiting





Participants loading of hives for transportation to the watershed



Participants transporting hive stands to the watershed for installation of hives



Transportation of hives to the watershed for installation





INSTALLATION OF KTBH:

Participants were taught how to install hives of various types with examples that a hive can be installed on a log of wood, on four poles or on a branch of a tree or hang on two poles. It was further explained that the method you use should be decided taking into consideration: the common pest in the locality, the size of the apiary and the security of the hives.





*Participants
learn about
hive
installation
and
Rejoice after
successful
installation*



A developed Cooperative Apiary at the Guzang community watershed



Group photo at the Developed apiary with members of the cooperative and guest from USA

MANAGEMENT OF APIARY AND KENEYAN TOP BAR HIVE (KTBH)

It was noted that the management of the apiary and care of KTBH should be done by clearing the surrounding to ensure that pest do not reach the hive. The hive should also be covered with a lid or zinc and grass to avoid direct rain and sun into the hive.



Participants returned to the apiary after two months to clear the surrounding



Group Photo with members of the cooperative taken after clearing the apiary

BEE PEST AND DISEASE;

Participant learned that the common enemies (pest) of bees in Cameroon are: man considered as the leading enemy because they use flaming straw for harvesting which kills about 2-3000 bees per harvest per hive. It was also explained that this flaming straw cause accidental fires that do havoc to the environment, property and sometimes life. Man also harvest wrong combs from traditional hives, tree trunks, holes in the ground resulting in the death of bees. Deforestation or cut down forest deprived bees of shade, nectar and pollen. It was further explained that man indiscriminate use of agricultural chemicals also kill bees directly, others get into the pollen or nectar and contaminate the honey and others destroy plants that supply bee needs. Participants were then told to educate and train farmers on modern techniques of beekeeping as well as the use of organic chemicals for farming. Animals were also considered enemies to bees with a good number of them being the honey-burger, birds, lizards, rats, spiders and safari ants that eat honey and bees. They were told how to manage these pests through regular visits and checks of hives as well as cleaning the surrounding regularly.



Safari ants (common Bee Pest)

HONEY HARVESTING:

Participants were given practical lesson on harvesting using a smoker. it was noted that time of harvesting depends on when the hive was colonized and that a big colony may take 4-5 months to produce honey for harvesting. They were also told that bees have a period of scarcity of honey and time of plenty of honey know as honey flow season. T was imphasized that bees must not be deprived of honey especially during the period of scarcity. In the north west region honey harvesting start around November and ends in June.it is advisable for the beefarmer to wait for the honey flow season.



Theoretical lessons on honey harvesting



Practical lesson on honey harvesting

BEEWAX EXTRACTION:

Beewax is a creamy colored substance produced as liquid from the glands of bees. Many participants do not know beewax and think honey is the only thing man gets from the bee. Participants were thought on the necessary equipment's used in bee wax extraction and the steps involved.



Practical lessons on bee wax extraction

CONCLUSION AND OUTPUT

Overall, the workshop was very well received by all participants. This became clear through observations of the group dynamic during the training as well as in several individual conversations with the beekeepers. Also, the evaluation at the end of the workshop showed it to have been especially motivating for the youths to build up their honey production and invest more time into the well-being of their bees and to re-invest into equipment. The men of adult age were inspired to also explore other potential sources of income that they did not know about before, such as the potential of bees wax marketing. Furthermore, the consumption of honey with health benefits that the community had not been aware of - presents an excellent nutrition substitution for children and elders and can contribute to the resilience and prevention of sicknesses and malnutrition of the villagers.

Almost all participants stated that most information given and hands-on practice in the field was new to them and provided them with a technical basis desperately needed to maintain and expand their bee colonies in order to make a profitable business out of them in the future. This beekeeping training marks an important step towards the development of environmentally friendly livelihoods which empower youths and adult men to contribute to a sustainable future for their community and the protection of honey bees in Batibo Cameroon. It was noted that the Guzang community watershed is a hotspot for bees as 18 out of the 20 hives installed was colonize in just a week. It is a sign that bees lack homes and the hive is one of such home that will protect them.

The Moghamo bee cooperative have developed an apiary in the watershed and plant trees to contribute in the protection of the watershed while safeguarding this endangered unique bee species ,maintain biodiversity and improve livelihood.

Recommendations for future steps include further workshops to build up further beekeeping and marketing/business skills, especially in the area of hygienic packaging and re-investing into beekeeping.

We thank all of the members of the Moghamo Bee Farmers Cooperative for the eager and attentive participation in the training. We would like to give special thanks to ***Sean Potts (American Peace Corps Volunteer) and Ataba Jude Fonsah (Director of CISEGD)***, who both dedicated their time and expertise to the success of this workshop.