

BEEKEEPING TRAINING REPORT

THE FUNDAMENTAL BEEKEEPING TRAINING PROGRAM

« Changing to Modern Beekeeping »

SESSION N° 3



Venue Classic Hotel-Kigali-Rwanda

Date: 14th – 18th February 2022

Table of content

EXECUTIVE SUMMARY	4
INTRODUCTION AND BACKGROUND.....	4
Opening Remarks	4
General rules and norms for training	5
Training objectives.....	6
Participant expectations and preliminary assessment.....	6
TRAINING APPROACH AND METHODOLOGY	6
Course proceedings.....	7
STRUCTURE AND THEME OF TRAINING.....	7
Biology and behavior of honey bees	8
Challenges:.....	9
Recommendations:.....	9
WORKING WITH THE HONEY BEES' COLONY.....	10
Summary.....	10
List of the experts in queen management, protection and transfer.....	11
Proposed bee friendly plants.....	12
Challenges.....	13
Recommendation:	13
MANAGING HONEY BEE COLONIES.....	13
Summary.....	13
Challenge	14
Recommendation.....	14
Queens rearing	14
List of participants, experts in queen rearing	15
Good news.....	15
APIARY MANAGEMENT	16
Laws regulating apiculture	17
Summary.....	17
Challenge:	17
Recommendations:.....	17
Honey Bee Nutrition	18

BEE PRODUCTS AND THEIR HARVEST	18
Summary	18
Api-tourism	20
Challenge	20
Recommendation	20
NEW LESSONS LEARNT AND BEST PRACTICES	20
CLOSING REMARKS	20
RECOMMENDATIONS IN GENERAL	21
GOALS SET BY PARTICIPANTS	22
CONCLUSION	22
ANNEXES	23
ANNEX I: LIST OF PARTICIPANTS	24
ANNEX II: SOUVENIR PHOTO	26
ANNEX III: MODERN EQUIPEMENT AND MATERIALS USED IN MODERN BEEKEEPING	27
ANNEX IV: TRAINING AGENDA	28
ANNEX V: TRAINERS AND ORGANIZER’S PROFILES	28

EXECUTIVE SUMMARY

Beekeeping in Rwanda has always been traditional where honey was used as food product, medicine and for brewing traditional liquor. They used and still many beekeepers use traditional equipment to produce and harvest honey. They have limited information on the importance of using modern beehives and other modern equipment to produce plenty of quality honey. They are not aware of the world's big market for bees' by-products which normally they throw away instead of adding value to them.

It is in this context that, EG-Honey Trading Ltd. Company chose to work with Rwandan beekeepers and all other stakeholders to promote beekeeping industry such that it becomes the first contributor to improved Rwandan's economy, through continued collaboration and training of beekeepers to allow them have access to vital beekeeping skills, knowledge and modern equipment.

This training's goal is to awake beekeepers to shift from traditional beekeeping to modern beekeeping, understand the importance of bees in the biodiversity systems, learn to take care of bees, learn how to manage their apiaries in a professional manner, bearing in mind international standards related to beekeeping.

Eng. Ahmed ALLAM (*CEO of EG-HONEY Ltd*) emphasized that trained beekeepers must be serious and use the skills and knowledge acquired to invest in professional bee farming for nutritional, medicinal, environmental and more importantly for profit-making purposes.

INTRODUCTION AND BACKGROUND

Opening Remarks

Eng. Ahmed Allam, welcomed the trainees and addressed a word of gratitude to RAB, RDB and FAO for their determination to supporting beekeeping industry in Rwanda. Mr. Willy MWIZA, Representing RAB/MINAGRI, welcomed all participants and declared the training open at Classic Hotel, KN 3 Rd, Kigali, Rwanda from 14th till 18th February 2022. He kindly sought trainees to make use of this opportunity by following the training meticulously and by implementing what they will have learnt as soon as they get back to their daily activities.

This third session of beekeeping training focused on the fundamentals of beekeeping and profit making. Trainees were reminded that they must believe in the profitability of their beekeeping activities once they are professionally done. Organized by EG-HONEY Ltd with support from various partners including Rwanda Agricultural Board (RAB), Rwanda Development Board (RDB) and Food and Agriculture Organization (FAO); this training is the effort to promote scientific, technical, ecological, social and economic apicultural development.

The training was facilitated and interpreted by Mr. Jean Nathan SEZIBERA and Me Beatrice UWIMABERA, whereas trainers were Prof. Dr. Awad HASSAN and Eng. Ahmed Allam.

Trainers emphasized the importance of bees in the biodiversity and ecological systems. They mentioned that science and clinical studies have revealed the anti-inflammatory and immunomodulatory properties of honey and other bees' products. Medicines based on apiary products can cure cancer, diabetes, hypertension, inflammation and many other diseases. They exposed the truth that with regards income generating, honey is the least product, it generates a little money compared to other types of apiary products.

During this training participants were shown various modern tools, materials and equipment used in modern beekeeping. They also learnt several modern techniques and methods of producing, collecting and packaging various products generated within the apiary. Trainees were taught important techniques of multiplying bees and especially queens, which are very crucial to succeed in beekeeping. Moreover, RAB and RDB Representatives informed that bees' products are highly demanded on the regional and international markets and that very good money waits for those who are going to professionally venture into the production of all bees' products. Participants were reminded that laws and rules around quality and international standards apply.

General rules and norms for training

After the opening remarks, participants enacted norms to guide the workshop as follows:

Punctuality: arrive on time for training and return on time from coffee break and lunch break. Arriving late is a sign of disrespect to your colleagues and to your trainers.

No disturbances: mobile phones to be turned off or put on silent mode for the duration of training. Avoid side conversations: If you are unsure of anything being discussed in training please ask the trainer to clarify.

Dignity and Respect: Respect other course participants and the trainer(s), do not interrupt others, when they are speaking, listen actively, no hostility or personal attack, encourage free expression of thoughts, views and opinions, no monopolizing.

Agree to disagree: respect others' views and opinions and have an understanding and acceptance that there will be differences in opinion, challenging/disagreeing is welcome but should be conducted respectfully, critique ideas/opinions and not the person delivering them, discussions should be open and frank and should not be seen as personal attack.

Confidentiality: all participants bring a wealth of experience to the training, matters discussed in training specifically relating to individual experiences/case histories must, be regarded as confidential and must not be discussed outside of the training program.

Audience participation: training will only be effective if there is audience participation and if there is a two-way process, between the trainer(s) and course participants, success will be dependent on the inclusion of every individual view, the course participants bring a wealth of knowledge to the training and therefore contribute significantly to the course content, everyone should be given an opportunity and encouraged to contribute to the training.

Ask questions: all questions, however trivial they may appear to you, are important so don't be afraid to ask, if you have difficulty asking a question in the group please ask a trainer during break time, if the question is related to something that will be covered later in training agree to "park" the question and make a note on the flipchart to remind the trainer of all questions asked to ensure they have been addressed at the end of the training.

Follow the Agenda: the trainer(s) will endeavor to stick to the agenda as set for the program as far as is reasonably practicable, the use of the "Park Questions" resource will be utilized to support this, audience participants should co-operate also in sticking to the agenda as far as is reasonably practicable. It is inevitable that there will be some divergence from the main topic which will be managed within allocated time resources.

Provide honest Feedback: at the end of the program, you will be asked to complete an evaluation form, it is important that you are honest in your evaluation as your evaluation will influence future training program and can be used to improve future training, constructive criticism is important and appreciated as it is the only way we can improve this program.

Training objectives

Training objectives included:

- To understand the fundamentals of beekeeping for the purpose of profit making,
- To emphasize the importance of quitting the traditional bee keeping in favor of modern bee keeping,
- To inform the participants that there are other types of products which are marketable apart from honey,
- To prepare the participants for subsequent trainings.

Participant expectations and preliminary assessment

Participants were asked to share their expectations from the training which they mentioned as follows:

- Learn how to shift from traditional beekeeping to modern,
- Acquire general knowledge on bees,
- Meet and connect with experienced beekeepers,
- Learn how to multiply bees,
- Learn about value addition to honey products, and
- Learn about local, regional and international markets.

TRAINING APPROACH AND METHODOLOGY

To deliver training, English language translated to Kinyarwanda language were means used, through an interactive and participatory approaches. Topics were taught with the help of PowerPoint presentations and practical demonstrations.

This training covered 5 major topics:

- ✓ Biology and behavior of honey bees,
- ✓ Working with the honey bee's colony,
- ✓ Managing honey bee colony,
- ✓ Apiary management, and
- ✓ Products and their harvest.

Trainers used interactive methodology to ensure that knowledge was distributed accurately and understood by trainees, through open discussions, feedback, queries and suggestions. Effective tools and training materials were used for the training to be a success: participatory sessions through questions and answers, group activities and power point presentations. Seven groups were formed and their representatives elected:

- ✓ Umuzinga (Bee Hive): NZARUBARA Bosco
- ✓ Inzuki (Bees): NZIRORERA Jean Pierre
- ✓ Insinda (Pollen): MUKAMUGEMA Seraphine
- ✓ Urucumbu (Propolis): MBARUSHIMANA Claude
- ✓ Umutiba (Traditional Hive): KWIZERA Raymond
- ✓ Urwiru (Queen): KWIZERA Jean de Dieu
- ✓ Urubori (Bee Venom): HIRWA Prince.

Course proceedings

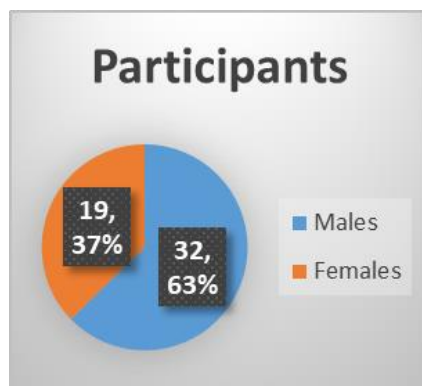
- ✓ To start a topic the trainers tested the level of knowledge by the participant on the incumbent subject, through questions and answers, brainstorming and sharing of personal experience,
- ✓ After each presentation, facilitators summarized the presentation to help trainees easily get a take home message,
- ✓ Before tackling the subsequent topic, revision of the last topic was done,
- ✓ The trainer and co-trainer complemented perfectly each other during any subject presentation,
- ✓ During the course of the presentation, proactive and evaluation questions were asked to participants,
- ✓ At the end of every training day, the moderator of the training workshop provided a “Dusangiyе Ijambo” aiming at helping trainees to grasp an overview of what was taught the whole day.

STRUCTURE AND THEME OF TRAINING

Participants included trainees, experienced beekeepers, beginner beekeepers, beekeepers-to-be and dealers in apiary products. Trainers included Prof. Dr. Awad HASSAN from Egypt and Mr. Willy MWIZA, the Representative of Rwanda Agriculture Board (RAB). Rwandan Government was also present through Celestin KABERA.....Representative of RWANDA DEVELOPMENT BOARD (RDB). Please visit annexes to learn more about trainers' profiles.

EG-Honey Trading Ltd's CEO and staff, facilitators and organizers were also present. Technicians, carpenters were present to learn how to contribute to “Made In Rwanda” program, through availing modern equipment and materials required to run professional beekeeping

activities. Total number of participants was 51 (32 males and 19 females). The percentage of women beekeepers was 37% as per the attached participants list.



Facilitated by EG Honey partner's resource person, trainers allocated major topics to five days as follows:

- 1st Session: biology and behavior of honey bees,
- 2nd Session: working with the honey bee's colony,
- 3rd Session: managing honey bee colony,
- 4th Session: apiary management, and
- 5th Session: bee products and their harvest.

1st Session: BIOLOGY AND BEHAVIOR OF HONEY BEES



Mr. Jean Nathan, the moderator, started by welcoming all the participants, presented the team made of trainers and facilitators and Government Representatives. He also mentioned the objectives of the training, rules and regulations to be followed by everyone throughout the training, and he explained the agenda and calendar for the whole week, stating how topics will fall out one after another. More importantly he reminded everyone to follow all measures aiming at fighting and preventing COVID-19.

Eng. Ahmed Allam, CEO of EG-Honey Ltd explained his collaboration with RAB, RDB, etc. in order to promote the modern beekeeping in Rwanda which is more profitable than the traditional

way of breeding bees. He said that they will focus on queen rearing promotion and continued on-the-job training (OJT).



Mr. Willy explained the history of bees and beekeeping industry, reminded trainees that Rwanda is said to be a paradise for bees, due to its riches in trees, flowers and waters. He talked about beekeeping trend in Rwanda, that the demand is very high while the supply is very low. He added that there are lots of business potentials in beekeeping in Rwanda.

Dr. Award, Expert Trainer, went into deep to explain the biology of honey bees. There are many types of bees, from which the type found in Rwanda is *Apis Mellifera*. He explained in details behavior of honey bees and the economical pattern of bee hives, whereby he mentioned that modern hive is more profitable than traditional hive. He also elaborated important terminologies used in beekeeping.

Challenges:

1. Beekeeping was considered a men's work. It is just recently that women have started to engage in beekeeping activities, however, their number is still low compared to the number of men in the same field of industry.
2. When it comes to Kinyarwanda, the technical terms used by beekeepers differ from province to another, which makes it difficult to communicate over beekeeping activities in Kinyarwanda, because of the difference in terminology related to beekeeping activities.

Recommendations:

1. Statistics about beekeeping dates from many years ago 2009, RAB in collaboration with the institute in charge of doing beekeeping survey (NISR) should do it to reveal the current status of every element related to beekeeping.
2. MINAGRI, RAB and beekeepers should work together to come up with a dictionary related to beekeeping industry to facilitate people communicate easily.

2nd Session: WORKING WITH THE HONEY BEES' COLONY



Summary

This session talked about colony protection, queen protection, effectiveness of changing to modern hives and its economic value. Dr. Awad explained that very often beekeeper must visit the hive to verify if everything is alright inside the hive, diagnose and fix problem if there is any before it is late.

Checks might include:

- ✓ Are there pests or diseases?
- ✓ Are bees using the proper entrance?
- ✓ Is the queen still in the hive?
- ✓ Is the queen still strong?
- ✓ Is the food enough?
- ✓ Do they have enough security?
- ✓ Is the harvest time ready?
- ✓ Have bees started to prepare for swam?
- ✓ Is the honey growing nicely?

Dr. Awad shared some advices with regards visiting the apiary:

- ✓ Self-protection is a must,
- ✓ Removal of strong smell from the body,
- ✓ Visit when bees are cool, if aggressive please postpone the visit,
- ✓ It is recommended to visit the apiary every 9 days. However, one can visit the apiary every 2 days without opening the hives,
- ✓ Number of visits will depend on the expectations with regards the harvest (honey, propolis, bee pollen...).

Eng. Ahmed Allam shared with the participants on the creative way to package and sell honey right away from the modern **hives on palette**.

Mr. Willy, after reminding us that in a beehive there exist 3 types of bees: workers, one queen and few tens hundreds of drones, he took us through the queen's life and its protection. He emphasized that much efforts must be oriented to rearing queens so as to increase the number of bees, therefore increasing production.

Without queens, beekeeping is not possible, so, queens need to be handled in queen's cage every time they are transported, transferred or are for sale.



List of the experts in queen management, protection and transfer

NAMES (Surname First)	LOCATION
BIZIMUNGU Jean Marie	Sonatube
KWIZERA JEAN DE DIEU	Gasabo, Muhazi, Gikomero
SINDAYIGAYA Emmanuel	Gahanga, Nyarugenge
NDASHYIKIRWA N.	Kirehe, Gahara,
MINANI Joseph	Kamonyi & Kigali
NTACYOBANKANZE Ildephonse	Huye, Mbazi,
NZIRORERA Jean Pierre	Kamonyi,
HITIMANA Leopord	Nyabihu
SEZIBERA Jean Nathan	Kicukiro

Proposed bee friendly plants

Bees are very selective as to the plant from which they feed themselves with pollen or nectar. Some flowers have nectar deep inside of them, such that bees cannot fetch them, because they have short tongues. Bees do not go to all flowers; some are toxic like neem. Bees collect nectar from banana not pollen. They will go to certain trees like mango when they are very hungry because mango does not release enough food for bees.

Plants liked by bees include but not limited to:

- Macadamia,
- Eucalyptus,
- Glass brush,
- Poinciana,
- Moringa trees,
- Orgueil de chine, .
- Basilic,
- Tea
- Plantain,
- Sunflowers
- Hibiscus,
- Caillotte,
- Narcisse,
- Camomille,
- Acacia,
- Periwinkle,
- Clova,
- Chia,



Dr. Awad reminded trainees that they should always do research about any plants liked by bees in order to cultivate them in and around their apiaries.

Challenges

1. Queens are delicate,
2. Like other modern equipment and materials in the beekeeping, extra cost is attached to queen's cage,
3. Traditional way of bees rearing has lots of wrong information and myths,

Recommendation:

1. Beekeepers are advised to work together with the people who have expertise every time they deal with the queen,
2. Dr. Ahmed revealed that the secret to succeed in beekeeping is hidden in the management of queens. Thus, please choose healthy, strong and best queen and protect it,
3. RAB in collaboration with EG-Honey Ltd, should import modern species of bees from Europe,
4. Plants much liked by bees should be cultivated in and around the apiary.

3rd Session: MANAGING HONEY BEE COLONIES



Summary

Eng. Ahmed Allam began by praising Rwanda as being a paradise for bees. Rwanda is rich in nature; it has gold in its various trees with various flowers. He said “Rwanda has a gold-mining industry in its trees. It should make use of that great industry.

The trainer discussed the effective management of honey bees' colonies which lies in general sanitation of hives and apiary. He mentioned that healthy bees' colonies depend on the health and strength of the queen, thus, emphasis must be put on effective queen rearing and multiplying. Colonies can at times be affected by diseases, Dr. Award went into deep elaborating on all types of diseases which can hinder the apiary's productivity, thus, reducing profitability which is our

focus in this course. Prevention measures of apiary diseases were studied, but the more important one is to always keep the apiary neat and clean. The use of modern tools and materials while dealing with the colonies was recommended. Illustrations of how to use them were done.

Challenge

Beekeepers and EG-Honey Ltd said that though beekeeping modern equipment can incredibly increase production, they are very expensive, not affordable to the average beekeeper. Prices are not encouraging for farmers. EG-Honey Ltd gave an example of one small beekeeping tool which can cost one dollar in a country while in another country the price can go up to five dollars.

Recommendation

All beekeeping stakeholders should work together in order to avail modern hives and equipment which are affordable to average beekeeper. Rwanda Revenue Authority (RRA) should revise the laws such that the beekeeping equipment become tax exempted.

Queens Rearing



The trainer said that without healthy and strong queens bee keeping is not possible. He explained the methods of producing queens, including: queen-less colony, grafting and jenter techniques. Tools and equipment required for this activity to be a success were used during the illustrations. The highly important tool in queen rearing is the queen cage made in plastic or wood.

The trainer explained that there are many reasons of rearing new and more queens:

- ✓ Sale the queens for profit making,
- ✓ Queen is old which makes productivity to be low,
- ✓ Produce more bees, and
- ✓ Increase colonies.

While producing, rearing queens four important things must be ensured:

- ✓ Mother queen must be young, strong and healthy,
- ✓ There must be lots of bee-workers,
- ✓ There must be enough food, and
- ✓ Should be done at the right time.

The trainer stressed on the selection of mother queen, that it must be selected from an excellent bee hive.

Queen rearing is very tricky; thus, queens should be handled with care and delicacy. It is said that because of their nature, women do graft work effectively. So, women beekeepers are encouraged to engage into the business of queen multiplication and trade.



List of participants, experts in queen rearing

NAMES(Surname First)	LOCATION
BIZIMUNGU Jean Marie	Sonatube, Kigali City
MINANI Joseph	Kamonyi & Kigali
NDASHYIKIRWA Medard	NIAME Bees Ltd, Kirehe
KWIZERA Jean De Dieu	Gasabo, Muhazi, Gikomero

Good news:

EG-Honey Ltd, is working with MINANGRI / RAB to introduce in Rwanda a new genetic of bees which is gentle, not aggressive, who does not swarm or migrate, more importantly, which is more productive. EG-Honey needs all kinds of support from all beekeeping stakeholders for the project to be successful.

4th Session: APIARY MANAGEMENT



The trainer discussed about apiary management. Enemies of apiary were discussed. The apiary's environment must be always clean to stop all kinds of diseases in the hives, while predators must be chased far away from the apiary.

Honey bees' pests, diseases and other enemies of bees were exposed. These include:

- ✓ Ants and termites,
- ✓ Wasps and hornets,
- ✓ Birds,
- ✓ Mammals,
- ✓ Wax-moth,
- ✓ Rain,
- ✓ Floods,
- ✓ Winds and
- ✓ Bad guys,

Every evil listed above was closely scrutinized, and the trainer explained how to deal with each of them, whether preventing or fighting it. The most proper ways being to ensure neatness, cleanliness in the apiary and hives and ensure security of the apiary.

Group assignment were done to research on:

- ✓ Swarming,
- ✓ Migration,

- ✓ Splitting,
- ✓ Combining,
- ✓ Queen introduction and protection.

Students presented the findings. The trainer thanked the presenters and their individual groups, adding that the only way to fight bad guys, thieves and destroyers is to make the apiary be protected by fence and be guarded by security persons. To conclude the topic the trainer emphasized that much attention must be paid examining the apiary's environment, detecting what might be wrong in and around the apiary in order to act appropriately in the right time.

Laws regulating apiculture

Summary

Ms. Beata and Mr. Willy explained the laws, rules and regulations governing the beekeeping industry. Participants were encouraged to read and understand them well, in order to know their rights while appealing to justice whenever they are offended. They reminded the participants that the law says that bees and apiaries are the property of an individual, thus when offended, they should appeal for justice to be applied.

Challenge:

- ✓ Some important terminologies are not in the law.
- ✓ Though the Law, in its article 187 says to punish any bee farming offender with 2 years max and the fine of 1m - 2m, justice is not given to the offended. Wrong-doers including the thieves who steal bees, hives, burn the bees and/or destroy the apiary, use pesticides still do it as they please,
- ✓ There are lot of offences towards beekeepers, yet, the local administration does not seem to give appropriate justice to offended beekeeper,
- ✓ The law says the apiary should be registered, yet, there is an issue of extreme delay in getting a license to run the apiary,
- ✓ Apiaries and bees are being destroyed by agri-farmers who use pesticides which kill bees.

Recommendations:

- ✓ Laws and regulations should be updated to reflect the correct terminologies, and incumbent situations in the field of bee farming,
- ✓ The third article of rules should be updated: currently the way it is, it stops women and short people to engage in beekeeping activities,
- ✓ Hotline should be established to help beekeepers instantly communicate to Rwanda Investigation Board (RIB) the issues they face,
- ✓ Beekeepers should mark their queens in order to trace the colony in case they get stolen,
- ✓ RAB should speedily resolve the problem of issuing the license to run apiary,
- ✓ Local administration should collaborate with beekeepers to inform the agri-farmers that they should use the pesticides at night, not during the day when bees are in the field feeding

- themselves; and ask them to stop the use of pesticides when plants are flowering. All stakeholders should work around creativity to come up with un-harmful pesticide,
- ✓ Ministry of Agriculture should work out to restrict apiculture zones whereby the use of pesticides is prohibited,
 - ✓ Eng. Ahmed emphasized that Government should set up clear law, rules and regulations in order to help beekeepers overcome the challenges they face on daily basis.

Honey Bee Nutrition

The trainer explained how we should feed our bees. Normally bee's food is honey. When we harvest honey, we subdue their food from them. So, as we take their honey, we must ensure they are appropriately feed. To feed them we must plant the trees and flowers they like to feed from around the apiary and we must provide them with syrup and protein like a mixture of soy and cassava flours. There exist other types of bees' proteins which are ready to use from the markets.

We must always be neat as we prepare food for bees, and remember to not give bees too much syrup, because they use extra food to manufacture honey-like stuff.

5th Session: BEE PRODUCTS AND THEIR HARVEST

Summary

The trainer introduced the many products of bees and the ways of harvesting each one. He added that bees are important as they are better pharmacist, and without their pollination over crops there would be no life.

Bee products include but are not limited to:

- ✓ Honey,
- ✓ Bee pollen,
- ✓ Propolis,
- ✓ Bee venom,
- ✓ Bees,
- ✓ Queen,
- ✓ Royal jelly,
- ✓ Bee bread,
- ✓ Honey vinegar,
- ✓ Male lava,
- ✓ Dead bees' powder, and
- ✓ Beehive air.



The Royal Jelly increases immunity and sexual strengths and is full of antioxidants. Bee venom is the most profitable product from beekeeping. On some markets the price of 1gr of bee venom can go up to USD 250. The trainer concluded by saying that with regards money making the least bee product is honey, therefore, encouraged participants to re-orient their efforts towards other bee-by-products like bee venom, royal jelly and many others.

API-Tourism

The trainer explained how important Apitourism is and encouraged participants to consider it as another opportunity of generating funds from their apiaries. Apitourism is sustainable, ecological, medicinal and educative. This said, tourists enjoy to visit apiaries located in the wild trees and flowers of Rwanda, in order to see and hear bees, shop bees' products and engage into apitherapy. The trainer gave hint to those who would like to venture into professional Apitourism.

Apitourism requires:

- ✓ Efficient infrastructure,
- ✓ Knowledgeable trained guides,
- ✓ Good transportation logistics,
- ✓ Neatness,
- ✓ Places to sit down,
- ✓ Clean protective suits for tourists,
- ✓ Clean rest rooms, and
- ✓ Clear rules and regulations.

Challenge

Apitourism is a new industry, thus requires lots of commitment from all stakeholders.

Recommendation

RAB and RDB should integrate Apitourism in “VISIT RWANDA” program as it is an added value to existing tourism and beekeeping.

NEW LESSONS LEARNT AND BEST PRACTICES

Packaging and selling honey on frames

CLOSING REMARKS

On behalf of RAB and RDB officials who could not attend the closing ceremony, Mr. Willy started by acknowledging and thanking the organizers, the trainees and the trainers. He reminded the trainees that it is their mandate to apply what they learnt and do it in a professional manner.

The representative of the trainees thanked the Government who through MINAGRI continuously support beekeepers. He thanked EG-Honey for their commitment to provide all kinds of support to beekeepers in Rwanda.

The training certificates were issued after which Mr. Willy MWIZA, Representative of RAB/MINAGRI declared the training over.

RECOMMENDATIONS IN GENERAL

- a) Continuous training for the bee farmers,
- b) Continuous guidance, on the job training (OJT) in the matter of bee farming,
- c) RAB follow up bee farmers by establishing “Supervision Department”
- d) Bee keepers’ union FERWAPI must be awoken, to become aggressive to promote and protect the industry, or it must be dissolved and start a new one.
- e) TV, Radio guidance, broadcasting channels only for beekeeping should be launched.
- f) Apitourism should be supported and promoted,
- g) Apitherapy should be promoted therapy base on bee produces,
- h) Take seriously the official beekeeping day on 20th May and organize it accordingly. Mr. Willy MWIZA has promised to work with beekeepers to organize such a great day this year in May. Products will be exposed, the best one will be selected and be awarded,
- i) The factory processing bees’ products should be established.
- j) Bee keepers should be creative, develop more new ways of packaging and sell honey (ref. EG-Honey selling honey on a piece of wood direct from the hive to the final consumer),
- k) Beekeeping involves lots of creativity, thus crate platforms and allow creative farmers share their innovation with other people,
- l) Much efforts must be oriented to rearing queens in order to produce more bees for increased honey production and avail bees for sale to other bee farmers,
- m) New beekeepers are advised to work together with the people who have expertise in managing the queens and multiplying bees,
- n) Queens are the big secret to succeed in bee farming, thus, should be multiplied and highly protected,
- o) Beekeepers should observe like bees: what are the types of plant much liked by the bees and share such info with other beekeepers, in order to cultivate multiply such plants around apiaries,
- p) Should stop considering the traditional beehive as a tool to catch the bees, and use a modern bees’ catcher box,
- q) The modern equipment should be made affordable to every beekeeper,
- r) Farmers should not only focus on honey, instead focus also on propolis, loyal jelly and other bee products which are expensive and have a big market.
- s) Rwandese must benefit from their country which is rich in nature, Rwanda has gold mines in its trees, it has lots of trees and flowers, thus, the use of modern hives, and modern equipment must be promoted to make huge profits and boost the economy of Rwanda,
- t) Should establish a platform to follow trained beekeepers and help them to apply what they ‘ve learnt otherwise the knowledge will be lost,
- u) Forum for women beekeepers and women queen breeders should be established,
- v) Latest research dates 2009, MINAGRI and NISR should run new research to reveal the current status of the beekeeping industry to help plan accordingly,
- w) Exhibition of only bees’ products and by-products should be organized,
- x) MINAGRI should facilitate the import of new bees’ genetics type which are not aggressive and highly productive,
- y) MINAGRI should establish “Nkunnganire muvumvu” program, and
- z) MINAGRI and RIB should stop “pirates” of the bees’ products.

GOALS SET BY PARTICIPANTS

After the training trainees and other participants resolved the following:

- ✓ Beekeepers are determined to get involved in the awareness of the citizens with regard the importance of bees and beekeeping, and inform them how profitable it is,
- ✓ Get enough knowledge about Apitourism and start its promotion,
- ✓ Advocate for MINEDUC to include beekeeping as a subject in science from primary schools, and the curriculum of the agri-veterinary universities should be adapted to include modern techniques in beekeeping,
- ✓ Participants determined to quit traditional beekeeping and embrace modern beekeeping as professionals,
- ✓ Own beekeeping, produce good quality products in order to attract the Government and investors' support,
- ✓ Youth are determined to sensitize other youth, and join experts in the beekeeping thus will easily integrate in beekeeping.
- ✓ Girls and women abled differently will be mobilized to endeavor into beekeeping projects.
- ✓ Determined to make study tours in order to learn and share experience with experienced beekeepers,
- ✓ Determined to plant flowers and trees in order to feed Rwandan bees in general and bees in our apiaries,
- ✓ Embrace the new activity of multiplying and selling bees and queens.

CONCLUSION

Participants said that the training and its content plus assignments done within the working groups helped them understand the topics. Training materials and shared presentations were easy to understand. Moreover, time allocation to each and every activity was well planned and effectively executed.

Major challenges identified in the law governing beekeeping industry and the high price of modern materials and equipment were assigned as homework to beekeepers, MINAGRI/RAB and RDB so that they collaborate to find the appropriate solutions.



EG-HONEY Ltd - Training Report

ANNEXES

ANNEX I: LIST OF PARTICIPANTS

REF.	SURNAME	FIRST NAME	GENDER	COMPANIES / COOP NAME	ADDRESS / DISTRICT
1	BIZIMANA	JEAN MARIE VIANNEY	H	BEEKEEPERS' GIFT LTD	GASABO
2	BIZIMUNGU	CHRISTIAN	H	SELF	NYARUGENGE
3	GAKWERERE	JEAN PIERRE	H	JBC COOP	NYABIHU
4	HAKIZIMANA	VEDASTE	H	SELF	KIREHE
5	HATEGEKIMANA	ABOUBAKAR	H	SELF	RULINDO
6	HIRWA	PRINCE THEOPHILE	H	RUHANGO BAZZ BEES LTD	RUHANGO
7	HITIMANA	LEOPORD	H	COEA COOP	NYABIHU
8	IMFURAYASE UMULISA	JEANNE	F	SELF	KICUKIRO
9	IRANKUNDA	PEACE	F	SELF	KICUKIRO
10	IRYAKUNZE	PHOEBE	F	PHOIBEES	KICUKIRO
11	ISHIMWE	LEONTINE	F	ABIRU COOP	MUHANGA
12	ISHIMWE	BLANDINE	F	SELF	NYANZA
13	KWIZERA	JEAN DE DIEU	H	BEEGULF LTD	GASABO
14	KWIZERA	RAYMOND	H	API ORGAIC RWANDA	GASABO
15	MBABAZI	SHALLON	F	SELF	RWAMAGANA
16	MBARUSHIMANA	CLAUDE	H	KMCS	KAMONYI
17	MINANI	JOSEPH	H	SELF	KAMONYI
18	MUGABO	DANIS	H	KOBOZUGA COOP	NYAGATARE
19	MUHIRE	ISMAEL	H	SELF	RWAMAGANA
20	MUHUNGUYISONI	DONATTA	F	APIL ORGA	MASORO
21	MUKAKALISA	MARIE FRANCOISE	F	KOPAKI	KIREHE
22	MUKAKARAMA	NADINE	F	SELF	S. PROVINCE
23	MUKAKIRENGA	IMMACULATE	F	KOBONZUGA COOP	NYAGATARE
24	MUKAMUGEMA	SERAPHINE	F	FAMILLE	RWAMAGANA
25	MUKANDAMUTSA	ELISABETH	F	SELF	NYARUGENGE
26	MURORUNKWERE	MARIE JEANNE	F	SELF	RWAMAGANA
27	MUSABYIMANA	VENERANDE	F	SELF	N/A
28	MUTANGUHA	PAULIN	H	API ORGANIC RWANDA	GASABO
29	NDANGIZI	FAUCAS	H	SELF	NYARUGENGE

30	NDASHYIKIRWA	MEDARD	H	NDAME BEES LTD	KIREHE
31	NIWENKUNDA	CATHERINE	F	SELF	GASABO
32	NIYITEGEKA	JEAN MARIE	H	ABADAHIGWA GROUP	GASABO
33	NIYITEGEKA	EMMANUEL	H	RAB	NYAMASHEKE
34	NKUNDABOSE	SERVAND	H	SELF	NYARUGENGE
35	NTACYOBANKANZE	ILDEPHONSE	H	SELF	HUYE
36	NTIREGANYA	THEONESTE	H	SELF	RUTSIRO
37	NTIVUGURUZZA	ALOYS	H	KSMC	KAMONYI
38	NYIRAMBONIZANYE	MARIE	H	IHURIRO NBCU	NYABIHU
39	NZARUBARA	JEAN BOSCO	H	SELF	RUHANGO
40	NZIRORERA	JEAN PIERRE	H	SELF	KAMONYI
41	RASHAD	SHEREEN	H	EG-HONEY LTD	NYARUGENGE
42	SAFARI	ELIA	H	ABADAHIGWA GROUP	GASABO
43	SERUYOMBO	EFASTO	H	KWAJEMU COOP	NYABIHU
44	SEZIBERA	JEAN NATHAN	H	IREBERE URUVUMVU REBERO	KICUKIRO
45	SINDAYIGAYA	EMMANUEL	H	SELF	KICUKIRO
46	UNNEFER	AKERU SHEMS	H	MANJA MAR	RWANDA
47	USENGUMUREMYI	JEAN CHRISOSTOME	H	RAB	SONGA
48	UWIMABERA	BEATA	F	SELF	KICUKIRO
49	UWINEZA	DIANE	F	SELF	JALI
50	UWIRAGIYE	GRACE	F	SELF	RUHANGO
51	UWITONZE	FLORENCE	F	SELF	RWAMAGANA

ANNEX II: SOUVENIR PHOTO



EG-HON



ANNEX IV: TRAINING AGENDA

Day 1 – 14 th February 2022					
Session 1 - Biology and Behaviour of Honey Bees					
Start	End	Duration	Title/Topic	Speaker	Organization/Sponsor
08:30	09:30	00:30	Registration	Coordinators	EG-Honey
09:30	09:40	00:10	Welcome speech	Dr. Jonathan Seziber	REBERE URUVUMVU REBERO
09:40	10:00	00:20	EG-Honey & RAB Frame work	Mr, Willy MWIZA Eng: Ahmed Allam	Apiculture Expert - RAB EG-Honey
10:00	11:00	01:00	Part I- Biology of Honey Bees	Dr. Hassan Awad	Apiculture Assistant Prof, Egypt.
11:00	11:05	00:05	Group Photos	All participants	Classic Hotel
11:00	11:30	00:30	Coffee Break	-	RDB
11:30	12:30	01:00	Part II- Traditional Beekeeping	Dr. Hassan Awad	Apiculture Assistant Prof, Egypt,
12:30	13:30	01:00	Lunch Break	-	RDB
13:30	14:30	01:00	Part III- Behaviour of Honey Bees	Dr. Hassan Awad	Apiculture Assistant Prof, Egypt.
14:30	15:00	00:30	Economic value & Take A Home Message	Moderator/Dr.Ahmed	Panel
15:00	15:30	00:40	Coffee Break & networking	-	RDB
End of day one					
Day 2 – 15 th February 2022					
Session 2- Working with the honey bee colony					
Start	End	Duration	Title/Topic	Speaker	Organization/Sponsor
09:00	10:30	01:30	Part IV-Colony Protection	Dr. Hassan Awad	Apiculture Assistant Prof, Egypt.
10:30	11:00	00:30	Coffee Break	-	RDB
11:00	12:30	01:30	Part IV-Queen Protection	Mr, Willy MWIZA	Apiculture Expert - RAB
12:30	13:30	01:00	Lunch Break	-	RDB
13:30	14:30	01:00	Part IV-Changing to Modern Way	Dr. Hassan Awad	Apiculture Assistant Prof, Egypt.
14:30	15:00	00:30	Economic value & Take A Home Message	Moderator/Dr.Ahmed	Panel
15:00	15:30	00:30	Coffee Break & networking	-	RDB
End of day two					
Day 3 – 16 th February 2022					

Session 3 – Managing honey bee colonies					
Start	End	Duration	Title/Topic	Speaker	Organization/Sponsor
09:00	09:30	00:30	Apiary & Beehives Management	Dr. Hassan Awad Eng. Ahmed Allam	Apiculture Assistant Prof, Egypt. EG HONEY
10:20	10:30	00:20	Queen Rearing	Dr. Hassan Awad	-
10:20	11:00	00:40	Coffee Break	-	RDB
11:00	12:10	01:10	First Aid -Apiary/Hive Sanitation	Dr. Hassan Awad	Apiculture Assistant Prof, Egypt.
12:10	12:30	00:20	Discussion	Moderator	-
12:30	13:30	01:00	Lunch Break	-	RDB
13:30	14:30	01:00	Pre-harvest - Pest and Disease Management	Dr. Hassan Awad	Apiculture Assistant Prof, Egypt.
14:30	15:00	00:30	Take A Home Message	Moderator	-
End of day three					
Day 4 – 17 th February 2022					
Session 4– Managing an Apiary					
Start	End	Duration	Title/Topic	Speaker	Organization/Sponsor
08:30	09:30	01:00	Gathering at hotel-Apiary visit	Bus will move at 09:30	
09:30	12:30	03:00	Practical Session	Dr. Hassan Awad	Apiculture Assistant Prof, Egypt.
12:30	14:30	02:00	Practical Session	Mr. Willy MWIZA	Apiculture Expert - RAB
14:30	15:30	01:00	Lunch Break @ Hotel	-	RDB
End of day four					
Day 5 – 18 th February 2022					
Session 5 – Bee products and their harvest					
Start	End	Duration	Title/Topic	Speaker	Organization/Sponsor
09:00	10:20	01:20	Apitherapy techniques “Apitherapy for Tourism Development- boosting “Visit Rwanda”	Dr. Dr. Hassan Awad & Eng. Ahmed Allam	Apiculture Assistant Prof, Egypt. EG- HONEY
10:20	10:30	00:20	Apiary Management Challenges	Eng Ahmed Allam and Moderator	-
10:20	11:00	00:40	Coffee Break	-	RDB
12:20	12:50	00:30	Closing Ceremony and Delivery of Certificates	Panel	Officail ranks
End of first week					
Day 5 – 19 th February 2022 – day off					
Day 5 – 20 th February 2022 – day off					

ANNEX V: TRAINERS AND ORGANIZER'S PROFILES

Organizers / Steering Committee	Biography
 <p>Eng. Ahmed ALLAM Tel. +250 783 812 077 Email: info@eghoney.com</p>	<p>Dr. Ahmed hold Bachelor's Degree in Agronomy and Business Administration Science, Egypt, doing his own projects as a beekeeper, in later 2017, he resigned from aviation Sector, and afforded his experiences to serve his main hoppy in agribusiness especially with flying bees, he is Pursuing a Master Degree in AIN SHAMS University, Cairo-Egypt for (Safe plantation of airports (case study) Cairo Airport, a Result-oriented and professional in facilitating operational activities such as beekeeping project and administrations, He considered as an enterprising leader with skills in leading personnel towards accomplishment of common goals, He aimed for business opportunity in his Rwandan company which registered in the names of EG HONEY TRADING LTD. The main honey product is branded "RUCHER". The company aims to develop the beekeeping sector in Rwanda in order to create a number of suppliers who can supply sustainable quantity and quality. At the end the company will buy from those producers the beekeeping products and export them to different destinations in the World where it negotiated already some contracts. The company started by supporting some beekeepers through training and coaching. Some modern beehives were imported from Egypt. Those are the ones that can produce up to 50 kgs per year. In first training which was conducted in March 2019, participated 53 beekeepers. And other series of training is upcoming. For more information about Eng. Ahmed Allam, please visit</p>
 <p>Jean Nathan SEZIBERA Tel. +250 788 536 778</p>	<p>Jean Nathan SEZIBERA is a Partner in IREBERE URUVUMVU REBERO (Come and See REBERO Apiary). A holder of "Master of Business Administration (MBA) (1991)" United States International University (USA). A Master's degree of Arts in Ministry Theology). Minnesota Graduate School of Theology (USA). A Bachelor degree in Arts</p>

<p>Tel. +250 785 385 079 Email: jsezibera@gmail.com</p>	<p>(Business Administration and Communication), (1990), Messiah College (USA He is a Management and Financial Consultant (over 25 years in the area of consultancy). He is a beekeeper in Maya, Rebero. He has a very rich experience in the following: Training in financial management for various organizations Financial Audit, management audit and internal control of organizations; Elaboration of strategic plans and HIV&AIDS workplace Policies.</p>
 <p>Prof. Dr. Awad MOHAMMED AWAD HASSAN Tel. (+2) 01 028 227 335 Email: awad.univ@gmail.com hassanam@appstate.edu awad.hassan@agr.svu.edu.eg</p>	<p>Dr. Awad is Apiculture Assistant Prof at Faculty of Agriculture, South Valley University QENA Egypt, as well as the Founder of the platform@ NahhalArabic, a non-profit initiative aims to provide integrated support for the Arab beekeepers. Author of written and media materials, working with non-profit and Government organizations for training for beginner and professional beekeepers in Upper Egypt. Provide continuous extension efforts virtually and in person for Arab beekeepers. Building Resilient Food Security Systems to benefit the Southern Egypt region (Development Project). Spatiotemporal analysis of honey production and forage potential mapping using remote sensing and GIS technologies (R&D project). Managing research teams and international publishing of scientific research & legal and financial aspects at University environment & Decision making and problem solving & exams and students evaluation systems & University code of ethics, 9-15 May 2016, Faculty and Leadership Development Center, Cairo University, Egypt.</p>
 <p>Mr. Willy MWIZA TEL. +250 788 462 874 Email: mwizawilly@yahoo.fr</p>	<p>My position in RAB is Acting Apiculture and commercial insects senior researcher coordinator, expert in beekeeping for poverty alleviation</p>

	<p>Beata Uwimabera Avocate au Barreau du Rwanda et Apicultrice</p> <p>+250 725 888 081 Website: www.beabees-apibiofarm.com</p> <p>e-mail: buwimabera@gmail.com, or imabera@yahoo.fr</p>	<p>Uwimabera Béata est grandie dans une famille qui avait une grande tradition agricole. Au moment du semis, elle avait le privilège d’être la première à déposer les premiers grains. Sa famille lui conférait la qualité d’une main verte. Pourquoi cette image ? – Elle ferait pousser les plantes ! Ces souvenirs riches en émotions détermineront plus tard son chemin dans la nature. Elle y rencontra un essaim d’abeilles qui venait de s’installer dans l’avocatier. Etant la voisine mal aimée malgré les bienfaits de son miel, Béata devint depuis lors la défenseuse de l’api mellifera, et l’hébergea dans une ruche traditionnelle. Toujours dans sa profession d’Avocate, elle a retourné à la force de son destin, en explorant les possibilités rurales et les opportunités que l’apiculture peut offrir.</p> <p>De la tige à la salopette apicole et vice-versa, Béata devient le modèle qu’une femme peut contribuer à la résilience de sa communauté. Elle est active dans les différentes plateformes à savoir African Women in Beekeeping ; Beekeeping for Apprentice..., elle exprime une immense gratitude aux abeilles et trouve une grande satisfaction dans la contribution à une saine alimentation et à la médecine alternative surtout pendant cette période du COVID 19.</p> <p>Béata est consciente qu’offrir les essences mellifères à ses amis est le bon point de départ pour la sauvegarde de ses soeurs Abeilles et la biodiversité. Elle adore le faire dans son temps libre qui s’accompagne de la lecture et de l’api yoga.</p>
	<p>CATHERINE NIWENKUNDA Tel.: +250 788 569 529 Email.: cathapcan@gmail.com Complete CV: https://www.linkedin.com/in/catherine-niwenkunda-4129b041/</p>	<p>Currently working as independent researcher on apiary related businesses. Like to learn new skills to help her contribute to the betterment of the lives of communities locally and worldwide.</p> <p>In collaboration with various international NGOs and Embassy, United States Embassy, United States Agency of International Development (USAID), International Rescue Committee (IRC), Women In Transition (WIT), Catherine participated in pioneering humanitarian international development in Rwanda. She also managed profit making companies, Be- Pro</p>

	<p>Consulting and FAIR – Food Agro-Industry Rwanda Ltd.</p> <p>Master’s Degree Holder (MBA, 2010); Maastricht School of Management (MsM), Maastricht, The Netherlands, with a strong business approach, Catherine delivers sustainable outstanding impact on people’s lives and helps companies to attain awaited profits.</p> <p>Catherine served on largest management teams of emergency responses in Rwanda. Her skills include but are not limited to the provision of NGOs services, community driven development, agri-business, shelter construction, private sector management, finances, accounting and budgets.</p>
--	--

ANNEX VI: LIST OF ACCRONYMS

- **RAB:** Rwanda Agricultural Board
- **RDB:** Rwanda Development Board
- **MINAGRI:** Ministry of Agriculture and Animal Resources
- **MENEDUC:** Ministry of Education
- **EG-Honey Ltd:** Egyptian Honey Trading Ltd Company
- **FAO:** Food and Agriculture Organization
- **RIB:** Rwanda Investigation Board

ANNEX VII: USEFUL LINKS

- RAB Webpage [announcing the training](#)
- RBA REPORT <https://www.youtube.com/watch?v=lhoMIIsgTRI>
- Rwanda TV official News at minute 41 [highlighted the training](#)
- EG-HONEY [official twitter page](#)
- EG-HONEY [website](#)
- Apomondia [website](#)
- Beekeeping platform [WhatsApp group](#)
- Inyaeyrwanda [NEWS](#)
- YouTube [page](#)
- Facebook [page](#)
- contact email info@eghoney.com