



CAMEROON GENDER AND ENVIRONMENT WATCH (CAMGEW)

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INTRODUCTION

Between the 25th and 28th of April 2016, a training workshop was organised in the premises of the Oku Honey Cooperative. The workshop was attended by persons involved in beekeeping related activities around the Kilum-Ijim Forest.

The training had as objectives

- To induct technical officers and lead farmers into organic certification
- To develop action plan for organic certification and Internal Control System (ICS)
- To commence the development of ICS manual for organic bee keeping for the selected groups in Cameroon

The workshop was organised within the frame work of a project from the African Insect Science for Food and Health –icipe titled *“African reference laboratory (with satellite stations) for the management of pollination, bee diseases and pest for food security”*.

The overall objective of this project is to enhance the contribution of bees and other pollinators to food security and livelihoods in Africa

Proposed action:

Improve bee products and pollination services through reduced incidence of bee diseases and pests , enhance market access and bee health institution environment

Goal:

Contribute to reducing the incidence of bee diseases and pests to improve honey production and pollination services for income generation

Results:

1. Bee health facilities for innovative technologies and provision of pests, risks analyse baseline and bench mark established
2. Validate bee diseases and pests management modules with efficient field bases diagnostic tools developed.
3. Enhance awareness on honey bee health and conducive environment for enhance bee disease control, access to market and consumer safety created.
4. Capacity of bee farmers and keepers federation, RECS and NARS on bee health

METHODOLOGY

The workshop was organised for 4 days from the 25th to the 28th of April 2016. It was attended by 17 participants from Oku, Jakiri, Mutteff and Ajung (Fundong), Mulloin (Njinikom), and Belo. The participants from Fundong, Jakiri and Njinikom were mostly coordinators of the newly created Cooperatives (done with facilitation from CAMGEW). The workshop was organised for bee farmer around the Kilum-Ijim who farm Oku White Honey. We also had participants from Non Governmental Organisations working in the Kilum Ijim Forest- Cameroon Gender and Environment Watch (CAMGEW) and Belo Rural Development Association (BERUDA). Forest Management Institutions (FMIs) were also represented during the workshop.

The workshop started every day at 8:00AM and ended at 04:30PM with two breaks every day. The first break was between 10:00am and 10:30am. The second was between 1:00pm and 2:00pm.

The teaching- learning method was an interactive one. Where the participants shared their experiences and they were linked to the process of organic certification

The workshop was facilitated by Jack Juma (Programme Manager and Technical Advisor on Organic Standards and Certification) from the Kenyan Organic Agriculture Network-KOAN, Dr. Nguku Evelyn (development Coordinator EU bee health Project) of the African Insect Science for Food and Health – icipe and Youbissi Annie Florence (Chef Service des Élevages Non Conventionnels, de l'Apiculture et des Animaux de Compagnie-SENCAAC) from the Ministry of Livestock Fisheries and Animal Industries

ACTIVITY AND RESULTS

The activities that were done during the workshop included an interactive method of learning where the facilitators discussed with farmers. There also practical sessions during which the participants worked in groups to come out with answers under the facilitators' supervision and field session whereby the Oku Honey Cooperative premises were inspected and comments were made to improve on the status of the Cooperative building and storage and processing facilities.

The lessons taught were on:

I. ORGANIC AGRICULTURE

Principles of organic agriculture

Health: sustains health of soil, plants and animals

Ecology: on living ecological systems/ cycles and work with them

Fairness: build relationship that ensures fairness

Care: managed in a participatory and responsible manner to protect the health and well being of current and future generations and environment

II. ORGANIC CERTIFICATION OF HONEY AND OTHER HIVE PRODUCTS

Consumers all over the world are increasingly concerned about food systems in terms of Food safety, Environmental impact, and Social impact and Climate change impact

Reasons for certification

- Ensure traceability
- Non contamination/ mixing of organic goods
- Independent verification

Main aspects of organic bee keeping

1. Conversion

- From the way it used to be done to how it should be done.
- 1 year of conversion
- If the wax has been contaminated then it has to be replaced with organic wax

2. Hive location

- Increase area 3 to 5 KM with limited sources of contamination
- Adequate forage, water, nectar and pollen

3. Hives

- No toxic effect to the bees or bee product
- Organic wax or non contaminated conventional wax to be used as starter combs

4. Feed

- Plants shall either be with or fulfill organic production requirements
- Supplementary feed may be used to overcome temporary shortages: organic honey and sugar

5. Husbandry

- Health of the colony shall be maintained with emphasis on disease prevention through breed selection and hive management

- Use allowed methods for pests and disease control e.g. natural etheric oils steam and direct flames and phyto-therapeutic treatments
- Synthetic veterinary drugs or pesticides may be used as last resort. In such cases, the colony shall undergo a new conversion

6. Harvesting

- Colonies shall be left with reserves of honey and brood and pollen sufficient for survival
- Synthetic repellent shall not be used
- There will also be a minimum smoking of the bee hive.

III. RISK MANAGEMENT

Anything which might jeopardize any organic product quality at any level and experts must be known and taken into account in all external control procedures

Risk assessment is done to identify risks

- Risks of commingling certified and non certified products
- Risks of use of non allowed substances especially chemical pesticides and additives
- Price differences between organic and conventional products: the higher the price the higher the risks of fraud
- Record : a good record
- The evaluation of the internal inspectors

a. Potential risks to be managed

- Farm production
- Sales/ buying
- Handling
- Insufficient ICS

b. Management risks

- Groups should be aware of standard compliance and critical control points to be monitored
- Focus supervision of potentially critical issues
- Continuously improve on the ICS, adapt procedures and requirements to be specific challenges and strengths of a group
- Be aware of present non compliances and potentials
- Risks may change overtime. At least yearly risks assessment is recommended
- The ICS staff should be always aware of critical control points in order to continuously improve the risks

IV. PRODUCT FLOW OF BEE FARMING AND RISKS OF CONTAMINATION OF PRODUCT AROUND KILUM IJIM

This is the entire process of honey production from the inputs that include Hives, Wax for baiting or starter combs, Colonies and Stands for hive mounting to the last stage which is the sales of the organic honey through processes like apiary setting, Transportation of hives from colonized zones, harvesting, transportation, processing, and packaging and storage.

V. INTERNAL CONTROL SYSTEM (ICS) INTERNAL PROCEDURES

This procedure involves the registration of new farmers, visit to the farmer's place (residence), explication of organic certification obligations; visit fields i.e. apiaries (in areas of colonisation and in the forest), farm or apiary entrance form, Map identifying the farmer's apiary, and a Sign agreement between the farmer and the Coordinator of the Project.

Inspections will involve organic fields and non organic fields, processing area, Livestock, Water source, Storage (products and inputs), Farmer's record include consolidated yields and inputs

Addressing non compliances

- Show the farmer the problem in the document or in the farm
- Show the farmer the standards
- Show ICS sanction options and describe where the farmer non compliance fits with these options
- Outline the next step is in the sanction and then communicate to the farmer

VI. HANDLING, PROCESSING, TRACEABILITY AND LABELLING OF ORGANIC PRODUCTS

The objectives of these lessons were to, avoid contaminations, avoid mixing of organic and non organic honey **and** ensure traceability of organic honey.

At all levels of product handling chain (chain value) different operators or units are responsible to ensure these at their levels. Each unit or operator responsible for the value chain should be certified unless excepted. Organic integrity must be maintained

Buying along the chain of custody of organic honey documents should be accompanied with the following documents to ensure traceability, a certified farmer history, buying list, receipt issue and labelling containers (organic code/lot number) keeping updated stock register

Storage

Honey should be labelled and stored in a dedicated and identified places clearly marked and separated from other products

Cleaning measure shall be sufficient to avoid any contamination of the stored products

Plans or sketches and addresses of all storage facilities shall be available

Transportation

Appropriate measures to avoid substitution mixing or contamination with non conforming products during loading and transportation (The operator shall describe the measures: identification, labelling, lot number, closed packaging etc.).

The product shall always be accompanied by a document or label mentioning the name and address of the operator, the name of the product, the reference to the met of organic production and the name of the certification body

Processing

Process separately (organic and conventional)

After draining conventional honey, clean drainer to drain organic honey

Effectiveness of the cleaning measures shall be regularly checked and recorded

The different lots shall always be identified to avoid mixtures or exchanges with the conforming product.

Traceability

Objectives:

- Provide documents that all aspects of the product are in compliance with the standards
- Documentation be in place that allows a finished product to be traced back to a field
- Each documentation for a product must be linked to the proceeding documentation which provides an unbroken chain of documents back to the origin of the raw material.
- Similarly procedures and ICS documents demonstrate compliance on the farm and management level

- A system for identification of lots shall be established
- Data in the accounts shall be documented with appropriate justification documents
- The balance check must show a good correlation between the quantities of products purchased and sold or the quantities of input received and used or in stock

Labelling

- In accordance with the certification status of the product
- At least 95% by weight of its ingredients of agricultural origin are organic
- The conventional ingredients are in the allowed list
- The list of ingredients shall indicate which ingredients are organic

VII. INTERNAL CONTROL (ICS) SYSTEM MANUAL

How to write an ICS manual

- It is a compilation of working instructions and forms used to maintain the internal control system
- It describes the responsibilities of each level in the project
- Its aim is to provide transparency

Availability of an ICS Manual

The document should be made available to all concerned co-workers. Each Field Officer shall have a copy of the ICS manual

ICS manual structure

- Should be as simple as possible, few pages
- Clear, precise and understandable

Writing up an ICS manual

- Describe the system in place
- Write down what you do and do what you have written

Components of an ICS Manual

- General description of the project area
The procedure:
This involves the description of the product; including the time of the year,
- Project organization
- Description of the project
- Harvesting and processing
- Organisational chart
- Procedures

VIII. INTERNAL CONTROL SYSTEM DOCUMENTATION

- One of the things required is keeping documents ICS element- documentation

Important points

- Each group should ensure that internal control documents meet requirements of certifier,
- Each producer understands the use and relevance of the ICS producer documentation develops.

Records have to

- Accepted to the operation,
- Fully disclose activities so they can easily be audited,
- Maintaining for at least 05 years,
- Sufficient to demonstrate compliance,
- Available for verification.

- ❖ Some documents shall be maintained by the producer and other shared with the ICS,
- ❖ Records must be inspected and evaluated as part of internal and external inspections,
- ❖ Each producer must participate in the developed of their own records often ICS provides supports in their process

Management documents

- Producer lists{ by community or zone, approved in transition or sanction},
- Regional maps community zone,
- Harvest results/ totals by community and by producer,
- Transport and storage record,
- Processing record,
- Sales and export record,
- Internal regulation: in local language,
- Producer loading systems,
- Staff qualification; conflict of interest statement,
- Training: extensions, internal inspectors and reviewers.

Document what should be available for each farmer

- Farmers contract,
- Farmers basics data form{ include field history},
- Maps,
- Notes on training or advice given to farmer,
- Farm inspection checklist : 01/year
- Annual consolidated field records: use of inputs.

RESULTS:

1. Development of Internal Standards to be respected in the organic certification project of the Oku White Honey. The Internal Standards were translated into Oku by one of the participants. The standards are yet to be translated into other languages i.e. Lamnso and Kom. ***The standards are attached at the annex pages.***
2. Start to develop an Internal Control System Manual. The manual will be compiled and completed by the second week of May 2016. The Manual will be compiled by Jack Juma of KOAN and sent to the Coordinator of the Project-the President of KIWhA Mr. Bang George
3. ICS staff were also elected or appointed. The ICS coordinator and Approval Manager will be Mr. Bang George. The appeal committee was created and members of the committee were Wirsy Emmanuel Binyuy (as independent member from NGOs), Samuel Mbuh (From Oku), Enoch (From Kom) and Mbah Grace (From Jakiri). 4 controllers were appointed for Kom i.e. Nsani Clement, Komaloo Anna, Diom Cyprian and Nkwain Nelson. Oku had 2 controllers i.e. Wanyu Napoleon and John Menda. Jakiri had 3 controllers i.e. Ngoran Christopher, Maimo Valentine Yuven and Foyua Amajoda
4. An action plan for the project was also developed for the project up to the next control which is due for the first week of July. ***The action plan is attached as an annex at the end of the report.***
5. The risks that could be encountered in the flow of honey production around the Kilum-Ijim Forest were also identified by the participants. These risks were identified at each stage of the flow of the product from inputs through the apiary to sales of the product. The possible ways of mitigation were also identified by participants. ***The chart is attached as an annex.***
6. The workshop also saw the start of the development of internal procedures for the Organic certification project for the Oku White Honey. These procedures involved estimation of

quantities of honey that could be produced by one hive. The participants said it will depend greatly on the site of the apiary. Some colonies could produce up to 20 litres of honey from a hive while others could produce only 5 litres. A coding system was also developed for the organic honey. The coding system and identification of farmers system is attached at the annexes.

7. Ways of handling, processing and traceability and labeling of organic honey was taught. This was aimed at making farmers avoid contamination of product and ensure traceability.

CONCLUSION

The training was a wonderful experience. The participants learnt a lot from the training. The importance of certification not just for increase in price but for other courses like health and environment protection was also appreciated. The participants liked the facilitation and hopefully are committed in making the project a success. An action plan was drawn and the participants are ready to start the ground work for the certification of the Oku White Honey as an Organic Product.

Below are some pictures of the workshop



Participants working on the chain of custody of honey around the Kilum Ijim Forest, the risks and the way of mitigating the risks



Cross section of participants at the workshop



Participants do a field visit for the inspection of the processing unit of the Oku Honey Cooperative Society



Participants doing presentations at the training workshop



Group picture of participants

ANNEXES

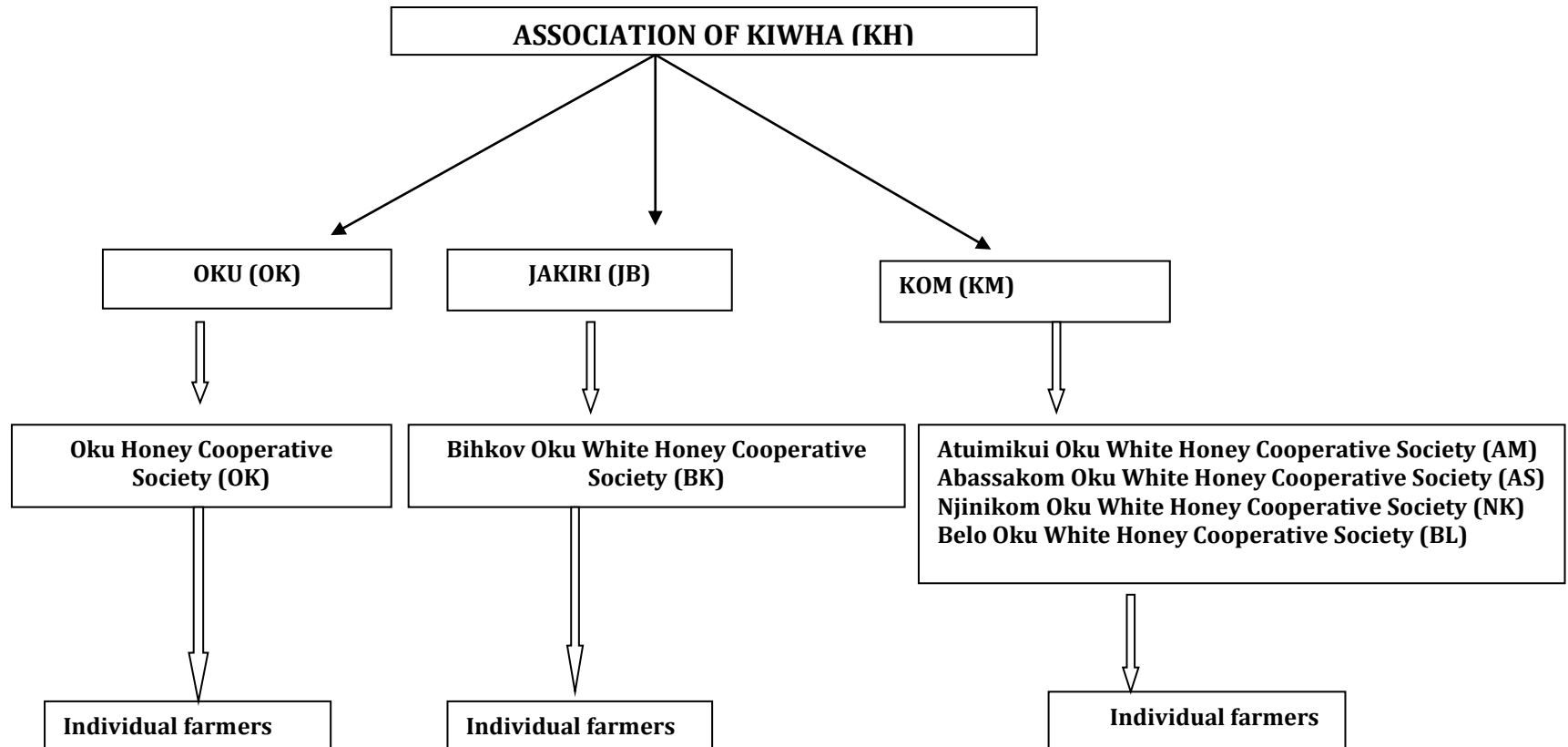
A. INTERNAL STANDARDS

- i. Bee keepers shall use both traditional and modern hives. Modern hives should not be painted with oil paint
- ii. Bee keepers shall use combs or clean combs approved by the cooperative
- iii. The apiary should be located in the forest (Kilum –Ijim) in zones with enough forage and water
- iv. Apiaries should be located in adequate distance (2KM) from possible sources of contaminations
- v. Pests in apiaries shall be managed through physical, biological and use of allowed inputs
- vi. In extreme situations, beekeepers may feed their bees using organic honey
- vii. Bee keepers shall harvest only ripe honey at least 75% capped
- viii. Do not over smoke during harvest
- ix. Avoid killing of bees or harvesting g of broods
- x. Use clean containers and equipment during harvesting
- xi. Leave at least 30% of honey during harvesting
- xii. Honey combs shall be delivered to collection centres within 24 hours after harvesting
- xiii. Bee keepers shall keep records of their organic apiary activities

B. KILUM-IJIM WHITE HONEY ASSOCIATION (KIWHA) ORGANIC CERTIFICATION PROJECT ACTION PLAN

DATE	ACTIVITY	RESPONSIBLE	PARTNERS	RESOURCES
By 15.06.16	Sensitization to members of the cooperatives	Field officer	The coordinator	
By 31.05.16	Beekeepers training	Field officer	Coordinator CAMGEW BERUDA	
By 15.06.16	Registration of bee keepers	Field officer	coordinator	Forms stationeries
By 15.06.16	Internal inspection	Field officer	Coordinator	Forms stationeries
By 15.06.16	Signing of bee keeping contract	Field officer	coordinator	
By 15.06.16	Signing of conflict of interests	coordinator	Juma	
By 07.05.16	Development of relevant form	Juma	coordinator	
By 22.05.16	Development of ICS manual	Juma	Coordinator/Evelyn	
By 15.06.16	Buying of files	coordinator	Annie	
By 15.06.16	Cluster maps	CAMGEW	FMI's and Coordinator	
By 30.05.16	Processing flow	coordinator	The processing staff	
By 15.06.16	Printing of forms	coordinator	Annie/Evelyn	
By 31.05.16	Follow-up with internal inspector and documentation	Juma	Coordinator, Annie, Evelyn	
Early July	External inspection	Juma/Evelyn	Coordinator, forest officer, Annie	

C. CODING SYSTEM AND INDIVIDUAL FARMER IDENTIFICATION CODING SYSTEM



II. Individual farmer identification (Examples)

1. Abassakom Farmer = **KH-KM-AS-0001**
2. Bihkov Farmer = **KH-JB-BK-0002**
3. Oku Farmer = **KH-OK-OK-0003**
4. Atumikui Farmer = **KH-KM-AM-0004**
5. Njinikom Farmer = **KH-KM-NK-0005**
6. Belo Farmer = **KH-KM-BL-0006**
7. Abassakom Farmer = **KH-KM-AS-0007**

D. CHAIN CUSTODY OF ORGANIC BEEKEEPING AROUND THE KILUM-IJIM FOREST, MAJOR RISKS AND WAYS OF MITIGATION

SN	PRODUCT STEP/ FLOW CHAIN OF CUSTODY	MAJOR RISKS	WAYS OF MITIGATION
1	<i>Hives</i>	Hives Wax for baiting or starter combs Colonies Stands for hive mounting	Avoid painting hives with colour paint Use natural wax or wax from a converted hive Avoid importation of hive colonies
2	<i>Apiary</i>	Location in the savanna where hives are colonized Location in the forest where hives are mounted and ready for harvesting Forage (Feed) Pests and diseases	Locate hive far from conventional farms Locate hives at least 3 KM from a conventional farm Feed bees (in case of severe climate conditions) with organic honey or sugar Use only authorized chemicals after concerting certifier. (Preferably use organic products)
3	<i>Transportation Of Hives From Colonisation Sites</i>	Spillage Absconsion of colony	Precautions should be taken when
4	<i>Harvesting</i>	Containers used for harvesting Maturity of the honey in combs Killing of bees during harvesting Over smoking during harvesting	Use new and clean containers or food related containers Make sure only matured up to 75% honey is harvested Avoid killing bees and eating broods Avoid over smoking of honey not to contaminated honey
5	<i>Transportation Of Honey From Apiary</i>	Rains Spillage Commingling of honey	Use closed containers (avoid harvesting under rain) Careful when transporting Avoid mixing organic and non organic honey
6	<i>Processing</i>	Draining systems (methods and equipment) Adulteration or commingling of product Duration of time after harvesting Heating	Use conventional equipment for draining Avoid adulteration of honey Process honey at most 24 hours after harvest Avoid heating honey
7	<i>Packaging And Storage</i>	Storage containers Packaging (chemical free containers) Commingling or mixing of product (organic and in-organic)	Store in clean and new containers Package in clean and chemical free containers Avoid commingling or mixing of organic honey with inorganic honey