AU-IBAR BEE PROJECT

PROJECT REPORT 2013

AU-IBAR / ICIPE EU-FUNDED BEE HEALTH PROJECT

Contract No: DCI-FOOD/2013/330416
1. PROJECT OVERVIEW

Project Title: African Reference Laboratory with Satellite Stations for the Management of Pollinator Bee Diseases and Pests for Food Security

Project Objectives

The overall objective of the proposed action is “To enhance the contribution of bees and other pollinators to food security and improved livelihoods in Africa”.

The purpose of the action is “To improve bee products and pollination services through reduced incidence of bee diseases and pests, enhanced markets access, and bee health institutional environment”.

Within the framework of the Comprehensive African Agriculture Development Program (CAADP), AU-IBAR and icipe are implementing a project aiming at improving honeybee production and pollination services through reduced incidence of bee diseases and pests, enhanced markets access, and bee health institutional environment. This initiative by AU-IBAR and icipe for research, development, advocacy, capacity building and strategic networking for honeybee diseases and pests in Africa proposes a coordinated action along the bee health service chain. The project will on the one hand established four regional satellite laboratories in west, central and East Africa and a central reference laboratory at icipe Kenya, to generate new knowledge on bee diseases and pests and their control measures for the Farmers’ Federations and beekeepers at large.

It shall be recall that in this joint implementing project the bee health component (who is particularly on research) is implemented by icipe.

This joint bee project overall strategy of the action is focusing on developing linkages between participatory bee health management (PBHM) and beekeeping technology, pollination services, market access and bee health policy and legislation at both national, regional and continental levels has four expected results and main activities (two for icipe our implementing partner and two for AU-IBAR).

1.1. AU-IBAR’s main activities

Result 3: Enhanced awareness on the honeybee health and conducive environment for enhanced bee disease control, access to markets, and consumer safety created.
Activity 3.1. Organize effective multi-stakeholder partnerships and mechanisms for the development of policy, institutional and market options for bee health and pollination services for food security.

Activity 3.2. Develop policy and regulatory frameworks for sustainable bee health, apiculture and pollination services at national, regional and continental levels in tight connection with OIE and RECs.

Activity 3.3. Carry out environmental impact study on bees and pollination services.

Activity 3.4. Enhance capacities for timely collection, analysis and sharing of accurate sanitary information; this activity will consist of strengthening the capacity of National veterinary services for early detection, timely notification/reporting, prevention and control of bee diseases.

Activity 3.5. Strengthen Africa’s participation in standard setting organizations (OIE and Codex Alimentarius) on standards setting process for bees and bee products.

Activity 3.6. Identify market constraints and opportunities for honey and hive products and investment opportunities of bee products and pollination services.

Result 4: Capacity of beekeepers/farmers’ federations, RECs and NARS on bee health management systems and policy options strengthened.

Activity 4.1. Establish or strengthen producer organizations for input supply management and cooperative marketing.

Activity 4.2. Enhance the capacity of beekeepers associations to acquire information and utilize improved bee health technologies/innovations.

Activity 4.3. Develop a database on pollination services and bee health research and development outputs.

Activity 4.4. Strengthen the capacities of NARS and RECs to analyze the value chain of pollination services and priority beehive products.

Activity 4.5. Develop and promote bee health knowledge management systems through bee health value chain analysis.

1.2. Icipe’s main activities

Result 1: Bee health facilities for innovative technologies and provision of pests risk analysis baselines and benchmarks established.
Activity 1.1: Refurbishment of one research and training centre in Kenya (Bio-safety level-2)

Activity 1.2: Refurbishment of four research and development satellite stations with regional mandate in East (Ethiopia), Central (Cameroon) and West Africa (Liberia and Burkina Faso) (Bio-safety level 1)

Activity 1.3: Equipping five research facilities with diagnostic tools for surveillance and detection of bee diseases in African colonies for undertaking bee health research.

Activity 1.4: Setting up model apiaries at selected NARS/national beekeeping stations and farmers’ fields to demonstrate the application of intervention logics and scaling up hive products and pollination services at each project site.

Activity 1.5: Develop screen houses at NARS/national beekeeping stations for demonstrating and training Farmer’s Federations in the use of various bee species for pollinating food crops.

Activity 1.6: Establish one marketplace for processing, packaging, and trading of honey and hive products in each participating country

Result 2: Validated bee disease and pest management modules with efficient field based diagnostic tools developed.

Activity 2.1: Mapping of bee biodiversity and health factors using species distribution model and dynamic vegetation modelling

Activity 2.2: Mapping of bee diseases and pests distribution in modern, traditional and feral bee colonies, pollen source and spatial analysis of land use and other environmental factors.

Activity 2.3: Investigating behavioural mechanisms of African honeybees’ tolerance against the invasion of Varroa mite, and other pests and brood diseases.

Activity 2.4: Developing effective methods to detect pesticide hazards in the beehive products and identify and standardize mites-related volatile components

Activity 2.5: Evaluating bee health hazard and risk through effective technologies such as morphometrics and DNA finger printing and vitellogenin levels

Activity 2.6: Developing of plant based bio-pesticide for bee diseases and pests and production of over 200,000 pieces of bee pest and disease control products for Farmers’ Federations/beekeepers in 5 countries in Africa.
2. INTRODUCTION

The EU project grant was signed with icipe on May, 2013 and with AU-IBAR (Contract No: DCI-FOOD/2013/330416) end December 2013. Consequently all activities carry out in 2013 were under icipe’s bee health project budget. It will be from March, 2014 that AU-IBAR will start activities under his on budget, and the first activity will be Activity 3.4: enhance capacities for timely collection, analysis and sharing of accurate sanitary information; this activity will consist of strengthening the capacity of National veterinary services for early detection, timely notification/reporting, prevention and control of bee diseases.

During the year 2013 and under icipe budget, we and our partner implement activities which are in line with the Unit mandate and also contributed to the following AU-IBAR strategic programmes namely:

- **Programme 1**: Reducing the impact of transboundary animal diseases and zoonoses on livelihoods and public health in Africa
- **Other Initiatives under the Animal Production Unit (APU)**: Other activities of bee project fall under what we can name “other initiatives under the Animal Production Unit”.

This report presents achievements made by bee project during the year 2013 and is in relation with the AU-IBAR’s strategic programmes and other initiatives under the Animal Production Unit.

3. Strategic programme 1: Reducing the impact of transboundary animal diseases (TADs) and zoonoses on livelihoods and public health in Africa

AU-IBAR in collaboration with ICIPE completed the formulation of the project titled “African Reference Laboratory with Satellite Stations for the Management of Pollinator Bee Diseases and Pests for Food Security”.

Within the framework of the Comprehensive African Agriculture Development Program (CAADP), AU-IBAR and icipe are implementing a project aiming at improving honeybee production and pollination services through reduced incidence of bee diseases and pests, enhanced markets access, and bee health institutional environment. This initiative by AU-IBAR and icipe for research, development, advocacy, capacity building and strategic networking for honeybee diseases and pests in Africa proposes a coordinated action along the bee health service chain. The project will on the one hand established four regional satellite laboratories in west, central and East Africa and a central reference laboratory at icipe Kenya, to generate new knowledge on bee diseases.
and pests and their control measures for the Farmers’ Federations and beekeepers at large.

It shall be recall that in this joint implementing project the bee health component (who is particularly on research) is mainly implemented by icipe.

This joint bee project overall strategy of the action is focusing on developing linkages between participatory bee health management (PBHM) and beekeeping technology, pollination services, market access and bee health policy and legislation at both national, regional and continental levels has four expected results and main activities (two for icipe our implementing partner and two for AU-IBAR).

Under this strategic program 1, the following activities have been undertaken:

3.1. Identification of facilities to host bee health regional satellite laboratories.

Dr. Simplice Nouala and Prof. Suresh Raina (icipe) travelled to Liberia and Burkina Faso between 14\textsuperscript{th} and 24\textsuperscript{th} July, 2013; and then to Cameroon and Ethiopia between 13\textsuperscript{th} and 19\textsuperscript{th} August, 2013. While in the four countries, they met with Ministers and Directors of Agriculture.

\textbf{AU-IBAR and icipe meeting with Minister of Agric, Liberia}
AU-IBAR and icipe meeting with PS, MRAH- Burkina Faso

AU-IBAR and icipe meeting with Agric. Minister, Cameroon
• The project was allotted spaces for satellite stations (Regional Laboratory) and marketplaces in the four countries.
Burkina Faso satellite station

Ethiopia satellite station
3.2. **Training on trainers (TOTs) workshop for chemists of participating countries on HPLC and technical people on Surveillance of honeybee pests and diseases**

This training targeting chemists and technical people from participating countries: Burkina Faso, Cameroon, Ethiopia, Kenya, Liberia and Madagascar. This TOTs workshop was held in Nairobi from 25\textsuperscript{th} November to 6\textsuperscript{th} December 2013 and was aims for chemists of participating countries on analyze of pesticide hazards in the hive products, and honey and hive products quality control using High Performance Liquid Chromatography (HPLC) and for technical people on various topic concerning Surveillance of honeybee pests and diseases, pollination and mapping biodiversity.

The participants were trained in the following areas:

- Surveillance of honeybee pests and diseases
- Pesticide hazards in the hive products; and honey and hive products quality control
- Mapping of bee biodiversity and diagnostic tools for bee pests and diseases- GIS and remote sensing
- Development of plant based biopesticides for bee diseases and pests
- Pollination ecology, stingless and carpenter bees
- African honeybee gene bank and queen breeding
- Marketplace development, ICS for certification and standardization of honey and hive products
- Bee health knowledge management systems; and Common agricultural policy and bee health (AU-IBAR)

Participants with AU-IBAR Representative and icipe Director General
4. **Other Initiatives under the bee project**

4.1. **Official launch of the EU funded bee health project and 1st project steering committee meeting (SCM)**

The inception workshop of the bee health was held on 23rd to 25th September, 2013 at the Thomas Odhiambo conference hall, icipe, Nairobi, Kenya. This was done together with the 1st project steering committee.

The inaugural Steering Committee Meeting and official launch of the project took place on 24th September, 2013 at icipe’s Duduville Campus in Nairobi, and was attended by 65 delegates from 15 countries. The following groups were represented:

Steering Committee (SC) members as follows:

- CEEAC representative
- IGAD representative
- EAFF representative
- COMESA representative
- Burkina Faso Ministry representative
- Cameroon Ministry representative
Liberia Ministry representative
Burkina Faso Private Sector representative
icipe secretariat

4.2. Participation to the FARA week

From 15 to 20 July, the Forum for Agricultural Research in Africa (FARA) convenes a continental gathering of all stakeholders involved in Africa agricultural development in Ghana. This gathering has become known as the Africa Agriculture Science Week (AASW).

4.3. Signing of contract

The AU-IBAR component of bee project grant was signed on 23th December 2013 under Contract No: DCI-FOOD/2013/330416.

Conclusion

AU-IBAR will start his activities component under his budget in 2014.