



**Centre for Innovation and Technology Dissemination (CITED)  
SECRETARIAT  
University of Energy and Natural Resources (UENR), Sunyani  
Ghana, West Africa**

**FIELD INSPECTION REPORT**



**OCTOBER 2014**

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**Executive Summary**

The Ghana Field visit team made up of Mr. Diantom Agoura, Professor Luciano Cinquanta, Dr. Remo Manoni, Mr. Claudio Papa, Dr. Valeria Salvatore, and Mr. Emmanuel Sassi, from Italy arrived in Ghana on the 22<sup>nd</sup> of August 2014, and joined the Ghanaian counterparts Professor Dan. Obeng Ofori, Mr. James Agyei-Ohemeng, Dr. Micheal Lartey and Dr. Phyllis Opare from University of Energy and Natural Resources' Center for Innovation and Technology Dissemination office in Ghana. The University of Molise (UNIMOL) team was met at the Kumasi airport on Friday August 22<sup>nd</sup> and brought by bus to Sunyani the same day. There were visits to SATTIFS project areas from the 22<sup>rd</sup> to 25<sup>th</sup> August 2014. The team visited Techiman and Wenchi for maize production and Goaso and Maabang for cocoa production. The team also spent six hours on training of CITED staff before departure on 26<sup>th</sup> August 2014. The team members had exciting practical experiences on maize and cocoa value chain actors and practices.

**Introduction**

This project is on Strengthening Innovations and Technology Dissemination for Sustainable Development in Cereals, Cocoa and Coffee Value Chains in Western and Eastern Africa. It aims at building capacity in science, technology, and innovation in these regions to boost food security and socio-economic development. This is to be achieved to effectively disseminate proven appropriate technologies in cocoa and cereal production in the study regions. The project is being implemented in several communities in the Brong Ahafo and Ashanti Regions of Ghana. The Ministry of Food and Agriculture, cocoa and maize farmers, and other practitioners in the cocoa and maize value chain have been identified as key stakeholders to benefit from training and the research outcomes of this project.

The field visit was carried out to stimulate early partnership engagement with the project staff and other stakeholders. The field visit was also organized to appreciate the best practice and stakeholders' attitude towards the execution of project activities in order to influence and promote the achievement of project objectives. It helped to guarantee the functionality of the structure and synergy with partners focusing on communication and motivation through training of CITED staff.

## **Objectives**

The objectives of the field visits were:

1. To stimulate early partnership engagement with the project staff and key stakeholders.
2. To stimulate attitude towards the project activities in order to promote the achievement of project objectives.
3. To guarantee the functionality of the structure and synergy with partners on communication and motivation through training of CITED staff.

## **Activities during field visits**

### **Saturday 23<sup>rd</sup> August 2014**

#### **1. Visit to Techiman**

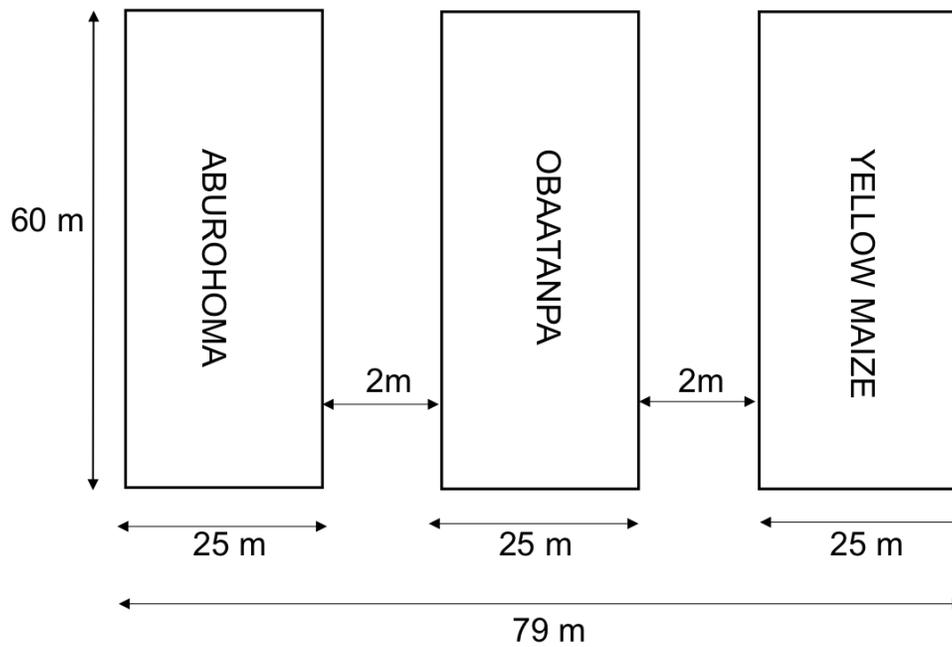
The team visited maize demonstration farm and interacted with 11 farmers (male: 7; female: 4) from three different farmer groups (Nyame Na Aye, Nyame Nti and Sunta Nanta). Each of these farmers cultivates 5-8 acres of land. The demonstration farm for the project was ready for the cultivation of three varieties of maize namely, Obaatanpa, Abrohoma and Yellow Maize as shown in the field lay out in Figure 1.

The farmers were selected to cultivate and engage in joint learning at the CITED maize demonstration field (Plate 1). The farm is situated near an irrigation site even though the irrigation is not readily available to all the farmers.

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 TANOSO IRRIGATION PROJECT ROAD
 

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**Figure 1: Farm Layout of Demonstration Farm**



**Plate 1. Participating Farmers**

At the irrigation site we were taken through the pumping of water from the River Tano to the farm lands using the pump. From the farm, we visited the irrigation plant. This is one of only a few irrigation sites in the Brong Ahafo Region, which

served only a few farmers in the catchment area. As a result, majority of Ghanaian farmers still rely on natural rain for farming.

## **2. Visit to Techiman Market**

We visited the maize section of the Techiman market to familiarize ourselves with the post-harvest processing and the sale of maize. Air-drying is employed by the traders to remove moisture from the maize. Since this was not the regular market day, many of the traders had maize spread out on tarpaulins to dry. The team interacted with some of the traders to understand the marketing and pricing mechanisms in the market.

## **3. Visit to Wenchi Silo**

At Wenchi maize silo facility, maize is processed in the silo to remove the chaff and dried through a processor (Plate 2). The dry weight is then deducted from the original weight and the difference is charged on to the farmer as a fee. The farmers are allowed to temporarily store the maize for a 3 months period. A test conducted on the processed maize showed that the moisture content was 12% w/w. At the peak season, the silo can process 10,000 kg of maize. Some of the maize are sold to the public. The team also paused at Wenchi maize drying/storage facility for lunch.



*Plate 2: Maize storage facility at Wenchi: Maize ready to be separated and Maize in a separator*

#### **4. Visit to a model maize farm in Wenchi**

At Wenchi, the team also visited Alhaji Baaba's maize farm where the maize was ready to be harvested (Plates 3 & 4). The farmer told us he employed all the technologies recommended by the Agricultural Extension Officer from land clearing to harvesting in his production chain.



*Plate 3: Model Maize farm at Wenchi ready to be harvested*



*Plate 4: Team members at a model maize farm in Wenchi*

He had planted ‘obaatanpa’ maize variety on the farm. He further took us to another model farm where he had ploughed and planted an area of about 5 acres with maize.

### **Sunday 24<sup>th</sup> August 20014**

The delegation visited the CITED secretariat where staff training sessions were conducted for the CITED staff based on the overview, aims and expectations of the project as well as an explanation and demonstration of the use of ELISA by Dr. Remo Manoni (Plates 5 & 6).



*Plate 5: CITED Training at UENR, Sunyani, Ghana*



*Plate 6: CITED Training at UENR, Sunyani, Ghana*

The training session covered the following presentations:

- a. *“SATTIFS Project presentation: overview and detailed activities”* by Professor Luciano Cinquanta
- b. *“Mycotoxins: overview and detection”* by Professor Luciano Cinquanta
- c. *“Role of farmers’ organization and women in agricultural productivity”* by Mr. Diantom Agoura Joseph, Ph.D. Student in Food Science, University of Parma, Italy and ACP project Coordinator.
- d. *“Mycotoxins: food contaminants detection”* by Dr. Remo Manoni

There were questions, comments and discussions on the various issues addressed during the presentations.

### **Monday 25<sup>th</sup> August 2014**

#### **1. Visit to Cocoa farms in Goaso**

The team visited some Cocoa farms in Goaso to learn at first hand the planting, harvesting, fermentation and drying processes of cocoa in Ghana (Plates 7). The team visited Madam Vivian’s farm. This farm has cocoa trees that are 7-15 years old. She

explained the process of fermentation and the importance of the process to the team. The team continued to Mr. Ayarriba's cocoa farm where he showed us sun drying of cocoa beans fresh cocoa pods yet to be harvested (Plate 8). From there the team proceeded to Mr. Banahene's farm to see newly cultivated cocoa plants intercropped with plantain, cocoyam, okra, ginger, etc (Plate 9).



*Plate 7: Heap fermentation being demonstrated, and sun drying of cocoa beans*



*Plate 9. Cocoa trees with mature pods*



*Plate 9. Newly planted cocoa farm with food crops to provide shade*

## **2 Visit to the Seed Production Unit, COCOBOD at Goaso**

At the Seed Production Unit workers explained and demonstrated the pollination procedure to select the best trees for cocoa pod production (Plate 10). It is a painstaking and thorough process of selecting pollen from trees with desired qualities and crossing with female plants also having desirable qualities.



*Plate 10: Some team members at Seed Production Unit office and a staff member demonstrating the pollination process to the team*

### 3 Visit to Cocoa Research Institute of Ghana (CRIG), Maabang

At this office, one of the scientists explained the development of new breeds by selecting clones that are resistant to diseases like the swollen shoot, black pod and other cocoa diseases (Plate 11).



*Plate 11: Some selected cloned seedlings in the nursery*

These seedlings are tried on the field to determine their viability before they are pollinated with other varieties and the pods are then field tried again for distribution to farmers.

#### **Key observations**

The key observations made during the visit were that the stakeholders, especially the farmers, were very much interested in the project objectives. This came out of the open discussions they had with the team. Consequently they are very eager to partner with the SATTIFs project. The presentations made by the team members and their interactions with farmers were very educative.

#### **Conclusion**

The field visit was well planned, organized and the time schedules were followed leading to a very successful project outcomes. However, due to the long distances between farms, future field visits should be carried out over a longer period to ensure adequate interaction with farmers and stakeholders. It is also hoped that a more effective and efficient technology dissemination platforms will be developed through this project to empower farmers to adopt appropriate technologies to increase crop production and enhance food security.

**Acknowledgments**

We thank the maize and cocoa farmers, agricultural extension agents, officers from the Ministry of Food and Agriculture, COCOBOD, cocoa research scientists, and technicians from the seed production unit of COCOBOD for their active participation. We are also grateful to our International Partners for their enthusiastic participation under difficult terrain and poor road network. The SATTIFS project provided funds for the organization of the field visits.