

CSIR-FRI/RE/KGA/2012/002



**ANNUAL TECHNICAL REPORT ON CSIR-FRI/CAVA  
PROJECT ACTIVITIES FOR THE PERIOD APRIL  
2011 THROUGH FEBRUARY 2012**

**Gregory Afra Komlaga and Mary Glover-Amengor**

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BY

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## **Executive Summary**

A two-year sub-contract was signed between University of Greenwich and CSIR-Food Research Institute to carry out outstanding activities in an earlier contract. The kitchen staff of four (4) senior high schools were trained by the FRI-C:AVA team in Brong Ahafo region on production of composite bread within the period. A total of thirty-nine (39) bakers were trained, out of which thirty-four (34) were women. The schools which received the training were Presbyterian SHS, Bechem, St. Joseph College of Education, Bechem, Sunyani SHS, Sunyani and Techiman SHS, Techiman. A commercial baker at Techiman, Samlote Bakery, was also trained. Two groups of commercial pastry makers (9 women and 1 man) in Accra were also trained during the period under review on cake making, doughnut making, sweet-bug making and chips making using HQCF and wheat flour in various combinations. Backstopping was provided to end users of HQCF in the Volta and Greater Accra regions of Ghana. Ten (14) monitory visits were made to senior high schools in Accra and Volta region to have first hand information on the use of the HQCF. A total of 32 maxi bags (50Kg) of HQCF were used by the pastry makers and schools during the period. The FRI-C:AVA team provided support to the C:AVA Ghana office to produce a documentary on the project.

## **Introduction**

Cassava: Adding value for Africa (C:AVA) project, is a project which intends to develop value chains for High Quality Cassava Flour (HQCF) in Ghana and four (4) other African countries as a means of improving the livelihoods and incomes of at least 90,000 smallholder households as direct beneficiaries including women and disadvantaged groups. It is funded by Bill and Melinda Gates foundation. The project seeks to promote the use of HQCF as a versatile raw material for which diverse markets have been identified in a pilot studies. The project focuses on three potent intervention points:

- (i) ensuring a consistent supply of raw materials (cassava roots);
- (ii) developing viable intermediaries acting as secondary processors or bulking agents in value chains and

- (iii) driving market demand and building market share (in bakery industry, components of traditional foods or plywood/paperboard applications). Farmers and farmer/processors will be supported in production and primary processing activities through partnership with Non Governmental Organizations (NGOs) or other extension services. Business development and other specialists will support intermediaries to meet the requirements of end users. End users will be supported technically in adopting HQCF.

Contracts were signed between CAVA (Ghana) and CSIR-Food Research Institute together with other stakeholders to carry out specific activities on the project. The management team of CAVA (Ghana) needs to know from time to time the progress of work of each stakeholder including CSIR-FRI. One of the means by which this can be achieved is by submission of reports of work carried out by each stakeholder at specified periods of project time table. This report covers the work carried out by the project team of CSIR-FRI for the period April 2011 through February 2012.

## **2.0 Work carried out within the period under review.**

### **2.1. Signing of project contract**

Bill and Melinda Gates Foundation granted a two-year no cost extension to CSIR-FRI for the completion of activities and delivery of outputs outstanding under the previous contract signed with the National Resources Institute, UK. The sub-contract was signed on behalf of CSIR-FRI by the Acting Director, Dr. P-N.T. Johnson, during the period under review.

### **2.2. Training of bakers in the Brong Ahafo region.**

The CSIR-FRI/CAVA team made reconnaissance visits to Senior High Schools (SHS) in the Brong Ahafo region to identify senior high schools or colleges of education that could have their kitchen staff trained in composite bread making. Fourteen (14) potential schools were visited in all. The schools visited were Ameyaw Akumfi SHS, Techiman, Tuobodom SHS, Tuobodom, Boakye Tromo SHS, Duayaw Nkwanta, Serwaa Kesse Girls SHS, Duayaw Nkwanta, Sacred Heart SHS, Nsoatre, Notre Dame Girls SHS, Fiapre, Berekum College of Education, Berekum, Presbyterian SHS, Berekum, Sunyani, St. Joseph College of Education, Bechem, Presbyterian SHS, Bechem, Sunyani SHS, Sunyani, Berekum SHS, Berekum, Techiman SHS, Techiman and



Wenchi SHS, Wenchi. Out of this number, six (6) schools were selected based on the team's criteria for selecting schools for training. The six (6) schools which were selected are St. Joseph College of Education, Bechem, Presbyterian SHS, Bechem, Sunyani SHS, Sunyani, Berekum SHS, Berekum, Techiman SHS, Techiman and Wenchi SHS, Wenchi.

Out of the six schools identified, four were trained during the period under review. The other two could not be trained because they declined to be part of the training programme after the selection process. One (1) commercial baker, Samlote Bakery, with workforce of thirty (30) people and capacity to bake twenty bags of flour (20 bags of 50Kg wheat flour) daily was also trained. The training of the schools took two days on the average to undertake. The first day of the training concentrated on small scale production of composite bread (20% HQCF and 80% wheat flour) alongside training on production of three (3) pastry products of various HQCF and wheat flour combinations. The pastry products the staff were trained on were doughnuts, chips and cassava strips. The second day of the training was used to bake bread in large quantity that fed the entire school population for a breakfast menu. The comments of the students after the breakfast menu were solicited. Generally, the students and the staff (teaching and non-teaching) were impressed about the outcome of the product and they were very appreciative for the training. They promised to use the HQCF in the school for bread production to feed the students in order to cut down cost on feeding the students.

A day was used to train the staff of Samlote Bakery. The FRI team allowed the management to use their own measurements of ingredients for the baking except for the baker's yeast and substitution of 20% HQCF for wheat flour. The quantity of yeast was increased to allow the bread to rise earlier (within 6 hours) than normal to avoid bitter aftertaste development in the bread. Management of the bakery was so much impressed about the outcome of the products and promised to use the HQCF in bread making in his business. The only concern they raised was the availability of the flour all year round. The team assured the management of the availability of the product which will soon be at their doorstep at St. Baasa Ghana Ltd, Chiraa (about 50Km from Techiman), a cassava processing company. The FRI team added that there could be an interim arrangement of the supply of the HQCF from Accra before St. Baasa Ghana Ltd starts

supplying to the bakery. The CEO of Samlote Bakery was finally happy and promised to get back to the team as soon as possible on how best to start receiving the HQCF.

<b>Name of school</b>	<b>Date of training</b>	<b>Total number trained</b>	<b>Number of Female trained</b>	<b>Remarks</b>
Presbyterian SHS, Bechem.	October 6 - 7, 2011	16	16	The training was very successful with much participation of the staff.
St. Joseph College of Education, Bechem.	October 7 – 8, 2011	6	6	The staff were very impressed about the outcome of the product and promised to use the HQCF.
Sunyani SHS, Sunyani.	October 10 – 11, 2011	6	4	The bakery department of the kitchen was happy about the training and promised to recommend HQCF use to the administration of the school.
Techiman SHS, Techiman.	October 11, 2011	6	6	The staff members were impressed about the outcome of the product. They promised to start using the HQCF as soon as they acquire their own baking facilities.
Commercial Baker, Techiman.	October 11, 2011	5	2	The CEO of the bakery was so much impressed about the outcome. He promised to start using the HQCF.

**Table1:** List of bakers trained in the Brong Ahafo region.

### **2.3 Training of pastry makers in Accra.**

Two groups of pastry makers from different environs of Accra were trained at the premises of CSIR-Food Research Institute during the period under review. The first group was made up of eight (8) people out of which seven (7) were women. The training was a day's programme which took place on November 4, 2011. The participants were trained on bread baking, cake making, chips making, doughnuts making and cassava strips making using HQCF and wheat flour in various combinations to make composite products. The participants were very impressed especially about the 100% HQCF cake. They were very grateful to the FRI team and promised to start using the HQCF. As a sign of commitment, most of the trainees bought various amounts of the HQCF that was available at FRI just after the training to start production.

The second group of pastry makers were trained on November 24, 2011 at the premises of FRI. They were also taken through the production of the pastry products the first group of pastry makers were trained on. The trainees were equally happy at the end of the training and expressed their gratitude to the FRI team. They also promised to start using the HQCF.

No.	Name of Participant	Gender	Date of Training	Contact (Tel.)
1	Veronica Amengor	Female	04-11-2011	0265436691
2	Mercy Dekpotor	Female	04-11-2011	0246940300
3	Anne Anatsui	Female	04-11-2011	0243288834
4	Esime Anatsui	Female	04-11-2011	0240938282
5	Mrs Mawusi Awity	Female	04-11-2011	0244981846
6	Florence Ahiakpor	Female	04-11-2011	0244933553
7	Esther Djabeng	Female	04-11-2011	0242955413
8	Praise Atikpui	Male	04-11-2011	0242261344
9	Anne Anatsui	Female	24-11-2011	0243288834
10	Joan Ampofo	Female	24-11-2011	0262642001

**Table 2:** List of pastry producers trained at FRI on the use of HQCF for pastries.

#### 2.4 Utilization of HQCF by bakers/pastry makers

The FRI team based on interaction with the trained pastry makers and the staff of the senior-high schools had figures on the utilization of the HQCF. A total of sixteen (16) bags of 50Kg HQCF were used within the period. The FRI team also used a total of five (5) bags of 50Kg HQCF to carry out its training activities. Table 3 shows the breakdown of the users of the HQCF during the period.



No.	Name of Institution	Quantity of HQCF Used (Kg)	Remarks
1	CSIR-Food Research Institute, Accra.	7	The HQCF was used for training of bakers/pastry makers
2	Sunyani SHS, Sunyani.	3	The HQCF was used to make bread for students for breakfast menu.
3	St. Joseph College of education, Bechem.	2	The HQCF was used to make bread for students for breakfast menu.
4	Samlote Bakery, Techiman.	5	The HQCF was used to make commercial bread.
5	Pastry makers, Accra.	8	The HQCF was used to make commercial pastries.
6	Mawuli SHS, Ho	7	The HQCF was used to make bread for students for breakfast menu

**Table 3:** Table showing the use of HQCF by trained bakers and pastry makers.

## 2.5 Backstopping activities

The FRI team visited six (6) senior high schools in the Volta Region and four (4) senior high schools in the Greater Accra region within the period under review. The schools visited in the Volta region included Bishop Herman SHS, Awudome SHS, Mawuli SHS, Anfoega SHS, Anlo SHS and Vakpo SHS. Mawuli SHS was the only school found to be using the flour at the time of the visits. The rest of the schools had stopped using the flour due to factors such as change in Matrons of schools and lack of suitable baking infrastructure in some of the schools. The schools visited in the Greater Accra region included Accra Academy SHS, Accra Girls SHS, Presbyterian Boys SHS, Legon and Labone SHS. All the Accra schools were putting plans in place for the use of the HQCF according to the school authorities.

## 2.6 Support to country office in documentary production

The FRI-C:AVA team provided support to the C:AVA country office to produce a documentary on the utilization of HQCF in Ghana. The support was in the form of organizing the schools that



had been trained by the FRI-CAVA team to enable them to grant an interview to the Country office. As a result of the airing of the documentary on a national TV station (GTV), follow-up calls were made to C:AVA-FRI requesting for training of some new schools some of which fall outside the project catchment area. Some of the schools that requested training were Novrongo Polytechnic and Ho Polytechnic.

### **3.0 Conclusion and Recommendations**

Efforts must be made (by CAVA-FRI team and the Business Advisor, CAVA-Ghana office) to convince the school authorities as well as the managers of Samlote Bakery to use the HQCF. CAVA-FRI must regularly be in touch with the pastry makers trained in Accra to keep the enthusiasm of using the HQCF. Most of the schools trained in the Volta region had stopped using the HQCF for bread making. This is due to lack of mills and/or rolling machines in the schools as well as change of Matrons in the schools. It is recommended that schools which lack the basic baking equipment such as rolling equipment could be assisted by the project to acquire one to facilitate smooth uptake of the HQCF. FRI-CAVA team together with the Business Advisor (Ghana office) must arrange and have discussions on procurement of HQCF with school authorities/board of governors of the schools.

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