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**COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH**



**FOOD RESEARCH INSTITUTE**

**REPORT ON TRAINING WORKSHOP ON PLANTAIN  
PROCESSING & RECIPE DEVELOPMENT**

**HELD AT APESIWA CONFERENCE ROOM, FOOD RESEARCH INSTITUTE (CSIR),  
FROM 15 TO 17<sup>TH</sup> MAY, 2007**

**EDITED BY**

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AGRICULTURE)**

**2007**

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**GATSBY BANANA AND PLANTAIN PROJECT**

**REPORT ON A TRAINING WORKSHOP FOR  
PLANTAIN PROCESSING**



**HELD AT FOOD RESEARCH INSTITUTE (CSIR),  
OKPONGLO, ACCRA, GHANA  
FROM 15<sup>TH</sup> – 17<sup>TH</sup> MAY, 2007**

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## **ACKNOWLEDGEMENTS**

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## ACRONYMS

AEA	Agricultural Extension Agents
AFFS	Agriculture Forestry and Fisheries Sector
CSIR	Council for Scientific and Industrial Research
DDO	District Development Officer
FRI	Food Research Institute
MAP	Modified Atmospheric Packaging
MoFA	Ministry of Food and Agriculture
POZs	Project Operation Zone
RDO	Regional Development Officer
SMEs	Small and Medium Scale Enterprises
TOT	Training of Trainees
WIAD	Women in Agriculture Development

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## EXECUTIVE SUMMARY

In response to the implementation of the Gatsby Banana and Plantain Project Phase II, a training workshop for plantain processing was organized at Food Research Institute (FRI) in collaboration with Women in Agriculture Development (WIAD) Directorate of Ministry of Food and Agriculture (MOFA). The two institutions were responsible for evaluation and dissemination of post-harvest processing options for plantain and banana under the Gatsby project. The Gatsby Banana and Plantain Project Phase II sought to increase food security and diversify income opportunities through an efficient collaborative scheme for delivery of improved varieties of plantain and banana with associated value-adding post-harvest processing options.

The training workshop was a follow-up on a consultative workshop held in May, 2006 at Food Research Institute in collaboration with Women in Agriculture Development (WIAD) Directorate of Ministry of Food and Agriculture (MOFA), where an action plan was drawn for the execution of the subcomponent of the Gatsby project. At the consultative workshop, FRI and WIAD officers, processors from the Project Operation Zone (POZs) and other stakeholders brainstormed on recipes and processing technologies available and selected those that could be adapted for use by all peoples across the nation particularly rural farm families in plantain and banana producing areas, food processors and industrialists. The action plan included development of training materials, training of WIAD officers and subsequent training of women and processors in processing technologies identified among others in three Project Operation Zones (POZs), Ashanti, Brong Ahafo and Eastern Regions. A draft training manual “*Your Plantain Processing and Recipe Manual*” was developed after the consultative workshop and served as the main training document during this training workshop.

The three day training workshop was participatory, in that trainees had the opportunity to question facilitators, pass comments and suggestion in a lively atmosphere. Trainees were taken through a step-by-step production of plantain flour and group practical work was done on the first day of the training workshop. Demonstration and group practical work on



plantain flour recipes was conducted on the second and third day. Twelve recipes including plantain and wheat flour, *tatale*, noodles, doughnuts, pastry chips, queen's cake, *ofam*, cookies, baby food formulation, *kaklo*, *mpotompoto* and *fufu* formulation and reconstitution. On the third day of the training workshop, trainees discussed and made suggestions for the finalization of the training manual, which saw the formation of an editorial board comprising of team members from FRI and WIAD to finalized the training manual for use in the POZs.

## 1.0 INTRODUCTION

In Ghana plantain and banana are very important starchy staples as they are cheaper in terms of cost per 100 calories than other food crops such as cassava, yam and rice grown by African farmers (Stover and Simmonds, 1987). Over 72% of total production in Ghana is consumed locally, which explains why plantains are the most important sources of carbohydrate and are also regarded as food security crops especially for Ghanaians. Plantain is mainly consumed as an energy-giving food whereas banana is mainly consumed as a dessert.

The Gatsby Foundation is a charitable organization helping to alleviate poverty in rural areas through micro-credit. In Ghana the Gatsby Banana and Plantain Project Phase I introduced black-sigatoga-resistant hybrid varieties of banana and plantain into 6 regions of Ghana which ended in 2002. Three hybrids were highly rated by farmers. The phase II of the Gatsby Banana and Plantain Project being implemented with the ultimate goal of increasing food security and diversifying income opportunity through an efficient collaborative scheme for delivery of improved varieties of plantain and banana with associated value-adding post-harvest processing options.

As part of the implementation of the phase II of the project a Consultative Workshop was held at Food Research Institute in May 2006 to brainstorm on the potential plantain products to be developed at the farm gate as a solution to the expected increase in production in the phase I. The working document of the workshop stated clearly the processing of plantain into flour and using the flour in recipes as the best preservation option to be adopted. The 3 day training workshop was therefore a follow-up on the consultative workshop, as a TOT for WIAD officers to train on processing of plantain flour and plantain recipes. After the TOT, it was expected that 20 plantain growing communities with at least 50 farmers each would receive training through the extension officers of the Women in Agriculture Development (WIAD) in collaboration with the Food Research Institute of the Council for Scientific and Industrial Research.

**DAY 1: 15<sup>TH</sup> MAY 2007**

## **2.0 OPENING AND WELCOME ADDRESS**

The programme started at 9:30 am with an opening prayer by Rev. Mrs. R. Adiepena, WIAD-MOFA, Headquarters, Accra followed by self introduction of the trainees and introduction of facilitators by Dr. P-N. T. Johnson, FRI/CSIR. The other facilitators from Food Research Institute were Dr. Charles Tortoe, Mrs. Iris Tamakloe, Mr. Seewu Komla Noamesi and Mr. Joseph Gayin.

In his welcome address, Dr. P-N. T. Johnson of the FRI/CSIR said the phase II of the Gatsby Banana and Plantain Project sought to ensure food security through appropriate processing and utilization of banana and plantain varieties. He noted that the phase II was intended to reduce the problems of rotten banana and plantain and will help alleviate poverty. He reminded trainees of the consultative workshop held in May 2006, which drew an action plan for the execution of this subcomponent of the Gatsby project.



**Fig. 1: A section of the workshop trainees**



A draft training manual entitled “*Your Plantain Processing and Recipe Manual*” which was an output of the action plan was introduced to the trainees. Dr. P-N. T. Johnson urged trainees to critically review the manual to improve on its content as a training manual for the Project Operation Zones (POZs). Further, he impressed upon trainees to take the training workshop seriously as they will be trainers in their POZs.

### **3.0 ADDRESS BY DIRECTOR OF WIAD-MOFA**

The Director of WIAD-MOFA, Mrs. Juliana Dennis said the subcomponent of the Gatsby Banana and Plantain Project which aimed at alleviating poverty, increasing food security and diversifying opportunities for income generation was a good relief for WIAD and women in general as they were a pivot in food processing, preservation and storage. She applauded the excellent collaboration between WIAD and FRI to disseminate plantain processing technologies to the Project Operation Zones (POZs). The director emphasized on the usefulness of the training workshop as the trainees will be trainers in the POZs in Brong-Ahafo, Ashanti and Eastern Regions. It was expected that about 600 farmers would receive training on plantain processing in the POZs. She pledged the support of WIAD in making the processing subcomponent of the Gatsby Banana and Plantain Project successful.

### **4.0 PRE-TREATMENT AND PRODUCTION OF PLANTAIN FLOUR**

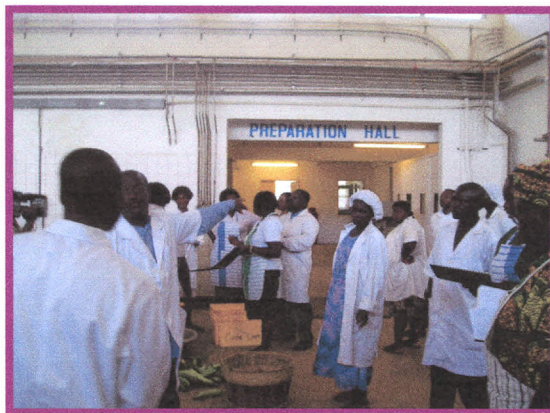
The contents of the draft training manual “*Your Plantain Processing and Recipe Manual*” was explained to trainees. A participatory approach was adopted for trainees to ask questions, comments and to make inputs. Trainees were taught the importance of pre-treatment as form of preservation in order to prevent enzymatic browning of peeled plantains. Two forms of pre-treatment were demonstrated to trainees. These were addition of sodium meta-bisulphite (1%) into clean water for washing the peeled plantains and blanching of the plantains in steam or boiling water for 3-5 minutes. Trainees agreed that blanching in steam can be adopted in the POZs by using cane baskets over boiling water, which must be done for 5 minutes.



Fresh plantains were available for trainees to learn hands-on production of plantain flour. Trainees formed two groups. The groups were taken through a step-wise production of plantain flour as presented in the training manual “Your Plantain Processing and Recipe Manual”.



**Fig. 2a: Fresh plantains in clean washing water**

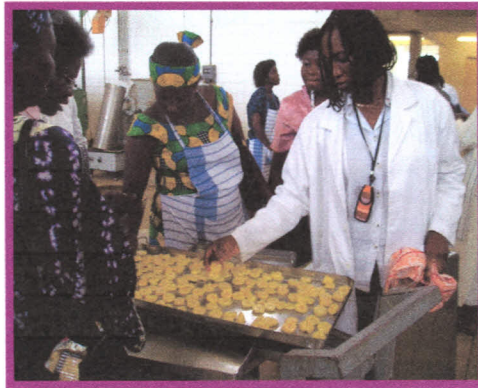


**Fig. 2b: A section of the trainees during the flour production demonstration**

The group members washed, peeled and washed the peeled plantain in potable water into which (1%) sodium meta-bisulphite had been thoroughly dissolved to prevent enzymatic browning occurring on the peeled plantain and eventually affect the colour of the flour. The peeled plantains were sliced/chipped and dried in a mechanical dryer at 60°C. Milling and sieving of dried chips was demonstrated and the groups had their dried chips milled and sieved into plantain flour the next day.



**Fig. 3a: Demonstration of blanching by laboratory technologists**



**Fig. 3b: Spreading of sliced blanched plantain on drying trays by trainees and laboratory technologists**

**DAY 2: 16<sup>TH</sup> MAY 2007**

## **5.0 DEMONSTRATION AND GROUP PRACTICAL WORK ON PLANTAIN RECIPES**

Trainees were taken through practical work on the plantain recipes by a facilitator from the FRI. The trainees were split into three groups and taken through all the 12 recipes as depicted in the figures 4a, b. The final products are shown in figure 4c.



**Fig. 4a: Trainees busy preparing plantain products during practical session**



**Fig. 4b: Trainees preparing plantain products**



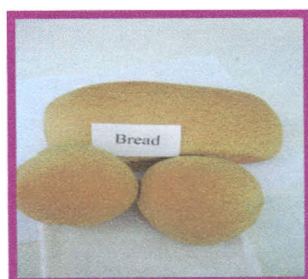
**Fig. 4c: Plantain products prepared by trainees**



## 5.1 COMMENTS MADE BY TRAINEES DURING PRACTICAL SESSION

Traditionally products like *ofam* and *tatale* are produced from over ripened plantain, hence their very sweet taste. Because of the use of green plantain flour for such products in this TOT, their tastes deviated significantly from their traditional sweet taste. This is because getting good flour from semi-ripened and ripened plantain is difficult due to drying challenges. The high sugar content does not allow for excellent drying and smooth flour production. To help bring up the taste of such products to normally accepted levels the trainees suggested the addition of little honey or a quantity of ripened plantain to the flour mix. Another suggestion made was the addition of a little palm oil to *kaklo* mixture in order to give a little bright colour / appearance to the product.

### Bread



#### Ingredients:

Plantain flour	90 g
Wheat flour	210 g
Yeast	2.5 g
Water	160 mls
Salt	15 g
Margarine	50 g

#### Method:

1. Combine both flours and rub in the margarine.
2. Put sugar, salt into it and make a hole in the middle and add yeast.
3. Gradually mix in warm water until the mixture becomes a stiff dough.
4. Knead dough for about 30-35 minutes.
5. Knock back the dough and mould into greased loaf tins.
6. Leave in a warm place for 1 hr 30 minutes to 2 hours.
7. Bake in a moderate hot oven for 30 minutes.

Trainees suggested that the recipe may need a little adjustment to reduce the dark colour of the final product. The dark colour of the bread is not suitable and will affect adoption of the product.

#### Cookies



#### Ingredients:

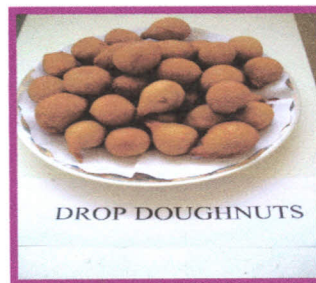
Plantain flour	70 g
Wheat flour	125 g
Sugar	50 g
Baking powder	1 teaspoon
Flavouring	½ teaspoon
Margarine	100 g
Eggs	2 singles

### Method:

1. Cream margarine and sugar until fluffy.
2. Beat in egg gradually until mixture has completely mix well.
3. Add flavour and stir.
4. Add all dry ingredients and cut and fold with a wooden spoon.
5. Place mixture in a cookies press.
6. Grease baking sheet and pipe on it.
7. Bake in a pre heated oven for 35 minutes.
8. Remove from oven and place on a cooling rack to cool.

The recipe was accepted. The colour of the cookies was excellent. However a concern was raised on the large quantity of sugar which must be reduced.

### Drop Doughnuts



#### Ingredients:

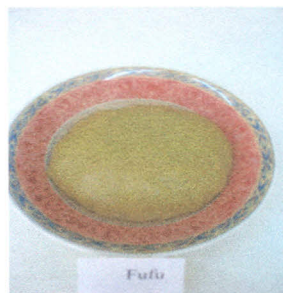
Plantain Flour	60 g
Wheat Pastry Flour	140 g
Granulated Sugar	80 g
Margarine	50 g
Table eggs	2 medium
Vanilla essence	¼ teaspoon
Grated Nutmeg	½ teaspoon
Baking Powder	1 teaspoon
Cooking oil	500 mls (enough for deep frying)
Water	60 mls

Method:

1. In a clean deep mixing bowl, combine all the flours and baking powder.
2. Rub margarine into the flour until it resembles breadcrumbs.
3. In the middle of the dry ingredients, add sugar, essence, nutmeg, beaten eggs and water.
4. Incorporate the dry ingredients into the wet and mix well.
5. Leave to rest for 10 minutes.
6. Heat oil in a frying pan and drop the mixture in using teaspoonfuls.
7. Fry until golden brown, drain and serve.

The recipe was excellently accepted as the taste of the product was similar to that present on the market. This will facilitate its easy adoption.

**Fufu**



Ingredients:

Plantain flour	50 g
Cassava flour	100 g
Water	suitable amount

Method:

1. Mix flour with water and put on fire.
2. Stir until the mixture is stiff.



3. Add a little water, cover and leave to simmer for 5 minutes.
4. Turn and stir well and mould.

Trainees suggested improvement on the texture, colour and starch content of the product. The starch content needs to be reduced and the texture and colour may affect acceptability. The recipe must be adjusted to compare favourable with traditional pounded *fufu*.

### ***Kaaklo***



#### Ingredients:

Plantain Flour	65 g
Ground onion	30 g
Ground Pepper	4 g
Salt	1 teasp.
Wheat flour	20 g
Roasted corn meal	20 g
Water	160 ml
Cooking oil	500 mls (or enough for deep frying)

#### Method:

1. In a clean deep bowl, soak the plantain flour with 160 mls water and leave to rest for minutes.
2. Add ground onion, pepper and other ingredients.
3. Mix very well and cover for 30 minutes.
4. Heat oil and drop in *Kaaklo* mixture in spoonfuls.

5. Fry on a moderate heat till golden brown.
6. Drain and serve hot.

The taste, appearance and texture were not appealing to trainees. A suggestion made was the addition of a little palm oil to *kaklo* mixture in order to give a little bright colour / appearance to the product.

### **Mpotompoto**



#### Ingredients:

Plantain flour	500 g
Palm oil	2 tablespoons
Smoke herring (ground)	20 g
Tomatoes	50 g
Onions	10 g
Shrimps	5 g
Water	300 mls
Salt	½ teaspoon

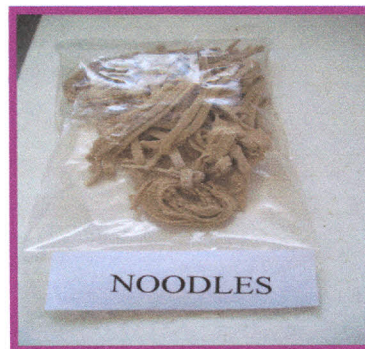
#### Method:

1. Blend all vegetables with 200 mls of water and cook to boil.
2. Add fish powder and shrimps.
3. Leave to simmer for 20 minutes.

4. Mix the plantain flour with remaining water.
5. Add to the light Soup and simmer gently for 5 minutes.

This recipe was well accepted. Trainees agreed that the product was easy to prepare, has good taste, which will facilitate adoption.

## Noodles



### Ingredients:

Wheat flour	40 g
Plantain flour	80 g
Olive oil	30 g
Water	150 mls
Salt	to taste
Cassava starch	20 g

### Method:

1. Combine all the dry ingredients in a bowl and mix together.
2. Add olive oil, egg yolk and mix well.
3. Add water to make dough knead and leave to rest for about one hour.
4. Roll and cut with the paste machine.

## **Noodles (B)**

### Ingredients:

Wheat flour	80 g
Plantain flour	1200 g
Olive oil	10mls
Cassava starch	20 g
Water	150 mls
Salt	to taste

### Method:

1. Combine all the dry ingredients in a bowl and mix together.
2. Add olive oil, egg yolk and mix well.
3. Add water to make dough knead and leave to rest for about one hour.
4. Roll and cut with the pasta machine.

Soya oil was suggested as an alternative to olive oil to reduce the cost of production.

Concerns were raised over the large quantity of wheat flour compared to plantain flour in the recipe. Suggestion was to increase the plantain flour over the wheat flour.

It must be noted that there were a few problems associated with this product.

- the final product was too brittle
- colour changes were observed on the final product which reduced the attractiveness

To address these more work is being done in the laboratory to get the right proportions of the composite flour and improvement on the production process.

## Ofam



### Ingredients:

Plantain flour	100 g
Onion	50 g
Salt	to taste
Wheat flour	25 g
Roasted corn	25 g
Water	294 mls
Palm oil	2 tablespoons
Pepper	8 g

### Method:

1. Combine all the flour and water and stir with a wooden spoon.
2. Add ginger, onion, pepper, salt and continue to stir until the mixture becomes smooth.
3. Stir in palm oil and rest the mixture for at least 30 minutes.
4. Grease loaf tin and place into the tins.
5. Bake in a moderate heat oven for 30 minutes.

Trainees agreed the recipe produced an excellent product. The taste was acceptable but not the texture which was quite hard. However, suggestion was that the recipe needs adjustment to improve the texture.



## Pastry Chips



### Ingredients:

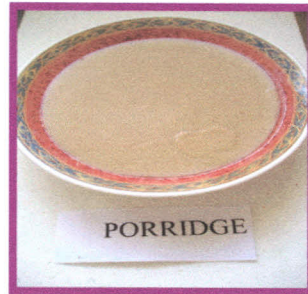
Wheat flour	15 g
Plantain flour	185 g
Margarine	50 g
Baking powder	¼ teaspoon
Salt	to taste
Cooking oil	200mls
Water	50mls
Nut meg (ground)	¼ teaspoon

### Method:

1. Rub in margarine and flour to a sandy texture.
2. Add baking powder, salt and nut meg.
3. Moisten it with water and mould.
4. Roll and cut into thin shape and deep fry.

The product tasted similar to chips made from wheat flour and so can be easily adopted. The product texture and colour were accepted, hence recipe needs no revision.

## Porridge (weaning formulation)



### Ingredients:

White dried maize	1kg
Raw Groundnuts	50 g
Soy beans flour	200 g
Plantain flour	100 g

### Method:

1. Roast the maize and the groundnut after carefully picking out the waste separately.
2. Mill the roasted maize almost smooth.
3. Add the roasted and dehuled groundnut and mill only once.
4. Allow the milled flour to cool then blend all the flours together and seal in polythene or keep dry and tightly covered.
5. Use for porridge, add a little milk and sugar to taste.

The recipe was highly impressive with the addition of groundnut and soya. The product was easy to prepare and tasted very good, especially when soya was added. This will facilitate easy adoption.

## Queens Cake



### Ingredients:

Plantain flour	75 g
Wheat flour	125 g
Sugar	200 g
Baking powder	½ teaspoon
Flavouring	½ teaspoon
Nut meg	½ teaspoon
Margarine	200 g
Eggs	5 singles

### Method:

1. Cream margarine and sugar until fluffy.
2. Beat in egg gradually until mixture is light.
3. Add flavour.
4. Combine all dry ingredients and add to the mixture by folding-in.
5. Place in cake cups and bake in a moderate hot oven for about 30 minutes.

Trainees agreed that the product is similar to wheat flour cake. The recipe was accepted as alternative to wheat flour cake. The product is tasty with good colour and texture. However, trainees suggested that the sugar content was higher and needs to be reduced.

## Tatale



### Ingredients:

- Plantain flour	50 g
Onion (grounded)	1teaspoon
Salt	to taste
Wheat flour	20 g
Ginger (grounded)	1 teaspoon
Pepper (grounded)	¼ teaspoon

### Method:

1. Add water to plantain flour and stir.
2. Add the wheat flour and continue to stir.
3. Add the seasoning -ginger, onions, pepper and salt.
4. Stir until the mixture is smooth.
5. Rest the mixture for 20 minutes and deep fry.

Traditionally *tatale* is known to be sweet, which was absent in this case. Trainees suggested the addition of a little honey or a quantity of ripened plantain to the flour mix. The pepper and salt contents need reduction. The recipe must be adjusted to compare favourable with traditional *tatale*.



## **5.2 OBSERVATIONS MADE DURING TRAINING PROGRAMME**

Technology transfer is the process of extending appropriate knowledge, skills and equipment to end-users. The technology must be cost effective and adaptable on a sustainable basis. During the TOT, some trainees were not too sure about the success of adoption of the technology. This was due to three main concerns expressed by some of the trainees.

### **5.2.1 Taste of the New Products**

The first concern was on the taste of some of the products such as *ofam*, *tatale* and *kaklo*. It was observed these products deviated from the known traditional taste because the flour used in this training was prepared from mature green plantain as against over ripened mashed plantain used in traditional preparation. Producing flour from ripened plantain is technologically very challenging. To solve this problem the most convenient way is to produce flour from mature green plantain thereby reducing post harvest losses of plantain. To help consumers to accept these products which deviate from traditional taste, renaming of these products is the most appropriate alternative. This would prevent consumers from associating these novel products to known traditional taste.

### **5.2.2 Measurements and Use of SI Units**

The second concern was centered on the use of SI unites in the training manual which is difficult for adaptation at the Project Operation Zones. In addressing this concern a conversion of the SI units in the training manual has been created. Measurements are now in spoon(s) and cup(s).

The third was on the availability of large quantities of plantain flour all year and its shelf-life. In addition to this is the high cost of equipment. The shelf-life of well prepared plantain flour

is approximately one year. Trainees were assured that, the Phase I of the project has lead to the production of excess plantain during the cropping season, which are being loss through post-harvest losses. It is to curtail these post-harvest losses that, the plantain flour technology transfer is purposed. As the shelf-life of plantain flour is a year, availability of the flour during the lean season will not be a problem.

### **DAY 3: 17<sup>TH</sup> MAY 2007**

## **6.0 EVALUATION OF TRAINING WORKSHOP**

Evaluation was done by the trainees in the area of usefulness of the recipes and the likely problems the adoption at the zonal level could face. Comments on the usefulness and the likely adoption problems were given on each recipe as follows:

- **Plantain and wheat bread**

Most trainees were of the view that the bread was useful and that the taste was better than that of corn bread. It was reported that the recipe is easy to prepare and the texture was also acceptable. It is however important to note that the recipe may need a little adjustment to enhance the colour of the final product since the recipe as it is now results in a dark colour. Some indicated availability of ovens, conversion of measurements in the manual, availability of plantain flour in large quantities and shelf-life as likely adoption problems in the zones. However in spite of these they were confident that consumers would accept the product but may take time.

- **Tatale**

This recipe was also seen as useful. Though the product has all the necessary ingredients, there is a deviation from the taste of the indigenous one which is usually sweet because ripened plantain is used. But in recent times where individuals are so conscious of their health this product may be useful for diabetics and people who want to cut down on their sugar intake. The stiff texture of the product and its unsweetened taste may affect the

adoption rate. It is therefore important to present it as a novel product with a new name so that it would not be associated with the normal sweet taste.

- Doughnuts

This recipe was seen as an excellent one. The taste is not so different from known ones on the market and for that matter can be easily adopted. It would be useful to promote it as snack for school children and at social gatherings. Availability of plantain flour in large quantities may be an adoption problem.

- Pastry chips

The recipe was accepted as a good one. The product also had a good texture. Its taste is very similar to chips made from wheat flour and so can be easily adopted. Its acceptability would help reduce dependence on wheat flour for various pastries.

- Queens cake

The recipe was found to be useful. The product is nice and tasty and appearance is close to normal cake. But some trainees were of the view that the sugar content was too much. The product is likely to be adopted without any problem. However availability of plantain flour all year round may be the limitation.

- *Ofam*

The recipe was a good one. The taste was nice but the texture was quite hard. Recipe needs some form of revision to correct some of these complaints. The taste may affect adoption but addition of ripened plantain or bananas to the recipe would improve the sweetness.

- Cookies

The recipe was appreciated. The colour was good but quantity of sugar was too much. Since it is not a common product adoption at the zones is expected to be good. However availability of plantain flour all year round may be the limitation.



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The recipe was appreciated. The colour was good but quantity of sugar was too much. Since it is not a common product adoption at the zones is expected to be good. However availability of plantain flour all year round may be the limitation.



- **Baby food formulation**

The recipe was highly impressive. The taste was good and its preparation was easy. Its adoption is expected to be high however availability of plantain flour was the main concern expressed.

- ***Kaaklo***

The product was reported to be sweet, but appearance and texture were not appealing and may affect acceptability. The pepper and salt content need to be reduced. Adoption is expected to be quite good.

- ***Mpotompoto***

This recipe was quick to prepare. The product had a good taste and would be good for children and the aged. Adoption in the zones is expected to be high because it was very nice. Availability of plantain flour in large quantities all year round may be an adoption problem.

- ***Fufu* formulation and reconstitution**

This was seen as a convenient and simple recipe. The starch content may have to be reduced. Texture and colour of the product need improvement. Appearance may affect acceptability while adoption may be gradual because there is still a big difference when compared to the pounded one.

## **7.0 GENERAL DISCUSSION**

Trainees expressed dissatisfaction about the duration of the training workshop as too short. They were concerned as there were so much to learn during the training workshop but time was limited resulting in some cases where individual demonstration work was done in groups. They suggested 5-day training workshop in subsequent training workshops. Trainees agreed that plantain flour products are very appropriate for diabetic patients and people who care about low sugar intake. Such ideas about plantain flour products should be drummed for

the populace to embrace and expand markets for plantain flour products. New product names were suggested for some of the plantain flour products as alternative market strategy. In addressing this, trainees were advised to develop recipes that are peculiar to the locality, which will be easily marketable in their locality. Training activities in the project operating zones, Ashanti, Brong -Ahafo and Eastern Regions was slated for June and July 2008.

## 8.0 REFERENCE

Stover, R. H. and Simmonds, N. W. (1987). *Utilization of fruit and plant by-products. Bananas*. (3<sup>rd</sup> ed.). Longman Scientific and Technical, London, United Kingdom.

## APPENDIX

### 1.0 LIST OF TRAINEES

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<b>Name</b>	<b>Rank</b>	<b>Region</b>	<b>Telephone</b>
Susana Adu Baning	ACTO	Eastern	024638076
Matilda Acquah	AAO	Ashanti	0244618790
Gifty Kwantinwaa	STO	Brong Ahafo	0243412623
Grace Authur	PTO	Eastern	0243272915
Monica Awuku	PTO	Volta	0244876063
Akosua Brago	SAO	Eastern	0244978003
Mercy Ocloo	SAO	Western	0246311446
Alice Dawson	AO	Accra	0246574291
Victoria Tsekpo	ASST DIR	Accra	0244139005
Nelson K. Asamoah	TO	Brong Ahafo	0243520537
Benjamin Boadi	NS	Accra	0249265640
Joyce Takyi	SAO	Brong Ahafo	020808180
Esther Akumaning	SAO	Central	0244795009

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