

**COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH**



**FOOD RESEARCH INSTITUTE**

**REPORT OF TRAINING ON PROCESSING OF AFLATOXINS FREE  
PEANUT PASTE ORGANISED FOR BUSINESS START-UPS AT CSIR-  
FOOD RESEARCH INSTITUTE, ACCRA, GHANA**



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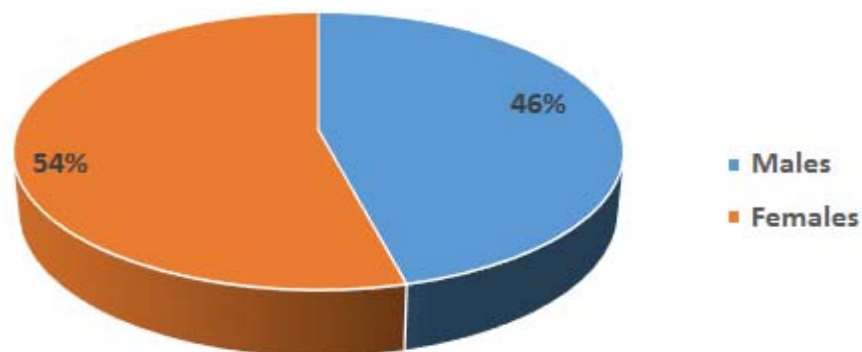
## 1.0 Introduction

Peanut is a major food security crop in Ghana with more than 80% of the population consuming peanut or peanut product at least once a week. However, peanut are susceptible to molds infestation which may lead to production of aflatoxin. Aflatoxin contamination of peanut remains a major food safety and public health concern both in Africa and across the globe. Aflatoxins are carcinogenic and can affect the liver and kidney. This has compelled countries including United States of America (USA) and United Kingdom (UK) to specify maximum content of aflatoxins in peanut exported to these two countries. The maximum content of aflatoxin in peanut that has been specified by USA and UK are 20 parts per billion and 4 parts per billion, respectively. Ghana Standards Authority specification of total aflatoxins in peanut is 15 parts per billion. To help business Start-ups meet this specification of aflatoxin content in peanut and allow export processed peanut paste to countries such USA and European markets, a training workshop on processing of aflatoxins free peanut paste was organised from 9<sup>th</sup> to 10<sup>th</sup> June 2021 for business start-ups at CSIR-Food Research Institute, Accra.

The aim of the training was to build capacity of entrepreneurs, and small to medium enterprises (SME's) on processing of aflatoxin free peanut. This will help promote export of peanut from Ghana to international market.

## 2.0 The training

The training took place at Apesiwa conference room at CSIR-Food Research Institute where one of the participants gave the opening prayer. A total of 13 entrepreneurs attended the training. Participants included 54% Females and 46% Males (Figure 1). The Director of CSIR-Food Research Institute in the person of Professor Charles Tortoe welcomed participants and gave facilitators opportunity to introduce themselves. The training involved two sessions.



**Figure 1.** Gender of participants at training.

## **2.1 Training facilitators**

Mr. George A. Anyebuno, CSIR-Food Research Institute

Dr. Hayford Ofori, CSIR-Food Research Institute

Mr. Thomas Najah, CSIR-Food Research Institute

Dr. Emmanuel Kyereh, CSIR-Food Research Institute

Mrs. Evelyn Buckman, CSIR-Food Research Institute

Mrs. Dorothy Narh, CSIR-Food Research Institute

## **2.2 Training organisers**

The training was organised by

1. Business Development Section of Commercial Division, CSIR-Food Research Institute
2. Food Chemistry and Nutrition Division, CSIR-Food Research Institute

## **2.3 Training objective**

The training was organised to build the capacity of SME's on processing of aflatoxin free peanut.

## **2.4 Scope of training**

The training included the theoretical and practical sessions. The theoretical session dealt with enhancing participants' knowledge on the effect of aflatoxin contamination of peanut on human health whilst the practical session involved how to reduce aflatoxins in peanut paste using manual sorting approach.

## **3.0 Presentations**

Two presentations were made during the training. The first presentation was made by Mr. George A. Anyebuno, Food Chemistry Division of CSIR-Food Research Institute and was focused on the dangers of aflatoxin contamination of peanut and how to process aflatoxins free peanut paste. The second presentation was made by Mr. Thomas Najah, Business Development Section, Commercial Division, CSIR-Food Research Institute which centered on marketing and branding strategies.



**Figure 2.** Mr. George A. Anyebuno delivering his presentation.



**Figure 3.** Mr. Thomas Najah delivering his presentation.

### **3.1 Outline of presentations**

#### **3.1.1 Processing of aflatoxin free peanut**

- Introduction
- Aflatoxins
- Food safety concern
- Processing steps for aflatoxin free peanut
- Determination of aflatoxin content in peanut

### 3.1.2 Marketing and branding strategies

- ❑ Develop the concept of branding in their daily business activities
- ❑ The use of basic marketing mix as a professional
- ❑ Relating product life cycle in business
- ❑ Understanding branding and re-branding as a business process

## 4.0 Practical session

The practical session was led by Mr. George A. Anyebuno, Dr. Hayford Ofori, Dr. Emmanuel Kyereh, Mrs. Evelyn Buckman and Mrs. Deborah Narh. Participants were taken through manual sorting procedure to remove all shriveled, immature kernels and foreign materials. Also, blanching of peanut in air-oven at a temperature of 140°C and milling of clean peanut into paste was demonstrated to participants.



**Figure 4.** Participants manually sorting peanut kernels.



**Figure 5.** Participants hand-picking immature kernels and foreign materials.



**Figure 6.** Participants preparing clean peanut kernels for blanching.





**Figure 7.** Participants blanching clean peanut.



**Figure 8.** Participants deshelling clean blanched peanut for roasting.



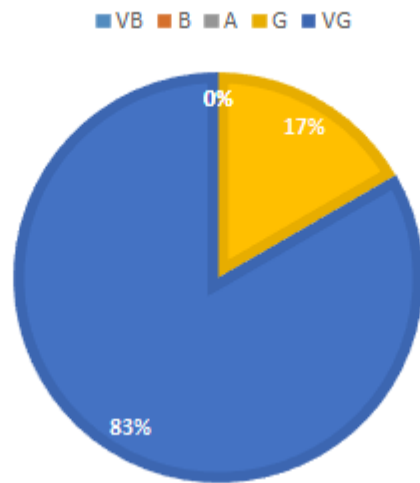
**Figure 9.** Clean roasted peanut.



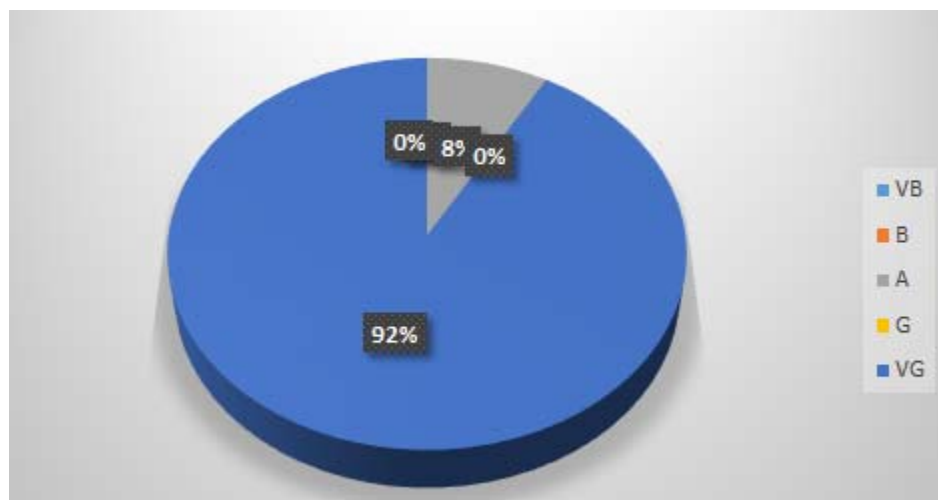
**Figure 10.** Roasted peanut being milled using colloidal mill.

## 5.0 Evaluation of training

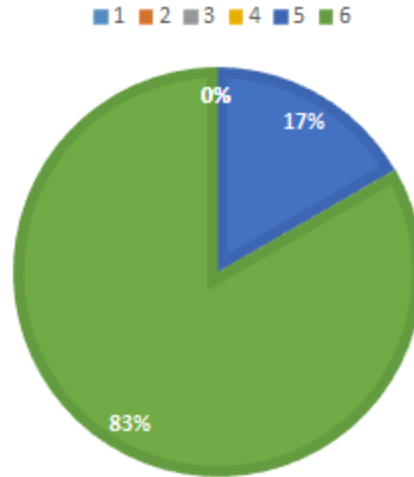
Participants had opportunity to evaluate the training where 83% majority strongly agreed that the quality of training was good (Figure 9), 92% strongly agreed that participation and interaction was good (Figure 10) and 83% strongly agreed that they can apply the knowledge acquired (Figure 11).



**Figure 11.** Participants assessment of quality of training.



**Figure 12.** Participants assessment on participation and interaction.



**Figure 13.** Participants assessment on application of knowledge acquired.

## **6.0 Conclusion**

The training brought together entrepreneurs of small to medium scale enterprises to be trained on processing of aflatoxin free peanut paste. Participants knowledge on the dangers of aflatoxin contamination and how to reduce/eliminate aflatoxins from peanut was deepened. This will help promote international trade and export of peanut grown in Ghana to international markets.

**Appendix: List of participants**  
**2 DAYS TRAINING ON PROCESSING OF AFLATOXIN FREE PEANUT PASTE,**  
**ORGANISED FOR BUSINESS START-UPS IN CSIR-FOOD RESEARCH INSTITUTE,**  
**ACCRA FROM 9<sup>TH</sup>-10<sup>TH</sup> JUNE 2021**

No.	Name	Sex	Contact
1	Ms. Rosemary Naa Norkai	F	279376050
2	Ms. Janet Agyeiwah	F	541084440
3	Mr. Stephen Aboetaka	M	540225181
4	Mr. Matthew Appiah Kwame	M	242612157
5	Ms. Jimah Sai Rahmatu	F	248455864
6	Ms. Eva Nimorme Torbi	F	246771470
7	Ms. Victoria M.E. Hajia	F	246567757
8	Mr. Tafa Kobla Okudzeto	M	553263602
9	Paul K. Ohene Amponsah	M	505694727
10	Ms. Baraka Shaibu	F	264267401
11	Mr. Edmund Senyo Lumorvie	M	541486329
12	Mr. Seth Adu-Asare	M	208396375
13	Ms. Felicia Dzidzor Atiku	F	243177951