

CSIR-FOOD RESEARCH INSTITUTE



CSIR-FRI/GRATITUDE

REPORT ON THE TRAINING OF YAM WHOLESALERS, RETAILERS AND TRANSPORTERS



Held at Agboghloshie Yam Retailers Office on 8th September, 2014

By

Charles Tortoe, Solomon Dowuona and Azizzu Issifu

9th September, 2014

Table of Contents

ACRONYMS.....	2
Summary	3
CHAPTER ONE	4
1.0 Introduction.....	4
1.1 Participants.....	4
1.2 Welcome Address	4
1.3 Opening Remarks.....	5
CHAPTER TWO	7
2.0 Training.....	7
2.1 Demonstration of Curing and Sprout Control Techniques	8
CHAPTER THREE	10
3.0 Contributions, Questions and Answers.....	10
CHAPTER FOUR.....	11
4.0 Remarks by participants.....	11
4.1 Lessons Learnt	11
4.2 Wrap up and Closing remarks.....	11
Appendix 1: Attendance List	12

ACRONYMS

AES	-	Agricultural Extension Agents
CSIR	-	Council for Scientific and Industrial Research
FRI	-	Food Research Institute
NGO	-	Non Governmental Organization
NRI	-	Natural Research Institute
SODIA	-	Social Development Improvement Agency
UoG	-	University of Greenwich

Summary

The CSIR-Food Research Institute in conjunction with Social Development and Improvement Agency (SODIA) organized a training workshop for yam wholesalers, retailers and transporters at the Yam Retailers' Office at the Agbogbloshie Yam Market in Accra on 8th September, 2014. Participants were drawn from the Agbogbloshie Yam Market, Accra. This training was part of dissemination of technologies developed under the GRATITUDE Project conducted by the CSIR-FRI. The one day training workshop was attended by 61 participants drawn from the Agbogbloshie Yam Market. The training was to transfer three technologies developed under Work Package 2 of the GRATITUDE Project to yam wholesalers, retailers and transporters. These technologies were on how to effectively cure wounded yams, delay sprouting of stored yams and storage of yams in improved yam barn. The retailers, wholesalers and transporters were grateful for the training and agreed to practice the learned technologies for yam improvement in Ghana.

CHAPTER ONE

1.0 Introduction

A yam stakeholders training was held at the Yam Retailers' Office at the Agbogloboshie Yam Market in Accra on 8th September, 2014. The training was organized under the CSIR-FRI/GRATITUDE Project under the auspices of the Social Development Improvement Agency (SODIA). The purpose of the training was to train retailers, wholesalers and transporters to effectively cure wounded yams, learn techniques involved in delaying sprouting of stored yams and further learn about the storage of yam in improved yam barn, which has been developed under the GRATITUDE Project by the CSIR-Food Research Institute. This training workshop was a dissemination drive of technologies developed under the Gratitude project conducted by the CSIR-FRI. These three technologies were developed under the Work Package 2 of the GRATITUDE Project.

The GRATITUDE Project is a three years project which is being sponsored by the CSIR-FRI, UoG and NRI which is targeted at making Gains from the Losses of Root and Tuber crops, with emphasis on cassava and yam. It is meant to address challenges in the production, handling and processing of root and tuber crops and also find solution to the huge waste which is generated by the processing of root and tuber crops. The program is being implemented by United Kingdom, Nigeria, Ghana, Thailand and Vietnam.

1.1 Participants

Participants at the training were 61 yam retailers, wholesalers and transporters from the Agbogloboshie Yam Market in Accra. Trainers were Dr. Charles Tortoe and Mr. Solomon Dowuona from CSIR- Food Research Institute and Mr. Azizzu Issifu representing SODIA. Participants did self-introduction before the start of the training.

1.2 Welcome Address

In a welcome address which was delivered by a representative from SODIA, Mr. Azizzu Issifu and supported by the Yam Traders Association, he challenged the participants to take keen interest in the training and also put into practice the techniques that will be demonstrated since it will enhance their livelihood as yam retailers (Figure 1).



Figure 1: Officials welcoming participants

1.3 Opening Remarks

In his opening remarks Dr. Charles Tortoe of the CSIR-Food Research Institute, gave a brief introduction of the GRATITUDE Project - Gains from Losses of Root and Tuber Crops. He indicated that the project aims at reducing yam and cassava losses to enhance the role that these crops play in food and income security. Post-harvest physical losses of these crops are exceptionally high approximately 30% in cassava and 60% in yam and occur throughout the food chain. The wastes of cassava and yam come in various forms as peeling losses can be 15-20% or higher. Waste often has no economic value which can make processing a marginal business proposition. The overall objective of this project is therefore to improve the post-harvest management of cassava and yams leading to reduce physical losses, reduced economic losses through value added processing and valorization of waste products. The general objectives are in three folds to (i) Reduce physical post-harvest losses of fresh produce (focusing mainly on yams), (ii) Reduce economic losses through value added processing (focusing on both cassava and yam) and (ii) Make use of waste from the value chain (focusing mainly on cassava).

The GRATITUDE project has eight work packages. The WP1 address value chain assessment and management, WP2: Reduced post-harvest losses of fresh produce, WP3: Alternative market development to reduce post –harvest losses, WP4: Adding value to waste products, WP5: Food safety, quality and compliance: WP6: Demonstration of technologies with beneficiaries, WP7: Dissemination and support to replication, WP8: Management and monitoring and evaluation.

The yam stakeholders training is therefore part of WP2, which seeks to reduce losses in the fresh yam value chain and hence improve food security and increase incomes with a focus on small-holder farmers. Losses on-farm could be reduced by improved storage structures and post-harvest practices to reduce sprouting and improve wound-healing. This would also provide tubers of better quality to withstand damage during transport. The WP2 specific objectives are to develop and validate strategies to improve curing of yam tubers, develop and validate strategies for yam tuber sprout control and finally identify appropriate storage structures to optimize tuber quality/storage.

CHAPTER TWO

2.0 Training

Dr. Charles Tortoe, in a presentation, showed the participants how important yam is to Ghanaians as a staple food, the benefits it brings to the country in the form of foreign exchange earnings. He stated that Ghana export approximately 27,000mt of yams to countries like the UK, the Netherland and the USA (Figure 2 and 3). The participants were taken through safe handling of yams from harvesting, sorting, packing and transportation to the market or the yam barn for storage. They were told how possible it is to convert broken and badly wounded yams to yam *kokonte* which can be sold for money. He also showed the participants the enormous benefits that come with using the improved yam storage barn to that of the traditional barn, which allow the stored tubers to be attacked by rodents and other animals that stray into it, and the fact that tubers kept in the improved yam barn keeps longer on the shelves than that of the traditional storage barn. Participants were taught techniques on how to delay sprouting in yam tubers with the use of 600ppm potah solution. Participants were also taught how to cure wounded yam to avoid infection through the wounded site by yam wound pathogens. The participants were told to create enabling environment for yam marketing, get involved in regular training, improved the yam market and source for financial support as well as Government support as a way forward for the yam improvement in Ghana.



Figure 2: Cross section of the participants at the training



Figure 3: Dr. Tortoe making a presenting during the training

2.1 Demonstration of Curing and Sprout Control Techniques

Mr. Solomon Dowuona, a technologist at the CSIR- Food Research Institute, demonstrated the curing and sprout control strategies to the participants. He artificially created wounds on a wholesome tuber and showed the participants how to cure the wounds using jute sack. With a 600ppm potash (burnt cocoa pod) solution he taught the participants the techniques involved in sprout control. He immersed the apical portion of the yam tuber into the 600ppm potash solution and kept it in for 60 seconds, after which he removed it from the plant extract solution (Figure 4-6). The tuber was then dried and ready to be stored in an improved yam storage barn.



Figure 4: Creating artificial wounds on yam tuber



Figure 5: Covering the wounded yam with jute sack



Figure 6: Demonstrating sprout control techniques

CHAPTER THREE

3.0 Contributions, Questions and Answers

After the presentation and demonstrations, Dr. Charles Tortoe opened the floor for questions and contributions. The questions and contributions are presented below.

1. How to apply weedicides appropriately?

The executives of the various yam associations have to contact MoFA AEA's to teach them the proper application of weedicides to avoid leaving chemical residues in the harvested yams.

2. How to get access to funds for yam cultivation and acquisition of tractors?

They were advice to approach Agricultural financial services and NGO's for such support.

3. Why is the government not assisting yam farmers?

The Government is assisting yam farmers in various ways. Now, through the Ministry of Trade and Industry (MoTI), Ghana has developed the Ghana Yam Strategy Plan to support yam improvement.

4. The training is very good and should be taken to yam farmers and retailers in the villages and other parts of the country.

The GRATITUDE Project has plans to go to other parts of the country to educate yam farmers on proper way to delay sprouting and to cure wounds on yams as well as the proper storage of yams.

6. How do we prepare the land to minimize rotten of yams?

MoFA AEA's should be involved in the selection of farm lands to avoid acquiring land that is not suitable for yam cultivation.

7. Why are AEA's more concern with their own farm than education farmers on good farming practices? Is the project going to construct Improved Storage Barn for the trained farmers?

AEA's will be advised to support farmers' activities more. The project cannot provide the storage structures for all trained farmers and those who are capable of constructing should do it since they will benefit greatly from it.

CHAPTER FOUR

4.0 Remarks by participants

The secretary of the Agboglobshie Yam Traders Association told the participants to be enthused about partaking in trainings like this one since it is for their benefit. He indicated that all the technologies learnt will be put to practice to enhance their yam trade. A participant admonishes the others to always participate in training such as this one as it goes to support their activities on yam for improvement. Participants were very happy about the training and demonstrations and thank the organizers for such an opportunity and requested that such training programs should be frequent to them.

4.1 Lessons Learnt

- Participants expressed their gratitude to the organizers and facilitators and requested that such training programs should be frequent.
- Government must standardized the pricing of yams by weights
- Soft loans are to be given to yam traders to build the improved storage barn.
- Bamboo sticks can be used to construct the barns

4.2 Wrap up and Closing remarks

In wrapping up, Mr, Azzizu Issifu of SODIA thank the participants for attending the training and appealed to them to put all the technologies on yam they have learn during the training into practice. He further thanked the facilitators for their support.

Appendix 1: Attendance List

GRATITUDE PROJECT TRAINING AT AGBOBLOSHIE YAM TRADERS OFFICE, ACCRA

S/N	NAME OF PARTICIPANT	LOCATION	CONTACT
C1	Jagri S. Apams	Accra	
2	Nisong Kofi Wilson	Accra	
3	Binas Solomon	Accra	
4	James Wassah	Accra	
5	Foster Sunaa	Accra	
6	Kofi Binubu	Accra	
7	Mboranam Solomon	Accra	
8	Smith Mbechie	Accra	
9	Nyimba Uborpoan	Accra	
10	Blama Gnunde	Accra	
11	Bawah yaw John	Accra	
12	Babola John Alabani	Accra	
13	Samuel Kebena Mensah	Accra	
14	Ntesin Bimoni	Accra	
15	Kwasi Wassah	Accra	
16	Zakaria Tilanbu	Accra	
17	Sey Grunjah	Accra	
18	Mary Nisong	Accra	
19	Uyanakum Nagbaja	Accra	
20	Kojo Blikpa	Accra	
21	Jacob Ngmalbini	Accra	
22	Agbe Nignan	Accra	
23	Gmanante Jamalbe	Accra	
24	Lanjor B. Daniel	Accra	
25	James Kpajul	Accra	
26	Tanyam Anthony	Accra	
27	Thomas Ndagbanam	Accra	
28	Nachipoan Nwinyandal	Accra	
29	Joseph Wassah	Accra	
30	Maleilen Liyilmoan	Accra	
31	Nwatan Ali	Accra	
32	Majonbi Timile	Accra	
33	Joachim Anbegnah	Accra	
34	Mathias Bacha	Accra	
35	Zacharia Matic	Accra	
36	Nimugmah Ngon	Accra	
37	Nasabache Tagi	Accra	

38	Haruna Bodin	Accra
39	Najeri Nkum Brin	Accra
40	Johnson Nkukan	Accra
41	Liwai Nayan	Accra
42	Stephen Binkpe	Accra
43	Njognabi Timbela	Accra
44	Awudu Jakpa	Accra
45	Mjakpa Tibrum	Accra
46	Amina Amidu	Accra
47	Kunobi kuabe	Accra
48	Nlengi Bidim	Accra
49	Selina Musong	Accra
50	Kugnan Nana Yachil	Accra
51	Takal Gabulja	Accra
52	Liyilmon Nlinkpa	Accra
53	Peter Balaboni	Accra
54	Blagoon Titewan	Accra
55	Obija Ayah Edward	Accra
56	Pauliba Teacher	Accra
57	David Brumya	Accra
58	Gmatili Samale	Accra
59	Abigail Binangilib	Accra
60	Daniel Jaburi Jonathan	Accra
61	J. Napaah Ntimah	Accra