



# **TRAINING OF CASSAVA PROCESSORS ON THE USE OF CASSAVA PEELS FOR THE CULTIVATION OF MUSHROOMS AS AN ADDITIONAL INCOME GENERATION VENTURE AT AYIGBE, BONO REGION GHANA**

**15<sup>th</sup> – 19<sup>th</sup> December 2019.**



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## **INTRODUCTION**

Cassava is an important starchy staple crop in Ghana with per capita consumption of 152.9 kg/year. Besides being a staple food crop, cassava can be used as raw material for the production of industrial starch, ethanol and recently in the production of beer. The production of cassava in Ghana ranged from 10,217,929 MT to 12,260,330 MT in the period 2007–2009 covering an area of 800,531 ha to 885,800 ha. Ghana currently produces about 12,260,000 MT of cassava annually. Out of this, 8,561,700 MT is available for human consumption while national consumption is estimated at only 3,672,700 MT resulting in surplus of about 4,889,000 MT which can be exploited for the production of industrial starch or ethanol.

The cultivation of mushroom serves as the most efficient and economically viable biotechnology for the conversion of lignocellulose waste materials to high quality protein food and this will naturally open up new job opportunities especially in rural areas.

## **OBJECTIVE**

- To generate value added products from wastes arising from Cassava value chains.
- Aim-To expand/open new market opportunities for new products developed from the waste of Cassava.

## **DAY 1**

The Team from CSIR-Food Research Institute left Accra to Wenchi on Sunday the 15<sup>th</sup> of Dec 2019.

## **DAY 2**

Team arrived at the training site Donata Cassava Innovation platform, Ayigbe at 9am. The trainees gathered at the training site, the Agriculture extension officer (Bahense Bondi) of the area was also present. The opening ceremony commenced with an opening prayer which was said by the Moslem leader.

Lecture on mushrooms and its importance to human health and nutrition was handled by Matilda Dzomeku and this was supported by Richard Takli.

The trainee and trainers went to gather substrates such as dried cassava peels, dried plantain leaves and sawdust. Pretreatment of the substrates where carried out. This included, the milling



of the dried cassava peels, soaking of the unmilled dried cassava peels and plantain leaves in clean water infused with quick lime. This was left over night.



Figure 1: Peeling of cassava by processors





Figure 2: Drying of cassava peels



Figure 3: Milling of dried cassava peels

### DAY 3

The day started with an opening prayer at 9:20am. The team had a recap of what was learnt yesterday. They then went on to strain the water from the soaked substrates and these were used to demonstrate the construction of domo beds. Trainees also practice making the beds themselves.

Plastic bag method of oyster mushroom cultivation was demonstrated to the trainees. Here weighing of the substrates was done and these weights were then standardized for easy implementation. The milled cassava peel is mixed with the sawdust, rice bran, quicklime and moistened with clean water. The substrates are thoroughly mixed and poured into polypropylene bags. These bagged substrates are sterilized in metallic oil drums.



Figure 4: Stacking of cassava waste into mold.





Figure 5: Making of beds.



Figure 6: Covering of finished beds.





Figure 7: Mixing of cassava waste and other additives



Figure 8: Making of compost bags





Figure 9: Packing of bags into Sterilization unit.

#### **DAY 4**

Demonstration of the sterilized bags being inoculated with matured spawn was done. Trainees all practiced this on their own. The inoculated bags were incubated at room temperature.

After the inoculation, cropping techniques and all good agronomic practices were taught.

This was followed by questions and answers and the training was brought to a close.





Figure 10: Demonstration of Inoculation of sterilized bags.



Figure 11: Inoculation by trainees.



Figure 12: Demonstration of cropping and good agronomic practices

## **DAY 5**

The team of trainers travelled back to Accra.

## **CONCLUSION**

Trainees were happy about the training. They said it will be a source of additional income to them as well as a way of recycling their cassava waste which otherwise was a big environmental pollution.



**Table 1: DETAILS OF TRAINEES**

#	Name	Age	Sex	Tel Number
1	Mary Gareba	50	F	—
2	Adubiah Comfort	34	F	0240977167
3	Mary Fosua	50	F	—
4	Gordeon Gareba	49	M	0559295270
5	Amisa Daniel	49	M	0242229699
6	Esther Amisa	42	F	0248717729
7	Braimah Ramatu	30	F	0559694025
8	Nuhu Jenabu	35	F	—
9	Kutumi Buhari	36	F	0554246320
10	Asana Iddrusu	31	F	—
11	Jennifer Badere	58	F	—
12	Janet Queebaye	39	F	—
13	Alamata Dauda	45	F	0242006835
14	Akua Amponmaa	36	F	0551552824
15	Mr. Nuamah	66	M	0546572234
16	Opoku Prempeh	67	M	0553624240
17	Comfort Boakyiwa	39	F	0245352631
18	Adwoa Bruku	28	F	0553120225
19	Atta Abena	40	F	—
20	Barikisu Ibrahim	41	F	—
21	Affah Mary	53	F	0242760498
22	Victoria Achido	65	F	0547630751
23	Achiaa Theresa	38	F	0246533999
24	Lisbert Achiaa	45	F	—
25	Attaa Afia	40	F	—
26	Polina Sumankyire	40	F	—
27	Salamatu Issah	50	F	—
28	Ajala Mohammed	40	F	0557900855
29	Najato Bayuo	26	F	0551550427
30	Martha Addai	50	F	0243564322
31	Kwasi Wusu	52	M	—
32	Janet Daquereye	46	F	0548195604
33	Florence Jebuah	20	F	0558424663
34	Ellen Amisa	18	F	0551563585
35	Amoah Elijah	19	M	0542324493
36	Alifodzi Beauty	38	F	0242732269
37	Janet Gyamfua	36	F	0545892211
38	Amponsah Felicia	30	F	0247471687



Figure 13: Group picture of Trainees and Trainers.