

## Cluster annual report - 2018

### CA4.2 – Raising incomes and improving the health and safety at small and medium cassava processing centers



Authors: Iheanacho Okiké, Emmanuel Alamu, Abass Adebayo, Arnaud Chapuis, Thierry Tran



## MAIN ACHIEVEMENTS

In **Processing** (CA4.2.1), performance tests of the pilot flash dryer at CIAT have enabled to further validate the computer-based model “Micropower-FD”. This achievement confirms the ability to use the model to design commercial flash dryers of various production capacities (from 100 up to 1000 kg of product/hour). In Ghana, a second small-scale flash dryer was designed, built by a local manufacturer (Hormeku Engineering) and installed in a commercial setting (Tropical Starch processing) ([reports and oral presentations at GCP21 and ISTRC uploaded in MEL](#)). In Nigeria, a prototype steamer for attiéké production was developed to optimize beta-carotene retention in attiéké produced from biofortified cassava ([poster uploaded in MEL](#)).

In **Product quality and user preferences** (CA4.2.2, CA4.2.3), a key focus in 2018 was to clarify the factors that determine the texture of cooked cassava products. While the starch component is important, texture tests on boiled cassava show that the fiber components (cell wall materials (CWM), pectins) also play a key role in the final texture and sensory perception. Several methods were developed to better characterize CWM (extraction followed by NIRS and MIRS measurements), and to measure the textural changes of cassava roots during boiling, fermentation (retting), and gari processing. In 2019 and 2020 correlations between CWM composition, texture and sensory perceptions of cooked cassava products will be investigated ([working papers on methodology developments uploaded in MEL](#)). In Zambia, a detailed study of cassava flours (HQCF) sold in Lusaka markets showed that different grades of HQCF are being marketed (product differentiation), with various starch contents and biophysical properties. No aflatoxin contamination was detected among the nine HQCF products of the study ([dataset uploaded in MEL](#)).

In **Use of by-products** (CA4.2.4), the RTB scaling project High Quality Cassava Peel (HQCP) organized the training of 120 potential investors on HQCP technology, and provided them with investment guidelines for obtaining credit from the Bank of Industry (Nigeria). A Community of Practice group was established using social media<sup>1</sup> (Whatsapp™), through which 150 members provide feedback on their experience of HQCP implementation, exchange information on location and availability of raw materials, and ask, and receive technical support. The HQCP project also produced a georeferenced database of sources of fresh cassava peels (Cassava Peel Tracker©), and integrated HQCP nutritional data in an online feed composition calculator (FeedCalculator©<sup>2</sup> in collaboration with Single Spark, Netherlands) ([supporting documents uploaded in MEL](#)).

In **Value chains approaches** (CA4.2.5), a study of the changes in the cassava value chain in the Cauca department (Colombia) between 1995 and 2017 showed a concentration of the cassava starch industry, with the number of factories decreasing from 200 to 60. In parallel the production capacity per factory increased, resulting in a total production slightly increasing. As a result, the labor market evolved with less independent processors and more salaried workers. Socially, inequalities increased as two groups of rallanderias have emerged: Larger ones able to invest in more efficient technology and increase their capacity of production, in contrast to smaller ones that remain at the same technological level as 1995 with a reduced market share ([PhD thesis and presentation uploaded in MEL](#)).

Finally, the cluster is mobilized to increase the number of publications, with 6 peer-reviewed articles published in 2018, and 10 currently at various stages of reviewing. Nine oral communications and

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<sup>1</sup> Contact Iheanacho Okike for inclusion in the Community of Practice group ([i.okike@cgiar.org](mailto:i.okike@cgiar.org))

<sup>2</sup> <http://www.singlespark.nl/feedcalculator.html>  
<https://www.feedcalculator.com/>

two posters were also delivered at international conferences (GCP21, ISTRC) (all publications uploaded in MEL).

### OUTCOME CASES AND POLICY INFLUENCED (PROPOSED)

The HQCP Scaling project produced several outcome cases, thanks to its focus on producing practical impacts.

Title of Outcome/ Impact Case Report (OICR) (30 words)	Description (up to 80 words)	Geographic scope (Specify if regional, national, sub-national and provide list of regions/countries)
Train investors in HQCP production and facilitate access to credit	120 potential female and male investors were trained on HQCP processing, know the minimum equipment as well as minimum hygienic and waste disposal standards required for feed safety and profitable operation. They have access to protocols, business guidelines and plans to enable obtaining credit (up to US\$30,000) at varying scales for processing and marketing HQCP.	Cassava producing regions of Nigeria especially the humid, sub-humid and savanna agroecological zones. <u>Evidence</u> : The complete list of trained potential investors is available on demand. 12 trainings events took place at IITA/ILRI (Ibadan) from August to October 2018.
Access to geo-referenced sources of fresh cassava peels	120 potential investors (female, male; small, medium and large) have access to detailed and geo-referenced maps (Cassava Peel Tracker©) identifying sources of cassava peels, and information on daily volumes processed, to support decisions on optimal location of facilities, and improve efficiency and profitability.	Cassava producing regions of Nigeria especially the humid, sub-humid and savanna agroecological zones. <u>Evidence</u> <sup>3</sup> : Cassava Peel Tracker© developed, 1250 locations surveyed and mapped in 4 states in south west Nigeria.
Improve knowledge of formulation of rations that include HQCP for livestock and fish	The online feed composition calculator (FeedCalculator©) enables feedmillers and male and female farmers in Oyo State and beyond to formulate least cost balanced rations for animal feed, incorporating HQCP mashes (fine, whole and coarse grades) based on their nutritional value. As at end of September 2018, HQCP mashes have been successfully included in 797 recipes out of 1463 formulation attempts. Inclusion rates vary with 9-15% for broiler rations, 10-24% for pig, 13-17% for catfish, and 15-18% for layer rations. These results exceed initial expectations.	Nigeria. <u>Evidence</u> : The FeedCalculator© app has been developed in collaboration with Single Spark in the Netherlands <sup>4</sup> .  The FeedCalculator© in combination with Cassava Peel Tracker© provide evidence bases for monitoring commerce and utilization of cassava peel products in feed formulation.
Create awareness of the HQCP innovation	Appropriate tools were developed to reach a large number of entrepreneurs as follows:	Nigeria and other countries in West Africa. <u>Evidence</u> : YouTube video: <a href="https://www.youtube.com/watch?v=jkvHYqPLvyc">https://www.youtube.com/watch?v=jkvHYqPLvyc</a>

<sup>3</sup> <http://seedtracker.org/peeltracker/>

<sup>4</sup> <https://play.google.com/store/apps/details?id=nl.singlespark.feedcalc&hl>



Title of Outcome/ Impact Case Report (OICR) (30 words)	Description (up to 80 words)	Geographic scope (Specify if regional, national, sub-national and provide list of regions/countries)
and facilitate the emergence of a community of practice (CoP)	<p>- A 5-min video clip of the innovation was shot and made available on YouTube®. It has now had 181k views and 800 likes.</p> <p>- Our community of practice (CoP) platform known as Cassava Peel First Movers (Whatsapp™-based) has more than 150 active members including all trained potential investors.</p>	Examples (screenshots) of CoP exchanges are provided in Annex 3: Valuable exchange of information on training, technical aspects of the HQCP technology, economic information (costs of raw materials, fluctuations of market prices, etc.).

Name and description of policies modified in design or implementation, informed by CGIAR research (20-50 words, ideally around 30 words)	Type (policies/ strategies / laws/ regulations/ budgets/ investments / curricula)	Whose policy is this? The primary organization(s) either designing/promulgating the policy, law, investment (e.g. national government) etc. and/or within which it is operating.	Geographic scope (Specify if regional, national, sub-national and provide list of regions/countries)
An assessment of the sustainability of the cassava value chain in Côte d'Ivoire (CIRAD, 2017) informed the decision by the European Union to fund a project (PRO2M) for the development of cassava and vegetables value chains.	Investment	European Union is providing funds for the project PRO2M in Côte d'Ivoire. The "Fonds Interprofessionnel pour la Recherche et le Conseil Agricole (FIRCA) and the Ministry of Agriculture and Rural Development (MINADER) implement the PRO2M project.	Côte d'Ivoire <u>Evidence</u> <sup>5</sup> : Announcement of the project by the MINADER website, published on 4/07/2018, shortly after the completion of the cassava value chain assessment by CIRAD in October 2017.
The training of 120 potential investors in HQCP technology, and access to credit thanks to a MoU between the HQCP Scaling project and the Bank of Industry (Nigeria) influence investment decisions in HQCP processing facilities.	Investment	The policy was influenced at two levels: (i) Potential investors in HQCP technology are equipped to make more informed decisions on investing and applying for a loan. (ii) The Bank of Industry is better informed when deciding to grant loans to HQCP investors.	Cassava producing regions of Nigeria especially the humid, sub-humid and savanna agroecological zones.

<sup>5</sup> [http://www.agriculture.gouv.ci/accueil/details\\_actualite/cote-d-ivoire-plus-11-milliards-de-l-ue-pour-developper-la-filiere-manioc-et-les-marachers407](http://www.agriculture.gouv.ci/accueil/details_actualite/cote-d-ivoire-plus-11-milliards-de-l-ue-pour-developper-la-filiere-manioc-et-les-marachers407)  
<https://news.abidjan.net/h/640647.html>





## MAIN ACHIEVEMENTS WITH GENDER RELEVANCE

In Nigeria, for the HQCP Scaling project, out of the 120 potential investors that have been trained in HQCP production, least cost feed formulation and guidelines for obtaining credit, 25% are female. The list of trained potential investors and their contacts is available on request.

In Zambia and Malawi, IITA conducted two studies to understand current practices of household and industrial processing and utilization of cassava. The study involved respectively 300 and 361 randomly selected cassava growing households in 5 districts in Zambia (Kasama, Samfya, Mansa, Serenje, Kaoma) and 3 districts in Malawi (Lilongwe, Mangochi Nkhata-Bay and Karonga). The study found that cassava is processed at small scale, mainly for household consumption. Women are more involved in processing cassava than men as most of the processes are done by women. Possibly in relation to this, levels of awareness and usage of improved cassava processing methods were low (20% to 26%). The only improved processing equipment that farmers used often (69%) was the hammer mill. The main challenges facing processing households included limited knowledge of the diversity of cassava products and low usage of improved equipment in Zambia, and lack of appropriate equipment, labour intensity and problems of sun-drying during rainy season in Malawi.

All evidence are uploaded in MEL. The Zambia study is published as a peer reviewed article: Alamu et al. 2019. Evaluation of cassava processing and utilization at household level in Zambia. Food Security. <https://doi.org/10.1007/s12571-018-0875-3>.

## MAIN ACHIEVEMENTS WITH YOUTH RELEVANCE

By generating new economic activities around cassava peels processing into animal feed, the HQCP project creates employment and income opportunities in rural cassava-producing regions of Nigeria, including for youth.


## MAIN ACHIEVEMENTS WITH CAPACITY DEVELOPMENT RELEVANCE

In Nigeria, IITA held a workshop “Dissemination of pneumatic flash dryer for drying of high-quality cassava flour” (February 2018) attended by 30 equipment fabricators and cassava processors.

In Nigeria, for the HQCP Scaling project, 120 potential investors have been trained in HQCP production, least cost feed formulation and guidelines for obtaining credit. The list of trained potential investors and their contacts is available on request. In addition, an unknown number of processors have depended entirely on the YouTube© video to develop their enterprises. These processors come to our notice when others – making enquiries – make reference to them, on the CoP Whatsapp™ platform in particular.

At least two PhD students, and 4 MSc students were trained through CA4.2 activities, on the following topics:

- 1) Socio-economic and technological changes in the cassava value chain in the Cauca region (Colombia) over 20 years (1995 – 2017). PhD project completed in September 2018.
- 2) Interactions between processing conditions of gari and final product quality. PhD project completed in November 2018.

- 
- 3) Characterization of the diversity of phenotypes and functional properties among cassava genotypes representative of seven agro-climatic regions in Latin America. MSc project completed in May 2018.
  - 4) Extraction and purification of cell walls from cassava roots for NIRS & MIRS analysis (MSc project).
  - 5) Commissioning and characterization of the performance of a pilot flash dryer at CIAT (MSc project).
  - 6) Development and evaluation of a steamer for attiéké production, and optimization of retention of carotenoids in attiéké produced with biofortified cassava (MSc project).

### **MAIN ACHIEVEMENTS WITH CLIMATE CHANGE RELEVANCE**

The HQCP the innovation improves the environmental footprint of cassava processing by reducing the quantity of peels that would otherwise be left to rot and generate greenhouse gas (GHG) emissions. Through providing alternative energy sources to maize, HQCP also reduces the quantity of maize that would have been farmed for animal feed production. This latter action saves water and protects the environment from any adverse effects of inorganic fertilizers application.

### **MAIN GAPS AND CHALLENGES**

Overall, activities were carried out according to the POWB, with only one deliverable cancelled (out of 49). Eight deliverables had to be postponed to 2019, for various reasons such as unavailability of cassava materials to conduct the planned experiments, lack of a suitable candidate for an MSc traineeship (flash dryer), and delays in article writing or in the reviewing process.

Scientifically, an emerging challenge is that the perception of texture by consumers is multi-dimensional, with attributes such as hardness/softness, but also friability and mealiness (case study of boiled cassava). Further investigations are planned in 2019-2020 to develop a texture method able to capture these multi-dimensional characteristics.

No review/study on foresight, monitoring and evaluation per se has been conducted in the past 12 months. Nevertheless, the PhD project on the changes in the cassava value chain in the Cauca (Colombia) between 1995 and 2017 may provide long-term information on the impacts of past projects by CIAT and CIRAD with cassava processors. It may be useful to review the data available (mainly surveys conducted in 1995 and repeated in 2017) with CC5.1 scientists to assess whether such data can be useful to them.

### **MEASURES TAKEN AND ADJUSTMENTS PROPOSED**

Please see previous section, where measures taken and adjustments proposed are described following their corresponding gap and challenge.

### **PARTNERSHIPS: ACHIEVEMENT AND CHALLENGES**

Please list up to three important partnerships for 2018, using the following table.



Brief description of partnership aims (30 words)	List of key partners in partnership (one or more partners). Do not use acronyms	Main area of partnership, Research / Delivery / Policy / Capacity Development / Other, please specify
Synergos has made inroads into the public sector and works with them up to the level of farmer field days. In coordination with the governments of Kogi, Niger and Benue states, Synergos has assisted in establishing at least three pilot plants for HQCP processing.	Synergos (NGO)	Capacity Development Delivery
Amo-Byng organized HQCP feeding trials of increasing sizes, starting with batches of 500 x 5 broilers and later reaching 22 000 birds. Inclusion of HQCP could reach 12.5% in feed or 25% replacement of maize. This is similar to results obtained when using the FeedCalculator© app.	Amo-Byng Nigeria Ltd.	Research

Please include collaborations with one or more CRPs or Platforms – or in some cases with other Centers, if these are not already core partners for your CRP.

Name(s) of collaborating CRP(s), Platform(s) or Center(s)	Brief description of the collaboration	Optional: Value added, in a few words e.g. scientific or efficiency benefits
CCAFS	Measurement of greenhouse gas emissions (CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O) from three cassava plots under mineral fertilization, organic fertilization, and control (no fertilization)	This is the first time, to our knowledge, that actual GHG emissions have been measured for cassava cultivation. The knowledge generated can contribute to databases on GHG field emissions, and to improving current models and emission factors of GHG from fertilization.

## FUND RAISING

Non-earmarked and earmarked CA4.2 budgets provide a key source of funding for the cluster activities. The RTBfoods provides additional bilateral funding, that strengthen in particular activities on texture characterization of boiled cassava, consumer perceptions and sensory analysis.

In 2018 the project proposal RTB Scaling of Flash drying technology was accepted, and an additional financial contribution was committed by TAAT. This funding will enable to strengthen the activities on cassava processing technologies in 2019-2020, in particular the transfer of the flash drying technology to the private sector.

In 2018, applications for funding were also submitted to USAID, the Raw Material Research and Development Council (RMRDC) of Nigeria, and Durante Fish Industries Ltd. These have not materialized yet.

Fund raising efforts will continue in 2019 to prepare for the end of current projects, expected between 2020 and 2022.

### ANNEX 1 – OUTPUTS TO BE REPORTED

Related output(s)	Output leader	Completed in MEL (YES/NO)
CA4.2.1.4 - Multi-objective optimization framework applied to optimize drying in at least two countries, integrating technical, socio-economic and environmental criteria to identify most suitable design	Michel Rivier Thierry Tran	No
CA4.2.3.2 - Standard operating protocols (SOP) to assess the physico-chemical, functional and nutritional properties of cassava roots, flour and starch, to support (1) the rapid screening of improved cassava varieties, and (2) the assessments of consumers and end-users preferences	Dominique Dufour Fabrice Davrieux	No
CA4.2.4.1 - Technologies for industrial production of animal feed and other feedstocks based on roots, by-products, and/or foliage in use in at least two countries	Acho Okike	No
CA4.2.5.1 - Benchmark surveys of cassava value chain in at least two countries completed and analyzed	Thierry Tran	No

*Annual milestones related to outputs are:*

*Improved cassava varieties evaluated assessing their processing suitability for transformation in traditional products (gari and fufu) and high-quality cassava flour and processors' preferences assessed in 3 countries.*

*More efficient processing technologies, supply chain management models, and waste management options tested in at least 3 countries*

### ANNEX 2 – LIST OF FORMATIVE AND EVALUATIVE STUDIES

Title	Deliverable code
Conflict and inequality in the region of Cauca, Colombia: Comparative analysis of socio-economic status in the cassava starch value chain between 1995 and 2018	12671



## ANNEX 3 – EXAMPLES OF COMMUNITY OF PRACTICE (COP) EXCHANGES OF INFORMATION AROUND THE HQCP TECHNOLOGY

### 29/06/2018: Technical information

**Cassava Peel First Movers**  
abassadebayo, Acho1, Lateef, +1 (314) 308-8774, +1 (587) 936-0914, +220 211 1158, +234 702 670 4390, +234 703 029 3555...

make gains too. 08:42

+234 803 769 6147 ~Daily Fresh Farms  
Quick check: To achieve 1ton per week, you will produce 250kg per day for 4-5days. This will require processing at least 800kg of wet peel per day. Depending on the type of grating machine, dewater press and number of labour, processing this quantity may take you 6-7 hours. It could be lesser if you have two machines. You may also have to consider your source of wet peels, the quantity available each day, the distance to your factory. Your drying method is also very important. As the rain starts, drying using natural solar may be slower, toasting may be an option. The above consideration is based on the prototype available at ILRI factory within IITA campus where we visited during the stakeholders' workshop in April. Thanks 08:49

+226 74 47 27 31 ~Tunde Amole  
+234 817 160 6021 ~XTRALARGE Farms  
Is there any one offering training on the cassava peel, As well the cost implications of starting up a processing plant for the project. Thanks  
International Livestock Research Institute (ILRI) located in IITA Ibadan offer regular training on processing and utilization of HQCP mash since 2016 till date. With certification, technical backstopping till your factory is working. Thanks 09:19

+234 817 160 6021 ~XTRALARGE Farms  
Thank you everyone, I really appreciate your warm welcome and response 09:21

+234 703 355 2350 ~Nathaniel Malgwi

### 14/07/2018: Price of corn versus price of cassava peels

**Cassava Peel First Movers**  
abassadebayo, Acho1, Lateef, +1 (314) 308-8774, +1 (587) 936-0914, +220 211 1158, +234 702 670 4390, +234 703 029 3555...

+234 802 611 2799 ~Leye  
Good evening. Going back to pricing, maize price has risen again, I expect that the price of hqcp will rise too. 15:01

So is the price still hovering around N45/kg. 15:01

I'm seeing a maize price of N120/kg and above can anyone confirm this 15:02

+234 806 496 3303 ~Victor  
+234 802 611 2799 ~Leye  
So is the price still hovering around N45/kg.  
Yes. Between 45 & 50 15:02

+234 802 611 2799 ~Leye  
I thought hqcp value was roughly 50% of maize price 15:03

+234 806 496 3303 ~Victor  
Some locations are however selling btw 60 & 65 Naira per Kg 15:04

Production cost and demand are factors playing around the price at the moment 15:04

+234 806 496 3303 ~Victor  
+234 802 611 2799 ~Leye  
I thought hqcp value was roughly 50% of maize price

## 17/07/2018: Announcement of the HQCP hands-on trainings for 120 potential investors

The image shows two screenshots of a WhatsApp chat group titled "Cassava Peel First Movers". The group members listed at the top are abassadebayo, Acho1, Lateef, +1 (314) 308-8774, +1 (587) 936-0914, +220 211 1158, +234 702 670 4390, and +234 703 029 3555... The chat background has a pattern of various icons.

**Chat 1 (Top):**


- Acho1 added +234 802 313 5030
- Acho1: Colleagues, We plan to organise hands on training on production of HQCP mashes at IITA/ILRI. This would be in batches of 5-6 persons. Training will last for 3 days. Interested participants are expected to transport, accommodate and feed themselves while we provide the training materials and equipment. If you are interested or know interested persons, please indicate so that we start arranging the batches. (02:34)
- Acho1 added +234 706 867 4936
- Acho1 added +234 805 502 0331
- +234 802 313 5030 ~Oluwafemi Salami: This is great. (02:59)
- Thanks Sir (02:59)
- +234 806 820 0026 ~Adekunle Ayandele: I'm interested Sir. When is the scheduled date/s.? @MIN. OF FARMHACK.NG , how far. (03:45)
- Acho1: +234 806 820 0026 ~Adekunle Ayandele: I'm interested Sir. When is the scheduled date/s.? @MIN. OF FARMHACK.NG , how far.


**Chat 2 (Bottom):**

- +234 706 300 1000 ~Demola Gbadegesin: Great initiative. I am interested
- You are 6 of 6 batch 1 (04:36)
- Dear Batch 1 trainees, can we schedule your training dates for Monday 30 July to 01 August starting at 9am. (04:45)
- +234 803 331 1981 ~Olufolakeishola: Good morning Dr i have two interested people they are Adeleke Mrs n Mr Salau Muda pls (04:46)
- Acho1: +234 803 331 1981 ~Olufolakeishola: Good morning Dr i have two interested people they are Adeleke Mrs n Mr Salau Muda pls
- Ah Madam, Good morning! It is ok. They will be 1 & 2 of 6 batch 2. (04:48)
- +234 803 331 1981 ~Olufolakeishola: Okay sir more people are still coming (04:50)
- +234 806 820 0026 ~Adekunle Ayandele: Acho1: Dear Batch 1 trainees, can we schedule your training dates for Monday 30 July to 01 August starting at 9am.

## 01/08/2018: Completion of training for the first batch

Cassava Peel First Movers  
abassadebayo, Acho1, Lateef, +1 (314) 308-8774, +1 (587) 936-0914, +220 211 1158, +234 702 670 4390, +234 703 029 3555...

Acho1  
  
First batch of 6 trainees complete their training today 1 August. 14:26

Acho1  
Acho1  
  
First batch of 6 trainees complete their training today 1 August.  
Each trainee tried their hand and attained competence in 1. Good production and business practices 2. Maintenance of processing equipment and machines 3. Making balanced and least cost rations using FeedCalculator and 4. Creating market for their products using Cassava Peel Tracker. 14:33


+234 706 867 4936 ~Uzieyi Christian E  
Acho1

Type a message

Cassava Peel First Movers  
abassadebayo, Acho1, Lateef, +1 (314) 308-8774, +1 (587) 936-0914, +220 211 1158, +234 702 670 4390, +234 703 029 3555...

Acho1  
Each trainee tried their hand and attained competence in 1. Good production and business practices 2. Maintenance of processing equipment and machines 3. Making balanced and least cost rations using FeedCalculator and 4. Creating  
In the closing session they were presented the guidelines for loan application by the Pup State Officer of Bank of Industry - Mr. Pacqueens Irabor - with strong encouragement to apply if they need credit. 14:37

Acho1  
Acho1  
In the closing session they were presented the guidelines for loan application by the Pup State Officer of Bank of Industry - Mr. Pacqueens Irabor - with strong encouragement to apply if they need credit.  
The project has a nationwide Memo of Understanding being executed at the moment. 14:42

+234 805 502 0331 ~segunladele  
Acho1  
  
First batch of 6 trainees complete their training today 1 August.  
Big thanks to Dr Okike, Dr Amole and other members of the ILRI who made our training session huge success. We hope to make you all proud in the nearest future as we go out to run with this great vision. 14:42

+234 803 978 4212 ~frederick schreurs  
Great achievement. My compliments 14:51

Type a message

## 17/09/2018: Feedback from trainees on the implementation of the HQCP technology at their own facilities

Cassava Peel First Movers  
 abassadebayo, Acho1, Lateef, +1 (314) 308-8774, +1 (587) 936-0914, +220 211 1158, +234 702 670 4390, +234 703 029 3555...

**Acho1**  
 Colleagues in Batches 1-6,  
 Could you all please update the forum on the progress you have made so far towards HQCP business- processing, aggregating and/or milling.  
 You all know the amount of effort being put into training each batch.  
 Let us know if there are areas where you need further help.  
 In the final analysis, we want to start assessing the return on our effort.  
 We will ask ourselves whether the level of training and support that we are providing will lead to scaling or not.  
 We want to hear from you.  
 Regards  
 12:52

9/17/2018

+234 803 223 6726 ~Joseph Aseda  
 Hello All. This is Jose Aseda. We are planning planning a scalable facility for about 7.5ton and 4 ton of fine and coarse HQCP per week in Oyo area. The facility should up by November latest. By way of encouragement from this house, we need viable off-takers on weekly basis. Let's know how much of which mash, u will be needing. Thank you!  
 08:09

+234 809 809 4000 ~Francis Adewole  
 Dr Okike and team:  
 • For batch 6, we started with 581kg of cassava peels  
 Then we initially removed 11.25kg waste at first sorting and another 6.95kg during first grating (Hence total unwanted – stumps and co – was 18.2kg).  
 • We came up with 28 bags of approximately 20kg wet (grated) mash.

Type a message

Cassava Peel First Movers  
 abassadebayo, Acho1, Lateef, +1 (314) 308-8774, +1 (587) 936-0914, +220 211 1158, +234 702 670 4390, +234 703 029 3555...

...we need viable off-takers on weekly basis. Let's know how much of which mash, u will be needing. Thank you!  
 08:09

+234 809 809 4000 ~Francis Adewole  
 Dr Okike and team:  
 • For batch 6, we started with 581kg of cassava peels  
 Then we initially removed 11.25kg waste at first sorting and another 6.95kg during first grating (Hence total unwanted – stumps and co – was 18.2kg).  
 • We came up with 28 bags of approximately 20kg wet (grated) mash.  
 ~ 560 kg wet (grated) mash.  
 • Next day, we weighed 5 of the pressed bags to be 54.25kg which had a moisture content of 29.5%  
 ~ 10.25kg per bag or 303.8kg for the 28 bags of pressed mash @ 38  
 52.3% from what we started (purchased peels)

• **Do we know what the exact total weight of the dried (toasted) mash came out to be?**  
 10:28

**Acho1**  
 +234 809 809 4000 ~Francis Adewole  
 Dr Okike and team: • For batch 6, we started with 581kg of cassava peels Then we initially removed 11.25kg waste at first sorting and another 6.95kg during first grating (Hence total unwanted – stumps and co – was 18.2kg). • We came up with  
 This information is available. A team member will supply it by tomorrow.  
 12:07

9/18/2018

Type a message



## 20/09/2018: Information on application for loans from BOI

Cassava Peel First Movers  
abassadebayo, Acho1, Lateef, +1 (314) 308-8774, +1 (587) 936-0914, +220 211 1158, +234 702 670 4390, +234 703 029 3555...

+234 906 000 2410 ~The Lovepreneur

BOI-OYSG MSME FUN...  
1 page - DOCX - 105 kB 23:02

+234 906 000 2410 ~The Lovepreneur

OYSG-BOI MSME DEVELOPMENT FUNDING  
SCHEME CIVIL PUBLIC SERVICE  
GUARANTORS FORM

(To be completed by Loan Guarantor in Block Letters)

A. BORROWER'S INFORMATION

1. Full Name of Borrower

BOI-OYSG GUARANT...  
3 pages - PDF - 2 MB 23:02

Kindly find attached above BOI-OYSG MSME Fund questionnaire and Guarantors form. The guarantor forms are expected to be filled in triplicate.

1 OYSG Senior Civil Servant for loans up to N2 Million.

2 OYSG Senior Civil Servants for loans above N2 million but up to N5 Million.

3 OYSG Senior Civil Servants (one of whom will be level 13 and above) for loans above N5 million but up to N10 Million.

Landed properties with valid title documents in an Urban area preferably State Capitals or Bank Guarantees are required for loans above N10 million.

Type a message

Cassava Peel First Movers  
abassadebayo, Acho1, Lateef, +1 (314) 308-8774, +1 (587) 936-0914, +220 211 1158, +234 702 670 4390, +234 703 029 3555...

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Kindly find attached above BOI-OYSG MSME Fund questionnaire and Guarantors form. The guarantor forms are expected to be filled in triplicate.

1 OYSG Senior Civil Servant for loans up to N2 Million.

2 OYSG Senior Civil Servants for loans above N2 million but up to N5 Million.

3 OYSG Senior Civil Servants (one of whom will be level 13 and above) for loans above N5 million but up to N10 Million.

Landed properties with valid title documents in an Urban area preferably State Capitals or Bank Guarantees are required for loans above N10 million.

The landed property should be valued by BOI's accredited estate valuers and should have Force Sale Value(FSV) of not less than 150% of the requested loan amount.

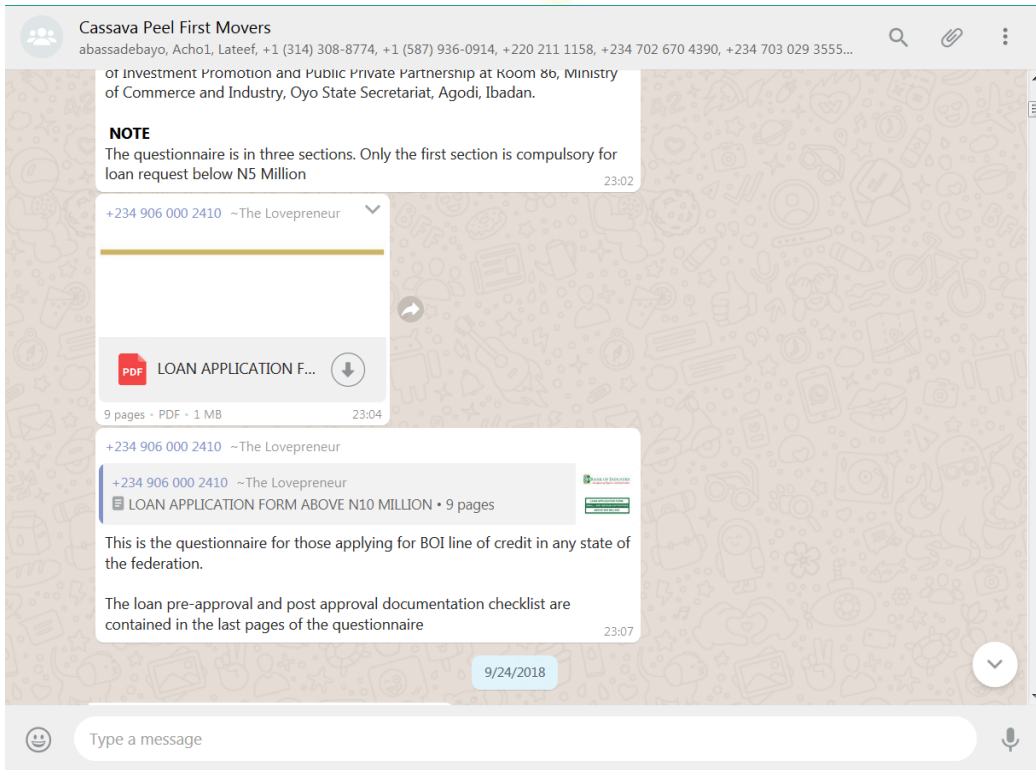
You are expected to apply for the BOI-OYSG MSME Fund through the Bureau of Investment Promotion and Public Private Partnership at Room 86, Ministry of Commerce and Industry, Oyo State Secretariat, Agodi, Ibadan.

**NOTE**  
The questionnaire is in three sections. Only the first section is compulsory for loan request below N5 Million

+234 906 000 2410 ~The Lovepreneur

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## 04/12/2018: Information exchange on the Feed Calculator

