

# NRCRI achievements in Period 1

## Activities Conducted, & Perspectives

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### Main Author(s):

- CHIJIJOKE Ugo, NRCRI, Nigeria
- EGESI Chiedozi, NRCRI, Nigeria
- MADU Tessy, NRCRI, Nigeria
- OBEDIEGWU, Jude, NRCRI, Nigeria
- NJOKU, Damian, NRCRI, Nigeria
- OFOEZE Miriam, NRCRI, Nigeria

Collaborator(s): IITA, Nigeria

### PARTNER Summary

*(10 to 15 lines of Partner achievement for Period 1)*

NRCRI, Umudike within period 1 produced the State of knowledge (SoK) report on the demand, preferred sensory characteristics and socio-cultural context of gari, boiled and pounded yam in South-East Nigeria (WP1 activity1). The institute also documented and delivered the state of knowledge report on biophysical and sensory characterization of fresh cassava and fufu (WP2 period 1 deliverable) WE also collaborated with IITA Ibadan and Bowen University to prepare a draft of the Protocol for determining the cooking, pounding ability, sensory, textural and biophysical properties of some yam varieties

NRCRI conducted and delivered the report of the survey on Gender Product mapping and User profile survey for gari, eba, fufu, boiled and pounded yam. The study was carried out in eight villages within six senatorial zones of two State (Imo and Ebonyi) in the South-Geo-political region of Nigeria (WP1 activity 3).

The Institute in collaboration with IITA Ibadan used twenty-three NextGen cassava varieties planted in the Mother trial at Imo State Nigeria to conduct and develop the protocol and methodology for participatory evaluation of new hybrids WP5. The NextGen cassava mother trial was replanted in Imo State for validation of the WP5 protocol. Samples of fresh cassava roots and gari from the NextGen cassava Mother trial were analyzed using wet lab methods and table top NIRS (WP2 activity) in collaboration with IITA Ibadan. An inventory of state of art within the yam breeding population was undertaken and submitted the WP4 leader

The Institute organized training for NRCRI and IITA staff on use of hand-held NIRS for high throughput analysis of fresh cassava roots. NRCRI participated in capacity strengthening workshop organized by wp1 in Benin, sensory evaluation training in Uganda by wp2 and the in-country co-ordination meeting held at IITA Ibadan.

### PARTNER activities

#### **PARTNER participation in the different WPs & cross-WP interactions**

*(Describe activities, collaborations between teams within the institution, project implementation)*

NRCRI WP1,WP2 and WP3 members were involved during the workshop on Harmonizing tool for gender food mapping and user profiling study for cassava and yam conducted by WP1 leader at NRCRI, Umudike .The WP1,2 and 4 member breeders, Food scientists, Gender specialist and Socio economists) participated in the WP5 activity on yam and cassava. WP 2 and 3 members in the Institute also participated in NIRs training organized in the institute. An in-country co-ordination meeting was held at IITA Ibadan for harmonizing activities conducted by RTBfoods team Nigeria for all the work packages.

*In which WPs is the PARTNER team involved? For which activities conducted in Period 1?*

NRCRI Umudike was involved WP1; **Activity 1:** State of knowledge report for yam, cassava, gari, fufu, boiled and pounded yam. **Activity 2:** Capacity strengthening workshop and **Activity 3:** Gender Product mapping and User profile survey

For WP2 we were involved in **activity 1:** State of knowledge report on biophysical and sensory characteristics of fresh cassava and *fufu*. **Activity 2:** Setting up of sensory laboratory and Development of protocol for determining the cooking, pounding ability, sensory, textural and biophysical properties of some yam varieties in collaboration with IITA Ibadan and Bowen University. We also collaborated with IITA Ibadan to analyze biophysical properties of fresh cassava root and *gari* samples processed from the Next Gen cassava Mother trial planted in Imo state South- East Nigeria using the wet laboratory method. Parameters evaluated include starch, dry matter, swelling power, solubility, color, cyanide, bulk density, dispersibility, and water absorption capacity.

**WP3;** Samples of fresh cassava roots and gari collected from NEXTGen cassava Mother trail in Imo State were also sent to IITA for NIRS calibration of starch, dry matter, colour and cyanide .

WP5: Participatory studies were conducted to develop protocol for future use WP5. The material were sourced from the Next Gen cassava Mother trial, champion processors within the locality were used to process and evaluate the gari samples.

*How is internally organized communication/coordination between WPs?*

Communication was maintained internally between WPs through exchange of mails, periodic meetings and workshops.

## PARTNER geographic implementation / strategy

*In which countries (and sub-regions) is the PARTNER team conducting activities?*

NRCRI, Umudike activities covered two states within the South-East geo-political region of Nigeria; Imo and Ebonyi states.

## PARTNER Product Profile participation

*In which product profiles the PARTNER team has been involved in Period 1? How & Where?*

NRCRI Umudike was involved in product profile activities for gari, fufu, eba, boiled and pounded yam

The Institute conducted activities for cassava and cassava products (gari, eba and fufu) in 4 villages in Imo state (Uzoagba, Akwakuma, Amandugba and Isinweke Ihitte). Yam activities were carried out in 4 villages in Ebonyi State (Onueke Ezza, Amagu Izzi, Umuebe Ezza Ohaukwu, Obinagu Ishiagu). The activities were carried out under wp1 activity 3: Gender product Mapping and user profile survey

## PARTNER Personnel involved & Students activities

NRCRI Umudike staff that were involved in the activities for period 1 include

<b>Name</b>	<b>Activity</b>
Chedozi Egesi—	Cassava Breeder
Damian Njoke---	Cassava Breeder
Jude Obidegwu---	Yam Breeder
Ugo Chijioke ----	Food Scientists
Miriam Ofeze—	Food Scientist
Amaka Onyenwe –	Food Scientists
Chukwudi Ernest Ogbenta—	Food Scientists
Tessy Madu---	Gender / socio economist
Emeka Benjamin Okoye---	Socio-economist
Justice Ewuziem -----	Socio-economist
Confidence Kanu—	Socio-economist
Mercy Ejechi----	Agric Extensio
Maria Okoro----	Agric Technician

List of Personnel involved in RTBfoods project in Period 1 (WPs + Country + Product Profiles implication): (For more accuracy you can refer to: Tab “**3a) PERSONNEL COSTS**” of Partner Financial Report)

The following are the list of personnel as captured in RTBfoods project in period 1

<b>Name</b>	<b>Activity</b>
Chiedozi Egesi (WP4 & 5)	South-east Nigeria Cassava
Tessy Madu (WP 1& 5)	South-east Nigeria Cassava and yam
Ugo Chijioke (WP1, 2, 3 & 5)	South-east Nigeria Cassava and Yam
Damian Njoku (WP4 & 5)	South-east Nigeria Cassava
Jude Obidegwu (WP4 & 5)	South-east Nigeria Yam
Miriam Ofoeze (WP 1& 2)	South-east Nigeria Cassava and Yam
Ugochukwu Ikeorgu (WP 3)	South-east Nigeria Cassava and Yam

List of Students involved in RTBfoods activities in Period 1:

<b>NAME Surname</b>	<b>Master Student or PhD or Post-Doc</b>	<b>Subject Title</b>	<b>University of affiliation</b>	<b>Fellowship Starting Date</b>	<b>Fellowship Ending date</b>	<b>Tutor(s) in RTBfoods project</b>

## PARTNER Travels: Participation to RTBfoods meetings & International Events on RTBfoods budget

(For more accuracy you can refer to: Tab **"3b) TRAVEL COSTS"** of Partner Financial Report)

<b>Number of People or List of NAMES</b>	<b>RTBfoods meetings</b>	<b>International / Regional Conferences</b>	<b>Dates</b>
Jude Obidiegwu, Tessy Madu,Ugo Chijioke	RTBfoods inception meeting Buea Cameroon		22 <sup>nd</sup> -28 <sup>th</sup> January 2018
Chiedozie Egesi, Ugo Chijioke, Confidence Kanu Benjamin Emeka Okoye	In-country Country meeting at IITA, Ibadan		20 <sup>th</sup> -21 <sup>st</sup> November 2018

## PARTNER Capital Equipment or investment (co-investments)

List of equipment acquired on RTBfoods budget (e.g?. texturometer, RVA, pHmeter, etc.)

(For more accuracy you can refer to: Tab **"3d) EQUIPMENT COSTS"** of Partner Financial Report)

2 Hp Pavilion intel core i7 laptops for NIRS

## PARTNER Training participations (within RTBfoods framework and other trainings)

<b>Training Title / Topic</b>	<b>WP concerned (if training within RTBfoods framework)</b>	<b>Country</b>	<b>Dates</b>	<b>List of Participants NAMES</b>
Breeding RTB products for end user preference Capacity strengthening workshop	WP1	Cotonu Benin	16 <sup>th</sup> -22 <sup>nd</sup> April 2018	Tessy Madu, Ugo Chijioke
Sensory Panel Training Workshop	WP2	Kampala- Uganda	17 <sup>th</sup> -21 <sup>st</sup> September 2018	Ugo Chijioke, Nwamaka Ogunka
Harmonizing and Piloting tools for survey on Gender product mapping and user profile on gari,eba, fufu, boiled and pounded yam	WP 1	NRCRI, Umudike, Nigeria	6 <sup>th</sup> -8 <sup>th</sup> August 2018	Tessy Madu, Ugo Chijioke, Benjamin Okoye, Confidence Kanu, Mercy Ejechi, Miriam Ofoeze, Amaka Ogunka, Chukwu Ernest Ogenta.

## PARTNER Sub-awards & Consultants

List of Sub-awards + WP concerned + Purpose. (For more accuracy you can refer to: Tab **3c) CONSULTANT COSTS** and **"3f) SUB AWARDS COSTS"** of Partner Financial Report)

## PARTNER Other Sources of Support for RTBfoods activities

*Which complementary / partner projects (other sources of fundings) contributed to RTBfoods activities in Period 1?*

The NextGen cassava and African yam projects complimented RTBfoods activities during the period under review. In conjunction with IITA, NRCRI Umudike provided 600 samples (fresh root and gari samples) from NextGen cassava mother baby trials for biochemical analysis and NIRS calibration of . These samples are to also to be used calibrate NIRS for end user quality triats ( RTBfoods Wp 3 and 5 activites). African yam project to nominate candidates from MLT trials for wp5 activity. Activity to be conducted within first quarter of 2nd period. (The trial was delayed due to plant harvesting period for yam).

## PARTNER List of Publications, Conference communications, Manuals, Leaflets, Posters, etc.

None.

## PARTNER Gaps & Constraints faced

*Which challenges faced in implementation of RTBfoods project within the PARTNER institution? Risks identified & Risk mitigation proposed?*

Lack of project vehicle was a major limitation

Limited funds allocated to some work package and travel affected project activities and participation in international conferences for project personnel.

## PARTNER Perspective & Internal organization for Period 2

*Which planification for the PARTNER team in Period 2 accross WPs, Product profiles (& countries)?*

WP1 (a): Community-based RTBfoods processing/preparation diagnosis on *gari, fufu*, boiled and pounded yam in 4 villages within two states in South-East geo-political region in Nigeria

WP1 (b): Consumer taste tests in rural and urban market segments on *gari, fufu*, boiled and pounded yam in 2 selected locations within two states in South-East geo-political region in Nigeria

WP 2(a): Recruitment and training of panelist for sensory profiling of *gari/ebai,fufu*, boiled and pounded yam.

WP 2 (b): Sensory Profiling of *gari/eba, fufu*, boiled and pound yam

WP 2(C): Biophysical analysis of yam, cassava and processed product

WP 3: NIRS activities will be conducted on fresh and processed products of selected yam and cassava varieties

WP4: Establishment of advanced yam breeding lines establishment of field trails, maintenance and data collection for Cassava and yam varieties in selected locations within the south-east agro-ecological zones

WP5: Development of protocol for adoption study of user preferred cassava and yam varieties in 2states (Imo and Ebonyi ) in the South-east agro-ecological zones of Nigeria.