

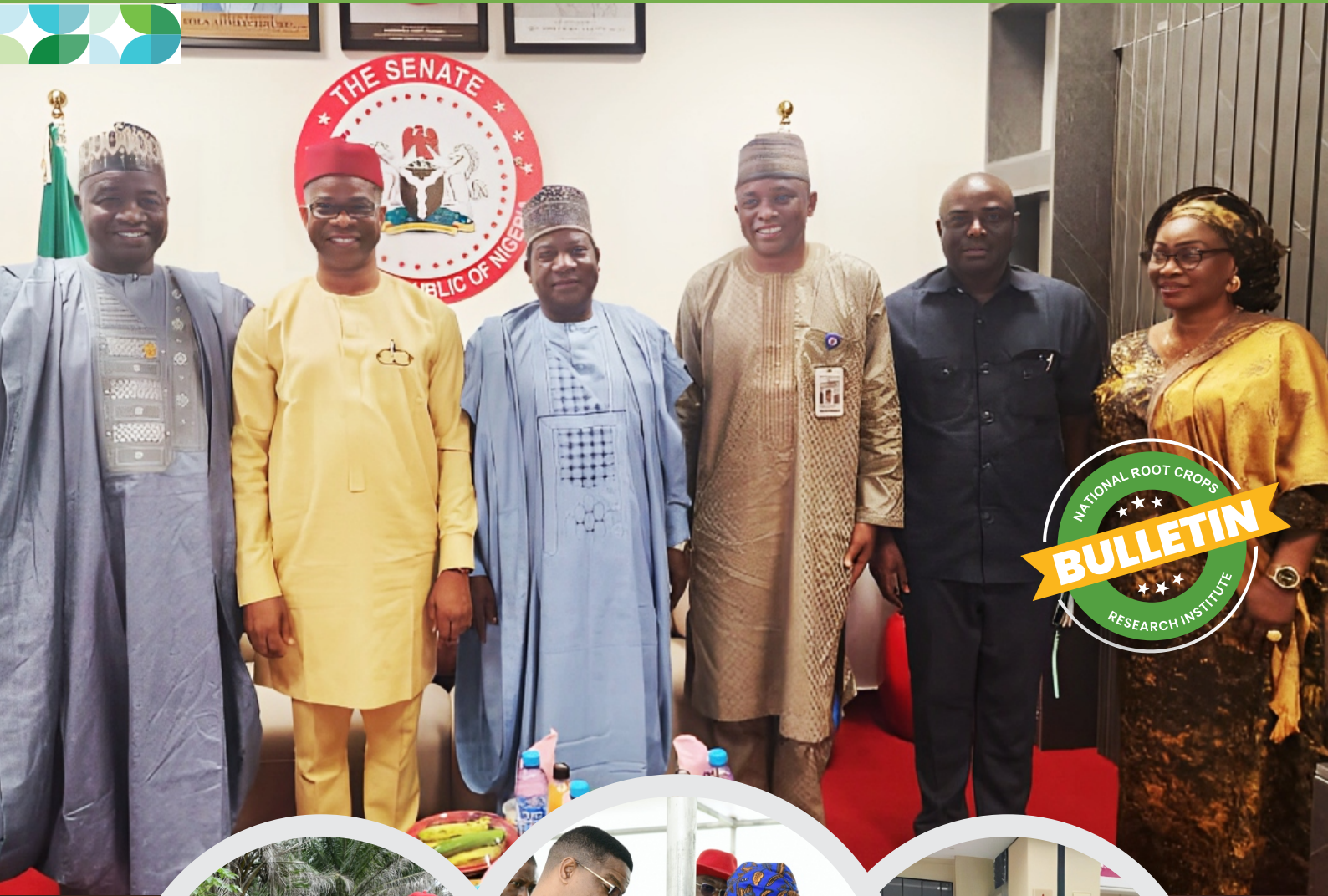


NRCRI

DELIVERING THE ROOTS OF PROSPERITY

NRCRI BULLETIN, NOV, 2024,

VOLUME 9, ISSUE NO. 2



NRCRI Establishes Regenerative Agroforestry Farm



ED Plays Host to State Director of Security



NRCRI Participates in the African Cassava Yield Doubling Program



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EDITOR IN CHIEF

Prof. Chiedozie Egesi

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NRCRI NATIONAL MANDATE

Research into the genetic improvement, production, storage, processing, utilization, and socio economics of root and tuber crops of economic importance (cassava, yam, cocoyam, ginger, Irish potato, sweet potato, turmeric, sugar beet, etc.)

ZONAL MANDATE

Conduct research into the farming systems of South East Geopolitical Zone of Nigeria.
Assist in agricultural extension and technology transfer activities

NRCRI MISSION

To provide necessary improved technologies that would enhance total value chain development of root and tuber crops towards national food security, income generation, gainful employment and industrial development.

VISION

To be recognized internationally as centre of excellence in root and tuber crops research in Nigeria

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Editorial

Enhancing cassava production through Climate smart agriculture in Nigeria

Hello beloved readers, It is now two years in office of the incumbent Executive Director/CEO of the NRCRI Umudike, Prof. Chiedozi Egesi, who started his leadership journey on 17th October, 2022. It has been a two year of Excellence. I could not believe we have done so much within the period. I see a brighter future for NRCRI, Umudike under the present Administration, despite the economic situation of the country.

It is my singular honour to welcome our numerous readers to the second edition of 2024 NRCRI bulletin. This edition is to draw readers interest toward enhancing cassava production through climate smart agriculture in Nigeria.

Cassava is the third largest source of carbohydrates in the tropics after rice and maize. It is the major staple food grown in the developing world, providing a basic diet for millions of people. Nigeria is the largest producer of cassava in the world with the

annual cassava output of 52 million metric tonnes which is almost 20% of production in the world. It is a drought tolerant and a food security crop. Cassava plays a very important role in agriculture in developing countries especially in sub-saharan Africa. It can serve as subsistence crop as well as a cash crop. Cassava production in Nigeria is throughout the year. In Nigeria the average yield of cassava per hectare is 10.6 tonnes. Cassava has a number of attributes that make it attractive as a crop to promote under any climate change adaptation strategy. For small -holder farmers with limited resources, cassava provides an excellent insurance against famine. Once

established, the crop is not easily affected by dry spells and drought. Tubers can be left in the ground (un harvested) for long periods as a food reserve. Cassava can be grown in all the 36 States of Nigeria and is adapted to multispecies agricultural systems. Because of its extensive root system, Cassava can grow in soils too impoverished to support other crops with yields of fresh tuberous roots up to 5 - 6 t/ha. Under good management yields can be as high as 40 - 60 t/ha of tuberous roots. Cassava tubers can be value added to produce a range of products including livestock feed. Most of our staple foods in Nigeria come from cassava, such as gari, fufu, flour, starch etc. Cassava can be used for all sorts of things including ethanol production. Therefore, there is serious need to maintain a climate smart cassava production for increased productivity and export.

Climate change and food insecurity pose two of the greatest development challenges of our time.. Climate change affects cassava production in diverse ways, total amount of rainfall and the deteriorating nature of most Nigerian soils are causing low yields among cassava farmers which consequently result to hunger, poverty, malnutrition and diseases outbreak. Rainfall within regions in Nigeria is unreliable and duration of rainfall shortened. It is either too much causing flood or either too small causing drought. Cassava being a drought resistant crop is susceptible to flood. A heavy floody environment may negatively affect cassava production consequently, the roots become rotten. Daily temperature was perceived as hot or high when the sunshine is much thereby scorching crops like cassava.

Excessive temperature causes withering of cassava leaves due to excessive sunshine. Poor or degraded soil as a result of poor cultivation practices, erosion and flood affect cassava production through reducing of yields. Pests and diseases pose problem to farmers and prolonged drought increases the population of variegated grasshoppers which attack cassava plants and destroy them, thereby resulting to poor yield of cassava.

To achieve a climate smart cassava production, there is need to plant improved cassava varieties and adopt good agronomic practices. NRCRI is making efforts to ensure the development of climate-smart and farmer-friendly technologies on cassava and other root and tuber crops. Climate smart Agriculture will serve as a tool towards establishing a Nigeria - China Cassava collaborative effort for improvement of Cassava Value Chain, leveraging technological advancement and as a catalyst to enhance productivity in Nigeria

Different improved cassava varieties have been developed by NRCRI, Umudike, and should be planted by farmers. Organic and inorganic fertilizers are used to improve the fertility of the soil. Use of irrigation where necessary makes it attractive as a crop to promote under any climate change adaptation strategy. For small holder farmers cassava provides an excellent insurance against famine.

Cassava foods price in Nigeria is in the increase and the reason is not far-fetched. The issue of adverse weather condition has contributed to this, many agricultural crops are not performing due to poor soils, land degradation and slides, pests and diseases incidence. Presently, the cost of gari in Nigeria is high, being the most common cassava food in Nigeria. Something must be done urgently. Farmers need to adapt to the changing climate.

Research results showed that variability in the pattern of rain and insufficient rain had negative impact on cassava production. Understanding the biological and economic

impacts of rainfall on cassava will ultimately improve yield and reduce cost of production. In southeastern Nigeria along literature, research has shown that precipitation imposed a negative effect on cassava production over a long period of time and temperature influenced cassava productivity negatively. Observation has shown that much of the climate change issues in Nigeria were triggered more predominantly by man-made causes, such as poor drainage system, water disposal habits, poor farming systems, deforestation and so on. Advancing cassava production using climate smart system through implementing different strategies will deliver us from these problems. Farmers need to adopt improved agricultural and environmentally sensitive technologies for increased productivity in Nigeria.

Good news, NRCRI has just released two newest improved cassava varieties, namely, Renewed hope and Biggi. Kudos to the Executive Director and the entire staff of NRCRI, Umudike.

Beloved readers, we are happy to inform you that our news bulletin will get to your office door posts at least twice a year. Our media and publicity unit is working hard to make sure you are highlighted. The daily news of National Root Crops Research Institute, Umudike is accessible through social media network platforms, including facebook(nrcri umudike), twitter handle (@ nrcri umudike), U' tube and LinkedIn (NRCRIUmudike). You can also access NRCRI website,

www.nrcri.gov.ng for any valid information. For enquiry, call: 08163879811

Thank you for patronizing us in NRCRI



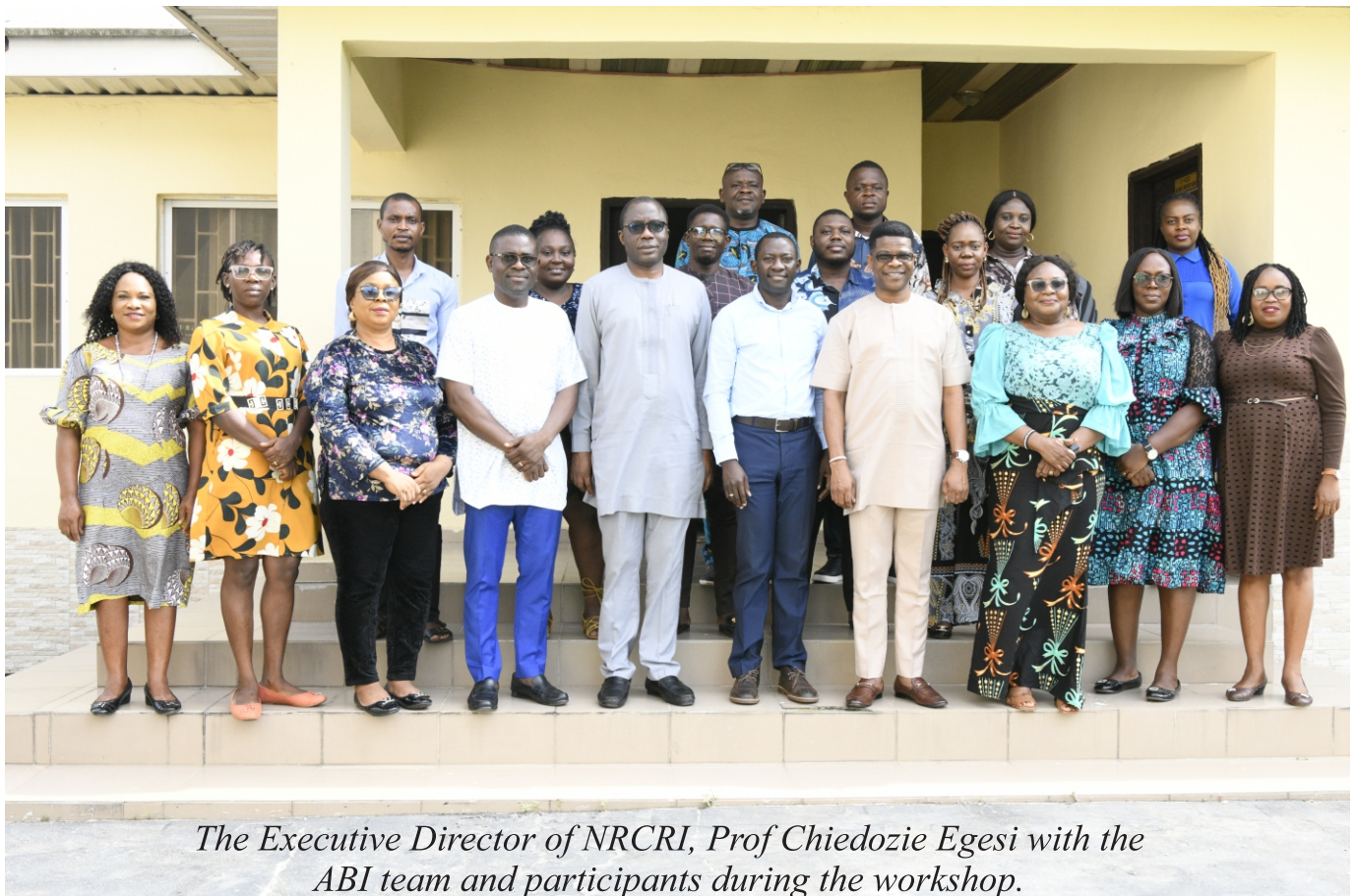
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NRCRI SCIENTISTS HOLD WORKSHOP TO IMPROVE RTC BREEDING

Ogwo Nkechinyere

Scientists in Root and Tuber Crops (RTC) research project held a five-day workshop at the National Root Crops Research Institute (NRCRI) Umudike Abia state on ways to improve and modernize root and tuber crops breeding to produce varieties that would be most suitable for food and industrial purposes.

In his remarks, the Chief Host and Executive Director of NRCRI, Professor Chiedozi Egesi said that the workshop with the theme "Product Design Team Workshop" was organized by the Accelerated Breeding Initiative (ABI) of the Consultative Group on International Agricultural Research (CGIAR) which has about 15 Centers across the world and collaborations with NRCRI.



The Executive Director of NRCRI, Prof Chiedozi Egesi with the ABI team and participants during the workshop.

He explained that the workshop is focused specifically on root and tuber crops such as cassava, yam, sweetpotato and potato. In his words, “We have come to the realization that breeding of Crops is not only to be done by Breeders but also by Agronomists, Farmers, Seed companies, Sociologists, Extension

workers. Others are Food Scientists, Agric-economists, Gender Specialists, Data managers and all stakeholders who are involved in breeding or the development of new varieties of crops. This is the new way forward as each of these stakeholders play a critical role to enable breeders get the right kind of variety out.



Dr Lydia Jiwuba making a presentation during the workshop

Prof Egesi further said that the workshop is holistic as it addressed all emergent breeding needs. He disclosed that his administration looks at the market segments as different groups of people looking for different designs of the product. Industries want variety of cassava with high quality flour, ethanol and high starch, farmers want varieties for gari and fufu and all these people are demanding for new varieties that meet these needs. According to him, the workshop also considers how to optimize breeding operations, make them seamless, more efficient, cost effective while meeting up with not only the farmers but also with other end users and consumers.

Expressing delight, Prof Egesi opined that by holding the workshop, Nigeria is now among the partner countries to hold the workshop. “Some East African countries like Ugandan Cassava and Potato breeding team have gone through this process and we are happy that we were not left behind as the Accelerated Breeding initiative of the CGIAR have prioritized us to make us come to speed in modernizing RTC breeding.

“The good thing is that in the end, we will be able to submit a proposal we can call a Bankable proposal to the CGIAR to fund and support breeding of crops like Sweetpotato and Potato and to further expand the work being done in yam and cassava to ensure that root and tuber crops

in Nigeria are improved to meet the food Security programme of the Renewed Hope Agenda of President Bola Ahmed Tinubu led administration.

Speaking during the workshop, the Root and Tuber Breeding Manager at the International Institute of Tropical Agriculture (IITA) Ibadan and ABI Transform Team Lead for West and Central Africa, Dr Vishnuvardhan Banda, described crop breeding as development and modernization of varieties of RTCs in line with the demands of the times.

In his own words, "our role is to help them develop and access improved crops varieties, improve their shelf life, prepare their key targets, define their product and decide what to do with their production including segmenting their production to the right audience at the right time with the right testing protocols and locations and to help the breeders and farmers get more operation funding"

The participants at the workshop comprised some Directors at NRCRI (Dr Tessy Madu, Dr

Joseph Onyeka, Dr Jude Obidiegwu, Dr Charles Amadi, Dr Damian Njoku), Programme Coordinators for cassava, yam, sweetpotato and potato, representatives of these root and tuber crops associations, Farmer Ikechukwu Emezue of Shelomoh Agro Allied Farm Olokoro, Mrs Adaku Njoku Obu representing Abia State Sweetpotato Farmers and other stake holders.

At the end of the workshop, Prof Chiedozi Egesi thanked the IITA team: Dr Vishnuvardhan Banda, Dr Ukoabasi Ekanem, Dr Olugboyega Pelemo, Dr Ismail Rabbi and Dr Agre Paterne for making out time from their busy schedule to train and support the institute's scientists. He urged all scientists to take the moonshot in their various career progression and described the week-long workshop as a huge capacity building experience that will leave lasting impact on Institute Scientists.

Highlight of the workshop included break out discussions and presentations on Product Design Team meetings, Breeding Program assessments, Sub-grant proposal development and breeding station assessment.

NRCRI COMMENCES TRAINING FOR NIGERIAN CASSAVA FARMERS

Ogwo Nkechinyere and Chidiebere Akubueze

The National Root Crops Research Institute Umudike in collaboration with the African Agricultural Technology Fund (AATF) and Nigerian Stored Products Research Institute has commenced the training program for 6000 cassava farmers and processors in south-west

Nigeria. The week-long intensive training was aimed at enhancing the skills of the 2024 batch of 1000 cassava farmers and processors and subsequently train 2000 in 2025 and 3000 in 2026.



Cross section of farmers during the workshop

In addition to the farmers, the program will include 1000 processors from Oyo and Ogun states with a focus on value addition for both men, women and youths. By equipping them with essential skills, the training seeks to improve their livelihood through better production methods and increased value creation.

Speaking during the training, the Director Tuber crops research, Dr Adeyemi Olojede said the institute is excited to be part of the training that

aims to improve cassava production in the country and more importantly, the value addition aspect that will provide farmers with alternative sources of income.

“Due to the significant impact the training will have in the lives of cassava farmers in south-west Nigeria, NRCRI deployed a team of experts to facilitate and ensure that the objectives are met and for the facility to contribute to the nation's food security efforts.” Said Dr Olojede



Dr Adeyemi Olojede training the farmers on Good Agronomic Practices

The AATF representative and program officer for agribusiness, Mr Kehinde Jimoh, emphasized that the initiative is part of AATF's broader commitment to ensuring the productivity of cassava farmers and processors.

He said “the training is targeted at empowering farmers and processors livelihood with best

agronomic practices and value addition strategies that will lead to significant improvements in their livelihood and cassava productivity. “this training is aimed at empowering farmers and processors on best agronomic practices as well as value addition so as to improve their livelihood.”

The training programme hosted by AATF and facilitated by experts from the Institute is funded by the German Federal Ministry for Economic Cooperation and Development (BMZ) and implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and its partners AATF, Agridrive Ltd. and Clayuca Corporation.



The training on best Agronomic Practices, Cassava Value addition and prudent financial management is conducted for the project “Mechanization of Cassava Production and Processing Project” as part of the Fund for the Promotion of Innovation in Agriculture (i4Ag).

IITA AND NRCRI HOLD TRICOT WORKSHOP

Ogwo Nkechinyere and Felicia Amadi

The National Root Crops Research Institute (NRCRI), Umudike in collaboration with the International Institute of Tropical Agriculture (IITA) and Sahel Consulting held a Triadic Comparison of Technologies (TRICOT) Inception workshop under the 1000Farms Catalytic grant RTB Breeding Study.



Dr Bela Teekan addressing participants during the TRICOT workshop

In her presentation, the Gender Focal Person in the institute, Dr. Tessy Madu gave an overview of TRICOT activities and achievements in NRCRI, Umudike which include trainings for lead farmers, use of android phones for data collection and speeding up of cassava variety releases. She also noted that the on-farm evaluations and partnership with farmers, processors, and consumers, enable improved cassava varieties to meet farmer preferences.



*Representative of the ED,
Dr Adeyemi Olojede flanked
by Dr Bela Teekan, Dr Tessy Madu,
Dr Joseph Onyeka and participants*

Dr Bela Teekan and Dr Bello Abolare of the International Institute of Tropical Agriculture (IITA) Ibadan made insightful presentations on “NRCRI 1000farms Catalytic fund proposal: scope and objectives” and the “steps of implementing tricot approach in the field from

gender inclusive participant selection to harvest” Mr Chinedu Agbara of the Sahel Consulting focused on “Triangulating Success: Harnessing Tricot Method for Streamlined Crop Variety Release

NRCRI/IITA PARTNER ON PRICE DATA INNOVATION WORKSHOP

Ogwo Nkechinyere and Chidinma Chukwuka

In a drive to digitally operate in line with global trend, the National Root Crops Research Institute (NRCRI), Umudike Abia state held a workshop on price data innovation for decision support in the food system. The one-day workshop was organized under the auspices of the newly created Digital Agriculture Unit (DAU), NRCRI, in collaboration with the International institute of Tropical Agriculture (IITA), Ibadan The Executive Director/ Chief Executive Officer of NRCRI, Professor Chiedozi Egesi said that what informed the creation of the new Unit was the need for provision of a holistic field level view for greater insight and better control of inputs

for good agricultural productivity that would help reduce cost, increase farmers profits and make positive impact on the environment. Professor Egesi expressed concern over Nigeria's 33% food inflation rate which continues to increase by one percent every month for the past four months describing this scenario as crucial for the country. The challenge is to undertake monitoring of agricultural produce trend especially our mandate crops of economic importance and proffer solution with proper prognosis to the causes of the increasing inflation.



Dr Julius Adewopo addressing participants during the price data workshop

He further said that the Institute is very motivated to provide solution for Nigeria and is happy to be a part of the market intelligence gathering efforts that is happening through this project which happens to be the first project for the new unit and that they are excited about the possibilities, opportunities and potential impacts it will have on agriculture.

In his presentation on the concept of Price Data Innovation, Relevance and Broader Vision and Elements of Task, Tool / Platform, Dr Adewopo said the meeting was part of the project to

advance agricultural digital innovations and decisions supporting agricultural systems.

He reiterated the broader vision which would include capturing price data of commodities in the whole of Nigeria and partnering with institutions such as National Agricultural Extension and Research Liaison Services (NAERLS) to achieve such vision. He also touched on elements of the tasks which began from the enumerators to the Open Data Kit (ODK) form, to commodities whose prices are to be collected.

"We are trying to align with farmers and groups in the food systems to make better decisions starting with prices of commodities as we understand that agricultural production will not be profitable if the prices are not right by engaging with NRCRI, we started to think about ideas on frequent price data collection so that decision makers can access the data and use them to make better decisions on when and who to give subsidy which are all important to encourage farmers increase in productivity and profitability". He added.



Group photo with the Executive Director, Prof Chiedozie Egesi

NRCRI ESTABLISHES REGENERATIVE AGROFORESTRY FARM

Ogwo Nkechinyere and Ifeyinwa David

The National Root Crops Research Institute (NRCRI) Umudike Abia state has announced her milestone on the establishment of regenerative agroforestry farm, a system that would regenerate the soil and sustain its fertility, describing the feat as the first ever by a research institute in Nigeria.



Hon. Sam Onuigbo poses in a group photo with the Executive Director of NRCRI, Prof Chiedozie Egesi and others at the Regenerative Agroforestry farm.

The Executive Director/Chief Executive Officer, Professor Chiedozie Egesi, made the announcement during the 2024 World Environment Day commemoration with the title “Land Restoration Desertification and Drought Resilience” in the Institute. He explained that the Regenerative Agroforestry Farm is the first farm in the country wherein indigenous tree crops that are both food and economic crops can be inter-cropped with root and tuber crops.

Professor Egesi said that the motivation behind the establishment was to find a way to make the land or soil to regenerate itself

and also make the environment sustainably healthy for agricultural production.

Speaking further, the Executive Director indicated that the Institute will soon create a Climate Change Desk, and urged the government, businesses, scientists, farmers, and individuals to play roles in promoting and adopting practices that protect and restore our environment stating that supporting carbon farming and regenerative agriculture is a powerful way to contribute to this mission objective.



Dr Joy Emerald making her presentation on “Agroforestry for carbon sequestration and food security”

He urged all to embrace the spirit of World Environment Day by committing to actions to restore and regenerate our natural world. "Together, we can create a sustainable future where nature thrives, and humanity flourishes. Let us make this World Environment Day a catalyst for meaningful change and a brighter, greener future for all". He added.

The keynote presenter, Hon Onuigbo who commended the Institute on the Regenerative agroforestry farm establishment, reiterated the call on the Ministries, Departments, and Agencies (MDAs) responsible for regulating educational curriculum in Nigeria to integrate Climate Change into the various disciplines and subjects across all educational levels. He encouraged every MDA to also create a Climate Change Desk Officer of a Directorate cadre with the responsibility to ensure that climate action is mainstreamed into the annual plans and budgeting of all MDAs in Nigeria.

The Head of Agronomy, OCP AFRICA, Dr Donald Madukwe in his presentation said that the single most efficient and cost-effective input that can increase food productivity of soil is fertilizer- be it organic or inorganic (mineral). He noted that fertilizer can equally reduce environmental degradation.

While the Head of Climate Adaptation

Agricultural Research Unit in the Institute, Dr. Joy Emerald who presented a paper on "Agroforestry for Carbon sequestration and Food Security, commended the OCP Fertilizer for collaborating with NRCRI on the celebration. She said that NRCRI is passionate about environmental integrity and is making palpable efforts to ensure the development of climate-smart, environmentally and farmer-friendly technologies. Another presentation on increasing environmental literacy: community-based solutions was done by Mr Chinonso Agbo.

In his goodwill message, Professor Chris Nwoko of the School of Environmental Management and Ecosystem Federal University of Technology Owerri said that young people around the world are demanding action and leading initiatives that drive real change. He opined that they must be supported, empowered and provided with the right tools and platforms they need to turn their ideas into action.

Highlight of the occasion was tree planting in the Institute, the feat which was performed by Honorable Samuel Onuigbo, the South East representative in the North East Development Commission Board, panel discussions, goodwill messages and a quiz competition by four secondary schools who correctly and timely answered all the questions posed to each.

ANNUAL PRAYER AND THANKSGIVING; ED URGES ALL TO BE FAITHFUL

Ogwo Nkechinyere and Chidinma Chukwuka

The Executive Director of National Root Crops Research Institute (NRCRI) Umudike, Prof Chiedozie Egesi has urged all staff of the institute to be faithful in carrying out their day to day work.



The ED, addressing staff during the prayer and thanksgiving

Prof Egesi stated this during the 22nd annual prayer and thanksgiving dedication held on the 19th of June ,2024 in the institute. He stated the theme for the thanksgiving as “faithfulness in service”. Referencing from the book of 1st Corinthians 4:1-2, he described steward as a manager, and one that has been given charge to take care of something. He

further emphasized that every staff has been given a charge to take care of God's estate, which is the institute. " You and I have been appointed today to take charge and manage his estate” he reiterated.

He prophesied that the lord will continue to do spectacular things in the institute and that it has just been God alone on the throne, blessing the institute and no man can take the glory on what God is doing. The Lord has done his work and that no one would add to it. He noted that God can turn things around in ones favour and encouraged all staff to remain faithful in their duties and desist from eye service as the Lord is the rewarder of faithfulness.

The ED encouraged all staff to acquire the requisite skills in readiness of the increase that is going to happen back to back in the Institute and prepare for the stretching that will happen to enable everyone to queue in and be a partaker of the increase



Prayer session for the ED and Directors

The guest Minister of the day, Dr Steve Ogan urged all staff to consider their positions as an avenue to serve God in the institute avoiding abuse of office.

In an address presented by the president, Christian staff fellowship, Dr Samuel Onwuka thanked the ED for his unflinching support to the Institute's staff fellowship and highlighted some of his achievements which included varietal releases, capacity building workshops, construction of offices and laboratory, provision of utility vehicles and for his general interest in staff welfare. Dr Onwuka noted that 2024 is a special year in the history of NRCRI as it is the

beginning of a new century and that the institute has been launched into the realm of greatness. He said that faithfulness in service brings honour that transcends one's present level. He stated that keeping God commandments and covenant will surely sustain the greatness of NRCRI Umudike among the league of research institutes in Nigeria and also make her a force to be reckoned with in the agricultural society globally. He concluded by acknowledging God's help in the Institute while encouraging all staff to be steadfast, focused and motivated as they carry out their duties.

NRCRI/TCGRI - CATAS collaborate to catalyze Agricultural productivity in Nigeria

Nkechinyere Ogwo and Uduak Adeyemi

Leveraging technological advancements and fostering collaborative research between China and Nigeria will significantly catalyze solutions to enhance agricultural productivity and sustainability in Nigeria. This assertion was made by the Executive Director / Chief Executive Officer of the National Root Crops Research Institute Umudike, Prof Chiedozi Egesi during the 3-day strategic meeting held at the institute between 1st - 3rd July, 2024.



The ED hosted the visitors, Prof Ou Wen and Dr Gao Fei in his office

In his welcome remark, the Chief Host, Professor Egesi expressed his excitement to have the visiting scientists, Prof Ou Wen and Dr Gao Fei. He emphasized that there has been a Memorandum of understanding (MOU) between the 2 research institutes since 2008 and hoped that with the meeting, a new chapter would be turned as it will give structure towards establishing a Nigeria - China Cassava Demonstration base for the improvement of Cassava Value Chain in Nigeria under a South-south Cooperation between Nigeria and China. According to him, this collaboration which has the support of the Food and Agriculture organization (FAO) of the United Nations Organizations (UNO) would change the narrative by presenting many opportunities for Nigeria.

He further said that the meeting was very important as grasping the partnership will bolster the technological advancements for Nigerians. "It will help to jump-start our agricultural production to look like what is obtainable in other nations that have attained food security status". Lessons should be learnt from this collaboration with regards to agricultural mechanization: for farmers to move away from manual production of cassava, open up the markets for Nigerian farmers for export and a situation where scientists would exchange visits with the Chinese.

In his own word, "the mechanization of production of cassava is the major area I am keen on as this would reduce drudgery and breaking of the farmers backs. It would give room for a seamless form of cassava production"

Prof. Egesi reiterated that Nigeria has a lot to learn from the Chinese collaboration

especially in terms of root and tuber crops. China is a net exporter of food to the world regardless of their population as against 40 years ago, when China was food insecure.

The representatives from the Tropical Crops Genetic Resources Institute of the China Academy of Tropical Agricultural Sciences (TCGRI-CATAS China) in their presentation, provided an overview of cassava genetic resources and its utilization for breeding in CATAS. Prof Ou Wen said that the partnership will help in increasing cassava value chain from manual to mechanized agriculture.

According to them, China has integrated and innovated right by simplifying Cassava technologies which they shared to some Cassava producing countries in Africa and Asia which is enhancing the competitiveness of the local Cassava industry.

CATAS has since 1982 established a strong working relationship with International Center for Tropical Agriculture and achieved fruitful results in Cassava resource sharing technology transfer and personnel training. The meeting featured various presentations by top NRCRI Scientists/Researchers and field inspection of the sites for China Hainan-Nigeria Umudike Cassava Joint Laboratory and African Cassava Yield Doubling Programme Umudike Demonstration Base, Nigeria.

The Executive Director, consequently expressed optimism that having seen what the Chinese did in some African countries that caused high yields to farmers, that Nigeria can therefore be on cutting-edge of the tools that are needed to work.

BREEDERS FROM ACROSS AFRICA BRAINSTORM ON RTCS OPERATIONS

Ogwo Nkechinyere and Felix Okorie

Plant Breeders, Biostatisticians and Breeding Data Managers from across Africa namely, DR Congo, Kenya, Niger and Nigeria recently gathered at the National Root Crops Research Institute (NRCRI), Umudike to brainstorm on Root and Tuber Crops (RTCs) Breeding Operations Costing using the Queensland University Breeding Costing Tool.

The workshop was a collaboration between the Accelerated Breeding Initiative (ABI) of the Consulting Group for International Agricultural Research (CGIAR)

and the National Root Crops Research Institute which has Professor Chiedozie Egesi as the Executive Director and Chief Executive Officer (ED/CEO).

While flagging off the Workshop, the Chief Host, Professor Egesi expressed elation to welcome the participants from across Africa for the workshop.

He said that Plant Breeders from DR Congo, Kenya, Niger, Nigeria are gathered at NRCRI to develop breeding metrics/schemes and financial models to implement them thereafter,



The ED, Prof Chiedozie Egesi flanked Dr Vishnuvardhan Reddy Banda and other ABI workshop participants

and that the Institute sought to use cutting edge technologies to increase agricultural productivity as a means to achieving Nigeria's Renewed Hope Agenda for Food Security and pivot to an agricultural-driven economy which is a strong demonstration of an effective Consulting Group for International Agricultural Research - National Agricultural Research (CGIAR-NARS) partnership in Africa.

Dr Vishnuvardhan Reddy Banda – ABI-Transform

lead said the lack of awareness about proper costing methods can hinder accurate tracking, lead to resource misallocation, and ultimately slow down genetics gains.

To address this, the Accelerated Breeding Initiative collaborated with NRCRI to host the workshop with focus on cost management for root, tuber, and banana breeding programs as he noted that effective cost management in breeding programs is directly linked to achieving targeted genetic gains.



Dr Samuel Mutiga of CIMMYT with trainees

Participants were drawn from the International Institute of Tropical Agriculture (IITA) Ibadan, Ahmadu Bello University, Zaria, National Cereals Research Institute Badegi, International Maize and Wheat Improvement Center (CIMMYT) Nairobi Kenya, Niger and DR Congo with sponsorship from the Accelerated Breeders Initiative (ABI) of the Consulting Group for International Agricultural Research (CGIAR).

The Workshop which featured presentations on cassava, yam, sweet potato, taro, irish potato,

maize, soybean and cowpea had Olivia Odiyo and Samuel Mutiga of International Maize and Wheat Improvement Centre (CIMMYT) Nairobi Kenya, and Dr Joseph Onyeka of NRCRI, among others.

Participants acquired valuable skills in accurate management of program costs, crafting well-informed structured funding proposals, providing precise budgeting and resource allocation advice to scientists and mastering the University of Queensland costing tool for enhanced efficiency.



Cross section of participants

In a vote of thanks, the ED appreciated all the participated Institutions for providing support for the workshop. He encouraged all participants to utilize the knowledge garnered from the workshop to excel and project their images as the right National program to be used as an example for the CGIAR-NARS network.

NPBA HONOURS PROFESSOR CHIEDOZIE EGESI WITH PIONEER FELLOWSHIP AWARD.

Ogwo Nkechinyere



Pioneer Fellowship Award being conferred on the ED, Prof Chiedozie Egesi during the NPBA conference

The Nigerian Plant Breeders Association (NPBA) recently awarded the Executive Director of the National Root Crops Research Institute Umudike, Prof. Chiedozie Egesi with the prestigious Pioneer Fellowship Award. The event took place at the Nigerian Airforce (NAF) Conference Centre, Kado, Abuja with the theme "Revolutionizing Agriculture through the Integration of Plant Breeding Strategies and Modern Biotechnology." This recognition celebrates Professor Egesi's exceptional contributions to plant breeding and his pivotal role in advancing agricultural research

It is worthy to note that Professor Egesi has been a leading force in the field of root and tuber crop research. He is one of the leaders of the CGIAR's breeding project on Roots, Tubers and Bananas Breeding - CGIAR Investments and has contributed immensely to the overarching goal of the NPBA in promoting and fostering the growth of plant breeding in Nigeria and Globally. With a distinguished academic background, including a Ph.D. from the University of Ibadan, and extensive experience as a global project Director for the NextGen Cassava Breeding project, Professor Egesi has made significant strides in modernizing cassava breeding and enhancing crop resilience.

His innovative work has led to the development and release of several improved varieties of cassava and yam, addressing critical challenges such as stress tolerance and nutritional quality. Under his leadership, NRCRI has become a

center of excellence in biosciences, and his contributions have garnered recognition both nationally and internationally.

Professor Egesi's commitment extends beyond research. He has been instrumental in mentoring young plant breeders and advocating for plant breeders' rights. His efforts in supporting the development of the Nigeria Plant Breeders Rights Act and enhancing the professionalization of plant breeding are noteworthy achievements.

In addition to his role at NRCRI, Professor Egesi has served as a visiting professor and scientist at various prestigious institutions, including Cornell University and the International Center for Tropical Agriculture (CIAT). His numerous accolades include fellowship awards from the Biotechnology Society of Nigeria (BSN) and the Agricultural Society of Nigeria (ASN), as well as the Nigeria Agricultural Achiever Award.

ASURI PASSES VOTE OF CONFIDENCE ON THE ED



Ogwo Nkechinyere

The leadership and entire membership of the Academic Staff Union of Research Institutions (ASURI) Umudike Branch has passed a "Vote of Confidence" on the Executive Director/CEO of the National Root Crops Research Institute Umudike, Prof Chiedozie Egesi.



The ED, Prof Chiedozie Egesi addressing the staff of NRCRI Umudike

In a letter dated 6th of September, 2024, the union stated that this was in recognition of his commitment to professional development which has been evident through his sponsorship of scientists to various research meetings, conferences and workshops, both nationally and internationally.

They praised the ED for the successful execution of the recent staff promotion exercise despite numerous challenges that tried to impede it, noting that it is a testament of his resilience and dedication to the advancement of the institute.

In recognition of the above commendable efforts, the congress unanimously PASSED A VOTE OF CONFIDENCE in his leadership as the Executive Director/ CEO of NRCRI Umudike.

ED PLAYS HOST TO STATE DIRECTOR OF SECURITY

Ogwo Nkechinyere

The Executive Director of NRCRI Umudike, Prof Chiedozie Egesi played host to the State Director of Security, Department of State Services, Abia State Command, Mrs Ojochenemi N. Muhammed-Soso, fsi, NPOM.

In his welcome remarks, the ED thanked the State Director for making out time from her busy schedule to pay an official visit to the Institute, stating that NRCRI will continue to need their support as it works to improve food security in Nigeria.



Mrs Ojochenemi N. Muhammed-Soso on a guided tour to Umudike seeds screenhouse with the ED, Prof Chiedozie Egesi

In her response, the Abia State, DSS boss appreciated the ED for the warm reception her team received and for the guided tour to NRCRI research facilities. She expressed awe at the beautiful and peaceful expansive atmosphere of the institute and the awesome work the institute is doing to improve agriculture in Nigeria. She assured the ED of their continued support.



Abia State director of security, Mrs Ojochenemi Muhammeed-Soso and team warmly welcomed by the ED and some management staff in his office

NRCRI AND FUTO HOLD EXECUTIVE TRACK A & B WORKSHOP

Ogwo Nkechinyere and Uduak Adeyemi

The National Root Crops Research Institute Umudike in collaboration with the Centre of Excellence in Sustainable Procurement, Environmental and Social Standards (CE-sPESS) of the Federal University of Technology, Owerri (FUTO) held a 5 day Executive Track A & B Workshop for administrators, scientists, engineers, social scientists, and allied professionals.

In her remark, the Director, Centre of Excellence in Sustainable Procurement, Environmental and Social Standards (CE-sPESS), Prof Gloria Chukwudebe said the programme is part of the umbrella programme of the WorldBank and National University Commission(NUC) called Sustainable Procurement, Environmental and Social Standards Enhancement project designed to bridge observed skills gap.



Cross section of participants during the Executive Track A workshop

During their courtesy visit to the Executive Director of NRCRI Umudike, Prof Chiedozie Egesi received the center Director, Prof Gloria Chukwudebe and her team in his

office. He used the opportunity of the visit to express his commitment towards fostering a formidable partnership between the two institutions on Research and capacity building.



The Center Director, Prof Gloria Chukwudebe with Dr Onyeka, Dr Tessy Madu and Dr Moses Okwusi

- Highlights of the workshop included pre and post quiz
- goodwill messages from host/partner institutions.
 - filling of WorldBank Evaluation feedback forms
 - lectures (Modules 1-10)
 - essay writing and
 - issuing of Certificates to participants

GBPP TEAM MEETS AT KURU, JOS

Ogwo Nkechinyere

The Global Biotechnology Potato Partnership (GBPP) project team recently met at the National Institute for Policy and Strategic Studies, Kuru, Plateau state. The meeting brought together various stakeholders involved with the project in Nigeria, including National Root Crops Research Institute (NRCRI), African Agricultural Technology Foundation (AATF) and National Biosafety Management Agency (NBMA) to update on the plan for the year 3 activities of the project in Nigeria.



GBPP Project lead, Dr Charles Amadi in a group photo with stakeholders

The Project lead, Dr. Charles Amadi made presentations for the 2nd year report and also talked about the workplan for year 3. He noted that the late blight resistant potatoes were developed with the insertion of three resistant genes found naturally in wild potato species and the resistant genes they possess were inserted into popular cultivated potato varieties through genetic engineering techniques. The genes that are active in Biotechnology potatoes are genes that are naturally occurring and give plants an early warning against pathogens. He went on to say that "For us in Nigeria, our aim is to get Biotech Potatoes that are resistant to diseases and make them available to Nigerian farmers following due process". The biotech potatoes require less

spraying as they are resistant to diseases making it very safe for consumption. Other presenters during the meeting were Mr Khaya Shuaibu (NRCRI), Mrs Blessing Aligwekwe (NBMA) and Mr Alex Abutu (AATF).

The GBPP team used opportunity of the visit to establish 3 confined field trials of late blight resistant potato from one to three locations. Trials in Mambilla and Kuru, along with an existing trial site in Boko were all planted at the end of May and have already been harvested in early September. These three locations are expected to provide important data on the performance of several late blight resistant potato varieties developed using genetic engineering.

The Project partners being the International Potato Center (CIP) and Michigan State University (MSU) have developed the late blight resistant potatoes for use by smallholder farmers. The project is led in Nigeria by Dr Charles Amadi, (NRCRI) and CIP as part of the Feed the Future Global Biotech Potato Partnership with support from the African Agricultural Technology Foundation (AATF).



NRCRI/SAHEL INCEPTION MEETING. **Ogwo Nkechinyere**

The National Root Crops Research institute Umudike, in collaboration with Sahel Consulting and Nutrition LTD held a day Inception Meeting/Strategic Plan Development under the collaboration of Seed Programme.



Prof Chiedozie Egesi flanked by Sahel Team and NRCRI team.

In his remark, the Executive Director of National Root Crops Research Institute Umudike, Prof Chiedozi Egesi appreciated the visiting team from Sahel consulting for making out time from their busy schedule to visit. He emphasized the importance of the institute adapting to technological and digital advancements, addressing the need for human capacity development and improving of institute's funding. He also expressed the institute's commitment to collaborating with Sahel consulting on this strategic plan.

Mr Chinedu Agbara of the Sahel underscored the critical role of a comprehensive strategic plan in helping the Institute address Nigerians pressing economic challenges. He emphasized the need for the organizations to collaborate and ensure the vision of the strategic plan is achieved. He described the strategic plan as a roadmap applied for long term goals, priorities and strategies on activities aligned for action in the Institute. The roadmap starts by developing a mission on where the institute needs to go as a group to achieve her objectives.



Group discussion during the training

The meeting was facilitated by the Director of Planning, Monitoring and Evaluation in the institute, Dr Tessy Madu to initiate the Development of Strategic Plan for NRCRI.

SAHEL CONSULTING CONDUCTS A 2-DAY STRATEGIC PLAN DEVELOPMENT MEETING FOR NRCRI

Ogwo Nkechinyere, Akubueze Chidiebere and Lupel Ijoho Keghtor

The National Root Crops Research Institute, Umudike recently held a 2-day Strategic Plan Development meeting which was organized in partnership with Sahel consulting and food nutrition. The workshop, which was

convened by Dr Tessa Madu, Director Planning, Monitoring and Evaluation, was attended by strategically selected participants to represent the various departments, programmes and units in the institute.



Dr Charles Amadi addressing participants on behalf of the Executive Director



Facilitators flanked by the participants in a group photo

threats and solutions for the institute. he went further to discuss the Key drivers and trends that will shape the future of NRCRI and listed them as follows: operational efficiency, funding/partnerships, human resources and demographic

The workshop had break-out groups to analyse the institute's Current State and Opportunities, its major strengths and weaknesses, opportunities and threats. The groups also identified plausible futures and implications the institute may likely experience by 2029 using different scenarios like,

will it be operationally effective? Will it be adequately funded with strong partnerships? Will it be operationally ineffective and lastly will it be inadequately funded with no partnerships? The groups discussed the key features involved, the implications for stakeholders and proffered solutions to produce measurable outcomes.

As the end of the workshop, Dr Amadi thanked the director PME, Dr Tessy Madu for organizing a seamless workshop. He also thanked Sahel consulting emphasizing that the workshop was very crucial to the future of the institute, to project and take the institute to greater height.

NRCRI PARTICIPATES IN THE AFRICAN CASSAVA YIELD DOUBLING PROGRAM

Ogwo, Nkechinyere

The Executive Director/CEO of the National Root Crops Research Institute (NRCRI) Umudike, Prof Chiedozie Egesi participated in the all-important Inauguration of the African

Cassava Yield Doubling Program targeted at increasing the productivity of farmers for efficiency and livelihood improvement as a food security strategy.



The ED, Prof Chiedozie Egesi with his team at the inauguration of African Cassava Yield Doubling Program

Speaking during the inauguration, the ED noted that “NRCRI is happy to be partners in the initiative having developed and signed a memorandum of understanding (MoU) to that effect with the Tropical Crop Genetic Resources Research Institute of the Chinese Academy of Tropical Agricultural Sciences (TCGRI-CATAS).



NRCRI Team in a group photo with the delegation from the Hainan Provincial Government of China

We have initiated the partnership with a focus on the strategy to develop and disseminate high yielding, disease resistant cassava varieties to farmers in Nigeria" said the ED.
The inauguration which took place at the

Green Agriculture West Africa Limited, Ushafa Junction, Bwari District Abuja had Dr Mark Tokula, Dr Justin Ewuziem and a high-level delegation from the Hainan Provincial Government of China in attendance.

SEMINAR: A MUST FOR SCIENTISTS

Ekechukwu, Rosemary and Eric Ene

Recently, scientists in National Root Crops Research Institute, Umudike have been reminded that attendance to Institute's seminar series is compulsory. This remark

was made by the Director, Cassava programme and the chairman of the occasion Dr Damian Njoku as he was declaring the seminar open at the Institute Library complex.



April Seminar presenters, Dr Chizaram Silver Onwusiribe and Dr Simon Peter Abah

The Seminar presenters were Dr Chizaram Silver Onwusiribe and Dr Simon Peter Abah. Dr Chizaram Onwusiribe presented on the topic "Analysis of informal Credit Repayment Performance of Rural Woman Cassava Farmers in Abia State, Nigeria". Her Citation was read by Dr Ann Kanu, While Dr Simon Abah made presentation

The Seminar presenters were Dr Chizaram Silver Onwusiribe and Dr Simon Peter Abah. Dr Chizaram Onwusiribe presented on the topic "Analysis of informal Credit Repayment Performance of Rural Woman Cassava Farmers in Abia State, Nigeria". Her Citation was read by Dr Ann Kanu, While Dr Simon Abah made presentation on the Topic "Genomic Assisted Cassava

Breeding for Early Storage Root Formation and Bulking under Invasive and Non-Invasive Phenotyping System”. Dr Lydia Juwuba did the Citation. The rapporteur of the day was Dr Ada Amaefula.

In his closing remarks, the Chairman Dr Damain Njoku encouraged both the Scientists and Agricultural Superintendents to attend seminars for enhanced knowledge and expressed displeasure for the low attendance witnessed

The Director, Planning Monitoring and Evaluation who was represented by Dr (Mrs) Chioma Ekwe, Assistant Director of the programme expressed gratitude to everybody present for making the occasion a successful one.

Highlight of the programme includes question and answer section by the Research Officers.

ORGANIZATION FOR WOMEN IN SCIENCE (OWSD) HOLDS HER QUARTERLY MEETING

Chidimma Chukwaka

Organization for women in Science for the Developing World (OWSD) Nigeria Chapter has promised to give Scholarship award/mentoring to some group of people /girls in their various discipline. This was made known during their meeting held at library complex hall at NRCRI, Umudike on 7th May, 2024.



Proudly Women in Science, as they pose for a group photograph

In her opening remarks, the Coordinator of OWSD in the person of Prof. Mrs Mabel Ifeoma Owuuka warmly welcomed everyone in attendance and expressed gratitude to her fellow OWSD in NRCRI and also the Chief Executive Officer of NRCRI, Prof Chiedozie Egesi for granting them a conducive venue to hold their meeting.

Earlier in her speech, the Coordinator of OWSD who said that three Secondary Schools have been selected by the OWSD to give scholarship award to their 10 best students who perform well in WAEC and JAMB and must choose MOUAU as the school of their choice. The Schools include Amuzukwu Girls Secondary, Ibeku High School and Methodist High School. She added that these students must write their Examination in the said school, that any result written at any special centre will not be approved.

In her presentation, the Director Peri Urban Agricultural System in the Institute Dr Mrs Helen Anyaegbunam who spoke on the topic

“Women Scientist Achieving the Utmost” mentioned some notable women who are trail blazers and who did well in their chosen professions. She pointed out some challenges that brings obstacles to women in science from achieving what they want to achieve, these obstacles which she said can be overcome by building Resilience, prioritizing self-care, promoting work life integration, defining odd and making remarkable effort.

Finally the National Chairperson in the person of Prof Olayinka Nwachukwu who gave her vote of thanks to those in attendance and urge the management to support the OWSD in their various fields to enable them do their work effectively.

The highlight of the meeting were issuance of certificates to some of the mentee who have completed their training and group photograph was taken by the OWSD.

IRAMN INDUCTS NEW MEMBERS

Stella Anyaeché and Chidinma Chukwuka.

About 60 (Sixty) Administrative Staff of National Root Crops Research Institute, Umudike were on the 29th of May, 2024 inducted into the Registered Administrative Management of Nigeria (IRAMN). This was done at the end of a two-day training on Professionalization of Human Resources Management Practice for Administrative Officer Cadre in the Nigerian Public Service at the Institute Library Complex.

Speaking in a lecture “Conceptual Issues in

Public Personnel Management”, Dr Amaefula Eugene Amaefula a Registered member of Administrative Management of Nigeria Kaduna, noted that it is pertinent to give competent people their rightful position. He explained that number of factors tend to inhibit effective recruitment. They are people not recruited in position they are qualified for, nepotism, corruption, undue emphasis in paper qualification, politicization, federal

character, principle and quota system as well as patronage of public official for individuals. Dr Ahamefula speaking on “The Role of Effective Leadership with good Human Relations in Organization Management” said that the success and failure of any organization are attributed to the leadership style of the system. According to him, where leadership is incompetent, there will be a bankrupt of ideas, goal setting will become a luxury or at worst the articulation of the epileptic fits of the leader, but that good leadership energizes people to contribute their best in cooperation with others. He noted that money is an energizer of character to a leadership and that a good leadership should ensure the job satisfaction of the members of the organization. He

urged the inducted members to improve themselves in their work, and that being a professional member, add value to the institute.

Dr Oborogbe Victor in his lecture titled “Understanding Human Capital Measurement as A Contemporary Human Resource Management Concept for Institutional Effectiveness” noted that productivity is important in development in any sector. He averred that managers should be able to measure capital, noting that competent ability in organization is internal capital.



The highlight of the training were presentation of Membership Certificate to the newly inducted members and group photograph taken.



IRAMN inducted members displayed their certificates

GBPP PARTNERS WITH NRCRI UMUDIKE

Chidimma Chukwuka and Stella Anyaeche

The Executive Director of NRCRI Umudike Prof. Chiedozie Egesi ably represented by the Director Root Crops Department, Dr Adeyemi Olojede has affirmed that the Institute has the best Biotechnology Laboratories in Nigeria. He disclosed this during the courtesy visit by Dr Eric Magembe of the Global Molecular and Technical Research lead of Global Biotechnology Potato Partnership, (GBPP) and that the institute also has manpower that can actually deliver on a project goal.



Breaking of kolanut by the GBPP project lead, Dr Charles Amadi

Earlier in his opening remarks, the Director of Tuber Crops and Project, Dr Charles Amadi said that the Global Biotechnology Potato Partnership (GBPP) is a partnership run by a consortium. The essence of the consortium is to deliver disease resistant potato to farmers and the product is late blight resistant potato. He went further to state that the potato will go to transgenic laboratory for proper transformation. He also noted that the essence of the partnership is to develop the institute ability in the research progress.



NRCRI staff and GBPP partners

In his address, Dr Eric said that the partnership, the GBPP with NRCRI has been well received and many confirmable trials will be done to show that the technologies are working, so that it can reach the farmers soon. He reiterated that he has come for capacity building in both human and institutions.

The Director of Biotechnology and Product Development Dr Onyeka welcomed Dr Eric to the Institute and urged him to build their Nigeria functional laboratory. While the Assistant Director and Coordinator

of Biotechnology Dr (Mrs) Ihuoma Okwuonu said that the meeting with Dr Eric Magembe will open a lot of other doors for co operations.

GENETICALLY MODIFIED POTATO FOR HEALTH, INCOME AND FOOD SECURITY

Ngozi Iheadigwu and Chinwe Odor

Genetically Modified Organism (GMO) Potato is safe for human consumption and enhances farmer's income and food security in a nation. The Director, Tuber Crops Research Department of the National Root Crops Research Institute (NRCRI), Global Biotechnology Potato Partnership (GBPP) in Nigeria, Dr Charles Amadi made bold this assertion in a paper presented recently during a roundtable meeting with stakeholders, at the National Institute for Policy and Strategic studies Jos.

He explained that the aim of the meeting was to bring stakeholders up to speed on the progress of Feed the Future Global Biotechnology potato Partnership undertaken in Nigeria by the National Root Crops Research Institute, Umudike. It was also slated to sensitized farmers and media personnel on the benefit of Genetically Modified Potato for quick adoption when released. The project aims to deploy biotechnology potatoes resistant to late blight to farmers after due process of evaluation.

In his goodwill message, Dr Amadi said that the venture will offer farmers new options for crop varieties and assured that the

institute will do all the necessary regulatory trials needed for the safety of GMO potato varieties and will multiply the crop to enable farmers have unrestricted access to it, believing that there will be high acceptability by farmers.

In her goodwill message, an Assistant Director with the Federal Ministry of Agriculture and Food Security, Mrs. Patricia Aghotor noted that NRCRI is playing a crucial role in pursuit of establishing a sustainable and effective seed system protocol for the potato industry. She reiterated the preparedness of her Ministry to welcome innovative projects that could rapidly help the industry into becoming commercially viable.

The Director General /Chief Executive Officer of National Biosafety Management Agency represented by Mr Abisabo Adamu, in her own goodwill message commended the Institute for their level of compliance with Biosafety regulations and assured the public that they are following up in every process concerning this crop.

Among other institutions that also flew in their messages were plateau State Ministry of Agriculture and State Ministry of Health.

Participants had ample time to interact with the speakers to alley all concerns regarding biotech potatoes in particular and GMO's in general.

Highlights of the occasion were group photographs and Press Conference.

NRCRI STAFF SCHOOL CELEBRATES MAIDEN CULTURAL DAY

Ifeyinwa David N.

The NRCRI Staff Primary School holds her maiden cultural day celebration this year 2024 at the school premises. It was indeed a colorful day. In his speech, the Executive Director, NRCRI, Umudike, Prof. Chiedozi Egesi ably represented by the Director of Administration, Mrs Maryrose O. Mbanaso applauded the organizers of the event and encouraged parents to teach their wards Igbo language which is their mother tongue.

In his opening remarks, the chairman of the occasion Dr Godwin O. Chukwu lauded the celebration of a cultural day and commended parents for neat and cultural dressing of their wards.

The Parents Teachers Association (PTA) Chairman, Mr Festus Okon emphasized the cultural integration between the pupils and teachers. He urged the PTA Executives to create an enabling environment and partner with the school management to make sure the school moves to a greater height. He implored the management to help in the renovation of the school classrooms, as well fulfill her promise of upgrading the school to a secondary



NRCRI Staff school pupils pose for a photo during the cultural day

school level.

The School Administrator, Dr (Mrs) Chinwe Ezeaputa thanked the Almighty God for a favorable weather and appreciated parents for their support. She pleaded with parents to endeavor to buy text books and pay their wards fees. In her vote of thanks, she lauded the management and parents to gracing the occasion and prayed God to lead all to their various destinations

In his closing remarks, the Chairman of the occasion thanked all for supporting the school and made a cash

donation. He said the next cultural day celebration will be lauder than this, he also thanked and appreciated the teachers for organizing the event.

Highlight of the occasion was cultural presentation by the three tribes (3) in Nigeria notably Igbo, Hausa and Yoruba.

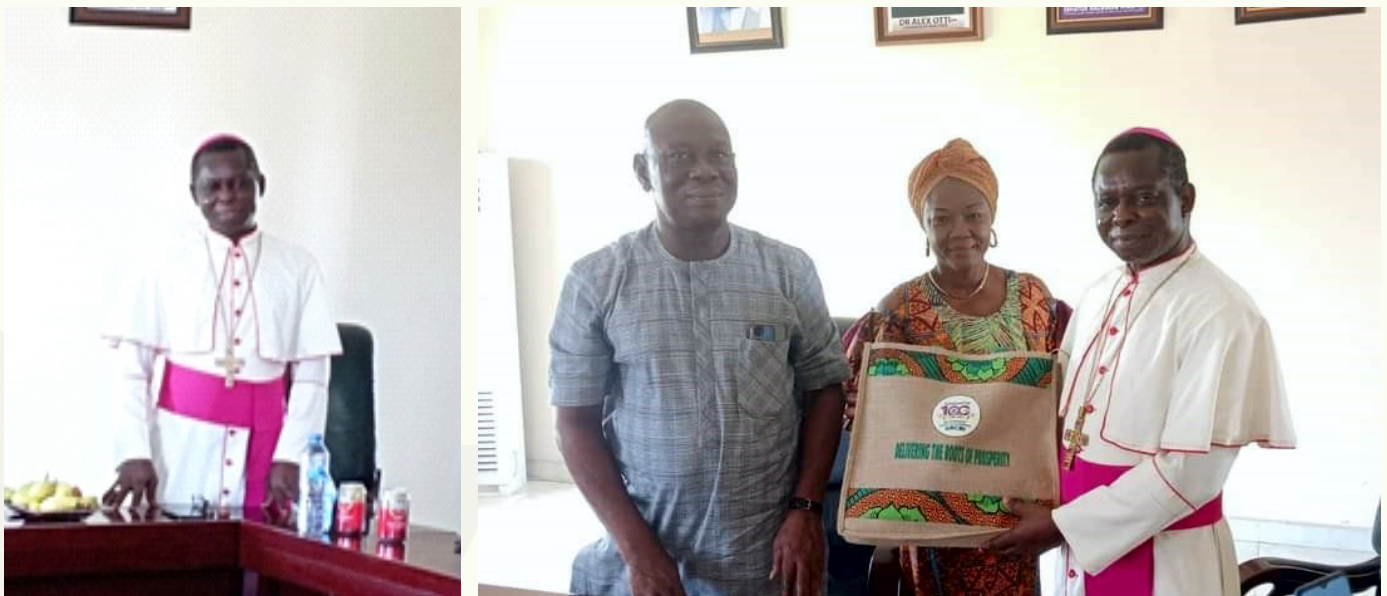
HIS LORDSHIP, DR MICHAEL UKPONG PAYS COURTESY VISIT TO NRCRI

Joy Ijebuonwu

The Executive Director of National Root Crops Research Institute, Umudike, Prof. Chiedozi Egesi ably represented by Dr Lawrence Ikpo Chukwu was accompanied by other management staff to welcome his Lordship, Dr Michael Ukpong the Catholic Bishop of Umuhia Diocese during a courtesy call as part of his pastoral visit to Christ the King Chaplaincy,(CKC) Umudike.

In his speech, the Executive Director welcomed his lordship for visiting NRCRI Umudike even in his tight schedule and short hour, he expressed his readiness to work with him in one faith to achieve his set goal, keeping fairness and equity in mind.

His Lordship who said his visit was part of his pastoral work to the Chaplaincy, Umudike, because of its peculiarity, emphasized that there are two major types of religion notably Christianity and Islamism. He noted that chaplaincy is established in Federal Ministries, barracks and wherever Federal Ministry of Agriculture is situated.



Bishop Michael Ukpong with some Management staff of NRCRI during the visit

The Bishop also said that the Federal institutions have the responsibility to take care of the religion that is situated under them, because it will provide their workers a conducive working environment. He maintained that the institute has contributions to make towards the catholic building already started, to provide the workers a worshipping place.

He urges everyone to be diligent in whatever thing he does in other to have

good report hereafter. He urged the institute to move the chaplaincy forward, bearing in mind that the progress of the chaplaincy is in their hands. He finally admonished the Executive Director of the institute to look into the affairs of the chaplaincy. highlight of the occasion was a souvenir presentation to his lordship by the Director of Reform coordinator and service improvement, Mrs Stella Igbokwe.

NRCRI HOLDS HER 2024 ANNUAL REVIEW AND PLANNING WORKSHOP

Ifeyinwa David and Priscillia Odor c.

The National Root Crops Research Institute (NRCRI), Umudike held her 2024 Annual Review and planning workshop “Advancing Sustainable Root and Tuber Crops-based Farming Systems in Nigeria: A Pathway to resilient Agrifood Systems” between 13th to 14th March, 2024.



Group photo after the opening ceremony

This epochal event drew people from different sectors of the economy involving policy makers, scientists, academia, Royal Highnesses of Host Communities and Private sectors. The workshop was officially opened by the Governor of Abia State, Dr. Alex Otti, represented by Dr. Cliff Agbaeze, special adviser to the governor on agriculture. He was accompanied by the then Hon. Commissioner for Agriculture, Prof. Monica Ironkwe. The Governor noted that in Nigeria, particularly in our own clime, our staple diet is root and tuber crops based commending the theme of the workshop as it recognizes and immediately seeks to fill the gaps in the dietary and nutritional situation and challenges at this time of national food emergency.

Prof. Chiedozie Egesi, the Executive Director of NRCRI, Umudike in his welcome address expressed gratitude to all participants. He opined that the workshop provided a means for the Institute to work with her collaborators, who have made enormous progress towards realizing national food security and has also enhanced food quality and sufficiency through research and extension activities on root and tuber crops thereby addressing issues faced by farmers and other end users regarding these technologies. Speaking also at the occasion, the Executive Secretary (ES) Agricultural research Council of Nigeria, Prof. Garba H. Sharubutu noted the chains of achievements of Prof. Egesi and encouraged him to keep the ball rolling.

The keynote address by Dr Kent Nnadozie, Secretary of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), Food and Agricultural Organization (FAO) of the United Nations, Rome, highlighted the global threat of genetic erosion, its impact on plant diversity, and the need for national and transnational policies to address future food resilience and diversity needs. The lead paper by Prof. Happiness Oselebe, Professor of Plant Breeding & Genetics at the Centre for Crop Improvement, Nutrition & Climate Change (CCINCC), Ebonyi State University (EBSU), Abakaliki underscored the vital role of high-quality early-generation seeds in agriculture, highlighting their significant influence on crop production, resilience, and overall success.



*Keynote Speaker, Dr Kent Nnadozie
delivering his keynote address*

Recounting the achievements of NRCRI, the Executive Director disclosed the official registering and release of four new potato varieties in June 2023 that are heat- and late-blight-resistant. Prof. Egesi revealed that in January, 2024 NRCRI formally registered and distributed the “Sharp-Sharp” early-maturing yam variety in collaboration with the International Institute for Tropical Agriculture (IITA), Ibadan, and Ebonyi State University Abakaliki. “The National Root Crops Research Institute did not stop at these, but has trained, women from Jidna & Guruki Communities on cassava and sweet potato value addition and as well funded 140 research projects in root and tuber crops, including ten externally funded projects in breeding, biotechnology, product development, seed systems, and climate adaptation research”. he pointed out

rof. Egesi advocates for expanding conservation efforts for crop genetic resources, improving crop breeding programs for food diversity, supporting seed system development, promoting national policies for diverse agrifood systems, enhancing collaboration, technology adoption, and market linkages, and collaborating with value chain actors. In his closing remarks the Executive Director urged stakeholders to collaborate and address threats to Nigerian agriculture, such as insecurity, climate change, genetic erosion, and governance complexities. To ensure agricultural resilience, food security, and job creation, there should be support for crop breeding programs, seed system development, policy alignment, and technology adoption. These key points will contribute to a sustainable agricultural sector, food security, economic growth, and economic empowerment in Nigeria.

WOMEN AND YOUTH FARMERS TRAINING

Nwakaego Akponye, Precious Nwoke and Bright Ogbonye

The Farming System Research Programme (FSRP) of National Root Crops Research Institute (N.R.C.R.I.) Umudike in collaboration with National programme for Foods Security (NPFS) Abuja held a 3 day workshop on Agro-Ecological practice for Sustainable crop production in National Root Crops Research Institute Umudike between 2nd – 4th April, 2024 at Institute's Library Complex Hall.



Participants and facilitators pose for a group photograph

The Minister of Agriculture and Food Security ably represented by the National Co-ordinator of Programme Mr Yerima Saidu in his speech emphasized the importance of the programme in enhancing Agricultural Production System. He added that the Programme collaborates with the Institute to build capacity of Farmers with greater focus on women and Youths. Mr. Yerima urged the trainee to apply skill and practice they acquired from the workshop to mitigate the negative implication of climate change. Earlier in his opening remarks, the Director, Host Community and Integration Dr. Chika Ezebuiri welcomed the participants and

explained that the Institute has the mandate to conduct research activities into root and tuber crops and being the only Institute in South-East. He boasted that the Institute has experts that are always ready to impart knowledge. He therefore urged them to be attentive and utilize the knowledge for enhanced income. Declaring the workshop open, the Executive Director Prof. Chiedozi Egesi ably represented by the Director Biotechnology and product Development; Dr. Joseph Onyeka noted with dismay that only about 10% of participants in this kind of workshop practice what they learn. He challenged them to be attentive and make difference



The Coordinator Farming System Research Programme and also south-East Coordinator of the Programme Dr. Innocent Onyekwere advised the farmers to make use of the training “looking at the caliber of resource persons, it will be good if some of you invite them,

extension agency or Agricultural Development Programme workers for farmers training so as to enhance productivity and reduction of green gas emission”, he said. Highlight of the programme was presentation of certificates by the National Co-ordinator.

NRCRI STAFF SCHOOL CELEBRATES HER FORTY-TWO (42) YEARS OF EXISTENCE

Ifeyinwa David

It was a day filled with joy and glamour as the old students, parents, teachers, pupils and the invited guests gathered on the 17th of July 2024 to commemorate the forty-two (42) years of the NRCRI staff school and her graduation ceremony.



The ceremony drew many dignitaries to the Institute including the wife of the Deputy governor of Abia State Her Excellency Adaeze Chidera Emetu the mother of the day who was represented by Mrs. Utah Emmanuel. Mr. Njoku Chukwuemeka who was the father of the day and Mr. Festus Okon PTA chairman and some old students were present for the occasion.

The Executive Director of National Root Crops Research Institute who was represented by Dr. Mrs. Tessa Madu of Planning, Monitoring and Evaluation Department of the Institute extends his love to the pupils and as well expressed joy at the growth of the academy thanking and commending the Head teacher of the school Dr. Mrs. Chinwe Ezeaputa for her sacrifices in making the school unique. The Executive Director also applauded the 1995 set of the old boy's association of the school for their support to the school through their foundation. The special guest of honour Prof. Stella A. Ubbor who is an old student of the school advised the pupils to put in everything to their studies to become great men and women in life.

In his opening remarks, the chairman of the occasion, Engr. Prof.

Chukwuma Kadurumba who doubles as an old student of the school expressed gladness at the growth of the school declaring the ceremony as a home coming for the ex-students who were present. In his words, the school has produced notable scientists, professors, doctors, provosts, professionals, farmers, registrars etc. He recalled that they have a foundation 'Triumphant Family Foundation NRCRI' which has been in existence for five (5) years with Mr. Nnabue Ikenna as the secretary. Prof. Chukwuma disclosed that the foundation for the past years have always given scholarship to the best graduating students of the academy. The chairman congratulated the parents and the graduating pupils advising that they should note the exploits of their predecessors in life and follow suit.

The unveiling of the school maiden magazine '2023/2024 Year Book' was anchored by Prof. Chukwuma Kadurumba, the chairman of the occasion, and many dignitaries in attendance supported the launching of the magazine.

Highlights of the occasion, were awards and scholarships given to the best graduating pupils.

NRCRI PLANS TO RELEASE BIOTECH POTATOES COME 2026

Chinwe Octor and Ngozi Iheadigwu

“National Root Crops Research Institute (NRCRI), Umudike is poised to release biotechnology potatoes by 2026”

The above statement was made known to the public by the Director of Tuber Crops Research Department, in the institute/Principal Investigator, Feed the Future Global Potato Partnership Project (GBPP), Nigeria, Dr. Charles

Okechukwu Amadi, during a round table meeting with stakeholders about the progress of the GBPP project, on 14th June, 2024, at National Institute for Policy and Strategic Studies, (NIPSS) Kuru, Jos, Plateau State.



GBPP lead, Dr Charles Amadi making an address during the stakeholders meeting.

The meeting had over forty (40) participants drawn from the Federal Ministry of Agriculture and Food Security (FMAFS), State Ministries, local and International Agencies, Potato Platforms, seed growers, farmers, marketers, and project staff of GBPP. The participants were briefed on the development of GMO potatoes and the impact GBPP project will have on stakeholders in the potato value chain. Dr. Amadi said that the USAID Feed the Future project, managed by Michigan State University, focused on the commercialization of Late Blight disease-resistant biotech potatoes developed from farmer-preferred varieties in Nigeria, Kenya, Indonesia, and Bangladesh. Describing the stakeholders as Apostles and Missionaries who will help to further carry proper information about GBPP

potatoes, Dr. Charles disclosed that GMO potatoes are safe, because of the rigorous regulations involved before the release of the varieties which are three times tougher when compared with the release of non-GMO potato varieties. According to Dr. Amadi, GMO varieties take at least six years before release, unlike other potato varieties that take only two years for all evaluations. He stressed that GMO varieties are required to undergo efficacy and regulatory trials before they are considered for commercial release by the National Biosafety Management Agency (NBMA). This is then followed by a national performance trial consisting of multilocational and on-farm trials before they are submitted to the National Variety Release Committee for registration and release to farmers for commerce.



Stakeholders pose for a group photograph during the meeting

POTATOES : PANACEA FOR FOOD INSECURITY

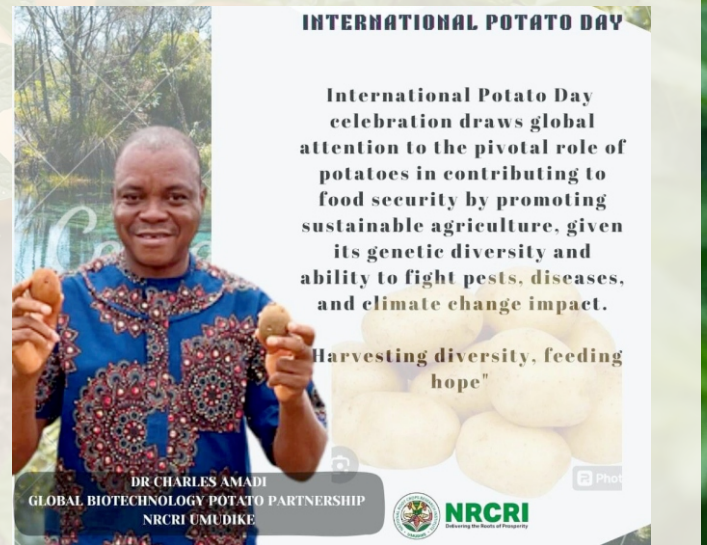
– Chinwe Odor

This epoch making event was adopted by the General Assembly of the United Nations in December, 2023, as a day to highlight and create awareness of the multiple nutritional, economic, environmental and cultural values of potatoes.

Being the first International Potato Day celebration, Dr. Amadi did not leave any stone unturned. He also stated that potatoes contain antioxidants properties like flavonoid, carotenoid among others, that aid in protection against cell damage, inflammation, and chronic diseases.

According to Dr. Charles, the event was important because potato contributes to food security of Nigeria in so many ways, which include, raising awareness to the public about the importance of potatoes in food security and nutrition, providing a platform to discuss constraints facing the potato value chain as well as how to optimize the benefits of potato.

He added that the celebration will also promote potatoes as a pillar of Agriculture, given their genetic wealth to combat pests, diseases, and climate change impact. Speaking on the 2024 theme “Harvesting Diversity and Feeding Hope”, Dr. Amadi said, the theme underscores the potential of potatoes to address global food security and nutritional challenges through over five



thousand different varieties and numerous landraces of the crop. He furthered that the theme also emphasizes the role of small-scale farmers, particularly women in preserving crop diversity and promoting sustainable agricultural practices.


The expert described potato as a “hidden treasure” because it is packed with nutrients with health benefits. Dr. Amadi disclosed that potatoes have anti-inflammatory effects as they contain compounds that have anti-inflammatory properties which may help in conditions like arthritis, asthma, and certain allergies while adding that the antioxidants and phytochemicals in potatoes may also help to reduce the risk of certain cancers such as colon, breast and lungs cancers.

NRCRI SEMINAR SERIES 2024

Ogwo Nkechinyere, Felix Okorie, Bright Ogbonye and Nwakaego Akponye Seminar presenters from the month of May to October 2024 and their seminar topics


NRCRI UMUDIKE SEMINAR SERIES 2024

Topic: MACHINERY INVESTMENT ANALYSIS; PRIME FOR GENERAL ADOPTION OF INDEGENEOUS AGRO MACHINES INNOVATION.



Wednesday
15 MAY
Time
11.00am

DR. JOSEPH IGBO
MECHANICAL ENGINEER



www.nrcri.gov.ng

NRCRI UMUDIKE SEMINAR SERIES 2024

Topic: ORANGE FLESHED - SWEET POTATO: A TOOL FOR ADDRESSING THE CHALLENGES OF HIDDEN HUNGER.



Thursday
18TH JULY, 2024
Time
11.00am

MR JOHN EMETOLE
FOOD SCIENTIST



www.nrcri.gov.ng

NRCRI UMUDIKE SEMINAR SERIES 2024

Title: CONTROL OF POST-HARVEST FUNGAL DETERIORATION OF HAUSA POTATO (SOLENOSTEMON ROTUNDIFOLIUS_ POIR) J. K. MORTON TUBER IN UMUDIKE.



Wednesday
18 SEPTEMBER
Time
11.00am

MRS JULIET NWANERI
PLANT PATHOLOGIST



www.nrcri.gov.ng

NRCRI UMUDIKE SEMINAR SERIES 2024

Title: Gender Differentiated Impacts of Climate Change and The Adaptation Strategies in Agricultural Production



Wednesday
18 SEPTEMBER
Time
11.00am

DR NGOZI FLORA NWAKOR
AGRIC EXTENSION



www.nrcri.gov.ng

NRCRI UMUDIKE SEMINAR SERIES 2024

DESIGN OF A SECURED WEB BASE VOTING SYSTEM



Wednesday
16 OCTOBER 2024
Time
11.00am

UCHENNA ONYEBULAM
COMPUTER ANALYST



www.nrcri.gov.ng





NRCRI UMUDIKE SEMINAR SERIES 2024

Topic: 'Harnessing the Potential of Composite Sweet Potato Meal in Rabbit Nutrition'

Wednesday
17 APRIL

Time
11.30am



DR. OLALERU IBIKUNLE.
ANIMAL SCIENTIST



www.nrcri.gov.ng

NRCRI UMUDIKE SEMINAR SERIES 2024

Topic: Advances and Retirements."

Thursday
18TH JULY, 2024

Time
11.00am



MRS HELEN GOVERNOR
ACCOUNTANT




www.nrcri.gov.ng

NRCRI UMUDIKE SEMINAR SERIES 2024

Topic: Yam farmer's perception and adaptation to climate stress: A panacea to seed business resilience".

Wednesday
17 APRIL

Time
11.00am



DR. CONFIDENCE KALU.
AGRIBUSINESS



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NRCRI EMBARKS ON SCHOOL OUT REACH PROGRAMME

Henrietta Egwu and Christine Obonna

NRCRI through her school outreach and adopted village programme has established demonstration farms at St Theresa's Girls Secondary School Olokoro and Community secondary school Isieke Ibeku.

Recently, a team of 6 led by Dr. Mrs F.N.Nwakor went to one of the adopted Schools: St Theresa's Girls Secondary School Olokoro Abia state for dissemination of NRCRI Improved Agricultural Technologies to the students. The team was well received by the principal of the school and the Agric Science teacher. The team lead introduced her team members. Dr. Nwakor, further gave a brief summary of the NRCRI and her mandates which centred on root and tuber crops research and development. She educated the students about the improved crop varieties developed by the institute

which include cassava, sweet potato, potato, yam, cocoyam, ginger, turmeric and other root/tuber crops and their agronomic practices that will be demonstrated in the school farm.

Next to her was Dr. Ivy Nwokocha who demonstrated to the students on how to plant their cassava, potato, ginger, turmeric and other agronomic activities on root and tuber crops production. The cassava varieties planted included

- *Fine face
 - *TME 419
 - *UMUCAS 44
- The sweetpotato planted included
- *UMUSPO 3
 - *TIS 87/0087
 - *Ex igbariam

The students excitedly demonstrated all they were taught and their demonstration farm fully established



Demonstration of NRCRI Technologies in St Theresa's, Olokoro

STAKEHOLDERS' MEETING TO DEFINE MARKET SEGMENTS AND TARGET PRODUCT PROFILE FOR TARO.

Ogwo Nkechinyere, Chidinma Chukwuka and Chidiebere Akubueze

The National Root Crops Research Institute (NRCRI) Umudike in collaboration with the Accelerated breeding initiative of CGAIR organized a Product Design Team (PDT) meeting for Taro (*Colocasia esculenta*) with the Theme: Stakeholders' consultation to define Market Segments and Target Product Profiles in Nigeria. Recall that the institute in recent time conducted a product design meeting for other root and tuber crops like yam, cassava, sweetpotato and potato which helped the institute in securing grants worth thousands of Dollars.

The Executive Director/Chief Executive Officer of NRCRI Umudike, Professor Chiedozie Egesi in his address said that “the team is dedicated to implementing a client-

oriented approach to define Taro market segment and market product profile from Nigeria. Despite being a starchy tuber with a rich history and diverse culinary uses, Taro falls under the opportunity crops that have suffered historically from underinvestment despite its potential to improve food and nutrition security”. During his presentation, the ED listed some notable achievements recorded by taro programme in the institute which include evaluation of germplasm, generation of bi-parental crosses for open pollinated seeds, establishment of taro seedling nursery, and a recipient of feed the future lab project/Innovation Lab for Crop Improvement grant on genetic analysis for QTL mapping, candidate gene analysis for Taro Leaf Blight and yield tracing.



The ED, Prof Chiedozie Egesi flanked by the Permanent Secretary, State Ministry of Agriculture, Mrs Ijeoma Aguwa, Dr Vish Banda and other key stakeholders

He reiterated that “NRCRI has garnered vast experiences from conducting product profile for other crops like yam, cassava, potato, sweetpotato and hopes to leverage on the learnings from RTB breeding, Nextgen cassava and Africa yam to conduct the product pipeline identification and refinement, determine top priority market segments, develop strategy to brand genetic gains, improve populations, establish a taro breeding committee of practice, implement traffic generation to reduce cycles and number of testing stages.

The ED went on to state that the mission of

VACS breeding is to support the breeding of opportunity crops which were regarded as neglected, orphaned or minor but which have the potential to improve nutrition, health and incomes while enhancing agricultural sustainability in Africa. The vision, on the other hand, according to the chief executive is to do a state-of-the-art impactful breeding programs for opportunity crops which is effectively implemented through co-ownership, co-design, co-leadership and co-implementation by NRCRI, CGIAR and other companies. The target is to grow taro more widely and to use all our learnings and leverages to achieve it”



Group Discussion during breakout session

The Taro project started in July and our focus is on the objectives and strategies: to define the business model within our framework, and discuss the target Product profile which will be the indicator of what we should be pursuing the next 3 years. Prof Egesi announced there will be inception meetings, capacity building courses and short-term trainings for people working in Taro.

In her goodwill message, the Representative of the Abia state government, the Permanent Secretary, State Ministry of Agriculture, Mrs Ijeoma Aguwa expressed her excitement to be part of the Product Design Team and pledged to support and collaborate with NRCRI to ensure food security and sustainability.

Speaking during the workshop, the Root and Tuber Breeding Manager at the International Institute of Tropical Agriculture (IITA) Ibadan and ABI Transform Team Lead for West and Central Africa, Dr Vishnuvardhan Banda said that the ABI role is to help develop and access improved Taro crop varieties, improve the shelf life, prepare their key targets, define their product and decide what to do with its production including segmenting the production to the right audience at the right time with the right testing protocols and locations and to help the breeders and farmers get more operation funding".

The stakeholders present include researchers, government officials, farmers, food processors and had Dr Joseph Onyeka as the facilitator.

EXTENSION OF NRCRI TECHNOLOGIES THROUGH ADOPTED VILLAGE/SCHOOL OUTREACH PROGRAMME



Extension visit to St Theresa Girls Secondary School, Olokoro by NRCRI Team

NRCRI RELEASES 2 IMPROVED CASSAVA VARIETIES

Ogwo Nkechinyere

At the 38th meeting of the Technical Sub-committee on crop variety naming, registration, and release which took place at the National Center for Genetic Resources and Biotechnology (NACGRAB), Moore plantation Ibadan, the National Root Crops Research Institute Umudike in collaboration with the International Institute of Tropical Agriculture (IITA), Ibadan unveiled two improved cassava varieties, RENEWED HOPE and BIGGI.



Renewed Hope



biggi

Renewed Hope (TMS14F1036P0007) which is tailored for the processing market segment exhibits resistance to Cassava Mosaic Disease and Cassava Bacteria Blight, featuring good plant architecture, fufu yield of 55%, gari yield of 24.5%, 45.7t/ha yield, and 37% dry matter content.



Biggi (TMS17F1387P0008) designed for the industry, offers resistance to CMB and CBB, vigorous growth, a 48.6t/ha yield, suitable architecture for #mechanization, and notable dry matter and starch content of 36.6% and 27.8%

LIST OF SOME RESEARCH PUBLICATIONS BY NRCRI SCIENTISTS IN 2024

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3. Reuben-Kalu, J.I., Kokiladevi, E., Muthurajan, R., Doraiswamy, U., Venkatasamy, B., Shanmugam, K.P., Nallusamy, S., & Kingsley, T.L. (2024). Comparative transcriptome analysis, identification and expression analysis of sucrose phosphate synthase genes in high and low starch cassava (*Manihot esculenta* Crantz) genotypes. *J. Plant Biochem. Biotechnol.* (2024). <https://doi.org/10.1007/s13562-024-00927-8>.
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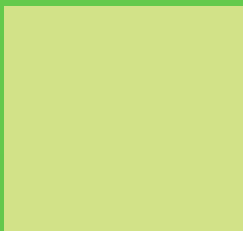
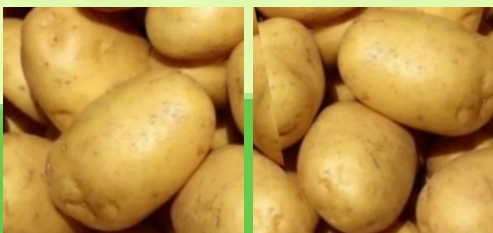
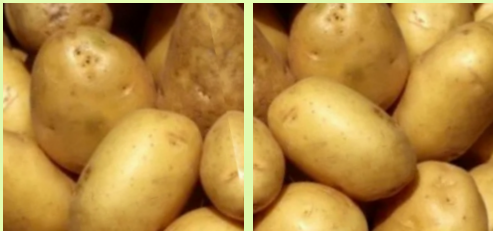
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