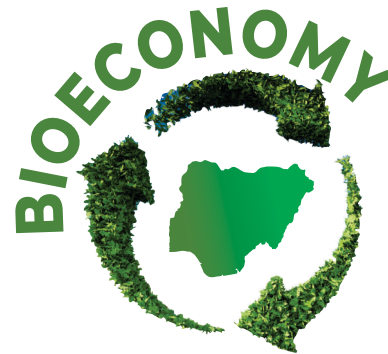




FEDERAL MINISTRY OF FINANCE,
BUDGET AND NATIONAL PLANNING
(Budget and National Planning Arm)



REE
ENGINEERING
LIMITED



Innovation and Knowledge Transfer Partnership

THE NEW ECONOMY FOR ACHIEVING ECONOMIC DIVERSIFICATION, EMPLOYMENT & ECONOMIC GROWTH

T H E M E :

KNOWLEDGE TRANSFER: CASSAVA & BIO-ETHANOL VALUE CHAIN

REPORT

SOUTH-WEST REGION AWARENESS & SENSITIZATION
WORKSHOP ON BIO-ECONOMY, EMPLOYMENT AND
INCLUSIVE GROWTH USING CASSAVA-BIOETHANOL
VALUE CHAIN DEVELOPMENT PROGRAMME PILOT

DATE: 25TH-26TH JULY 2023 TIME: 9AM

VENUE: INTERNATIONAL INSTITUTE FOR TROPICAL AGRICULTURE (IITA) IBADAN



THE WORLD BANK

giz Deutsche Gesellschaft
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PREPARED BY: REE ENGINEERING LIMITED

The Future is here - The New Bio-economy



HIS EXCELLENCY,
BOLA AHMED TINUBU (GCFR)
PRESIDENT AND COMMANDER IN-CHIEF OF THE ARMED FORCES
FEDERAL REPUBLIC OF NIGERIA



HIS EXCELLENCY,
KASHIM SHETTIMA (GCON)
VICE PRESIDENT OF FEDERAL REPUBLIC OF NIGERIA



ENGR. NEBEOLISA ANAKO
PERMANENT SECRETARY (FMFBNP)

SOUTH WEST GOVERNORS



**HIS EXCELLENCY,
BABAJIDE SANWO-OLU**
GOVERNOR, LAGOS STATE



**HIS EXCELLENCY,
ABIODUN ABAYOMI OYEBANJI**
GOVERNOR, EKITI STATE



**HIS EXCELLENCY,
PRINCE DAPO ABIODUN**
GOVERNOR, OGUN STATE



**HIS EXCELLENCY,
ADEMOLA ADELEKE**
GOVERNOR, OSUN STATE



**HIS EXCELLENCY,
ROTIMI AKEREDOLU**
GOVERNOR, ONDO STATE



**HIS EXCELLENCY,
OLUSEYI ABIODUN MAKINDE**
GOVERNOR, OYO STATE

**REPORT OF THE
REGIONAL AWARENESS/
SENSITIZATION WORKSHOP ON**

**THE IMPLEMENTATION OF THE
NIGERIA BIO-ECONOMY FRAMEWORK/
CASSAVA BIO-ETHANOL PROJECT PILOT
SOUTH-WEST REGION**

**HELD AT INTERNATIONAL INSTITUTE FOR
TROPICAL AGRICULTURE (IITA) IBADAN
ON 25TH-26TH JULY 2023**



**PREPARED BY:
REE ENGINEERING LIMITED**

WORKSHOP THEME:

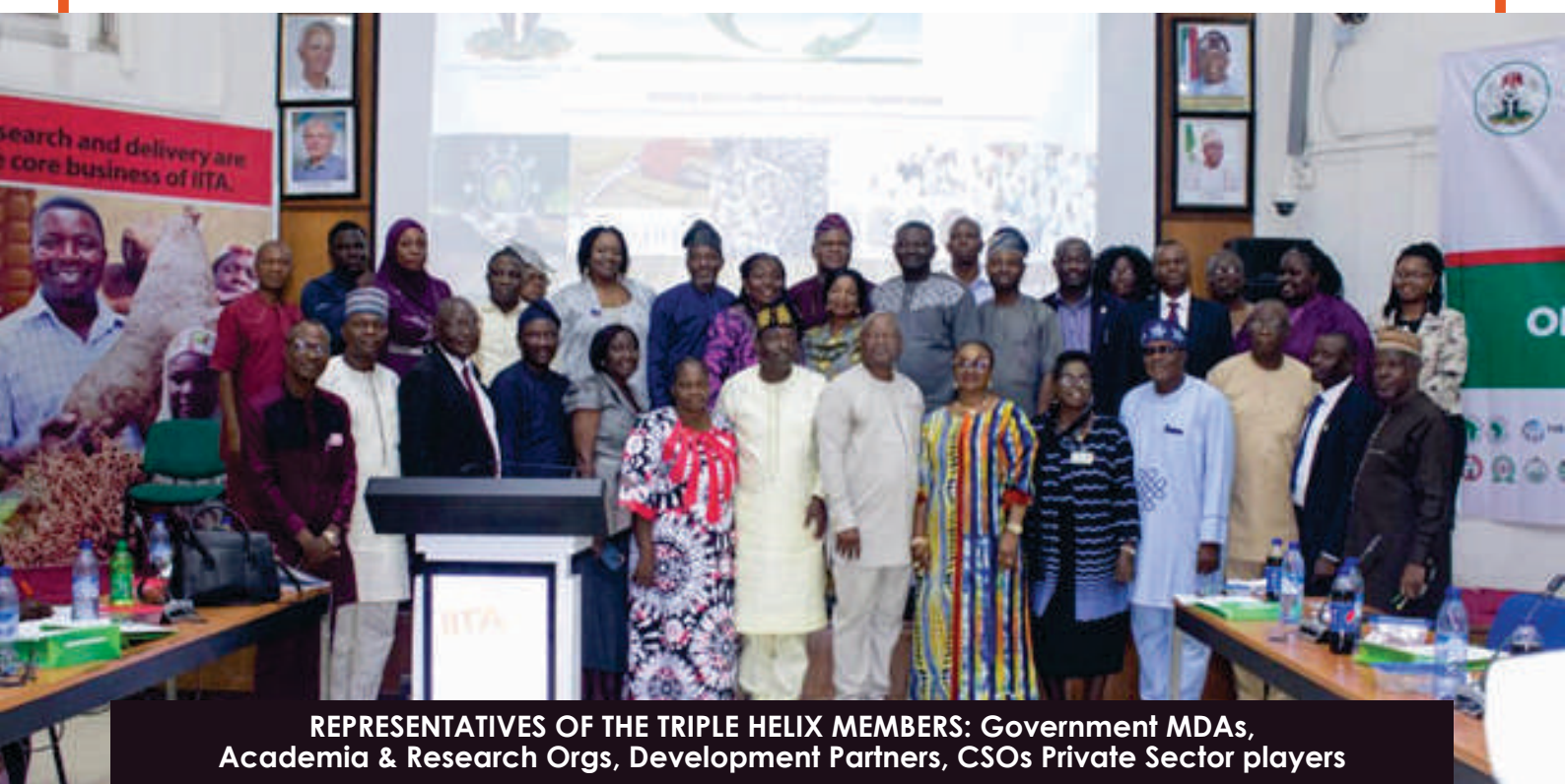
Knowledge Transfer, Cassava Value chain and Bioethanol/The New Economy For Achieving Economic Diversification, Employment And Economic Growth.

PREAMBLE:

The South-west Regional Sensitization workshop was organized by the Federal Ministry of Finance, Budget, and National Planning as part of the ongoing Awareness/sensitization of critical stakeholders and the public on the validated Nigeria Bio-Economy Framework and the Implementation of the Cassava Bioethanol Pilot Project aimed at driving more inclusive partnership among the critical stakeholders and for the seamless implementation of the Nigeria Bio-Economy Programme.

The South-West regional Workshop was a follow up to the previously held Regional Sensitization programme for the South-East, North-Central, and the North-West Regions held in Enugu, Nasarawa, Kano, respectively. The Nigeria Bio-Economy Program is designed to leverage Bio-resources including cassava to produce Bioethanol and other cassava derivatives including Industrial Starch, Pharmaceutical, Starch, High Quality Cassava Flour HQCF Chips, sorbitol, Animal feeds and Ethanol.

The sensitization workshop drawn participants from the Six South-West state of Ekiti, Lagos Ogun, Ondo, Oyo, and Osun, with players from top Government Functionaries, the Agribusiness sector, Academia, Government at all levels including representatives of Government Ministries, Departments and Agencies (MDAs) and Cassava Farmers all the six states were in attendance. (See details in the Workshop Attendance)



REPRESENTATIVES OF THE TRIPLE HELIX MEMBERS: Government MDAs, Academia & Research Orgs, Development Partners, CSOs Private Sector players



DR. SIMEON EHUI,
DG, IITA Ibadan

WELCOME REMARKS OF THE DIRECTOR GENERAL OF IITA DR. SIMEON EHUI

The Director General of the International Institute for Tropical Agriculture (IITA) Dr. Simeon Ehui represented by the Coordinator of the Technologies for African Agricultural Transformation (TAAT) programme Dr. Akem Chrys welcome all participants to IITA and thanked the organizers for the recognition accorded the IITA to host this all-important regional Sensitization workshop a national project designed to explore and maximize value addition to one of the cardinal crop of the Institute CASSAVA.

“In IITA we are ready and very committed to being an active partner on this particularly important project in the efforts of the country to create more job opportunities for the youths and reduce poverty which are what the IITA is also pursuing in the region. I am also glad that the project is also directed connected to one of the projects currently being implemented in the country; Technologies for African Agricultural Transformation (TAAT) programme supported by Bill & Melinda Gate Foundation and the African Development Bank (AFDB)” were his opening declarations. He stated that IITA is about to sign an MOU with the Association of Deans of Agriculture in Nigerian Universities (ADAN) who is also a leading partner of this Cassava Bioethanol Pilot Project and strongly believe that with the collaboration of both ADAN, IITA and other stakeholders with Government, that cassava shall be processed into more products, jobs will be created, poverty will be reduced, and livelihoods will be improved.

He further informed the organizers and the participants that IITA has just be made to be the leader of the African Continental CGIAR Members and as such IITA can link the project and other stakeholders needs to any other crops within the CGIAR Networks in Africa. He therefore thanked all participants again, wishing them fruitful deliberation and asked that they enjoy their stay in the beautiful campus of IITA.



DR. AKEEM CHRYS,
Coordinator, TAAT
speaking for the DG IITA



ENGR. NEBOLISA ANAKO

**Permanent Secretary,
Budget & National Planning**

WELCOME REMARKS OF THE PERMANENT SECRETARY, MINISTRY OF BUDGET & NATIONAL PLANNING ENGR. NEBOLISA ANAKO

The Permanent Secretary, Engr. Nebolisa Anaka in his opening remarks welcome participants from all the states of the Regional and the national participants to the South-West regional Sensitization workshop and the Oyo State Government and the IITA for play host to the sensitization programme of the Nigeria Bio-Economy programmes and the Cassava Bioethanol pilot project.

Speaking of on behalf of the Permanent Secretary, the Director Economic Growth Department of the Ministry Mrs. Elizabeth Egharevba stated that the cardinal goal of the Federal Government through the project is to grow the National GDP, create jobs, reduce poverty, explore opportunities in the Bio Sector while driving innovations to create

alternative energy sources that is clean and renewable. The Permanent Secretary stated that this project is part of the National Development Plan 2021-2025 and adopting a Triple Helix Knowledge Transfer Partnership to transform our research from the Academia and Research Institutions into practical and scalable innovations that will sustain and grow the Nigeria Bio-Economy investment drive in renewable Biomass, food Security and alternative energy for the country.

He further stated that considering the removal of the fuel subsidy and its current biting effects, that it has become imperative to create alternative energy sources and cassava holds that prime position to give use renewable energy, jobs and poverty reduction and again thanked all critical Stakeholders including ADAN and IITA, the State Government for their critical partnership in the country's quest to create a bio-based economy and to put in place mechanism and products for export.



MRS. ELIZABETH EGHAREVBA

**Director Economic Growth Department
Ministry Budget & National Planning Delivering
welcome address for the Perm. Sec**

GOODWILL MESSAGES

Goodwill Message of His Excellency the Executive Governor of Oyo State Dr. Seyi Makinde

His Excellency Dr. Seyi Makinde, represented by the Permanent Secretary, Oyo State Ministry of Budget, and Planning Dr. S.H Bello thanked the Federal Ministry of Finance Budget and National Planning and the entirety of the federal Government of Nigeria for the design of the laudable project and for considering Oyo State as the host for the Southwest Regional Sensitization Workshop. He stated that Oyo State remains the second largest producer of Cassava in the country and the state is also proud to play host to the First and Largest Cassava Sorbitol Factory (Psaltry International Company) in the state. This is the demonstration our commitment to the Agricultural revolution and our priority attention on cassava and reiterated the state commitment to the partnership with the Ministry and other stakeholders on this all-important Bio-Economy.



DR. SEYI MAKINDE
Executive Governor, Oyo State



DR. S.H BELLO
Permanent Secretary, Oyo State Ministry
of Budget & Planning speaking for
Executive Governor, Oyo state

GOODWILL MESSAGE OF THE VICE CHANCELLOR OF THE UNIVERSITY OF IBADAN, PROF ADEBOWALE, (MNI, FRSC, FAS, FAvH, FCSN, FSAN, FPIN)

The Vice Chancellor of University of Ibadan (UI) Prof Adebowale, ably represented by Prof. A.O Oluwadare thanked the organizers for the careful selection of cassava as a prime crop for the Bio-Economy program to drive inclusive growth, reduce poverty and harness alternative renewable energy sources for the country.

He stated that the University has provided two hundred hectares of land at one of the University project sites at Ile-Ogo solely for this Cassava Bio-Ethanol project pilot and the management is ready to expand it more as the need arises.

The Vice chancellor further challenged critical stakeholders in Agriculture to seat up and commit to research, to start developing our local indigenous technology and no country can practice Agriculture sustainably depending on imported technologies.



GOODWILL MESSAGE FROM THE VICE CHANCELLOR, FEDERAL UNIVERSITY OF AGRICULTURE ABEOKUTA (FUNNAB) PROF. OLUSOLA KEHINDE



Prof. Olusola Babatunde Kehinde the Vice Chancellor of FUNNAB represented by the Dean of the College of Animal Science and Livestock Production Prof. Sowande Olusuji Sunday expressed the regrets of the Vice Chancellor over his non-physical presence and thank the FMFBN and the entire project partners for bold step to explore the economic benefit of cassava which he says are enormous. To demonstrate the readiness of the University to commit 100% to the project, he informed the organizers and other partners that the University has donated one hundred hectares of land for the Seed stock multiplication, and Land clearing is currently on-going, and a tractor has also been dedicated to the project.

GOODWILL MESSAGE OF THE RECTOR, OYO COLLEGE OF AGRICULTURE AND TECHNOLOGY, PROF. KEHINDE AFOLABI

Prof. Afolabi in his remarks likened the Cassava Bio-ethanol project as a dream come true for him view of his recent moves on how best to put the college's vast land resources to use. He declared that he is donating 2,000 hectares of college land to this project and the team can move in any time any day. He said the college has over 5,000 students and these can be useful in project management at the farm level and to demonstrate his excitement on the project, about twenty staff of the College were physically present at the workshop. "They may be challenges on a way of the great project like this, lets collaborate, ignore the challenges and move on together to achieve the results" were his concluding remarks.



GOODWILL MESSAGE OF ADAN PRESIDENT, PROF. O.J JAYEOBA



In the Goodwill Message of the ADAN President, Prof. James Olumide Jayeoba, he appreciated the stakeholders in the South-west for their massive turnout for the event informed the stakeholders how important Agriculture is to the Nation's economy and how well positioned the Association of Deans of Agriculture in Nigeria Universities (ADAN) to take this project to its right project working closely with relevant stakeholders and the young generation of innovation farmers in the sector.

He stated that ADAN was founded in 1958, just two years to Nigeria Independence and this goes a long way to underpin the importance of Agriculture to the country and since then ADAN has been contribution to the Agriculture profession through producing quality graduates of Agriculture, carrying-out Agricultural problem-solving research, promoting and enhancing the quality of Agricultural Education in Nigeria. He emphasized that ADAN is very committed to improved service delivery, modernization, and professionalism in all her activities, and they will not deliver less for the Bio-Economy Project.

He informed the stakeholders that ADAN through their partnership with the Federal Ministry of Agriculture and Rural Development has earlier established Eleven (11) Agribusiness Incubation Centers (AICs) across different Universities spread among the Six Geo-political zones and further requested that the AICs can be upgraded to Agro Industrial Park under the Bio-Economy Programme. Appreciated ADAN BOT Chairperson Prof. F.M David-Abraham for her continuous push to broker more partnership collaborating with the Executive to explore the potentials of Agriculture.

He thanked IITA for the massive improvements in production and processing of Cassava done over the years, especially the Mobile Processor innovation.

The ADAN President thanked Prof. Ken Ife for his doggedness and highly intelligent sinputs and coordination of the Bio-Economy programme and further appreciated the Ministry Again for the collaborations.

KEYNOTE ADDRESS/PRESENTATION BY THE PROJECT CONSULTANT, PROF. KEN IFE



The Project Consultant Prof. Ken Ife in his opening statement commended the President of the Federal Republic of Nigeria Asiwaju Bola Ahmed Tinubu for the bold steps taken so far upon assumption of office especially the declaration of State of Emergency on National Food Security.

He further declared that there other critical challenges facing this country to requires concerted efforts of all stakeholders and such initiative-taking leadership measures to address and very quickly and he summarized some of the challenges to include.

- Macro-Economic Challenge
- Micro-Economic Challenge
- The Unemployment situation
- The Existence Security Challenge- Boko Haram, Banditry, Kidnaping, militancy Herders-Farmers crisis etc.
- The Waste-Wealth Situation

He stated that the right time for Nigeria to move away from the heavy dependency on imports is now, that this will ensure that the National economic reforms are not negatively affected by external situations that ought not to concern. A Typical example cited were the Russian-Ukraine crisis that has affected Nigeria Diesel and Wheat market while Nigeria remains an Oil and Wheat producing country without exploring the full potentials.

The Consultant also hammered under the unemployment situation likening to a country that wants to destroy its future because the youths remain the future any nations and in Nigeria situation, only 7% of the annual graduates are securing jobs while unemployment and underemployment for the young people of 24-40 years is above 60%. The situation was labelled as Time Bomb that this country must not allow to explode. And the Bio-Economy programme is part of such bold steps taken by the Federal Government to curb the situation especially in Job creation, export earnings and creating alternative/renewable energy sources.

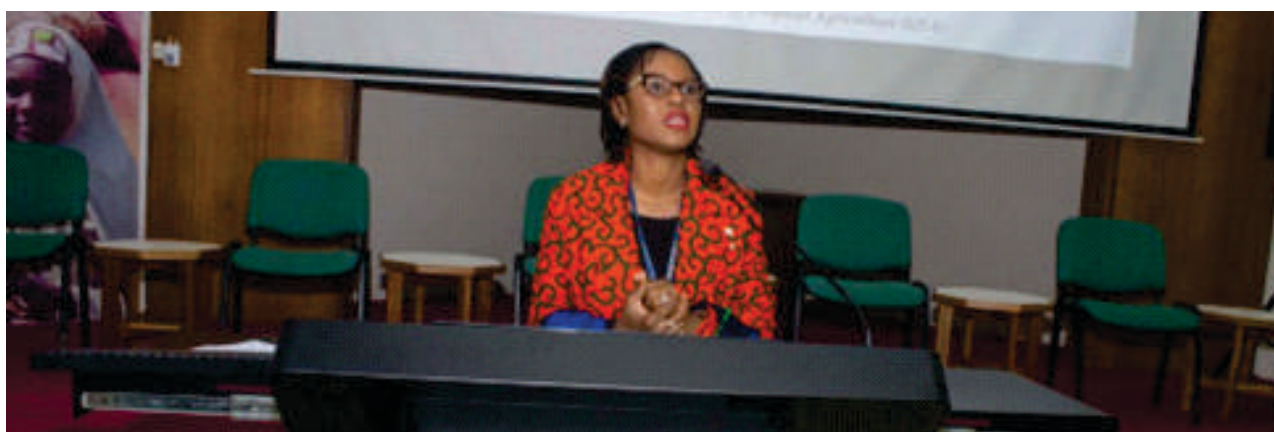
He stated a sad fact where Nigeria producing over sixty-two million metric tons of Cassava can leverage the over 25million cassava peels to produce livestock feeds that help the country leap jump her production of fish, cattle, and other small ruminants yet the cassava peels are going to waste across villages in Nigeria.

Coming back to the main presentation of the Bio-Economy programme of the Federal Government, he stated the use of the triple Helix Knowledge Transfer model was intentional and will help to create the right synergies and partnership that drive the project. He mentioned particularly that the Academia especially the Universities are big assets that the country has underutilized in our Agricultural projects' development drive. However, that this project will leverage the Private Sector, Academia, CSOs, Government MDAS and all to ensure seamless implementation of the Nigeria Bio-Economy Programme and the Cassava Bio-ethanol Project pilot

PRESENTATION BY IITA CASSAVA TEAM LEADER: DR. MERCY DEBIE-OJO

Dr. Mercy who made the presentation on behalf of IITA explained the various improvement to cassava by the Institute as Cassava is one of its core Crop and till date, IITA has released over 50 Varieties of Cassava with each of them having their distinctive features and uniqueness. However, she stated that the unfortunate situation is that only 2% of these released varieties are what the farmers have with them. He mentioned high performing varieties such as Baba 70, Farmers Pride, Game Changer, Ayaya, TME 419. She Stated TME 419 seems to be the popular among the farmers and unfortunately however is that other new varieties have overtaken the TME419 in terms of yield per hectare, starch content and suitability for different use.

She further assured that IITA is doing more to promote these varieties and ensure their availability to the farmers and encourage stakeholders to join hands with the Institute in promoting these varieties in their projects as they are certain to get better results



QUESTIONS AND ANSWERS

The two presentations from Prof. Ken Ife and Dr. Mercy Diebiru-Ojo were followed by series of questions, answers, and clarifications where necessary.



The purpose of this plenary session put in place specifically for state Government from the Southwest region was to understand the various interventions of the State in Cassava value chain with a view to partnering with them to consolidate the gains in Cassava Intervention and other bio-resources for a vibrant Nigeria Bio-Economy.

The Plenary Session has representatives of Ekiti, Ogun, Ondo, Osun, Lagos, and Oyo States respectively in the sessions as well as the President of ADAN and Chief Omoba Adewale, a strong private sector player as well as the Deputy Director, National Planning in the MFMBNP Dr. Kenneth Olusode.

EKITI STATE

Ekiti State currently play host to one of the Staple Crops Processing Zone (SCPZ), flagship program of the African Development Bank (AFDB) and has cleared about four thousand hectares dedicated to Cassava production. Numbers of Smallholder farmers support program are currently being implemented by the state including capacity building, inputs subsidies, among others.

LAGOS STATE

The Lagos state is reported by the Permanent Secretary, Ministry of Agriculture to be fully involved in cassava Intervention through a partnership with the cassava

Growers Association of Nigeria (NCGA) on production of Cassava on two thousand hectares. And there is also a Cassava Processing Factory in Araga-Epe involved in processing cassava into various derivatives. And discussions are currently ongoing to handover the factory to NCGA for proper management and optimum utilization of the installed capacity of Araga-Epe Cassava Factory.

He also informed the participants that the State Government has also established a mid-level market in Mushin Area of Lagos for sales of various cassava products and therefore encourage all stakeholders in the Cassava to explore both the factory and Mushin Cassava market in their businesses.

OYO STATE

The representative of Oyo State Government Dr. Osada reeled put the various intervention of the State Government in Cassava especially the various state Government Intervention to smallholder farmers that ensure massive cassava production in the State. The state plays host to the largest Sorbitol factory in Africa owns and managed by Psaltry International Company. There is also another Cassava Factory located in Ruston in Olara Farm Estate producing High Quality Cassava Flour. Three hundred Youths of Oyo State has also been trained in modern system of cassava production and state was said to be currently opening about four thousand hectares of land at Fasala Agro-Industrial Hub. And state also have specific partnership with IITA on cassava Value chain improvement activities in the state Including another partnership with World Bank through the Nigerian Governors Forum.

OGUN STATE

Ogun State in its report by Dr. James Oyesola on behalf of the state pride herself as the largest cassava producer in the region as 90% of her 2million farmers are cassava producers. Ogun State Government has also previously launched a Cassava Revolution Program, a program through several farmers were encouraged and supported. The State representative mentioned about 23,000 farmers were specifically trained on cassava production and the state currently have partnership with GIZ on Clean energy with major focus on Cassava. It was also reported that the state play host to thirty-one large cassava processing industries and the state average yield of cassava is said to be 19tons because of the state support to farmers through distribution of improved varieties and capacity building. Ogun states were also said to be a host to one of the Agro-Cargo Airport.

OSUN STATE

The Representative of Osun state also reported that several productivity improvement activities and projects has been conducted by the state Government and the state currently play host to an Ethanol fuel plant along Egbeda Road in Ekiti State.



BIO-ENTREPRENEURSHIP

The President of ADAN Prof. James Jayeoba led an extensive discussion on the activities around Bio-entrepreneurship where he explained the Student participation model designed to create a succession plan for Students of Agriculture from Year to year 5 and with fourth year beneficiaries always taking over the leadership of the student's clusters. Under the model, it was discussed that students will be engaged in bio-entrepreneurship activities and earning income at same time. And the Bio-Entrepreneurship curriculum will be designed to capture students in the primary and Secondary schools, respectively. This will help to create the needed awareness of our environment and ensure that we have adequate well-trained workforce for the Bio-Economic activities of the country.

QUESTIONS AND ANSWERS

After the plenary session, were few questions were asked and further clarification were given by the respective speakers.

The students of Agriculture from University of Ibadan and FUNNAB asking questions bothering on the need to make adequate financial provision for students of Agriculture to be able to practice while studying. Based on this, few projects including the Master Card Foundation entrepreneurship program, the CBN Students intervention were further highlighted, and the students were encouraged to explore those windows while they were assured that the Bio-Entrepreneurship

SYNDICATE SESSION

After the Plenary session for the State Government in southwest region the participants break into four (4) Syndicate Groups to discuss the implementation dynamics of the project as it relates to the peculiarity of the Southwest region of the Country.



Ongoing Syndicate Session during the workshop



SYNDICATE GROUP REPORT

GROUP 1

Title: Hybrid Cassava Foundation Seed Multiplication (TME 419/Obasanjo/Hope) and Cassava Grow-out

Chair: Prof. N.I Odiaka

Rapporteur: Ogirinye Innocent

Syndicate Members: 45 Participants



OGIRINYE INNOCENT
reporting syndicate Group 1
recommendations

RECOMMENDATIONS

1. More Sensitization and farmers awareness program should be conducted and intensified.
2. More Seed-Out-growers should be encouraged in strategic locations linked to IITA and Tuber Research Institute, Umudike Farmers should be linked to such Seed Producers.
3. Seed producers should also be encouraged to phase their production to meet farmers needs at varying production times across the country.
4. Farmers are encouraged to stop recycling their stems to achieve optimum yield per hectares.
5. Different Cassava Varieties should be multiplied across different zones depending on farmers popular demand in such regions.
6. Different Faculties and Colleges of Agriculture should be targeted for Foundation Seeds production to give Certified Stems to farmers in their catchment areas.
7. Such Colleges and faculties should register with the National Agricultural Seed Council and their source of Foundation seeds should be verifiable too.
8. Cassava Stems should be planted within 7 days after harvesting of Fresh stems subject to storage conditions.
9. Cassava field should be prepared for delivery of the stems.
10. The Production start period of June- August in the Southwest region must be considered.
11. Specialized and resolute Mechanization Service Model should be established for the Project in the region and targeted at the Cassava Clusters in the Zone
12. More Tractors should be deployed for the project.
13. Power tillers should be encouraged. However, it does not work on all land in the zone.
14. Farmers should be sensitized on the importance of Insurance.
15. Insurance Subsidies should be provided by Government to encourage off-take by farmers.
16. Farmers should be trained on Early Disease control measures.
17. Quality Weed control chemicals should be supplied.
18. Mechanized Cassava Weeders should be provided.
19. Simple mechanized Cassava Harvesters should be promoted and deployed for the project.

20. Such Harvesters should be subsidized by the Government and Key Promoters of Cassava Value chain Projects.
21. Cassava Aggregation Centers should be established and should be equipped with weighbridge to automatic tonnage measurement.
22. Transportation infrastructure should be conducted include rural feeder roads construction and farm transportation vehicles.
23. Modular on-site processing machineries should be deployed for first level produce processing.
24. Some Standardization mechanism should champion by IITA especially in product marketing including starch content determination that will be understandable by the Farmers and Processors.
25. Guaranteed Minimum Price (GMP) for Cassava should be established.
26. Multiple Produce Taxation should be eliminated.

GROUP 2

Title: Cassava Value Chain Processing
Chairman: Professor Stella Odebode
Rapporteur: Professor Olusiji Sowande
Attendance: Sixty-One (61) participants

RECOMMENDATIONS

1. High Population: Nigeria has the advantage of high population. Consequently, there exists a remarkably high domestic market for cassava and cassava products at any stage of production, processing, and value addition and it should be explored.
2. Land Availability and Suitability: The country has a vast expanse of arable land for the cultivation of cassava. In addition, every state has a huge portion of cultivable land suitable for cassava production and processing, more processing facilities should be established.
3. Export Potential: Cassava products and by-products have great export potentials to boost the gross domestic product of the country and increase the contribution of Agriculture to national economic growth and development. There are regional and global markets for cassava products and by-products, export market should be targeted in the project.
4. Massive Job Creation: Cassava production and processing value chain can play a pivotal role in solving the problem of high unemployment rate in the country by creating rural and urban employment and as well as creation of new entrepreneurs. Production of more primary raw materials will allow more people to be added to the production process, thereby encouraging the full development of the cassava value chain.
5. Poverty Alleviation: Through creation of employment opportunities and, sales and marketing of end products and by-products, cassava value chain can create wealth and thereby reduce poverty among the Nigerian teeming population.
6. Control of Environmental Pollution: Cassava wastes and by-products such as peels, leaves, sieves, and bagasse that otherwise constitute a nuisance and pollute the environment can be converted to animal feeds, thereby controlling environmental pollution, and creating opportunities for more integrated cassava systems.

7. Increase in Technology Development: Cassava production/value chain will stimulate innovation and technological development through cutting-edge research to produce machines, tools, and equipment which are necessary for good quality products that meet international standards and local needs. This will also encourage the industrialization of rural environments through siting of processing industries.

GROUP 3

Title: Bio-Entrepreneurship and Curriculum Development

Chairman: Prof. Oludare

Rapporteur: Prof. Abanikoda

RECOMMENDATIONS

1. Nigeria's Education sector does not have an agile process for engagement with enterprise with a strong focus on the development of apprenticeship, graduate conversion and upskilling in Bio-enterprise.
2. There is need for Nigeria's Education sector to have a strong focus on sustainability education and training, and on embedding soft skills into current or new courses particularly to allow for the consideration of the integration of cross-cutting areas such as bioeconomy.
3. Curriculum development in Bio-entrepreneurship should consider and consider specific industry, primary producers and innovation intermediaries needs.
4. It is important to assess relevant research outputs for integration into Bioeconomy education, training and skills, policy development and implementation.
5. Bio-entrepreneurship curriculum should support such pedagogical formats as: Interactive Educational Online Games, Online teaching of Courses with videos, Case Studies, Web pages with a variety of resources, Podcasts Audio-Visual materials, webinars, videos, MOOC, Reports, YouTube Videos, and such assessment formats as interactive assignments and quizzes for evaluation of user progress, Quizzes, exhibitions, competitions, etc.
6. It is equally important to integrate Bio-entrepreneurship relevant extra-curricular activities into the scheme of work to enhance the cognitive, affective, and psychomotor skills of the students at the primary school, secondary school, and tertiary level of education.



Syndicate Group 4: Innovation Challenge Fund & Development Partners Intervention

Task: Review of the various development finance intervention from CBN, Blended Finance options, Green Bond, Climate Fund, Carbon Credit, GEF and other innovation finance

1. REPAYMENT:

- There is a need for mixed cropping to service a buffer.
- Adequate monitoring & supervision.
- Involvement of insurance companies from the on-set.
- Timely reporting of issues in the farm to attract insurance premiums.

2. SINCERITY WHEN SELECTING BENEFICIARIES:

- A synergy is needed between the farmers and the financial institution in respect of data tracking.
- Capturing of farmers with Non-Governmental Organization (NGO) e.g., Cassava farmers association.

3. GLUT IN THE MARKET:

- Mixed cropping.
- Value addition should be encouraged.
- Digitalization of cassava products for proper taking.

4. TRACEABILITY OF PRODUCTS:

- Improve traceability throughout the value chain to improve exporting of cassava produce.

5. POLICY ISSUES/IMPLEMENTATION:

- Sincerity of policy implementation, the idea of directing farmers to get chemicals or seeds from somewhere should be developed.
- Capacity development.

6. HIGE INTEREST RATE:

- Lower interest rates so that it will be convenient for farmers to borrow loans.

7. DIGITIZATION OF CASSAVA PRODUCT FOR PROPER TRACKING:

8. TIMELY DISBURSEMENT OF LOANS:

- There should be timely release of funds by the required houses.

9. LACK OF INFORMATION & AWARENESS OF THE FUNDS:

- For the environmental innovation fund: There should be an adequate equality building & arranged funds for farmers.



VOTE OF THANKS

The workshop ended with a vote of thanks delivered Mr. Auwal Mohammed, the representative of the Director, Department of Economic Growth. He thanked the Oyo State Government for the peaceful and well secured environment that guarantees the successful hosting of the southwest Regional Sensitization workshop in the State.

He further appreciated IITA, all participants, members of the project team especially the Permanent Secretary of the Ministry of Finance, Budget, and National Planning Engr. Nebolisa Anako and the Director of Economic Growth Department, Mrs. Elizabeth Egharevba, whom he represented to give the vote of thanks and all Directors and Staff of the ministry for their tireless efforts towards the success of the program.

And he prayed for journey mercies for all participants and even as he informed the audience the train will move to the Northeast to sensitize the stakeholders in the region.

SITE VISIT









