



CRIN Herald

A MONTHLY PUBLICATION OF COCOA RESEARCH INSTITUTE OF NIGERIA (CRIN), IBADAN.

ISSUE: 51 (May, 2025)

CRIN Sets to Partner with FAAID



In furtherance of the vision of the Cocoa Research Institute of Nigeria (CRIN) in improving the productivity, quality and sustainability of its mandate crops, the

Institute is set to collaborate with the Foundation for African Agritech Inclusive Development (FAAID). FAAID is a pan-African non-profit organization dedicated to leveraging technological innovation to drive agricultural transformation, promote sustainable development, and foster inclusive growth. It is guided by the principles of collaboration and mutual benefit, which align closely with the spirit of China's Belt and Road Initiative (BRI).

The Foundation paid a visit to the Institute on 28 April, 2025. The Visiting Team consists of Thomas Chow (Leader), Borton Mao, Rain

Chen and Jayeoba Adekunle. They were received by the CRIN Team comprising of Dr. Sunday Agbeniyi (Director, Research Operations), Dr. Amos Famaye (Director, Budgeting, Monitoring and Evaluation), Dr. Moses Ogunlade (Director, Production and Substations), Dr. Samuel Orisajo (Director/Cocoa Programme Leader), Dr. Anna Muiyiwa (Director/Head, Crop Improvement) and Dr. Festus Olasupo (Breeder).

In his address, the CRIN Executive Director, Dr. Patrick Adebola, ably represented by Dr. Famaye, welcomed the guests and revealed the Institute's readiness to partner with FAAID on its vision, which is to bridge the gap between China's advanced agricultural technologies and Nigeria's rich agro-ecological potential, aligning their efforts with the Nigerian Government's Agricultural Promotion Policy (APP) and the African Union's Agenda 2063.

FAAID aims to create a partnership with CRIN that yields shared value, drives co-innovation, and ensures lasting prosperity for farmers and the broader agricultural commu-



-nity. Recognizing CRIN's outstanding achievements and deep expertise in cocoa research and agricultural innovation, FAAID proposes to collaborate with CRIN in Promoting advanced agricultural technologies and management practices to enhance crop yields and quality through the establishment of agritech demonstration farms; Providing technical training and guidance to farmers through CRIN's network, thereby enhancing their agricultural skills and knowledge; Supporting the establishment of agro-processing facilities to increase the value addition of agricultural products and create employment opportunities; and Organizing agritech exchange programs to introduce advanced agricultural technologies and best practices from both domestic and international sources.

It is believed that through the collaboration, FAAID can fully leverage CRIN's leadership in agricultural innovation to stimulate local economic development and improve the quality of life for farming communities across Nigeria.



ED Bags Award At Progressive Senior Staff Cooperative AGM



The CRIN Progressive Senior Staff Cooperative, Thrifts and Credit Society (C.T.C.S) held her Pre-Annual General Meeting (PRE-AGM) and AGM on March 25 and April 3, 2025 at the Events Centre of the Institute.

The Executive Director, Dr. Patrick Adebola, ably represented by Dr. A.O. Famaye (Director, Budget, Monitoring and Evaluation), appreciated the society for the tremendous progress made. He was particularly gladdened by the settlement of the entitlement of all retirees as well as the payment of all dividends to the beneficiaries. He however appealed that good leaders be elected by shunning sentiments when casting votes during the election. He further urged that fear of God and people's welfare be upheld.



Representative of the ED, Dr. Famaye, addressing the gathering

The outgoing President of the society, Mr. E.E.O. Agbebaku, outlined the achievements made during his tenure which



includes: of office as follows: Membership growth from 149 to 478 as at December 31, 2024; Increase in monthly deduction from ₦1.3 million to ₦16 million as at December 31, 2024; Settlement of all retirees' entitlements till date; Prompt payment of loans and emergencies to members; Sales of food stuffs and cooking gas to members who are in need; Payment of Christmas, Ileya savings and dividends from 2019 to 2024 without delay.



Mr. Agbebaku, outgoing President of the society delivering his speech

The occasion availed deserving members of the society awards; the Executive Director was given award of excellence in recognition of his selfless service, developmental projects, staff welfare, and passion for humanity.



Presentation of award of excellence of the ED to Dr. Famaye



Presentation of award to the manager of the society



Award presentation to Mr. Pelemo, the pioneer president of the society



Mr. Agbebaku presented with award at the occasion





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At the course of the election, 488 members were registered while 377 were accredited. The election was successfully held and the elected officers to serve for a renewable tenure of one-year term include: Mr. Bello Babajide (President), Mr. Adebayo Kayode Adekunle (Vice President), Mrs. Eruke Titiloye (Treasurer) and Mr. Akinsola Kabir (Secretary).



Voting exercise



Sorting and counting of votes

We wish the new executives of the CRIN Progressive Senior Staff Cooperative, Thrifts and Credit Society (C.T.C.S) a successful tenure.



The elected President, Mr. Bello (left), awarded

CRIN Holds Monthly Seminar

The 4th in the series of the 2025 monthly seminar was held on April 14, 2025 at the Lawrence Opeke Conference hall of the Institute. The program featured presentations from Mr. R.A. Buari, and Mrs. Y.O. Oladigbolu of Entomology and Plant Pathology Divisions, respectively. The seminar was chaired by Dr. O.S. Ibiremo (Director, Planning).



The Chairman of the seminar, Dr. Ibiremo (right) with the presenters



Imperatives of Climate Change, Its Effects on Insect Species Trajectories as it Cascades in Cocoa Agroecology - a review

- Buari, R. A.

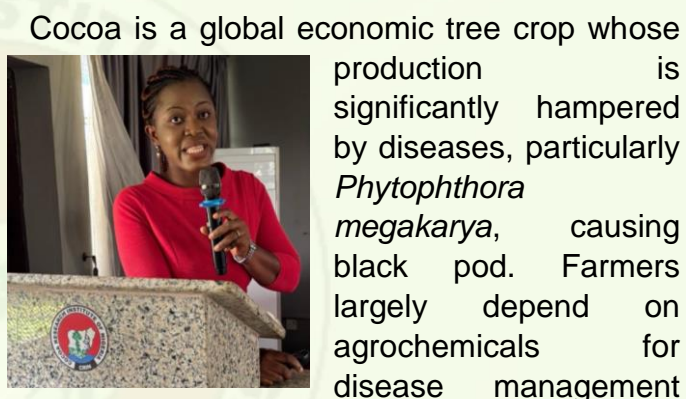


Over 1,500 insect species have been reported to infest cocoa plant but less than two percent are of genuine economic importance with the major insect pests identified as Brown Cocoa Mirids (*Sahlbergella singularis*), Tea Mosquito Bug (*Helopeltis* spp.), Cocoa Stem Borer (*Eulophonotus myrmeleon*), Cocoa Pod Borer (*Characoma stictigrapta*), mealybugs (*Planococcus* sp. and *Pseudococcus* sp.), Cocoa Shield Bug (*Bathycoelia thalassina*) among others. Several studies have discussed the occurrence, feeding preference, damage characteristics and control measures with the shifting climate patterns, particularly alterations in abiotic factors encompassing the climatic elements having significant consequences on the population dynamics of cocoa insect pests. The study made use of available data from literatures, online resources and annual reports at the CRIN Library to give a clearer picture of the resultant effects of abiotic stressors on cocoa plant as a yardstick for climate effects mitigation in insect pests' management. These climate changes exert direct influences over various aspects of the insects' intrinsic populations, including their developmental rates, survival rates, fecundity, dispersal capabilities as well as interactions with natural predators. The oscillations in the adult population of tea mosquito bug has been correlated with factors such as temperature, intense sunlight and rainfall. Incidence of the mealybugs is greatly influenced by temperature as eggs wont

hatch when the temperature is too low or too high. Therefore, seasonal incidence and influence of weather on insect pest development is of paramount importance in forecasting pest incidence and hence determining the time and method of control.

Management of Black Pod Disease (Phytophthora pod rot) of Cocoa using Botanical species (*Eucalyptus grandis* and *Datura stramonium*)

- Oladigbolu Y. O.



Cocoa is a global economic tree crop whose production is significantly hampered by diseases, particularly *Phytophthora megakarya*, causing black pod. Farmers largely depend on agrochemicals for disease management but abuse have led to resistant pathogen strains and environmental risks. In response to increasing demand for safe cocoa and conserve ecosystem, the study evaluated the antifungal potential of *Eucalyptus grandis* and *Datura stramonium* extracts as plant – based alternatives to manage black pod of cocoa. Aqueous and ethanolic extracts of the botanicals were assayed *in-vitro* and *in-vivo* at varying concentrations. There were four concentrations of aqueous and five of ethanolic extracts assessed *in-vitro* using a Completely Randomized Design (CRD) with three replicates. Field trials were conducted in a Randomized Complete Block Design (RCBD) on F₃ Amazon cocoa plots with record of black pod disease. The 4% aqueous extracts concentration of *D. stramonium* and *E. grandis* reduced the mycelial growth of *P. megakarya* by 68.8% and 67.5%, respectively, at 7 DAI.



The 3% concentration mixture of both botanicals also inhibited mycelial growth of *Phytophthora* by 65.2%, while the ethanolic extracts showed greater efficacy, with the 1% concentration achieving 76% inhibition in-vitro. Zero incidence of black pod recorded on field application of 1% ethanolic extracts of *D. stramonium* and *E. grandis* at 10 WAS, which was significantly similar to the performance of synthetic fungicide. These findings proof the bio-efficacy of the botanicals, however multi-locational trials should be conducted to substantiate the effectiveness for sustainable management of black pod and cocoa health.

T.I. Hassan. The scientists of the Extension Division, Dr. Uwagboe and Mr. Awodunmila, took turns to acquaint the visitors with the Institute's mandates and technologies. They proceeded to the nursery for field exposures; Value Added Research Department for exposure on the technologies developed by the Institute; Entomology and Plant Pathology Divisions for pests and diseases exposures; and finally to the fermentary section for cocoa fermentation training.



Cross section of the students of YABATECH



Dr. Uwagboe addressing the staff and students

Excursion to the Institute

Students of the Agricultural Extension, Yaba College of Technology (YABATECH) were in the Institute on Thursday, April 24, 2025 for an excursion and were received at the expansive Lawrence Opeke Conference Hall. They were led by one of their Lecturers, Mr.



Group photograph with the visitors



CRIN Scientists Attended MTP Edition 19 Training in Ghana

The Institute was represented at the 19th edition of the cashew Master Training Program (MTP) held from February 10–14, 2025 in Ghana. Dr. Uche Asogwa, Mr. Olufemi Aremu-Dele, Olaitan Paul Babatunde and Mrs. Yetunde Ololade Oladigbolu attended the programme. The 1st session of the 2025 Cashew Master Training Program (MTP) Edition 19 took place in Sunyani, Ghana, with the objective of enhancing participants' understanding of the cashew value chain, market dynamics, and training material development, while also fostering personal and professional growth. Below is the summary of the training activities:

Day 1: Trainer's Attitude and Cashew Production Overview

Participants also received an overview of global cashew production, country-specific data, and nutritional aspects under the theme "Cashew: Great Food, Smart Nutrition."

Day 2: Public Speaking and Cashew Market Value Chain

Sessions included "Standards and Certification for Processing," "Cashew Market and Value Chain Concept," and "Public Speaking Skills." The latter built participants' confidence and clarity in communication, while the former provided insight into processing standards like HACCP and Fairtrade. Discussions emphasized Africa's significant role in cashew production and Nigeria's need to boost local processing to enhance competitiveness.

Day 3: Field Trip to Nimdee Hyeren Processing Factory

A practical learning experience was offered through a visit to a semi-automated cashew processing facility. Participants observed all

stages of processing from drying to storage and interacted with factory personnel, who shared their challenges and support received from GIZ/MOVE. The integration of a dedicated plantation to secure raw materials and favourable government policy was particularly noted by the factory personnel to improve their production.

Day 4: Standards, Certification, and Facilitation Skills

Training continued with practical sessions on training material development, data interpretation, and facilitation skills. Participants designed and presented training materials; for example, a poster illustrating cashew processing stages. A facilitation practical followed, allowing participants to lead sessions and receive feedback on their delivery.

Day 5: Evaluation and Conclusion

The final day covered "Processing Machine Selection, Operations and Maintenance," "Design of Adult Training Programme," and "The GIZ/MOVE Learning Courses." An expert database was introduced, and participants evaluated the week-long training. The session concluded with a closing dinner and reflections on lessons learned.



From the left: Dr. Asogwa Uche, Mrs. Oladigbolu Yetunde Ololade, Mr. Aremu-Dele Olufemi and Mr. Babatunde Olaitan Paul during the Training Manual Development practical session.



Health News

Diphtheria – Mrs. Bosede Famaye



Diphtheria is a serious bacterial infection caused by *Corynebacterium diphtheriae*. It primarily affects the throat and nose, but can also affect other parts of the body. It is a serious bacterial infection that can have severe consequences if left untreated.

Diphtheria is spread through respiratory droplets such as those produced by coughing or sneezing. People in close contact with an infected person such as family members or healthcare workers are at risk of contracting the disease. Individuals who are under-vaccinated are more susceptible to contracting Diphtheria.

Signs and symptoms of Diphtheria includes: Severe sore throat, which is often the first symptom; High fever, often above 102°F (39°C), is common; Lymph nodes in the neck may become swollen and tender; Thick, gray membrane may form in the throat, which can cause breathing difficulties; The voice may become hoarse or raspy; A cough may develop which can be severe; Nasal discharge; Tiredness; and Difficulty breathing or rapid breathing.

People who are at increased risk of catching Diphtheria includes:

- Children and adults who don't have up-to-date vaccinations.
- People living in crowded or unsanitary conditions.
- Anyone who travels to an area where

Diphtheria infections are more common.

- Anyone who travels to an area where Diphtheria infections are more common.

Prevention of Diphtheria includes:

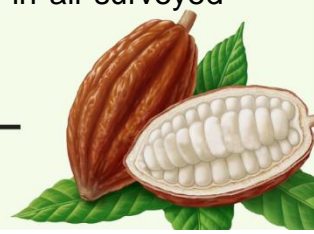
- Vaccination: which is the most effective way to prevent Diphtheria. The Diphtheria vaccine is typically given in combination with tetanus and pertussis vaccine (DTaP).
- Good hygiene: practising good hygiene such as washing hands regularly, can help prevent the spread of Diphtheria.
- Avoid close contact: Avoiding close contact with people who have Diphtheria can help prevent transmission.

Vaccination is the most effective way to prevent Diphtheria, and prompt treatment with antibiotics and supportive care can help manage symptoms and prevent complications.

Market Survey

Price Report for April 2025

This report gives the analysis of cocoa and cashew prices across selected states in April, 2025. Data were collected from key cocoa and cashew producing areas within the states, and average prices were calculated accordingly. In this month, Cocoa prices experienced an upward trend in all surveyed states during April. The most



significant increase was observed in Abia State, where prices surged by over 30% compared to the previous month. Despite this sharp rise, Abia still recorded the lowest average price at ₦9,500 per kg. Conversely, the highest cocoa price was recorded in Kogi State, reaching ₦11,500 per kg.

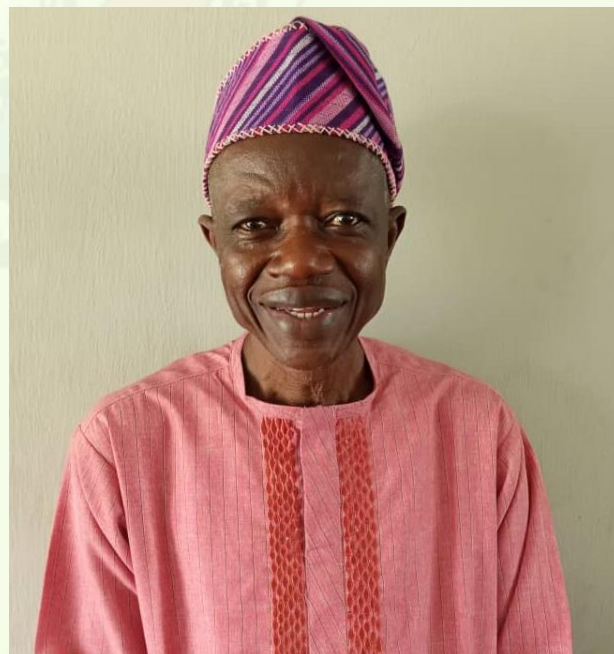
In contrast, cashew prices generally declined across the states, with the exception of Kogi and Kwara. While Kogi saw no change, Kwara reported a modest 5% increase. Enugu State recorded the most substantial decline, with prices dropping by approximately 7.0% from March levels. The highest average cashew price was ₦1,400 per kg in Oyo State, while the lowest was ₦1,050 per kg in Kwara State. These price movements reflect the prevailing dynamics of supply and demand in the market during the reporting period.

CASHEW COST PER KG (LOCAL PRICE), April, 2025

| State | Minimum Price (₦) | Maximum Price (₦) | Average Price (₦) |
|-------|-------------------|-------------------|-------------------|
| Abia | 1100 | 1300 | 1200 |
| Enugu | 1300 | 1400 | 1350 |
| Kogi | 1100 | 1200 | 1150 |
| Kwara | 1000 | 1100 | 1050 |
| Osun | 1000 | 1200 | 1100 |
| Oyo | 1300 | 1500 | 1400 |

Source: CRIN Survey, 2025
Economics and Statistics Sections

Staff of the Month



Dr. Amos Olatunde Famaye was born on 22 July, 1960 to Chief Matthew Famaye and Madam Eunice Amuwaolorun Famaye at Emure-Ile, Owo Local Government. He attended Our Saviour Primary School

COCOA COST PER KG (LOCAL PRICE), April 2025

| State | Minimum price (₦) | Maximum price (₦) | Average price (₦) |
|-------------|-------------------|-------------------|-------------------|
| Abia | 9000 | 10000 | 9500 |
| Cross River | 10000 | 11000 | 10500 |
| Kogi | 11000 | 12000 | 11500 |
| Kwara | 9500 | 10000 | 9750 |
| Ondo | 10000 | 11000 | 10500 |
| Osun | 11000 | 11000 | 11000 |
| Oyo | 10000 | 10500 | 10250 |

Source: CRIN Survey, 2025
Economics and Statistics Sections



Emure-Ile (1965-1970), Methodist High School Owo (1972-1976), School of Agriculture, Akure (Formerly University of Ife) (1979-1981). He obtained his Bachelor of Science (BSc Hons) in Agriculture (Crop Science) from University of Ibadan, Ibadan in 1987, Master of Science (MSc) in Agronomy and Doctor of Philosophy (PhD) in Crop Production/Physiology from same University of Ibadan in 1992 and 2000, respectively. He joined the service of the Cocoa Research Institute of Nigeria (CRIN) in November, 1993 as Research Officer 1 and rose to the position of Director of Research in October, 2014.

With over three decades of consistent commitment and dedication to research work, Dr. Famaye has worked in all five national mandate crops of CRIN (Cocoa, Kola, Coffee, Cashew and Tea). Apart from Nigeria, he has travelled across the globe to present papers at conferences and workshops. He has held several leadership positions in CRIN till date. These include: Head of Agronomy Section; Head of Agronomy and Soil Division; Coordinator, CRIN Ajassor Substation; Head of Station CRIN Udonmora, Edo State; Head of Department, Production and Substations; Leader, Coffee Research Programme; Leader, Farming System Research Programme; Chairman Board of Survey; Chairman, Anti-Corruption and Transparency Monitoring Unit (ACTU) of ICPC; Member of CRIN Internal Management Committee; and presently the Head of Department, Budget, Monitoring and Evaluation Directorate.

Dr. Famaye is a member and Fellow of the Institute of Management Consultants (IMC-Nigeria), Horticultural Society of Nigeria (HORTSON) and International Association of Research Scholars and Administrators (IARSA). He is also a member of Institute of Soil Science Nigeria (ISSN), Weed Science Society of Nigeria (WSSN), Science

Association of Nigeria (SAN), International Society of Horticultural Sciences (ISHS) and International Society of Conservation Biology. He enjoyed the Institute training for his PhD programme from 1994 to 2000 at the University of Ibadan. He has several local and International high impact scientific journals, book publications and conference proceedings which are germane to the nation's food security.

Dr. Famaye is a very articulate, industrious, seasoned scientist with good leadership attributes whose work ethics is characterized by integrity and excellence. He is happily married with children.

May Birthday Galore

Hearty birthday celebrations to the members of staff that will be celebrating their birthdays this month. Wishing you all the very best in your life endeavours. Congratulations!



| | |
|---------------------------|--------|
| Fajutu Kayode Samuel | 02-May |
| Adejoro Matilda Ozemwogie | 03-May |
| Nwaolise Felicia | 03-May |
| Oludayo Gbolagade | 04-May |
| Apanisile Olusola | 05-May |





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|------------------------------|--------|------------------------------|--------|
| Daniel Mezack Andrew | 05-May | Adeleke Sunday Akanji | 17-May |
| John Muo | 05-May | Dauda Oluwoyin | 17-May |
| Oguntinyinbo Waheed | 05-May | Orimoloye Philo Olotie | 17-May |
| Oladejo Adeleke Omineye | 05-May | Asogwa Evaretus Uche | 18-May |
| Oladimeji Lynda Taye | 05-May | Nome Peter | 20-May |
| Orisasona Taye Matthew | 05-May | Oshodi Veronica | 20-May |
| Taiwo Banke Motunrayo | 05-May | Ayegboyin Kayode Olufemi | 21-May |
| Ayidu Temitope | 06-May | Ganiyu Bolanle Risikat | 21-May |
| Olaniran Omolara Caroline | 06-May | Onatunde-Onanuga Joseph O. | 21-May |
| Oluyole Kayode Akanji | 07-May | Nduka Beatrice Abanum | 22-May |
| Ogundeji Adekunle Kayode | 08-May | Ogunwolu Qudus | 22-May |
| Adekanbi Aderemi Adeniyi | 09-May | Oyebanjo Temitope Omotayo | 22-May |
| Buari Rasheed | 09-May | Onojo Joseph | 23-May |
| Raji Yashirat | 09-May | Ene Amaka Perpetua | 24-May |
| Alih Mohammed | 10-May | Awe Funke Christiana | 25-May |
| Ayidu Sunday | 10-May | Muritala Wasiu | 25-May |
| Imumolen Jeffery | 10-May | Ndah Alfa | 25-May |
| Makinde Bunmi | 10-May | Ogunkunle Gbadebo | 25-May |
| Atanda Jamiu Folorunsho | 11-May | Oladiyipo Olabisi | 25-May |
| Adeoye Stella Abosede | 12-May | Shittu Abu Sadik | 25-May |
| Dada Olayinka Alfred | 12-May | Yahaya Lateef Eugene | 25-May |
| Olutade Oluwabukola Fadekemi | 12-May | Adenuga Omotayo | 26-May |
| Falana Maria | 13-May | Amodu Ayodele | 26-May |
| Owolabi Iyabo Olufunke | 13-May | Ogunjobi Taiwo Elizabeth | 26-May |
| Oyeniran Adejoke | 13-May | Olayiwola Iyabo | 26-May |
| Wada Sunday | 13-May | Olubisaye Dare Joshua | 26-May |
| Sobowale Ibrahim Olalekan | 14-May | Paul Anaticha | 26-May |
| Adeoye Wuraola | 15-May | Agbor Charles Eyang | 27-May |
| Boluwade Sunday | 15-May | Akanji Azeez Abiodun | 27-May |
| Ehimme Charles | 15-May | Olorunmota Rosemary Temilade | 27-May |
| Eubodaghe Monday | 15-May | Magaji Jonathan Danladi | 27-May |
| Oyemuwa John | 15-May | Bakare Abibat | 28-May |
| Solomon Oluremi | 15-May | Ganiyu Olubode | 28-May |
| Adeyemo Stephen | 16-May | Oloyede Amos Adegbola | 28-May |
| Ajayi Aremu John | 16-May | Adewale Temilade Olujope | 30-May |
| Odugbela Oluwasina | 16-May | Adio Stephen | 30-May |
| Onanuga Odutola | 16-May | Bello Jelili Ademola | 31-May |
| Salami Mufutau | 16-May | | |





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www.crin.gov.ng directorcrin@yahoo.com +2348039784154

