



CRIN Herald

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

ISSUE: 26 (April, 2023)

Realignment of CRIN Research Focus



The Scientists in the Institute are taking turns to hold research programme meetings in order to fine tune research themes and tasks thereby realigning the direction of year 2023 research activities. This is

in keeping with the charge of the Executive Director, Dr. Patrick Adebola, for a departure from individual research focus to Institutional theme that cuts across all research disciplines. The research programmes were equally charged to generate proposals for external funding to augment the lean research funding from the Federal Government coffers. This was reiterated by the Director (Research Operations), Dr. S.O. Agbeniyi, during the meeting with the new Programme Leaders (PLs) necessitating a paradigm shift in the research approach. The PLs are: Dr. S.B. Orisajo (Cocoa), Dr. C.O. Jayeola (Value Addition Research), Dr. M.O. Okeniyi (Tea), Dr. K.A. Oluyole (Coffee), Dr. K.B. Adejobi (Kola), Dr. O.O. Adeigbe (Cashew), and Dr. S.A. Adeosun (Farming Systems Research). The programmes have held intensive research-driven meetings and constituted grant winning teams.

Senior Staff Promotion Examination

The promotion examination for the Senior Staff of the Institute was held on February 28, 2023. It was a demonstration of the Executive Director, Dr. Patrick Adebola's



commitment, without fail, to the welfare of the staff. The examination cut across all cadres of eligible senior staff from both the

Headquarters and the Substations. The representatives of the Agricultural Research Council of Nigeria (ARCN), the Director (Administration), Alhaji Mahmood Bello, and the Federal Ministry of Agriculture and Rural Development (FMARD), the Deputy Director (HRM II), Mrs Toyin Showemimo, were on ground to supervise the exercise.



ARCN and FMARD representatives with ED discussing on effective promotion coordination

A total of 138 staff partook in the examination, while 8 staff were on conversion from one cadre to another.





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Cross section of staff during the promotion exercise

ASURI Holds Election

The Academic Staff Union of Research Institutions (ASURI) CRIN Branch held election into the offices of the Union on March 6, 2023. The exercise was hailed as the overall best by Comrade Owolabi Gbenga, the representative of the ASURI National body. He extended the fraternal greetings of the National Secretary of ASURI, Prof. T.C.N. Ndubuaku and wished the Institute well. The Executive Director, Dr. Patrick Adebola, represented by the Director (Research Operations), appreciated the outgoing Executives for the harmonious working relationship he enjoyed during their tenure of office and implored the incoming executives to extend similar hands of fellowship to his administration. The outgoing Chairman of ASURI, Dr. Kayode Ayegboyin showered encomium on the ED for the peaceful atmosphere he has successfully catalysed in the Institute. He highlighted the successful payment of returned salaries, resettlement

allowances as well as promotion of stagnated staff as some of his achievements during his tenure of office. The Vice Chairman, Comrade Efe Asowata corroborated this by adding implementation of rotational headship and employment of researchers into the Research Officer 1 cadre as additional achievements of the ED. The following researchers were eventually elected: Dr. Kayode Ayegboyin (Chairman), Mr. Efe Asowata (Vice Chairman), Dr. Osasogie Ugioro (Secretary), Mrs. Favour Okunade (Asst. Secretary), Dr (Mrs.) Taiwo Ogunjobi (Treasurer), Mr. Andrew Daniel (Financial Secretary), Mr. Ibrahim Abdulkarim (PRO), and Dr. Mohammed Babanitsa (Internal Auditor). The tenure of the new executives is three years.



Some IMC members and ASURI National Representative Com. Owolabi Gbenga (left)



Cross section of researchers at the event





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The voting exercise by ASURI members



The swearing in ceremony of the new executives



The collation of the votes by the electoral body

NHIS Captures Newly Recruited Staff

The National Health Insurance Scheme (NHIS) was at the Institute on four days working visit from March 8 to 11, 2023 for the capturing of the newly recruited staff into their database. This is to facilitate their access to Medicare at subsidised rate. The staff of NHIS worked in collaboration with the staff of Admin. and Supplies of the Institute.



The presentation of the certificate of return to the ASURI CRIN Branch Chairman, Dr. Kayode Ayegboyin (right) by the Chairman of the Electoral Committee, Dr. Samuel Orisajo



Ag. Head, Admin and Supplies, Mr. Onatunde Onanuga (left) with the NHIS Staff



Scrutiny of the staff prior to capturing





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Cross section of staff ready for capturing

ARCN News

West and Central African Council for Agriculture Research And Development (CORAF - WECARD) And Agricultural Research Council Of Nigeria (ARCN) Jointly Organises Training of Youths Of West African Countries on Aquaculture

In his welcome address, the Executive Secretary (ES) of ARCEN, Prof. Garba Hamidu Sharubutu mni, ably represented by the Director of Livestock, Dr. Danjuma Kidda, expressed delight and welcomed the invited guests and participants while noting that empowering the youths in aquaculture could not have come at a better time than now when it's gaining global attention as one of the major sources of animal protein. The ES opined that as a key player in global aquaculture, the choice of Nigeria to train hundreds of youths on Agro-Sylvo Pastoral and Halietic Value Chain on the module of aquaculture is not by chance but a well-deserved honour. In his remarks, the Federal Director of Fisheries, Dr Imeh Umoh, ably represented by Mr Salihu Abdullahi Bwala, indicated that fish is an important animal protein especially for adults while noting the

huge gap between the demand and production of aquaculture in Nigeria. According to him, the low production is being substituted with importation which is not good for the economy because it affects our foreign exchange. He pointed out that the new backward integration policy aimed at curbing the excessive importation of fish into the country.

In his keynote address, the Hon. Minister of Agriculture, Dr. Muhammad Mahmoud Abubakar, ably represented by the Director of Extension Services, Engr. Frank, indicated that fish farming is no longer dependent on availability of suitable site but on technology. According to the Hon. Minister, the training of youths on Agro-Sylvo Pastoral and Halietic Value Chains on module of aquaculture is a welcome development. He noted that the new technology in fish farming will help in reducing the rate of youth unemployment. At the opening session were the various key stakeholders who gave their goodwill messages. The Ag. Head of Department, Fisheries and Aquaculture in ARCEN, Dr. Charity Obetta, gave her vote of thanks while also highlighting the importance of the workshop to the participants which she noted would be of tremendous benefits to them.



The distinguished guests at the training programme





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Group photograph comprising the trainees, trainers and guests



Exchange of gifts between the guests and the host

ARCN Proposal Development Committee Visits Federal Ministry of Environment

The Proposal Development Committee of the Agricultural Research Council of Nigeria (ARCN) paid a scheduled courtesy visit to the Department of Climate Change, Federal Ministry of Environment at Green Building, Maitama, Abuja on Wednesday 22nd March, 2023. The Committee was led by Dr. Umar Umar Abdullahi. The meeting discussed areas of mutual benefit and collaboration between ARCN and Department of Climate Change of the Federal Ministry of Environment. The Committee deeply appreciated the ES, Prof. Garba Hamidu Sharubutu (mni) for graciously approving the visit.



Group photograph



Interactive session during the visit

Health News

Breast Cancer



Breast cancer is the most common invasive cancer in females. It is also a leading cause of cancer deaths among females. Advances in screening and treatment for breast cancer have improved survival rates dramatically. Overall, the rate of breast cancer declined by about 40% between 1989 and 2017.





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The chance of dying from breast cancer is around 1 in 38 (2.6%). About 281,550 new cases of invasive breast cancer will be diagnosed by the end of 2023. About 43,600 deaths from breast cancer are likely to occur by the end of 2023. Breast cancer prevention starts with healthy habits. Research shows that lifestyle changes can decrease the risk of breast cancer, even in women at high risk. To lower your risk: Limit alcohol - the more alcohol you drink, the greater your risk of developing breast cancer; Maintain a healthy weight; Be physically active; Breast-feed - breast-feeding might play a role in breast cancer prevention; Limit postmenopausal hormone therapy - combination hormone therapy may increase the risk of breast cancer. Talk with your doctor about the risks and benefits of hormone therapy.

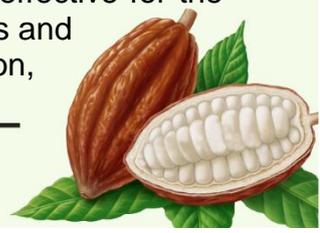
Successful PhD Defense: Dr. Babatunde Ayodeji OGUNDEJI



Congratulations to Dr. B. A. Ogundeji for successfully defending his PhD thesis on "The use of selected botanicals and nanoparticles to control toxigenic moulds associated with stored cocoa beans" at the Federal University of Agriculture, Abeokuta

(FUNAAB) on March 22, 2023. The research sought to develop cheap broad spectrum bio-fungicide(s) for the control of toxigenic moulds and mycotoxin production in stored cocoa beans. Molecular diversity of toxigenic moulds (*A. flavus*) associated with dried fermented cocoa beans obtained from randomly selected cocoa warehouses across Southwest Nigeria was determined using standard methods. Varying concentrations

(1.00, 2.00, 4.00 and 5.00%) of ash and biochar forms of scent leaf (branches), neem (branches), rice husk, saw dust (*Albizia zygia*), as well as silver nanoparticles (AgNPs) (2.50, 5.00, 7.50, 10.00%) of neem and scent leaf extracts were tested *in-vitro* against two pathogenic strains of *A. flavus* and *A. ochraceous* isolated from stored cocoa beans during different seasons of the year. Freshly prepared dried fermented F3 Amazon and Tc series cocoa beans varieties were treated *in-vivo* with ash (20g and 40g ash/kg cocoa beans) and AgNPs (75ml and 100ml AgNPs/kg cocoa beans) that performed better in the *in-vitro* assay and stored for 120 days under varied storage conditions (29-34°C/RH 55-65% and 29-31°C/RH 85-95%). Proximate, heavy metals and fungal mycotoxin/secondary metabolite profiles of the treated beans were determined before and after the period of storage using standard methods. The treatment that gave best result for *in-vivo* assay was subjected to cytotoxicity testing (using albino rats) and sensory evaluation. Fifty out of the characterized 51 mostly occurring toxigenic moulds (*Aspergillus* spp.) isolated from the collected cocoa beans samples showed 99.00-100.00% molecular similarity with known *A. flavus* strains, while only one showed 100% similarity with *A. tamari*. The *in-vitro* anti-microbial assay revealed that only neem ash and scent leaf ash treatments with mycelia inhibitions 46.80-93.40% and 33.41-93.34% respectively, competed favourably with the positive control. Ash and AgNP treatments used *in-vivo* significantly reduced the levels of *Aspergillus*, *Penicillium* and *Fusarium* mycotoxins/secondary metabolites ($P \leq 0.05$) on the F3 Amazon and Tc series cocoa beans varieties. Proximate parameters and heavy metals tested in both treated and untreated cocoa beans samples were not significantly different ($P \leq 0.05$) at the end of storage. Neem ash treatments at 20 and 40 g/kg cocoa beans were most effective for the control of toxigenic mouldiness and storage moulds toxin production,





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and yet did not show any cytotoxic effect or reduced sensory quality of the beans. The two treatments (20g and 40g neem ash/kg cocoa) are, therefore, recommended as much safer bio-pesticide alternatives for preservation of dried fermented cocoa beans. Findings from this study are expected to speed-up CRIN efforts at developing bio-pesticides to replace the age-long use of synthetic chemicals in the control of storage toxin producing moulds affecting CRIN mandate crops along their production value chains.

Staff of the Month: Mr Ahmad Gold



Mr. Ahmad Gold was born on June 08, 1983 to the family of Alhaji and Alhaja Mudi Gold in Ilorin, Kwara State. He attended Abdulazeez Memorial Nursery and Primary school, Ilorin where he obtained first school

leaving certificate in 1992. He then proceeded to Federal Government College Ilorin for his post primary education and bagged West African School Leaving Certificate in year 2000. In pursuance of higher education, he attended the Federal University of Technology Minna, Niger State from 2000 to 2008 where he studied Civil Engineering and obtained Bachelor in Engineering (B.Eng.). He equally did Post-graduate diploma in Management at the Ladoke Akintola University of Technology, Ogbomoso, Oyo State from 2010 to 2011. Mr. Gold joined the service of CRIN in March 2011 as Higher Technical Officer (HTO) and rose through the rank to his present cadre as Principal Technical Officer (PTO). He is happily married to Mrs. Bola Nafisat Gold and they are blessed with two lovely children.

April 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!



Emmanuel Tolulope Angela	01-Apr
Gbalajobi Kehinde	01-Apr
Olabiyi Bosede Mojisola	01-Apr
Adekoya Olaoluwa Adebayo	02-Apr
Adesoji Ronke	02-Apr
Bakare Adeyemi	02-Apr
Patrick Caroline	02-Apr
Fawusi Oluwatobi Amoo	03-Apr
Rabiu Akeem Adekunle	03-Apr
Ariyibi Esther Olayemi	04-Apr
Bakare Mary Abike	04-Apr
Enya Monday	04-Apr
Farinola Patrick Adekunle	04-Apr
Obi Esther Ogom	04-Apr
Duruaku Ogochukwu Maureen	06-Apr
Gimba David Augustine	06-Apr
Ishola Ropo	07-Apr
Ismaila Tajudeen	07-Apr
Ajinisi Mary Oluwaponmile	08-Apr
Isaac Emmanuel	08-Apr
Adebayo Olusola	09-Apr





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Isong Ekama Blessing	09-Apr	Babatunde Adeyinka Sherifat	26-Apr
Okontah Kehinde	09-Apr	Dahiru Adamu Tanko	26-Apr
Agbongiarhuoyi Eghe Anthony	10-Apr	Dare Ayo Omokore	26-Apr
Akinsola Kabir	10-Apr	Edeh Tochukwu	26-Apr
Olawole Florence Olufunmilola	10-Apr	Onyemachi Oyinyechi Fidelia	26-Apr
Onifade Adebisi	10-Apr	Akinrelere Oluwakemi Abosedo	27-Apr
Akinola Wasiu	11-Apr	Ifidon Ikhusho	27-Apr
Ehidiamen Joseph	11-Apr	Agbebaku Halima Caroline	28-Apr
Alawode Suleman Adewale	12-Apr	Matthews Dare Feyisayo	28-Apr
Oyekunle Emmanuel	13-Apr	Wakaps Francis John	28-Apr
Adewoye Gabriel Adebowale	14-Apr	Oyinlade Folake Banke	28-Apr
Lawal Dorcas Oyinyechi	15-Apr	Ikokoh Loveth Ufuoma	29-Apr
Okpanachi Nda	15-Apr	Amosu Sunday	29-Apr
Abdullahi Olasunkanmi	17-Apr	Salami Kamoru	29-Apr
Anijese Funmilayo	17-Apr	Ola Olanike	30-Apr
Huseini Usman Dang	17-Apr	Sekoni Olaide Sakirat	30-Apr
Olorungbami Nike	17-Apr		
Adeyanju Kehinde Hussain	18-Apr		
Ibitoye Folake	18-Apr		
Ogunde Oluwatosin Ajoke	18-Apr		
Ojo Olawale	19-Apr		
Ologunwa Tope C.	19-Apr		
Adeyemo Samuel Ayanfe	20-Apr		
Ajewole Bamidele	20-Apr		
Akinyode Olubisi Emily	20-Apr		
Aransi Ramoni	20-Apr		
Idowu Omoleke	20-Apr		
Iruobe Elizebeth	20-Apr		
Oni Nike	20-Apr		
Agboola Lydia Ololade	21-Apr		
Fadahunsi Fatai Salami	22-Apr		
Imade Charles Osa	22-Apr		
Ojewale Oluwafemi Ezekiel	22-Apr		
Ademola Sunday	24-Apr		
Lawal Kafayat	24-Apr		
Nweke Paul Chukwu	24-Apr		
Samuel Ladi Esther	24-Apr		
Babalola Remi	25-Apr		
Oyawale Muniru Babatunde	25-Apr		

