



ISSUE: 37 (March, 2024)

Milestone by CRIN Flavour Quality Lab



On February 8, 2024, Cacao of Excellence announced the 2023 Awards winners in Amsterdam, The Netherlands, honouring top-quality cacao farming while supporting and

encouraging more sustainable production. Juan Lucas Restrepo, Director General of the Alliance of Bioversity International and CIAT, congratulated the producers for their dedication and outstanding achievements, highlighting the importance of their role in shaping the future of cocoa. These Awards celebrate producers' hard work, expertise, and commitment to elevating cacao quality and sustainability. In addition, the 2023 edition marked a milestone with the introduction of the new Cacao of Excellence R&D Laboratory, equipped with exceptional equipment, which received, analyzed, and processed all cocoa samples. During the occasion, the Gold, Silver and Bronze winners of the 2023 Cacao of Excellence Awards for the Africa and Indian ocean region were revealed. The Gold medal was awarded to Komi Aziague from Togo, while Okongor Obasi, Kokoa Kamili and Komla Yebo from Nigeria, Tanzania and Togo, respectively, clinched the silver medal. Also, Ehimika Emmanuel from Nigeria grabbed the bronze medal with Cameroon, Congo, Côte d'Ivoire, Ghana and Togo. The CRIN Executive Director, Dr. Patrick Adebola, received the awards on behalf of Nigeria at the event. This was a celebration of a major milestone by the Flavour Quality Laboratory (FQL) of the Institute that screened all the samples from Nigeria.

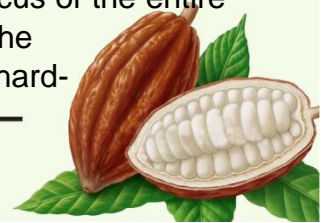


Dr. Patrick Adebola, ED CRIN (second right) with the silver and bronze awards

Happy Birthday to a Quintessential Leader and Purpose-driven Strategist



The Executive Director (ED) of the Institute, Dr Patrick Adebola, turned a year older on February 23, 2024. It was indeed a celebration of a life very well spent by teeming population of staff of the Institute whose lives has been touched in so many positive ways by the celebrant. Dr. Patrick Adebola is an International Agricultural Research Scientist with strong background in Applied Genetics and Plant Breeding. His dominance and mastery of his chosen field is exceptional. Little wonder he is regarded as an icon of inestimable value in CRIN. Having a clear understanding of the apparent challenges of CRIN over the years, he has taken strategic steps and far reaching decisions to urgently restructure and re-engineer the administrative apparatus for a more effective performance. The ED, on the helm of affairs in CRIN, has endeared himself to every cadre of staff; his fame is even noised abroad among the host communities. He initiated projects and well thought out programmes all geared towards enhancing the infrastructure and improvement of staff welfare. With these, the Institute experienced harmony and staff morale was boosted. These feat enhanced the refocus of the entire workforce towards achieving the core mandate of CRIN. He is hard-





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working, devoted, highly disciplined, cerebral, accommodating and quintessential plant breeding scientist who took the Institute by the storm and left his indelible footprints within three years in office as the Executive Director/CEO. He is an awardee of the National Productivity Order of Merit. Little wonder the social media platforms of the Institute is awash with several good will messages in celebration of the man that specializes in bringing smiles to the faces of people. His sleeping and waking thought appears always centred on making life bearable for all and sundry. The heartfelt prayers of everyone for Dr. Adebola is that God should continually bless him with good health, endue him with more wisdom and keep him alive for a very long time to fulfil all the good purpose of God for his life. Hearty congratulations, Sir!

In-House Seminar Programme

The Institute organised in-house seminar on February 12, 2024. Three presentations were done by staff of Agronomy Division and Value Added Research (VAR) as well as the Account Department. The presentations which were centred on Tea science in CRIN: field impact of varied light intensities in the lowland; Influence of redox-modulators on thiyl radical-mediated degradation of biomolecules and Budget preparation and implementation under IPSAS were presented by Dr. S.A. Adeosun, Dr. Bunmi O. Olorundare and Mr. Oluwatoyin Sorinolu, respectively. The occasion was chaired by Dr. O.S. Ibiremo, Director, Planning.



The Chairman, Dr. Ibiremo (middle), with the presenters and rapporteurs



Presentation by Dr. Adeosun



Presentations by Dr. Olorundare



Presentation by Mr. Sorinolu



Cross section of the participants





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Tea Science in CRIN: Field Impacts of Varied Light Intensities in the Lowland

Abstract by Dr. S.A. Adeosun



Tea plant is a good source of antioxidants, but its production in Nigeria is largely confined to the Mambilla highland. To meet the increasing demand, there is need to expand its cultivation to the lowland.

However, tea production is significantly influenced by Light Intensity (LI) in the lowland. Information on response of tea to different LI in the lowland agro-ecology is scanty. Therefore, field performance of tea under regulated LI was investigated in Cocoa Research Institute of Nigeria Stations in Ibadan and Owena. The response of two tea cultivars, C143 and C318, under three LI achieved with sheds of different Palm Frond Layers (PFL): 45% LI (4.57×10^4 lux) (2PFL); 65% LI (6.75×10^4 lux) (1PFL) and 100% LI (1.04×10^5 lux) (control) was evaluated on the field. Tea performance was further evaluated under three plantain populations/ha (2,222/ha; 1,111/ha and 0/ha). Both experiments were arranged in a Randomised Complete Block Design in four replicates. Data on Plant Height (PH, cm), Leaf Area (LA, cm^2), Survival Count (SC), Dry Matter (DM, g), chlorophyll and carotenoids (mg/g) were obtained following standard procedures. Data were analysed with descriptive statistics and ANOVA at $\alpha_{0.05}$. The results show that Cultivar 143 performed significantly better than C318 in PH, LA, DM and SC in Ibadan and Owena. The L2 was superior to other LI by increasing the DM by 616.5% and 951.1% at Ibadan and Owena, respectively. In Ibadan, chlorophyll and carotenoids increased from 1.29 and 0.41 mg/g, respectively in C143 under 100% LI to 2.93 and 1.13 mg/g in C318 under 45% LI; while in

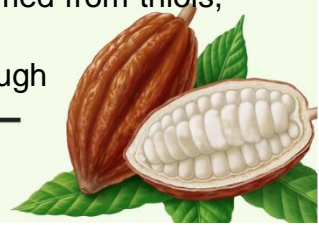
Owena, chlorophyll and carotenoids increased from 1.48 and 0.34 mg/g, respectively in C143 under 100% LI to 2.42 and 0.52 mg/g in C318 under 45% LI. In Ibadan, plantain density of 2222 increased PH by 69% in comparison with 1111 plantain/ha, and by 320% compared to zero shade. In Owena, 2222 plantain/ha increased PH by 27% in comparison with 1111 plantain/ha, and by 64% compared to zero shade. Highest SC of 79.43% and 78.69% in Ibadan and Owena, respectively was caused by 2222 plantain/ha. The highest LA, 709.97 and 6295.84 cm^2 in Ibadan and Owena, respectively were achieved in C143 under 2222 plantain/ha. In conclusion, light intensity at 45% (4.57×10^4 lux) achieved with 2222 plantain/ha enhanced the growth, seedling establishment, chlorophyll and carotenoids contents of C143 and C318 tea in Ibadan and Owena.

Influence of Redox-modulators on Thiyl Radical-mediated Degradation of Bio-molecules

Abstract by Dr. Bunmi O. Olorundare



The normal aerobic metabolic reaction occurring in cell mitochondrial of living organisms generates hydroxyl radicals ($\cdot\text{OH}$). Increased formation of $\cdot\text{OH}$ and other free radicals including thiyl radicals ($\text{RS}\cdot$) in biological system may overwhelm the body antioxidant protection consequently inducing biomolecular degradation which are basis for several health conditions such as diabetes, cancer and several neurodegenerative diseases. $\text{RS}\cdot$ are radicals formed from thiols, a major antioxidant defense mechanism of the body. Although





the existence and biomolecular degradative ability of RS^{\bullet} have been established nevertheless, the role of redox modulators on their formation and mechanism of attacking biological macromolecules is yet to be investigated. In this study, RS^{\bullet} -induced deoxyribose degradation and cerebral lipid peroxidation were evaluated using varying concentrations of two redox active metals. Also, the effect of varying pH and buffer systems on the radical-mediated degradation of biomolecules was examined. In addition, the antioxidant intervention mechanism of diphenyl diselenide (DPDSe); a potent organoselenium compound on the RS^{\bullet} - radical assaults of body macromolecules were investigated. The results revealed that the biomolecules were significantly attacked by metal/thiol interplay (RS^{\bullet}). Notably, the metal/thiol-induced assaults on the biomolecules were more pronounced in alkaline medium than acidic. However, antioxidant effect of DPDSe was observed in its ability to prevent the radical-prompted cerebral lipid peroxidation and deoxyribose degradation by making thiols unavailable for RS^{\bullet} formation. The findings of this study further established the existence, formation and biomolecular-degradative ability of RS^{\bullet} . It also unveiled the mechanism of antioxidant intervention of DPDSe on the inhibition of RS^{\bullet} -mediated assaults of biomolecules.

GIZ-MOVE Partners CRIN on Cashew Technical Training

The position of CRIN, a research institute of international repute under the leadership of Dr. Patrick Adebola, scientist of global exposure has received another recognition with a collaboration proposed by GIZ-MOVE project in Nigeria. The two-phase partnership is first for CRIN to provide technical support for the upcoming Cashew Technical Training a first of its kind in Nigeria cashew sector champion by GIZ-MOVE and Nigerian Export

Promotion Council (NEPC). CRIN scientists alongside experts from West Africa sub-region will facilitate the training and participants will be drawn from Federal Ministry of Agriculture and Food Security, Federal Ministry of Trade & Investment, NEPC, CAPPAN, NCAN, Financial institutions, Regulatory agencies and CRIN amongst others. The second is the proposal by GIZ-MOVE to develop a MoU with CRIN on cashew research in Nigeria. The ED CRIN, Dr Patrick Adebola, represented by Director (Research Operations), Dr Sunday Agbeniyi, welcomed the GIZ team led by Nunana Addo and Hamzat Olawale. He emphasized the importance of CRIN in cashew research in the country and advised the team to institutionalize their partnership with CRIN for the benefit of the system and the partner. The Director reiterated the new trend of productive research collaboration of CRIN with other development partners and assured GIZ that CRIN will deliver on the collaboration. The GIZ team expressed satisfaction with the state of preparations in CRIN as part of the execution plan for the technical training. The team visited cashew germplasm, nursery facility, cashew apple processing laboratory and cashew plot at zone 2 & 4.



The GIZ-MOVE collaboration with CRIN is facilitated by Dr. Dele Adeniyi, Head, Ochaja Substation, Kogi State. The CRIN team that received GIZ included Cashew Programme Leader, Dr Oluwatosin Adeigbe and Director/ Value Added Research Programme Leader, Dr Olayinka Jayeola.





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F & A Holds End of Year Session



The Finance and Accounts (F&A) Department of the Institute held her 2023 end of year prayer session on January 18, 2024. The colourful event, which was anchored by the

Head of the Department, Mr, Oluwatoyin Sorinolu, had the Executive Director, Dr. Patrick Adebola and some management staff in attendance. The occasion afforded the Department the opportunity to appreciate God for His manifold goodness and beseech Him for divine help in the new year. The participants also seized the occasion to unwind. The ED, management staff, the three in-house unions and some staff of the F&A Department were given awards.



Presentation of award to the ED



Cross section of staff of F&A Department



Group photograph

Information and Documentation Department 2024 Staff Celebration



It was a celebration galore as the Information and Documentation Department celebrated her New Year Sent forth and Valentine's party on 13th February 2014. The programme was graced by the Executive Director, Dr. Patrick Adebola, and other management staff. The Head of Information and Documentation Department, Dr. Taiwo Ogunjobi expressed her gratitude to the ED and other management staff. She also welcomed the retirees that graced the occasion: Mr Arowobusoye, Mr Ale and Mrs Ben-Nana. The ED in his speech, appreciated the retirees for their contributions to the growth of the Institute. The Executive Director also had a one on one meeting with the staff of the Department, where staff were able to ask all questions that had been bothering their minds. The ED was given an award and the retirees also received gifts. The event was rounded off with entertainment and lots of fun.



Cross section of LID staff and dignitaries





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Valentine Celebration Galore



February 14, 2024, the legendary valentine day was celebrated in style by the Human Resources and Admin. Department of the Institute. The occasion afforded the staff of the

opportunity to ease off tension by sharing love amidst them. The programme that was anchored by the amiable Head of the Department and the Admin. Secretary, Mr. J.O. Onatunde-Onanuga, had The ED of the Institute, Dr. Patrick Adebola, in attendance.



Cross section of staff of HR & A Department

Presentation of Cote d'Ivoire Souvenir

The African Cup of Nations (AFCON) is done and dusted with the Super Eagles of Nigeria clinching the Silver medal. This feat is not without morale boosting presence of the supporters' club notable among whom is Mr Johnson Akintoroye, a Chief Agricultural Field Officer (CAFO) of the Institute. The trumpet totting Akintoroye was pivotal to the feat by the Nigerian team. In appreciation of the support of the sports loving Executive Director of the Institute, Dr. Patrick Adebola, Mr. Akintoroye, in the company of the Chairman of Sports Committee of the Institute, Mr. Onatunde-Onanuga, made presentation of AFCON attires to the Institute.



Presentation of award to the ED



The ED, flanked on the right by AFCON trumpeter, Mr. Akintoroye and on the left by Chairman, Sports Committee, Mr. Onatunde-Onanuga



Cutting of valentine cake





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CRIN Rolls Out Staff Transport Buses

In a bid to alleviate the transportation distresses of the staff, the Management of the Institute ably led by the Executive Director, Dr. Patrick Adebola, rolled out coaster buses on February 21, 2024. The vehicles are for staff conveyance to and fro between town and office in the morning and afternoon at close of work at an affordable cost.



Flag off exercise by the Executive Director

Excursion

The students from the Faculty of Agriculture, Obafemi Awolowo University Ile-Ife Osun State were on the excursion visit to the Institute on February 1, 2024. The 3 level students led by Prof. Ajayi and 15 academic staff embarked on the visit as a condition for fulfilment of the requirements for curriculum in Extension Teaching/Learning Process and Methods. Due to the large number of the students (493), the normal tradition of using Conference Hall was difficult. Hence, they were gathered in the frontage of Administrative block where Mass Media Approach method of communication was implored. As part of their request, exhibition was displayed to show case technologies

developed in CRIN. Also, the students were engaged in educational activities such as history, mandate, objectives and achievements of the Institute. There was interaction with experts from Extension section, Economics section, Value Addition Research, Library, Information and Documentation department purposely to foster deeper understanding of CRIN mandate crops. The visit was anchored by Dr. Uwagboe, Dr. Adebisi, Mr. Agbons, Dr. Abdulkarim, Mr. Awodumila, Dr. Rahman, Mr. Oha, Mrs. Yusuff, Mrs. Ogenegueke and Mr. Garba.



Exhibition of CRIN technologies



Cross section of the students and staff

ARCN News

Media chat with the ES

The Executive Secretary of ARCIN, Prof. Garba Hamidu Sharubutu mni, recently hosted a media chat with Agricultural Correspondence of Nigeria where he spoke with journalist on the activities of the Council and their plans to grow the agricultural Sector. The press corps also took



time to inspect some developmental projects currently going on at the Council as well as had a hands on information on the functions of the Reference Museum as well as the Radio and Television outfits.



Inspection by the press corps



Group photograph of the ES with the media

(ARCN report by Kayode I. Aiyedogbon, Ag. Director, Administration)

Health News

Sexually Transmitted Diseases (STDs) -

Mrs. Bosede Famaye



Sexually transmitted diseases (STDs) are caused by sexually transmitted infections (STIs). They are spread mainly by sexual contact. STIs are caused by bacteria, viruses or parasites. A

sexually transmitted infection may pass from person to person in blood, semen, or vaginal and other bodily fluids. Sometimes STIs are spread in ways other than sexual contact. For example, STIs can spread to infants during pregnancy or child birth. It can also spread through blood transfusions or shared needles. STDs can have a range of symptoms including no symptoms. That's why STIs may go unnoticed until a person has complications or a partner is diagnosed. Symptoms may include: Sores or bumps on the genitals or in the oral or rectal area, Painful or burning urination, Discharge from the penis, Unusual or odorous vaginal discharge, Unusual vaginal bleeding, Pain during sex, Sores, swollen lymph nodes, particularly in the groin but sometimes more widespread, Lower abdominal pain, Fever, Rash over the trunk, hands or feet. Sexually transmitted infection symptoms may appear a few days after exposure, but it may take years before you have any noticeable problems, depending on what's causing the STI. Sexually transmitted infections can be caused by: Bacteria (Gonorrhoea, syphilis and Chlamydia are examples of STDs that are caused by bacteria); Parasites (Trichomoniasis is an STD caused by a parasites); and Viruses (STDs caused by viruses include human papilloma virus





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the herpes simplex virus and the human immunodeficiency virus which causes AIDS).

Anyone who is sexually active risks getting or spreading an STD. Factors that may increase the risk of getting a sexually transmitted infection include: Having unprotected sex (vagina or anal sex with an infected partner who isn't wearing a condom or not using condom properly); Having sexual contact with many partners; Having a history of STIs (having one sexually transmitted infection makes it much easier for another STI to take hold); Being forced to engage in sexual activity such as Rape; Misuse of alcohol or use of recreational drugs (substance misuse can inhibit one's judgement, making one more willing to take part in risky behaviors); Injecting Drugs (sharing a needle while injecting drugs can spread many serious infections e.g HIV, Hepatitis B and Hepatitis C); Being young (people age 15 to 24 report high levels of STIs compared to those who are older); and Spread from mothers to infants (during pregnancy or delivery, some sexually transmitted infections can be passed from mother to infant. Examples are gonorrhea, Chlamydia, HIV and Syphilis. STIs in infants can cause serious problems or even death. All pregnant women should ought to be screened for STI infections and treated as needed).

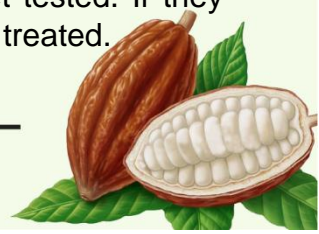
Possible complications of sexually transmitted infections include: Pelvic pain, Pregnancy complications, Eye inflammation, Pelvic inflammatory Disease, Infertility, Heart Disease, Certain cancers, such as HPV associated cervical and rectal cancers.

There are many ways to avoid or lower your risk of getting an STD: Avoidance of sex or sexual activity; Staying with one Uninfected partner; Avoidance of vaginal and anal sex or sexual activity with new partners until both have been tested for sexually transmitted infections; Use of vaccines to prevent STDs

caused by human papilloma virus (HPV), Hepatitis A and B; Use of condoms consistently and correctly whether oral, vagina or anal; Refraining from excessive alcohol consumption or use of illegal drugs to avoid sexual risks; Use of pre-exposure prophylaxis (prep) to lower the risk of HIV infection in people who are at very high risk.

Diagnosis of an STD starts with sexual history and current symptoms. Physical or pelvic examination to look for signs of infections which are a rash, warts or discharge. Tests include blood tests to confirm the diagnosis of HPV or later stages of syphilis, Urine samples, Fluid samples from Genital sores, Texting for an STD or sexually transmitted infection in someone who doesn't have symptoms is called screening. All pregnant women will generally be screened for HIV, hepatitis B, Chlamydia and Syphilis early in pregnancy.

STDs may be treated in different ways based on the causes. Sexually transmitted infections caused by bacteria are generally easier to treat. STIs caused by viruses can be managed and treated but not always cured. Treatment of sexually transmitted infections usually consists of one of the following depending on the infection: Antibiotics usage can cure many STIs caused by bacteria or parasites, such as gonorrhea, Syphilis or Chlamydia and trichomoniasis. Also important is to avoid sexual activity until seven days after one has completed antibiotic treatment and any sores have healed. If one has herpes or HIV, antiviral medicines can keep HIV infection in check for many years but one will still carry the virus and can still spread it though the risk is lower. If tests show that one has an STD one needs to tell the sex partners for the past three months to one year that they will need to get tested. If they are infected, they can then be treated.





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Staff of the Month: Folarin Adeyinka

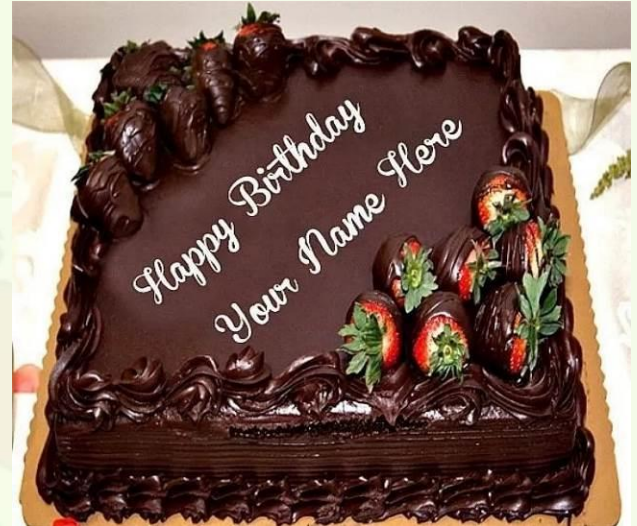


Mrs. Folarin Adeyinka Victoria was born on August 31st, 1973 in Ibadan, Oyo State. She is a native of Ijebu-Ode in Ogun State. She attended St. Leo's Primary School, Orita-

Challenge, Ibadan for her primary education and Eyinni High school for her post primary education. She later proceeded to University of Ibadan, for her Diploma degree in librarianship in the year 2004, and also obtained her Bachelor of Science Degree (B. Sc.) in the same discipline and the same University in year 2011. She also has Diploma in computer from Micho computer Center, Ibadan in 2007 and Diploma in Confidential Secretary Course from GRE School of Secretarial and Computer Center, Ibadan in the year 1998. She was employed by the Institute on August 1st, 1998 as a Library Assistant. She rose to the rank of Assistant Chief Library Officer cadre at the Information and Documentation Department of the Institute. Currently, she is the Head of the Serial Section of the Department. She has enjoyed CRIN sponsored training among which is: Re-skilling bibliographic workers for the digital age from 23rd to 26th October, 2017 held at the Kenneth Dike Library, University of Ibadan. She is happily married with children.

March 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!



Emaku Christian	1-Mar
Okontah Patrick	1-Mar
Rabiu Sulat Tubike	1-Mar
Alabi Mukaila	2-Mar
Godwin Peter	2-Mar
Adeoye Hazzan	3-Mar
Alli Olawale Saidi	3-Mar
Mohammed Magaji	3-Mar
Numfat Zephaniah	3-Mar
Oloyede Elizabeth	3-Mar
Okoi Eteng Iwara	3-Mar
Yusuf Jimoh	3-Mar
Adedara Conelius	4-Mar
Adeniran Ojo	5-Mar





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Adeduntan Dotun Gbenga	6-Mar	Abdulkarim Ibrahim	17-Mar
Mohammed-Bashir Wasilat Omotolani	6-Mar	Odedele Samson Oluseye	17-Mar
Adeyemo Sola	7-Mar	Ibine Benjamin Ipinsokan	18-Mar
Ishola Ropo	7-Mar	Oketokun Grace Olusola	18-Mar
Abioye Peter Olubunmi	8-Mar	Akanbi Olorunfemi Sunday	20-Mar
Arobieke Sunday Bamidele	8-Mar	Ohikhatemen George	20-Mar
Awunghe Joy Takim	8-Mar	Agbeniyi Sunday Oluremi	21-Mar
Ejenobor Fransisca Bolanle	8-Mar	Akinbinu Adeolu	21-Mar
Iroulo Chimobi	8-Mar	Modebel-Timothy Damilola B.	21-Mar
Williams Olabisi	9-Mar	Rahmon Saheed B.	23-Mar
Adewumi Esther Oluwemimo	10-Mar	Adigun Aderinto Benjamin	24-Mar
Ipinmoroti Rotimi Olumide	10-Mar	Alexander Yemisi Blessing	24-Mar
Musa Paul	10-Mar	Alli Modinat Adewumi	24-Mar
Ogunsowo Akintobi Olutoye	10-Mar	Imafidion Ruth	24-Mar
Olalekan Olugbade	10-Mar	Morakinyo Racheal Adejisola	24-Mar
Aye Fatima	11-Mar	Nwaokolo Ruth Onosiemaeme	24-Mar
Ojimah Dennis	11-Mar	Okpaise Idowu	24-Mar
Akinpelu Modinat	13-Mar	Agaji Bernard	25-Mar
Olaleye Oluseye	13-Mar	Borokinni Olufisayo Olusola	27-Mar
Uloko Baba Adakole	13-Mar	Ebulu Sunday Arebamhen	28-Mar
Abioye Bosede	14-Mar	Atanda Shina Mobolaji	29-Mar
Akintoroye Ambrose Kokumo	14-Mar	Togun Bolatito Olubukola	29-Mar
Oyeneye Taofik Olakunle	14-Mar	Enagu Victor Ogum	30-Mar
Uwakwe Innocent	14-Mar	Okonji Micheal	30-Mar
Olayiwola Sakiratu	15-Mar	Iyadunni Kolawole Asimiyu	31-Mar
Sarafa Hammed	15-Mar	Isaiah Regina Joseph	31-Mar
Mathews Olayemi	16-Mar		
Okesola Amos	16-Mar		





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- Agrochemical Screening
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- Soil and Biological Services

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