



NIGERIAN INSTITUTE OF ANIMAL SCIENCE

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NIAS Newsletter

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HIGHLIGHTS

- ✓ **NIAS GAS INDUCTION 2021**
- ✓ **Production of Black Soldier Fly Larvae, A veritable tool in Sustainable Livestock and fish feed Supply**
- ✓ **Professional Animal Scientists' Examinations 2021**
- ✓ **NIAS Conducts Professional Resource Verification**
- ✓ **The State of Biosafety In Nigeria, Resolutions from the Stakeholders Conference.**

VISION:

To be the leading regulatory Institution for Animal Science and Husbandry Practices in Africa that will improve the standard of living of its people.

MISSION:

Regulation of the practice of Animal Husbandry for increased profitability to all Stakeholders, guarantee improved animal husbandry and production systems that will embrace environmental sustainability and ensure high quality and quantity of animal protein to Nigerians



UYO
2021



ANIMAL SCIENCE ASSOCIATION OF NIGERIA & NIGERIAN INSTITUTE OF ANIMAL SCIENCE

10th
ASAN-NIAS
JOINT ANNUAL MEETING
&
26TH ANNUAL ASAN
CONFERENCE



THEME:

LIVESTOCK RESILIENCE
IN THE POST-COVID ERA

Date: 5th -9th September, 2021

Time: 8am Daily

Venue:

IBOM HALL
ALONG IBRAHIM BABANGIDA AVENUE, UYO

NIAS GAS INDUCTION 2021



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CONFERENCE TARGET

Participants will include farmers, Animal Scientists, Extension workers, policy makers, specialists from allied industries and researchers in all facets of livestock industry.

ABOUT UYO

You are welcome to Uyo, the serene capital of Akwa Ibom state. It became the capital on September 23, 1987 when Akwa Ibom state was created from the former Cross River State. It is 45 mins drive from Victor Attah International Airport.

The state is rich with culture and diversity, with its immense infrastructural transformation and emerging commercial sectors, it is fast becoming the nation's tourism capital.

Prominent tourist destination in the state include: Ibeto Beach, Iberio, Amalgamation House, Ikot Abasi, Oron Museum, Oron, National Museum, Uyo, Lord Lugard Residence, Ikot Abasi, Mbo Forest Game Reserve, Mbo, Slave Masters Lodge, Okopedi, Itu, Presbyterian Church, Itu, Mary Slessor House Tomb, Royal Niger Boat Yard, Sculptural Women Monument, Ukanafun Blue river, Ukanafun and Ibom Plaza, Uyo. Ibibio is the primary indigenous language. The people of Akwa Ibom State are mainly civil servants, traders and farmers.

Emedio - Welcome!

HOTEL *RATES IN UYO

S/N	Hotel	Address	Rate (N)
1	Caribana Hotel & Suites 07031158031	3 Henry August Street, Changeme, Uyo	12,000 - 45,000
2	Uniques Hotel & Suites 08062641774	39 Aka Ikem Street, Uyo	9000 - 60000
3	Wateridge Hotels & suites 09036151033	11A/B 898 Avenue, opposite Bom Hall, Uyo	15,000 - 85,000
4	Angelside Guest House 07036498175 09074025220	No. 1 Goldwin George Linn, Obongme Eliabo, Opp. Dawa Int. School, Uyo	5,000 - 20,000
5	Tranquility Hotels 08172071691	No. 5 Sundown Road, Pung Oku, Off Aka Nung Ibiwe Road, Uyo	5,500 - 14,000
6	E-plus Prime Hotels 08022220031	9 Full life Avenue by Unity Park off Nkolok Edokot Avenue, Uyo	7,000 - 12,000
7	Urban Park Hotels Nig. 09080742469	1 Unity Park Road, Off Udo Udoema Avenue, Uyo	25,000 - 35,000
8	Fresh Spring Hotels & Towers 08069304700	49 Akpa Ube street, Uyo off 186 Avenue by NCL Near Bom Hall, Uyo	10,000 - 20,000
9	Hotel Milan 08068760665	9 Ibe Okoro Street, Changeme Estate, Uyo	8,000 - 7,000
10	Mandela's Queen Hotel 08025938465	205 Calabar Itu Highway, Uyo	8,000 - 25,000
11	Hammer Hotel 09075250855	State Police station Road	7,500 - 14,000
12	Villa view Hotels LTD	4 Unkinyang Street, Off Park Road, Ham junction, Uyo	5,000-15,000
13	Sam's Inn Hotel 07036751500	5 Eket Aye street off 186 Avenue, Uyo	4,000 - 7000
14	George Town Residence 08033606575	3 Tropicana Residence, opp. FRC, Uyo	14,000-20,000
15	New Point Hotel 07068260000	31 Antares Lane, Uyo	16,000 - 20,000
16	Enkai Hotel 07068270000	117 Old Ring Road behind New Road, Uyo	6,000 - 10,000
17	Mirna Hotels & Suites 07068461395	Udohighway (Infront off Abel Road), Uyo	6,000 - 6,000
18	Clebs Hotel 08046520821	51 Akpa Lane, Uyo	7,000 - 25,000
19	Palace Hotel 08076475886	81 Akpa Lane, Uyo	6,000 - 10,000
20	Skyline Accommodation 08022050526	21 Nkolok Creek Avenue, Uyo	5000
21	Peaceful Hotel 08023171949	90 Calabar Itu Highway, Uyo	4,900 - 7,500

*Subject to Change



ANIMAL SCIENCE ASSOCIATION OF NIGERIA & NIGERIAN INSTITUTE OF ANIMAL SCIENCE



THEME:
LIVESTOCK RESILIENCE IN THE POST-COVID ERA

Date: 5th -9th September, 2021

Time: 8am Daily

Venue:

IBOM HALL
ALONG IBRAHIM BABANGIDA AVENUE, UYO

SUB THEMES:

1. Addressing the concerns of feed shortages
2. Breed improvement and commercial pasture production to mitigate the farmers-herders conflict

ANNOUNCEMENT AND CALL FOR MANUSCRIPTS

The LOC hereby invites prospective authors who wish to present papers at the conference to submit their original research, review and or technical reports for consideration in any of the subthemes listed hereunder. Deadline for submission on papers is June 30, 2021 and may not be extended.

MANUSCRIPT AREA OF SPECIALIZATIONS

Animal Biotechnology
Animal Breeding & Genetics
Animal Physiology, Reproductive & Health
Animal Products & Processing Technology
Livestock Economics & Extension
Micro-Livestock & Aquaculture
Monogastric Production/Nutrition
Pasture & Range Management
Ruminant Production/Nutrition

GUIDELINES FOR MANUSCRIPTS

Papers should be prepared in Microsoft Word using Time New Roman font size 11. The title should be concise (not more than 120 characters) on the first line, followed by a space, then the names of the author (s) and their affiliations on the following lines. Author(s) with different affiliations should be separated by asterisks (*) and leave a space. The corresponding author, email address and telephone contact should be indicated.

The abstract should describe the problem, objective of the study, materials and methods, results and conclusion. Please provide 5 keywords below the abstract for indexing. Abstract that are more than 250 words will be rejected.

Full length manuscripts should not be more than 4 pages and should contain; Abstract (<250 words), Keywords (5), Description of Problem, Materials and Methods, Results and Discussion, Conclusion and Application, Acknowledgment (if any) and References. Author/Reference citation in the body of the text should

be prepared following the format described in the Nigerian Journal of Animal Science or accessed from the website of the Association on www.animalsciassociation.org.ng. The accepted full papers will be published in a branded CD.

Authors whose papers are not published will have their money refunded less 50% for administrative charges. Please mail full length manuscript in a single file (Name JAM 10, Paper 1, 2, 3, etc). When submitting, authors should indicate specialization of their preferences at the top of the manuscript.

PRESENTATION GUIDELINES

Authors whose manuscripts are accepted will be expected to register and prepare their papers for power point presentation as multimedia projectors will be available at the conference venue. Prepared slides must be sent in before the conference date. Presentation by proxy may not be permitted.

PAGE CHARGE PAYMENTS

A publication charge of N5,000 or equivalent per paper is payable in full on submission of manuscripts and evidence of payment should be scanned or screenshot and sent by email (LOC email: asanniasuyo2021@yahoo.com) along with the manuscripts.

Bank Details: Bank: Ecobank Plc
Account Name: ASAN UYO 2010
Account Number: 0302 006 536

HIGHLIGHTS OF EVENTS

- Day 1** - Arrival, Registration & Interaction with PG Students and young academics (side event: TBA)
- Day 2** - Registration, MCPE, Scientific Sessions I/meeting of Dean, HOD & Directors
- Day 3** - Registration/Opening Ceremony/NIAS Induction/Keynote Address/ASAN Awards, Prizes & Induction/Product Presentations/Exhibition/ASAN AGM/Dinner
- Day 4** - Scientific Session 2/Industry & Farmers Interaction (side event) NIAS AGM
- Day 5** - Excursion & Departure

ASAN MEMBERSHIP PAYMENTS

Membership Application Fee N5,000
Annual Membership Dues N10,000
Life Membership N100,000
should be paid into the GT Bank Account No: 000 966 9667 with the name Animal Science Association of Nigeria (ASAN).

ASAN CONFERENCE REGISTRATION PAYMENTS (Early Birds - June 30th, 2021)

Members: N6,000
Non-Members: N10,000
Students (with valid ID): N2,000
Corporate Registration: N20,000

(After June 30th, 2021)

Members: N8,000
Non-Members: N12,000
Students (with valid ID): N2,000
Corporate Registration: N30,000

Bank: Stanbic IBTC,
Account Name: Animal Science Association of Nigeria (ASAN)
Account Number: 002 119 0499

NIAS MEMBERSHIP PAYMENTS

1. MCPE: N20,000 (RAS/AAS): N5,000 (GAS)
2. MCPE: N25,000 (Non-members)
3. AGM: N5,000
4. Annual Practicing License Fee: N5,000
5. Induction Fee (total package): N60,000

All NIAS fee should be paid into Federal Government Treasury Single Account (TSA) @www.remitta.net; for more information, please visit: www.nias.gov.ng

PRODUCT EXHIBITION AND ADVERT PAYMENTS

Product Exhibition Stand: N50,000

Advertisement rates in Programme Booklet
Back Page: N150,000
Center Spread: N150,000
Inner Front and Back Pages: N100,000
Inside Full Page: N50,000
Inside Half Page: N25,000
Inside Quarter Page: N15,000
Goodwill messages (<40 words): N5,000
Bank: Ecobank Plc,
Account Name: ASAN UYO 2010,
Account Number: 0302 006 536

Production of Black Soldier Fly Larvae, A Veritable Tool in Sustainable Livestock and Fish Feed Supply

By

Professor Cordelia Ifeyinwa Ebenebe

Department of Animal Science and Technology,

Nnamdi Azikiwe University, Awka.

Meat and meat products has remained the most widely consumed animal protein sources despite all the claims of crusaders of vegetarian diet Lucke (2000)

Meat production is limited by high cost of feed ingredients unaffordable to most Nigerians, thus the lingering problem of animal protein shortage in the diet of most Nigerians.

FAO/WHO recommended 35g per caput animal protein consumption per day for sustainable growth and development (FAO 1991)

Animal protein consumption in Nigeria is less than 8g/person/day which is far lower than the FAO minimum recommendation (Niang and Jubrin, 2001)

- ▶ Fish meal, the basic animal protein ingredient in fish and livestock feed is extremely costly
- ▶ Soyabean is also costly, 100kg bag of Soyabean has risen to N24,000 (US\$ 60.93) from N12,000 (US\$ 30.47) and N160,000 per ton in October 2019, is N300,000 in October, 2020 in less than four months (Onallo Akpa , DG of PAN,2020)
- ▶ Soyabean and maize constitute almost 80% of raw materials in feed production, their

short supply is negatively affecting the poultry industry

- ▶ Poultry World on Nutrition News of 18th February, 2021 reported that scarcity and price hike of soyabeans (a major ingredient used in poultry feeds) is fast crippling the poultry sector in Nigeria
- ▶ Feed remains a key factor in livestock production as it constitutes 60% of production costs in monogastric animal production (Adebisi and Bunmi 2017)
- ▶ There is need for alternative poultry ingredient, Black soldier is a cheap alternative animal protein cherished by Livestocks

POTENTIALS OF BLACK SOLDIER FLY

- ▶ Elimination of Odour in Decomposing Mass

The gluttonous nature of the BSF larvae endows it with the ability to digest organic compounds before they decompose thus eliminating odor (Odor colour) (Mutafela 2015).

- ▶ Pest Control

The larva feeding behavior also discourages clustering of pest flies (Pest control).The waste generated becomes useful as fertilizer (biofertilizer).

➤ Natural antibiotics

Newton et al (2008) noted that BSFL contain natural antibiotics which prevents contamination as opposed to spreading diseases.

Zouh et al., (2013) reported that BSFL suppress *Escherichia coli*, *Salmonella enterica*, *Serovar enteritidis* in contaminated chicken manure.

► Pollution Control

Mutafela (2015) reported on the pollution reduction potential of BSFL to the tune of 50-60%.

van Huis et al. (2013) posited that nitrogen was reduced by 71%, phosphorus and potassium 52% each, while aluminum, boron, cadmium, calcium, chromium, copper, iron, lead, magnesium, manganese, molybdenum, nickel, sodium, sulphur and zinc were reduced by 38-39%.

► Low Pathogenicity

The BSF larvae is not a vector of any known disease: thus a demonstration of low pathogenicity (Mutafela 2015).

► Decomposition of Organic Waste

► Nigeria generates 542.5 million tons of organic waste per annum, and waste is fast becoming a menace in many urban centres. They have large and powerful chewing mouthparts allowing them to shred and devour waste

► Bioconversion

► The residue from BSFL decomposition is similar to compost, contains nutrients and organic matter and, when used in agriculture and helps to reduce soil depletion.

► van Huis *et al.* (2013) posited that nitrogen was reduced by 71%, phosphorus and potassium 52% each, while aluminum, boron, cadmium, calcium, chromium, copper, iron, lead, magnesium, manganese,

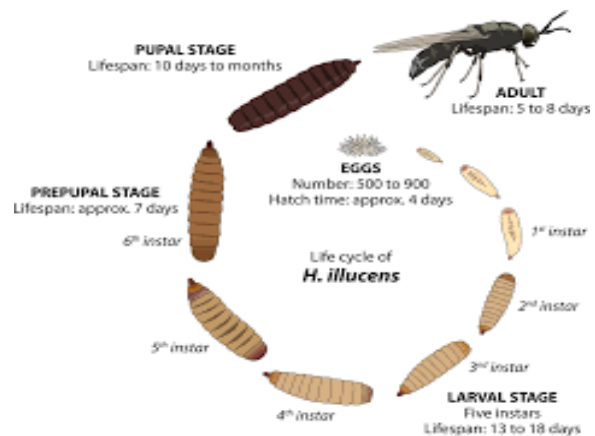
molybdenum, nickel, sodium, sulphur and zinc were reduced by 38-93%.

Animal protein resource for livestock and fish feed

► BSFL constitute a useful animal protein ingredient (Gould 2012, Van Huis 2013 and Shelomi 2020) in fish and livestock feed as they convert the manure nutrients into 42% protein and 35% fat feedstuff (Gould 2012).

HOW TO START A BLACK SOLDIER FLY FARMING

1. Understanding the Life Cycle





2. Male and Female: The male have a more round lower tail whereas the female have a more pointy tail.



3. The developmental stages in the life cycle of black soldier fly

- ▶ Eggs: The female black soldier fly deposits a mass of about 500 eggs in cracks and crevices near or in decaying matter such as dung, carrion, garbage, and other organic waste. The eggs hatch into larvae in about four days. Each oval shaped egg is about 1

mm in length, and pale yellow or creamy white in color

- ▶ Larvae: The larvae can reach 27 mm in length and 6 mm in width. They are a dull, whitish color with a small, projecting head containing chewing mouthparts. Larvae pass through six instars and require approximately 14 days to complete development (Hall and Gerhardt 2002).
- ▶ During larval development, black soldier fly larvae are insatiable feeders. As adults they do not need to feed and rely on the fats stored from the larval stage (Newton et al. 2005).
- ▶ Management of larva
- ▶ The larva is the only stage BSF feeds because it is the time the protein and fat reserve are stored for other periods of development
- ▶ First, first instar larva are fed in Hatchling showers (30% broiler starter feed+ 70% water) in hatchling containers (60x40x12cm) till the 5th day when 5-Day Old Larva (5-DOL) are harvested and counted and transferred into rearing plastic containers (40 x 60 x 17cm). Feeding rate 3kg feed /9kg hatchlings
- ▶ Ten thousand (10,000) 5-DOL in the laversos (plastic container containing larva) is fed with 15kg of organic waste on wet basis for 12 days with feeding of equal amount on Day 1, 5 and 8
- ▶ Optimal Condition for Larval Development
- ▶ Warm Climate: Ideal temperature 24 -30oC, if too high, the larva will crawl away from food source in search of cooler location
- ▶ Shaded environment: Larva avoids light and will always search for shaded environment
- ▶ Pupae: Before pupation, the sixth instar larvae disperse from the feeding site to dry

sheltered areas, such as ground vegetation, to initiate pupation. The exoskeleton (skin) darkens and a pupa develops within.

- ▶ Pupation requires about two to three weeks (14 days) (Hall and Gerhardt 2002).
- ▶ Management During Pupation
- ▶ Transfer to pupation containers (60x 40 x 12cm) and place in dark cages to protect the pupa from changing environmental changes (Moisture, temperature, air movement)
- ▶ From the 12th day of pupation connect the dark cage to the love cage

The Love Cage, Mating and Emergence of Adult Fly

- ▶ Mating is usually done in Flight ,
- ▶ The dark cage has a tunnel that connects to a well lit cage often made of mosquito net (Love cage) to provide an environment for the aerial mating
- ▶ Light set at the end of the tunnel attracts emergent adults
- ▶ Adult: The adult flies do not feed but they require moisture for hydration of their system.
- ▶ The love cage is equipped with a wet hand towel or wet cotton wool, moistened from time to time
- ▶ The cage is also equipped with eggies (Plaques on which eggs are laid) positioned above a container of attractant

Planning A BSFL Rearing and Processing Facility



Figure 4.3: Schematic representation of the facility considered in the BSF scenario

- ▶ There are five major units in any BSFL rearing and processing facility
- ▶ Organic Waste Receiving (Municipal , Agro-industrial and Livestock farm waste) and Preprocessing Unit
- ▶ Organic Waste Processing Unit (Involves arrangement for supply of waste, quality assurance of waste, reduction of waste into 1-2mm particle size by a shredder or hammer, Mixture into a homogenous mass)
- ▶ BSF Rearing Unit (Comprising units for laboratory analysis, stack of rearing cages, dark cages, love cages,)
- ▶ Product harvesting and Processing Unit
- ▶ Post Treatment Unit

3. Equipment and Facilities Required for Black Soldier Fly Farming

i. Love Cages made of Nets: Black Soldier Fly Undergoes Aerial Mating



Another Design of Love cage



ii. Dark cage: Where the pupal transformation to adult occurs



iii. Rearing plastic containers



Eggies (25 x 5x0.3cm)



Improvised eggs made with Carton



How to Start

There are two major ways of starting Black Soldier Fly Farming Business

- ▶ **Procurement of Foundation Stock:** We do not have many farms selling BSF
- ▶ **Collection from the Wild Using an Attractant**
 - Preparation of Attractant
 - Ingredients: Rice bran or Maize Dusa, Water and Fruit with Strong (Banana, Mango, Pineapple)
- ▶ **Procedure**
 - Mix the Bran with water (Ratio 1:1) thoroughly and leave to ferment for three days
 - On the third day, Blend the banana and mix with the fermented bran (Ratio 1:1). Add a little water to make it watery
 - Place the eggies on top of the attractant
 - Keep near an organic waste (Refuse dump, poultry waste, pig manure) to attract the flies to lay eggs
 - Keep away from trees, else the flies lay eggs on the tree bark

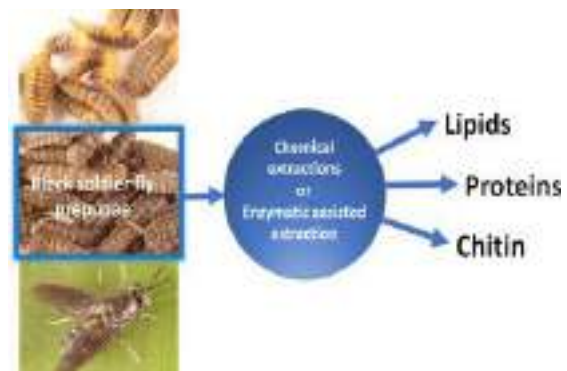
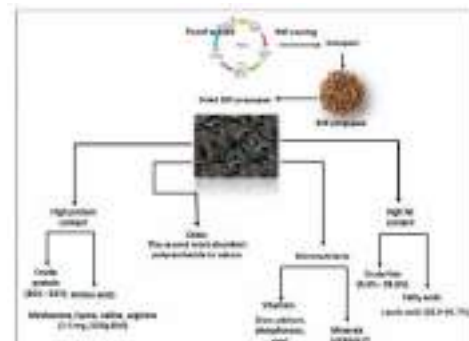
Managing eggs to Hatching

- ▶ Prepare a container for Rearing of Hatchlings (Plastic container with perforation on the lid replaced with wire netting sieve)
- ▶ Put the feed inside the container, cover with the lid and scrape eggs on top the net on the lid and allow to stand for four days
- ▶ Eggs hatch in four days into the first instar larva which drops into the feed inside the container

Managing from Larva to Pupal Stage

- ▶ The larva feeds and transforms into 2nd and 3rd instar, when they are moved into the rearing cages where they are fed on organic waste until the prepupae and pupal stage
- ▶ During the pupal stage they remain motionless
- ▶ At this time they are placed in containers and moved into the Dark cages where they stay for 8 to 9 days
- ▶ Then the Dark cage is connected to a well lit Love cage, as the adult emerge they are attracted by the light
- ▶ In the love cage aerial mating of males and female takes place and egg laying commences. The male and female usually mate in flight and female deposit egg masses (500 eggs) near edges of decaying organic matter

Products From Black Soldier Fly



i. BSF Larval Oil

- ▶ A very remarkable one is "Oricga" patented by entomocosmetics a Thai company that appear to be the

first in the world producing internationally patented Entomocosmetic line. Guan Yu Lim in an online magazine

► *[Cosmetics design-asia-com also reported a face and neck oil with brand name Point 68 (.68), the first luxury skin oil product containing 20% black soldier fly grub.*

► *The founder of this Insect Beauty product Josh Galt stated that the face oil is a rich source of Omega 7, a fatty acid vital to collagen production,*



i. **Chitin and Chitosans**

- *The exoskeleton covering the body of insects, crustaceans and some annelids contains polysaccharide chitin which accounts for 5–20% of their dry weight (Barker et al., 1998; Finke, 2002).*
- *Chitin is the second biggest available biopolymer on earth, next to cellulose and it is a primary component of the exoskeletons of arthropods (Roos and Van Huis, 2017)*
- *Chitin can be converted to chitosan by deacetylation process.*
- *Chitosan shows more versatility than chitin due to its solubility and reactive free amino group.*
- *Chitosan is used in food industry because they are non-toxic for warm blooded*

animals. It is also used as emulsifying and gelling agent, to stabilize food (Shanta, Paras, & Rameshwar, 2015)

- *Chitin, chitosan and their derivatives are used as antimicrobial agents against different groups of microorganisms, such as bacteria, yeast and fungi (Bae and Moon-Moo, 2010)*

ii. **Animal Protein Ingredient in Fish and Livestock Feed**

- *An international team of researchers (Lee et al., 2018) in South Korea and the US explored the use of black soldier fly larva (BSFL) meal in the diets of broiler chicks as a potential feed ingredient and in regards to the influence of the meal on immune functions, and reported that BSFL meal improved chick weight gain, boosted immune responses and increase the survivability of the birds against S. gallinarum experimental infection*
- *The US Food and Drug administration (FDA) after investigations on the B SFL ingredients (meal, oil and whole larvae) has recommended amendment of the Association of American Feed Control Officials (AAFCO) ingredient definition of dried BSFL to include feeding to poultry.*

Conclusion

- *I believe strongly somebody here is interested in setting up a black soldier fly farm. I want to believe also we have investors here and NAUWA is one big investor. The former Vice Chancellor graciously gave us land to establish our insect farm beside the University Primary School. The time to establish that insect farm has come . Give me a direct mail let's do this together and make the profit together*

Prof. C. I. Ebenebe

Professional Animal Scientists' Examinations 2021

Professional Animal Scientists (RAS/GAS) Examinations are organized by the Nigerian Institute of Animal Science (NIAS) for Animal Scientists across the nation. The exams are membership access pre-qualification for Animal Scientists to become professional registered members of the Institute [Registered Animal Scientists (RAS) and Graduates Animal Scientists (GAS)]. This is in fulfilment of its prerogative mandate to prescribe and regulate the standards of academic qualification and

practical skills required to be attained by persons seeking to be registered members of the Institute.

The 2021 NIAS Professional Examinations will hold on July 10th and 17th. One hundred and Forty (140) Candidates will sit for The Registered Animal Scientists (RAS) Exams while Six Hundred and Thirteen (613) candidates will sit for the Graduate Animal Scientists Examinations in Ten (10) Centers across the 6 geopolitical zones.

PROFESSIONAL RESOURCE VERIFICATION

In line with NIAS Mandate and commitment to Professional Standards in academic institutions of Animal Science, Professional Resource Verification and Accreditation Team was put together constituting The Chairman (Representative from Academia) , Representatives from The Industry, Representative from Policy (Government) ,The Head of Accreditation and Curriculum Department of NIAS who is the Secretary of the committee, and some Departmental Staff .The Accreditation Team visited Landmark University and Kogi State University with warm reception from the VC's of the Two Institutions, The Vice Chancellors stated that their administrations take Accreditation very seriously and expressed readiness to accept suggestions and advice from the Team in order to strengthen the standard of Animal Science in their respective Institutions. The Accreditation Team proceeded

further on the exercise by visiting the Livestock Teaching and Research Farm consisting of the following units; Poultry, Rabbitry, Cattle section, Small Ruminants, Piggery and Pasture farm.

The Professional Resource Verification Team also visited the Department of Animal Production where the lecture Theatres, Classrooms and offices were examined. The Departmental Laboratories were inspected followed by an interactive session with the Academic Staff of the department in the faculty boardroom during which staff files, student projects were examined. The Students on both Institutions were engaged in an interactive session with Questions and answers. The Exercise was concluded with another session with the VC of each University where The PRV Team presented their reports and advice to The VC and the Management Team.

PHOTO GALLERY OF NIAS PROFESSIONAL RESOURCE VERIFICATION OF THE DEPARTMENT OF ANIMAL PRODUCTION KOGI STATE UNIVERSITY



NIAS PRV Team with Staff of Kogi State University Anyigba



PRV Team and some Staff of KSU at the Small Ruminant Section



Cattle Section – Kogi State University



Poultry Farm, Department of Animal Production - KSU



Departmental Laboratory, Animal Production Department, Kogi State University



Interactive Session with Students of the Department of Animal Production - KSU

The State of Biosafety in Nigeria: Resolutions from the Stakeholders' Conference - HOMEF



There is increased push for the adoption of risky technologies such as genetic engineering especially in crop and animal breeding. This has heightened biosafety risks in many countries including Nigeria. With these risks the safety of the public and environment in these countries is not guaranteed. Health of Mother Earth Foundation (HOMEF) brought stakeholders together in a one-day conference on 'The State of Biosafety in Nigeria'. The conference which was in-person and virtual

was held on 13 April 2021 in Abuja. The stakeholders in attendance included small-scale farmers and food processors, environmental justice and food sovereignty advocates, legal and medical practitioners, academia, biosafety experts and the media. In the conference, HOMEF launched two landmark reports which situate Nigeria's biosafety situation as well as the presence of GMOs in Nigerian markets. The first report titled '**The State of Biosafety in Nigeria**' addresses the situation of biosafety in Nigeria with regards to Genetically Modified Organisms (GMOs), their use, official and illegal release, and the level of public awareness on the subject. It also reviewed Nigeria's biosafety regulatory system and analysed the implementation of biosafety principles such as the precautionary principle.

The second report titled '**What's on Our Plate?**' shows the prevalence of GMO products in the Nigerian markets. The report is the output of market shelf surveys carried out by HOMEF from 2018 to

2020. It revealed the presence of over 30 products with genetically engineered ingredients on the shelves of supermarkets in Nigeria without any sign of their entry being authorized.

It was noted in the conference that:

1. NABDA (National Biotechnology Development Agency) and NBMA (National Biosafety Management Agency) have been campaigning for the adoption of modern agricultural biotechnology and promoting GMOs as safe without reference to known negative impacts and risks for the people and environment.
2. The dangerous slide in Nigeria's biosafety began with the establishment of the National Biotechnology Development Agency (NABDA) in November 2001 without being backed by any law and with no agency to regulate its activities.
3. NBMA which is meant to regulate NABDA's biotechnology endeavours was only instituted in 2015 – fourteen (14) years after the biotechnology promotions agency had been created. When the regulatory agency was finally created, the promoter of the technologies needing regulation got a seat on the board of the regulator (NBMA).
4. Nigeria has now expanded the scope of her biosafety regulation to cover gene editing and synthetic biology regardless of higher risks and the fact that their handling of the elementary versions of the technology has created serious concerns and doubts.
5. The Gene Editing Guidelines prepared and adopted by NBMA offer a peculiar process that allows some gene edited products to be approved by NBMA without going through the rules governing the approval of GMOs if the agency reckons that the product does not contain any recombinant DNA.
6. More troubling is the fact that such approvals can be given within 21 days of the application being submitted to the NBMA without any public consultation or even notice.

7. The fear of a projected galloping human population has literally become the vehicle for speculating on foods and for promoting risky technologies such as geoengineering, gene-editing, synthetic biology, nanotechnology, robots and 3D food printing.
8. Smallholder farmers are the ones who feed the world with nutritious and tasty foods – cultivated through non-polluting agroecological practices that cool the earth and revitalize rural communities.
9. These smallholder farmers have been subjected to multiple shocks over the last two decades and their shocks have been intensified by the Covid-19 pandemic. Their seeds are being demonised across the African continent in favour of those distributed by multinational seed companies.
10. Unlike the earth-cooling and other people-centred impacts of agroecological practices of smallholder farmers, there is a strong connection between industrial agriculture and climate change. This is coupled with industrial agriculturists' focus on providing animal feed and biofuels, and on food commodification leading to unending land grabbing.

At the end of deliberations the following resolutions were made by stakeholders:

1. There should be a total overhaul of the Biosafety regulatory architecture in Nigeria as the gaps and flaws in the current NBMA Act of 2015 and as amended in 2019 are overwhelming.
2. It is dangerous and needless to have gene editing guidelines that can label gene edited organisms as non-GMOs, thus, allowing approval of such organisms without regulation or public consultation. The guidelines are hopelessly against the interest of Nigeria and should be scrapped.
3. The introduction of GMOs in Nigeria should be stopped and our natural seed varieties plus genetic resources should be preserved.
4. Farmers should be supported with needed storage and processing facilities, market and

- extension services to ensure optimum productivity.
5. More awareness should be carried out to sensitise the people generally and farmers specifically to enable them make informed choices about what to plant, sell and consume.
6. The recommendations of 'The State of Biosafety in Nigeria' report should be duly considered.
7. We should create community seed banks (for our natural seeds) to preserve indigenous varieties.
8. We should support our local researchers who work with communities as partners and respect indigenous knowledge and practices.
9. There is need to build the capacity of the media to be able to adequately report biosafety issues.
10. We should build an inter-generational movement by equipping school age children with knowledge of biosafety issues and all that threaten a nation's food and agricultural systems.
11. We should promote agroecology and ensure it finds expression in our school curricula and farms.
12. Support our farmers as they defend their rights to food sovereignty.

NIAS GAS INDUCTION

- ✓ The Nigerian Institute of Animal Science conducted a successful GAS Induction for the Year 2021. The Graduate Animal Scientists Induction was held at three (3) centers; Bayero University Kano, University of Ibadan and University of Benin on the 15th, 22nd, 29th June, 2021 respectively. A total of Two hundred and eighty two (282) new GAS members from 18 Universities were inducted into the Institute which now sums up the GAS membership database to a total of Five thousand two hundred and nine (5,209).
- ✓ NIAS through The Regulatory Affairs Department held its first Hybrid Induction which involved candidates participating via virtual (zoom) and physical at the University of Benin Center.



Prof. E.A Iyayi, NIAS Registrar/CEO



**Inductees
and The
Officials at
the NIAS
INDUCTION
– University
of Ibadan
Centre**



The Registrar of NIAS, Prof. E.A Iyayi, while inducting the graduates added by saying, “Having been found worthy both in character and learning, and by the power imposed on me, I admit and induct you all into NIAS family”. “I urge you all, to regularly update your professional knowledge, skill and competence.” He also tasked the graduates who were inducted into the practice to add their potentials in bringing sanity to the handling of animal products.



Inductees and The Officials at NIAS INDUCTION – UNIBEN CENTRE.



Head, Regulatory Affairs Department, Mr Harry Njoagwuani, at the University of Ibadan centre.



NIAS GAS INDUCTION – Bayero University Kano Centre.



NIAS Registrar, Prof. E.A Iyayi and the Inductees.



Opinion

To enrich the Newsletter, members and other stakeholders are invited to send their views, comments, and

contributions to the Email address below: nias2014newsletter@gmail.com

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PONMON ADVOCACY



NIAS MANDATES

