

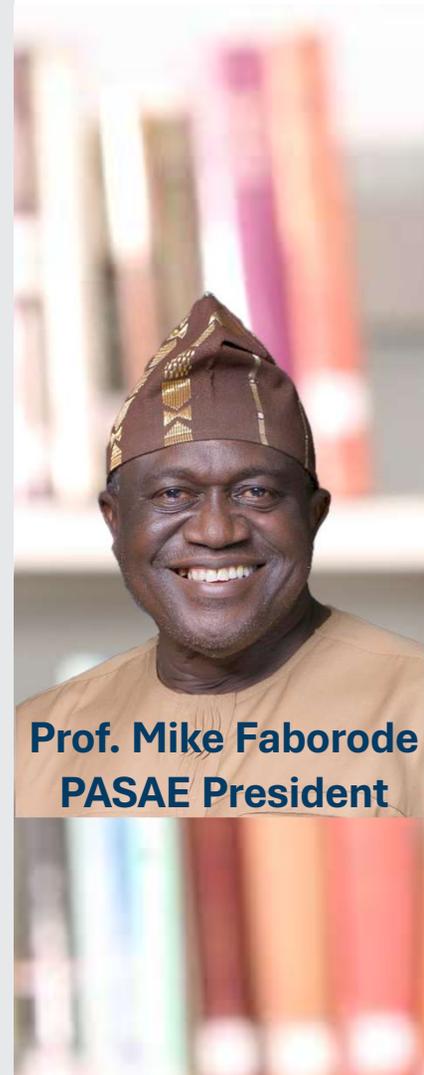
ADDRESS TO THE 6TH MEETING OF THE COUNCIL OF PASAE

I welcome all members of the new Council of PASAE to the 6th meeting of the Council, being the first in the current administration. I particularly welcome new members of the Council and congratulate them and indeed all of us on our election into our various positions to lead the society for the next two years. I look forward to a vigorous and active tenure that will advance the noble cause of PASAE and our profession in ensuring that agriculture fulfils its great expectations to ensure food security, agro-industrial growth and economic prosperity for our peoples in Africa.

Before proceeding to layout our priorities and focus for the next two years, I must acknowledge the solid foundation laid and the giant strides so far recorded for PASAE by its founding fathers. The salutary work done by the foundation Council, especially, the immediate past President, Prof Linus Opara, Secretary, Prof Jeff Smithers, who also graciously offered to continue into this Council, the pioneer Administrator, Ms Boeboe A. Neethling, who we shall continue to remember for her dedication and successful management of the Secretariat, and all others as our records indicate, is deeply appreciated by a grateful and proud society. I urge us to acquaint ourselves with the giant strides of PASAE in the last few years as can be gleaned from the following documents: (i) PASAE Strategic Plan (PSP) 2019-2021, (ii) the General Secretary's Report to the 5th Council Meeting, (iii) Final Report of Project ACP1921_3_2 GCRF Africa Catalyst funded by the Royal AgEng Society, and (iv) Report of the 3rd PASAE Conference held in April 2021.

I believe that our task in the new dispensation is to build on this solid foundation, grow and strengthen the Society and profession, and extend the frontiers of our influence, utility and relevance to resolving the African development contradictions on the basis that promoting agriculture is the best way forward for the African Agenda 2063. We as agricultural and biosystems engineers hold a lot of hope in leading the African renaissance aright through the practice of our profession. It is in furtherance of this obligation that I had undertaken, in consultation with the General Secretary and the Immediate Past President, a review of the accomplishments and outstanding aspects of the 2019-2021 PSP to guide in charting our way forward in the next two years. The Draft PSP 2022-2024 is now before us to consider at this meeting.

The Draft PSP 2022-2024: The 6 Focus Areas of the PSP are (i) Growing the membership of PASAE (ii) Raising the Profile of the Profession (Showcasing possibilities and Creating awareness) (iii) Creating New Opportunities (iv) Reforming and Modernising the Profession (v) Growing the Profession (Supporting Students, Youths and National/Regional Societies), and (vi) Ensuring Viability and Sustainability of PASAE.



Prof. Mike Faborode
PASAE President

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PASAE - AfroAgEng MISSION

AfroAgEng's mission is to promote and enhance the agricultural engineering profession in Africa. In addition, the Society aspires to become a vital knowledge partner and prominent policy advocate on the role of engineering and technology in the transformation and industrialization of agriculture in Africa, in the context of Agenda 2063 and beyond - the Africa We Want.

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ADDRESS TO THE 6TH MEETING OF THE COUNCIL OF PASAE (cont'd)

The PSP table details the various actions outlined for achieving the goals set in the focus areas, while also suggesting responsibilities as indicated. The Council is invited to consider and decide on these proposals subject to changes as members may propose.

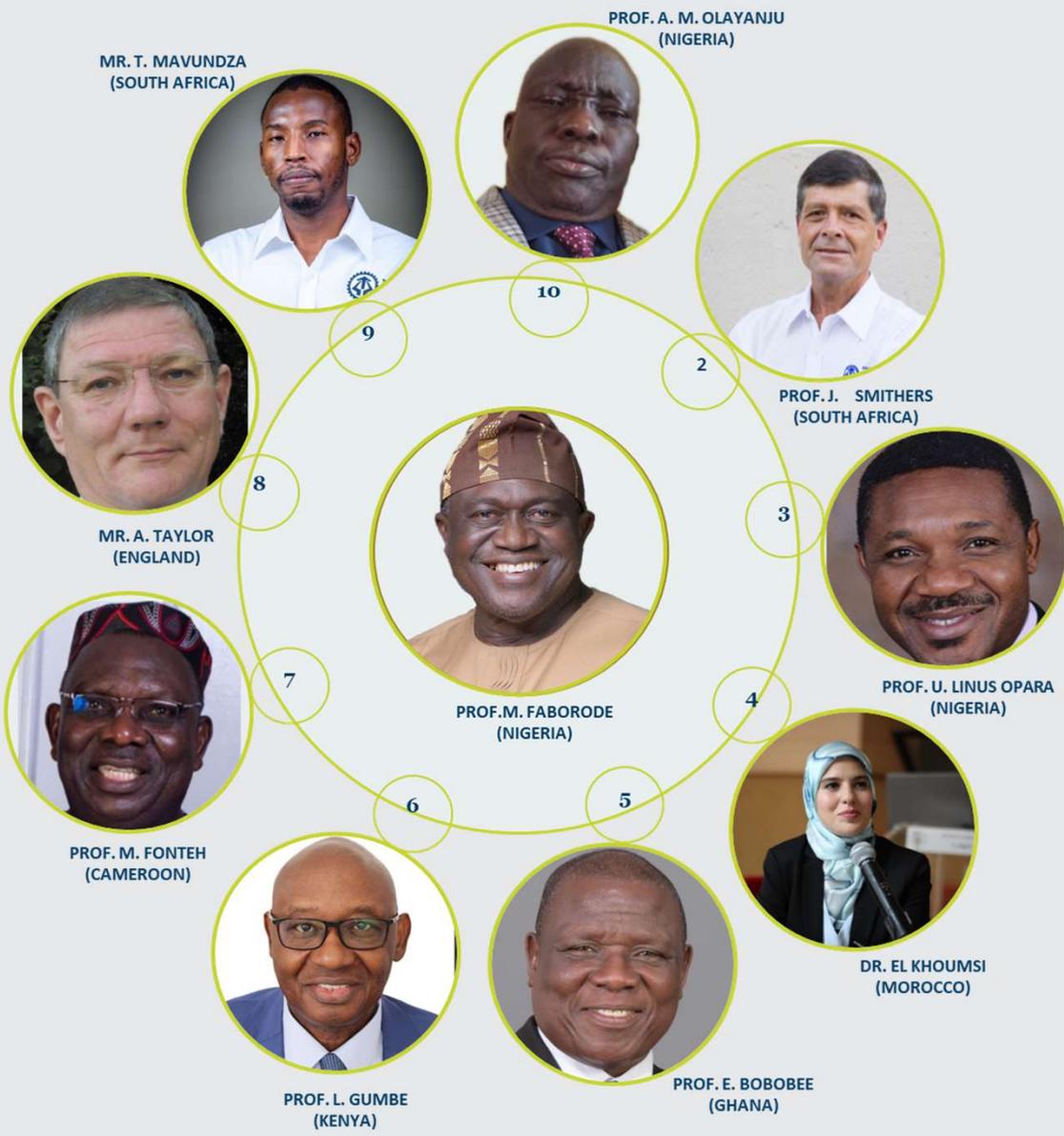
I want to emphasize some key thematic activities (a-k) highlighted, preceding the table to address some of the goals. In considering the PSP, the feasibility of its implementation is paramount and we must be pragmatic about what we can effectively achieve. For example, in order to facilitate our partnership with the African Union or African Union Commission and its agencies, and be able to serve as the Focal Implementor for the Comprehensive Agricultural Development Programme (CAAPD) as part of the African Agenda 2063, we shall need to enable the establishment of the Ethiopian Society for Agricultural Engineering, if one does not exist yet.

I also wish to suggest that Council considers, in line with the trending nomenclature, the adoption of the new name **“Pan African Society for Agricultural and Biosystems Engineering”** with the acronym **“PASABE”**. We may also decide to retain the current **“PASAE”**. I pledge to provide the necessary leadership to enable us accomplish our targets, as I also implore all members of Council to let us work as a solid team to fulfil the aspirations of our members and the profession.

Thank you.

Mike Faborode

“I believe that our task in the new dispensation is to build on this solid foundation, grow and strengthen the Society and profession, and extend the frontiers of our influence, utility and relevance to resolving the African development contradictions on the basis that promoting agriculture is the best way forward for the African Agenda 2063.”



PASAE COUNCIL MEMBERS

1. PROF. MICHAEL FAVORODE **PRESIDENT**
2. PROF. JEFF SMITHERS **SECRETARY GENERAL**
3. PROF. UMEZURUIKE LINUS OPARA **IMMEDIATE PAST PRESIDENT**
4. DR. WAFAE EL KHOUMSI ANAFIDE **(NORTH AFRICA)**
5. PROF. EMMANUEL BOBOBEE **COUNCIL MEMBER**
6. PROF. LAWRENCE GUMBE **COUNCIL MEMBER**
7. PROF. MATHIAS FONTEH **CO-OPTED COUNCIL MEMBER (CENTRAL AFRICA)**
8. MR. ALASTAIR TAYLOR **CO-OPTED COUNCIL MEMBER (UK/INTERNATIONAL)**
9. MR. THABO MAVUNDZA **(SOUTHERN AFRICA)**
10. PROF. ADESOJI MATTHEW OLAYANJU **COUNCIL MEMBER**

PASAE COUNCIL MEMBERS



Chikondi Gurira
PASAE Administrator



Senzo Masikane
PASAE Administrative Assistant

PASAE SECRETARIAT

administrator@pasae.org.za

The conference was jointly organized by the AfroAgEng — the Pan African Society for Agricultural Engineering (PASAE) and the Nigerian Institution of Agricultural Engineers (NIAE), and was focused on adequately apprehending the wide dimensions, the multi-faceted challenges, the abundant emerging opportunities and prospects for agricultural and rural transformation in Africa, in line with the Africa Agenda 2063 — The Africa We Want.

Thus, the conference was essentially aimed at harnessing an emerging global movement for Africa's renaissance through knowledge and practice-driven agriculture and agriculture-led industrialization. It was noted that Africa's potentials in human, agricultural and natural resources is significant but largely under exploited and underutilized, hence there was the need to create a new momentum for concerted action.

Key Points

The following were the key observations made at the sessions:

1. Presently, Africa is a net importer of food and agricultural products at a level of about 80 billion US dollars annually, with only a tiny fraction originating from the continent. This implies that if requisite investments are made in agriculture, at the minimum, Africa can increase cross border trade by capturing a significant share of the 80 billion US dollars of agriculture imports.
2. Agricultural, Biosystems and Environmental Engineers have a responsibility to drive the modernisation of Africa's agriculture and to create the foundation for its commercialisation. New technologies are critical in expanding hectareage, improving farm productivity, ensuring efficiency in resource use, and protecting the environment. Agricultural engineers must also support the introduction of efficient and least-cost technologies and farming practices that will enhance productivity growth, eliminate post-harvest losses, and enhance the overall quality and acceptability of agricultural products on the African markets
3. Modern digital technologies, including Artificial Intelligence, use of drones, machine learning, etc, hold the key to transforming Africa's agriculture and trade. The conference noted happily that Afreximbank is investing heavily in a host of technologies including the Pan African Payments and Settlements System and the African Customer Due Diligence Repository, indicating the potential for collaboration with PASAE and NIAE.
4. To realise the full potential of the African Continental Free Trade Area Agreement (AfCFTA), deliberate policies and programmes to commercialise agriculture in Africa must proceed earnestly. These policies and programmes should focus on formalising the largely informal sector, reforming the land tenure and ownership systems, creating incentive schemes to leverage private capital into agriculture and acquiring modern farming technologies that will improve and sustain agricultural productivity.
5. PASAE and NIAE have successfully built bridges with key continental and international development agencies and private sector actors such as the AfDB, AFREXIMBANK, UNFAO, UNIDO, Intelligest, CEAM/FTN, Bari, ASABE, and CSAE to mention a few, to forge the partnership for action in alignment with SDG No 17 and the move towards the Africa we Want. This was one of the goals of PASAE in its strategic plan.
6. The conference had good international participation, though it could have been better. In the case of Nigeria, this conference has substantially reawakened interest in the NIAE and we shall capitalize and build on the new momentum to reform our structures and governance in order to enhance the relevance of our profession to the country and sustain the interest of our members.
7. Significantly, we recorded great success in mobilizing students and the youths through the Quiz and Technical presentation competitions which engaged students. The students were greatly inspired, mobilized and mentored. They were actually a major part of the success of our grow Agricultural Engineering campaign. The conference social media

Key Points (cont'd)

7. publicity could not have been this successful, but for the involvement of the youth and students. They are the strength for our profession now and in future.
8. We consider this as a good start in our initiative to catch our students young and get them involved in PASAE professional activities. The momentum generated from these activities have been very impressive and most inspiring. We shall build on these and harness the immense energy and creativity of our students. They have been very impressive in their participation. Next time we have greater international spread and reach.
9. During the Masterclass and the main conference, it was clear that we know where we want to be. During the technical sessions it seems to me that there is still a large focus on technological issues that is used currently during production and processes. The challenge is in bridging the gap between the two. We need to think about the “how” – we know the “what”.
10. We need to work at many different levels. Our work to promote the discipline needs to work for the small-scale farmer (or even the woman with the hoe) as it does the large scale and intensive operation.
11. We recognise that there are always three groups – those who make it happen, those that watch it happen, and those who don't know what happened. In other words. There are 25% at the top who will apply all of the new technologies anyway and 25% at the bottom for whom the technology is too big a task. It is the 50% in the middle we need to influence the most and that is where the change can come.
12. Also, we consider our intervention to that of “Engineering in Agriculture” entails use of all engineers from other disciplines who are essentially “converted” to engineers working in agriculture especially mechanical, industrial, mechatronic, electronic, electrical and civil engineers need to be infected with agriculture in order to make a contribution. Our universities and polytechnics should offer short courses or a post graduate degree for these disciplines to be more knowledgeable in agricultural issues (like agronomy, soil science, irrigation, food processing and so on)
13. NCAM and FIRO should be strengthened as Innovation and Processing Hubs of the Nation, more so, because NCAM is already hosting NIAE while FIRO is already hosting NIFST.
14. The Curriculum of the four Universities of Agriculture in Nigeria - FUNAAB, MOU Umudike, UA Makurdi and Landmark University, Omu-Aran should be made youth friendly in order to address the issue of low enrollment in Agricultural Programmes. Courses such as Hydroponics Technology, Smart Agriculture, IOT, Drones in Agric as well as AI should be introduced as specialised and compulsory courses for those programmes.

These are just a few of the issues to stir our memories in exploring from our individual and corporate perspectives the importance of what this 2021 virtual adventure has represented to the goal of attaining “the Africa we want” with Agricultural, Biosystems and Environmental Engineering in the driving seat for progress.

Professional Development Workshops and Master Classes

Details of the six designed workshops are as follows:

- i. High-Level Professional Development Workshop on postharvest engineering and the development of export processing zones/agro-industrial or knowledge parks to boost agro-industrial development
- ii. High-Level Professional Development Workshop on harnessing Africa's water resources and modern irrigation technologies to boost agricultural productivity
- iii. Masterclass on effective use of big data, artificial intelligence and blockchain technology in enhancing farm productivity and sustainability
- iv. Masterclass on strategic engagement of digital technologies, youth and women in agriculture and rural transformation.
- v. High-Level Professional Development Workshop on transforming tertiary institution curricula/programmes and pedagogies to promote quality graduates to meet the Agenda 2063 challenges.
- vi. Masterclass on the principles and approaches for training and practice in intellectual property management for engineering professionals.

PASAE Notice

PASAE related news, announcements and reminders!



PAN AFRICAN SOCIETY FOR
AGRICULTURAL ENGINEERING

PASAE- GSAEGH Conference in Ghana

PASAE Conference in Ghana

A reminder! This is to remind you all of the PASAE Conference, which will be hosted in Ghana! As the PASAE, we are pleased to announce and invite you to attend the 4th Pan African Society for Agricultural Engineering (PASAE) AfroAgEng International Conference.

Please take note of the following:

Date: 10 - 14 October 2022

Venue: The Institute of Distance Learning (IDL) Conference Centre,
Kwame Nkrumah University of Science and Technology
(KNUST), Kumasi, Ghana.

Several engineering, technology and science professionals will share their innovations and expertise on issues that span sustainable food production and supply chain management. The theme of the conference is “Engineering Africa’s Agriculture as Business for Sustainable Development with a focus on Agenda 2063”.

The link below will lead you to the Conference website, which will contain ALL of the Conference details!

Conference Website Link: <https://www.gsaegh.com>

Do the right thing and RSVP!!!

See you there!

PASAE Membership

All professionals interested in the discipline and practice of engineering in agriculture, food, the environment, and related companies are welcome to join AfroAgEng. Scientists, academics, researchers, industry practitioners (input providers, farmers, postharvest operators, processors, and manufacturers), consultants, policy experts, and students are among those that make up this group. We encourage worldwide membership and do not require formal qualifications in Agricultural Engineering or any other academic area.

To join, please go to www.pasae.org.za and download and fill out the application form, then send it to the Administrator via administrator@pasae.org.za

The Pan-African Society for Agricultural Engineering – AfroAgEng delights to welcome new members to the society and expresses hope, that through exchange of knowledge and interaction with various persons in the field of Agricultural Engineering, the profession and its noble cause will be promoted; as awareness about the critical role of engineering and technological innovations in agriculture and related bio-based industries in Africa will be raised. PASAE processes registration with SAGE pay (an Online payment platform) and other payment solutions which make the process easy and convenient for its clients.

Social Media Space

Let us ensure that the agricultural engineering fraternity gets the awareness and recognition it deserves! You can assist us in doing so by following the PASAE on these two social media platform links:

Facebook: [PASAE | Facebook](#)

LinkedIn: [PASAE | LinkedIn](#)

Events of Interest

This is an invite to you ALL.

PASAE is committed to promoting and advancing the profession of Agricultural Engineering in Africa. We seek to become a key knowledge partner and visible policy advocate on the role of engineering and technology in the transformation and industrialization of agriculture in Africa.

We invite all members to share any events of interest to be circulated to the body of Agricultural Engineers across Africa.

Any Questions

Should you have any questions or queries, please do not hesitate to contact us!

Email: administrator@pasae.org.za

10th International Micro-Irrigation Conference

The Moroccan National Committee of CIGR and ICID, as well as ANAFIDE, a member of the PASAE, have announced that they will host the 10th International Micro-Irrigation Conference in 2023. <http://10imic.ma/>

Micro-Irrigation in an Age of Technological Innovation and Digital Transformation

Dates: January 25-27, 2023

Venue: Dakhla, Morocco

Abstracts must be submitted by September 15th, 2022.

SAIAE Biennial Symposium

The South African Institute for Agricultural Engineers (SAIAE) has announced that her Biennial Symposium will be held this year!

Since its last appearance before COVID, the organizing committee (SAIAE Limpopo Branch), with the backing of the whole Institute, has been eagerly anticipating this spectacle.

<https://saiae.co.za/saiae-biennial-symposium-and-cpd-event/>

Dates: 21 – 23 September 2022

Venue: Fairview Hotel, Tzaneen, Limpopo, South Africa

Engineering in Kenya Magazine

The Kenya Institution of Engineers is 50 years old! A magazine issue has been published to commemorate this occasion! The Issue is honouring the Institution's 50th anniversary! The issue features a variety of intriguing subjects related to Kenyan engineering; make sure to read it!

The issue also includes information on the forthcoming 'Engineering Partnerships Convention 2022,' which will be held between 15 – 17 June 2022. More information may be found in the issue!

Contact the PASAE Office to receive access to the issue! Send an email to administrator@pasae.org.za to get a digital copy of the issue!

Don't pass up this intriguing read!

Africa Prize for Engineering Innovation - Call for entries

The Royal Academy of Engineering has announced that submissions for the Africa Prize for Engineering Innovation 2023 are now open! What is the award for, you may wonder? The prize is intended to encourage, recognize, and reward African innovation and entrepreneurship.

Individuals or small groups living and working in Sub-Saharan Africa are encouraged to apply. Entrepreneurs from all technical disciplines are encouraged to apply if they have an idea that can give scalable solutions to local concerns. Shortlisted applicants will get a six-month package of customized support to assist them in commercializing their idea. Please keep in mind that, while applicants do not need to be fluent in English, all training will be performed in English.

The overall winner of the GBP 25,000 prize will be announced at a high-profile event in 2023! So, apply! Please note that applications close on the 19th of July 2022. Furthermore, innovators do not need to be qualified engineers to enter, but their innovation must involve some form of engineering (mechanical, software, etc.).

A short video about the prize can be viewed here. Please feel free to visit the Africa Prize website for more information, or follow developments on Twitter, Facebook or LinkedIn.

Don't miss out on this interesting read!

Growing Agricultural Engineering in Africa: Supporting the Operations and Implementation of the Strategic Plan for AfroAgEng

By: Prof Jeff Smithers, SAIAE Council Member and PASAE Secretary-General

Two projects focused on supporting the growth of Agricultural Engineering in Africa have been funded by the Royal Academy of Engineers (RAENG) in the UK, in partnership with the Global Challenges Research Fund (GCRF). The aim of the GCRF Africa Catalyst programme is to strengthen professional engineering bodies in sub-Saharan Africa so that they can effectively promote the profession, share best practice and increase local engineering capacity, and thus help drive development.

The project team was led by the South African Institute of Agricultural Engineering (SAIAE) and included partners from the Pan African Society for Agricultural Engineering (PASAE - commonly referred to as AfroAgEng), the Institute of Agricultural Engineering (IAgrE) in the UK and Harper Adams University in the UK. The first one-year project titled “Planning for the Growth of Agricultural Engineering in Africa by Supporting the Establishment of AfroAgEng” was completed in 2019. The strategic plan developed during this project was adopted by the PASAE Council. A two-year follow on project titled “Growing Agricultural Engineering in Africa: Supporting the Operations and Implementation of the Strategic Plan for AfroAgEng” was completed in 2021. The main aim of the project was to support the growth of Agricultural Engineering in African by supporting the PASAE Council with the implementation of the Strategic Plan for AfroAgEng and with the operations and administration of the PASAE. The objectives and activities of the project are summarized below.

Raise the profile by showcasing the role and capabilities of Agricultural Engineering

- Support for the combined 3rd PASAE / NIAE International Conference and Workshops which was held online from 9-22 April 2021. The theme of the conference was “Engineering Africa's Agro-Industrial Transformation for Economic Prosperity and Sustainable Development”. Two workshops were presented and 66 presentations were made covering seven themes.
- Support has also been provided to prepare for the 4th PASAE International conference to be held in Ghana in conjunction with the Ghana Society of Agricultural Engineering (GSAE)

Compilation of information document on Agricultural Engineering for economic development in Africa

A comprehensive 88-page report on “Agricultural Engineering in Africa: A Key Driver for Transforming Agriculture to Deliver Food Security and to Support Economic Prosperity”, which includes a call to action with 25 recommendations, was produced. Information for the report was derived from the literature, call for submissions and online interviews with key people. This report was launched during an online event held on the 3rd August 2021, with statements of support made by a wide range of institutions (e.g. RAENG, CIGR, SAIAE, FAO, ASABE, AfDB, AFRIMEX, RUFORUM) and was attended by more than 60 people. The report can be accessed from <https://pasae.org.za/publications.html> and details on the launch event from <https://pasae.org.za/Events.html>.

- A compendium of key state and non-state actors was compiled, which includes funding agencies, relevant to Agricultural Engineering education, research and practice in Africa.

Build relationship with industry, government and funding agencies

- The planned face-to-face meetings with representatives from key institutions were not possible due to COVID-19 related travel restrictions . Therefore, a number of institutions were targeted and involved in the 3rd PASAE-NIAE conference and Agricultural Engineering in Africa report launch event.
- The top ranked 100 questions of importance for the future of Agricultural Engineering education and research in Africa were identified based on an extensive literature search and framing. Through a series of dialogues with stakeholders from government, industry and non-state actors, key issues of importance to the relevance and practice of Agricultural Engineering in Africa were highlighted.
- A compendium of key state and non-state actors was compiled, which includes funding agencies, relevant to Agricultural Engineering education, research and practice in Africa.

AfroAgEng to support regional and national Agricultural Engineering Societies

Proposals for support were requested and approved from East (EA), North (NA), West (WA), Central (CA) and Southern (SA) regions in Africa. These included:

- Creation of a database of Agricultural Engineering training institutions with contact details, level of training provided, accreditation of the programmes and enrolled and graduated students.
- Creation of a database of National Agricultural Engineering Related Professional Institutes/Societies including contact details, no. of members and operational status of the institutes/societies.
- In addition, specific requests for support were received and which included:
 - Support to run CPD training events (NA)
 - Website development and promotional material (NA, SA, WA)
 - IT equipment (SA)
 - Establishment of a permanent secretariat (WA).

Focus on youth engagement

As part of the 3rd PASAE/NIAE conference, a continental wide quiz for students was run and prizes for the top three students were awarded. In addition, presentations made by students were judged by an international panel and three best technical presentations were awarded cash incentives.

Raising public awareness

- The PASAE website and some of the national society webpages were revised and upgraded with support from the project.
- The “Agricultural Engineering in Africa” report is expected to contribute significantly to raising the profile of Agricultural Engineers by increasing public awareness, influencing key people and institutions, and by showcasing exciting opportunities to attract new entrants to grow the profession

Support for the engagement with academic Agricultural Engineering programmes offered in Africa and facilitation of collaboration between the institutions and with IAgRE (UK) and HAU

An online workshop on “Modernising Agricultural Engineering Programmes to meet Africa’s Agenda 2063: The Africa We Want” was held on 21st September 2020. Seven speakers were invited to make presentations and this was followed by facilitated discussion on six questions in six breakout sessions with a report back from each discussion group to a final plenary session. The workshop was attended by approximately 80 delegates and the event was live-streamed on YouTube, The presentations made and the reports from the discussion groups are available from <https://pasae.org.za/Events.html>.

Development of a CPD training portfolio

Five CPD webinars were commissioned and run in conjunction with KeSBAE and SAIIE:

- Environmental, Biological and Agricultural Engineers in the Fight Against COVID - 19 in Africa (2-h, 82 delegates)
- Environmental Concerns in Development of Agricultural Projects (2-h, 42 delegates)
- Developments in Renewable Energy in Africa (2-h, 42 delegates)
- Water Resources Planning in Agriculture (2-days, 25 delegates)
- Fundamentals of Energy Management Opportunities in Agriculture (2-days, 14 delegates).

Support for secretariat, administrative procedures, budget control and auditing for AfroAgEng

Support for the PASAE secretariat and membership administration has been provided by the project. In addition, the project facilitated the call for nominations and the election of a new PASAE Council as per the PASAE constitution with annual PASAE council meetings were arranged and facilitated, and regular combined AfroAgEng project and PASAE Council meetings were scheduled and run.

The contributions from the Project Team and the PASAE Council to the successful completion of the projects, and the financial support for the projects by the RAENG, are gratefully acknowledged.

Circulation of the Agricultural Engineering in Africa Report

PASAE published a report titled "Agricultural Engineering in Africa: A Key Driver for Transforming Agriculture to Deliver Food Security and Economic Prosperity." It is our job to disseminate the report throughout the continent and the world at large, and also promote agricultural engineering and make the world aware of its relevance!

To achieve this, we would like to request that you contact the PASAE Secretariat if you have contact with national decision-makers across Africa and would therefore want to obtain printed copies of the PASAE report.

Let's circulate the report! The report is accessible in digital form on the PASAE website: <https://www.pasae.org.za/publications.html>

Contact us

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Media Feature of Prof Emmanuel Y.H. Bobobee, PASAE Council Member by From Thomas Agbenyegah Adzey, Anwomaso

Extracted from <https://thechronicle.com.gh/ghana-can-earn-13bn-from-cassava-products-if/>

An Associate Professor in Agricultural Mechanisation says from a conservative estimate Ghana can earn over \$3 billion from gari alone, \$4 billion from starch and between \$5 billion to \$6 billion from bio-ethanol per one million hectares of the lead varieties of cassava (*Manihot esculenta*).

He has, therefore, recommended the establishment of a dedicated Cassava Research Institute, as well as a Cassava Marketing Board, just as it pertains with the Cocoa Marketing Board (COCOBOD), which will bring a big relief to the country and its neighbours as well.

Prof. Emmanuel Yaovi Hunnuor Bobobee of the Agricultural Machinery Engineering department of the Kwame Nkrumah University of Science and Technology (KNUST) said Africa produces about 60 percent of the global cassava production, but the continent is not even near 1 percent when it comes to export and value addition.

Prof. Bobobee, who has invented the TEK Mechanical Cassava Harvester, patented 17219 and championing the mechanisation of cassava production in Ghana and beyond, last week, Wednesday demonstrated how the cassava harvester works to The Chronicle, at the KNUST Agricultural Research Station at Anwomaso, near Kumasi.

Designed to harvest all tropical root and tuber crops, the TEK Harvester at the same time of harvesting also ploughs the field at the same time for the next cultivation, conserve energy and works best when the ground is hard.

Prof. Bobobee, who has a vast experience in agricultural equipment development and mechanisation with special interest in mechanised cassava production, said the idea is to alleviate the difficulties associated with the manual methods of cassava production by making the process easy, mechanised, smart and attractive.

His 17-acre cassava farm purposely for teaching and demonstration is cultivated with twelve cassava varieties out of about thirty elite cassava varieties developed by the Crop Research Institute of the CSIR, which are capable of yielding a minimum of 25 tons of cassava per hectare, as against 8 tons in the case of local varieties.

Prof. Bobobee, who was at the same time also practically demonstrating to a large number of final year agricultural engineering students of the faculty, explained that some of the developed elite cassava varieties can yield as much as 60 to 80 tons per hectare, when cultivated on ridges and properly spaced.

The Specialist Researcher in Agricultural Mechanisation, who is passionate about mechanizing cassava production elaborated that cassava is a reliable staple for us and can also be used as a composite flour to make confectioneries and bread especially now that there are crisis about import of wheat from other parts of the world as a result of the Russia/Ukraine war.



The Agric Professor admiring a cassava plant on the farm

The good thing about cassava, according to the professor, is that “the continent produces and consumes, unlike other products that we produce and look for external markets” and that, “improving a bit of its cultivation techniques would help produce more so that we can feed ourselves and at the same time export”.

He, however, bemoaned that the state’s response to this laudable innovation is actually not encouraging or motivating at all instead of being a good by-product for government to invest in tertiary education at a time the universities are churning out more school graduates without employment opportunities.



The Professor and His students at the demonstration farm

Prof. Bobobee suggested to government to align its agricultural policy alongside mechanization with cassava and support this innovation or invention which is capable of bringing rippling effects to the nation.

“It is the right time for government to invest in university researchers and inventors, and innovations that start businesses and can employ students”, emphasizing that manual production and harvesting of cassava cannot be sustained and does not make it attractive to the youth.

Prof. Bobobee’s department of Agricultural and Biosystems Engineering at KNUST is currently working on a cassava peeling machine (cassava peeler) to help farmers peel their harvested cassava quickly.

He said these are all start-up innovations that the government must step in to assist in order to create jobs for the teeming youth and graduates in the agricultural industry and also create wealth in the society.

In addition to the food types derived from cassava, the crop can also be used for bio-ethanol, artificial rice, animal feed, as starch for paper, plywood and textile industries and as binder for the pharmaceutical industry.

“It can also be used as a monosodium glutamate, artificial sweetener, an adhesive and a bio-plastic”, Prof. Bobobee enumerated.