



## December, 2012



Prof. B. A. Adewumi, fnse, fniae  
National Chairman, NIAE

### **F**rom the Chairman's Table:

The remarkable success of the 2012 NIAE National Conference and Annual General Meeting at Bauchi Polytechnic, Bauchi, tagged 'Wikki Spring 2012' is a land mark history in NIAE. This goes a long way to show the true professionalism in NIAE without tribal sentiments. I am happy for the support given to me by all and sundry during the election that brought me un-opposed to the position of the Chairman of the Institution during the AGM. I sincerely appreciate all members of CPC & LOC, especially the Regional Chair (Dr. Iya Shehu), LOC Chairman (Dr. Samuel Sule ) and Rector, Bauchi Polytechnic (Dr Shaib)

Reviving the NIAE News Letter/ Bulletin at this critical time gladdens my heart and excites me. The immediate past NEC seriously worked towards it and I'm happy that with a little more effort we are able to roll out this edition to end the year 2012. Henceforth, we hope to have the electronic copy of the New Letter/ Bulletin on NIAE website ([www.niae.net](http://www.niae.net)) and also circulate hard copies to financial members.

I shall be grateful if we can sustain this successful effort of rolling out the New Letter/ Bulletin by supplying news items from the Chapters, Branches and Regions. This implies that all passive Chapters, Branches and Regions must be revived. There must be Chapters, Branches and Regions meetings. We must organize workshops and seminars at Chapter, Branch and Region levels. We must organize Career Talks,

feature in Radio & TV programmes and shows, promote programmes that shall contribute to out immediate society and Chapter, Branch, State and Regional levels, aside National programmes.

The immediate past National Executive Council of NIAE, under the leadership of our amiable Prof. S. Z. Abubakar, succeeded in completing the affiliation with the American Society of Agricultural and Biological Engineers (ASABE). It is hoped that more of our members shall register with ASABE via the affiliation. I am also hopeful that NIAE shall soon affiliate with CIGR also. In the just conclude CIGR Conference at Stellenbosch, South Africa, I was assured by the International In-coming President of International Commission for Agricultural and Biological Engineers (CIGR) that he shall provide all the cooperation to fast track the affiliation of NIAE with CIGR. Also, at the Conference, I was nominated to serve in the committee that will produce the draft document to start the Association of Afro Agric Engineers, which is the African Continental component of CIGR. All these are pointer to the fact that great things are ahead.

Kindly take your time to read the articles and features in this edition of the News Letter/ Bulletin and ponder on what you can do to improve NIAE. Happy reading.

Prof. B. A. Adewumi, fnse, fniae  
National Chairman, NIAE

### News Contents

✍ **Change of Boton of NIAE Leadership Page 2**

✍ **Communique of the 33rd NIAE National Conference and AGM - Page 4 and 5**

✍ **Challenges to Agricultural Engineers by Dr Aminu Sale CFR, GCON, Former Secretary to the Federal Government - page 6**

✍ **New Admission to the NIAE College of Fellows - page**

✍ **Photo Panorama - page 7**

✍ **Announcement from Secretariat - page 8**

## **Change of Baton at the NIAE Leadership**

By

M. K. Othman (PhD)

The recently concluded 33<sup>rd</sup> NIAE Annual Conference and AGM tagged “Wikki Spring 2012” witnessed a change of leadership Baton of the NIAE EXCO members. The change was a result of election conducted during the AGM. Engr Prof. Babatunde Adewumi the immediate past Vice Chairman was elected chairman to replace Engr Prof. Sadiq Z. Abubakar who had completed his second term as the National Chairman. Engr Dr. Shaibu Musa became the new National Vice Chairman. Similarly, Engr Dr. Mike A. Enaboifo replaced Engr Dr. M. K. Othman as the new National secretary while Engr Othman became the new Publication secretary. Other new members of the EXCO were Engr Bala Jahun as National Financial Secretary, Engr Sabiu Bello as the PRO, Engr Yahaya D. Kazaure as Ex-officio and Engr Prof. Sadiq Z. Abubakar as new IPC. Members who retained their positions in the EXCO for their second term of office were Engr J. Adama as National Assistant Secretary, Engr (Mrs) N. I. Nwagugu as 2<sup>nd</sup> Ex-officio and Engr (Mrs) C. Ademade as National Treasurer. Similarly, Dr. F. O. Alonge retained his position as Auditor I while Engr (Mrs) R. S. Samaila was elected as Auditor II. All positions were to last for two years with effect from November, 2012. Congratulation to all the new and old officers while wishing them a successful tenure in their respective positions.

### **NSAE Certificate Retrieved and Registering with Corporate Affairs Commission (CAC), Abuja as NIAE**

It may be recalled National Executive Council (NEC) was directed at 32<sup>nd</sup> AGM in Ilorin to upgrade the certificate of registration with CAC and formally change the name from NSAE to NIAE. The change of name became necessary because the NSAE certificate of registration could not be traced and therefore considered missing. All efforts to trace it in the last five years were futile as it could not be tied to any member of the immediate or past EXCO. The inability to produce the certificate of NSAE has been a major problem when transaction businesses with corporate bodies like Banks, Agencies and NGOs. Most branches could not open Bank account without the NSAE certificate. The EXCO then swung into action in consultation to retrieve the certificate by employing the services of Legal advisory body; F. G. Birma & Co, Solicitors & Advocates, Legal Chambers; based in Abuja/Gomb. The assignment was contracted to the Legal Chamber in September, 2012 after preliminary investigation. The conditions for the change of name are to pay all the yearly subscriptions from the date NSAE was registered to date, affidavit for the missing certificate, etc.. Presently, a certified copy of the NSAE was retrieved after following the due process. The new certificate with the name of NIAE will be out anytime from this Month. The latest on the certificate is a letter from CAC sent to NSE to verify the authenticity of NIAE application for the change of name from NSAE to NIAE. This is not likely to pose a problem as NIAE is real and genuine. To facilitate this matter, NIAE influential members talk to NSE EXCO members fast tract what seems to be a long process as the letter has been with NSE Executive Secretary in the last one month

### **CHALLENGES TO AGRICULTURAL ENGINEERS IN NIGERIA: Engineering the Agricultural Transformation Agenda**

by

**Alh. (Dr.) Aminu Saleh**, CFR, GCON,  
Wamban Katagum

(Opening Remarks by Chairman of The Occasion at the Opening Ceremony of the 33<sup>rd</sup> Annual Conference on 6<sup>th</sup> November, 2012 at federal Polytechnic, Bauchi)

I have accepted your invitation to be the Chairman of this occasion, when at the same time I am asked to submit an opinion paper on general overview of the theme and sub-themes of the conference. My opening remarks will just be a few words of encouragement and confidence boosting as I am delighted with your strong sense of mission in this historic sacrifice. This effort of your institution will remain a lesson in the national service which professional associations ought to emulate in the overall interest of our fatherland. You have to continue to cultivate the relevant qualities to sustain this unique challenge of transformation of agriculture, by maintaining fairly good tempo of activities. Our people are eagerly awaiting, are full of expectation and have high hopes for improvement in quality of life. I am confident that you are up to this daunting task. I guess my opinion paper is for plenary session. I will like to recall that my boss and role model Dr. Pius Okigbo was once forecasting that the outcome of the European, Chinese etc advances in technology in agriculture "is to increase the technological dependence of Africa in the area of food security, on the West". Sir, this is now the unfortunate situation in Nigeria, **since we spent N1.3tr on rice, wheat, sugar and fish importation in 2010**, things that could be produced locally. Distinguished participants, our hope is in S and T planning, it is like a dream with your eyes wide open. I want to ask you about the likely changes you are fore sighting for the future if you really want to emphasis S & T in your recommendations? Fore sighting in science and technology is not the same as the conventional forecasting. Proponents of fore sighting advise that S and T planers should ask hard questions and think the unthinkable (even like fairy tales) and then plan and hope for technological advances to provide solutions. (Continue on page 7.)

**COMMUNIQUE OF THE 33<sup>rd</sup> NATIONAL  
CONFERENCE AND ANNUAL GENERAL MEETING  
OF THE NIGERIAN INSTITUTION OF  
AGRICULTURAL ENGINEERS (NIAE) HELD AT  
FEDERAL POLYTECHNIC, BAUCHI FROM 5<sup>th</sup> 9<sup>th</sup>  
NOVEMBER, 2012**

**INTRODUCTION**

The 33<sup>rd</sup> NIAE Annual Conference and AGM tagged “Wikki Spring”, 2012 was jointly hosted by the Federal Polytechnic, and Abubakar Tafawa Balewa University, Bauchi in Bauchi City from 5<sup>th</sup> 9<sup>th</sup> November, 2012. The theme of the Conference is “**Engineering the Agricultural Transformation Agenda (ATA)**”. It was attended by Agricultural Engineers and other related professionals from various higher institutions of learning, Federal and State Ministries of Agriculture, Departments and Agencies. A total of 102 participants registered for the Conference.

The opening ceremony took place at the M. L. Audu Auditorium of the Federal Polytechnic, Bauchi and was chaired by Alh. (Dr.) Aminu Saleh, CFR, GCON (Wamban Katagum) who was a former Secretary to the Federal Government. A keynote address was delivered by the Federal Minister of State for Agriculture and Rural Development, Alh. Bukar Tijjani, represented by the Director (Field Operations North East Regional Office), Alh. Yusuf Muhammed. The Executive Governor of Bauchi State, His Excellency Mal. (Dr.) Isa Yuguda FNIM (Matawallen Bauchi) was represented by Bauchi State Commissioner for Agriculture, Alh. Tasiu Muhammed (Zannan Katagum). At the Opening Ceremony, the Chairman of the occasion presented an opinion paper on the theme.

Three lead papers were presented at the plenary session by the following renowned scholars in the field of agricultural engineering.

1. Engr. Prof. F. A. Adeniji; Managing Soil as Natural Resources for Sustainable Development.
2. Engr. Prof. S. Z. Abubakar; Strategies to Drive Agricultural Transformation Agenda for Maximum use of Nigeria's Agricultural Potentials.
3. Prof. Babatunde Adewumi; Engineering the Agro Food Process Sector of the Nigerian Economy to Boost the Agricultural Transformation Agenda (ATA)

At the technical session, papers were presented and discussed under the following fields of agricultural engineering: Farm Power and Machinery, Soil and Water, Post Harvest, Farm Structures and Environmental Control/Emerging Technology. A total of 94 articles were published in the conference proceedings.

such as dams, irrigation systems, road, electricity and others are grossly underutilized and/or in dilapidated conditions.

2. Agriculture is a key component of Nigerian economy currently contributing 42% of nation's GDP as against 13% for oil. With the abundant human and natural resources in Nigeria, food importation into the Country continues to be on the increase.
3. There is no national policy in Agricultural Mechanization; only short term interventions are put in place.
4. There is an under utilization of human resources and poor management of natural resources especially land and water.
5. There is indiscriminate importation of Agricultural Machinery into the Country without recourse to our environment.
6. There is inadequate support for research and development and the commercialization of locally produce agricultural machinery and equipment.
7. There is wide spread of malfunctioned agricultural machinery across the country as a result of poor maintenance culture.

**RECOMMENDATIONS**

1. The large number of dams spread across the Country which is grossly underutilized should be put to optimal use by developing the downstream infrastructures for all the year farming, while at the same time embarking on nationwide rehabilitation of all irrigation schemes in order to have quantum leap in agricultural production. All existing rural feeder roads in dilapidated conditions should be rehabilitated and more opened to link agricultural production centres (farms) to the market.
2. In order to increase food product and reduce importation, the Government should:
  - i. Give more attention to agricultural production than Oil.
  - ii. Fully implement the ATA for sustained national food security.
  - iii. Promote the formation of Cooperative Society in agricultural mechanization by producing financial windows.
  - iv. Promote agricultural product processing for oriented market value addition, reduce Post-harvest losses and create employment opportunity to reduce poverty.

Water resources. The technical personnel in the agricultural establishment, especially the Agric. Engineers should be maximally and appropriately utilized for efficient services.

5. Indiscriminate agricultural machinery importation should be discouraged and the existing agricultural machinery testing and certification programme at National Centre for Agricultural Mechanization (NCAM) should be strengthened. NCAM and Standard Organization of Nigeria (SON) should collaborate to ensure that only certified agricultural equipment that can adapt to our environment should be promoted for importation.
6. The process for the disbursement of fund for research and development should be re-evaluated for easy access and efficient utilization. Government should promote mass production/manufacturing of locally developed agricultural machinery and equipment that shall suit our environment through relevant government agencies (National Agency for Science and Engineering Infrastructure-NASENI; Black Smith/Artisan Training and Support Unit BATSU, Manufacturers Association of Nigeria (MAN) and make provision for financial support.
7. The Federal Government is implored to recognize NIAE and NCAM as major stakeholders and repository of cognate engineering expertise for actualizing the technological needs of the ATA. The stakeholders should play major roles in developing programmes and plans for the rehabilitation of malfunctioned agricultural machinery nation-wide, as a matter of urgency.

Engr. Prof. Babatunde Adewumi, FNIAE, FNSE  
National Chairman,

Engr. Dr. Mike A. Enaboifo  
National Secretary,

NAME OF APPLICANT AND RANK	ADDRESS AND POSITIONS RESPONSIBILITY HELD
<b>SOMONAN, Joshua Kayode</b> (Ass Professor), Former Had and presently Deputy Dan	Dpt of Agric and Bioresources Engineering, Mhad Opara University of Agriculture, Umulike
<b>ALONGE, A.F.</b> (Associate Professor)	University of Uyo Auditor, NAE Former, Nit. fin Sec NAE
<b>EZEAKU, Genert A</b> (Chief Lecturer)	Federal Poly Buchi, Had Dpt of Agric Engg
<b>EDIBO, Sunday</b> (Regional Director, ATA North Central Region)	Federal Ministry of Agriculture and Rural Development
<b>OKUNU, Chivatosin</b> (Director)	Federal Ministry of Agriculture, Abuja
<b>CBOI, Esien</b> (Ass Professor)	University of Uyo Former Nit Vice Chairman, NAE
<b>SALIMHIN, Ade Adhano</b> (Sr. Lecturer)	University of Agriculture, Marudi Ag Head, Dpt of Agric Engg Federal University, Oyo Odi
<b>ADENRAN, Kanuru Akemi</b> Senior Lecturer	University of Ilorin
<b>AKANRO, John Olanwon</b>	Senior Lecturer Lagos State Polytechnic
<b>OMBODE, Miji dan Abubakar</b> (Ass Professor)	Agric Engg Dep ABU Zaria
<b>CLAOYE, Joshua</b> Clarevaju (Sr. Lecturer)	Dpt of Agri and Bioresources Engineering University of ILORIN Former Nit. Fin Sec NAE
<b>OKHEKE, NGOZI ANIHON</b> Professor)	Federal University of Technology, Owerri, Former Head of the Dpt of Agric Engg
<b>EKE, AKACHUKWU BEN</b> (Sr. Lecturer) Former Had and Dan	Dpt of Agric and Bioresources Engineering, Mhad Opara University of Agriculture, Umulike
<b>UGWUSHWU, BONEFACE</b> <b>OBINWANE</b> (Sr. Lecturer)	Former Had Department of Agric and Bioresources Engineering University of Nigeria, Nukka
<b>MHAMMAD, MH</b> Professor	Vice Chancellor, AIBU

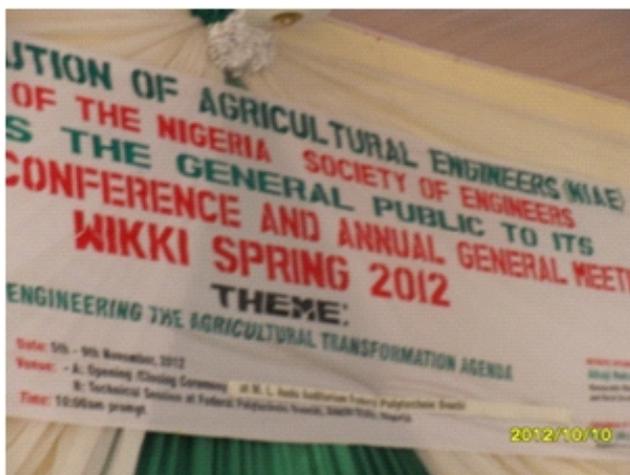
# Photo Panorama for Wikki Spring, Bauchi, 5th to 9th Nov, 2012



NIAE National EXCO with Representative of Emir of Bauchi, Galadiman Bauchi, Surv I. Saidu Jahun



IPC Engr Prof S. Z. Abubakar delivering his speech at Emir's Palace during courtesy call



Banner at Bauchi Conference



Cross section of the Conference participants during opening ceremony of Bauchi Conference



Dignitaries at Bauchi Conference



NIAE Stand for registration of participants at Bauchi Conference

Continue from page 3

I will take advantage of this opportunity to state the following 5 attributes that are among 10 listed devices (I hold the remaining 5 to myself) used to encourage a planer to think about how things could be different to better (1) **adaptation**: what else is like it? What other ideas does it suggest? What could you copy? What could you imitate? (2) **modification**: what new twist could be made? Can you change the colour, size, shape, motion, sound, form, or odor? (3) **magnification**: can you make it smaller, shorter, lighter, or lower? Can you divide it up or omit certain parts? (4) **rearrangement**: can you interchange parts? Can you use a different plan, pattern, or sequence? Can you change the schedule or rearrange cause and effect? (5) **reversibility**: can you turn backward or upside down? Can you reverse roles or do the opposite? Once upon a time U.S.A. declared vocational education for youth a top priority because they wanted to win the race for technical competence and superiority, can we copy this? In Europe, China, India, etc their method of farming is more scientific therefore more productive. In those countries, mechanization brought about considerable progress in output with explosive growth in the use of agricultural chemicals, herbicides, insecticides, fungicides, and fertilizers (with their hazards). They also develop high yielding species that lead to intensive farming on the land with sufficient rearing of cattle and poultry production. They went further into genetic engineering method for hybridization and embark on pest control by use of chemicals.

In Nigeria, we are still at the primitive level making use of natural element of climate such as rainfall, sunshine and soil condition. Every farm work is done manually from land preparation, plowing, cultivating, harrowing, to seed planting and tree planting, harvesting, processing, and storage. We have no knowledge of, and therefore don't monitor acidity or nutrients, nothing protects the shallow soil, and in our area the rainfall is not enough to saturate the soil for more than two months. Even the use of simple machine and implement in place of manual labor or the use of animals on the farm is not there productivity per man per acre is low.

Again, there are no machines available to help people in the homes for domestic activities. With all the money spent these years on research and development in Agriculture very little has changed. I will like to recall an American question: **“is government dead?” this was what TIME MAGAZINE of New York asked in 1980. The question was asked because school standards had gone low, hospital care was nil, courts were over crowded and most of the city councils were bankrupt, confidence in government had fallen to record low, cities and high ways succumb to mounting crimes** end of quote.

Therefore, we are putting a lot of hope on this program. Distinguished participants, I come from an area where scarcity of drinking water is another problem for the inhabitants. There is very little groundwater recharge at the upper aquifer due to lack of rainfall (vagaries of nature) not to talk of the recharge at the larger aquifer below. However, the situation is completely different at Nguru wetlands with incessant flooding and stagnation where conveyances are not desalted and cleared, ambient condition for **TYPHER GRASS (Kachalla)**. Please, note that under climate change, the rains fall in a short period with high intensity resulting in large volume of overland flow, which is often lost into streams hence, there is need for inter basin water transfer and construction of large dams with hydropower that are more cost effective in terms of cost per unit volume of water impounded, under **national management of rain water use and control**. Sir, for a start, how do we undertake research into discovering cheap method of distilling ground water reservoirs or where a surface water deposit forms in poorly drained area? Potable water supply and good sanitation for about 80% of our population was promised by the government, but alas we are yet to see it happen. Another important issue is the impact of rural-urban drift that must be part of your recommendations. It is caused by lack of basic modern amenities in the rural areas that in itself drives youth prematurely away from rural family homes. Due to lack of job opportunities, youth are unable to practice vocation or embark upon economic activities in their rural communities. If your conference is to provide inputs for the preparation of plans, be they long term, medium term or short term, you have to take a second look at the agricultural objectives, goals, targets, strategies and action plans, to ensure their clarity, consistency, realism, feasibility and challenges, particularly change from rain fed to irrigation farming, to achieve national aspirations. Where to begin your transformation is to focus on sensitization through mass mobilization and support building to spread the message to the public and policy makers. Crafting a befitting program is one thing, implementation is another. You have to take further stride to achieve your goals. You, as professionals in this field, understand better than others, what needs to be done to move the sector forward.

### 69 NIAE Members are the First Batch Beneficiaries to NIAE ASABE Merger

The signing of Memorandum of Understanding (MOU) between NIAE and American Society of Agric and Bio-resources (ASABE) in 2010 to work together as professional bodies has started yielding a positive result. This is because the first batch of 69 NIAE members was automatically registered with ASABE with all rights and privileges accorded to ASABE members worldwide. The certificates of the registered members were issued six months ago. Benefits to ASABE membership are uncountable; free access to ASABE on line library and publications is one of such numerous benefits to ASABE members. The applications for second batch of 45 members are currently being processed and hopefully they will receive their certificates before the end of the year. Similarly, names are being compiled to process the next batch. Members are urged to seize the opportunity to register with ASABE. The success of the merger was a result of untiring effort of the immediate past NIAE EXCO who made sure that all obstacles to the merger were removed.

### NATIONAL SECRETARY'S ANNOUNCEMENTS FOR THE MONTH OF DECEMBER 2012

1. NIAE members are advised to participate fully in the NSE conference taking place at Ilorin from 3-7th Dec. 2012 and use the opportunity to participate in the Group Dynamics Session, upgrade the payment of their Annual Dues, provide updated information on their email and postal addresses, get new NIAE publication, kick start the registration of new members, visit the NIAE National Secretariat at NCAM Ilorin, etc.

2. Meeting of the National Executive Council (NEC) of NIAE holds in the 2nd weeks of February 2013. Contact NEC through your Regional Chairmen during the NEC meeting.

3. Wedding invitation from Prof & Mrs Ogunlela of the University of Ilorin: The families of Prof Ogunlela and Pa Oyedun invites members to the coming together in marriage of their children: Tolu Ogunlela and Olaitan Oyedun on Friday Dec. 7, 2012 & Saturday Dec 8, 2012. (Engagement on Fri. Dec. 7, 2012 @1pm @ Excellence Hall; along Pipeline Rd; Tanke, Ilorin. Wedding on Saturday Dec 8, 2012 @ 10am @ UMCA Chapel; along Unilorin Perm. Site Rd; Tanke, Ilorin. Reception follows immediately at Roemichs Hall, alonge Ajase-Ipo Rd. Offa Garage, Ilorin.).

NEC wishes the couple Happy marriage life and invites ALL NIAE members to attend. Members should take advantage of their being at Ilorin for the NSE conference to attend the ceremony en mass.

4. Preparation is in top gear for the North-East Zone to inaugurate three Chapters soon within January and February 2013. South West should start the process of re-launching passive chapters in Lagos, Ogun, Osun and Oyo State by the end of March, 2013.

5. Ensure you regularly visit NIAE website ([www.niae.net](http://www.niae.net)) for journals and information. NIAE News Letter/ Bulletin shall be available on the website any time from now.

Also, NIAE Programme of Activities for 2013 (National, Regional and State) shall be available on the website before the end of January, 2013.

6. Members are requested to send papers to the NIAE Journal (Journal of Agricultural and Engineering Technology - JAET). Also, cite publications from JAET in your published articles henceforth to improve the impact factor of JAET.

7. 2013 NIAE Conference shall hold at Uyo by October. Members should start preparations.

8. NEC Wishes ALL Happy Xmass & New year celebration.

Thanks a million times

, Engr Dr. Mike A. Enaboifo

National Secretary, NIAE