# LEAD PAPER

# The Study of Agriculture in the Universities and the new Core Curriculum Minimum Academic Standards (CCMAS) of the National Universities Commission (NUC)

*Chinedum Nwajiuba*

*Prochancellor, Federal University of Agriculture Zuru, Nigeria, and Visiting Scholar, National Universities Commission, Abuja, Nigeria*

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**CORRESPONDING AUTHOR**

***chnwajiuba@gmail.com***

## PROLOGUE

*"The man who farms as his forefathers did cannot produce much food no matter how rich the land or how hard he works. The farmer who has access to and knows how to use what science knows about soils, plants, animals, and machines can produce abundance of food though the land be poor. Nor need he work nearly so hard and long. He can produce so much that his brothers and some of his neighbours will move to town to earn their living." —T W Schultz (1964) (Noble Prize winner for Economics, 1979)*

Dear friends and colleagues, at some point, I will come back to this statement by Prof. Theodore Schultz. That is all I say about that for now.

## APPRECIATION

It is proper that I start by expressing my deep appreciation for the opportunity to speak at this conference. I am particularly grateful to the Vice-Chancellor, Prof. Charles O. Esimone, and the entire university for this privilege.

I thank the Faculty of Agriculture, Dean, Staff, and students. I also thank very warmly the organizing committee of this conference. You have done well

**Caveat**

I have chosen a style for myself when invited to speak for some time now. It is a problem-solving, non-technical, easy to understand street-level approach.

I therefore issue a caveat. Dear colleagues and friends, I rarely do technical papers these days. By this I mean the types we have done over the years to earn the titles we have acquired. I state this so that younger academics and students do not misunderstand my approach here. These days, I devote more efforts at such opportunities as this, at addressing practical problems and hoping that we can together find solutions by which we can improve our wellbeing and that of millions of our suffering people.

This is also community service, a matter, I also observe that academics and universities are struggling with. Our communities service, the third in our line of goals, the first being teaching/learning and the second being research, should be in the context of what we teach

and research, and not something far from the university mandate. Such offices as chair or secretary of village meetings and church groups do not qualify as community service in the university system. This is a challenge to many colleagues as revealed last year when the NUC asked for submissions on community service during the collation of data/information for ranking universities. The very hardworking Director Academic Planning (DAP) of this university who I believe was part of that effort, as with all other DAPs will easily remember the struggles in getting our universities properly respond to the request for information on community service.

Therefore, this should be considered my **first contribution here: Get the community service responsibility right**.

Following from this, may I also humbly appeal that the outcomes of this conference and other conferences should not end in papers on bookshelves and conference proceedings or even journals. We should transit to producing simple policy briefs, and community action papers which will be less technical, and easy to read and delivered to the policy and governing groups and as well as communities from whom we often generate our data as we very often state in the justification/need for our study and research.

Universities globally have arrived at a point of needing to justify their existence. We in the universities are weak at marketing our products. **That will be my second contribution here: ensure that in your research and in this conference, take the extra step beyond the conference proceedings, by sending to governments and communities, findings and recommendations that affect them, stating what needs to be done, and by whom, requiring what resources, over what period, with what expected deliverables.**

**INTRODUCTION**

The National Universities Commission (NUC), the body created by Law to oversee standards and quality in the Nigeria university system late last year unveiled a new curriculum of programmes in the Nigeria university system, and in so doing moved from the Benchmark Minimum Academic Standards (BMAS) that we are all familiar with to the Core Curriculum Minimum Academic Standards (CCMAS). It is therefore proper that in this period, Nigeria universities should pay attention to, and explore this.

Therefore, when I was given the privilege of choosing the topic to speak on, I decided it has to be in the context of the new CCMAS. I have chosen to speak on the study of Agriculture in the universities and the new CCMAS.

For some personal reasons, I could relate aspects of this to the 2016 conference of the Association of Deans of Faculties of Agriculture in Nigeria universities, hosted in this university. I was invited to speak, and I made some contributions bothering on the need to look at the current situation with studying agriculture in the university system in Nigeria.

Since then, something of great significance is the shift by the NUC from the BMAS to the CCMAS. We must commend and appreciate the NUC and her leadership, especially the Executive Secretary (ES), Prof. Abubakar Adamu Rasheed for this significant achievement under his watch.

Curriculum review should be a regular exercise. New knowledge and experiences arise from time to time. New imperatives of society and economy, as well as the expectations of employers of labour should inform the update of curriculum. This has informed the work done by the NUC.

Ideally the Universities should drive this, but our reality is that we may not yet be there. The NUC has provided leadership by driving the 70% core of curriculum. Universities will have to provide the balance 30%. These are not expected to be the same for all universities. Universities therefore have space to create a niche for themselves. The expectation is that with time the NUC 70% will be gradually reduced, and the universities 30% will be gradually increased. That is academic freedom and that is universities maturing and taking confident positions in the firmament of global knowledge enterprise.

In this presentation we focus on agriculture in the CCMAS. Before proceeding, let us reflect on the message of the 2016 presentation.

**Recap: Awka 2016**

My key message here at the Nnamdi Azikiwe University Awka during the 2016 Conference/Meeting of Association of Deans of Faculties of Agriculture in Nigerian Universities is what I refer to. All academics in the faculties of Agriculture in the Nigeria university system know that we are about the least subscribed by prospective students via the Joint Admissions and Matriculation Board (JAMB) Exercise. This situation is so critical that I have christened them scavenger programmes. By this I mean that since we usually do not have enough applicants, except perhaps one or two programmes in the Faculties of Agriculture, we are forced to scavenge for students. JAMB statistics eloquently shows this.

According to JAMB about 1.8 million candidates sat for the 2022 UTME Exams (https://rsuadmissionguide.com/jamb-announces-statistics-of-courses-applied-in-2022-exam/). A breakdown of these applicants is as follows:

**Medicine** had the highest number of applicants with **367,499** candidates, while available spaces were only **43,717** slots available in the country. The reported cited put this at above **11%** of the total applicants.

**Social Sciences** had **231,907** candidates applying for **93,277** slots.

**Science** had **204,734** applicants for **132,796** slots.

**Technology-related courses** had **103,891** for the **60,199** slots available (this includes **Engineering** programmes).

**Law** had **81,653** applicants for **8,529** slots.

**Arts and Humanities** had **72,014** applicants for **48,744** slots.

**Education** had **53,612** candidates applying for **111,601** slots.

**Agriculture** had **21,568** candidates applying for **31,217** slots.

Education and Agriculture had more available spaces than the number of students applying for them.

In agriculture, the students we mostly end with are usually persons who did not *a priori* apply to study any of the programmes in agriculture in the universities. They are mostly, "put me somewhere students".

They come with a lot of baggage, chiefly not being sufficiently motivated, and always on the look out to change to some other programmes.

That does not have to be so. Among the reasons for this low patronage is that very few young persons want to study agriculture.

The practice of agriculture in Nigeria is not "***Kool***", fashionable, nor exciting.

The entry requirements are almost the same for Medicine, Pharmacy, Engineering, microbiology, Biochemistry, and similar courses. Not even Professors in the programmes of Agriculture commonly encourage their own biological children and wards to apply to study any of the programmes in agriculture when they have these entry requirements.

The courses are five-year programmes for those coming in with the SSCE. This is the same number of years as Engineering, Pharmacy, among others. This is also one year more than Biochemistry, Microbiology, etc.

Upon graduation, there are no additional benefits for this extra one year.

At inception of the study of Agriculture in our universities, and until sometime in the mid-1970s, in the era of the Oil boom, the study of agriculture was four years for those with the SSCE and 3 years for those with A-levels. This was changed by choice, moving from the 4-year BSc to the 5-Year B. Agric. The expectation was that the B. Agric graduate will be employed in the civil service and placed on salary Grade Level 09. That never happened. In any case the interest in university education in contemporary Nigeria is no longer employment in the civil service. That era is gone.

Further the same programmes are still offered as B.Sc. (Not B. Agric) in Ghana or the UK, and the US. Young Nigerians who study in those countries return and get into the NYSC, hypothetical one year ahead of their peers.

**What has the NUC done with the agriculture curriculum?**

What the NUC has done with the CCMAS include the following:

- Grant greater powers to the universities and their senate.
- Unbundled the B. Agric. and have options of B.Sc. in each discipline. Examples are B.Sc. Agricultural Economics, B.Sc. Agricultural Extension, B.Sc. Animal Science, B.Sc. Crop Science, B.Sc. Soil Science, etc.
- Make possible two options: retaining the 5-year B. Agric. and having the new 4-year B.Sc. You may choose the 4-year B.Sc. or the 5-year B. Agric. Each University and her senate should make a choice. The NUC is not forcing any of these two options on the universities. That is academic freedom.

**How does this relate to the prevailing culture of scavenging for students?**

Deriving from my earlier concern about the study of Agriculture becoming scavenger disciplines we need to remind ourselves what we perhaps know. Many young persons may not find the study of agriculture "***Kool***" at the time of choosing what to study, but we

have seen that those who graduate in the various disciplines of agriculture have better opportunities and excellent career opportunities not just in Nigeria but also globally.

Those who persevere become happier with what they can do in and outside Nigeria. Many of the courses the young people find "***kool***" at 16 to 18 years turn out to have comparatively less opportunities after graduation. In addition, by our level of development and the challenges we face, agriculture should be well patronized. It is perhaps the most important challenge we face as a country and most of the developing world.

**Agriculture and the University**

A university system must be relevant to the national circumstance and must adapt to solving national problems. As many persons realise, there are so many opportunities for those who study programmes in agriculture in the universities, but these are often not known to young people.

There are several serious issues which the university should be addressing. These include:

- Huge challenges with agriculture in Nigeria, the huge deficits in food supply and raw materials provisions, which all indicators show may be worse in the future.
- Predictions of global food challenges and rising food cost.
- Significant urban immigration, with Nigeria urban population galloping.
- Aging farming population.
- Reduced number of those who can farm or the inability of producing and raising the next generation of farmers.
- Continued low technology and use of rudimentary technologies.
- Climate change.

**How do we encourage students to study agriculture?**

The universities must have to find ways of encouraging students into programmes in agriculture. All over the serious world, certain sectors are considered critical to national security, including agriculture, especially food security. Most of the more developed parts of the world provide support and incentives for agriculture.

To address the aging farming population in Nigeria, with a reduced ability to produce the next generation of farmers, **we must find incentives for students of agriculture.** We must also make their training more practical and more hands-on. We must make university education for university students entrepreneurial based. We must raise the agribusiness sector and we must raise the level of farm technologies. It should not be out of place to have scholarships for students of agriculture. We should commence support for students to embark on agricultural ventures and start-ups. Federal and state government will have to be made to address these. **These represent my third contribution**.

In a nutshell, what **do we need to do to raise a new generation of farmers to replace the aging farming population?** We should creatively make the study of agriculture more exciting and more practical, modernize agriculture and shift to technology, and develop food and agriculture processing technologies. This is also an area that you could factor into your 30% of the CCMAS. **That would be my fourth contribution.**

Of relevance to the challenges of scavenging for students to study agriculture is the recent introduction of Central Admissions Processing System (CAPS) by JAMB. By this, the ability of universities to seek out and offer prospective students places in programmes in agriculture is constrained. **This leads me to my fifth contribution: JAMB should look at the CAPS admission process and grant heavily undersubscribed programmes concessions of inviting prospective students to Agriculture programmes, and then advising them to change online as required by JAMB.** This is slightly different from what we have now which is that the prospective students should first change on the CAPS before being admitted to Agriculture. The Association of Vice-Chancellors of Nigeria Universities, and the Committee of Vice-Chancellors of Nigeria Universities should take this up with JAMB.

**After six decades of agriculture and the universities in Nigeria – What impact?**

Suppose there were no universities in Nigeria offering degrees in agriculture, what would our country be missing? Put differently what has been the impact of over six decades of universities (from the Nsukka generation of 1960) offering degrees in agriculture in Nigeria? What is the impact of the faculty of agriculture at the Nnamdi Azikiwe University Awka?

Are we dealing with a phenomenon akin to the famous line, 'water, water everywhere and not a drop to drink', in Samuel Taylor Coleridge's poem, 'The Rime of the Ancient Mariner'? PhDs and professors are increasing, but our problems in agriculture are unsolved.

I now return to the words of Prof. Theodore Schultz:

> *"The man who farms as his forefathers did cannot produce much food no matter how rich the land or how hard he works. The farmer who has access to and knows how to use what science knows about soils, plants, animals,*

*and machines can produce abundance of food though the land be poor. Nor need he work nearly so hard and long. He can produce so much that his brothers and some of his neighbors will move to town to earn their living." —T W Schultz (1964) (Noble Prize winner for Economics, 1979)*

Prof. Schultz devoted much of his career to how education, technology and financial incentives significantly raises productivity. Today we can add to this list from Prof. Schultz, that markets also impact on productivity. Insecurity disrupts markets, and adversely affect agriculture. Examples can be seen in the war in Ukraine and the conditions in many places in northern Nigeria. A recent addition is the instability in the market arising from a policy confusion such as the recent naira redesign in Nigeria. That is also disrupting the markets as farmers desperately in need of Naira notes are selling at considerably reduced prices. That may likely adversely affect the following farming seasons, and therefore not just production but productivity.

While reflecting on the lessons of the views of Schultz, which is focused on technology and agriculture, I present an extract from the book by Olaudah Equiano: The Interesting Narrative of the Life of Olaudah Equiano (1789).

*"Our tillage is exercised in a large plain or common, some hours walk from our dwellings, and all the neighbours resort thither in a body. They use no beasts of husbandry; and their only instruments are hoes, axes, shovels, and beaks, or pointed iron to dig with."*

(Source: https://docsouth.unc.edu/neh/equiano1/equiano1.html, Page 22). The Interesting Narrative of the Life of Olaudah Equiano, or Gustavus Vassa, the African. Written by Himself. Vol. I: Electronic Edition.

What is of interest here is Oladuah's description of the state of agricultural technology in Igboland in the eighteenth century. Three centuries after we are still at the hoe and cutlass technology level. Six decades of universities and agriculture, the situation is not different. Many PhDs and Professors down the line, what impact are we having? How do we justify our existence?

The need for universities to justify their existence is a global one. Nigeria is not exempt. The number of Nigerian universities, faculties of agriculture, and the number of professors in agriculture has increased since 1960. What have we got to show for it?

I present some statistics on professors in agriculture in the Nigeria university system (Table 1). These professors are listed under the following categories and with the accompanying figures:

**Table 1:** Distribution of agriculture professors according to disciplines

| **Discipline** | **Number of Professors** |
|---|---|
| **Agribusiness** | 5 |
| **Agricultural Economics** | 86 |
| **Agricultural Extension** | 53 |
| **Agricultural Science (5-year option)** | 21 |
| **Animal Science** | 114 |
| **Crop Science** | 94 |
| **Family and Consumer Sciences** | 3 |
| **Fisheries and Aquaculture** | 53 |
| **Food Science and Technology** | 26 |
| **Forest Resources and Wildlife Management** | 31 |
| **Horticulture and Landscape Management** | 7 |
| **Agricultural Science: Soil Science** | 43 |
| **Water Resources Management and Agro-meteorology** | 1 |

Source: NUC, 2022

**A note on these figures and categories**

There may be over-lap, and some repetitiveness. Nevertheless, it shows a picture of the entries and submissions by DAPs in Nigeria universities. Note also that some persons may have not been listed having not been forwarded by their DAPs. I will leave further comments on this, and you can draw whatever inferences you may on this.

What contribution do I have to make on this as **my sixth**? I have none.

**Ending comments**

Dear Colleagues and friends, if I have offended you, please pardon. I have put forward five contributions for your consideration. These are:

1. Get the community service responsibility right.

2. Ensure that in your research and in this conference, take the extra step beyond the conference proceedings, by sending to governments and communities, findings and recommendations that affect them, stating what needs to be done, and by whom, requiring what resources, over what period, with what expected deliverables.

3. We must find incentives for students of agriculture.

4. We need to do to raise a new generation of farmers to replace the aging farming population.

5. JAMB should look at the CAPS admission process and grant heavily undersubscribed programmes concessions of inviting prospective students to Agriculture programmes, and then advising them to change online as required by JAMB.

I have however left one for you to fill the gap. In doing that, I will encourage you to see how a major oil-bearing country, Saudi Arabia, has used technology to turn her deserts green, and become an exporter of agricultural products. Please see: https://www.youtube.com/watch?v=HJf6-xIXXJ8. That is the power of science and technology among others, and that is what our universities should be leading our country and people to.

God bless you.

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