IMPROVEMENT OF AGRICULTURAL SCIENCE PROGRAMME AT SECONDARY SCHOOL LEVEL

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Abstract
As we prepare ourselves for the challenges of the 21st century, we shall accept
that Nigeria is endowed with great agricultural potentials and resources,
which are yet to be adequately tapped to develop our nation especially in
educational sector. This paper examines the improvement of agricultural
science in secondary schools. Some of the constraints include; inadequate of
funds, overloaded syllabus, incompetency of agricultural science teachers.
Recommendations include; organising agric conferences/seminars for the
heads of school and teachers, involving the teachers in curriculum planning.

Food has always remained a basic necessity of man. This is why the earliest
men were wanderers moving from place to place in search of food. In many nations,
there has been a steady rise in the population of the citizenry. This is more in
developing countries than the developed nations. In most developing countries majority
of the food is produced in the rural areas, where crude implements are employed which
has led the young men and women to migrate to cities. Thus, the food production is left
for the aged. Also the number of young men and women with requisite skills in
agriculture willing and able to enter farming to replace the aged farm operation has not
been enough. Omonuyi et al (1993) state that Nigeria derives foreign exchange earning
from exported agricultural products. He further stated that agriculture is a source of
food, raw materials for industries, source of income, shelter, employment clothing and
transportation for the country. By and large, agriculture will continue to be the main
stay of our economy. About 80 percent of the total population continues to live as
indigenous farmers in rural areas (Efionji, 1981). Given the large annual turn over of
secondary school graduates and drop outs which increased the rate of unemployed
Youths because they have not acquired any skill that will give them employment in agricultural sector of the economy. The problem of achieving this objective, however, lies with the attitude of the primary and secondary school graduates. One of the reasons why secondary school graduates feel reluctant to engage in agriculture. A second reason is that life in the urban areas is more congenial than life in the rural areas. Thirdly, development in Nigeria has followed the pattern of concentration of modern facilities in the urban areas while the rural areas are devoid of such amenities. Consequently, the educated youth drift from urban areas in search of better life in the industrial sector. Duruajaiye (1970) pointed out that, ‘A problem that should concern Nigeria is the problem of youth. The academic content of Nigeria educational system is disappropriately large that job seekers are trained more than job seekers…’

The Federal government of Nigeria adequately considered the development and implementation of mechanisms for minimizing the problems for purposes of guaranteeing food security in Nigeria. In that line, several well articulated programmed were launched to address the prevailing and peculiar agricultural problem in schools especially at secondary school levels.

The Concept ‘Agriculture Education’

It is not sufficient to make one sentence definition of agricultural education. The world book Encyclopedia defines agricultural education as instruction in agriculture useful to farmers, to those engaged in non-formal agricultural occupation and to all persons as part of the general education.

It is the training of learners in the processes of agricultural productivity as well as in the techniques for the teaching of agriculture. “It is teacher preparation in agricultural production and in pedagogical skills in agricultural subject areas” (Olaitan, 1988). Agricultural education refers to the teaching of skills, values, attitudes, and related products. (Egbule, 2004). Therefore, agricultural education is the type of education that is employed in training learners in the improved agricultural production process as well as in the techniques for the teaching of agriculture. It therefore, takes place at two levels, namely formal level which would take place at primary, secondary to graduate study in the university; and at informal level which goes on outside the formal school system.

Objectives of Agricultural Science Programmes at Secondary School Level.

The teaching of agriculture at the secondary school level in Nigeria today is done at two levels; at the Junior Secondary (J.S.S.) and at the Senior Secondary School (S.S.S). At the junior Secondary school, that is first three years of secondary education, ‘practical agriculture’ is recommended as one of the core subjects.

According to Egbule (2004), the objectives of agricultural science Education at Secondary school level include

i. To stimulate students interest in agriculture
ii. To develop basic agricultural skills in students.
iii. To enable students acquire basic knowledge of agriculture
iv. To enable students to integrate knowledge with skills in agriculture
To expose students to opportunities in the field of agriculture
To prepare students to opportunities in the field of agriculture
To prepare students for further studies

Hindrance to Effective Teaching of Agricultural Science in Secondary School Level

Misconception of Young Farmers’ Club - Experience has shown that there is always the tendency for students to see the farm products as nobody’s property. There is also a strong tendency on the part of the students to misuse the club by imposing unauthorized levy, giving improper account, using the club activities as a camouflage to organise dances or parties with students of opposite sex, all lead to indiscipline in school thereby hindering the students exposure to agricultural programmes.

Incompetency of Teachers - The strength of any education system depends on the quality of its teachers. It is the teacher who eventually implements the curriculum through the interaction with students who are the immediate beneficiaries of the system. Agwubuike (1992), noted that there are not enough, competent graduate teachers or agricultural science in our schools. Madubuike (1984), stated that teachers who lack interest in farm activities but still qualified in agriculture because of their high grades in the theory aspect are not sufficiently qualified to teach agriculture in our schools. Lack of skill full agricultural science teachers in schools has resulted in the production of theory oriented agricultural science graduates. The shortage of qualified teachers has resulted in the following.

(a) Poor teaching methods - most teachers due to their incompetency lack focus on various teaching methods and materials to be used to enhance learning. Such materials like suitable textbooks, charts, models, projected and non-projected devices even when these materials are provided, they still lack the best teaching method to break the course content.

(b) Students’ laissez-faire attitudes - due to poor presentation of the topic by incompetent teachers, students feel it is not important to attend agricultural science classes especially practical.

Number of Period - The time allocated to agricultural science in the time table is not always sufficient for the teachers to lay a good foundation for agricultural science. The nature and significance of agriculture entails special provision of extra curricular hours to enable the teachers to teach the theoretical and practical aspect. Akinpelu (1981), opined that it is true that agricultural science is an examinable subject by West African Examination Council, but then it cannot be adequately taught within the number of minutes allocated to it.

1. Insufficiency of fun - Schools are starved of funds by the government to enable them to erect and equip modern laboratories, procure adequate equipment, tools, repair and replace faulty equipment, procure fertilizers, drugs, feed etc. also schools are not adequately funded to establish school farms for practical.
2. Over loaded syllabus – the syllabus is overloaded that it does not allow for the proper teaching of the subject. The agricultural science covers the crop, animal, soil, economics, extension etc. the teachers find it difficult to cover the broad areas.

3. Non-cooperative attitude of heads of schools - some heads of schools especially the art oriented ones do not show any interest in practical agriculture in their schools. Whenever the teachers of agricultural science approaches them for financial assistance, they feel reluctant and rather extort the students’ money. And in some cases these heads share the school farmland among teachers for farming.

4. Insufficient land - Land is one of the major factors in agricultural production. In some schools land are not enough for practical agriculture, this may result form the fact that communities where the schools are located may not agree to give out some of the land near the school environment out of greed. Osisioma (1992) pointed out that vocational agriculture involves training to acquire skills, aptitude for proficiency in farming. There is no way students of agriculture can acquire skill or proficiency in farming unless a farmland is provided. This invariably makes the teachers to produce unskilled students.

Inadequate Facilities/Equipment - Agricultural science cannot be properly taught without adequate facilities and equipment, such as storage facilities, tractors, machine tools, and modern laboratory, computers etc. all these facilities are lacking in our secondary schools today. Osuala (2004) pointed out that the ultimate objective of vocation education is to train qualified technical personnel and skilled work force to meet the requirement of the society, regardless of how well the vocational education curriculum is prepared and how excellent the qualifications of the teachers are, inadequate facilities hamper the students learning in cognitive, affective and psychomotor domain.

Strategies for Improving Teaching/Learning of Agricultural Science at Secondary School Level

1. Competent teachers - Effective teaching of agriculture must result in improved learning for students. It is a common defect in our educational set-up that most of the subject (Agric) teachers are not competent in the subject concern. Maduike (1987), stressed that at secondary school level, the professional and qualified teachers should stimulate both the students and themselves to enhance efficiencies in performance. Meanwhile, the subject teacher concern in one way or the other must have qualities on farm experience, general technical education character and personality. Orhieve (1985) noted that skilful teachers are vital to every dynamic successful training programme.

2. Suitable Curriculum - The term curriculum has been conventionally and broadly defined to all the experiences that the student is exposed to under the direction of a school. Egbulu (2004) defined curriculum in agriculture to consist of series of courses including extra-curricular activities. The curriculum planners should select
learning experiences from the learner’s environment, which will help him (learner) to meet his motives and reflect the training needs of the students, the following are important.

(a) Teacher-training programme should include the content of curriculum development on new approaches and method concerning the teacher/instructors’ attitude.

(b) The participation of teachers/instructors in planning

(c) A system involving central and local governmental departments should be established to evaluate the curriculum implementation process which aimed at ensuring the quality of the programme offered.

3. School farm surveying and layout - The knowledge of survey principles and practices are essential for successful farm operations. In order to curtail the encroachment on school land by land – hungry neighbours, school farm are properly surveyed. Farm surveying deals with making measurement by means of figure table or layouts. (Ikeoji and Egbule, 1993). It involves measuring vertical and horizontal distance between objects, determining artificial features present on the farm, and using such information as planning purpose.

4. Adequate funding: School farms are starved of funds. According to Olaitan (1982), it is very important to make use that here is enough fund before embarking on any vocational programmed if it is to meet the standard of vocational education and create awareness in the pupils. Development of vocational skills in agricultural science require a lot of funds for repairing and replacing of faulty equipment, employing more qualified staff, buying of fertilizers etc.

5. Effective organisation of young farmers’ club (Y.F.C.) – Idahor (1992), sees the Young Farmers’ club as a voluntary and democratic youth organisation for boys and girls of between 10-25 years of age, and whose main objective is to develop the interest of our youths in agriculture. This programme is primarily designed to teach young people especially the students. In order to curb the problems of ignorance in agriculture, the government, community and the entire school should help to intensify this club by assisting in the supply of tractor, hiring service, imposed seeds and other inputs. More so, appoint wealthy people as patrons to monitor the cash flow of the club.

6. Acquisition of more land for school farms - The current emphasis on functional educational programme makes it mandatory that school and colleges should keep farms. A school farm in this context is a piece of land located within or around the school and used for cultivation of crops and rearing of animals. Essentially, school farms are geared towards helping students to acquire necessary arming skills and ensuring that classroom theories are backed up by facts and practices. To provide students with opportunity of acquiring knowledge, skills and needed competencies in agriculture, the school farms should be enlarged. The community, which the school is located could be approached to donate enough land for schools’ agricultural programmes. Government
schools and colleges may also acquire land through the ‘land use decree’. It is advisable therefore to make schools farms as large as possible but should not be too large as to become a burden to both the agricultural science teachers, the students as well as the administration.

7. Dynamic methods of teaching - For agricultural science to be improved at secondary school levels, agricultural science teacher must be a professional who combines knowledge of what he teaches with appropriate methods and techniques of teaching. A teaching strategy is an integration of method and techniques, which has to reflect expected activities for both teachers and learners for teaching/learning process. Maduike (1980), opined that any method that is adopted by the agricultural science teaches in the actual teaching exercise must lead to the development of ideas, concept understanding and attitudes by the students. Agricultural science by a practical oriented subject requires practices with diverse teaching methods like demonstration, project, field trip/excursion, laboratory work, discussion etc.

8. Availability of teaching materials/aid - Teaching aids or instructional materials consist of carefully planned and selected resources to facilitate teaching/learning process. According to Ughamadu (1992) instructional material refer to those materials like textbooks, chalkboard, models, charts, television, radio and other projected and non-project devices or tools, which bring about efficiency and effectiveness in the teaching/learning process and invariably promote and enhance the achievement of instructional objectives.

Conclusion

According to the National Policy on Education (2004), Agricultural science is a pre-vocational subject, which lays emphasis on practical skill acquisition, which help the students to acquire knowledge and skills that makes them to be self-reliant. The improvement of agricultural science programmes in secondary schools has certain hindrances like unqualified personnel, improper use of methods, insufficient land and so on. The improvements on these factors are necessary for the preparation of youths who will take up agriculture as their future career.

Recommendations
i. To make curriculum more efficient and relevant, teachers should be allowed to participate fully in the process of planning.
ii. Agricultural science teaches and heads of schools should be sponsored for agricultural science seminars/conferences
iii. Qualified agricultural science teachers should be employed to teach.
iv. There should be steady supervisory team from the ministry of education to make sure that teachers are adequately employing the proper methods to impact both theoretical and practical knowledge to students.
v. The governments/non-governmental bodies should help to provide at least 80% of the equipment/facilities needed to make the subject an attractive course to students.

vi. Students who have fully participated in practical agriculture especially planting should be allowed to take home one or two items from the farm.

vii. Schools should liaise with the community to acquire enough land for practical agriculture.

References


