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Challenges and enhancement of youth participation in agricultural education for sustainable food security

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ABSTRACT

The phenomenal low participation of youth in agricultural education programmes has featured in several forums both at national and international levels. This is because giving the right opportunity youth could make positive impact and create positive change in the economy of nations. This paper identified challenges and enhancement of youth participation in agricultural education for food security. Survey research design was adopted. The subjects for the study were selected using multi-stage sampling technique. Data were collected using questionnaire. The population for the study comprised of all students in tertiary institutions offering agricultural education programme in the study area. Two hundred and forty tertiary students were chosen through proportionate simple random sampling technique from six randomly selected tertiary institutions in the North Central Nigeria. Mean and standard deviation were used to analyze the data. Findings revealed youths studying agricultural education are aware of their roles through their participation in schools; which extends to their communities, thereby influencing sustainable food supply and availability. The study also revealed that the identified challenges prevail on the youth participating in agricultural education. Analysis of identified approaches had mean scores above the benchmark hence; they were regarded as useful in enhancing youth participation in agricultural education. It was concluded that youth studying agriculture were well aware of their role. Their participation is however, hampered by the enormous challenges bedeviling the programme, which has negative implication on interest by intended youths. The findings were further verified through a focus group discussion involving ten lecturers of agricultural education. It was concluded that youth's participation in agricultural education is hampered by several challenges. The study recommended among others that, Agriculture teachers in collaboration with school management should emphasize establishment and maintenance of school farms by the students for practical skills acquisition by the youths in school; government should enhance funding, provide scholarship for students to sustain interest and enhance greater youth choice and participation in the programme.

Keywords: Agricultural education, sustainable, food security, youth, participation.

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INTRODUCTION

Food supply, availability and accessibility for the ever-growing world population have been contentious and have featured in several national and international debates by stakeholders. Agriculture is the bedrock of production of food and allied products on which human existence depends. According to some authors, agriculture is supposed to guarantee food security but improper resource utilizations and over-exploitation has caused attendant negative impact on the environment with the attendant food scarcity (Engler and Kretzer, 2014; Naamwintome and Bagson, 2013). It has been contended that under normal condition, with necessary

knowledge and skills through formal agricultural education, agriculture practitioners should perform better (Paisley, 2014) in terms prudent resource management. This situation is however yet to be achieved due to several challenges which this paper strives to unravel.

Agricultural education is a type of vocational training that equip learners with the knowledge and skills in productive agriculture; the training of both the head and the hands of the learners (Olusoga, 2014). In contrast to general education, Olusoga (2014) reiterated that agricultural education is skill-oriented and aside from training in terms of pedagogy, it provides avenue through which knowledge, abilities and skills of beneficiaries could be increased towards attainment of food security. Therefore, those who are tutored through agricultural education would acquire both technical knowledge and entrepreneurial skills to be able to train others (Agriculture for Impact, 2019). Contextually, agricultural education is a vocational-based subject area, which provides knowledge and skills through formal education in schools and universities; and training programmes for participants. Through Agricultural Education and training programmes, individuals are empowered to be successful in real life situation upon graduation. In Nigeria however, authors have expressed concern over the challenges faced by agricultural education from the pre-tertiary levels especially in terms of low interest exhibited by both the teachers and students (Onwumere et al.; Otekunrin et al. as cited in Diise et al., 2018). The lack of interest is probably because of ineffective pedagogic approaches where both teachers and students are well at home with the popular chalk and talk (lecture) method of teaching, regular copying of notes with little or no emphasis on field practice.

Rapid changes in technical knowledge and the need to avert the menace of food insecurity and poverty have brought changes in the education systems in many developing countries and agricultural education is not an exception (Fadipe et al., 2014). This calls a rethink for effective engagement of the youths, since they are a sector of the population who possess higher drive for development (Paisley, 2014) and are most found in schools. This study envisages that youth participation in agricultural education is could bring a turnaround in the global trend of food challenges which was propelled by numerous factors including environmental degradation (Fadipe et al., 2014; Agboola and Emmanuel 2016; Barreda, 2018). The knowledge and skills acquired by the youth could be useful in raising awareness among other members of the society on better ways of conserving our nature by adopting farming practices that are socially and environmentally friendly (Barreda, 2018). This could bring about food security. The researchers are optimistic that given the right playing ground, agricultural education is capable of equipping learners mostly youth, with saleable skills for crop production, livestock management, soil and water conservation and other related vocations. A study on perceptions of higher agricultural education students' participation in sustainable food security in Nigeria is therefore apt.

Participation entails the ability of individuals to have an input in decision-making processes and to play a role in certain measures towards specific targets (Ataneh as cited in Adesina and Eforuoku, 2016). The researchers proposed that youth through agricultural education, would participate effectively towards achieving food security. A critical look at agriculture with the attendant global emphasis by several nations confirm that it seeks to simultaneously help in meeting the tripartite objectives of poverty reduction, food security and environmental sustainability. Therefore, meeting the current and future needs for food requires rapid increase in productivity of this multi-important natural resource. The concept of Food Security emerged at the World Food conference of United Nations Food and Agriculture Organization (UN-FAO), held in 1974 (Oyeshola et al., 2009). Food security describes a condition where people access sufficient, safe and nutritious food to meet their dietary needs and preferences to remain both healthy and active (FAO, 2011; World Summit on Food Security (WSFS) in Engler and Kretzer, 2014; Poppy et al., 2014).

The growth of a country's population comes along with it food security challenges, because environmental resources must be over tapped to meet up with needs of the population Encouraging the youth who are highly dynamic and flexible could lead to agricultural development (Njeru, 2017) and consequently food security. Being one of such developments, some authors emphasized the need to include agriculture in primary school curriculum to enable teachers to instill a positive perception in students by explaining the many aspects of agriculture; its importance in everyday life; and inherent career opportunities to the youth (Njeru et al., 2015). That entails providing a sound background for the up-growing youth to be partakers in agricultural education where they could play their roles effectively. Girei et al. (2017) identified several benefits of youth participation in agriculture; and that they possess the latent (physical) energy requirement and ability to participate in all agricultural operations. The authors reiterated that youth have propensity to learn and imbibe new ideas and technologies.

The educational policy reviews and reforms recommended integration of agriculture at the basic-primary and junior schools' curriculum (Otekunrin et al., 2019). This was the right step in the right direction because at this level, it agriculture is studied as a pre-vocational subject with emphasis on hands on or experiential learning experiences. Furthermore, Otekunrin et al. (2019) stipulate that the policy review recently introduced Animal Husbandry and Fisheries Management studies as elective subjects at the Senior Secondary School level in Nigeria. The aim was to raise and possibly sustain the interest of students in practical

agriculture skills acquisition. In addition, it was intended to prepare them for self-sufficiency both in terms of wealth creation and in terms of food availability. In general, the objectives of introducing agricultural science in both basic and senior schools was to among others sustainably stimulate the students' interests in the subject and enable the graduate with basic tertiary level entry knowledge and skills for future studies.

Unfortunately, because of poor administrative and curriculum implementation including the pedagogies, agricultural science students have performed below expectation over the years. For instance, Otekunrin et al. (2019) documented Chief Examiner's Report for the West African Examination Council (WAEC), which stipulated that the performance of candidates was poor. The authors contended that the poor performance by the students was because of lack of interest and commitment by both the teachers and students (Diise et al., 2018; Otekunrin et al., 2019; Modebelu and Nwakpadolu, 2013). According to Otekunrin et al., little attention is paid to teaching of knowledge and skills acquisition among the Senior High School students of agriculture. On the other hand, Diise et al. added that the ineffectiveness of practical skills acquisition, which is propelled by schools and teacher related factors, culminates in lack of technical and employability skills. Observation has shown that most secondary school graduates either could not progress in terms of further education or engaged themselves in self-employed enterprises. According to Otekunrin et al., this phenomenon exists in spite of the acclaimed huge budgetary allocation by successive government administrations in the Nigerian context. Therefore, there was need for more stakeholders' commitment in the education sector; most especially, as it pertains to the youth's education and empowerment. From the foregoing, this study agrees that youths are no doubt key players that could bring a turnaround in the trend of food insecurity challenges through participating in agricultural education.

Through agricultural education, acceptable practices would be taught to the youth who should graduate and engage in direct production or as educators. The youth could also serve as extension agents who interpret extension research results to other farmers in their communities and families. They could also become teachers and instructors in schools and colleges where they would teach principles and pedagogies of environmental resource utilization. The youth could in turn influence skills, attitudes and knowledge of other younger and older generations. They could be involved in policy formulation regarding the exploitation and utilization of environmental resources too. The World Youth Report (2010) reports that youth have been involved in food production, hence, the need for them to participate more actively in shaping global decisions relating to food security. Agbulu and Wever (2011) agreed that youth may form about 40% of a community, but their higher standard of education and scientific knowledge could aid them in forming various agricultural innovations and adoption of improved (modern) farming practices. Chakeredza et al. (2010) also reported a strong positive correlation between educational attainment and socioeconomic development of any country. According to the authors, education would make the youth impact on communities in the current global food insecurity and environmental challenges if there is institutional innovations and changes. This further ensures that graduates produced from tertiary agricultural institutions are abreast with issues relating to the environment; and the curricular content, teaching methods and materials, including the delivery patterns should be designed in such a manner that youth would take interest in the practice.

A number of scholars have done studies on youth participation in agriculture in different perspectives. For instance, Pur et al. (2007) examined the role of youth associations in empowering youths in Adamawa State Central Senatorial District, Nigeria. The study adopted random sampling in selecting 31 associations from 71 registered associations. Descriptive and inferential statistical analysis indicated that skills acquired by youths as a result of joining associations' activities reveal that 84.4% of the respondents acquired skills in crop production, cattle fattening and poultry production which showed 30.6, 42.5 and 11.3%, respectively. Findings also indicated that due to the skills acquired, 72.6% of the beneficiaries were engaged in the personal agricultural activities. In conclusion, the study noted that participation of the school youth in agricultural related associations was very important. This is because those who participate learn various skills and majority of them extended those same to their own farms. Considering the role of media advocacy in youths' participation in agriculture, this will imply targeting such associations with communication needed to bring about youths' participation in agriculture. Naamwintome and Bagson (2013) did a study on youth in agriculture, prospects and challenges in the Sissala area of Ghana. A focus group discussion revealed that 95% of the respondents kept a pair of bullock. Findings further revealed that up to 52.22% of the respondents were between ages of 15 and 35 while 20.54% were above 35 years but without formal education. Majority (69%) indicated that the youth were willing to participate in agriculture in the study area. The study recommends that stakeholders needs to embark on mass education of the populace because they showed high enthusiasm for growing crops but were less educated. The finding thus explains why food crop cultivation was the major agricultural activity of the people in the study area. Njeru et al. (2015) conducted review study and reported that approximately 64% of unemployed persons in Kenya are youth. The authors revealed that most of the youths lack formal education. This is probably why the youths participate less in

agriculture. Educating the youths may avert of their poor perception towards agriculture.

A study by Paisley in 2014 reported the view of Percy-Smith and Akkermans under the platform of Young Professional for Agricultural Research Development (YPARD) in Uganda. The study revealed that youth required skills to be employed in the agriculture industry. In another study, Adesina and Eforuoku (2016) found out determinants of Youth-in-agriculture program in Ondo state, Nigeria. The study revealed that majority (99.2%) of the youth had one form of formal education and this enhanced their adoption of agricultural technologies and innovations. Their study concluded that formal agricultural education was essential. In addition, Njeru (2017) conducted a study in Uganda and found out that 60.2% of the respondents had formal education (Primary, Secondary up to certificate and diploma levels) with a few 12.1% having University education. It was concluded that formal agricultural education had positive impact on youth participation in agriculture. Elsewhere in Nigeria a study was conducted (Mbah et al., 2017) and showed that majority (73.80%) of the respondents had up to secondary education with 11.30% having below secondary school education. The study however indicated as low as 13.80% of youth with tertiary education qualifications.

Many authors for instance, Ahmed et al. (2008) have agitated on the need for a total overhaul of the agricultural education system to carter for emerging issues such as food security. Besides, Fan (2010) maintained that the decision to review of agricultural curriculum was necessary to incorporate new and emerging innovations and challenges in the food production systems. In terms of funding, some literature confirmed that as a major fund provider, including at the global and local levels, government of nations should allocate higher budgets for agricultural education in Schools, Colleges and Universities (Agboola and Emmanuel, 2018; Barreda, 2018; Egun, 2010; Fadipe et al., 2014). To address the problems and issues of sustainable agricultural production and rural development, the education sector of government needs to pursue a policy of development in agriculture (Poppy et al., 2014; Njeru et al., 2015; Nwaogwugwu and Obele, 2017) to capture the great majority of the youth. All nations especially those noted to have significant food security challenges, especially developing ones require the adoption appropriate and up-to-date technologies in agricultural production.

The current emphases on education programmes, which integrate modern technologies, make it mandatory for educational institutions to maintain a functional school farm (Olusola, 2018). Using the school farm, youth participation in agricultural education programmes and activities could propel food production and largely reduce the gap between the nourished and undernourished (Saliu et al., 2016). This implies that youths especially, those either who have graduated or who are still in higher schools would be able to exhibit their fundamental roles in their communities. They could help other farmers in their communities to organize themselves and take charge of their development efforts (Akinagbe and Ajayi, 2010). Furthermore, as graduates of agricultural education, youth may serve as surrogate extension assistants by helping the community members organize themselves for self-help and sustainable development programmes. Among these programmes are food security and poverty alleviation issues. Earlier, Adebo (2009) averred that in schools, youth engage in clubs, societies, and these influences and or enhances agricultural production and productivity through dissemination of innovations to the rural dwellers. These associations may include: Young Farmers Club, Future Farmers Association such as in the United States of America, Youth in Agriculture Programme, Youths in Food Production, Young Foresters Club, Youth Help Alliance, and the 4-H Club. A study by Kangai et al. (2011) revealed that youth organizations could promote and facilitate youth participation in their own structures to understand the issues affecting rural youth. Through these organizations, youth could also be actively involved in defending their social, political and economic rights. Finally, these youth organizations would help young boys and girls to develop ideas for better farming, home making and rural community development, and give informal training in agriculture.

Having provided the background as documented in the preceding paragraphs, the remaining aspects of the paper was presented the statement of problem for the study, empirical evidences on the roles of youth in promoting FS; approaches for promoting FS through participation of youth in higher agricultural education; and conclusion and recommendations.

Statement of the problem

The need to emphasis youth participation in agricultural education to enhance food security cannot be overemphasized. This is because the future of agriculture in most developing countries might be bleak if the bulk of the production efforts were relinquished to the aged farming population. Moreover, Adekunle et al. (2009) stipulate that most of the aged are less or even, not educated. The advocacy on youth empowerment is because they are the most critical as agents of change in every society. Besides, most practitioners of agriculture (farmers) were mostly found in rural locations and were deprived of social infrastructures such as schools thus, posing threats to their children's academic career (Mbah et al., 2017; Njeru, 2017; Paisley, 2014). These farmers often adopt some production practices such as excessive use of chemicals for pests, weeds, and disease control; and mechanical land preparation practices, which are

unfriendly to the environment (Ogboru and Anga, 2015). This is an obvious precursor for the phenomenal food insecurity especially in developing countries such as Nigeria. If the situation remains without attention paid to the youth who are strong agents of change then, sustainable food security remains in doubt. Expectedly, youth would have bridged this gap. Unfortunately, it is a known fact that even those youth who has neither a viable or employability skill nor a good certificate are always on the move into the cities. Yet a greater majority still roams the streets in search of few existing white-collar jobs. Besides, most of the social vices perpetrated in various parts of the country are done by the unemployed graduate youths from various levels of education.

The researchers agreed that the existing trend calls for urgent action because the potentials of the youth were yet to be fully tapped (International Fund for Agricultural Development, (IFAD) as cited in Paisley, 2014). The low priority in the development plans of most developing countries Nigeria inclusive, in the training of human resources in agriculture have made the curricula and teaching programmes not so relevant to the production needs of the agricultural sector (Fadipe et al., 2014). This has therefore, made access to tertiary agricultural education to fall below standard requirement (FAO, 2013). The crux of this paper was to find out respondents' perceptions on participation of youth in higher agricultural education in sustainable food security in Nigeria.

Specifically, the paper determined the:

1. Role of youth in agricultural education for ensuring sustainable food security in Nigeria.
2. Challenges of agricultural education for ensuring participation of youth in sustainable food security.
3. Best approaches for enhancing youth participation in agricultural education for sustainable food security.

MATERIALS AND METHODS

Youth participation in agriculture is capable of guaranteeing sustainable food security, and environment. The study was carried out in the North Central Nigeria. Survey research design was adopted for the study. The North-central zone consists of a mix of farmers who practice farming especially crops and animal husbandry. Six states including Benue, Kogi, Plateau, Nasarawa, Niger, Kwara States, and Abuja, the Federal Capital Territory (FCT), make up the zone. The population included youth offering agricultural education in tertiary institution. The choice of the area and subjects were based on the agrarian background of as well as literature revelations on low involvement of youth in agricultural education. Multistage sampling was used for the study. Purposive sampling was adopted to select Benue and FCT because of the existence of tertiary institutions with large number of youth offering agricultural education. Simple random sampling was adopted to select 60 respondents from one public College of Education and one University each, giving 240. The study was guided by three research objectives and three research questions. Instrument for data collection was questionnaire, which was tagged as Youth Participation in Agricultural Education Questionnaire (YIPAEQ). The questionnaire contained three sections A, B and C. Four research assistants helped in distributing the 26 items questionnaire, which was structured with a four point rating scale of response options 4-strongly agree (SA); 3-agree (A); 2-disagree (D); 1-strongly disagree (SD). Two copies were not properly filled. Therefore, data analysis was done using 238 completed questionnaires. Descriptive statistics was used to analyze the primary data. Weighted Mean and standard deviation were used to answer the research questions. A benchmark of 2.50 was used to draw conclusion based on the mean. Where the mean was less than 2.50 the item was not accepted but if up to 2.50 and above then it was accepted.

RESULTS

Data in Table 1 showed that that the respondents agreed with all the 11 items which elicited responses on their roles as participants in agricultural education. The finding revealed mean scores ranging between 3.22 and 3.90 with weighted mean, M=3.27 which were above the benchmark of 2.50. The SD also ranged between 0.44 and 0.89, which indicated that the responses of the respondents were not too far from each other.

Data in Table 2 shows that the respondents agree with all 17 items that elicited responses on challenges to effective participation and acquisition of agricultural production skills by youth. The Mean values ranged between 2.55 and 3.88 with weighted mean, M=3.76 which were all above cut-off point of 2.50. The SD ranged from 0.47 and 0.97, which means the respondents were not far from one another in their responses.

Data in Table 3 showed that the respondents agreed on the mechanisms for ensuring food security and sustainable environment through youth participation in agricultural education. This is because the means of items 1 to 25 were within the range of 2.56 and 3.84 with weighted mean, M=3.12. There was no mean less than 2.50 for any item. The SD ranged between 0.53 and 0.96, which means that the respondents were not far from the means and from response of each other.

DISCUSSION

Findings in Table 1 revealed opinion of the respondents on their role as participants in agricultural education for ensuring food security and sustainable environment.

Table 1. Mean and Standard Deviation of the responses of the youth on their role in agricultural education for ensuring sustainable food security and environment**.**

S/N	Item statement	M		Remark
1	Participate in agriculture teaching and learning programme	3.48	0.65	Agree
2	Ensure adoption of farming operations and practices	3.22	0.89	Agree
3	Perform field demonstration to the observation of community	3.53	0.87	Agree
4	Sensitize people and members of my family on adoption of soil conservation practices	3.48	0.44	Agree
5	Sharing knowledge with classmates and non-agriculture students	3.64	0.49	Agree
6	Sensitizing members of the community on adoption of good soil and water management practices	3.50	0.67	Agree
7	Participate in school farm management practices	3.78	0.59	Agree
8	Partake in pest control measures	3.61	0.56	Agree
9	Partake in disease control measures	3.48	0.78	Agree
10	Ensure food safety	3.90	0.46	Agree
11	Partake in agribusiness (postharvest-processing and marketing)activities	3.83	0.89	Agree

N = 238. M = mean; SD = standard deviation.

Table 2. Mean and Standard Deviation of the responses of the respondents on challenges of agricultural education vis-a-vis the participation of youth in sustainable food security.

S/N	Item statement	M	SD	Remark
1.	Poor public attitudes towards AE by stake holders	3.48	0.65	Agree
2.	Dearth of properly trained AE support personnel	3.22	0.89	Agree
3.	Poor infrastructural facilities for AE	3.53	0.87	Agree
4.	Poor remuneration of AE teachers	3.48	0.44	Agree
5.	Agricultural students seldom access scholarships and grants	3.64	0.49	Agree
6.	Poor funding of AE implementation programmes in schools	3.50	0.67	Agree
7.	Poor training AE teacher trainers/instructors	3.78	0.59	Agree
8.	Utilization of sundry teachers in AE	3.61	0.56	Agree
9.	Poor public view and low recognition for teachers and students of AE programmes	3.22	0.67	Agree
10.	Local, crude and insufficient tools and implements are used for practical	3.48	0.76	Agree
11.	Poor patronage of graduate products of AE	3.03	0.97	Agree
12.	No clear dichotomy between general education and vocational agriculture in senior secondary schools	3.41	0.73	Agree
13.	Inconsistent/unstable government policies resulting in disruption of school programmes	3.36	0.66	Agree
14.	Little time allotment for teaching and learning of agriculture in schools	2.55	0.84	Agree
15.	No starter packs after graduation to start small agricultural enterprises	3.48	0.89	Agree
16.	No synergy between AE departments/institutions and Enterprise owners	2.76	0.87	Agree
17	Agricultural education students are rated as low in intelligence	3.88	0.76	Agree

N = 238. M = mean; SD = standard deviation.

From the table all the items were all above the cut off mark and it was concluded that the respondents were conscious of their roles. This finding relates with that of Pur et al. (2007) who revealed that those youth who engaged in poultry production activities extended the knowledge to others who were not engaged in the practice. The finding is also in consonance with that study by Chakeredza et al. (2010) which stipulated that there is a strong positive relationship between educational attainment and socioeconomic development of any nation. The finding is also in line with Fadipe et al. (2014). This is probably because before the respondents made choice to study agricultural education, they were conversant with the objectives and mandate of the subject. That goes to confirm why the respondents agreed that part of their role is to extend knowledge and skills they acquire from school to siblings and members of their community. This finding also agrees with Naamwintome and Bagson (2013) who found out that majority (69%) indicated that the youth were willing to participate in agriculture in Ghana.

Findings in Table 2 revealed perceived general public

Table 3. Mean and Standard Deviation of response of respondents on best approaches for ensuring sustainable food security through enhanced youth participation in agricultural education.

S/N	Item statement	M	SD	Remark
1.	Proper training and retraining of agriculture teachers	3.67	0.82	Agree
2.	Employ more teachers to teach/ensure adequate staffing	3.27	0.53	Agree
3.	Review agricultural education curriculum to capture food security and sustainable environment concepts	3.00	0.87	Agree
4.	Emphasize population and family life education as determinants of food security and sustainability	2.56	0.89	Agree
5.	Protect and accord high recognition for teachers of agriculture	3.00	0.73	Agree
6.	Organize and invite agricultural education experts entrepreneurs for lectures, seminars and workshops	3.62	0.76	Agree
7.	Frequent awareness/reminders through career day programme	3.35	0.63	Agree
8.	Creation of a conducive and friendly environment for effective learning	3.77	0.80	Agree
9.	Adequate funding of the agricultural education programme	3.55	0.71	Agree
10.	Ensure proper synergy between school and farmers in the community where school exist	2.62	0.64	Agree
11.	Start teaching agricultural education programmes at basic school level-nursery, primary	3.64	0.91	Agree
12.	Establish agricultural entrepreneurship development centre in high schools	3.31	0.88	Agree
13.	Ensure internship and industrial work experience programmes for agricultural education	3.84	0.54	Agree
14.	Adopt innovative teaching and learning techniques and methods to enhance cooperative learning	3.63	0.94	Agree
15.	Ensuing complete involvement of all stake holders in agricultural education policy framework	3.14	0.84	Agree
16.	Ensure lifelong learning of skills by providing field based school learning environment	2.82	0.66	Agree
17.	Setting school based youth organizations clubs and societies (e.g. Environmental club, youth in agriculture club, and young farmers' club	3.24	0.96	Agree
18.	Agricultural education should be given top priority	3.41	0.76	Agree
19.	Providing adequate agriculture textbooks and training manuals in school libraries.	2.67	0.56	Agree
20.	Proper monitoring of agricultural education implementation programmes	3.01	0.89	Agree
21.	Proper supervision of agricultural education implementation programmes	3.37	0.55	Agree
22.	Proper evaluation of the agricultural education programmes	3.23	0.67	Agree
23.	Adequate publicity of agricultural education programmes and products through mass media	3.24	0.63	Agree
24.	Establishment of worldwide linkages among agricultural education students through social networks/internet	3.82	0.80	Agree
25.	Organize interschool quiz and exhibition to showcase talents and exchange of intellectual property	3.14	0.71	Agree

N = 238. M = mean; SD = standard deviation

view about agricultural education vis-a-vis youth participation. From the table respondents agreed totally (with mean scores of all the items above 2.50 benchmark) that the poor public view about agricultural education included lecturers/teachers and students alike. This probably explains why the programmes have remained under the auspices of general education programmes and never received the desired attention based on its tenets of being vocational/skill based. Onu et al. (2018) revealed a similar finding in their study on entrepreneurial skills required by youth for food security in Nigeria where they revealed the same views of the respondents. This corroborate with the views of Naamwintome and Bagson (2013) who also identified the same challenge and recommended the need to create more awareness on the importance of agricultural education in the development of both the individual and his nation; and to change the attitudes of people towards the programme.

Finding in Table 3 indicated the mechanisms for ensuring food security and sustainable environment through youth participation in agricultural education. The respondents agreed on all the strategies identified by this research. This is in tandem with report by FAO (2013). The report stipulates that provision of adequate funds; good public awareness, adequate staffing, enacting and implementing educational policy on agricultural education among others are necessary mechanism that can ensure effective choice and participation in agricultural education programmes by the youth. This was also supported by the view of Paisley (2014) who contended that above every development strategies to engage young people in agriculture must include input from young agricultural professionals themselves. The reason was that young people are in a better position to fashion out how best to reach out to their peers. Moreover, they have common

interests and are able to influence their peers to take certain decisions. Therefore, both informal and formal mechanisms and different actors should work together towards achieving the set goals for agricultural education.

In addition, a Focus Group Discussion (FGD) guide was developed by the researchers to support and guide the researchers in taking decision on the challenges and enhancement of youth participation in agricultural education for sustainable food security. The decision to undertake the FGD involving the lecturers was to seek the views of the lecturers based on the research questions. Furthermore, it was ascertain the consistency of the responses of the students; and hence, to support the findings. The FGD schedule was developed and administered on a sample of ten (10) lecturers of agricultural education from three tertiary institutions offering the programme. Face-to-face contact with the lecturers was adopted. All the research assistants for the research were involved. At the end of the exercise, the responses of the lecturers the FGD corroborated with the findings from the students' responses.

CONCLUSION

Because of their role, the youths are a very important component of the population who need to be taught the dynamics of food, population, environment and socio-economic development. This is because many could graduate and be employed as farm managers, agricultural programme planners, and policy makers. Government need to explore effective strategies to bring every concerned community and institutions into policies for attaining food security. Ultimately, government needs to ensure institutional reorientation and attitudinal change among the stakeholders in the economy. Based on that, curriculum planners could integrate population education into training modules so that citizens especially youth, would understand its relationship to resource scarcity, distribution and utilization thus; understanding the relationship between food security, land use and environmental degradation. Extension agents though as a non-formal educational structure, could contribute to youth's involvement in food production. Schools could work jointly with stakeholders including groups and associations to implement policies and projects that would enhance sound agricultural production practices.

RECOMMENDATIONS

1. Agriculture teachers in collaboration with school management should emphasize establishment and maintenance of school farms by the students to enable practical skills acquisition by the youth while in school.
2. Government should ensure redemption of the image and status of agricultural education through making adequate funds available, and scholarships to promote interest of the youths in agricultural education as a career.
3. Government should encourage partnership with non-governmental organizations and civil society organizations to provide grants for undertaking training programmes, seminars and workshops related to sustainable agricultural production practices and food security within the framework of education.
4. Radios, televisions, and the internet and other social media should be used to create more awareness on the relevance of agricultural education in the socioeconomic development of the nation. This should be targeted on parents and other members of the society.

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