



Perception of Recipients of Agricultural Science Education of Agriculture and Agribusiness: A Survey

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Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

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ABSTRACT

Effort of government at all levels to transform agricultural sector in Nigeria and diversify the economy from oil required that Nigeria educated youth should be persuaded to take active roles in the process. As youth have latent potential to overcome some major constraints to improving agricultural productivity. Major step in this direction is to encourage and support graduates of agriculture and related fields to take up career in agribusiness. On these premises this paper examined willingness of students of vocational agricultural education in colleges of education to take up career in agricultural-entrepreneurship. Questionnaires were given to 76 final year students in the department of Agricultural Science Education, The College of Education, Lanlate. The findings revealed that respondents have positive perceptions of agriculture and agribusiness and showed strong willingness to find their opportunity to contribute as leaders and participants in agricultural sector. Major challenges to willingness to actively participate in agribusiness were found to be limited-access to capital, land, agribusiness information and extension services, risk of uncertainty in agriculture, and high cost of inputs. The paper recommended strengthening of extension services and out of school agricultural knowledge, improve access to capital, land and information on government support and reinvigoration of agricultural-entrepreneurship education to make it relevant to needs of the recipients and address emerging challenges in agricultural sector.

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1. INTRODUCTION

In the last few years efforts of Nigeria government to revive agriculture, diversify the economy through agriculture and make the country self-secure in food production had produced minimal result. Today Nigeria is a net importer of food despite about 79 million hectares of under utilised cultivable land and highly diversified ecological conditions suitable for production of wide range of agricultural products [1]. This had been adduced to the fact that participation of youths in agricultural activities is low, despite the massive population of Nigerian youths, due to their poor perception of agriculture [2,3].

To correct the anomalies, Nigeria's government had attempted to stimulate youth interest in agriculture. And the first step in this direction was the introduction of Vocational Agricultural Education as a subject in schools. This was intended to inculcate the positive attitude in youth towards agriculture as well as preparing them for productive engagement in the sector [4]. The programme is intended to prepares individual recipients for ultimate occupational choice and useful living in a free enterprise economy, promote private enterprise and self-employment in agriculture. Succinctly, the education is gear towards emergence of agropreneurs [5].

The colleges of education offer courses in Vocational Agricultural Education. The philosophy of Nigeria Certificate of Education (NCE) Agricultural Education programme as stated in National Curriculum for Colleges of Education (NCCE) [6] is tied with the national philosophy on agriculture for self-reliance based on the provision of teachers endowed with a balanced approach between principles and practice of agriculture for academic and vocational ends. The main objectives are to prepare graduates with the right attitude to, and knowledge/professional competence in vocational agriculture and teachers who will be capable of motivating students to acquire interest in and aptitude for agriculture [6].

Specifically, recipients of Vocational Agricultural Education in Colleges of Education are exposed to the skills and knowledge involved in the production, management, processing and storage of different food and industrial crops as well as production and management of livestock

and various farm animals. Through practical vocational agricultural education, recipients are empowered to be self-employed and self-reliant. In essence, the programme is intended for the production of Agricultural Science teachers to teach agricultural science in schools and recipients who will find their opportunity to contribute as leaders and participants in agricultural sector.

On this premises, this paper looked at the perceptions of recipients of Vocational Agricultural Education in colleges of education of agriculture and agribusiness. Specifically, the paper looked at the willingness of the recipients of Vocational Agricultural Education in The College of Education Lanlate, Oyo State to engage in agricultural-entrepreneurship, identified their areas of agribusiness interest and what motivate them to want to engage in agricultural-entrepreneurship. Also, the paper examined factors hindering recipients of vocational agricultural education from engaging in agricultural-entrepreneurship. This becomes imperative in the renewed efforts of Oyo State government to drag youth into productive activities in agricultural sector.

2. LITERATURE REVIEW

2.1 Perception of Entrepreneurship by Recipients of Entrepreneurship Education

Generally, perception of entrepreneurship is a way of regarding, understanding or interpreting the phenomenon of entrepreneurship. Perception plays a vital role in explaining emergence, behavior and performance of entrepreneurs [7], when an individual has a positive mental disposition of entrepreneurship, there is a high probability that the individual will engage in entrepreneurship [8,9]. Ogundele [7] provides a list of six different ways of acquitting information upon which disposition are based to be blind trial-and error, general perception, perception of others, perception of the outcomes of others, verbal instruction relevant to behavior and verbal instruction about the object's characteristics.

Although, there are both internal and external factors that determine perception of an individual of entrepreneurship and shape entrepreneurial behavior. While external factors are outside the individual control, internal factors relate to the

factors that the individual can control, for example attitude, character and habits [10]. Again, external factors relate to the external environment, and affect all entrepreneurs equally but the individual's entrepreneurial perception will determine how the entrepreneur will respond to them. Meredith, Nelson & Neck [11] observed that while most people let condition control their attitudes, entrepreneurs use their attitudes to control conditions. Hence, those with positive mental disposition towards entrepreneurship are better placed to overcome the challenges brought about by the external factors [12]. Then to be an entrepreneur, one has to perceive opportunity, have high motivation and expectation and have the means and ability to pursue the opportunity. Also, entrepreneurs need to have another perception of risk, and rather than focusing on threats and risk, entrepreneurs must focus on opportunities and expected returns [13].

Various studies have indicated that the school, society and social groups have the greatest influence on how the learner perceives entrepreneurship as a viable career option [13,14,15]. Kelly, Bosma & Amoros [9] in their study on 59 countries revealed that attitude has a great impact on the success of any entrepreneur, and this attitude is mostly shaped by societal aspirations and values. Also, Henderson and Robertson [10] in their study of factors determining entrepreneurial ambition among high schools' students, established that media and teachers had a significant influence on the perception of the students towards entrepreneurship. The authors posited that learners had a negative image of entrepreneurs since what is communicated by media mostly portrayed entrepreneurs as persistently facing financial problems and entrepreneurship to be highly risky engagement while teachers portrayed entrepreneurship as foregoing a career instead of portraying entrepreneurship itself as a career. In the same vein, Saeed [16] evaluates the impact of entrepreneurship education on shaping young entrepreneurs in Australia established that, though there was a paradigm shift towards entrepreneurship-based education, there was still negative image of entrepreneurship as school curriculum had not been able to teach self-employment and entrepreneurial spirit as a viable career option.

On a final analysis, Ogundele [7] and Kabui & Maalu [13] noted factors with the greatest effect on the perception of entrepreneurship as a

career option by individual were cultural barriers and societal values, fear of failure, level and quality of education, influence of family, friends and other mentors who are role models.

2.2 Determinants of Willingness to Participate in Agricultural-Entrepreneurship

Agricultural-entrepreneurship is defined as the manifest ability and willingness of individuals to perceive and create new economic opportunities in agricultural sector, in form of new products, new production methods, new sources of raw materials, new organisational schemes and new product-market combinations, and to introduce their ideas in the market, in the face of uncertainty and other obstacles, by making decisions on location, form and the use of resources and institutions [17]. A cursory look at the concept of agricultural-entrepreneurship as defined revealed that it is not only connected to innovation but also to entrepreneurial personality as a determinant of entrepreneurial behaviour. Thus, the concept of agricultural - entrepreneurship as described emphasized the importance of individual personal traits - attitudes, skills and actions- and environment on agricultural-entrepreneurship. From this angle, the agropreneur is seen as a separate, independent entity, and personality traits are perceived as stable disposition [18].

Meanwhile, Owoade et al. [5] highlighted the essential elements of agricultural-entrepreneurship to include agropreneurs' vision, motivation, technical skills or competence, interpersonal relationship, social network and interaction. Owoade [19] and Owoade [20] identified factors that determine the decision to participate in agricultural-entrepreneurship as personal interest and characteristics (family background, age, sex, level of education, etc.), societal values, availability of resources (financial, human and material) and market, government policy/support and level of infrastructural development and security. In the same vein, Ogundele [8] notes the most emphasized motives for engaging in entrepreneurship to include need for steady source of income and independence, self-challenges, financial and support provided by government and family, individual experience, personal exposure, economic activities in the immediate environment. On a final analysis, with regards to willingness to engage in particular enterprise considerations include personal

characteristics and entrepreneurial motivations [7,21].

3. RESEARCH METHODOLOGY

The study employed a descriptive survey research design. The target population for the study was all the students in the department of Agricultural Science Education, The College of Education, Lanlate, Oyo State. Purposive sampling technique was used and all 300 level students in the department of Agricultural Science Education 2017, 2018 and 2019 sets. The study focused only on 300 level students for singular reason that they would have completed or almost complete their training in Vocational Agricultural Education which include courses in agricultural-entrepreneurship. All of the seventy-six (76) students were used as respondents for the study.

The instrument used was a structured questionnaire. The questionnaire was split into different sections according to the research objectives. The respondents were asked to rate statements on a 4-point Likert scale. The test-retest method was used to ascertain the reliability of the instrument using a college of education outside the study area, and the reliability coefficient stood at 0.784.

The responses of the respondents were computed by using of frequency counts as frequency counts are useful in knowing the trend related to a particular variable [22]. The results were presented via table while representative nature of the sample variables was measured using computations of index and percentages.

4. RESULTS AND DISCUSSION

4.1 Sex and Age

Majority of the respondents (52.63%) were male. This implies that career in agriculture is male dominated although there is not too much difference between the male and female (47.37%) as college of education provides opportunity for the recipients to venture into teaching profession. Also, it can be observed that 81.58% of the respondent were between the age bracket of 19-23 years while the average age of the respondents was found to be 21.74 years. This implies that the students-teacher are within the age range in which they need a sound background and support to enhance further academic and professional progression, and if properly guided and supported they can find their

opportunity to contribute as leaders and participants in agricultural sector [23].

4.2 Parents' Occupation

Table 1 shows that 28.95% of the respondents' father were into agricultural related occupations while 71.05% were into non-agricultural related occupation. With regards respondents' mother occupation 17.11% were into agricultural related occupations while 82.89% were into non-agricultural related occupations. Although a further probing revealed that majority of the respondents' have either one or both parents engaged in one form of agricultural activities or the other apart from their primary occupation. The implication of this is that parent's occupation and perception of the respondents of their parent's status in society may likely influence respondents' interest in agriculture and their perceptions of those who go into agriculture. This is in line with Ogundele [7] who listed among others perception of others and perception of the outcomes of others as some of ways of acquitting information upon which disposition are based.

From Table 2 it was revealed that the respondents have positive perception of agriculture and agribusiness and are considering seizing the abundant opportunities in the sector to create wealth and employment. This is against the general misconception among youths that farming is a profession for the poor and illiterate, who entails grueling toil in the farmland, with a mere pittance as returns [24,25], but agrees with findings of Omotosho, Asani, Ayegba & Ayoola, [26] who reported willingness of students of Agriculture at Landmark University to pursue agriculture and related careers in future. This may be due to the recipients improved knowledge of the value chain and opportunities for wealth creation in the sector after taking courses in Vocational Agricultural Education. This corroborated Ogundele [7] who listed among others verbal instruction relevant to behavior and verbal instruction about the object's characteristics as some of ways of acquitting information upon which disposition are based.

Table 3 showed the most preferred agricultural enterprises in order of preference to be poultry production and marketing, aquaculture and ruminant production and marketing. This implies that the recipients of vocational agricultural education preferred animal production and detest crop farming. This is in concordance with the

Table 1. Distribution of respondents according to their personal characteristics (n = 76)

Variables	Frequency	Percentage	Mean
Sex			
Male	40	52.63	
Female	36	47.37	
Age in years			
19-23	62	81.58	
23-27	14	18.42	21.74
Father's primary occupation			
Agricultural related	22	28.95	
Non-agricultural related	54	71.05	
Mother's primary occupation			
Agricultural related	13	17.11	
Non-agricultural related	63	82.89	

Source: Field survey 2019

Table 2. Learners perceptions of agriculture and agribusiness

S/N	Items	4	3	2	1	X	Std	Decision
1	Am seriously considering a career in agriculture	50 (65.79)	21 (24.42)	3 (3.95)	2 (2.63)	3.56	0.69	Agreed
2	Am seriously considering starting a business in agriculture	32 (42.11)	41 (53.95)	0 (0)	3 (3.95)	3.34	0.68	Agreed
3	Agriculture is decent employer of youth in the Nigeria economy	26 (34.21)	44 (57.89)	5 (6.58)	1 (1.32)	3.25	0.63	Agreed
4	Agriculture is a lucrative business in Nigeria	36 (47.37)	24 (31.58)	11 (14.47)	5 (6.58)	3.20	0.92	Agreed
5	Youth should be actively involved in agricultural transformation/modernization	33 (43.42)	23 (30.26)	15 (19.74)	5 (6.58)	3.11	0.94	Agreed
6	Agriculture is an important sector in Nigeria economy	37 (48.68)	27 (35.53)	4 (5.26)	8 (10.53)	3.22	0.95	Agreed
7	Venturing into agriculture is a way to create wealth and employment	29 (38.16)	26 (34.21)	17 (22.37)	4 (5.26)	3.05	0.90	Agreed
8	Agricultural science should be made compulsory at all educational level in Nigeria	35 (46.10)	26 (34.21)	14 (18.42)	1 (1.27)	3.25	0.80	Agreed
9	Agriculture is important to Nigeria food security	36 (47.37)	26 (34.21)	8 (10.53)	6 (7.89)	3.21	0.92	Agreed
10	Agriculture is a vocation for the poor and downtrodden	03 (3.94)	05 (6.58)	23 (30.26)	44 (57.89)	1.54	0.78	Disagreed
11	Agriculture is an occupation for illiterate and uneducated	12 (15.79)	13 (17.11)	34 (45.33)	17 (22.37)	2.26	0.98	Disagreed
12	Agriculture involves staying in remote village or rural area	10 (13.16)	6 (7.90)	11 (14.47)	49 (64.47)	1.7	1.08	Disagreed

Source: Field Survey 2019; Agreed- mean index ≥ 2.5 ; Disagreed- mean index ≤ 2.5

Table 3. Preferred agricultural enterprise

S/N	Items	4	3	2	1	Mean X	Std	Decision	Rank
1	Poultry production and marketing	52	15	6	3	3.53	0.80	Most preferred	1 st
2	Fish rearing, catching, processing and marketing	38	30	5	3	3.36	0.77	Most preferred	2 nd
3	Tuber production, processing and marketing (cassava, yam)	33	18	17	8	3.00	1.04	Preferred	10 th
4	Piggery breeding, fattening for commercial purposes	23	24	14	15	2.72	1.10	Preferred	16 th
5	Ruminant farming, commercial production and marketing of cattle, goats, sheep for milk and meat	40	17	14	5	3.21	0.96	Most preferred	3 rd
6	Production and marketing of snails, grasscutter, guinea fowl, for meat & egg production	20	17	23	16	2.54	1.09	Least preferred	17 th
7	Agricultural produce processing for food and industrial purposes	30	20	18	8	2.95	1.02	Preferred	11 th
8	Agricultural produce storage and distribution	26	23	18	9	2.87	1.02	Preferred	14 th
9	Commercial production of exotic vegetables such as water melon, cabbage cucumber, tomato	24	21	20	11	2.76	1.05	Preferred	15 th
10	Tree crop farming such as cocoa, cashew citrus, oil palm	32	28	14	2	3.18	0.82	Preferred	4 th
11	Commercial plantain & banana production, processing & marketing	27	37	9	3	3.16	0.78	Preferred	7 th
12	Commercial production, processing and marketing of grains and cereals such as rice, maize, groundnut, soybean etc.	29	18	20	9	2.88	1.05	Preferred	12 th
13	Livestock feed milling and supply	36	20	17	3	3.17	0.91	Preferred	5 th
14	Agriculture equipment sales, leasing & hiring	33	24	12	7	3.09	0.98	Preferred	8 th
15	Fabrication of machines for on and off farm processing and utilization	27	24	14	11	2.88	1.05	Preferred	12 th
16	Agricultural education and consultancy	32	24	12	7	3.04	0.97	Preferred	9 th
17	Veterinary services and animal drug sales	35	23	14	4	3.17	0.91	Preferred	5 th
18	Eatery, canteen and foodstuff sales	21	23	12	20	2.59	1.15	Least preferred	17 th

Source: Field Survey 2019; Most Preferred: $X \geq 3.20$; Preferred: $3.20 > X \geq 2.50$; Least Preferred: $X < 2.50$

Table 4. Motivator for want to engage in agricultural entrepreneurship

S/N	Variable	4	3	2	1	Mean	X	Std	Rank	Remark
1	Opportunity to earn good money	47	16	11	2	3.42		0.83	2 ND	Very important influence
2	New experience and knowledge	49	11	2	14	3.25		1.16	4 TH	Very important influence
3	Availability of technical support	11	17	15	33	2.08		1.11	9 TH	Not an influence
4	Being financially independent	52	20	4	0	3.63		0.58	1 ST	Very important influence
5	Self-challenges	44	11	13	8	3.20		1.06	5 TH	Very important influence
6	Flexible working hour	12	36	21	7	2.7		0.84	7 TH	Influence
7	Opportunity of having a job and earn money	33	22	17	4	3.11		0.93	6 TH	Important influence
8	Family support	45	18	9	4	3.37		0.89	3 RD	Very important influence
9	Government support	13	22	5	35	2.14		1.20	8 TH	Not an influence

Source: Field Survey 2019; Very important influence: $X \geq 3.20$; Important influence: $3.20 > X \geq 2.80$; Influence: $2.80 > X \geq 2.50$; Not an influence: $X < 2.50$

Table 5. Challenges to participation in agricultural entrepreneurship

S/N	Item	4	3	2	1	X	Std	Decision	Rank
1	Non-access to capital	50	11	12	3	3.42	0.89	Most challenging	1 st
2	Non-access to information about agribusiness	26	17	8	25	2.58	1.30	Challenging	10 th
3	Limited knowledge of business management skills	23	29	15	9	2.87	0.98	Challenging	4 th
4	Inadequate access to market	27	23	8	18	2.78	1.17	Challenging	8 th
5	Limited technical competence in modern agriculture	24	27	11	14	2.80	1.09	Challenging	7 th
6	Limited access to technical assistance and support	17	17	27	15	2.47	1.04	Not challenging	11 th
7	High cost of agricultural inputs	29	22	11	14	2.87	1.13	Challenging	4 th
8	Inadequate Access to extension services	20	23	15	18	2.59	1.15	Challenging	9 th
9	Inadequate farm workers	13	21	21	21	2.34	1.06	Not challenging	12 th
10	High cost of agricultural machinery	38	15	9	14	3.01	1.16	Most challenging	3 rd
11	Non-access to land	22	31	10	13	2.82	1.04	Challenging	6 th
12	Risk and uncertainty in agriculture	26	37	6	7	3.08	0.88	Most challenging	2 nd

Source: Field Survey 2019; Most challenging: $X \geq 3.00$; Challenging: $3.00 > X \geq 2.50$; Not challenging: $X < 2.50$

findings of Omotosho, et al., [26] who reported the strong interest of students of agriculture at Landmark University in livestock production. This may be due to the facts that there is still low-level utilization of mechanization in crop farming in Nigeria as activities are carried out mainly with traditional, rudimentary technology and largely rain dependent, with farmers still exposed to weather vagaries and practicing farming by dictate of the season [27]. Making crop production laborious and the yield unpredictable and returns unattractive to young men taking up vocation in agriculture. Thereby making them not to perceive opportunities for wealth creation in crop production.

From Table 4 it was revealed that the respondents find being financially independent, opportunity to earn good money, family support, eagerness to showcase new experiences and knowledge that have just been acquired and self-challenges as very important factors that influence their decisions for want to engage in agricultural entrepreneurship. This agreed with the findings of Ogundele [8] and Owoade [28] who find these factors to be of great influence in the decision of individual to become entrepreneur. The respondents found availability of family support rather than government or private support to be very important influence in the decision to take up career in agricultural-entrepreneurship. A further probing of the respondents revealed that they neither aware of government or private sector support nor know where or how to source for supports even when its available.

Table 5 revealed major obstacles to participation of recipients of vocational agricultural education in order of severity to be non-access to capital, risk and uncertainty in agriculture, high cost of inputs and agricultural machinery. Other important challenges are non-access to land, limited knowledge of business management skills and technical competencies in modern agriculture. This finding is supported by the observation of Chibundu [21] who reported non-access to capital and money market, inadequate supply and high cost of inputs, poor management practices and low entrepreneurship skill as challenges to entrepreneurship development in Nigeria.

5. CONCLUSION

This study revealed that recipients of vocational agricultural education in colleges of education

have positive perceptions of agriculture and agribusiness and strong willingness to find their opportunity to contribute as leaders and participants in agricultural sector if needed support is provided. Major motivators to taking up career in agribusiness were need for financial independence, opportunity to earn good money and family support while challenges were identified to be limited access to capital, risk and uncertainty in agriculture, high cost of inputs and agricultural machinery, non-access to land, limited agribusiness management skills and knowledge in modern agriculture.

6. RECOMMENDATIONS

To ensure recipients of Agricultural Science Education fully embrace career in agricultural-entrepreneurship the following are essential:

- Strengthening of extension services and out of school agricultural knowledge: this is to bridge the asymmetrical relationship between theoretical training at any form of school and the practical agribusiness. In this regard, creation of agricultural incubation centers and parks, mentoring through internship and reinvigoration of farm settlements through a public-private partnership should be considered.
- For ease access to land by young agropreneurs, as land is a basic resource in agriculture, government should carry out land reforms to make acquisition of lands for commercial agricultural purposes less cumbersome and inexpensive.
- There must be improve access to information on the available support targeted at youth in agriculture by government, development agencies and private sector. As most of intending farmers are not aware and don't even know where and how to source for help.
- Since, educational institutions is where the contact of society is more policies with regard to agricultural support should be available at agricultural-entrepreneurship development centers set up at school, and these centers should be equipped to provide after school services to would be and nascent agropreneurs.
- Reinvigoration of agricultural-entrepreneurship education: Given that it is becoming more difficult to succeed in farming in a changing environment. There is a greater need to foster skills which

support the recipients in coping with this increased complexity. Fostering appropriate entrepreneurial skills can therefore be seen as one way of supporting intending farmers to succeed, since they constitute the activity-related aspect of agricultural-entrepreneurship and, as such, are capable of being influenced.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Author has declared that no competing interests exist.

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