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Skills Required by Secondary School Leavers for Cashew (*Anacadium Occidentale l*) Production in Kogi State, Nigeria

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Abstract
The study determines skills required by secondary school leavers for cashew production in Kogi state, Nigeria. Three (3) research questions and three (3) hypotheses guided the study. The study adopted a descriptive survey research design. The population of the study was Fifteen thousand six hundred and forty eight respondents (15,648); while the sample for the study was Four hundred and ninety eight (498) respondents which consist of One hundred and eight (108) Agricultural Extension Agents and three hundred and ninety (390) registered cashew farmers. The instrument used for data collection was a structured questionnaire titled "Skills Required for Cashew Production Questionnaire" (SRCPQ) which was validated by three experts and with a Cronbach Alpha reliability coefficient of 0.84. The data was analyzed using descriptive statistics of mean ratings and standard deviation and t-test to test the hypotheses at 0.05 level of significance. Findings revealed that all the 30 skill items identified were required by the secondary school leavers for cashew production. It was recommended that the identified skills should be packaged into training programme for secondary school leavers.
Key words: Skills, cashew production, agricultural extension agents, cashew farmers

Introduction
Year in year out, Nigerian secondary schools continue to record a good number of school leavers. Adekoya and Coaster, (2010) stated that 71% of students who graduated from secondary schools are yet to find jobs. The countless numbers of secondary school leavers loitering around the streets of major cities attest to the limited job opportunities in Kogi state. Secondary school leavers in the view of Okafor and Onuoha (2010) are those individuals that have completed secondary school education but could not secure admission into any higher institution or employed in any job. In Kogi State therefore, most of them depend on their parents for their survival while a few migrate to urban cites like Anyigba, Abuja, Lokoja, Okene, Lagos, Port Harcourt, Kano in search of white collar jobs which are not easy to come-by these days. While in the cities, they embark on some immoral and illegal kinds of social vices to earn a living.

Secondary school leavers in Kogi State can be engage in cashew production to reduce poverty and those unwanted acts by participating effectively in large scale cashew production. They require skills in resource managements and skills training for cashew production. In the opinion of Obue (2013), poor skills among secondary school leavers in agriculture is due to inadequate teachers, facilities and equipments for implementation of the agricultural program and inadequate exposures of students to practical lessons especially crop production in schools.

A skill as described by Okeme, Ekele and Anam (2014) is the ability of a person to perform an act expertly. According to Okeme, Alawa and Akwagiobe,(2014) Skill is a well established habit of performing task in a manner accepted by workers in the profession. In the context of this study, Skills are the ability or capacity that is required by secondary school leavers to engage in

cashew production to enhance their living. Problems of secondary school leavers could be solved if they are encouraged and trained on the required skills for cashew production to create employment, serve as source of income, improve foreign exchange earnings of the state and help to encourage expansion of cashew orchard/plantation in the state.

Cashew (*Anacardium Occidentale*) is an important economic tree crop which thrives well virtually in all vegetation belts of Nigeria, but grows better in the guinea savanna where Kogi State is located. Originally, according to Shalini, Vinay, Sirivatsava and Shiva (2014), Cashew (*Anacardium Occidentale*) a native of Brazil, was introduced to other parts of the world starting from the 16th century mainly with the intention of afforestation and soil conservation. From its humble beginning as a crop intended to check soil erosion, cashew has come out as a major foreign exchange earner in most of the countries. It is further reported that Cashew is primarily grown in the continents of Asia, Africa and South America; Asiatic Zones mainly include India, Vietnam and Indonesia as the major cashew producing countries followed by Philippines, Malaysia, Thailand and Sri-Lanka. African countries producing cashew are Nigeria, Cote D'ivore, Tanzania, Mozambique, Kenya, Benin and Guinea Bissau. Latin American countries producing Cashew consist of Brazil, Columbia, Costa Rika, Honduras and Salvador, and now widely cultivated in Vietnam, Nigeria and India as major production countries.

According to Deckers, Cundall, Shomari, Ngatunga, and Basi (2006), its English name derive from the Portuguese for the fruits of the cashew tree ***caju*** which itself is derived from the indigenous Tupi India word ***acaju*** "literally meaning**" nuts that produce itself".** The name *Anacardium,* from the Greek refers to the usual Location of the seed outside the core or heart of the fruits (***ana*** means **"without"** and-***Cardium*** means "**heart**") (Wikipedia, 2012). Cashew *(Anacardium Occidentale)* is an important industrial and export crop whose potential is yet to be fully exploited in Nigeria. (Agbongiarhuoyi, Aigbekaen and Akinbile, 2008).

According to Akor (2013), production is the process of transforming inputs such as capital, labour and land into goods and services called output, and the components of production in Agriculture such as nursery, plantation establishment, plantation management, harvesting and post harvesting operations are required. According to Agbulu, Asogwa, and Ekele (2013), crop is a plant that is deliberately grown by a farmer with the intention of harvesting it at some stages of its development, and involves the combination of resources in carrying out certain operations for the purpose of obtaining products from the crop. The authors stated that such operations include, nursery, pre-planting, planting, post-planting, harvesting and post-harvesting operations.

Are, Igbokwe, Asadu and Bawa (2010) defined crop production as the growing of only crops by farmers, and further stated that crop production teaches the principle and practices of cultivating and managing crop plant grown for human and animal consumption or for industrial uses. This means that for secondary school Leavers to engage in cashew production, they need to acquire skills in the above mentioned areas and if identified it could be used to equip the Secondary School Leavers in Kogi state.

Statement of the Problem

One of the objectives of agricultural science is that secondary school leavers should be able to cultivate at least two crops and rear two animals that are popular in their locality. In Kogi state, cashew production is a popular occupation chosen by the people. It is expected that while students are in secondary school, they should have been taught skills in cashew production to

enable them make a living after graduation. The researcher's observation and interaction with some of these secondary school leavers revealed that they did not possess adequate skills in the area of land preparation, planting as well as harvesting operations. Further investigation showed that these students were not taught skills in cashew production that could make them earn a living. Consequently, these Secondary School leavers roam the streets and constitute social nuisance like pilfering, house breaking and other unacceptable or truant acts in their communities. In order to eliminate or reduce these vices or acts, the researcher felt that if skills in land preparation, planting and harvesting operations are identified and packaged as a retraining program for these youths/secondary school leavers, it would help to encourage the expansion of cashew tree planting/orchard in the state and Nigeria in general, hence this study.

Objectives of the Study

The main purpose of this study is to determine skills required by secondary school leavers for Cashew production in Kogi State, Nigeria. Specifically the study sought to determine the skills required by secondary school leavers in:

1. nursery operations for cashew production;
2. site selection and Land preparation for cashew production; and
3. planting operations for cashew production.

Research Questions

1. What are the skills required by secondary school Leavers in Nursery operations for cashew production
2. What are the skills required by secondary school Leavers in Site Selection/land preparation for cashew production?
3. What are the skills required by secondary school Leavers in planting operations for cashew production?

Research Hypotheses

Ho_1: There is no significant difference in the mean rating of the responses of agricultural extension agents and cashew farmers on the skills required in Nursery operations for cashew production.

Ho_2: There is no significant difference in the mean rating of the responses of agricultural extension agents and cashew farmers on the skills required in Site Selection/land preparation for cashew production.

Ho_3: There is no significant difference in the mean rating of the responses of agricultural extension agents and cashew farmers on the skills required in planting operations for cashew production.

Scope of the Study

The study covers the skills required by secondary school leavers in nursery operation, land preparation and planting of cashew in Kogi State, Nigeria. The study covers the four (4)Agricultural Zones of Kogi State Agricultural Development Project (KSADP).The Zones are A (Yagba West,/East Mopamuro, Ijumu, Kaba/Bunu), B (Dekina, Omala, Ankpa), C (Okene, Okehi, Adavi, Kogi, Lokja),and D (Ofu, Idah, Ibaji).These zones are cashew producing Local Government areas of Kogi state, Nigeria.(GIS LAB,2010).

Methodology

The study adopted survey research design. Survey research design is one in which a group of people or item is studied by collecting and analyzing data from a few people or item considered to be representative of the entire population. The study was carried out in Kogi State. The state is located in the middle belt region of Nigeria. It is popularly called the confluence state because the confluence of rivers Niger and Benue is at its capital in Lokoja. The state lies between latitude $6^0$30'N and $8^0$48'N and Longitude $5^0$23'E and $7^0$48'E thus was created on the 27th August, 1991 from the then Benue and Kwara States.

The population of the study was 15,648 which consist of 148 Agricultural extension agents and 15, 500 registered cashew farmers who participated in the year 2015 crop yield/Area Survey (CYAS) which was conducted by Kogi State Agricultural Development Project (KSADP) Lokoja using the four (4) Kogi State Agricultural Development Project (KSADP) zones A, B, C and D respectively. The sample size for this study is 498 respondents. This consists of 390 registered cashew farmers and 108 agricultural extension agents gotten using "Taro Yamane formula" for sample size determination. Multi-stage Sampling Techniques was adopted for this study.

The instrument that was used for data collection is a thirty (30) skill items structured questionnaire titled: "Skills Required by Secondary School Leavers for Cashew Production Questionnaire" (SRSSLCPQ)'' developed by the researcher from literature review. Each (SRSSLCPQ) item is anchored on a four point rating scale of Highly Required (HR), Required (R), Slightly Required (SR) and Not Required (NR) with a corresponding nominal value of 4, 3, 2 and 1, respectively.

Validation is the process of giving an instrument to experts in the specialized field to determine the extent an instrument can measure what it is designed to measure. Face and content validation of the instrument were carried out by one expert from Department of Crop Production, Faculty of Agriculture, Kogi State University, Anyigba and one from the Department of Vocational Agriculture and Technology Education, University of Agriculture, Makurdi and one from Kogi State Agricultural Development Project, (Zone B Anyigba). Their comments were taken into consideration in modifying the objectives of the study.

A reliability coefficient of 0.84 was obtained using Cronbach-Alpha reliability method. The research instruments were administered to the respondents by the researcher with the help of four (4) Research Assistants that were trained on how to administer and retrieve the instrument. Four hundred and ninety eight (498) copies of the Questionnaire were administered on the respondents in all the four (4) KSDP Zones (A, B, C and D) and four hundred and eighty (480) were retrieved back. The data collected from the respondents were analyzed using descriptive statistics (Simple Percentage, Mean and Standard deviation) to answer the research questions. A criterion mean of 2.5 was established such that a mean value of 2.5 and above was for acceptance while a mean value below 2.5 was for rejection. Also, inferential statistics (t-test) was used to test the hypotheses raised in the study and was tested at 0.05 level of significant. When the t-calculated value exceeds the t- tabulated value, the hypotheses of no significance difference were rejected, while the hypotheses of no significance difference were accepted when the t-calculated value is less than the t- tabulated value.

Results

Research Question 1

What are the skills required by secondary school leavers in nursery operations for cashew production?

The data in Table 1 revealed that all the 17 skill items in nursery operation had their mean ranged between 2.97 (item 17) and 3.68 (item 15) and they are all higher than 2.50 which indicates that all the 17 skills items in Nursery operations are required by secondary school leavers for cashew7 production in Kogi state, Nigeria. The skills required by secondary school leavers in nursery operation for cashew production is presented in Table 1.

Table 1: Mean ratings and Standard Deviation of Agricultural Extension Agents and Cashew Farmers on Nursery Operation Skills Required by Secondary School Leavers for Cashew Production

S/N	Items	$\bar{X}1$	SD_1	$\bar{X}2$	SD_2	$\bar{X}g$	SDg	Decision
1	Identifying suitable site for the establishment of cashew nursery	3.41	.661	3.50	.731	3.46	.696	Required
2	Locating nursery on a level ground site that is not prone to water logging	3.52	.606	3.12	.766	3.32	.686	Required
3	Purchase of planting bags or poly material	3.44	.678	3.17	.671	3.31	.675	Required
4	Identify Suitable soil medium e.g (loamy soil), saw dust, and organic manure	3.69	.506	3.39	.868	3.54	.687	Required
5	Purchase of viable nuts to ensure good germination and vigorous seedlings/ purchase elite seeds from breeders	3.64	.502	3.38	.757	3.51	.630	Required
6	Healthy nuts devoid of plant or bruises, cracks, insects or fungi attack	3.67	.474	3.48	.556	3.58	.515	Required
7	Large to extra- large nuts	3.76	.450	3.36	.781	3.56	.616	Required
8	Raise nursery within the main cashew field	3.72	.490	3.14	1.06	3.43	.776	Required
9	Arrange the bags in row of 100 (s) in the nursery for the purpose of counting and maintenance operations	3.60	.614	3.13	.848	3.37	.731	Required
10	Treat seeds meant for sowing with CyperDforce	3.68	.563	3.17	1.05	3.43	.807	Required
11	Soak seed in salt solution	3.30	.587	2.66	.815	2.98	.701	Required
12	Soak seed in fresh water for 2-3 days (48-72hours)	3.08	.730	3.06	.869	3.07	.800	Required
13	Carryout floating test	3.33	.615	3.21	1.02	3.27	.816	Required
14	cracking the seed coat to facilitate germination	3.44	.634	3.34	.712	3.29	.673	Required
15	Apply water Regularly (3 times per week)	3.57	.535	3.28	.921	3.68	.728	Required
16	Fence with wire mesh to prevent rodent from nursery at a height of 1m	3.33	.583	3.21	.763	3.27	.673	Required
17	practicing insect /pest management	3.49	.539	2.45	.912	2.97	.726	Required

N=Number of Respondents (N=480; n_1=375; n_2=105), $\bar{X}1$= Mean of Extension Agents, SD_1= Standard Deviation of Extension Agents, , $\bar{X}2$= Mean of Cashew Farmers, SD_2= Standard Deviation of Cashew Farmers, $\bar{X}g$= Grand Mean of the Respondents, SDg= Grand Standard Deviation of the Respondents

Research Question 2

What are the skills required by secondary school leavers in site selection/ land preparation for cashew production?

The data in Table 2 revealed that all the skill items in site selection and land preparation had their mean ranged between 2.81 (item 4) and 3.60 (item 1). This indicates that the respondents agreed that all the 5 skill items in site/land preparation operations are required by secondary school leavers for cashew production in Kogi state, Nigeria. The skills required by secondary school leavers in site/land preparations operations for cashew production is presented in Table 2

Table 2: Mean and Standard Deviation of Respondents on site/ Land Preparation Skills Required by Secondary School Leavers for Cashew Production

S/N	Items	$\bar{X}1$	SD_1	$\bar{X}2$	SD_2	$\bar{X}g$	SDg	Decision
1	Clear the land by using hoe and cutlass/under-brushing of the bush	3.74	.439	3.45	.699	3.60	.57	Required
2	Burn the bush	3.76	.428	3.34	.724	3.55	.58	Required
3	Spray field with glyphate, (adopt zero tillage) Glyphosphate	3.64	.502	2.97	.814	3.31	.66	Required
4	Uproot shrubs/trees using tractor	3.45	.588	2.17	.999	2.81	.79	Required
5	Marking out and holing	3.57	.497	2.17	.901	3.87	.70	Required

N=Number of Respondents (N=480; n_1=375; n_2=105), $\bar{X}1$= Mean of Extension Agents, SD_1= Standard Deviation of Extension Agents, $\bar{X}2$= Mean of Cashew Farmers, SD_2= Standard Deviation of Cashew Farmers, $\bar{X}g$= Grand Mean of the Respondents, SDg= Grand Standard Deviation of the Respondents

Research Question 3

What are the skills required by secondary school leavers in planting operation for cashew production?

Table 3 revealed that all the identified planting operations skill items required for cashew production had their mean ranged between 2.97 (item 4) and 3.57 (item 5) and they are higher than 2.50 which indicates that all the skills items in planting operations are required by secondary school leavers for cashew production in Kogi state, Nigeria. The skills required by secondary school leavers in planting operations for cashew production is presented in Table 3.

Table 3: Mean ratings and Standard Deviation of Agricultural Extension Agents and Cashew Farmers on Planting Operation Skills Required by Secondary School Leavers for Cashew Production

S/N	Items	$\bar{X}1$	SD_1	$\bar{X}2$	SD_2	$\bar{X}_g$	SDg	Decision
1	Planting distances (9 x 9m, 10 x 10m, 12 x 12m)	3.56	.499	2.89	1.018	3.23	.76	Required
2	Digging holes at the high density peg points	3.42	.496	2.73	1.016	3.08	.76	Required
3	Digging large holes to accommodate roots of transplants	3.36	.483	3.17	.891	3.27	.69	Required
4	Testing seed viability	3.76	.428	2.17	.924	2.97	.68	Required
5	Sow seeds at the start of rains, April/May	3.70	.458	3.44	.732	3.57	.60	Required
6	Transplanting healthy seedlings in May/June	3.40	.492	3.50	.542	3.45	.52	Required
7	Cover seeds deep with soil	3.45	.500	3.48	.602	3.47	.55	Required
8	Sowing seedlings 7.5cm depth	3.70	.458	3.39	.669	3.55	.56	Required

N=Number of Respondents (N=480; n_1=375; n_2=105), $\bar{X}1$= Mean of Extension Agents, SD_1= Standard Deviation of Extension Agents, $\bar{X}2$= Mean of Cashew Farmers, SD_2= Standard Deviation of Cashew Farmers, $\bar{X}_g$= Grand Mean of the Respondents, SDg= Grand Standard Deviation of the Respondents

Discussions

Findings from the study in Table 1 revealed that all the 17 skill items identified in nursery operations were required by secondary school leavers for cashew production in Kogi state, Nigeria. This finding in agreement with Asogwa, Omeh, and Ikelusi (2010), who explained on competencies in moringa nursery enterprise for capacity building of secondary school graduates for sustainable livelihood in southern, Nigeria. The author further related that all the 38 competencies identified in moringa nursery enterprise were required and it was found out from the hypothesis tested that there was no significant difference in the mean of lecturers and instructors on the thirty-eight competency items. This also in consonance with Uko (2013), who opined that the resources managements skills identified in oil palm nursery enterprise be packed and integrated into skill acquisition centres for training senior secondary school graduates and other unemployed youth for employment, economic success and wealth creation.

The results of the study in Table 2 revealed that all the identified 5 skill items in site selection and land preparation were required by secondary school leavers for cashew production in Kogi state, Nigeria. This finding is in harmony with the study by Umeh and Attaboh (2008) who stated that women need improvement in manual land clearing and should involve the felling of mangrove tree and shrubs. This findings is also in consonance and agreement with the view of Agbareyo, (in Okeme, Ekele, and Anam 2014) that site selection is the process of choosing the optimal location for a business based on accessibility to and availability of customers as well as consideration of space cost, size and other physical characteristics, and identified 8 site selection skills.

Finding from the results in Table 3 revealed that all the 8 identified planting skill were required by secondary school leavers for cashew production in Kogi state, Nigeria. This finding is in

consonance with the view of Onu and Alaribe, (2013) that planting had 10 skill items required for the production of pineapple in their study on identification of work-skill needs by secondary school graduates in South East, Nigeria. The results of the hypotheses tested showed that there was no significant difference in the mean ratings of the responses of the cashew production in nursery, site/land selection and planting operations. The implication of this finding was that the professional differences of the two groups of respondents did not significantly influence their responses on the skills required by secondary school leavers in nursery, site/land preparation and planting operations in cashew production.

Conclusion

Presently in Kogi state, Nigeria, the potentials of cashew production (nut and apple) and various stages of production operations especially, nursery, site/land preparations and planting, are still under-utilized. Huge postharvest losses are usually recorded during the harvest period, especially with regard to the apple. There is need therefore to improve production and transformation opportunities through introduction of appropriate skills. This study has shown that all the 30 skill items identified were required by secondary school for cashew production. Hence, there is need for this building population of secondary school leavers to be properly informed and trained in these areas of enterprise (cashew production) so that they could find themselves self-employed or employed by other bigger cashew production enterprise for them to be able to make a living.

This could assist in reducing the social menace posed by this school leavers as a result of idleness and also could contribute to the social-economic well being of their individual families and even to a large extent their state, nation as a whole, and become independent on their parents for living as it was observed that cashew production requires minimal capital investments and has high market competition both local and international.

Recommendations

From the results of this study, the following recommendations were made.

1. The identified skills in nursery, site/land preparations and planting operations should be package into a training programme for the secondary school leavers and unemployed youths to enable them to become self-reliant and self sustaining.
2. The skills identified in this study should be made available to the secondary school leavers through some Agricultural organizations like Agricultural development projects (ADP), Research institute and extension offices to help improve their production.
3. The teachers of agricultural science should be encouraged to teach the identified skills during the period of school instructions and the students should be made to pass through it in their studies, to help them develop interest, thereby encouraging them to go into cashew production business.

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