

Indigenous Practices Militating against the Olericultural Production: Methods of Improving its Productivity in the Uruan LGA of Akwa Ibom State, Nigeria

Aboh, C. L. and Effiong, J. B.

Department of Agricultural Extension and Rural Sociology
Faculty of Agriculture,
Forestry and Wildlife Resources Management
University of Calabar, Calabar
Cross River State, Nigeria
johneffiong@yahoo.co.uk.

Abstract

The study assessed the challenges militating against olericultural production in Uruan Local Government Area of Akwa Ibom State. It further stresses some of the basic indigenous knowledge practices and methods of improving its production. A sample size of 121 respondents was selected through a multi-stage sampling procedure from selected agricultural zones in Uruan LGA. Data collected were analyzed using descriptive statistics. Results of the study revealed that perishability/bulkiness of vegetables, rural-urban migration and restiveness/conflicts in farming communities ranked 1st (\bar{X} = 3.62), 2nd (\bar{X} = 3.55) and 3rd, (\bar{X} = 3.31) respectively and were, hence, considered in this work as some of the major challenges affecting olericultural production in Uruan LGA of Akwa-Ibom State, Nigeria. The results revealed that availability of storage and processing facilities, availability of social infrastructural amenities and land tenure review ranked 1st (\bar{X} = 3.71), 2nd (\bar{X} = 3.49) and 3rd (\bar{X} = 3.35) respectively and were, therefore, considered to be of high necessity for the olericultural production while provision of agro-chemicals for pest/disease control, access to agro-inputs/credit facilities and adequate extension service ranked 6th (\bar{X} = 3.15), 5th (\bar{X} = 3.20) and 4th (\bar{X} = 3.21) respectively. In identifying the basic indigenous knowledge practices for olericultural production, the use of scare crows to avoid birds, clustered planting of waterleaf and staking practice of pumpkin,

cucumber and watermelon ranked 1st (\bar{X} =3.88), 2nd (\bar{X} =3.55) and 3rd (\bar{X} =3.53) respectively and were, in the current study, regarded as being of high utilization. The study concluded that perishability/bulkiness of vegetables, rural-urban migration and poor land tenure policies, are among the major challenges militating against olericultural production in Uruan LGA of Akwa-Ibom State, Nigeria. The study therefore recommended that storage/processing facilities and social infrastructural amenities should be made available to farmers, and that land tenure system and government policies should be reviewed to provide full ownership of land to farmers.

Key words: Challenges, Olericultural production, indigenous knowledge practices and productivity in Akwa-Ibom State, Nigeria.

Introduction

In the early 1970's and late 1980's, agriculture was the main stay of the Nigerian economy providing foreign exchange earnings through exportation of agricultural produce and foodstuff for foreign and domestic consumption. But with the advent of oil boom and the sharp decline in global prizes of cash crop produce, came a paradigm shift from an agrarian economy in Nigeria to an oil-based economy in Nigeria (Nneonyi, Angba and Ogbonna, 2008) where Akwa-Ibom State is located in the global map. Hence, farmers have prior to the application of scientific (modern) technologies in agricultural production, continued to carry out various practices such as the use of palm front to guard against rodents, the use of images, traps, wood ashes, the use of scare crows, and clustered planting of waterleaf amongst several other methods to ensure high yield in their subsistence agriculture. These practices, according to Amalu (1998), have been variously described as indigenous technical knowledge, traditional knowledge, rural knowledge, indigenous knowledge, local people's knowledge and ethno-science, to mention but a few. Against this backdrop, it has been widely observed that though modern agricultural practices have contributed immensely to boosting of agricultural productivity and food security; yet, farmers are not

convinced that the extra cost concomitant with the adoption of modern innovations will bring about extra benefits due to perceived lack of relative advantage over existing local practices, compatibility, trialability, divisibility, observability and complexity of innovation being introduced (Akpabio, 2005; Asiabaka, 2010; Ekong, 2010; Kolawole, 2002; Bamigboye, 2010; and Brokensha, 1980). The importance of vegetable as a major source of nutrients in Nigeria cannot be overemphasized because it augments the nutritive values of staple foods due to its rich assortments of vitamins, minerals, proteins and oils. (Nwaleji, 2006 and Muanya, 2003). However, there are numerous challenges that militates against olericultural production in Nigeria today such as lack of capital, land, processing/storage facilities, climatic/weather conditions, pest/diseases and proximity to marketing centres and this calls for intensive production of vegetable to bridge the deficit gap between demands and supply in the country. (FAO, 2006).

Methodology

The study was conducted in Uruan Local Government Area in Uyo agro-ecological zone of Akwalbom State, a coastal state in the South-South agro-ecological zone of Nigeria called the Niger Delta Region. Uruan occupies a landmass area of approximately 449km² with an estimated population of over 118,300 people (NPC, 2006). It is made up of 57 villages with many creeks, rivers and streams emptying into the Atlantic Ocean and this makes the area rich in fishes, crabs, shrimps, lobsters, oyster and periwinkles amongst others. The people are largely fishermen, farmers, traders, canoe builders and carpenters since the area lies in the rainforest belt and it's rich in timber and non-timber products (NTP's).

A multi-stage sampling technique was used to select the respondents. At first stage, purposive sampling technique was used to select Uruan as a block from Uyo Agricultural Zone. This was influenced by the prevalent of vegetable farmers in the block. The second stage was the purposive selection of 11 cells from the block namely; EkimEne, NdonEbom, Adadia, EsukOdu, IkotInyangEsuk, Ekpenelbia, ItukMbang,

EkpeneUkim, Use Uruan, IssietEkim and Ikot Akan. This was due to the intensive all year round cultivation of vegetables in the cells. In the third stage, 11 respondents were randomly selected from each of the selected cells. This produced a sample size of 121 respondents used for the study. Primary data collected was done with the aid of an interview schedule and a structured questionnaire, while secondary data were obtained from relevant literatures and publications. Descriptive statistics were used to analyze data collected for the study. These included frequency, percentage, mean and rank.

Results and Discussion

Table 1 showed the challenges militating against olericultural production in the study area. The Table revealed that the perishability/bulkiness of vegetables, rural-urban migration and restiveness/conflicts in farming communities were ranked 1st (\bar{X} =3.62), 2nd (\bar{X} = 3.35), and 3rd (\bar{X} =3.31) respectively. While, pest and disease infestation, poor land tenure policies and inadequate extension services were ranked 7th (\bar{X} =3.16), 6th (\bar{X} =3.18) and 5th (\bar{X} =3.22) respectively and were regarded as minor challenges militating against olericultural production in the study area.

This findings corroborates with the study of (Akpabio, 2005; USAID, 2005; Efifong, Ijioma and Effiong, 2015) who asserted that restiveness in farming regions, rural-urban movement and unavailability of land were the major challenges of agricultural production in Nigeria.

Table 2 showed the methods of improving olericultural production for increased food security in the study area, results revealed that availability of storage/processing facilities, availability of social infrastructural amenities and land tenure policy review were ranked 1st (\bar{X} =3.37), 2nd (\bar{X} =3.49) and 3rd (\bar{X} =3.35) respectively. This finding is in line with the study of (Egbuna, 2008) who asserted that access to arable land at any place and time by farmers, investors and non-governmental organizations (NGOs) will significantly improve vegetable production. Also provision of agro-chemicals for

pest/disease control, access to agro inputs/credits facilities and provision of adequate extension services were ranked 6th(\bar{X} =3.15), 5th(\bar{X} =3.20) and 4th(\bar{X} =3.21) respectively and regarded as least methods of improving olericultural production in the study area. According to Effiong, (2013) providing agro-inputs, storage/processing facilities and social infrastructural amenities will improve food security in Nigeria.

Table 3 showed the basic indigenous knowledge practices utilized for olericultural production in the study area. The results revealed that use of scare crows to avoid birds, clustered planting of waterleaf and staking practice of fluted pumpkin, cucumber and waterleaf were ranked 1st (\bar{X} =3.86), 2nd (\bar{X} =3.55) and 3rd (\bar{X} =3.53) respectively. This findings corroborates with the study of Kolawole (2002) who opined that rural people to whom all research development programmes and efforts are directed to have their own body of knowledge called indigenous or local knowledge that enables them arrive at decision which enhances their standard of living and wellbeing and should therefore not be outrightly discarded by change agents in their programme development. Table 3 also revealed that settings of traps for rodents, uses of ashes and extract of Siam weed and Neem plants for pest and disease control and use of palm fronds to guard against rodents were ranked 8th(\bar{X} =2.28), 7th(\bar{X} =2.41) and 6th(\bar{X} =2.61) respectively and regarded as least indigenous knowledge practices utilized for olericultural production in the study area.

Table 1: Challenges militating against olericultural production

Challenges	SA 4	A 3	SD 2	D 1	CUM	MEAN \bar{X}	RANK
Perishability/bulkiness of vegetable	79(316)	38(114)	2(4)	1(1)	435	3.62	1 st
Low access to agro-chemical and credit facilities	36(144)	74(222)	6(12)	4(4)	382	3.18	6 th
Inadequate extension service	51(204)	50(150)	15(30)	4(4)	388	3.23	4 th
Poor land tenure policies	47(188)	57(171)	12(24)	4(4)	387	3.22	5 th
Pest and disease infestation	48(192)	49(147)	18(36)	5(5)	380	3.16	7 th
Restiveness/conflicts in farming communities	59(236)	45(135)	11(22)	5(5)	398	3.31	3 rd

Indigenous Practices Militating against the Olericultural.....

Rural-urban migration among farmers	64(256)	43(129)	5(10)	8(8)	403	3.35	2 nd
-------------------------------------	---------	---------	-------	------	-----	------	-----------------

Source: Field survey, 2017. SA = Strongly Agreed, A = Agreed, SD = Strongly Disagreed, D = Disagreed

Decision rule: Mean value >2.50 shows major challenge while mean value ≤ 2.50 shows minor challenge.

Table 2: Methods of improving olericultural production for food security

METHODS	SA 4	A 3	SD 2	D 1	CUM	MEAN \bar{X}	RANK
Availability of storage/processing facilities	92(368)	23(69)	4(8)	1(1)	446	3.71	1 st
Availability of social infrastructures and amenities	69(276)	44(132)	4(8)	3(3)	419	3.49	2 nd
Agro-chemicals for pest/disease control	43(172)	57(171)	15(30)	5(5)	378	3.15	6 th
Land tenure system review	61(244)	44(132)	11(22)	4(4)	402	3.35	3 rd
Adequate extension service provision	50(200)	48(144)	19(38)	3(3)	385	3.21	4 th
Access to agro-inputs and credit facilities	51(204)	49(147)	13(26)	7(7)	384	3.20	5 th

Source: Field survey, 2017. SA = Strongly Agreed, A = Agreed, SD = Strongly Disagreed, D = Disagreed

Decision rule: Mean value >2.50 shows high necessity while mean value ≤ 2.50 shows low necessity.

Table 3: Indigenous knowledge practices for olericultural production

Indigenous methods	VH 4	H 3	L 2	N 1	MEAN \bar{X}	RANK
Use of scare crows to avoid birds	108(432)	9(27)	2(4)	1(1)	3.86	1 st
Setting of traps for rodents	16(64)	31(93)	44(88)	29(29)	2.28	8 th
Clustered planting of waterleaf	75(300)	38(114)	5(10)	2(2)	3.55	2 nd
Ashes and extract of Siam weed and Neem plant for pest and disease	24(96)	34(102)	37(74)	25(25)	2.47	7 th
Palm fronds to guard against rodents	32(128)	33(99)	32(64)	23(23)	2.61	6 th
Staking of pumpkin, cucumber and watermelon	74(296)	38(114)	6(12)	2(2)	3.53	3 rd
Matchet/ho for land preparation	71(284)	37(111)	10(20)	2(2)	3.47	4 th
Mulching, bush fallowing, crop rotation and animal dungs for soil fertility.	74(296)	31(93)	13(26)	2(2)	3.47	4 th

Source: Field survey, 2017

VH = Very High, H = High, L = Low, N = Never; Cum = Cumulative frequency

Decision rule: Mean value > 2.50 shows high utilization while mean value \leq 2.50 shows low utilization.

Conclusion

The findings of the study showed that the major challenges militating against olericultural production are perishability/bulkiness of vegetables, rural-urban migration and restiveness/conflicts in farming communities while availability of storage/processing facilities, availability of social infrastructural amenities and land tenure review were the most common methods of improving olericultural production in the study area.

Recommendations

Based on the findings of the study, the following policy recommendations were proffered:

- 1) Proper documentation of basic indigenous knowledge practices for future use and provision of incentives to custodians to enable them divulge the knowledge to others.
- 2) There is a great need to revisit the issue of storage/processing facilities which is the hall mark of olericultural production. This will consciously encourage the youth, elderly and other marginalized groups into olericultural production.
- 3) Government should increase its funding for social amenities/infrastructural sector especially in the rural areas as this has a direct bearing on olericultural production.
- 4) Adequate policies and legislations for improved and easier access to foundational resources such as land, capital, technology would help develop adequate interest in olericultural activities.

References

- Akpabio, I. (2005). *Human Agriculture: Social Themes in Agricultural Development*. Abeam Publishing Company, Uyo, Akwa Ibom State. Pp. 42-47.
- Amalu, U. (1998). *Agricultural Research and Extension Delivery Systems in Sub-Saharan African*. The University of Calabar Press, Calabar. Pp. 4-6.
- Asiabaka, C.C. (2012). *Agricultural Extension: A Handbook for Development Practitioners*. Hudson-Jude Nigeria, Owerri, Imo State, Nigeria. Pp. 95-97.
- Bamigboye, E. O. (2008). Factor Associated with the Utilization of IKS for Rice Production by Farmers in Ekiti State, Nigeria: M.Tech. Department of Agricultural Economics and Extension (LAUTECH), Ogbomosho, Nigeria. Pp. 20-24.
- Brokensha, D. D., Canine-Adams, K., Land Shield, B. L., Boileau, T. W., Clinton, S.K. and Erdman, J. W. Jnr. (2004). *Tomato Phytochemicals and Prostate Cancer Risk*. *J.Nutr* 134 (12 Suppl) 3486s-3492s.
- Effiong, J. B. (2013). Prospects and constraints of indigenous agricultural practices among rural farmers in Itu LGA., Akwalbom State, *NigeriaMedwell Journals of Agricultural Science*, 8(1): 23-24.
- Effiong, J. B., Ijioma, J. C. and Effiong, M. O. (2015). Endogenous determinants of adoption of improved rubber production technologies among farmers in Akwalbom State, *Nigeria Asian Journal of Agricultural Extension, Economics, and Sociology*, 8(4): 1-6.
- Egbuna, N. (2008). Urban Agriculture as a Strategy for Poverty Alleviations. Pp. 10-11.
- Ekong, E. E. (2010). *Rural Sociology: An Introduction and Analysis of Rural Nigeria*. Uyo: Dove Educational Publication Nigeria. Pp. 358-380.
- Food and Agriculture Organization, FAO (2004). *World Food Security: A Reappraisal of the Concepts and Approaches*. Director Generals Report. Rome Italy. Pp. 3-10.

- Kolawole, O. D. (2002). Local Knowledge Utilization and Sustainable Rural Development in the 21st Century. *Indigenous Knowledge and Development Monitor*. 9(3):13-25.
- Muanya, C. (2004). Pineapple as a Panacea for Yuletide Ailment. *Thursday Guardian*, October, 16, P.61.
- Nneonyi, I., Angba, A., and Ogbonna, K., (2008). The Role of Agricultural Extension in Promoting Indigenous Knowledge Systems among Cassava Growers in Odukpani L.G.A. Cross River State. *Nigerian South East Journal of Agricultural Economics and Extension*. Vol. 8, Nos. 1 & 2, pp. 60-67.
- Nwalieji, H. U. (2006). Evaluation of Fadama Phase One Vegetable Production Project of the Anambra State Agricultural Development Programme. M.Sc. Thesis Project Submitted to the Department of Agricultural Extension, University of Nigeria, Nsukka. Pp. 5-6.
- USAID (2005). Global Horticultural Assessment. The World Vegetable Center. [http://pdfDocs/Pnadh769.pdf](http://pdfdocs/Pnadh769.pdf). Accessed 28/2/2017.