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Agricultural Science

Yam Production in Orire Local Government Area of Oyo State, Nigeria: Farmer's Perceived Constraints

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ABSTRACT [ENGLISH/ANGLAIS]

The study identified various constraints to yam production in Orire Local Government area of Oyo State as perceived by yam farmers in the area. An interview schedule was administered to the respondents to elicit useful information. Multistage sampling technique was used to select 80 respondents from 5 agricultural extension cells randomly chosen in the study area. Results of the study showed that majority of the respondents were male and inherited their farming land. Majority (71.3%) were small scale farmers that normally cultivate between 1.0 to 2.0 hectares of land, also majority of the respondents practices mixed cropping, only 48.7% practices sole cropping for yam. Yam had high socio-cultural significance in the study area and was perceived as the most important crop cultivated in the area followed by maize and cassava. However, serious constraints to yam production in the area as perceived by the respondents include low soil fertility, lack of improved yam varieties, inadequate information on improved yam production, disease and pest attack, unavailability of inorganic fertilizer, high cost of hired labour, lack of finance to carry out necessary farming activities, among others. These findings suggest the need for provision of adequate agro- service shops where farmers can obtain their farm input at subsidized prices as well as the accessibility to credit facilities in order to enable the farmers to enhance their productivity of yam.

Keywords: Farmers, perceived, constraints, yam production, Orire, Oyo State

RÉSUMÉ [FRANÇAIS/FRENCH]

L'étude a identifié diverses contraintes à la production de l'igname dans la zone Orire gouvernement local de l'Etat d'Oyo telle que perçue par les agriculteurs dans la région de l'igname. Un calendrier des entrevues a été administré aux répondants pour obtenir des informations utiles. Technique d'échantillonnage à plusieurs degrés a été utilisé pour sélectionner 80 répondants de 5 cellules de vulgarisation agricole choisis au hasard dans la zone d'étude. Résultats de l'étude a montré que la majorité des répondants étaient de sexe masculin et a hérité de leurs terres agricoles. La majorité (71,3%) étaient de petits agriculteurs qui, normalement, cultivent entre 1,0 et 2,0 hectares de terre, aussi la majorité des répondants pratiques culturales mixtes, seulement 48,7% des pratiques culturales unique pour l'igname. Yam avait grande importance socio-culturelle dans la zone d'étude et a été perçue comme la plus importante culture cultivée dans la région suivi par le maïs et le manioc. Toutefois, de sérieuses contraintes à la production de l'igname dans la zone telle que perçue par les répondants comprennent faible fertilité des sols, le manque de variétés d'igname améliorées, une information insuffisante sur la production d'igname améliorées, les maladies et les attaques de ravageurs, l'indisponibilité des engrais inorganiques, coût élevé de la main-d'œuvre salariée, le manque de financement pour mener à bien les activités agricoles nécessaires, entre autres. Ces résultats suggèrent la nécessité de fournir des services adéquats agro-magasins où les agriculteurs peuvent obtenir leur intrants agricoles à des prix subventionnés ainsi que l'accessibilité aux facilités de crédit afin de permettre aux agriculteurs d'améliorer leur productivité de l'igname.

Mots-clés: Les agriculteurs, perçue, les contraintes, la production d'igname, Orire, Etat d'Oyo

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INTRODUCTION

Yam (*Dioscorea species*) is among the oldest recorded food crops and rank second after cassava in the study of carbohydrates in West Africa [1, 2]. It also forms an important food source in other tropical countries including East Asia Africa, South America, South East Asia (including India) [2, 3]. Nigeria is the largest producer of the crop, producing about 38.92 million metric tonnes annually [4]. Six species, namely white yam (*Dioscorea rotundata*), yellow yam (*Dioscorea cayenensis*), water yam (*Discorea alata),* Trifoliate or three-leaved yam (*Dioscorea dumentorum).* Arial yam (*Dioscorea*

bulbifera) and Chinese yam (*Dioscorea esculenta*) can be considered the principal edible yams of the tropic [2, 3]) yam tubers are eaten boiled, roasted, fried or pounded and could be chipped, dried and produced into yam flour. Yam represents about 20% of the daily calorie intake of Nigerians living in the forest and savannah region [1]. Yam constitutes a major staple food for the majority of inhabitants of Nigeria. Yam has potential for livestock feed and industrial starch manufacture.

Traditionally, yam is a prestige crop that is view and received with high respect, prominently during special gatherings such as new yam festivals in rural communities of eastern, central and some parts of south west of Nigeria. There has been a general decline in yam production in Nigeria over years [6]). Madukwe et al. [5], Agwu and Alu [2] and International Institute of tropical Agricultural [6] reported that both area under yam cultivation and total yam output were declining. This also applicable to Orire local Government Area as in other parts of Oyo State. However, yam production in Nigeria is faced with a number of constraints paramount among these constraints are pest and disease attack, procurement of the required seed yam for more yam production, its reoccurring scarcity and high cost during planting season [7].

The seed yams constitute over 35% of the cost out-lay in yam production and limits the size of yam farms under traditional cropping method [8]. This study therefore, sought to ascertain the constraints to yam production as perceived by farmers in the area, specifically, the study was designed to describe socio-economic characteristics of the respondents, examine farmers perceived relative importance of yam to other cultivated crops, identify yam species cultivated in the area and ascertain major constraints to yam production in the area.

MATERIALS AND METHODS

The study was conducted in Orire Local Government Area of Oyo State. The local government area has a total land area of 2,040 km^2 with population of about 42,242 people [9]. The area made up of one Agricultural block by Oyo State Agricultural Development Program me (OYSADEP). This block made up of eight Agricultural extension cells. A multistage random sampling technique was used in selecting respondents for this study. Five extension cells were randomly selected out of eight extension cells in the area. However, four communities were randomly selected from each cell making a total of twenty communities, selected for the study. Four respondents were randomly selected from each community, making a total of sixteen respondents selected from each cell, making a total of eighty respondents for the study. A structured interview schedule was used to collect relevant information from the respondents. In order to examine the relative importance of yam to other crops grown in the area. Major crops cultivated were listed out and the respondents were asked to indicate their perceived relative importance on a four –point likert-type scale of very importance, importance, little importance, and not importance scaled 4 to 1. Also to identify major yam species grown in the area, respondents were asked to indicate species of species yam grown out of common yam species listed. Furthermore, to ascertain the major constraints to yam production as perceived by the farmers, a list of possible constraints to yam production was compiled and respondents were asked to indicate their perceived serious constraints on a three point's likert – type scale of very serious, serious, and not serious, scaled 3 to 1. Data were subjected to descriptive statistical tools like means, frequency counts, tables and percentages.

RESULTS AND DISCUSSION

Socio economic characteristics of the respondents

Table 1 shows the selected socio-economic profile of the respondents, the analysis showed that about 48.0% of the respondents were at the age of 41 years and above, 28.7% fell within the age category of 36-40 years, about 18.0% were between the age category of 31-35 years while about 6.3% only were below 30 years of age. Thus majority (93.7%) of the respondents were matured and active to understand the constraints that hindered yam productions. This study agrees with that of Agwu and Alu [2] who observed that active age of farmers is a positive factor for sustainable food crops production and poverty eradication among rural farmers. Also among the randomly selected respondents 86.3% were males, 77.5% inherited their farming land while 71.3% cultivated between 1.0 to 2.0 hectares of land for yam production. Table 1 further revealed that various cropping system were practiced by the respondents in the study area, 48.7% yam sole, 22.5% yam / maize while 16.3% and 12.5% practiced yam / guinea corn and yam / melon respectively.

Crops cultivated on the basis of relative importance

Table 2 shows that yam was the most important crop cultivated in the area with a mean score of 3.82. This was followed in descending order by maize (3.78), cassava (3.76), fruits (3.62) pepper (3.60), tomatoes (3.59) melon, (3.46) groundnuts (3.32) guinea corn (2.76) and rice (2.54) all the crops cultivated were perceived to be important. This result agrees with the findings of Agwu and Alu [2] which stated that yam is the most important crop cultivated in Benue State.

TABLE 1

Table 1 shows the socio- economic characteristics of the respondents

	Frequency	Percentage
Age (years)		
> 30	05	6.3
31 - 35	14	17.5
36 - 40	23	28.7
41 and above	38	47.5
Total	80	100.0
Sex		
Male	69	86.3
Female	11	13.7
Total	80	100.0
Land Acquisition Method		
Gifts	06	7.5
Inherited	62	77.5
Purchased	04	5.0
Lease	08	10.0
Total	80	100.0
Size of Yam Farms Cultivated (hectare)		
> 1.0	12	15.0
1.0-2.0	57	71.3
3.0 – 4.0	08	10.0
5.0 and above	03	3.7
Total	80	100.0
Cropping System		
Yam / maize	18	22.5
Yam / melon	10	12.5
Yam sole	39	48.7
Yam / guinea corn	13	16.3
Total	80	100.0

Source: Field Survey 2010

Species of yam cultivated

Table 3 shows that about 54.0% of the respondents cultivated white yam, 22.5% cultivated water yam and white yam. 17.5% cultivated yellow yam and white yam, while 3.8% cultivated yellow yam, water yam, white yam and aerial yam. However, only 1.3% of the respondents cultivated water yam and aerial yam alone respectively. This result agrees with findings of Agwu and Alu [2], and OSADEP [10] whom reported that white yam is the most widely grown species of yam in Benue state, Nigeria.

TABLE 2

Table 2 shows the mean scores of other corps cultivated on the basis of relative importance (N= 80)

Crops*	Mean Score
Yam	3.82
Maize	3.78
Cassava	3.76
Fruits (mango, orange, cashew etc)	3.62
Pepper	3.60
Tomatoes	3.59
Melon	3.46
Groundnut	3.32
Guinea corn	2.76
Rice	2.54
Cocoa and important crops	2.50

Source: Data Analysis 2010

Constraints to yam production

Data in table 4 shows that serious constraints to yam production in the area were low soil fertility with mean score of (2.94) lack of improved yam varieties (2.89) inadequate information on improved yam production practices (2.86) disease and pest attacks' (2.83) unavailability of inorganic fertilizers (2.78) high cost of higher labour (2.71) lack of finance to carry out necessary farming activities (2.67) and lack of planting materials (2.51). Field observation showed that farmers found it difficult to procure fertilizers to supplement soil nutrient for yam production. This was due to the role played by middlemen who create artificial scarcity so as to increase price and also found it difficult to obtained useful and adequate information on improved yam production practices so as to efficiently increase yam production and farmers income. The result of this study supports the assertion of Ezedimal *et al.* [1] that low soil fertility, lack

of improved yam varieties were among the major constraints to economically efficient crop production. Other serious constraints to yam production as perceived by the farmers include lack of adequate rains during critical periods (2.14) and lack of efficient post harvest storage methods (2.12).

TABLE 3

Table 3 shows the species of yam cultivated

Yam species	Frequency	Percentage
Water yam / white yam	18	22.5
Yellow yam / white yam	14	17.5
White yam	43	53.8
Water yam	01	1.2
Aerial yam	01	1.2
Yellow yam, water yam, white yam and Aerial yam	03	3.8
Total	80	100.0

Source: Field Survey 2010

TABLE 4

Table 4 shows the Constraints to yam production (N= 80)

Constraints	Mean score
Low soil fertility in the area	2.94
Lack of improved yam varieties	2.89
Inadequate information on improved yam production practices	2.86
Yam production practices	2.86
Disease and pest attacks	2.83
Unavailability of inorganic fertilizers	2.78
High cost of higher labour	2.71
Lack of finance to carry out necessary farming activities	2.67
Lack of planting materials	2.51
Lack of adequate rains during critical periods	2.14
Lack of efficient post harvest storage methods	2.12
Lack of staking materials	1.62
Inadequate knowledge about the use of inorganic fertilizers	1.56

Source: Data Analysis 2010

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CONFLICT OF INTEREST

No conflict of interest was declared by authors.