Problems and Prospects of Rice Production in Central District of Edo State, Nigeria

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ABSTRACT This paper examined the problems and prospects of rice production in the Central District of Edo State, Nigeria. The methods of study involved the administration of questionnaire and oral interview. Ageing and illiterate people dominate Rice forming. The farming system is characterized by the use of crude implements, small farm holdings and subsistency. There are no extension workers and farmers are unaware of new varieties of rice seedlings. Fertilizers are very expensive and unaffordable to the local farmers. Rice production is plagued by myriad of problems including; attack from pests like birds, rodents and diseases. Yield per farm is low and financial return is correspondingly low, the prospect of rice production is low as many farmers are shifting to cassava farming. It is recommended that government should subsidize farm inputs and send extension worker to the farming communities. Also, credit facilities with minimum collateral security as well as improving socio-economic facilities will encourage the local farmers to continue his business.

INTRODUCTION

Rice *(Oriza sativa)* is an integral part of human history. It is the world's only crop that was planted by emperors and kings, offered to the gods and eaten by both the wealthiest and the poor (IRRI, 1992). Rice is an annual crop and the most important staple food crop in tropical countries. Commercially, it is the most important cereal after wheat. It is widely consumed and there is hardly any country in the world where it is not utilized in one form or the other. In Nigeria rice is one of the few food items whose consumption has no cultural, religious, ethnic or geographical boundary. It is available in five-star hotels in the big cities and towns as well as in the "most local" of the eating places in the remotest villages throughout the country. It is highly priced and widely accepted for festivity. In some rural areas, it is so adored that it is eaten only on Sundays and sometimes on market days.

But unfortunately, the cultivation and production of this highly priced and very important food crop is dwindling. Consequently, the price has gone beyond the reach of majority of Nigerians. In order to stem the decline in the number of farmers participating in rice farming and at the same time increase the production of all staple food crops, the Federal Government introduced a number of agricultural development programmes/projects among which are:- Operation Feed the Nation (OFN), Green Revolution, National accelerated food production programmes (NAFPP), Directorate of food, roads, and rural infrastructures (DFRRI) and now Agricultural Development Programme (ADP), River Basin and Rural Development Authorities (RBRDA), and Nigerian Agricultural Co-operative and Rural Development Bank to mention but a few. Irrspite of these programmes/projects and other schemes such as Farm Settlement Models, Micro-credit Schemes, Extension services schemes and improvement in infrastructural facilities, food crop (especially rice) production have persistently remained below market demand.

Esan land (Edo State Central senatorial district) has been a major rice producing area in Edo State. However, this role has been revised in recent time.

To enable us advance recommendations, which are practicable in solving this most important problem of our time, this study seeks to examine the reason for the decline in rice production in Nigeria using Esan areas of Edo State as a basis for the study. The prospects of rice farming will also be discussed.

AREA OF STUDY

The area of study is Esan Land of Edo State. The area is largely rural and a majority of the people are farmers specializing in rice and cassava farming among others (Omofonmwan, 1995). Esan area is the geographic unit situated between latitutde $6^o10^{1'}$ and 6° 45' North of the

Equator and between longitude 6° 10' and 6⁰ 30' East of the Greenwich Meridian (Fig. 1).

The relief of the region can broadly be divided into two structural component viz: the relatively undulating plateau surface which occupies about 75 percent of the area and the slopes and lowland and are to be found mostly in the southeast part of the region. This is the part of the region bordering the River Niger (Fig. 1& 2). These two structural components favour the cultivation of up land and swamp rice, respectively.

The soil types are ferrisols on loose sandy sediments. To the north of the region the soils are reddish, while to the south, they are yellowish brown. These soil types are less leached and consequently retain the advantage of a good growing medium for crops such as rice. The top soil, when freshly cleared from forest contains about 5 percent organic matter and can thus sustain growth of crops for several years without applying fertilizer (Akinbode, 1983).

MATERIALS AND METHODS

Data for this study were collected through the administration of questionnaire, oral interview, and visit to farm sites. For uniform and even spread of questionnaire, spatial frames were constructed from the existing political divisions and sub-divisions. The Edo State Central Senatorial districts is politically divided into five local government areas as follows: Esan Central, Esan Northeast, Esan Southeast, Esan West and Igueben. Each of these five local government areas is sub-divided into ten wards except Esan North East which is divided into eleven wards (Omofonmwan, 2001a). In other wards, there are fifty-one wards in the area of study. These fifty-one wards in the study area were re-designated as fifty-one spatial closures or area unites for data collection, analysis and discussions in this study.

Twenty questionnaires were administered in each of the fifty-one spatial closures, resulting to one thousand and twenty (1020) questionnaires. Within each spatial closure, twenty house-holds heads were randomly selected for the administration of questionnaire. The choice of "heads of households" for questionnaire administration is based on the fact that they most appropriately represent their respective households (Omonfonmwan, 1995, 2001b). A 100 percent response was recorded through the replacement of lost or misfilled questionnaires.

RESULTS AND DISCUSSIONS

Farming Systems and Practices

In the study area, the dominant system of farming is bush fallow. Bush fallow involves the rotation of cultivated land so as to allow for the "following" of exhausted farmland. More than 70 percent of the sampled farmers practice the bush fallow system. Fallowing allows for natural replenishments of farmland. The system persists partly, because there is inadequate access to modern farming inputs (like fertilizers). In Nigeria, fertilizers are very expensive and are therefore beyond the reach of the local farmers. As noted by Hance (1969), bush fallowing is one of the most fundamental factors limiting food crop (especially rice) production in Nigeria. It inhibits, or impedes the application of science and technology but provide veritable pedestal for subsistency and poverty.

Crop production is practiced both for subsistence and commercial purpose. Subsistence farming is where the farmer produces mainly to feed himself and his family while commercial farming entails the production of crops for cash income. In the area of study, the situation is such that, it is relatively difficult to make a clear distinction between subsistence and commercial farming. All the respondents practice a system which involves a considerable degree of subsistence farming and at the same time, a substantial element of cash cropping. The fact that a farmer has to pay school fees as well as buy an increasing range of goods in the local market makes it impossible for him not to sells part of his produce.

In summary, the farming practices in the central district of Edo State are characterized by shifting cultivation/bush fallowing, small holding, aged and illiterate farming population, mixed cropping, use of simple implements like hoe, cutlasses etc, .

Rice Production Practices

Studies within the rice producing areas revealed that land preparation in the form of clearing and burning begins in February/March of every year. Planting is carried out after the first rain, which usually comes during the last week of March or early April. The sowing process involves the use of cutlass or sharpened knive and pointed stick to dig the soil for up to
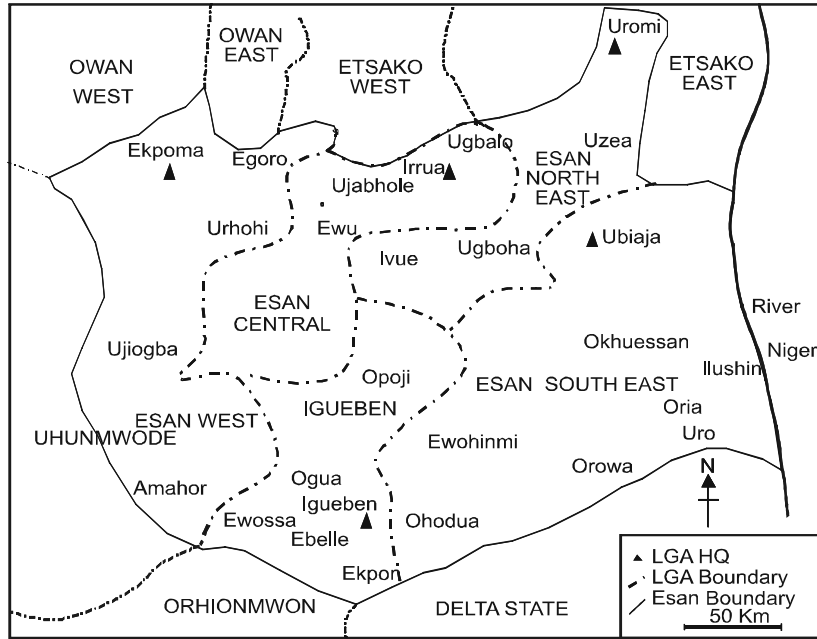
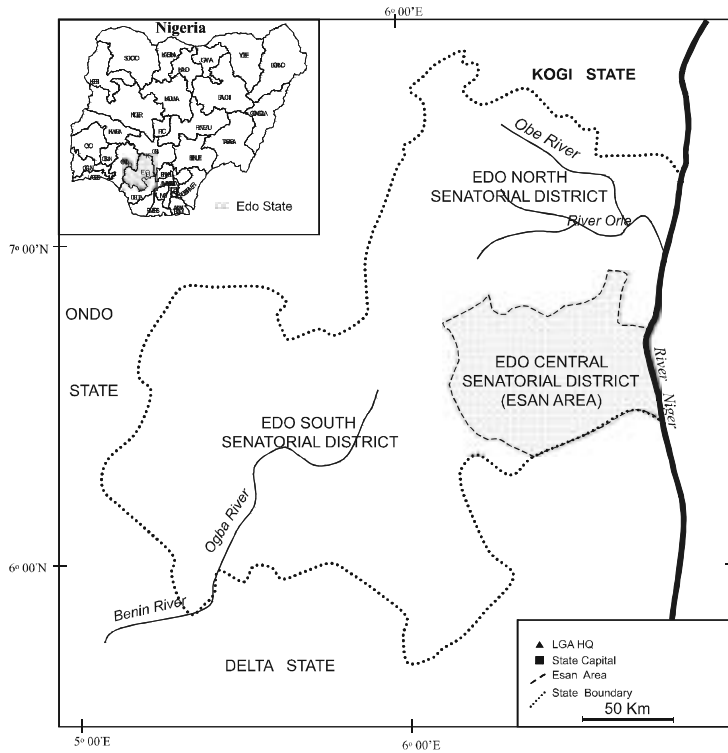**Fig. 1. Edostate showing central senatorial district**

Fig. 2. Esan Region of Edo State (Rice Producing Area)

3cm to 4cm deep. Then between 6 and 8 seeds are sown per hole. Holes are dug close to each other and are not more than 6cm apart.

Weeding is necessary to ensure that the rice plant is not stifled or deprived of necessary nutrients during the growing periods. This according to Anyanwu (1979) Komolafe (1980) and Jacguot and Courtois (1987) should be done thrice before harvest either using hoe, cutlass or chemicals. Field survey in the area of study revealed that weeding may be more than three times depending on the type of soil and the amount of rain fall for that particular year. Weeds respond positively to heavy rainfall. This dictates the number of times weeding is carried out. Application of soil enriching fertilizer is necessary to increase yield per rice plant. However, majority of the farmers posited that weeds take advantage of fertilizer than rice seed and thus makes weeding more difficult. But, Ighalo and Remison (1995) reported that fertilizer increases yield per rice plant and that low yield in rice production is due to lack of, or inadequate use of, fertilizer.

Problems of Rice Production

Food crop production in Nigeria is replete with a plethora of problems. Specifically, the problems confronting rice cultivation and/or production in the area of study are listed in Table 1. All the respondents indicated finance as the most intractable problem confronting rice farmer. The second most serious problems are those involving pests (e.g. birds), rodents (e.g. rats, grass cutters etc.) and diseases (e.g rice blast, rice smut, narrow brown leafspot, leaf blight, stock or root rot etc.). Most of the farmers interviewed complained of the devastating effects of birds and grasscutters attacks on rice farms.

The cumulative effect of the whole problems on rice production is low yield per hectare, which in turn leads to poor financial returns. This deplorable situation is further worsened by competition from cassava farming which yield higher financial returns. About 92 percent of the sampled farmers use crude implements such as cutlasses, hoes and knives. The remaining 8 percent did not want to mention crude implements as a problem because none of the sampled farmers mentioned the use of modern farm tools like tractor and no such farm tool was cited during the field survey. Also, the use of modern farm inputs such as fertilizers and improved high

yielding varieties are not common in the area. The farmers complained that the cost of purchasing fertilizers were high and above their reach.

The improved varieties of rice seeds were not common and where available, there were no field extension workers to demonstrate the associated methods of planting, maintaining and harvesting the new variety. There were other social problems confronting rice production in the area of study. These were poor transportation problems, illiteracy and ageing farming population. Transport network connecting the local government headquarters are fairly well developed, but same cannot be said of roads linking the rural settlements with their farm-stead on one hand and the markets on the other hand. About 90 percent of the sampled farmers asserted that the bane of food crops production in the area is poor transportation system.

Literacy level is very instructive in information diffusion and the application of science and technology. Fifty-four percent of the sampled farmers had no formal education. Another 40 percent claimed to have attended primary school (Table 2). The low level of education of farmers in the study area may create a difficult problem for the spread of agricultural innovations and modern farming methods.

Table 1: Problem of rice production in Central District of Edo State.

S. No.	Identified Problems	No. of Respondents	Percentage
1.	Finance (e.g Agric Loan)	1020	100
2.	Pest, diseases & Rodents	1010	99.0
3.	Low Returns	960	94.0
4.	Competition from cassava	950	93.0
5.	Use of crude implements	940	92.0
6.	Lack of modern farm inputs	930	91.0
7.	Transport Problems	910	89.0
8.	Illiteracy	868	85.0
9.	Ageing farming population	781	77.0
10.	Lack of extension worker	776	76.0

Source: Field Survey, 2003

Table 2: Education status of respondents.

Educational Status	No. of Respondent	Percentage
No formal education	541	53.0
Primary School	110	40.2
Post Primary School	48	4.8
Tertiary Education	21	2.0
Total	1020	100

Source: Field Survey 2003

The field survey also revealed that about 60 percent of the farmers mainly illiterate (Table 3) were more than sixty years old. The problems of rice farming are many (Table 1) and some of these are yet intractable.

Table 3: Age of respondents

Age Bracket	No. of Respondents	Percentage
21-30	10	1.0
31-40	50	5.0
41-50	103	10.0
51-60	255	25.0
60+	602	59.0
Total	1020	100.0

Source: Field Survey 2003

Prospects of Rice Production

In view of the numerous problems associated with rice production as discussed in the preceding subsection, the prospects of rice farming in the area of study is very bleak. More than 80 percent of the farmers interviewed are wary about the future of rice farming in the area. A majority of this category of farmers is already drifting to cassava farming.

However, there are some farmers who have developed psychological attachment to rice farming. Also there are others whose farmland are only ecologically suited for the cultivation of rice. These two categories of farmers are not more than twenty percent of the sample taken, and at present, they remain the hope of rice farming in the region. Thus, the scarcity of locally produced rice in the region is due to the decrease in the number of farmers participating in rice farming in the area.

To stem the observed decrease in the number of farmers engaged in rice farming and to also increase the total production, governments at all levels must take urgent steps to encourage the farmers. Such encouragement should include:-
1. Providing credit facilities (e.g soft loan) to the farmers who are really engaged in rice farming.
2. Providing farm inputs (e.g fertilizers, improved seedlings, and chemical for weeding and curbing the activities of pests, rodents and diseases) at subsidized rates.
3. Extension workers should also be provided to educate the local farmers on new methods and applications of various farm inputs, and
4. Imposition of a total ban on the importation of rice.

CONCLUSIONS

Food crop production in Nigeria in general and the Edo State central senatorial district in particular are bisected with myriad of problems. The farming systems and practices are characterized by the use of crude implements, illiterate and ageing farming population and small-sized farms holdings. These features constitute a blockage to the introduction of new technology into the farming system. These are the pedestals on which low crop yield and poor financial returns are perpetrated.

Farm imputes such as fertilizers are very expensive and beyond the reach of the local farmers. New and improved varieties of rice seeds are not available. The use of tractors is unknown to them and they have never seen an extension worker. Above all, yield per rice farm is low and it is becoming glaringly that growing cassava is more profitable.

Social service facilities are inadequate. The few available facilities are in deplorable conditions yarning for sustenance. To resuscitate and boost rice production in the study area in particular and in Nigeria in general, the following recommendations are suggested; Extension workers should be provided for farmers. The extension workers who must be fluent in the local dialect should be able to educate the local farmers on modern and scientific methods of rice cultivation and/or production.

Farm inputs such as fertilizers, improved varieties of rice seeds, chemicals for weeding and curbing the activities of pest, rodents and diseases etc should be made available to farmers at highly subsidized rates.

Credit facilities especially soft loan should be granted to the true farmers with minimum collateral securities. Such collateral should not be more than mere identification of the farmers by the traditional rulers or local chief within the communities of the farmer. Farm settlement schemes specifically designed for rice cultivation should be established within the rice farming area.

The available infrastructural facilities should be improved upon and new centers created where they are not available. This would stem the drift of rural young men and women into the already congested urban centers. These recommendations, if religiously adhered to, would resuscitate and improve crop (Rice) Production in Nigeria

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