

**PRODUCTION AND MARKETING OF DESSERT BANANA IN  
OWERRI AREA OF SOUTHEAST NIGERIA**

**BY**

**EZEDINMA C. I<sup>1</sup> and M. TSHIUNZA<sup>2</sup>**

- 1. Dept of Agricultural Economics / Extension  
Federal University of Technology P.M.B. 1526, Owerri  
Imo State, Nigeria**
- 2. Plantain Banana Improvement Program  
International Institute of Tropical Agriculture, (IITA)  
Onne Substation P.M.B. 008 Nchia  
Port Harcourt Rivers State.**

*(Accepted August, 2000)*

**ABSTRACT**

This paper describes the smallholder dessert banana production and marketing activities. The survey was conducted in Owerri agricultural zone in the humid forest ecology of southeast Nigeria. Four markets, one urban and three rural markets were investigated. Information on production practices was also collected from 60 dessert banana producing farmers in villages where the rural markets were located.

Results indicate that dessert bananas were mostly intercropped with plantains in compound farms by smallholder farmers. Production status of dessert banana in the study area is secondary to plantains while 45 percent of output is marketed by producers. The marketing channel is simple involving mostly retail traders. Retail prices are seasonal peaking in the months of lowest output (April to September), when gross value to farmers is also highest. Further socioeconomic research should focus on the characterization of major and minor dessert banana producing and marketing areas in Southeast Nigeria.

## Resume

Cette etude decrit la production paysanne de la banane de table ainsi que sa commercialization. Une enquete a ete menee dans la zone agricole de Owerri situee dans la zone forestiere humide du Sub-Est du Nigeria. Quatre marches dont un situe en milieu urbain et trois en milieu rural ont ete visites. Les pratiques culturales de la production de la banane de table etaient observees aupres de 60 paysans dans les villages ou les marches etaient situes. Les prix etaient recoltes aussi bien en milieu rural qu'en milieu urbain.

Les resultats de l'enquete montrent que la banane de table est cultivee en association avec le plantain autour des habitations des paysans. La production de la banane de table est secondaire par rapport a celle du plantain et 45% de sa production sont commercialises par les producteurs. Le circuit de commercialization est simple et comprend surtout les detaillants. Les prix de detail sont saisonniers et ont leur peak pendant les mois de faible production (d'Avril a September); c'est pendant cette periode que la marge brute est la plus elevee. Des etudes socioeconomiques ulterieures devraient mettre un accent sur la caracterisation des grandes et petites zones de production et de commercialization de la banane de table dans le Sud-Est du Nigeria.

### 1.0 INTRODUCTION

Dessert banana (*Musa* spp. AAA group) is an important fruit in Southeast Nigeria. It is popular for its flavour, texture and for its convenience value being easy to peel and eat (Robinson, 1996). It is basically a snack food implying that it is not a whole meal. Hence it differs from plantains (*Musa* spp cv AAB) and cooking banana (*Musa* spp cv ABB) which can be a whole or part of a meal. The most popular complement of dessert banana in Southeastern Nigeria is roasted peanuts.

The domestic market for dessert banana in Nigeria is large but production is limited mostly to the Southern parts of Nigeria especially the Southeast. Here the

production is mostly in smallholder compound farms in the rural villages while the urban centers are the major consuming markets. The challenge facing dessert banana production and marketing in southeast Nigeria is to improve production technology, market infrastructure and post harvest utilization. This paper therefore sets out to describe the present smallholder dessert banana production practices, ascertain the production status of dessert banana relative to plantain, ascertain the seasonal price differences and gross value at the farm gate and retail market levels and make recommendations that will help improve research on the

production and marketing of dessert banana in southeast Nigeria.

## 2.0 METHODOLOGY

A survey was conducted in the owerri agricultural zone of Imo State in southeast Nigeria. Imo State is one of the major banana producing areas in the humid zone of southeast Nigeria (Ogazi, 1996). Owerri is the largest urban

settlement in the state while the rural population is made up of farming communities. The dessert banana market in Owerri area is large and draw consumers from within and outside the state. This market is surrounded by a range of satellite rural markets from which it draws its supplies (Figure 1).

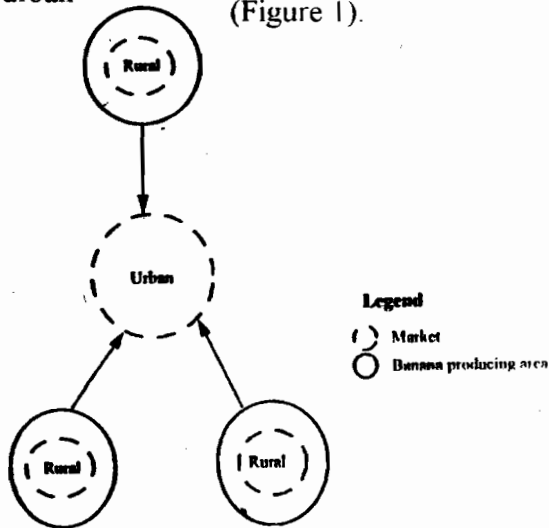


Figure 1. Methodology of Dessert banana production and marketing survey

Three of these satellite markets namely; Nkwo Ihiagwa (18km from Owerri), Ori Eziobodo (25km) and Ori Umuokanne (20km) were selected for the survey. The Owerri urban market is a daily market while the Nkwo Ihiagwa and Ori Eziobodo sits every eight days. The Ori Umuokanne sits every four days.

Since these rural markets

were located in banana producing villages, twenty banana producing farmers were interviewed in each of the three villages. The farmers were selected at random from a list compiled before the survey. Direct observations were used to obtain information on banana production activities such as number of stands owned, banana intercrops, labour

use, manure application and weeding. Proportion of banana marketed, consumed or given out as gift and farmers socioeconomic characteristics were also recorded. A total of sixty farm families were surveyed. Yield sample of desert banana were also taken from five of these farmers per village over a period of one year. The sample size for yield sampling was reduced due to cost constraints. However, a total of 42 samples (15 in the rainy seasons months and 27 in the dry season months) were taken from a total of 15 farmers. In addition, cross sectional market prices of dessert banana bunches were collected from the three rural markets where the farmers sold their produce and from Owerri urban market. The price information was collected following Nweke et al (1988), that is by bargaining and purchase of banana bunches.

Data on both production (yield) and marketing aspects of the survey were obtained fortnightly over a period of one year (June 1997 to May 1998) with the assistance of enumerators. Data is analyzed using percentages and means presented in tables and charts. Estimates on gross value were based on 16000 plants per hectare in laid out production systems.

### **3.0 Socioeconomic Characteristics of Dessert Banana Farmers**

Table 1 summarized the socioeconomic characteristics of smallholder banana production in the study area. Most (53 percent) respondents were women, while 47 percent were men. The main age of respondents was 43 years and were mostly married (93 percent) with a mean household size of 11 persons. Banana production is essentially a female activity. This was also recognized by the male respondents in the sample. Married women in the household find banana easy to plant within the compound farm because it requires little or no maintenance and household waste can be poured into the groves to maintain fertility and keep the homestead clean.

The mean number of years spent in school was 12 years implying that most of the respondents attained secondary education. Banana production is not considered a major occupation even though respondents have had about 26 years of experience in growing the crop. Banana producers in the study area were primarily arable crop farmers and traders who engage in banana production to supplement their income from their farming and trading activities.

**Table 1: Socio-economic Characteristics of smallholder Banana Producers in Owerri area of southeastern Nigeria.**

Characteristic	Percent/mean	Range	
		Min	Max
Percentage Male	47	-	-
Mean Age (years)	43	24	85
Percentage Married	93	-	-
Mean Household size	1	3	18
Mean no. of years spent in school	12	0	20
Banana Production as major occupation (%)	2	0	2
Banana Production Experience (years)	26	4	45

#### 4.0 Smallholder Banana Production Practices.

Figure 2 shows that 77 percent of the farmers surveyed produce banana in compound farms while 23 percent had their banana crops located in non-compound farms. The latter includes neighbourhood and distant farms. It was observed that banana (as well as plantains) were not usually planted in rented, borrowed or leased land. Since banana is a perennial crop, security of tenure

may discourage production on land acquired by such methods. Production in compound farms reduces the incidence of theft of mature fruits but most importantly it makes the application of refuse convenient. Refuse including palm oil fibre, leaves swept from the compound, wood ash, peels from cassava, yam, cocoyam and other kitchen waste were applied mostly by women and children on a daily basis.

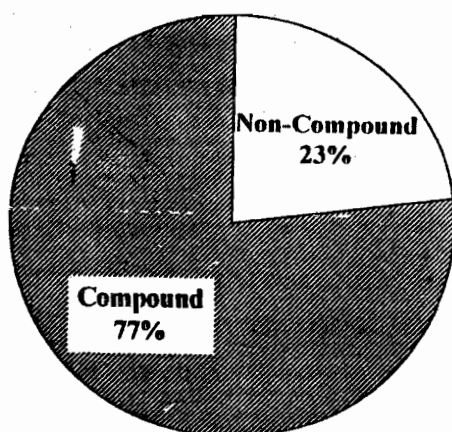


Figure 2. Percentage distribution of dessert banana producing farmers by compound and non-compound farms

Figure 3 indicates that banana is mostly intercropped with plantains by all farmers (100 percent), root and tuber crops especially cocoyam, cassava and yam (42 percent), other economic trees and fruits such as oil palm, coconut, kolanut, oranges, soursop, guava, mango and pineapple (41 percent) and with vegetables such as telfaria, pepper,

and bitterleaf in compound farms in the study area. However the average number of banana stands is about 29 per farm family with a range of 9 to 68 plants. Plantain stands were much higher with about 68 stands per farm family and a range of 10 to 115 stands. This difference was found to be statistically significant using to test at five percent probability level.

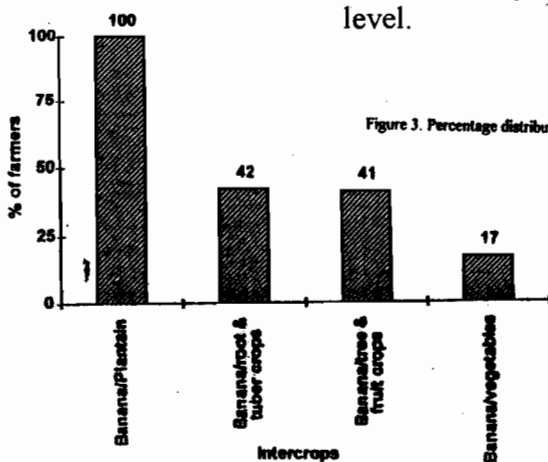


Figure 3. Percentage distribution of dessert banana intercrops

This contrasts with Nsukka area located in the subhumid zone of southeast Nigeria where Baiyeri and Ajayi (1996) found that more farmers grew dessert banana than plantains. In terms of production status dessert banana comes second to plantain in the humid zone unlike in the subhumid zone of southeast Nigeria.

Banana suckers were obtained mostly from relatives (85 percent), own stock (eight percent) or extension agents (five percent).

The rainy season is the most favoured time of planting especially in the months of June (52 percent), July (30 percent) May (13 percent), August (three percent) and April (two percent). Thinning of excess suckers is not usually practiced, while mulching and weeding were common to all farmers. Only two percent of the farmers hired labour for banana production. In this case the labour was hired for digging of holes for transplanting new banana suckers.

Harvesting is carried out 9 to 12 months after planting. Fruits are harvested all the year round. The peak harvest period is between October and March. Yield is also relatively higher during the peak harvest months averaging about 11.9kg compared to 9.0 kg during the rainy season months of April to September. Obiefuna (1982) has already observed in the case of plantains that bunches that developed during the rainy season were more robust than those that developed during the dry season months because of more favourable soil moisture during the rainy season. While this may explain the higher yield of dessert banana from the dry than rainy season months, it may need further agronomic investigation.

### 5.0 Marketing of Dessert Banana in Owerri Area of Southeast Nigeria.

Figure 4 shows that most (45 percent) of the farm households' dessert banana output is sold in the local village market, 31 percent is consumed at home while 24 percent is given out as gift to relatives and friends. Nweke et al (1988) however noted in the case of plantains that 80 percent were marketed while 20 percent were consumed at home by farmers in Owerri area of southeast Nigeria. This may indicate that dessert banana is less market-oriented than plantain in the study area. Giving dessert banana bunches out as gift is important especially during the peak output season when it is seen as a convenient method of disposing excess output instead of leaving the produce to waste due to lack of storage facilities.

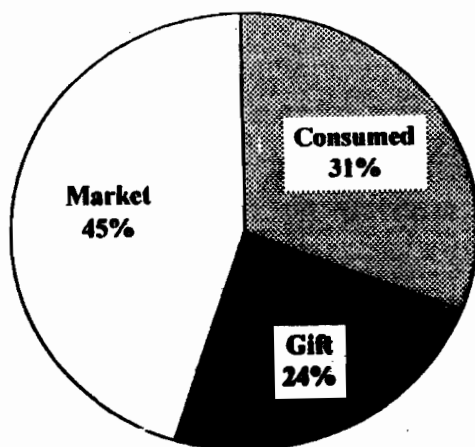


Figure 4. Proportion of dessert banana marketed, consumed at home and given out as gift by smallholder farmers

The marketing channel for dessert banana is simple (figure 5).

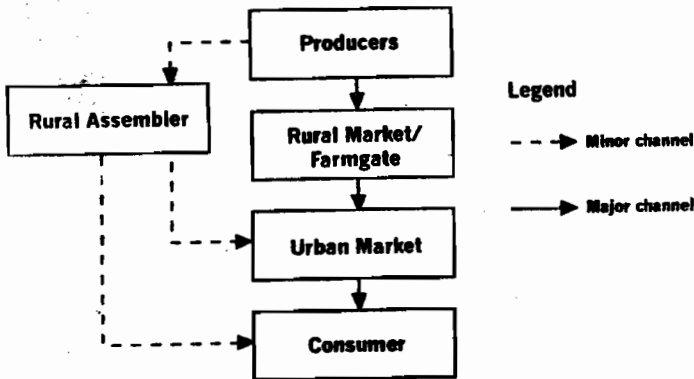


Figure 5. Marketing channels for dessert banana in Owerri.

The producers were the marketers of their produce in the rural markets. Banana is purchased green from the rural markets by retail traders from Owerri urban market. The retailers resell the naturally ripened fruits in fingers and hands in the urban market. This is the major marketing channel. Unlike plantains, there were few rural assemblers (wholesalers) for dessert banana in the rural markets. The rural assemblers were resident in the urban (Owerri) area but move to the

rural markets with vehicles to purchase dessert banana and resell to urban retail traders.

Dessert banana production and marketing is seasonal although the fruit is found throughout the year in the market. Figure 6 shows the seasonal price for dessert banana between rural and urban markets in the study area. Prices are highest from April to September and lowest from October to March. Rural and urban market prices differ by average of four percent during the year.

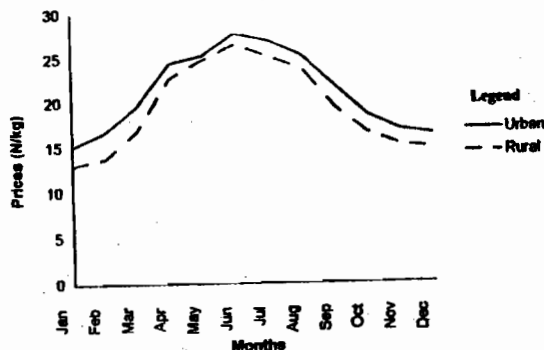


Figure 6. Seasonal prices of banana bunches N/kg in Owerri urban and rural satellite markets.



This is accounted for primarily by charges and to a lesser extent by market levies, taxes and transportation costs as indicated in table 2.

**Table 2: Percentage Difference in variable costs (N) between Rural and Urban markets.**

Variable Cost	Rural Market	Urban Market	Percentage Difference
Transportation	1080	2335	16
Handling Charges	770	1250	62
Stall Fees	375	2185	83
Levies and taxes	360	750	8
<b>Total</b>	<b>2885</b>	<b>7190</b>	<b>49</b>

Table 3 however, shows that even though banana yield and output supply is low in the rainy season (i.e between April to September), producers make 23 percent more income from banana production per hectare annually. During this season price tends to increase as supply declines. The income difference apparently reflects a strong consumer preference and an excess demand for dessert banana during the rainy season.

**Table 3: Gross value (N/Ha/Yr) by season in smallholder dessert banana production.**

Standard	Months of lowest Output (April – Sept.)	Months of Highest output (October-March)	All
Farmgate Price (N/kg)	24.34	14.98	19.66
Retail Market Price	25.21	17.14	21.18
Bunch weight (kg/bunch)	9.00	11.90	10.45
Total yield (kg/Ha/Yr)	14400	19040	16720
Farm gate gross value (N/Ha/yr)	350496.00	285219.20	328715.20
Retail market gross value (N/Ha/Yr)	363024.00	326345.60	352457.60
USD \$ 1.00 =	N80.00		

However, consumers are likely to get less value for their money for dessert banana purchased during the rainy season because bulk capacity is less than in the dry season months of October to March. On the other hand, retail market gross value exceeds farm

gate gross value by 14 percent during the months of highest output and by four percent during the months of lowest output. This indicates that retail marketers are likely to earn more income during the months (October to March) of highest dessert banana output than

during the months (April to September) of lowest output.

## 6.0 Conclusion

dessert banana production is concentrated in compound farms where it is interplanted with plantains and other arable and fruit tree crops. Unlike in the subhumid zone of southeast Nigeria, the status of dessert banana is secondary to plantain. Yield is relatively higher in the peak production period. About 45 percent of the farm households' output is marketed in rural markets. The marketing channel to urban consumers is simple with very few rural assemblers, prices between urban and rural markets are small but seasonal.

The domestic market in Nigeria has the capacity to absorb more output if supply is increased during rainy season. This can be achieved through

improved storage of surpluses from the dry season months. Potential markets for dessert banana that can take advantage of surpluses during the dry season months exist especially in Northern Nigeria. But the ability to explore this market potential is limited by lack of improved packaging and transport systems that can deliver

the product in good condition to the consumer in these markets.

Further research on dessert banana should characterize the major and minor producing areas in terms of production status and income generation relative to plantains and other crops in southeast Nigeria. Market research should focus on spatial studies to delineate the major marketing and consuming areas and how to improve physical infrastructure and post harvest losses in dessert banana.

## REFERENCES

- Baiyeri, K.P. and Ajayi (1996). Comparative Production Status of Plantain and Banana: A survey of the subhumid zone of Nigeria. Paper presented at the International conference Center, Kampala, Uganda.
- Nweke, F.I., J.E. Njoku and G.F. Wilson (1988). Productivity and limitations of Plantain (*Musa* spp cv. ABB) production in compound gardens in southeastern Nigeria: Fruits: 43 (3)
- Obiefuna, J.C. (1982). Growth and Bulking Patterns in Falsehorn Plantain Fruits. Paper presented at the Fifth Annual conference of horticultural Society of Nigeria Ahmadu Bello University, Zaria.
- Ogazi, P.O. (1996) Plantain Production, Processing and Utilisation. Paman Ltd. Okigwe, Nigeria.
- Robinson, J.C. (1996). Bananas and Plantains, Cab International, Oxon, U.K.