# Towards Improving Food Availability among Low Income Households in Ebonyi State.

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## Abstract
The study focused on food availability among low-income households in Ebonyi State. Specifically the study aimed at finding out the extent foods are available to low-income households, factors militating against food availability, and ways of enhancing food availability. The population comprised all the low-income households in Ebonyi State. The sample size consisted of 400 home-makers randomly drawn from the population. Questionnaire was used for data collection. Data were analyzed using means and t-test. The findings revealed among others that high post harvest food losses, poor road network, inadequate supply of electricity etc militate against food availability in the state. Conclusions and recommendations were made based on the findings of the study.

## Introduction
Food security is the ability of every citizen to have regular access to enough food to meet up the daily nutritional requirements for a healthy and productive life (United State of Agency for International Development, (USAID, 1995). A nation is food secured when the majority of the populations have access to food of adequate quality and quantity consistent with decent existence at all time (Idachaba, 2004). The World Bank (2001) identified three pillars underpinning food security, which are food availability, food accessibility and food utilization.

Food availability involves ensuring that sufficient food is available through production or by importation. The food available for human use reflects what is left from available supply after deducing exports, industrial uses, farm input and end of year inventories (Frankel and Gould, 2001). Food availability only does not guarantee food security because food may be physically available but inaccessible to those who need it most (USAID (2002) further observed that just producing enough food does not guarantee that the people who need it are able to get it, if they do not have enough money to buy land, seeds and tools to grow foods or if natural and human made disasters such as drought or war prevent them from getting food. The people are at risk for under nutrition even when there is an adequate food supply.

National Planning Commission (NPC, 2001) observed that the major

problem affecting food availability especially in developing countries is inadequacy of food storage facilities. Losses of cereal such as maize, millets and sorghum are estimated in the range of 35% to 30%, for root crops, from 50% to 70% and approximately 70% for fruits and vegetables. As a result of lack of adequate storage facilities and economic pressure, farmers sell part of their produce soon after harvest at low and un-remunerative prices, resulting in escalating food prices during the off-season periods often two or three times higher than prices immediately following the harvest.

Edo ADP (Edo State Agricultural Development Programme (2002), reported that less than 5% of Nigerians have attained the food security status, 65% semi food secure while over 20% are still in the food insecure zone. NPC (2001) noted that previously food security in Nigeria was addressed almost exclusively in terms of aggregate food availability at the national level. Consequently insufficient attention has been paid to the issue of household food security, especially in the poorer segments of the population (low income households). Households are said to be poor if they live below the level income deemed necessary to provide a decent standard of living (Carbett, 2006). Poverty also means that their income fall below a certain thresholds (i.e. poverty line). This occurs when households live on less than $1 a day (Carbett, 2006).

The sudden interest over food security has to feed. They become disenchanted, frustrated and are exposed to lot of problems at homes and schools. There is a serious concern about rising juvenile delinquency, crime rate, disobedience and other deviant behaviours that are generally associated with anti-social vices among the households. Today families face numerous problems occasioned with poverty, such as hunger, lying, cheating, stealing, drug abuse, armed robbery ritual killings, rapping, sex abuse, acquiring money through fraudulent means and examination malpractices. These problems are attributed to lack of physical and economic access to sufficient, safe and nutrition's food to meet the family dietary needs.

After the creation of Ebonyi State in October I, 1996, occupation of the people changed dramatically from agriculture to white collar jobs. There was massive movement of people from rural to urban areas, leaving only few hands on the farm with local farm implements with many mouths to foods. Some of the factors that compel farmers to move to cities are the need for a better income, the inability of small farmers to compete with larger farmers and the take over of loss of knowledge passed down through generations of farmers families about the most productive agriculture practices far a region affect the variety, quality and quantity of food produced (Microsoft® Encarta®, 2006).

Some efforts have been in place to reduce the impacts of factors affecting food security in low income households. This include operation Feed the Nation

(1976), Green Revolution (1980) and Family Economics Advancement Programme (FEAP) (1997) etc (Federal Republic of Nigeria, 1997). Adedeji (2004) noted that these programmes have failed woefully to solve food crises because their targeting was poor and duplication was excessive. Those who captured the benefits from these programmes were neither the poor nor the rural population but the bureaucrats and absentee farmers. Based on the above problems, it therefore becomes necessary to assess the food availability among low income household in Ebonyi State.

## Purpose of the Study

The main purpose of the study is to assess the food availability of low income households in Ebonyi State. Specifically, the study determined

- The extent to which selected common staple food are available to low income households in Ebonyi State.
- Factors militating against food availability for low income households in Ebonyi State.
- Ways of enhancing food availability in low income households in Ebonyi State.

The findings of the study will provide the households with the knowledge of ways of enhancing food availability especially through the use of home gardening or farming, thereby increasing domestic food production, which will make food available at all times, enhancing income generation and purchasing power of the households

which is a prime determinant of food accessibility thereby arresting hunger. The welfare of majority of the households and their internal security will be guaranteed.

## Research Questions

Three research questions were formulated to guide the study.

- To what extent are selected common staple foods available to low income household in Ebonyi State?
- What are the factors militating against food availability among low-income households in Ebonyi State?
- What are the ways to enhance food availability among low income households in Ebonyi State?

## Hypothesis

The null hypothesis was tested at 0.05 level of significance.

**Ho:** There is no significant difference in the means opinions of urban and rural low income households on the factors militating against food security.

## Methodology

*Design of the study*: The design for the study was survey design. This design was used to access the status of food availability among low income households in Ebonyi State. This survey study would elicit the opinions I of low-income households members.

*Area of the study*: The area of the study was Ebonyi State. It is made up of three senatorial zones as follows: Ebonyi North, Ebonyi South and Ebonyi Central senatorial zones. And Abakaliki L.G.A, Afikpo and Onueke L.G.A are

urban areas while others are rural most low income households dwell most in rural areas. Ebonyi State was chosen because it has the characteristics of low income household identified by national Teachers' Institute (NTI, 2002) and was supported by Egwu (2004) when he noted that more than 90% of Ebonyi State is rural and poor.

*Population of the Study*: The population consisted of all the low-income households in Ebonyi State. Low-income households as used in this study are those households that do not often have enough to meet their basic needs. They live below USD 1 (₦118.00) per day. They live on too little or wrong kind of food, spending as much as 80% of their income on food, leaving little or nothing for housing, health or education (Mbanefor, 1994). The population of the study was therefore made up of 278.034 households (National Population Commission, 1991).

*Sample and Sampling Technique*: The multistage sampling technique was adopted in the selection of the sample for the study. All the three senatorial zones namely: Ebonyi North, Ebonyi South and Ebonyi Central were used for the study. Each of the three senatorial zones has four, four and five LGAs respectively giving a total of 13 LGAs.

Disproportionate stratified sampling techniques was employed in the first stage to select 136, 134 and 130 housing units from Ebonyi North, Ebonyi South and Ebonyi Central senatorial zones. In second stage,

purposive sampling technique was used to select 46 and 90 urban and rural households from Ebonyi North Senatorial zone, 42 and 92 urban and rural households from Ebonyi South senatorial zone 30 and 100 urban and rural households from Ebonyi Central zone giving a total of 400 households. Finally, a homemaker was randomly selected from the 400 households giving a total of 400 hundred homemakers used for the study.

*Instrument for data Collection*: Questionnaire was developed and used to collect data for the study. The questionnaire was validated by five experts. To determine the reliability it was pilot tested on 20 respondents that did not form part of the sample. Cronbach's Alpha Reliability index was used to determine the internal consistency of the instrument on the data obtained. The analyzed data yield a coefficient of 0.78, which showed that the instrument was reliable.

**Data Collection Techniques**
Four hundred copies of questionnaire were distributed to the respondents by hand though the help of six trained research assistants. Three hundred and ninety three (393) copies were completed correctly and return. The questionnaire served as interview schedule for those respondents who were illiterate. The research assistants explained the questionnaire items to the respondents and recorded their responses.

Table 1: Responses on selected common staple foods available

| s/n | Common staple foods | $\bar{x}$ | SD | Decision |
|---|---|---|---|---|
| 1 | Beef meat (Capsium Frulescens) | 3.49 | 1.27 | Sometime available |
| 2 | Chicken meat (Rasmarinus) | 3.81 | 1.09 | Always available |
| 3 | Mutton meat (Allium hookeri) | 2.51 | 1.32 | Never available |
| 4 | Goat meat (Raphanus sativuslinn) | 3.90 | 1.11 | Available |
| 5 | Fresh fish (Ephedra siruca stpl) | 3.99 | 1.13 | Always available |
| 6 | Dried fish | 4.31 | .98 | Always available |
| 7 | Smoked fish (Eletharia cardomomum) | 3.60 | 1.32 | Always available |
| 8 | Egg (Solanum melongena) | 3.98 | 1.18 | Always available |
| 9 | Turkey (Meleagoris) | 2.82 | 1.26 | Never available |
| 10 | Snails (Archachatina spp) | 2.87 | 1.19 | Never available |
| 11 | Pork meat (Foeniculum vulgare) | 2.82 | 1.22 | Never available |
| 12 | Rice ( Oryza sativa) | 4.64 | .781 | Always available |
| 13 | Maize (Zea mays) | 4.07 | .96 | Always available |
| 14 | Beans (Phaseolus qureus) | 4.39 | .88 | Always available |
| 15 | Soya beans (Gcycine max) | 3.37 | 1.19 | Sometime available |
| 16 | Cow peas (Akidi) (Vigna ungwculata tami) | 3.00 | 1.29 | Sometime available |
| 17 | Bambaranuts (okpa) (Vigna subterranean) | 3.69 | 1.22 | Always available |
| 18 | Sweet potatoes (Ipomoea batatas) | 3.67 | 1.15 | Sometime available |
| 19 | Irish potatoes (Salanum tuberosum) | 3.10 | 1.39 | Always available |
| 20 | Yam (Dischoria spp) | 4.57 | .92 | Always available |
| 21 | Cassava (Marvhot esculents) | 4.53 | .04 | Always available |
| 22 | Bread fruit (Ukwa) (Altocarpus attiles) | 3.46 | 1.19 | Sometime available |
| 23 | Groundnut (Arachis hypogaca) | 4.56 | 2.74 | Always available |
| 24 | Millet (Panicu decompositum) | 2.94 | 2.52 | Never available |
| 25 | Melon (Cucumis melo) (musk melon) | 3.90 | 1.23 | Always available |
| 26 | Sorghum (Sorghum bicolar) | 2.50 | 1.37 | Never available |
| 27 | Paw-paw (Carice payaya) | 4.13 | .95 | Always available |
| 28 | Pineapple (Ananas comosus) | 3.97 | .991 | Always available |
| 29 | Mangoes (Mangipera indical) | 3.94 | .99 | Always available |
| 30 | Banana (Musa sp) | 4.36 | .88 | Always available |
| 31 | Plantain (Musa paradisiacal) | 4.04 | 1.02 | Always available |
| 32 | Onions (Aurum cepa) | 4.68 | .671 | Always available |
| 33 | Tomatoes (esculentum) | 4.64 | 3.71 | Always available |
| 34 | Okra (Abelmosetins esculentus) | 3.89 | 1.06 | Always available |
| 35 | Oranges/lemon/lime (Citrus spp) | 3.94 | 1.08 | Always available |
| 36 | Carrots (Danscns carota L) | 3.28 | 1.18 | Sometime available |

| 37 | Cucumber (Cucumus satives) | 2.91 | 1.38 | Never available |
|---|---|---|---|---|
| 38 | Ugu (Telfaria) | 4.36 | 1.12 | Always available |
| 39 | Bitter leaves (Vemonia amygdalina) | 4.34 | .94 | Always available |
| 40 | Uturukpa/ora (oha) | 4.00 | 1.15 | Always available |
| 41 | Oil palm/palm produce (Elaeis gumeensis) | 4.65 | .012 | Always available |
| 42 | Coconunt oil (Cocosnucifera) | 2.94 | 1.51 | Never available |
| 43 | Soybean oil (Soja wspida) | 2.46 | 1.40 | Never available |
| 44 | Sunflower oil (Halianthus annus) | 2.07 | 1.35 | Never available |
| 45 | Cotton seed oil (Gossypium herbaceous) | 2.09 | 1.45 | Never available |
| 46 | Cow milk (Citrus avranfilfolia) | 3.43 | 1.53 | Always available |
| 47 | Goat milk (Pelargonium gravedens asperium Geramium | 2.05 | 1.39 | Never available |
| 48 | Butter | 3.55 | 1.31 | Always available |
| 49 | Bread/Biscuit (Triticum sativum) | 4.21 | 1.01 | Always available |
| 50 | Cake/cookies (Heucherella) | 3.66 | 1.21 | Always available |
| 51 | Sugarcane (Andopetalum biglandulosum) | 3.58 | 1.08 | Sometime available |
| 52 | Coffe (Coffea Arabica) | 3.19 | 1.50 | Always available |
| 53 | Lipton (Camellia sinensis) | 3.80 | 1.28 | Always available |
| 54 | Bournvita (Prosopiscineraria) | 4.12 | 1.09 | Always available |
| 55 | Milo (Hibiscus populneus | 3.94 | 1.29 | Always available |
| 56. | Ovaltine (Amorphoptallus) | 3.68 | 1.31 | Always available |

Table 1 shows that chicken meat, goat meat, fresh fish, dried fish, smoked fish egg, rice, maize, beans, Barbara nuts (okpa) irish potatoes, yam, cassava, groundnut, melon, paw-paw, pineapples, mangoes, banana, plantain, onions, tomatoes, okro, orange/lemon/lime, ugu, bitter leave, uturupkpa, palm oil, cow milk butter, bread/biscuit, cake/cookies, coffee, lipton, bournvita, milo, ovaltine (66%) are always available in Ebonyi State.

Beef meat, cow peas sweet potatoes, bread fruit (ukwa) millet, carrots, cucumber, sugar cane (13%) are sometimes available while mutton meat, pork meat, sorghum, coconut oil, soybean oil, sunflower oil, cotton seed oil, goat milk, turkey, snail, millet and cucumber (21%) are never available to low income households.

Table 2: Responses on factors militating against food availability

| s/n | Factors militating against food availability | $\bar{x}$ | SD | Decision |
|---|---|---|---|---|
| 1 | Low level of nutrition Education | 3.86 | 1.24 | Agree |
| 2 | Poor health facilities | 3.32 | 1.33 | Agree |
| 3 | Cultural Factors and taboos that reduce access to food | 3.36 | 1.28 | Agree |
| 4 | Religious belief | 2.97 | 1.40 | Disagree |
| 5 | Poor supply of electricity | 3.36 | 1.40 | Agree |
| 6 | Unavailability of research findings to the public | 3.50 | 1.28 | Agree |
| 7 | Lack of information and communication technology | 3.80 | 1.27 | Agree |
| 8 | Changes in climate that hinders crop yields | 3.93 | 1.23 | Agree |
| 9 | Continuing inter-tribal wars in the state. | 3.56 | 1.28 | Agree |
| 10 | Degradation of Natural Resources | 3.80 | 1.29 | Agree |

Table 2 reveals that the respondents agreed to all the items except item 4 that is religious belief as factors militating against food availability. It means that all other items in table 2 with a mean of 3.50 except item 4 are the factors militating against food availability.

Table 3: Responses on ways of enhancing food availability

| s/n | Ways of enhancing food availability | $\bar{x}$ | SD | Decision |
|---|---|---|---|---|
| 1 | Practical farming/home gardening | 4.24 | 1.15 | Agree |
| 2 | Provision of good road network in rural areas | 4.31 | 1.12 | Agree |
| 3 | Provision of electricity and water | 4.31 | .98 | Agree |
| 4 | Reducing post harvest food losses through improved storage | 4.18 | 1.04 | Agree |
| 5 | Massive investment in food industries | 4.21 | 1.00 | Agree |
| 6 | Improve the scope of Research and development | 4.17 | 1.16 | Agree |
| 7 | Food security education should be included in the Home Economics Curriculum | 4.30 | .93 | Agree |
| 8 | Entrepreneurship education should be emphasized | 3.78 | 1.28 | Agree |
| 9 | Engagement in regular enlightenment campaign on the importance of food security to individuals, families and the whole nation | 4.30 | .90 | Agree |

Table 3 reveals that the respondents agreed that all the items are ways of enhancing food availability within low income households in Ebonyi State. This means that these items are ways of enhancing food security in Ebonyi State.

Table 4: t-test of urban and rural low-in-come households on factors militating against food security.

| s/n | Factor militating against food security | $\bar{x}_1$ | $SD_1$ | $\bar{x}_2$ | $SD_2$ | t-cal | Remark |
|-----|------------------------------------------|------|------|------|------|-------|--------|
| 1. | Inadequate food production and low income generation | 4.43 | 1.20 | 4.24 | 1.17 | .86 | NS |
| 2. | Cultural factors and taboos that reduce access to food | 3.26 | 1.29 | 3.43 | 1.27 | -1.27 | NS |
| 3. | Religious belief | 3.20 | 1.40 | 2.79 | 1.37 | 2.85 | S |
| 4. | Poor supply of electricity | 3.57 | 1.39 | 3.19 | 1.40 | 1.70 | NS |
| 5. | Unavailability of research findings to the public | 3.59 | 1.27 | 3.42 | 1.29 | 1.28 | NS |
| 6. | Lack of information and communication technology | 3.79 | 1.39 | 3.81 | 1.16 | -0.15 | NS |
| 7. | Changes in climate that hinders crop yields | 3.82 | 1.25 | 4.01 | 1.21 | -1.59 | NS |
| 8. | Continuing inter-tribal wars in the state | 3.50 | 1.34 | 3.61 | 1.24 | -0.82 | NS |
| 9. | Degradation of Natural Resources | 3.82 | 1.29 | 3.78 | 1.30 | 0.27 | NS |

$\bar{x}_1$ = mean for urban respondents, $\bar{x}_2$ = mean for rural respondents, $SD_1$ = standard deviation for urban respondents, $SD_2$ = Standard deviation for rural respondents, NS = Not significant, S = significant, P = 0.05, Df = 391, t-critical = 1.96

The null hypothesis is accepted for all the items in Table 4 except in item 3 that is religious belief. This means that the cal t is less than table t. it means that there is no significant difference in the means score of urban and rural low income households on the factors militating against food availability in Ebonyi State.

**Discussion of the finding**
Food availability means ensuring that sufficient food is available through production or by importation (World Food Summit, 1996). Nature has blessed Nigeria in general and Ebonyi State in particular with fertile soil for the growth and production of assorted foods roots and tuber crops, grains, oil seeds, fruits and vegetables to satisfy the nutrient needs of the people. The listed food crops from the major crops that should normally be available to all consumers. The national Essential Foods list should consequently, contain items of food that ought to be readily, available, within the country by production or by importation, to supplement those grown in the country and made available within the reach of all Nigerians (Ango Abdullahi, 2001). It is also essential that our essential foods should be distributed to all corners of the country regardless of the time of the year. This requires not just enough food to go round but that people have ready access to food. The availability of food is thus a necessary condition to security even through that people can starve even when enough food is available.

The problem often is the poor distribution and lack of purchasing power (Ozo, 2006).

Food security can be either long term or short term and is determined by a combination of three sets of factors: food availability, accessibility and utilization (USAID, 2002). USAID further observed that agriculturalists mighty claim that food production is the key determinant of whether a country, region or household is food secure in a given year. Yet food availability at national or local level is determined not only by domestic production, but also by food imports and stocks, prices, food distribution through both private sector and public channels. Even at household level, food availability says nothing about who has access to that food (Maxwell & Berger, 1992).

Infrastructure plays a prominent role in agricultural development and food availability. Physical infrastructure such as road network, electricity, irrigation, sanitation and communication are vital aspects of the economy that have direct impart on, and can affect improvement of food availability as seen in Table3 items 3 and 4.

## Conclusion
On the basis of the findings, the following conclusions were made: Mutton meat, turkey, snails, pork meat, millet, sorghum, goat milk, cucumber, coconut oil, cotton seed oil, sunflower oil are never available, and may not be utilized among low income households in Ebonyi State. High post harvest food losses, poor road network, inadequate supply of electricity etc militate against food availability in the state.

## Recommendations
Based on the findings of this study the following recommendations were made:
- Households should endevour to produce some protein foods locally to increase their protein intake e.g. fish, snail etc through practical farming.
- Households food security can be sustained by exposing children at very tender ages to practical faring and gardening.
- Entrepreneurship education should be emphasized
- Government should provide good road network, electricity, water, reduce post harvest losses through improved storage facilities in rural areas.

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