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Strategies for Enhancing the Use of Soya Beans among Households in Edo State, Nigeria

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Abstract:

This study investigated the strategies for enhancing the use of soya beans among households in Edo State, Nigeria. Survey research method was adopted for the study. The population comprised of all home makers in Edo state. The sample consisted of 150 home makers randomly drawn from the population. A self-constructed questionnaire was used for data collection. Data were analyzed using mean and standard deviation. Findings revealed the following strategies: households should prepare varieties of dishes using soya beans, increase the frequency of the use of soya beans in the preparation of meals, combine it with foods that are preferred by family members, that mothers should educate their family members to accept soya beans, soya beans should be supplemented at a good ratio with other flour products, families should cultivate soya beans in addition to other food crops, home makers should devise easier method of preparation of soya beans. For what government should do; government should provide good road network, massive investment into soya beans production, adequate funding of agricultural sector, close supervision of rural agricultural extension workers and adequate programme to reach the rural dwellers in the state. Based on these findings, it was therefore recommended that government should employ more extension workers especially those in-Home economics and Agriculture to reach rural households through nutrition education.

Keywords: Households, soya beans, malnutrition, nutrition education

1. Introduction

Soybeans are a variety of edible beans known as glycermie max. This bean is a native to East Asia, but is now widely cultivated and consumed across the globe. The key benefits of soya are its high protein content, vitamins and minerals. Soya bean is a cheap source of quality protein that is superior to protein from all other plant foods, it has good balance of the essential amino acids. Its amino-acids is fairly close to that of cow milk (Belewu and Belewu, 2007). The fat from soya bean is unsaturated type, hence is good for heart disease patients (Adegoke, Gbadomosi, Uzo, Falade, Itiola and Skura, 2002). It also has a good amount of calories and contains the eight essential amino acids including the good fat called omega 3 (Food and Agriculture Organisation, 1999). Research has it that one kilogram of soy bean contains as much protein as 2kg of boneless meat or 45 cups of cow's milk or 5 dozen of eggs, it is said to contain about 40% protein, 30% carbohydrates, 20% oil and 10% mineral (Osho and Dashell, 1998). Yet it is by far cheaper than meat, eggs or fish. This has made it one of the world's most valuable legumes with tremendous potential for alleviating protein-based malnutrition.

Malnutrition contributes to the death of mothers and children and it is very severe in infants and children due to undernourished diets. Every single day, Nigeria loses about 2,300 under five-year olds and 145 women of child bearing age, this makes the country the second largest contributor to the under-five and maternal mortality rate in the World (UNICEF, 2013). The 2016 maternal mortality rate is still high at 814 deaths/100,000 live births (CIA World fact books, 2016). Malnutrition predisposes one to chronic diseases such as diabetes, high blood pressure and stroke in later life. Likewise, delayed motor development, impaired cognition function, poor school performance and low intelligence are all attributed to malnutrition in the first hundred days of a child's life (Peleteir, 1994; Mortorelli 1996; AC/SCN, 2000). It is said to be medicinal in that it helps in building immune system, serve against high blood pressure, stroke, ulcer, menopause, diabetes and cancer (World, Health, Foods, 2004). In addition, studies have shown that soya bean tend to lower cholesterol levels and due to the phytoestrogen content of soya, many women decide to include it in their diet as they enter the menopause, for during the menopause, the body's natural production of oestrogen may stop and symptoms may ensue. Asphyto estrogen act as a weak oestrogen, it may help to relieve symptoms by boosting levels slightly (Lewin, 2015).

These nutritive values have made soya bean to be a good source of protein for infants and other members of the family yet some years ago it was observed that the amount of soya beans consumed by families in Nigeria was very low reasons being that it was difficult to cook, (Brownson, 2009). The situation is still the same for most families in Edo state; most

families in the state do not include soya beans more frequently on their meal preparation, despite its rich protein and other nutrient content, and the rural populations do not even have access to soya beans in their locality. Soyabean has been used as good source of fortification to many traditional foods sources such as corn and wheat, Soya fortification was introduced into Nigerian diet for the purpose of increasing its usage (Osho, 1993). Still majority of the households are unable to buy the product because of its exorbitant prices.

Soya bean is very useful in the preparation of bread, biscuits, cake, soups, pastries, snacks, milk, yoghurt and oil. Approximately half of the carbohydrate in soya bean is crude fibre (Soya bean utilization Alternatives, SUA 1988). Fibre is very important to man Burkitt (1982), reported that the large amount of fibre consumed by African natives protect them from suffering from many diseases common to Westerners, diseases such as colon cancer, hemorrhoids and varicose veins of the legs. The oil extract is very useful in the preparation of margarine and paint. The residue from the oil is valuable as fertilizer or as feed for livestock.

Improving family menu has become necessary since an increasing number of households in Nigeria have become food insecure as a result of the present economy recession. The situation is raising inflation and escalating food prices also decreasing the purchasing power of the populace thereby increasing the consumption of poor diets. Adequate food and proper nutrition are basic requirements for economic development, investment in nutrition is an investment in human capital development therefore; nutritional improvement of family meals is of typical priority for improving nutritional status of the populace. Homemaker's food choices and nutritional practices determine to a great extent the nutritional adequacy of family members. In this regard, soya beans which was hitherto, underutilized by homemakers if adequately utilized in the present economy recession may help to reduce malnutrition among the family members.

In Edo State, a lot of couples have large family sizes. In the face of the present high cost of living, it is not easy to maintain such large families most especially if the family income is low. In most homes, only the adults and male members of the family consume larger share of meat, fish and other high protein foods. The responsibility for improving the food situation must be one of the responsibilities of the government in food policy and planning (Nnayelugo 1992). The need to identify strategies for enhancing the use of soya bean is of paramount importance at his time hence this study.

2. Purpose of the Study

The purpose of this study was to investigate strategies for enhancing the use of soy beans among households in Edo state. Specifically, the purpose of this study was to find out

- What households should do to enhance the use of soya beans.
- What the government should do to enhance the use of soya beans.

3. Research Questions

The research questions that were investigated in this study include

- What should households do to enhance the use of soya beans?
- What should the government do to enhance the use of soya beans

4. Methodology

4.1. Research Design

The research design adopted for this study was a descriptive survey.

4.2. Population of the Study

The population of this study consist of all home makers who plans and prepare meals for their families in Edo state

4.3. Sample of the Study

Multi stage sampling procedure was used for this study. Edo state has three senatorial districts comprising 18 local government areas. Edo north has 6 local governments areas, Edo central has 5 local government areas and Edo south with 7 local government. From each senatorial district one local government each was randomly selected yielding a total of three local government areas that were utilized for the study. Using purposive sampling technique five communities per local government were randomly selected and from each community 10 households were randomly selected yielding total of 150 households. A home maker per household was randomly selected. The total numbers of respondents were 150.

4.4. Instrument for Data Collection

The instrument used for data collection was the interviewer questionnaire. The instrument has two sections. Section A elicited responses from the homemakers on what the homemakers should do to enhance the use of soya beans and it had 10 questions. While section B is questions on what the government should do to enhance the use of soya beans among households, it had 11 questions also. The instrument was a 4-point Likert-type with strongly agree 4, Agree 3, Disagree 2 and Strongly disagree 1 respectively. The instrument was subjected to face validation among home economics experts. The

instrument was trial-tested with 20 home makers in one of the local government area who are not among the sample utilized in the study. The result of the test was used for the reliability through Cronbach alpha, and it yielded an index of 0.78.

4.5. Method of Data Collection

The copies of the questionnaire were administered to the respondents, explanation was made where necessary. At the end of the exercise the copies of the questionnaire were retrieved by the researcher and the assistants.

4.6. Data Collection and Analysis

The data collected were analyzed using mean and standard deviation.

Research Question 1; what should households do to enhance the use of soya beans?

	What the home makers should do	\bar{X}	SD	Decision
1.	Home makers should prepare varieties of dishes using soy beans	3.11	0.71	Agree
2.	Increase the frequency in the use of soy beans	3.04	0.64	Agree
3.	Prepare family meals using varieties of methods of preparing soy beans	2.84	0.51	Agree
4.	Preserve in large quantities and store for easy access	2.41	0.66	Disagree
5.	Combine it with foods that are liked by family members	3.44	0.84	Agree
6.	Mothers should educate their family members to accept soy beans	2.76	0.94	Agree
7.	It should be supplemented at a ratio gradually with other flour	3.74	0.66	Agree
8.	Parents should cultivate soy beans to encourage the use of soybeans	2.74	0.91	Agree
9.	Parents should devise means for easy preparation of soy beans	3.45	0.78	Agree
10.	Parents should plan, prepare their soy meals properly	2.77	0.92	Agree
		3.03	0.76	

Table 1: Respondents mean responses on what households should do to enhance the use of soy beans

In the above table, the respondents apart from one item, No. 4, prepare in large quantity and store for easy access, agreed that these items should be done by the households to enhance the use of soya beans. The cluster mean is 3.03.

Research Question 2: What the government should do to enhance the use of soya beans.

	What the government should do	\bar{X}	SD	Decision
1.	Massive investment into soy beans to help farmers produce more soy beans	3.60	0.82	Agree
2.	Provision of good road network for transporting finished soy bean	3.20	0.74	Agree
3.	Reducing post harvest food losses through improved storage	2.96	0.87	Agree
4.	Adequate funding of Agricultural sector	2.84	0.91	Agree
5.	Market development aid trade in the area of soy beans sales	3.55	0.66	Agree
6.	Close supervision of extension workers, to propagate the use of soy beans	2.88	0.70	Agree
7.	Provision of fertilizers to farmers to produce soy beans	3.60	0.82	Agree
8.	Provision of electricity and water to help irrigation	3.60	0.74	Agree
9.	Provision of seminars/workshops to farmers to produce more soy beans	3.40	0.91	Agree
10.	Adequate programmes to reach the rural dwellers, to give nutrition education	2.94	0.87	Agree
11.	Elimination of all sensitive traditional belief that discriminate against the use of food products	2.6	0.80	Agree
		2.96	0.80	

Table 2: Respondents mean responses on what the government should do to enhance the use of soy beans

Table above has shown that the whole items on what the government should do were agreed by the respondents. This table has a cluster mean of 2.96.

5. Discussion

The study revealed the strategies to be adopted by households to enhance the use of soy beans except for item 4. It means that the item is not what households should do to enhance the use of soya beans in Edo State and this is not far-fetched from the fact that home makers are having problems with storage of food products, this may be as a result of epileptic power supply of most parts of the state. This finding is supported by Caial and Popoola (2010) who explained that most families have limited access to modern life and living which includes the use of labour saving devices and household facilities that use electricity. The women are generally known to be suffering from general deprivation, including information on current methods of preservation.

Table 2 shows the mean above 2.50 for all the items. The result indicates that, the respondents accepted all the items as what the government should do to enhance the use of soya beans. This is supported by Administrative Committee on

nutrition (2003) finding that household's foods security depends on access to land and other agricultural resources, which facilitates domestic production. In addition, nutrition security depends on the household's access to food rather than simply availability of food, so in the entire state, good road network, adequate funding of agricultural programmes, massive investment into soya beans production, provision of fertilizers and close supervision extension workers are very important means of enhancing soya beans utilization. Ferudu (2004) finding agreed that women economic vulnerability is at the centre of the powerlessness and improvement of their economic status has a positive impact on other dimensions of empowerment. Neolen (2004) stated that when women gain economic power, the health nutrition and education of other members of the household, especially children will improve at the same time.

6. Conclusion

It is a known fact that most households do not include soya beans in their meals. Malnutrition can be dangerous in the life of the mother, unborn baby and the growing child, so enhancing the use of soya beans is a means of improving the nutritive content of meals of the neglected population. In this study, findings have shown what the household should do and what the government should also do. These include prepare varieties of dishes with soya beans, combine with other foods liked by family members, supplemented with other flour in an agreed ratio, cultivate soya beans and government should also encourage rural households by investing into soya bean to help farmers to produce much soya beans, reduce post harvest by improving storage and improve road network to mention but a few. Complete adherence to these would improve the use of soya beans in Edo State.

7. Recommendation

Based on the findings of the study, the following recommendations are made to enhance the use of soya beans among households.

- Government should employ more extension workers especially those in Agriculture and Home economics, so as to be able to reach households in the rural areas with thorough nutrition education.
- Health professionals in government hospitals should intensify health talk and nutrition education among patients to remind them of the use of soya beans.
- Parents/households should be encouraged to cultivate soya beans among their food crops in their farms by Agricultural extension workers.
- Government should provide good road network, electricity and water to assist households with storage facilities.

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