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Market Trends and Business opportunities for delivering improved nutrition

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Research International Nigeria

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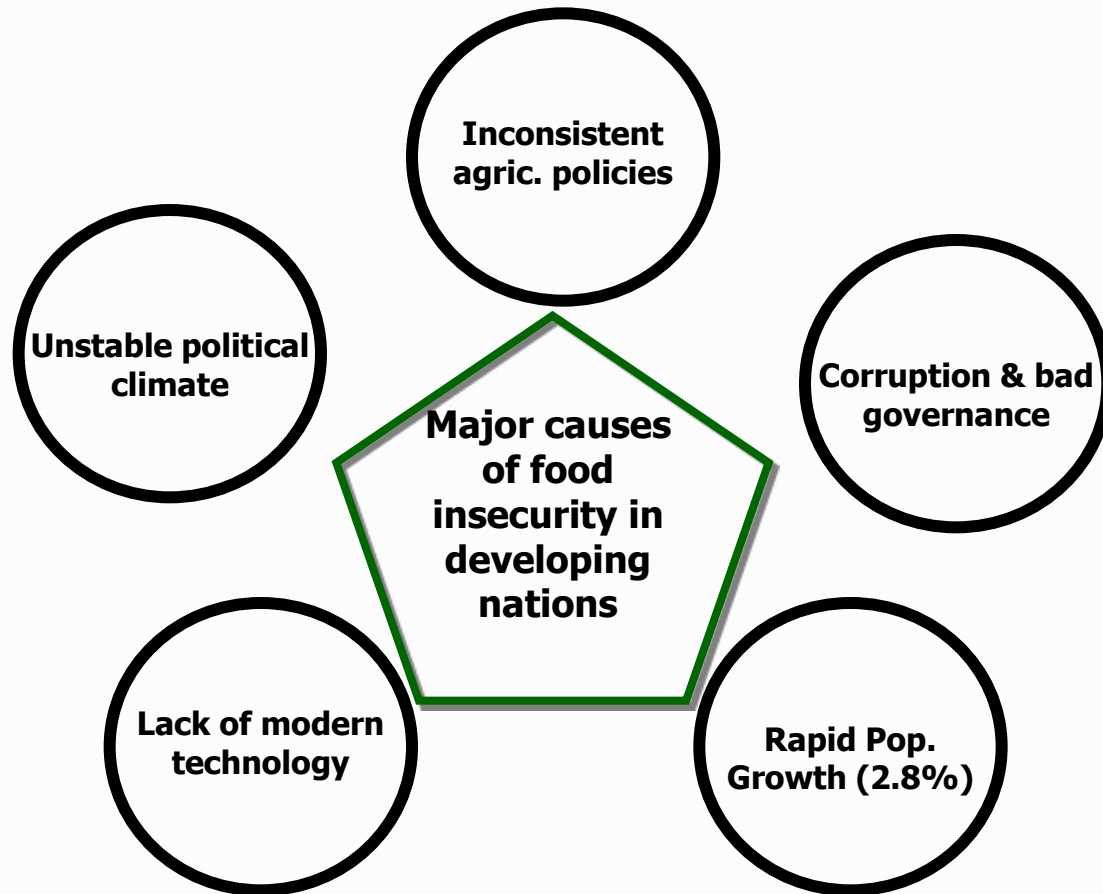
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- Overview of food security issues in Nigeria.
- Evolution of soy bean in the Nigerian food map.
- Major developments in the production & utilization of soy in Nigeria.
- Business opportunity areas
- Support needs of the industry

Food security, pre-condition for nutrition & health

- Food security exists when all people, at all times, have access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.
- Without food security, nutrition and health security cannot be achieved. Health, food security and nutrition are therefore, inter-related
- Three basic ingredients for food security:
 - **Availability** - Sufficient quantities of appropriate, necessary types of food
 - **Access** - Individuals have adequate incomes or other resources to purchase or barter to obtain levels of appropriate foods needed to maintain consumption of an adequate diet and nutritional level.
 - **Utilization** -existence of proper food processing and storage practices, adequate knowledge and application of nutrition and child care, and adequate health and sanitation services
- FAO recognizes that healthy, well-nourished population is the outcome of successful social and economic development

Food insecurity in developing nations



- **Nigeria today cannot meet the food requirements of her rapidly increasing population.**
- **A great percentage of Nigerians cannot access adequate food protein in their diets. [FMAWRRD, 1998].**
- **This is particularly worrisome in the rural areas, where over 65% of Nigerians live.**

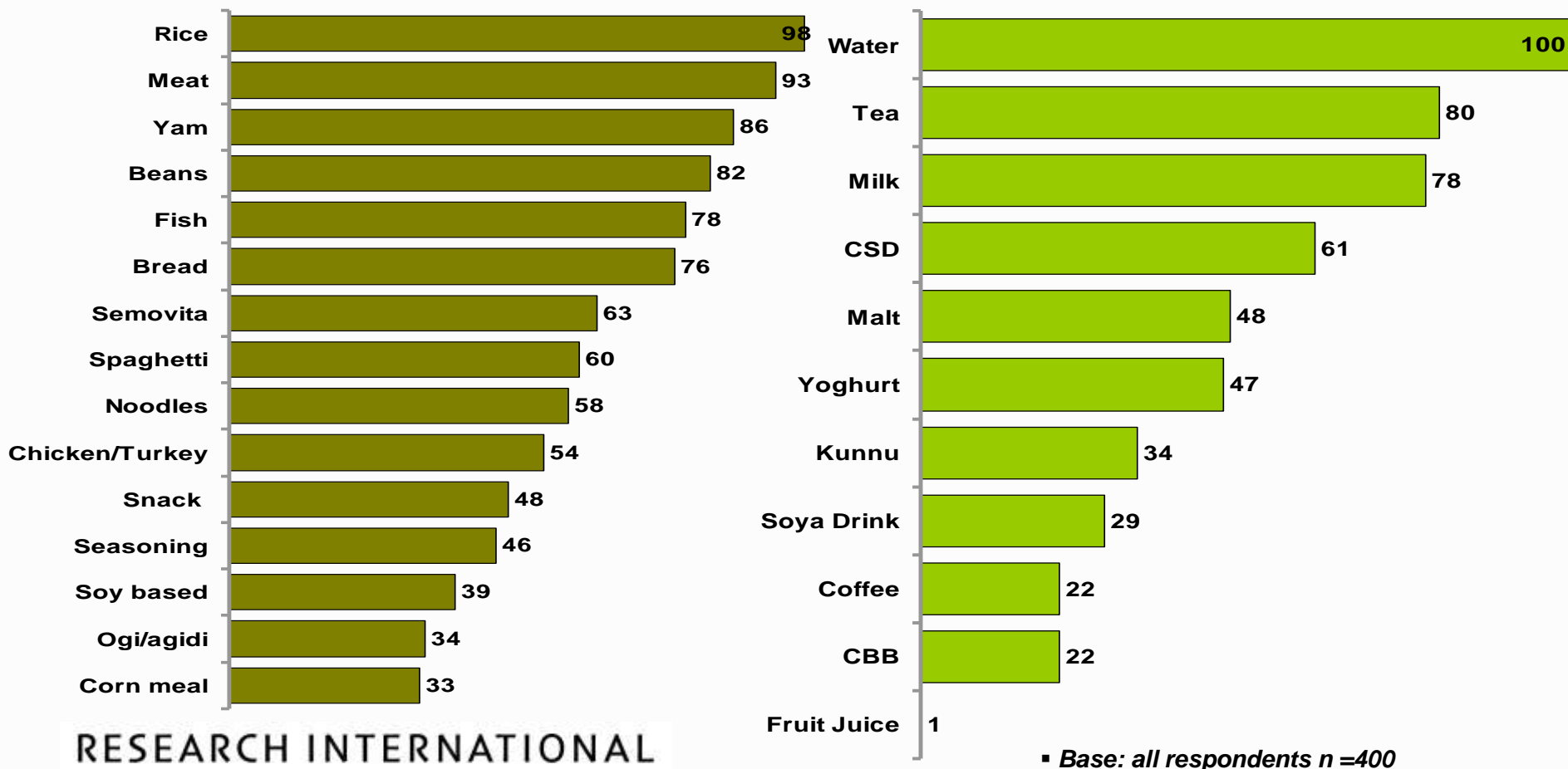
. . . Protein-deficient diets, a food security issue in Nigerian

- Reports from health authorities indicate that **inadequate protein** in diets is the greatest nutritional problem currently facing the country.
- Sadly, conventional sources of protein are expensive and very much beyond the reach of the average Nigerian.
- Just about only the middle to upper socio-economic segments of the society, consisting about 30% of the population can perhaps afford enough protein in their diets.

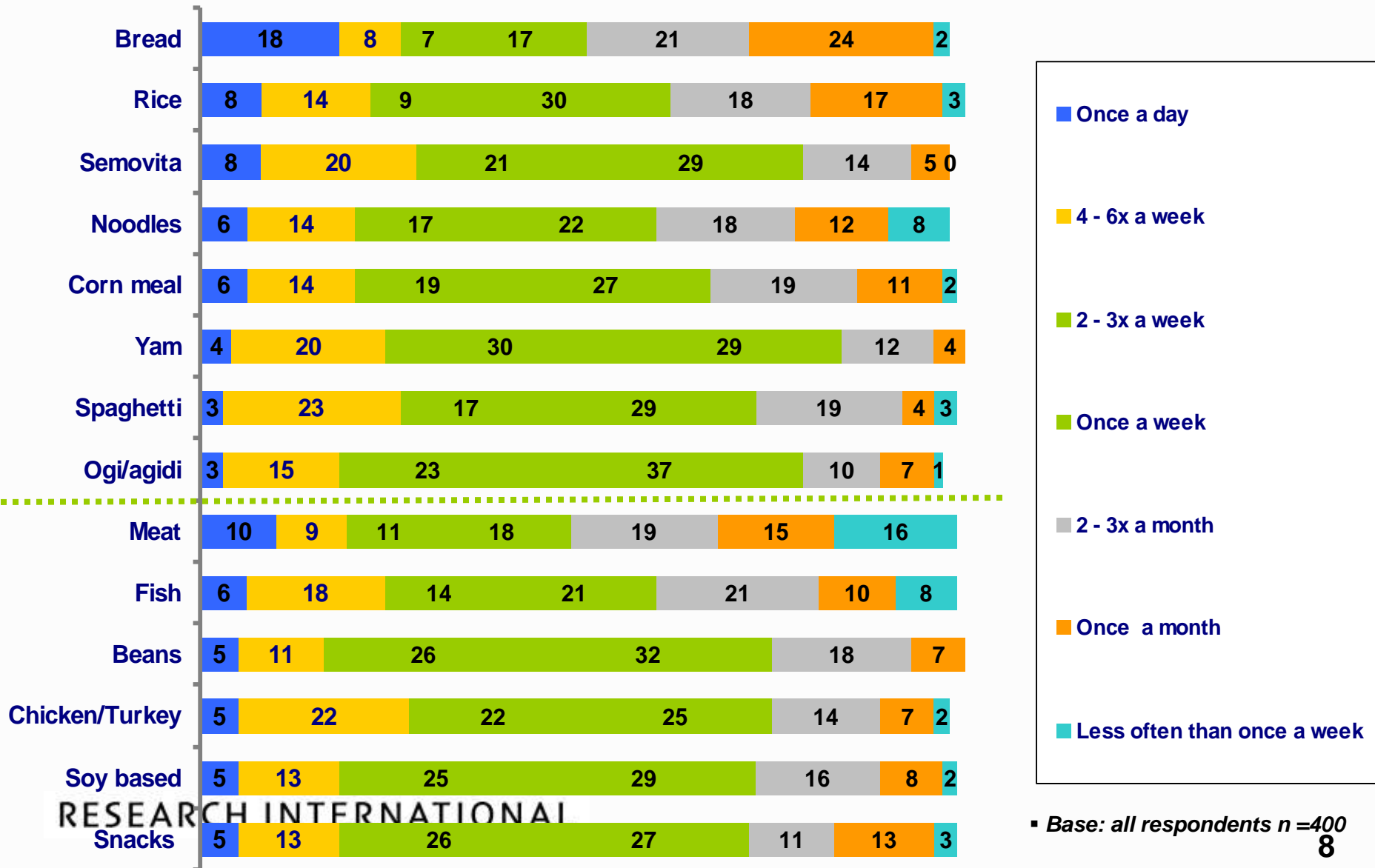


Types of food and drinks taken nowadays

- Below is the food & drinks repertoire of consumers. Result show high consumption of food item rich in carbohydrate Consumption of soy based food is low.
- Aside water, result show high consumption of processed drink like Tea, milk & CSD. Lower proportion of people are observed to consume Soy.



• High daily consumption of bread, and other carbohydrate food items. Same for meat



Evolution of soy in the Nigerian food map

- In apparent response to this seeming food insecurity, the IITA, Ibadan, Nigeria, embarked on research projects to encourage the use of nutritious, less expensive soybeans in everyday food
- Through this effort, when soybeans protein extract is mixed with any food product [maize, sorghum, rice, wheat or any other cereals], the protein content of the food was enhanced
- Until this IITA initiative just two decades ago, not much was known about Soybean

...so why soya beans?

- Soybean is about 40% protein [more protein-rich than any of the common vegetables or animal food source found in Africa].
- It also contains about 20% oil which is 85% unsaturated and cholesterol-free
- Nutritionally, it carries twice the protein of meat or poultry and contain all eight essential amino acids needed for childhood development
- Best of all, it is affordable. In Nigerian markets, soybeans cost about one-fifth as much as other forms of protein, including dairy and fish
- Soybean is a near-perfect crop for a country like Nigeria, with a large population size , much of that facing food insecurity

...Soybean, a nutritionally rich food product

- ◆A recent research carried out at Nigeria's University of Ibadan shows that children who grow up in soybean-producing communities are generally healthier and suffer less malnutrition than the average Nigerian child.



VS.



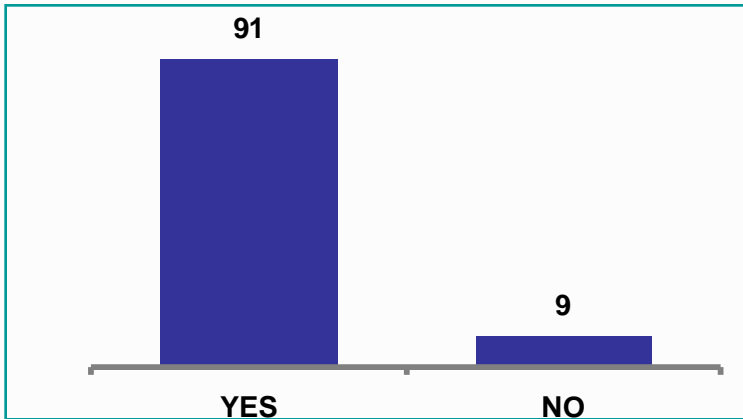
- In fact, the Nigerian government realizing the importance of Soya beans to the economy, recently declared its production and utilization a national priority

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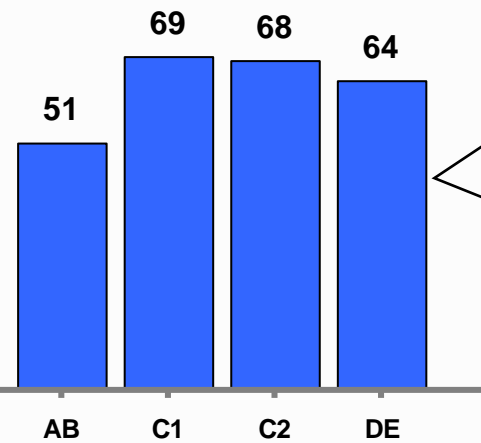
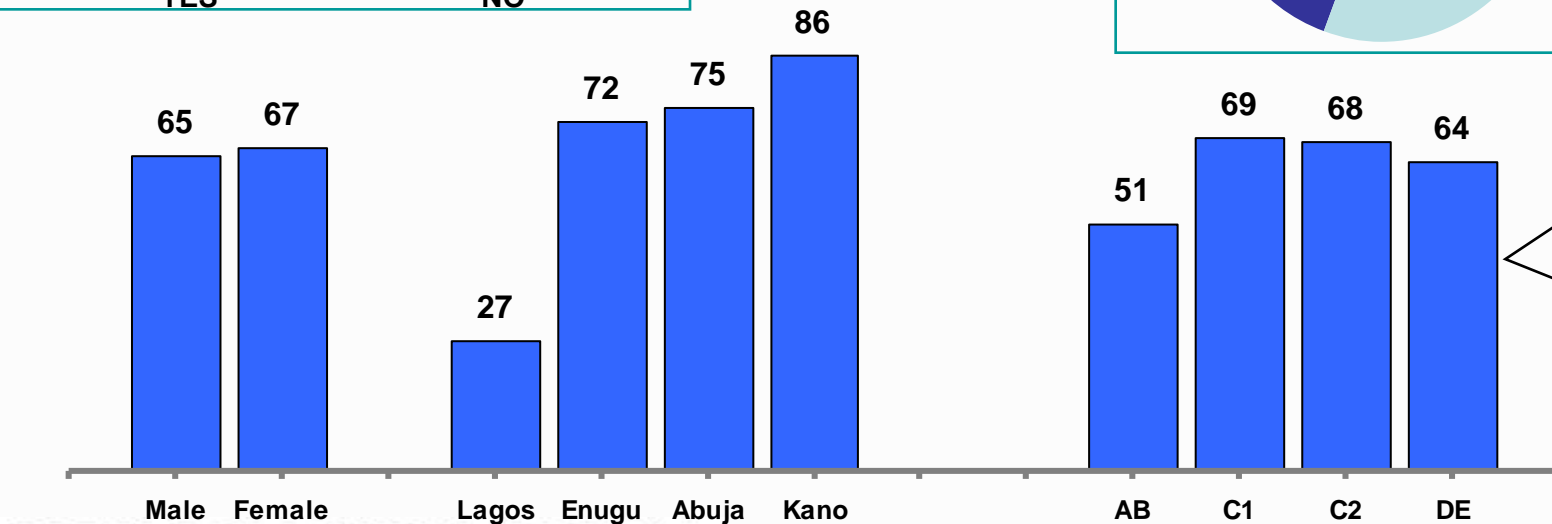
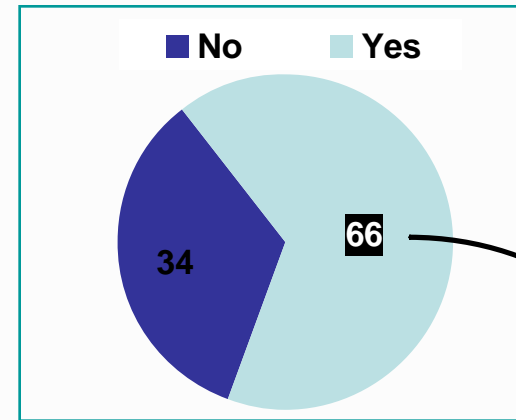
Awareness & Penetration of Soy

- Result showed high awareness and consumption of Soy. Consumption is observed to be higher amongst middle & lower income bracket (C1C2DE) than the upper SES.
- Consumption is also observed to be higher in the northern regions (especially Kano) than the Southern regions

Aware of Soy? (n = 400)



Consume Soy? (n = 365)



Form usually consumed

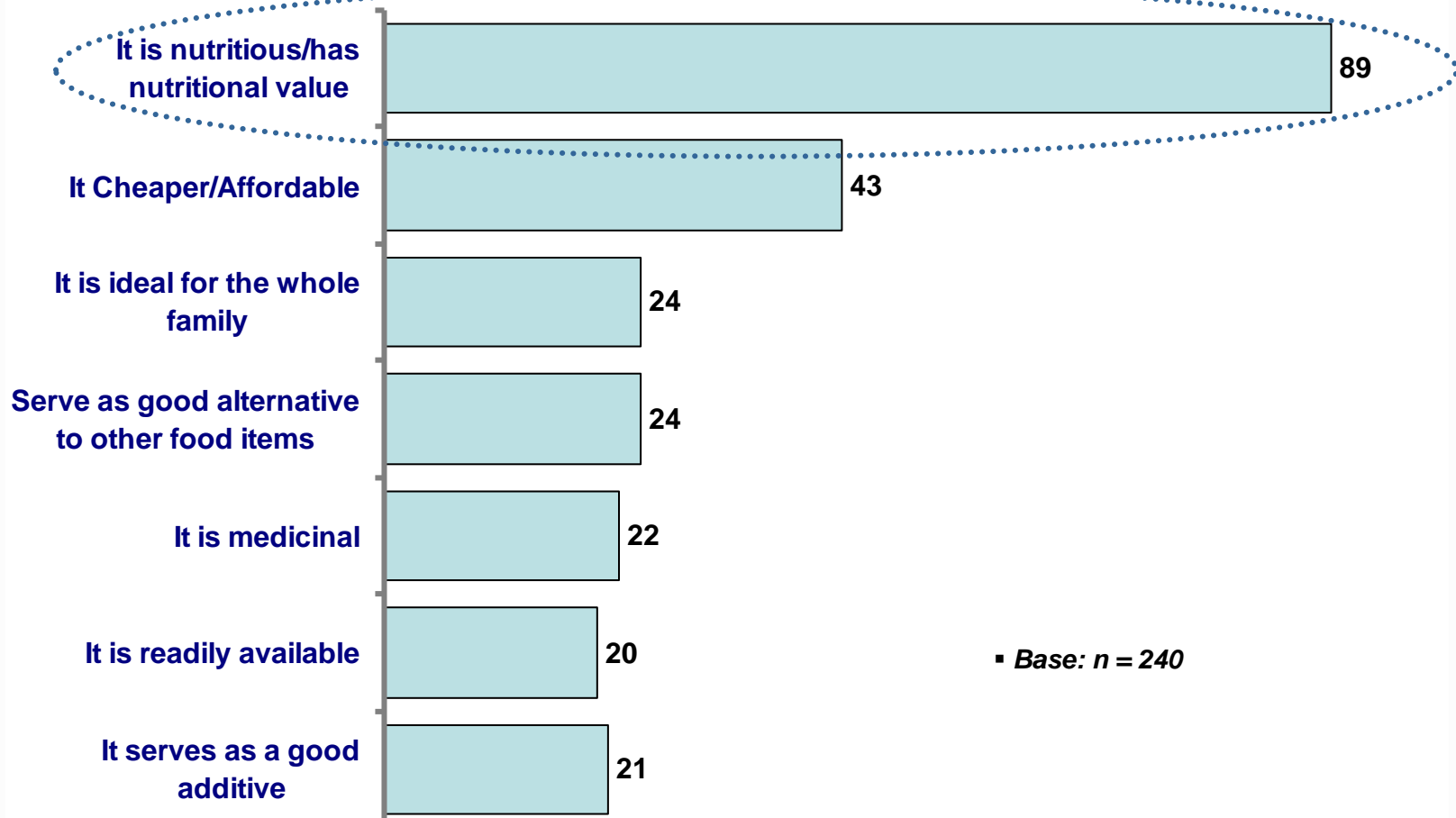
Two basic forms: Additive and stand alone

	Total	Lagos	Abuja	Enugu	Kano
Total	240 %	23 %	72 %	62 %	83 %
Additive/ingredients to other food items	25	57	29	31	7
Additive/ingredients to other drink items	24	13	63	13	1
Stand alone meal	50	30	8	55	89

- **Local/Traditional foods = 75%**
- **Beverages = 40%**
- **Dairy = 36%**
- **Snacks = 17%**
- **Baked = 16%**
- **Meat = 6%**

Benefits derived from consumption of soy

- Perceived nutritional benefit is the main driver for soy consumption. At lower level, a good proportion of consumers also considered Soy as cheap/affordable and serve as a good alternative to other food items.



Likes/Dislikes about soy/soy based products

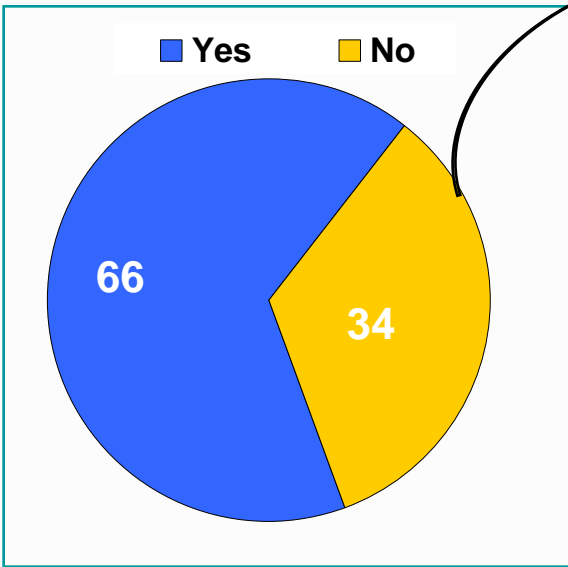
- As expected, the key driver is anchored on soy nutritional value.

LIKES	TOTAL
It is highly nutritional	42
Has high protein	27
Has natural taste & flavour	16
It is rich in vitamin	10
It is not expensive	9
It is highly refreshing	6
It is medicinal	5
It gives energy	5
It is readily available	4
It serves as an alternative for food	2

DISLIKES	TOTAL
Not easily available	9
Poor flavour/aroma	9
Preparation takes long	6
It is too expensive	3
The local type has an unpleasant taste	2
It does not stay long in the stomach	1

Barriers to consumption of soy products

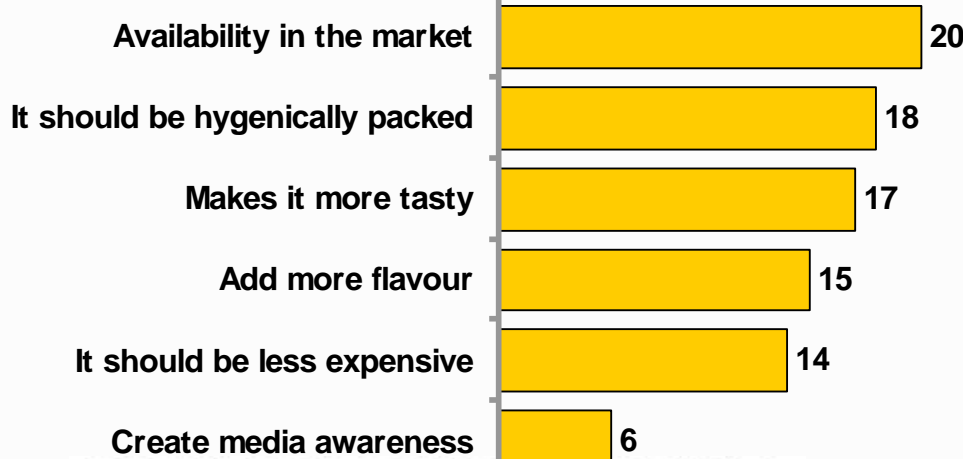
Consume Soy? (n = 365)



Why do you not consume soy? (n = 125)



What can make you consume? (n = 125)



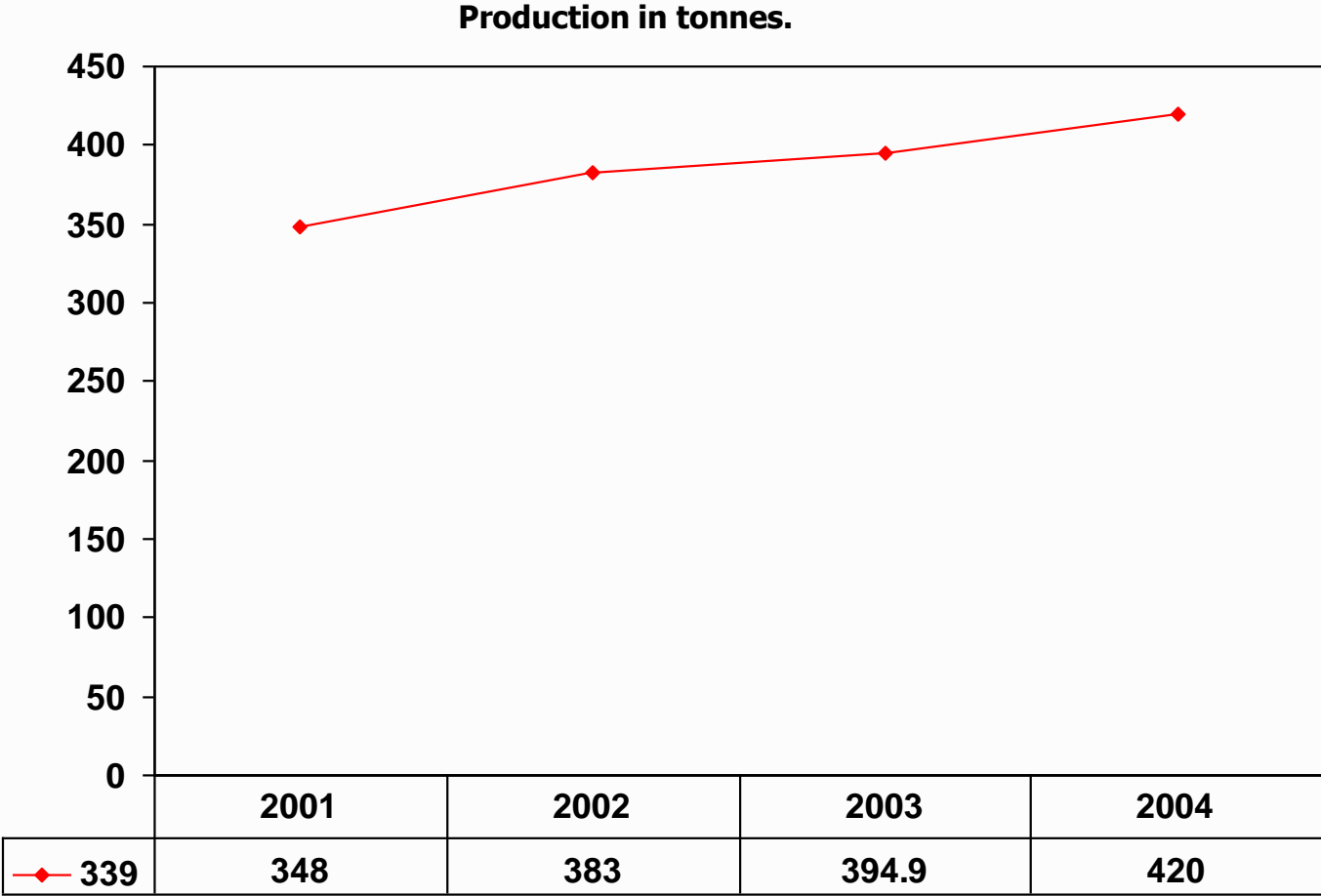
Recent developments in soy production & utilization in Nigeria

- ◆ Globally Soy bean business is worth about US\$40 billion.
- ◆ Nigeria contributes a very small fraction in this business, although it has a huge untapped potential.
- ◆ Nigeria is just beginning to take steps towards the processing and utilization of soy products..
- ◆ Various groups have been in the forefront in training over 100,000 Nigerians, most of them women on soybean production and preparation.
 - ◆ Local NGOs,
 - ◆ Hospitals, and
 - ◆ Church groups
- ◆ All groups are working in cooperation with the IITA and various government agencies.

Recent developments in soy production & utilization in Nigeria

- ◆ The private sector is becoming a major player in the market for soybean and soy processing
- ◆ Nigeria now has more than 80 soybean processing concerns, ranging in size from small village-level cottage industries to plants established by food processing giants
- ◆ Currently, over 100 soy-based food products have been developed for use, most unbranded.

1. Developments ... increasing soy output ['000 Tonnes]



**Source: Derived from data compiled by:
National Bureau of Statistics
FAO Production Yearbook/Central Bank of Nigeria Annual Agricultural Surveys
Returns from the Federal Ministry of Agriculture**

2. Development... import of unprocessed soy to augment local production

Country of origin	2002 Net weight [Kg]	2003 Net weight [Kg]	2004 Net weight [Kg]	2005 Net weight [Kg]	2006 Net weight [Kg]
Belgium	10,000			-	-
United Kingdom	1,283	7,512		444	7,000
United States	150	3,570,000		26,000	-
Netherlands		8,708		-	-
South Africa	-	-	13,420	51,000	21,000
India				978	-
Madagascar				1	-
Brazil					1,500,000
DRC (ex Zaire)	-	-	-	-	3,061,018

Source: National Bureau of Statistics [2007]

No consistency in quantity and source countries

3. Developments . .. increasing Value Added soy ingredients import

- Annual import of Value Added Soy ingredients has been on the increase since 2000
- Mainly Soya Lecithin, Soy meal, Soya Fatty Acid
- Mainly from the USA, UK, China, Argentina

Source: National Agency for Food and Drugs Administration and Control [2008]

Growth is buoyed by:

- Growing industrial utilization
- Improved enabling environment
- Activities of local NGOs [international & local] and other stakeholder groups
- Increased inflow of foreign investment and investors
- Young and large population : the market (appx 65% of population is between 0-49 years)
- Increasing consumer health consciousness
- Changing consumer lifestyle/eating habits

Business opportunity areas

- **Bakery**
 - Consumed daily by over 50% of the population
 - Hugely untapped
- **Dairy**
 - Consumed across age brackets.
 - Consumed in and out of home
 - Consumed alone and as creamer for Tea and cereals
- **Snacks [as fillers]**
 - Past studies indicate that there is a gradual and steady increase in snacking
 - Families eating out on the increase
- **Meat processing**
 - Currently very infinitesimal due to lack of technology
 - Great potentials, particularly in the hospitality industry

Business opportunity areas

- Weaning:
 - Over 25 million Nigerian children aged <5
- Milling:
 - Consumption across all SEC
- Seasoning:
 - Increasing use as flavour and thickening
- Local/Traditional
 - 75% of soy usage in Nigeria
 - Good business opportunity with better production technology

Key support areas for growth & development

For improved development of soy products as veritable sources of enhanced nutrition and good health, the industry currently requires:

- **Technical support**
 - Access to the right processing machines

- **Man power development**
 - Assistance in the development of appropriate expertise

- **Value added protein development/supply**
 - Access to Value Added Soy ingredience

- Massive IEC program to drive home the nutritional benefits of soy products

In Nigeria, access to improved Nutrition through soybean hinges on the understanding that in a global economy everybody wins when science and technology is allowed to cross international borders