

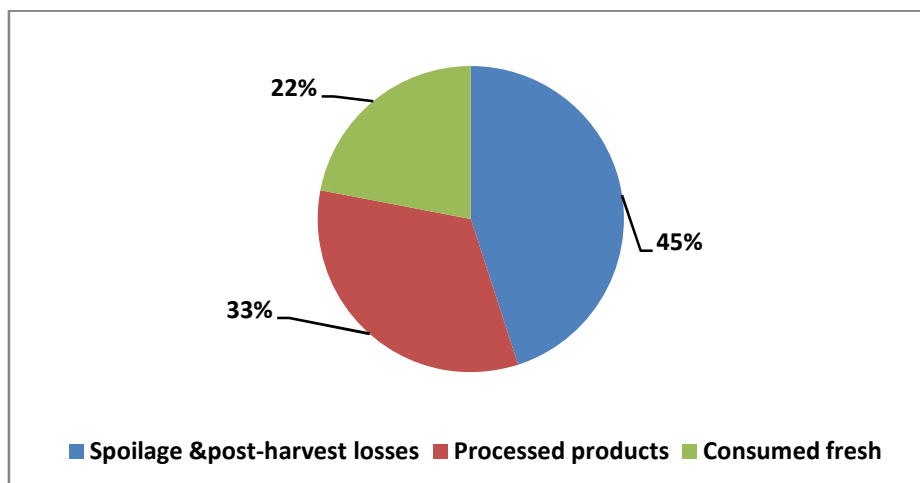


**THE RECENT TOMATO CRISIS, HOUSEHOLD CONSUMPTION AND DISPOSABLE INCOMES**

**OMOSOMI OMOMIA**

Nigeria is Africa's second largest producer of tomatoes with over 1.5 million tonnes harvested annually. Globally, Nigeria ranks as the 16th largest tomato producing nation in the world and has the comparative advantage and potential to lead the world in tomato production and exports. The country accounts for 68.4 percent of West Africa’s output; 10.79 percent of Africa's and 1.2 per cent of total world production of the crop. Despite this, nearly 50 percent of postharvest losses occur annually due to poor storage system and poor transportation.

**Post-Harvest Losses**



Source: FMARD FRN, BRIU

In the first half of 2016, the outbreak of the *tuta absoluta* pest destroyed an estimated 60 percent of anticipated national tomato crop harvests across six states representing the major tomato producing regions in the Northern part of the country. Consequently, a crisis ensued resulting in the price of tomato rising to quadruple its regular cost even in periods of seasonal scarcity.

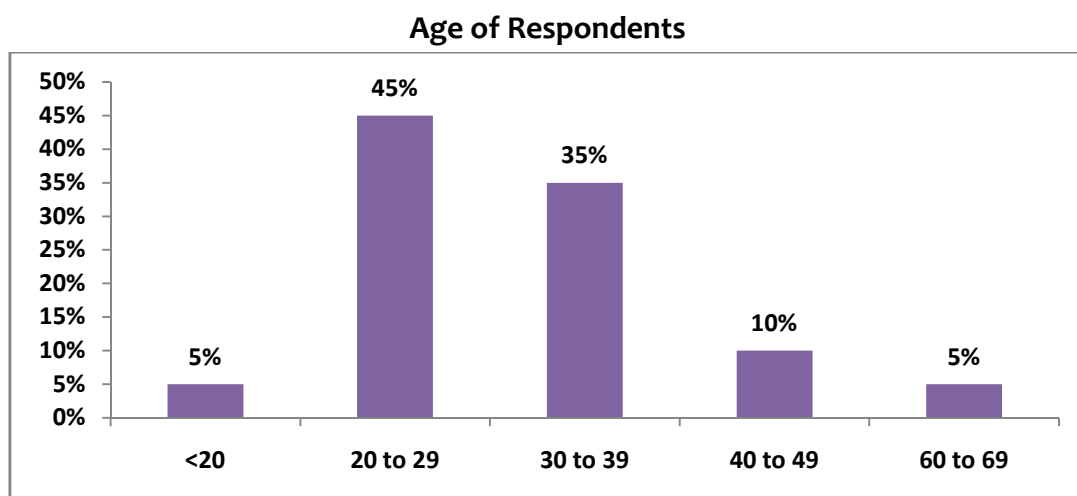
To gauge the impact of the *tuta absoluta* pest outbreak on households, BusinessDay Research and Intelligence Unit (BRIU) conducted a tomato consumer perception survey in July. The aim of the survey exercise was to gauge and assess the perception and views of consumers on the cause of the scarcity and the attendant price increase, amidst other issues and factors.

Data was collected within Lagos metropolis through a survey that was designed to cover a select number of local government areas in the state. In choosing the LGAs to be covered, a number of parameters were considered.

A structured questionnaire was used to collect the data while analysis was done with SPSS. Statistics including frequency distribution, percentages, and cross tabulations were computed to understand trends in the subject of the research.

### Demography of respondents

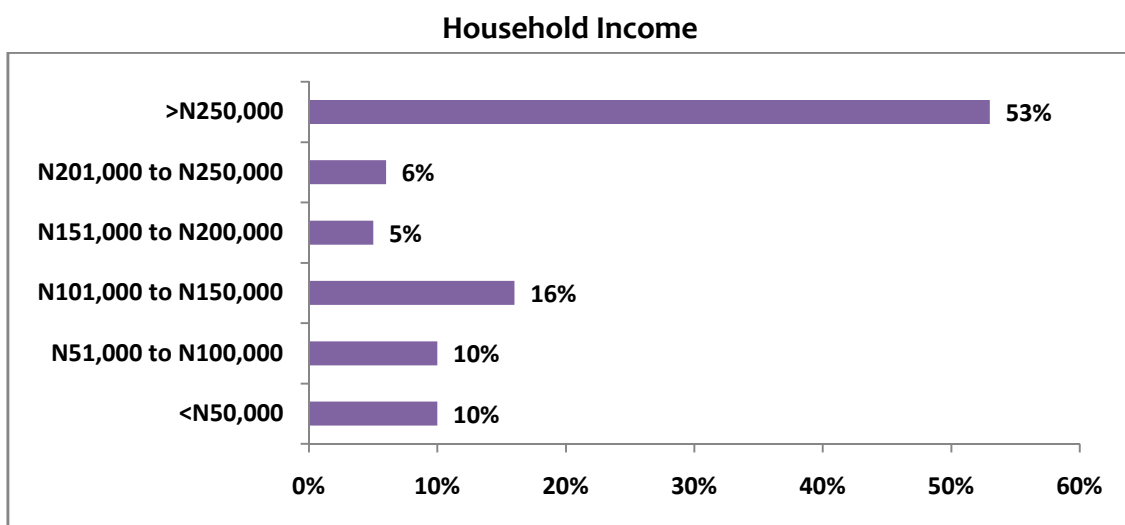
100 percent of the respondents surveyed were females between the ages of 16 to 69. The bulk of those surveyed, approximately 45 percent, were between the ages of 20 to 29 years. This was followed by 35 percent of respondents aged between 30 to 39 years old. About 10 percent of the women who responded to our survey were 40 to 49 years old while 5 percent were between 60 to 69 years of age. The remaining respondents were less than 20 years old.



### Household Incomes

Fifty-three percent of the respondents have an average monthly household income greater than N250,000; while 16 percent of surveyed have a combined monthly income ranging between N101,000-N150,000. Eleven percent of responses received were shared equally between those receiving total household income ranging from N51,000 to N100,000 on a monthly basis and those collecting less than N50,000 monthly as a household.

While 6 percent of the respondents earned combined income of N201,000-N250,000 every month, the balance of 5 percent of those surveyed collected household earnings of N151,000 to N200,000 in the same period.

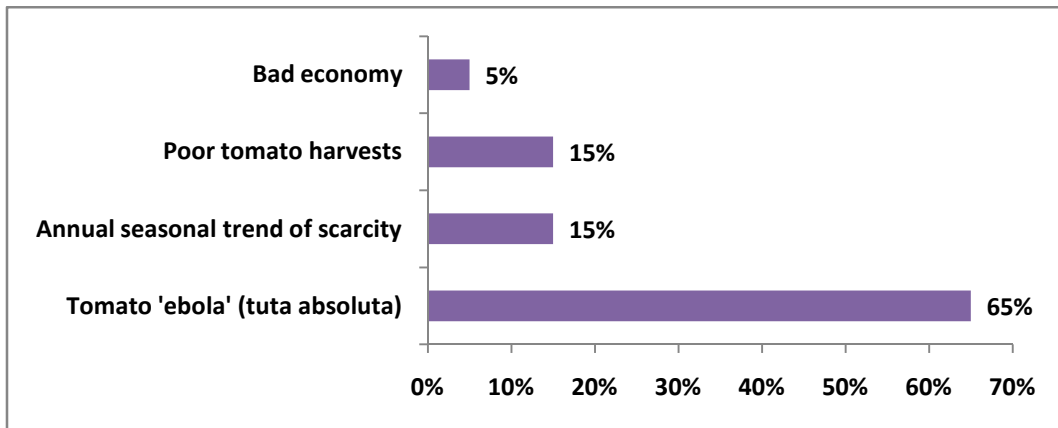


### Awareness on the cause of the scarcity of tomatoes

When respondents were gauged on their level of perception on the cause of the scarcity, a huge chunk of 95 percent expressed affirmation on the cause of the crisis and the consequent inadequate supply of tomatoes in the market. When probed further to provide reasons for the lack of availability of the indispensable vegetable crop, 65 percent of respondents confirmed that the *tuta absoluta* pest was responsible for the cause of the scarcity.

Fifteen percent of responses were shared equally between the annual seasonal trend of scarcity and poor tomato harvests respectively as the cause of the scarcity. While the balance of respondents of 5 percent believed that the current economic recession or downturn was responsible for the severe scarcity of tomatoes and the resultant exorbitant cost of the crop.

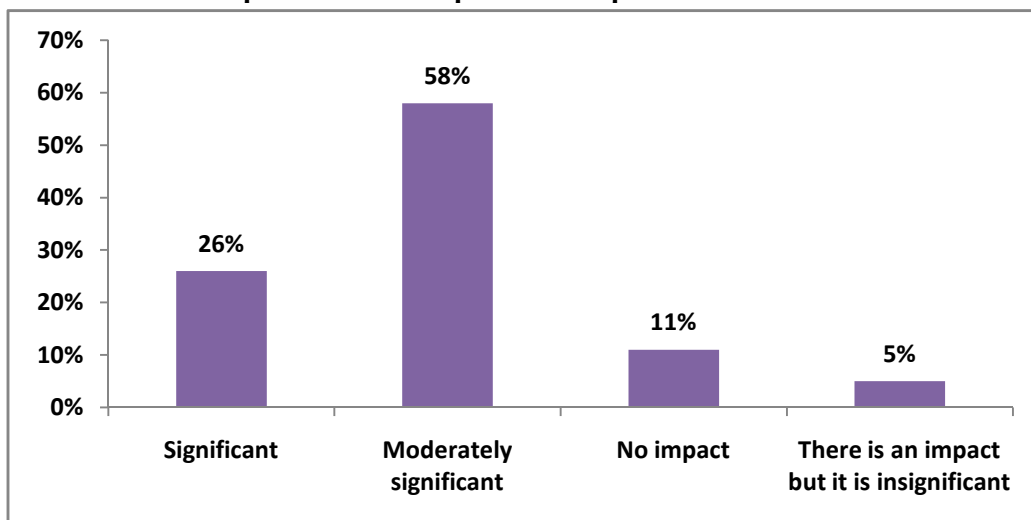
### Opinion on the cause of the scarcity



### Impact on household budgets and expenditures

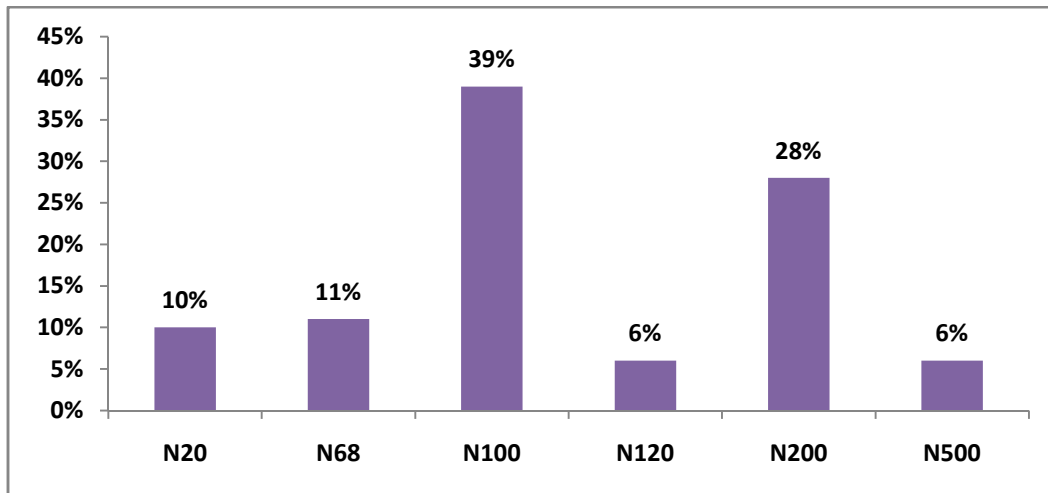
Fifty-eight percent of respondents affirmed that the impact on their household budgets due to the tomato crisis was moderately significant; while 26 percent of respondents confirmed that the effect on their food disposable incomes was significant. 11 percent of those surveyed posited that there was no impact on their food expenditure, while the balance of 5 percent agreed that there was an impact but it was insignificant.

### Impact of tomato price on disposable incomes



When asked on the rate of increase on the amount spent for the vegetable crop, 39 percent of respondents confided that they expended N100 more on a single tomato fruit after the *tuta*-induced tomato scarcity crisis than before the pest infestation. 28 percent of those surveyed spent N200 more than previously, while about 11 percent allocated N68 more than the regular price on a single tomato. 10 percent spent N20 more than usually obtained, and the balance of 6 percent was shared equally between those who spent N120 more and those who expended N500 extra than the previous price of tomatoes.

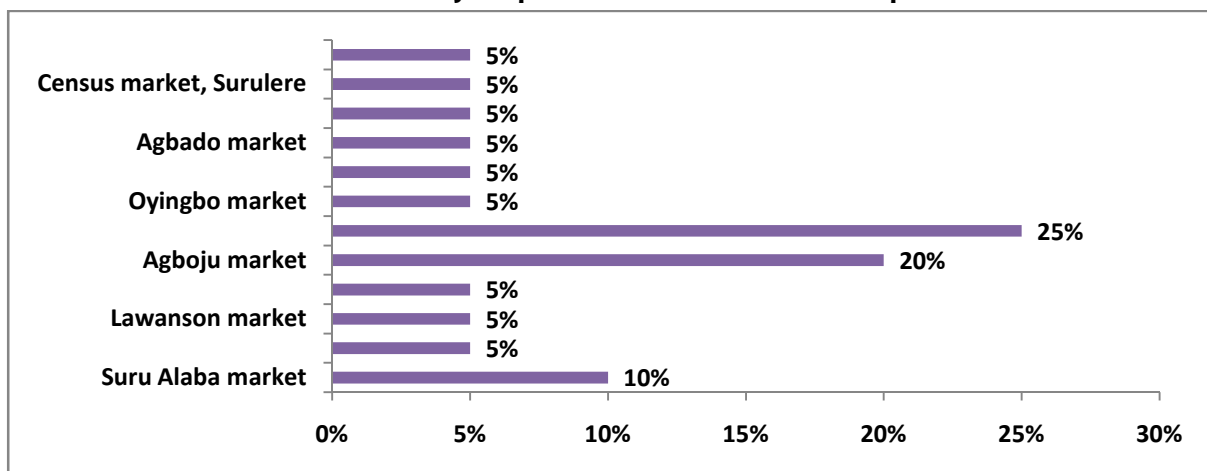
**Average spend per tomato fruit after Tuta outbreak**



Although many confirmed at the time of the survey in July that the prices of tomato were coming down, the recent significant price rise was a significant shift in trend for the tomato crop. Infact, there was a popular joke that emanated from the crisis, where a meme was created that stated: *“No condition is permanent. Tomato is now more expensive than apple in Nigeria. Lesson: Never look down on anyone.”*

The reason for the gradual drop in prices of fresh tomatoes is due to the attempts being made to mitigate the shortfall. One of which is the importation of fresh tomatoes from the neighbouring countries of Cameroun and Ghana into the major Mile 12 market. The market is one of the main hubs for the sale and distribution of vegetables in Nigeria. Though this supply from other countries in West Africa has been a regular trend during the regular seasonal shortages of the crop, however, the *tuta absoluta* crisis worsened the situation in the country.

**Markets attended by respondents for fresh tomato purchases**

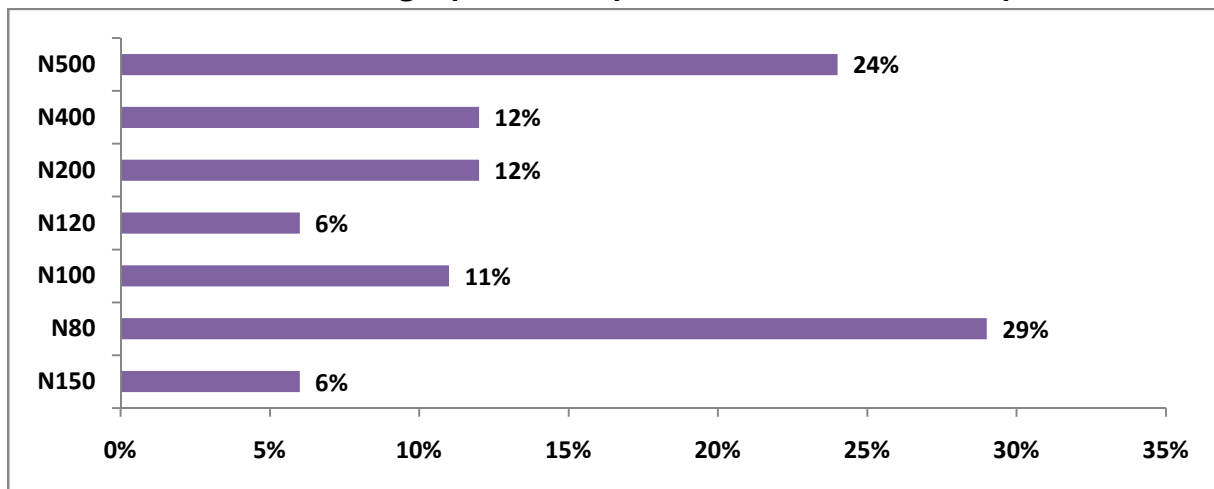


According to the General Secretary, Mile 12 Market Perishable Food Association, in July 2015, a big basket of tomatoes was sold for between N12, 000 to N13, 000 but due to the tomato shortage crisis; the same quantity was sold for N35,000 as at May 2016. In July, the prices ranged from between N20,000 to N22,000.

Nigeria is a hugely advantaged country because the nation usually has two seasons for majority of the crops produced within its borders. Tomato also is no exception as the crop has two seasons as well: April to June (off-peak) and November to February (peak).

Despite this, the Federal Ministry of Agriculture and Rural Development (FMARD) states that domestic demand for tomatoes is 2.3 million tons, while the country only produces 1.5 million tons a year but only 800,000 tons is consumed annually due to post-harvest losses.

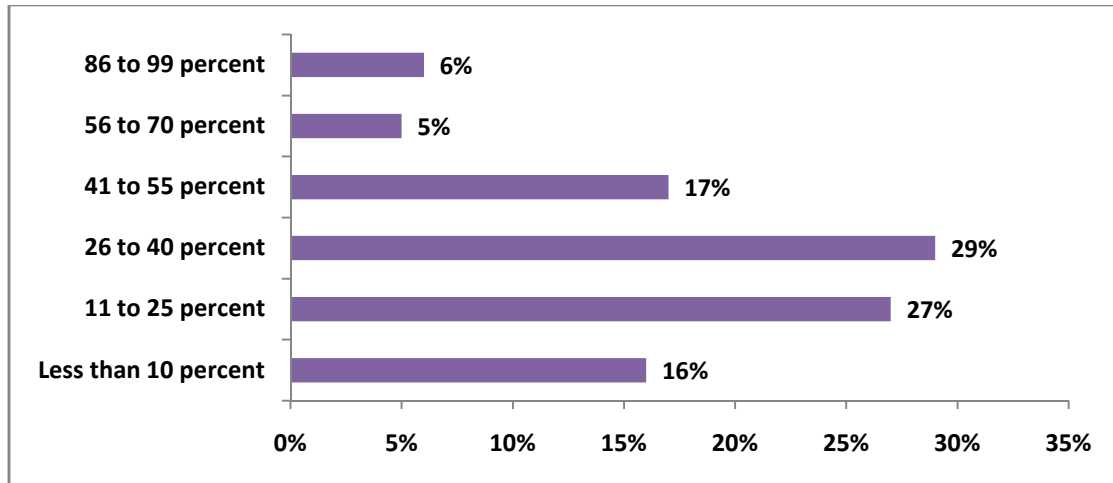
**Increase in budget per tomato purchase for each market trip**



Assessing the increase in budget due to respondents' tomato purchase needs due to the price rise, less than 10 percent confirmed that their household budgets had expanded by 16 percent, while 11 to 25 percent of respondents affirmed that their food expenditure had risen by 27 percent. Furthermore, 26 to 40 percent of those surveyed responded that their food spend had increased by 29 percent.

41 to 55 percent of respondents posited that their household expenditure had also increased by 17 percent. 86 to 99 percent confided that their food budgets had appreciated by 6 percent, while 56 to 70 percent of those surveyed declared that their household spend had risen by 5 percent.

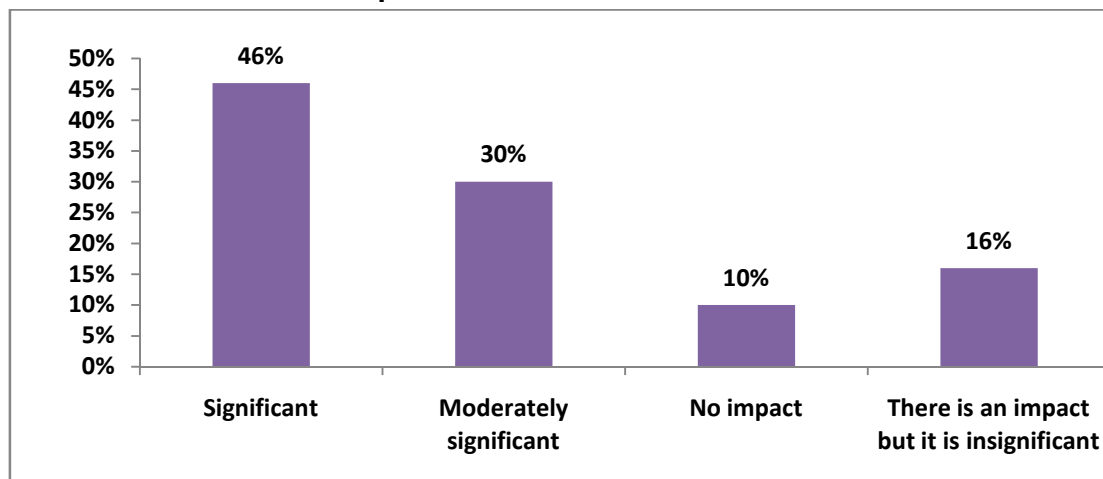
### By how much has your budget increased?



### Impact of the recent tomato shortage on food requirements and cooking needs

When asked on the impact of the recent significant shortage of tomatoes on household food requirements and cooking needs, the bulk of 46 percent of responses affirmed that the effect was significant. While 30 percent of those surveyed acknowledged that the impact on their household cooking needs was moderately significant. 16 percent of respondents recognised that there was an effect on their food requirements but that the impact was insignificant. The balance of 5 percent declared that there was no impact at all on their daily cooking activities.

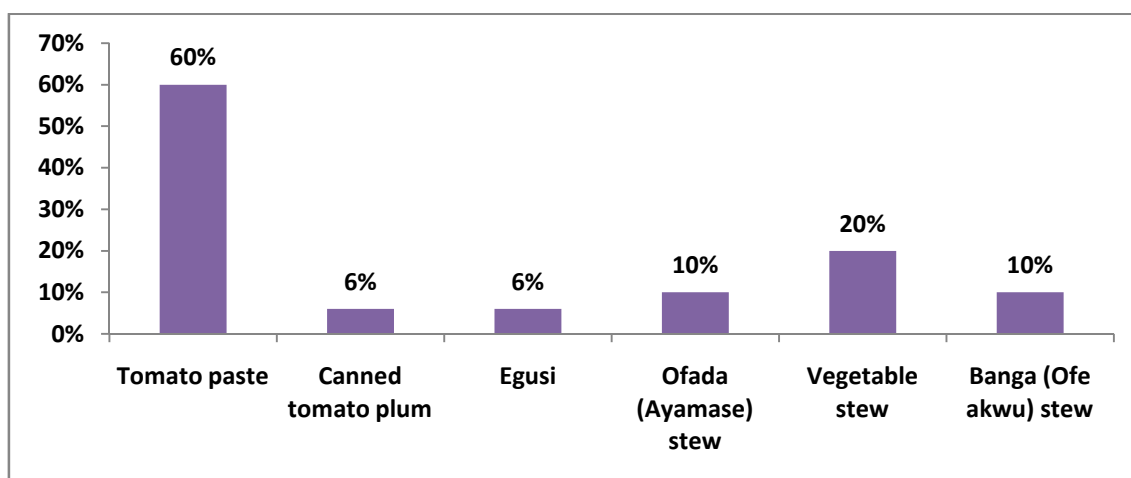
### Impact of tomato crisis on food needs



For those who experienced varying measures of impact on their food needs and cooking requirements, alternative options to tomato usage was sought and subsequently, 60 percent of respondents made use of tomato paste as a supplement. Tomatoes are a common ingredient in a significant portion of local Nigerian foods; and tomato paste is a

popular product given that it enables easy access to tomato products outside of production seasons and is often low-cost.

#### Alternative to fresh tomatoes



Nigeria has significant demand for processed tomatoes; almost half of tomato paste is imported from international locations such as China and Italy. Subsequently, various tomato paste brands costing approximately US\$1 billion are imported into Nigeria annually, according to the United Nations Environmental Programme (UNEP). Consequently, Nigeria is the 8th largest importer of tomato paste in the world.

#### Sizes of canned tomato paste in the Nigerian market

size	weight	popularity/density
Small	70 gms	High
Medium	200 gms	High
Half DeRica	400 gms	Medium
DeRica	800 gms – 850 gms	Medium
Bembe/ Large	2,200 gms	Medium
Sachet	70 gms	Low
Sachet	140 gms	Low

About 20 percent of those surveyed supplemented their tomato supply with vegetable (efo) stew. About 10 percent of responses were shared equally between those who confirmed that they supplemented their tomato sauce needs with ofada (ayamase) stew and banga (ofe akwu) stew respectively.

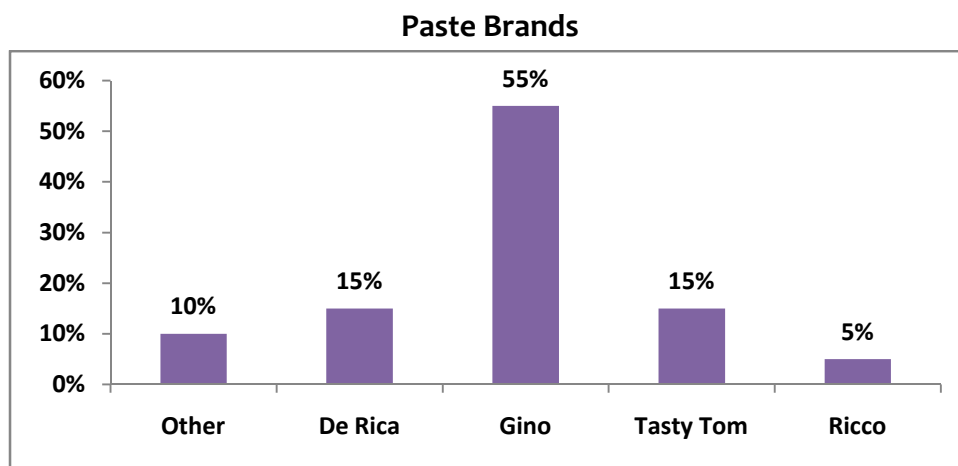


Nigerian *Banga Soup* or *Ofe Akwu* is native to the Niger Delta and the South Eastern parts of Nigeria. In the Niger Delta areas, *Banga soup* is commonly eaten with various starch recipes: Pounded Yam, Semolina, Garri and Cassava Fufu. In the South Eastern parts of Nigeria, *Banga Soup* is referred to as *Ofe Akwu* where *Ofe* means Soup/ Stew and *Akwu* means palm fruit and is used mainly as stew for Boiled White Rice.

The palm fruit oil extract used in cooking *Banga Soup/Stew* is quite different from the red palm oil used in cooking Nigerian food recipes. Palm Oil is pure oil extracted from the palm fruit pulp at high temperatures while the palm fruit oil extract used for the *Banga Soup* is extracted at a very low temperature and is a mixture of oil and water. Palm fruit oil extracted for *Banga Soup* contains less saturated fat than palm oils.

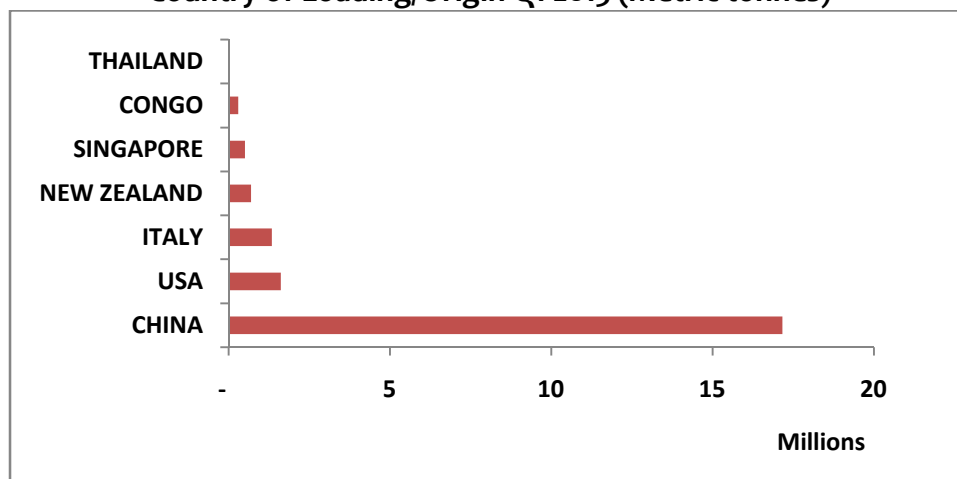
On the other hand, *Ayamase*, also known as *Ofada* stew is from the people of Ogun State. The stew is commonly eaten with *Ofada rice* (unpolished brown rice), hence where it got the name *Ofada* stew.

The balance of 6 percent was shared equally between those who substituted their tomato stews with canned tomato plum and egusi soup respectively. The Nigerian *Egusi* soup, prepared with melon seeds, is prepared by most tribes in Nigeria in many different ways. It is known as *Miyan Gushi* in Hausa, *Ofe Egusi* in Igbo and *Efo Elegusi* in Yoruba.



Tomato paste demand is estimated at 200,000 tonnes with approximate growth of 10 to 15 percent annually, according to FMARD. Increasing demand from consumers is driven by Nigeria’s large and growing population of 170 million estimated to increase by 2.5 per annum over the next five years.

**Country of Loading/Origin Q1 2013 (Metric tonnes)**



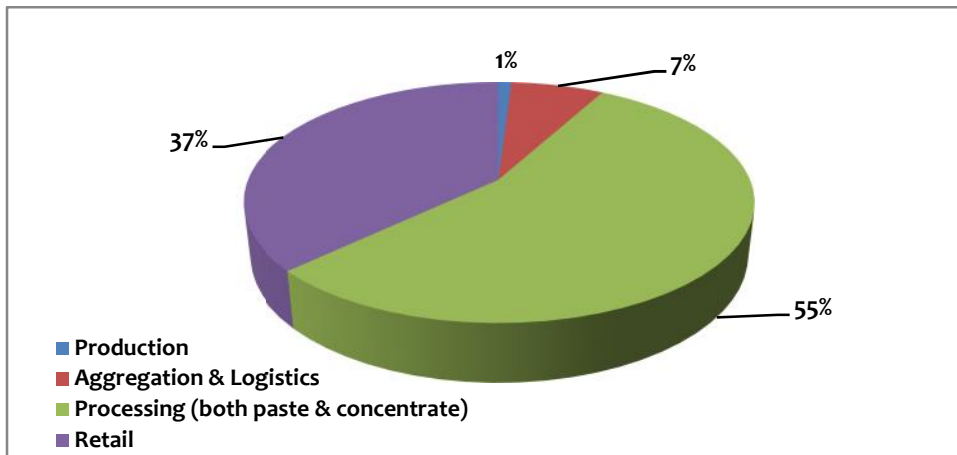
In 2010, Germany represented the largest importing country of processed tomatoes, followed by Italy, the United Kingdom and Russia with France rounding up the top five. By the first quarter of 2013, the statistics had changed significantly. China now represents the single largest exporter of packaged and processed tomatoes into Nigeria. This is followed by the United States and Italy, with New Zealand and Singapore completing the top five as reflected by the chart below.

**Some Major brands of tomato paste in the Nigerian market**

Brand	Popularity	Price	Origin
DeRica	High	High	Italy
Gino	High	High	China
Pomo	High	Low	China
TASTY TOM	High	Low	Nigeria
Chtoura Garden	Low	Very High	Lebanon
TAIMA	Low	High	Nigeria
VERA	Low	Low	China
Day by Day	Low	Low	China
St. Rita	Low	Low	China

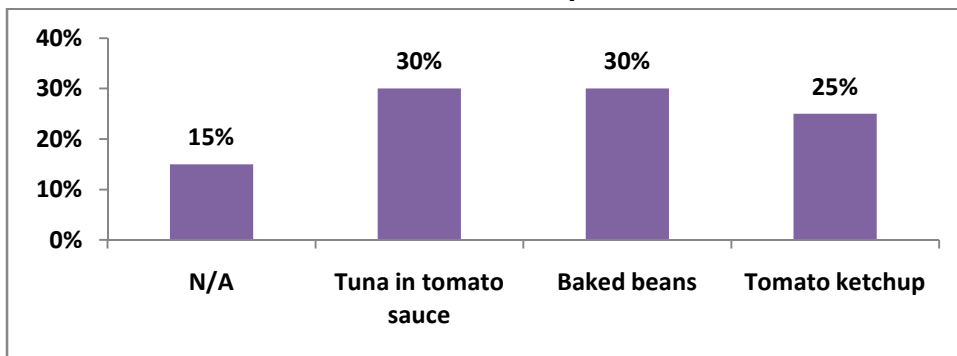
In the tomato value chain, processing is where an investor can capture the greatest economic value according to the Federal Ministry of Agriculture and Rural Development (FMARD). Raw materials supply can be a challenge for processors due to post-harvest losses and comparatively lower yields. Post-harvest losses of tomatoes can sometimes be over 50%.

### Economics of the tomato value chain in Nigeria



Demand for processed tomatoes is on the rise from both end-consumers as well as manufacturers. Given high domestic demand, there are a significant number of local manufacturers that use imported concentrate in order to make retail packs of tomato paste for domestic use.

### Other tomato-based products



When asked on other tomato based products besides tomato paste that respondents consumed, 30 percent of responses were shared equally between those who consumed tuna in tomato sauce and baked beans respectively reflecting equal consumption of both items. While 25 percent of those surveyed also affirmed that they consumed tomato ketchup as well.

### What brand of tomato based products?

