

Solving Hunger

By Chinenye Chukwu-Mba, July 13 2023.

World Food Program (WFP) estimates – from 79 of the countries where it works (and where data is available) – that more than 345 million people face high levels of food insecurity in 2023. That is more than double the number in 2020, constituting a staggering rise of 200 million people compared to pre-COVID-19 pandemic levels. This has not always been the case as we will see in the ten-year food production and consumption report we will examine in this discuss. The acute food insecurity the world is facing currently was driven by many factors including the deterioration of security conditions, conflicts, disease spread. Worsening security issues and conflicts in various parts of the world have led to the displacement of millions of people and have constrained farmers' access to their lands. The Benue state of Nigeria for instance which used to be the food basket of the nation has been unable to produce much since the attack of farmers by Fulani herdsmen began. Another major factor promoting food insecurity is what I have tagged 'foreign fever'; an instinct to constantly crave what you do not have and abandon what you own amongst developing nations. Many of these countries are experiencing significant reductions in per capita food production and have become very dependent on imports.

I will examine the report of a ten-year data on food production and consumption in Africa, from the Food and Agricultural Organisation of the United Nations (FAO). On the basis of those data, I will discuss the need for new agricultural strategies in the world and alternative options for food distribution. The world food shortage problem can be solved! Yes you heard right, I have a plan.

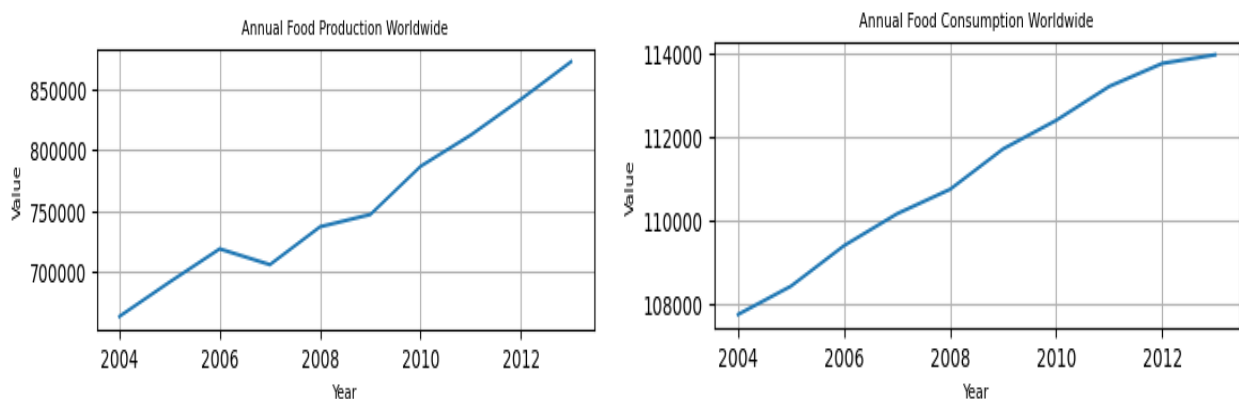


Fig. 1.0

Between 2004 and 2013, food production in the Africa as a whole increased at an annual average of about 3.5%, about four times faster than the average annual consumption growth of less than 1%. Production exceeding consumption means that the domestic food supply can satisfy domestic consumption. But is that really the case here?

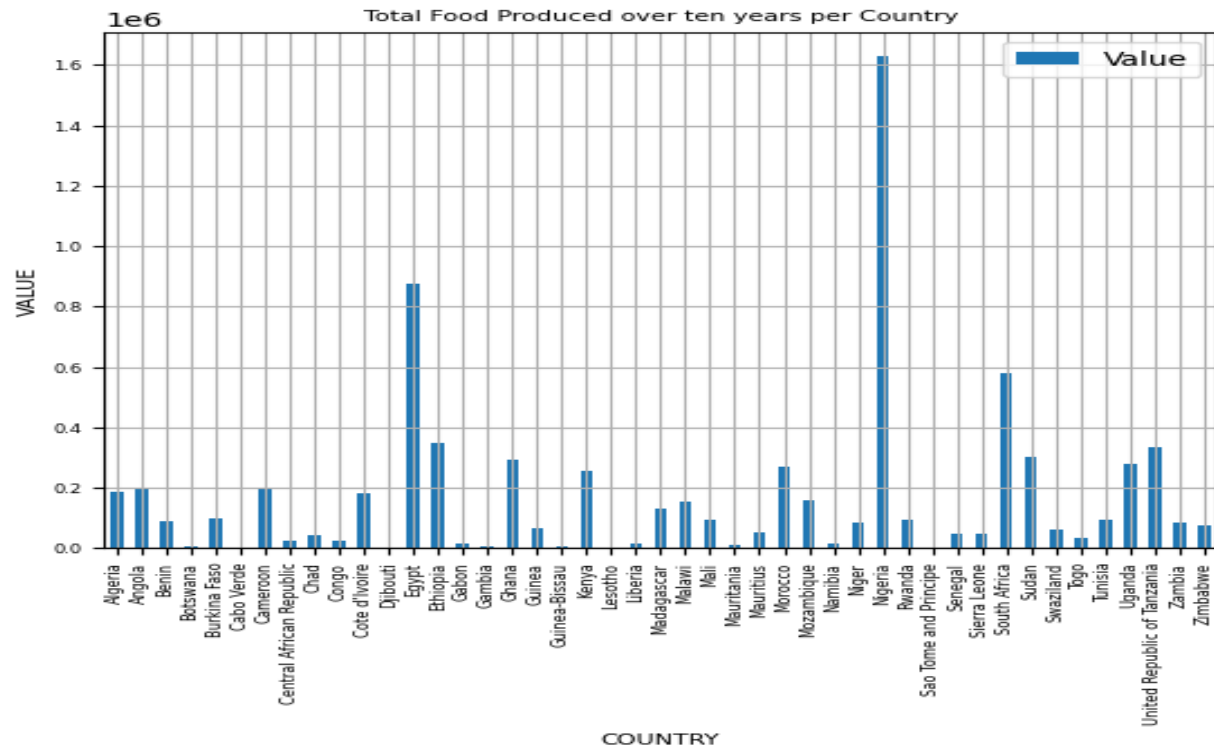


Fig 2.1

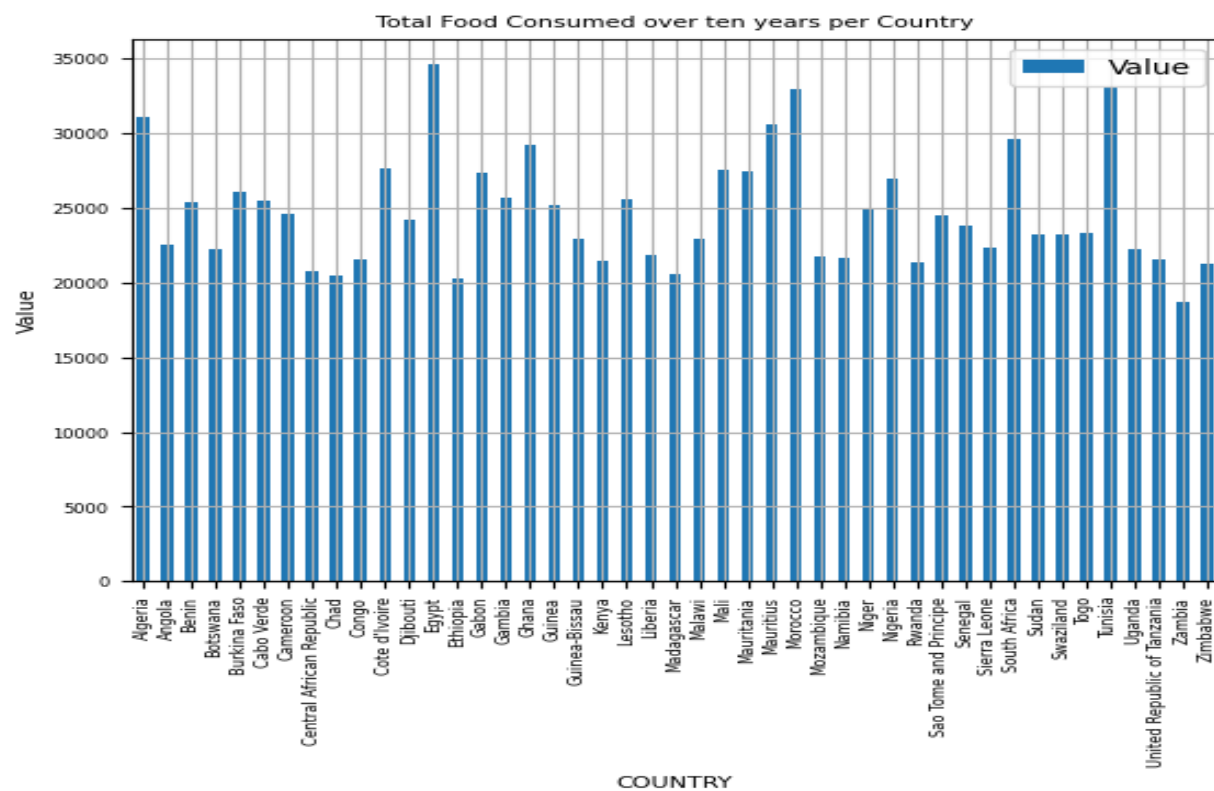


Fig 2.1

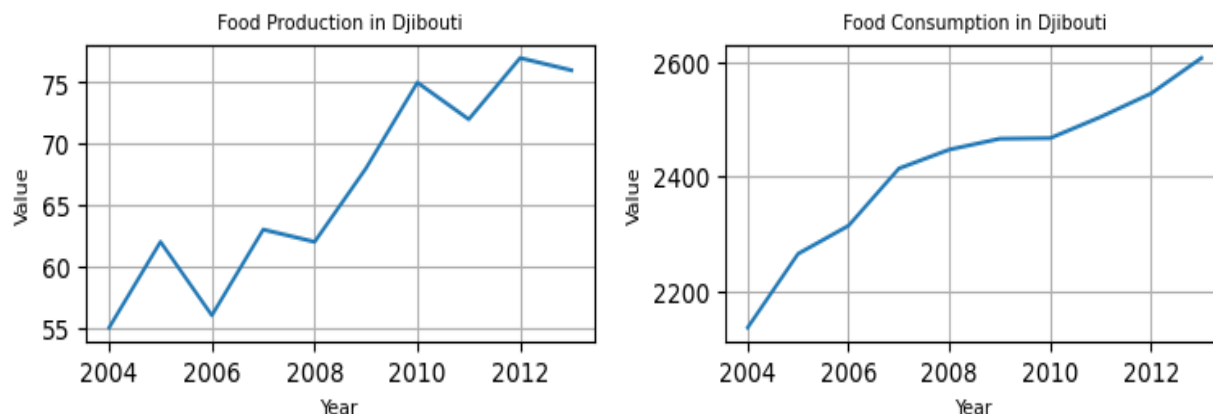


Fig 2.2

Looking at Figs. 2.0 through 2.2, we see that although generally the rate of production greatly exceeded that of consumption, consumption outpaced production in many countries. The aggregate figures covered sharply, the different rates of food production and consumption growth in various regions. This gives the impression that large flow of imports from some high producing countries, must have helped to raise consumption in other countries. For example, Nigeria contributed about 21% of the total food production worldwide, while Djibouti contributed almost zero%. But we see that though unable to produce much, people living in Djibouti had their fill as they consumed about 24,000 tons of food (more than 30 times their production and almost equal amounts with Nigeria who produced the most food crops). We see that with effective distribution in these years, hunger was an easy thing to conquer in Africa.

Problem

Depending on the distribution market puts countries at the mercy of global events. In recent times, cost of delivery is at an all-time high due to high fuel prices, farmers have been displaced by wars dropping their production and economies have dropped worldwide in the aftermath of the covid-19 disease. Price inflation in the food market has become worse (Nigeria surged to 24.32 per cent in January 2023 from the 23.75 per cent recorded in December 2022, the highest in the last four years, according to the National Bureau of Statistics). This is happening at a time when the number of acutely hungry people has increased due to population explosion; the United Nations Population Fund (UNFPA) reported eight billion world populations in November 2022 with almost about one billion increase from 2013. The world is now battling the problem of food insecurity.

How to solve the world food crises

The first and most promising solution to world food insecurity problem is to increase domestic food production to match domestic consumption; every country needs to go back to making her food and reduce dependence on countries that were formerly 'world' food producers. In developing countries, where the shift from cultivable land to non-food land has gone far, modern technology has come to the rescue. The growth of food crops has been made easy through the

use of alternative irrigation techniques, availability of science-modified fertilizers that shorten plant growth and maturity times, use of aeroponics and hydroponics (growing plants without soil) etc. Irrigation provides an alternative means of improving soil moisture in dry lands. This can involve constructing reservoirs, dams and canals to deliver water to plants. With aeroponics, plants can be moved easily from areas of worsening insecurities and they can be stacked, meaning less space is required for their plantation. With aeroponics, the speed of growth is controlled by the grower. It is now possible to increase food production without even expanding agricultural land. With a national level investment in these technological advancements, nations battling insecurity can still raise their production to match consumption and reduce dependence on the distribution market which is now failed.

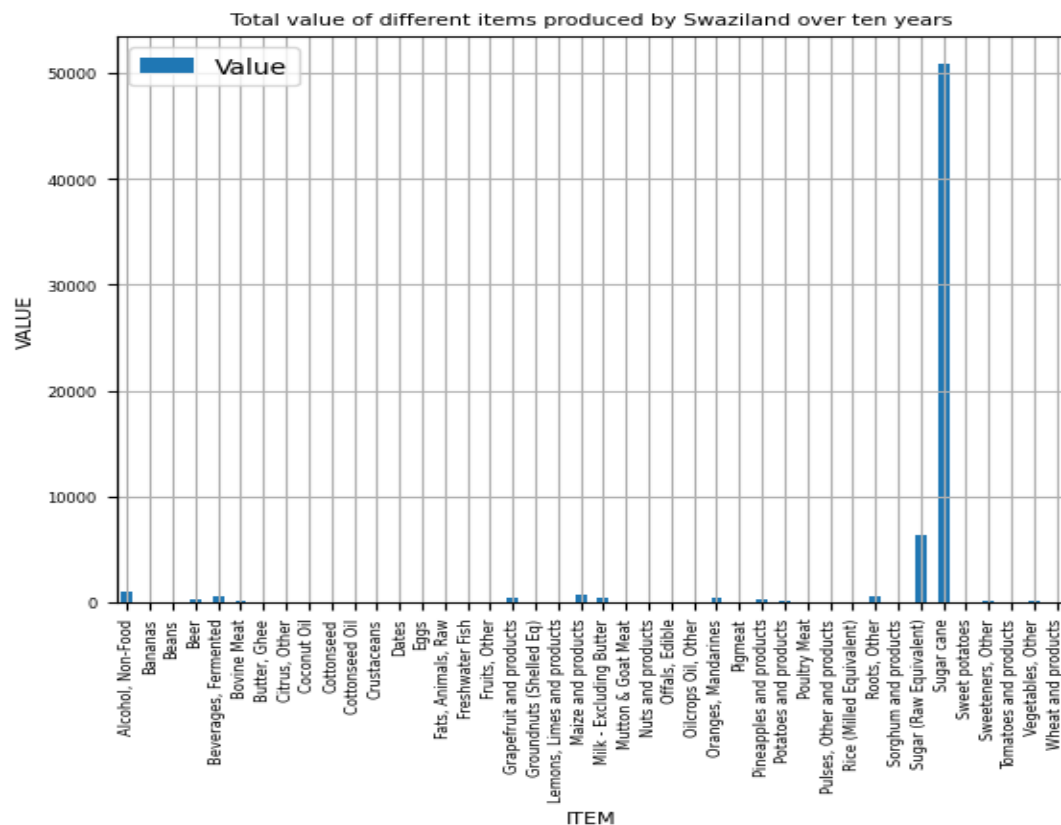


Fig. 3.0

Related to the first solution is the need for countries to channel balanced efforts to both cash and food crops. Figure 3.0 above shows that in the ten-year period reported, Swaziland produced only 15 types of food items. Amongst these items, Sugar cane, Sugar (raw equivalent) and Alcohol/non-foods (all cash crops) topped the list, making up over 80% of the total tonnage of production. Does this have an implication for Swaziland? The answer is yes. Cash cropping countries are more vulnerable to food insecurity. This is primarily because the income made from cash cropping may not be enough to match market prices of food crops. Secondly, total

reliance on the highly unpredictable distribution market increases the risk of food insecurity during situations that are not import-friendly, like during disease pandemics. For countries to stay safe from food insecurity, cash cropping and food cropping efforts should match.

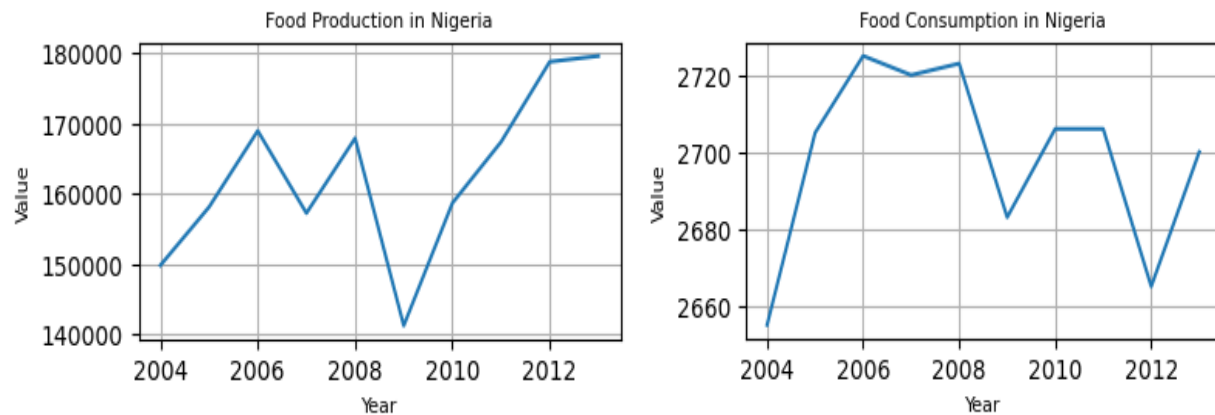


Fig. 4.0

To discuss the third solution, I will reference the graphs in Fig 4.0. It can be seen from the report that between 2004 and 2013, some countries (Nigeria) produced hundreds of tons of food products than they consumed. The African continent in totality (Fig. 1.0) produced over 500,000 tons worth of food product which was not consumed, a whopping over five hundred of a thousand tons! Where did all that food go? Your guess is as good as mine; some went into the distribution market while others went to waste due to lack of proper storage facilities and poor transportation techniques. The evidence of this is the current state of food security in the world. Elimination/minimization of food wastes is yet another viable solution to the world food insecurity problem. Countries can start by measuring food waste to determine its significance. Developing nations should increase their investments in technological advancements in food storage and preservation. Fresh fruits which are formerly the most wasted food crops can now be preserved for very long periods using temperature controlled rooms. Grocery stores in developed countries have tapped into this method and are enjoying the longer holding times in their facilities. Nations can also partner in this regard, exchanging food crops that they cannot store to obtain what they can afford to store.

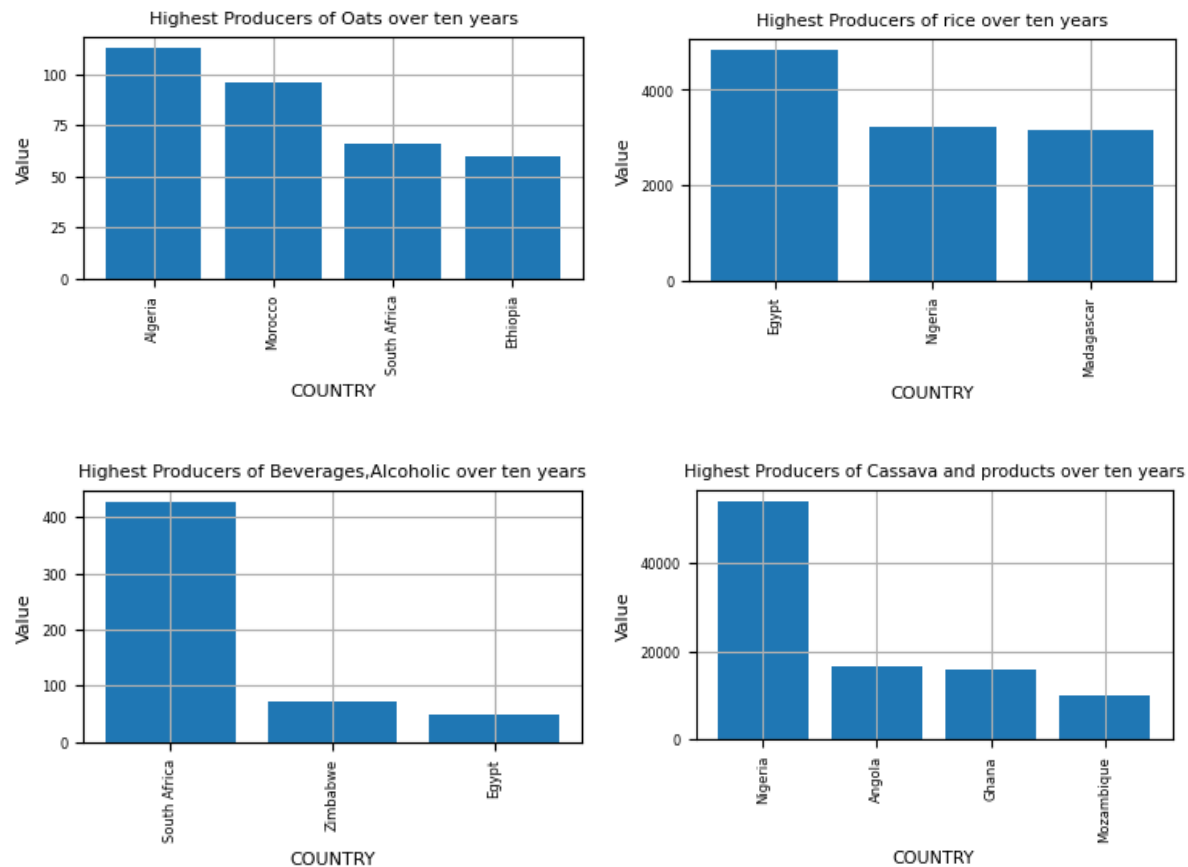


Fig. 5.0

Finally, I am of the thought that broadening purchasing power to go beyond paper currencies will reduce the problem of food insecurity. Given the price inflation in the food market currently, it may be a good time to return to the use of exchange as a means of acquiring an item. History has it that the first exports from Nigeria to European traders including pepper, and slaves were exchanged mostly for gold with Portuguese traders. From the FAO reports, we can see great variations in the type of food crops produced by different countries. There could be a product swap of Oats for Alcoholic beverages between Algeria and South Africa. Egypt can also swap some of her rice for Nigeria's cassava. Rather than buying and selling using currencies and running the risk of depleting foreign reserves or being at the mercy of their purchasing power; nations can focus on using exchange of the excess quantities of the items they produce, for other items which they are unable to make in sufficient quantities. That way, they can eliminate costs and make imported food prices cheaper for their people.

I cannot end this write-up without mentioning my favorite topic; supply chain management. Imagine that regions (continents) had a central warehouse with proper storage facilities put in place, where each country dropped her excess farm produce at a forward rate price and these items are distributed through regional and local warehouses to each country based on the forces of demand and supply. Fun stuff right? It gets even more interesting. The excess products which

are not sold in a given continent can also swap for another from a nearby continent and return in the supply chain as a useful item. The world food supply chain can function as a single system and it doesn't end with sharing farm products, nations can eliminate waste and earn revenues for optimizing their agricultural efforts. This is the future; this is where the world should be some day.

In conclusion, food programmes, donations and other temporary interventions going on in different parts of the world cannot help us sustainably; we have to go from feeding the hungry to solving hunger. Countries that continue to dwindle their agricultural efforts, focus more on cash crops production, lack a system of providing storage and/or not proactive in forming alliances will not be successful in their food insecurity interventions.