

QUARTERLY E-BULLETIN



Effects of the Russia-Ukraine war on the Agricultural Sector and Hunger Situation in Kenya

China opens Market for Hass Avocado Farmers in Kenya



Newly Introduced Hybrid Rice in Mwea to replace Imported Rice



Farmers face losses from the Fall Army Worm



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Introduction

With the ravages of the Coronavirus barely behind us, the world is now faced with a great crisis that seems to dwarf all others since the second world war – the Russian-Ukraine conflict. The Russian Federation and Ukraine are among the most significant producers of agricultural commodities globally. Both countries are net exporters of agricultural products, and they both play leading supply roles in global markets of foodstuffs and fertilizers, where exportable supplies are often concentrated in a handful of countries. This concentration could expose these markets, including Kenya, to increased vulnerability to shocks and volatility, especially in agriculture, manufacturing, retail, and energy.

For instance, in 2021, either the Russian Federation or Ukraine (or both) ranked among the top three global exporters of wheat, maize, rapeseed, sunflower seeds, and sunflower oil, while the Russian Federation also stood as the world's top exporter of nitrogen fertilizers, the second leading supplier of potassium fertilizers and the third-largest exporter of phosphorous fertilizers. With the ongoing war, severe impacts are being experienced in the country, particularly in the agriculture sector, including:

a) Trade disruptions

b) Local production,

c) Domestic food security

d) Increased hunger cases

a) Trade (import and export) disruptions

The nation has experienced an acute shortage of some commodities which she imports from Russia and Ukraine leading to the high price of the same goods due to the increase in their demand and a reduction in their supply following the decision by these countries to suspend the export of agricultural good to various countries. These include:

1. Wheat

- ◇ The country suffers an acute wheat shortage following the global media report that Russia had suspended exports of some agricultural commodities, including wheat.
- ◇ Kenya imported wheat worth Ksh16 billion from Russia in 2020, as outlined in the data from UN Comtrade.
- ◇ With the reduction in the quantity of wheat imported to the country due to the conflict, wheat prices had doubled in two weeks, with a bushel of the products selling at a high of \$13.48 from \$7.50 when the war broke out.

2. Fertilizer

- ◇ The conflict has led to the rise of fertilizer prices which is currently retailing at over Ksh7,000 for the 50-kilogram bag, a price beyond the reach of many farmers following the suspension of the two nations to export their goods to other countries.
- ◇ Being the onset of the planting seasons, several farmers admitted that they would reduce the area under production since they cannot access some inputs like fertilizer for production. This will translate to lower production volume, thus affecting the agriculture sector.
- ◇ Additionally, as indicated in the Business Daily newspaper, a few farmers are opting to plant without fertilizer, and they are expecting a low volume of output due to a lack of fertilizers.
- ◇ The government has intervened through provision of subsidized fertilizers, but there are challenges in quantities needed and delivery timelines beyond the planting season.

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3. Maize

- ◇ Maize is one of the products that dominate cereal imports from the two countries. The disruption of maize supply due to the ongoing war has led to a hike in the prices of maize flour, with a 2kg packet retailing at Ksh145.
- ◇ The maize imports from Russia in 2021 were estimated at Ksh1 billion, to cushion the country from the poor harvest experienced that year.

4. Oilseed

- ◇ Kenya depends on oilseed imports from the two countries, particularly from Ukraine.
- ◇ One of the key oilseeds imported is sunflower seed, that makes sunflower oil. The country imported oilseed worth Ksh1 billion from Ukraine in 2020.
- ◇ Kenyan households have been severely affected by the high oil prices that have nearly tripled during the quarter. This has resulted from the supply chain disruption of this commodity due to the ongoing conflict.

b) Local production

- ◇ The impacts of the war are anticipated to severely decrease local agricultural production following the high prices of farm inputs, including seed, fertilizers, and fuel.
- ◇ The Russian Federation is a key player in the global energy market. As a highly energy-intensive industry, agriculture will inevitably be affected by the sharp increase in energy prices accompanying the conflict.
- ◇ The sector absorbs high amounts of energy directly, through the use of fuel, gas, and electricity, and

indirectly through agri-chemicals such as fertilizers, pesticides, and lubricants.

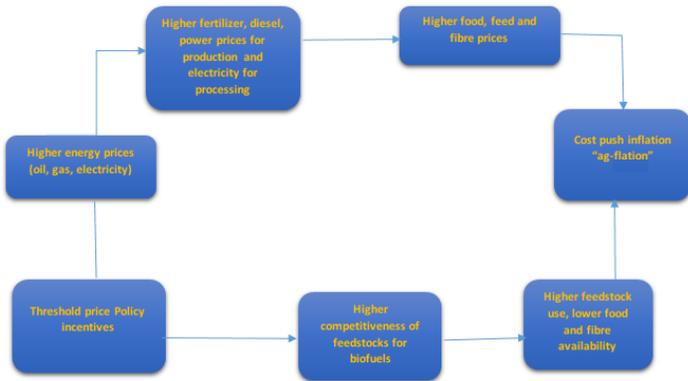
- ◇ The higher prices of these inputs will first translate into higher production costs and eventually into higher food prices.
- ◇ They could also lead to lower input use levels, depressing yields and harvests in the 2022/23 season, thus giving further upside risk to the state of domestic and global food security in the coming years.
- ◇ Additionally, the higher energy prices make agricultural feedstocks (especially maize, sugar, and oilseeds/vegetable oils) competitive for the production of bio-energy and, given the large size of the energy market relative to the food market, this could pull food prices up to their energy parity equivalents.
- ◇ This is already evident with the price of all food commodities rising unexpectedly beyond the reach of many low and middle-income households.
- ◇ Lastly, mechanization in the agricultural sector suffers a big blow following the high cost of diesel used in most farm machinery for plowing, planting, and even harvesting.
- ◇ The disruption in the supply chain of oil from the two giant-oil producers due to the conflict may greatly affect large-scale agricultural production in the country, with numerous plantations seen lying fallow even during this onset of rain as a result of high cost of fuel to run the agriculture machineries due to sharp increase in global crude oil prices.
- ◇ As outlined in the Business Daily newspaper, there is an immense public outcry to the government to reduce the taxes on energy and farm inputs to enhance the accessibility of the farmers to these raw materials, thus boosting the food production in the country. The Eastern Africa Farmers' Federation is pushing the government to zero-rate duties on agriculture machinery and related technologies whose cost has risen occasioned by the on-going war.

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c) Domestic food insecurity and hunger

- Conflict interrupts regular economic and livelihood activities and constrains income flows. Disruptions in the trade are likely to increase the food insecurity already experienced in the country.

The flow chart below shows how high energy prices translate to the increasing cost of food commodities and farm inputs resulting in cost-push inflation.



- With anticipated low output and reduced yield in agricultural produce, attaining food security in the country may be difficult.

About the global hunger index

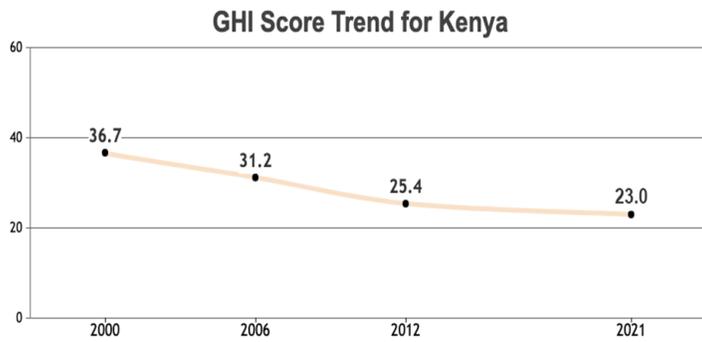
The global hunger index (GHI) is a peer-reviewed yearly report, cooperatively published by Concern Worldwide and Welthungerhilfe, premiated to comprehensively measure and track hunger at global, regional, and country levels. Below is the chart for the global hunger index 2021:



- According to the Global Hunger Index report, Kenya was ranked 87 out of 116 countries' hunger levels. **With a score of 23.0**, Kenya's hunger situation is serious.
- Though the major cause of this lack of food in major arid and semi-arid areas in the country remains drought, especially in Marsabit, Wajir, Moyale, Garissa, Turkana, Baringo, Samburu, Tana River, and Isiolo, the ongoing war is set to further worsen the condition through increased cost of production.
- Several studies conducted report that achieving a zero hunger plan may not be possible with the drastic happenings domestically and globally.
- In addition, about 2.8 million citizens struggle to find meals, with many lives lost besides numerous malnourished children who suffer from health complications.
- Marsabit County has been the worst hit, with 450,000 people needing relief food, water, and other essentials.
- Hunger rates are rising significantly globally, and one of the largest drivers of hunger is manmade conflict.
- The increase in food price inflation causes a decrease in local populations' purchasing power, which deteriorates access to staple foods and farm inputs, with consequent increases in food insecurity levels.
- The low purchasing power of the farmers to access the raw materials severely decreases the production output by increasing the production cost, thus food insecurity in the nation.

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The graph below shows the trend in the hunger index in the country from 2000 to 2021

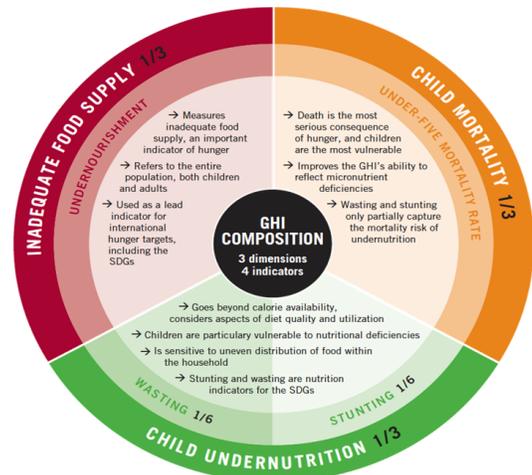


NOTE:

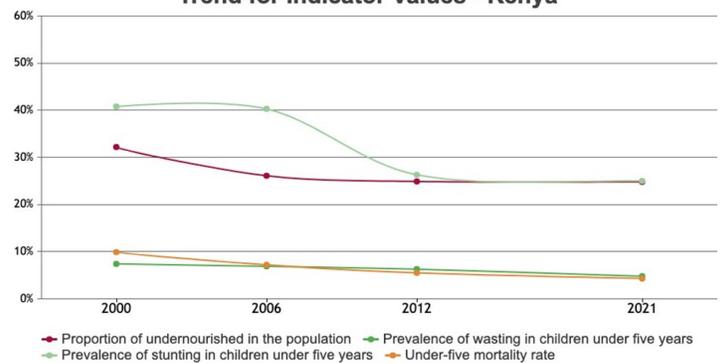
Data for GHI scores are from 1998–2002 (2000), 2004–2008 (2006), 2010–2014 (2012), and 2016–2020 (2021).

- ◇ The GHI score incorporates four component indicators: undernourishment, child wasting, child stunting, and child mortality. Using this combination of indicators to measure hunger offers several advantages.
- ◇ The indicators included in the GHI formula reflect caloric deficiencies as well as poor nutrition. The undernourishment indicator captures the nutrition situation of the population as a whole, while the indicators specific to children reflect the nutrition status within a particularly vulnerable subset of the population for whom a lack of dietary energy, protein, and/or micronutrients (essential vitamins and minerals) leads to a high risk of illness, poor physical and cognitive development, and death.
- ◇ The inclusion of both child wasting and child stunting allows the GHI to document both acute and chronic under nutrition. By combining multiple indicators, the index reduces the effects of random measurement errors.

The chart 3 below shows the component indicators for the GHI



Trend for Indicator Values - Kenya



NOTE:

Data for child stunting, and child wasting are from 1998–2002 (2000), 2004–2008 (2006), 2010–2014 (2012), and 2016–2020 (2021). Data for undernourishment are from 2000–2002 (2000), 2005–2007 (2006), 2011–2013 (2012), and 2018–2020 (2021). Data for child mortality are from 2000, 2006, 2012, and 2019 (2021). See Appendix C of the 2021 GHI report for additional information regarding the selection of indicator data.

Kenya to export Avocado fruits to China

The Chinese government has allowed Kenya to export fresh Hass avocado after four years of lobbying as Beijing reverses an initial requirement that **only** allowed frozen produce, coming as a major boost to farmers who had to invest heavily in cold rooms to meet the requirement. China had locked out the fresh produce in 2019 due to prevalence of fruit flies locally.

The KEPHIS Managing Director Professor Theophilus Mutui said that the move follows successful completion of the rigorous Pest Risk Analysis carried out by the agency and the National Plant Protection Organisation of China, which identified quarantine pests of concern to China that should be controlled before export.

All the fresh avocado fruits must comply with all applicable Chinese phytosanitary (plant health) laws and regulations, health and safety standards and be free from any quarantine pests of concern to China.

Specifically, all producers and exporters intending to export fresh avocado to China must:-

- Have all their production farms, pack houses and fumigation treatment facilities registered by KEPHIS.
- Apply Good Agricultural Practices (GAP) and keep good sanitary conditions as well as implement Integrated Pest Management programs, including pest monitoring, chemical and biological control and any other pest control operations.
- Monitor and manage quarantine pests of concern to China under the guidance of KEPHIS; KEPHIS shall carry out periodic field inspection.
- Keep monitoring records of quarantine pests as well as pest management measures implemented.
- Carry out phytosanitary treatment of the fresh avocado fruits by fumigation before export.
- Ensure that all consignments are inspected prior to export.

KEPHIS will monitor the processing, packaging, storage and transportation of the fruits.

Introduction of a New Hybrid Rice in Kenya

A new hybrid rice has been introduced in Mwea, Kenya. Dr. Emmanuel Okogbenin, the director in charge of programs and commercialization at the ***African Agriculture Technology Foundation (AATF)***, made the announcement and said the new rice variety is more yielding and early maturing.

The move is set to replace the demand for imported rice in the country. According to Dr. Emmanuel Okogbenin, the new breed of rice according to scientists is more favorable to the Kenyan masses and is cheap when compared with the imported rice.

African Agriculture Technology Foundation (AATF) has been collaborating with Kenya Agricultural Research and Livestock Organization in Mwea in the development of the hybrid rice. Already 400 acres have been supplied with the rice and true to the expert's words' the crop is already growing faster than the traditional rice.

Rice consumption in Kenya

"It is heart breaking for Kenya and the entire Africa to continue importing food while they have the ability to produce their own at a local level. Our objective is to achieve prosperity for the farmers through technology as will be evidenced through the hybrid rice. There is a greater need for the adoption of the technology in order to increase rice production in Kenya and in Africa as a whole," Okogbenin said.

Okogbenin said the level of rice consumption in Kenya stands at 650,000 tons as compared to the production, which is at 150,000 tons. As a result, the deficit is met by the importation of 500,000 tons of rice yearly. The crop scientist further observed consumption of rice has increased by 13% while productivity grew by only 3% and hence the need to jump start rice production in the country.



Farmers seek government help as the Fall Army Worm destroys crops

The armyworm infestation has left thousands of farmers in Homa Bay counting huge losses as the pests destroy food crops including maize and sorghum on the farms. A spot check in Rachuonyo South and Rangwe areas depict that several farmers will not harvest anything as their crops have massively been destroyed by the worms. Additionally, farmers in Kakamega, Bungoma, and Busia have been hit by similar pest.



Farmers in Lurambi area, Kakamega County reported that the pests are resistant to the pesticides they have used in trying to control them. The failure to get a solution to get rid of these pests is anticipated to result to acute food shortage and starvation in the region. The worms spread very fast and have left the land bare since they eat any green vegetation.

Additionally, the African Armyworm can lay up to 2,000 eggs and attack crops in all stages of growth according to the experts who have also warned that the worms may spread to other counties if no immediate action is taken. Several farmers in these counties are unable to buy seeds and fertilizers for replanting and thus calling for government assistance to address the situation.



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