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National Food Security Bulletin

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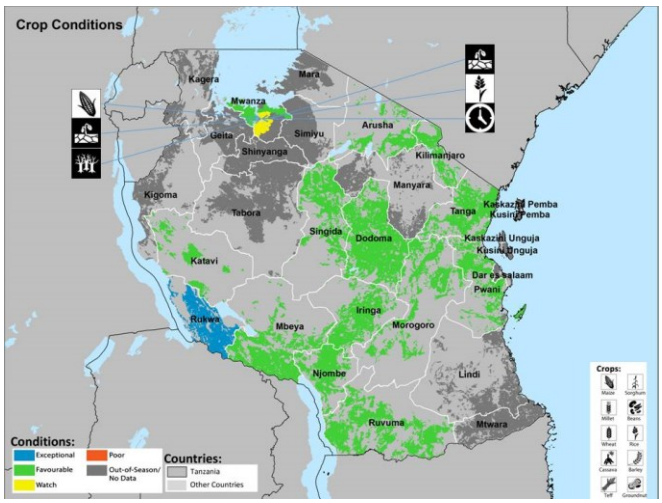

Figure 1: This Crop condition map syntheses information for all crops as of 31st December, 2018. Crop conditions over the main growing areas based on combination of national and regional crop analyst inputs along with remote sensing data and rainfall data provided by Tanzania Meteorological Agency. Crop with conditions other than favorable a marked indicated on the map.

NATIONAL HIGHLIGHTS

- In bimodal areas, most of the crops are at vegetative stages except beans which were at maturity stage with favorable conditions. However, watch condition was observed in Maize and paddy in some parts of Mwanza due various reasons. In Unimodal areas land preparation and planting activities are ongoing.
- Cassava continue to have favorable conditions all over the country and the crop is at different growth stages.
- Lindi, Songea, Iringa and Mtwara had the highest prices for rice while Shinyanga, Musoma, Geita and Sumbawanga had lowest market prices.
- Lindi, Mwanza, Bukoba, Geita and Kinondoni had above average maize price while Njombe, Songea, Babati and Mbeya were all below average maize prices. However, the lowest maize price was observed in the Njombe, Songea, Babati and Mbeya market.
- Ilala, Lindi, Kiondoni, Temeke and Mbeya had the highest prices for beans while while Babati, Arusha, Iringa and Bukoba Markets had the lowest prices of beans.

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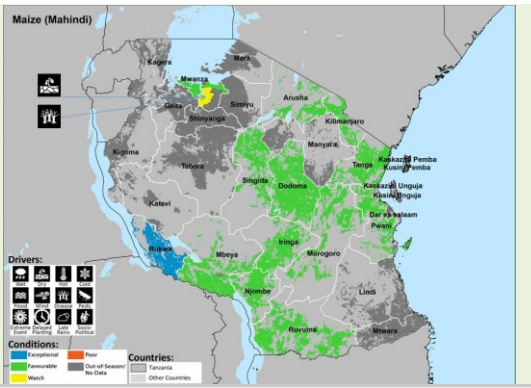
Crop Conditions for Major Food Crops

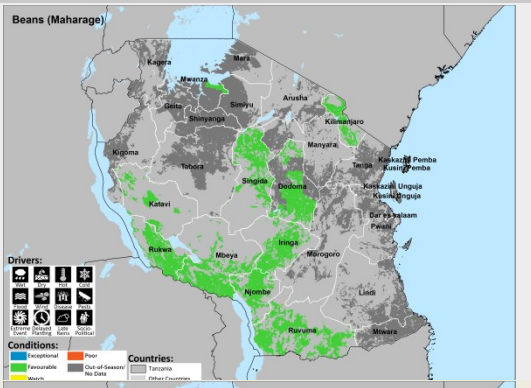
Maize

In most of the bimodal areas, Maize is at vegetative stages and in favorable condition except in some parts of Mwanza region where watch condition was observed due to dry condition and presence of pests in some parts. In unimodal areas, land preparation and planting activities are proceeding.



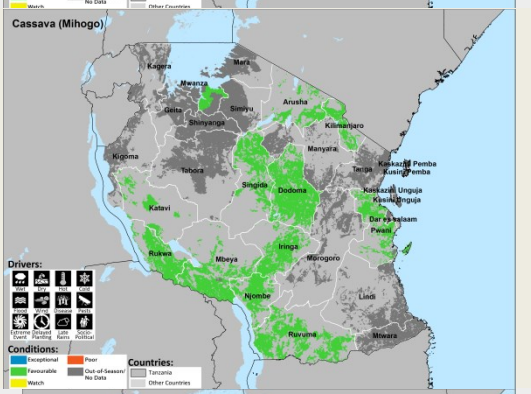
Beans

In most parts of Bimodal areas beans are at maturity stage and are in favorable conditions ready for harvest while in unimodal planting activities are on progress.



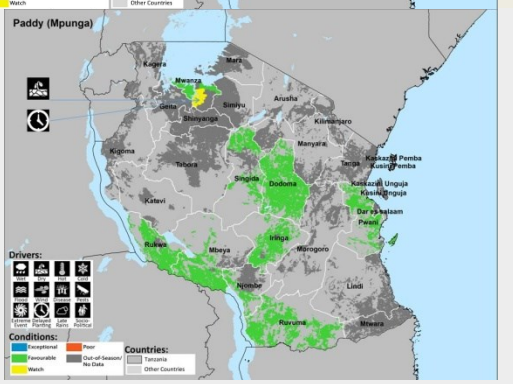
Cassava

Favorable conditions were experienced in most of the regions.



Paddy

In most part of the bimodal areas, paddy is at vegetative stages and in favorable condition except in some parts of Mwanza region where watch condition was observed due to dry condition and delayed rainfall. In unimodal areas, land preparation and planting activities are proceeding.



NOTE: ***Other important crops grown in wide range and contribute in the food basket include banana, sorghum, millets, potatoes, wheat and other pulses.***

Satellite-based crop Conditions

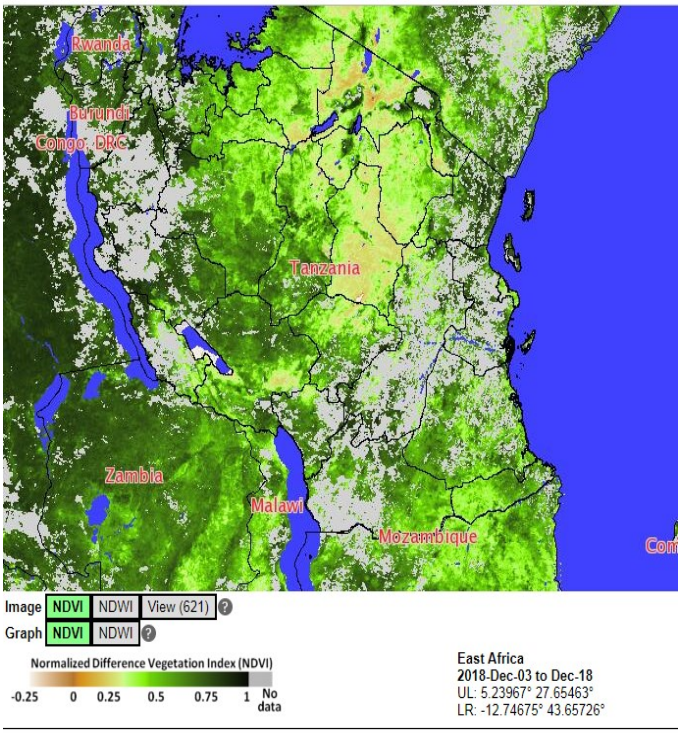


Figure .6: ***Normalized Difference Vegetation Index (NDVI) anomaly for 03-18 December, 2018***

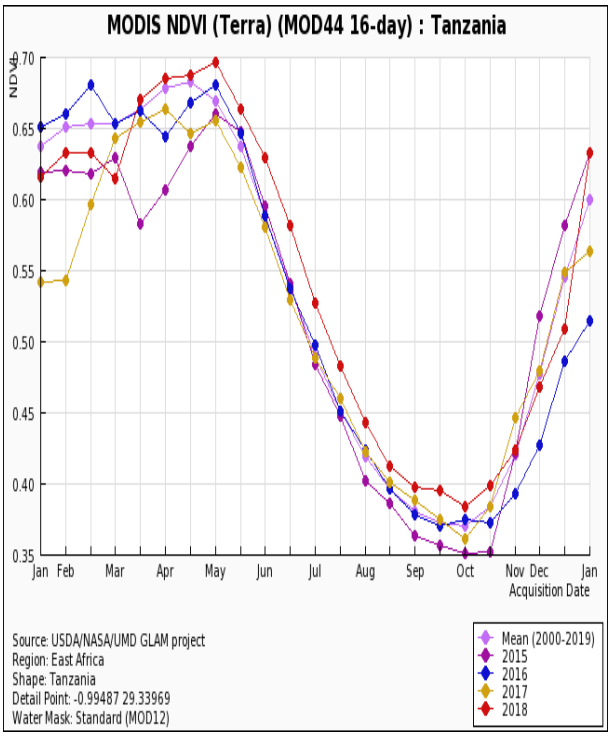


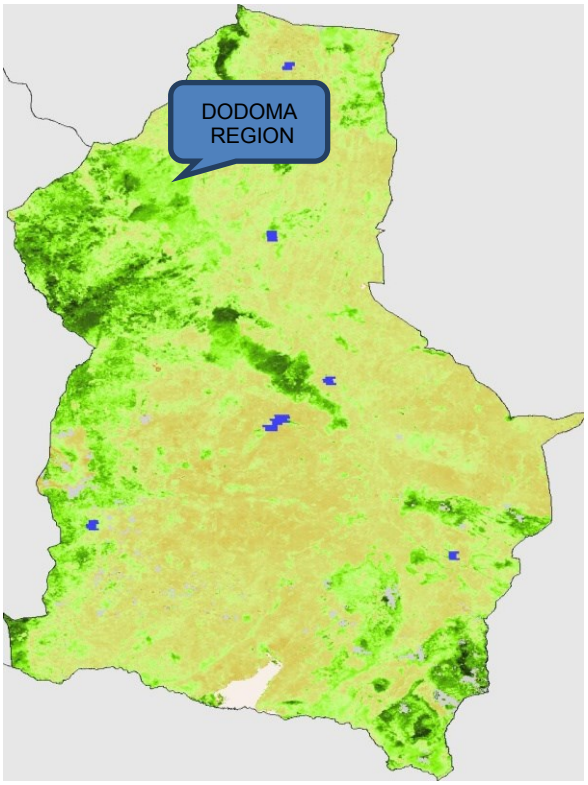
Figure 7: 16 ***days for December, 2018 as it compares to 2015,2016,2017,2018 and the long term mean. Data shows NDVI values bordering average for the whole country.***

Compared to the long term mean NDVI and the NDVI anomaly for 2015, 2016, 2017 and 2018, the NDVI for December, 2018 was lower than 2015, 2017 and the long term mean but it was higher than 2016 (Fig. 7).

During the month of December, the country received significant amount of rainfall result to good vegetation cover in most parts except Dodoma, Manyara, Arusha and some parts of Simiyu as shown in satellite image figure 6 above.

Pasture and water availability for livestock was in good condition almost all over the country due to ongoing vuli/msimu rains except in the Northern and Central parts of the country.

Satellite-based crop Conditions



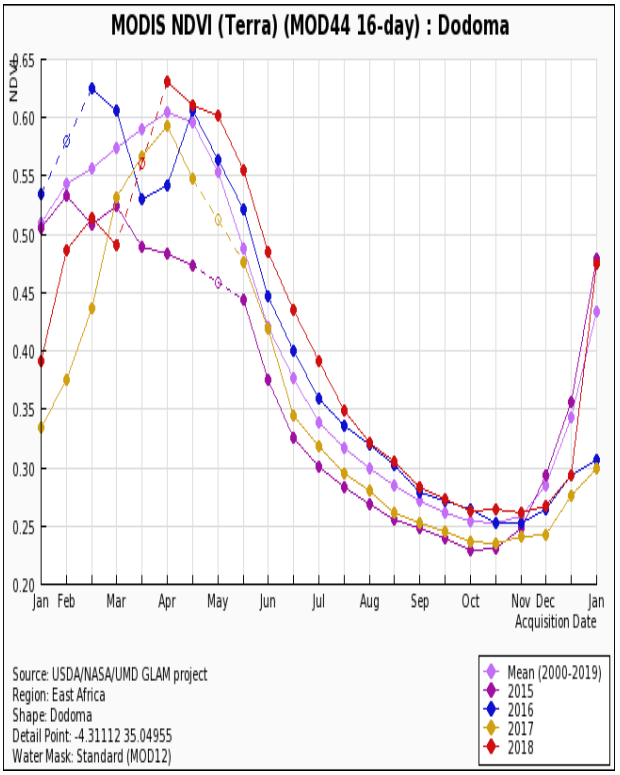


Figure .8: ***Normalized Difference Vegetation Index (NDVI) for Dodoma anomaly for 3-18 December, 2018.***

Figure 9. ***16 days NDVI for December, 2019 as it compares to 2016, 2017, 2018, and the long-term mean .***

Compared to the long term mean NDVI and the NDVI anomaly for 2015, 2016, 2017 and 2018, December, 2018 NDVI for Dodoma is higher than December, 2017 and 2016 but it is below 2016 and the long term mean. (Fig.9)

Rainfall Performance during December, 2018

During the month, the country received significant amount of rainfall between 150mm – 400mm except in some parts of Northeastern Highlands which received about 50mm - 100mm as shown in figure 1 (left). Observed rains over unimodal areas especially Central to Western parts (Singida, Tabora, Kigoma, Katavi and Rukwa regions) performed 100mm – 300mm deviated from normal. Figure 1 (right).

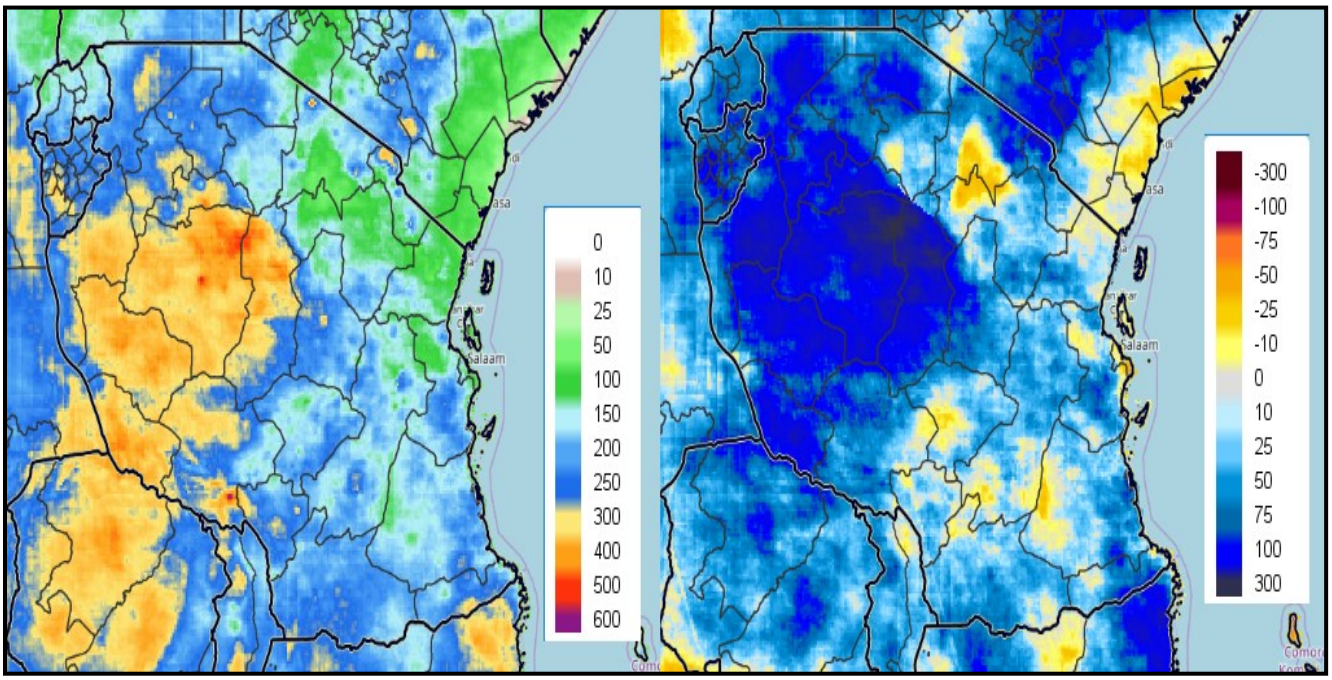


Figure 1: Tanzania Rainfall Distribution for 1 – 31 December, 2018; as total (left) and deviation from long term monthly mean (right).

Agrometeorological impact during December, 2018:

The observed rainfall over unimodal areas provided favorable conditions for crops germination in most areas. Farmers were mostly engaged in planting activities. In most of bimodal areas crops were at maturity stage except in Mwanza, Shinyanga, Mara and Tanga regions where late grown crops were still at ripening stages. Weeding was the major activity for late grown crops in these areas. Majority of farmers in the Northern Coast (mainly Dar es Salaam and Coast regions) were grown only cassava. Other crops been severely affected by soil moisture stress occurred during November. Water and pasture availability for livestock has improved in some parts of the bimodal areas especially in Lake Zone areas as a result of ongoing Vuli season rainfall.

Weather Outlook for January, 2019:

No.	Regions	Likely Weather
1.	Tanga, Pwani, Dar es Salaam regions, northern sector of Morogoro region, Unguja and Pemba Islands	Moderate rains are expected during the first three weeks of the month followed by suppression of rains during the remaining period.
2.	Kilimanjaro, Arusha and Manyara regions	Dry condition is expected during the first week of the month followed by enhancement of rainfall during the second and third weeks, thereafter reduction of rains during last week of the month.
3.	Kagera, Geita, Shinyanga, Mwanza, Mara, Simiyu, Tabora and Ruvuma	Moderate rains are expected over some areas.
4.	Kigoma and Katavi regions	Light rains are expected over some areas.
5.	Dodoma, Singida, Rukwa, Njombe, Iringa, Mbeya region and Southern sector of Morogoro	Moderate rains are expected over some areas during the first week of the month followed with enhancement of rainfall activities during the second and third weeks of the month, and thereafter reduction during the last week of the month.
6.	Mtwara and Lindi regions	Rainy conditions associated with short periods of enhanced rainfall activities during the first three weeks of the month followed by reduction of rainfall during the remaining period of the month

Agro-meteorological Outlook for January, 2019

The expected rains will likely improve soil moisture conditions over most of unimodal areas where crops are at early vegetative stages. Episodes of off seasonal rains projected during the month over bimodal areas will favour late grown crops, but can affect matured crops. Farmers are therefore advised to continue with routine farm activities and seek advice from agriculture extension and livestock keepers for optimal use of the forecast and advisory.

AVERAGE PRICES FOR DECEMBER, 2018

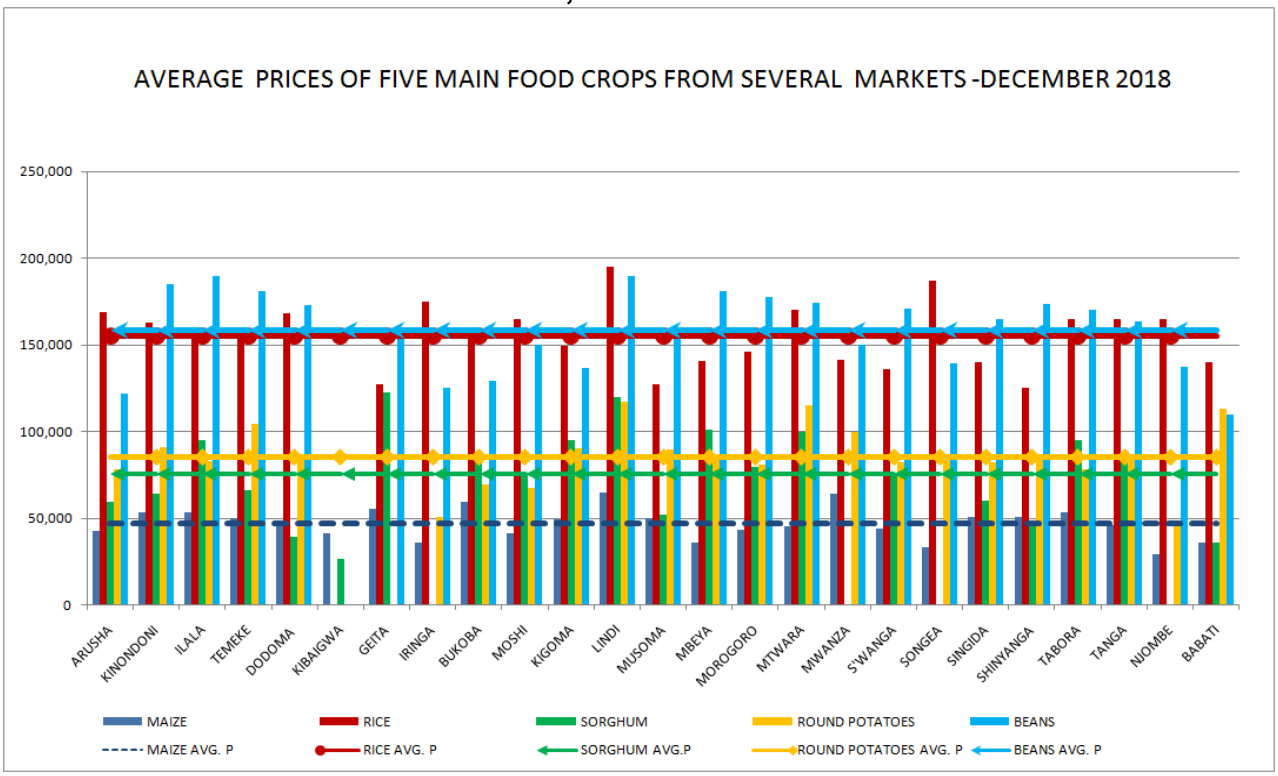


Figure 11: Major Food Prices at Selected Markets

The chart above portray December, 2019 average market prices of major food crops in combination with Nation average price data for the selected markets. Lindi, Songea, Iringa and Mtwara had the highest prices for rice ranging from (1,704/- to 1,950/- per Kg) while Shinyanga, Musoma, Geita and Sumbawanga had lowest market prices ranging from (1,250/- to 1,362/- per kg). Lindi, Mwanza, Bukoba, Geita and Kinondoni had above average maize price while Njombe, Songea, Babati and Mbeya were all below average maize prices. However, the lowest maize price was observed in the Njombe market (297 per Kg), Songea market (337/- per Kg), Babati market (360/= per Kg) and Mbeya market (360/- per Kg). Ilala, Lindi, Kiondoni, Temeke and Meya had the highest prices for beans, ranging from (1,808/- to 1,900/- per kg) while Babati, Arusha, Iringa and Bukoba Markets had the lowest prices of beans ranging from (1,100/- to 1,295/- per kg). Lindi, Mtwara, Babati and Temeke markets had the highest prices for Round potatoes, ranging from (1,045/- to 1,175/- per kg) while Njombe, Iringa, Moshi and Bukoba had the lowest prices of round potatoes ranging from (468/- to 695/- per kg). Geita, Lindi, Mbeya and Mtwara had the highest prices of Sorghum, ranging from (997/- to 1,225/- per kg) while Kibaigwa, Babati, Dodoma and Shinyanga markets had the lowest prices of sorghum ranging from (265/- to 484/- per kg).

National Food Availability

The table below shows 2017/2018 Final Food Crop Production Forecast for 2018/2019 Food Security in Tanzania.

CEREALS	MAIZE	SORGHUM& MILLETS	RICE	WHEAT	TOTAL CEREALS
Production	6,273,150	988,428	2,219,628	56,651	9,537,857
Requirement	5,462,390	1,916,108	990,044	258,731	8,627,273
Deficit(-)/Surplus (+)	810,760	-927,679	1,229,583	-202,080	910,584
SSR (%)	**115**	**52**	**224**	**22**	**111**
NON-CEREALS	**PULSES**	**BANANA**	**CASSAVA**	**POTATOES**	**TOTAL NON CEREALS**
Production	1,823,472	1,131,832	2,790,737	1,608,076	7,354,117
Requirement	788,122	910,523	2,273,332	970,034	4,942,012
Deficit(-)/Surplus (+)	1,035,350	221,309	517,404	638,041	2,412,105
SSR (%)	**231**	**124**	**123**	**166**	**149**
TOTAL	**CEREALS**	**NON-CEREALS**	**TOTAL FOOD**		
PRODUCTION	9,537,857	7,354,117	16,891,974		
REQUIREMENT	8,627,273	4,942,012	13,569,285		
DEFICIT (-)/ SURPLUS(+)	910,584	2,412,105	3,322,689		
SSR (%)	**111**	**149**	**124**		

Source: The MoA 2017/2018 Final Food Crop Production Forecast for 2018/2019 Food Security.

Contribution of Different Crops for Food Security 2018/2019 Consumption Year

The proportional contribution crop wise for 2018/2019 consumption year is as indicated in the figure below

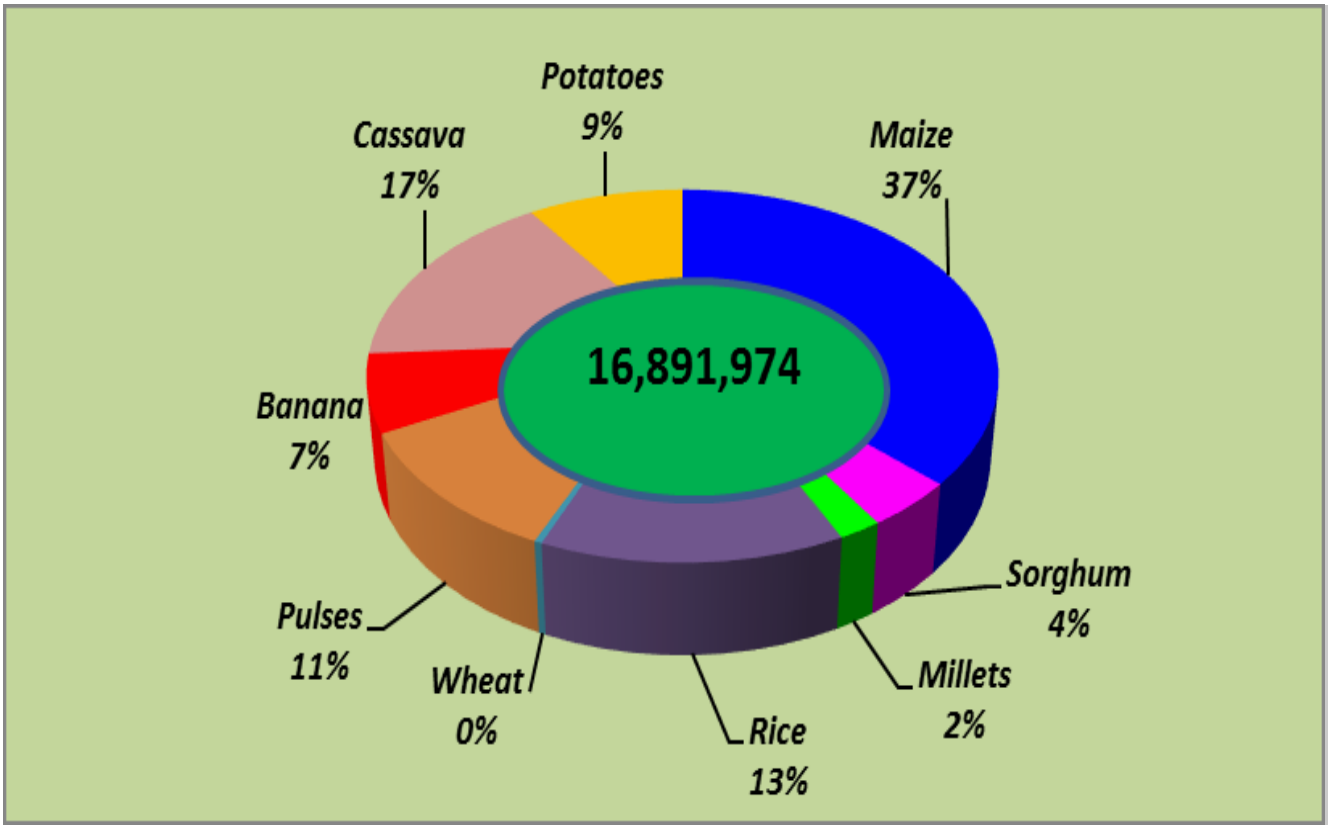


Figure 22: Crop wise proportional contribution

Source: The MoA 2017/2018 Final Food Crop Production Forecast for 2018/2019 Food Security.

Interventions

Nutrition Related interventions

On Going Nutrition Related interventions

- Promote production and consumption of high nutritive value crops from a variety of food crops including cereals and non- cereals such pulse, roots, tubers, fruits and vegetables so as to ensure availability of minerals, vitamins and proteins.
- Promote Bio fortification with the view of increasing nutritive value of a crop. Bio-fortification offers the most effective, sustainable and cost-effective delivery model to supply the micronutrients of nutritional importance, such as iron, zinc, vitamin A, and protein.
- Promote post-harvest management technologies that reduce post- harvest losses and hence ensure food and nutrients availability.
- Promote agro-processing with a view to preserve nutrients and ensure availability of food throughout the year.
- Disseminate agriculture related nutrition education among extension workers.

Medium to Long-Term Strategies:

- Provide training sessions on improved crop production, crop diversification as well as marketing in order to increase household income.
- Improve market linkages and accessibility through construction of roads, market infrastructures introduction of regulations for the transport of commodities, etc.
- Construction and rehabilitation of drainage systems and irrigation schemes as well as improved agricultural land management to avoid water logging.
- Promote a fully-fledged watershed management in order to reduce the associated risks of flooding of the agricultural land through - tree planting, land use management plans, riverbank maintenance, construction of dams,etc.

PUBLIC AWARENESS

Project to Link Farmers to Agribusiness in Tanzania

The World Bank Board of Executive Directors has approved $70 million in new financing to support Tanzania's agriculture sector and strengthen it by linking smallholder farmers to agribusinesses for boosting incomes and job-led growth. As part of its national development strategy the Government of Tanzania is currently implementing the Southern Agricultural Growth Corridor of Tanzania (SAGCOT) Program which seeks to promote agribusiness partnerships to tackle low farm productivity and limited market access that are impeding development of the country's agricultural sector. The newly-approved SAGCOT Investment Project is financed by the International Development Association* (IDA) and seeks to develop income opportunities for 100,000 smallholder farming households by providing them new technologies and marketing practices and expanding partnerships with lucrative agribusinesses in the Southern Corridor of Tanzania. Once implemented, the project will directly benefit over half a million people and engage 40 agribusiness operators, with emphasis on including women in successful commercial value chains.

"*Smallholder farmers play a central role in Tanzania's agricultural sector"* "*The SAGCOT Investment Project has the potential to be transformational as it will provide them with crucial access to capital and new technology needed to invest in higher value production, promote their livelihoods and meet their nutritional needs."* Over 80 percent of the poor and extreme poor live in the rural areas with limited opportunities to establish links with productive value chains and higher value crops. As a result, Tanzania's otherwise remarkable economic growth rate of 7 percent over the past decade has left behind most of the poor in the rural areas. The SAGCOT Investment Project will link them by encouraging greater investments by agribusiness firms partnering with smallholder farmers through providing matching grants that they can use for capital and operational costs directly related to expanding smallholder participation in competitive agricultural supply chains.

The Government of Tanzania has created two new public-private-partnership institutions to lead sound implementation of the SAGCOT Program – the SAGCOT Centre as a focal point for planning and advertising the wider SAGCOT Program; and the SAGCOT Catalytic Trust Fund, which supports early stage investment in the corridor by providing matching grants. The World Bank-financed project will achieve its objectives by channeling support through those two entities as well as improving the operations of the Tanzania Investment Center (TIC) which is tasked with preparing and promoting investment projects and attracting private sector investments. "*Tanzania has achieved demonstrable successes in boosting productivity in the horticulture, rice, sugar and tea sectors*". "*The challenge is to extend the reach of existing efforts and expand poor farmers' access to lucrative market opportunities, which are the goals of the project*." The SAGCOT Investment Project is aligned with the World Bank's Country Assistance Strategy and the National Strategy for Growth and Reduction of Poverty (*Mkukuta II)*; specifically Cluster I: Growth and Reduction of Income Poverty, which calls for the modernization and commercialization of private sector-based agricultural activities through accelerating productivity growth and removing bottlenecks in agribusiness value chains.

Terms and Definitions

MOA	Ministry of Agriculture	
NFSD	National Food Security Division	
TMA	Tanzania Metrological Agency	
RAS	Regional Administrative Secretary	
NDVI	Normalized Difference Vegetative Index. The NDVI is used to measure and monitor plant growth, vegetative cover, and biomass production.	
MODIS	Moderate resolution Imaging Spectro-radiometer	
BIMODAL	Areas receiving rains twice a year. This means that the majority of precipitation falls in two distinct seasons a year i.e short rains Vuli-September to December, Long rains Masika - March to June.	
UNIMODAL	Areas receiving rains once a year Msimu rains i.e. from November to April	
Conditions	Exceptional	Conditions are much better than average at time of reporting
	Favorable	Conditions range from slightly below to slightly above average at reporting time
	Watch	Conditions are not far from average but there is a potential risk to production
	Poor	Crop conditions are well below average. Crop yields are likely to be 10% or more below
	Average	This is only used when conditions are not likely to be able to recover, and impact on production is likely
Drivers	Wet: Flooding	Wetter than Average due to flooding
	Wet: Water Logging	Wetter than Average due to water logging
	Dry	Dryer than Average
	Hot	Hotter than Average
	Cold	Cooler than average or risk of frost damage
	Extreme Event	This is a catch-all for all other climate risks (i.e. hurricane, typhoon, frost, hail, winterkill, wind damage, etc.)
	Delayed Planting	Postponement to the start of season
	Pests	Destructive insects or animals
	Disease	Impairment of the crop that causes abnormal functioning
	Wind Damage	Damage caused by high winds
	Flood	An excessive amount of water located beyond its normal boundaries
	Socio-political	Social or political factors that impact crop conditions (i.e. policy changes, agricultural subsidies, government intervention, etc.)
	Late Rains	Delayed onset of rainy season
Trends	Improving	Crop conditions are improving
	Stable	Crop conditions are stable
	Worsening	Crop conditions are worsening