



**National Drought Management Authority**  
**KWALE COUNTY**  
**DROUGHT EARLY WARNING BULLETIN SEPTEMBER 2021**

**SEPTEMBER 2021 EW FLAG**



**Early Warning (EW) Phase Classification**

Livelihood Zone	Phase	Trend
Mixed Farming	Alert	Stable
Livestock Farming	Alert	Stable
County	Alert	Stable
Biophysical Indicators	Value	Normal Range/Value
VCI	23.68	>35
State of Water Sources	4	4
Production indicators	Value	Normal
Crop condition (maize and legumes)	-	-
Milk Production (Litres)	2.6	3.3
Livestock Migration Pattern	Intra-county migrations	Intra-county migrations
Livestock deaths (from drought)	Zero deaths	Zero deaths
Access indicators	Value	Normal
Terms of trade	60.2	54
Milk Consumption (litres)	1.6	1.4
Return distance to water sources for households (km)	4.3	2.9
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	2.9	-

**Drought Situation & EW Phase Classification**

**Biophysical Indicators**

- No rainfall was received in the county in the first and second dekads of the month.
- The vegetation condition for September was below normal for the month with all sub-counties classified in the moderate drought category.
- The state of water sources was below normal for September.

**Socio Economic Indicators (Impact Indicators)**

**Production indicators**

- Harvesting was almost complete for the long rains season crop. Land preparation was on-going for the short rains season crop.
- Milk production below normal this month.
- No cases of migration or drought-related livestock deaths were recorded during the month. However, intra-county movements by herders have intensified in search of pasture and water from McKinnon Road, Ndavaya and Kasemeni wards to Mwereni Ward.

**Access indicators**

- Terms of trade (casual labour to maize) were normal implying normal household purchasing power.
- Household milk consumption was normal for the month of September.
- Distances to water sources for domestic use were above normal for September.

**Utilization Indicators**

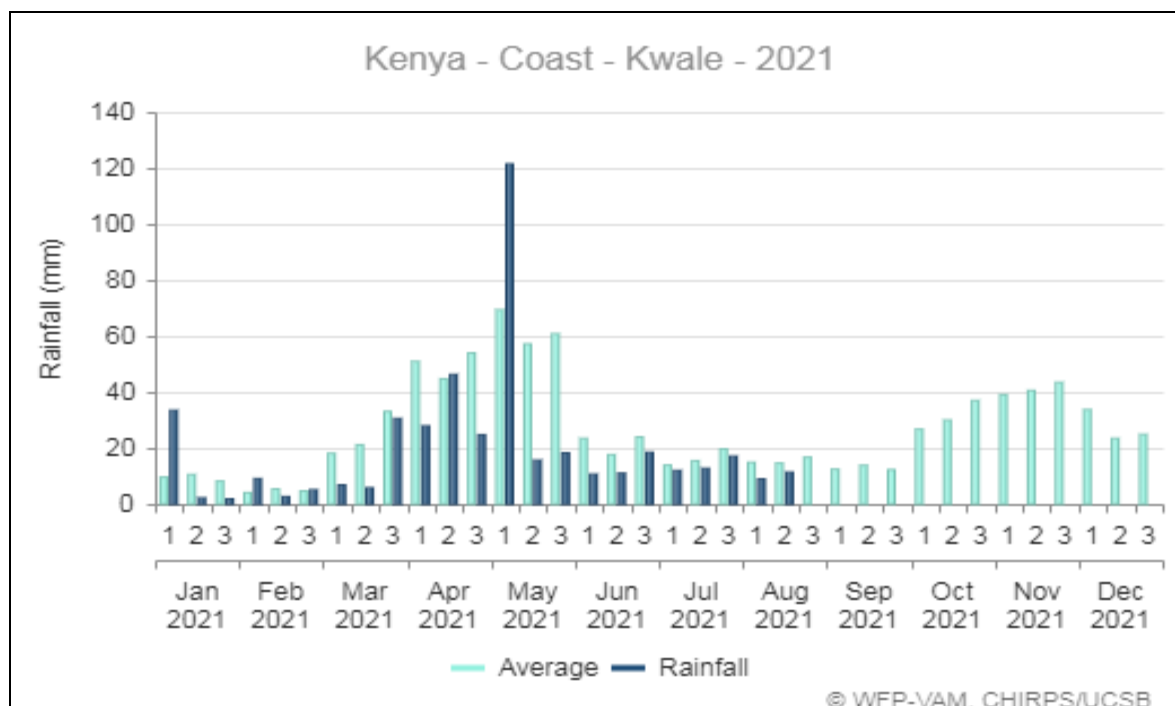
- The percentage of children at risk of malnutrition was estimated at 2.9

**Seasonal calendar**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
<ul style="list-style-type: none"> <li>Short rains harvests</li> <li>Short dry spell</li> <li>Reduced milk yields</li> <li>Increased household food stocks</li> <li>Land preparation</li> </ul>			<ul style="list-style-type: none"> <li>Planting/weeding</li> <li>Long rains</li> <li>High calving rate</li> <li>Milk yields increase</li> </ul>			<ul style="list-style-type: none"> <li>Long rains harvests</li> <li>A long dry spell</li> <li>Land preparation</li> <li>Increased household food stocks</li> <li>Kidding (Sept)</li> </ul>			<ul style="list-style-type: none"> <li>Short rains</li> <li>Planting/weeding</li> </ul>		

## 1.1 RAINFALL PERFORMANCE

- No rainfall was received in the county during the first two dekads of the month as shown in the diagram below.
- This was below average as normally an average of 12.264, 13.703 and 12.234 mm of rainfall would be recorded in the first, second and third dekads of September.



## 2.0 IMPACTS ON VEGETATION AND WATER

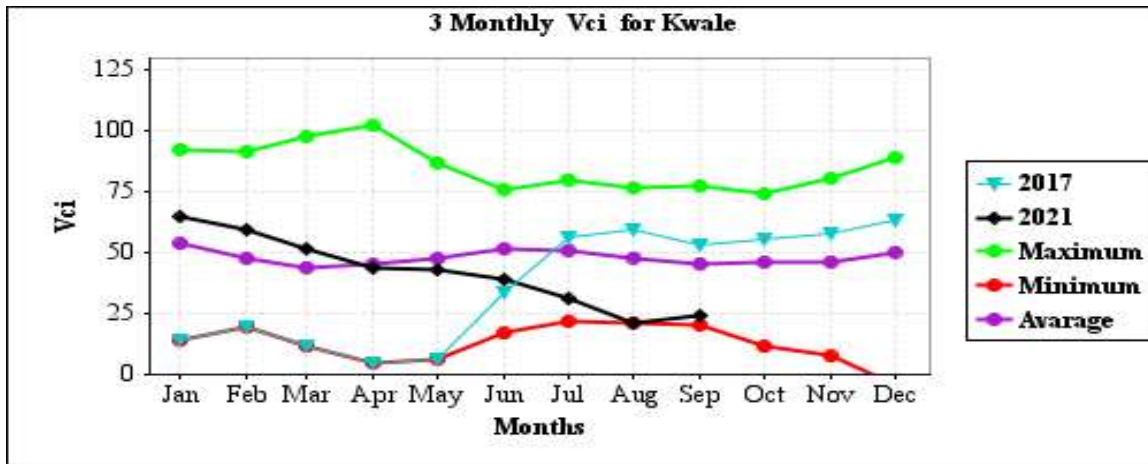
### 2.1 VEGETATION CONDITION

#### 2.1.1 3-monthly Vegetation Condition Index (VCI)

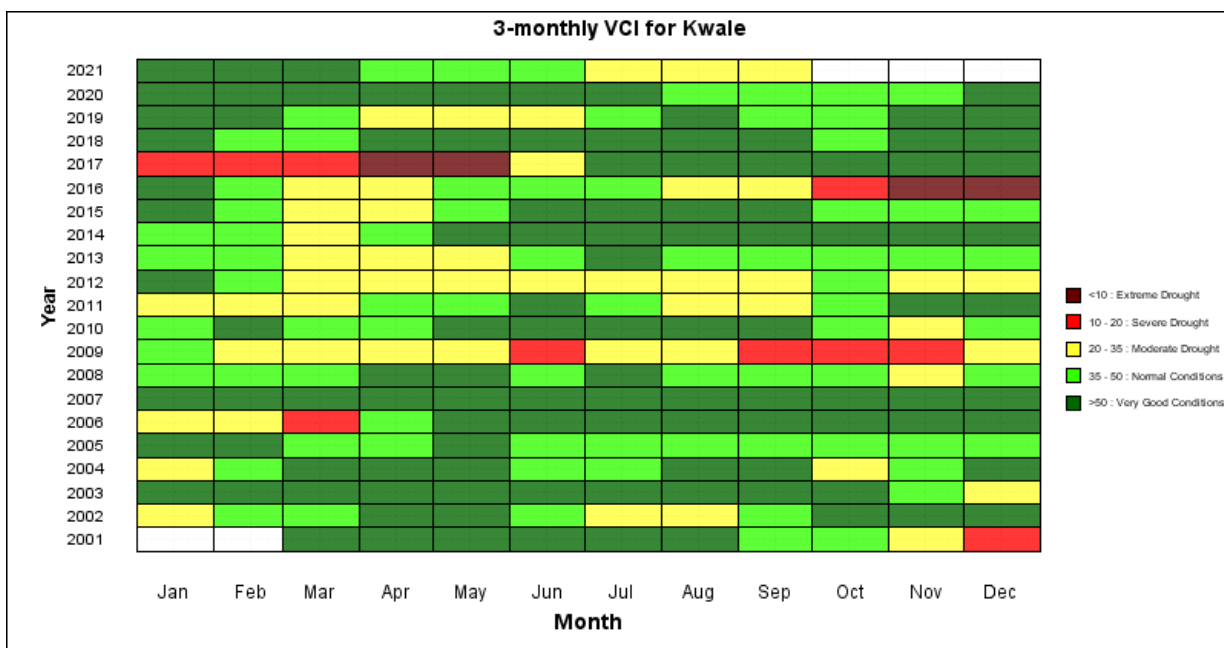
- There was an insignificant increase in the county's vegetation greenness as the 3-monthly VCI increased from 21.04 in August to 23.68 in September as shown in the table below.
- The county is therefore categorized in the moderate drought category similar to last month.
- All sub-counties recorded increases in the vegetation greenness as illustrated by the increase in the VCI with the exception of Lunga Lunga Sub-county.
- However, all sub-counties were categorized in the moderate drought category similar to last month with the exception of Kinango Sub-county which had improved from the severe drought category in August.

Area	Jan 2021	Feb 2021	Mar 2021	April 2021	May 2021	June 2021	July 2021	August 2021	Sept 2021
Kinango Sub-county	61.91	55.81	45.9	36.67	37.17	34.22	26.02	16.93	21.24
Lunga Lunga Sub-County	68.29	61.71	54.78	36.67	53.4	48.88	40.55	28.8	25.84
Matuga Sub-county	67.06	67.2	64.76	53.92	43.63	36.06	31.23	23.56	27.71
Msambweni Sub-county	67.06	66.07	64.34	55.43	51.81	47.42	38.99	26.21	32.09
Kwale County	64.28	59.16	51.29	43.08	42.55	38.57	30.75	21.04	23.68

- In addition, the county's vegetation condition almost coincides with the lowest point ever recorded in the county as shown in the graph below.

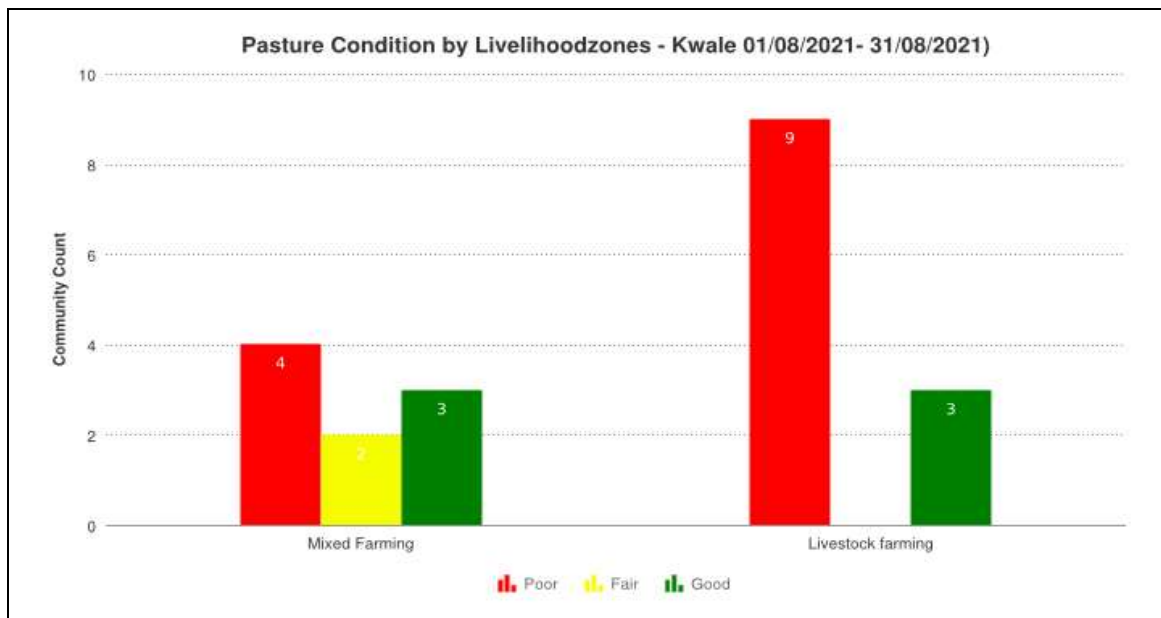
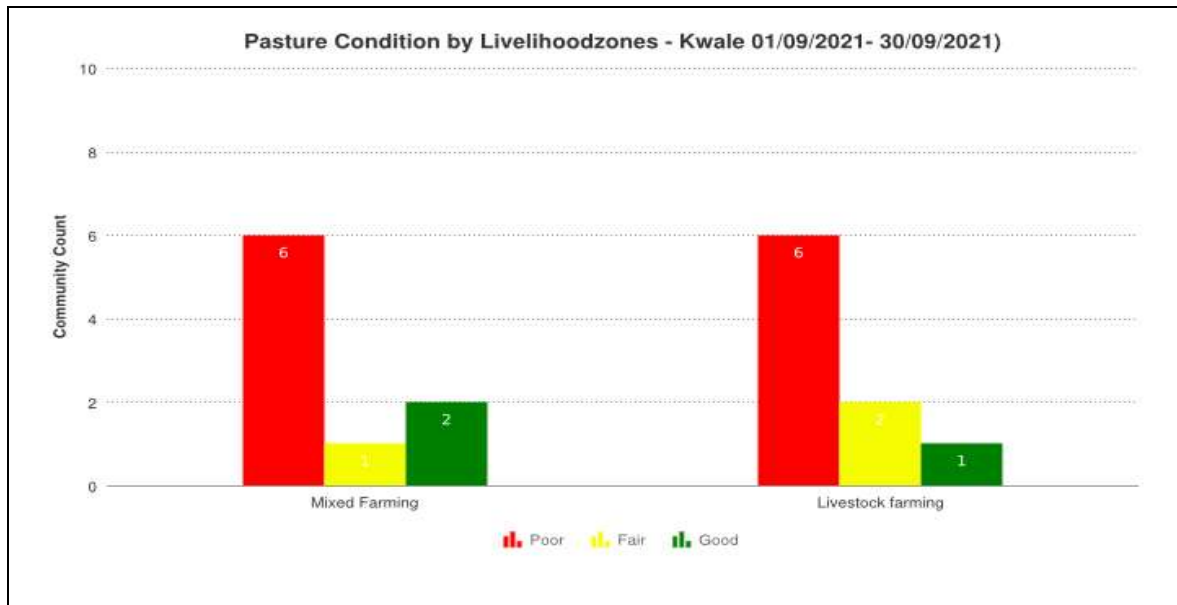


- The matrix below shows that the current vegetation condition was worse than a similar time last year and similar to the same period in 2016 when the county experienced a severe drought.



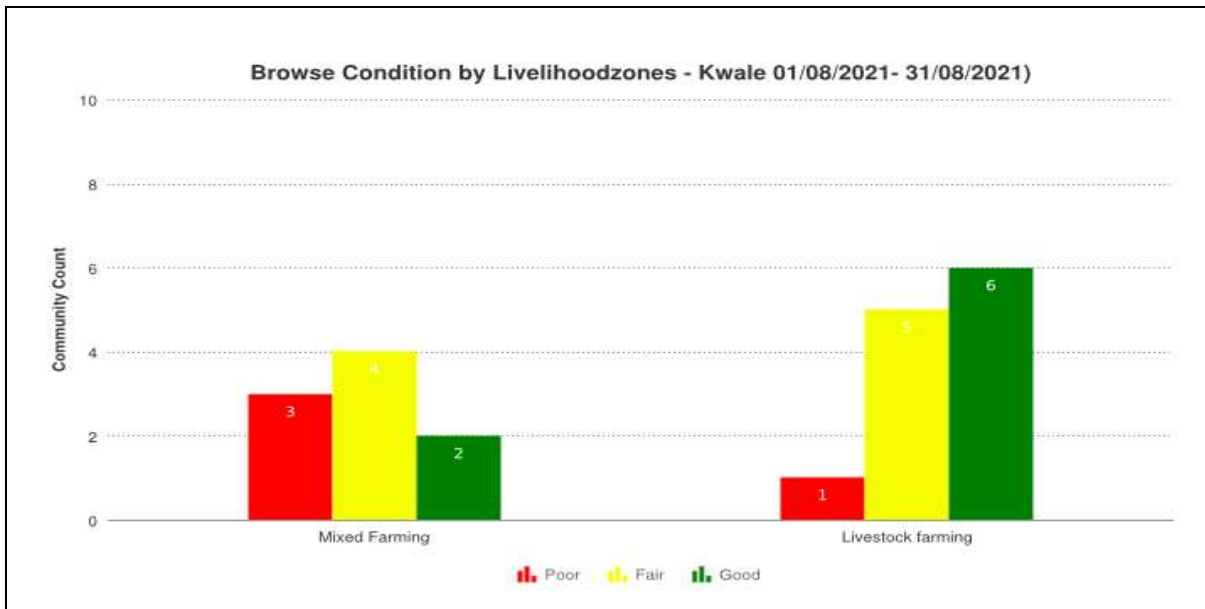
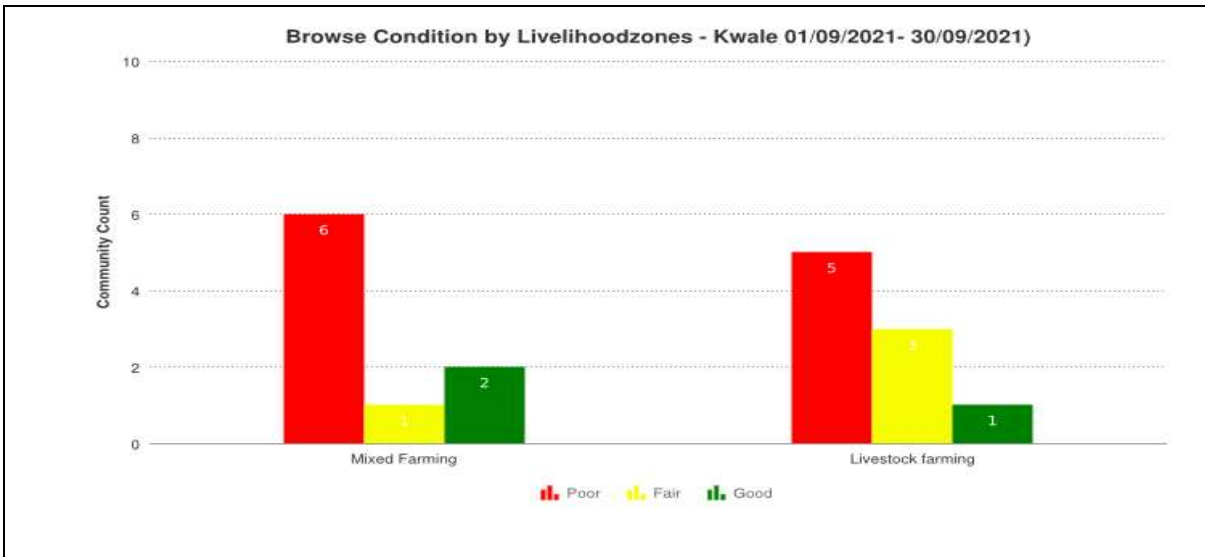
**2.1.2 Pasture**

- There was a slight deterioration in pasture condition in the county in September as approximately 66.7 percent of households recorded poor pasture condition compared with 61.9 percent in August.
- In addition, an approximated 16.7 percent of households reported good pasture condition in September having reduced from 28.6 percent in August further underscoring the deteriorating trend.
- The changes were reflected at livelihood zone level as shown in the graphs below.



**2.1.3 Browse**

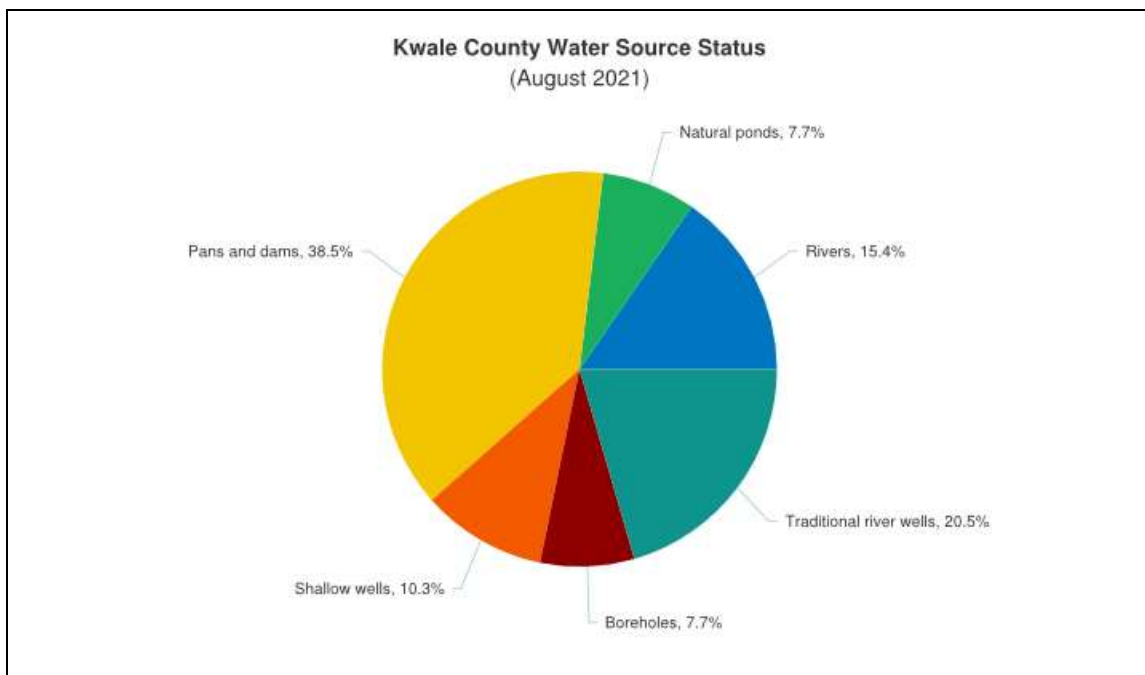
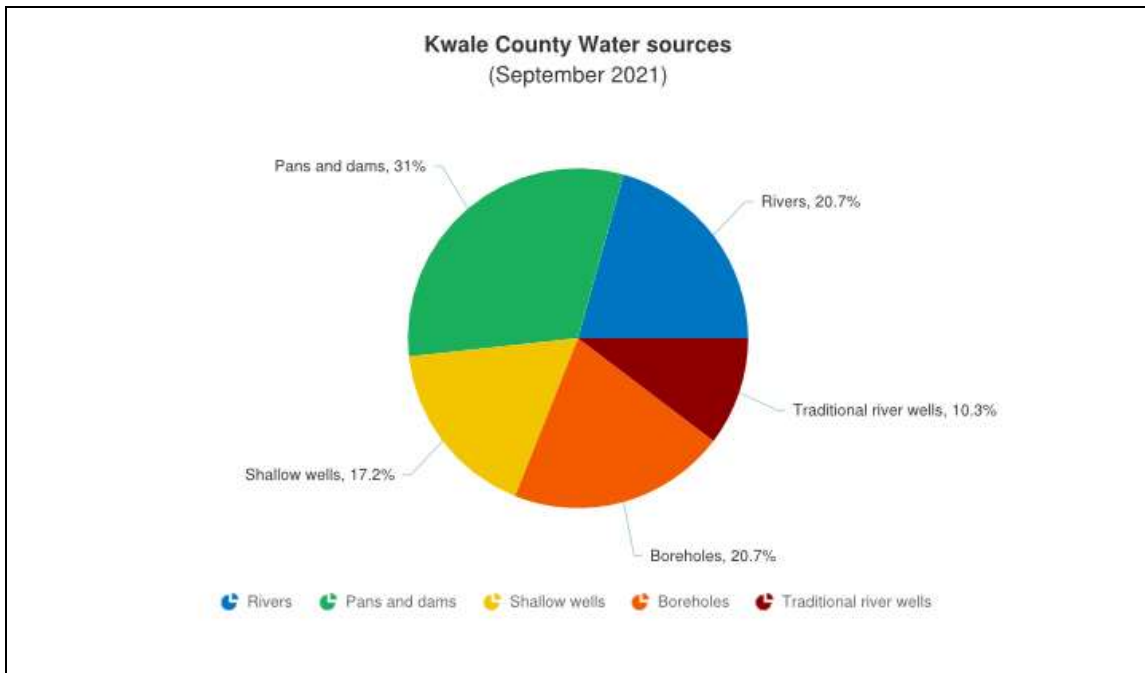
- Browse condition deteriorated compared with last month as an estimated 16.7 percent of households reported having good browse condition in September compared with 38.1 percent in August.
- In addition, approximately 22.2 and 16.7 percent of households reported fair and poor browse condition respectively in September in comparison with 42.9 and 19 percent respectively in August, indicative of a deteriorating trend.
- The deterioration was evident at livelihood zone level as shown in the graphs below.



## 2.2 WATER RESOURCES

### 2.2.1 Sources

- Pans and dams were the main sources of water for domestic consumption in September similar to last month. However the proportion of households relying on them had reduced from 38.5 percent in August to 31 percent in September as shown in the graph below.
- Other major sources in September included rivers and boreholes on which 20.7 percent of the population relied upon as shown in the pie-chart below.
- The sources were the ones normally relied upon for this time of the year.



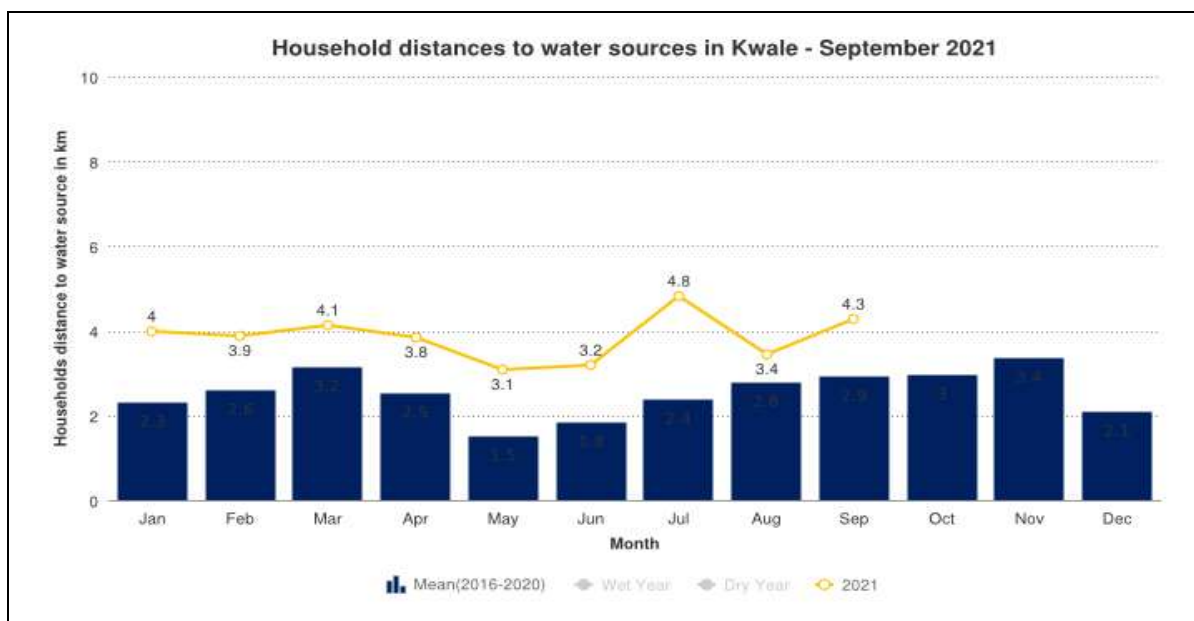
- The status of water sources was declining at index '4', implying that water availability was below normal for this time of the year.

INDEX	STATUS OF WATER SOURCE	DESCRIPTION
1	<b>EMERGENCY SITUATION</b>	All main water sources have dried up; only few boreholes still yielding significant amounts
2	<b>STRONGLY INADEQUATE</b>	Surface water sources have dried up while the underground water sources are yielding very little amounts of water. Breakages of boreholes contribute to worsen the situation. Acute water shortage in many areas within the livelihood

3	<b>INADEQUATE</b>	Surface water sources have dried up while the underground water sources are yielding modest amounts of water. Concentration of livestock around few water points contribute to spread communicable diseases and to degradation of rangeland
4	<b>DECLINING</b>	The water availability is below normal for the period
5	<b>NORMAL</b>	The water availability is normal for the period
6	<b>GOOD</b>	The water availability is above normal for the period

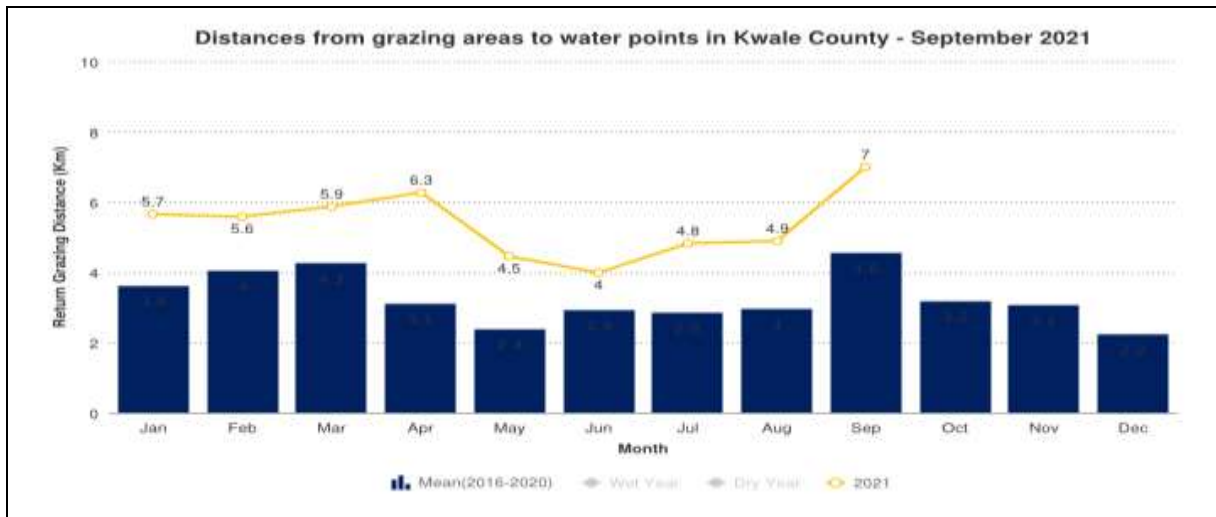
### 2.2.2 Household access and utilization

- Access to water for household use declined this month in comparison with August as households had to walk an average of 4.3 km in September compared with 3.4 km in August as shown in the graph below.
- Accessibility was lower than normal as households would normally walk an average distance of 2.9 km for this time of the year in the 2016-2020 LTA as shown in the graph below.



### 2.2.3 Livestock access to water

- Access to water by livestock declined this month as livestock had to walk an average 7.0 km in search of water in September in comparison with 4.9 km in August as shown in the graph below.
- The decline could be owed to deteriorated forage condition and reduced water availability in the county.
- The current distance was also way higher than expected for this time of the year in comparison with 4.6km recorded in the 2016-2020 LTA as shown in the graph below.

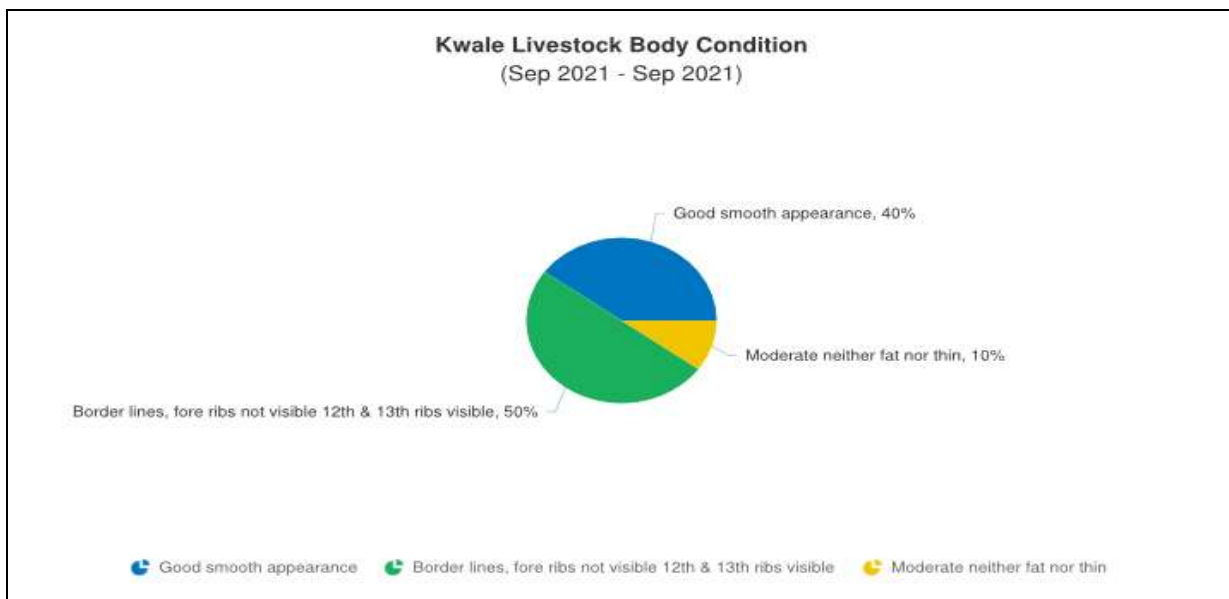


### 3.0 PRODUCTION INDICATORS

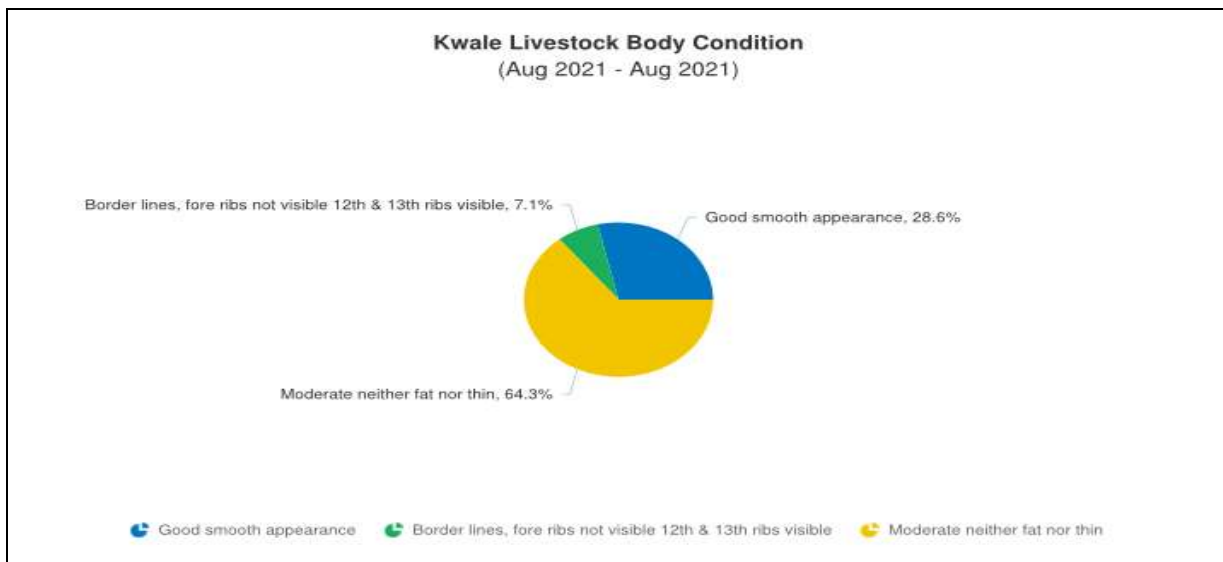
#### 3.1 LIVESTOCK PRODUCTION

##### 3.1.1 Livestock Body Condition

- Livestock body condition deteriorated this month as the proportion of households who were categorized as stressed (borderline fore-ribs not visible but 12th & 13th ribs visible) increased from 7.1 percent in August to 50 percent in September as shown in the graphs below.
- The deterioration could be owed to the reported increase in distances to watering points from grazing areas.



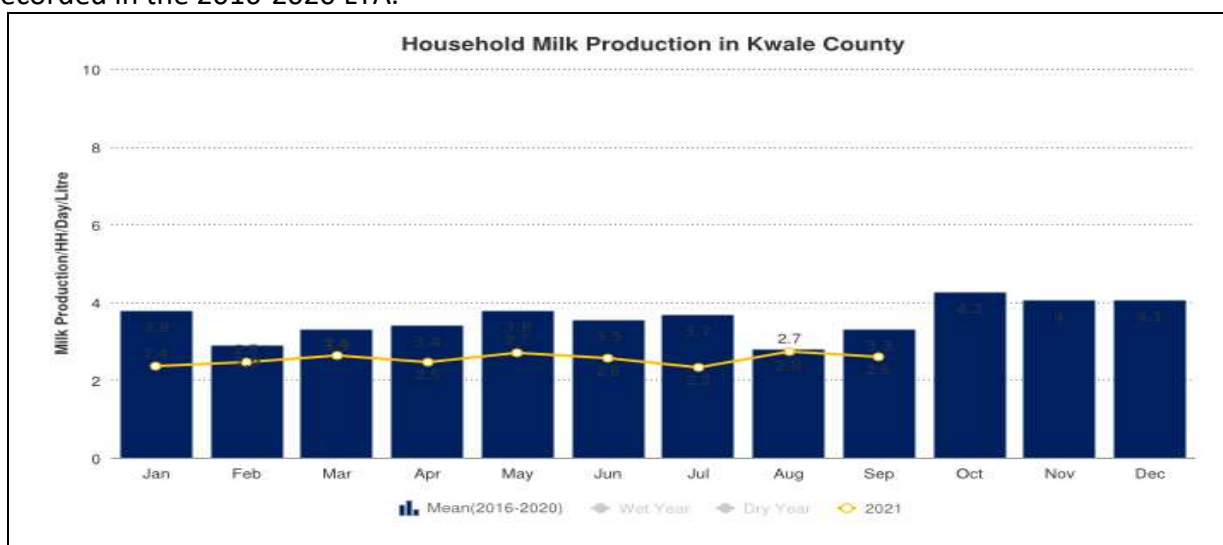




Level	Classification	Characteristics (this describes majority of the herd and not individual isolated stock)
1	Normal	Very Fat Tail buried and in fat
		Fat, Blocky. Bone over back not visible
		Very Good Smooth with fat over back and tail head
		Good smooth appearance
2	Moderate	Moderate. neither fat nor thin
3	Stressed	Borderline fore-ribs not visible. 12th & 13th ribs visible
4	Critical	Thin fore ribs visible
5	Emaciated	Very thin no fat, bones visible
		Emaciated, little muscle left

### 3.1.2 Milk Production

- Milk production at household level averaged 2.6 litres in September having maintained a stable trend in comparison with 2.7 litres recorded in August as shown in the graph below.
- The production was slightly below average for this time of the year compared with 3.3 litres recorded in the 2016-2020 LTA.



## 3.2 RAIN-FED CROP PRODUCTION

### 3.2.1 Stage and condition of food crops

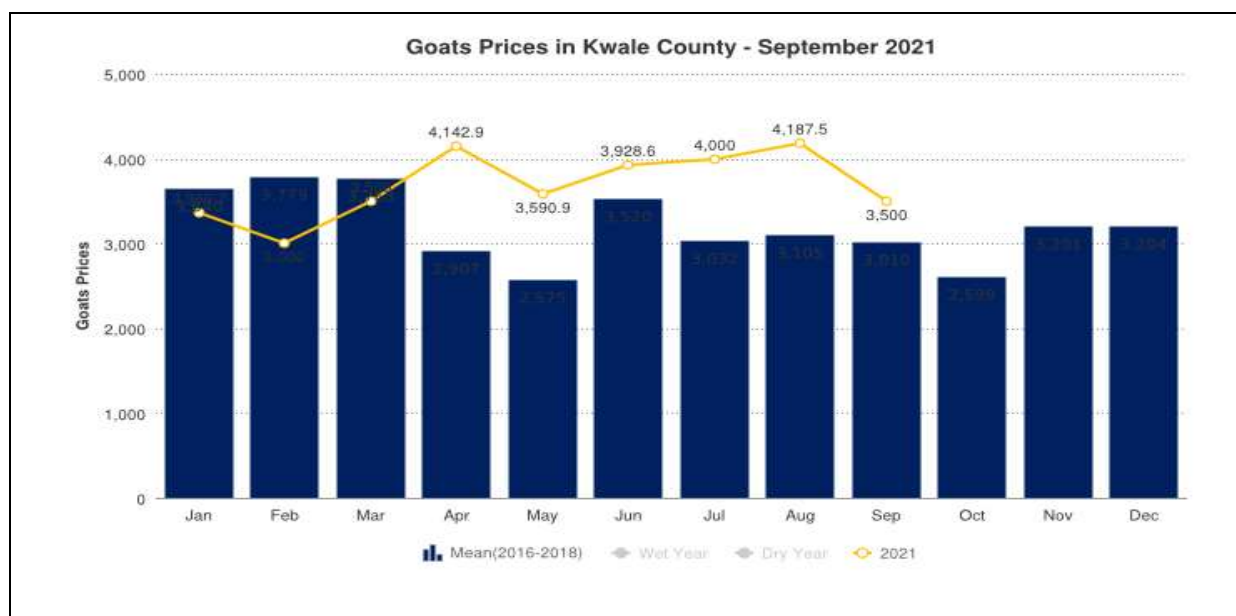
- Harvesting of the long rains season crop was nearing completion. Households were also engaged in land preparation in readiness for the short rains season.
- Maize, cow peas and green grams were the main crop grown during the season.
- Production for all three crops was below normal for the season.

## 4.0 MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

#### 4.1.1 Goat prices

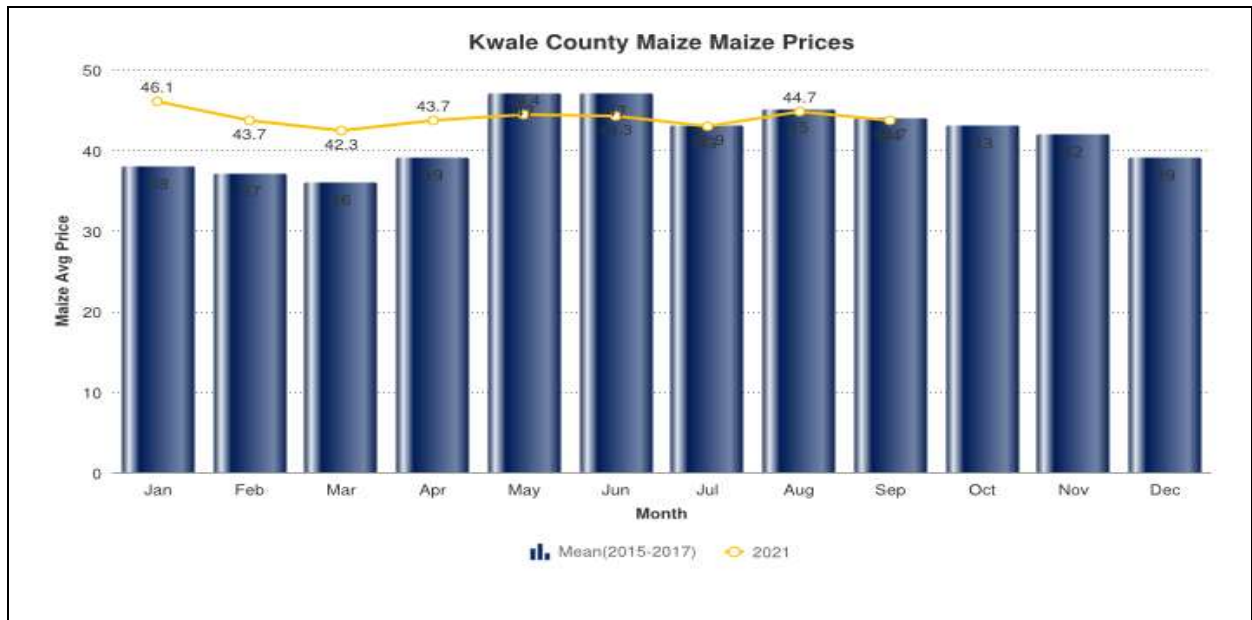
- A medium-sized three-year-old buck was Kshs 3,500 in September having reduced by a 16.4 percent margin from Kshs 4,187.5 in August.
- The price was however, relatively within seasonal norms in comparison with Kshs 3,010 recorded in the 2016-2018 LTA as shown in the graph below.



## 4.2 CROP PRICES

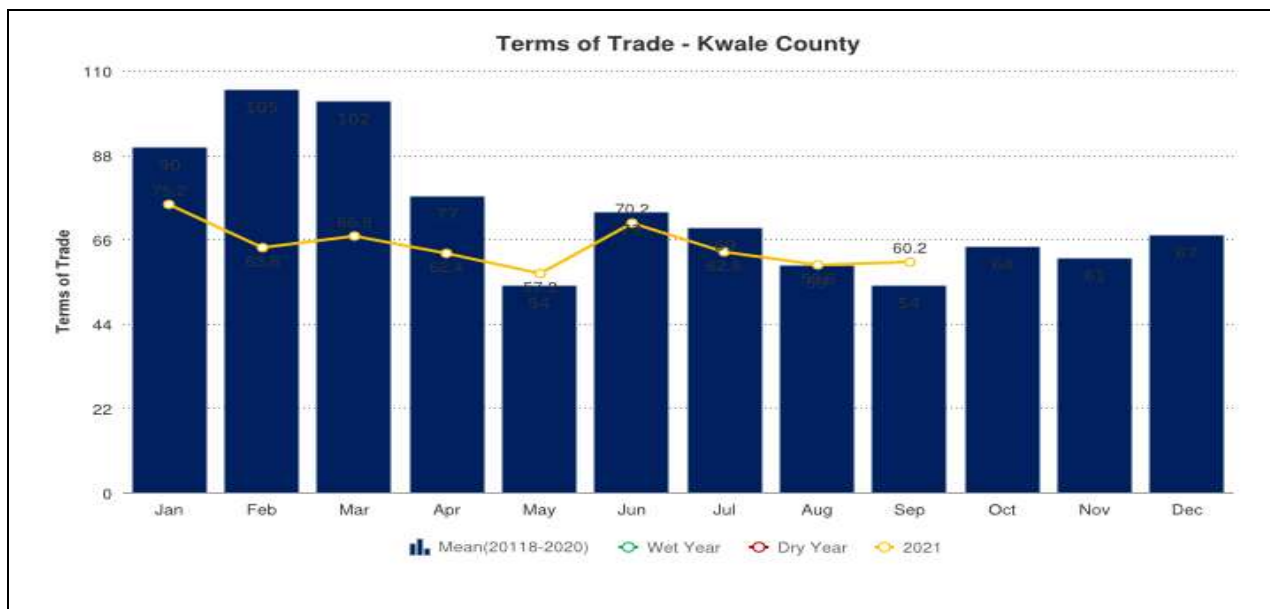
### 4.2.1 Maize

- The retail price of a kilogram of maize was Kshs 43.7 in September having remained stable in comparison with Kshs 44.7 recorded in August.
- The price was within seasonal norms compared with Kshs 44 recorded in the 2015-2017 LTA as shown in the graph below.



### 4.3 TERMS OF TRADE (ToT) - CASUAL LABOUR VERSUS MAIZE PRICES

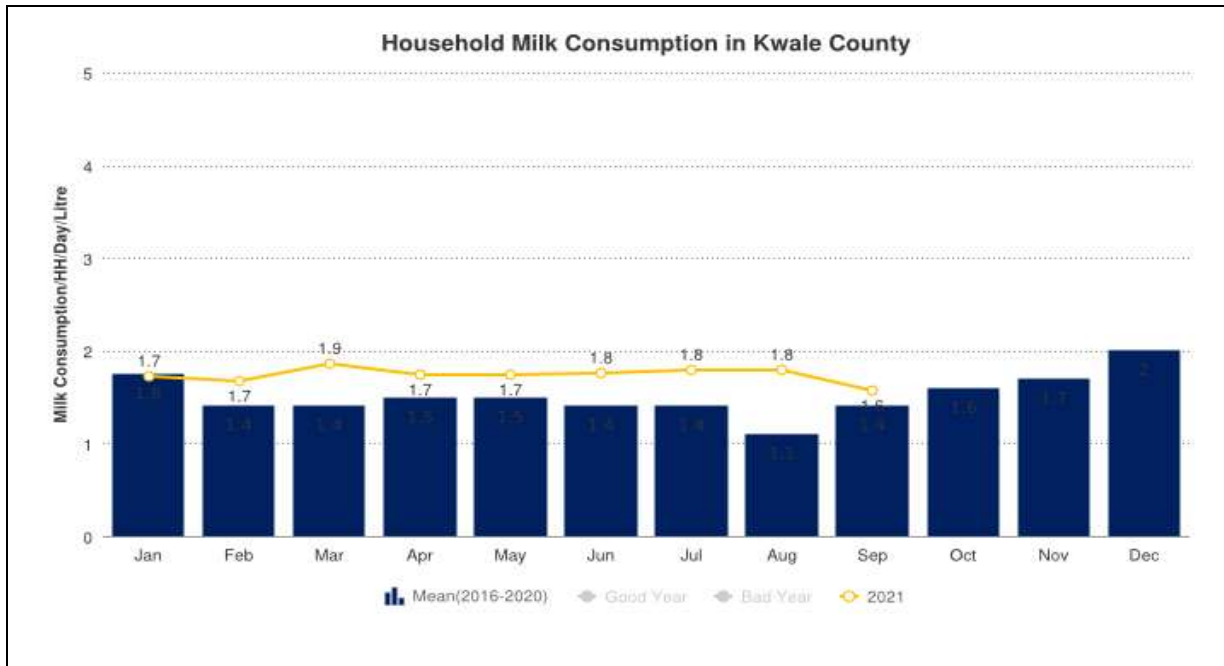
- The average ToT this month was 60.2 having maintained a stable trend in comparison with 59.5 in August.
- The ToT was within seasonal norms in comparison with 54 recorded in the 2018-2020 LTA as shown in the graph below.
- The stability from last month shows that with the earnings from casual labour, households were able to purchase relatively the same quantity of maize this month compared with last month.
- The same earnings could be able to purchase the normal quantity of maize for this time of the year.
- The implication was that household purchasing power had remained relatively stable compared with last month and was relatively normal.



## 5.0 FOOD CONSUMPTION

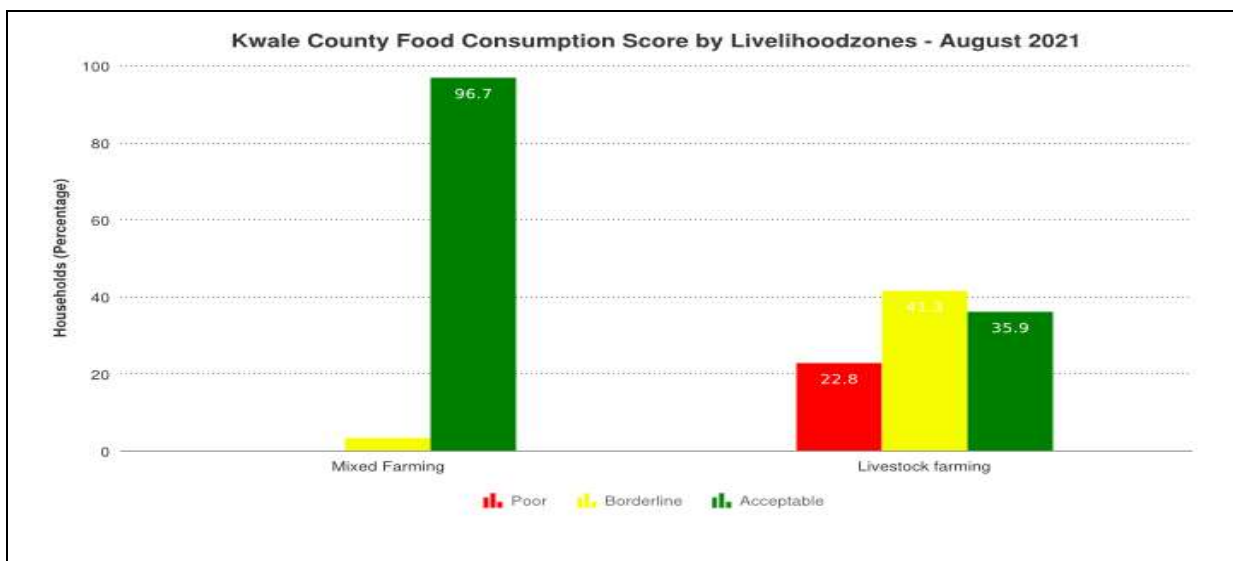
### 5.1 MILK CONSUMPTION

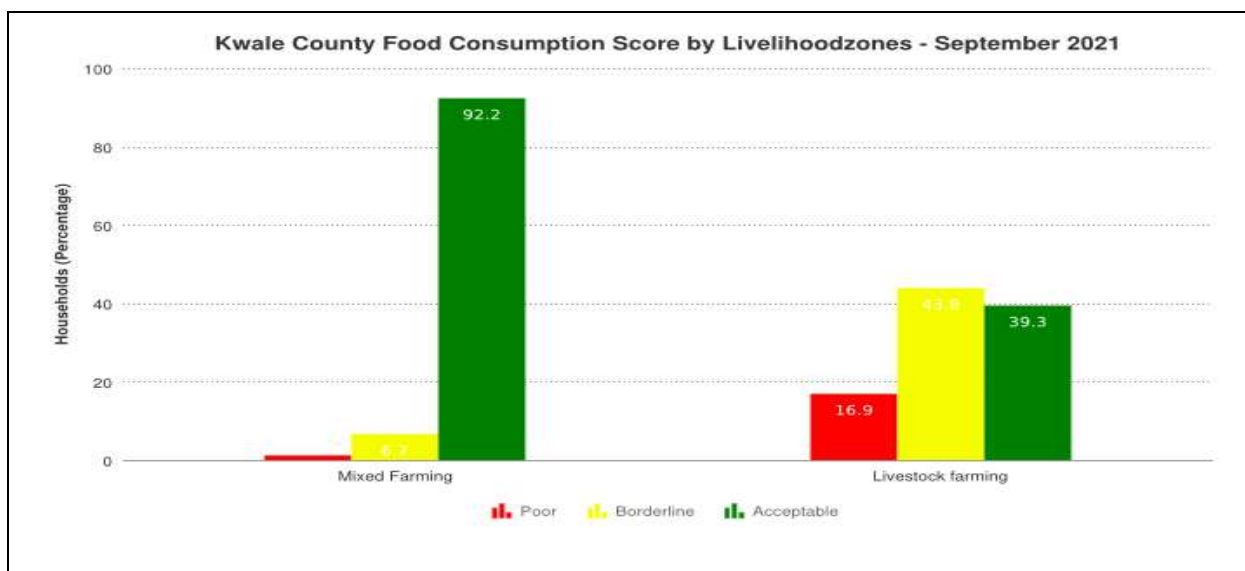
- Average household milk consumption was estimated at 1.6 litres in September having maintained a stable trend from 1.8 litres recorded in August.
- The consumption was within seasonal norms compared with 1.4 litres recorded in the 2016-2020 LTA as shown in the graph below.



## 5.2 FOOD CONSUMPTION

- Food consumption patterns were stable in comparison with last month as the proportion of households with acceptable food consumption was estimated at 65.75 percent in September in comparison with 66.3 percent in August.
- Households with borderline food consumption were estimated at 25.3 percent in comparison with 22.3 percent in August, while those with poor food consumption averaged 8.9 percent in September compared with 11.4 percent in August.
- Therefore food frequency, dietary diversity and nutritional value of food had remained relatively the same compared with last month.
- The stability in food consumption patterns were illustrated in the graphs below.





## 5.3 HEALTH AND NUTRITION STATUS

### 5.3.1 Nutrition Status

- The proportion of children at risk of malnutrition as determined by the mid-upper arm circumference method was 2.9 percent in September.
- The proportion had remained stable in comparison with 2.4 percent recorded in August.

## 5.4 COPING STRATEGIES

- The average reduced coping strategy index (rCSI) was 13.8 in September having remained stable in comparison with 13.6 recorded in August.
- Therefore households had neither significantly increased nor decreased the frequency and/or severity of the consumption-based coping strategies to curb food consumption deficits.
- The highest rCSI was recorded in the livestock farming livelihood zone at 14.4 having remained relatively stable compared with 13.3 posted in August.
- The lowest rCSI was posted in the mixed farming livelihood zone at 13.1 having maintained a stable trend from 13.8 recorded in August.

## 6. CURRENT INTERVENTION MEASURES

### 6.1 NON-FOOD INTERVENTIONS

#### Water department

- Water trucking is on-going sponsored by the County Government of Kwale.

#### Agriculture department

- Training of farmers on conservation agriculture.
- Post-harvest management campaigns.

#### National Drought Management Authority

- The Authority conducted a rapid assessment in Kinango and Lunga Lunga Sub-counties to ascertain the evolving drought status while identifying emerging drought-related needs.

### **Nutrition department**

- Iron Folate supplementation for pregnant and lactating women.
- Deworming for children aged five years and below.
- Promotion of proper child care practices, sanitation and hygiene
- Vitamin A and zinc supplementation for children aged below five years.

## **7. EMERGING ISSUES**

### **7.1 Insecurity/Conflict/Human Displacement**

- There were a few cases of conflict over pasture and water between Maasais in Mwereni Ward and Somali herders who had moved their herds from Ndavaya and McKinnon Road wards.

### **7.2 Migration**

- Intra-county migrations have occurred as livestock herders moved their herds from McKinnon Road, Ndavaya and Kasemeni wards to Mwereni Ward.

## **8. RECOMMENDATIONS**

- Livestock feed supplementation particularly for cattle due to deteriorating and unavailability of pasture.
- Up-scaling of water-trucking to areas where water is scarce in Kinango and Lunga Lunga Sub-counties.
- Fuel subsidies for strategic boreholes in Kinango and Lunga Lunga Sub-counties.
- Continued drought monitoring every fortnight to inform drought-related needs as they emerge.