

National Drought Management Authority

MERU (MERU-NORTH) COUNTY

DROUGHT EARLY WARNING BULLETIN FOR SEPTEMBER 2021



A Vision 2030 Flagship Project



SEPTEMBER 2021 EW PHASE

Drought Status: ALERT

Maandalizi ya mapema

Drought Situation & EW Phase Classification

Biophysical Indicators

Rainfall: There was no rainfall recorded in the month September across the livelihood zones.

Vegetation condition: The County recorded normal vegetation greenness across the livelihood zones. The pasture condition was poor across the livelihood zones with browse condition been poor in the agro pastoral zones and fair in the rain fed zones.

Socio Economic Indicators (Impact Indicators)

Production Indicators: Farmers across the livelihood zone are in land preparation having recorded poor to no harvest in the long rains season. The livestock body condition for small stock and cattle is poor to fair in the agro pastoral and fair in the rain fed zones. Cases of foot and mouth disease and LSD have been reported in Igembe Central and Tigania west Milk production has remained stable although significantly below the LTA.

Access Indicators: The average return distances to water sources for households increased while for livestock remained stable. The distances were both significantly high compared to normal average. Milk consumption per HH per day is below the normal but stable compared to previous month. Maize prices slightly increased and was within the LTA with beans prices remaining stable and above the LTA. TOT remained stable compared to previous month remaining significantly low compared to the LTA

Utilization Indicators: 31.7% households were within the acceptable score with 37.5% been borderline and 30.8 percent been in the poor score. The percent in the poor score are higher compared to August. majority of households applied reduced consumption based coping strategies across the livelihood zones. Majority of children are under the green band, with 8 percent been under yellow and 0.7 percent facing malnutrition.

Early Warning Phase Classification

Livelihood Zone	Phase	Trend
Mixed Farming	Alert	Worsening
Agro - Pastoral	Alert	Worsening
Rain Fed Cropping	Alert	Worsening
County	Alert	Worsening
Biophysical Indicators	Value	Normal Range/ Value
Rainfall (% of Normal)	0	80 – 120
VCI-3Month	46.51	35 – 50
Production indicators	Value	Normal
Maize Crop Condition	Poor	Good
Livestock Body Condition for cattle	fair- poor	Good
Milk Production per HH/ day	1.2	1.5 litres
Livestock Migration Pattern	External and internal migration	No migration
Access Indicators	Value	Normal
Terms of Trade (ToT)	108	127
Milk Consumption per HH/ day	1	1.5Litres
Return HHs distance to water sources	13.1	9.1 Km
Water source return distance from grazing areas	17.1	11.6 Km
Cost of water (20 litres)	Ksh 2.5- 5.00	Ksh 2.5 - 5.00
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	G 91.9% Y = 8% R =0.7%	0

<ul style="list-style-type: none"> Short rains harvests Increased HH Food Stocks Short dry spell Reduced milk yields Land preparation 	<ul style="list-style-type: none"> Planting/Weeding Long rains High Calving Rate Milk Yields Increase 	<ul style="list-style-type: none"> Long rains harvests Increased HH Food Stocks A long dry spell Land preparation Kidding (Sept) 	<ul style="list-style-type: none"> Short rains Planting/weeding 								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

1. CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- There was no rainfall recorded across the livelihood zones in the month under review. However, according to the WFP –VAM, the rains received in form of precipitation were within the long term average for this time of the year for the first dekad and above the long term average for the second dekad of September.

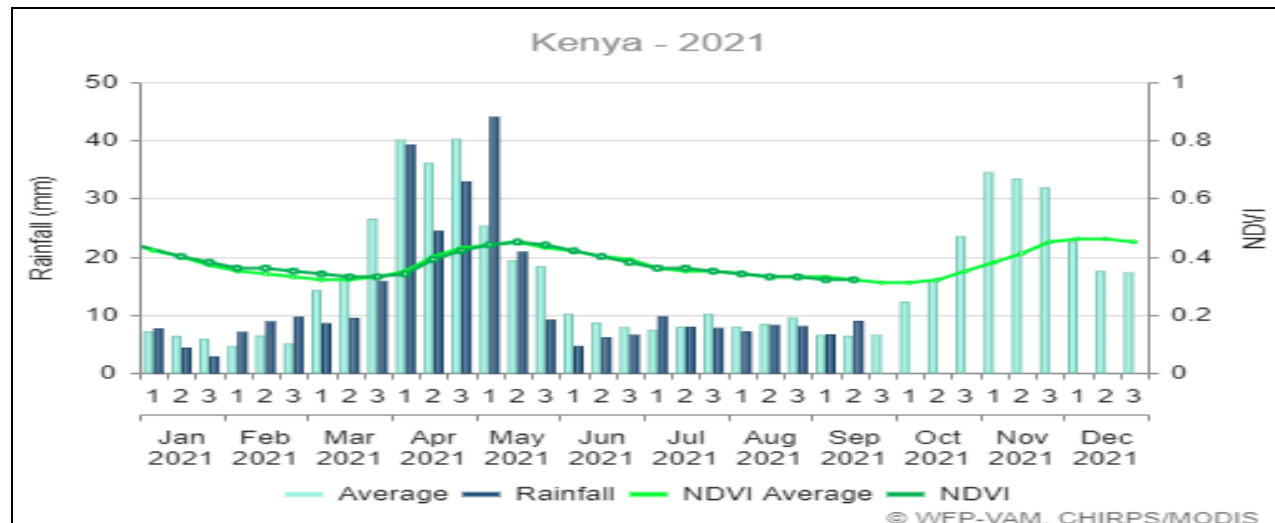


Figure 1: Rainfall estimates in Meru North

- From the figure 1 above the Rainfall for Estimate (RFE) amounts for the first dekad was within the long term average and second dekads of September was above the normal averages.
- The County received an average of 7.659 mm compared to the long term average of 6.332 mm for the same period. The first dekad received 6.52 mm and second dekad received 8.79 mm of rainfall.
- Normalized Difference Vegetation Index (NDVI) for the first and second dekads were within the normal average when compared to their respective long term decadal NDVI values.

2. IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

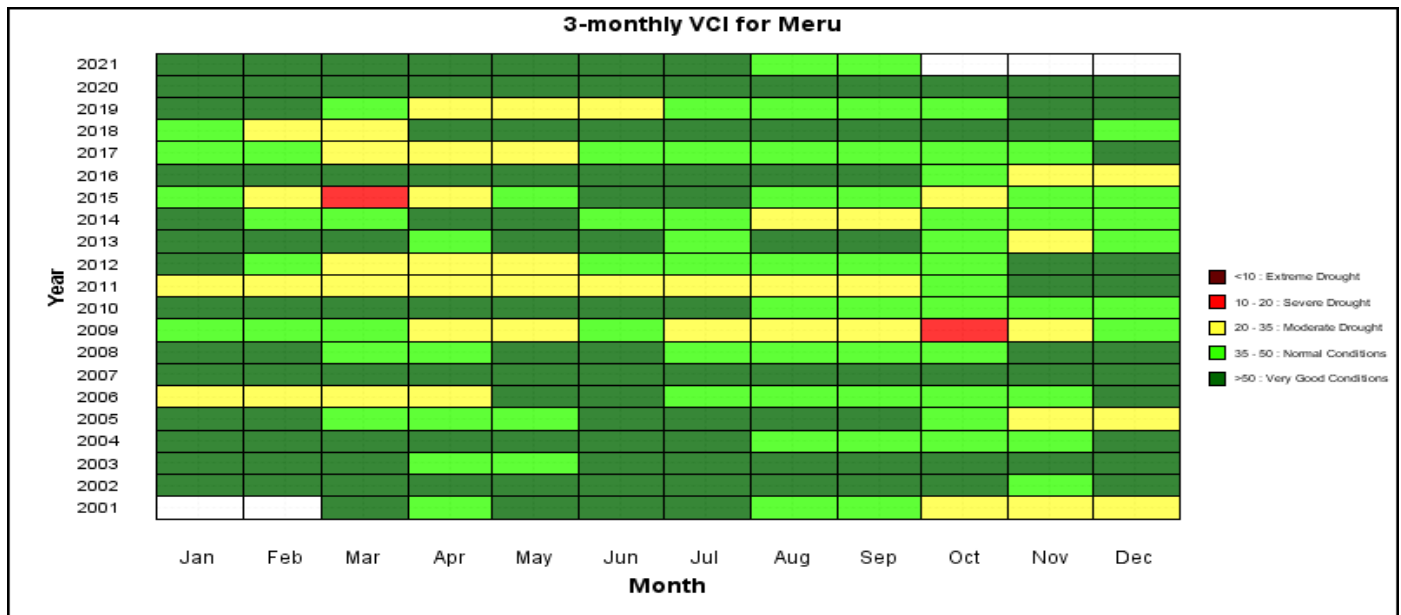


Figure 2: Three-monthly VCI for Meru County [Source: MODIS Data]

- From the figure {2} shown above, the County vegetation condition in the month under review is within the normal vegetation greenness as depicted by a vegetation condition index (VCI).
- The sub counties of Igembe central, North and Tigania East and West all depicted normal vegetation greenness.
- The combined 3-month Vegetation Condition Index (VCI) was at 46.51 in the month under review compared to 44.27 in the month of August.
- The 3-monthly vegetation condition index for Igembe Central was at 48.94, Igembe North at 40.31, Tigania East 44.07 and Tigania west was at 48.02

2.1.2 Pasture Condition

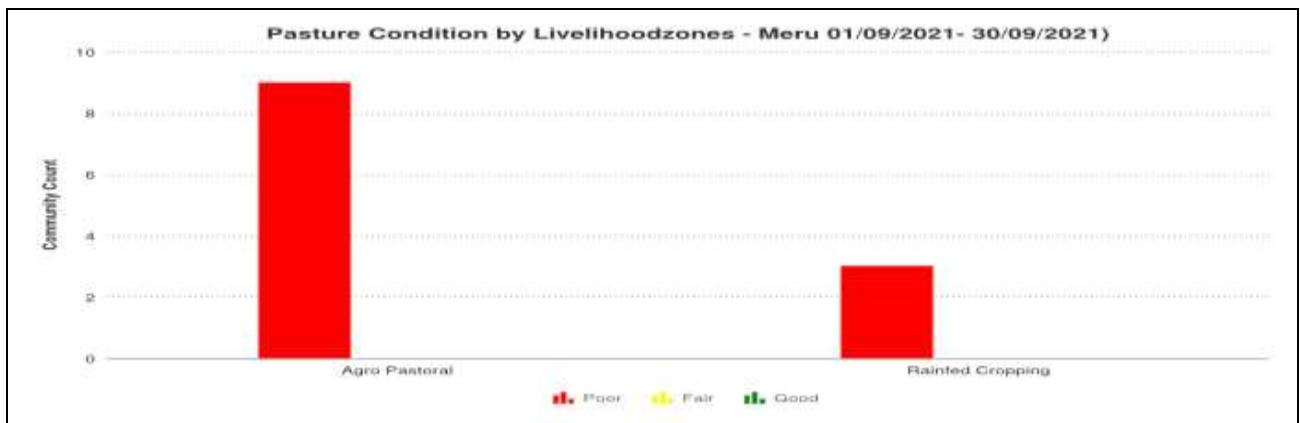


Figure 3: Pasture condition in Meru County

- The pasture condition was poor across the livelihood zones.
- The pasture condition is below normal across all the livelihood zones compared to the same periods for this time of the year expect for rain fed livelihood where the situation is normal.

Tigania East livestock depend majorly on dry maize stalk due to the poor condition of pasture.

- The available pasture is estimated to last for less than a month cross the livelihood zones.
- The below normal pasture condition is attributed to the below average rainfall received hence little regeneration and fast depletion.

2.1.3 Browse

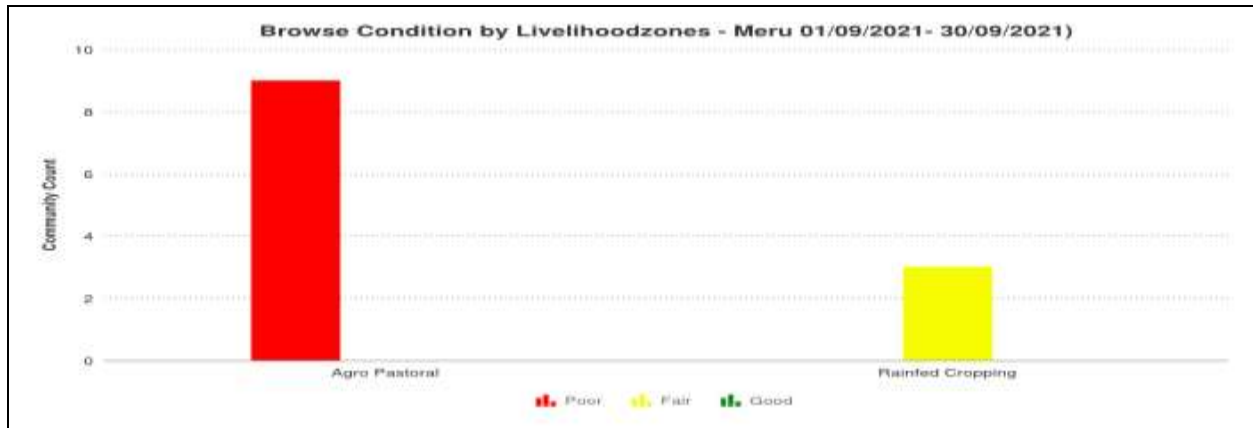


Figure 4: Browse condition in Meru County

- The browse condition was poor to fair across the county with 75 percent of the browse condition been poor and 25 percent been fair.
- The browse condition in the Agro pastoral zone and mixed livelihood zone was poor, the condition was fair in the Rain fed livelihood zone.
- The browse condition is below normal across the livelihood zones except in the rain fed zone where the browse condition is normal for this time of the year.
- The browser conditions expected to last for a month in the rain fed livelihood zone and less than a month in the agro pastoral and mixed livelihood zones.
- The below normal conditions are attributed to little to no rainfall and uneven distribution of the rains received across the zones with the agro pastoral receiving below average rainfall hence little regeneration with fast depletion.

2.2 WATER RESOURCE

2.2.1 Sources

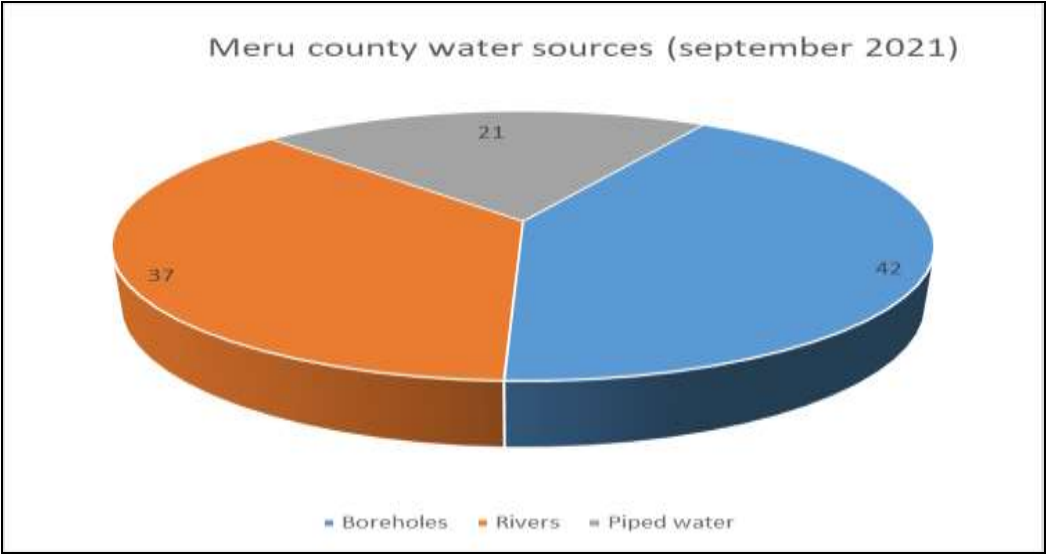


Figure 5: Water sources for Meru County

- From figure 5 shown above, the three main sources of water within the period under review were; boreholes, rivers, and piped water. Other sources of water relied on during this period include water trucks and springs.
- Major sources of water have dried up due to the poor rainfall performance and continued household and livestock use without replenishment.
- The return distance from concentration points for livestock is expected to increase across the livelihood zones.

2.2.2 Household Access to Water

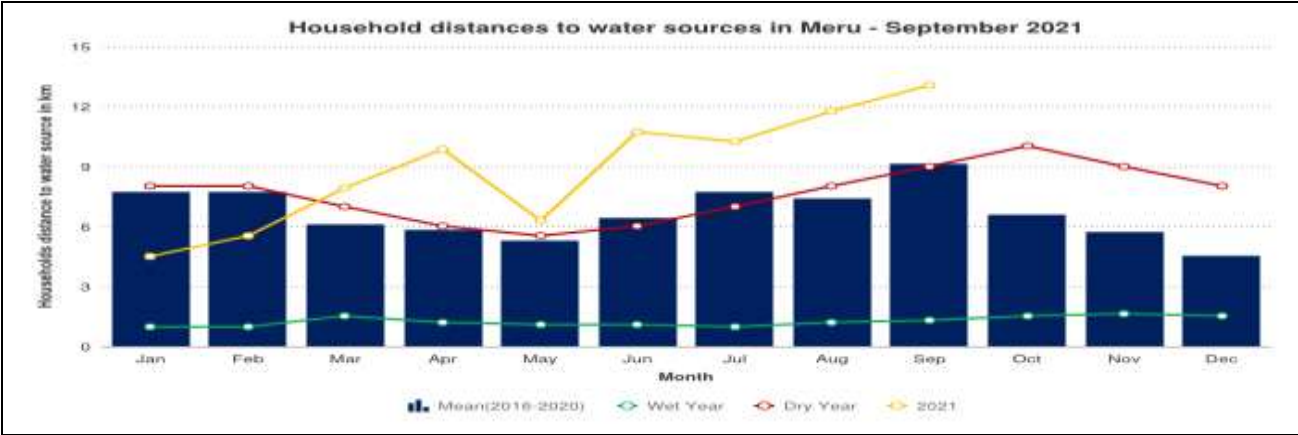


Figure 6: Household average distances to water sources

- From the figure {6} shown above, the average return distances to household water sources increased by 12 percent from 11.7 km in August to 13.1 km in September.
- The increase is attributed to increased trekking distance in such of water due to the drying up of main sources of water due to insufficient rainfall received in the year.
- The current household water distance of 13.1 km is significantly higher than the normal average of 9.1 km by 44 percent compared to similar periods.

- The average cost of 20 litre jerry can at water kiosks was at Ksh 2.5 to 5 across livelihood zones except in Igembe North areas of Kachiuru where Households depended on water trucking, the cost of a 20 litre jerry ranged at Ksh 20 to 25.
- Treatment of drinking water is done by boiling and use of filtration with 31 percent of the 120 sampled households treating drinking water.

2.2.3 Livestock Trekking Distance to Water Sources from Grazing Areas

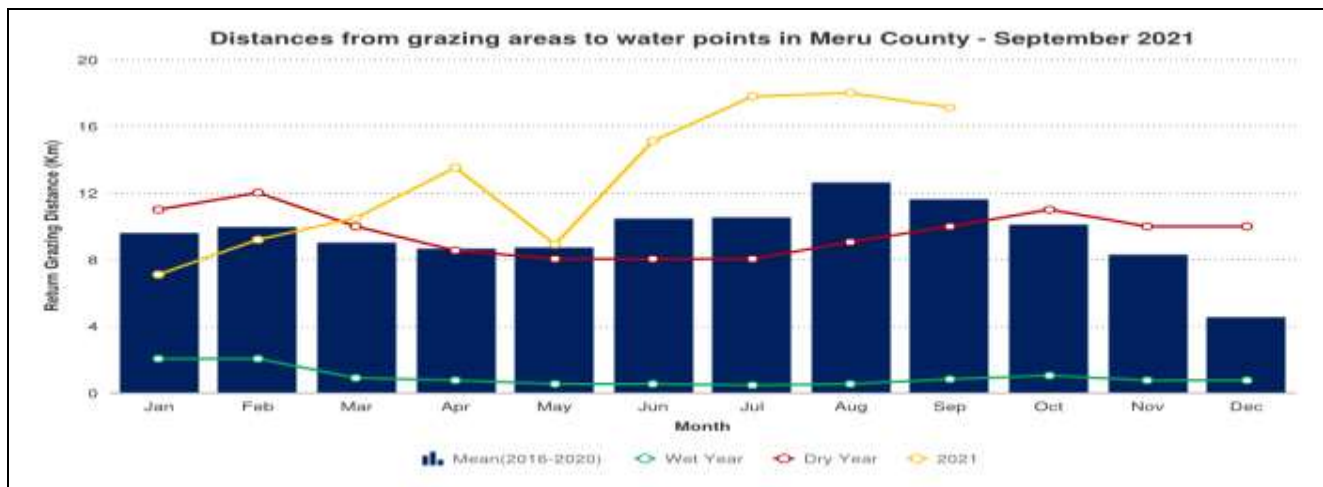


Figure 7: Livestock average return distances to water sources

- From (Figure 7) shown above, the average return distance to water source from grazing areas remained stable at 17.1 km in September compared to the 18 km in August despite been significantly high for this period of the year.
- The long distances are due to increased distances to grazing areas in search of pasture and drying up of water sources due to poor performance of the Long rains season across the livelihood zones.
- The watering frequency for both small stock and cattle was on a daily basis in Rain fed zone of Tigania East and two to three times a week in Igembe Central, Igembe North and Tigania West
- The current average return distance to water sources is above the long term average of 11.6 by 47 percent.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- The body condition of small stock and cattle was fair to good in the rain fed livelihood zone with livestock having good smooth appearance, In the Agro pastoral and mixed zones of Igembe North, Igembe Central and Tigania west the body condition was fair to poor with majority of livestock having borderline for ribs not visible with 12th and 13th ribs visible. The body condition is expected to further worsen with the poor pasture conditions.
- In areas of Igembe central, kamweline in Igembe North and Kadembeni in Tigania west livestock body condition is poor due to depleted pasture condition.

3.1.2 Livestock Diseases

- Cases of Foot and Mouth Diseases and Lumpy Skin Disease were reported in Igembe central and Tigania West. Routine surveillance measures by the County government continued in the month under review.

3.1.4 Milk Production

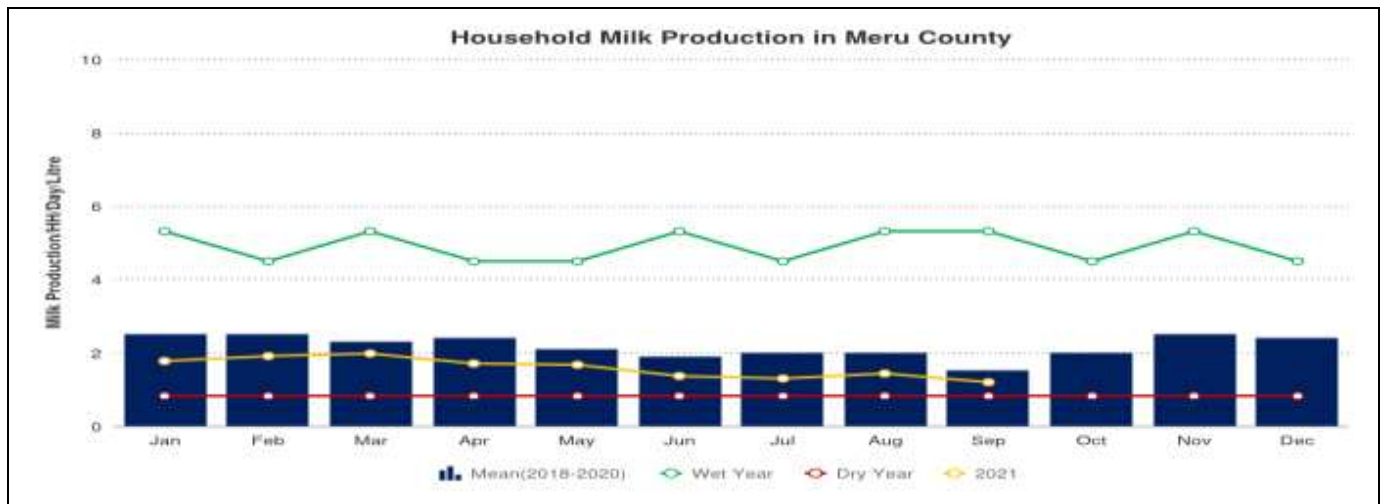


Figure 8: Household milk production in Meru North

- From the figure 8 above, the average daily milk production per household per day reduced to 1.2 litre per household per day in September compared to 1.4 litres in August.
- The decrease is attributed to the poor condition of forage and the increased distances in search of water and pasture leading to poor livestock body condition hence poor productivity.
- Current milk production of 1.2 litre is below the normal long term average milk production of 1.5 litres for this time of the year.
- Average milk price per litre at household level ranged from Ksh. 50 – 100 across the livelihood zones with highest price in Igembe Central at ksh 100.

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of food Crops

- There was poor crop production across the livelihood zones with the farmers experiencing poor harvest due to the poor performance of the long rains. Akithi in Tigania west, Amwitha in Igembe North experienced total crop failure.
- In Igembe central and Tigania East the harvest was poor and below average across the zones.
- Farmers are at preparation stage of crop development across the livelihood zone in anticipation for the onset of the short rains season although farmers across the zones have minimal access to seed stock for planting.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

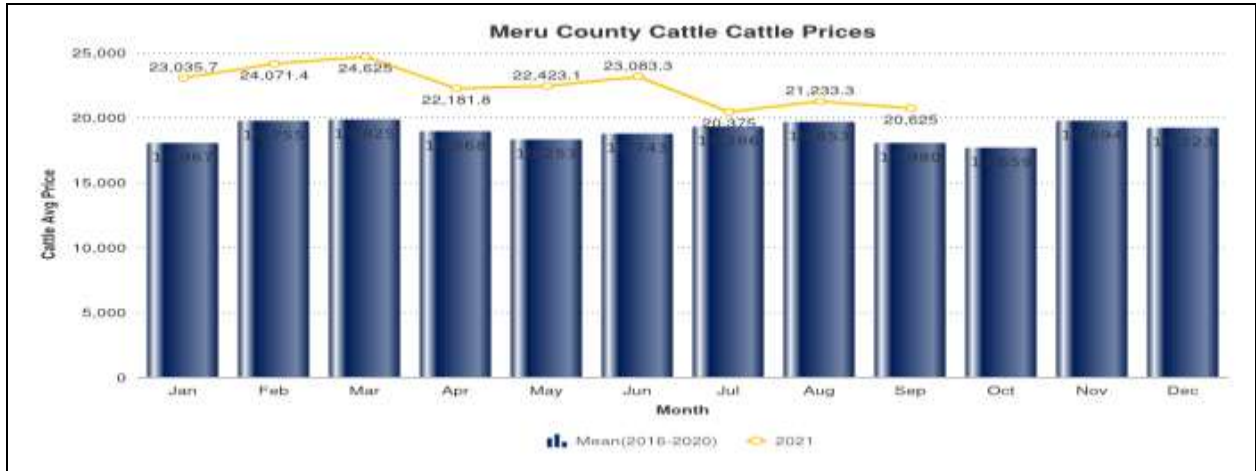


Figure 9: Average Market prices for cattle in Meru County

- From the figure (9) shown above, the average market price of three-year-old cattle for the month under review remained stable at Ksh. 20,625 from Ksh 21,233 in the month of August.
- The stability is attributed to the deteriorating body condition of cattle in the market due to the poor condition of forage across the livelihood zones creating low demand.
- When compared to similar periods, current cattle price of Ksh. 21,233 is slightly above the long term price of Ksh 17, 980 by 15 percent.
- The highest price recorded for the month for cattle was at Ksh 25,833 in Ng'undune in Tigania west and lowest price recorded was Ksh18,000 in Mutuati market in Igembe North.

4.1.2 Goat Price

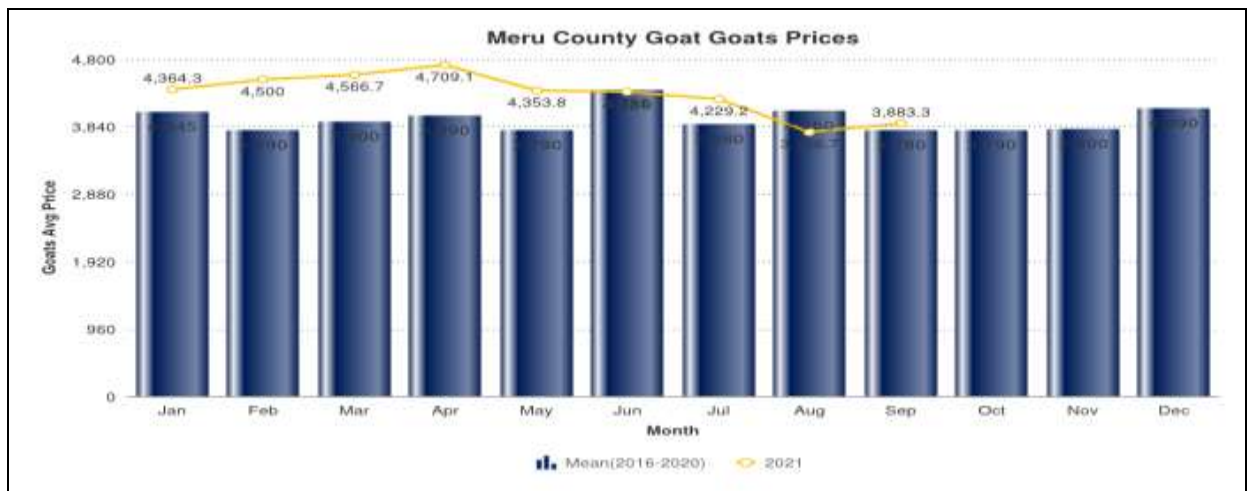


Figure 10: Average Market prices for goat in Meru County

- The average market price of a two-year goat for the month under review remained stable at Ksh 3,883 in September when compared to Ksh 3,766 in August as illustrated in the above figure (10).
- When compared to the long term average price of Ksh 3,780 at similar periods the current price is within the long term average.
- The stability is attributed to low demand in the market.
- The highest goat prices were recorded in Mutuati market in Igembe North at Ksh 4,500 and lowest price was Ksh.3, 200 in Mulika in Tigania East.

4.2 CROP PRICES

4.2.1 Maize

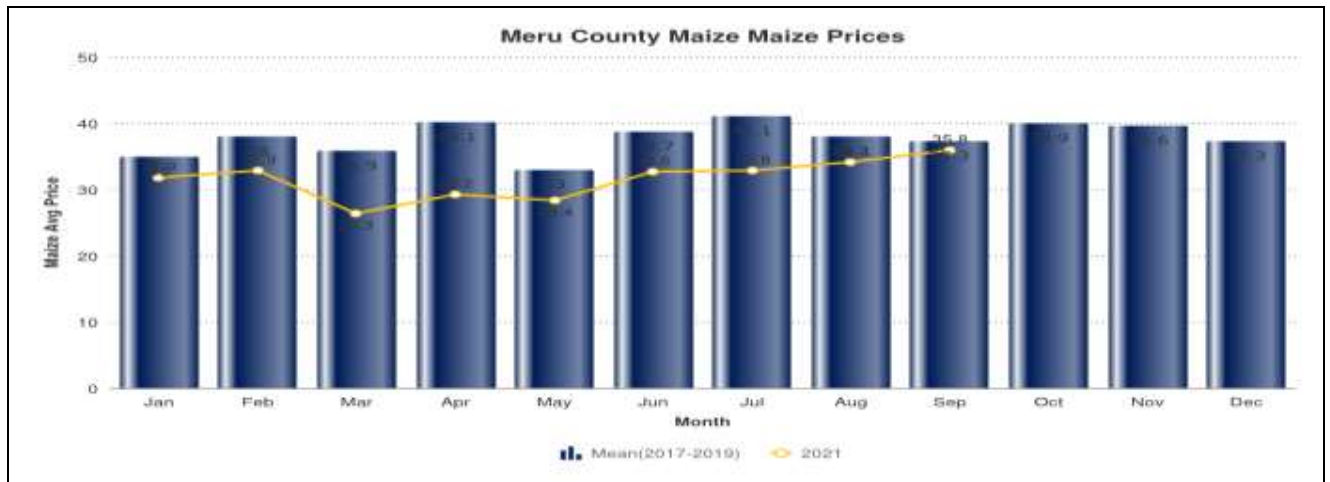


Figure 11: Average market prices for maize in Meru County

- The average market price of a kilo of maize slightly increased at Ksh 36 in the month under review compared to Ksh 34 in August.
- The increase in maize prices is due to the decreased supply with the depletion of household stock across the livelihood zones and increase demand for seeds in preparation for short Rains.
- The highest maize price was recorded in Kangeta Market in Igembe central at Ksh 40 with lowest price recorded in Kianjai Market in Tigania West at Ksh 32
- The current market price is within the long term average of Ksh 37 at similar periods at this time of the year.

4.2.2 Beans Prices

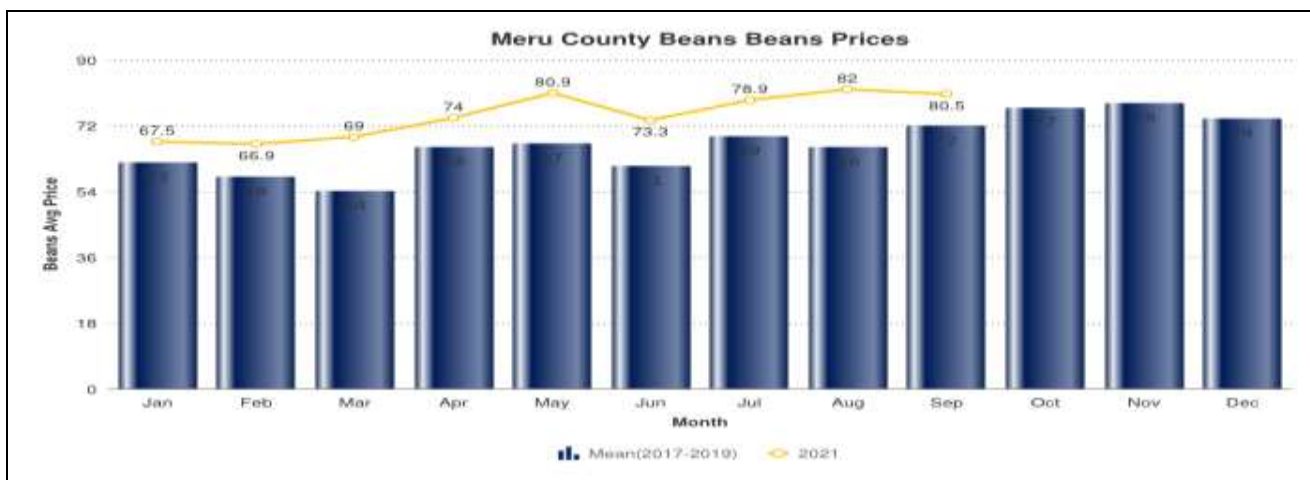


Figure 12: Average market prices for beans in Meru County

- From the figure { 12} shown above, the average market price of beans remained stable at Ksh 81 in September compared to Ksh 82 in August.
- The stability is accredited the stability in demand and supply in the market.
- The highest market price per kilo was recorded in Kianjai market in Tigania west at Ksh 83 and lowest in Mikinduri in Tigania East at Ksh 75
- The current average beans price is 13 percent above the long term average of Ksh 72 per kilogram.

4.2 INCOME

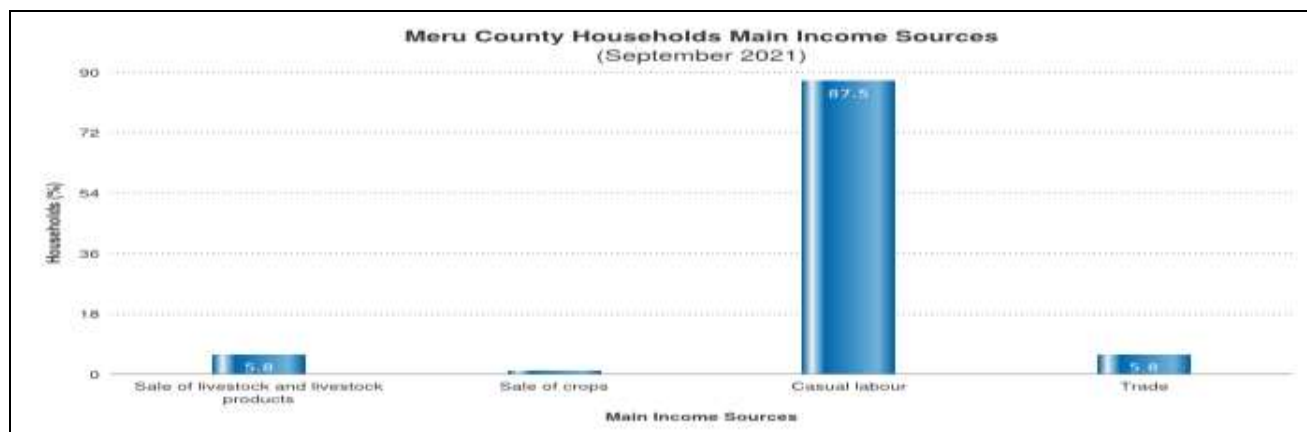


Figure 13: Sources of household income in Meru North

- The households' main source of income was casual labour accounting for 87.5 percent of household source of income, trade at 5.8, sale of livestock and livestock products at 5.8 percent and sale of crops at 0.8 percent.
- In isolated cases of Igembe central, households have resulted to sale of wood and sale of charcoal as the main sources of income.
- Households have reduced dependency on sale of crops due the poor harvest received from the long rain season. Income from sale of livestock and livestock products is also low due to the poor body condition of livestock leading to reduced productivity and low prices in the market

4.3 TERMS OF TRADE

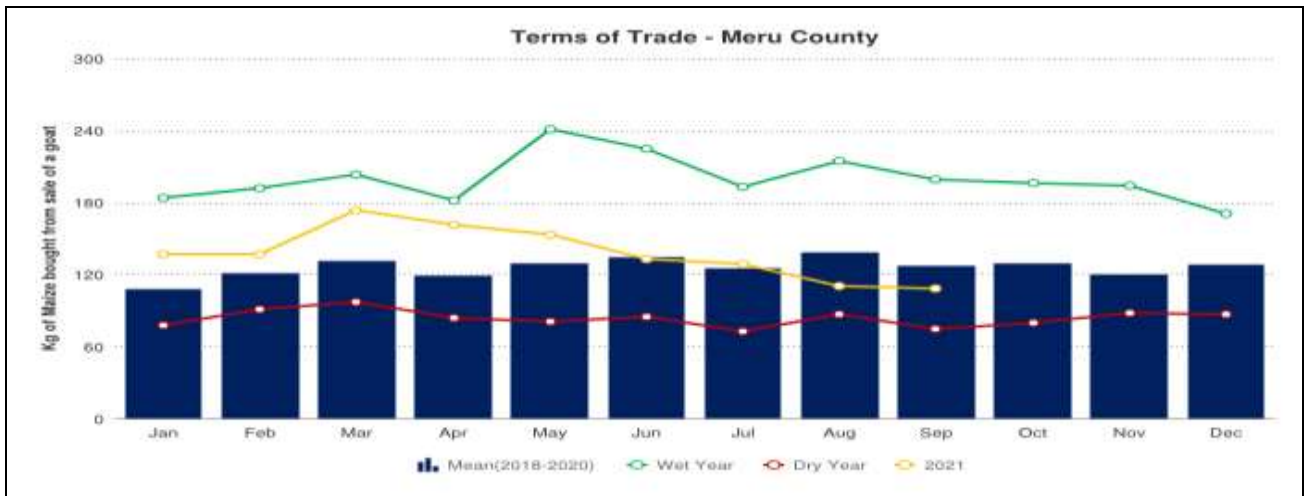


Figure 14: Terms of trade in Meru North

- The Terms of trade remained stably low in the month under review at Ksh 110 per kilogram of maize bought from a sale of a goat in August compared to Ksh 108 in September as illustrated in the above figure 14.
- The stability is accredited to the stability in maize price and goat prices in the market
- The lowest amount for the Terms of Trade was in Igembe North at Ksh 112 and highest at Ksh 117 per Kilogram of maize realised from a sale of a goat in Tigania West
- The current terms of trade below the long term average of Ksh 127 by 15 percent

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

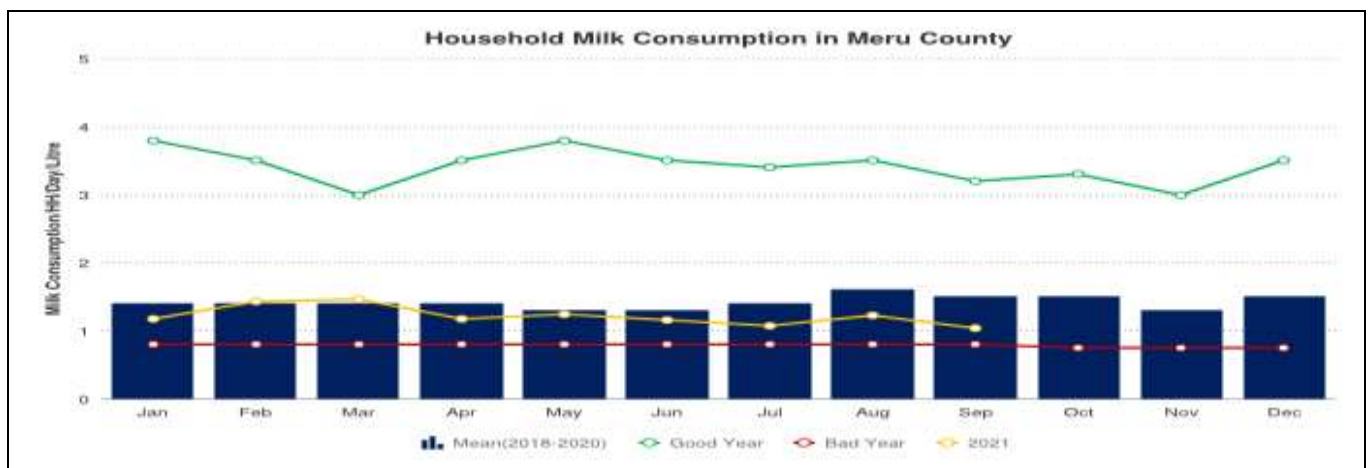


Figure 15: Average household milk consumption (l/hh/day)

- Milk consumption per household per day decreased from 1.2 litres per household per day in August to one litre in September.
- The current milk consumption per household per day is below the long term average of 1.5 litres
- The milk consumption is expected to further reduce across the livelihood zones with continued depletion of pasture and worsening livestock body condition.

5.2 FOOD CONSUMPTION SCORE

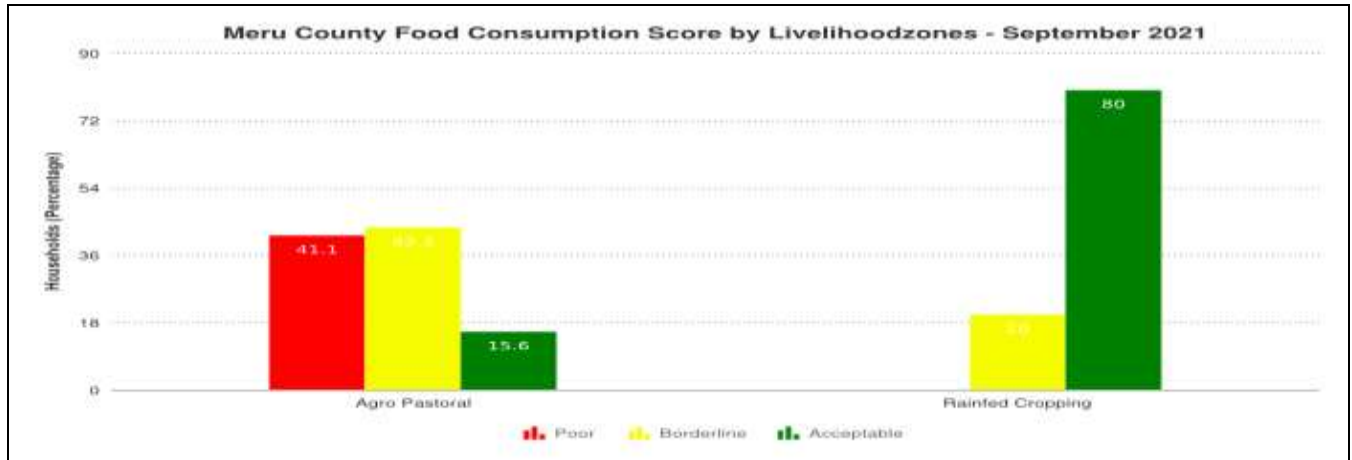


Figure 16: Household food consumption score

- Out of the 120 households sampled from the sub counties, majority of the households averagely 37.5 percent were in the borderline food consumption score category implying that households were consuming starch and vegetable on a daily basis with a limited access to proteins and dairy products. 31.7 percent of households were under acceptable food consumption score while 30.8 percent were under poor food consumption score. The current month recorded more households at poor food consumption score compared to the previous month which recorded 14 percent of the household at the poor score.
- Majority of the households in the poor food consumption were from Igembe North and Igembe central with households lacking access to staple food, dietary diversity and total absence of proteins and dairy products in the sub counties.
- Majority of the households at 80 percent in the Rain fed zone had acceptable food consumption score.
- The worsening food consumption score is attributed to the poor harvest from the long rains season and the poor pasture and browse condition resulting to poor livestock productivity.

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status of Children

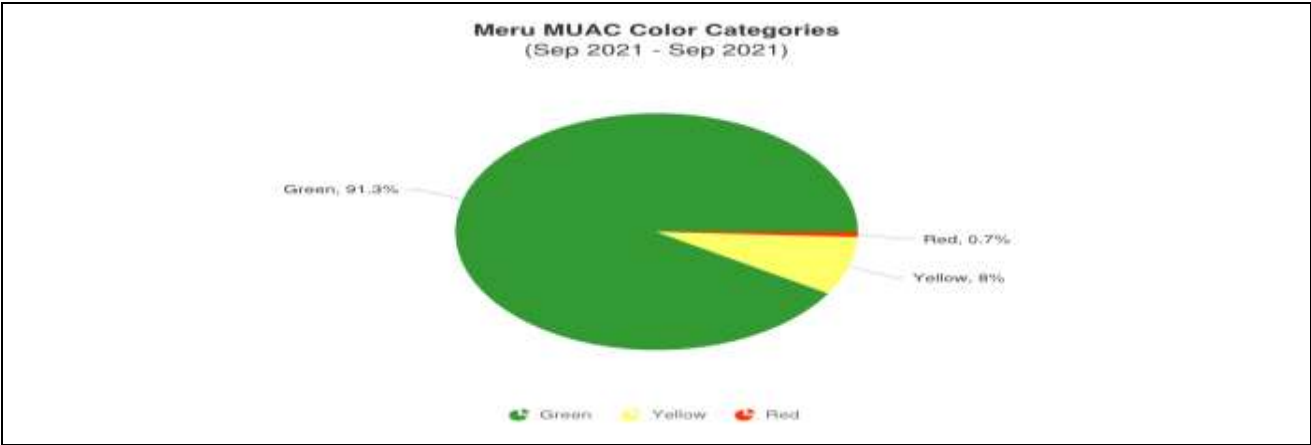


Figure 17: Children under five at risk of malnutrition in Meru County

- The nutritional status for children under five years old have remains stable compared to previous months’ rates.
- Out of the 120 sampled households, children at risk of malnutrition 91.9 percent were at green with the remaining 8 percent at yellow and 0.7 percent at red.
- A case of malnutrition was reported in Amwitha in Igembe North and another in mikinduri in Tigania East. The children were referred to health centres for supplementation and follow up

5.4 Coping Strategy Index

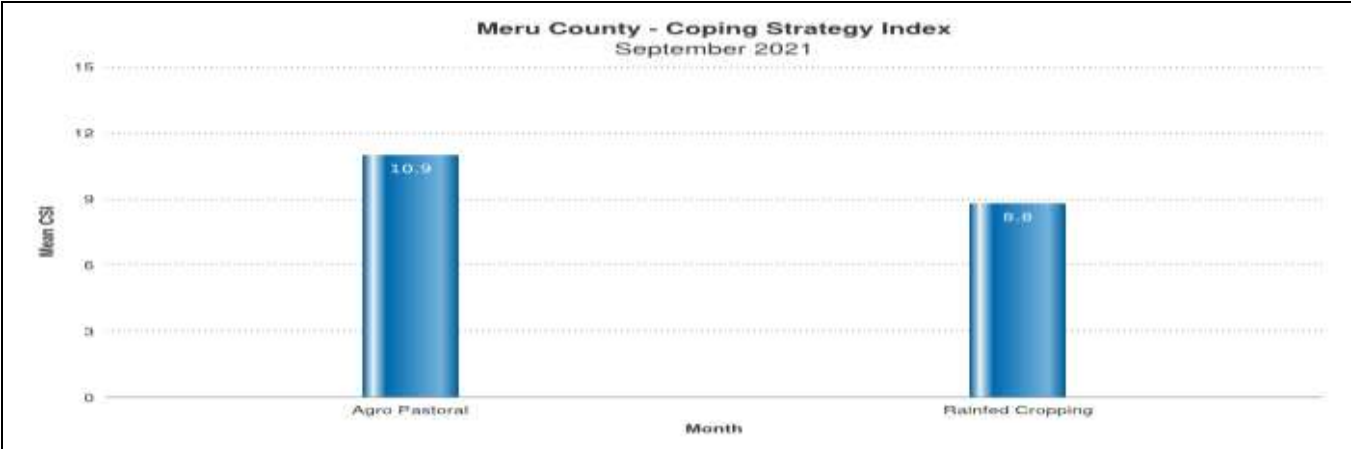


Figure 18: Household coping in Meru North

- Reduced consumption based coping strategy index (rCSI) for the month under review remained stable at 9.85 compared to 9.7 in August. The coping strategy index is below the long term average of 10.40
- The agro pastoral livelihood zone recorded CSI of 10.9 while the rain fed livelihood zone recorded a coping strategy index of 8.8
- Households mainly resulted to reducing the quality and quantity of food consumed by adults and borrowing as a coping strategy.

6.1 Emerging issues

- High Cases school drop outs have been reported in Kamweline ,Ithata ,Ngitana ,Murara ,Kachiuru and Nginyo primary schools in Igembe North and Igembe central due to lack of food in households. Pupils have been reported to drop out as they migrate to search for pasture and water for livestock
- Shortage of food such as vegetables, fruits and legumes have been reported across Igembe central and Igembe North exposing the children to the risk of malnutrition due to lack of dietary diversity in the livelihood.
- Farmers across the livelihood zones lack access to seeds for planting in preparation for the Short Rains season.
- There is high tension in the county due to the threat of insecurity from neighbouring communities in search of water and pasture especially in Igembe North and Central. This has created reluctance among farmers to prepare their farms due to fear of destruction by herders and their livestock

Migration

- Cases of internal and external migration in search of water and pasture have been reported across the livelihood zones. In Amwathi in Igembe North households have migrated together with their school going children in search of pasture .The out migration is towards the border of Meru and Tharaka Nithi and parts of Igembe south .
- Armed Somali and Turkana herders with their livestock have been reported to have invaded areas of Njaruine in Mutuati in Igembe North. This has placed pressure on the already depleted pasture due to the high number of livestock and has caused tension in the county.
- In Igembe central there was migration of herds of small stock and camels in Rekeau ward from Isiolo county. This has led to further depletion of pasture across the sub county.
- Large herds of cattle migrated into Tigania East from Tigania west in search of pasture and water

6.2 FOOD SECURITY PROGNOSIS

- Household food security is expected to worsen in the next month with the depletion of household stock and the unfavourable market prices due to the poor crop performance across the livelihood zones.
- Livestock production and productivity is expected to remain low in the next month due to the poor condition of pasture and browse.
- The poor condition of pasture and browse is expected to further deteriorate in the next month owing to poor performance of rainfall and fast depletion.
- Cases of insecurity and conflict is expected to be on the rise in the next month with the migration of large herds of livestock into and within the county in search of water and pasture.

- The rate of school drop outs expected to remain high in the next month due to migration of households in search of water and pasture.
- Internal and external migration expected to be on the rise with the continued condition of pasture and browse.

6.3 ON-GOING INTERVENTIONS

Intervention	Implementer	Beneficiaries
<ul style="list-style-type: none"> Routine livestock diseases surveillance 	<ul style="list-style-type: none"> County Department of Livestock Production and Veterinary Services 	Livestock farmers from both sub counties
<ul style="list-style-type: none"> Routine Disease Surveillance Routine disease surveillance on outbreak of Corona virus (COVID- 19). Routine screening management of malnutrition at health facility level Routine Vitamin A and Zinc Supplementation and deworming at health facility level 	<ul style="list-style-type: none"> County Department of Health Services 	<p>Mothers and children who visited health facilities in both sub counties</p> <p>Households and health facilities in targeted community areas</p>
<ul style="list-style-type: none"> Surveillance of the locusts 	<ul style="list-style-type: none"> County department of Agriculture department 	Farmers

7. SECTOR RECOMMENDATIONS

Sector	Recommended Activities	Proposed Implementers	Expected Outcome/Impact
AGRICULTURE	<ul style="list-style-type: none"> Sensitization on improved farming methods Capacity building on pest and diseases (Fall army worm and Locust) Development of irrigation schemes Capacity building on food storage Provision of seeds to farmers for planting 	<p>County government</p> <p>Other Stakeholders</p>	<p>Reduced post-harvest losses due to poor storage</p> <p>Increased quantity and quality of harvest</p>

EDUCATION	<ul style="list-style-type: none"> • Provision of meals through school feeding programs. • Follow up on school dropouts among pupils 	County government	Reduced school dropout rate
LIVESTOCK	<ul style="list-style-type: none"> • Disease surveillance and promotion of good and husbandry practices and silage making • Strategic vaccination of animals 	County government Other Stakeholders	Increased productivity Diversification of income Reduced outbreak of diseases
WATER AND SANITATION	<ul style="list-style-type: none"> • Drilling and equipping of more boreholes • Desilting of earth dams. • Construction of new big dams and pans. • Repair of the broken boreholes 	County government, Other Stakeholders	Improved potable water accessibility and consumption
HEALTH AND NUTRITION	<ul style="list-style-type: none"> • Provision of Personal Protective Equipment (PPE) at the hospital and at community level to curb spread of corona virus • Sensitisation on good nutritional practises. • Sensitization on COVID-19 • Provision of commodities for management of various types of malnutrition at health facilities. • Sensitization on use and provision of water treatment chemicals to households. 	County department of health NDMA Development partners	Management of malnutrition amongst under five children Reduced cases of water borne diseases