



A Vision 2030 Flagship Project



National Drought Management Authority

MERU (MERU-NORTH) COUNTY

DROUGHT EARLY WARNING BULLETIN FOR MARCH 2021

MARCH 2021 EW PHASE

Early Warning Phase Classification



| Livelihood Zone | Phase | Trend |
|--|---------------------------------|----------------------|
| Mixed Farming | Normal | Deteriorating |
| Agro - Pastoral | Normal | Deteriorating |
| Rain Fed Cropping | Normal | Deteriorating |
| County | Normal | Deteriorating |
| Biophysical Indicators | Value | Normal Range/ Value |
| Rainfall (% of Normal) | 54.1 | 80 – 120 |
| VCI-3Month | 52.78 | 35 – 50 |
| Production indicators | Value | Normal |
| Maize Crop Condition | Fair | Good |
| Livestock Body Condition for cattle | Good to fair | Good |
| Milk Production per HH/ day | 2.0 | 2.3 litres |
| Livestock Migration Pattern | Internal and external migration | Normal |
| Access Indicators | Value | Normal |
| Terms of Trade (ToT) | 173 | 131 |
| Milk Consumption per HH/ day | 1.5 | 1.4 Litres |
| Return HHs distance to water sources | 7.9 | 6.1Km |
| Water source return distance from grazing areas | 10.4 | 9.0 Km |
| Cost of water (20 litres) | Kshs 3.00-5.00 | Kshs 3.00 - 5.00 |
| Utilization indicators | Value | Normal |
| Nutrition Status, MUAC (% at risk of malnutrition) | G 96.9%, Y= 3.1% | 0 |
| Copying strategy Index(CSI) | 9.96 | <15 |

Drought Situation & EW Phase Classification

Biophysical Indicators

Rainfall: The onset of long rains was late as expected in the second dekad of the month. Below normal average rains were recorded across all the livelihood zones with erratic and unevenly distribution in terms of time and space.

Vegetation condition: Normal vegetation greenness was recorded across all the regions with exception of Tigania West which recorded above normal greenness .Pasture condition was poor in the rain fed livelihood zone and fair to poor in the agro pastoral livelihood zones. Browse condition was fair in the rain fed livelihood zone and fair to poor in the agro pastoral.

Socio Economic Indicators (Impact Indicators)

Production Indicators: farmers are preparing farms and planting for the long rains season. Livestock body condition for small stock and cattle was good to fair. Cases of FMD were reported in the county. There were both internal and external livestock migrations

Access Indicators: The average return distances to water sources for households and livestock increased compared to the previous month. Milk consumption per HH per day remained stable. The current term of trade is slightly above the normal.

Utilization Indicators: household food consumption score is within the acceptable band while the coping strategy employed by households has decreased compared to preceding month. The nutritional status of children under five was within the green band.

| | | | | | | | | | | | |
|--|---|---|---|-----|-----|-----|-----|------|-----|-----|-----|
| <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

- The onset of the long rains was late as it was expected in the second dekad of March. Rains received within the first and second dekads of March were below the normal average.
- The rains received were erratic and poorly distributed across all the livelihood zones

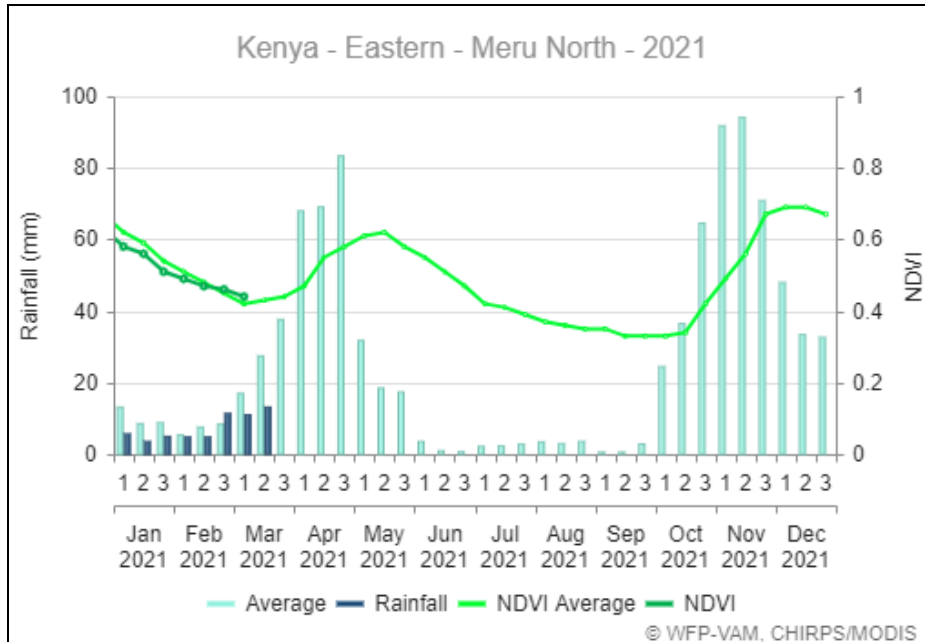


Figure 1: Rainfall estimates in Meru North

- From the figure 1 above the Rainfall for Estimate (RFE) amounts for the first and second dekads of March was below normal compared to their long term averages.
- The County received an average of 12 mm compared to the long term average of 22.1 mm for the same period.
- Normalized Difference Vegetation Index (NDVI) for the first and second dekads were normal 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)

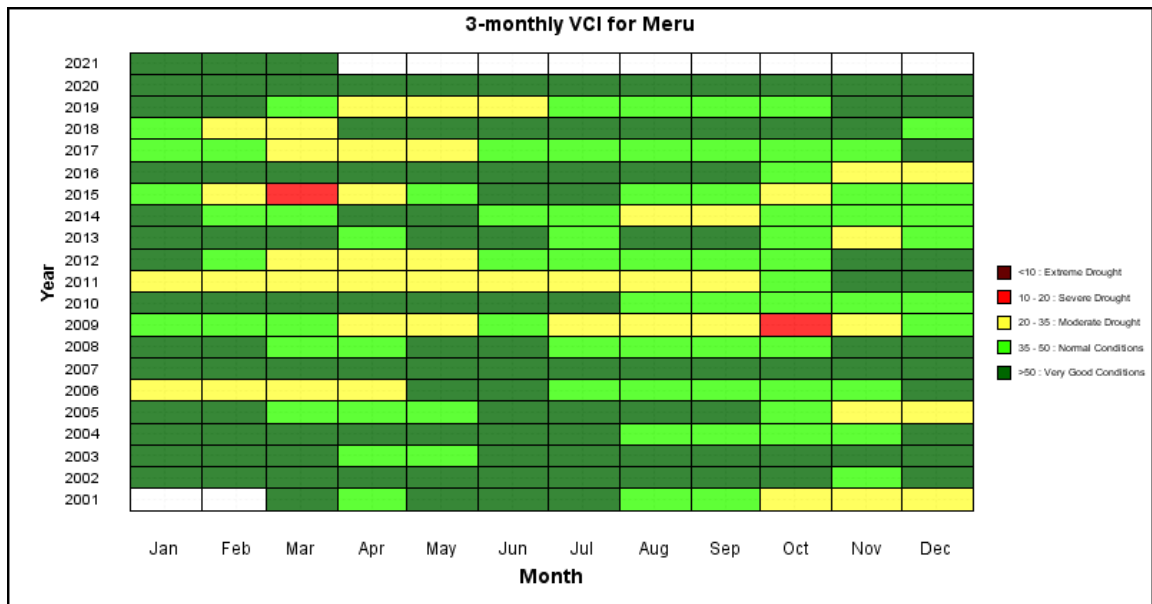


Figure 2: Three-monthly VCI for Meru County [Source: MODIS Data]

- From the figure {2} shown above, the County vegetation condition in the month under review is within vegetation greenness above normal as depicted by a vegetation condition index (VCI).
- All the areas depicted normal vegetation greenness with exception of Tigania West which depicted vegetation greenness above normal.
- The combined 3-month Vegetation Condition Index (VCI) was at 52.78 compared to 56.18 recorded previous month of February.
- The 3-monthly vegetation condition index for Meru Igembe Central was at 43.4 Igembe North at 38.79, Tingania East at 46.35 while that of Tigania West was at 57.24.

2.1.2 Pasture Condition

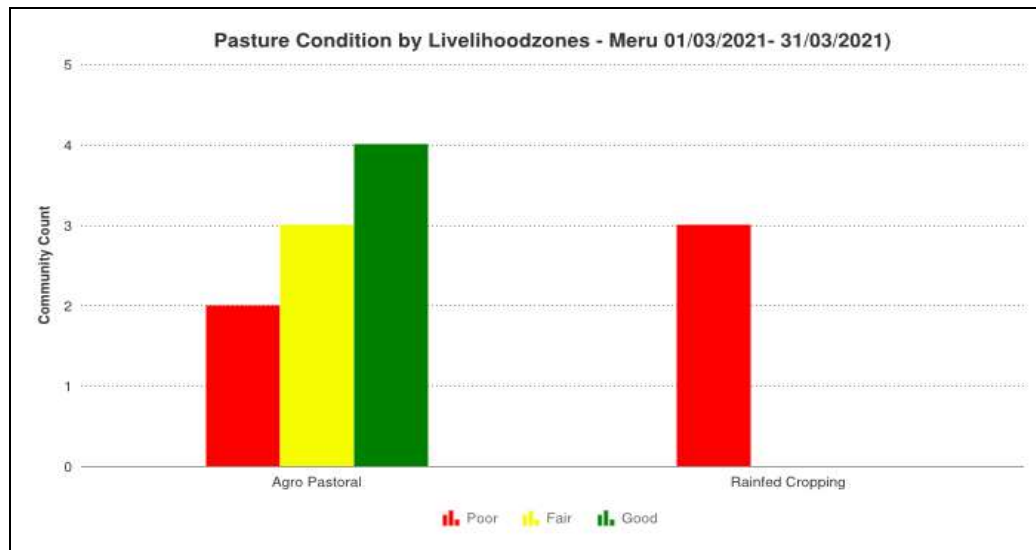


Figure 3: Pasture condition in Meru County

- The pasture condition ranged from good to fair in the Agro Pastoral livelihood zone and mixed farming zones. In the rain fed zones the condition was poor. The Agro pastoral livelihood and mixed livelihood zone recorded poor pastures in Amwitha of Igembe North and Mikiduri in Tigania East.

- The pasture condition is normal for this time of the year except Amwitha in Igembe North which recorded below normal pasture conditions compared to same periods for this time the year.
- The available pasture is estimated to last for 1-2 months in the mixed farming and rain fed livelihood zones, while in the Agro pastoral the pastures will not last more than a month. However, the condition is expected to improve with the onset of the long rains.

2.1.3 Browse

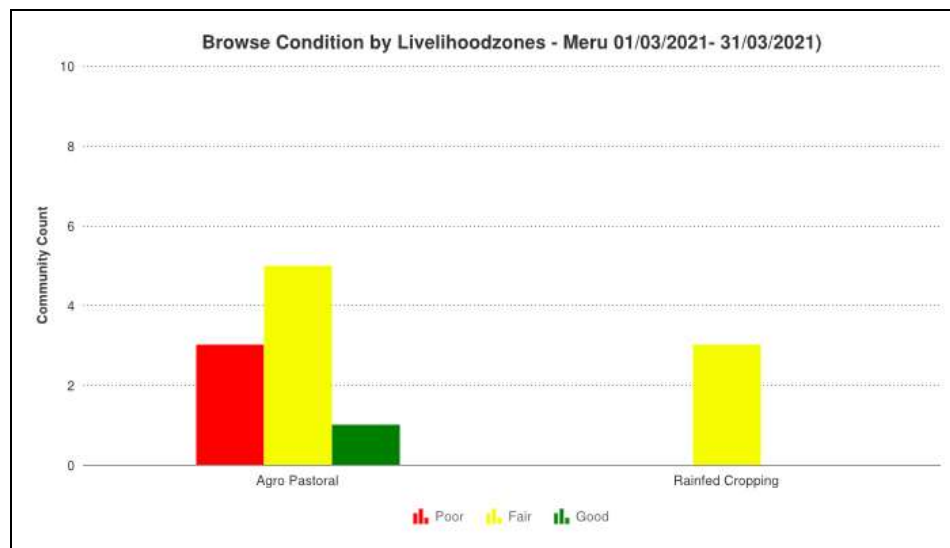


Figure 4: Browse condition in Meru County

- The browse condition was fair in the rain fed livelihood zone and fair to poor in the Agro pastoral livelihood zones.
- The browse condition is normal at this time of the year except in Amwitha in Igembe North which recorded below normal browse condition for similar periods at this time of the year with Akithi in Tigania West recording good browser conditions.
- Browse condition is expected to last a month or less across the livelihood zones. However, the condition is expected to improve with the onset of the long rains.

2.2 WATER RESOURCE

2.2.1 Sources

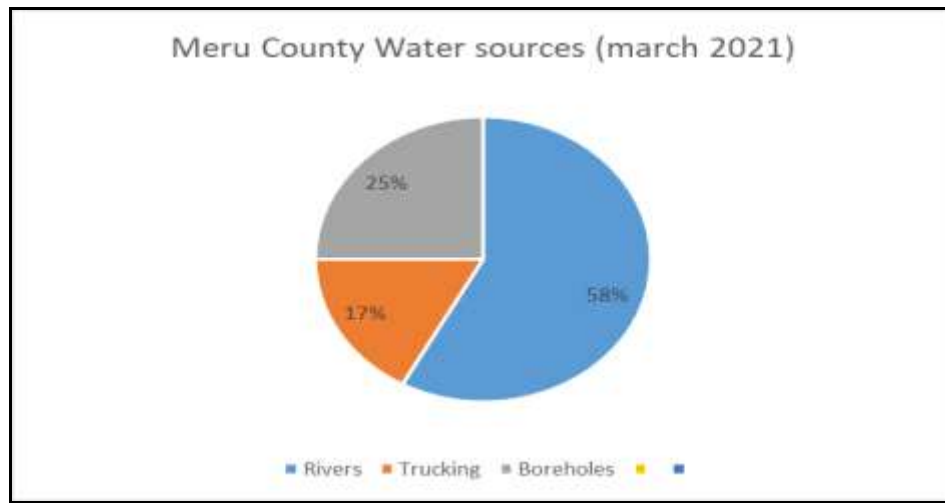


Figure 5: Water sources for Meru County

- From figure 5 shown above, the three main sources of water within the period under review were; rivers, boreholes and water trucks. Other sources of water relied on during this period include piped water, pans, dams and shallow wells.
- In the Agro pastoral livelihood zones in areas of Kachiuru in Igembe North, households relied on water trucking/ vendors as source of water.
- The quality of water in boreholes was good while that of rivers and other surface sources was poor due to ground rain water run-off.

2.2.2 Household Access to Water

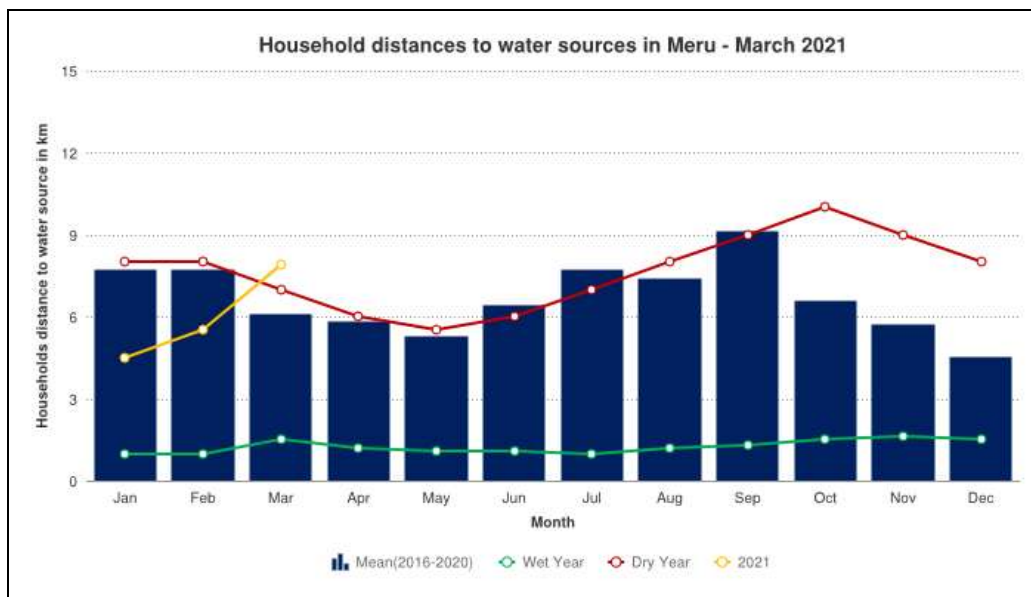


Figure 6: Household average distances to water sources

- From the figure {6} shown above, the average return distances to household water sources increased to 7.9 kms in March compared to previous month 5.5 kms. The increase is attributed to drying up of water sources and breakages of boreholes.
- The current household water distance of 7.9 kms is 29.5 percent higher than the long term average of 6.1 km compared to similar periods.

- The average cost of 20 litre jerry can at water kiosks was ranging between Ksh. 3 .00 to 5.00 except in Igembe North areas of Kachiuru where Households depended on water trucking and vendors, the cost of a 20 litre jerry ranged between Kshs 30-Kshs 50..
- Treatment of drinking water is done by boiling and use of filtration with 25% of households treating drinking water.

2.2.3 Livestock Trekking Distance to Water Sources from Grazing Areas

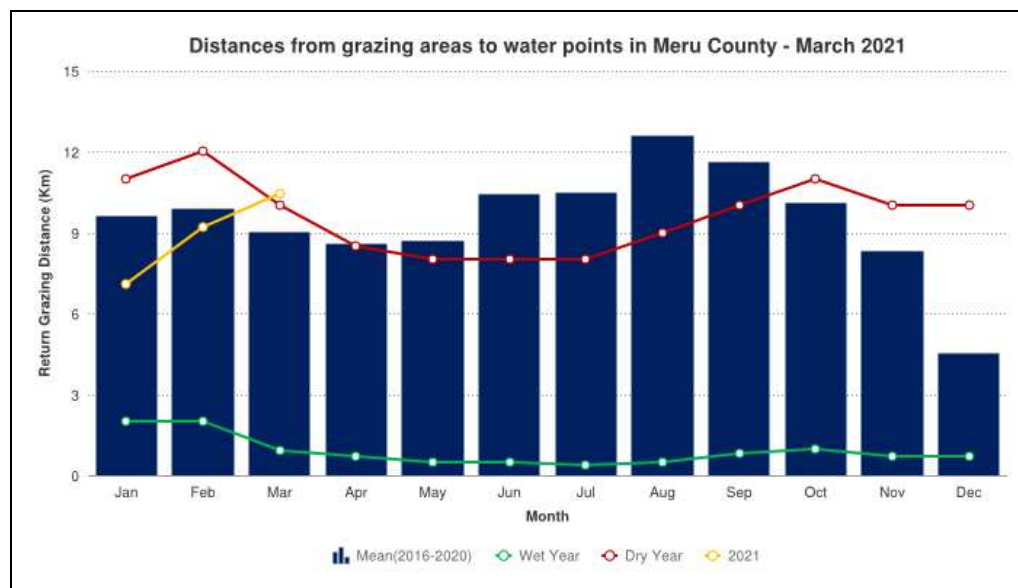


Figure 7: Livestock average return distances to water sources

- From (Figure 7) shown above, the average return distance to water source from grazing areas increased to 10.4 km when compared to the previous month of 9.2 km.
- The increase was due to increased distances to grazing areas in search of pasture and drying up of water pans and dams.
- The watering frequency for livestock was on a daily basis for mixed farming and rain fed livelihood zones while in the agro pastoral livelihood zone it was on alternate days.
- The current average return distance to water sources was 15.6 percent above the normal 9 Km.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- The body condition of cattle and small stock was good to fair across the livelihood zones.
- The body condition in rain fed and mixed livelihood zone was good to fair with majority of livestock been neither thin nor fat and with good smooth appearance. In the agro pastoral livelihood zone the body condition was fair.
- The body conditions of livestock are expected to deteriorate with the increasing constrain and deterioration of pasture in the livelihood zones
- However, with the onset of the long rains the condition is expected to improve owing to forage rejuvenation.

3.1.2 Livestock Diseases

- Cases of FMD were reported within the county.
- During the first week of March vaccination against FMD was carried out. The vaccinations however discontinued due to constrains in resources within the month.
- Routine surveillence measures by the County government continued in the month under review.

3.1.3 Livestock Migration

- There were internal and external migrations of livestock mainly cattle and camels.
- The migration was mainly from Isiolo Migration route Kinna- Kinanduba- Kisimani – Tharaka., The migration has been mostly near watering sources in the county

3.1.3 Milk Production

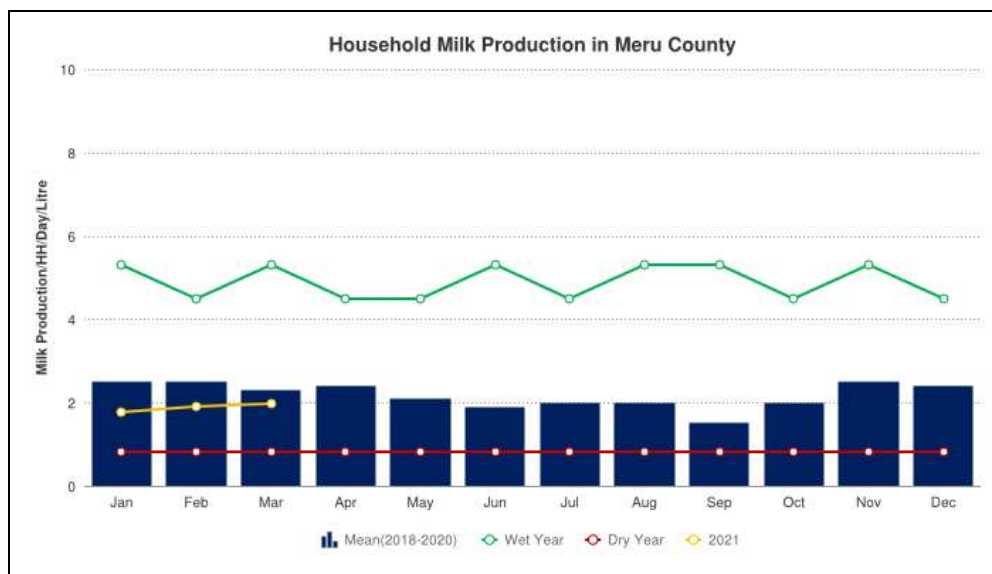


Figure 8: Household milk production in Meru North

- From the figure 8 above, the average daily milk production per household per day remained stable at 2.0 litres compared to the previous month at 1.9 litres.
- Current milk production of 2.0 litres is slightly below normal the long term average milk production of 2.3 litres.
- Average milk price per litre at household level ranged from Ksh. 60 – 100 which was normal at this time of the year.

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of food Crops

- Preparation of farms and planting for the long rains is on-going.
- poor harvests of crops was reported across all the livelihood zones.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

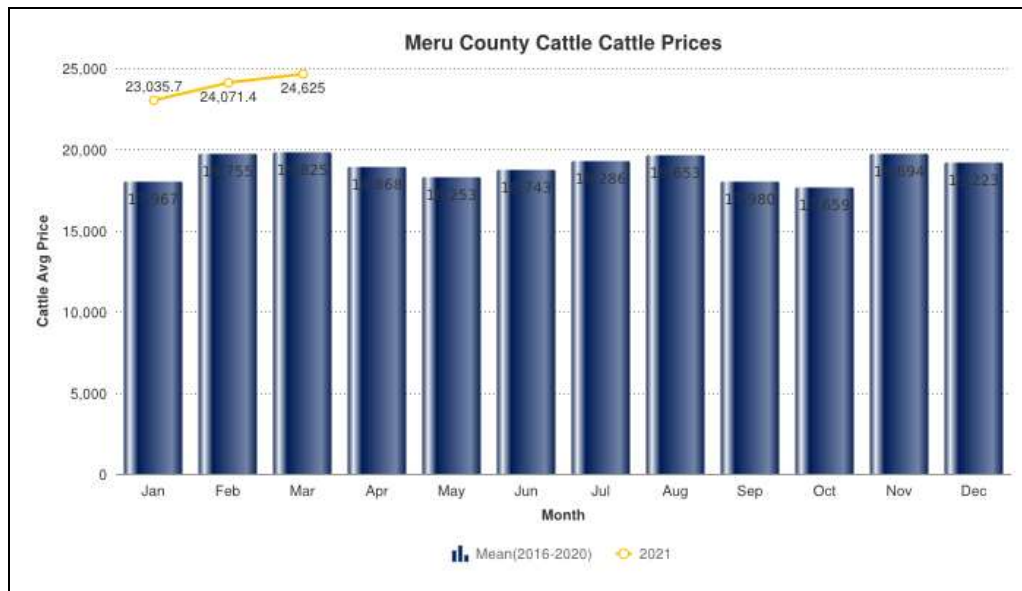


Figure 9: Average Market prices for cattle in Meru County

- From the figure (9) shown above, the average market price of three-year-old cattle for the month under review remained stable at Ksh. 24,685 when compared to the previous month of February price of Ksh. 24,071.4.
- When compared to similar periods, current cattle price of Kshs. 24,685 is above the long term price of Kshs. 19,825. The high prices are attributable to low supply with high demand in the market.
- The highest price recorded for the month for cattle was at Ksh 35,000 in Kianjai in Tigania West and lowest at 19,000 in Mutuati market in Igembe North.

4.1.2 Goat Prices

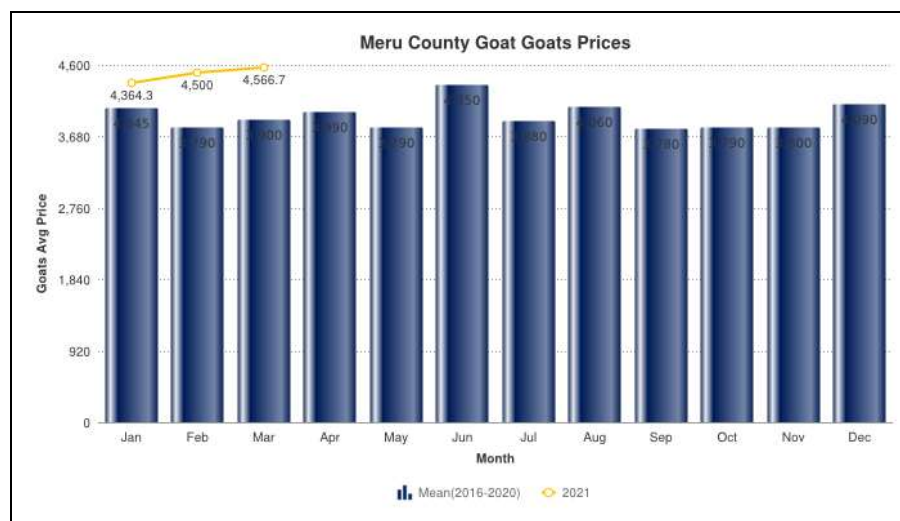


Figure 10: Average Market prices for goat in Meru County

- The average market price of a two-year goat for the month under review remained stable at Ksh. 4,566 when compared to the preceding month of February price of Ksh. 4,500 as illustrated in the above figure (10).
- When compared to the long term average price of Ksh. 3790 at similar periods the current price is above normal by 17.1 percent.
- The highest goat prices were recorded in Kangeta market in Igembe Central at Ksh 6000 while the lowest in Mikinduri market in Tigania East at ksh 3500.

4.2 CROP PRICES

4.2.1 Maize

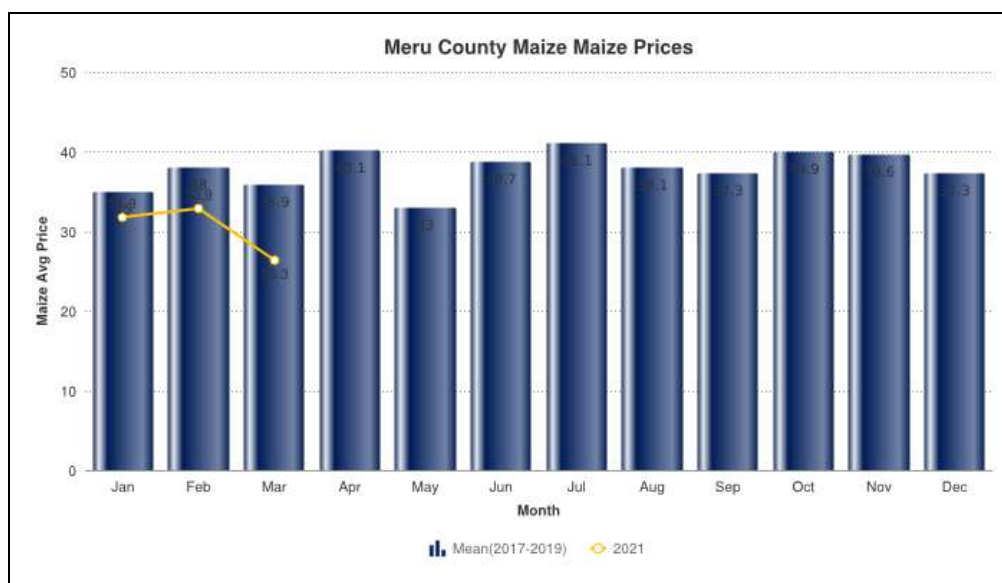


Figure 11: Average market prices for maize in Meru County

- The average market price of a kilo of maize significantly decreased from ksh 32.9 in February to Ksh 26.3 in March across the livelihood zones.
- The decrease is attributable to short rains harvests at household level thus replenishing the household stocks and high supply in the market.
- The highest maize price was recorded in Kangeta Market in Igembe Central at Ksh 30 with lowest price recorded in Mutuati Market in Igembe North at Ksh 22.
- The current market price is 27 percent below the long term average of Ksh 35.9 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 a kilo of beans remained stable at Kshs 69 when compared to previous month price of Kshs 66.9
- The stability is attributed to short rains harvest of pulses hence replenishing the household stocks and high supply for the commodity in the market.
- The highest market price per kilo was recorded in Kangeta Market at Ksh 70 while the lowest in Kianjai market at Ksh 68.
- The current average beans price is above the long term average of Ksh 54 per kilogram.

4.2 INCOME

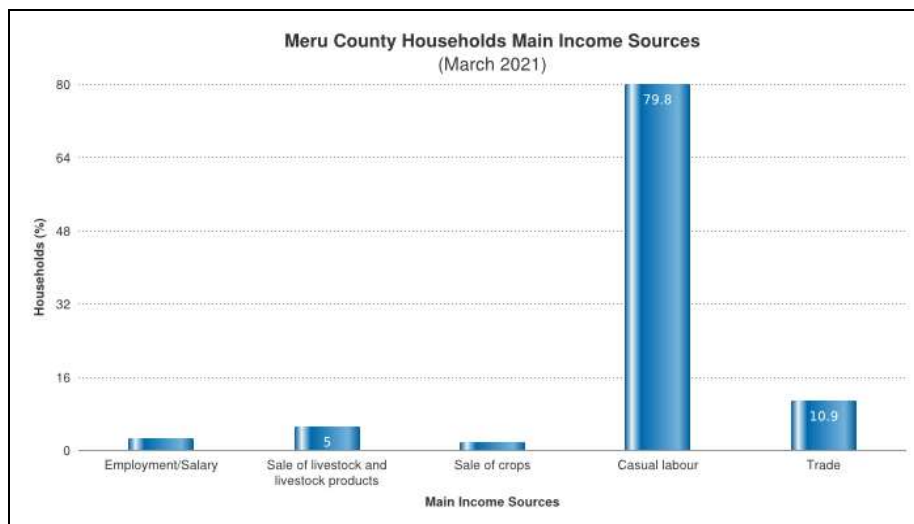


Figure 13: Sources of household income in Meru North

- The households' source of income was casual labour accounting for 79.8 percent of household source of income, trade at 10.9 percent sale of crops at 7.9 percent sale of livestock and livestock products at 5 percent and employment /salary at 2.5 percent.
- Households also depended on sale of 'Miraa' which is considered as a major cash crop

4.4 TERMS OF TRADE

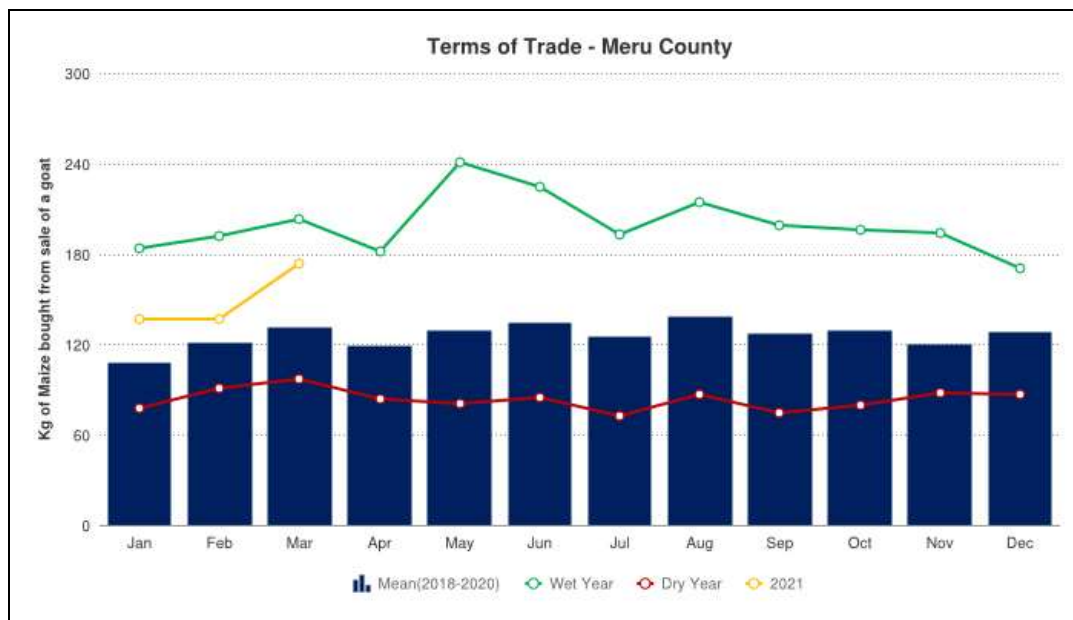


Figure 14: Terms of trade in Meru North

- The Terms of trade significantly increased from Ksh 137 per kilograms of maize realised from a sale of goat to Ksh 173.4 in March illustrated in the above figure 14.
- The increase is attributed to increase in goat prices while the maize prices decreased.
- The current terms of trade is 32 percent above the long term average of Ksh .131 per kilogram of maize realised from sale of a goat.

5. FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

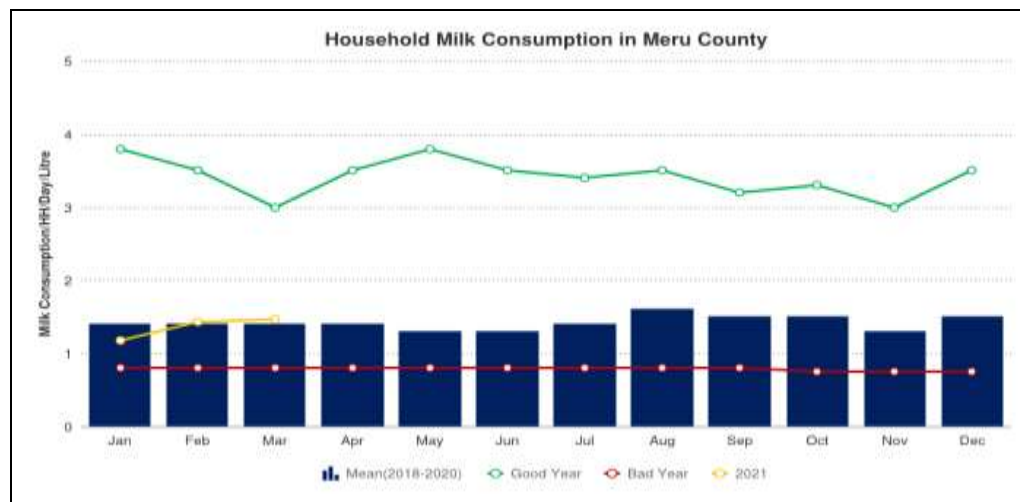


Figure 15: Average household milk consumption (l/hh/day)

- Milk consumption per household per day remained stable at 1.5 litres compared to previous month at 1.4 litres.
- The stability is attributed to stability in in milk production at households.
- The current milk consumption per household per day is within the long term average of 1.4 litres

5.2 FOOD CONSUMPTION SCORE

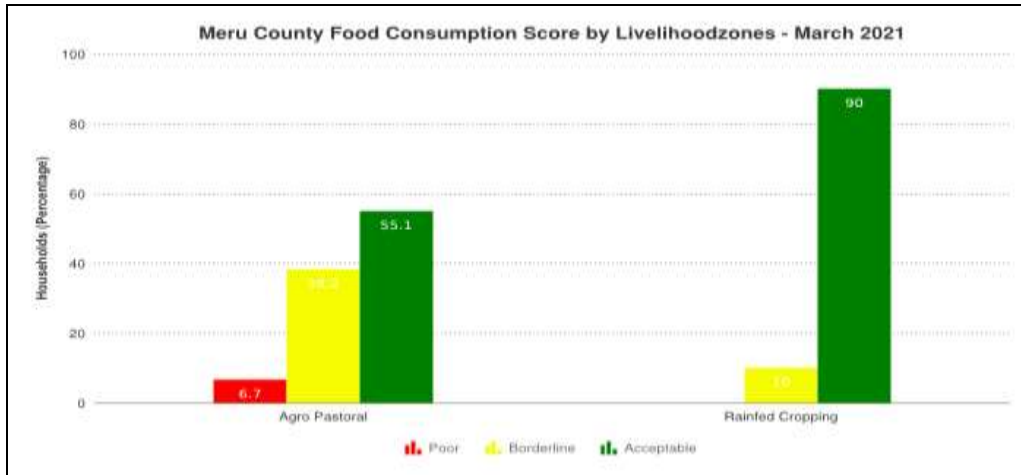


Figure 16: Household food consumption score

- Out of 120 households sampled from the sub counties, majority of the households averagely 64 percent were in the acceptable food consumption score category indicating that they were consuming an acceptable diet in terms of meal frequency, dietary diversity, nutritional value and amount. The rest of the households, 31 percent, were under borderline consumption score category, while 5 percent households under poor food consumption score.
- The households on average consumed; grains and pulses for six to seven days, vegetables for an average of four days and fruits for five days now that it was mango season. Consumption of milk and meat was minimal.

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status of Children

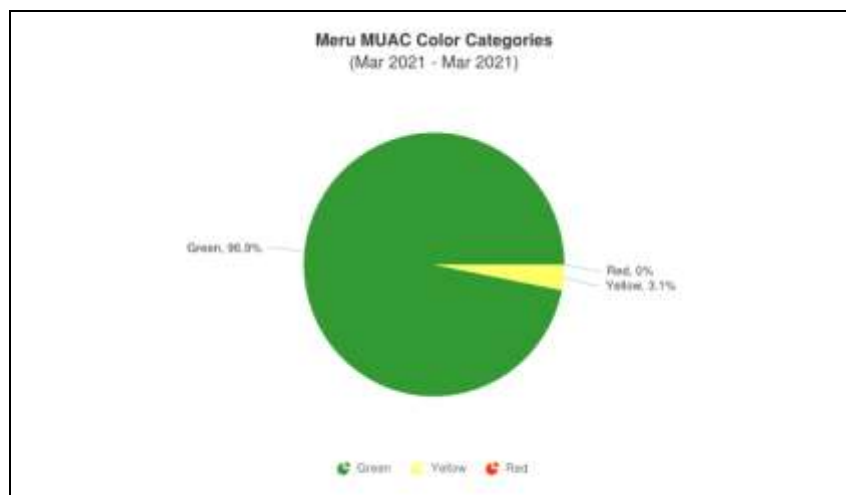


Figure 17: Children under five at risk of malnutrition in Meru County

- Out of the sampled children at risk of malnutrition 96.9 percent at green with the remaining 3.1 percent at yellow.

5.4 Coping Strategy Index

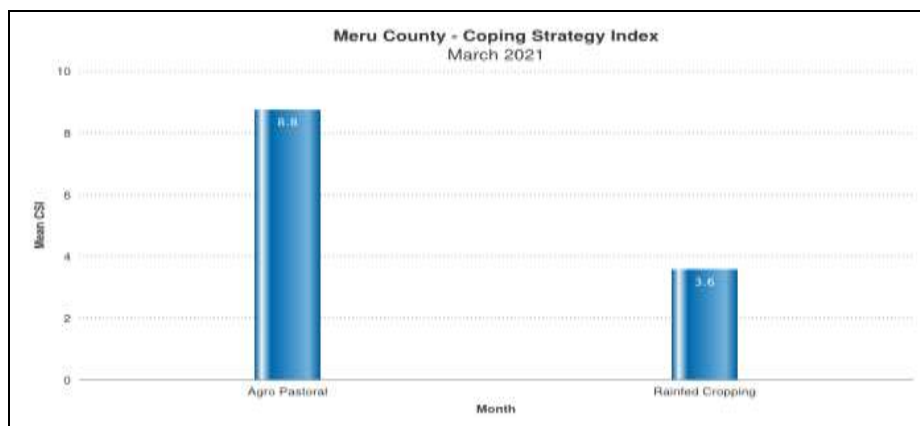


Figure 18: Household coping in Meru North

- Reduced consumption based coping strategy index (rCSI) for the month under review significantly decreased to 8.8 compared to previous month of February at 9.9. The copying strategy index was within the long term average.
- The agro pastoral livelihood zone recorded a higher CSI of 8.8 while the rain fed livelihood zone recorded a coping strategy index of 3.6.
- The decrease is attributed to replenished household food stocks from the short rains harvests and also the increased purchasing power for livestock keepers.
- The coping strategy index was normal at this time of the year.

6.1 Insecurity/ Conflict/ Human Displacement/ emerging issues

- Cases of conflict between herders from neighbouring communities in Igembe North have been reported where the herders let in camels and cattle into farms in search of pasture and water.

6.2 FOOD SECURITY PROGNOSIS

- Pasture and browse condition is expected to improve with the onset of the long rains
- to decrease with the onset of the long rains which is expected to recharge water sources
- The terms of trade are also expected to remain favorable for the next two months occasioned stable market prices of livestock and cereals.
- The proportion of children at risk of malnutrition will likely reduce due to replenishment of household stocks from short rains harvest and favourable terms of trade.
- Livestock production and productivity is expected to increase in the next two months due to availability pasture and water at shorter distances with time

6.3 On-going interventions

| SECTOR | Intervention | Implementer | Beneficiaries |
|-----------------------------|--|--|--|
| HEALTH | <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> |
| AGRICULTURE | <ul style="list-style-type: none"> • Surveillance of the locusts and fall army worms | <ul style="list-style-type: none"> • County department of Agriculture department | Farmers |
| WATER AND SANITATION | <ul style="list-style-type: none"> • Repair of the broken boreholes | <ul style="list-style-type: none"> • County government, • Other Stakeholders | Households ,farmers |

7. SECTOR RECOMMENDATIONS

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

| | | | |
|-----------------------------|---|---|---|
| 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 • 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 |