

National Drought Management Authority
THARAKA NITHI COUNTY (THARAKA)
DROUGHT EARLY WARNING BULLETIN FOR MAY 2020



A Vision 2030 Flagship Project



May 2020 EW Phase

Drought Status: NORMAL



Early Warning Phase Classification

	EW PHASE	TRENDS
Mixed Farming	Normal	Stable
Marginal Mixed Farming	Normal	Stable
Rain Fed Livelihood Zone	Normal	Stable
County	Normal	Stable
Biophysical Indicators	Value	Normal Ranges
Rainfall % of Average	31.03%	80-120
VCI-3month	61.79	>35
Water Sources	Above Normal	Normal
Production Indicators	Value	Normal Ranges
Livestock Migration Pattern	No Migration	No Migration
Livestock Body Conditions	Good	Good
Milk Production	1.2Litre	Above 1.01 of a Litre
Livestock deaths (from drought)	No death	No death
Access Indicators	Value	Normal
Terms of Trade	105.4	Above 89
Milk Consumption	1.2 Litres	Above 0.85 of a Litre
Water for Households	Normal	Normal
Utilization indicators	Value	Range/Value
Coping Strategy Index (CSI)	1.2	Below 7.74
Food Consumption (Acceptable FCS)	90%	Above 20.57%

Drought Situation & EW Phase Classification

Biophysical Indicators

- Rainfall amount and spatial distribution in May was normal. An average of 27mm was received and it was unevenly distributed. The Weather condition for May was fairly cold. Crop condition, forage condition and water status were normal. Vegetation cover across the County was above normal an indication of good pasture and browse condition.
- The current biggest contributing factor to vulnerability of the county in term of food security in the month of May is Covid 19 which has disrupted market operation hence making prices of livestock to drop and that of food commodities outside the county to increase.

Socio Economic Indicators (Impact Indicators)

Production Indicators

- Livestock body condition was good and improving. Food Stock at households' level was stable and the situation was improving due to onset of harvest. However, disruption of market operations, business and transport uncertainty has affected household income from crops and livestock sales.

Access Indicators

- Livestock prices increased due to return to normalcy of market while food commodity prices portrayed a downward trend due to onset of harvesting. Household water distance was within the normal range due to good status of water sources. Milk production and consumption was normal which led to low malnutrition cases.

Utilization Indicators

- Following all the above prevailing conditions, the overall drought phase in the month of May was normal and stable.

Seasonal Calendar

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

1.0 CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- Cessation of rainfall was on the 4th week of April in most areas while in a few localities such as Marimanti, Chakariga and Tunyai, it extended to the 1st week of May. The peak of March to May rainfall was witness in April with few flash floods being witnessed in few areas and along river Tana, Kathita, Thananthu among others.
- Spatial and temporary distribution was uneven with some few areas receiving rainfall.
- An average amount of 27mm of rains was received in May which was slightly below the normal range compared to the long term average of 87mm.
- The figure 1 below shows the rainfall trend for 2020 compared to the long term Average.

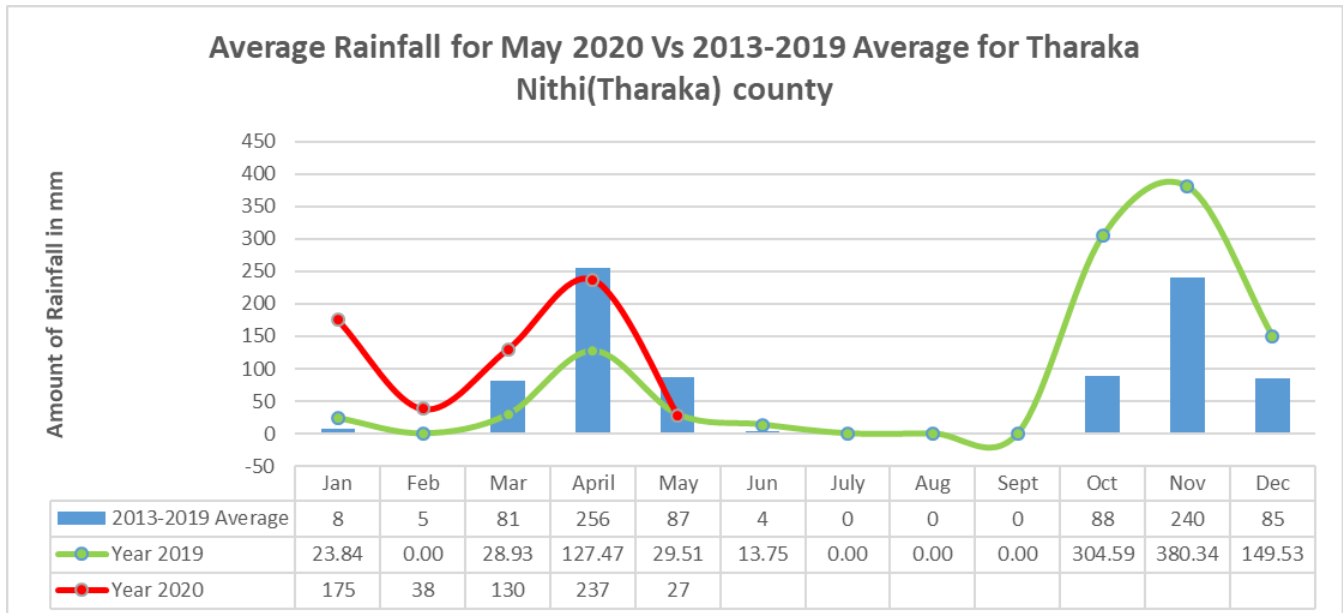


Figure 1 : Rainfall trend for 2020 Vs 2013-2019 Average

1.1.1 Spatial and Temporal Distribution of Rainfall

- Rainfall received in the month of May was unevenly distributed, Chakariga received the highest amount of rainfall of 82.2mm for 2 days, it was followed by Tunyai Mukothima with 47.1mm for 3 days, Karocho was third with 40.6mm for 4 days while Marimanti received the least amount of 22.3 mm for 3days. Kamanyaki, Mukothima, Kathanga chini and Irunduni did not received any rainfall. The total amount of rainfall received per the rain gauge station is as shown by the figure 2 below.

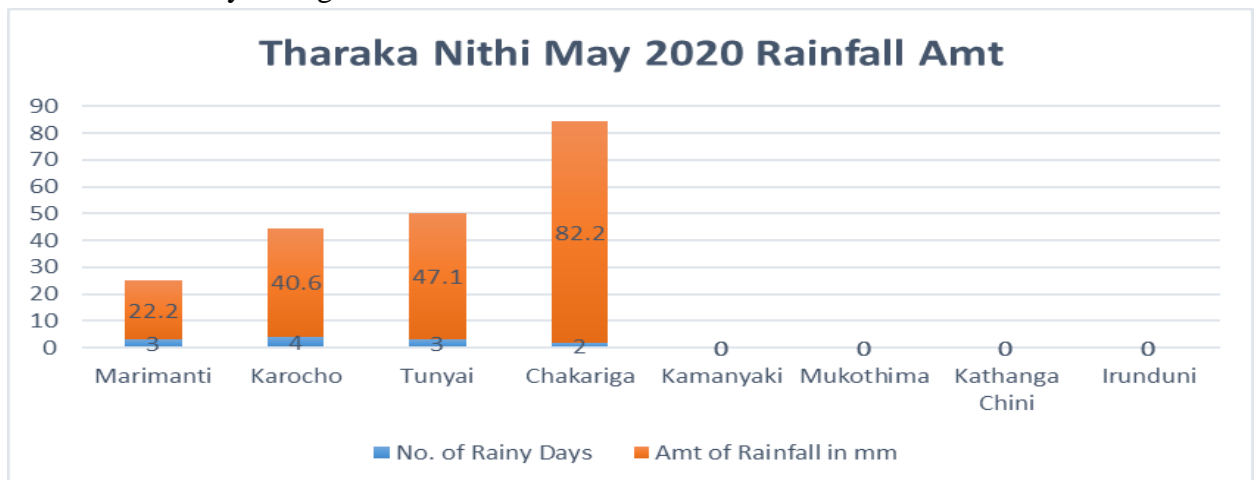


Figure 2 : Rainfall Amount per the Rain gauge station

2.0 IMPACTS ON VEGETATION AND WATER

2.1 Vegetation Condition Index (VCI)

- The cumulative 3 month vegetation cover for Tharaka Nithi County (Tharaka) for the month of May was 61.79 from 74.69 in April which was indicating above normal vegetation greenness. Pasture and browse reduced across all the livelihood zones due to the cessation of the long rains.
- The matrix in figure 1(a) below shows vegetation cover classification based on the drought phases while figure 1(b) shows the trend of vegetation cover in terms of vegetation condition index for Tharaka Nithi (Tharaka) County.

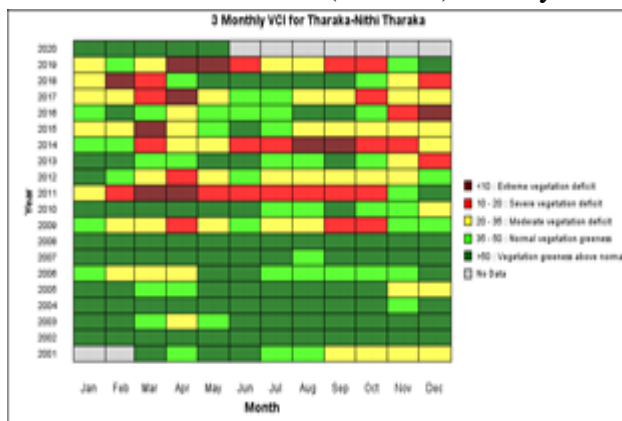


Figure 3(a): Matrix of VCI Classification

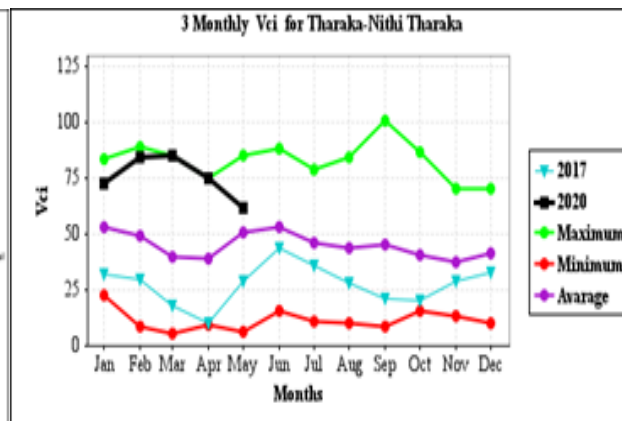


Figure 4(b): Chart of VCI Trend

Table 1: May 2020 Vs April 2020 VCI (3M)

ADMINISTRATIVE UNITS		VCI as at 30 th April 2020	VCI as at 31 st May 2020
County	County/Sub County		
Tharaka Nithi	County	80.09	67.75
	Tharaka	74.69	61.79
	Chuka Igambang'ombe	89.35	77.31
	Maara	86.05	75.10

2.2 Natural Vegetation and Pasture Condition

Pasture Condition

- Pasture quantity and quality was good across all the Livelihood zone during the month of May was good with a reducing trend.
- Pasture condition reduced slightly from that of the previous month due to the ongoing long rains.

Browse Condition

- Browse condition in terms of quantity and quality was good across all the livelihood zones in the month of May reduced compared to that of the previous months.
- This reduction of browse was due to the cessation of the long rains in the 1st week of May.

Livestock Access

- Average return water distance from grazing area increased from 1.9Km in April to 2.8 Km in May. This was attributed to the cessation of the long rain which reduced the recharge of water sources leading to decreased livestock access to water. The longest return water distance to grazing areas was recorded in the Marginal Mixed Farming Zone at 3.6 Km, Rain Fed Cropping Zone at 2 Km while the Mixed Farming Zone recorded the least grazing distance of 1.6 Km.
- The average return water distance to grazing areas was 26.32 percent lower than the long term average of 3.8 Km for this time of the year.

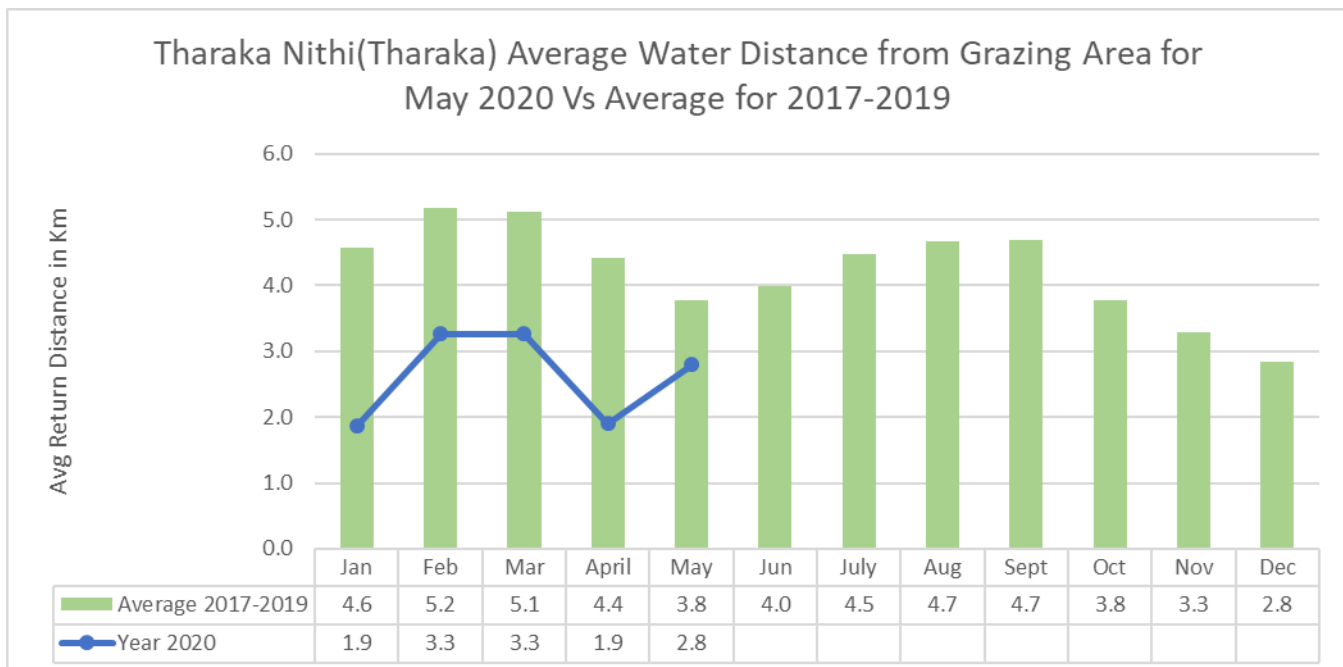


Figure 5: Grazing Distance for Livestock

2.2 Water Sources and Availability

2.2.1 Main Sources of Water

- The major sources of water for livestock and domestic use in Tharaka Nithi County for the month of May was: Rivers, Boreholes, Traditional River wells and shallow wells as shown by figure 4 below.

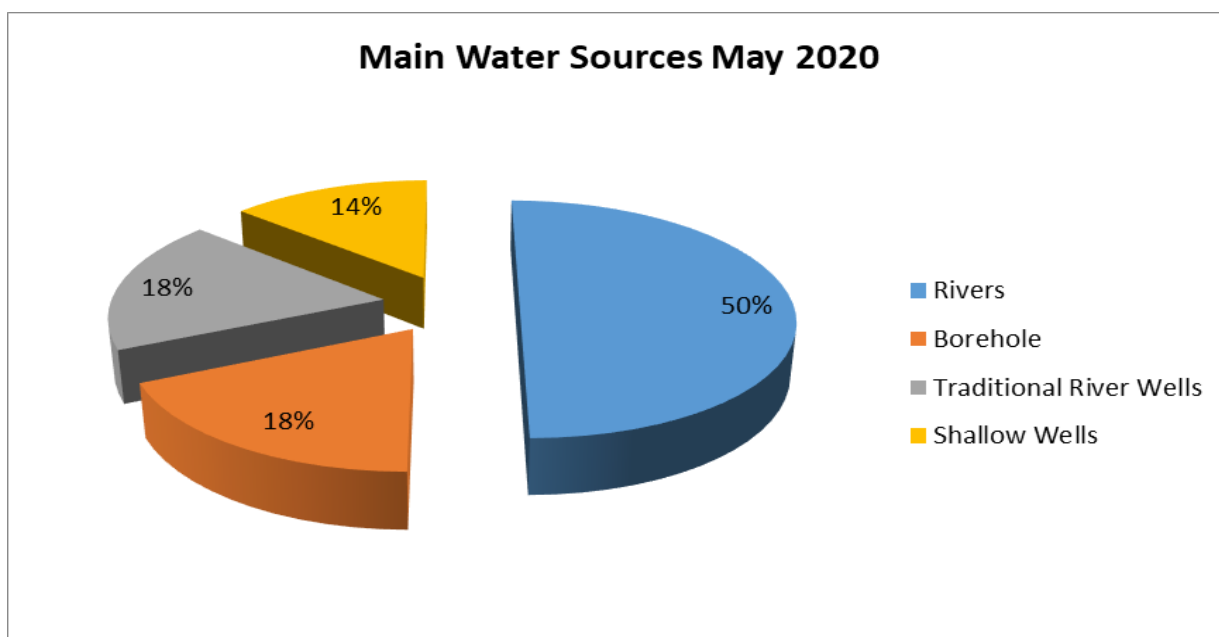


Figure 6: Main Water sources Tharaka Nithi County

2.2.2 State of Water Sources

- The state of water sources for the month of May was within the normal range and the trend was stable. The water recharge level both for the surface and underground sources was at approximately 31.03%.
- Despite the drop in water recharge level water availability was still within the normal range.
- Status of water sources across all the Livelihood Zones could be ranked as good which is at index 5 in reference to the scale below:

Table 2: State of Water Sources

INDEX	STATE OF WATER	DESCRIPTION
1	EMERGENCY.SITUATION	All main water sources have dried up; only few boreholes still yielding significant amounts
2	STRONGLY INADEQUATE	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	INADEQUATE	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	DECLINING	The water availability is below normal for the period, but showing declining trends.
5	NORMAL	The water availability is normal for the period
6	GOOD	The water availability is above normal for the period

2.2.3 Household Water Access

- Average Household water return distance in May was 2.8 Km from 2.3 Km in April which Increased due to low recharge following the cessation of the long rains in early May. Household return water distance in Marginal Mixed Farming Livelihood Zone was 3.6 Km, 2.2 Km in Mixed Farming Zone while the Rain Fed Zone had the least household distance of 1.2 Km.
- The average distance of household access to water was 20% lower than the long-term average of 3.5 Km for the month of May.

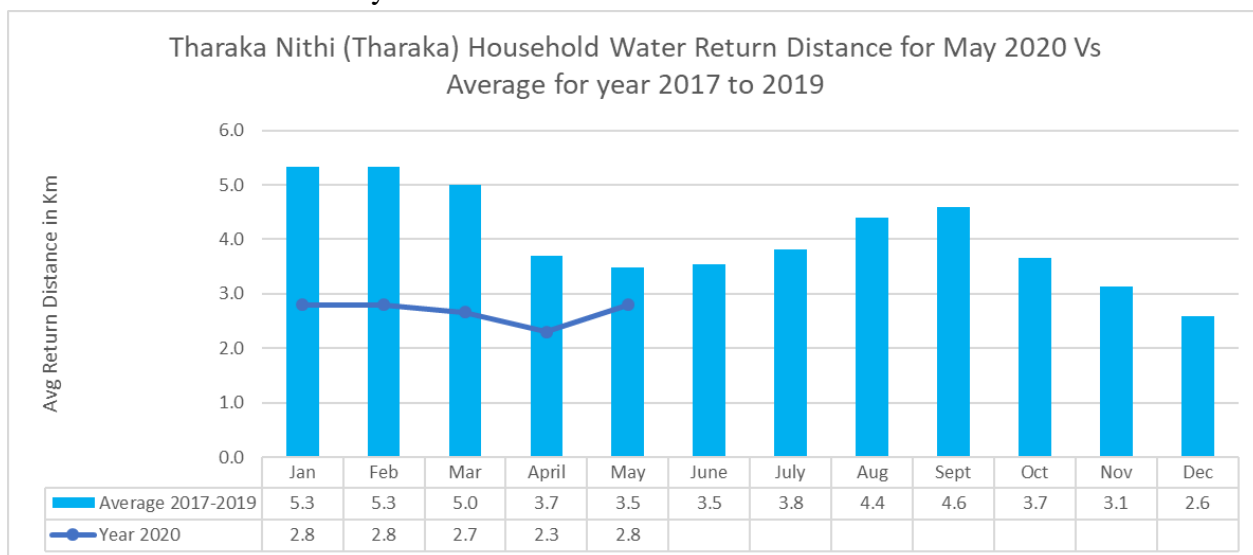


Figure 7: Household Water Distance

3.0 PRODUCTION INDICATORS

3.1 Livestock Production

3.1.1 Livestock Body Condition

- Livestock body condition for both cattle and shoats was good across all the livelihood zones.
- The fair to good livestock body condition was attributed to fair pasture and browse condition across most of the livelihood Zones.
- The Livestock body condition in May for cattle and shoats was rated at index 8 as per the livestock threshold scale below.

Table 2: Livestock Body Condition categories

BODY CONDITIONS	SCORE	WARNING STAGE
Emaciated, little muscle left	1	Emergency
Very thin no fat, bones visible	2	
Thin fore ribs visible	3	Alert Worsening/Alarm
Borderline fore-ribs not visible. 12 th & 13 th ribs visible	4	Alert
Moderate. Neither fat nor thin	5	Normal/Alert
Good smooth appearance	6	
Very Good Smooth with fat over back and tail head	7	Normal
Fat, Blocky. Bone over back not visible	8	
Very Fat Tail buried in fat	9	

3.1.2 Livestock Diseases and Migration

There were no cases of Livestock migration and diseases. However, there were few reported cases of CPP in goats were reported in Kathangachini location in the month of March, April and May.

3.1.3 Milk Production

- Milk production decreased from 1.3litres in April to 1.2litres in May. Milk production was almost the same as of the previous month and it was higher than the long term average which was attributed to fair pasture and browse condition from the concluded long rains.
- All the livelihood Zones had an average production of more than a litre per household per day. Milk production per household was 18.81 percent higher than the 3-year average of 1.01 litre per household per day for this time of the year.

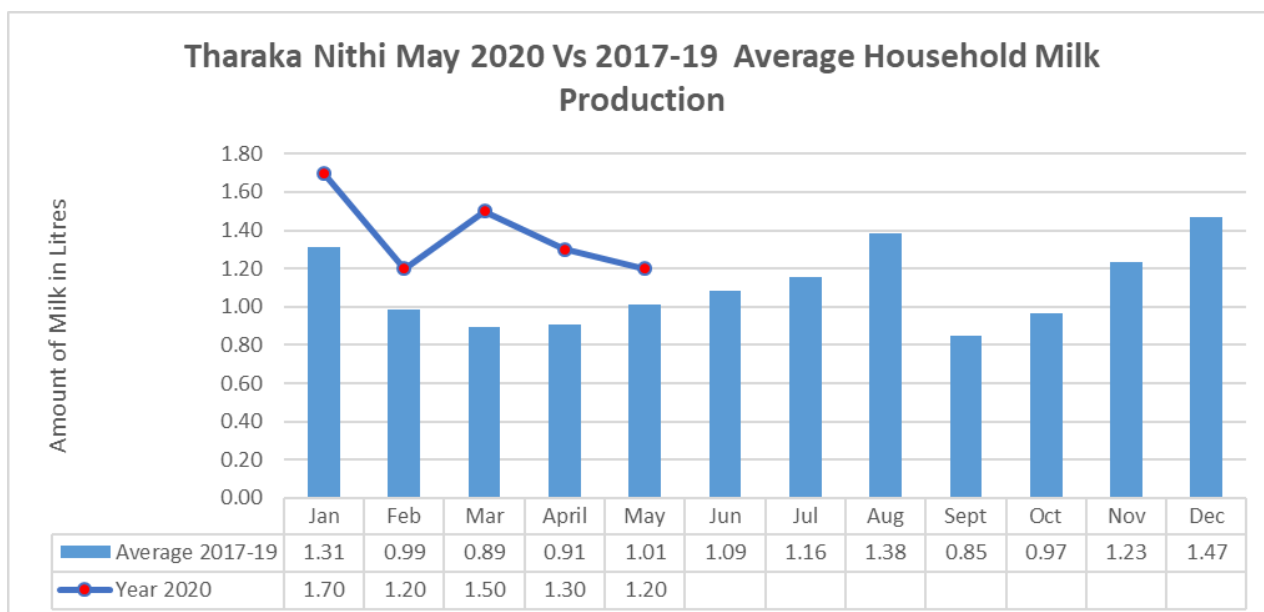


Figure 8 : Milk Production Trend

3.2 Crop Production

3.2.1. Timeliness and Status of Crops

- Cereal crops like sorghum and millet are in the final stage of maturity while pulses such as green grams and cow peas are being harvested. Farming activities during the period under review was harvesting of pulses.
- Condition of both cereal and pulses was good hence a good harvesting is expected in most areas.
- Pulses grown were green grams, cowpeas and pigeon peas while cereal crops were Millet, Sorghum and maize across all the livelihood.

3.2.2. Pests and Diseases

- There were reported cases of desert locust infestation in Maragwa, Kathanga Chini, Kathagani, Kathiriku, Karangare, Makithi and surrounding areas hence posing a threat to pasture, browse and crops.
- However, the situation was subdued due to multi-agency approach intervention ranging from ground mapping, community sensitisation, surveillance, monitoring, coordination meeting to ground and ariel spraying.

4.0 MARKET PERFORMANCE

4.1 Livestock Prices

4.1.1 Cattle Prices

- The average cattle price increased from Kshs. 23,000 in April to Kshs. 23,817 in the month of May which was almost the same as of the previous month. Cattle price is expected to increase with the anticipated ease of Covid 19 restriction measures and the resumption of livestock markets.
- The Marginal Mixed Farming livelihood Zone had the highest average price of Kshs 25,000; the Rain Fed Cropping Livelihood Zone had the price of Kshs 24,000; while the Mixed Farming Livelihood Zone had the least price of Kshs 20,000. The current price was 25.54 percent higher than the three-year average of Kshs 18,972.

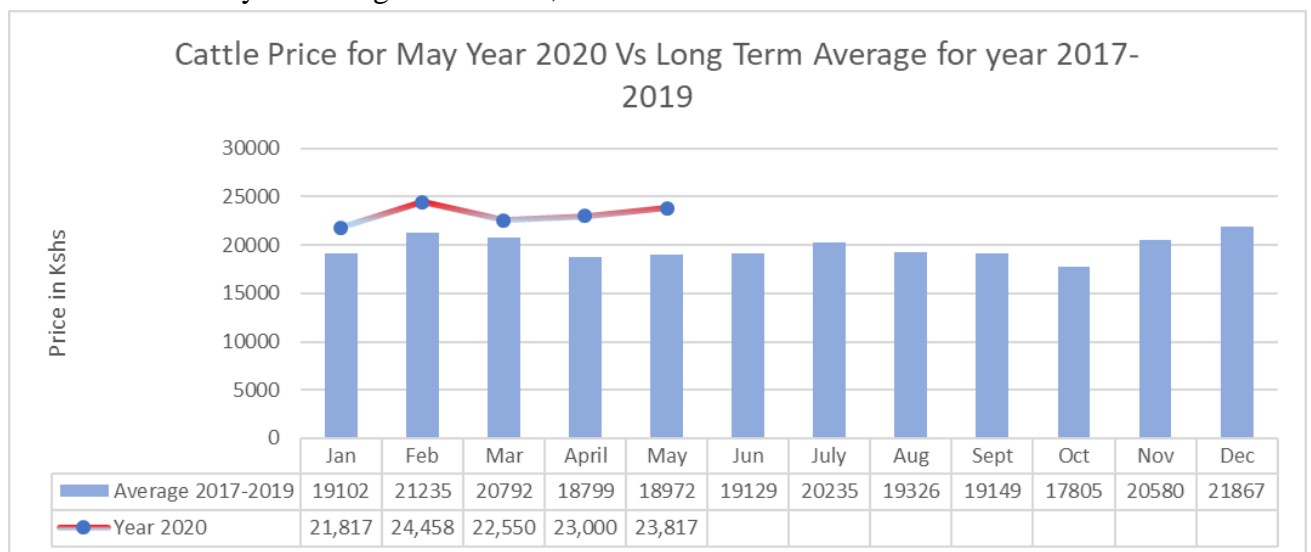


Figure 9: Cattle Price Trend

4.1.2 Goat Prices

- The average goat price increased from Kshs 3,767 in April to Kshs 3,908 in the month of May. The increase in price could be attributed to resumption of normalcy make shifts livestock markets.
- The Marginal Mixed Farming Livelihood Zone had the highest price of Ksh. 4,166.5; Rain Fed Cropping Livelihood Zone recorded the price of Kshs 4,000 while the Mixed Farming Zone recorded the lowest price of Ksh. 3,300.
- The average goat price was 11.31 percent higher than the three-year average of Ksh 3,511.

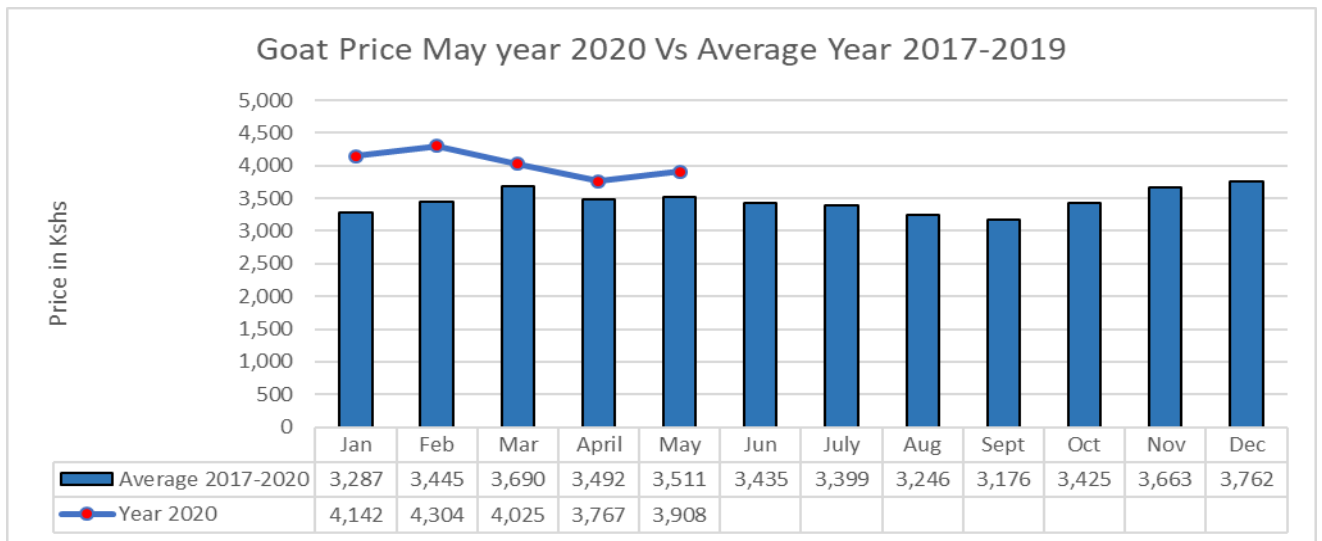


Figure 10 : Goat Price Trend

4.2 Price of Cereals and Other Food Products

4.2.1 Maize Prices at Market Level

- The average market price of a Kilogram of maize decreased from Kshs 41 per Kg in the month of April to Kshs 37 per Kg in the month of May. This decrease in maize price was attributed to onset of harvesting which led to use of substitute food leading to low demand of maize.
- Maize price was Kshs 40 per Kg in the Mixed Farming Livelihood Zone, Kshs 37.5 per Kg in Marginal Mixed Farming Livelihood Zone and Kshs 33 per Kg in the Rain Fed Livelihood Zone.
- The average maize price was 15.91% lower than the three-year average price of Kshs 44 per Kg in May.

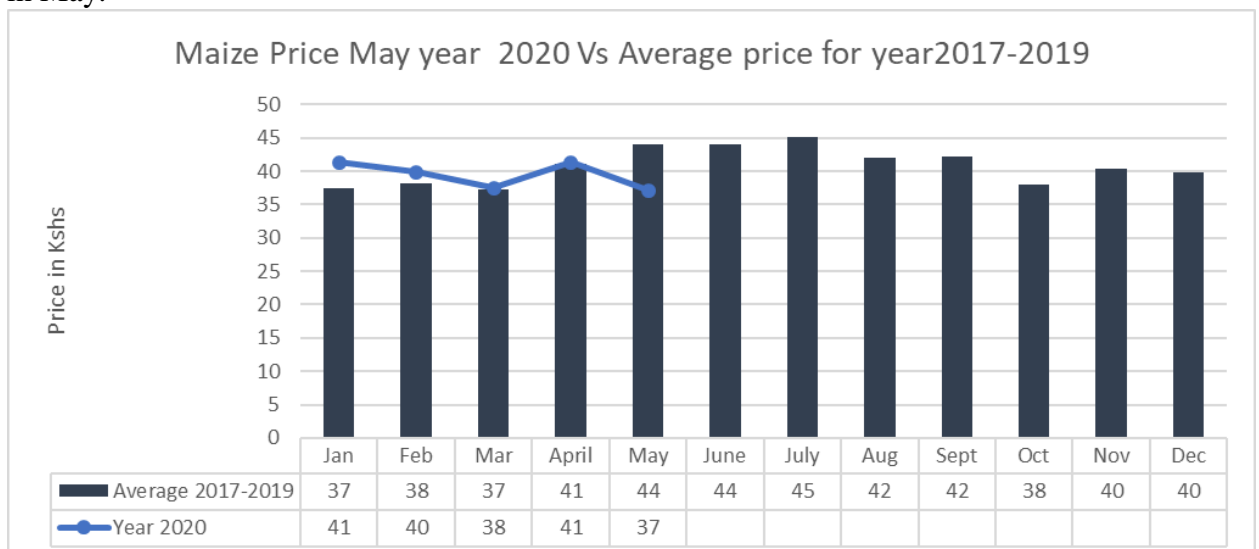


Figure 11: Maize Price Trend

4.2.2 Millet Price at Market Level

- The average market price of millet decreased from Kshs 29 per Kg in April to Kshs 26 per Kg in May which was attributed to onset of harvest of some of the long rain crops leading to a drop in Millet price.
- The Rain Fed and Mixed Farming Livelihood Zone recorded the highest market price of Kshs 30 per Kg while Marginal Mixed Farming Zone recorded the least price of Kshs 25.5per Kg.
- The millet price was 50.94 percent lower than the long-term average price of Kshs.53 per Kg for the month of May.

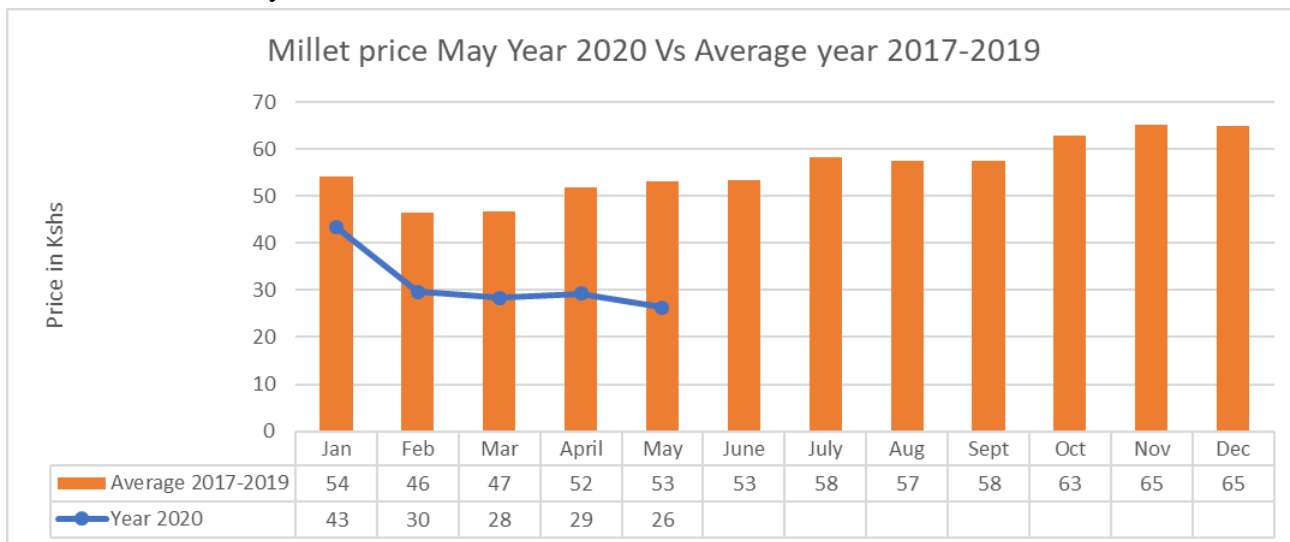


Figure 12 : Millet Price Trend

4.2.3 Terms of Trade (ToT)

- The Terms of Trade increased from 91.3 in April to 105.4 in May which was attributed to an increase in Goats price and a relative decrease in maize price.
- The highest ratio was recorded in the Rain Fed Cropping Zone at 121.21; followed by Marginal Mixed Farming Zone at 111.11 while Mixed Farming Zone had the least term of trade ratio of 82.5.
- The term of trade for the period under review was 18.43% higher than the three year average value of 89 during the same period.

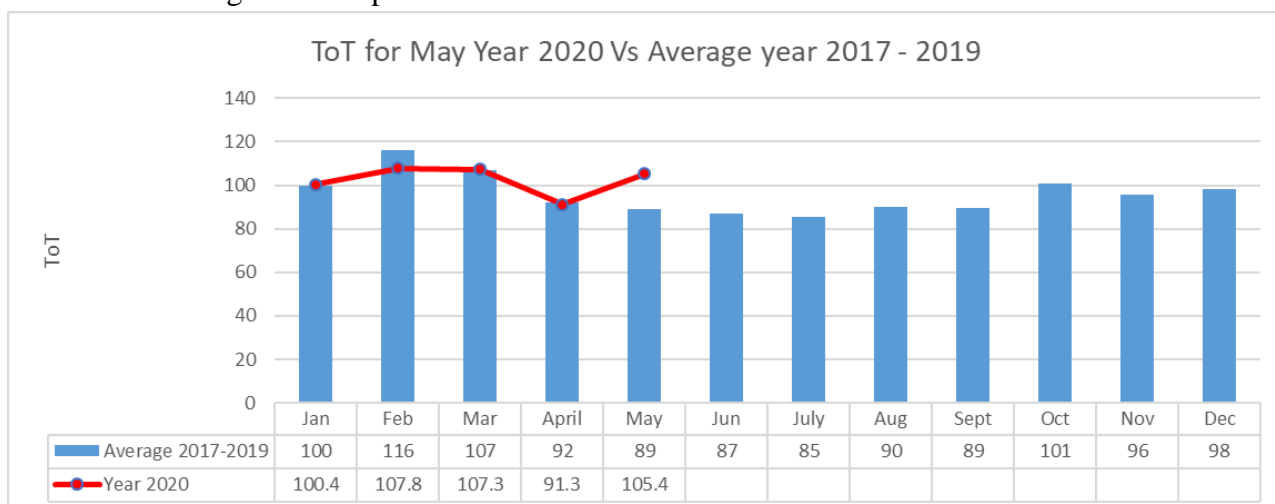


Figure 13: Term of Trade

4.2.4 Income sources

- The main sources of income for households in Tharaka Nithi County for the month of May were: Petty trade, Casual labour, Sale of crops, Employment/wages and Sale of livestock and livestock product as shown by the figure 14 below.

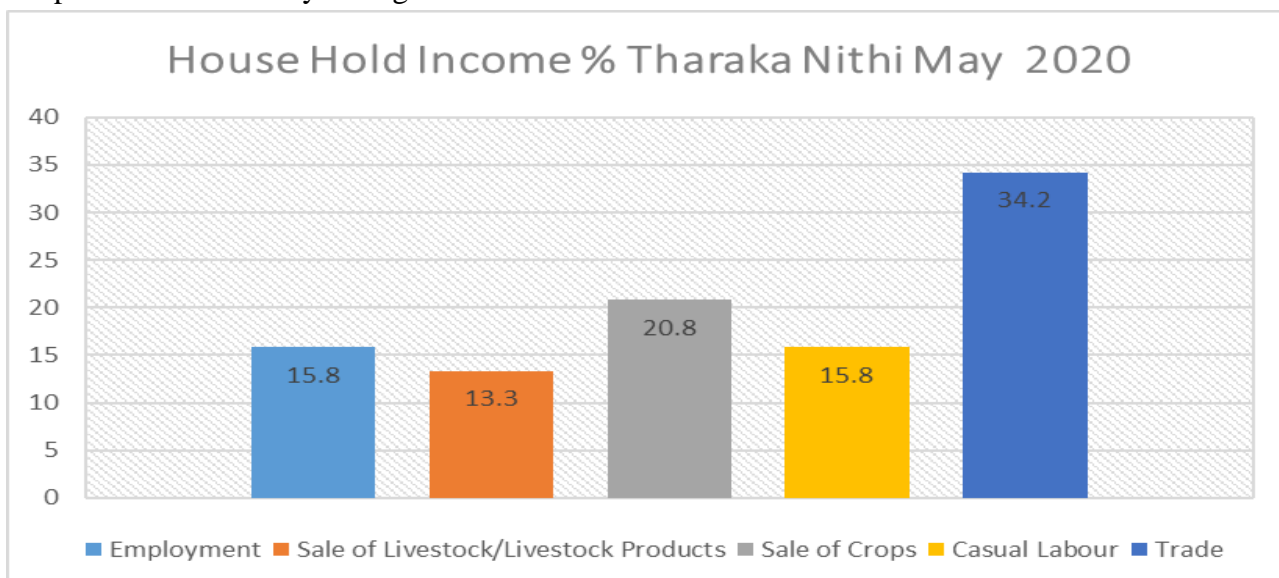


Figure 14 : Tharaka Nithi Percentage Household Income

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1.1 Milk Consumption

- The average milk consumption per household per day in the month of May was 1.2 of a litre from 1.1 of a litre per household per day in April which was within the normal range.
- This was attributed to availability of milk at household level. The average milk consumed was 41.18 percent higher than the 3-year average of 0.85 of a litre.

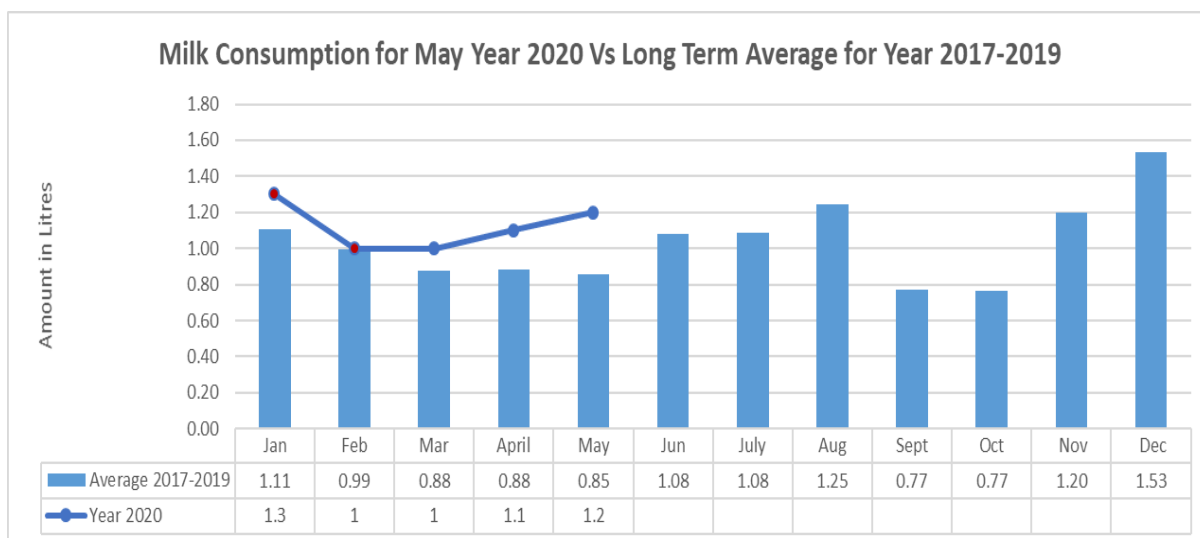


Figure 15 : Milk Consumption Trend

5.1.2 Food Consumption Score

- Proportion of households with acceptable Food Consumption Score increased from 78.90% in April to 90% in May as shown by the graph in fig. 16 below.

- Improvement in Food Consumption Score was attributed to onset of some of the long rain crops which led to availability of food stocks at household level hence good household food security and diversity.

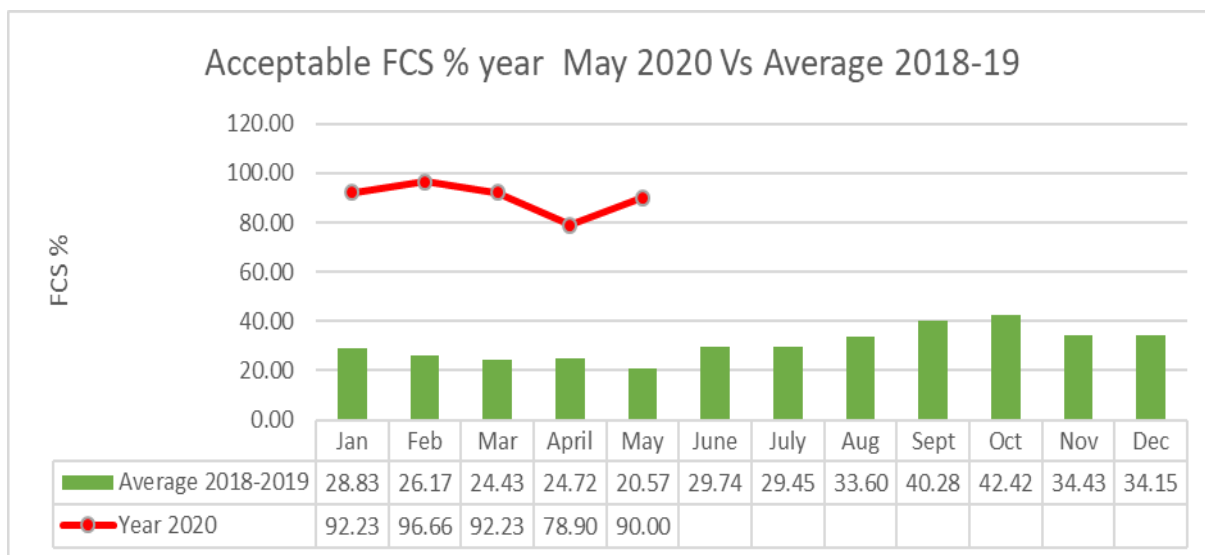


Figure 16: Trend of the Proportion of HHs with Acceptable FCS

- A higher number of Food Stressed Households were in the Rain Fed Cropping Livelihood Zone at 16.7% followed by Marginal Mixed Farming Livelihood Zone at 13.3% while negligible food stressed households were reported in the Mixed Farming Livelihood Zones as shown by figure 17 below.

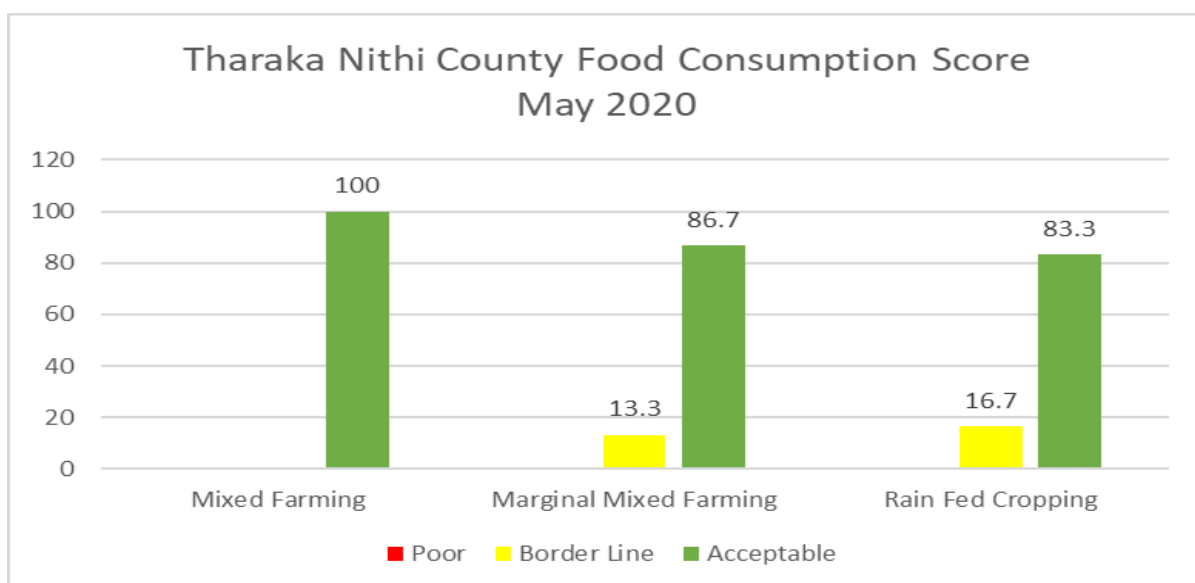


Figure 17: Food Consumption Score Chart

Table 3: Average Food Consumption Score

Period	Acceptable (%)	Borderline (%)	Poor (%)	Food Insecure HH (%)
January 2019	92.23	7.77	0	7.77
February	96.67	3.33	0	3.33
March	92.23	7.77	0	7.77
April	78.9	21.1	0	21.1

May	90	10	0	10
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- The poor food consumption score implies household are not consuming staples and vegetables every day and rarely consuming protein rich food, borderline imply household are consuming staple, vegetable every day accompanied by oil and pulse a few times in a week while the acceptable imply households consuming staples, vegetables every day, and frequently accompanied by pulses.

5.2 UTILISATION INDICATORS

5.2.1 Health and Nutrition Status

Health

- The prevalence of most common diseases for the general population in Tharaka Nithi County include diseases of the respiratory system, malaria, skin disease, urinary tract infections and rheumatism while those mainly affecting children under five years include: diseases of the respiratory system, pneumonia, malaria, intestinal worms and skin diseases.

5.2.3 Coping Strategy Index

- The Coping Strategy Index (CSI) increased from 1.03 in April to 1.2 in May which was almost the same as of the previous month. The low CSI indicated low household stress to obtain food or money to buy food during the month of May.
- The CSI for May 2020 was lower than that of 2018-19 average for May which further indicates less difficulty in obtaining food in 2020 during the same period.

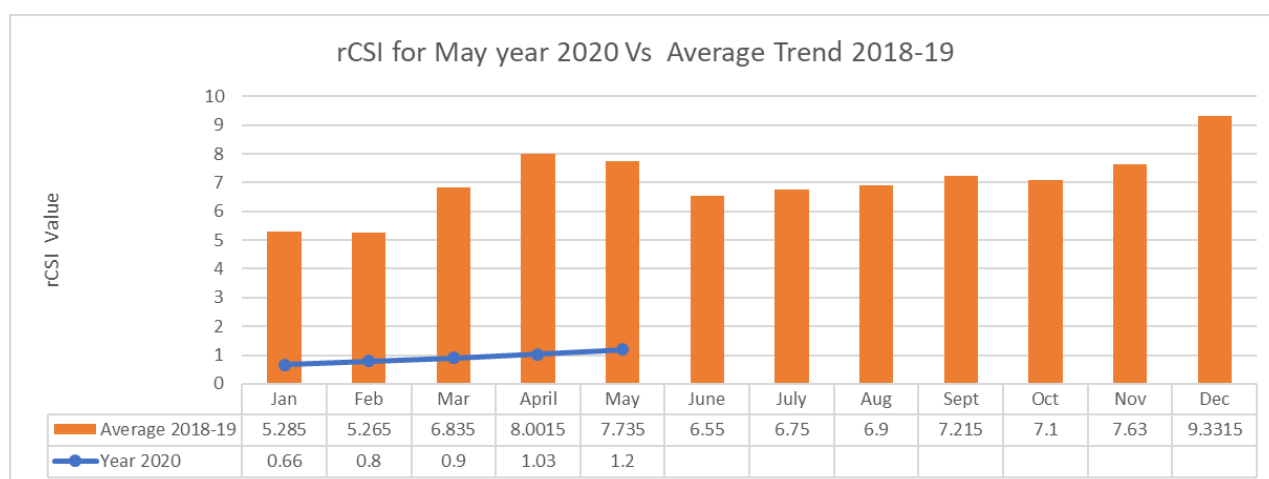


Figure 18 : Trend of CSI

- The highest CSI was recorded in the Marginal Mixed Farming zone at 2.5 followed by 1.1 in the Mixed Farming Zone while the Rain Fed Livelihood Zone recorded the least CSI.
- The most commonly employed coping strategy mechanisms during the month of May were: - Obtaining of goods on credit, Reliance on less preferred and less expensive food.
- Some households employed livelihood based coping strategies such as sale of some household assets, spending of savings as well as borrowing of short term loans.

6.0 CURRENT INTERVENTIONS AND RECOMMENDATIONS

Ongoing Interventions

6.1 Food Intervention

6.1.1 Food Intervention by International Aid Services

- Distribution of 3,600Kg of maize and 1,800 Kg of beans in 200 households in Marimanti location which was targeted to benefit vulnerable children in 10 schools in Marimanti location.
- Distribution of 1,620 Kg of maize and 810 Kg of beans in 90 households in Turima location which was targeted to benefit vulnerable children in 4 schools in Turima location.
- Distribution of 1,260 Kg of maize and 630 Kg of beans in 70 households in Karocho location which was targeted to benefit vulnerable children in 4 schools in Karocho location.
- Distribution of 2,700 Kg of maize and 1,350 Kg of beans in 150 households in Matakiri location which was targeted to benefit vulnerable children in 6 schools in Matakiri location.
- Distribution of 1,980 Kg of maize and 990 Kg of beans in 110 households in Nkondi location which was targeted to benefit vulnerable children in 5 schools in Nkondi location.
- Distribution of 720 Kg of maize and 360 Kg of beans in 40 households in Mwanyani location which was targeted to benefit vulnerable children in 2 schools in Mwanyani location.
- Distribution of 1,980 Kg of maize and 990 Kg of beans in 110 households in Gituma location which was targeted to benefit vulnerable children in 5 schools in Gituma location.
- Distribution of 1,260 Kg of maize and 630 Kg of beans in 70 households in Kanyuru location which was targeted to benefit vulnerable children in 3 schools in Kanyuru location.

6.2 Non Food Intervention

Agriculture Sector

- Training of desert locust scouts for prompt identification and reporting when need arises.
- Waving of tariffs and cess on all food products entering and leaving the county to caution farmers, retailers and consumers against the effect of Covid 19.
- Sensitisation of farmers on locust behaviour and management.
- Assessment of impact of locust invasion and flash floods across the county.

Livestock and veterinary

- Livestock pasture development in Tharaka North and South sub counties.
- Artificial insemination by the veterinary department at a subsidised price to farmers.
- Dairy farming of goats and cow by Upper Tana Natural Resource Management Programme and Livestock Department.
- Goats upgrading for milk and meat by Upper Tana Natural Resource Management Project.
- Upgrading of local chicken by Upper Tana Natural Resource Management Project.

Water

- Construction of Manduru earth dam in Gatunga Ward.
- Rehabilitation of Ura- Kathangachini and Kamacabi water project by the county Government and Water Trust Fund Agency.
- Extension of water pipe line from Marimanti to Maragwa by Water Services Trust Fund (WSTF).
- Re-construction of Kaibonce concrete dam by Kenya Climate Smart Agricultural programme.

6.2 Food Security Prognosis

- Cereals crops were at the final stage of maturity while pulses were at the harvesting stage. Main farming activities were harvesting of green grams, pigeon peas and cow peas. In most areas, farmers were scaring away birds to avoid them destroying cereal crops. Crop condition was good and good harvest is expected for cereals towards the end of June and early July.
- There was disruption of market activities due to closure of markets indefinitely while trying to implement the government directive of social distancing in order to limit the effects of Covid 19. This has affected livestock and cash crop prices making them to drop while food commodities prices from outside the county is likely to increase due to restriction and uncertainty of transport system which might affect supply.
- Rainfall received was normal therefore, status of water sources was normal with household and Livestock watering distance being within the normal ranges and the situation is likely to decline in the next 2 months or remain the same due to reduction of recharge of water sources due to cessation of the long rains.
- Food Stocks at households' level is likely to remain stable and start improving from the next 2months in all the livelihood zones due to harvesting of cereals and pulses beginning end of May to end of July.
- Markets operations are likely to worsen for livestock despite presence of pasture and browse due to disruption of market in an effort to reduce Covid 19 while prices of food commodities from within the county is likely to decrease or remain the same for the next 2 month due to onset of harvesting.
- Pasture condition is fair and the condition is likely to increase due to supplement of livestock feed from crop residue leading to shorter grazing distance, increased milk production; good livestock body condition till July.
- Increased milk production is likely to lead to high milk consumption hence low malnutrition level amongst the under 5years.
- Terms of Trade is fair and is likely to increase significantly in favour of livestock farmers and the trend is likely to continue for the next 2month.
- Households in the County are likely to be Food sufficient in the next 2 months but the situation may worsen due to the effect of Covid 19 which might negatively affect income and food availability.

7.0 Recommendations (February to May 2020)

- The county Government and different stakeholders should prepare to concentrate on Response towards locust control, management of effects of Covid 19 and other preparedness activities geared towards resilience to propel household towards food security.

Sector	Intervention	Target areas hotspot (Wards/Villages)	Beneficiaries
Agriculture	Provision of subsidised certified planting materials to farmers	Tharaka North and South sub counties	Farmers
	Provision of subsidised fertilizers to farmers	Tharaka North and South sub counties	Farmers
	Support farmers with certified locust control chemicals	Maragwa and Kathangachini locations	6,000
	Capacity Building and sensitisation of Farmers about Locust Management	Maragwa and Kathangachini locations	6,000

	Support Ground spraying of locusts by trained personel and Farmers	Maragwa and Kathangachini locations	6,000
Water	Water harvesting and Storage	Kamanyaki, Maragwa, Mukothima Kathangachini locations and all the other locations.	County wide
	Capacity building of Wruas & Surveillance of Rivers to stop illegal water abstractions	Lower Thangatha, Upper Thangatha (Part of Gatunga Ward and Mukothima Ward)	2,000 People
	Repair of Rock Catchments	In Gatunga Ward: Mukuruti Kanyi, Manduru, Kiaramara, Muturu, Nchege Rock Catchment	4,000 people, 500 cows, 2,000 goats, 1,000 sheep 200 donkeys
	Renovation of Earth Dams	Gankamba, Nyamboni, Kiaramara, Manduru and Ngaani	5,000 people 1,000 cows 10,000 goats 500 donkeys
	Restocking for cattle	Gatunga Market, Kathangachini, Chakariga Market	10,000 people
	Vaccination of Goats and sheep against CCP	Marimanti ward, Kithigiri, Kibienga, Nkondi ward Kereria, Gachugini	30,000 shoats
	Vaccination of Goats and sheep against sheep & goat pox	Kamanyaki, Kathangachini, Chakariga, Marimanti	35,000 shoats
	Vaccination of dogs against Rabies	Gatue ward, Mukothima ward	1000 dogs
Health and Nutrition	Provision of hand sanitisers, phase masks and installation of hand washing equipment at strategic high risk areas.	Tharaka North and Tharaka South Sub county.	Tharka North and South residents
	Proper sensitisation and enforcement of covid 19 prevention standards in social places, restaurants, hotels, shops and businesses.	Tharaka North and Tharaka South Sub county.	Tharka North and South residents
	Provision of food supplement for malnourished children and mothers	Tharaka North and South	20 facilities each receiving 2 bags of 90kg fortified Health supplements.
Coordination	Conduct 7 CSG meetings at county and Sub County level	Tharaka North & South	40 members