

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



A Vision 2030 Flagship Project



February 2020 EW Phase

Drought Status: NORMAL



Early Warning Phase Classification

	EW PHASE	TRENDS
Mixed Farming	Normal	Improving
Marginal Mixed Farming	Normal	Improving
Rain Fed Livelihood Zone	Normal	Improving
County	Normal	Improving
Biophysical Indicators	Value	Normal Ranges
Rainfall % of Average	Over 100%	80-120
VCI-3month	84.12	>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 0.99 of a Litre
Livestock deaths (from drought)	No death	No death
Access Indicators	Value	Normal
Terms of Trade	107.8	Above 116
Milk Consumption	1 Litres	Above 0.99 of a Litre
Water for Households	Normal	Normal
Utilization indicators	Value	Range/Value
MUAC	3.7	Below 4.7
Coping Strategy Index (CSI)	0.8	Below 5.27
Food Consumption (Acceptable FCS)	96.66%	Above 6.17%

Drought Situation & EW Phase Classification

Biophysical Indicators

- Average amount of rainfall received in February was above normal and good for pasture and browse development. The Weather for February was a mixture of wet, hot and cold condition. Status of water sources was good. Most of the crops were at the harvesting stage.
- The biggest threat to food security in Tharaka Nithi County is infestation of dessert locust in Gatunga Ward. The production and spread of the locust is at an alarming rate and it is projected that the whole of Tharaka Nithi County might be affected if concerted effort is not applied by all stakeholders to end the menace.
- Although the vegetation cover across the County is normal, there is a threat to its quality and quantity which is posed by secondary locusts.

Socio Economic Indicators (Impact Indicators)

Production Indicators

- Livestock body condition for both cattle and goats was good and improving. Food Stock at households' level was good and the situation was still improving due to the ongoing harvest.

Access Indicators

- Livestock prices improved while food commodity prices continue to portray a downward trend. Household water distance was within the normal range across all the livelihood Zones due to good status of both surface and underground water sources. Milk production and consumption was normal which led to low malnutrition cases.

Utilization Indicators

- Percentages of children at risk of malnutrition decreased due to improvement of food availability and accessibility at Household level.
- Following all the above prevailing conditions, the overall drought phase in February was still Normal with an improving trend.

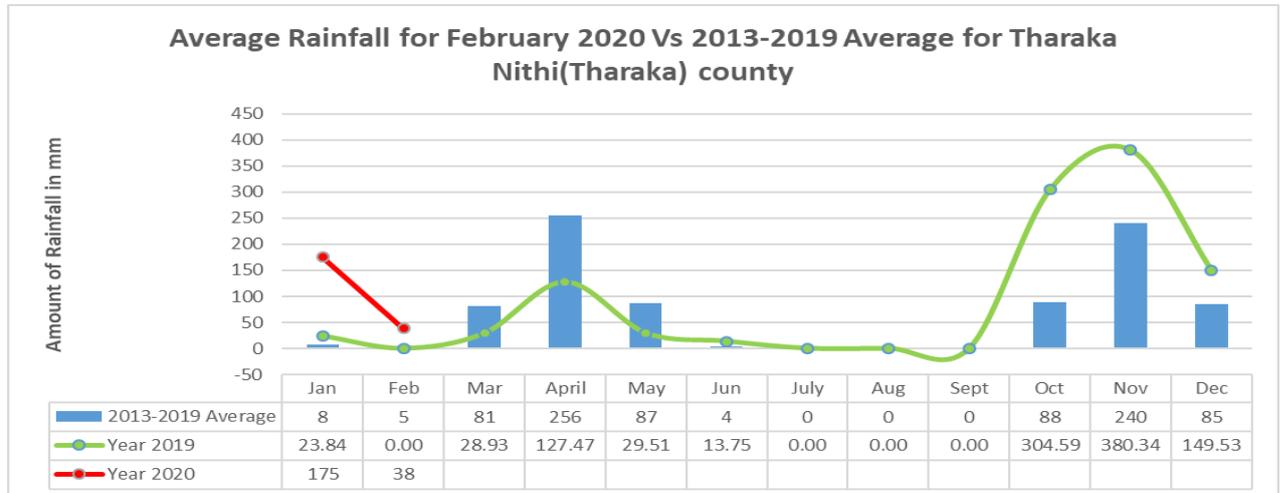
Seasonal Calendar

<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

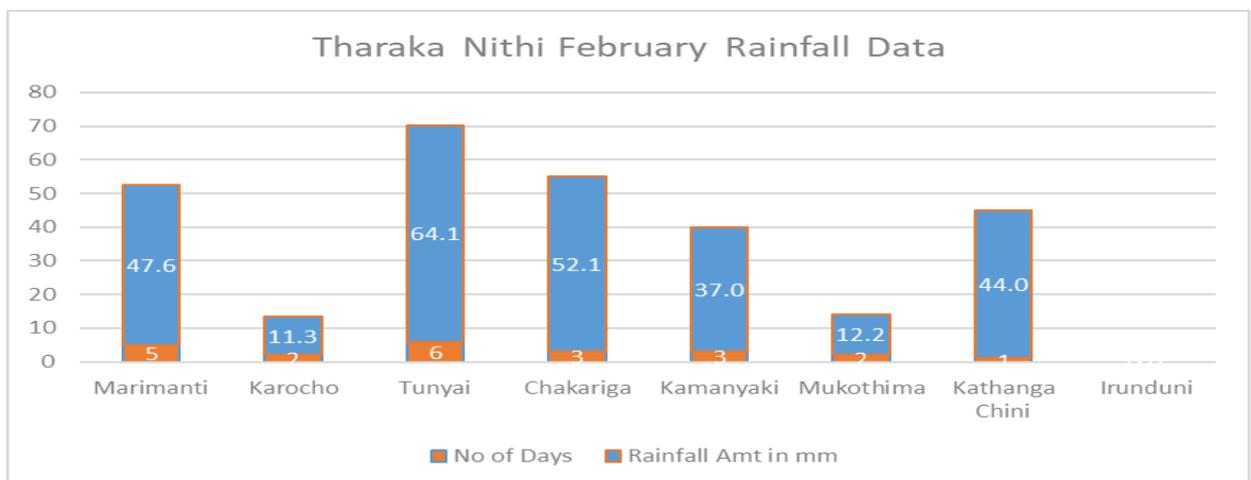
1.1 RAINFALL PERFORMANCE

- An average amount of 38mm of rains was received in February. This was normal compared to the long term average of 5mm. The drought situation for February was normal and the situation was improving with most indicators being within the normal range.
- The figure below shows the rainfall trend for 2020 compared to the long term Average.



1.1.1 Spatial and Temporal Distribution of Rainfall

- Rainfall received in the month of February was evenly distributed across all the livelihood zones. Tunyai received the highest amount of rainfall of 64.1mm for 6 days, it was followed by Chakariga with 52.1mm for 3 days, Marimanti was third with 47.6mm for 5 days, Kathangachini received 44 mm for 1 day, Mukothima 12.2mm for 2 days, Karocho 11.3mm for 2 days while Irunduni did not receive any rainfall.
- The total amount of rainfall received per the rain gauge station is as shown by the chart below.



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 February was 84.12 from 72.43 in January which was indicating above normal vegetation condition. Pasture and browse improved across all the livelihood zones due to the off season rains which was experienced in February.

- 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.

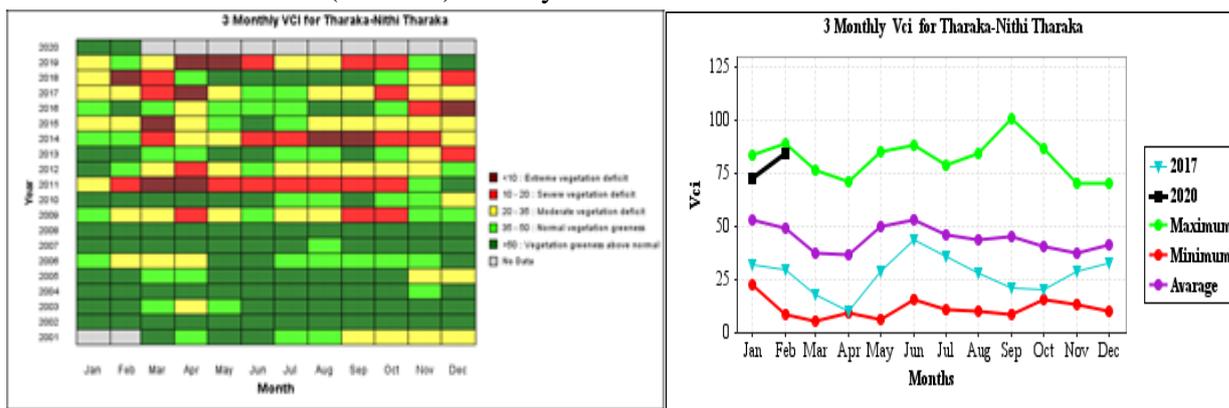


Figure 1(a): Matrix of VCI Classification

Figure 2(b): Chart of VCI Trend

Table 1: February 2020 Vs January 2020 VCI (3M)

ADMINISTRATIVE UNITS		VCI as at 29 th January 2020	VCI as at 29 th February 2020
County	County/Sub County		
Tharaka Nithi	County	70.52	77.01
	Tharaka	72.43	84.12
	Chuka Igambang'ombe	70.25	67.41
	Maara	64.86	66.07

2.2 Natural Vegetation and Pasture Condition

Pasture Condition

- Pasture quantity and quality was good across all the Livelihood zone during the month of February was good with an improving trend.
- Pasture condition improved from that of the previous month due to the off season rains which persisted to the month of February.

Browse Condition

- Browse condition in terms of quantity and quality was good across all the livelihood zones in the month of February and it continued to improve compared to that of the previous month.
- This improvement of browse was triggered by the persistent short rainfall which extended to February.

Livestock Access

- Average return water distance from grazing area increased from 1.9Km in January to 3.3 Km in February which was attributed to a slight reduction in rain but still remained within the normal range. The longest return water distance to grazing areas was recorded in the Marginal Mixed Farming Zone had a distance of 5.4 Km, Rain Fed Cropping Zone at 2 Km while the Mixed Farming Zone recorded the least grazing distance of 2.4 Km.
- The average return water distance to grazing areas was 36.54 percent lower than the long term average of 5.2 Km for this time of the year.

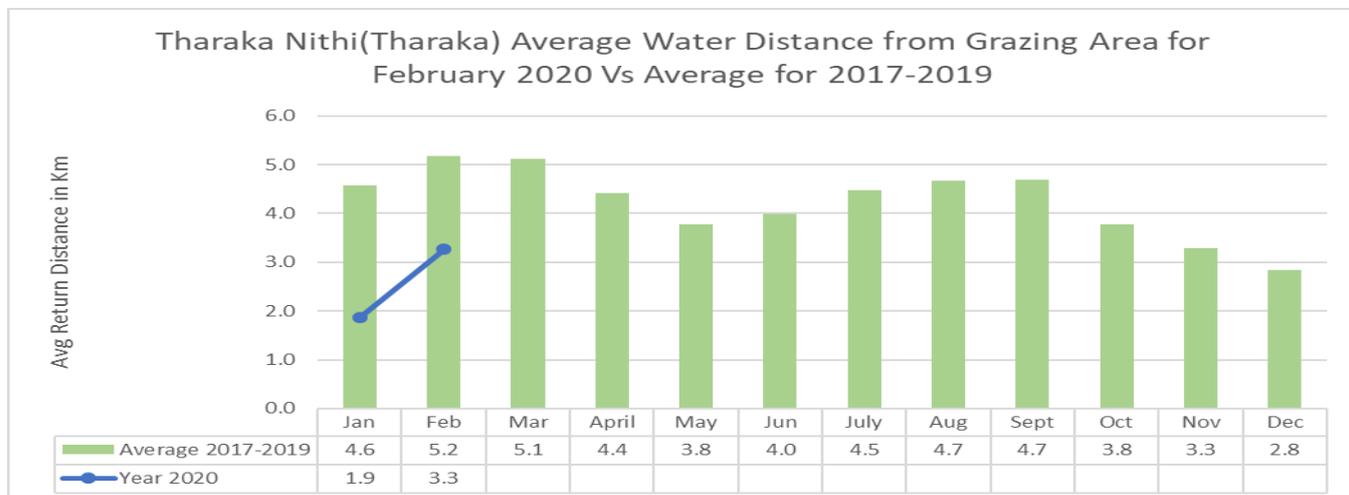


Figure 3: Grazing Distance for Livestock

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 February were: Rivers, Boreholes, Traditional River wells and shallow wells as shown by figure 4 below.

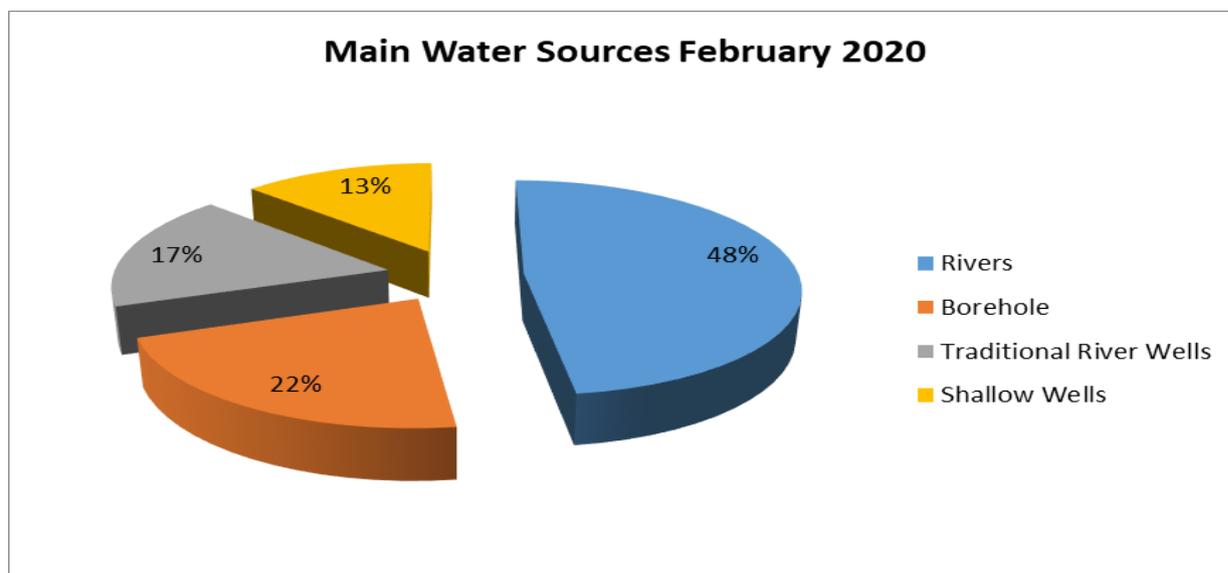


Figure 4: Main Water sources Tharaka Nithi County

2.2.2 State of Water Sources

- The state of water sources for the month of February was above normal and the trend was stable as of the previous months. The water recharge level both for the surface and underground sources still remained more than 100% of the usual recharge of between 80 to 100%.
- The main challenge of water availability has increased contamination of water source in Rivers, Piped water system, pans and dams hence need to intensify on water treatment.
- Status of water sources across all the Livelihood Zones could be ranked as good which is at index 6 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 remained at 2.8 Km in February as it was the previous month. Household return water distance in Mixed Farming Zone was 4 Km, 3.2 Km in Marginal 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 47.17 % lower than the long-term average of 5.3 Km for the month of February.

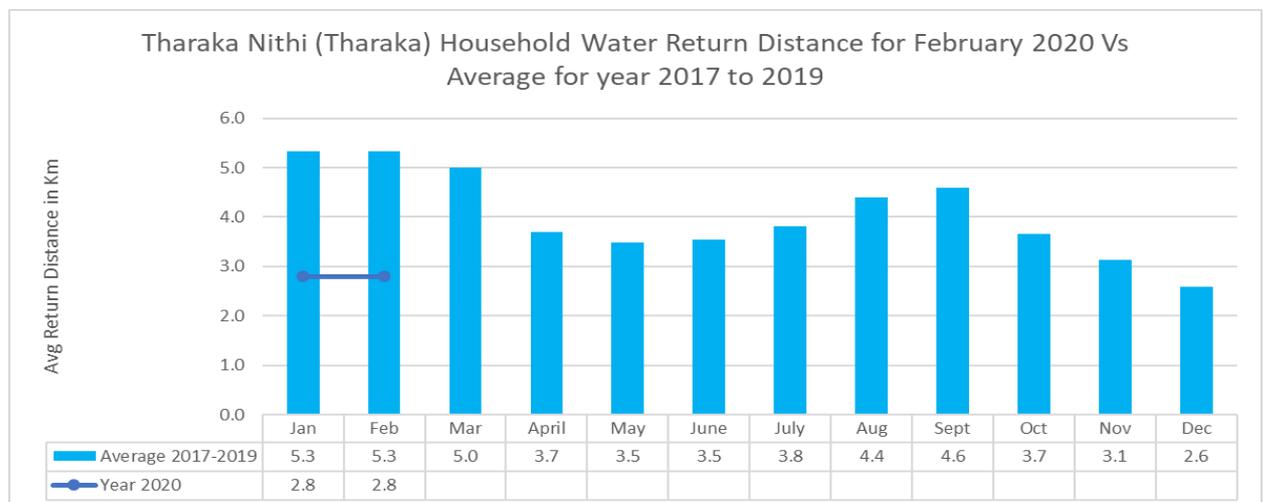


Figure 5: Household Water Distance

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 and the situation was improving.
- The Livestock body condition in February for cattle and shoats was rated at index 9 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. 12th & 13th 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 reported cases of LSD in Mukothima, Marimanti and Chiakariga wards. Cases of CPP in goats were reported in Kathangachini location in the month of February.

3.1.3 Milk Production

- Milk production decreased from 1.7litres in January to 1.2litres in February. Milk production in February was almost the same as of January. Milk production was above the long term average which was attributed to fair pasture and browse due to good weather condition from the short rains.
- All the livelihood Zones had an average production of more than a litre per household per day. Milk production per household was 21.21 percent higher than the 3-year average of 0.99 litre per household per day for this time of the year.

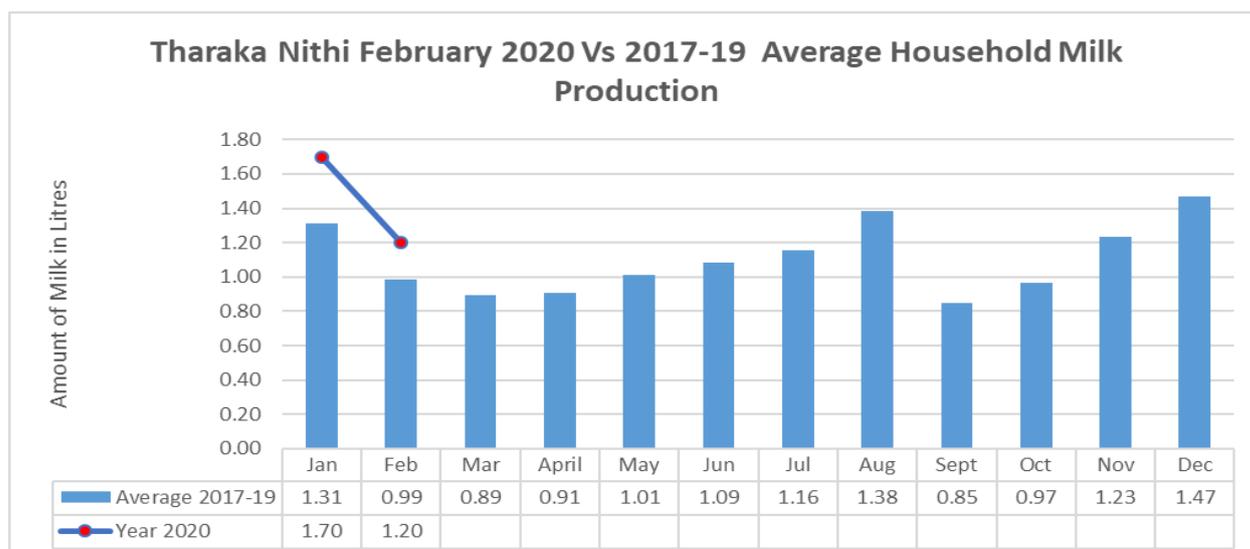


Figure 1: Milk Production Trend

3.2 Crop Production

3.2.1. Timeliness and Status of Crops

- Most of the crops were at the maturity stage of development and most farmers were harvesting and selling their pulses especially green grams, Millet, Sorghum, cow peas, pigeon peas across all the livelihood Zones while a few were still in the farms.
- Some tree crops such as mangoes were still being harvested and contributing to household income although their season of harvesting was fast elapsing.
- The crop yield was very good and most of the crops grown during this short rainy season were Sorghum, Millet, Cow peas and green grams while maize was grown in selective parts of Mixed Farming and Rain Fed Livelihood Zones such as Karocho, Nkondi, Kibung’ a, Tunyai and parts of Mukothima ward.

3.2.2. Pests and Diseases

- There was dessert locust infestation in Maragwa, Kathanga Chini, Kathagani, Kathiriku, Karangare, Makithi and surrounding areas hence posing a threat to pasture, browse and few unharvested crops.
- Most livelihood zones reported cases of Fall Army worms in areas of Karocho, Kathanga chini, Mukothima, Tunyai and many other areas. However, they were easily managed to high rainfall which inhibited their spread.

4.0 MARKET PERFORMANCE

4.1 Livestock Prices

4.1.1 Cattle Prices

- The average cattle price increased from to Kshs. 21,817 in January to Kshs. 24,458 in the month of February due to improved pasture which led to good cattle body condition which led to increase in cattle price.
- The Rain Fed Cropping Livelihood Zone the highest average price of Kshs 24,000; the Mixed Farming Zone had the price of Kshs 23,667; while the Marginal Mixed Farming livelihood Zone had the least price of Kshs 22,442. The current price was 15.18 percent higher than the three-year average of Kshs 21,235.

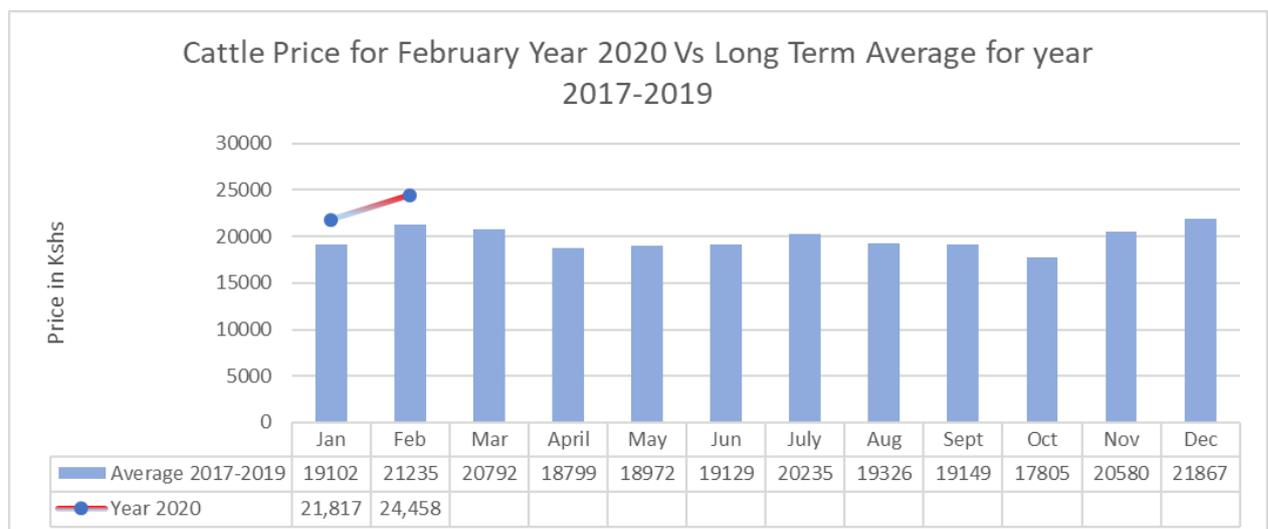


Figure 6: Cattle Price Trend

4.1.2 Goat Prices

- The average goat price increased from Kshs 4,142 in January to Kshs 4,304 in the month of February. The increase in price could be attributed to improvement in goat body condition due to improvement of browse from the extended off season rain.
- The Rain Fed Cropping Livelihood Zone had the highest price of Ksh. 4,800; Marginal Mixed Farming Livelihood Zone recorded the price of Kshs 4,225 while the Mixed Farming Zone recorded the lowest price of Ksh. 3,642.
- The average goat price was 24.93 percent higher than the three-year average of Ksh 3,445.

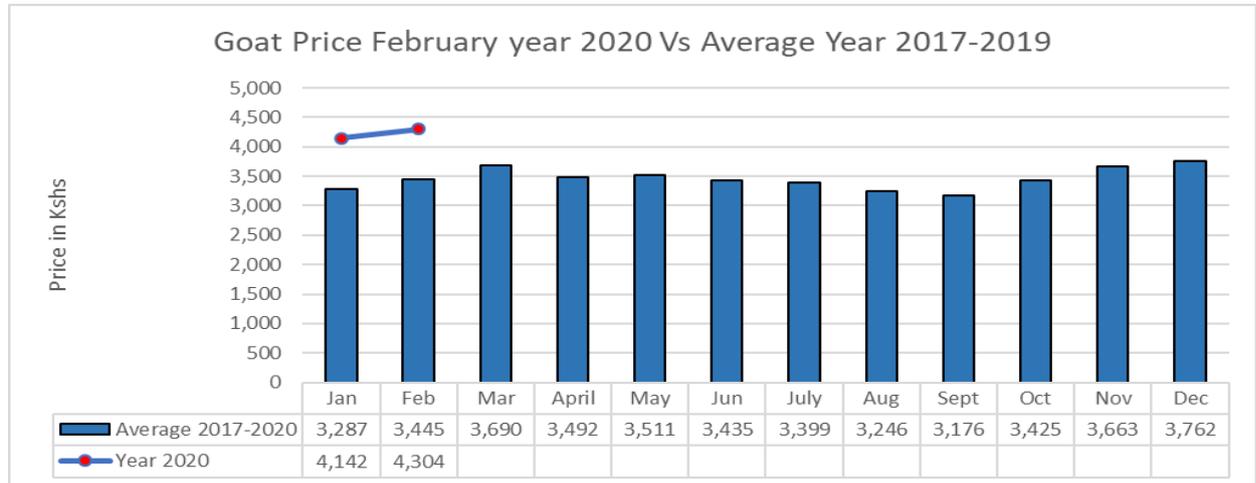


Figure 7 : Goat Price Trend

4.2.1 Maize Prices at Market Level

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 January to Kshs 40 per Kg in the month of February which was almost the same as of the previous month. The drop in maize price was attributed to use of substitute crops from the ongoing short rain harvest.
- Maize price was Kshs 43.5 per Kg in the Marginal Mixed Farming Livelihood Zone, Kshs 40 per Kg in in Rain Fed Livelihood Zone and Kshs 35 per Kg in the Mixed Farming Zone.
- The average maize price was 5.26 percent higher than the three-year average price of Kshs 38 per Kg in February.

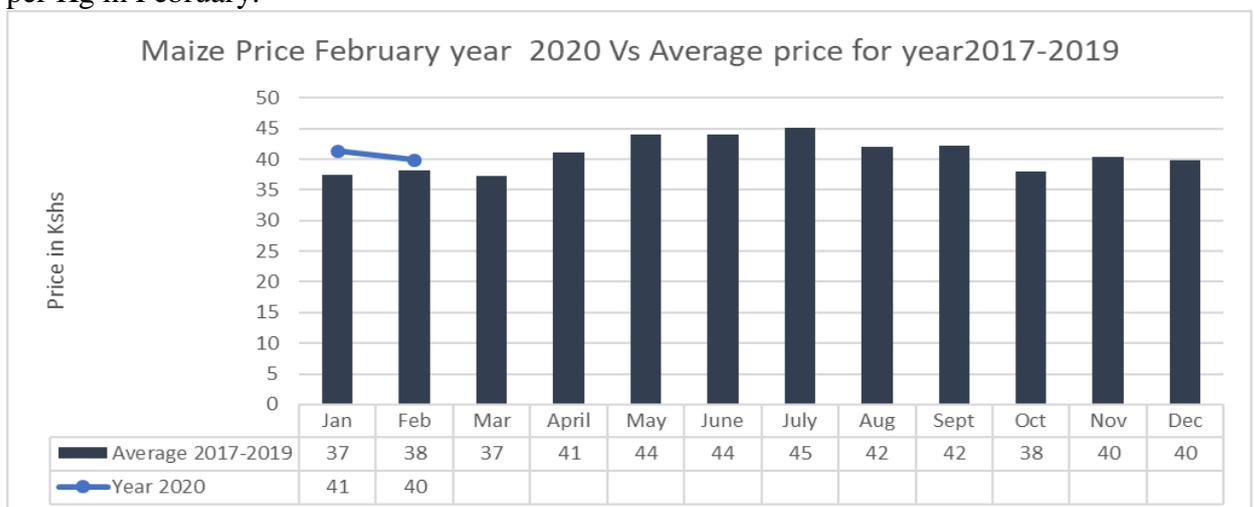


Figure 8: Maize Price Trend

4.2.2 Millet Price at Market Level

- The average market price of millet decreased from Kshs 43 per Kg in January to Kshs 30 per Kg in February due to the ongoing harvest leading to increased millet supply hence a drop in price.
- The Rain Fed Livelihood Zone recorded the highest market price of Kshs 42/Kg, Marginal Mixed Farming Kshs 34.5 per Kg while Mixed Farming Zone recorded the least price of Kshs 34 per Kg.
- The millet price was 34.78 percent lower than the long-term average price of Kshs.46 per Kg for the month of February.

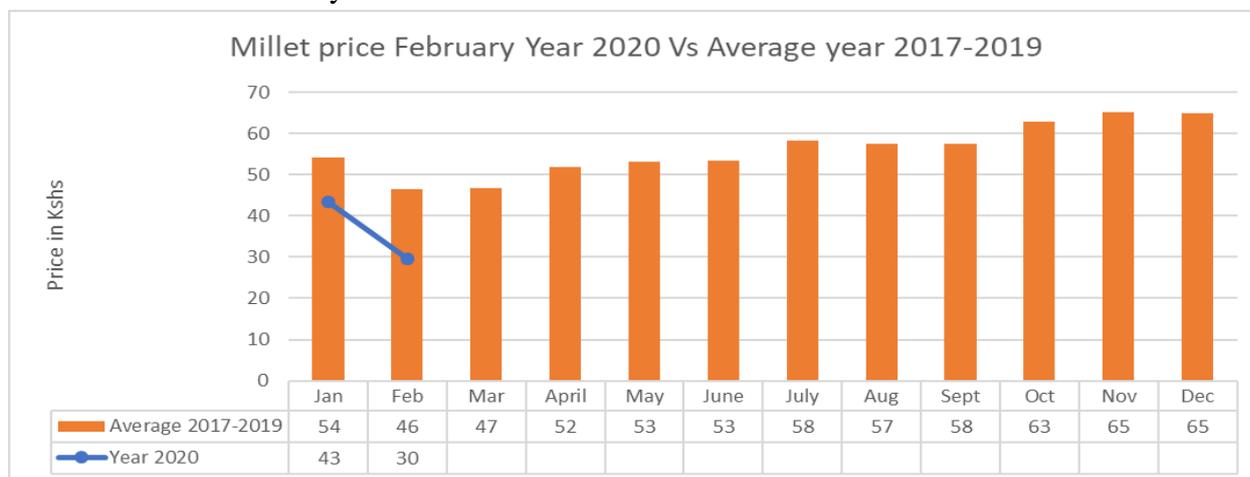


Figure 9 : Millet Price Trend

4.2.3 Terms of Trade (ToT)

- The Terms of Trade increased from 100.4 in January to 107.8 in February due to an increase in goat price against a drop in maize price.
- The highest ratio was recorded in the Rain Fed Cropping Zone at 120; followed by Mixed Farming Zone at 104.06 while Marginal Mixed Farming Zone had the least term of trade ratio of 97.13.
- The term of trade for the period under review was 7.07 percent lower than the three year average value of 116 during the same period.

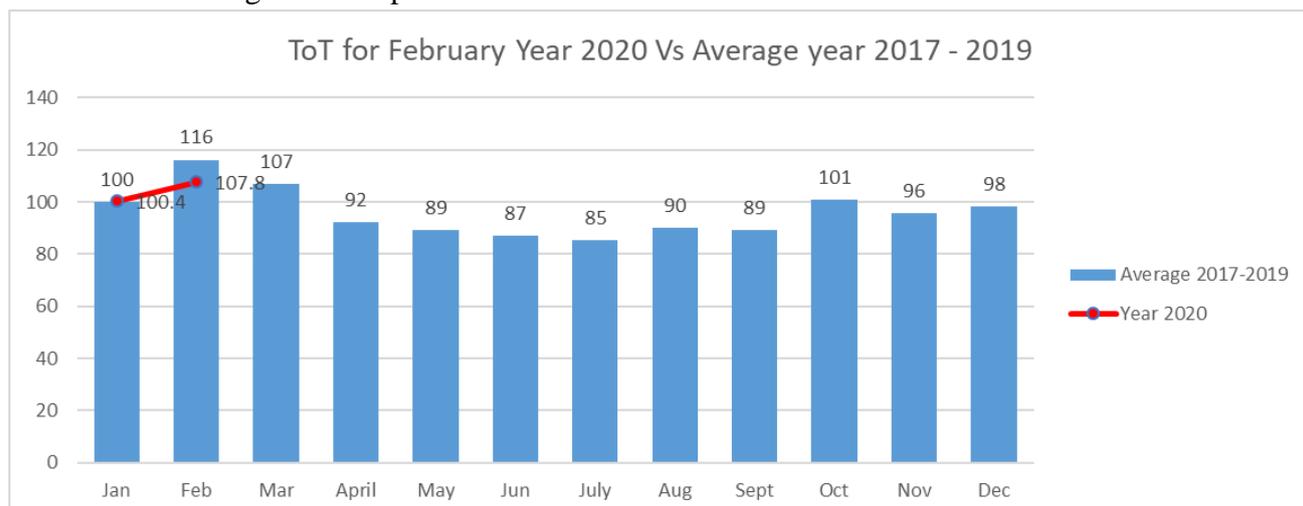


Figure 10: Term of Trade

4.2.4 Income sources

- The main sources of income for households in Tharaka Nithi County for the month of February were: Sale of crops, petty trade, Employment/wages, casual labour and sale of livestock and livestock product as shown by the figure below 12 below.

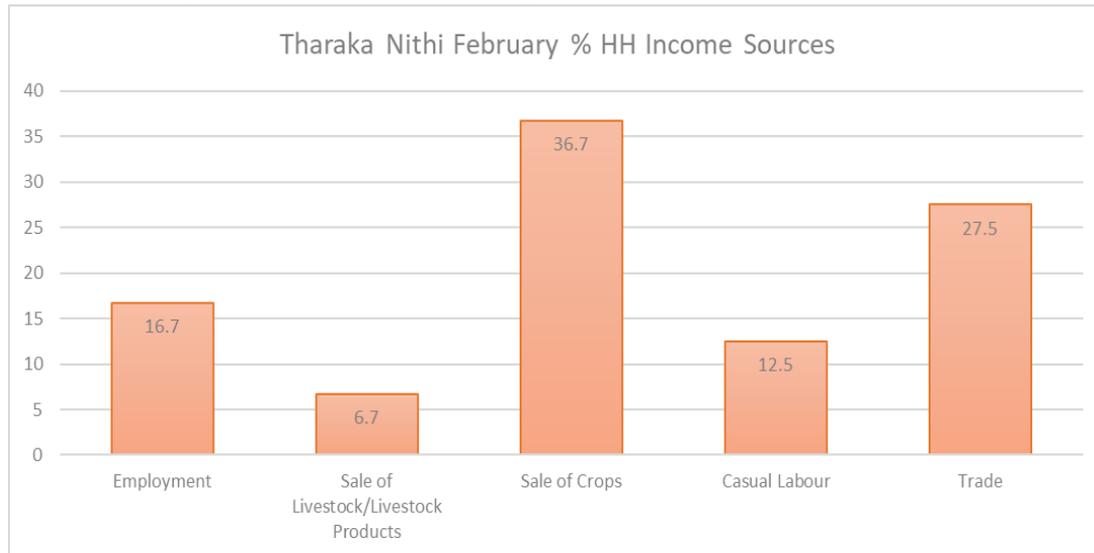


Figure 11 : Tharaka Nithi Percentage Household Income

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1.1 Milk Consumption

- The average milk consumption decreased from 1.3 litre per household per day in the month of January to 1 litre per household per day in the month of February which was almost the same as of the previous month. Pasture and browse continue to improve due to rains which continued to be experienced.
- The average milk consumed was 1.01 percent higher than the 3-year average of 0.99 of a litre.

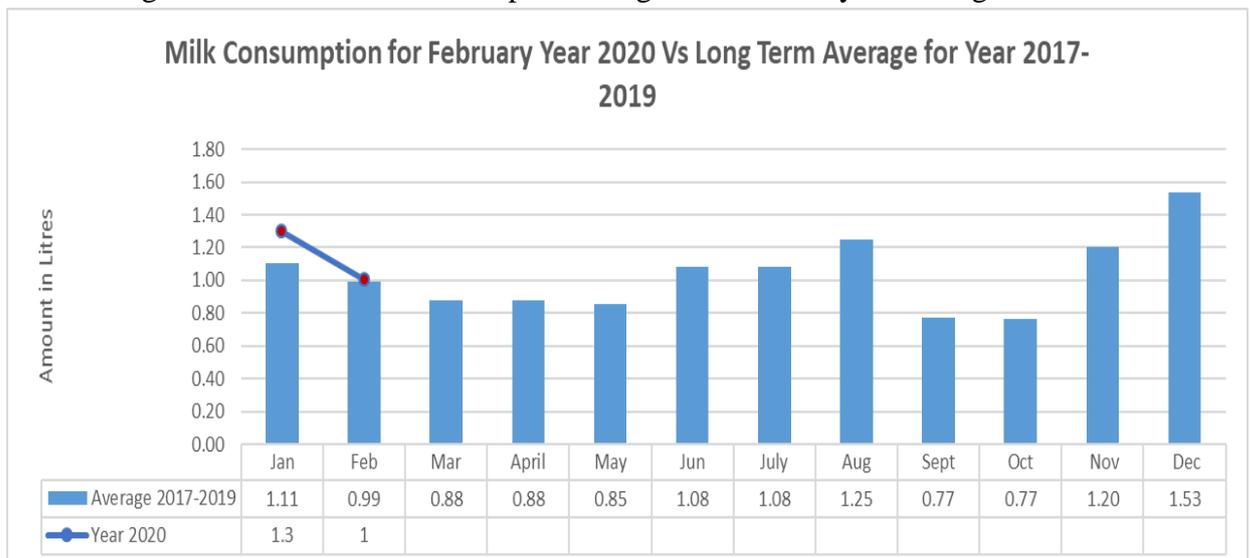


Figure 12 : Milk Consumption Trend

5.1.2 Food Consumption Score

- Proportion of households with acceptable Food Consumption Score increased from 92.23% in January to 96.66% in February as shown by the graph in fig. 13 below.
- The increase in Food Consumption Score was attributed to improvement in household food security and diversity from that of the previous month.

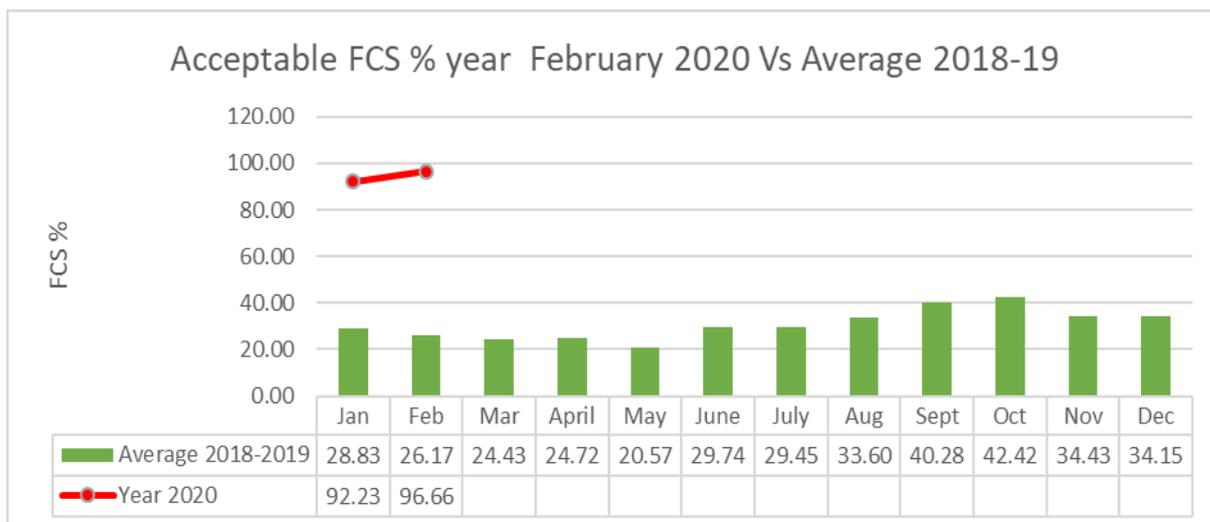


Figure 13: Trend of the Proportion of HHs with Acceptable FCS

- A higher number of Food Stressed Households were in the Rain Fed Cropping Livelihood Zone at 10% while negligible food stressed households were reported in the Marginal Mixed Farming and Mixed Farming Livelihood Zones.

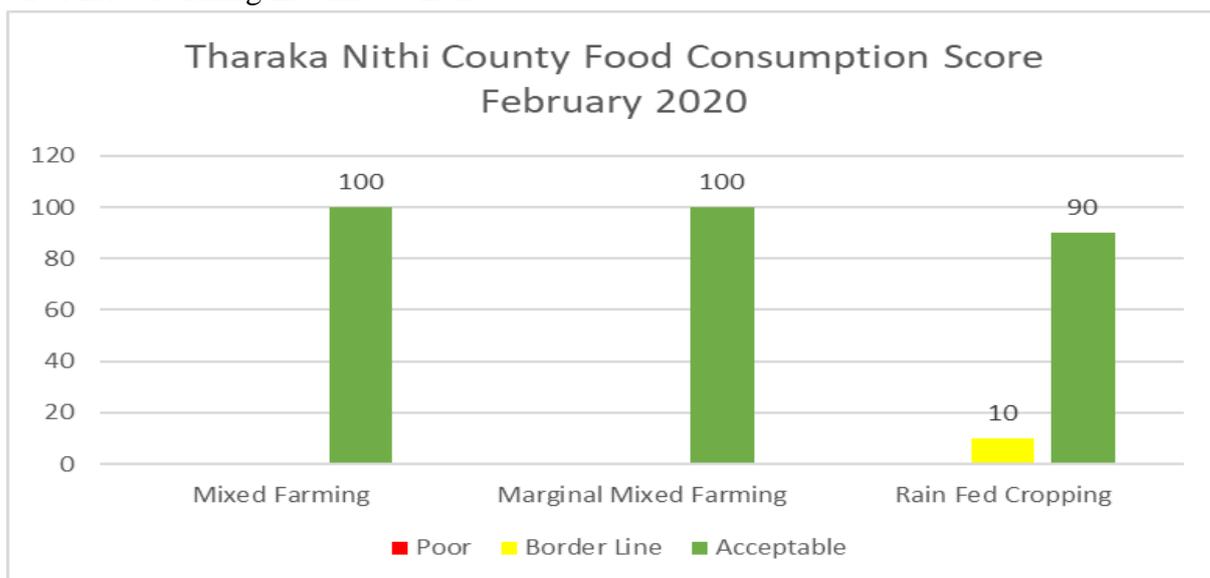


Figure 14: Food Consumption Score Chart

Table 3: Average Food Consumption Score

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

- 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

5.2.2 MUAC

- The proportion of children between 6 to 59 months at risk of malnutrition whose MUAC measurement was below 135 mm decreased from 6.8 percent in January to 3.7 percent in February which was attributed to improvement in household food security.
- The proportion of children at risk of malnutrition whose MUAC measurement was below 135mm was below the long-term average of 4.7 percent.

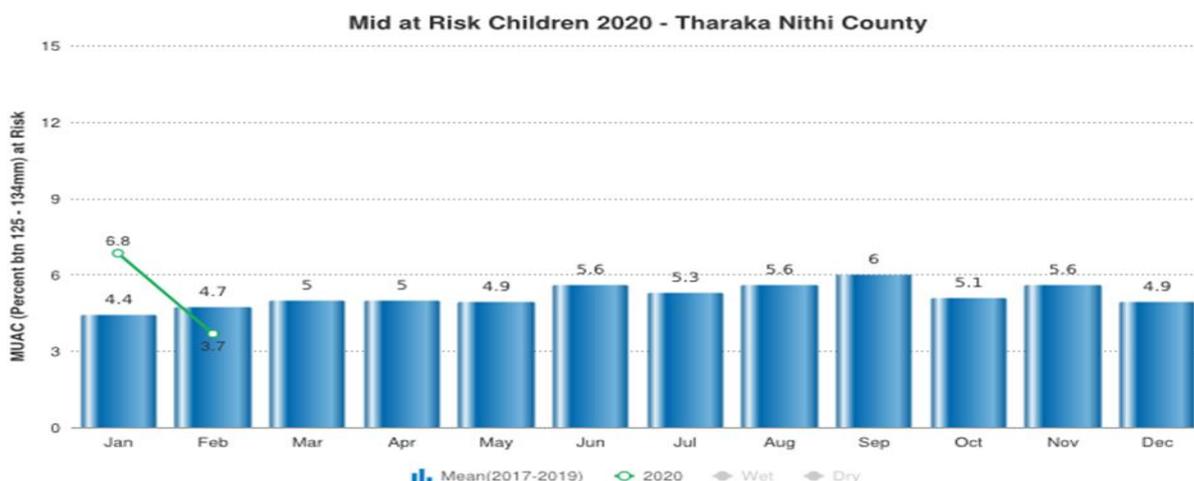


Figure 15: MUAC Graphs

5.2.3 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.

5.2.4 Coping Strategy Index

- The Coping Strategy Index (CSI) increased from 0.66 in January to 0.8 in February 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 February.
- The CSI for February 2020 was lower than that of 2018-19 average for February which further indicates less difficulty in obtaining food in 2020 during the same period.

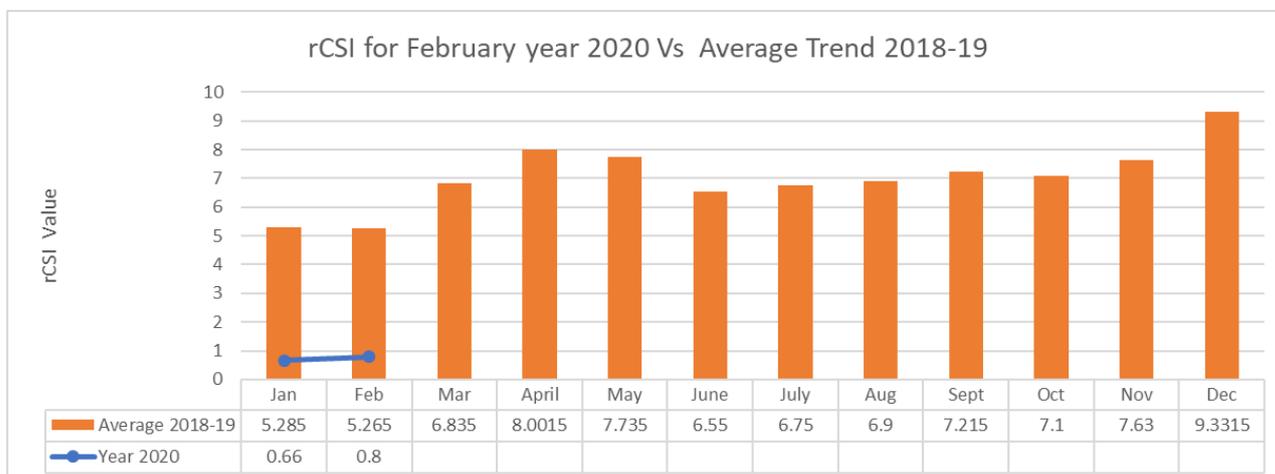


Figure 16 : Trend of CSI

- The highest CSI was recorded in the Marginal Mixed Farming zone at 1.6 followed by 0.8 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 February 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

Agriculture Sector

- Sensitisation
- Locust control through ground spraying in Maragwa, Kathangachini, Makithi, Kathiriku and the surrounding areas of Tharaka North Sub- County.
- Coordination meetings and update of locust invasion in Tharaka Nithi County by various stakeholders.
- Monitoring, surveillance, mapping and reporting of the migration of hoppers and their laying beds for prompt action.
- Kenya Climate Change Fund sensitisation to different stakeholders by Kenya Cereal Enhancement Program (KCEP CRAL).

Livestock

- 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

- Most of the crops have matured and most farmers have harvested green grams, Cow peas while harvesting is still ongoing for a few farmers till early March.
- The harvesting season of perennial tree crops such as mangoes have elapsed hence most farmer will fully depend on the seasonal cash crops for income till the next season. The was above average harvest hence the food security situation is good.
- Rainfall received was above the long term average therefore, status of water sources is above normal with household and Livestock watering distance being within the normal ranges and the situation is likely to improve or remain the same due to sufficient recharge of water sources till mid-May.
- Food Stocks at households level is likely to improve in the next 1months in all the livelihood zones till end of April.
- Markets operations are likely to improve for livestock due to fair pasture and browse which will improve livestock body condition and prices while crops prices are most likely to decrease or remain the same for the next 1 month till March.
- Pasture condition is fair and the condition is likely to improve leading to shorter grazing distance, increased milk production; good livestock body condition and better prices till April.
- 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 the livestock farmers and the trend is likely to continue for the next 1month.
- Households in the County are likely to be Food sufficient in the next 1 months during the harvesting period.

7.0 Recommendations (February to May 2020)

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

7.1 Agriculture for Locust Control

Sub County	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Tharaka North	Support farmers with certified locust control chemicals	Maragwa and Kathangachini locations	6,000	NDMA, County Gvt,MoA, FAO and other stakeholders	Chemicals	-	Immediately
Tharaka North	Capacity Building and sensitisation of	Maragwa and Kathangachini locations	6,000	NDMA, County Gvt,MoA, FAO and other	Facilitation	Personel	Immediately

	Farmers about Locust Management			stakeholders			
Tharaka North	Support Ground spraying of locusts by trained personnel and Farmers	Maragwa and Kathangachini locations	6,000	County Gvt, Plan International, IAS,	Facilitation, Trainings, Chemicals ,Spraying equipments	Human resource	Immediately

7.2 Other Recommendations

Sector	Intervention	Target areas hotspot (Wards/Villages)	Beneficiaries
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, Nchegeni 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 CCPP	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	Integrated outreach services in 10 hard to reach areas.	Tharaka North and Tharaka South Sub county.	24,000 under five children , pregnant and lactating women
	Provision of sachets of water treatment kits per month for 3 months	Tharaka North and South Sub-Counties	12,000 HHs
	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
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