

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



A Vision 2030 Flagship Project



September 2020 EW Phase



Drought Situation & EW Phase Classification

Biophysical Indicators

- No rainfall was recorded in the month of September, however, light showers were experienced in localised areas. The October to December rainfall onset is expected from 3rd week of October and continue to the 3rd week of December. The short rains are expected to be depressed with uneven distribution in time and space as forecasted by the Meteorological department.
- Status of water sources was declining with water rationing being experience is trading centres where piped water is used.
- Vegetation cover across the County remained normal but on a reducing trend which was also manifested in Pasture and browse condition.

Socio Economic Indicators (Impact Indicators)

Production Indicators

- Livestock body condition was good and stable. Food stocks at household levels were normal but fast depleting due to depressed economy from the Covid 19 containment measures.

Access Indicators

- Livestock and commodity prices remained stable with marginal changes due to return to normalcy of market.
- Household water distance increased but remained 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 September was normal and stable.

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	80%	80-120
VCI-3month	62.8	>35
Water Sources	Normal	Normal
Production Indicators	Value	Normal Ranges
Livestock Migration Pattern	No Migration	No Migration
Livestock Body Conditions	Fair	Good
Milk Production	0.5 Litre	Above 0.85 of a Litre
Livestock deaths (from drought)	No death	No death
Access Indicators	Value	Normal
Terms of Trade	104.82	Above 89
Milk Consumption	0.5 Litres	Above 0.77 of a Litre
Water for Households	Normal	Normal
Utilization indicators	Value	Range/Value
Coping Strategy Index (CSI)	6.4	Below 7.2
Food Consumption (Acceptable FCS)	77.2%	Above 40.28%

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

Tharaka Nithi NDMA September 2020 Drought Early Warning Bulletin, committed to ending Drought Emergencies

1.0 CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- The month of September was characterised with dry and sunny weather condition with drizzles of rainfall in some localised areas. No noticeable rainfall was recorded during the month of September which was normal compared to the long term average during the same period.
- The weather forecast by the Kenya meteorological Department states that the October to December short rain is expected from 3rd week of October and continue to the 3rd week of December. The short rains are expected to be depressed with uneven distribution in time and space. The figure 1 below shows the rainfall trend for 2020 compared to the long term Average.

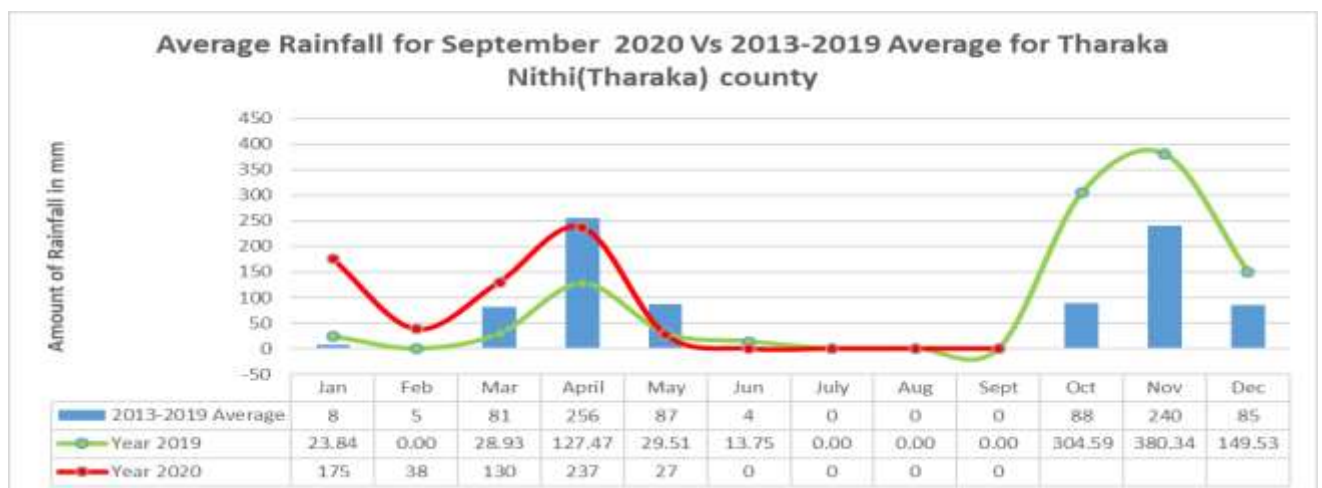


Figure 1 : Rainfall trend for 2020 Vs 2013-2019 Average

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 September was 62.8 from 61.51 in August indicating normal vegetation greenness.
- Pasture and browse reduced across all the livelihood zones due to the ongoing long dry spell however, they still remained within the normal range.
- The matrix in figure 2 below shows vegetation cover classification based on the drought phases while figure 3 shows the trend of vegetation cover in terms of vegetation condition index for Tharaka Nithi (Tharaka) County.

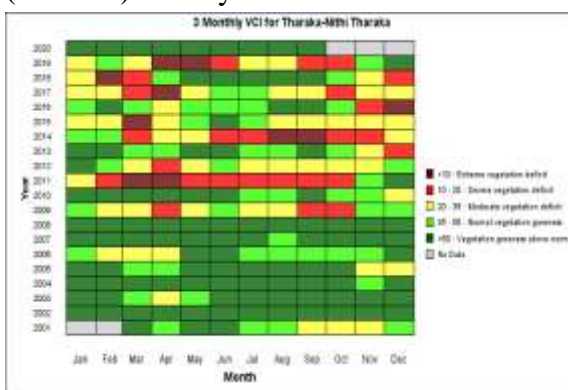


Figure 2: Matrix of VCI Classification

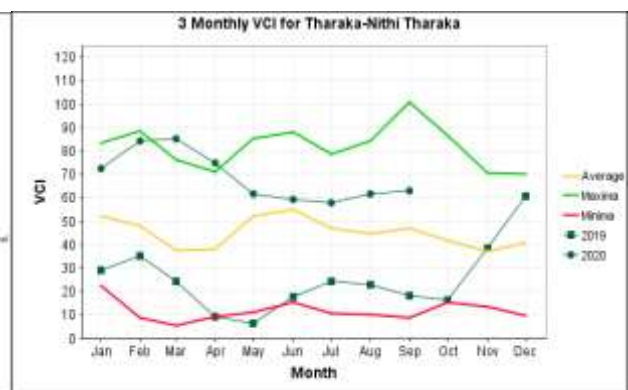


Figure 3: Chart of VCI Trend

Table 1: September 2020 Vs August 2020 VCI (3M)

ADMINISTRATIVE UNITS		VCI as at 31 st August 2020	VCI as at 30 th September 2020
County	County/Sub County		
Tharaka Nithi	County	68.49	66.17
	Tharaka	61.51	62.8
	Chuka Igambang'ombe	78.63	71.45
	Maara	78.38	70.5

2.2 Natural Vegetation and Pasture Condition

Pasture Condition

- Pasture quantity and quality was fair across all the Livelihood zones during the month of September but with a reducing trend.
- Pasture condition reduced slightly from that of the previous month but the condition remained normal.

Browse Condition

- Browse condition in terms of quantity and quality was also fair across all the livelihood zones in the month of September but reduced compared to that of the previous months.
- This reduction of browse was due to the onset of the long dry spell in June and is expected to continue till mid-October when the short rains are expected to begin.

Livestock Access

- Average return water distance from grazing area decreased from 4.2 Km in August to 3.5 Km in September. This distance was still high and it was attributed to the ongoing dry spell 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 5.4 Km, followed by Mixed Farming Zone at 3.2 Km while Rain Fed Cropping Zone recorded the least grazing distance of 2 Km.
- The average return water distance from grazing areas was 25.53 percent lower than the long term average of 4.7 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 main sources of water for livestock and domestic use in Tharaka Nithi County for the month of September was: Rivers, Boreholes and Traditional River wells as shown by figure 5 below.

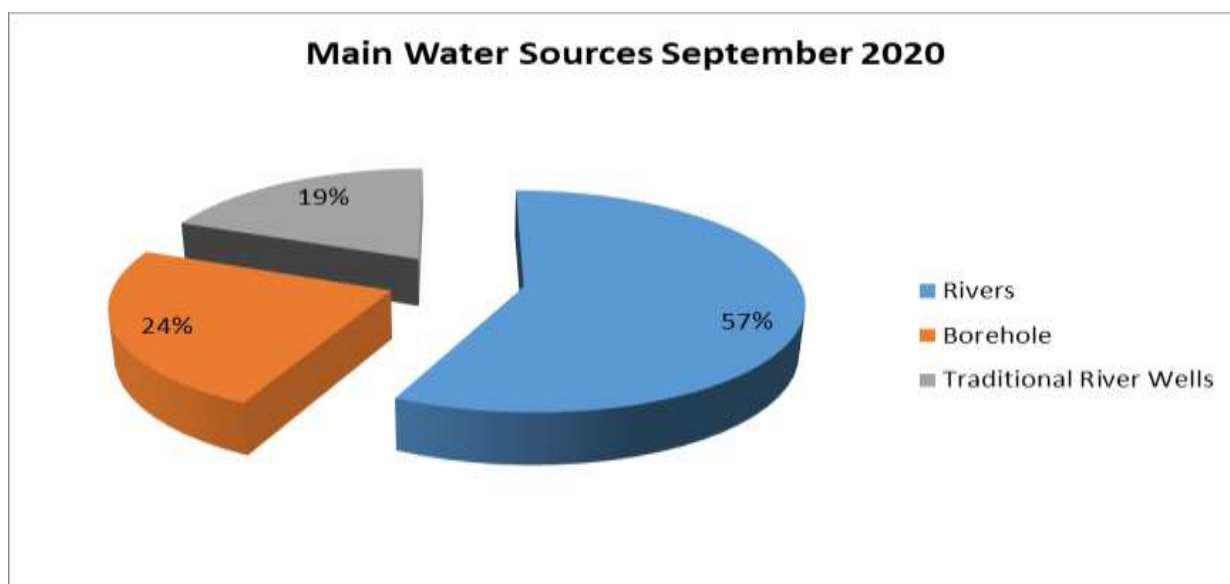


Figure 4: Main Water sources Tharaka Nithi County

2.2.2 State of Water Sources

- The state of water sources for the month of September was within the normal range but the trend was reducing. The water recharge level both for the surface and underground sources was still within the normal range.
- Status of water sources across all the Livelihood Zones was ranked as declining which is at index 4 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
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2.2.3 Household Water Access

- Average Household water return distance in September was 3.1 Km from 3Km in August which was almost the same as of the previous month. Household return water distance in Marginal Mixed Farming Livelihood Zone was 4.8 Km, 3.6 Km in Mixed Farming Zone while the Rain Fed Zone had the least household distance of 1 Km.
- The average distance of household access to water was 32.61% lower than the long-term average of 4.6 Km for the month of September.

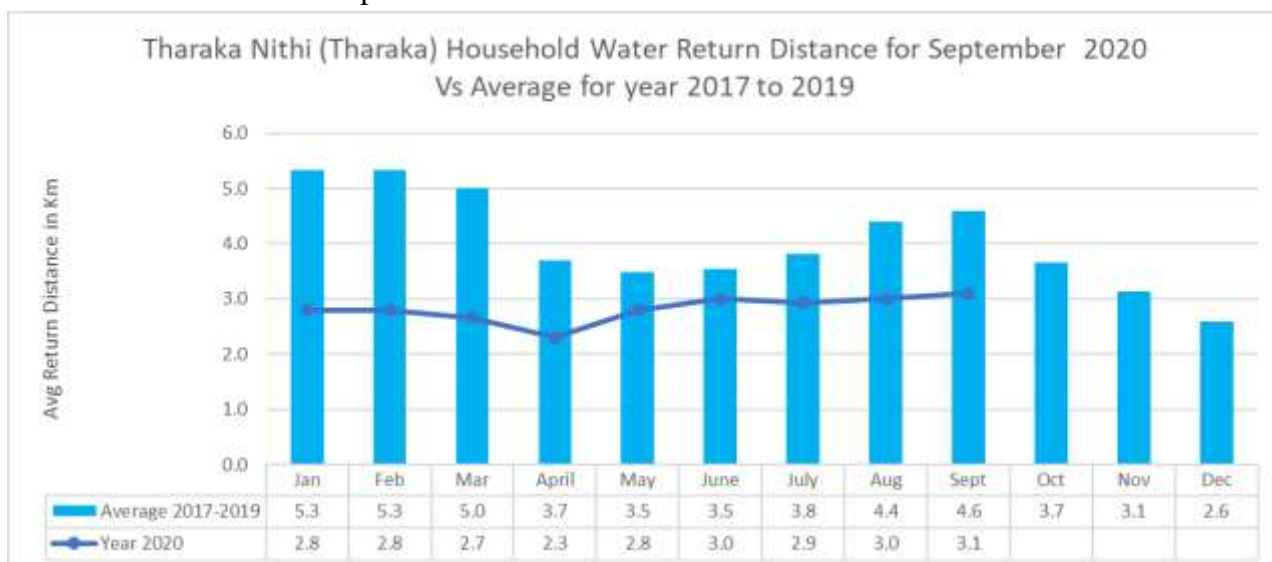


Figure 5: Household Water Distance

3.0 PRODUCTION INDICATORS

3.1 Livestock Production

3.1.1 Livestock Body Condition

- Livestock body condition for both cattle and shoats was fair across all the livelihood zones. The fair to good livestock body condition could be attributed to fair pasture and browse condition across most of the livelihood Zones.
- The Livestock body condition in September for cattle and shoats was rated at index 6 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	

3.1.2 Livestock Diseases and Migration

- There were no cases of Livestock migration and diseases. However, there were few reported cases of LSD in cattle in Gatunga, Nkondi, Marimanti and Chakariga.
- Cases of FMD were reported in Mukothima for cattle and pigs; cases of rabbies were reported in dogs and donkeys in Gatunga ward.

3.1.3 Milk Production

- The average Milk production per household per day in September was low at 0.5 from an average production of 1litre per household per day in August. The low milk production which was lower than the long term average could be attributed to the declining browse, pasture and status of water sources. The soaring sun and the temperature level could also be a contributing factor to low milk production despite the status of water and the distances being within the normal range.
- Marginal Mixed Farming livelihood Zones had an average production of a litre per household per day while production in other Zones was lower than a litre. Milk production per household was 41.18 percent lower than the 3-year average of 1.38 litre per household per day for this time of the year.

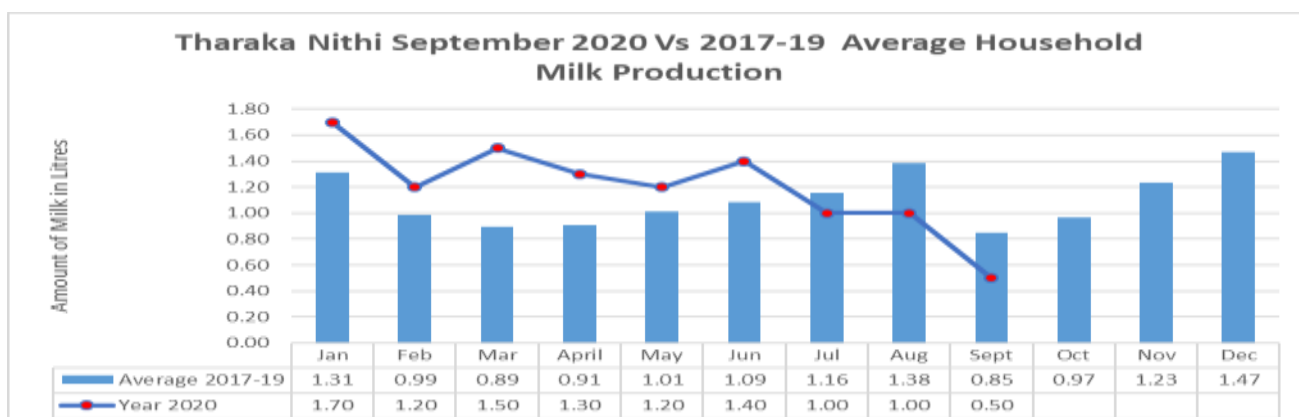


Figure 6 : Milk Production Trend

3.2 Crop Production

3.2.1. Timeliness and Status of Crops

- Farming activities during the month of September was land preparation for the short rain planting.
- The main crops to be planted during the short rain are green grams, cowpeas and pigeon peas for pulses while cereal crops to be planted are Millet and Sorghum. Maize is mainly grown in parts of rain fed and mixed farming zones.

3.2.2. Pests and Diseases

- There were few reported cases of pests and diseases since there were only few crops in the farms i.e. the tree crops which are less prone to pests and diseases.

4.0 MARKET PERFORMANCE

4.1 Livestock Prices

4.1.1 Cattle Prices

- The average cattle price decreased from Kshs. 29,000 in the month of August to Kshs. 25,958 in in September which could be attributed to reduced livestock body condition due to reduction in pasture and crop residue which were previously the supplementary feed for pasture. The Mixed Farming livelihood Zone had the highest average price of Kshs 30,917; the Marginal Mixed Farming Livelihood Zone had the price of Kshs 27,250 while the Rain Fed Cropping Livelihood Zone had the price of Kshs 24,500. The current price was 35.56 percent higher than the three-year average of Kshs 19,149.



Figure 7: Cattle Price Trend

4.1.2 Goat Prices

- The average goat price decreased from Kshs 4,117 in August to Kshs 3,592 in the month of September. The decrease in price could be attributed to reduction in browse which could have led to reduced goats body condition hence a decrease in price.
- The Marginal Mixed Farming Livelihood Zone had the highest price of Ksh. 4,050; Rain Fed Cropping Livelihood Zone recorded the price of Kshs 3,800 while the Mixed Farming Zone recorded the lowest price of Ksh. 3,517.
- The average goat price was 13.10 percent higher than the three-year average of Ksh 3,176.

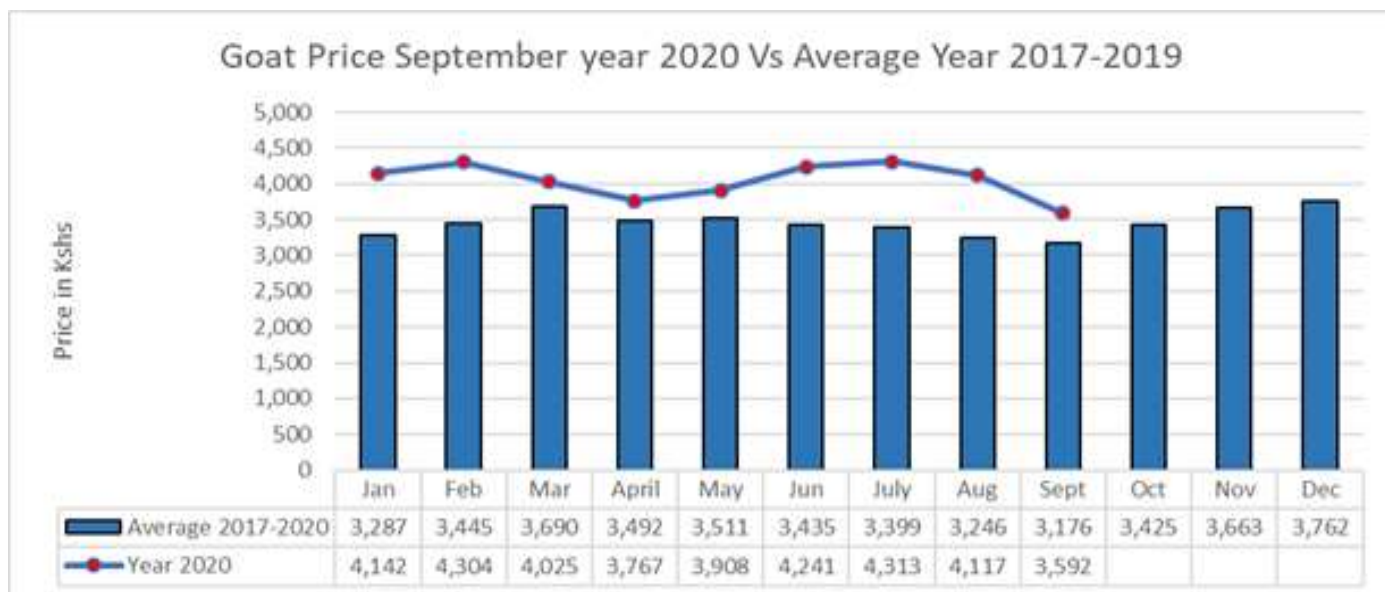


Figure 8: Goat's Price Trend

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 remained unchanged at Kshs 36 per Kg in the month of September just like the previous month. This stable maize price could be attributed to constant supply of maize from outside the county where there is still high stocks from the recent harvests.
- Maize price was Kshs 39 per Kg in the Mixed Farming Livelihood Zone, Kshs 30 per Kg in the Marginal Mixed Farming while in the Rain Fed Livelihood Zone it was Kshs 35per Kg.
- The average maize price was 14.29% lower than the three-year average price of Kshs 42 per Kg in September.



Figure 9: Maize Price Trend

4.2.2 Millet Price at Market Level

- The average market price of millet increased slightly from Kshs 43 per Kg in August to Kshs 46 per Kg in September which was also lower than the long term average. The increase in millet price could be attributed to a decrease in millet supplies to the market hence an upward trend in prices.
- The Mixed Farming and the Rain Fed Livelihood Zone recorded the highest market price of Kshs 60 per Kg followed by an average of Kshs 33 per Kg in the Marginal Mixed Farming Livelihood Zone.
- The millet price was 20.69 percent lower than the long-term average price of Kshs.58 per Kg for the month of September.



Figure 10 : Millet Price Trend

4.2.3 Terms of Trade (ToT)

- The Terms of Trade decreased from 113.6 in August to 104.82 in September which could be attributed to a decrease in goat price against a constant maize price.
- The highest ratio was recorded in the Marginal Mixed Farming Zone at 115; followed by Rain Fed Cropping Zone at 108.57; while Mixed Farming Zone had the least term of trade ratio at 90.18. The term of trade for the period under review was 17.78% higher than the three year average value of 89 during the same period.



Figure 11: Term of Trade

4.2.4 Income sources

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

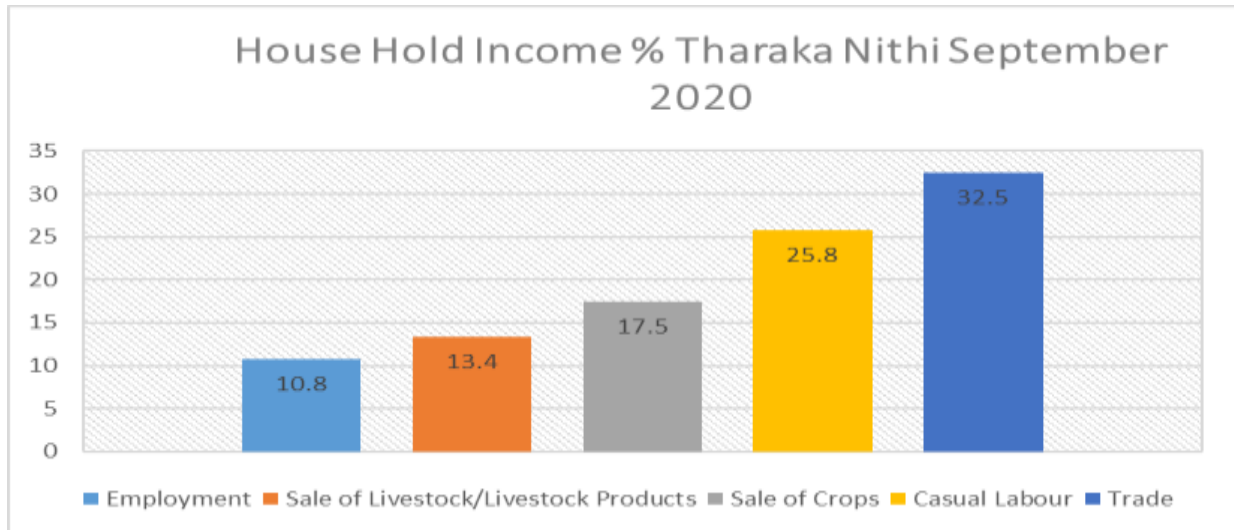


Figure 12 : Tharaka Nithi Percentage Household Income

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1.1 Milk Consumption

- The average milk consumption per household per day in the month of August was 0.5 of a litre per household per day from 1.3 litre per household per day in August which was a drop from the previous month. This drop could be attributed to a reduction in pasture and the soaring heat from the sun.
- The average milk consumed was 35.06 percent lower than the 3-year average of 0.77 of a litre.



Figure 13 : Milk Consumption Trend

5.1.2 Food Consumption Score

- Proportion of households with acceptable Food Consumption Score decreased from 87.20% in August to 77.20% in September as shown by the graph in fig. 15 below. The percentage of households with acceptable FCS in September was higher than the long term average.
- Declining Food Consumption Score could be attributed to a downward trend in household stock level from the long rain harvest.

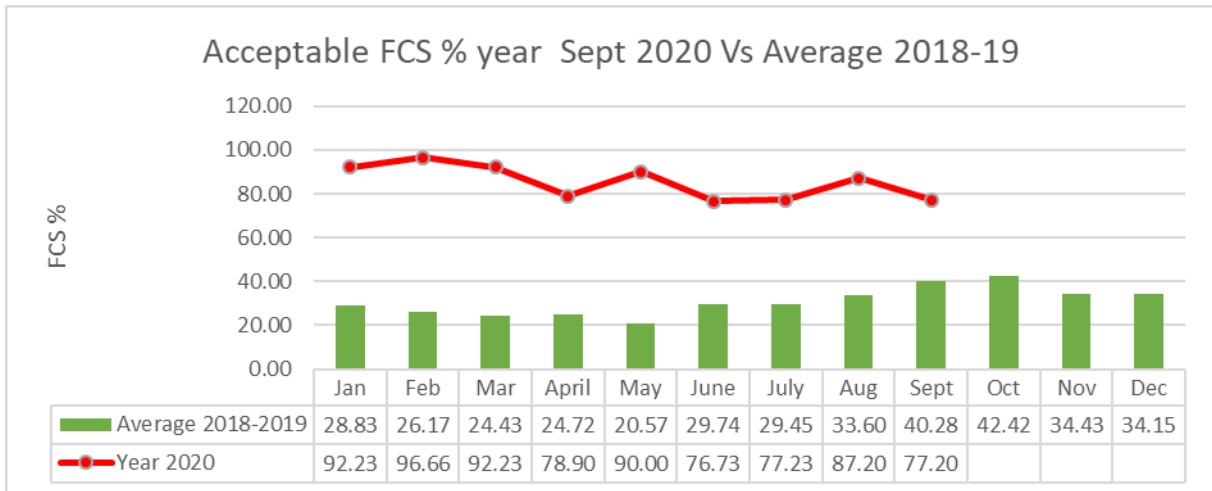


Figure 14: Trend of the Proportion of HHs with Acceptable FCS

- A higher number of Food Stressed Households were in the Rain Fed Cropping Livelihood Zone at 43.4% followed by Marginal Mixed Farming Livelihood Zone at 15% while the least food stressed households were reported in the Mixed Farming Livelihood Zones at 10% as shown by figure 15 below.

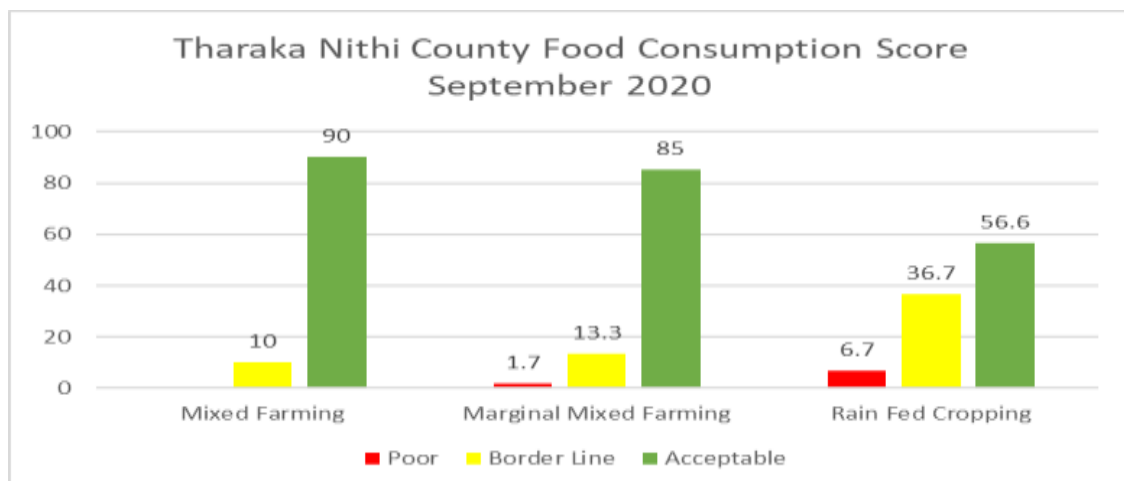


Figure 15: Food Consumption Score Chart

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
June	76.73	23.27	0	23.27
July	77.23	21.67	1.1	21.77
August	87.2	10.57	2.23	12.8
September	77.20	20	2.8	22.8

- 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 3.17 in August to 6.40 in September which was almost the same as of the previous month. The increase in CSI indicated an increase in household stress to obtain food or money to buy food during the month of September from that of the previous month.
- The CSI for September 2020 was lower than that of 2018-19 average for September during the same period.



Figure 16 : Trend of CSI

- The highest CSI was recorded in the Marginal Mixed Farming zone at 14.8 followed by 3.6 in the Mixed Farming Zone while the Rain Fed Livelihood Zone recorded the least CSI of 0.8.
- The most commonly employed coping strategy mechanisms during the month of September 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 and cash transfers

- Kazi Mtaani through the County Commissioners Office of 380 youths in Tharaka South and 330 youths in Tharaka North for vulnerable families from July 2020 for six months till January 2020 earning Kshs 455 per day to caution those families against the effects of Covid 19.
- Cash transfer through the County Commissioners Office of poor and vulnerable 100 household in Tharaka South and 100 in North earning Kshs 1,000 per week from July 2020 to November 2020 to caution them against Covid 19 shocks.
- Cash transfer to vulnerable groups by the social services department of 3,862 elderly;153 disables;3,420 orphans and additional 1,000 people due to effects of Covid 19.
- Distribution by Tharaka Nithi County Government of 4Kg of wheat flour, 4Kg of maize flour and 1 litre of cooking oil to 340 households in Gatunga.
- Distribution by Tharaka Nithi County Government of 4Kg of wheat flour, 4Kg of maize flour and 1 litre of cooking oil to 153 households in Mukothima.
- Distribution by Tharaka Nithi County Government of wheat flour, maize flour and cooking oil in households in Tharaka South.

6.2 Non Food Intervention

Agriculture Sector

- 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.

Livestock and veterinary

- Lumpy Skin Disease vaccination targeting over 20,000 cattle in Tharaka South Sub County.
- Foot and Mouth Disease vaccination targeting over 20,000 cattle and 5,000 pigs in Tharaka South Sub County.
- Rabbits vaccination targeting 2,000 dogs and 500 donkeys 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

- Main farming activities were land preparation for the short rain season .Stock levels at household was declining. Market operation were normal since reopening in July and are recovering well from the Covid 19 shocks.
- Status of water sources was normal with a declining trend with household and Livestock watering distance still being within the normal ranges. This situation is likely to continue declining in the next one month due to the ongoing long dry spell till mid- October.
- Food Stocks at households' level is likely to continue decreasing for the next 1month in all the livelihood zones due diminishing stocks from the long rains harvest.
- Markets operations are likely to remain stable for livestock due to presence of fair pasture and browse and resumption of market while prices of food commodities is likely to increase or remain the same for the next 2 months till the beginning of short rain harvesting.
- Pasture condition is fair and the condition is likely to remain stable for the next one month due to supplement of livestock feed from crop residue leading to shorter grazing distance, increased milk production and good livestock body condition.
- 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 1month.

- 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 (July 2020 to February 2021)

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

Sub County	Intervention	Ward	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Agriculture Immediate interventions							
Tharaka North	Provision of relief food	Gatunga Mukothi ma	5000	County and National Government	food	Technical staff	immediately
Tharaka South and North	Provision of subsidized planting inputs	Chiakari ga, Marimanti,, Nkondi, Mukothi ma, Gatunga	16000	County and National Government	Fertilizers Seeds chemical s	Technical staff	By end of September 2020
Agriculture Medium term/Long Term interventions							
Tharaka South	Construction of NCPB store	Kanyange	10000	MOA/STAKEHOLDERS	Capital land labour	Land	2 YRS
Livestock							
Tharaka South	Community sensitization on Livestock feed preservation and controlled grazing	Tharaka south	3,500 farmers	NDMA, County government, National Government and livestock department	Funds, fuel and personnel,	Personnel	2months
Tharaka south	Upgrading of local goats, cattle and chicken	Nkondi, Marimanti chiakariga	2400 farmers	County Government, UTaNP KCSAP, Livestock Production and NDMA	Funds, fuel and personnel,	Personnel	3 years
Tharaka South	Vaccination of animals (goats, sheep and	Tharaka south	4,500 farmers	NDMA, County government	Vaccines, funds, fuel,	Personnel	2months

	cattle) against RVF			and veterinary department	vehicles and personnel		
Tharaka Nithi	Tharaka North& South	Fodder production	300 farmers	TNCG Livestock department	Personnel planting material (seeds), fuel 200ltrs & funds Ksh 200,000	Personnel	2years
Water							
Tharaka North	Capacity building on irrigation water management and COVID 19 management response	Tharaka North	1200	Irrigation DVPT, MOH, NDMA	funds	Personnel	12 months
Water -Medium and Long Term recommended Interventions							
Ngoaka-Ntoroni irrigation project	Farmers organization and COVID 19 intervention	Gatithini	268 farmers	Irrigation Development	funds	Personnel	24 months
Health							
Tharaka	Vitamin a supplementation	All wards	All children under 5yrs	M O H	funds	Personnel	Continuous
Tharaka	Zinc supplementation	All wards	All children under 5yrs with diarrhoea	M O H	funds	Personnel	Continuous

Tharaka	Management of acute malnutrition (imam)	All wards	All children with malnutrition	M O H	funds	Personnel	Continuous
Tharaka	IYCN Interventions (EBF and complementary Foods)	All wards	All children under 5yrs	M O H	funds	Personnel	Continuous
Tharaka	Iron Folate Supplementation among Pregnant Women	All wards	All pregnant women	M O H	funds	Personnel	Continuous
Tharaka	Deworming	All wards	All children under 5yrs	M O H	funds	Personnel	Continuous

Education Recommended

Food Security Related	Tharaka South and Tharaka North	ESMP	37	8093	IAS	Retention	6 months
		HGSM	13	2171	GOK	Retention	Long term
		Water Tanks	10	2100	NDMA	Hygienic safe drinking water	3 months
Covid-19 Related	Tharaka North Tharaka South	Face masks	172	35,618	GOK	Reducing spread of COVID 19	Short term 6 months
		Fumigation of school building	172	35,618	GOK	Prevent COVID 19	3 months
COVID-19 Related	Tharaka North Tharaka South	Fumigation	62	16805	County Government MOE	Prevent COVID 19	November – December 2020
		Hand Washing Facilities	62	16805	MOE	None	August-December 2020
		Sanitizers	62	16805	MOE	None	August-December 2020