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EMBU COUNTY

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## **ADVISORIES FOR THE MARCH-APRIL-MAY (MAM) 2023 RAINY SEASON**

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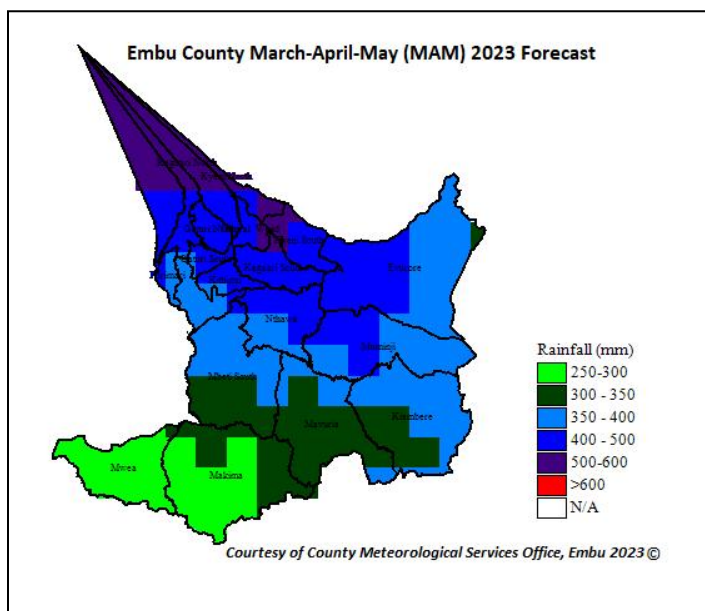
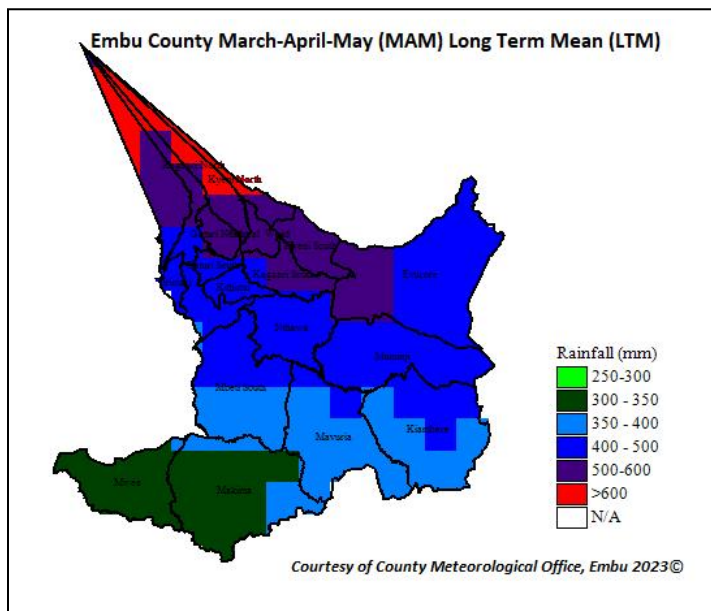
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# 1 MAM 2023 Seasonal Weather Forecast

## 1.1 Highlights

The MAM 2023 rainy season is expected to be near normal with a tendency to below normal and the rains are expected to start within 15<sup>th</sup> to 31<sup>st</sup> March 2023 and have a cessation or end within 15<sup>th</sup> to 31<sup>st</sup> May 2023. The distribution of the rains is expected to be fair to poor within season (medium to long dry days within season). However it should be noted that we are in the season of tropical cyclones development and consequence movement into the Mozambique Channel and they can affect the forecast and therefore it is recommended that one should also follow the weekly weather updates issued by the County Meteorological office, Embu.

## 1.2 Probable total Seasonal Rainfall



### 1.3 Summary of MAM 2023 Seasonal Forecast by Ward

No.	Sub county	Ward/ climatic zone	Seasonal Amount in mm		Probable onset dates	Probable Cessation dates	Probable Length of Rain Period	Probable distribution
			Normal (Long term mean 1991- 2020)	Forecast for MAM 2023				
1.	Runyenjes	Kagaari North	500-600	400-500	Between 15 <sup>th</sup> to 31 <sup>st</sup> March 2023	Between 15 <sup>th</sup> to 31 <sup>st</sup> May 2023	45-60 days	Medium to long dry spells within the rain season that could affect vulnerable crops
2.		Kagaari South	500-600	400-500				
3.		Gaturi North	500-600	400-500				
4.		Runyenjes Central	>600	500-600				
5.		Kyeni North	>600	500-600				
6.		Kyeni South	500-600	400-500				
7.	Manyatta	Kirimari	350-400	400-500				
8.		Nginda	>600	500-600				
9.		Gaturi South	>600	500-600				
10.		Mbeti North	400-500	350-400				
11.		Ruguru Ngandori	>600	500-600				
12.		Kithimu	400-500	350-400				
13.		Mbeere North	Evurore	400-500				
14.	Muminji		400-500	350-400				

No.	Sub county	Ward/ climatic zone	Seasonal Amount in mm		Probable onset dates	Probable Cessation dates	Probable Length of Rain Period	Probable distribution
			Normal (Long term mean 1991- 2020)	Forecast for MAM 2023				
15.		Nthawa	400-500	350-400				
16.	Mbeere South	Mbeti South	400-500	350-400				
17.		Mavuria	400-500	350-400				
18.		Makima	400-500	350-400				
19.		Kiambere	400-500	350-400				
20.	Mbeere South	Mwea	350-400	250-300				

## 1.4 Recommendations

- i) Choosing the right crops to plant:
  - To minimize risks, choose the crops whose seasonal Crop Water requirement within the lower limit value of the predicted range
  - Risk of long dry Spells within the rainy period:
    - At the moment we cannot reasonably predict the actual length of the dry spells and their impacts on various crops
    - We therefore advise farmers to choose crops that are least vulnerable to such long dry spells
  - Length of the rainy period(LRP):
    - The exact length of soil moisture is slightly higher than the LRP depending on crop type, soil type and the amount of moisture at the time of cessation.
    - Choose the crop whose length of growing period to maturity is not too far from the LRP.
- ii) Onset dates versus planting dates
  - For those wishing to dry plant, it is advisable to plant in the 1<sup>st</sup> week of the predicted onset dates
  - For those wishing to wet plant, it is advisable to wait for the weekly weather update which is more accurate
  - Dry or Wet Plant when the **weekly forecast** indicates at least **3 days** with rain of a total amount **greater than 20 mm.**

## 2 Agro-Weather Advisories

### 2.1 General Responsibilities

- Farmers to implement the advisories
- Agricultural Officers to advise farmers
- Input suppliers to ensure inputs are available on time
- Community Extension Volunteers to advise farmers
- Kenya Met Department to provide weather updates (weekly, other)
- Agriculture, Livestock and Fisheries development
- Insurance companies

### 2.2 General Farm Activities

- Early land preparation: before 21st November
- Repair of soil and water conservation structures: Terraces, Zai pits, etc
- Repair of water storage structures: Desilting of farm ponds, weirs, water tanks, water pans, Gutters
- Practices: Conservation Agriculture (CA): Ripping, Planting stations.
- Pre-germination (seed soaking); Seed preparation
- Scale up manure and fertilizer application (basal & top dressing)
- Timely weed control
- Timely and proper pests and disease control.
- Proper spacing of crops
- Plant ecologically suitable certified seeds as indicated above
- Pitting for fruits and forest Trees

### 2.3 When to Plant

- Dry or Wet Plant when the **weekly forecast** indicates at least **3 days** with rain of a total amount **greater than 20 mm**.

### 2.4 Specific agro-weather Advisories for the Upper zones

Crops to plant	Wards (Runyenjes Central, Kyeni North, Nginda, Gaturi South and Ruguru Ngandori)
1. Maize	Hybrid – 5 series, Pannar 15, Pioneer 30G19
2. Beans	Kat (B1,B9, B9, B69 &B56), Nyota and Angaza
3. Fodder	Napier grass (Bana & Kakamega I, II & III varieties) under Tumbukiza method, Bracharia, Rhodes grass, Calliandra, Desmondium and Mulberry
4. Tea	Proper management
5. Coffee	Proper management

### 2.5 Specific agro-weather Advisories for the Middle zones

Crops to plant	Wards: (Kagaari North, Kagaari South, Gaturi North, Kyeni South and Kirimari)
1. Maize	Duma 41, Duma 43, DH04, KDV4 and KDV6, Pioneer 2848, Simba 61, WS403, Pannar 3M-05 & 4M-19)
2. Beans	Mwende, mwitemania, gachango, KATB1, KTB9, KATX69, KATX56, Nyota
3. Sunflower	Encouraged to plant for oil and animal feeds
4. Cassava	Ndolo, Mucericeri and Tajirika
5. Sweet Potatoes	KSP 004, KEMB 10 and Bungoma
6. Fruits	Encouraged to plant and do proper maintenance
7. Fodder	Napier grass (Kakamega I, II & III varieties) under Tumbukiza method, Bracharia (basilisk and MG4), Rhodes grass, Desmondium, Tithonia, Sweet potato vines (Musinya, X-Mukurweini), Fodder trees(Calliandra, Leucaena & Mulberry. Farmers advised to conserve excess fodder

## 2.6 Specific agro-weather Advisories for the Lower zones

Crops to plant	Wards( Mbeti North, Mbeti South, Kithimu, Evurore, Muminji, Nthawa, Mavuria, Makima and Kiambere)
1. Maize	DH02 & DH04 at minimal levels
2. Beans	Crop varieties: Nyota; KAT X56; KAT B1
3. Sorghum	Gadam,, millet
4. Millet	PM 1, 2 & 3
5. Cow peas	M66 & KVU 27-1
6. Green grams	N26, KS 20, Pigeon peas
7. Vegetables	Cow peas leaves
8. Cassava	Ndolo, Mucericeri and Tajirika
9. Sweet Potatoes	Locals, KSP 20 & 20, Kemp 10, SPK 004 local kingee.
10. Fodder crop/trees	Sudan grass, fodder sorghum, Leucaena & Mulberry
11. Fruits trees	Mango, pawpaw and orange trees to be well managed

## 2.7 Specific agro-weather Advisories Mwea Ward

Crops to plant	Mwea Ward
1. Beans	Crop varieties: Nyota; KAT X56; KAT B1
2. Sorghum	Gadam,, millet
3. Millet	PM 1, 2 & 3
4. Cow peas	M66 & KVU 27-1
5. Green grams	N26, KS 20, Pigeon peas
6. Vegetables	Cow peas leaves
7. Cassava	Ndolo, Mucericeri and Tajirika
8. Sweet Potatoes	Locals, KSP 20 & 20, Kemp 10, SPK 004 local kingee.
9. Fodder crop/trees	Sudan grass, fodder sorghum, Leucaena & Mulberry
10. Fruits trees	Mango, pawpaw and orange trees to be well managed

## 2.8 General Analysis of Hazards/Risks and Opportunities (agriculture)

Hazards /risks	Opportunities	Proposed actions
<ul style="list-style-type: none"> <li>• Moderate floods (flash floods)</li> <li>• Soil erosion</li> <li>• Isolated incidences of water logging</li> <li>• Outbreak of crop pests and diseases</li> <li>• Leaching of nutrients</li> <li>• False on-set of rains</li> <li>• Poor germination and loss seeds</li> <li>• Destruction of farm structures</li> <li>• Low land productivity</li> <li>• Low crop yields</li> <li>• Loss of inputs and poor crop establishment</li> <li>• Food insecurity and poor farm incomes</li> </ul>	<ul style="list-style-type: none"> <li>• Maximizing yields and income through planting recommended varieties</li> <li>• Increased area under crop and farm forest cover</li> <li>• Water harvesting for crop production and household use</li> <li>• Availing of certified farm inputs by agro-dealers</li> <li>• Kitchen gardening</li> <li>• Insuring of crops against</li> </ul>	<ul style="list-style-type: none"> <li>• Establish new and Repair existing soil and water conservation structures and farm facility structures</li> <li>• Staggered planting</li> <li>• Timely procurement of inputs</li> <li>• Embrace Integrated Pest Management and Integrated Crop Management</li> <li>• Procurement of crop insurance</li> </ul>

### 3 Specific advisories for Livestock farmers

Recommended Actions	Hazard/Risks	Opportunities	RESPONSIBLE
<p>✓ <b>Pastures/fodder to be established</b></p> <ul style="list-style-type: none"> <li>• Bracharia species</li> <li>• Sorghum Fodder</li> <li>• Sudan grass</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Livestock diseases, Parasites infestation, Poor pasture and fodder establishment</li> <li>• Inadequate pasture and fodder</li> <li>• Reduced milk production</li> <li>• Low birth rates</li> <li>• Poor body condition</li> <li>• Low prices of animals</li> <li>• Reduced water availability</li> <li>• Reduced household income</li> </ul>	<ul style="list-style-type: none"> <li>• Feed Conservation</li> <li>• Breed improvement-for adaptable breeds (Magic 50)</li> <li>• Value addition</li> <li>• Water harvesting and storage</li> <li>• Increase of small stock number</li> <li>• Breed improvement-for adaptable breeds</li> <li>• Value addition</li> <li>• Water harvesting and storage</li> <li>• Increase of small stock number</li> <li>• Feed Conservation</li> </ul>	<p>Farmers</p> <p>WLPO</p> <p>Community Extension Volunteers,</p> <p>Inputs suppliers</p> <p>Service providers</p>
<p>✓ <b>General actions</b></p> <ul style="list-style-type: none"> <li>• Ration feeding/Paddock/conservative feeding</li> <li>• Destocking for appropriate carrying capacity.</li> <li>• Adopt Home feed formulations.</li> <li>• Breed management</li> <li>• Rehabilitation of Existing and establishment of new water harvesting structures</li> <li>• Bush management for pasture improvement</li> <li>• Deworming</li> <li>• Tick control</li> <li>• Vaccinate the animals against weather related diseases</li> <li>• Proper housing for livestock protection.</li> <li>• Timely harvesting and preservation of pastures and fodder</li> <li>• Rehabilitation of fish ponds</li> <li>• Restocking of fish ponds.</li> </ul>			

### 4 Advisories for Other Livelihood Sectors

SECTOR	Impact	Hazards/ Risk	Opportunity	Intervention/Actions	Responsible
Water resources	Little water that should be harvested	Inadequate water infrastructures -Flash flood	Water harvesting & conservation	Water trucking, adopt Water harvesting structures e.g. dams ,ponds ,water tanks	Dept of water and development partners
Disaster management	Few disasters likely to happen	Foods and whirl winds	Leverage on salvaged produce	Emergency /contingency plans	National Drought Management Authority, NGOs, Governments, Faith Based Organization
Wildlife /forestry	Increased Human /wildlife conflict, Incidences of wild fire breakout.	Loss of livelihood  Loss of wildlife	Conservation and strict protection of the current biodiversity	Human /wildlife conflict minimization through budgetary allocation for compensation ,electric fencing ,surveillance and enforcement, Afforestation programs	KWS  National & County Government  Farmers

SECTOR	Impact	Hazards/ Risk	Opportunity	Intervention/Actions	Responsible
Trade, industry and finance	commodity price increase  Reduced per capita incomes	Famine/ drought/starvation	Prudent utilization of current food reserves, Importation of essential food commodities	Subsidized trader  Reduced credit interests	Dept of Trade, Business Community, National & County Government
Energy	Energy infrastructure network collapse	Electrocution, Temporary blackouts	Maintenance of KPLC infrastructures, Investment on alternative energy sources	Allocate emergency funds, subsidy on fuel especially for domestic use	Kenya Power & Lighting Company
	Power outages	Short-circuiting	Energy saving	Alternative supply e.g. solar, generators	Kenya Power & Lighting Company
	Increased cost of Energy	Reduced electric energy generation	Intensified use of solar energy	Power rationing, Subsidies on solar power equipment	
Transport /communication	Poor transport & communication networks	Flash floods	Road for water harvesting	Diversion channels  Emergency funds /personnel, reclogging of culverts	Department of Transport, NTSA, National Government, County Government
Health	Increased Food insecurity	Increased Malnutrition, Increased food deficient related ailments	Leverage on Nutrition, Increase food supplements for young children and the elderly	Emergency /mobile clinic, Increase Health personnel, Enhanced public health activities, Prepositioning of drugs in health facilities	Ministry Of Health, Private Hospitals, Stakeholders
Education	Disruptions of education due to hunger at home, Increased school drop outs	Poor school infrastructure due to parent's low incomes	Initiation of School feeding Program	Early warning and preparedness	Department of Education, NGOs, Faith Based Organizations, Parents

## 5 How to get Weather Updates

You can get weekly weather updates from the Counties folder in the KMD Website <https://meteo.go.ke/node/4191> and via SMS messages every Monday evening or early Tuesday morning. For More information Contact, the Nearest Agric Office: Ward, Sub County & County-Embu. County Meteorological Office, Embu mobile +254705252469

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