

FORE WARD

This Agro met Bulletin is prepared and disseminated by the National Meteorological Agency (NMA). The aim is to provide those sectors of the community involved in Agriculture and related disciplines with the current weather situation in relation to known agricultural practices.

The information contained in the bulletin, if judiciously utilized, are believed to assist planners, decision makers and the farmers at large, through an appropriate media, in minimizing risks, increase efficiency, maximize yield. On the other hand, it is vital tool in monitoring crop/ weather conditions during the growing seasons, to be able to make more realistic assessment of the annual crop production before harvest.

The Agency disseminates ten daily, monthly and seasonal weather reports in which all the necessary current information's relevant to agriculture are compiled.

We are of the opinion that careful and continuous use of this bulletin can benefit to raise ones agro climate consciousness for improving agriculture-oriented practices. Meanwhile, your comments and constructive suggestions are highly appreciated to make the objective of this bulletin a success.

Director General
NMA
P.O.Box 1090
Tel: 011661-57-79
FAX 00251-11-6625292
E-mail nmsa@ethionet.et
Addis Ababa

አህፅሮት

እ.ኤ.አ ኦክቶበር 2017

በኦክቶበር የመጀመሪያዎቹ አሥር ቀናት ሰሜንና የሰሜን ምሥራቅ እንዲሁም የመካከለኛው የሀገሪቱ አካባቢዎች ከነበራቸው የደመና ሽፋን በጥቂት ቦታዎቻቸው ላይ ለጥቂት ቀናት አነስተኛ ዝናብ ያገኙ ቢሆንም ብዙውን ጊዜ ደረቅ የአየር ሁኔታ ተዘውትሮባቸዋል። ይህም በመሆኑም በተለይም በመደበኛ ሁኔታ ከሰሜንና ከሰሜን ምሥራቅ የሀገሪቱ ክፍል ዝናብ መውጫው ስለሆነና በዚህ ጊዜ የሰብል ስብሰባቸውን በሚያካሄዱ በአንዳንድ ሰብል በደረሰባቸው አካባቢዎች የነበረው ደረቅ የአየር ሁኔታ ለሰብል ስብሰባና ድህረ ሰብል ስብሰባው አመቺ ሁኔታን የሚፈጥር ቢሆንም በጥቂት ቦታዎቻቸው ላይ ለጥቂት ቀናት የተገኘው አነስተኛ እርጥበት ቀደም ብለው ለተዘፋና አልፎ አልፎ ፍሬ በመሙላት ላይ ለሚገኙ ዝግጅተው ለተዘፋና በተለያ እድገት ደረጃ ላይ ለሚገኙ የመኸር ሰብሎችም ሆነ ለቋሚ ተክሎች የውሃ ፍላጎት መሟላት አሉታዊ ተፅእኖ ይኖረዋል። በተጨማሪም የተገኘው እርጥበት በአካባቢው ተገልብጦ በድጋሚ ለተዘፋ ሰብሎች አመቺ ሁኔታን እንደሚፈጥር እሙን ቢሆንም። በአንዳንድ አካባቢዎች ሰብሎች እየደረሱ ከመሄዳቸው ጋር ተያይዞ የሰብል ስብሰባ እየተከናወነ ባለባቸው ቦታዎች የነበረው እርጥበት አሉታዊ ጎን እንደሚኖረው ነው። በተመሳሳይ ሁኔታም በምዕራብ የሚኖረው እርጥበት በተለያ እድገት ደረጃ ላይ ለሚገኙ የመኸር ሰብሎችም ሆነ ለቋሚ ተክሎች የውሃ ፍላጎት መሟላት ምቹ ሁኔታ እንደሚፈጥር እሙን ነው። በአንጻሩ ደግሞ በጋ ሁለተኛ የዝናብ ወቅታቸው በሆኑት የደቡብና የደቡብ ምስራቅ የሀገሪቱ ክፍሎች ላይ የተሻለ የእርጥበት ሁኔታ የተስተዋለባቸው በመሆኑ የተገኘው እርጥበት ጥምር ግብርና ለሚካሄድባቸው በደቡብና ደቡብ ምስራቅ የአገሪቱ ክፍሎች ላይ ዘር ለመዝራትና እንዲሁም በቆላማው አካባቢ ለሚኖሩት አርብቶ አደሮችና ከፊል አርብቶ አደሮች ለግጦሽ ሣርና ለመጠጥ ውሀ አቅርቦት ጥሩ አስተዋጽኦ እንደነበረው ይገመታል።

በአክቶበር የሁለተኛው አስር ቀናት የእርጥበት ሁኔታው በደቡብና በምዕራብ አጋማሽ የሀገሪቱ ክፍሎች ላይ የተሻለ እርጥበት እንደሚኖር የሚጠበቅ ሲሆን ይህም ሁኔታ በአብዛኛው ለግብርናው ዘርፍ ጠቀሜታ እንደሚኖረው ይጠበቃል። በመሆኑም ቀደም ብለው ለተዘሩና ፍሬ በማፍራት ላይ ለሚገኙ፤ ዘግይተው ለተዘሩና በተለያዩ እድገት ደረጃ ላይ ለሚገኙ ሰብሎችም ሆነ ለቋሚ ተክሎች የተሟላ እድገት የሚያስፈልጋቸውን የእርጥበት ፍላጎት ከማረጋገጥ አንፃር አወንታዊ ሚና ይኖረዋል። በዚህ ጊዜ በመጠኑም ቢሆን የሚገኘው እርጥበት ሁለተኛ የዝናብ ወቅታቸው ለሆኑት ለደቡባዊው የሀገሪቱ ክፍሎች የማሳ ዝግጅት ለማድረግና ዘር ለመዝራት ምቹ ሁኔታ እንደሚፈጥር የሚጠበቅ ሲሆን በአካባቢው ለሚኖሩት አርብቶ አደሮችና ከፊል አርብቶ አደሮች ለግጦሽ ሣርና ለመጠጥ ውሀ አቅርቦት ጥሩ አስተዋጽኦ እንደሚኖረው ይገመታል። በተጨማሪም ውኃ አጠር የሆኑ አካባቢዎች የሚገኘውን የዝናብ ውኃ ለመሰብሰብና ለማከማችት መልካም አጋጣሚ ስለሚያገኙ ይህንኑ ለማከናወን የሚያስችል ዝግጅት እንዲያደርጉ ይመከራሉ። የእርጥበት እጥረት በሚያጋጥማቸው ዘግይተው በዘሩ የመኸር ተጠቃሚ አካባቢዎች ላይ ለዋግ መፈጠር ምቹ ሁኔታዎች ሊኖሩ ስለሚችሉ አርሶ አደሮች ጥንቃቄ እንዳደርጉ ይመከራል። በተጨማሪም በአንዳንድ አካባቢዎች ሰብሎች እየደረሱ ከመሄዳቸው ጋር ተያይዞ የሰብል ስብሰባ እየተከናወነ ሲሆን እርጥበት የሚጠበቅባቸው አካባቢዎች እርጥበት ጉዳት እንዳያደርስ አስፈላጊውን ጥንቃቄ ማድረግ ያስፈልጋል።

በአክቶበር ሶስተኛ አሥራ አንድ ቀናት ሰሜንና የሰሜን ምሥራቅ እንዲሁም የመካከለኛው የሀገሪቱ አካባቢዎች ከነበራቸው የደመና ሽፋን በጥቂት ቦታዎቻቸው ላይ ለጥቂት ቀናት አነስተኛ ዝናብ ያገኙ ቢሆንም ለዝናብ መፈጠርና መስፋፋት አስተዋጽኦ የሚያደርጉ የሚቲዎሮሎጂ ገጽታዎች ከመዳከሙ አንጻር በአብዛኛው የሀገሪቱ ቦታዎች ላይ ብዙውን ጊዜ ደረቅ ፀሐያማና ነፋሻማ የአየር ሁኔታ ተዘውትሮባቸዋል። ይህም በመሆኑ በተለይም በመደበኛ ሁኔታ ከሰሜንና ከሰሜን ምሥራቅ የሀገሪቱ ክፍል የበጋ ወቅታቸው ስለሆነና በዚህ ጊዜ የሰብል ስብሰባቸውን በሚያካሄዱ በአንዳንድ ሰብል በደረሰባቸው አካባቢዎች የነበረው ደረቅ የአየር ሁኔታ ለሰብል ስብሰባና ድህረ ሰብል ስብሰባው አመቺ ሁኔታን የሚፈጥር ቢሆንም በጥቂት ቦታዎቻቸው ላይ ለጥቂት ቀናት የተገኘው አነስተኛ እርጥበት ቀደም ብለው ለተዘሩ በመሰብሰብ ላይ ያሉና አልፎ አልፎ ፍሬ በመሙላት ላይ ለሚገኙ ሰብሎች አሉታዊ ተጽዕኖ ሲኖረው፤ ዘግይተው ለተዘሩ በተለያዩ እድገት ደረጃ ላይ ለሚገኙና ተገልብጦው በድጋሚ ለተዘሩ የመኸር ሰብሎችም ሆነ ለቋሚ ተክሎች የውሃ ፍላጎት መሟላት አወንታዊ ተፅዕኖ ይኖረዋል። በተመሳሳይ ሁኔታም በምዕራብ የሚኖረው እርጥበት በተለያዩ እድገት ደረጃ ላይ ለሚገኙ የመኸር ሰብሎችም ሆነ ለቋሚ ተክሎች የውሃ ፍላጎት መሟላት ምቹ ሁኔታ እንደሚፈጥር እሙን ነው። በአንጻሩ ደግሞ የበጋ ሁለተኛ የዝናብ ወቅታቸው በሆኑት የደቡብና የደቡብ ምስራቅ የሀገሪቱ ክፍሎች ላይ የተሻለ የእርጥበት ሁኔታ የተስተዋለባቸው በመሆኑ የተገኘው እርጥበት ጥምር ግብርና

ለሚካሄድባቸው በደቡብና ደቡብ ምስራቅ የአገሪቱ ክፍሎች ላይ ለተዘሩ ሰብሎች የውሃ ፍላጎት እንዲሁም በቆላማው አካባቢ ለሚኖሩት አርብቶ አደሮችና ከፊል አርብቶ አደሮች ለግጦሽ ሣርና ለመጠጥ ውሀ አቅርቦት ጥሩ አስተዋጽኦ እንደነበረው ይገመታል።

በአጠቃላይ ባለፈው ባለፈው የአክቶበር ወር በመካከለኛው"በሰሜንና በምሥራቅ የሀገሪቱ ክፍሎች ላይ በአብዛኛው የበጋው ደረቃማው የአየር ሁኔታ አመዝናባቸው የቆየ ነበር! ይህም በመሆኑም በተለይም በመደበኛ ሁኔታ ከሰሜንና ከሰሜን ምሥራቅ የሀገሪቱ ክፍል ዝናብ መውጫው ስለሆነና በዚህ ጊዜ የሰብል ስብሰባቸውን በሚያካሄዱ በአንዳንድ ሰብል በደረሰባቸው አካባቢዎች የነበረው ደረቅ የአየር ሁኔታ ለሰብል ስብሰባና ድህረ ሰብል ስብሰባው አመቺ ሁኔታ የፈጠረ ቢሆንም በተለይም በአንዳንድ ለውርጭ ተጋላጭ በሆኑ ሥፍራዎች ላይ የሌሊቱና የማለዳው ቅዝቃዜ እየጨመረ በመምጣቱ እድገታቸውን ባልጨረሱ ሰብሎች ላይ አሉታዊ ጎን ሊያሳድር ይችላል። በሌላ በኩል በወሩ ውስጥ በተለያዩ የሀገሪቱ አካባቢዎች ላይ ከቀላል እስከ መካከለኛ መጠን ያለው ዝናብ በመኖሩ ምክንያት የተገኘው እርጥበት ቀደም ብለው ለተዘሩና አልፎ አልፎ ፍሬ በመሙላት ላይ ለሚገኙ የመኸር ሰብሎች" ለቋሚ ተክሎች የውሃ ፍላጎት መሟላት እንዲሁም የተገኘው እርጥበት በአካባቢው በዝናብ መቆራረጥ ምክንያት ተገልብጦ በድጋሚ ለተዘሩ ሰብሎች አሉታዊ ተፅእኖ ነበረው። በአንጻሩ ደግሞ በጋ ሁለተኛ የዝናብ ወቅታቸው በሆኑት የደቡብና የደቡብ ምስራቅ የሀገሪቱ ክፍሎች ላይ የተሻለ የእርጥበት ሁኔታ የተስተዋለባቸው በመሆኑ የተገኘው እርጥበት በደቡብና ደቡብ ምስራቅ የአገሪቱ ክፍሎች ላይ ለሚኖሩት አርብቶ አደሮችና ከፊል አርብቶ አደሮች ለግጦሽ ሣርና ለመጠጥ ውሀ አቅርቦት ጥሩ አስተዋጽኦ እንደነበረው እሙን ነው።

SUMMARY

October 2017

During the first dekad of October the collected and analyzed agro meteorological information indicated that during the first dekad of October good moisture condition has persisted in most part of Meher crop growing areas except eastern amhara and Tigray region and has gradually extended to the second rain benefiting areas of the south and southeast part of the country. In line with this, Within 24 hours there was heavy rain fall over Arjo 36.4mm, Ayikel 30.1mm, Bore 30.0mm, and Dilla 34.7mm was observed. In most cases, such amount of received rain water might positive impact both long cycle crops which were planted at earlier time and short cycle Meher crops, such as Cereal, Pulses, and Oil crops, and favor were planted or re-planted lately and now found at different growing stages. In addition, the southward advancement of the weather system might be positive particularly for the second rain benefiting areas for the overall Bega season agricultural activities, like for land preparation, collecting and storing of water, planting crops and seedling etc. Moreover, the received normal to above normal amount of moisture in the pastoral and agro pastoral areas might play significant role in improving pasture and drinking water.

During 2nd decade of October rainfall indicators over north and north eastern parts of the country and over center of the country decrease from day to day. Over some parts of the country due to cloud coverage for some days gained rainfall but in most parts of the country dominated dry spell. This dry spell dominated was important for some Meher crop growing places harvest and post harvest activities. Beside to this situation western and Bega second rainy season areas like south and south eastern parts of the country have a good rainfall amount and performance.

Generally the 2nd dekad of October poor moisture condition has persisted in most part of Meher crop growing areas and has gradually extended to the second rain benefiting areas of the south and southeast part of the country. In most cases, such amount of received rain water might positive impact both long cycle crops which were planted at earlier time and short cycle Meher crops, such as Cereal, Pulses, and Oil crops, and favor were planted or re-planted lately and now found at different growing stages. In addition, the south ward advancement of the weather system might be positive particularly for the second rain benefiting areas for the overall Bega season agricultural activities, like for land preparation, collecting and storing of water, planting crops and seedling etc. Moreover, the received normal to above normal amount of moisture in the pastoral and agro pastoral areas might play significant role in improving pasture and drinking water.

During 3rd decade of October rainfall indicators over Western Tigray and Amhara, Benishangul Gumuz, Gambela, SNNPR, Western and Southern Oromia and South eastern Ethiopia of the country was dominated wet spell condition and other parts of the country like Eastern Tigray, Eastern Amhara, Afar, Northern Oromia and Northern Somalia was dominated dry, sunny and windy weather condition. Due to this condition moisture status over western parts of Tigray, western parts of amhara, Benishangul Gumuz, Gambela, western and southern parts of Oromia, almost all parts of SNNPR, HARARGE and southern and eastern parts of Somalia was good moisture condition. This moisture condition over north and north western parts of the country was negative impact for some meher cropping places harvesting and post harvesting activities. But over north and north eastern parts of the country was good situation for harvesting and post harvesting activities that is dry spell. Beside this for the above moist areas some positive impact for short cycle plants or re-planted lately and now found at

different growing stages.

On the other hand; south and south east ward advancement of the wet weather system might be positive impact particularly for second rain benefiting areas for overall bega season agricultural activities; like for planting crops, seedling, growing crops, collecting and storing water purpose was good moisture condition. And to received normal and above normal amount of moisture in the pastoral and agro pastoral areas might play significant role in improving pasture and drinking water.

Generally during the month of October under review the anticipated dry and sunny condition observed over central, northern and eastern parts of the country would favor Meher crops, which are ready to harvest. However the observed extreme minimum temperature over southern, central and northern parts might have a negative impact for early sown crops and crops which were at different phonological stages and not attained maturity. On the other hand the observed slight to heavy rainfall over different parts of the country was enhanced the moisture availability and to fulfill water requirements of crops, which were sown earlier, and attaining maturity and grain filling growing stage, perennial plant as well as this extended wet condition would have positive impact on crop affected by dry spell where replanting of the crops has been going on recently. Besides the situation was favored pasture and drinking water availabilities over south and south eastern pastoral and agro-pastoral areas. In line to this the observed heavy rainfall (30 – 55 mm) in one rainy day over Abobo, Layiber, Arjo, Dilla, Ayikel, Bore, Jinka, Bulen, Shawura, Gimbe, Maji, Limugenet, Chewaka, Ijaji, Bedele, Chira, Kebridehar, Hagermariam, Ayira, Gambela, Mayitsemire, Jimma, Dangla, Pawi, Motta, Seru, Fagnido, Konso and Tercha. Where water deficit areas might have positive impact on water harvesting that can be used in time of deficit. Moreover, the observed extreme heavy fall over some places may cause negative impact on harvest and post harvest activities in areas where the activities are under question.

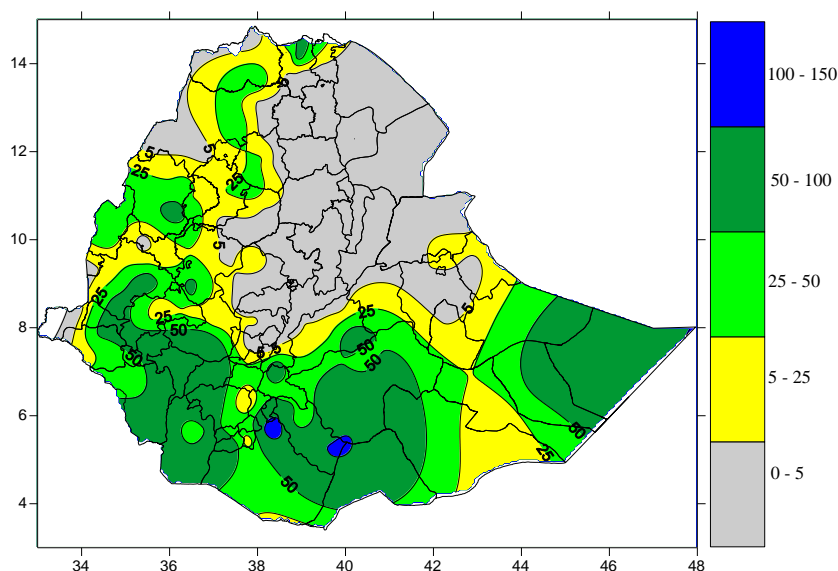


Fig 1. Rainfall distribution in mm (21 – 30) October 2017

1. WEATHER ASSESSMENT

1.1. Rainfall amount (Fig.1)

During the third dekad of October 2017, some pocket areas of Borena, Guji and Bale received rainfall in the range of 100 to 120mm. Much part of Sheka, Jimma, Keffa, Dawro, Benchi Maji, Basketo sp Woreda, South Omo, Gamo Goffa, Derash, Konso, Gedeo Guji, Liben, Bale, Warder and some places in Korahe, Degehabur, West Wellega, Illubabor , Gembella zone 1 & 2; and in few pocket areas of Central Tigray, Metekel, East Wellega and Sidama experienced rainfall in the range of 50-100mm. On the other hand, much part of Central Tigray, Metekel, Assosa, Borena, Amaro Welayita, Sidama, Afder, Degehabur, Gedeo and some part of West Tigray, North and South Gonder, Gojam, Agew Awi, East and West Wellega, Gambella zone 1 & 2, Bench Maji, Yem sw, Hadiya Arsi and West Harerge received rainfall in the range of 25 – 50mm. The rest parts of the country exhibited rainfall in the range of 0-25mm.

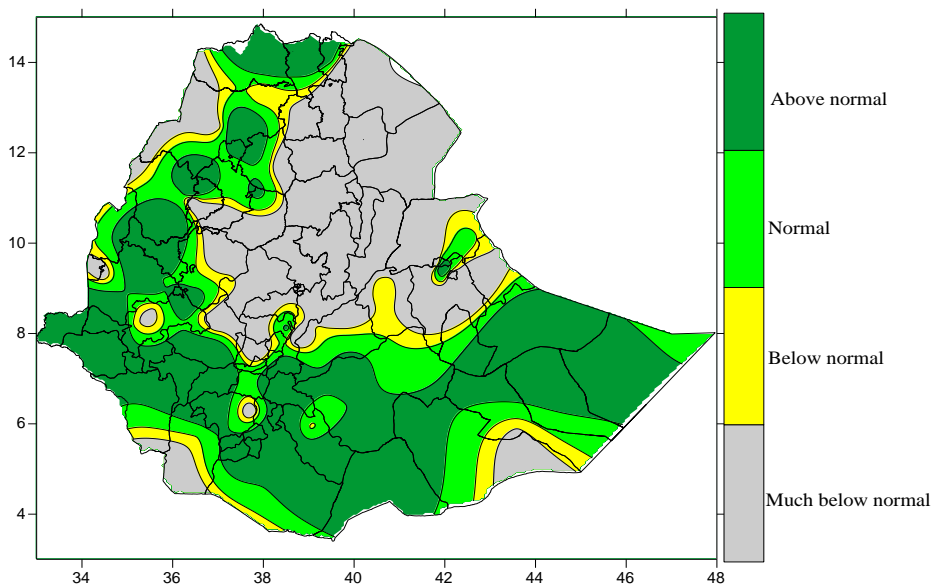


Fig. 2 Percent of normal rainfall distribution (21 – 30 October 2017)

Explanatory notes for the Legend

- < 50-Much below normal**
- 50-75%-Below normal**
- 75-125%- Normal**
- > 125% - Above normal**

1.1.2 Rainfall Anomaly (Fig. 2)

Much part of West, Central and East Tigray, North and South Gonder, Bahir Dar, West and East Gojam, Meteke, Assosa, Kamashi, West Wellega, all zones of Gembella, Illubabor, Sheka, Goder, Jimma, Keffa, Bench Maji, Dawro sw, Basketo sw, Gamo Goffa, Welayita, Sidama Hadiya, Gedeo, Derash, Konso sw, Burji, Amaro, Borena, Guji, Bale, Liben, Afder, Fik, Gode, Koraha, Warder, Degehabur and Harar experienced normal to above normal rainfall. The rest parts of country exhibited below to much below normal rainfall.

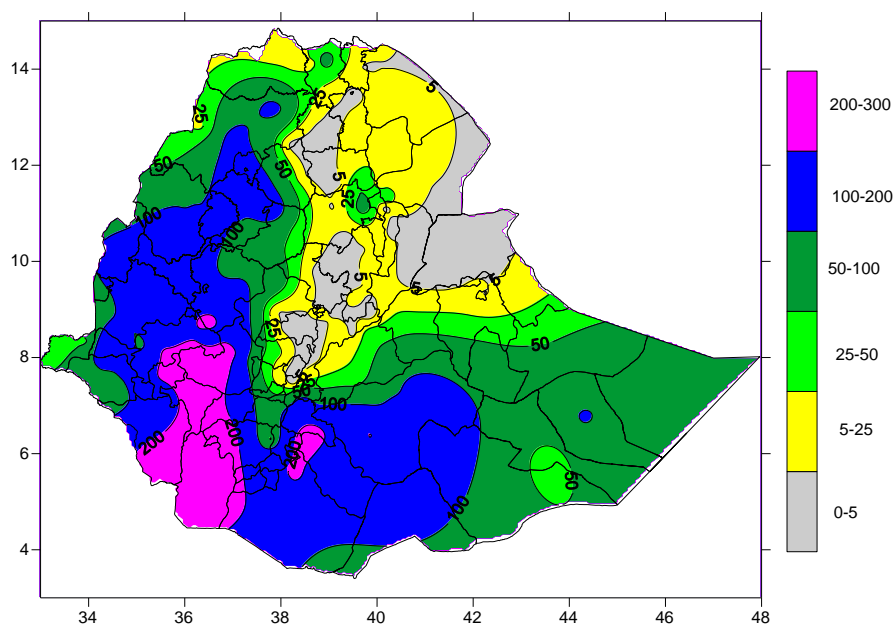


Fig. 3 Rainfall amount in mm for the month of October 2017

1.2.1 Rainfall amount (Fig.3)

Most parts of Sheka, Jimma, Keffa, Basketo, Derashi, south Omo and pocket area of Gedeo zones received 200 – 300 mm of rainfall. Bahirdar, Gojam, Agewu(Awi), Metekel, Assosa, Kamashi, east & west Wellega, Illubabur, Gambela zone 1, Godere, Bench maji, Dawuro, Gamogofa, Burji, Konso, Amaro, Borena, Guji, Bale, Liben and pocket area of Koraha exhibited 100-200 mm of rainfall. North & south Gonder, east & west Gojam, pocket area of Oromia special zone, north & west Shewa, Yem, Hadiya, Welayita, tongo, Gambela zone 2, Fik, east of Afder, Gode, Deghabur and Koraha 50-100 mm of rainfall. West & central Tigray, tip area of north Gonder, Oromia special zone, west Harergie, Gambela zone 3, pocket area of Gode and east of Arsi exhibited 25-50 mm of rainfall. east Tigray, north part of west Tigray, western part of Waghimra, south Tigray, Afar zone 1, 2, 4, & 5, north & south Wollo, Addis ababa, east

Shewa, Alaba, Harer, east Harergie and Jijiga zones exhibited 5-25 mm of rainfall. the rest part of the country Exhibited 0-5 mm of rainfall.

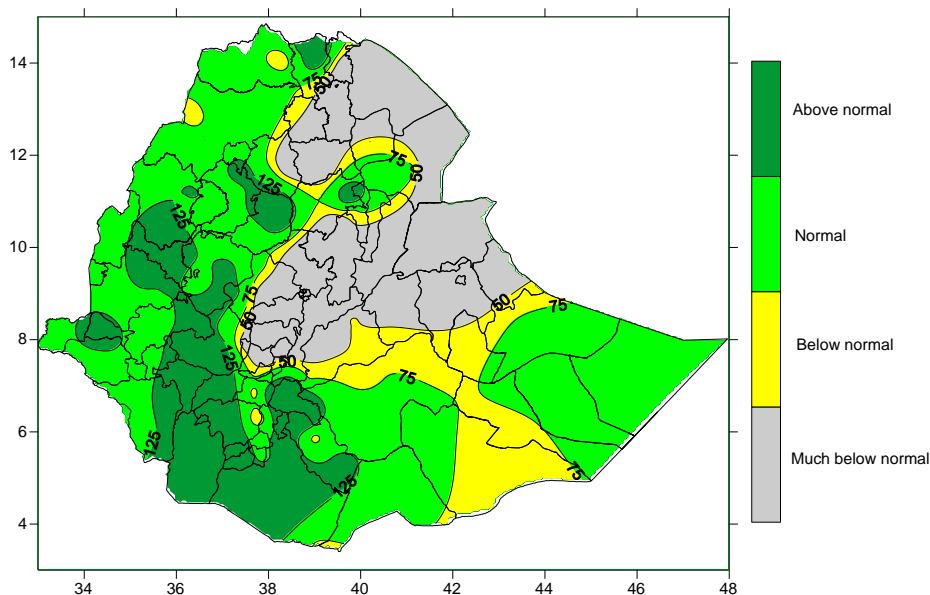


Fig. 4 Percent of Normal Rainfall for the month of October 2017

Explanatory notes for the Legend:

- < 50 -Much below normal**
- 50-75%- Below normal**
- 75-125%- Normal**
- > 125% - Above normal**

1.2.2 Rainfall Anomaly (Fig. 4)

Most parts of the country exhibited normal to above normal rainfall over Pocket area of east Tigray, central Tigray, south & north Gonder, Bahirdar, west & east Gojam, south Wello, Metekel, Assosa, Agew (Awi), Tongo, Illubabur, Jimma, Kamashi, Gambela Zone 1, 2 & 3, Sheka, Gode, Keffa, Dawro, Bench maji, Basketo, south Omo, Dirashe, Konso, Amaro, Borena, Sidama, Gamogofa, Hadiya, Wolayita, Gedeo, Burji, Guji, Liben, Korahe, Godere, some pocket area of Fik, Bale, Degehabur, Oromia special zone, and pocket area of Afar zone 1, . The rest part of the country has received from below normal to much below normal rainfall.

1.3 TEMPERATURE ANOMALY

During the month under review, some stations found in the lowlands of the country exhibited extreme maximum temperature above 35°C. Among reporting stations: : Gode,

Methara, Abobo, Awash Arba, Aysha, Chifra, Dalifagi, Dubti, Elidar, Fiq, Fugnudo, Gewane, Mile, Gembela, Kebridehar, Lare, Metema, Quara, Sawula, Semera and Shiraro recorded. The situation might have caused a negative impact on the normal growth and development of plants and livestock.

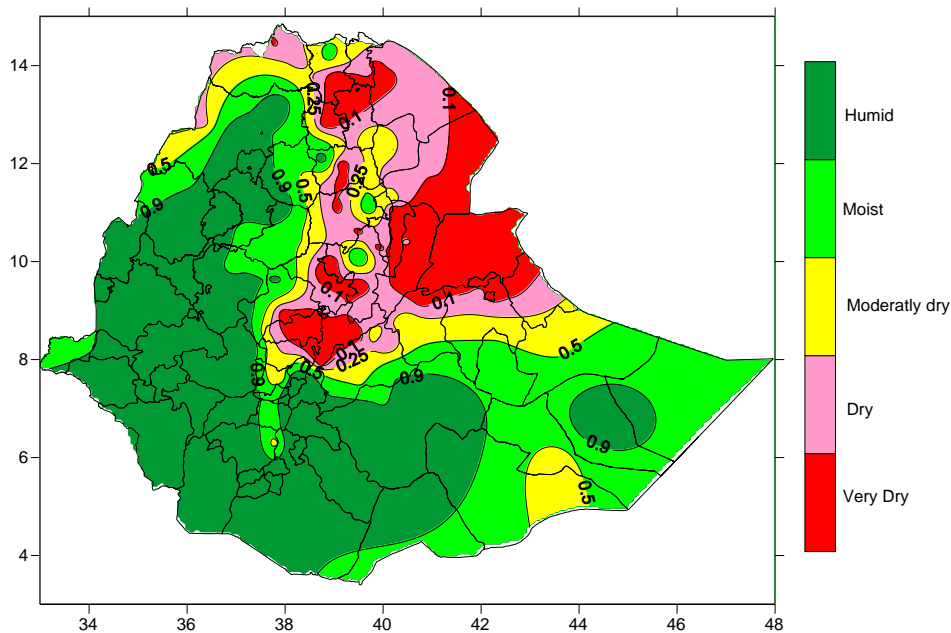


Fig. 5 moisture status for the month of October 2017

As indicated on the moisture status map above, much of south and south eastern second rainy benefiting area of the country and western part of the country experienced humid to moist moisture condition the situation might have favored Mehere agricultural activities for late sowing crops and availability of drinking water and pasture, water requirement of long cycle crops. While central, northern and Afar received moderately dry to very dry moisture condition. The situation might have favored Mehere agricultural post harvest activities.

2.2 EXPECTED WEATHER IMPACT ON AGRICULTURE DURING THE COMING MONTH

In normal condition in November month dry, sunny and windy Bega weather is experienced in most part of the country. The meteorological forecast data shows that during coming November month dry Bega weather expected on most part of the country and cold weather during night and early morning is expected on high land areas of the country on other hand the southwest and southern half of the county will receive minimized amount of rainfall until Mid of the month. In relation with this on few high land areas frost is expected. In other hand some areas expected to get slight to middle rainfall associated with cloud formation over the area. The dry weather that is expected in coming November month will favorable for harvesting matured crops whereas the cold during night and early morning as well as the expected frost formation on some highland areas of the country will have negative effects on late sowed crops, that doesn't finished seeding stages .

On other hand the expected slight to middle rainfall until the mid of November will benefit in late sowed crops and annual plants for water requirement satisfaction. This condition also have positive impacts for drinking water and pasture availabilities for pastoral and Agro pastoral areas.

In line to this East and west Welega, Jima, Ilubabor, east and west Harege, Guji and Borena zones from Oromia region, Asosa and Kemashe zones from Benishangul Gumuz region, Welayta, Kefa and Bench Maji, south Omo and Segen people zones from SNNP region and Degehabur, Fik, werder, Korahe, Afder, Gode and Liben zones from Somali region are expected to get near normal rain fall. These conditions will benefit the normal agricultural activities over the above mentioned area. Whereas the other parts of the country will be experience dry weather condition, the situation is suitable for harvesting activities of matured crops. It is advisable to apply water conservation mechanism for proper available moisture and rainwater for late sowed crops.

DEFNITION OF TERMS

ABOVE NORMAL RAINFALL: - Rainfall in excess of 125% of the long term mean

BELOW NORMAL RAINFALL: - Rainfall below 75 % of the long term mean.

NORMAL RAINFALL: - Rainfall amount between 75 % and 125 % of the long term mean.

BEGA: - It is characterized with sunny and dry weather situation with occasional falls. It extends from October to January. On the other hand, it is a small rainy season for the southern and southeastern lowlands under normal condition. During the season, morning and night times are colder and daytime is warmer.

BELG: - Small Rainy season that extends from February to May and cover s southern, central, eastern and northeastern parts of the country.

CROP WATER REQUIREMENTS: - The amount of water needed to meet the water loss through evapotranspiration of a disease free crop, growing under non-restricting soil conditions including soil water and fertility.

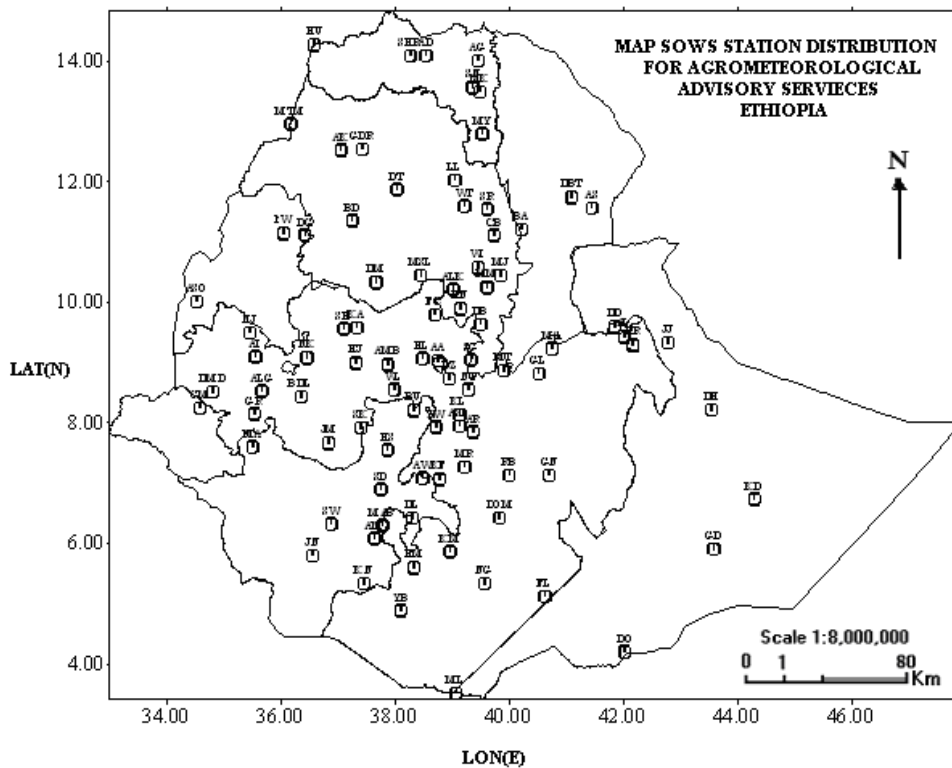
DEKAD: - First or second ten days or the remaining days of a month.

EXTREME TEMPERATURE: - The highest or the lowest temperature among the recorded maximum or minimum temperatures respectively.

ITCZ: - Intertropical convergence zone (narrow zone where trade winds of the two hemispheres meet.

KIREMT: - Main rainy season that extends from June to September for most parts of the country with the exception of the southeastern lowlands of the country.

RAINY DAY: - A day with 1 or more mm of rainfall amount.



Station	CODE	Station	CODE	Station	CODE	Station	CODE
A. Robe	AR	D. Markos	DM	Hossaina	HS	M/Selam	MSL
A.A. Bole	AA	D. Zeit	DZ	Humera	HU	Nazereth	NT
Adigrat	AG	D/Dawa	DD	Jijiga	JJ	Nedjo	NJ
Adwa	AD	D/Mena	DOM	Jimma	JM	Negelle	NG
Aira	AI	D/Odo	DO	Jinka	JN	Nekemte	NK
Alemaya	AL	D/Tabor	DT	K.Dehar	KD	Pawe	PW
Alem Ketema	ALK	Dangla	DG	K/Mingist	KM	Robe	RB
Alge	ALG	Dilla	DL	Kachise	KA	Sawla	SW
Ambo	AMB	Dm.Dolo	DMD	Koffele	KF	Sekoru	SK
Arba Minch	AM	Dubti	DBT	Konso	KN	Senkata	SN
Asaita	AS	Ejaji	EJ	Kulumsa	KL	Shambu	SH
Asela	ASL	Enwary	EN	Lalibela	LL	Shire	SHR
Assosa	ASO	Fiche	FC	M.Meda	MM	Shola Gebeya	SG
Awassa	AW	Filtu	FL	M/Abaya	MAB	Sirinka	SR
Aykel	AK	Gambela	GM	Maichew	MY	Sodo	SD
B. Dar	BD	Gelemso	GL	Majete	MJ	Wegel Tena	WT
Bati	BA	Ginir	GN	Masha	MA	Woliso	WL
Bedelle	BDL	Gode	GD	Mekele	MK	Woreilu	WI
BUI	BU	Gonder	GDR	Merraro	MR	Yabello	YB
Combolcha	CB	Gore	GR	Metehara	MT	Ziway	ZW
D. Berehan	DB	H/Mariam	HM	Metema	MTM		
D. Habour	DH	Harer	HR	Mieso	MS		
		Holleta	HL	Moyale	ML		