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NATIONAL METEOROLOGICAL SERVICES AGENCY
TEN DAY AGROMETEOROLOGICAL BULLETIN

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FOREWARD

This Agro met Bulletin is prepared and disseminated by the National Meteorological Services Agency (NMSA). 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.

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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 evapotransipiration 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.

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During the first dekad of February 2004, eastern half of SNNPR, northwestern and southeastern Amhara, central and southern Oromiya experienced normal to above normal rainfall while the rest parts of the country received below normal rainfall. The observed below normal rainfall over northern SNNPR and eastern half of Tigray would decrease the moisture content of the soil over the above-mentioned Belg benefiting areas; and this situation could have negative impact on season's agricultural activities. In addition to this, the persisted dry weather situation over Afar, Somali, eastern Oromiya, Gambella aggravated the scarcity of pasture and drinking water over the aforementioned places. The reverse is true over southeastern Amhara, central and southern Oromiya as well as northern and northeastern SNNPR. Regarding air temperature, Dangila registered extreme minimum air temperature below 5°C for eight consecutive days. On the contrary, Gambella reported extreme maximum air temperature above 35°C for ten consecutive days, this extreme maximum air temperature resulted in high evapo-transpiration over those areas and may have negative impact on the physiological processes of plants and the well being of animals.

During the second dekad of February 2004, little or no rainfall has been observed over most parts of the country. Thus this condition could have negative impact on the early season's agricultural activities in some Belg growing areas where the season's activities normally starts during the month of December and January like southern Tigray, Eastern Amhara and Belg growing areas of SNNPR. Moreover, the persistence moisture stress over most parts of Somali could have negative impact on pastoral and agro pastoral activities over pastoral and agro pastoral areas. With regard to extreme temperatures, some areas from the central highlands like Debre Birhan, Alemaya, Meraro, Bui, Wegel Tena, Asgori, Arsi Robe, Kulumsa, Mehal Meda, Jima and Koffele exhibited extreme minimum temperature less than 5°C lowering up to –1.4°C. On the contrary Assayta, Metehara, Metema, Pawe and Gambela experienced extreme maximum temperature ranging from 35.2-42°C. Therefore both extreme minimum and maximum temperatures could affect the normal growth and development of plants in the areas. Moreover, high temperature can increase evapotranspiration.

1. WEATHER ASSESSMENT

1.1 RAINFALL AMOUNT (Fig. 1)

Pocket areas of southern Oromiya and SNNPR received falls ranging from 5 – 50 mm of rainfall.

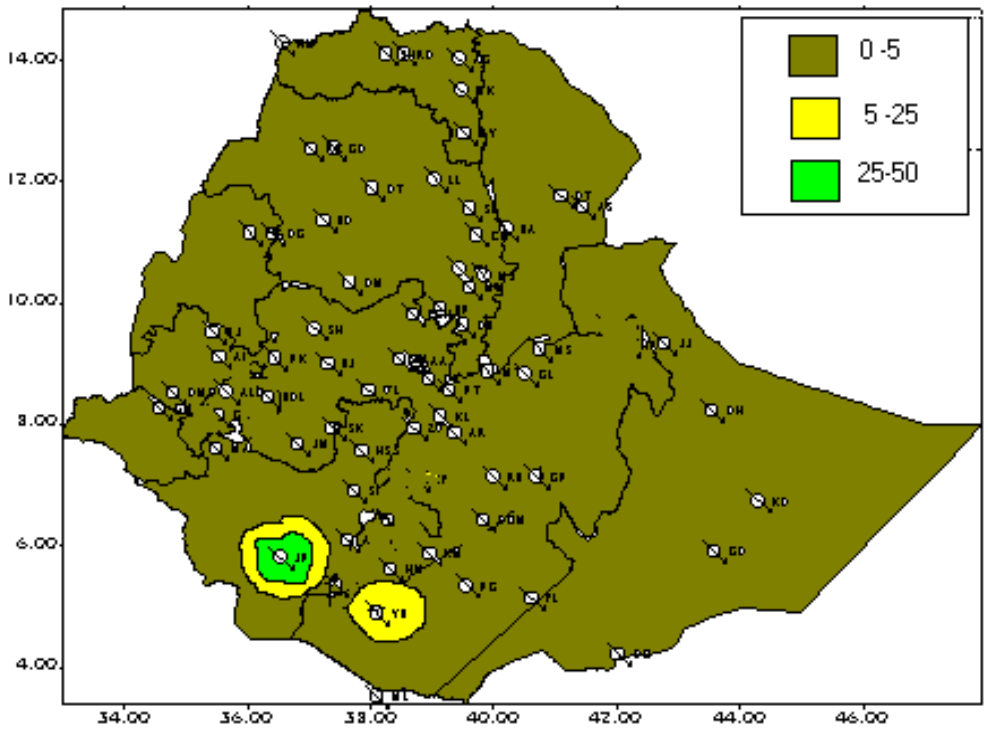

Fig 1. Rainfall distribution in mm (11-20, February 2004)

1.2 RAINFALL ANOMALY (Fig. 2)

With the exception of pocket areas of southern and western Oromiya including SNNPR, the rest of the country exhibited below to much below normal rainfall.

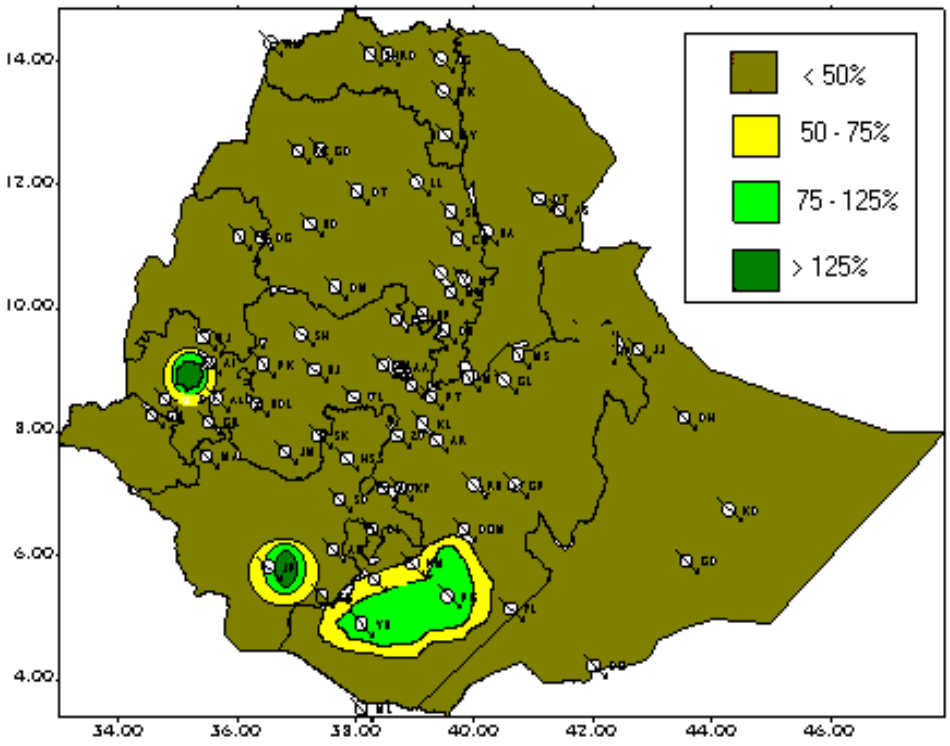

Fig.2 Percent of normal rainfall (11-20, February 2004)

Explanatory notes for the legend:
<50 -- Much below normal
50—75% -- below normal
75—125% --- Normal
> 125% ---- Above normal

1.3 TEMPERATURE ANOMALY

Some areas from the central highlands like Debre Birhan, Alemaya, Meraro, Bui, Wegel Tena, Asgori, Arsi Robe, Kulumsa, Mehal Meda, Jima and Koffele exhibited extreme minimum temperature less than 5°C lowering up to –1.4°C. On the contrary, Assayta, Metehara, Metema, Pawe and Gambela experienced extreme maximum temperature ranging from 35.2-42°C.

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2. WEATHER OUTLOOK FOR THE THIRD DEKAD OF FEBRUARY 2004

In the coming ten days rain producing systems are expected strengthen relatively over western half of the country within the forecast period for a few days. However, eastern half of the country is anticipated to be dry for the whole period through eastern Tigray and areas bordering to it will get light rainfall for a few days.

In general, the highlands of western Amhara, eastern Tigray, Gambela southern border of western Oromiya are expected to get normal to above normal rainfall. On the other hand, western Tigray, Afar, much of Amhara, much of Oromiya, SNNPR and Somali are anticipated to get below normal rainfall.

3. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

3.1 VEGETATION CONDITION AND IMPACT ON AGRICULTURE

The deficient rainfall condition during the dekad under review could have negative impact on the early season's agricultural activities in some Belg growing areas where the season's activities normally start during the month of December and January like southern Tigray, Eastern Amhara and Belg growing areas of SNNPR. Moreover, the persistence moisture stress over most parts of Somali could have negative impact on pastoral and agro pastoral activities. With regard to extreme temperatures, the observed both extreme minimum temperature over some areas of central highlands and maximum temperatures over the lowlands of eastern and western Ethiopia could affect the normal growth and development of plants in the areas. Moreover, high temperature can increase evapotranspiration of the vegetated areas.

3.2 EXPECTED WEATHER IMPACT ON AGRICULTURE DURING THE COMING DEKAD

The anticipated light rainfall over eastern Tigray and the adjoining areas of Amhara would have positive contribution on early season's agricultural activities in some areas. However, proper water harvesting techniques should be applied in order to exploit the anticipated little moisture efficiently.

The expected below normal rainfall over most parts of Tigray, eastern Amhara, eastern and southern Oromiya including SNNPR would have negative impact particularly in areas where Belg agricultural activities start earlier. Moreover, the deficient situation observed over Afar and Somali would exacerbate the persistence dry condition in the areas and would affect the availability of pasture and drinking water as well