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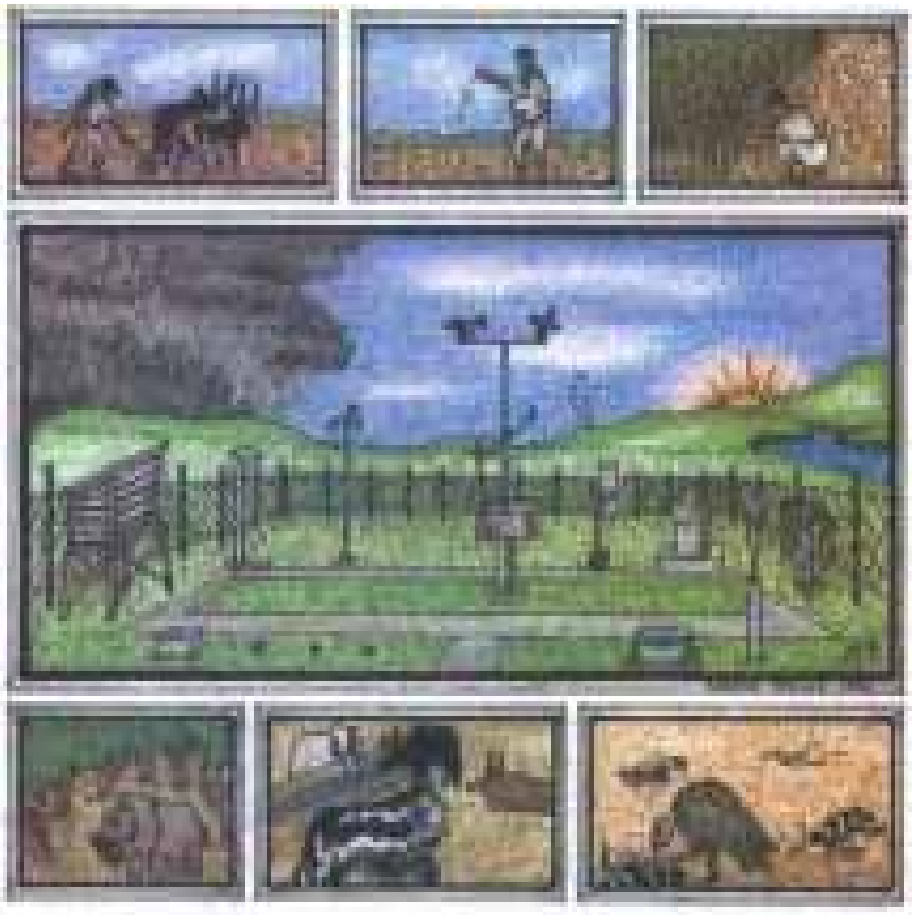

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FORE WARD

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.

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SUMMARY
MARCH 2006

During the first dekad of March 2006 there was shortage of moisture over most parts of Belg growing areas of the country, while central Tigray northeastern SNNPR and parts of southeastern Oromiya received normal to above normal rainfall. The observed moisture particularly over central Tigray could ease the dry situation that persisted during the preceding dekads. Besides it could have a positive impact for land preparation for long cycle crops like maize, sorghum and millet. Moreover the observed better moisture condition over some areas of southern Oromya could minimize the stress condition due to shortage of moisture together with high temperature to some extent. With regard to extreme maximum temperature Meiso, Dire Dawa, Methehara, Semera, Limu Genet, Assayta, Gode, Dubti, Mankush, Metema and Gambela recorded extreme maximum temperature ranging from 35.2 – 42.3 ^{0}C.

During the second dekad of March the observed above normal rainfall over most parts of the country could favor land preparation for long cycle crops, which are considered as Meher crops, and their contribution is about 35% of the total Meher production. Besides, it could help to start sowing activity of the above-mentioned crops in some pocket areas. However, some areas like Sodo, Sawula, Debre Zeit, Combolcha, Gelemso, Negelle, Nazret, Abomsa and Jinka exhibited heavy falls ranging from 32-53mm which indicates that there was erratic rainfall distribution in some areas in terms of crop water requirement. Generally most parts of the country received falls in 5-7 rainy days, which can create suitable condition for crops in terms of their water requirements. Moreover the observed wet condition could favor the availability of pasture and drinking water in the lowlands of pastoral areas and also create favorable condition to perform land preparation in agro pastoral areas. Among the reporting stations Sodo, Chira, Sawla, Debre Zeit, Combolcha, Gelemso, Negelle, Nazreth, Abomsa and Jinka received heavy rainfall 30.1, 32.0, 32.3, 35.8, 38.5, 44.0, 45.0, 47.0, 53.0 and 54.2 mm in one rainy day respectively. With regard to extreme maximum temperature Metema, Pawe, Assayta, Gode and Semera reported extreme maximum air temperature as high as 42.0, 39.5, 39.0, 38.7, and 38.5^{0}C respectively.

During the third dekad of March 2006 the observed normal to above normal rainfall over most parts of Belg benefiting areas of the country could have positive impact particularly for those areas which start their land preparation and sowing activities during this time like central (Adama, Meraro, Ziway, Bui and Weliso), eastern (Meiso, Gelemso, JiJiga and Alemya) and northeastern (Alem Ketema, Majete, Cheffa and Bati) parts of the country. However, some areas like Limu Genet, Mehal Meda, Alem Ketema, Bedelle, Sirinka, Hosana, Jimma, Bati, Wegel Tena, Sekoru, Arjo, Konso, Addis Ababa Bole, Enewari, Cheffa and Bui received heavy rainfall ranging from 30.4-72.7 mm in one rainy day. Thus, this condition could have a negative impact on crop field that are found in low-lying areas. Pursuant to the crop phenological report, teff was at emerging stage in some areas of northeastern (Majete and Sirinka). With regard to air temperature Gambela, Metema, Dubti, Monkish, Semara, Gewane, Pawe, Assayta, Gode, Nedjo, Begi, Limu Genet, Methara, Elidar, Dire Dawa, Moyale and Meisso recorded extreme maximum temperature as high as 42.3, 42.0, 41.0, 40.6, 40.2, 40.0, 39.5, 39.4, 39.0, 39.0, 38.5, 38.2, 37.5, 36.8, 36.5, 35.4, and 35.2 respectively.

Generally the wide spread rainfall condition observed particularly as of the second dekad of the month over most parts of Belg growing areas could have significant positive contribution for the existing Belg crops in some areas. Besides, it could also favor land preparation and sowing activities (for long cycle crops like maize and sorghum) in some areas of central (Adama, Ziway, Meraro, Bui and Weliso), eastern (Meiso, Gelemso, Jijiga and Alemya) and northeastern (Majete, Chefa and Bati) parts of the country. Moreover, in addition to easing the dry condition persisted over the lowlands areas during the preceding dekads, the observed wet condition could favor the regeneration of grasses and bushes for pasture and the availability of drinking water over pastoral and agro pastoral areas of southern Oromia, southern Afar and southern Somali.

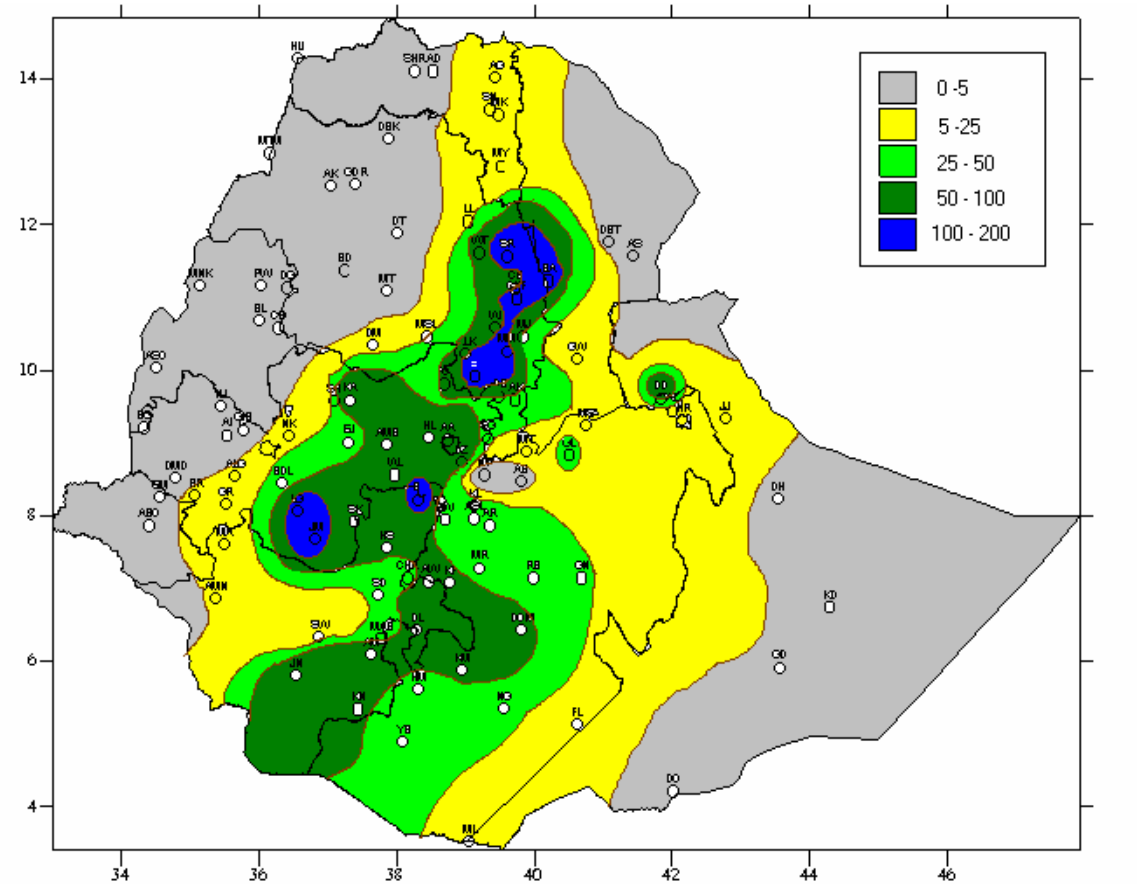


Fig 1. Rainfall distribution in mm (21 - 31 March, 2006)

1. WEATHER ASSESSMENT

1.1 (21- 31 March, 2006)

1.1.1 Rainfall amount (Fig.1)

Few areas of south and southeastern Amhara and pocket areas of western and central Oromia, western margin of Afar received rainfall amount 100-200mm. Some areas of eastern and southeastern Amhara, western Afar, central and southern Oromia, northern SNNPR and Pocket areas of northern Somali experienced rainfall amount 50 –100mm. Few areas of southeastern Amhara, Western Afar, central, western and southern Oromia, SNNPR received 25-50mm of rainfall. Most parts of eastern Tigray, some areas of northeastern, eastern and southeastern Amhara, northwestern Afar, some areas of western Oromia, western SNNPR and most parts of eastern and southeastern Oromia and northern Somali exhibited 5-25mm of rainfall. There was little or no rainfall for the rest parts of the country.

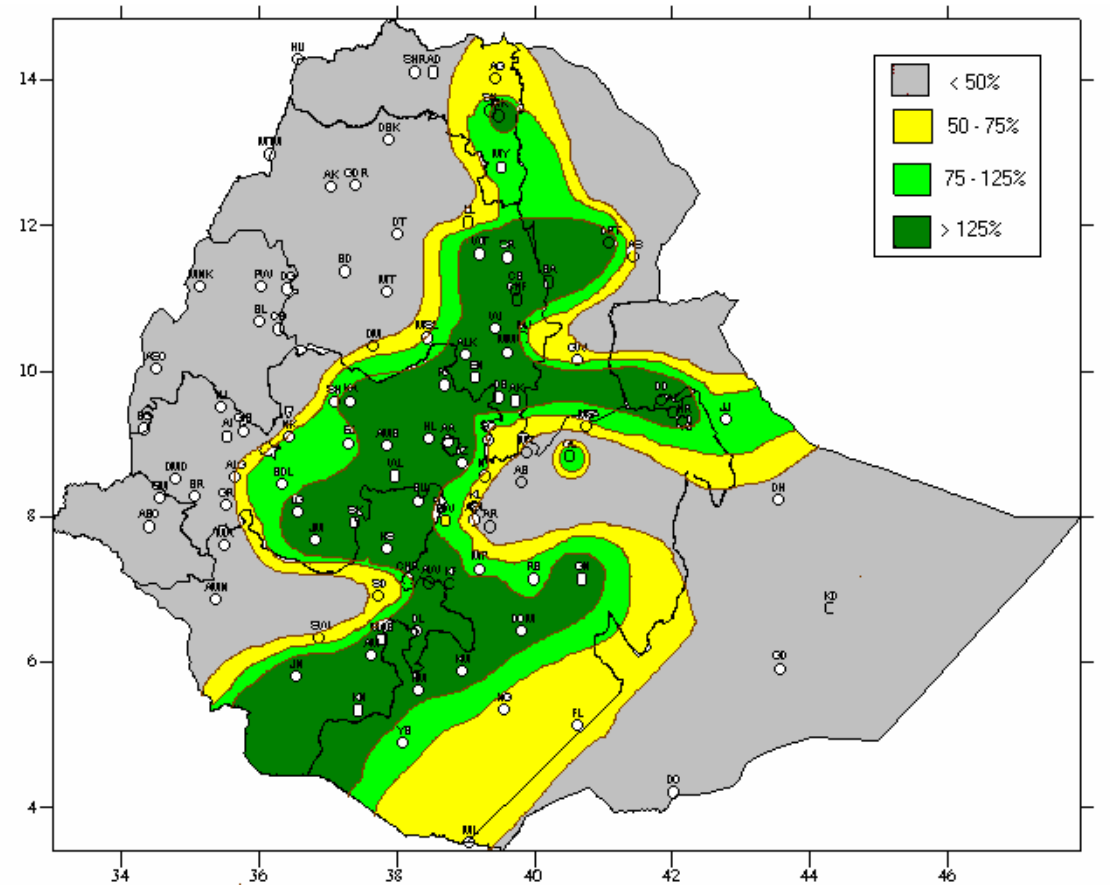


Fig. 2 Percent of normal rainfall distribution (21-31 March, 2006)

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)

Some areas of southern Tigray, southeastern Amhara, central, eastern and southern Oromia, western and southern Afar, northern Somali and most parts of eastern half of SNNPR exhibited normal to above normal rainfall while the rest parts of the country experienced below to much below normal rainfall.

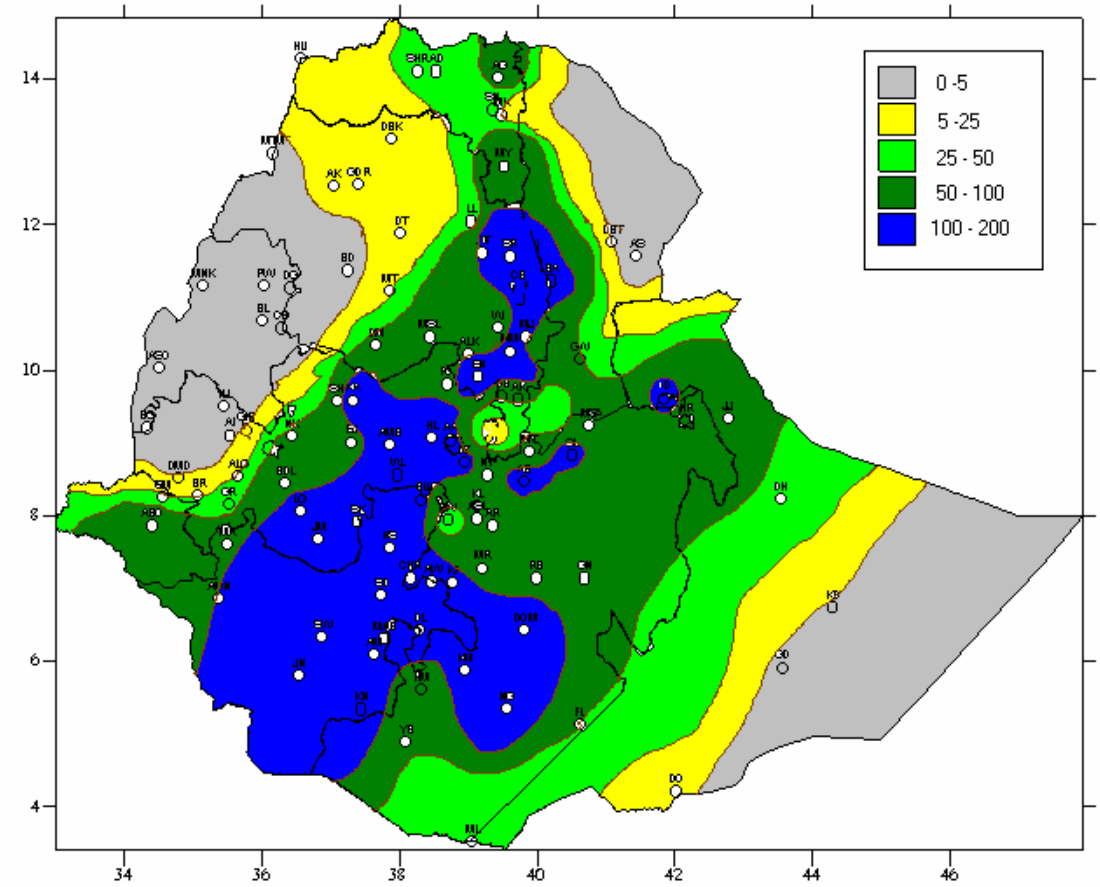


Fig. 3 Rainfall distribution in mm for the month of March 2006

1.2 March 2006

1.2.1 Rainfall distribution (Fig.3)

Some areas of southern and southeastern, eastern and northeastern Amhara, central, western and southwestern Oromia, pocket areas of eastern Oromia and northern Somali, much of SNNPR experienced rainfall amount 100-200mm. Some areas of northern and South Tigray, southeastern and eastern Amhara, Gambella northern Somali, and much of Oromia received 50-100mm of rainfall. Some areas of eastern half and southern Tigray, central Amhara, western Oromia, western Afar, western and southwestern Somali and pocket areas of central Oromia experienced 25-50mm of rainfall. Most parts of western Tigray and Amhara some areas of western Oromia, eastern and southeastern Afar and central Somali received 5-25 mm of rainfall. There was little or no rainfall for the rest parts of the country.

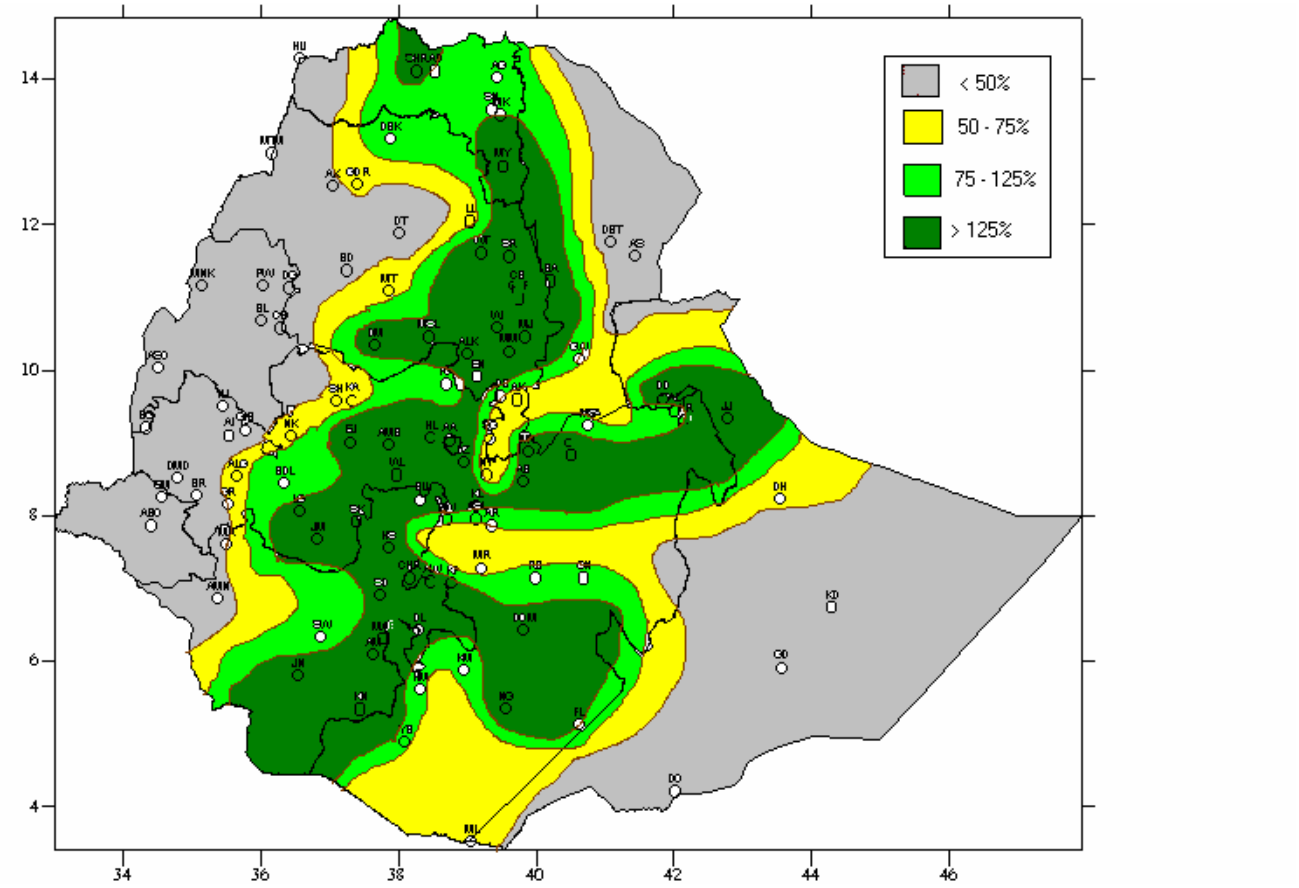


Fig. 4 Percent of Normal Rainfall distribution for the month of March 2006

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 Tigray, northeastern, eastern and southeastern Amhara, western, central eastern and southeastern Oromia, northern Somali and much of SNNPR exhibited normal to above normal rainfall. The rest parts of the country received below to much below normal rainfall.

1.3 TEMPERATURE ANOMALY

Gambela, Metema, Dubti, Mankush, Semara, Gewane, Pawe, Assayta, Gode, Nedjo, Begi, Limu Genet, Methara, Elidar, Dire Dawa, Moyale, and Meisso recorded extreme maximum temperature as high as 42.3, 42.0, 41.0, 40.6, 40.2, 40.0, 39.5, 39.4, 39.0, 39.0, 38.5, 38.2, 37.5, 36.8, 36.5, 35.4, and 35.2 respectively.

2. WEATHER OUTLOOK

2.1 For the first dekad of April 2006

For the coming ten days, the Belg rain producing system is expected to continue in a similar manner over Belg rain benefiting areas. Hence, eastern Amhara, southern Afar, central and eastern Oromia, DireDawa, Harari, central Somali and SNNPR regions are expected to get wide spread rain showers with heavy falls at the some places. So that, it will meet a high probability of normal to above normal rainfall. In addition to this, southern Oromia and eastern Tigray are anticipated to receive close to normal rainfall Southern half of Somali will start to get near normal rainfall condition. Besides, Gambella and western Oromia adjoining areas of southwestern Ethiopia will have near normal rainfall. On the other hand, western Tigray and Amhara as well as Benshangul-Gumuz will be under sunny weather condition.

2.1 For the month of April 2006

For the coming month, the belg rain bearing systems are expected to have a better strength over northeastern, central, and eastern as well as southern portion of the country. In general, central Ethiopia, eastern and southern Oromya, SNNPR regions, eastern Amhara, southern Afar, DireDawa, Harari and northern half of Somali are likely to get normal to above normal rainfall with the occurrence of heavy falls at places. Moreover, eastern Tigray, Gambella, western Oromia, Benshangul-Gumuz and southwestern escarpments of Amhara some places will get near normal rainfall. Besides, southern half of Somali and adjoining southern Oromia regions are anticipated to receive close to normal rainfall. However, occasionally shortage of rainfall will be observed. On the other hand, despite dry and warm weather condition, light rain shower is anticipated over western and northwestern parts of the country.

3. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

3.1 VEGETATION CONDITION AND IMPACT ON AGRICULTURE

The wide spread rainfall condition observed particularly as of the second dekad of the month over most parts of Belg growing areas could have significant positive contribution for the existing Belg crops in some areas. Besides, it could also favor land preparation and sowing activities (for long cycle crops like maize and sorghum) in some areas of central (Adama, Ziway, Meraro, Bui and Weliso), eastern (Meiso, Gelemso, Jijiga and Alemya) and northeastern (Majete, Chefa and Bati) parts of the country. Moreover, in addition to easing the dry condition persisted over the lowlands areas during the preceding dekads, the observed wet condition could favor the regeneration of grasses and bushes for pasture and the availability of drinking water over pastoral and agro pastoral areas of southern Oromia, southern Afar and southern Somali. Among the first class meteorological station that report meteorological elements to be used for the computation of the reference evapotranspiration, many stations have exhibited values of greater than the lowest threshold of the ratio of the rainfall to the PET (> 0.5) which is considered as the necessary condition for successful planting (Please refer to Table 1).

3.2 EXPECTED WEATHER IMPACT ON AGRICULTURE DURING THE COMING DEKAD

The anticipated better rainfall condition over northeastern, central, eastern and southern parts of Belg growing areas of the country would have significant contribution for sowing activities in areas where sowing activities are under question in some areas like central (Abomsa, Zeway, Hossana, Kofelle, Bui, Meiso, Ejaji, Kachise), southern (Yabello, Negelle, Moyale, Kibre Mengist, Awassa) western (Alge, Bedelle, Limu Genet) and eastern parts (Harar) of the country. Therefore, farmers are advised to exploit this opportunity to the maximum by staring the required activities on time. On the other hand, even though near normal rain is expected in some areas of western half of Tigray, Gambella, western Oromia, and Benshangul - Gumuz and southwestern margin of Amhara there will be a possibility of deficient fall in most areas. Thus appropriate water harvesting techniques should be designed in order to minimize the risk due to the expected below normal rainfall in most parts of the aforementioned areas. Moreover, the anticipated near normal rainfall over some areas of southern half of Somali and adjoining areas of southern Oromya would ease the dry weather condition persisted in the areas during the preceding dekades. Besides, it would also have a positive contribution for the availability of drinking water in the areas. However, due to the expected deficient moisture in some areas of the above mention areas together with high temperature the rate of evapotranspiration would increase in the areas. Therefore attention should be given for proper soil and water management techniques. The anticipated erratic rainfall in some areas of the country would favor the occurrence of pest and disease in sensitive areas. Thus close monitoring and attention should be given ahead of time in areas where frequent pest occurrence is the normal phenomenon to take appropriate crop protection measures below economic threshold level. Though normal rain is expected in most parts of Belg growing areas there will be a possibility of heavy falls in some areas. Therefore, appropriate measure should be undertaken before hand in croplands, which are found in low-lying areas and near riverbanks to minimize the risk due to flooding and water logging.

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.

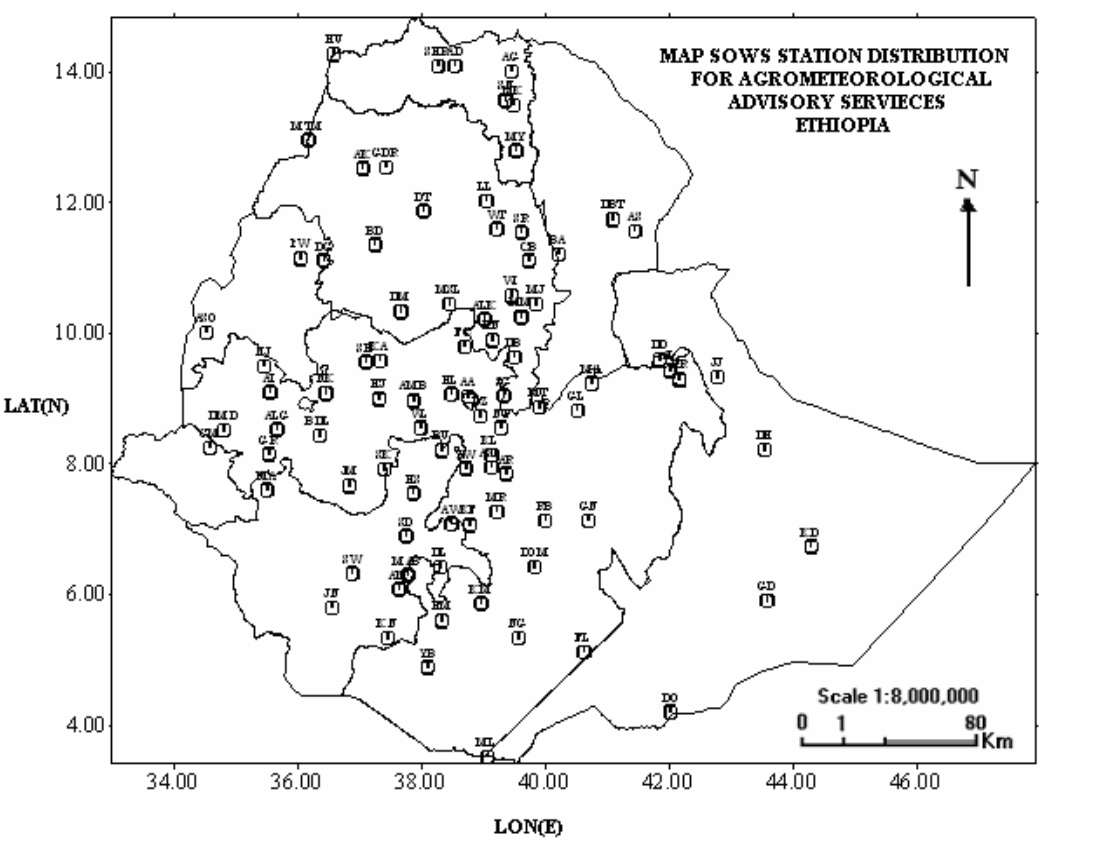
DEKAD: - First or second ten days or the remaining days of a month.

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