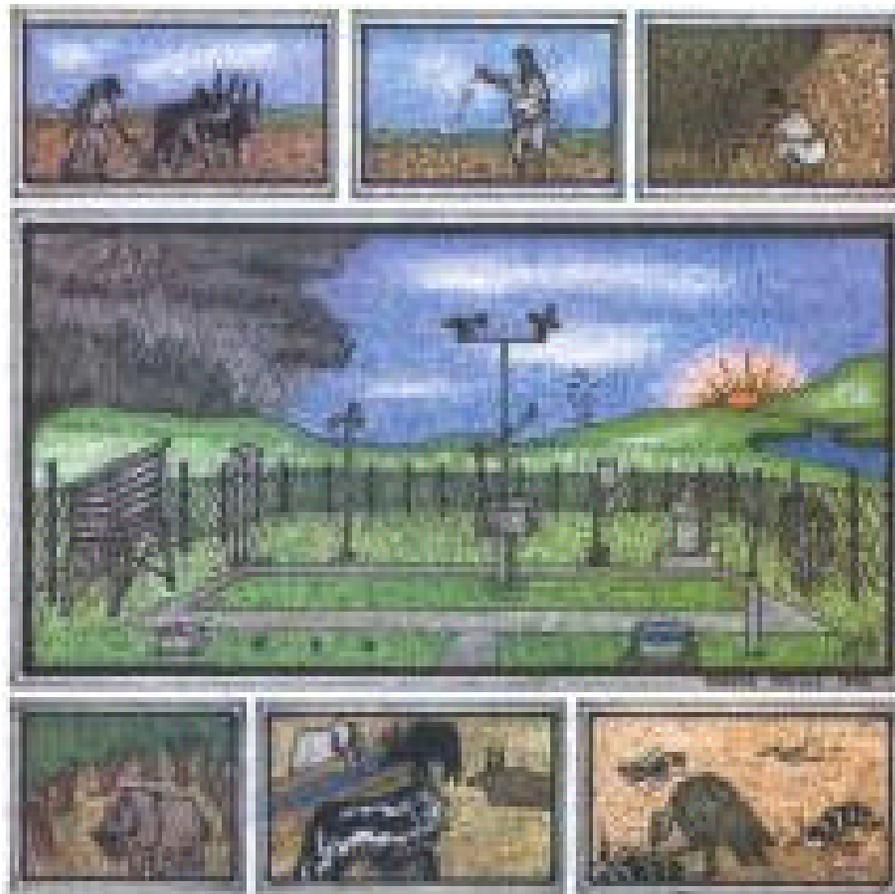


**NATIONAL METEOROLOGICAL SERVICES AGENCY
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FORE WARD

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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BEGA 2004/05 SUMMARY

Under normal circumstance the season Bega 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 southern and southeastern lowlands. Harvest and post harvest activities are the major practices over most parts of Meher growing areas. It is a cropping time for southern and southeastern lowlands of agro pastoral areas like Yabello, Negelle and Moyale. Besides, it is time to perform water-harvesting activities for pastoral and agro pastoral areas of southern and southeastern lowlands. The weather situation could favour the out break of pests if the conditions are conducive like untimely rain, erratic rainfall distribution, favorable environment and the pest itself. The dry and windy Bega's weather situation is favourable for the occurrence and spread of fire. There is a possibility of frost hazard during the season, mainly over northeastern, central, eastern and southern highlands.

During the month of October 2004 moist to humid moisture status has been observed over most parts of Meher growing areas (Figure 1) . Thus, this situation favored the water requirement of the crops in areas where the Meher on set of rain was late. Besides, the wet condition could favour the on going agricultural activities over pastoral and agro pastoral areas like Yabello, Moyale, Mega and Negelle (their sowing time extends from end of September to end of October) . However, deficient rainfall has been observed over southern SNNPR (South Omo) and most parts of southern half of Somali including most parts of Afar throughout the month. This situation leads to reduced available pasture and water, increased livestock mortality rates, prompted early migrations of herds and people, and reduced livestock prices in all affected areas (FAO/WFP Crop and Food Supply Assessment Mission). According to the multi-agency needs assessment, most pastoralist in South Omo were forced to move with their livestock to the green areas of Mago and Muei Parks, Borena, Maji, Geleb, Surma and other neighbouring places much earlier than normal. Crossing over into Kenya in search of pasture may not be an option this year as a similar pasture crisis exists on the other side of the border.

With regard to air temperature among the reporting stations Ambamariam, Debre Birhan, Enewary, Mehal Meda, Wegel Tena, Adigrat, Bale Robe, Meraro, Fitcha, Kofele and Alemaya exhibited extreme air temperature below 5°C for two to ten consecutive days, particularly Debre Brehan recorded extreme minimum air temperature below 0°C for 5 consecutive days (17 – 21 October, 2004). Thus, this condition could have negative impact on the normal growth and development of the existing crops, pasture and other vegetations over the aforementioned areas. For instance Alemaya reported crop damage due to frost on maize, F. Bean and Sorghum.

During the month of November 2004, the observed wet weather condition over some pocket areas of Meher growing areas of the country hampered the on going harvest and post harvest activities. Bati, Aira, Awassa, Sirinka, Majete, Alge, Chira, Dolo Mena, Cheffa, Gonder, Kibre Mengist and Combolcha recorded 124, 73.2, 67.1, 61.6, 53.5, 50.2, 44.8, 42.7, 41.8, 40.3, 39.4 and 38.9 mm of heavy falls in one rainy day, respectively. As a result Dolo Mena, Kibre Mengist, Bedelle, Majete, Woliso, Aira, Alge, Chagni, Nejo, Jinka and Chira reported moderate to severe crop damage due to heavy falls. On the other hand the, observed better moisture status (Figure 2) over pastoral and agro pastoral areas of southern and southeastern parts of the country had positive contribution to the availability of pasture and drinking water to some extent.

Debre Birhan, Enewary, Mehal Meda, Wegel Tena, Adigrat, Jimma, Bale Robe, Arsi Robe, Alemaya, Fitcha and Kofelle exhibited extreme air temperature below 5°C for two to ten consecutive days. Debre Brehan recorded extreme air temperature below 0°C for two consecutive days and below 5°C for 10 consecutive days during the first dekad while for 6 consecutive days during the third dekad of November 2004.

During the month of December 2004, the over all dry (Figure 3) weather situations favored the on going harvest and post harvest activities. Nevertheless the observed occasional falls particularly during the first dekad of the month over western Oromiya, eastern and western Hararge, parts of southern Amhara resulted in crop damage and negatively affected the on going harvest and post harvest activities in some pocket areas. For instance, Chagni, Dolo Mena and Shambu reported crop damage due to occasional falls. Besides Masha reported animal loss (nine cattle were died) due to flood.

Some areas of northwestern, northeastern, central and eastern highlands like Dangla, Wegel Tenana, Debre Birhan and Alemaya exhibited extreme minimum temperature less than 5°C repeatedly (observed about 10 - 13 days) throughout the month. As a result some areas reported crop damage due to frost. However the situation is better than last year (Those areas exhibited minimum temperature less than 5°C for 15 – 25 days during the month of December 2003).

During the month of Januar 2004, the observed very dry moisture status (Figure 4) over South Tigray, parts of eastern Amhara, parts of southern Oromiya and southern SNNPR could affect land preparation and sowing activity of the aforementioned areas to some extent. However, the rainfall condition could have positive impact for land preparation

in some areas. According to the crop phenological report, harvest and post harvest activities were under way in some pocket areas of Meher growing areas during the month of January. Harvest of early matured and matured crops was underway due to the migration of herds from other places in some areas of Afar Region like Chefa and Asayta (11-20 January, 2004).

Alemaya, Debre Berihan, Debre Zeit, Mehal Meda, Wegel Tena and Jijiga recorded extreme air temperature below 0°C lowering up to -7.5, -5.0, -2.5, -1.2, -0.5 and -0.3°C, respectively during the month of January 2004. Besides, Robe, Debre Zeit, Adigrat, Addis Ababa, Wegel Tena and Debre Birhan exhibited extreme minimum temperature below 5°C for 5-11 consecutive days. However, the situation changed due to better moisture incursion as of January 11-20, 2004 in most places. The extreme minimum temperature observed during the first dekad of January resulted in crops damage over some areas of northeastern, central and eastern Ethiopia. Fore instance Kombolcha reported banana sucker and potato seedling damages; Alemaya and Mota reported crop damage due to frost.

Even though the occasional falls and other adverse weather conditions as frost resulted in crop damage and low quality of crop performance in some pocket areas of the Meher Growing areas the overall rainfall condition was in a good shape over western half of the country as compared to that of the preceding year (2003/04) in case of Meher crop production. As FAO/WFP production estimate indicates, the expected yield production of 2004/5 will increase by 10 percent as compared to that of last year and a close to 23 percent increase from the past five-year FAO/WFP average, making it a second consecutive bumper harvest year. More over the good rainfall performances in 2004 also increased the production of cash crops such as coffee and chat, both in terms of quantity and quality. With regard to pastoral and agro pastoral areas pursuant to SC-UK and DPPB report, the movement of people in search of water and pasture was minimal due to the observed normal to above normal rainfall during the season over Liban Zone. Moreover, Afder, Korahe, Fik and Shinille Zones have also seen moderate improvements.

On the other hand the Meher season rains performance was erratic in the eastern half, including eastern and southern parts of Tigray, zones 1, 2 and 4 of Afar Region, east/west Hararge, lowlands of Arsi, Bale, Borena zones of Oromiya Region and the southern and eastern lowlands of SNNPR. As a result, cereal production in the aforementioned areas has been seriously reduced and the availability of pasture and drinking water was negatively affected.

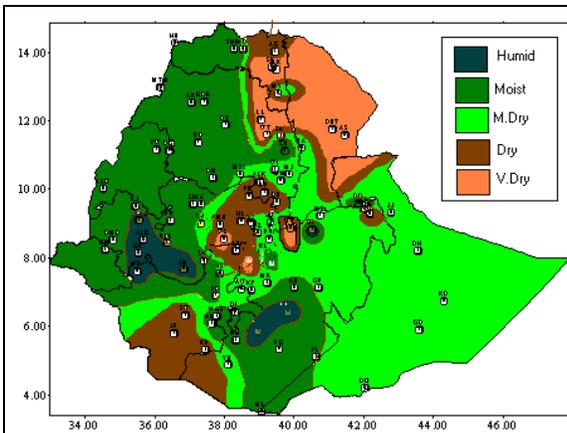


Figure 1 Moisture Status for October 2004

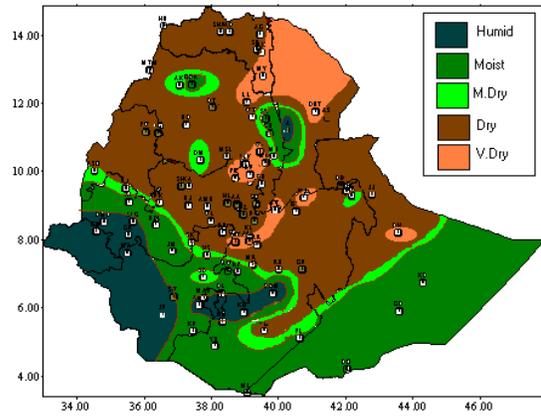


Figure 2 Moisture Status for November 2004

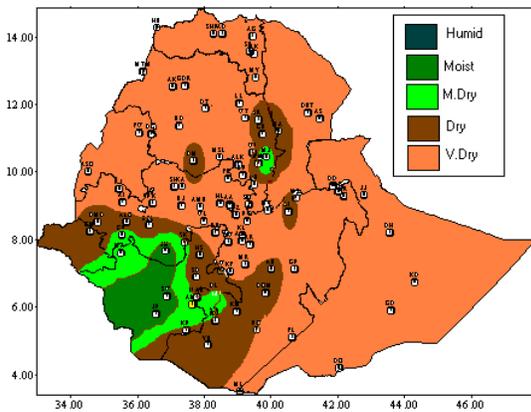


Figure 3 Moisture Status for December 2004

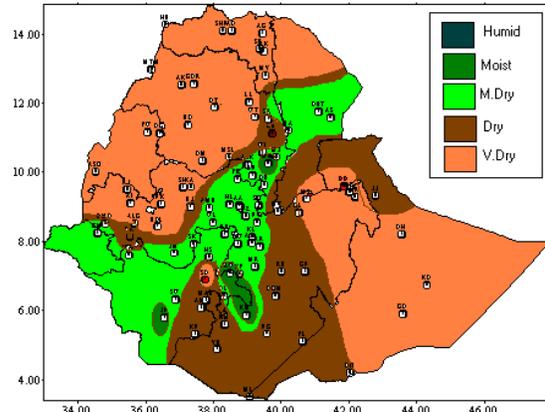


Figure 4 Moisture Status for January 2005

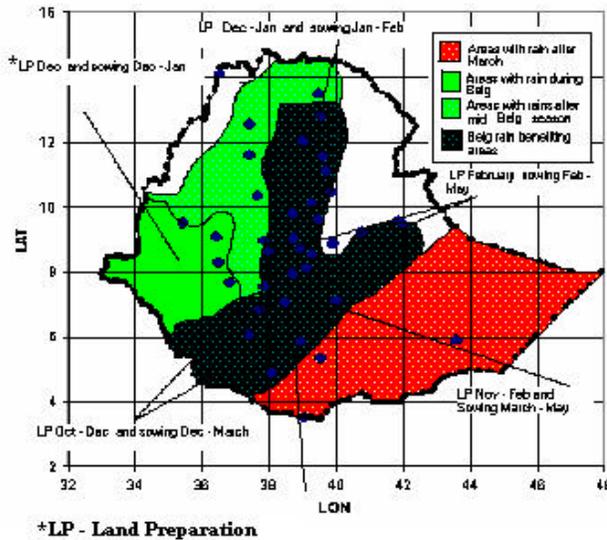


Figure 11. Belg growing areas of Ethiopia

The anticipated normal on set of Belg would favour land preparation and sowing activities over Belg growing areas of North Shewa, East and west Harargie, Arsi, Bale, North and South Wello, Borena and SNNPR (Kembata, Hadiya, Wolayta, Gurage, Keffa and Bench) in areas where their land preparation and sowing activities start during the months December to February.

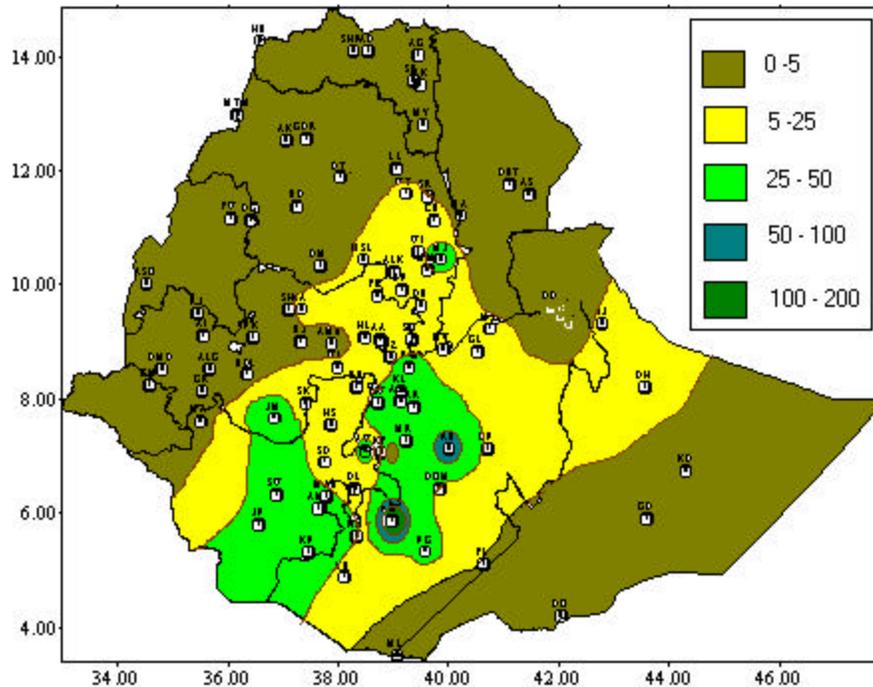


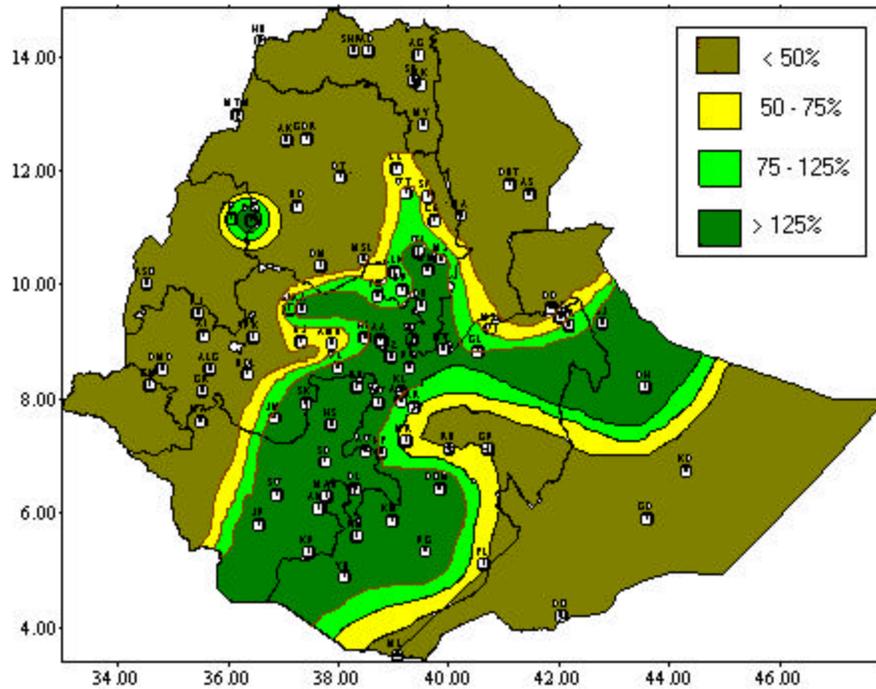
Fig. 5 Rainfall distribution in mm (21- 31 January, 2004)

1. WEATHER ASSESSMENT

1.1 January 21-31, 2005

1.1.1 Rainfall Amount (Fig 5)

Among the reporting stations pocket areas of southern Oromiya received falls up to 101 mm; parts of southern and central Oromiya, southern and parts of northern SNNPR received 25-50mm of rainfall, eastern Oromiya, parts of northern Somali, central Ethiopia, southern and parts of eastern Amhara as well as western SNNPR recorded 5-25mm of rainfall, while the rest portions of the country received little or no rainfall.



Fig, 6 Percent of normal rainfall (21-31 January, 2005)

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. 6)

Much of SNNPR, parts of central, eastern and southern Oromiya, parts of southern Amhara and northern Somali experienced normal to above normal rainfall while the rest portions of the country were below normal rainfall.

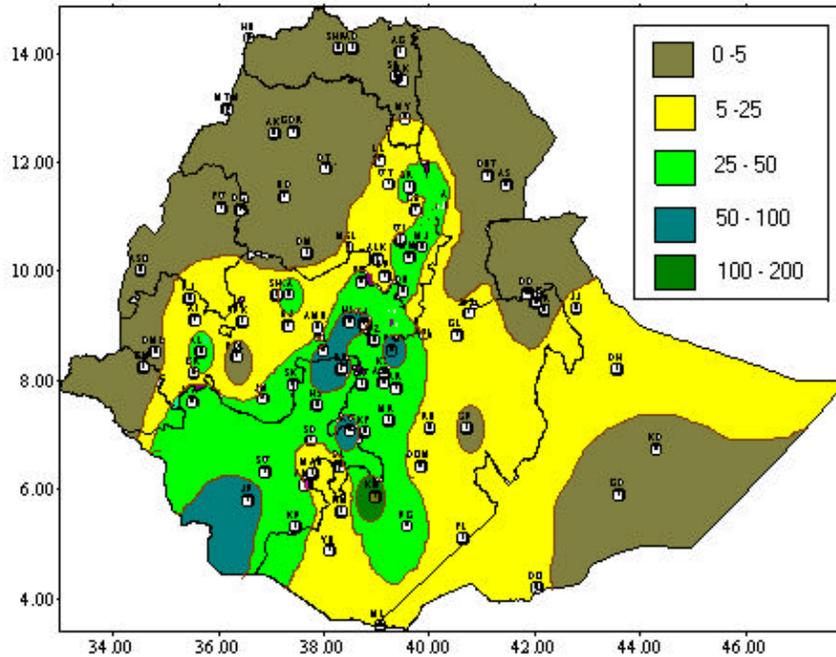


Fig. 7 Rainfall distribution in mm for the month of January 2005

1.2 January 2005

1.2.1 Rainfall Amount (Fig. 7)

Some pocket areas of southern Oromiya received falls up to 101 mm. Parts of southern SNNPR, pocket areas of central Oromiya received 50-100mm of rainfall. Most parts of SNNPR, parts of southern and central Oromiya, southern and eastern Amhara recorded 25-50 mm of rainfall. Parts of northern, eastern and southeastern Somali, parts of southern, eastern and western Oromiya, parts of eastern and southern Amhara, few areas of southeastern Benishangul-Gumuz received falls ranging from 5-25 mm. There was little or no rainfall for the rest portions of the country.

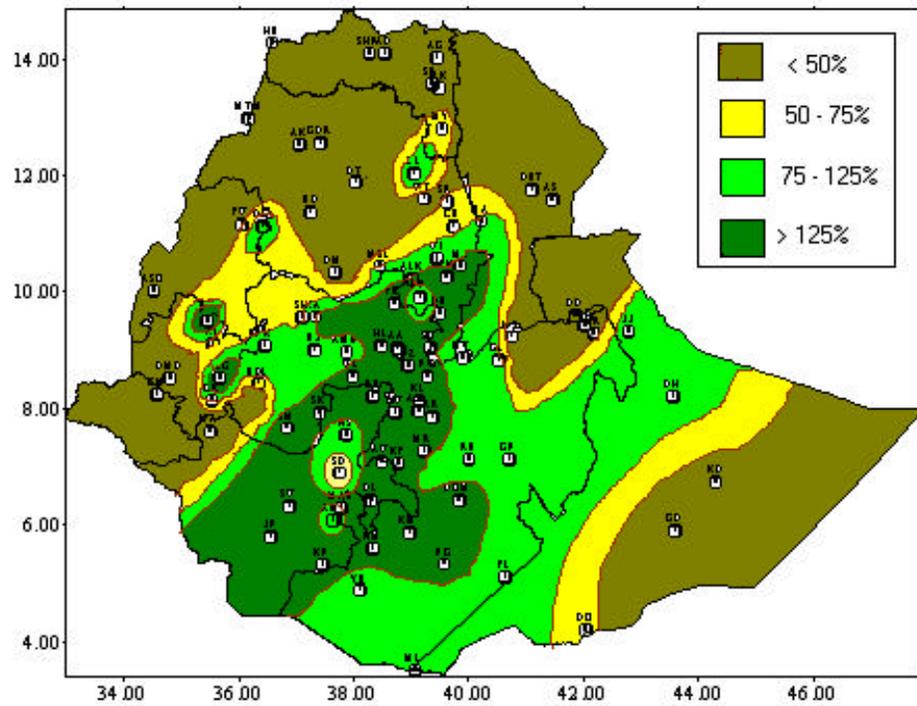


Fig. 8 Percent of normal rainfall for the month of January 2005

Explanatory notes for legend
 < 50 – Much below normal
 50–75% --- Below normal
 75– 125% --- Normal
 > 125% ---- Above normal

1.2.2 Rainfall Anomaly (Fig. 8)

Much of SNNPR, most parts of central, southern, eastern and few areas of western Oromiya, southern Amhara, and parts of northern and southwestern margin of Somali experienced normal to above normal rainfall distribution while the rest of the country exhibited below to much below normal rainfall.

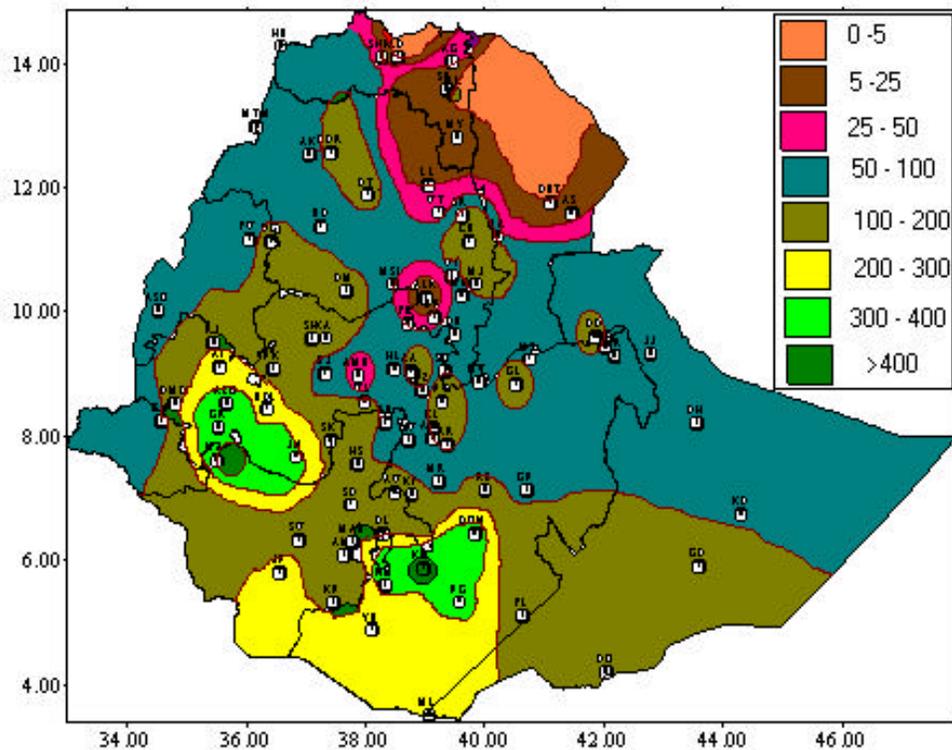


Fig. 9 Rainfall distribution in mm for Bega 2004/05

1.3 Bega 2004/05

1.3.1 Rainfall Amount (Fig. 9)

Kibre Mengist (466mm), Masha (440.7mm), Dolo Mena (342.9mm), Jimma (323.7mm), Negelle (312.4mm), Gore (282.3mm), Yabello (270.7mm), Arba Minch (263.9mm), Assela (253.1mm), Bedelle (249.6mm), Awassa (244.5 mm), Moyale (234.2mm), Bati (221.2mm), Aira (216.3mm), Limu Genet (213.3mm) and Jinka (209.3 mm) of seasonal rainfall, respectively. Besides, most of the reporting stations exhibited fall ranging from 100-200mm during the season.

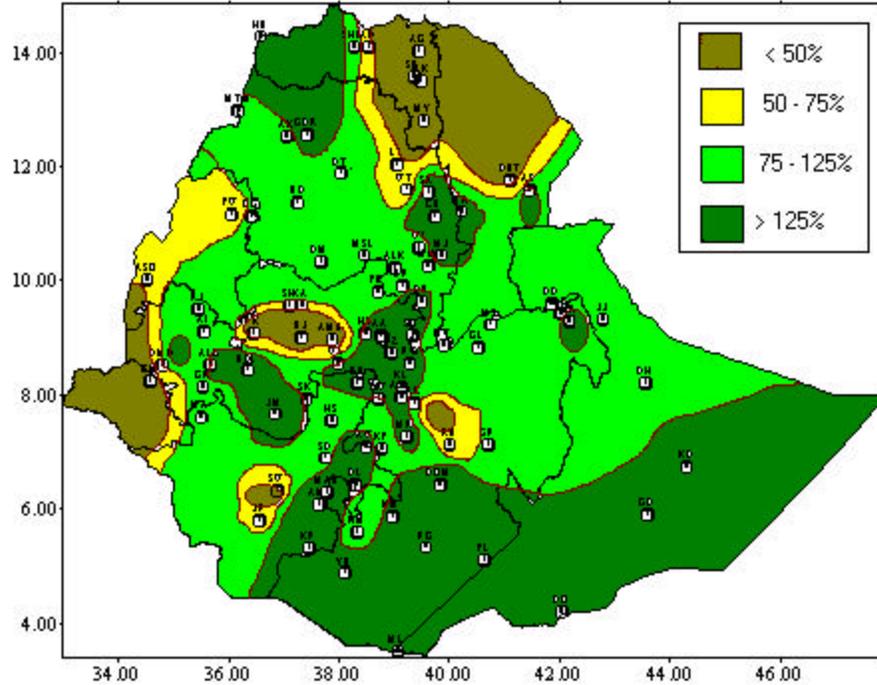


Fig. 10 Percent of Normal rainfall for Bega season, 2004/05

Legend

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

1.3.2 Rainfall Anomaly (Fig. 10)

Much of Amhara, western Tigray, much of Oromiya, SNNPR, Somali, southern Benishangul-Gumuz and southern half of Afar experienced normal to above normal rainfall distribution while the rest portions of the country were below normal rainfall.

1.4 TEMPERATURE ANOMALY

Some areas of northwestern, northeastern, central and eastern highlands like Dangla, Wegel Tenana, Mehal Meda, Debre Birhan and Alemaya exhibited extreme minimum temperature less than 5°C repeatedly throughout the season. Besides some areas like Debre Birhan and Alemaya exhibited extreme minimum temperature lowering up to -5°C and -7°C respectively during the Bega season 2004/05.

2. WEATHER OUTLOOK

2.1 For the month of January 2005

The systems, which are responsible for the rainfall activity during this season, are expected to have a better strength over various parts of the country. In general, a better rainfall activity is anticipated over the Rift valley and it adjoining areas. Hence, SNNPR, Central and eastern Oromiya, Borena, eastern Tigraya and Amhara Afar, Northern portions of Somali will have near normal rains. Western Tigray and Amhara, Buinshangul-Gumuze western Oromiya and Gambela will be mainly dominated by dry weather condition with patches of clouds at places. Dry weather with a chance of light rains is anticipated over southern half of Somali.

2.3 For the Belg season, 2004/05

Based on recent evaluation of Oceanic and atmospheric conditions and on a majority of the statistical and compiled model forecasts, it seems most likely that weak warm episode (El Nino) conditions will persist for at least the next three months. Hence, using the above mentioned and other indices, 1970, 1978, 1979, 1980, 19993, 19995 and 2003 were selected as analogue years. And based on the pre-seasonal rainfall percentile, 1970, 1993 and 2003 have been chosen as the best analogue years.

Depending on the rainfall distribution on the above mentioned best analogue years, the coming Belg rainfall is expected to have a better distribution and amount which will be close to normal over most parts of Belg rain benefiting areas of the country. Besides, it is expected to have a normal onset and cessation.

3. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

3.1 VEGETATION CONDITION AND IMPACT ON AGRICULTURE

Even though the occasional falls and other adverse weather conditions as frost resulted in crop damage and low quality of crop performance in some pocket areas of the Meher Growing areas the overall rainfall condition was in a good shape over western half of the country as compared to that of the preceding year (2003/04) in case of Meher crop production. As FAO/WFP production estimate indicates, the expected yield production of 2004/5 will increase by 10 percent as compared to that of last year and a close to 23 percent increase from the past five-year FAO/WFP average, making it a second consecutive bumper harvest year. More over the good rainfall performances in 2004 also increased the production of cash crops such as coffee and chat, both in terms of quantity and quality. With regard to pastoral and agro pastoral areas pursuant to SC-UK and DPPB report, the movement of people in search of water and pasture was minimal due to the observed normal to above normal rainfall during the season over Liban Zone. Moreover, Afder, Korahe, Fik and Shinille Zones have also seen moderate improvements.

On the other hand the Meher season rains performance was erratic in the eastern half, including eastern and southern parts of Tigray, zones 1, 2 and 4 of Afar Region, east/west Hararge, lowlands of Arsi, Bale, Borena zones of Oromiya Region and the southern and eastern lowlands of SNNPR. As a result, cereal production in the aforementioned areas has been seriously reduced and the availability of pasture and drinking water was negatively affected.

3.2 EXPECTED WEATHER IMPACTS ON AGRICULTURE DURING THE COMING BELG SEASON

Central, parts of northern highlands, eastern highlands, parts of central, southwestern and southern Ethiopia are known as Belg growing areas (Fig 11). Normally North Shewa, East and west Harargie, Arsi, Bale, North and South Wello, Borena and SNNPR (Kembata, Hadiya, Wolayta, Gurage, Keffa and Bench) start their land preparation and sowing activities during December to February.

The anticipated normal on set of Belg would favour land preparation and sowing activities over Belg growing areas of North Shewa, East and west Harargie, Arsi, Bale, North and South Wello, Borena and SNNPR (Kembata, Hadiya, Wolayta, Gurage, Keffa and Bench) in areas where their land preparation and sowing activities start during the months December to February. Particularly the expected normal on set over SNNPR has paramount importance in the areas where their Belg production contribution ranges from 40-70 % from annual production.

The anticipated normal rainfall distribution during the season in most parts of Belg growing areas would favour the water requirement of Belg crops. It would also have positive contribution for land preparation and sowing activities of long cycle crops like maize and sorghum towards the second half of the season. Besides, the expected near normal rainfall over non Belg growing areas of the country during the coming season would the early Kiremt season's agricultural activities like land preparation and sowing activities of long cycle crops (maize, sorghum and millet) their contribution is 35-40 % of the total Meher production. Nevertheless, the expected below normal rainfall over some areas of lowlands of western Amhara, Benishangul - Gumuz, central and western Oromiya would result in water stress on the aforementioned long cycle crops. Thus the concerned personnel should plan the appropriate strategies to mitigate the effect of water stress. Moreover, attention should be given for proper water harvesting activities in areas which are defined as drought prone.

The possibility of heavy falls in areas where the above rainfall is expected would result in water logging and flooding over low lying areas and in areas where the type of soil is clay and areas, where there is no proper water drainage system. Thus, proper handling should be practiced in the areas. Besides, it would favour weed infestation in some areas. Hence, proper cultural practice should be applied as required.

The expected normal temperature condition would favour the normal growth and development of Belg crops and it would also minimize evapotranspiration over the lowlands. Nevertheless, the expected increase in maximum temperature over lowlands of north-eastern, north-western and south-eastern Ethiopia would enhance evapotranspiration. Thus, proper attention should be given in terms of selecting crop variety and soil water conservations matter.

Last but not least, sometimes the meteorological normal will not coincide with the agricultural normal. Thus, the concerned personal should give attention in this mater and interpret and analyse the values according to the specific areas of interest. Besides, considering other conditions like the on set of the season, the distribution of rainfall throughout the season and cessation of rainfall in terms of crop type, phenological phase of the crop, soil types of the area, etc. has paramount importance in order to use the information properly.

Table 1 Climatic and Agro-Climatic elements of different stations for the month of January 2005

	Stations	Region	A/ rainfall	Normal	%of Normal	ETo mm/day	Monthly ETO	Moisture
1	Adigrat	TIGRAI	0	8.3	0.0	3.55	110.05	VD
2	Adwa		0	0.8	0.0	3.7	114.7	VD
3	Mekele		0	2.4	0.0	4.73	146.63	VD
4	Michew		6.4	12.3	52.0	2.83	87.73	VD
5	Shire		0	3.2	0.0	4.09	126.79	VD
1	Assayta	AFAR	0	2.2	0.0	NA	NA	NA
2	Dubti		2.3	6.3	36.5	NA	NA	NA
3	Gewane		10.2	10.5	97.1	4.92	152.52	VD
1	BahirDar	AMHARA	0.7	3.3	21.2	3.74	115.94	VD
2	Bati		35.7	41.3	86.4	2.76	85.56	MD
3	Combolcha		19.6	29.3	66.9	3.10	96.1	D
4	Chagni		0	4.9	0.0	4.11	127.41	VD
5	Chefa		24	58.6	41.0	3.43	106.33	D
6	D.Birhan		34.3	12.1	283.5	3.81	118.11	MD
7	D.Markos		2.3	15.2	15.1	3.79	117.49	VD
8	D.Tabor		1.3	8.8	14.8	NA	NA	NA
9	Dangila		4	5.1	78.4	3.56	110.36	VD
10	Enwary		10.3	11.3	91.2	NA	NA	NA
11	Gonder		0	3.6	0.0	4.32	133.92	VD
12	M.Meda		54.3	18.4	295.1	NA	NA	NA
13	Majete		53.3	27.6	193.1	3.02	93.62	M
14	Metema		0	1.2	0.0	NA	NA	NA
15	Lalibela		4.7	3.9	120.5	3.96	122.76	VD
16	Sirinka		32	50.2	63.7	2.78	86.18	MD
17	Woreilu		26.3	24.1	109.1	NA	NA	NA
18	Wegeltena		9	22.3	40.4	3.48	107.88	VD
1	Aira	OROMIYA	1.3	3.6	36.1	3.34	103.54	VD
2	Abomssa		52.3	33.5	156.1	NA	NA	NA
3	Alge		26.5	14.6	181.5	NA	NA	NA
4	Alemaya		0.5	6.3	7.9	4.34	134.54	VD
5	Ambo		18.6	21	88.6	NA	NA	NA
6	Assela		73.9	18.7	395.2	NA	NA	NA
7	Bedelle		5	11.3	44.2	3.47	107.57	VD
8	Begi		0.3	2.1	14.3	NA	NA	NA
9	Bure		0	13.2	0.0	NA	NA	NA
10	DembiDollo		1.6	11.7	13.7	NA	NA	NA
11	DoloMena		15	11.9	126.1	4.18	129.58	D
12	DebreZeit		25.5	9.1	280.2	4.29	132.99	D
13	Ejaji		8.3	13.5	61.5	NA	NA	NA
14	Fitche		49	21	233.3	3.21	99.51	MD
15	Gelemso		15.1	17.2	87.8	4.5	139.5	D
16	Gimbi		2.2	4.5	48.9	NA	NA	NA

17	Gore		15.7	41.9	37.5	3.57	110.67	D
18	HagerMariam		18.2	13.3	136.8	NA	NA	NA
19	Jimma		44.5	33.2	134.0	3.06	94.86	MD
20	Kachissei		28.8	17.1	168.4	NA	NA	NA
21	KibreMengist		100.8	11.7	861.5	3.56	110.36	M
22	Kulumsa		48.3	19.5	247.7	NA	NA	NA
23	LimuGenet		48.3	NA	NA	NA	NA	NA
24	Masha		27.4	67.3	40.7	NA	NA	NA
25	Meisso		9.7	21	46.2	4.35	134.85	VD
26	Metehara		18	17.9	100.6	4.43	137.33	D
27	Nazreth		61.9	11.8	524.6	4.9	151.9	MD
28	Neghele		33.9	12.1	280.2	5.56	172.36	D
29	Nedjo		10.7	7.8	137.2	3.64	112.84	VD
30	Nekemte		9.6	10.2	94.1	3.59	111.29	VD
31	Robe(Bale)		16.1	33.3	48.3	3.92	121.52	D
32	Sekoru		39.9	29.8	133.9	4.99	154.69	MD
33	Shambu		12.9	31.7	40.7	NA	NA	NA
34	Woliso		63.3	20.5	308.8	NA	NA	NA
35	Yabello		19.4	24.1	80.5	NA	NA	NA
36	Zeway		48.5	16	303.1	4.51	139.81	MD
1	DegeHabur	SOMALI	19.9	1.4	1421.4	NA	NA	NA
2	Gode		0	0.1	0.0	6.04	187.24	VD
3	Jijiga		10	9.5	105.3	2.8	86.8	D
1	ArbaMinch	SNNPR	29	32	90.6	4.62	143.22	D
2	Awassa		77.7	22.7	342.3	3.95	122.45	M
3	Bui		56.2	12.7	442.5	4.25	131.75	MD
4	Hosaina		31.5	27.1	116.2	3.6	111.6	MD
5	Konso		26.8	16.7	160.5	4.85	150.35	D
6	Jinka		62.9	36.7	171.4	3.66	113.46	M
7	M/ Abaya		18.1	3.9	464.1	NA	NA	NA
8	Sodo		7.4	33.2	22.3	4.79	148.49	VD
1	Pawe		0	0.3	0.0	NA	NA	NA
2	Asossa	B/GUMUZ	0	0.5	0.0	NA	NA	NA
3	Bullen		0	1.6	0.0	3.64	112.84	VD
1	Addis Aababa.Obs	A.A	45.6	17.5	260.6	2.95	91.45	MD
1	Diredawa	D.D	2.6	51.4	5.1	4.04	125.24	VD
1	Harar	Harai	0.8	3.8	21.1	4.17	129.27	VD

Legend

VD	Very Dry	< 0.1
D	Dry	0.1 - 0.25
MD	Moderatly Dry	0.25 - 0.5
M	Moist	0.5 - 1
H	Humid	>1

Explanatory Note

ETo Reference Evapotranspiration(mm)

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.

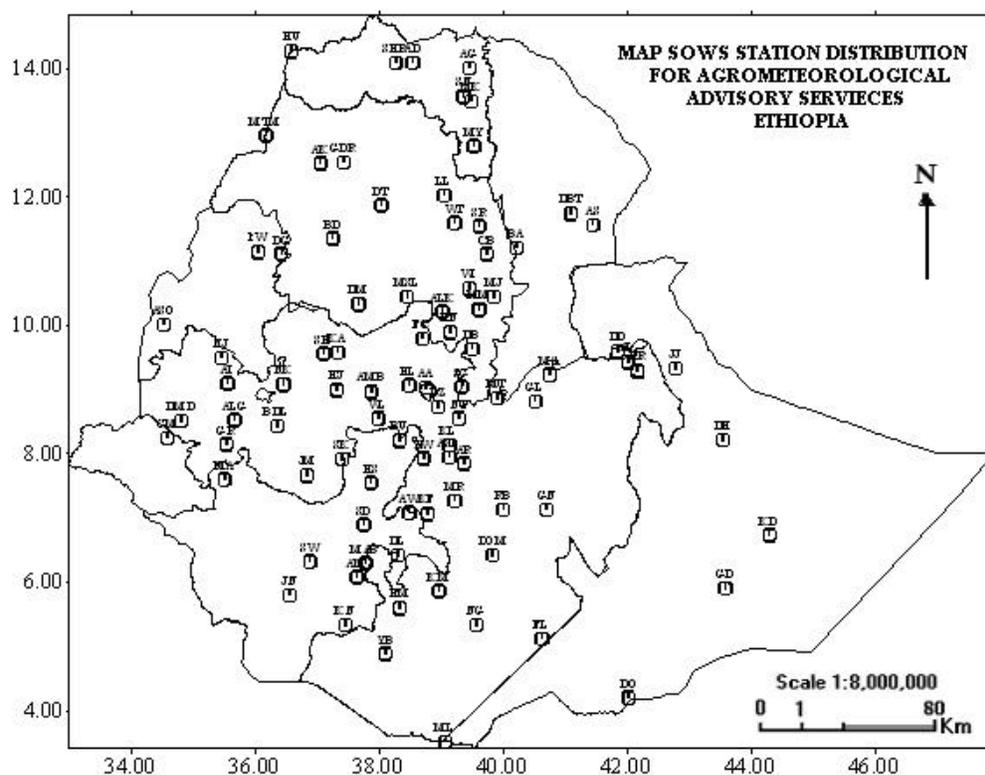
DEKAD: - First or second ten days or the remaining days of a month.

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