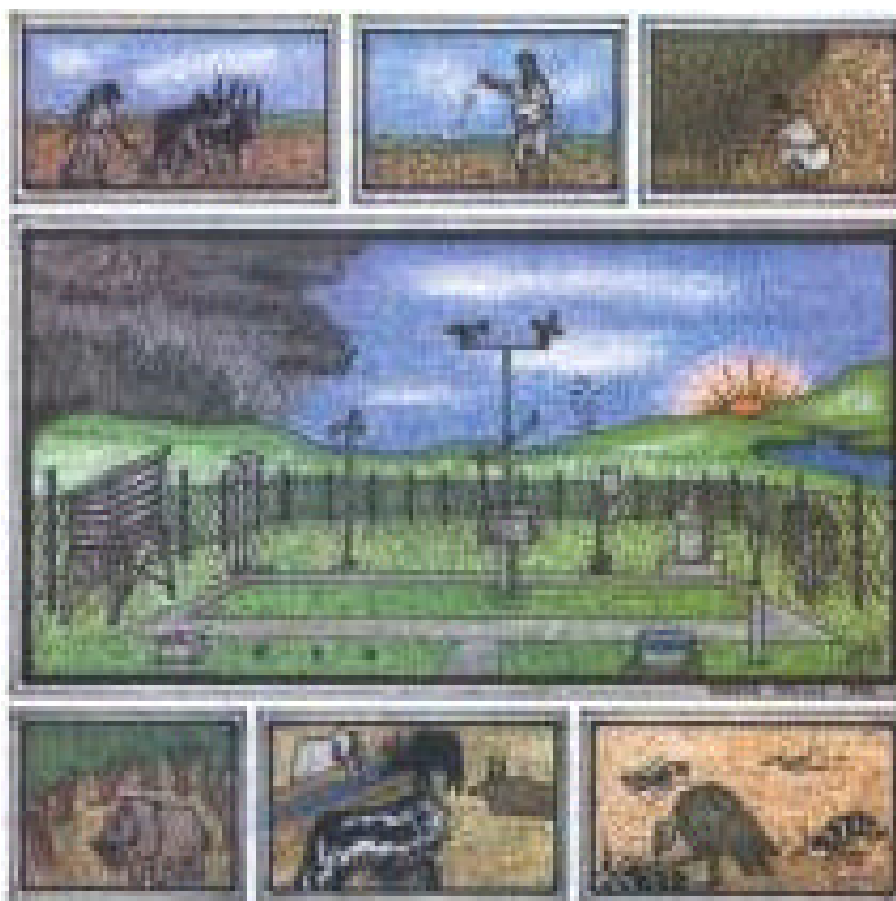


**NATIONAL METEOROLOGICAL SERVICES AGENCY AGROMETEOROLOGICAL
BULLETIN**

**SEASONAL AGRO METEOROLOGICAL BULLETIN
KIREMT 2005
VOLUME 15 No. 27
DATE OF ISSUE: - OCTOBER 6, 2005**



**P.O.BOX 1090, ADDIS ABABA, ETHIOPIA
E.Mail: nmsa@ethionet.et Fax 251-11-5517066, Tel. 251-11-5512299**

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.

General Manager

NMSA
P.O.Box 1090
Tel: 51-22-99
Fax: 51-70-66
E-mail: nmsa@ethionet.et
Addis Ababa

KIREMT 2005 SUMMARY

In case of Meher agricultural activities, in addition to the Kiremt season rain, the Belg season rainfall particularly the rainfall amount and distribution observed during the months of April and May has significant impact on the performance of long cycle crops like maize and sorghum crops which are considered as Meher crops. Under normal circumstance their sowing date starts from March and extends up to end of May in most parts of the country. During the month of April 2005 moist to humid moisture status has been observed in most parts of long cycle crop growing areas (Figure 1). On the other hand long cycle crop growing areas of western parts of Gambela parts of western Oromiya, western and southeastern Amhara exhibited moderately dry to dry moisture condition. In general the over all moisture situation particularly observed during the second and third dekad of April was favourable to perform land preparation and sowing activities of long cycle crops. In case of May 2005 most parts of Belg and Meher growing areas exhibited moist to humid moisture status while dry to moderately dry moisture status has been observed over Meher growing areas of western Amhara and Tigray (Figure 2).

During the month of June 2005 the rainfall amount and distribution particularly during the second and third dekad of the month was favourable for the on going season's agricultural activities in most parts of Meher growing areas. Besides it improved the situation of pasture and drinking water over some areas of northeastern pastoral areas. Nevertheless, the observed heavy falls (30-89mm) in some pocket areas of western, central and northwestern Ethiopia resulted in crop damage in some areas like Gimbi and Debre Tabor. On the contrary the deficient moisture condition observed during the first and second dekad of the month over most parts of Tigray and Oromiya including western half of Amhara could exacerbate the deficient moisture condition particularly persisted over most parts of Tigray and western half of Amhara during the preceding month (May 2005). With regard to pest condition as MoARD has pointed out beginning from the second dekad of June swarm of egg laying matured desert locusts migrated to localized areas of northwestern zone and central zone of Tigray and northern Gonder in Amhara region. However the situation was under control. On the other hand the dry and sunny condition favored harvesting activities in some Belg growing areas like Majete (Harvesting of teff was underway over the areas)

During the month of July 2005 the overall observed rainfall situation was in a good shape in terms of crop production and the availability of pasture and drinking water in most areas. Besides as the moisture index analysis shows, humid moisture status has been observed in most parts of the country (Figure 4). On the other hand, the observed erratic rainfall condition in some lowland areas of northwestern, northeastern and eastern Ethiopia resulted in pest outbreak but the occurrence was not at epidemic level. As indicated in MoARD Bulletin No12/97 E.C no significant pest outbreak has been observed during the month. However during momentary landing and migration the matured locusts have caused damage to pasture and bushes land (about 85 hectares) in Tigray Region. With regard to heavy falls damage, the observed heavy falls (30-100 mm) over some pocket areas of northeastern, northwestern, central and western highlands resulted in crop damage and livestock losses. In addition to that, the continuous wet condition and cloud cover induced excess moisture in crop fields and unnecessary vegetation growth, which can have negative impact in terms of normal growth and development of the plants.

During the month of August 2005, even though some areas of eastern, southern highlands and southwestern parts of the country exhibited below normal rainfall in general the situation of Meher crops was in a good shape in most areas. Besides as the moisture status index for August 2005 shows most parts of Kiremt benefiting areas exhibited moist to humid moisture

status (Figure 5). However, some areas of north-western, western, northern and central Ethiopia exhibited heavy falls ranging from 40-104 mm during the month which can have damaging effect particularly in low-lying areas and in areas where the soil type is clay. For instance Fitch reported crop damage due to heavy falls during the first dekad, Bui and Dangila reported crop damage due to heavy falls during the second dekad and Bedelle experienced heavy falls greater than 30 mm for four days out of the ten days period and reported crop damage due to flooding and hailstorms during the third dekad. Moreover, Gimbi reported maize and sorghum crops damage due to the same reason. With regard to pest outbreak, as indicated in Desert Locust Bulletin No 323 (1 Sept 2005) during the first two dekades of August, ground control operations treated 158 ha of residual late instar hopper populations at two places in western Tigray. Besides, the matured locusts have caused damage to pasture and bushes land (about 183 hectares) during provisional landing in Tigray Region. Besides, as MoARD has pointed out very few hoppers have been reported in one site of Kafta Humera. However no significant damage has been observed due to effective control measures taken by MoARD.

During the month of September 2005 the observed normal to above normal rainfall over western half of Amhara including some areas of eastern Amhara, Benishangul Gumuz, western Tigray, western Oromiya and most parts of SNNPR could have positive impact on crops which are found in lowlands of the aforementioned areas in areas where deficient falls has been observed during the preceding dekads. It could also have significant contribution over the mid lands and highlands of Meher producing areas like Nedjo, Alge, Shambu, Aira, Bedelle and Dembi Dolo where sorghum and millet are at tasseling and flowering stage, in western Amhara like Dangila and Mota where maize and teff are at tasseling stage, in eastern Amhara like Wegel Tena and Sirinka where teff and beans are at flowering stage, in case of SNNPR it could favor wheat, teff and sorghum and in case of western Tigray it could have significant contribution for the normal growth and development of crops like barley, wheat and millet. However the observed heavy falls ranging from 30-74 mm could have negative impact on crops which are at flowering and ripeness stages by shattering the flower before fertilization and shattering the seeds of crops which are ready to harvest. Fore instance some areas reported crop damage due to heavy fall like Hosaina (on teff and wheat crop), Bedelle (on teff, sorghum, maize and beans) and Dangila (on teff and maize crops) during the third dekad of September (21-30). On the other hand the dominant below normal condition persisted over most parts of Somali, Bale zone and southern Oromiya could have negative influence on crops which are at different phenological stages and have negative impact on the availability of pasture and drinking water over pastoral and agro pastoral areas.

Generally the overall rainfall situation observed during the season was favorable for season's agricultural activities in most parts of Meher growing areas. Nevertheless as indicated in the above statement there was deficient moisture status over eastern and South Tigray, eastern Amhara, few areas of eastern SNNPR, northern Somali and eastern Oromiya during the month of June. As a result crops, which are found in some pocket areas of the aforementioned areas, suffered from moisture stress at the beginning of the season. Moreover, parts of northern Afar exhibited deficient moisture condition during the month of July and August (Figures 4 & 5). Besides, crops which are growing in some pocket areas exhibited adverse weather conditions like hail damage, water logging, flooding, late onset of Kiremt rain and erratic rainfall distribution (over some lowland areas).

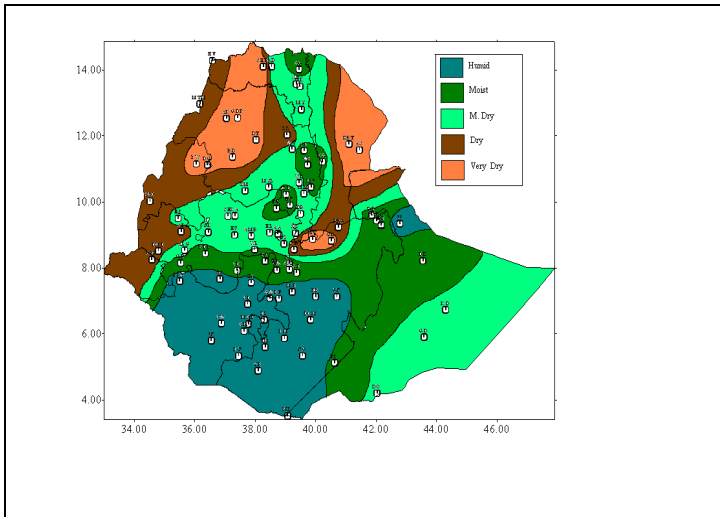


Figure 1 Moisture status for the month of April 2005

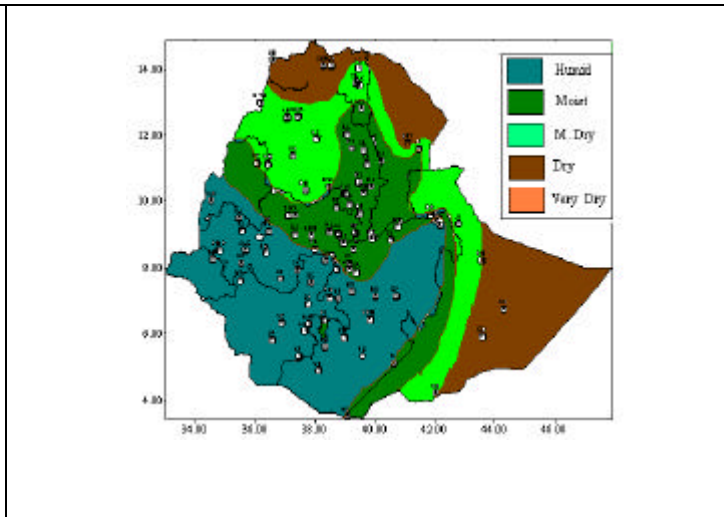


Figure 2 Moisture status for the month of May 2005

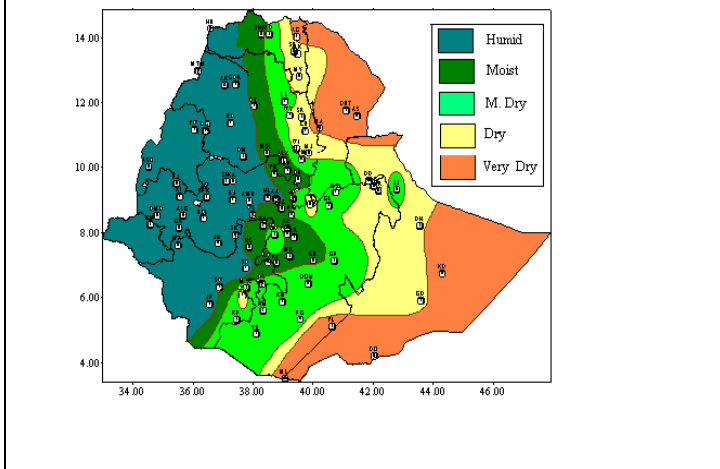


Figure 3 Moisture status for the month of June 2005

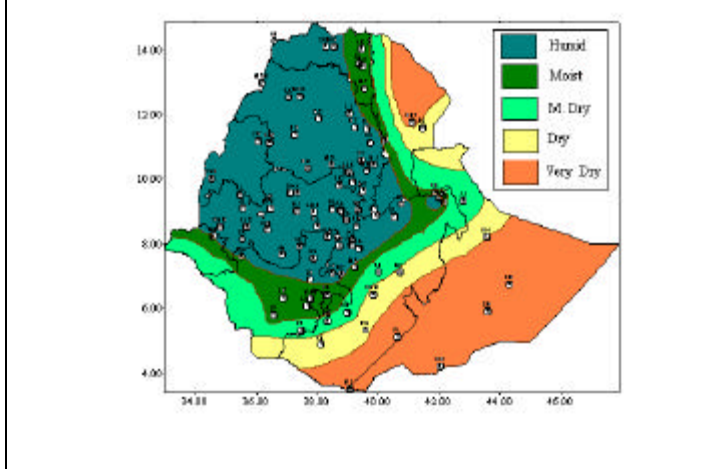


Figure 4 Moisture status for the month of July 2005

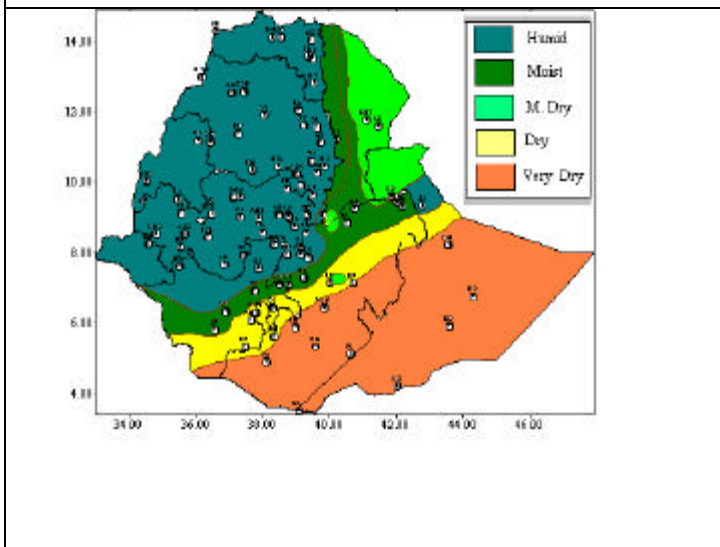


Figure 5 Moisture status for the month of August 2005

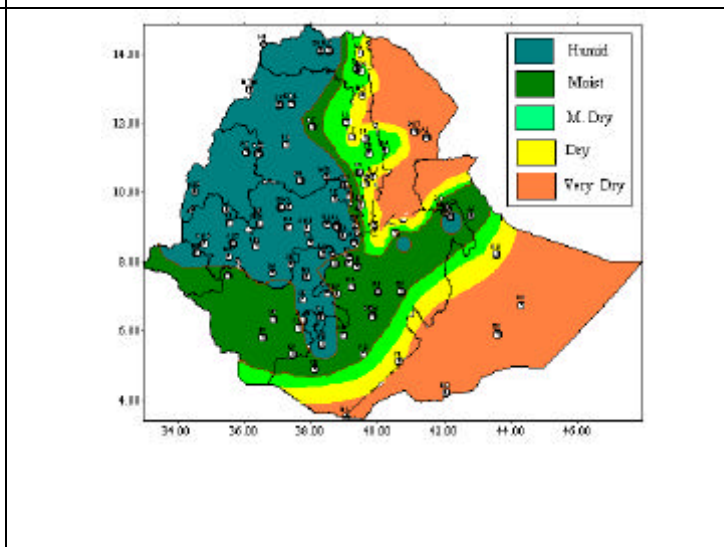


Figure 6 Moisture status for the month of September 2005

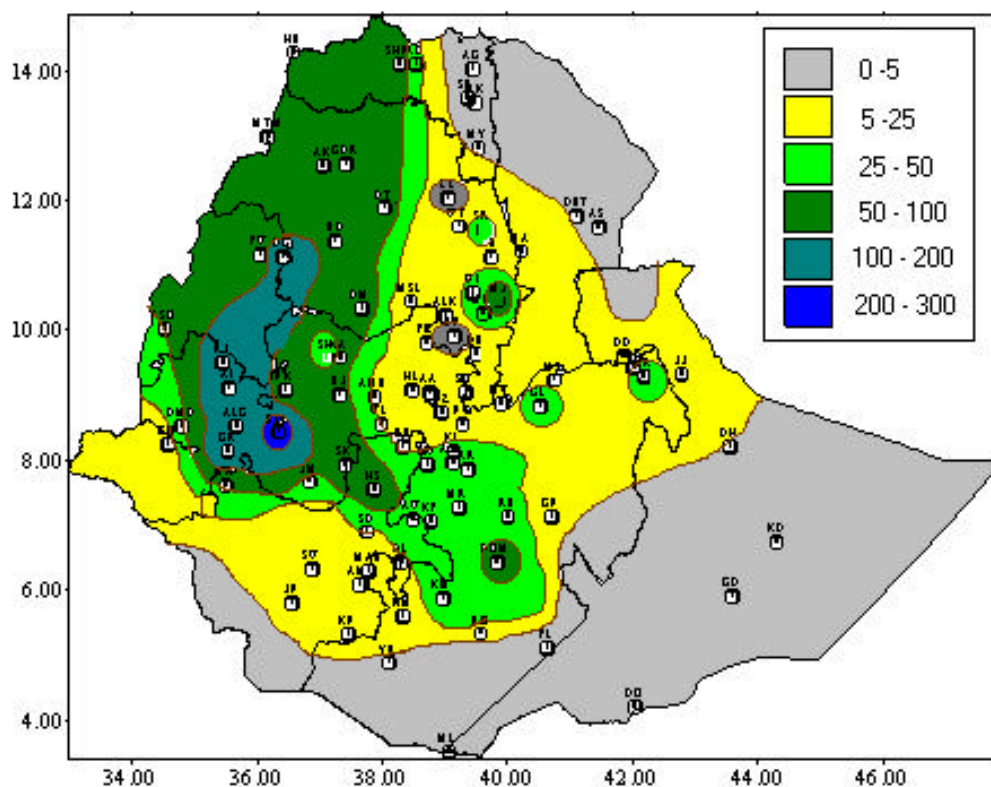


Fig Rainfall distribution in mm (21-30 September 2005)

1. WEATHER ASSESSMENT

1.1 September 21-30, 2005

1.1.1 Rainfall Amount (Fig 7)

With the exception of Gambela and SNNPR most parts of western half of Meher producing parts of the country received falls greater than 50 mm. Few areas of central Tigray, Amhara and few areas of central Oromiya, parts of southern highlands and western margin of Oromiya experienced 25-50 mm of rainfall. Most parts of eastern half of Tigray, western half of Amhara, most parts of central and eastern Oromiya, most parts of SNNPR, southern half of Afar, Gambela and parts of northern Somali received 5-25 mm of rainfall. Little and no rain for the rest of the country.

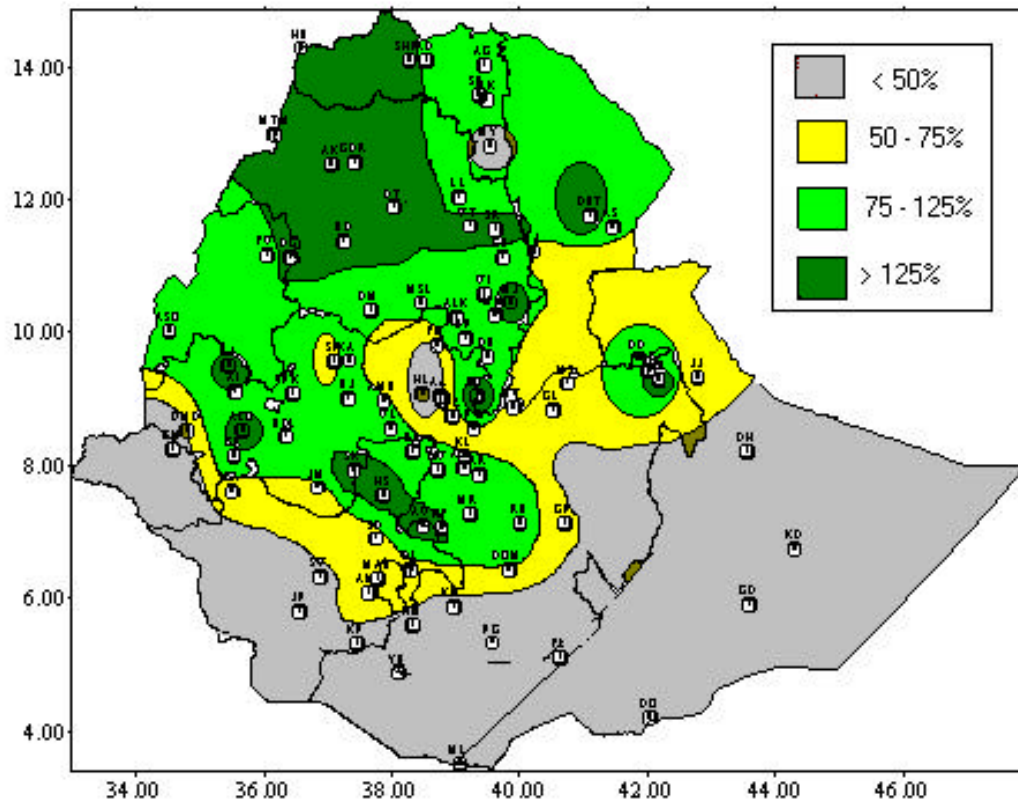


Fig Percent of normal (21-30 September 2005)

Explanatory notes for the Legend:

< 50-Much below normal

50-75%-Below normal

75-125%- Normal

> 125% - Above normal

1.1.2 Rainfal Anomaly (Fig 8)

With the exception of Gambela, western margin of Oromiya, most parts of SNNPR, southern and most parts of eastern Oromiya, southern half of Afar and most parts of Somali the rest parts of the country exhibited normal to above normal rainfall.

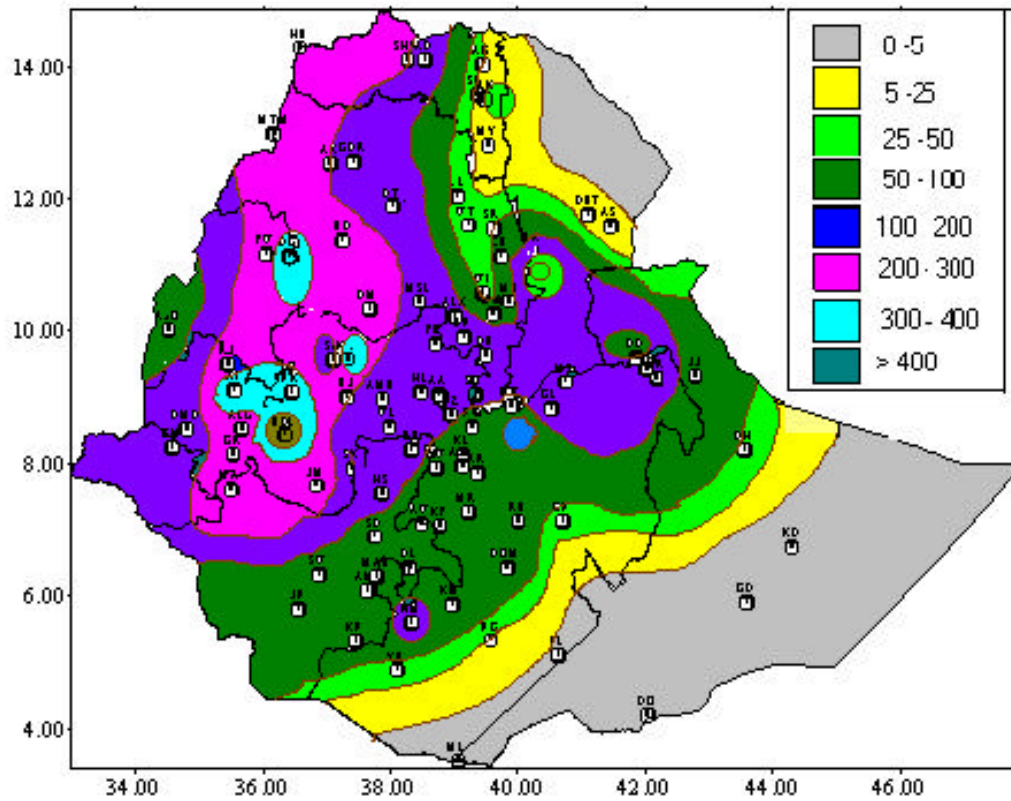


Fig. Rainfall Distribution in mm for the month of September 2005

1.2 September 2005

1.2.1 Rainfall Amount (Fig. 9)

Some areas of western Amhara and western Oromiya received falls greater than 300 mm. Most parts of western Tigray, most parts of western half of Amhara, most parts of Benishangul Gumuz, northwestern tip of SNNPR, parts of western Oromiya received 200 – 300 mm of rainfall. Parts of central Tigray, parts of central and southern Amhara, parts of central and eastern Oromiya, most parts of southern Afar, few areas of northern Somali, northeastern and parts of northwestern SNNPR, Gambela and western margin of Oromiya received 100-200 mm of rainfall. Eastern parts of central Tigray, parts of eastern Amhara, parts of central Afar, parts of northern Somali, parts of eastern and southern highland and mid lands of Oromiya and most parts of SNNPR exhibited 50-100 mm of rainfall. The rest parts of the country received below 500 mm of rainfall.

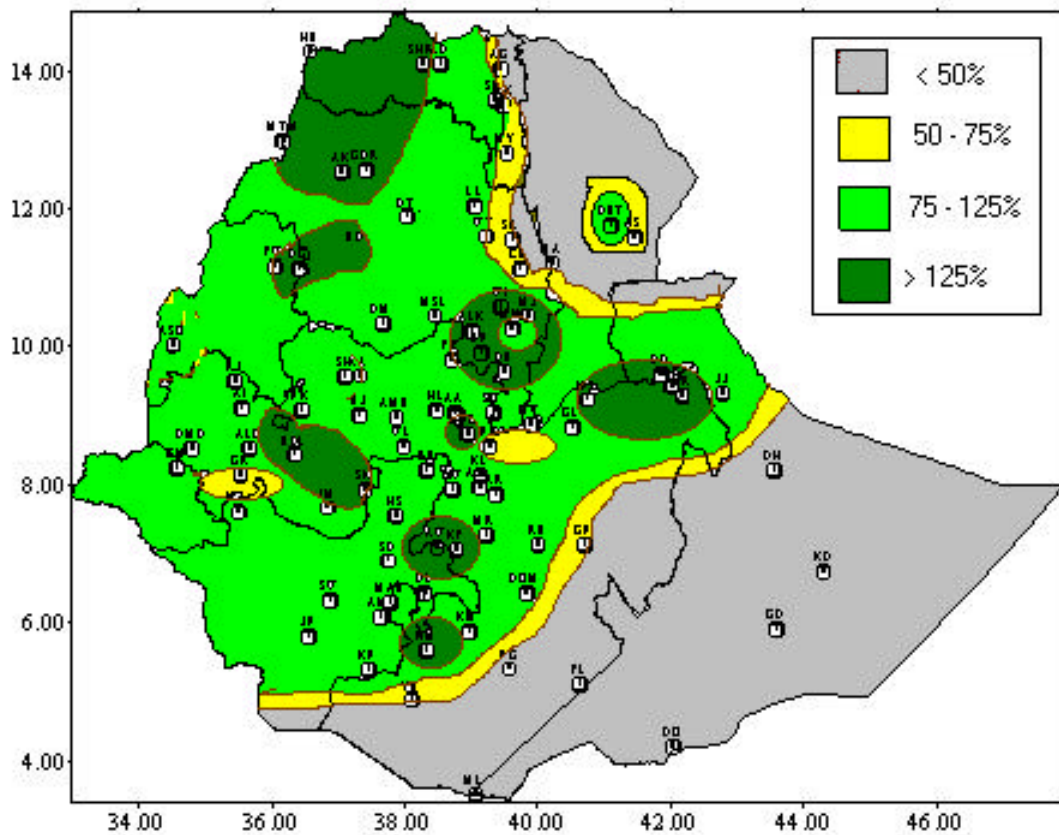


Fig. 4 Percent of Normal Rainfall for the month of September 2005

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. 10)

With the exception of northern half of Afar, few areas of eastern and southern Tigray, northeastern margin of Amhara, parts of eastern and southern Oromiya, most parts of southern and southeastern Somali the rest of the country exhibited normal to above normal rainfall.

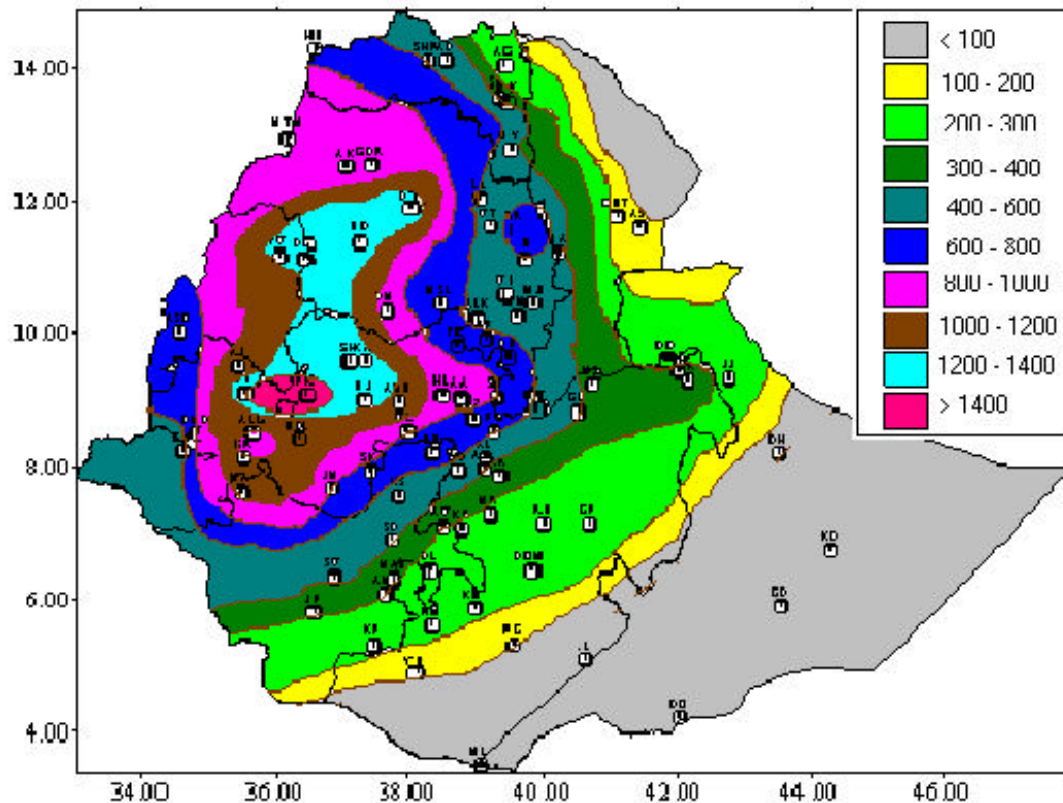


Fig. Rainfall Distribution in mm for Kiremt 2005

1.3 Kiremt 2005

1.2.1 Rainfall Amount (Fig. 11)

Some pocket areas of western Oromiya exhibited fall greater than 1400 mm like Gimbi, Aira, and Nekemte. Parts of western Amhara, eastern half of Benishangul Gumuz, parts of western Oromiya and northern tip of Benishangul-Gumuz received 1000-1400 mm of rainfall. Most parts of Amhara, western half of Benishangul – Gumuz, central and parts of western Oromiya, eastern margin of Gambella, western half of Tigrai and few areas of northern SNNPR received 600 – 1000 mm of rainfall. Eastern half of Tigrai, eastern Amhara, parts of eastern and central Oromiya, most parts of northern half of SNNPR, most parts of Gambella including southern half and western margin of Afar received 200 – 600 mm of rainfall. The rest parts of the country received less than 100 mm even less than that over southern and southeastern parts of the country where the seasonal rainfall started as of second dekad of September normally.

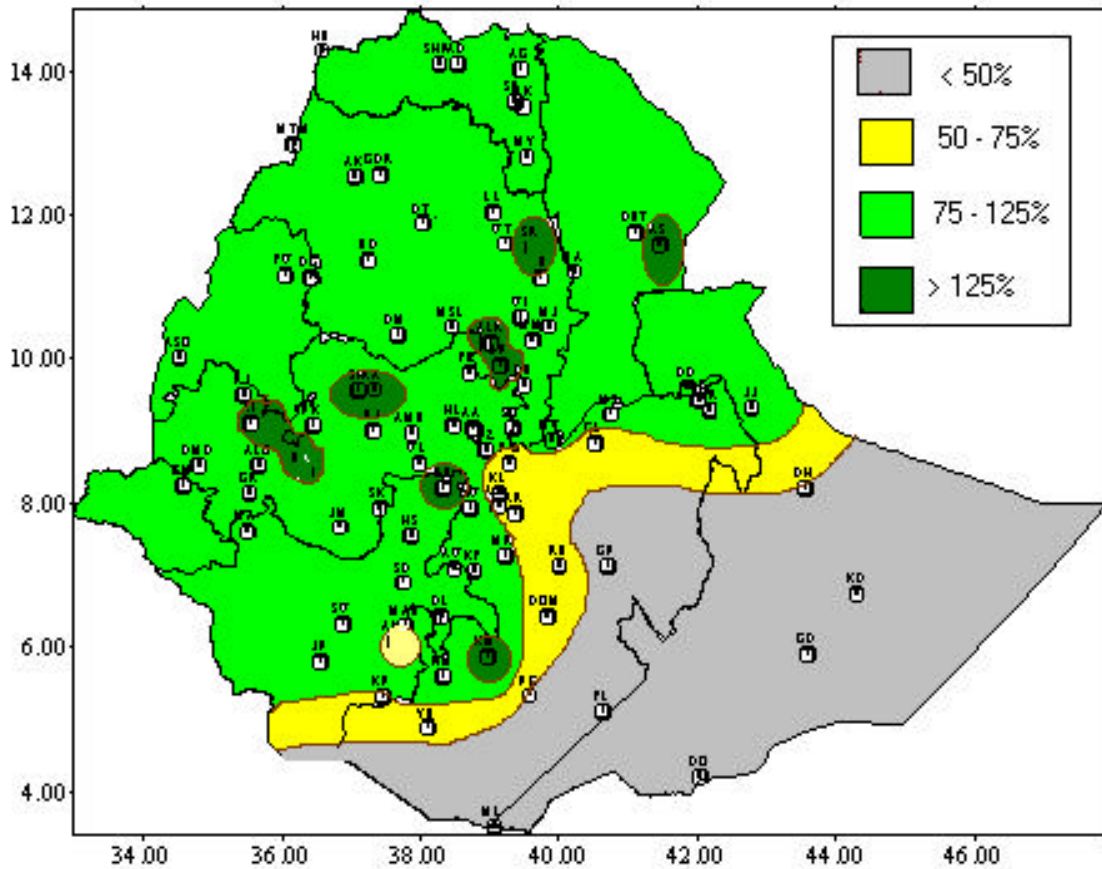


Fig. 4 Percent of Normal Rainfall for Kiremt 2005

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. 12)

With the exception of parts of eastern Oromiya including Arsi and Bale zones of Oromiya the rest of the country exhibited normal to above normal rainfall.

1.4 TEMPERATURE ANOMALY

No significant temperature anomaly has been observed during the season.

2. WEATHER OUTLOOK

2.1 For the month of October 2005

Under normal condition, October is considered as wettest month among the Bega's months. Particularly, over south and southeast, the Bega's rain widely distributed and cover much of the regions, where Bega is the seasonal rainy season. In the coming October, the rain bearing systems are forecasted to prevail over southwest and west Ethiopia, including some portions of north as well as eastern Ethiopia. However, the rain-producing systems are anticipated to weaken relatively from south and southeaster portion of the county. As a result, near-normal rainfall is anticipated over Tigray, Amhara Benshangul-Gumuz, western, central Amhara and eastern Oromya, Gambela, SNNPR and northern Somali regions. Occasional rain is also likely to occur over seasonally dry areas of central, northeastern as well as eastern Ethiopia. On the other hand, the monthly rainfall conditions are anticipated to weaken over southern portion of SNNPR and Oromya as well as south and eastern Somali region. Hence, some of aforementioned regions of the contrary are highly likely to experience deficient rains.

2.2 For the Bega season, 2005/06

Bega is generally categorized as dry season over northern half of the country. However, for south and southeastern regions, Bega is considered as wet, and second rainy season. In the upcoming Bega season, the rain, producing systems are anticipated to maintain their normal patterns across western half including parts of north and eastern portions of the country. However, the seasonal rain producing components are highly likely to be weekend over southern half of Ethiopia. As a result, much of Tigray, Amhara, Benshangul-Gumze, Gambella, western, central and eastern Oromya, northern half of SNNPR and northern Somali will have high chance of getting normal to above normal rains. Also there could be a possibility of getting un seasonal rains over some localities of central and northern half of Ethiopia. On the other hand, there are enhanced probabilities of getting below normal seasonal rains across southern and southeastern lowlands of the country. The anticipated relatively wet conditions are anticipated to depress frost occurrence over the frost prone areas of the country. In view of this mild night time and early morning temperature will prevail over the major portion of the country.

3. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

3.1 VEGETATION CONDITION AND IMPACT ON AGRICULTURE

Moist to humid moisture status has been observed in most parts of long cycle crop growing areas during the month of April 2005. On the other hand long cycle crop growing areas of western parts of Gambela parts of western Oromiya, western and southeastern Amhara exhibited moderately dry to dry moisture condition. In general the over all moisture situation particularly observed during the second and third dekad of April was favourable to perform land preparation and sowing activities of long cycle crops. In case of May 2005 most parts of Belg and Meher growing areas exhibited moist to humid moisture status while dry to moderately dry moisture status has been observed over Meher growing areas of western Amhara and Tigray.

The rainfall amount and distribution particularly during the second and third dekad of June 2005 was favourable for the on going season's agricultural activities in most parts of Meher growing areas. Besides it improved the situation of pasture and drinking water over some areas of northeastern pastoral areas. Nevertheless, the observed heavy falls (30-89mm) in some pocket areas of western, central and northwestern Ethiopia resulted in crop damage in some areas like Gimbi and Debre Tabor. On the contrary the deficient moisture condition observed during the

first and second dekad of the month over most parts of Tigray and Oromiya including western half of Amhara could exacerbate the deficient moisture condition particularly persisted over most parts of Tigray and western half of Amhara during the preceding month (May 2005). With regard to pest condition as MoARD has pointed out beginning from the second dekad of June swarm of egg laying matured desert locusts migrated to localized areas of northwestern zone and central zone of Tigray and northern Gonder in Amhara region. However the situation was under control. On the other hand the dry and sunny condition favored harvesting activities in some Belg growing areas like Majete (Harvesting of teff was underway over the areas)

The overall observed rainfall situation was in a good shape in terms of crop production and the availability of pasture and drinking water in most areas during the month of July 2005. On the other hand, the observed erratic rainfall condition in some lowland areas of northwestern, northeastern and eastern Ethiopia resulted in pest outbreak but the occurrence was not at epidemic level. With regard to heavy falls damage, the observed heavy falls (30-100 mm) over some pocket areas of northeastern, northwestern, central and western highlands resulted in crop damage and livestock losses. In addition to that, the continuous wet condition and cloud cover induced excess moisture in crop fields and unnecessary vegetation growth, which can have negative impact in terms of normal growth and development of the plants.

Even though some areas of eastern, southern highlands and southwestern parts of the country exhibited below normal rainfall during the month of August in general the situation of Meher crops was in a good shape in most areas. However, some areas of north-western, western, northern and central Ethiopia exhibited heavy falls ranging from 40-104 mm during the month which can have damaging effect particularly in low-lying areas and in areas where the soil type is clay. For instance Fitcha reported crop damage due to heavy falls during the first dekad, Bui and Dangila reported crop damage due to heavy falls during the second dekad and Bedelle experienced heavy falls greater than 30 mm for four days out of the ten days period and reported crop damage due to flooding and hailstorms during the third dekad. Moreover, Gimbi reported maize and sorghum crops damage due to the same reason.

The observed normal to above normal rainfall over western half of Amhara including some areas of eastern Amhara, Benishangul Gumuz, western Tigray, western Oromiya and most parts of SNNPR during the month of September 2005 could have positive impact on crops which are found in lowlands of the aforementioned areas in areas where deficient falls has been observed during the preceding dekads. It could also have significant contribution over the mid lands and highlands of Meher producing areas like Nedjo, Alge, Shambu, Aira, Bedelle and Dembi Dolo where sorghum and millet are at tasseling and flowering stage, in western Amhara like Dangila and Mota where maize and teff are at tasseling stage, in eastern Amhara like Wegel Tena and Sirinka where teff and beans are at flowering stage, in case of SNNPR it could favor wheat, teff and sorghum and in case of western Tigray it could have significant contribution for the normal growth and development of crops like barley, wheat and millet. However the observed heavy falls ranging from 30-74 mm could have negative impact on crops which are at flowering and ripeness stages by shattering the flower before fertilization and shattering the seeds of crops which are ready to harvest. For instance some areas reported crop damage due to heavy fall like Hosaina (on teff and wheat crop), Bedelle (on teff, sorghum, maize and beans) and Dangila (on teff and maize crops) during the third dekad of September (21-30). On the other hand the dominant below normal condition persisted over most parts of Somali, Bale zone and southern Oromiya could have negative influence on crops which are at different phenological stages and have negative impact on the availability of pasture and drinking water over pastoral and agro pastoral areas. In accordance with the crop phenological report (September 21-30, 2005) harvest of beans was underway in some areas of central Oromiya like Kulumsa while it was at flowering stage in some areas of northern Oromiya (Fitcha) and eastern Amhara (Shola Gebeya and Wegel Tena). Maize was at tasseling and flowering stages in some areas of western Amhara (Dangila), eastern Amhara (Bati and Majete) and western Oromiya (Gimbi and Bedelle) where as it was at

wax and full ripeness stage over western Oromiya (Nedjo, Dembi Dolo and Aira) and eastern Amhara (Sirinka and Majete). Sorghum was at tasseling and flowering stages in some areas of western Oromiya (Nedjo, Alge, Dembi Dolo, Bedelle and Aira), eastern Amhara (Bati and Majete) and mid lands of southern Oromiya (Chira). Teff was at tasseling and flowering stage over western Amhara (Mota), eastern Amhara (Majete and Sirinka) while at shooting stage over some areas of Oromiya like Kachise, Fiche and Chira and western Amhara like Dangila and eastern Amhara like Bati. Millet was at tasseling stage in some areas of western Oromiya (Nedjo and Aira) and eastern Amhara (Majete). It was at shooting stage over northwestern Benishangul Gumuz. Wheat was at tillering and shooting stage over western Oromiya like Shambu and Gimbi and eastern Amhara like Shola Gebeya and Wegel Tena while at flowering stage over some areas of Oromiya like Kulumsa and Fiche. Peas were at flowering stage over some areas of western Oromiya (Shambu). Nug was at budding and elongation stages over northwestern Benshangul Gumuz (Bullen) and western Amhara (Chagni), respectively.

Generally the overall rainfall situation observed during the season was favorable for season's agricultural activities in most parts of Meher growing areas. Nevertheless as indicated in the above statement there was deficient moisture status over eastern and South Tigray, eastern Amhara, few areas of eastern SNNPR, northern Somali and eastern Oromiya during the month of June. As a result crops, which are found in some pocket areas of the aforementioned areas, suffered from moisture stress at the beginning of the season. Moreover, parts of northern Afar exhibited deficient moisture condition during the month of July and August (Figures 4 & 5). Besides, crops which are growing in some pocket areas exhibited adverse weather conditions like hail damage, water logging, flooding, late onset of Kiremt rain and erratic rainfall distribution (over some lowland areas).

3.2 EXPECTED WEATHER IMPACTS ON AGRICULTURE DURING THE COMING BEGA SEASON

Under normal circumstance during the Bega season harvest and post harvest activities are the major practices over most parts of Meher growing areas and it is a cropping time for southern and southeastern lowlands of agro pastoral areas. It is also the time to perform water-harvesting activities for pastoral and agro pastoral areas of southern and southeastern lowlands. The Bega weather situation would favour the out break of pests if there is favorable environment, susceptible host and the pest itself. Besides, the dry and windy Bega's weather situation is favorable for the occurrence and spread of fire. There could be a possibility of frost hazard during the season, mainly over northeastern, central, eastern and southern highlands.

The Meher harvest usually begins in September in the lowland areas and extends through January to the typical highland areas. As a result crops are at different level of phenological stages(early vegetative, flowering and maturity stages) at this time of a year. Thus, the effect of rainfall can vary from place to place accordingly. In accordance with the current crop phenological report(21-30 September 2005) beans were at flowering stage in some areas of northern Oromiya (Fiche) and eastern Amhara (Shola Gebeya and Wegel Tena). Maize was at tasseling and flowering stages in some areas of western Amhara (Dangila), eastern Amhara (Bati and Majete) and western Oromiya (Gimbi and Bedelle) where as it was at wax and full ripeness stage over western Oromiya (Nedjo, Dembi Dolo and Aira) and eastern Amhara (Sirinka and Majete). Sorghum was at tasseling and flowering stages in some areas of western Oromiya (Nedjo, Alge, Dembi Dolo, Bedelle and Aira), eastern Amhara (Bati and Majete) and mid lands of southern Oromiya (Chira). Teff was at tasseling and flowering stage over western Amhara (Mota), eastern Amhara (Majete and Sirinka) while at shooting stage over some areas of Oromiya like Kachise, Fiche and Chira and western Amhara like Dangila and eastern Amhara like Bati. Millet was at tasseling stage in some areas of western Oromiya (Nedjo and Aira) and eastern Amhara (Majete). It was at shooting stage over northwestern Benishangul Gumuz. Wheat

was at tillering and shooting stage over western Oromiya like Shambu and Gimbi and eastern Amhara like Shola Gebeya and Wegel Tena while at flowering stage over some areas of Oromiya like Kulumsa and Fiche. Peas were at flowering stage over some areas of western Ormiya (Shambu). Nug was at budding and elongation stages over northwestern Benshangul Gumuz (Bullen) and western Amhara (Chagni), respectively.

The anticipated normal rainfall over western half and central Ethiopia would facilitate seed setting and grain filling process in areas where the crop phenological phases are at tasseling and flowering stages at this time of a year. The expected above to near normal rains over northeast, east and southern highlands would favor the existing crops which are at different crop phenological stages. Besides, it would have significant contribution for the production of pulses with residual moisture. The expected unseasonal rain particularly over northern half of Ethiopia would be helpful for the late sown crops over the lowlands of northwestern Ethiopia including some areas of southeastern Amhara like North Shewa.

On the other hand the expected occasional rainfall over seasonally dry sectors of the country would have negative impact on harvest and post harvest activities in areas where the activities are under question. In accordance with the latest crop phenological report crops were at ripeness stage even in some high land and mid land areas. For instance maize was at wax and full ripeness stage in some areas of western Oromiya like Nedjo, Aira, Algea, Ziway and Dembi Dolo and eastern Amhara like Majete and Sirinka. Pulses were at ripeness stage in some areas of central Oromiya. Thus proper measures should be taken in areas where crops are ready to harvest in order to minimize post harvest losses. Moreover, the expected unseasonable rainfall over seasonally dry sector of the country would favor the occurrence of crop pests and post harvest pests. Therefore proper precaution should be undertaken ahead of time to minimize post harvest and pre-harvest losses below economic threshold level.

The expected weak seasonal rainfall performance over southern and southeastern parts of the country would exacerbate the deficient moisture condition which persisted during the preceding decades over parts of southern highlands(parts of Arsi and Bale zones of Oromiya). Moreover it would have negative impact on the availability of pasture and drinking water over pastoral areas of southern and southeastern Ethiopia. In addition to these it would affect the crop performance of agro pastoral areas. Thus proper attention should be given ahead of time in order to minimize the effect of stress condition. Besides, attention should be given for proper water harvesting techniques in the areas.

With regard to temperature condition temperature is a limiting factor during the Bega season particularly over central, northern and southern highlands of Ethiopia. The anticipated less occurrence of frost due to the relative wet condition over frost prone areas would favor the normal growth and development of the plant in terms of optimal temperature requirements of the crop and pasture. On the contrary the expected weakened seasonal rainfall over the lowlands of southern and southeastern parts of the country would facilitate the occurrence of fire by increasing maximum temperature, decreasing relative humidity and drying vegetation thereby more dried materials would be available to aggravate the situation.

Last but not least the onset, distribution and cessation of season's rainfall are very important in terms of agricultural activities. Thus, users should interpret the weather forecast in terms of their area of interest and the existing condition of the specific area.

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

	Stations	Region	A/ rainfall	Normal	%of Normal	Eto mm/day	Monthly Eto	Moisture status
1	Adigrat	TIGRAI	7.5	19.1	39.3	3.84	115.2	VD
3	Mekele		34	38	89.5	4.17	125.1	MD
4	Michew		18.2	72.6	25.1	3.82	114.6	D
5	Senkata		4.8	NA	NA	NA	NA	NA
6	Shire		212.7	120.9	175.9	3.78	113.4	H
1	Assayta	AFAR	8.1	13.2	61.4	6.47	194.1	VD
2	Dubti		18.9	13.9	136.0	6.33	189.9	VD
3	Gewane			33.9	0.0	NA	NA	NA
1	Bahirdar	AMHARA	278.5	205.8	135.3	3.67	110.1	H
2	Bati		33.9	80.8	42.0	4.07	122.1	MD
3	Bullen		272.2	NA	NA	3.12	93.6	H
4	Combolcha		50.8	125.7	40.4	3.84	115.2	MD
6	D.Birhan		NA	NA	NA	3.27	98.1	VD
7	D.Markos		235.3	211.8	111.1	3.32	99.6	H
8	D.Tabor		180.9	182.7	99.0	NA	NA	NA
9	Dangla		320.7	222.4	144.2	3.47	104.1	H
10	Enwary		133.3	62.3	214.0	3.46	103.8	H
11	Gonder		169	116.2	145.4	3.93	117.9	H
12	M.Meda		67.4	81.4	82.8	NA	NA	NA
13	Majete		170.3	104.8	162.5	NA	NA	NA
	Metema		248.5	180.8	137.4	NA	NA	NA
	Mota		204.5	NA	NA	3.96	118.8	H
14	Lalibela		40.2	41.1	97.8	3.21	96.3	MD
15	Sirinka		55.6	90.1	61.7	3.87	116.1	MD
	S.Gebeya		124.6	104.5	119.2	3.22	96.6	H
16	Woreilu	24.7	NA	NA	3.53	105.9	D	
17	Wegeltena	22.8	35.9	63.5	3.56	106.8	D	
1	Abomsa	OROMIYA	103.3	108.5	95.2	3.83	114.9	M
2	Aira		335.1	271.8	123.3	3.45	103.5	H
3	Alemaya		156.4	117.1	133.6	3.76	112.8	H
4	Alge		258.8	307.5	84.2	NA	NA	NA
9	Bedelle		488.8	276.3	176.9	NA	NA	NA
10	Bui		90	NA	NA	NA	NA	NA
	Chria		265.7	NA	NA	NA	NA	NA
11	D.Dollo		113.2	150.3	75.3	3.13	93.9	H
13	D.Zeit		153.3	105.8	144.9	NA	NA	NA
15	Fitche		119.2	126.8	94.0	3.43	102.9	H
16	Gelemso		154.4	124.7	123.8	4	120	H
17	Gimbi		383	315.7	121.3	3.34	100.2	H
18	Gore		235	323.9	72.6	2.88	86.4	H
	H.Mariyam		116	59.2	195.9	2.86	85.8	H
19	Jimma		229	184.8	123.9	3.24	97.2	H
20	K.Mengist		91	98.7	92.2	3.15	94.5	M
21	Kachise		321.5	NA	NA	NA	NA	NA
23	Kulumsa		84.7	106.9	79.2	3.28	98.4	M
	Limugent		287.8	NA	NA	3.16	94.8	H
24	Masha		252.2	223.8	112.7	NA	NA	NA

25	Meisso		NA	NA	NA	4.74	142.2	VD
26	Metehara		22	43	51.2	5.45	163.5	D
29	Nazreth		68.4	106.4	64.3	4.72	141.6	MD
30	Neghele		7	40.8	17.2	NA	NA	NA
31	Nedjo		278.9	308.7	90.3	3.29	98.7	H
32	Nekemte		326	268.3	121.5	3.01	90.3	H
33	Robe(Bale)		96	103	93.2	3.79	113.7	M
34	Sekoru		187.3	180.6	103.7	3.34	100.2	H
35	Shambu		158.9	277.6	57.2	NA	NA	NA
1	A.Minch	SNNPR	76.4	77.4	98.7	3.95	118.5	M
2	Awassa		117.6	73.7	159.6	3.64	109.2	H
3	Hosaina		151.2	155.8	97.0	3.27	98.1	H
4	Jinka		91.7	106.6	86.0	3.39	101.7	M
6	M.Abay		72	NA	NA	4.45	133.5	M
8	Sodo		88.2	149.3	59.1	NA	NA	NA
1	Assosa	B/GUMUZ	88.9	207.8	42.8	NA	NA	NA
2	Pawe		232.2	276.4	84.0	3.7	111	H
3	Chagni		349	NA	NA	NA	NA	NA
4	Mankush		125.4	NA	NA	3.68	110.4	H
1	A.A.Obs.	A.A	161.5	173.6	93.0	2.99	89.7	H
1	Diredawa	D.D	89.8	47.2	190.3	5.63	168.9	M
1	Harar	Harai	130.9	93	140.8	3.49	104.7	H

Legend

VD	Very Dry	< 0.1
D	Dry	0.1 - 0.25
MD	Moderately 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.

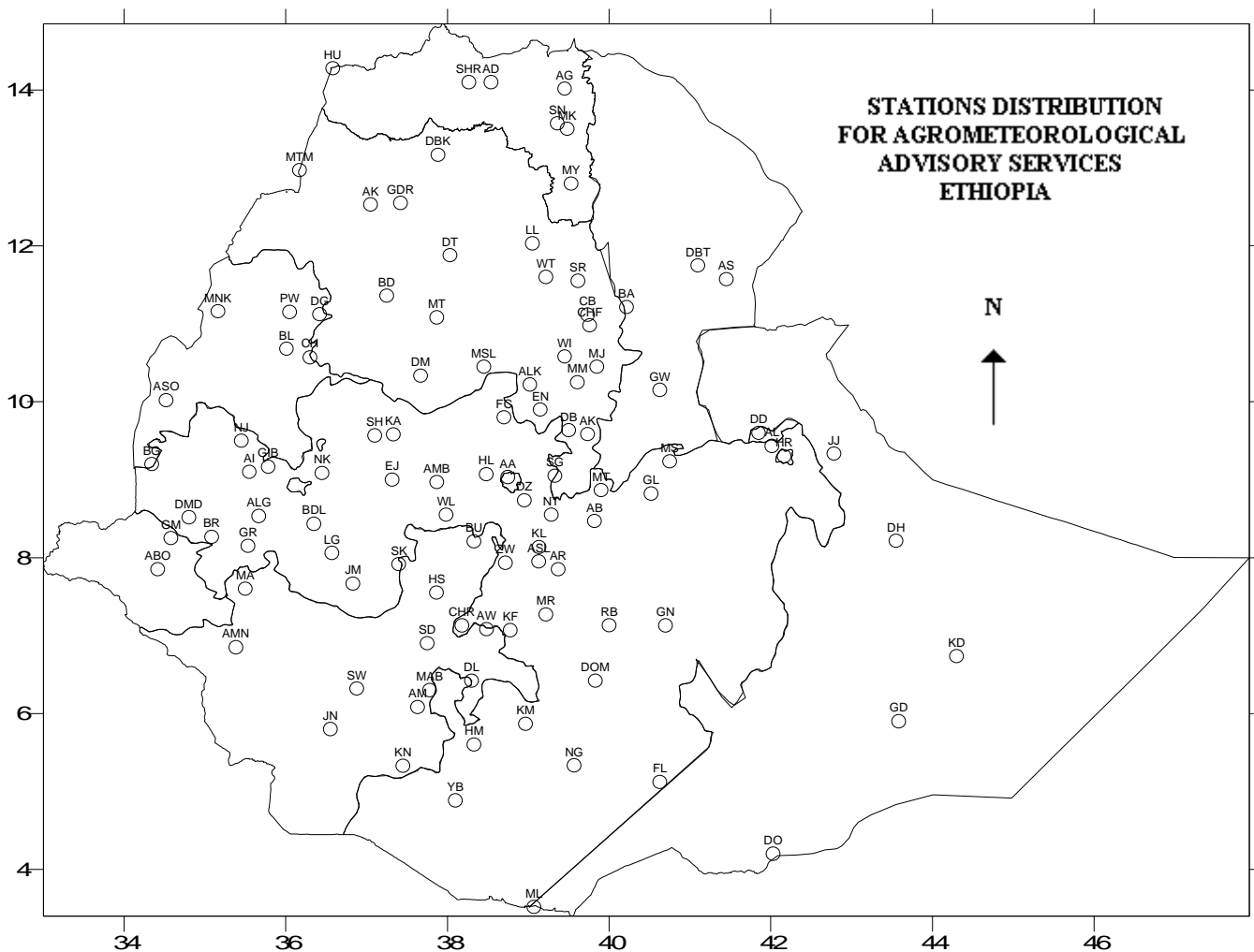
DEKAD: - First or second ten days or the remaining days of a month.

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