

FORE WARD

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

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

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

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

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

አህዕድት
ኦክቶበር 2008

እ.ኤ.አ ከኦክቶበር 2008 በመጀመሪያው አስርተ ቀናት መደበኛና ከመደበኛ በላይ ዝናብ በአብዛኛው አማራ፣ ቤንሻንጉል ጉሙዝ እንዲሁም በአጎራባች ምዕራብ እና ደቡብ ኦሮሚያ፣ ጋምቤላ እንዲሁም በደቡብ ብሔር ብሔረሰቦች እና ህዝቦች ክልል አጋማሽ፣ በደቡብ ኦሮሚያ እና በደቡብ ሶማሌ ተስተውሏል። ይህም የዝናብ ሁኔታ በአጠቃላይ ለመኸር የእርሻ እንቅስቃሴ በተለያዩ የዕድገት ደረጃ ላይ ላሉ እንዲሁም ፍሬ በማሙላት ላይ ላሉ የመኸር ሰብሎች ጠቀሜታ የነበረው ሲሆን በሌላ በኩልም ለግጦሽ ሣርና ለመጠጥ ውሀ አቅርቦት ጠቀሜታ የጎላ ነበር። በአንፃሩ ደግሞ በአንዳንድ አማራ፣ ትግራይ፣ ቤንሻንጉልጉሙዝ እና ጋምቤላ አካባቢዎች ላይ ከበድ ያለ ዝናብ ነበር የጥቂቶችን ጣቢያ ለመጥቀስ ያህል አይኮል፣ አሶሳ፣ አዴሬ፣ባህርዳር ፣ሀገረማርያም፣ ሞያሌ እና ሽራሮ 51.7፣ 36.1፣ 30.3፣ 36.9፣ 68.3፣ 49.3 እና 36.8 ሚ.ሜ እንደየቅደም ተከተላቸው በአንድ የዝናብ ቀናት አግኝተዋል።

እ.ኤ.አ በኦክቶበር 2008 በሁለተኛው አስር ቀናት በደቡብ ኢትዮጵያ የበጋ ዝናብ ተጠቃሚ አካባቢዎች ላይ እስካለፉት አስር ቀናት አጋማሽ ድረስ ዝናቡ ቀጥሎ ተስተውሏል። በዚህም መሠረት የደቡብ ብሔር ብሔረሰቦችና ህዝቦች ክልል፣ የደቡብ ኦሮሚያና የሶማሌ ደቡባዊ አጋማሽ እስከ አስር ቀናት አጋማሽ ድረስ ዝናብ የነበራቸው ሲሆን በተለይም የኦሮሚያና የደቡብ ብሔር ብሔረሰቦችና ህዝቦች ክልል ምዕራብ ኦሮሚያ፣ የጋምቤላ፣ የቤንሻንጉል ጉሙዝና የምዕራብ አማራ አካባቢዎች የተሻለ ዝናብ ነበራቸው። ይህም ሁኔታ ፍሬ በመሙላት ላይ ላሉ የመኸር ሰብሎች ለአጠቃላይ የእርሻ ስራ እንቅስቃሴ እንዲሁም የበጋ ዝናብ ተጠቃሚ በሆኑ አንዳንድ አካባቢዎች ለዘር ጊዜ ዝግጅት እና ለአርብቶ አደሩና ለከፊል አርብቶ አደሩ ለግጦሽ ሳር እና ለመጠጥ ውሃ አቅርቦት አዎንታዊ ተፅዕኖ እንደነበረው ይታመናል። በሌላ በኩል የሰሜን ምስራቅ የመካከለኛና የምስራቅ ኢትዮጵያ አካባቢዎች ብዙውን ጊዜ ደረቅ ሆኖ ሰንበተዋል። ይህም ሁኔታ ለነዚህ አካባቢ ለሚካሄደው የመኸር ሰብል ስብሰባ አመቺ ሁኔታ እንደነበረው ይታመናል። ከባድ ዝናብ በተመለከተ በአንዳንድ የሀገሪቱ ክፍሎች ላይ ከ30-68 በሚ.ሜ የሚደርስ ከባድ ዝናብ ተመዝግቧል። ከዚህ ጋር በተያያዘ በሲርባ አባይ ንፋስ ቀላቅሎ የዘነበው ዝናብ በሰሌጥ ሰብል ላይ መጠነኛ ጉዳት እንዳደረሰ ከመረጃ ክፍላችን ለማወቅ ተችሏል።

እ.ኤ.አ በኦክቶበር 2008 በሶስተኛው አስር ቀናት ቀደም ሲል በደቡብ ምዕራብ፣ በደቡብና ምሥራቅ ኢትዮጵያ ላይ ብቻ ተወስኖ የነበረው ዝናብ ከሳምንቱ አጋማሽ ጀምሮ ከሰሜን ምዕራብና ምዕራብ ቆላማ አካባቢዎች በስተቀር የተቀሩትን የሀገሪቱ ክፍሎች አዳርሶ ነበር። በመሆኑም ባለፈው ሳምንት በአብዛኛው የሀገሪቱ ክፍሎች ላይ ወቅታዊ ያልሆነ ዝናብ ተስተውሏል። መረጃ ከሚልኩ ጣቢያዎቻችን መካከል በዝዋይ፣ በመካነ ሰላም፣ በአቦምሳ፣ በአልጌ፣ በጊኒር አካባቢ በዘነበው ከባድ ዝናብ ሳቢያ በደረሱ ሰብሎች ላይ ጉዳት ተስተውሏል።

ጠቅለል ባለ መልኩ ባሳለፍነው በኦክቶበር ወር መጨረሻ አስር ቀናት ከሕንድ ውቅያኖስና ከአረብ ባሕር ወደ ሀገራችን በስፋት ሲገባ የነበረው እርጥበት አዘል አየር በትግራይና አማራ ምሥራቃዊ አጋማሽ፣ በአፋር፣ በአብዛኛዎቹ የኦሮሚያ፣ የደቡብ ብሔር ብሔረሰቦችና ሕዝቦች ክልል፣ በድሬዳዋ፣ በሐረሪና በጋምቤላ አካባቢዎች የተስፋፋ ዝናብ ተስተውሏል። ይኸው ሁኔታ ወቅታዊ ያልሆነ ዝናብ በመኸር አብቃይ አካባቢዎች በሰብል ስብሰባውና ድህረ ሰብል ስብሰባው እንቅስቃሴ ላይ አሉታዊ ተፅዕኖ ነበረው። ሆኖም ወቅታዊ ያልሆነ ዝናብ በተለያዩ የእድገት ደረጃ ላይ ለሚገኙና ፍሬ በመሙላት ላይ ላሉ በደጋማው መኸር አብቃይ አካባቢዎች ለሚገኙ ሰብሎች ጠቃሚነት እንደነበረው ይታመናል። በተጨማሪም በአርብቶ አደርና ከፊል አርብቶ አደር አካባቢ ለግጦሽና መጠጥ ውሃ አቅርቦት ጠቀሜታ ይኖረዋል። በጋ ሁለተኛ የዝናብ ወቅታቸው በሆኑት በደቡብ ኦሮሚያ በደቡብ ብሔር ብሔረሰቦችና ሕዝቦች ክልል ደቡባዊ አጋማሽና በሶማሌ ደቡባዊ አጋማሽ አካባቢዎች የተስፋፋ ዝናብ በማግኘት ላይ በመሆናቸው በአካባቢዎቹ ላይ ላለው የእርሻ ሥራ እንቅስቃሴ ለግጦሽና ውሃ አቅርቦት የጎላ አስተዋፅዖ ነበረው።

SUMMARY

OCTOBER, 2008

During the first dekad of October 2008, normal to above normal rainfall was observed over much of Amhara, Benshangul-Gumuz and adjoining areas of western and southern Oromia, Gambela, southern half of SNNPR, southern Oromia and southern Somali. This situation might have a positive impact on Meher crops that are at grain-filling stages and for general agricultural activities, pasture and drinking water availabilities. On the other hand, occasional heavy fall observed over some areas of Amhara, Tigray, Benshangul-Gumuz and Gambela. Among reporting stations: Aykel, Assosa, Adele, Bahar Dar, Hager Mariam, Moyale and Sheraro recorded 51.7, 36.1, 30.3, 36.9, 68.3, 49.3 and 36.8 mm of rainfall in one rainy day respectively.

During the second dekad of October 2008, rainfall activity was observed over Bega rainfall benefiting areas parts of southern Ethiopia. As a result better rainfall was observed over parts of SNNPR, southern Oromia and southern half of Somali. Moreover, western Oromia, Gambela, Benshangul-Gumuz, and parts of western Amhara received better rainfall. Hence, the situation might have a positive impact on Meher crops that are at grain-filling stages and for general agricultural activities, pasture and drinking water availabilities. On the other hand, dry weather condition was observed over northeastern, central and eastern parts of the country. The condition might be favorable for Meher harvest activities. In addition, heavy falls were observed over some places of the country within the range of 30-68 mm rainfall in one rainy day.

During the third dekad of October 2008, the observed unseasonal rainfall over southwestern and south and eastern parts of the country strengthened and distributed over most parts of the country except northwestern and western lowlands of the country. As a result, last week unseasonal rainfall observed over most parts of the country. According to the reporting stations, Zway, MekaneSelam, Abomsa, Alge, and Ginir reported crop damage due to unseasonal heavy fall.

Generally during the month of October 2008, the rain bearing system from the Indian Ocean and Arabian seas moved towards our region to bring moisture in the last ten days of October. As a result, unseasonal rainfall was observed over eastern parts of Tigray and Amhara, Afar, much of Oromia, SNNPR, DireDawa, Harari, and Gambela. This situation might have a negative impact on meher harvest and post harvest activities, however, the situation could favor meher crop at different growing stage and grain filling stage, and for pasture and drinking water availability over pastoral and agro pastoral areas.

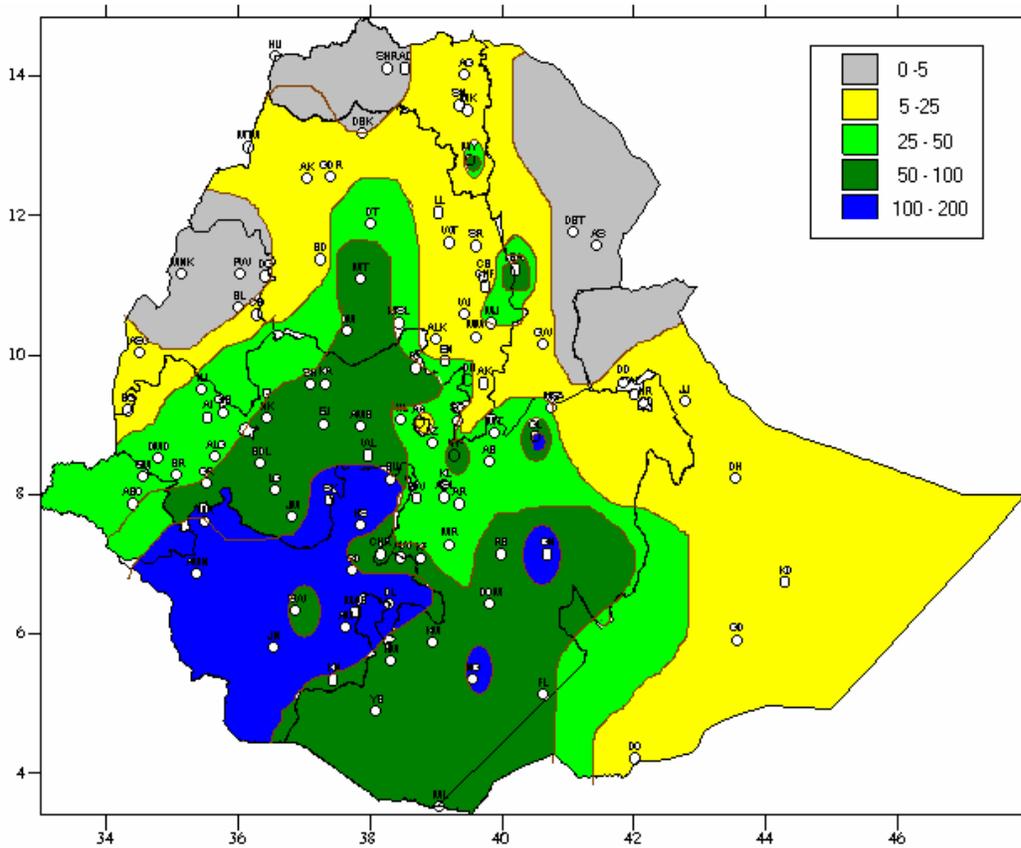


Fig 1. Rainfall distribution in mm (21-31 October, 2008)

1. WEATHER ASSESSMENT

1.1 (21- 31 October, 2008)

1.1.1 Rainfall amount (Fig.1)

Much Of SNNPR, pocket area of southern Oromia received 100-200mm of rainfall. Much of western and southern Oromia parts of southern Amhara, and pocket areas of central Oromia exhibited 50-100mm of rainfall. Gambela, parts of central Amhara, western and central Oromia, parts of southern Benshangul-Gumuz and some areas of southern Somali experienced 25-50 mm of rainfall. Much of Tigray and Amhara, western half of Afar, some parts of Benshangul-Gumuz and much of Somali exhibited 5-25 mm of rainfall. Little or no rainfall exhibited on the rest parts of the country.

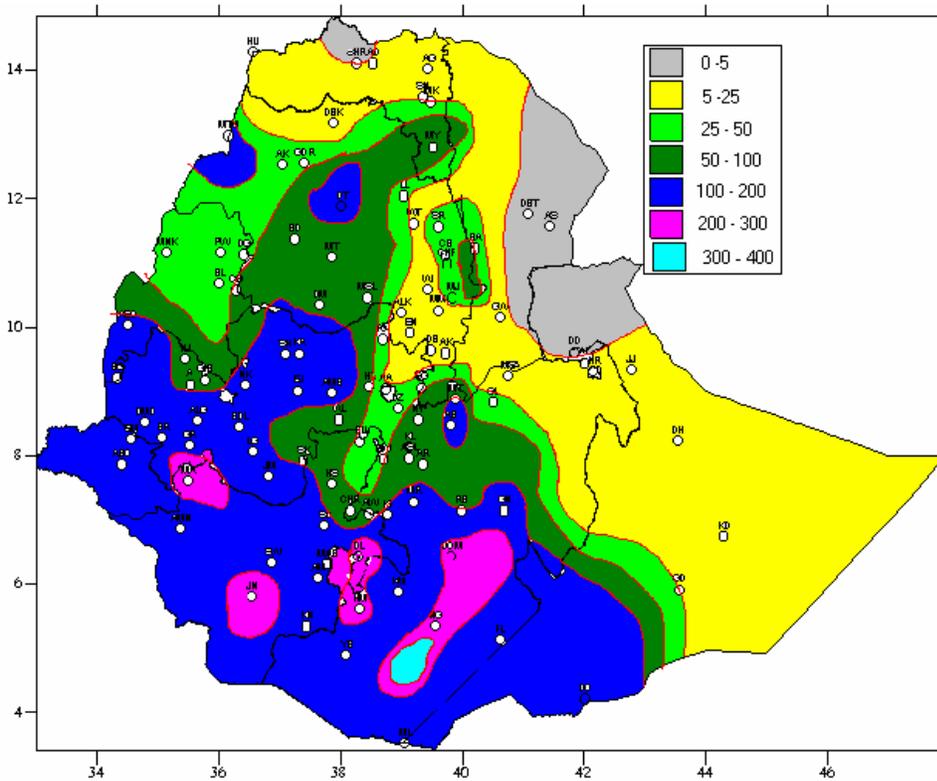


Fig. 3 Rainfall distribution in mm for the month of October 2008

1.2 October 2008

1.2.1 Rainfall distribution (Fig.3)

Pocket areas of southwestern and southern Oromia and southern and southwestern SNNPR and much of southern Somalia received rainfall amount exceeded 200mm while, most parts of southern and southwestern and southeastern, western and northwestern Oromia, SNNPR, Gambela and southern Tigray and some places of southern Somalia experienced rainfall amount of 100-200mm. On the other hand pocket areas of southern Somalia, central, eastern, northern, northwestern Oromia and central and northeastern Amhara and some places of southern Tigray, southern and southwestern Benshangul -Gumuz exhibited rainfall amount of 50-100. Most parts of Somalia, Tigray, Afar and eastern and northeastern Oromia and some place of northern and eastern Amhara received rainfall amount of 5-25mm, while the rest parts of the country received little or no rain during the month of October 2008.

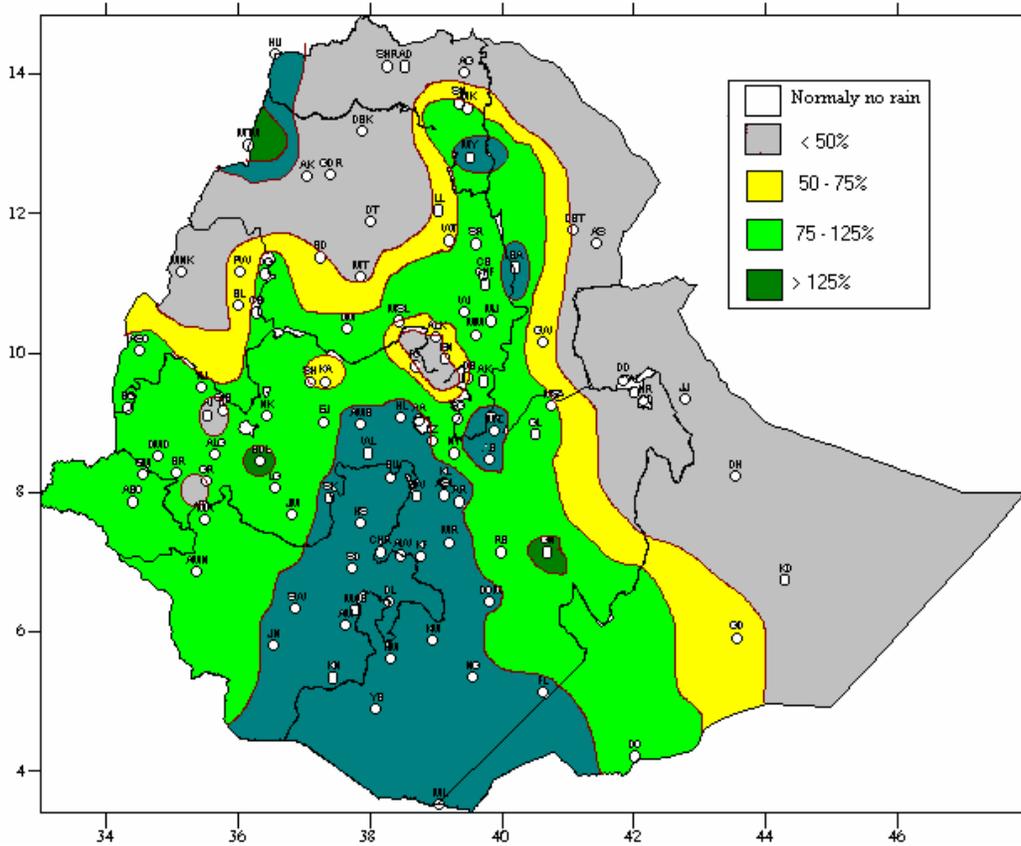


Fig. 4 Percent of Normal Rainfall distribution for the month of October 2008

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 Oromia, SNNPR, Gambela and southern, southeastern, northeastern and western Amhara, portions southwestern Somalia, western Afar, southern and western Tigray received normal to above normal rainfall, while the rest parts of the country exhibited below normal to much below normal rainfall.

1.3 TEMPERATURE ANOMALY

With regard to Air temperature Dire Dawa, Metema, Methara, Sheraro Gambella, Gode, Humera, Elidar, Mille, Semera, Assayta and Dubti reported extreme maximum temperature as high as 35.2 ,35.2, 36.0 ,36.5, 36.5, 37.4, 38.5, 39.0, 39.5, 40.0, 40.0, and 40.5⁰ C respectively.

2. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

2.1 VEGETATION CONDITION AND IMPACT ON AGRICULTURE

Generally during the month of October 2008, the rain bearing system from the Indian Ocean and Arabian seas moved towards our region to bring moisture in the last ten days of October. As a result, unseasonal rainfall was observed over eastern parts of Tigray and Amhara, Afar, much of Oromia, SNNPR, DireDawa, Harari, and Gambela. This situation might have a negative impact on meher harvest and post harvest activities, however, the situation could favor fmeher crop at different growing stage and grain filling stage, and for pasture and drinking water availability over pastoral and agro pastoral areas.

2.2 EXPECTED WEATHER IMPACTS ON AGRICULTURE DURING THE COMING MONTH

During the coming month of ten days, the unseasonal rainfall will be continued with the same pattern of the previous dekad then, slowly it will be dominated dry weather condition. However, unseasonal rainfall will be expected over different places of the country in the remaining weeks. As a result, most parts of the country especially over northeastern, eastern, riftvally and is neighboring areas, central and southern Ethiopia will have above normal heavy fall. Hence, normal to above normal rainfall will be anticipated over Tigray, eastern parts of Amhara, eastern and central half of Oromia, Afar, SNNPR, Addis Ababa, Harari, DireDawa and Somali. This situation will have a positive impact on meher crop at different growing stage and grain felling stage and for general agricultural activities over Bega rainfall benefiting areas like parts of southern Oromia, southern half of SNNPR and pasture and drinking water availabilities over pastoral and agro pastoral areas. On the other hand the unseasonal rainfall will cause unwanted moisture that could have a negative impact for harvest and post harvest activates of meher crops.

Table1. Crop Phenological report for 21-31 October 2008

Station name	Region	Zone	Woreda	Three Major Crops of given area			Growth Phases		
				1	2	3	1	2	3
Adet				Maize	Barely	Teff	Fr	H	Fr
Aykel				Barely	Teff	-	H	Sh	-
Ayehu				-	Papper	Wheat	-	Cr	H
Ale.ketema				Teff	-	-	Fl	-	-
Bedelle	Oromia	IluAbabor	Bedlle	Maize	Teff	-	Fr	Fr	-
Chagni				Maize	Millet	Nug	Fr	Sh	Bu
Chira	Oromia	Jimma	Gera	-	Teff	-	-	Fl	-
Dangila	B.shangul	Awi	Dangla	Maize	Teff	-	Fr	Fl	-
Debr.Tabr	Amahara			Teff	Beans	Wheat	Fl	Fl	Fl
Dilla				Coffe	-	-	Fr	-	-
Dolomena				Maize	Seaseme	-	NI	Bu	-
Fitche	Oromia	Semen.Shoa	Girarjarso	Teff	Wheat	Beans	Sh	Fr	Fl
Hossaina				Maize	Wheat	-	Fr	Fl	-
Kachisie				Teff	-	-	Fl	-	-
Majete				Teff	-	Maize	H		Fr
Meh. Meda	Amahara	Semen Shoa	Gira mider	Wheat	Barely	Beans	Fl	Fl	-
Mek/selam	Amahara			Wheat	Teff	Beans	Fr	Fr	-
Nedjo	Oromia	Mb wellega	Nedjo	Maize	Sorghum	Millet	H	Fr	Fl
Shambu	Oromia	HoroWolleg	Horo	Teff	Barely	Peas	Ta	Sh	-
Shahura				Maize	Teff	-	Fr	Fr	-
Sirinka				Teff	Maize	Millet	Fl	Fl	Fl
Sokoru	Oromia	Jimma	Limukosa	Maize	Teff	-	Fr	Fl	-
WegelTena	Amhara	Semen Woll	Delenta	Wheat	Barely	Beans	Sh	Sh	Fl
Woliso	Oromia	DM.Shoa	Woliso	Maize	Nug	Teff	H	H	Fr

Key:

P/S= Plant/Sow
 Em=emerge
 TI=Third leaf
 Fl=Fifth leaf
 Sl=Seventh leaf
 Yr=Yellow ripe
 NI= Ninth leaf
 El= Elongation
 Ta = Tassel

Ti=Tiller
 Sh=shoot
 Bs= Berry soft
 Bh= Berry hard
 Ph= Pin heading
 Ea= Earing
 He= Heading
 Bu= budding
 Fl=Flower
 R = ripeness

Cr= Consumer ripeness
 Gr= Green ripeness
 Wr= Wax ripeness
 Yg r= yellow green ripeness
 Lgr =light green ripeness
 Dr= dark ripeness
 Fr= Full ripeness
 H =Harvested
 - = Data not available

DEFINITION 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 covers 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.

Table1. Climatic and Agro-Climatic elements of different stations for the month of September 2008

No.	Stations	Region	A/ rainfall	Normal	%of Normal	ETo mm/day	ETo/month	Moisture	
1	Adigrat	TIGRAI		27.8	0	3.48	107.9		
2	Adawa		11	27.3	40.3	4.1	127.1	0.09	VD
3	Humera		18.9	15.8	119.6	4.2	130.2	0.15	D
4	Mekele		8.8	6	146.7	3.67	113.8	0.08	VD
5	Maichew		88.2	49.7	177.5	2.86	88.7	0.99	M
6	Maytsemri					5.26	163.1		
7	Senkata		18	41.8	43.1	3.94	122.1	0.15	D
8	Shire		3.4	29.6	11.5	3.76	116.6	0.03	VD
1	Assayta	AFAR	1.7	6.3	27.0	4.99	154.7	0.01	VD
2	Dubti		0	8.2	0.0	4.58	142.0	0.00	VD
3	Semera		0	23.6	0.0	5.51	170.8	0.00	VD
4	Elidaar			0		5.95	184.5		
1	A. Ketema	AMHARA	13	26.9	48.3	3.64	112.8	0.12	D
2	Ayehu		62	0		4.18	129.6	0.48	MD
3	Aykel		23.9	146.1	16.4	3.05	94.6	0.25	MD
4	Bahirdar		58.7	96.4	60.9	3.34	103.5	0.57	M
5	Bati		77.5	30.3	255.8	3.56	110.4	0.70	M
6	Bullen		30	159.7	18.8	3.39	105.1	0.29	MD
7	Combolcha		40.2	36.4	110.4	3.89	120.6	0.33	MD
8	Chefa		31.8	41.8	76.1	3.52	109.1	0.29	MD
9	D.Birhan		9.9	23.9	41.4	3.02	93.6	0.11	D
10	D.Markos		69.9	81.6	85.7	3.42	106.0	0.66	M
11	D.Tabor		51.8	86.6	59.8	3.25	100.8	0.51	M
12	Dangila		28.6	81.9	34.9	3.27	101.4	0.28	MD
13	Enwary		0.6	8.4	7.1	2.94	91.1	0.01	VD
14	Gonder		16.6	71.6	23.2	3.85	119.4	0.14	D
15	M.Meda		32	29.2	109.6	3.07	95.2	0.34	MD
16	Majete		59.7	33.8	176.6	3.42	106.0	0.56	M
17	Metema		78.4	34.4	227.9	5.01	155.3	0.50	M
18	Lalibela		14.5	16.6	87.3	3.16	98.0	0.15	D
19	Pawe		42.9	137.9	31.1	3.55	110.1	0.39	MD
20	ShoaRobit		20.1	36.6	54.9	4.04	125.2	0.16	D
21	S. Gebeya			66.7	0.0				
22	Sirinka		49.9	59.2	84.3	3.27	101.4	0.49	MD
23	Wegeltena		13.6	8.3	163.9	3.52	109.1	0.12	D
24	Wereilu		9.2	13.6	67.6	3.36	104.2	0.09	VD
1	Abomsa	OROMIYA	143.1	76.7	186.6	3.79	117.5	1.22	H
2	Adelle		81.2	0		2.98	92.4	0.88	M
3	Aira			135	0.0				VD
4	Alemaya		9.8	45.1	21.7	4	124.0	0.08	VD
5	Alge		147.8	154.3	95.8	3.81	118.1	1.25	H
6	Ambo		89.8	41.5	216.4	3.81	118.1	0.76	M
7	Arjo		210	108.8	193.0	3.28	101.7	2.07	H
8	Arsirobe		64.8			3.35	103.9	0.62	M
9	Bedelle		146.3	129.3	113.1	3.5	108.5	1.35	H
10	Begi		105.3	123	85.6	2.86	88.7	1.19	H
11	Blate		160.5	61.5	261.0	3.98	123.4	1.30	H
12	Bore			55.4	0.0	2.39	74.1	0.00	VD
13	Chercher		42.1	0		3.73	115.6	0.36	MD
14	Chira		131.8	144.8	91.0	3.02	93.6	1.41	H
15	D.Dollo			110.7	0.0				VD
16	D.Mena		203.8	214.5	95.0	3.66	113.5	1.80	H
17	D.Zeit		5.1	21.5	23.7	3.52	109.1	0.05	VD

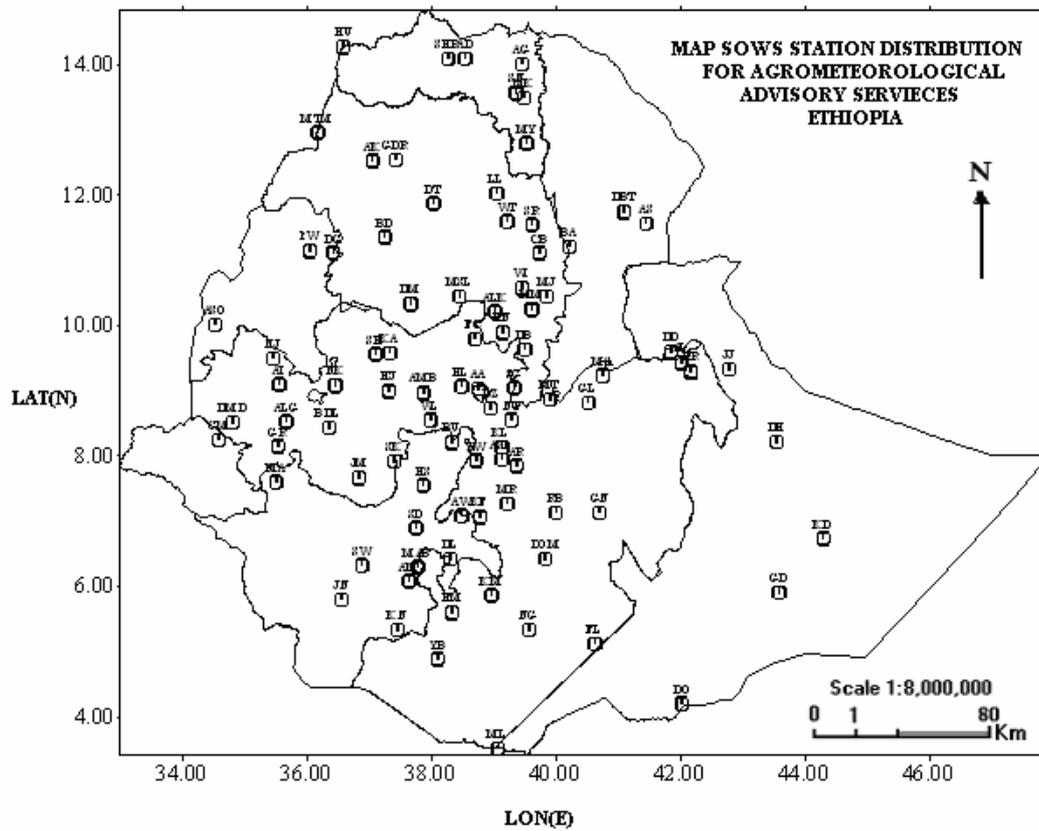
18	Fitche		19.2	28.6	67.1	3.02	93.6	0.21	D
19	Ejaji			80.2	0.0	4.38	135.8	0.00	VD
20	Gelemso		23.2	90.9	25.5	4.24	131.4	0.18	D
21	Gimbi		52.9	131.9	40.1	3.39	105.1	0.50	M
22	Ginir		276	190.7	144.7	3	93.0	2.97	H
23	Gore		105.3	194.3	54.2	2.72	84.3	1.25	H
24	H. Mariam		273.8	125.1	218.9	3.12	96.7	2.83	H
25	Jimma		127.2	101.5	125.3	4.51	139.8	0.91	M
26	K.Mengist		175.8	183.5	95.8	3.1	96.1	1.83	H
27	Kachisa		70	106.3	65.9	3.15	97.7	0.72	M
28	Koffele		129.9	98.1	132.4	2.84	88.0	1.48	H
29	Limugenet		115.9	188.3	61.6	3.81	118.1	0.98	M
30	Mieso		23.4	40.5	57.8	4.09	126.8	0.18	D
31	Metehara		49.1	21.1	232.7	5.56	172.4	0.28	MD
32	Moyale			76.6	0.0	2.93	90.8		
33	Nazreth		37.5	53.6	70.0	3.9	120.9	0.31	MD
34	Neghele		309.2	125.1	247.2	3.17	98.3	3.15	H
35	Nedjo		60.3	67.9	88.8	2.87	89.0	0.68	M
36	Nekemte		175.5	182	96.4	3.13	97.0	1.81	H
37	Robe (Bale)		83	118	70.3	3.06	94.9	0.87	M
38	Sekoru		101.3	152.2	66.6	3.58	111.0	0.91	M
39	Shambu		53.2	81.8	65.0	3.42	106.0	0.50	M
40	Wolliso		50.3	39.4	127.7	4	124.0	0.41	MD
41	Yabello		196.1	88.5	221.6	3.42	106.0	1.85	H
42	Ziway		28.7	21	136.7	4.36	135.2	0.21	D
1	Gode	SOMALI	32.4	59.4	54.5	4.68	145.1	0.22	D
2	Jijiga		19.5	49.5	39.4	3.41	105.7	0.18	D
1	A.Minch	SNNPR	139.6	119.8	116.5	3.45	107.0	1.31	H
2	Awassa		66.4	84.3	78.8	3.72	115.3	0.58	M
3	Bui		26.8	21.8	122.9	3.2	99.2	0.27	MD
4	Dilla		338.2	153.8	219.9	3.16	98.0	3.45	H
5	Hosaina		122.6	79.8	153.6	3.65	113.2	1.08	H
6	Jinka		229	136.7	167.5	3.07	95.2	2.41	H
7	Konso		192.7	88.2	218.5	3.57	110.7	1.74	H
9	Sawla		124.4	64.7	192.3	3.31	102.6	1.21	H
1	Assosa	B/GUMUZ	142.1	132.6	107.2	3.25	100.8	1.41	H
2	Chagni		180.9	185.3	97.6	3.42	106.0	1.71	H
1	Gambela	Gambela	106.2	104.3	101.8	3.96	122.8	0.87	M
1	A.A.Obs.	A.A	88.2	41.1	214.6	3.74	115.9	0.76	M
1	Diredawa	D.D	2	25.5	7.8	5.23	162.1	0.01	VD
1	Harar	Harai		42.4	0.0	3.65	113.2	0	VD

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 Evapo-transpiration (mm)



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