

## 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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# አህፅሮት

## እ.ኤ.አ ኦገስት 2009

በኦገስት የመጀመሪያዎቹ አስር ቀናት በከባቢ አየር ውስጥ ለዝናብ መኖር አስተዋፅዖ የሚያደርጉት የሚቲዎሮሎጂ ክስተቶች ከሞላ ጎደል የተመቻቸ ሁኔታ የነበራቸው በመሆኑ በአብዛኛው የክረምት ዝናብ ተጠቃሚ አካባቢዎች የተስፋፋ ዝናብ የነበራቸው ሲሆን በጋምቤላ፣ በደቡብ ብሔር ብሔረሰቦች ህዝቦች ክልል ሰሜናዊ አጋማሽ፣ በቤንሻንጉል ጉሙዝ፣ በአማራ፣ በትግራይ፣ በመካከለኛውና ምዕራብ ኦሮሚያ እንዲሁም ምስራቅ የሀገሪቷ ክፍሎች ዝናብ አግኝተዋል። ይህም ሁኔታ ለመክሩ የእርሻ እንቅስቃሴ በቂና ምቹ ሁኔታ የነበረው ሲሆን በአርብቶ አደሩና ከፊል አርብቶ አደሩ አካባቢም ለመጠጥ ውሃና ለግጦሽ ሳር አቅርቦት አዎንታዊ ተፅዕኖ እንደነበረው የታመናል።

በኦገስት ሁለተኛ አስር ቀናት አብዛኛዎቹ የክረምት ዝናብ ተጠቃሚ አካባቢዎች የተስፋፋ ዝናብ አግኝተዋል። ይሁንና የዝናቡ መጠን በሁሉም አካባቢ ተመሳሳይ አልነበረም። በአንዳንድ ቦታዎቻቸው ላይ ከበድ ያለ ዝናብ ሲመዘገብ በተቀሩት አካባቢዎች ዝናቡ መጠነኛ ነበር። በተለይም በትግራይ፣ በአማራ፣ በጋምቤላ፣ በቤንሻንጉል ጉምዝ፣ በኦሮሚያ፣ በደቡብ ብሔር ብሔረሰቦች ህዝቦች ክልል ሰሜናዊ ክፍል፣ በሰሜን ሶማሌ እና በደቡብ አፋር ዝናብ ነበር። ይህም ሁኔታ በአካባቢው ለሚካሄደው የመክር እርሻ እንቅስቃሴና በአካባቢው ለበቀሉት ቋሚ ተክሎች እና በአካባቢው ለሚኖሩ አርብቶ አደሮችና ከፊል አርብቶ አደሮች ለመጠጥ ውሃና ለግጦሽ ሳር አቅርቦት አዎንታዊ ተፅዕኖ የነበረው ሲሆን በአንዳንድ ጣቢያዎቻችን ላይ በተመዘገበው መረጃ መሠረት በ24 ሰዓት ውስጥ የጣለው ከፍተኛ ዝናብ በፍቼ ቡለን እንዲሁም በሆሳዕና በቡቃያ ላይ ባሉትና በቋሚ ተክሎች ላይ መጠነኛ ጉዳት መድረሱ ተጠቁሟል። በሌላ በኩል በደቡብ ብሔር ብሔረሰቦች እና ህዝቦች ደቡባዊ ክፍል፣ ቦረና፣ ምስራቅ ኦሮሚያ ደቡባዊ ክፍል፣ ሰሜን አፋርና ደቡብ ሶማሌ በአብዛኛው ደረቅ የአየር ሁኔታ አመዝናባቸው ነበር። ይህም በአካባቢው ለሚኖሩት አርብቶ አደሮችና ከፊል አርብቶ አደሮች እና ለመክሩ እርሻ እንቅስቃሴ አሉታዊ ተፅዕኖ እንደነበረው ይገመታል።

በኦገስት ሶስተኛ አስር ቀናት በአብዛኛው የክረምት ዝናብ ተጠቃሚ አካባቢዎች ላይ ብዙ ስፍራዎችን የሸፈነ ዝናብ ነበር። በሀገሪቱ መካከለኛውና ምዕራብ አካባቢዎች ላይ በስርጭት የተስፋፋና በመጠን ደግሞ ከባድ ዝናብ የተስተዋለ ሲሆን ይህም ሁኔታ በአካባቢው እየተካሄደ ላለው

የመኸር እርሻ እንቅስቃሴ እና ለቋሚ ተክሎች ጠቀሜታ እንደነበረው ይታመናል። በምስራቃዊ አጋማሽ አንዳንድ አካባቢዎች ግን የነበረው ዝናብ በስርጭት ደካማ ከመሆኑም በላይ የጊዜ ስርጭት የተስተካከለ አልነበረም። ስለሆነም ምስራቅ ትግራይ፣ አፋር፣ ምስራቅ ኦሮሚያ፣ ሰሜን ሶማሌ፣ አብዛኛው የደቡብ ብሔር ብሔረሰቦች እና ህዝቦች ክልል ደቡባዊ አጋማሽ የዝናቡ ስርጭትና መጠን ያልተስተካከለና ተከታታይነት ያልነበረው ቢሆንም በአካባቢው እየተካሄደ ላለው የመኸር እርሻ እንቅስቃሴ ማለትም በተለያዩ የእድገት ደረጃ ላይ ላሉ የመኸር ሰብሎች፣ ለቋሚ ተክሎችና ለአርብቶ አደሩና ለከፊል አርብቶ አደሩ ለግጦሽ ሳር እና ለመጠጥ ውሃ አቅርቦት በአንዳንድ ስፍራዎች ላይ በመጠኑም ቢሆን አሉታዊ ተፅዕኖ እንደነበረው ይታመናል።

ባአጠቃላይ ኦገስት ወር 2009 በአብዛኛው የወቅቱ ዝናብ ተጠቃሚ አካባቢዎች ተሸፈነ ዝናብ የነበረ ቢሆንም በቦታና በጊዜ ስርጭት አንፃር የዘነበው ዝናብ ተመሳሳይ አልነበረም። በአጠቃላይ ትግራይ፣ አማራ፣ አፋር ቤንሻንጉል ጉሙዝ፣ አብዛኛው ኦሮሚያ፣ ጋምቤላ፣ የደቡብ ብሔር ብሔረሰቦች ህዝቦች ክልል ሰሜናዊ አጋማሽ፣ ድሬደዋ፣ ሐረርጌ፣ ሰሜን ሶማሌ ዝናብ አግኝተዋል። በአንዳንድ አካባቢዎቻቸው ላይ ከባድ ዝናብ ነበራቸው። ይህም ሁኔታ ለተለያዩ የእድገት ደረጃ ላይ ላሉ የመኸር ሰብሎች ለቋሚ ተክሎች እና ለአርብቶ አደሩና ከፊል አርብቶ አደሩ ለግጦሽ ሳር እና ለውሃ አቅርቦት አመቺ ሁኔታ እንደነበረው ይታመናል። ሆኖም በምስራቅ የሀገሪቱ አጋማሽ ላይ የነበረው ዝናብ ተከታታይነት ያልነበረውና በመጠንም ሆነ በስርጭት ያልተስተካከለ ቢሆንም በተወሰነ መልኩ ለአካባቢው እየተካሄደ ላለው የመኸር እርሻ እንቅስቃሴና ለአጠቃላይ የእርሻ ሥራ እንቅስቃሴ እንደ አካባቢው ሁኔታ የተወሰነ ጠቀሜታ እንደነበረው እሙን ነው።

## **SUMMARY**

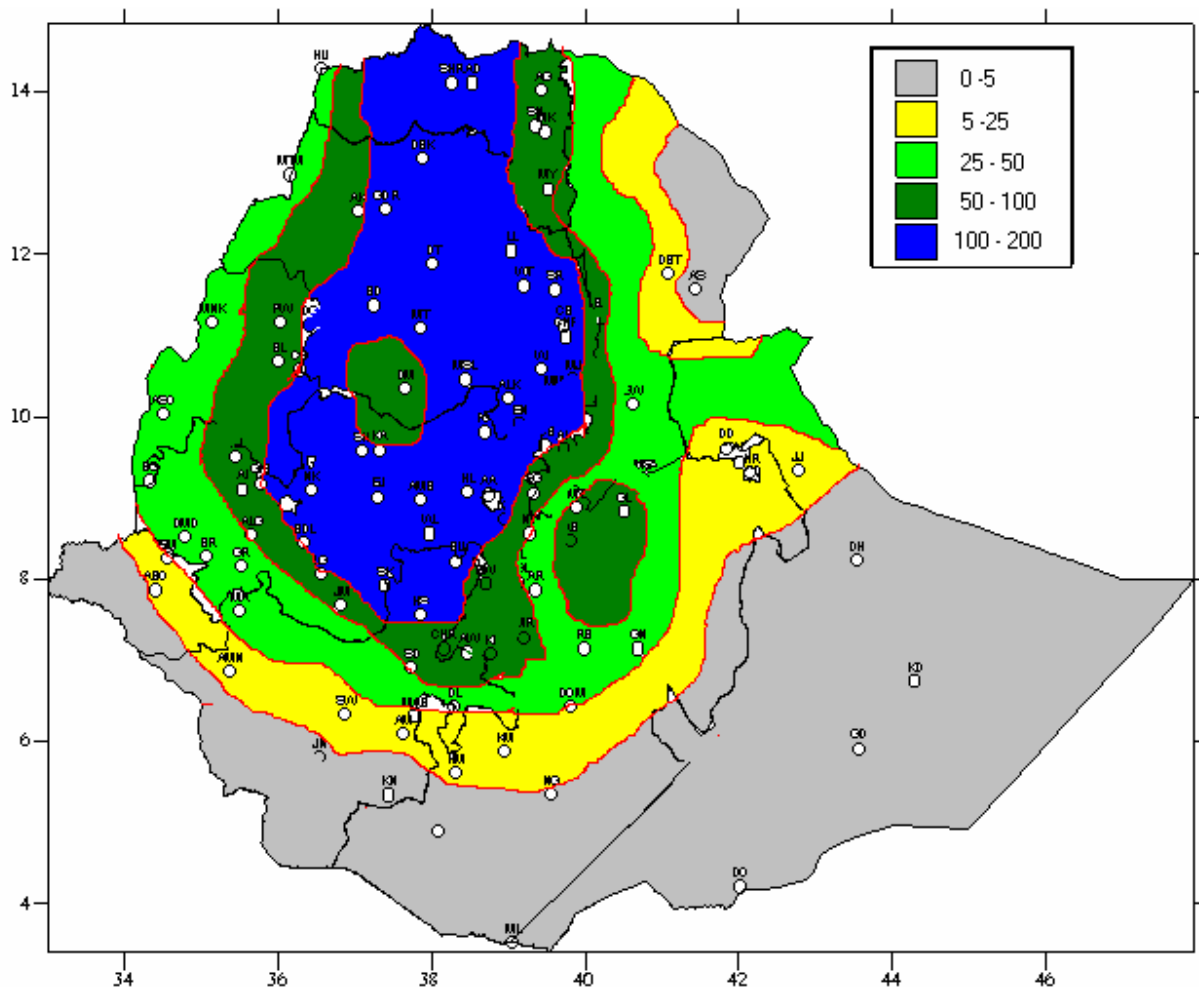
### **August 2009**

During the first dekad of August 2009, the rain bearing metrological phenomena was more or less in good condition in bringing rain over Meher growing and Meher rain benefiting areas of northern portions of SNNPR, Beshangul-Gummz, Amhara, Tigray, central and western Oromya,. The situation might have favored Kiremt the general agricultural activities, fulfilling the water demand of different crops at different phonological stages, perennial crops and availability of drinking water and pasture over pastoral and agro pastoral areas of eastern and northeastern parts of the country. Heavy fall was reported over some stations of central, northeastern and northern part of the country. Among reporting stations: Aira, Enwari, Bullen, Gondar, Nekemte, A.A (obs), Kachise, Mankush recorded heavy fall ranging 40.0–60.0 mm of rainfall in one rainy days. There is no crop damage report in the dekad.

During the second dekad of August 2009, much of Meher growing and Meher rain benefiting areas of the country have got better rain, however, the distribution was not the same in all places. Better rain reported areas were much of Tigray, Amhara, Gambella, Beshangul-Gumuz, Oromiya, northern portion of SNNPR, northern Somalia and Southern portions of Afar. The situation might have favored the on going seasonal agricultural activities, perennial crops, availability of pasture and drinking water over pastoral and agro pastoral areas. Some stations recorded heavy falls during the dekad. Among the reporting stations: Addis Ababa, Debre Markose, Debre Zeit, Jimma, Nekemte, Abomsa, Axum, Bullen, Dangila, Debre Tabor, Fitch, Woliso, Gimbi, Hossahina, Kachise, Kulumsa, Majate, Shiraro, recorded heavy fall ranging 31.5–68.5 mm of rainfall in one rainy day. From those stations Fitch, Bullen and Hossahina reported crop and trees damage due to heavy fall during the dekad. On the other hand, dry weather conditions were prevailed over southern portions of SNNPR, Borena, southern portions of eastern Oromiya, northern Afar, and southern Somali. This situation could have a negative impact on Meher agricultural activities, perennial, availability drinking water and pasture over postural and agro pastoral areas of the country.

During the third dekad of August 2009, the observed over all rainfall condition favored season's agricultural activity in most part of Meher growing areas. Better rainfall performance was showed over central and western parts of the country. This situation would have a positive impact for Meher agricultural activities and prelim crops. On the other hand, the distribution of rainfall was not good shape over eastern half of the country. As result eastern Tigray, Afar, eastern Oromia, northern Somali and southern half of SNNPR were received disorder distribution and amount of rainfall. However, it would have a positive contribution for Meher agricultural activities and pasture and water availability over pastoral and agro-pastoral areas.

Generally during the month of August, the seasonal rainfall activity covered over most parts of Kiremt benefiting areas. However, the distribution was not in the similar manner over eastern half of country. In general Tigray, Amhara Beshangul-Gumuz, Gambella, most of Oromia, northern half of SNNPR, Afar, Dire Dawa, Harari and northern Somali received rainfall. The situation might have positive impact on Meher agricultural activities, perennial crops and for pasture and drinking water availability over pastoral and agro-pastoral areas. On the other hand, in the second dekad of the month from Fitch, Bullen and Hossaina reported crop and trees damage due to heavy fall.



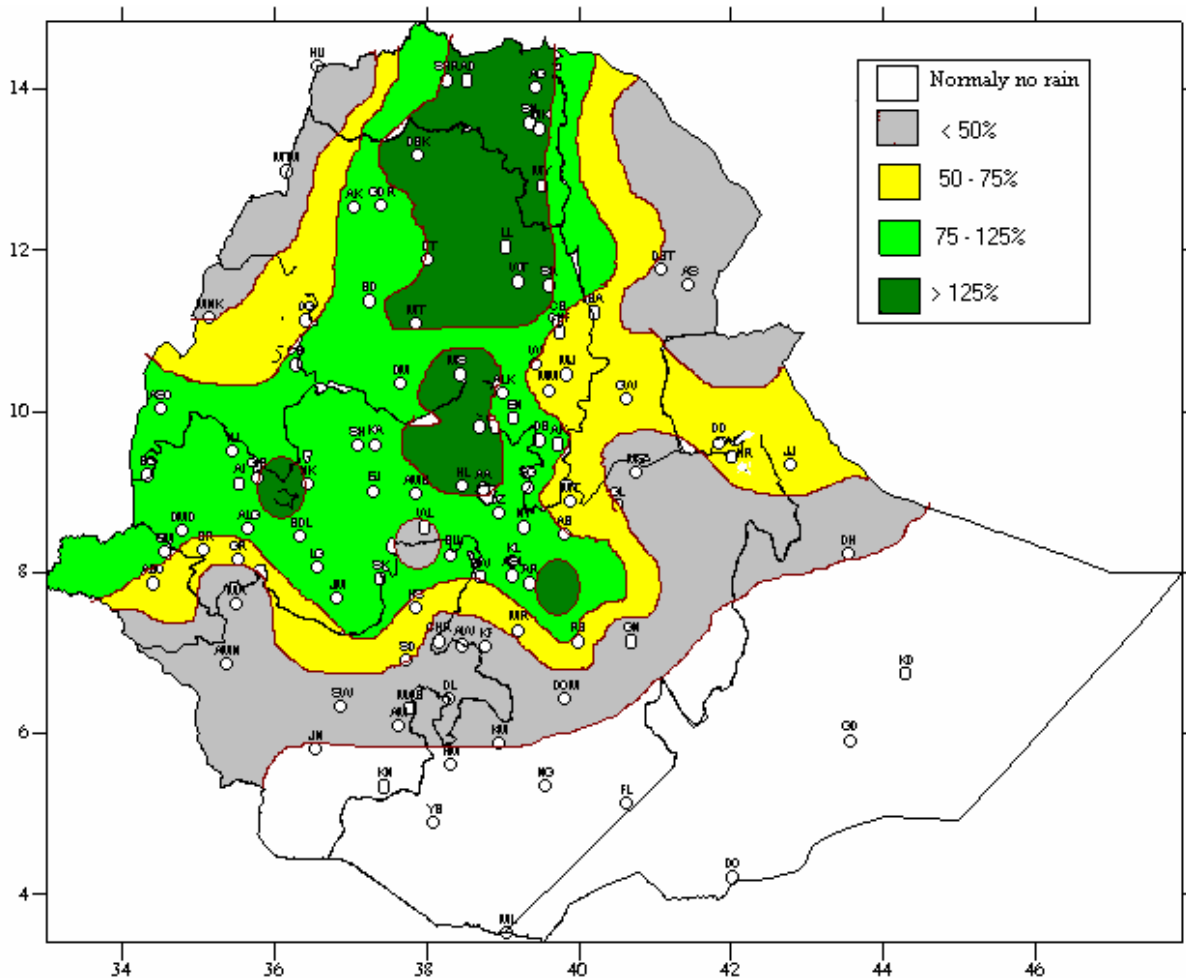
**Fig 1 Rainfall distribution in mm (21 – 31 August, 2009)**

## **1. WEATHER ASSESSMENT**

### **1.1 (21- 31 August, 2009)**

#### **1.1.1 Rainfall amount (Fig.1)**

Much of eastern, central and southern Tigray, eastern, central and southern Amhara, and central Oromiya received 100-200 mm of rainfall. Parts of eastern and western Tigray eastern and western Amhara, northern and central Beshangul-Gumuz, pocket areas western Afar, eastern and central Oromiya and pocket areas of central Amhara received 50-100 mm of rainfall. Much of western and central Afar, northern Somalia, eastern Oromiya, western and eastern Amhara, western and eastern Tigray received 25-50 mm of rainfall. Parts of eastern Afar, northern Somalia, southern and southwestern Oromiya and much of Gambella experienced 5-25mm of rainfall while the rest parts of the country received little or no rainfall.



**Fig. 2 Percent of normal rainfall distribution (21-31 August, 2009)**

**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)**

Much of eastern and central Tigray, eastern and central Amhara, southern and central Beshangul-Gumuz, western portions of Gambella, central, northern and western Oromiya and pocket areas of western Afar received normal to above normal rainfall while the rest parts of the country experienced below to much below normal rainfall.



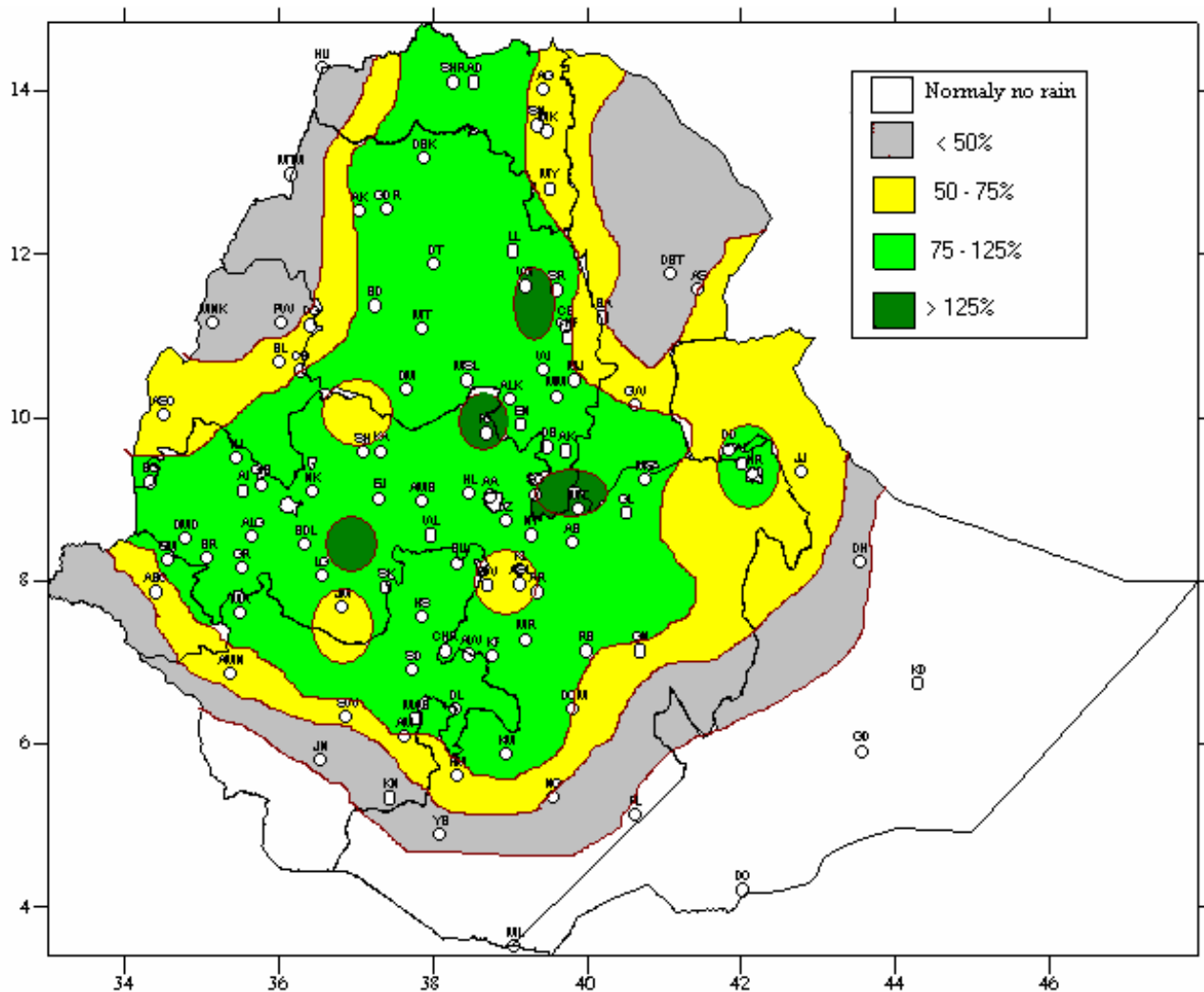


Fig. 4 Percent of Normal Rainfall distribution for the month of August, 2009

**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 central, eastern and northern Amhara, central, eastern and northern Tigray, western tip of, central, eastern Oromia, eastern margin of Beshangul-Gumuz and pocket areas of eastern Gambella received normal to above normal rain fall. The rest parts of the country received below normal to much below normal rainfall.

**1.3 TEMPERATURE ANOMALY**

During the month under review some areas exhibited extreme maximum air temperature above 35<sup>0</sup> C. Among the recording stations Gode, Gambella, Aysha, Mille, Assayta, Dubti, Semera and Chercher recorded extreme maximum temperature as high as 36.5, 37.5, 39.0, 44.0, 43.0, 45.0, 43.2, and 35.5<sup>0</sup> C respectively.

## **2. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE**

### **2.1 VEGETATION CONDITION AND IMPACT ON AGRICULTURE**

Generally during the month of August, season's rainfall covered over most parts of Kiremt benefiting areas. However, the distribution was not in similar manner over eastern half of country. In general Tigray, Amhara Beshangul-Gumuz, Gambella, most of Oromia, northern half of SNNPR, Afar, Dire Dawa, Harari and northern Somali received rainfall. The situation might have positive impact Meher agricultural activities, prelim crops and for pasture and drinking water availability over pastoral and agro-pastoral areas. On the other hand, in the second dekad of the month from Fitch, Bullen and Hossaina reported crop and trees damage due to heavy fall.

### **2.2 EXPECTED WEATHER IMPACT ON AGRICULTURE DURING THE COMING MONTH**

The anticipated normal and in some places above normal rainfall will observe over western Tigray, western Amhara, Beshangul-Gumuz, western and central Oromia, will have positive impact for the on going Meher agricultural activities, perennial crops and availability of pasture and drinking water over pastoral and agro pastoral areas. On the other hand the anticipated below normal rainfall over eastern Tigray, eastern Amhara, eastern Oromia, northern Somali, Afar, Dire Dawa and Harari. This situation will have a negative impact for the Meher agricultural activities and pasture and drinking water availability. Besides, will expect light rainfall over southern and south eastern low lands. This situation will have a positive impact for the availability of pasture and drinking water for pastoral and agro pastoral areas.

**Table 1 Crop Phenological report for the month of August 2009**

Station name	Region	Zone	Woreda	Major Crops			Phases		
				1	2	3	1	2	3
Adet	Amahara	M/ Gojjam	Adet	Wheat	Barely	Teff	Ta	Fl	Sh
A/Ketem	Amahara	S/ Shewa	Laybet	Teff	Nug	-	Sh	El	-
Chagni	Amahara	Awi	Guagnua	Maize	Millet		FR	Ti	-
Zeway	oromiya	E/Shewa	Ziway	Wheat	Teff	-	Ti	TL	-
D/Birhan	Amahara	S/ shewa	D/Birhan	Barley	Wheat	Maize	Sh	Ta	Ta
Fitch	Oromiya	N/Shewa	GrarJarso	Teff	Wheat	Bean	TL	Ti	Fl
Gelemeso	Oromia	M/ Haraghe	Habro	Maize	-	Teff	FR	-	P/Sow
Bati	Amahar	Oromiya	S/wello	Teff	Peans	-	Ta	-	-
Beddle	Oromiya	Illubabour	Yem	Maize	Teff	-	WR	Sh	-
Dangla	Amahra	Agewawi	Dangla	Teff	Millet	-	TL	Em	-
Kulumsa	Oromiya	Arsi	Tiya	Wheat	Beans	-	Ti	Em	-
Motta	Amhara	W/Gojjam	Hulet enese ij	Teff	-	-	TL	-	-
Pawe	Amhara	Agewawi	Dangla	Maize	Seaseme	-	-	-	-
L/ Genet	Oromiya	Jimma	Bedele	Maize	Millet	Teff	Em	Sh	Em
Majate	Amahara	S/ Shewa	Mizan antakiya	Teff	-	Maize	Ta	-	Ta
M/ Meda	Amahara	S/ Shewa	Gira mider	-	Barley	Maize	-	Ti	-
M/ Selam	Amahara	S/ Shewa	D/Sina	Wheat	Teff	Bean	Em	P/sow	FL
Chira	Oromiya	Illbabour	kulukonta	-	Oats	-	TL	-	-
D/Work	Amahra	E/Gojam	Enarjenaw ga	Wheat	Teff	-	Tl	Em	-
Bullen	B/Gumuz	Metekel	Bullen						
Shaura	Amahara	S/ Gonder	ALEF.T	Teff	-	-	TL	-	-
Shambu	Oromia	Horo Wollega	Horo	Beans	Peans	Wheat	Bu	Bu	Em
Sekoru	Oromia	Jimma	Sokoru	Maize	Teff	-	FL	Em	-
S/Gebeya	Amahara	M/ Shewa	H/mariam & kesem	Wheat	Beans	-	Ti	Bu	-

**Key**

P/S= plant/ sow  
 Em= Emerge  
 TL=Third Leaf  
 FL = Fifth Leaf  
 SL = Seventh Leaf  
 YR= Yellow Ripe  
 NL = Ninth Leaf  
 El =Elongation  
 Ta= Tassel

Sh= Shoot  
 BS= Bear Soft  
 BH= Beary Hard  
 FI =flower  
 PH= Pin Heading  
 He= Heading  
 Bu= Buddin  
 CR=Consumer Ripeness  
 GR= Green Ripeness  
 WR= Wax Ripeness

LGR= Light green Ripeness  
 FR= Full Ripeness  
 R= Ripeness  
 H= Harvest  
 x = Data not available  
 Ti= Tiller  
 YGR= Yellow Green Ripeness

Table 1. Climatic and Agro-Climatic elements of different stations for the month of August 2009								
No.	Stations	Region	A/ rainfall	%of Normal	Eto mm/day	Monthly Eto	Moisture	Moisture Status
1	Adigrat	TIGRAY	81.4	54	3.3	98.7	0.9	M
2	Adwa		276.2	115	3.4	101.4	2.8	H
3	Atsbi		235.6	NA	NA	NA	NA	NA
4	Axum		180.4	85	3.2	94.8	1.8	H
5	Humera		99.3	49	5.5	163.5	0.5	MD
6	Maichew		141.1	71	3.4	100.8	1.4	H
7	Maytsermi		318.1	NA	NA	NA	NA	NA
8	Senkata		116.8	56	3.8	113.4	1.0	H
9	Mekele		161.5	80	3.6	107.4	1.5	H
10	Shaura		303.9	NA	NA	NA	NA	NA
11	Sheraro		117.8	NA	NA	NA	NA	NA
12	Shire		205.6	76	3.7	110.4	3.0	H
1	Assayta	AFAR	3.70	10	6.40	192.00	0.02	VD
2	Dubti		36.60	76	5.87	176.10	0.20	D
3	Mille		37.20	NA	NA	NA	NA	NA
1	A/Ketema	AMHARA	295.3	89	3.0	88.8	3.3	H
2	Adet		276.0	817	NA	NA	NA	NA
3	B. Dar		372.0	97	3.0	90.0	4.1	H
4	Cheffa		41.0	18	NA	NA	NA	NA
5	Combolcha		320.3	125	3.7	109.5	2.9	H
6	D.Berehan		273.2	104	3.2	96.9	2.8	H
7	D.Markos		352.9	116	3.0	89.7	4.8	H
8	D.Tabor		404.6	93	3.0	89.1	4.5	H
9	D/work		294.5	133	3.5	105.6	2.8	H
10	Enewari		222.2	75	NA	NA	NA	NA
11	Gondar		298.0	100	3.4	100.8	3.1	H
12	Lalibela		214.1	92	3.0	89.7	2.4	H
13	Layber		174.6	NA	3.0	89.7	2.4	H
14	M.Meda		245.8	95	3.3	97.5	2.5	H
15	Majete		279.9	93	4.1	121.8	2.3	H
16	Mankush		179.9	NA	NA	NA	NA	NA
17	M/ Selam		202.2		3.5	105.6	1.9	H
18	Mota		328.6	115	3.7	111.0	3.0	H
19	S.Gebeya		261.3	88	2.9	86.4	3.0	H
1	A. Robe	OROMIA	225.3	105	3.5	104.1	2.2	H
2	Abomsa		192.2	119	4.2	126.3	1.5	H
3	Alemaya		97.9	63	3.7	112.2	1.0	H
4	Alge		312.5	95	3.0	89.4	3.5	H
5	Ambo		271.9	134	3.0	90.6	3.0	H
6	Bedelle		169.3	55	2.9	107.3	1.6	H
7	Bati		188.5	67	3.8	114.9	1.6	H
8	Bui		140.7	67	2.8	84.3	1.7	H
9	Chria		234.7	105	2.8	82.8	2.8	H
10	D.Zeit		240.1	110	3.6	109.2	2.2	H
11	Dm.Dolo		173.4	104	2.8	83.4	6.3	H
12	D/mena		12.7	47	3.7	112.2	0.1	D
13	Fiche		406.6	130	3.4	102.0	4.2	H

14	Gelemso		107.8	63	4.1	123.0	1.0	M
15	Gore		297.1	90	2.7	79.5	3.7	H
16	Gimbi		339.7	102	2.9	88.2	3.9	H
17	Ginir		0.7	2	4.8	144.9	0.0	VD
18	Jimma		304.7	143	3.1	91.8	3.3	H
19	Kachise		416.7	102	2.7	80.7	5.6	H
20	koffele		173.4	108	2.9	88.2	2.0	H
21	Kulumsa		204.0	151	3.3	97.5	2.1	H
22	Limugent		198.7	72	3.0	90.6	2.2	H
23	Masha		303.3	92	2.3	69.6	4.8	H
24	Metehara		85.8	69	5.6	168.0	0.7	M
25	Mieso		103.0	62	5.4	162.6	0.6	M
26	Nazereth		108.8	51	4.1	124.2	0.9	M
27	Negelle		0.0	0	4.9	148.2	0.0	VD
28	Nekemte		349.1	93	2.6	78.0	5.9	H
29	Nuraera		163.3	NA	NA	NA	NA	NA
30	Robe		132.6	111	3.9	118.2	1.1	H
31	Sekoru		255.0	114	3.1	92.1	2.8	H
32	Shambu		329.0	88	NA	NA	NA	NA
33	Woliso		283.3	102	NA	NA	NA	NA
34	Ziway		82.1	69	4.3	129.3	0.6	M
1	Arbaminch	SNNPR	16.2	37	4.5	134.7	0.1	D
2	Awassa		100.4	80	3.9	117.6	0.9	M
3	H.Mariyam		1.0	2	2.9	86.7	0.0	VD
4	K/Mingist		0.0	0	3.0	90.9	0.0	VD
5	Hossaina		153.6	83	3.2	96.0	1.8	H
6	Jinka		16.2	21	3.5	103.5	0.2	D
7	Konso		1.4	6	4.5	133.5	0.0	VD
8	Sawla		90.3	52	3.4	101.1	0.9	M
1	Bullen	B/GUMUZ	339.6	93	3.0	88.5	3.8	H
2	Chagni		233.2	66	3.0	89.4	2.6	H
3	Dangila		379.4	106	3.0	89.7	4.2	H
4	Asossa		201.4	85	3.3	99.6	2.0	H
5	Pawe		181.0	47	3.5	104.7	2.4	H
1	Jiiiga	SOMALI	0.0	0	6.2	185.1	0.0	VD
2	Gode		61.5	51	5.2	156.0	0.4	MD
1	D/Dawa	D/DAWA	74.20	58.61	6.37	191.10	0.39	MD
1	Harar	HARAR	136.3	115.2	3.8	112.5	1.2	H
1	A.A. Bole	A.A	227.9	96.5	3.4	100.5	2.6	H
2	A.A. Obs		300.6	108.1	2.9	86.1	4.6	H

### Explanatory Note      Reference Evapo-transpiration (mm)

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

## **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.

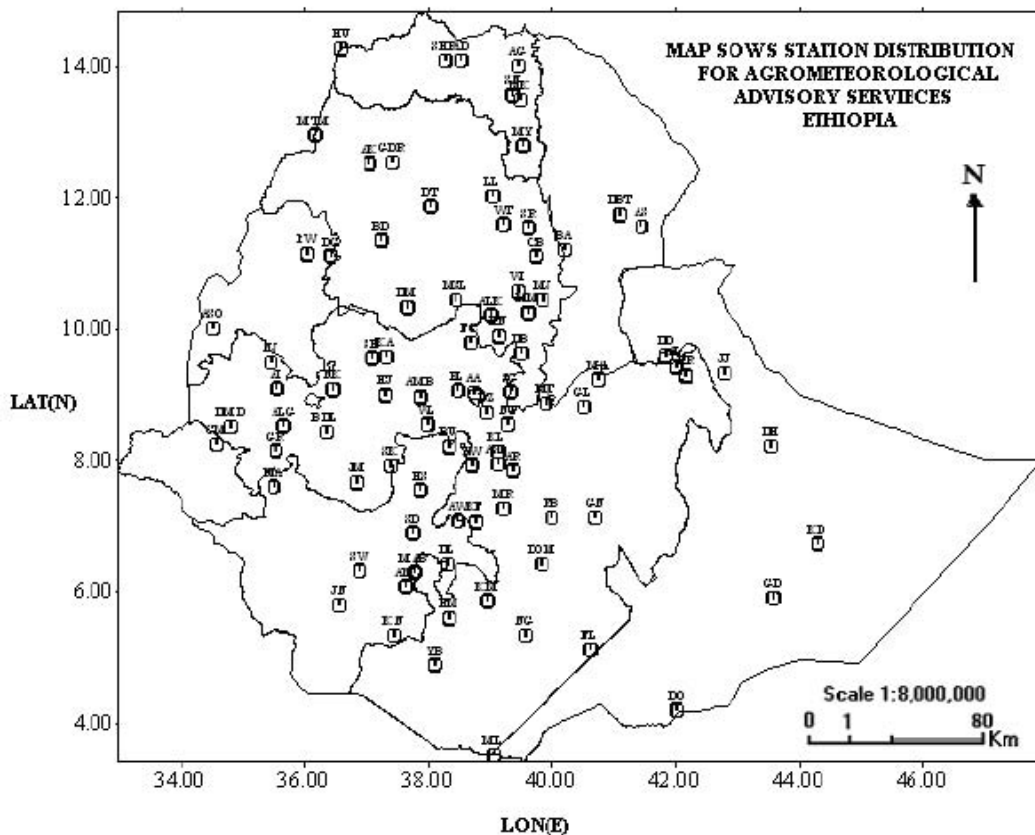
**DEKAD:** - First or second ten days or the remaining days of a month.

**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.



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. Habour	DH	Holleta	HL	Moyale	ML		