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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እ.ኤ.አ ኦገስት 2009

በኦገስት የመጀመሪያዎቹ አስር ቀናት በከባቢ አየር ውስጥ ለዝናብ መኖር አስተዋፅየ 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 ለመኸሩ 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 የመኸር እርሻ እንቅስቃሴና በአካበቢው 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 ብሔብረሰቦች እና ህዝቦች ደቡባዊ ክፍል፣ ቦረና፣ ምስራቅ ኦሮሚያ ደቡባዊ ክፍል፣ ሰሜን አፋርና ደቡብ ሶማሌ በአብዛኛው ደረቅ የአየር ሁኔታ አመዝኖባቸው ነበር። ይህም በአካባቢው ለሚኖሩት አርብቶ አደሮችና ከፊል አርብቶ አደሮች እና ለመኸሩ 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

የመኽር 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 የመኽር እርሻ እንቅስቃሴ ማለትም በተለያዩ የእድገት ደረጃ ላይ ላሉ የመኽር ሰብሎች፣ ለቋሚ ተክሎችና ለአርብቶ አደሩና ለከፊል አርብቶ አደሩ ለግጦሽ ሳር እና ለመጠጥ ውሃ አቅርቦት በአንዳንድ ስፍራዎች ላይ በመጠኑም ቢሆን አሉታዊ ተፅዕኖ እንደነበረው ይታመናል።

ባለጠቃላይ 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 የመኽር 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 የመኽር 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.

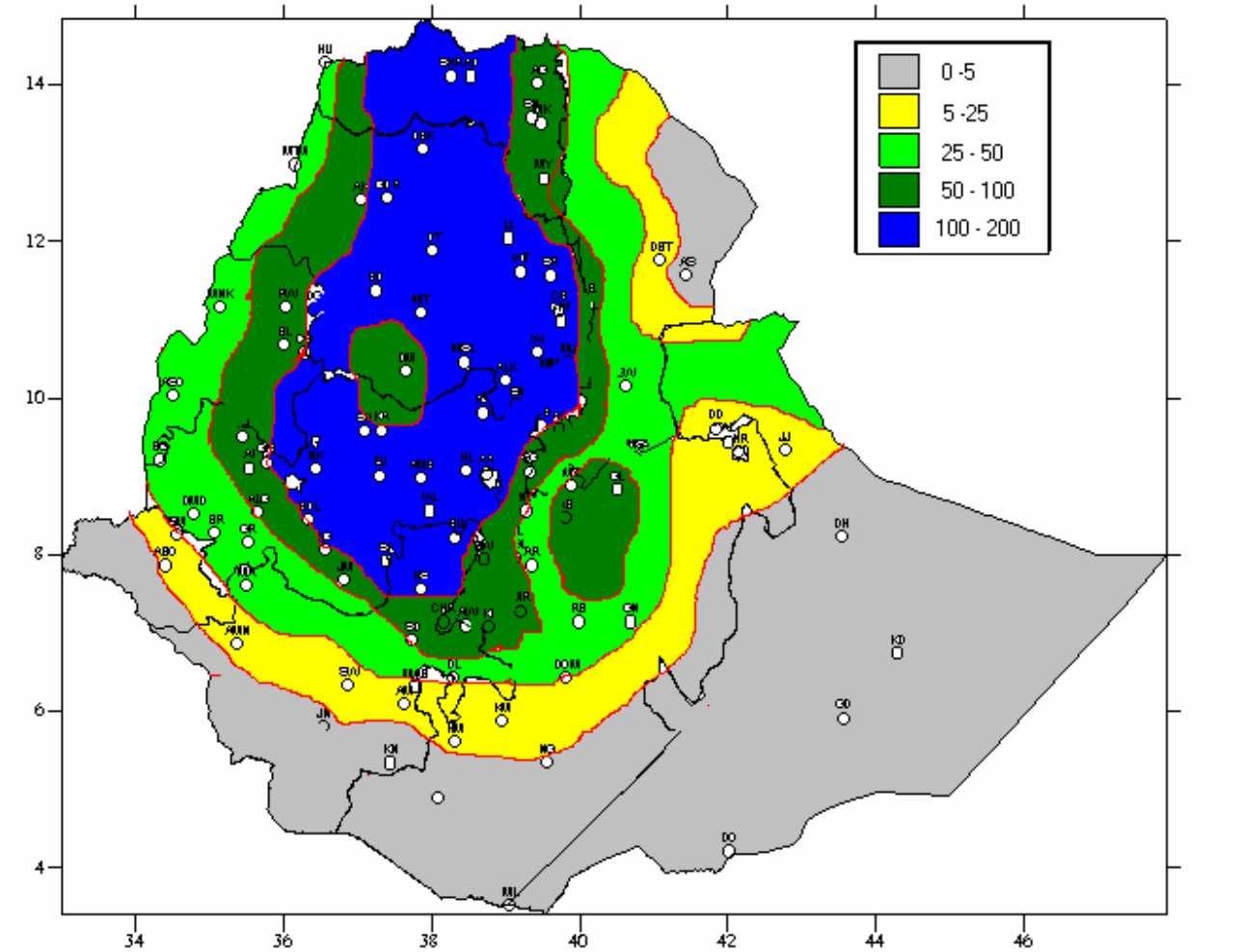


Fig 1 Rainfall distribution in mm (21 – 31 August, 2009)

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.

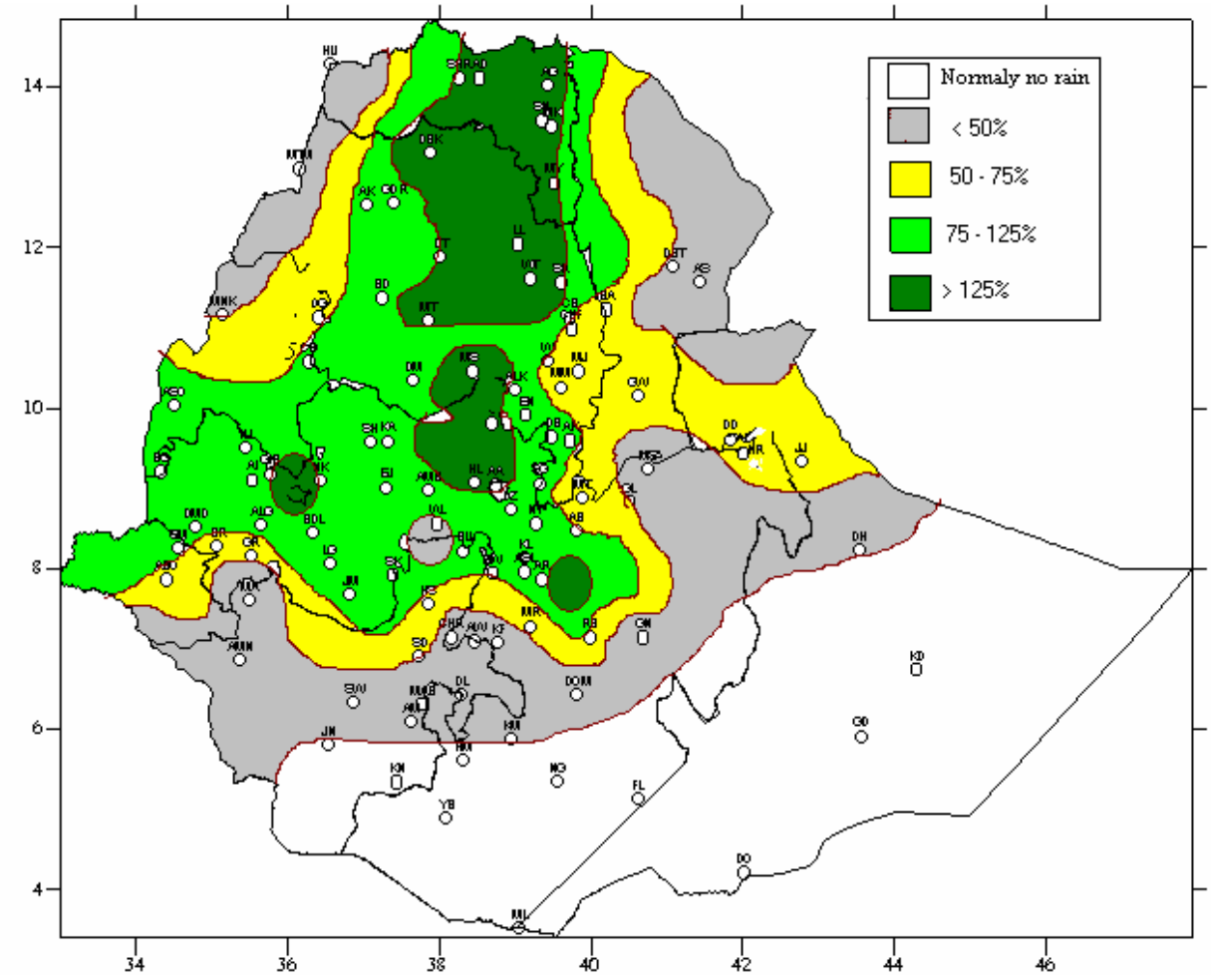


Fig. 2 Percent of normal rainfall distribution (21-31 August, 2009)

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**.**

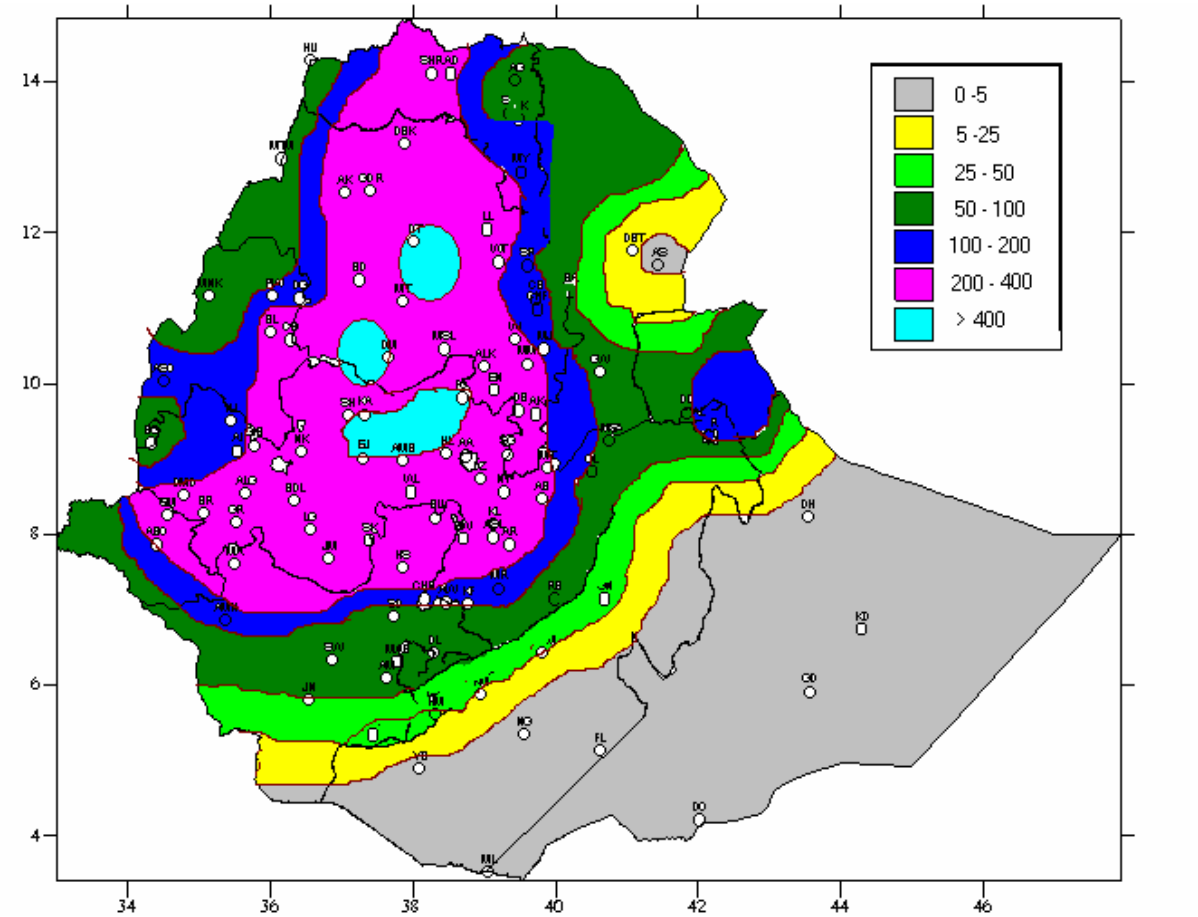


Fig. 3 Rainfall distribution in mm for the month of August, 2009

1.2 August, 2009

1.2.1 Rainfall distribution (Fig.3)

Pocket area of Central Oromia, central and southern Amhara received greater than 400 mm of rainfall, most parts of Tigray, Amhara, central, western and northeastern Oromia received 200-400 mm of rainfall, western and eastern Margin of Tigray, and Amhara, eastern margins of Beshangul-Gumuz, northern SNNPR, pocket areas of western, central and eastern Oromia pocket areas of eastern Gambella received 100-200 mm of rainfall. Much of Gambella, western and southwestern Oromia, some parts of western Amhara, pocket areas of western Tigray, some parts southern SNNPR received 25-50 mm of rainfall. Eastern half of Afar, pocket areas of southern SNNPR and southern Oromiya, northern Somalia received 5-25 mm of rainfall. The rest parts of the country received below 5 mm of rainfall.

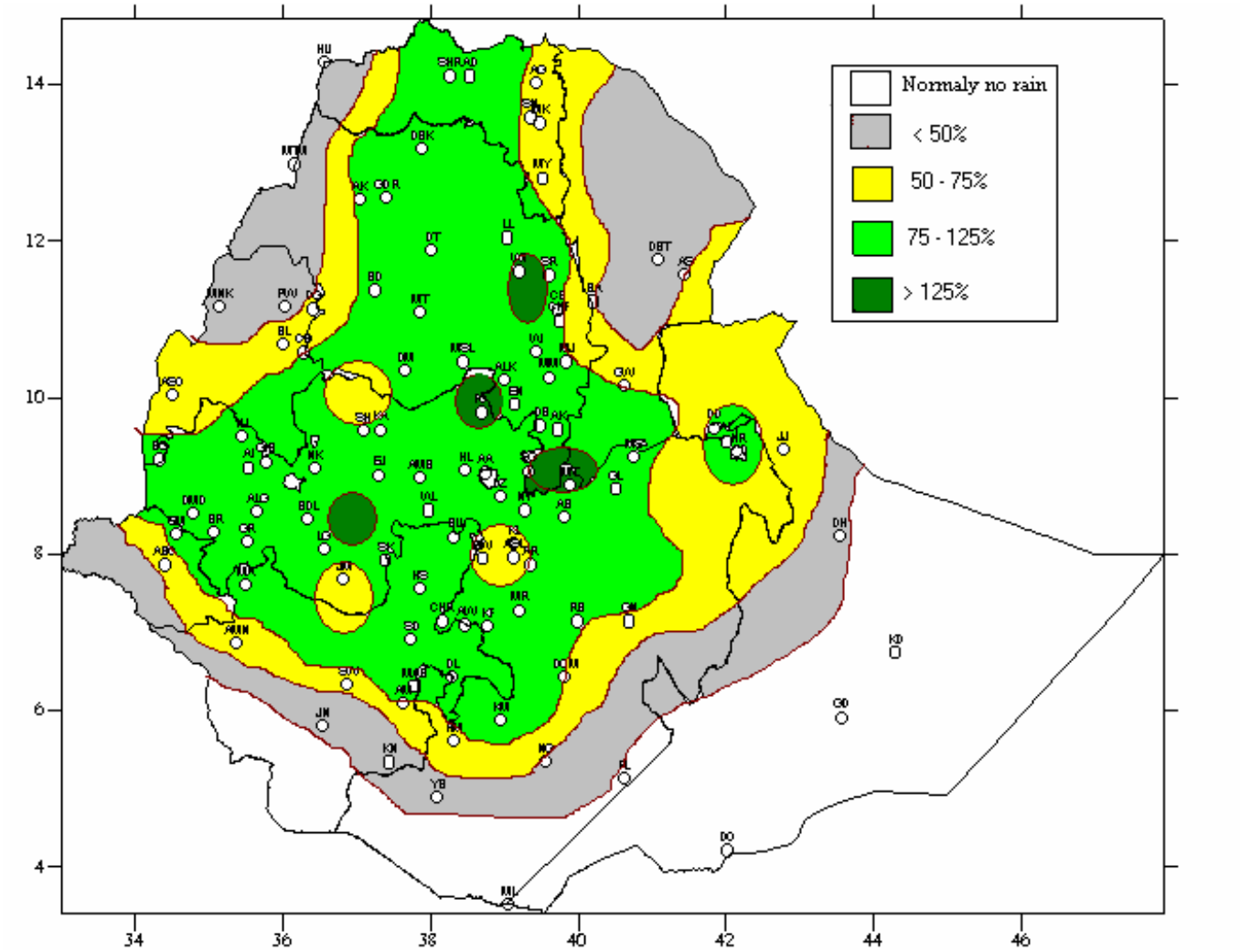


Fig. 4 Percent of Normal Rainfall distribution for the month of August, 2009

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 ^{0}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 ^{0}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/Gojiam	Hulet ij enese	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	Enarjenawga	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 = Fitfth 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

EFNITION OF TERMS

ABOVE NORMAL RAINFALL: - Rainfall in excess of 125% of the long term mean

BELOW NORMAL RAINFALL: - Rainfall below 75 % of the long term mean.

NORMAL RAINFALL: - Rainfall amount between 75 % and 125 % of the long term mean.

BEGA: - It is characterized with sunny and dry weather situation with occasional falls. It extends from October to January. On the other hand, it is a small rainy season for the southern and southeastern lowlands under normal condition. During the season, morning and night times are colder and daytime is warmer.

BELG: - Small Rainy season that extends from February to May and cover s southern, central, eastern and northeastern parts of the country.

CROP WATER REQUIREMENTS: - The amount of water needed to meet the water loss through evapotranspiration of a disease free crop, growing under non-restricting soil conditions including soil water and fertility.

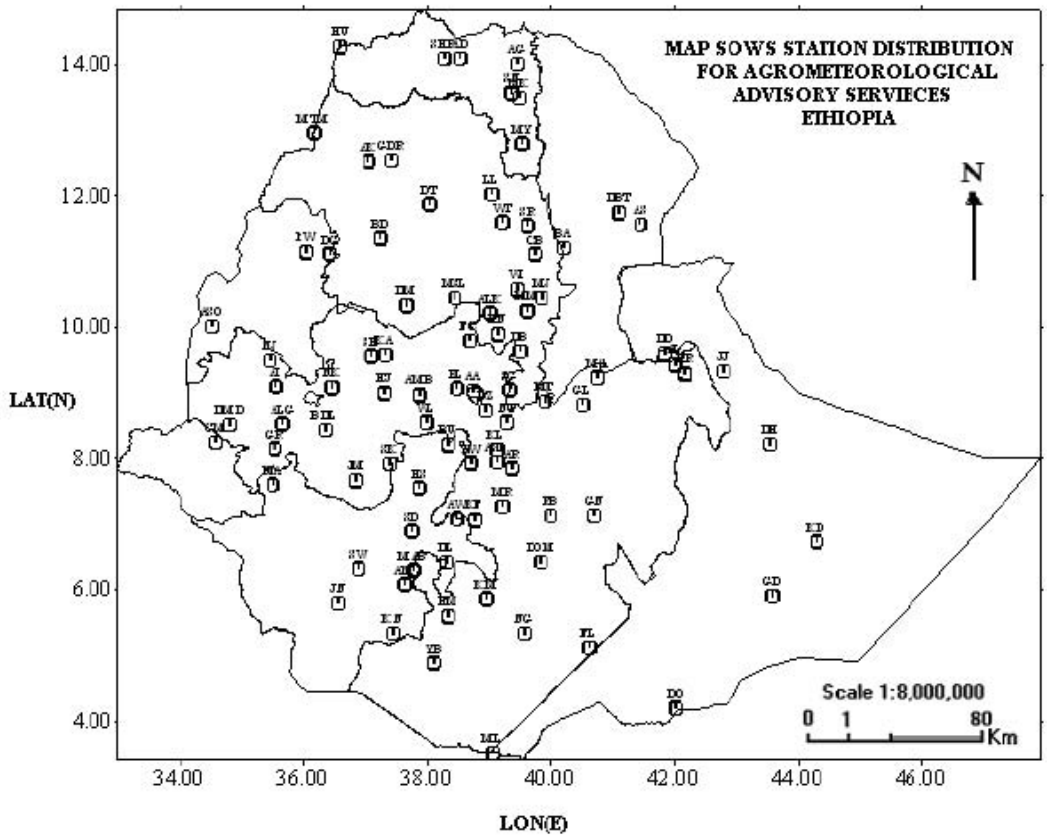
DEKAD: - First or second ten days or the remaining days of a month.

EXTREME TEMPERATURE: - The highest or the lowest temperature among the recorded maximum or minimum temperatures respectively.

ITCZ: - Intertropical convergence zone (narrow zone where trade winds of the two hemispheres meet.

KIREMT: - Main rainy season that extends from June to September for most parts of the country with the exception of the southeastern lowlands of the country.

RAINY DAY: - A day with 1 or more mm of rainfall amount.



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