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 ፌብሩዋሪ 2009

እ.ኤ.አ በፌብርዋሪ 2009 በመጀመሪያ አስርተ ቀናት የነበረው የአየር ሁኔታ በአጠቃላይ የመካከለኛውና ምዕራብ ኦሮሚያ፣ የምስራቅ አማራ፣ የደቡብ ብሔር ብሔረሰቦችና ህዝቦች ክልል፣ የጋምቤላና የቤንሻንጉል ጉሙዝ አንዳንድ ቦታዎች ቀላል ዝናብ ያገኙ ሲሆን ይህም የዝናብ ሁኔታ ለበልግ የማሳ ዝግጅት እና ለአጠቃላይ የእርሻ እንቅስቃሴ ጠቀሜታ እንደነበረው ይታመናል። በሌላ በኩል በተቀሩት የሀገሪቱ የስምጥ ሸለቆና የምስራቅ ደጋማ ቦታዎችና የአማራ አንዳንድ ቦታዎች ላይ በአብዛኛው የደመና ሽፋን የነበረ ሲሆን ይህም ሁኔታ የመሬቱ እና የተክሎች የትነት መጠን በመቀነስ የአፈር እርጥበት ድርቀትን በመቀነስ ረገድ አስተዋፅየ እንደነበረው ይታመናል። በተጨማሪ በምዕራብ አማራ እና በደቡብ ኦሮሚያ ደጋማ ቦታዎች ላይ አነስተኛ ዝናብ እንደነበር ለማወቅ ተችሏል። ይህም ሁኔታ በደቡብ ኦሮሚያ ለሚካሄደው የበልግ ወቅት የማሳ ዝግጅት እና ለአጠቃላይ የእርሻው እንቅስቃሴ አዎንታዊ ተፅዕኖ ነበረው።

እ.ኤ.አ በፌብሪዋሪ 2009 በሁለተኛው አስርተ ቀናት የነበረው የዝናብ ሁኔታ በምዕራብና ደቡብ ኦሮሚያ፣ በምዕራብ አማራ፣ በጋምቤላና በደቡብ ብሔር ብሔረሰቦችና ህዝቦች ክልል በተለያዩ ቦታዎች የተገኘው መጠነኛ ዝናብ የበልግ እርሻ እንቅስቃሴያቸውን ቀድሞ ለሚጀምሩ አካባቢዎች ለቋሚ ሰብሎች ማሳ ዝግጅት በጎ ጎን እንደነበረው የታመናል። በሌላ በኩል በደቡብ ምስራቅ፣ በሰሜን ምስራቅና የሰሜን ምዕራብ ቆላማ ስፍራዎች ታይቶ ከነበረው የቀን ከፍተኛ ሙቀት መጨመር አኳያ ቀደም ብሎ ከነበረው ደረቅ ሁኔታ ጋር ተያይዞ በመጠጥና የግጦሽ ሳር አቅርቦት ላይ አሉታዊ ተፅዕኖ እንደነበረው ይገመታል።

እ.ኤ.አ በፌብሪዋሪ 2009 በሶስተኛው አስርተ ቀናት የነበረው የዝናብ ሁኔታ በአገሪቷ ደቡብ ምዕራብና ሰሜን ምስራቅ አከባቢዎች ላይ የተስፋፋ ዝናብ ሲሰጡ የቆዩት የሚቲዎሮሎጂ ክስተቶች እስከ ማርች የመጀመሪያዎቹ አስር ቀናት አጋማሽ ድረስ ከሞላ ጎደል በተመሳሳይ መልኩ ቀጥሏል። ይህም ሁኔታ ለበልግ የእርሻ ስራ እንቅስቃሴ፣ ለአርብቶ አደሩና ከፊል አርብቶ አደሩ ለመጠጥ ውሃ እና ለግጦሽ ሳር እንዲሁም በአካባቢ ለሚበቅሉ ቋሚ ተክሎች የተሻለ አስተዋፅየ እንደሚኖራቸው ሲጠበቅ በሌላ መልኩ በመጨረሻዎቹ አስር ቀናት በደቡብ ምዕራብ ኢትዮጵያ አካባቢዎች የተሻለ ዝናብ የሚያገኙ ሲሆን ይህም ለአካቢቢው የበልግ የእርሻ

እንቅስቃሴ አዎንታዊ ተፅዕኖ የነበረው ሲሆን በምስራቅ የአገሪቱ ክፍሎች ላይ ዝናቡ በመጠንና በስርጭት ቀስ በቀስ የመዳከም አዝማሚያ በአካባቢው ለሚኖሩ አርብቶ አደሮች እና ከፊል አርብቶ አደሮች የጎላ ጉዳት እንዳልነበረው ይገመታል።

በአጠቃላይ መልኩ ሲታይ በፌብሪዋሪ ወር የነበረው የዝናብ መጠን እንብዛም የተጠናከረ መልክ ባይኖረውም በምዕራብ የሀገሪቱ አጋማሽ ላይ ግን ዝናቡ ተከታታይነት ያለውና በመጠንና በቦታ ሽፋን ረገድ ጥሩ ገፅታ እንደነበረው ተስተውሏል። ይህም ለበልግ እርሻ እንቅስቃሴ ማለትም ለዘርና ለማሳ ዝግጅት እንዲሁም ለቋሚ ተክሎችና ለአርብቶ አደሩና ለከፊል አርብቶ አደሩ ለመጠጥ ውሃ አቅርቦት እና ለግጦሽ ሳር ልምላሜ አዎንታዊ ተፅዕኖ የነበረው ሲሆን ይህም ለበልግ አብቃይ አካባቢዎች ለወቅቱ ዝናብ መደበኛውን ፈር ተከትሎ መጣሉ ለበልጉ እርሻ እንቅስቃሴ በጎ ጎን መኖሩ ከመረጃ ዘጋቢ ጣቢያዎቻችን ለማወቅ ተችሏል። በአጠቃላይ መልኩ ሲታይ የፌብሪዋሪ ዝናብ በአብዛኛው አማራ ኦሮሚያ እና የደቡብ ብሔር ብሔረሰቦችና ህዝቦች ክልል ለበርካታ ቀናት ዝናብ ሲያገኙ የቆዩ ሲሆን በሰሜን ምስራቅ አማራ በምዕራብ ኦሮሚያና አጎራባች የደቡብ ብሔር ብሔረሰቦች ክልል አንዳንድ ቦታዎች ላይ ከባድ ዝናብ የተመዘገበ መሆኑን ከዝናብ መረጃዎች ለማወቅ ተችሏል ሆኖም ግን በአዝርዕትና በሰው ላይ ያደረሰው ጉዳት አልነበረም። በወሩ መጨረሻ ቀናት ውስጥም ከደቡብ ምዕራብ እስከ ሰሜን ምስራቅ የሚገኙትን የበልግ አብቃይ አካባቢዎች የተስፋፋ ሲሆን ይህም ለበልጉ እርሻ እንቅስቃሴ በጎ ጎን እንደነበረው ታውቋል። ከዚህም ሌላ በወሩ ውስጥ የተሻለ የዝናብ መጠን ስርጭት በምዕራብ ኦሮሚያ በደቡብ ብሔር ብሔረሰቦች ክልል በምስራቅ አማራ አካባቢዎች ሰፖኑ የዝናብ መጠንና ስርጭት ይነስ እንጂ የደቡብ እና የሰሜን ሶማሌ የምስራቅ ኦሮሚያና የምዕራብ አማራ አካባቢዎችም ለተወሰነ ቀናት ዝናብ አግኝተዋል ይህም ለበልጉ ወቅት የእርሻ ሥራ እንቅስቃሴ ለአርብቶ አደሩና ለከፊል አርብቶ አደሩ በጎ ጎን እንደነበረው ተስተውሏል።

SUMMARY
February 2009

During the first dekad of February 2009, light rain prevailed over pocket areas of central and western Oromia, eastern Amhara, SNNPR, Gambela and Benshangul Gumuz, this little rainfall might have a positive impact for land preparation and agricultural activities over Belg benefiting areas, on the hand, an increase in cloud coverage over few places of the rift valley, eastern highlands and eastern Amhara might have favored recharging of moisture in the atmosphere which might decrease evapo-transpiration that favored perennial crops. In addition to this, high lands of western Amhara and southern Oromiya received little amount of rainfall, which favored land preparation and agricultural activities over southern Oromiya.

During the second dekad of February 2009, the observed rain over western and southern Oromia, western Amhara, Gambella and SNNPR might have favored for Belg agricultural activities where normally started earlier as well as perennial crops. Moreover, the observed small rains over northeast, eastern and central Ethiopia might have favored Belg land preparation. On the other hand, the observed day time extreme air temperature rise for consecutive days over mid and lowland areas of the country that might have caused the rate of evapo-transpiration to increase, hence, the condition might have caused moisture stress on availability of pasture and water over pastoral and agro-pastoral areas.

During the third dekad of February 2009, the extended rain bearing systems over southern and northeastern portions of the country. Hence, the situation expected to favor Belg agricultural activities, perennial crops and availability of pasture and water over pastoral and agro pastoral areas.

In general the month of February 2009, the rainfall activities over most Belg growing areas of the country favored land preparation. While over western and southwestern parts of Belg growing areas the rainfall activities were conducive for Belg agricultural activities as well as for perennial crops. Belg rain-benefiting areas of southwestern and northeastern portions of the country recorded sufficient rain, which favored for Belg agricultural activates as well as availability of drinking water and pasture. Although, limited amount of rainfall was observed over parts of southern and northern Somalia, eastern Oromiya and western Amhara the rainfall activity favored Belg agricultural activities, availability of pasture and drinking water.

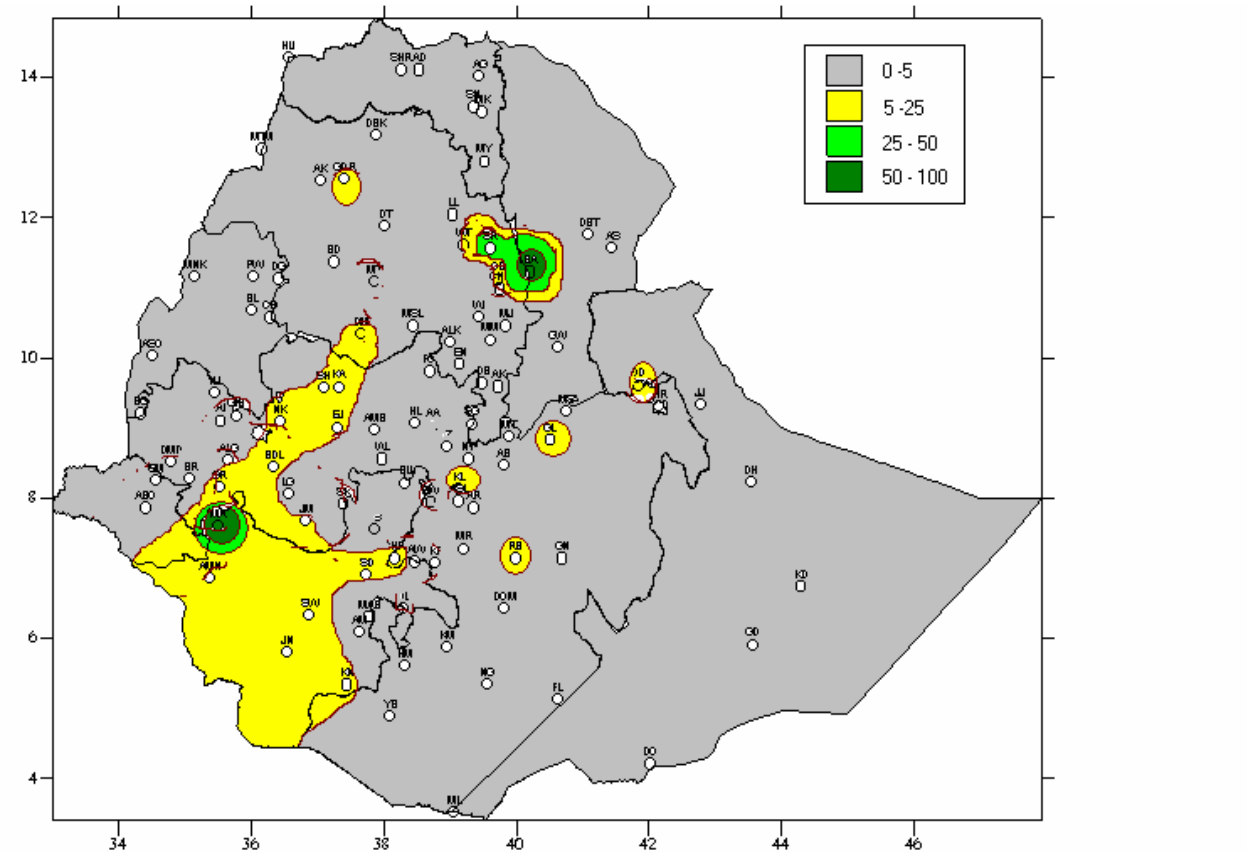


Fig 1 Rainfall distribution in mm (21-28 February, 2009)

1. WEATHER ASSESSMENT

1.1 21-28 February 2009

1.1.1 RAINFALL AMOUNT (Fig.1)

Pocket areas of western SNNPR and eastern Amhara received 50-100 mm rainfall. Pocket areas of western SNNPR and eastern Amhara received 25-50 mm rainfall. Most part of SNNPR, part of western and pocket areas of central and eastern Oromia, part of eastern Gambela and pocket areas of northern, southern and eastern Amhara received 5-25 mm rainfall. The rest parts of the country exhibited little or no rain fall.

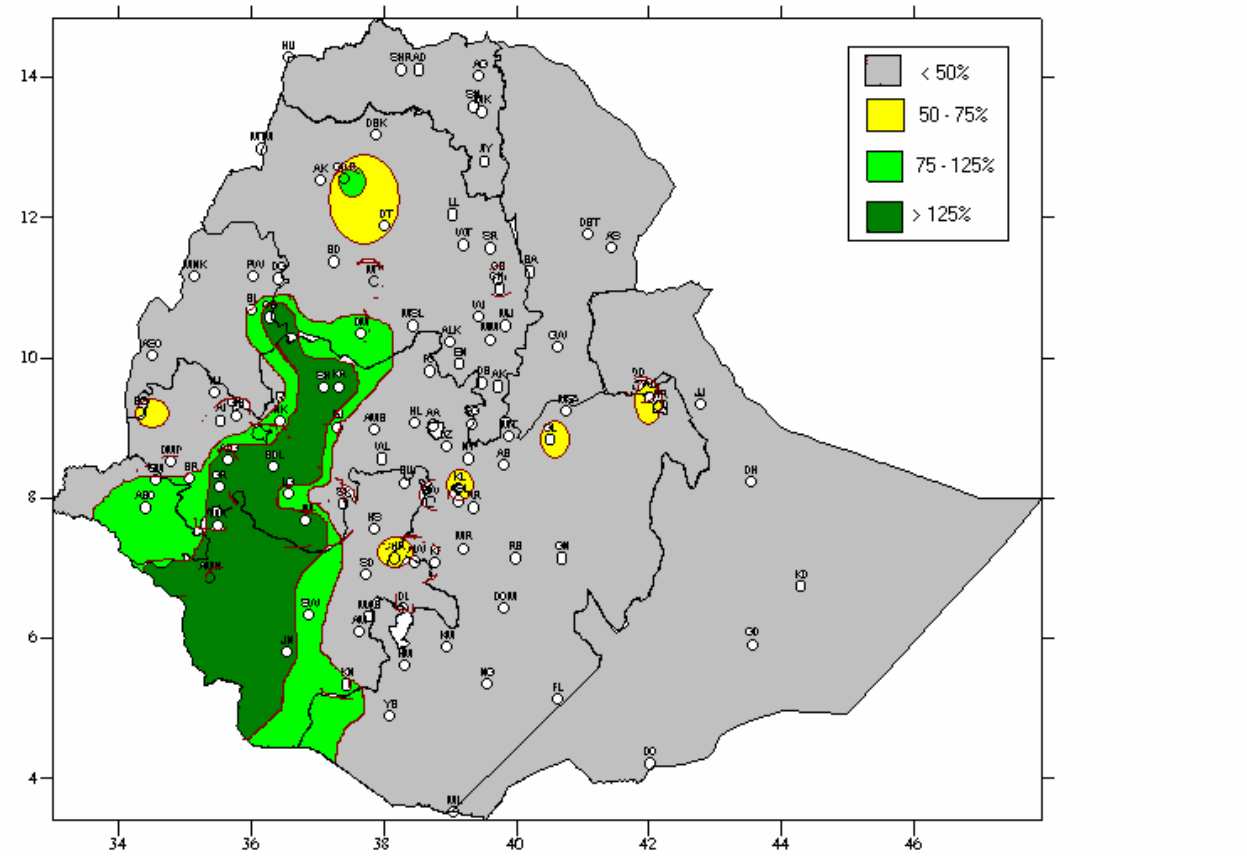


Fig.2 Percent of normal rainfall (21-29 February, 2009)

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)

Western half of SNNPR, eastern half of Gambella, part of western and southern Oromia, part of southern and pocket area of northern Amhara and pocket areas of eastern Benshangul –Gumuz received normal to above normal rainfall. The rest parts of the country experienced below normal to much below normal rainfall.

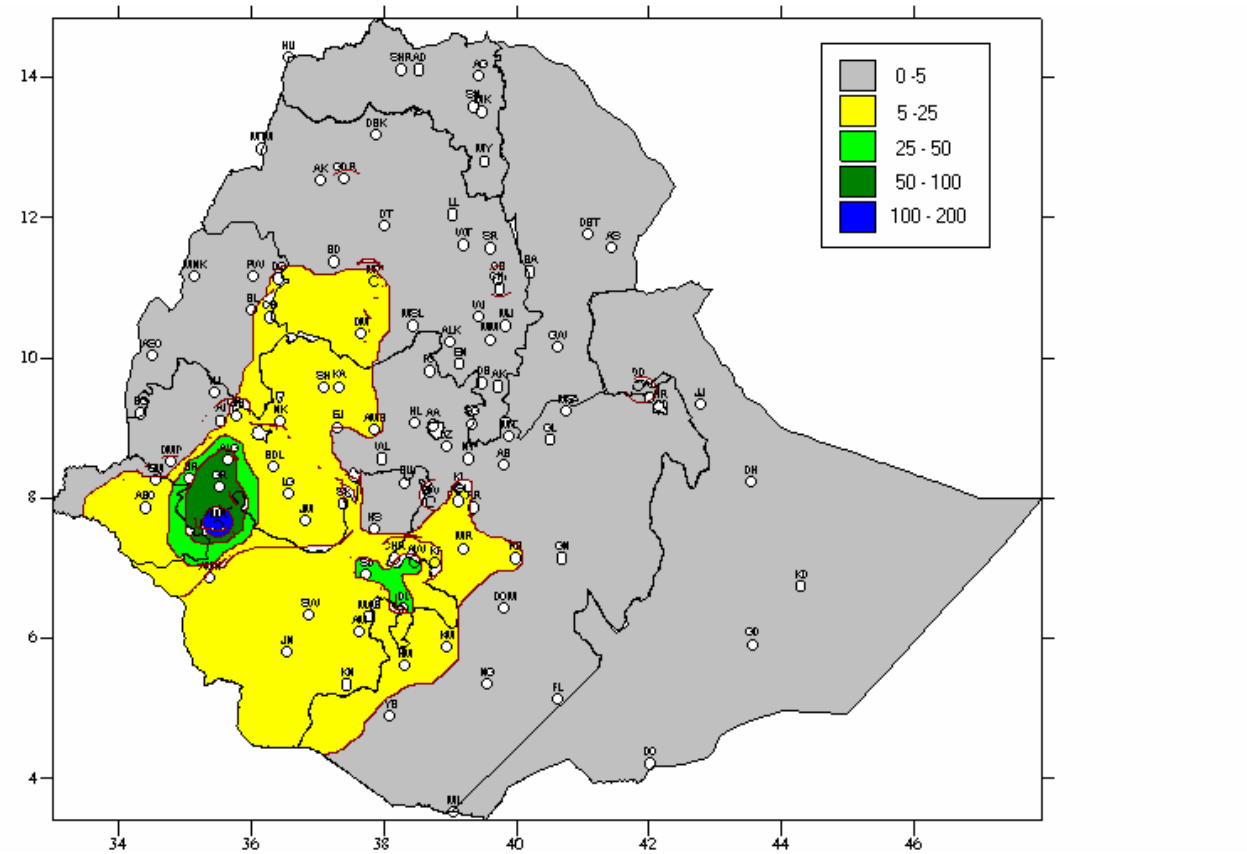


Fig 3 Rainfall distribution in mm for the month of February 2009

1.3 February, 2009

1.1.3 Rainfall distribution (Fig.3)

Pocket area of western SNNPR received 100-200 mm rainfall. Pocket area of western Oromia received 50-100 mm rainfall. Parts of western Oromia, eastern Gambela and pocket area of eastern SNNPR received 25-50 mm rainfall. Most of SNNPR, Gambela, and parts of western and southern Oromia, southern Amhara and eastern Benshangul-Gumuz received 5-25 mm rainfall. The rest parts of the country exhibited little or no rainfall.

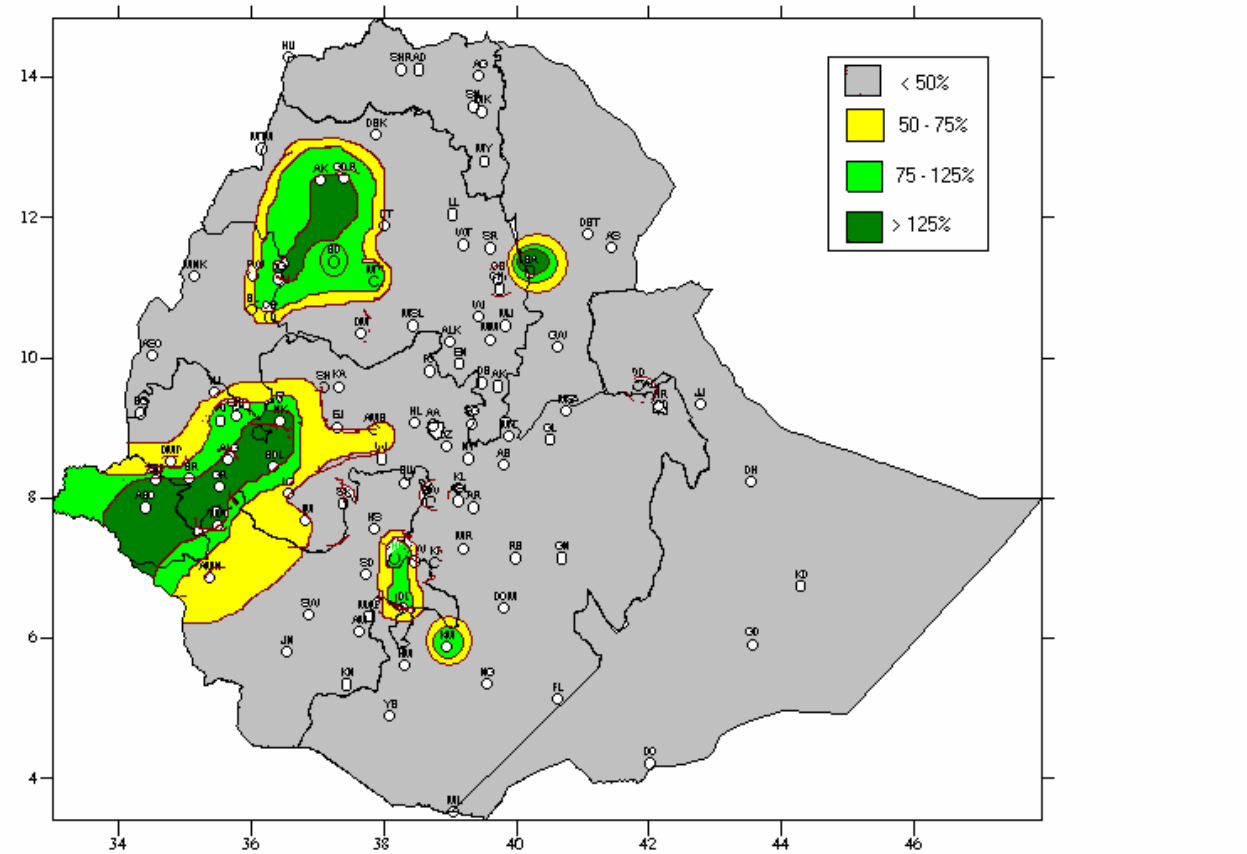


Fig.4 Percent of normal rainfall for the month of February 2009

Explanatory notes for the legend:

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

Gambela, parts of western and pocket area of Oromia, pocket area of eastern SNNPR, part of western and pocket area of eastern Amhara and pocket areas of eastern Benshangul-Gumuz experienced normal to above normal rainfall. The rest parts of the country exhibited below normal to much below normal rainfall.

1.1.4 TEMPERATURE ANOMALY

During the month some stations recorded extreme maximum temperature greater than 35 ^{o}C, among them Humera, Metema. Gambela, Mankush, Gewane reported 41.6,41.5, 41.0,40.4 and 40.0 ^{o}C, respectively. On the other hand some stations reported extreme minimum temperature below 5°C, among those stations Kofelle, Debre Berhan, Kulumsa, Arsi robe, Alemaya, Mekele, BaleRobe , Bui and Debre Zeit exhibited extreme minimum temperature as low as 2.2, 3.0, 3.5, 3.5, 3.5, 3.6, 4.0, 4.5 and 4.6 C, respectively this situation has a negative impact for normal growth and development of plants.

3. AGROMETEOROLOGICAL CONDITIONS AND IMPACT ON AGRICULTURE

3.1 VEGETATION CONDITION AND IMPACT ON AGRICULTURE

In the month of February 2009, the rainfall activities over most Belg growing areas of the country favored land preparation. While over western and southwestern parts of Belg growing areas the rainfall activities were conducive for Belg agricultural activities as well as for perennial crops. Belg rain-benefiting areas of southwestern and northeastern portions of the country recorded sufficient rain, which favored for Belg agricultural activates as well as availability of drinking water and pasture. Although, limited amount of rainfall was observed over parts of southern and northern Somalia, eastern Oromiya and western Amhara the rainfall activity favored Belg agricultural activities, availability of pasture and drinking water.

3.2EXPECTED WEATHER IMPACT ON AGRICULTURE DURING THE COMING DEKAD

Belg rain bearing meteorological phenomena will more or less increase in the dekad over most Belg growing areas of the country. The condition will favor Belg agricultural activities, pasture and water availability over postural and agro postural areas. The expected rain will follow normal pattern in amount and distribution over most parts of Belg growing areas especially over southwestern and northern portions of the county, as a result will favor Belg agricultural activities.

Table 1. Climatic and Agro-Climatic elements of different stations for the month of February 2008

Stations	Region	A/ rainfall	Normal	%of Normal	Eto mm/day	Monthly Eto	Moisture status
Adigrat	**TIGRAI**	0.6	10	6.0	3.64	101.92	VD
Mekele		0	8.8	0.0	6.02	168.56	VD
Michew		5	25.2	19.8	3.61	101.08	D
Senkata		1.2	26.9	4.5	NA	NA	NA
Shire		0	0.3	0.0	4.92	137.76	VD
Assayta	**AFAR**	NA	NA	NA	6.39	178.92	NA
Dubti		NA	NA	NA	5.54	155.12	NA
Gewane		NA	NA	NA	6.1	170.8	NA
A. Ketema	**AMHARA**	2.6	20.5	12.7	NA	NA	NA
Abomsa		0	52.1	0.0	4.71	131.88	VD
Aykel		5.7	2.2	259.1	NA	NA	NA
Bahirdar		0.8	1.8	44.4	2.63	73.64	VD
Bati		81.8	41.7	196.2	4.02	112.56	M
Bullen		0.7	0.3	233.3	3.78	105.84	VD
Combolcha		11.4	37.3	30.6	3.76	105.28	D
D.Birhan		0	18.6	0.0	4.21	117.88	VD
D.Markos		12.4	17.6	70.5	4.45	124.6	D
D.Tabor		3.6	6.5	55.4	NA	NA	NA
Dangla		5.3	2.6	203.8	3.82	106.96	VD
Gonder		14.3	7.9	181.0	4.8	134.4	D
M.Meda		12.4	25.8	48.1	NA	NA	NA
Majete		10.3	48.8	21.1	4.23	118.44	VD
Metema		0	0	0.0	4.2	117.6	VD
Motta		13.2	12.6	104.8	4.45	124.6	D
Lalibela		2.8	12.6	22.2	4.35	121.8	VD
S. Gebeya		0	24.3	0.0	4.24	118.72	VD
Sirinka		7.9	61	13.0	4.04	113.12	VD
Wereilu		3	30.4	9.9	4.16	116.48	VD
Arsi Robe	**OROMIYA**	0	52.9	0.0	4.28	119.84	VD
Alemaya		5.3	24.1	22.0	NA	NA	NA
Alge		59.3	17.9	331.3	NA	NA	NA
Ambo		23.1	36.6	63.1	NA	NA	NA
Arjo		13.8	23.7	58.2	3.82	106.96	D
Bedelle		43.2	21.3	202.8	NA	NA	NA
Begi		3.2	11.6	27.6	NA	NA	NA
Chira		44.5	56	79.5	NA	NA	NA
D.Mena		2.3	34.6	6.6	NA	NA	NA
D.Zeit		0	25.4	0.0	5.1	142.8	VD
Fitche		2.7	33	8.2	3.58	100.24	VD
Gelemso		6.2	34.5	18.0	4.86	136.08	VD
Gimbi		15.3	4	382.5	NA	NA	NA
Gore		59.2	37.5	157.9	3.8	106.4	M
H. Mariam		4.5	25	18.0	3.47	97.16	VD
Jimma		29.5	47	62.8	8.47	237.16	D
K.Mengist		23	21.5	107.0	3.92	109.76	D
Kachise		8.6	27.3	31.5	4.12	115.36	VD
Koffele		28.4	57.1	49.7	3.85	107.8	MD
Kulumsa		17.7	44.3	40.0	4.29	120.12	D
Lumugenet		9.2	36.6	25.1	3.36	94.08	D
Meisso		2.9	39.9	7.3	NA	NA	NA
Metehara		0	30.6	0.0	5.2	145.6	VD
Moyale		1.9	21.7	8.8	6.2	173.6	VD
Nazreth		0	27.2	0.0	6.07	169.96	VD
Neghele		0	21.5	0.0	3.84	107.52	VD

Nedjo		1.3	5.2	25.0	3.65	102.2	VD
Nekemte		21.8	15.7	138.9	3.68	103.04	D
Robe(Bale)		8.4	31.5	26.7	3.86	108.08	VD
Sekoru		17.2	37.2	46.2	3.9	109.2	D
Woliso		1.6	30	5.3	5.78	161.84	VD
Ziway		NA	NA	NA	5.21	145.88	VD
Jijiga	**SOMALI**						
Gode		2.2	4.8	45.8	NA	NA	NA
A.Minch	**SNNPR**	4.2	31.8	13.2	4.75	133	VD
Awassa		9	58.9	15.3	4.6	128.8	VD
Billate		20	39.2	51.0	NA	NA	NA
Dilla		40.8	45.4	89.9	NA	NA	NA
Hosaina		4.8	51.6	9.3	4.25	119	VD
Jinka		20.3	47.2	43.0	4.04	113.12	D
Konso		16.3	39.8	41.0	5.76	161.28	D
Masha		137	52.9	259.0	3.04	85.12	H
Sawla		18.3	35.8	51.1	4.24	118.72	
Assosa	**B/GUMUZ**	0	4.2	0.0	NA	NA	NA
Pawe		0	1	0.0	4.54	127.12	VD
Chagni		6.8	7.1	95.8	4.17	116.76	VD
Gambela	**Gambela**	11.7	2.9	403.4	NA	NA	NA
A.A.Obs.	**A.A**	2.7	36	7.5	4.12	115.36	VD
A.A. Bole		0	37.6	0.0	5.27	147.56	VD
Diredawa	**D.D**	12.1	32.7	37.0	4.6	128.8	VD
Harar	**Harai**	2	11.8	16.9	4.55	127.4	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 Evapotranspiration(mm)
NA	Data not available

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.

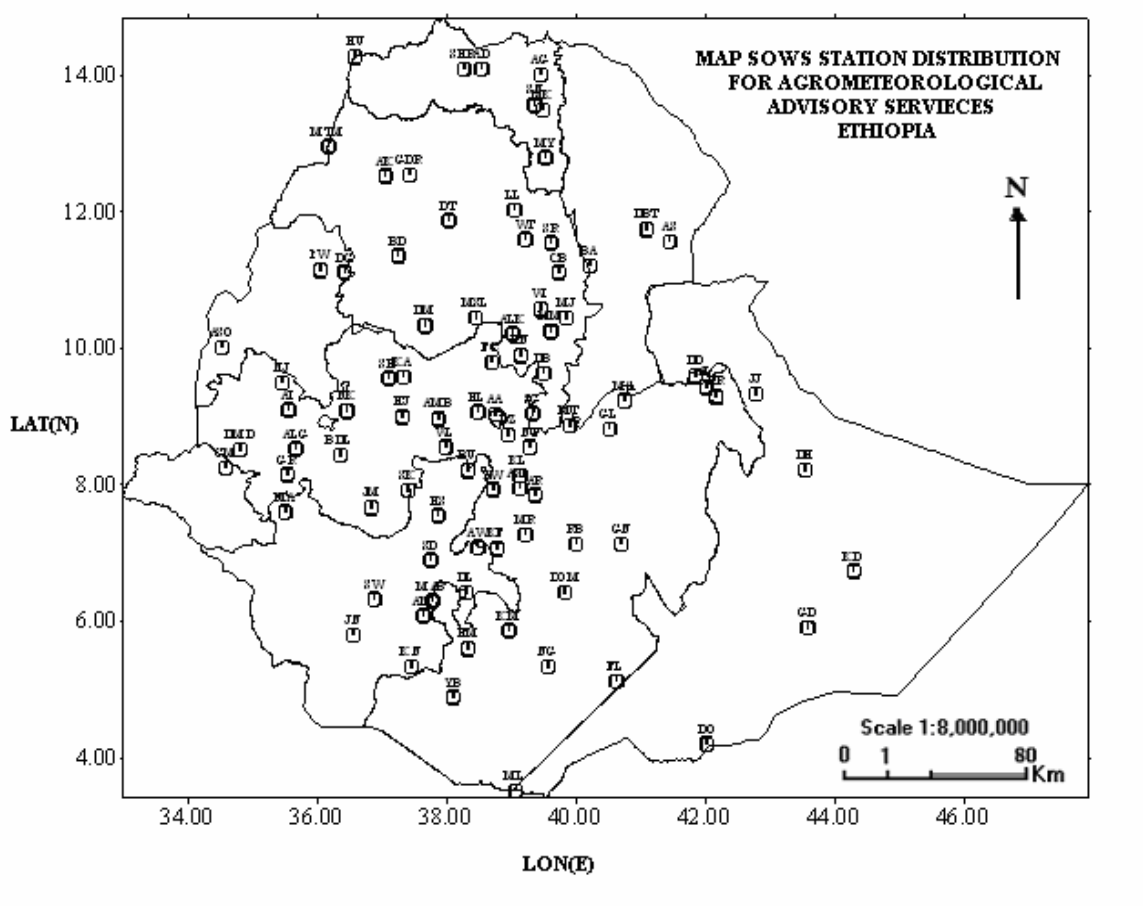
DEKAD: - First or second ten days or the remaining days of a month.

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
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