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Decadal Agromet Bulletin of Pakistan



Highlights....

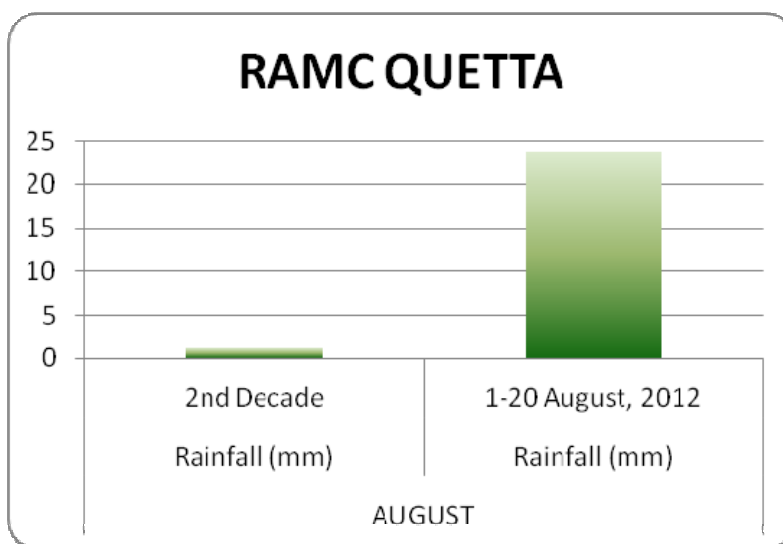
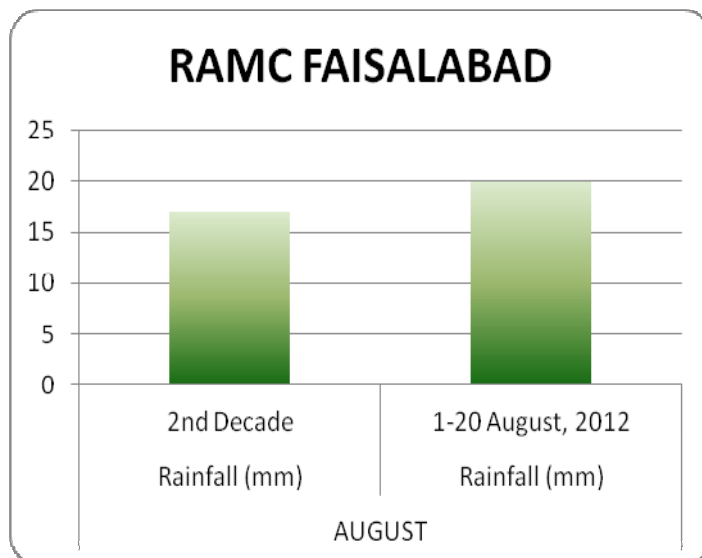
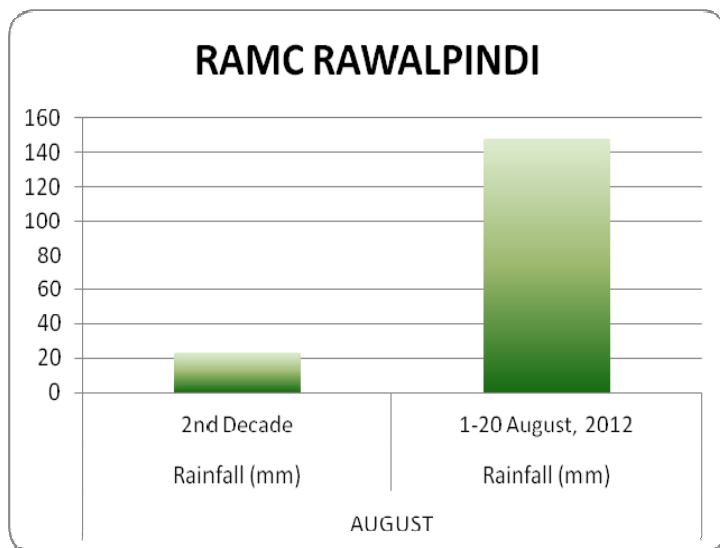
- ❖ Light to moderate rainfall with few heavy showers occurred in the agricultural plains of the country except Sindh, where meager rain reported. Highest amount of rainfall recorded at Muzaffarabad as 168 mm during the last decade.
- ❖ Extreme temperatures (above 40°C) recorded in upper Sindh & Eastern Balochistan.
- ❖ Highest values for the relative humidity (above 60%) recorded at scattered places of Punjab, Upper and Southern KP, Eastern Balochistan and Lower Sindh.
- ❖ Highest values for ETo (above 6.0 mm/day) recorded in Sindh.
- ❖ Maximum temperatures are expected to be normal/below normal in most of the agricultural plains of the country during the next decade.
- ❖ Mainly hot & humid weather is expected during the next decade all over the country except Kashmir & Gilgit Baltistan region. However, chances of scattered to widespread rain/thundershower in upper & central parts of the country during 1st half and chances of isolated rain/thundershower in upper parts of the country during 2nd half of the decade.

**NATIONAL AGROMET CENTRE (NAMC)
PAKISTAN METEOROLOGICAL DEPARTMENT
SECTOR H-8/2, ISLAMABAD**

http://www.pmd.gov.pk/WFF/weather_for_farmers

Phone: +92-51-9250592 email: dirnamc@yahoo.com

Graphs for Rainfall (mm) during August 2012



Note: No Rainfall recorded at RAMC Tandojam & Usta Muhammad.

Meteorological conditions during 2nd decade of August, 2012

Sr. No.	Station	Precipitation (mm)			Air Temperature (°c)			Soil Temperatures (°c)						Sunshine Duration (hours)	Wind Speed (km/hr)	R.H (%)	ETo (mm/day)
		Normal	Actual	Dep	Tmin Dep	Tmax Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	TANDOJAM	1.5	TR	-1.5	0.4	1.7	31.3	40.0	36.9	35.4	34.1	33.6	31.7	84.9	7.8	63	5.8
2	SAKRAND ☆	2.0	0.0	-2.0	-0.4	1.1	31.3	45.0	110.7	45.2	37.7	38.1	35.7	111.0	4.8	55	6.1
3	ROHRI	0.4	TR	-0.4	0.6	1.2	34.4	47.2	43.7	39.1	38.2	37.1	36.5	95.1	4.3	50	5.9
4	USTA MUHAMMAD	1.2	0.0	-1.2	1.5	-0.7	33.1	38.9	38.5	36.8	37.4	36.5	35.0	***	3.1	64	4.9
5	QUETTA	0.0	1.2	1.2	-1.1	-1.0	26.0	35.5	33.7	29.8	22.4	27.6	28.0	89.3	5.5	35	5.4
6	KHANPUR	1.0	42.7	41.7	-0.4	-0.4	32.2	38.1	37.5	37.0	37.1	37.5	36.0	76.8	6.3	67	5.4
7	MULTAN	0.8	8.4	7.6	-0.5	-0.5	32.4	***	***	***	***	***	***	68.4	5.3	66	5.0
8	LAHORE	4.0	72.6	68.6	-1.5	-0.9	30.3	32.7	32.7	31.6	31.1	***	30.2	45.9	2.4	73	3.7
9	FAISALABAD	4.1	17.0	12.9	0.5	-0.3	31.6	38.1	37.1	34.9	33.5	32.8	31.8	53.3	5.0	65	4.5
10	SARGODHA	4.0	TR	-4.0	-0.1	-0.3	31.9	37.9	36.1	34.3	33.7	33.8	32.2	71.3	3.0	66	4.6
11	JHELUM	7.3	71.4	64.1	-0.6	0.1	30.4	33.8	32.8	31.3	30.9	31.2	***	61.2	2.8	76	4.2
12	RAWALPINDI	10.5	22.0	11.5	1.6	3.1	30.4	33.3	31.8	30.8	31.0	30.0	30.0	65.7	2.4	66	4.3
13	DI KHAN	1.9	16.7	14.8	0.0	-0.9	31.4	***	***	***	***	***	***	79.7	3.5	66	5.0
14	PESHAWAR	1.4	6.0	4.6	-0.3	2.4	32.1	40.8	35.7	34.3	33.4	32.0	30.6	61.2	0.3	59	3.9
15	SKARDU	0.5	1.0	0.5	0.1	0.8	23.5	***	***	***	***	***	***	45.5	3.6	43	3.9
16	GILGIT	0.5	0.4	-0.1	3.6	1.8	27.5	***	***	***	***	***	***	64.4	6.9	49	4.6

Table-1: Meteorological parameters for selected station of Pakistan. "Dep" in the table stands for difference from climatic normal, i.e. actual value minus normal. And "% Dep" is calculated by the formula; Dep divided by Normal multiplied by 100. Tmin & Tmax stands for minimum and maximum temperatures respectively. ETo stands for reference crop evapotranspiration. *** stands for no data and (☆) indicates the station with five years climatic (normal) data for computing departures.

Past Weather (11th to 20th August, 2012):

Light to moderate rainfall with few heavy showers reported from the agricultural plains of Punjab, KP, Balochistan and Kashmir, while meager rain reported from the agricultural plains of Sindh during the decade.

1.1 Punjab

Light to moderate rainfall with few heavy falls reported from the agricultural plains of Punjab during the decade, chief amount received at Mandibahuddin, Lahore and Jhelum (Fig. 1.a). Decadal maximum temperature raised above normal by 0.1°C and minimum temperature dropped below normal by 0.1°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 3.9 km/hr, 68 %, and 4.5 mm/day respectively (Fig 3-4).

1.2 Sindh

Light rainfall reported from few agricultural plains of Sindh during the decade, chief amount received at Moenjodaro etc. Decadal maximum and minimum temperature both raised above normal by 1.3 & 0.2°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 5.6 km/hr, 56 %, and 5.9 mm/day respectively.

1.3 Khyber Pakhtoon Khawa (KPK)

Light to moderate rainfall with few heavy falls reported from the agricultural plains of KPK; chief amount received at Balakot, Parachinar and Kakul etc. Decadal maximum temperature raised above normal by 0.8°C and minimum temperature dropped below normal by 0.2°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 1.9 km/hr, 63 %, and 4.5 mm/day respectively.

1.4 Balochistan

Light to moderate rainfall reported from few agricultural plains of Balochistan; chief amount received at Barkhan and Khuzdar etc. In the northern Balochistan, decadal maximum temperature dropped below normal by 0.9°C and minimum temperature raised above normal by 0.2°C respectively. Whereas mean values of wind speed, relative humidity and ETo were recorded 4.3 km/hr, 50 %, and 5.2 mm/day respectively.

1.5 Gilgit Baltistan and Azad Jammu & Kashmir

Light rainfall reported from most of the agricultural plains of Gilgit Baltistan and light to moderate rainfall with few heavy showers reported from Azad Jammu & Kashmir; chief amount received at Muzaffarabad, Kotli and Garhi Dopatta etc. In GB & AJK region; decadal maximum and minimum temperature both raised above normal by 1.3 & 1.9°C respectively. Whereas mean values of wind speed, relative humidity and ETo were recorded as 5.3 km/hr, 46 %, and 4.3 mm/day respectively.

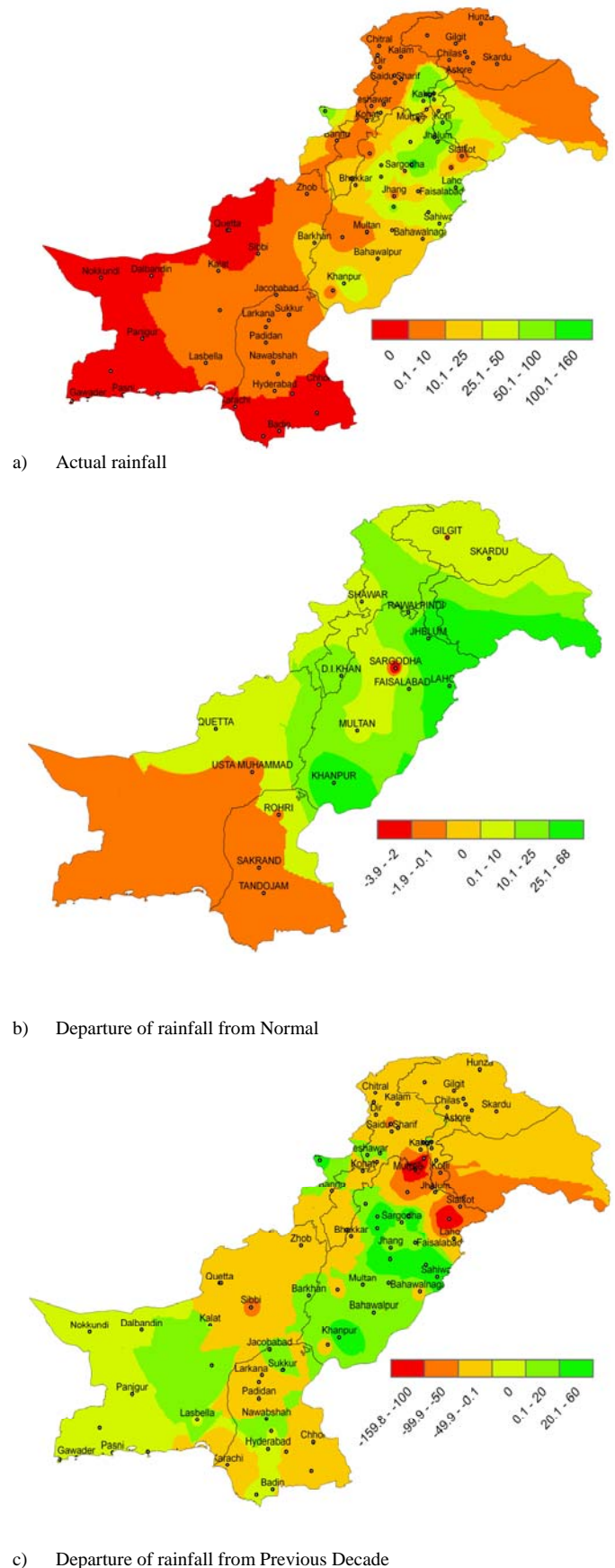


Figure.1: Rainfall distribution during previous decade in “mm”

2 (a) Past Weather for Major Agricultural Plains (11th to 20th August, 2012) as per Table-1

2.1 RAMC, Rawalpindi (Potohar region)

Rainfall reported as 22.0 mm during the decade, weather remained cloudy for 8 days and average relative humidity recorded as 66%. Mean night temperature was 25.1°C while day temperature recorded as 35.6°C with 65.7 hours bright sunshine duration. Wind speed recorded as 2.4 Km/hr with mean direction *westerly*. Presently one crop (rainfed conditions) is grown at the station as detailed below:

Maize: Good condition, 9th Leaf stage.

2.2 RAMC, Tandojam (Lower Sindh)

Rainfall reported as Trace (amount not measurable) during the decade, weather remained cloudy for 9 days and average relative humidity recorded as 63%. Mean night temperature was 25.8°C while day temperature recorded as 36.7°C with 84.9 hours bright sunshine duration. Wind speed recorded as 7.8 Km/hr with mean direction *south westerly*. Presently only one crop (irrigated conditions) is grown at the station as detailed below:

Cotton (BT-886): Good condition, Boll opening stage.

2.3 RAMC, Faisalabad (Central Punjab)

Rainfall reported as 17.0 mm during the decade, weather remained cloudy for 10 days and average relative humidity recorded as 65%. Mean night temperature was 26.8°C while day temperature recorded as 36.3°C with 53.3 hours bright sunshine duration. Wind speed recorded as 5.0 Km/hr with mean direction *south easterly*. Presently one crop (irrigated conditions) is grown at the station as detailed below:

Sugarcane: Very Good condition, Tillering stage completed.
Cotton: Very Good condition, Flowering stage completed.

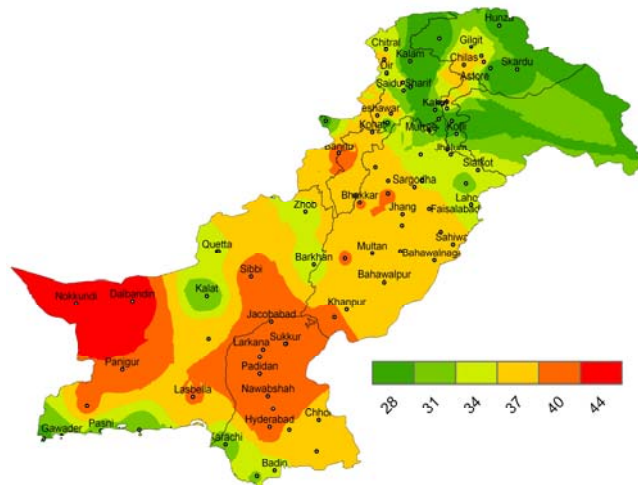
2.4 RAMC, Quetta (Northern Balochistan)

Rainfall reported as 1.2 mm during the decade, weather remained cloudy for 7 days and average relative humidity recorded as 35%. Mean night temperature was 18.0°C while day temperature recorded as 33.9°C with 89.3 hours bright sunshine duration and wind speed recorded as 5.5 Km/hr with mean direction *southerly*. Presently no crop is grown at the station.

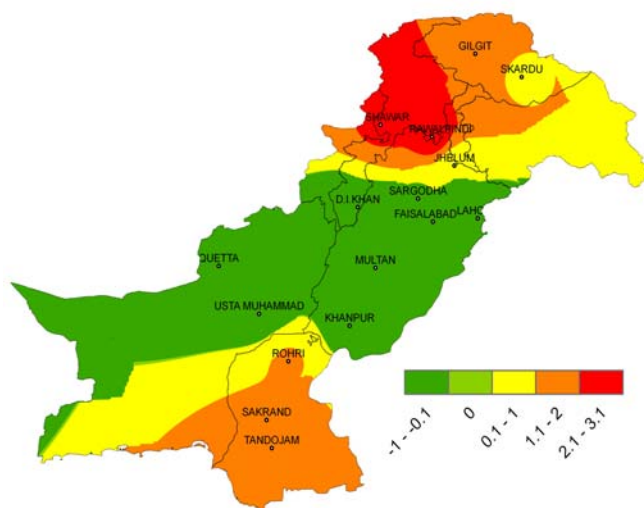
2.5 RAMC, Usta Muhammad (Eastern Balochistan)

No rainfall and cloudy day reported during the decade, average relative humidity recorded as 64%. Mean night temperature was 27.6°C while day temperature recorded as 38.5°C. Wind speed recorded as 3.1 Km/hr with mean direction *southerly*. Presently one crop (Irrigated conditions) is grown at the station as detailed below:

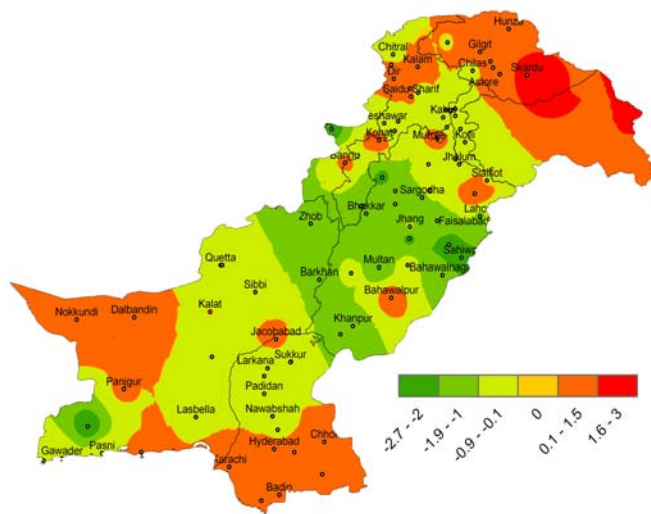
Rice: Good condition, Tillering stage.



a) Actual max-temp



b) Departure of max-temp from Normal



c) Departure of max-temp from Previous Decade

Figure.2: Maximum Temperature distribution during previous decade in “°C”

2(b) Past Weather for sub regional Agricultural Plains (11th to 20th August, 2012)

2.6 Rohri

Rainfall reported as Trace (amount not measurable) during the decade, weather remained cloudy for 10 days and average relative humidity recorded as 50%. Mean night temperature was 28.8°C while day temperature recorded as 40.0°C with 95.1 hours bright sunshine duration. Wind speed recorded as 4.3 Km/hr with mean direction *north easterly*.

2.7 Skardu

Rainfall reported as 1.0 mm during the decade, weather remained cloudy for 6 days and average relative humidity recorded as 43%. Mean night temperature was 15.6°C while day temperature recorded as 31.4°C with 45.5 hours bright sunshine duration. Wind speed recorded as 3.6 Km/hr with mean direction *south easterly*.

2.8 Multan

Rainfall reported as 8.4 mm during the decade, weather remained cloudy for 10 days and average relative humidity recorded as 66%. Mean night temperature was 27.9°C while day temperature recorded as 36.9°C with 68.4 hours bright sunshine duration. Wind speed recorded as 5.3 Km/hr with mean direction *north easterly*.

2.9 Lahore

Rainfall reported as 72.6 mm during the decade, weather remained cloudy for 10 days and average relative humidity recorded as 73%. Mean night temperature was 26.5°C while day temperature recorded as 34.1°C with 45.9 hours bright sunshine duration. Wind speed recorded as 2.4 Km/hr with mean direction *south easterly*.

2.10 Peshawar

Rainfall reported as 6.0 mm during the decade, weather remained cloudy for 10 days and average relative humidity recorded as 59%. Mean night temperature was 26.0°C while day temperature recorded as 38.1°C with 61.2 hours bright sunshine duration. Wind speed recorded as 0.3 Km/hr with mean direction *north-north easterly*.

2.11 Khanpur

Rainfall reported as 42.7 mm during the decade, weather remained cloudy for 10 days and average relative humidity recorded as 67%. Mean night temperature was 27.3°C while day temperature recorded as 37.0°C with 76.8 hours bright sunshine duration. Wind speed recorded as 6.3 Km/hr with mean direction *north easterly*.

2.12 Sargodha

Rainfall reported as Trace (amount not measurable) during the decade, weather remained cloudy for 10 days and average relative humidity recorded as 66%. Mean night temperature was 27.0°C while day temperature recorded as 36.8°C with

71.3 hours bright sunshine duration. Wind speed recorded as 3.0 Km/hr with mean direction *south easterly*.

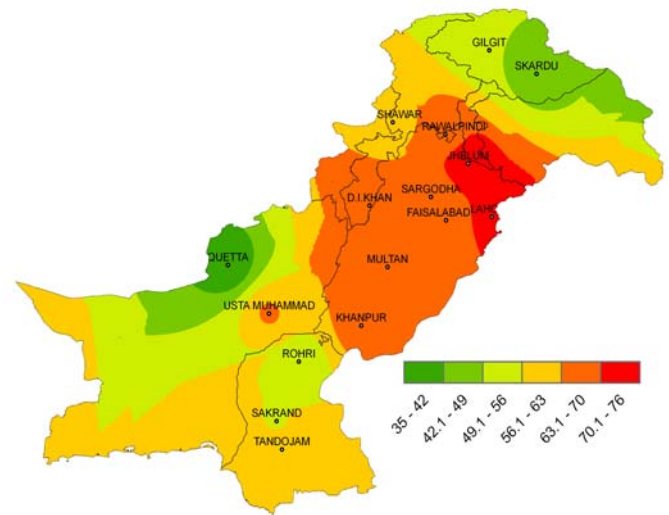


Figure.3: Relative Humidity in percentage

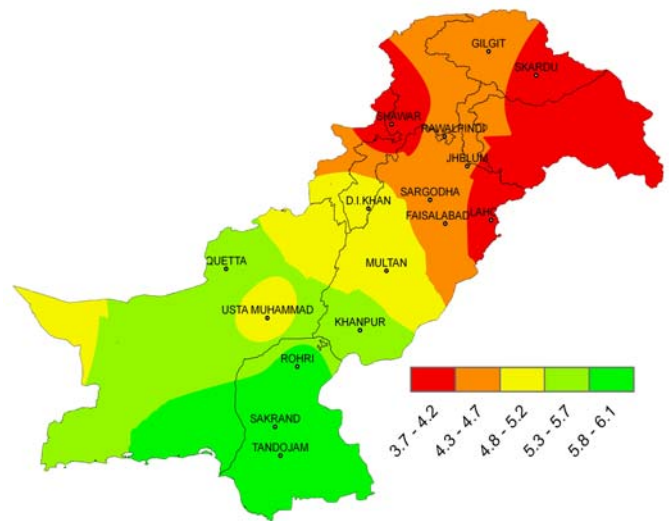


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

2.13 Gilgit.

Rainfall reported as 0.4 mm during the decade however weather remained cloudy for 10 days and average relative humidity recorded as 49%. Mean night temperature was 19.9°C while day temperature recorded as 35.1°C with 64.4 hours bright sunshine. Wind speed recorded as 6.9 Km/hr with mean direction *westerly*.

2.14 Jhelum

Rainfall reported as 71.4 mm during the decade however weather remained cloudy for 10 days and average relative humidity recorded as 76%. Mean night temperature was 25.5°C while day temperature recorded as 35.3°C with 61.2 hours bright sunshine duration. Wind speed recorded as 2.8 Km/hr with mean direction *south westerly*.

2.15 D.I. Khan

Rainfall reported as 16.7 mm during the decade, weather remained cloudy for 7 days and average relative humidity recorded as 66%. Mean night temperature was 26.0°C while day temperature recorded as 36.7°C with 79.7 hours bright sunshine duration. Wind speed recorded as 3.5 Km/hr with mean direction *south easterly*.

2.16 Sakrand

No rainfall reported during the decade however weather remained cloudy for 5 days average relative humidity recorded as 55%. Mean night temperature was 24.6°C while day temperature recorded as 37.9°C with 111.0 hours bright sunshine duration. Wind speed recorded as 4.8 Km/hr with mean direction *south easterly*.

3. Ten days Weather advisory for Farmers

(21st to 31st August, 2012)

3.1 Temperature Forecast:

Day time temperatures expected to be normal/below normal in most of the agricultural plains of the country during the decade.

3.2 Rain Forecast:

- ❖ **Punjab:** Mainly hot & humid weather is expected during the decade. However scattered rain/thundershower is expected in upper & central Parts of the province during 1st half and isolated rain/thundershower is expected in upper parts of the province during 2nd half of the decade.
- ❖ **Khyber Pakhtoonkhawa:** Mainly hot & humid weather is expected during the decade. However scattered rain/thundershower is expected in upper & central Parts of the province during 1st half and isolated rain/thundershower is expected in upper parts of the province during 2nd half of the decade.
- ❖ **Sindh:** Mainly hot & humid weather is expected during the decade. However light rain is expected in southeastern parts of the province during 1st half.
- ❖ **Balochistan:** Mainly dry weather is expected during the decade. However rain/dust-thunderstorm is expected at isolated places in the eastern parts of the province during 1st half.
- ❖ **Kashmir & Gilgit-Baltistan:** Mainly partly cloudy to cloudy weather is expected during the decade. However widespread rain/thundershower with isolated heavy falls is expected at Kashmir during 1st half & isolated chances of rain/thundershower during 2nd half of the decade and rainfall is also expected at isolated places of Gilgit Baltistan during the decade.

3.3 Wind Forecast:

Gusty winds may prevail occasionally in the monsoon belt and adjoining areas during the decade.

3.4 Advisory for Farmers:

- ❖ Farmers are advised to take in time necessary precautionary measures to protect their crops, livestock and other property to keep in mind with current situation of monsoon.
- ❖ Due to hot & humid weather expected in southern half of the country, farmers are advised to irrigate the crops as per requirement.
- ❖ During the dry & humid weather in monsoon season, farmers of cotton belt are advised to take in time precautionary measures to protect the crop from the pest attacks especially attack of Melay Bug, Jassid, Thrips & Whitefly during the period.
- ❖ Recent rains in upper half may accelerate weeds growth in standing crops. Farmers should take in time precautionary measures through manual methods or chemical spraying to control weeds on time.