

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported in Punjab, K.P, G.B and Kashmir and light rainfall reported from Balochistan & Sindh the during the last decade.
- ❖ Highest amount of rainfall reported as 153.8.0mm at Jhelum during the last decade.
- ❖ Highest maximum temperature recorded 45.0°C at Dalbandin during the last decade.
- ❖ Light to moderate rainfall is expected in Punjab, K.P, Baluchistan, G.B and Kashmir from 21st to 25th and light to moderate rainfall is expected in Punjab, K.P, Baluchistan, Sindh, G.B and Kashmir from 28th to 31st of the decade.
- ❖ Pest/viral attacks and more weeds growth are expected after expected monsoon rains in sugarcane and other standing crops in upper parts of the country. Farmers are therefore advised to take in time precautionary measures in this regard.
- ❖ Farmers of rainfed areas obtaining water through tube wells and irrigated areas in upper parts are advised to schedule the irrigation according to the expected weather mentioned during the decade. Rainfall/ gusty winds after irrigation cause water logging of standing crops like maize, sugarcane and cotton. Farmers should be very careful in this regard.
- ❖ Due to onset of monsoon rains, farmers are advised to take in time precautionary measures to protect their crops, livestock and other property from any expected heavy rain.

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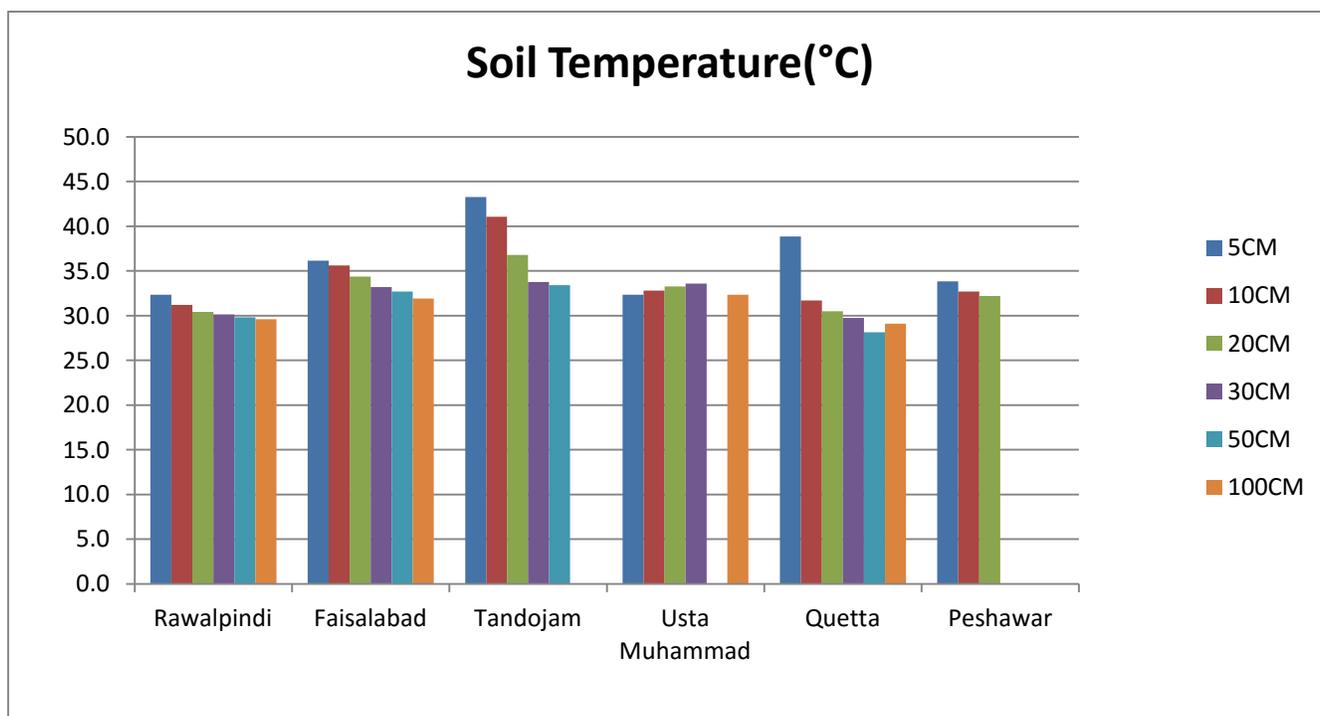
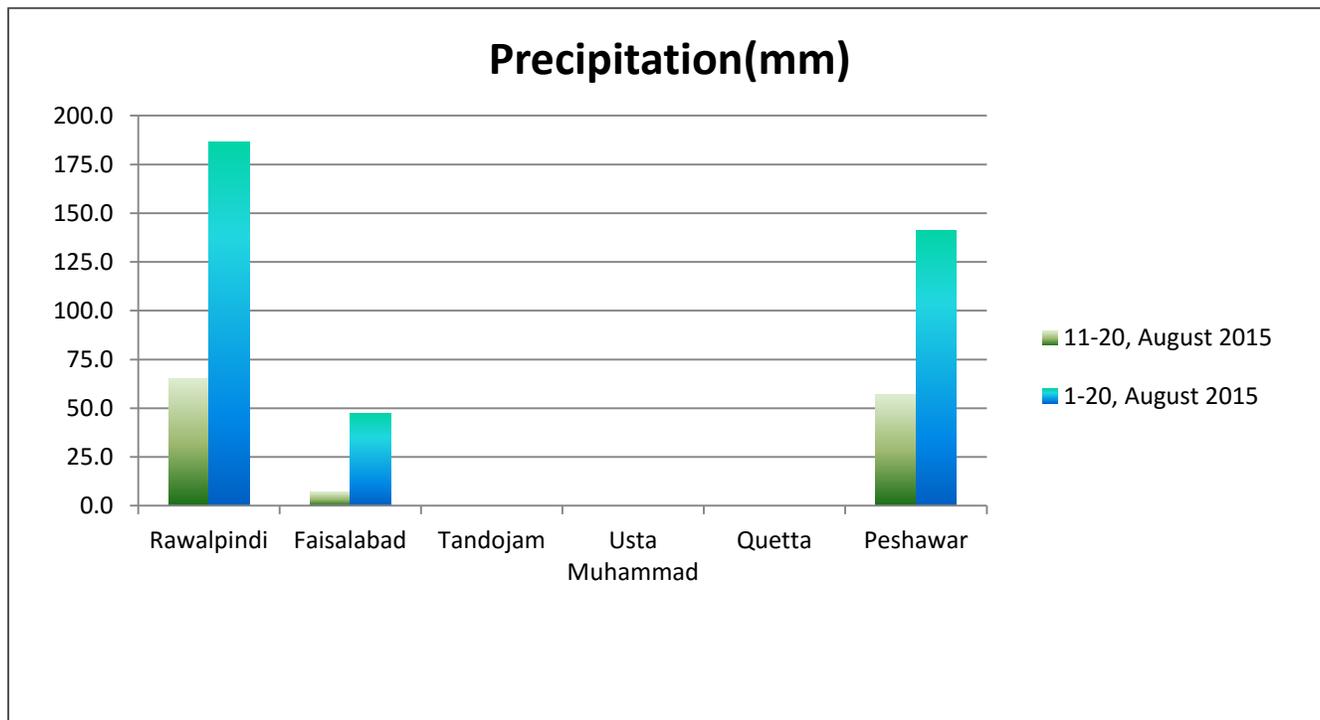
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Meteorological conditions during 2nd decade of August, 2015

Sr. No.	Station	Precipitation (mm)			Air Temperature (°C)			Soil Temperatures (°C)						R.H (%)	Sunshine Duration(hours)	Wind Speed (km/hr)	ETo (mm/day)
		Normal	Actual	Dep	Tmax Dep	Tmin Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	10.5	65.4	54.9	1.3	1.0	29.2	32.4	31.2	30.4	30.2	29.8	29.6	69	72.0	4.7	4.7
2	FAISALABAD	4.1	7.2	3.1	0.2	1.1	32.1	36.2	35.6	34.4	33.2	32.7	31.9	66	77.2	3.7	5.1
3	JHELUM	7.3	153.4	146.1	1.1	-0.3	31.1	35.8	34.0	32.5	33.0	31.6	***	71	33.7	4.2	3.9
4	LAHORE	4.0	24.4	20.4	0.2	-0.8	31.2	34.8	34.3	32.4	31.5	***	30.2	73	50.7	2.4	4.1
5	SARGODHA	4.0	14.0	10.0	-6.9	1.7	29.5	36.9	35.6	33.3	32.4	32.3	30.4	69	63.3	3.1	4.3
6	MULTAN	0.8	17.6	16.8	-0.2	-0.1	32.8	***	***	***	***	***	***	63	78.0	6.8	5.8
7	KHANPUR	1.0	1.4	0.4	0.4	-0.4	32.6	***	35.5	35.2	35.1	35.0	33.7	61	91.4	5.7	6.1
8	TANDOJAM	1.5	0.0	-1.5	0.1	0.2	30.4	43.3	41.1	36.8	33.8	33.4	***	68	89.1	14.8	6.6
9	SAKRAND ☆	2.0	0.0	-2.0	-0.3	-2.4	29.6	46.6	41.4	***	***	***	36.2	61	98.2	10.2	6.8
10	ROHRI	0.4	0.0	-0.4	0.2	0.3	33.8	44.5	42.3	39.1	36.5	34.6	36.9	52	96.2	3.7	6.0
11	D I KHAN	1.9	40.0	38.1	-0.9	-1.0	30.9	***	***	***	***	***	***	72	80.4	***	5.5
12	PESHAWAR	1.4	57.0	55.6	0.3	0.9	31.6	33.9	32.7	32.2	***	***	***	70	66.7	2.8	4.6
13	USTA MUHAMMAD	1.2	0.0	-1.2	-1.8	2.2	32.9	32.4	32.8	33.3	33.6	***	32.4	59	***	***	5.7
14	QUETTA	0.0	0.0	0.0	0.1	0.1	27.1	38.9	31.7	30.5	29.8	28.2	29.1	23	101.8	4.9	6.1
15	SKARDU	0.5	0.8	0.3	2.0	-1.1	23.5	***	***	***	***	***	***	44	63.4	1.7	3.9
16	GILGIT	0.5	11.1	10.6	1.7	1.4	26.4	***	***	***	***	***	***	54	78.1	1.7	4.7

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; $\text{Dep} \div \text{Normal} \times 100$. 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.

Graphs of RAMC's during August, 2015



Past Weather (11th to 20th August, 2015)

Light to moderate rainfall reported in Punjab, K.P, G.B and Kashmir and light rainfall reported from Balochistan & Sindh the during the last decade.

1.1 Punjab

Light to moderate rainfall reported in the agricultural plains of Punjab. Chief amount of rainfall received in Jhelum, Gujrat & Islamabad. Decadal maximum dropped below normal by 0.6°C & minimum temperature raised above normal by 0.3°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 67%, 66.6hrs, 4.4km/hr and 4.9mm/day respectively.

1.2 Sindh

Light rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Chorr, Mithi & Badin. Decadal maximum remains normal & minimum temperature dropped below normal by 0.6°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 60%, 94.5hrs, 9.6km/hr and 6.5mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

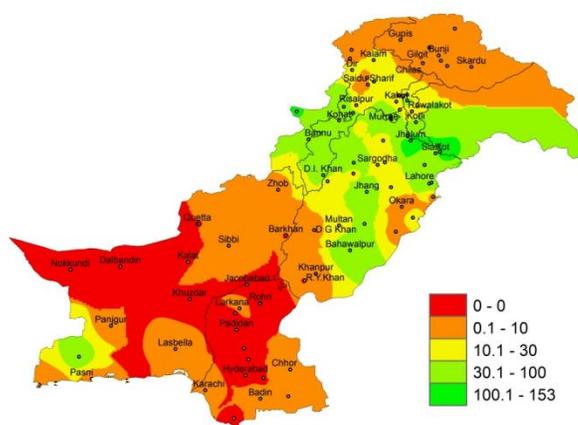
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Parachinar, Peshawar & D.I Khan. Decadal maximum & minimum temperature both dropped below normal by 0.3°C & 0.1°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 71, 73.6hrs, 2.8km/hr and 5.1mm/day respectively.

1.4 Balochistan

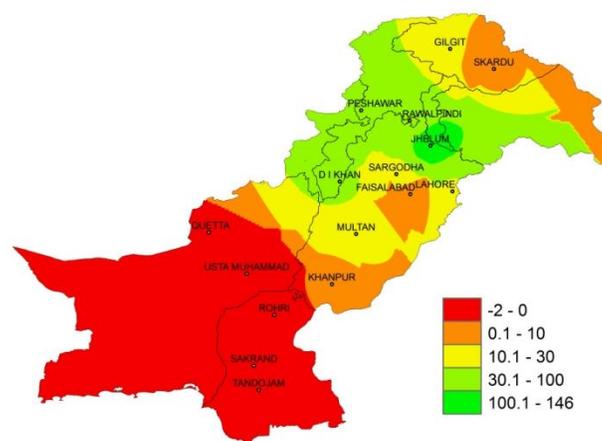
Light rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Turbat, Sibbi & Zhob. Decadal maximum dropped below by 0.9°C & minimum temperature raised above normal by 1.2°C, in the province. Whereas mean values relative humidity, sunshine hour, wind speed & ETo were recorded as 41%, 101.8hrs, 4.9km/hr and 5.9mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

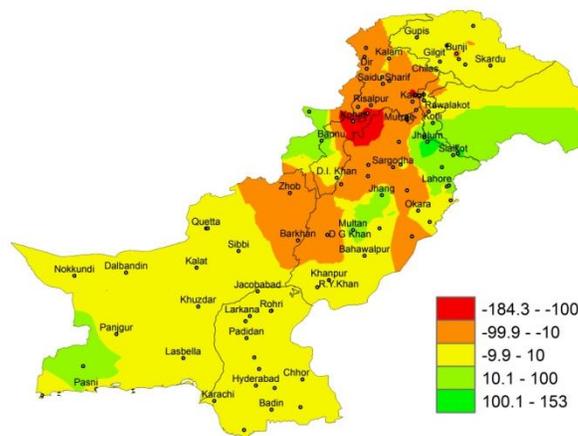
Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Garhi Dopatta, Kotli & Muzzaffarabad. Decadal maximum & minimum temperature both raised above normal by 1.9°C & 2.0°C respectively, in the province. Relative humidity, sunshine hour, wind speed & ETo were recorded as 49%, 70.8hrs, 1.7km/hr and 4.3mm/day respectively.



I. Actual rainfall



II. Departure of rainfall from Normal



III. Departure of rainfall from Previous Decade

Figure.1: Rainfall distribution during previous decade in "mm"

2(a) **Past Weather for Major Agricultural Plains
(11th to 20th August, 2015)**

2.1 RAMC, Rawalpindi (Potohar region)

Rainfall reported as 65.4mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 69%. Mean day temperature was 33.8°C while night temperature recorded as 24.5°C with 72.0hours bright sunshine duration. Wind speed recorded as 4.7km/hr with mean wind direction *westerly*.

2.2 RAMC, Faisalabad (Central Punjab)

Rainfall reported as 7.2mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 66%. Mean day temperature was 36.8°C while night temperature recorded as 27.4°C with 77.15hours bright sunshine duration. Wind speed recorded as 3.7km/hr with mean wind direction *south westerly*.
Cotton: Very good condition, flowering stage.

2.3 RAMC, Tandojam (Lower Sindh)

Dry weather reported during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 68%. Mean day temperature was 35.1°C while night temperature recorded as 25.6°C with 189.1hours bright sunshine duration. Wind speed recorded as 14.8km/hr with mean wind direction *south westerly*.

Cotton (Sindh-I): Good condition, boll formation Stage.

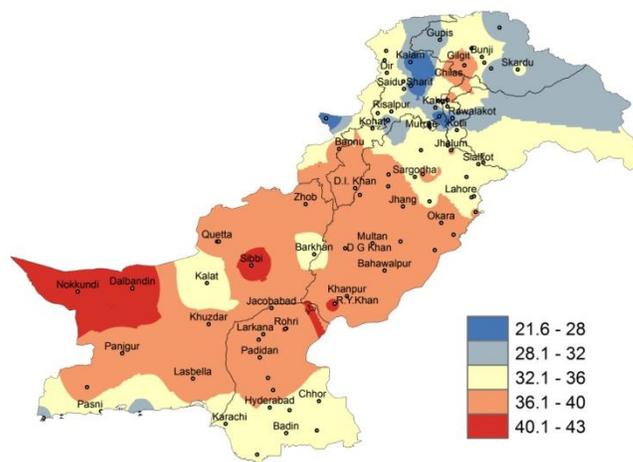
2.4 RAMC, Usta Muhammad (Eastern Balochistan)

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 59%. Mean day temperature was 37.4°C while night temperature recorded as 28.3°C.

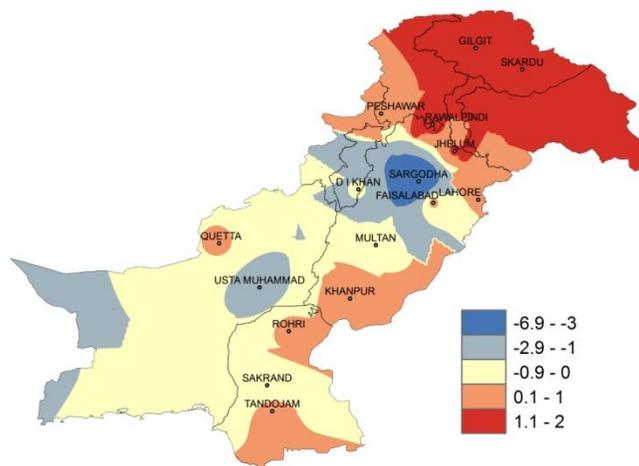
Rice (Paniri): Good Condition, Tillering stage.

2.5 RAMC, Quetta (Northern Balochistan)

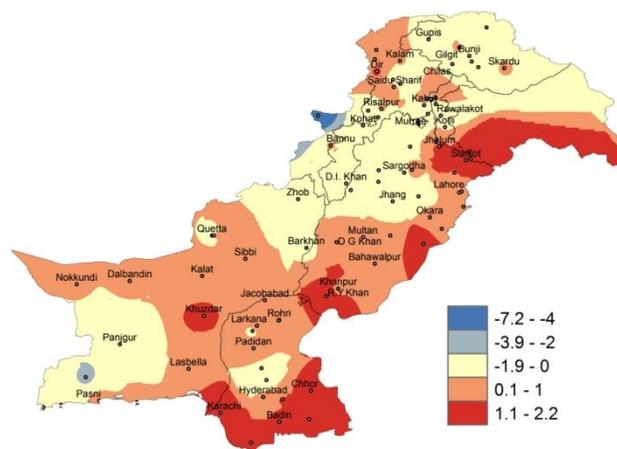
Dry weather reported during the decade, however weather remained cloudy for 10days. Average relative humidity recorded as 23%. Mean day temperature was 35.0°C while night temperature recorded as 19.2°C with 101.8hours bright sunshine duration and wind speed recorded as 4.9km/hr with mean wind direction *north westerly*.



I. Actual max-temp



II. Departure of max-temp from Normal



III. 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, 2015)**

2.6 **Jhelum**

Rainfall reported as 153.4mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 71%. Mean day temperature was 36.3°C while night temperature recorded as 25.8°C with 73.7hours bright sunshine duration and wind speed recorded as 4.2km/hr with mean wind direction *south easterly*.

2.7 **Lahore**

Rainfall reported as 24.4mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 73%. Mean day temperature was 35.2°C while night temperature recorded as 27.2°C with 50.7hours bright sunshine duration. Wind speed recorded as 2.4km/hr with mean wind direction *south easterly*.

2.8 **Sargodha**

Rainfall reported as 14.0mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 69%. Mean day temperature was 36.2°C while night temperature recorded as 28.8°C with 63.3hours bright sunshine duration. Wind speed recorded as 3.1km/h with mean wind direction *south easterly*.

2.9 **Multan**

Rainfall reported as 17.6mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 63%. Mean day temperature was 37.2°C while night temperature recorded as 28.1°C with 78.0hours bright sunshine duration. Wind speed recorded 6.8km/hr with mean wind direction *south westerly*.

2.10 **Khanpur**

Rainfall reported as 1.4mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 61%. Mean day temperature was 37.8°C while night temperature recorded as 27.3°C with 91.4hours bright sunshine duration. Wind speed recorded 5.7km/hr with mean wind direction *south westerly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remains cloudy for 06days. Average relative humidity recorded as 61%. Mean day temperature was 36.5°C while night temperature recorded as 22.6°C with 98.2hours bright sunshine duration. Wind speed recorded 10.2km/hr with wind direction *south easterly*.

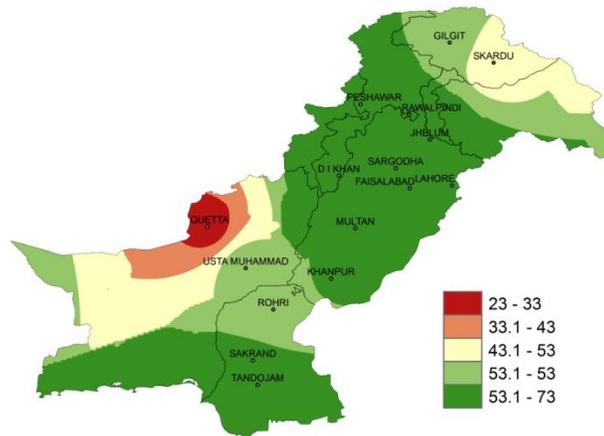


Figure.3: Relative Humidity in percentage (%)

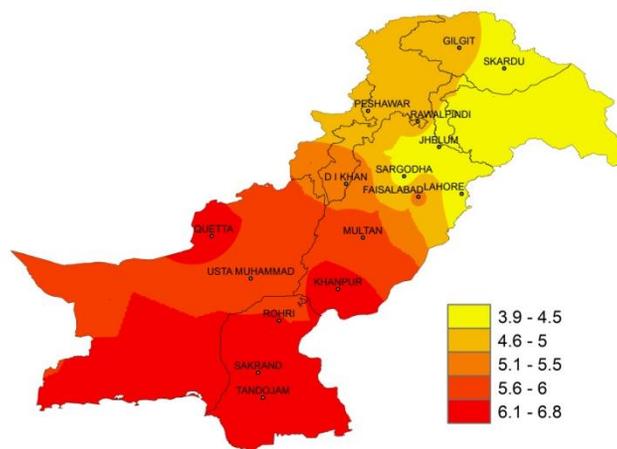


Figure.4: Reference Crop Evapotranspiration "ETo" in mm/day

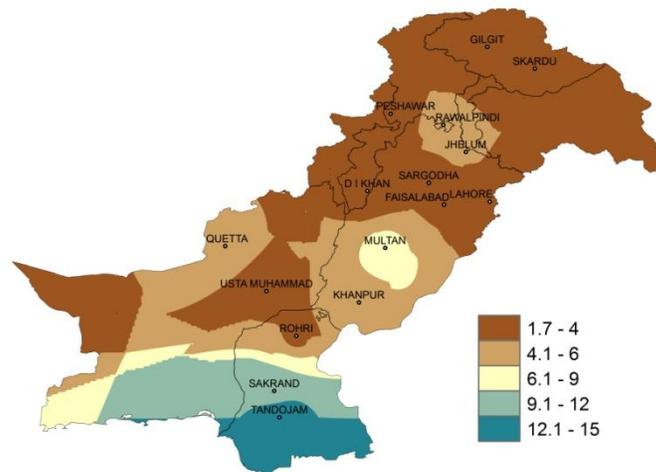


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Dry weather reported during the decade; however weather remained cloudy for 06days. Average relative humidity recorded as 52%. Mean day temperature was 39.0°C while night temperature recorded as 28.5°C with 96.2hours bright sunshine duration. Wind speed recorded as 3.7km/hr with mean wind direction *southerly*.

2.13 D.I. Khan

Rainfall reported as 40.0mm during the decade; however weather remained cloudy for 09days. Average relative humidity recorded as 72%. Mean day temperature was 36.7°C while night temperature recorded as 25.0°C with 80.4hours bright sunshine duration.

2.14 Peshawar

Rainfall reported as 57.0mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 70%. Mean day temperature was 36.0°C while night temperature recorded as 27.2°C with 66.7hours bright sunshine duration. Wind speed recorded as 2.8km/hr with mean wind direction *south easterly*.

2.15 Skardu

Rainfall reported 0.8mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 44%. Mean day temperature was 32.6°C while night temperature recorded as 14.4°C with 63.4hours bright sunshine duration. Wind speed recorded as 1.7km/hr with mean wind direction *southerly*.

2.16 Gilgit

Rainfall reported as 11.1mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 54%. Mean day temperature was 35.0°C while night temperature recorded as 17.7°C with 78.1hours bright sunshine duration. Wind speed recorded as 1.7km/hr with mean wind direction *easterly*.

**3. Ten Days Weather Advisory for Farmers
(21st to 31st August, 2015)****3.1 Temperature Forecast**

Temperatures are likely to be slightly above normal in most of the agricultural plains of the country during the decade.

3.2 Wind Forecast

Normal wind pattern may prevail in most of the agricultural plains of the country during the decade while during thunderstorm it may gust up to 30-50 knots.

3.3 Rain Forecast

- ❖ **Punjab:** Mainly hot and dry weather is expected in most parts of the Punjab however isolated light to moderate falls is expected in D.G khan division from 23rd & 24th, light to moderate rainfall with isolated heavy falls is expected in Rawalpindi, Gujranwala, Sargodha, Lahore Divisions from 21st to 24th and light to moderate rainfall is expected in Faisalabad, Sahiwal divisions from 21th to 24th of the decade. Light to moderate rainfall is expected from 28th to 31st in the upper Punjab.
- ❖ **Khyber Pakhtunkhwa:** Mainly dry weather is expected in the province. However scattered light to moderate rainfall is expected in Peshawar, Kohat, Hazara, Malakand division from 21st to 26th and from 29th to 31st of the decade.
- ❖ **Sindh:** Mainly hot and dry weather is expected in most parts of the Sindh however light to moderate rainfall is expected at few places including Karachi division on 25th to 29th of the decade.
- ❖ **Balochistan:** Mainly hot and dry weather is expected in most parts of the Balochistan however light to moderate rain is expected at north-west Balochistan including Zhob, Sibbi and Quetta from 22nd to 24th and 28th to 30th of this decade.
- ❖ **Gilgit Baltistan:** Rain-thunderstorm is expected in most parts of the G.B during the decade.
- ❖ **Kashmir:** Mainly cloudy weather is expected in most of the parts of the Kashmir however rain-thunderstorm is expected at Muzaffarabad, Kotli & Rawalakot from 21st to 26th and from 29th to 31st of this decade.

3.4 Advisory for Farmers

- ❖ Pest/viral attacks and more weeds growth are expected after expected monsoon rains in sugarcane and other standing crops in upper parts of the country. Farmers are therefore advised to take in time precautionary measures in this regard.
- ❖ Farmers of rainfed areas obtaining water through tube wells and irrigated areas in upper parts are advised to schedule the irrigation according to the expected weather mentioned during the decade. Rainfall/ gusty winds after irrigation cause water logging of standing crops like maize, sugarcane and cotton. Farmers should be very careful in this regard.
- ❖ Due to onset of monsoon rains, farmers are advised to take in time precautionary measures to protect their crops, livestock and other property from any expected heavy rain.
- ❖ Farmers of upper half of the country are advised to complete sowing of Kharif crops in time to utilize fully

the present soil moisture especially growers of maize crop in rainfed areas.

- ❖ Farmer of cotton belt is advised to be aware of the adverse effects of stagnant water in the fields. Mechanism for drainage of stagnant water from fields should be evolved on priority basis and necessary requirement in this regard should be taken.