

# Decadal Agromet Bulletin of Pakistan



## Highlights....

- ❖ Light to moderate rainfall reported in Punjab, K.P, Balochistan, G.B and Kashmir and light rainfall reported from Sindh during the last decade.
- ❖ Highest amount of rainfall reported as 196.0mm at Lahore during the last decade.
- ❖ Highest maximum temperature recorded 45.5°C at Turbat & Nokkundi during the last decade.
- ❖ Light to moderate rainfall is expected in Punjab, K.P, Baluchistan, G.B and Kashmir from 3<sup>rd</sup> to 7<sup>th</sup>
- ❖ 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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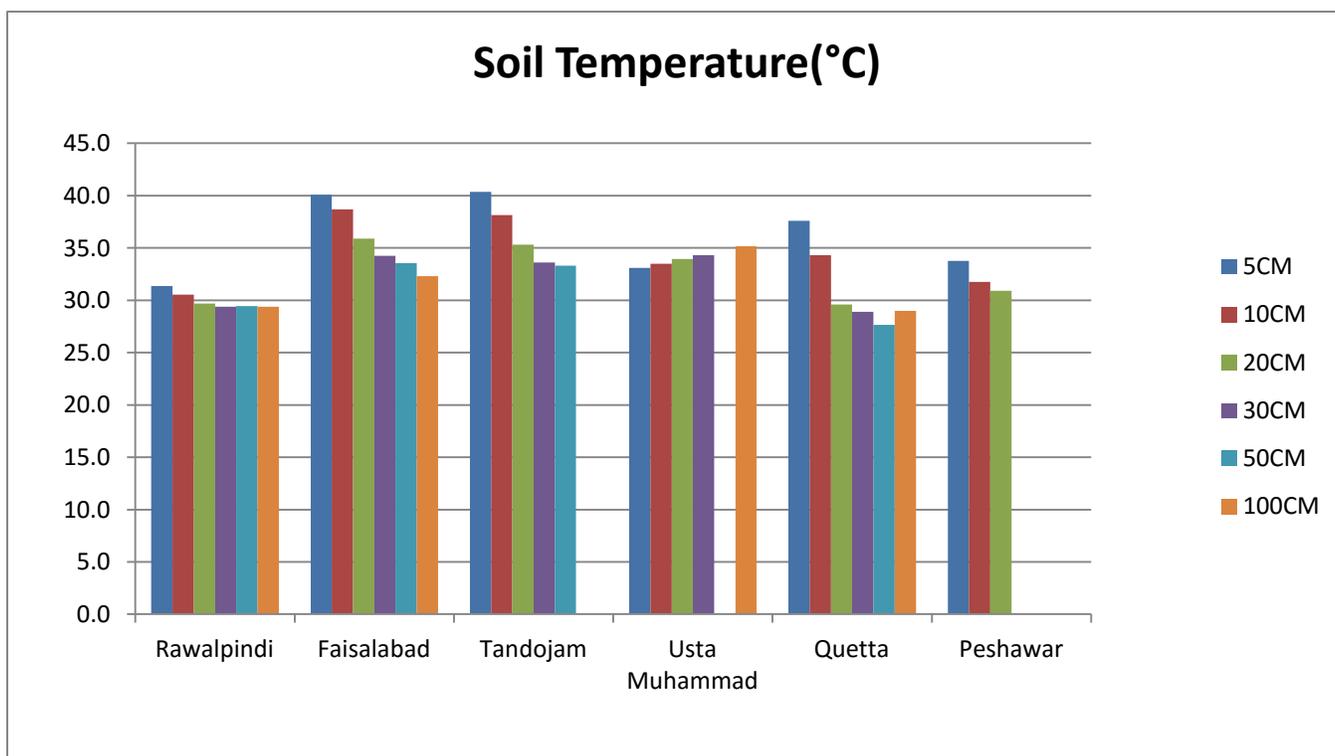
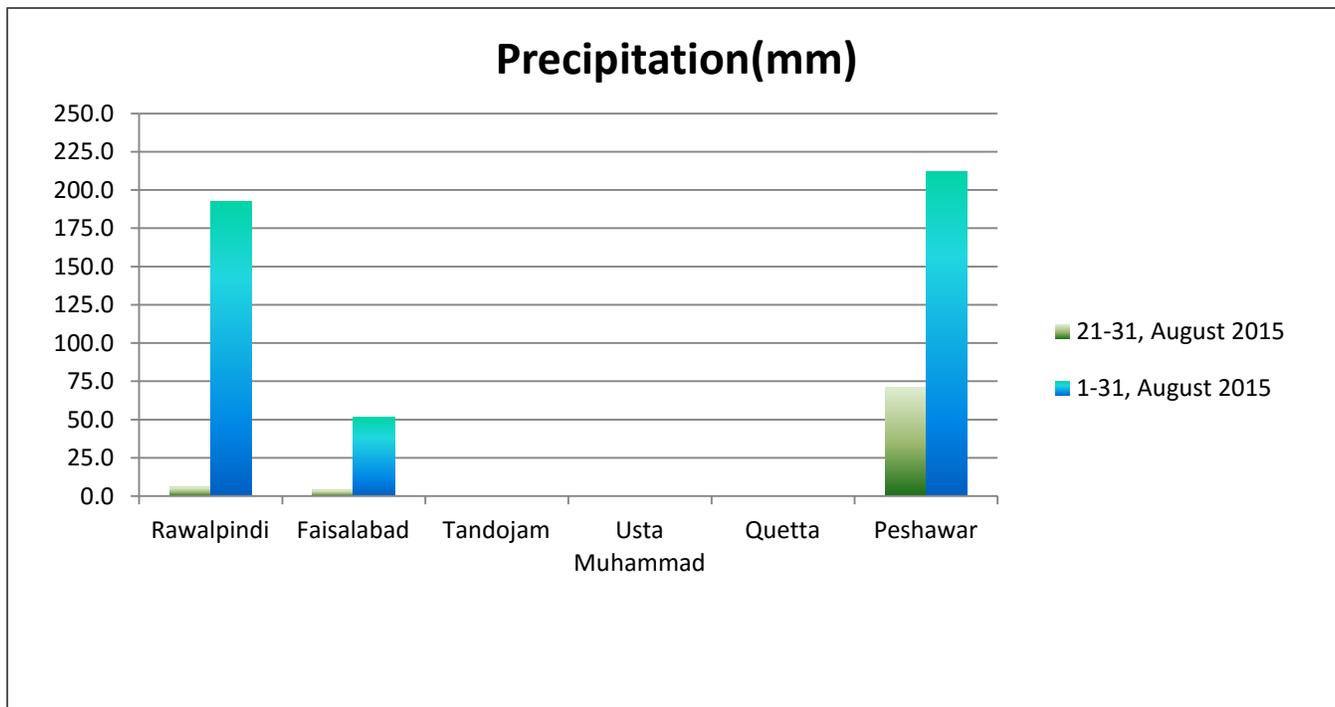
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Meteorological conditions during 3<sup>rd</sup> decade of August, 2015

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	5.9	5.8	-0.1	2.0	0.8	29.2	31.4	30.6	29.7	29.4	29.5	29.4	60	93.8	4.7	5.3
2	FAISALABAD	2.9	4.0	1.1	0.5	-0.4	31.4	40.1	38.7	35.9	34.3	33.6	32.3	60	97.4	3.9	5.5
3	JHELUM	4.4	20.1	15.7	0.9	-0.9	30.4	34.4	32.9	31.5	30.7	31.1	***	66	88.8	4.0	5.1
4	LAHORE	3.7	39.4	35.7	0.3	-1.0	30.7	34.2	33.8	31.9	30.8	***	30.1	66	79.5	2.2	4.6
5	SARGODHA	2.3	7.3	5.0	0.3	-0.8	31.4	37.2	35.9	32.9	32.1	31.9	30.6	64	85.8	2.8	5.0
6	MULTAN	0.7	39.0	38.3	-0.7	-1.0	31.4	***	***	***	***	***	***	63	90.3	6.8	5.8
7	KHANPUR	0.0	0.0	0.0	0.4	-0.5	32.1	***	35.2	35.1	35.3	35.3	34.2	62	98.0	4.9	5.9
8	TANDOJAM	1.5	0.0	-1.5	0.2	0.1	30.3	40.4	38.2	35.3	33.6	33.3	***	68	109.9	16.1	7.2
9	SAKRAND ☆	0.7	0.0	-0.7	1.0	-3.4	29.6	46.5	41.7	***	***	***	36.3	59	115.5	7.8	7.0
10	ROHRI	0.7	0.0	-0.7	0.6	-0.3	33.3	44.2	41.2	37.8	36.8	35.0	35.2	58	113.0	3.2	6.1
11	D I KHAN	1.8	12.0	10.2	-0.5	-2.6	29.7	***	***	***	***	***	***	68	88.6	***	5.6
12	PESHAWAR	0.8	71.0	70.2	-0.5	-1.8	29.5	33.8	31.8	30.9	***	***	***	70	82.5	2.9	4.6
13	USTA MUHAMMAD	0.1	0.0	-0.1	-2.4	0.3	31.8	33.1	33.5	34.0	34.3	***	35.2	59	***	***	5.5
14	QUETTA	0.4	0.0	-0.4	-0.8	0.3	26.0	37.6	34.3	29.6	28.9	27.7	29.0	21	104.7	5.7	6.1
15	SKARDU	0.4	13.2	12.8	0.7	-3.9	19.5	***	***	***	***	***	***	53	56.5	3.7	3.8
16	GILGIT	0.4	2.9	2.5	-1.3	0.8	24.5	***	***	***	***	***	***	49	85.9	3.5	4.8

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 (21<sup>st</sup> to 31<sup>st</sup> August, 2015)**

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

**1.1 Punjab**

Light to moderate rainfall reported in the agricultural plains of Punjab. Chief amount of rainfall received in Lahore, Chakwal & Shorkot. Decadal maximum raised above normal by 0.5°C & minimum temperature dropped below normal by 0.5°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 63%, 90.5hrs, 4.2km/hr and 5.3mm/day respectively.

**1.2 Sindh**

Light rainfall reported at one place of Sindh i.e Karachi. Decadal maximum raised above normal by 0.6°C & minimum temperature dropped below normal by 1.2°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 62%, 112.8hrs, 9.0km/hr and 6.8mm/day respectively.

**1.3 Khyber Pakhtunkhwa (KP)**

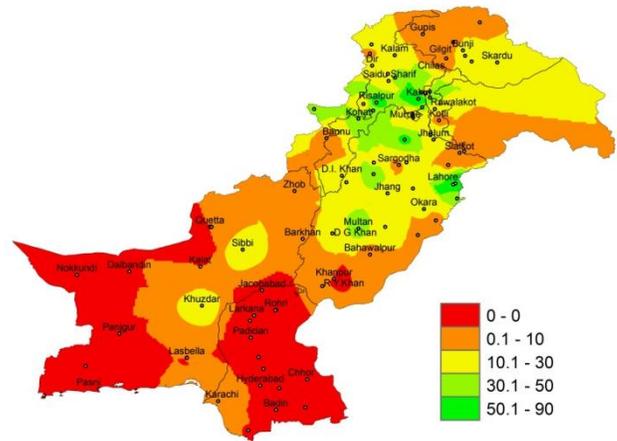
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Kakul, Risalpur & Malam Jabba. Decadal maximum & minimum temperature both dropped below normal by 0.5°C & 2.2°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 69, 85.6hrs, 2.9km/hr and 5.1mm/day respectively.

**1.4 Balochistan**

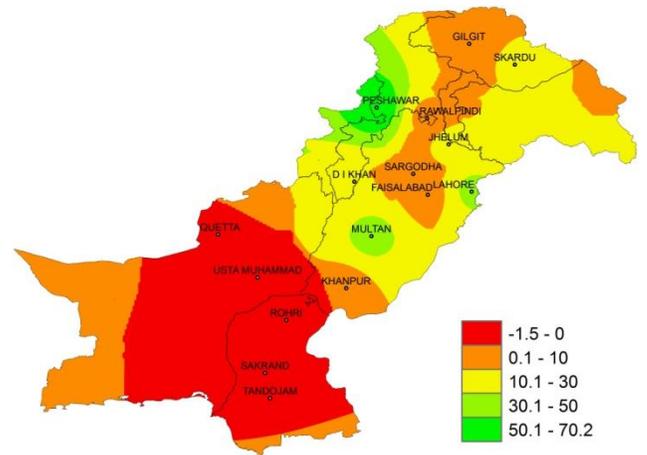
Light to moderate rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Sibbi, Khuzdar & Zhob. Decadal maximum dropped below by 1.6°C & minimum temperature raised above normal by 0.3°C, in the province. Whereas mean values relative humidity, sunshine hour, wind speed & ETo were recorded as 40%, 104.7hrs, 5.7km/hr and 5.8mm/day respectively.

**1.5 Gilgit-Baltistan and Azad Jammu & Kashmir**

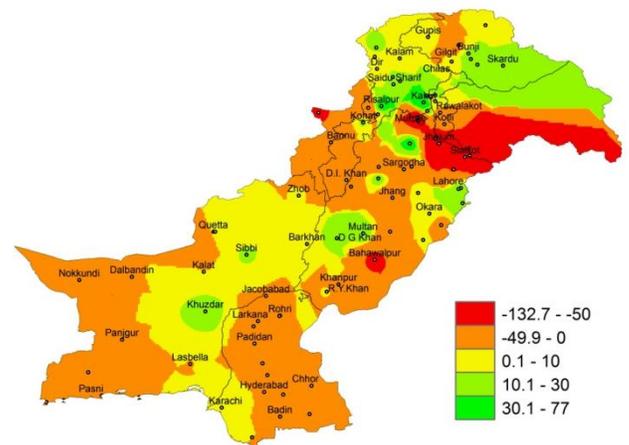
Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Garhi Dopatta, Asrore & Muzaffarabad. Decadal maximum & minimum temperature both raised above normal by 0.3°C & 1.6°C respectively, in the province. Relative humidity, sunshine hour, wind speed & ETo were recorded as 51%, 71.2hrs, 3.6km/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**  
**(21<sup>st</sup> to 31<sup>st</sup> August, 2015)**

2.1 **RAMC, Rawalpindi (Potohar region)**

Rainfall reported as 5.8mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 60%. Mean day temperature was 34.6°C while night temperature recorded as 23.8°C with 93.8hours bright sunshine duration. Wind speed recorded as 4.7km/hr with mean wind direction *westerly*.

2.2 **RAMC, Faisalabad (Central Punjab)**

Rainfall reported as 4.0mm during the decade however weather remained cloudy for 11days. Average relative humidity recorded as 60%. Mean day temperature was 36.8°C while night temperature recorded as 25.9°C with 97.35hours bright sunshine duration. Wind speed recorded as 3.9km/hr with mean wind direction *south westerly*.  
**Cotton:** Very good condition, boll opening stage.

2.3 **RAMC, Tandojam (Lower Sindh)**

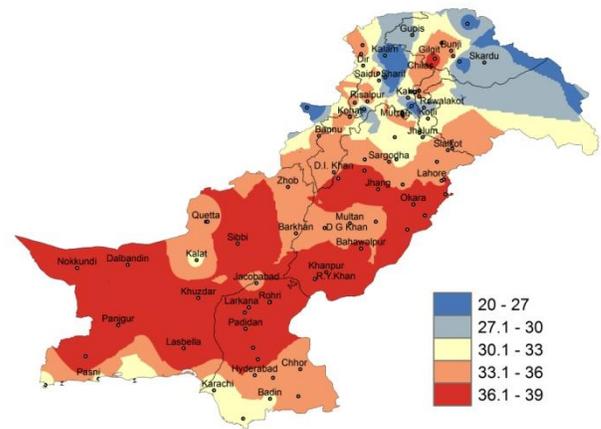
Dry weather reported during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 68%. Mean day temperature was 35.3°C while night temperature recorded as 25.2°C with 109.9hours bright sunshine duration. Wind speed recorded as 16.1km/hr with mean wind direction *south westerly*.  
**Cotton (Sindh-I):** Good condition, boll opening Stage.

2.4 **RAMC, Usta Muhammad (Eastern Balochistan)**

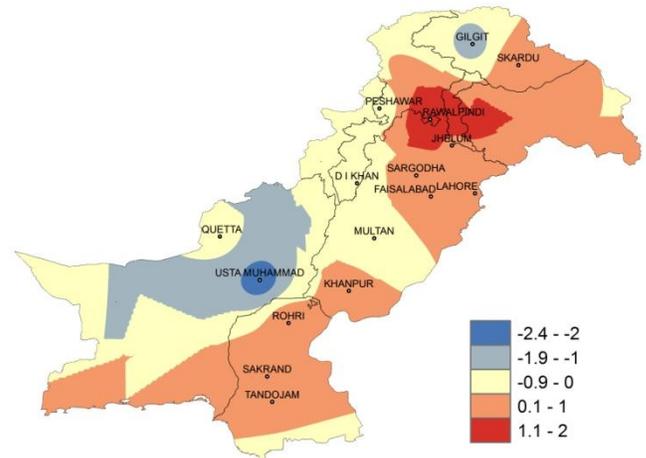
Dry weather reported during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 59%. Mean day temperature was 36.7°C while night temperature recorded as 26.9°C.  
**Rice (Paniri):** Good Condition, Tillering stage.

2.5 **RAMC, Quetta (Northern Balochistan)**

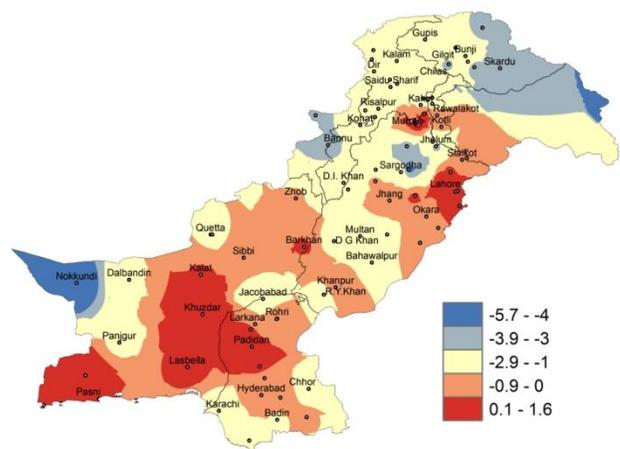
Dry weather reported during the decade, however weather remained cloudy for 07days. Average relative humidity recorded as 21%. Mean day temperature was 33.6°C while night temperature recorded as 18.4°C with 104.7hours bright sunshine duration and wind speed recorded as 5.7km/hr with mean wind direction *north westerly*.



I. Actual max-temp



II. Departure of max-temp from Normal



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 (21<sup>st</sup> to 31<sup>st</sup> August, 2015)**

2.6 **Jhelum**

Rainfall reported as 20.1mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 66%. Mean day temperature was 36.0°C while night temperature recorded as 24.7°C with 88.8hours bright sunshine duration and wind speed recorded as 4.0km/hr with mean wind direction *south westerly*.

2.7 **Lahore**

Rainfall reported as 39.4mm during the decade however weather remained cloudy for 11days. Average relative humidity recorded as 66%. Mean day temperature was 35.2°C while night temperature recorded as 26.1°C with 79.5hours bright sunshine duration. Wind speed recorded as 2.2km/hr with mean wind direction *south westerly*.

2.8 **Sargodha**

Rainfall reported as 7.3mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 64%. Mean day temperature was 36.8°C while night temperature recorded as 25.9°C with 85.8hours bright sunshine duration. Wind speed recorded as 2.8km/h with mean wind direction *easterly*.

2.9 **Multan**

Rainfall reported as 39.0mm during the decade however weather remained cloudy for 11days. Average relative humidity recorded as 63%. Mean day temperature was 36.2°C while night temperature recorded as 26.6°C with 90.3hours bright sunshine duration. Wind speed recorded 6.8km/hr with mean wind direction *south westerly*.

2.10 **Khanpur**

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 62%. Mean day temperature was 37.5°C while night temperature recorded as 26.6°C with 98.0hours bright sunshine duration. Wind speed recorded 4.9km/hr with mean wind direction *south westerly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remains cloudy for 05days. Average relative humidity recorded as 59%. Mean day temperature was 37.4°C while night temperature recorded as 21.7°C with 115.5hours bright sunshine duration. Wind speed recorded 7.8km/hr with wind direction *south westerly*.

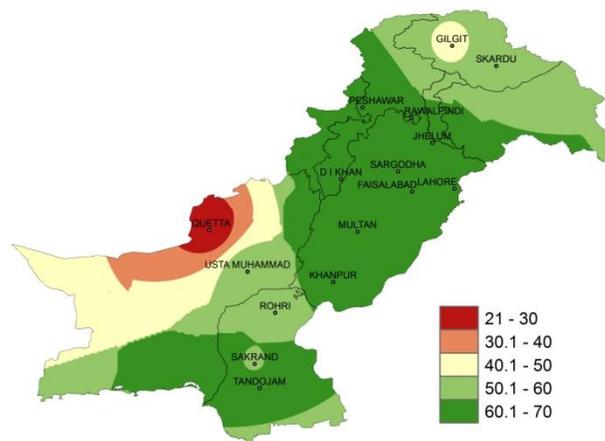


Figure.3: Relative Humidity in percentage (%)

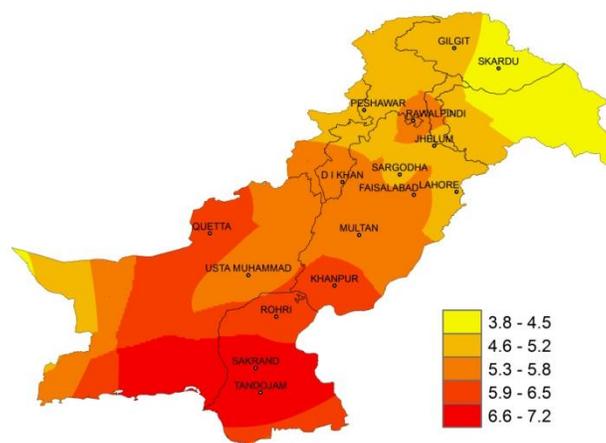


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

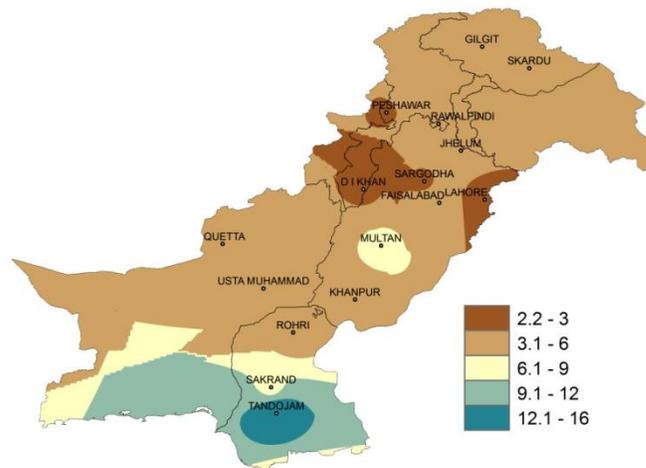


Figure 5: Wind Speed in kilometer per hour (km/h)

**2.12 Rohri**

Dry weather reported during the decade; however weather remained cloudy for 06days. Average relative humidity recorded as 58%. Mean day temperature was 38.9°C while night temperature recorded as 27.7°C with 113.0hours bright sunshine duration. Wind speed recorded as 3.2km/hr with mean wind direction *southerly*.

**2.13 D.I. Khan**

Rainfall reported as 12.0mm during the decade; however weather remained cloudy for 07days. Average relative humidity recorded as 68%. Mean day temperature was 36.5°C while night temperature recorded as 22.9°C with 88.6hours bright sunshine duration.

**2.14 Peshawar**

Rainfall reported as 71.0mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 70%. Mean day temperature was 35.0°C while night temperature recorded as 24.0°C with 85.5hours bright sunshine duration. Wind speed recorded as 2.9km/hr with mean wind direction *north easterly*.

**2.15 Skardu**

Rainfall reported 13.2mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 53%. Mean day temperature was 28.4°C while night temperature recorded as 10.6°C with 56.5hours bright sunshine duration. Wind speed recorded as 3.7km/hr with mean wind direction *south easterly*.

**2.16 Gilgit**

Rainfall reported as 2.9mm during the decade however weather remained cloudy for 11days. Average relative humidity recorded as 49%. Mean day temperature was 33.1°C while night temperature recorded as 15.9°C with 85.9hours bright sunshine duration. Wind speed recorded as 3.5km/hr with mean wind direction *westerly*.

**3. Ten Days Weather Advisory for Farmers  
(1<sup>st</sup> to 10<sup>th</sup> September, 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 3rd & 4th, light to moderate rainfall expected in Rawalpindi, Gujranwala, Sargodha and Lahore Divisions from 3th to 5th of the decade.
- ❖ **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 3th to 5th and from 7th to 8th of the decade.
- ❖ **Sindh:** Mainly hot and dry weather is expected in most parts of the Sindh.
- ❖ **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 Kalat from 3rd to 5th 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 Muzzafarabad, Kotli & Rawalakot from 3rd to 7th 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.