

# Decadal Agromet Bulletin of Pakistan



## Highlights....

- ❖ Light to moderate rainfall reported from agricultural plains of the country during the last decade.
- ❖ Highest amount of rainfall recorded as 123.0mm at Lahore during the last decade.
- ❖ Highest maximum temperature recorded 47.0°C at Dalbandin during the last decade.
- ❖ Lower values of relative humidity reported from Quetta & Skardu regions while higher values reported from Punjab, K.P & Lower parts of Sindh during the last decade.
- ❖ Lower values of ETo reported from Gilgit-Baltistan while higher values reported from Sindh & Balochistan during the last decade.
- ❖ Temperature is likely to be normal/slightly above normal in the agricultural plains of the country during the decade.
- ❖ Dust storm/ gusty wind conditions likely to prevail in the country during the decade.
- ❖ Due to expected onset of monsoon rains during the decade farmers are advised to take in time precautionary measures to protect their crops, livestock and other property from any expected heavy rain.
- ❖ Farmers of rainfed areas in upper parts are advised to cultivate maize crop due to recent rains. Farmers obtaining crop water through tube wells are also advised to schedule the irrigation according to the expected weather mentioned during the decade.

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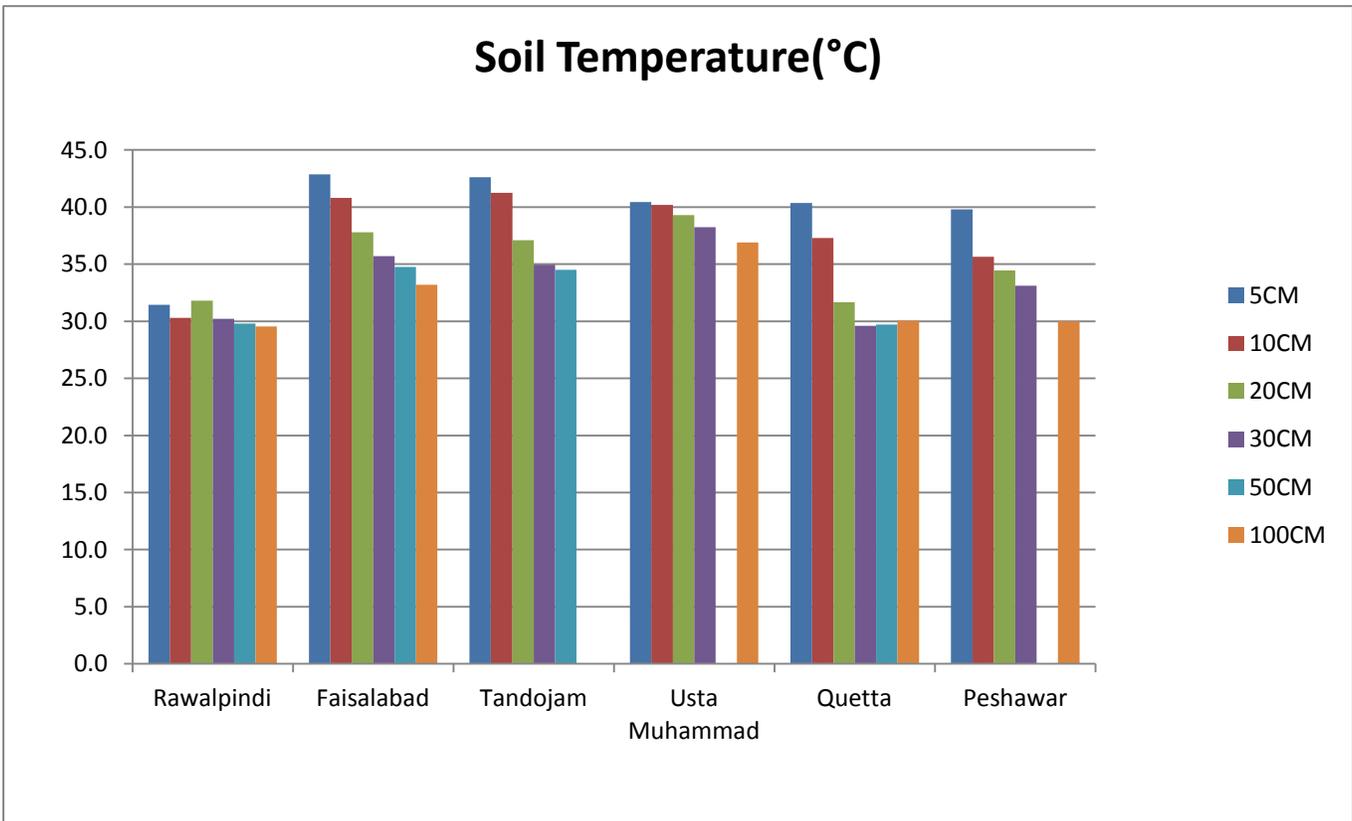
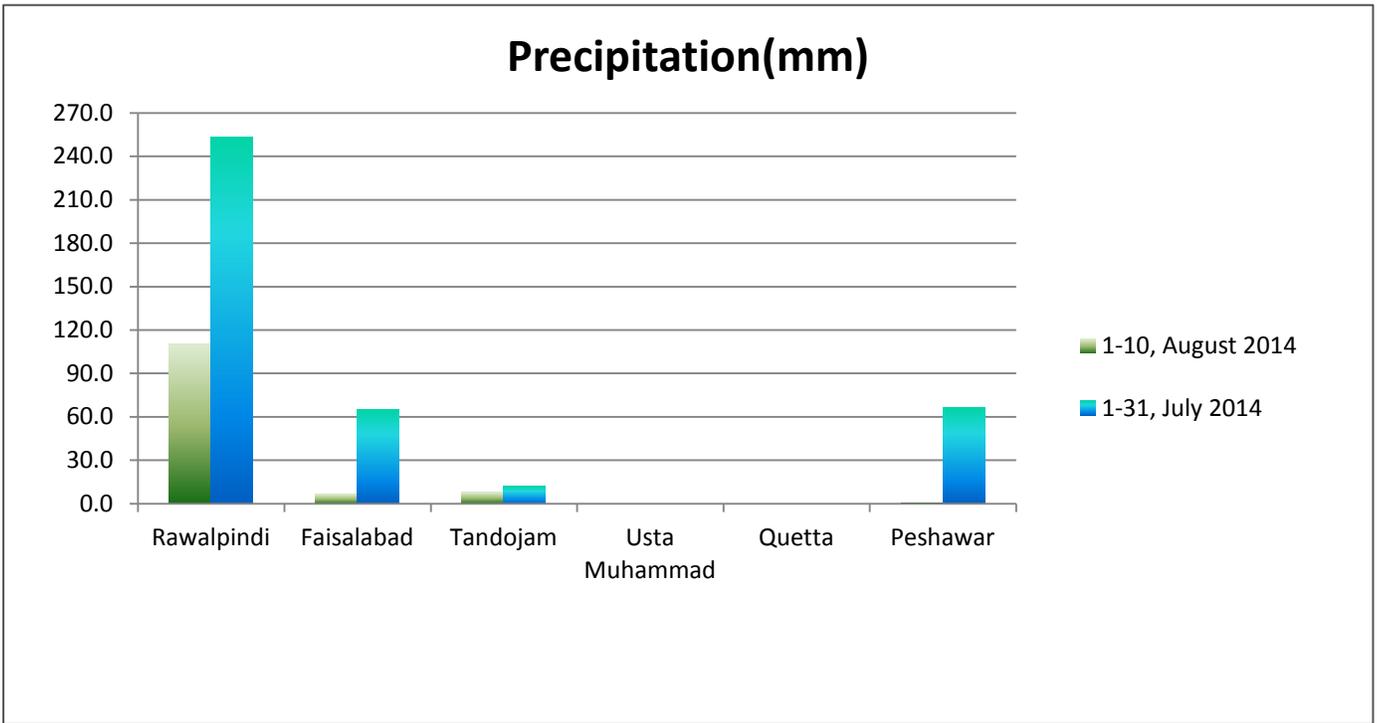
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Meteorological conditions during 1<sup>st</sup> decade of August, 2014

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	Tmin Dep	Tmax Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	13.9	110.2	96.3	-0.3	1.8	28.9	31.5	30.3	31.8	30.2	29.8	29.6	75	73.0	2.0	6.8
2	FAISALABAD	5.3	6.7	1.4	1.2	2.0	33.2	42.9	40.8	37.8	35.7	34.8	33.2	62	88.2	3.5	8.8
3	JHELUM	9.0	56.2	47.2	-0.3	1.0	30.7	35.7	34.7	32.9	31.8	31.8	***	70	73.9	3.6	7.1
4	LAHORE	5.0	47.9	42.9	-1.3	1.1	30.9	33.8	33.8	32.5	32.2	***	30.3	70	75.0	3.4	7.5
5	SARGODHA	1.6	11.0	9.4	0.6	0.3	32.5	36.4	35.1	33.1	32.3	32.1	31.6	68	73.5	1.3	6.3
6	MULTAN	3.8	4.0	0.2	1.2	1.5	34.4	***	***	***	***	***	***	58	81.5	8.0	6.6
7	KHANPUR	10.7	0.0	-10.7	1.2	3.0	34.1	***	39.7	39.4	39.4	39.2	37.0	69	86.7	5.7	6.9
8	TANDOJAM	2.5	8.0	5.5	-0.2	0.6	30.9	42.6	41.3	37.1	35.0	34.5	***	66	73.5	5.2	6.3
9	SAKRAND ☆	3.9	15.0	11.1	-7.8	1.3	29.6	45.7	41.2	***	***	***	36.1	66	78.9	10.5	6.7
10	ROHRI	2.8	0.0	-2.8	1.2	2.9	34.9	49.1	45.4	38.9	37.8	36.3	36.2	52	74.6	1.0	5.9
11	D I KHAN	4.6	0.0	-4.6	0.0	2.0	32.5	***	***	***	***	***	***	63	55.6	***	6.7
12	PESHAWAR	3.3	0.1	-3.2	0.6	2.8	32.6	39.8	35.7	34.5	33.1	***	30.0	59	67.0	4.3	5.5
13	USTA MUHAMMAD	0.0	0.0	0.0	2.8	1.2	34.1	40.5	40.2	39.3	38.3	***	36.9	52	***	***	6.7
14	QUETTA	0.0	0.0	0.0	-0.2	0.7	27.9	40.4	37.3	31.7	29.6	29.7	30.1	26	94.7	5.9	5.5
15	SKARDU	0.4	0.0	-0.4	-0.2	0.3	24.7	***	***	***	***	***	***	39	21.0	2.1	5.5
16	GILGIT	0.4	9.5	9.1	1.3	-0.5	26.4	***	***	***	***	***	***	52	52.8	2.3	5.1

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.

# Precipitation at RAMC's during August/July, 2014



**Past Weather (1<sup>st</sup> to 10<sup>th</sup> August, 2014)**

Light to moderate rainfall reported from agricultural plains of the country 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, Gujranwala & Islamabad. Decadal minimum & maximum temperature both raised above normal by 0.3°C & 1.5°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 78.8hrs, 3.9km/hr, 67% and 5.4mm/day respectively.

**1.2 Sindh**

Light to moderate rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Badin, Mithi & Shaheed Benzairabad. Decadal minimum dropped below normal by 2.3°C & maximum temperature raised above normal by 1.6°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 75.7hrs, 5.6km/hr, 61% and 5.5mm/day respectively.

**1.3 Khyber Pakhtunkhwa (KP)**

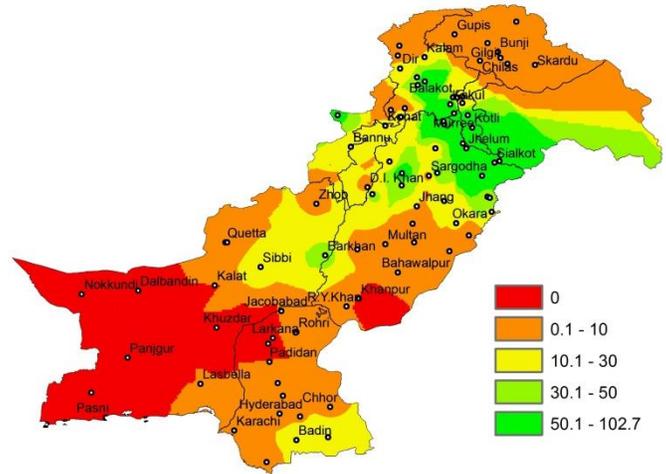
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Malam Jabba, Kakul & Parachinar. Decadal minimum & maximum temperature both raised above normal by 0.3°C & 2.4°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 61.3hrs, 4.3km/hr, 61% and 5.4mm/day respectively.

**1.4 Balochistan**

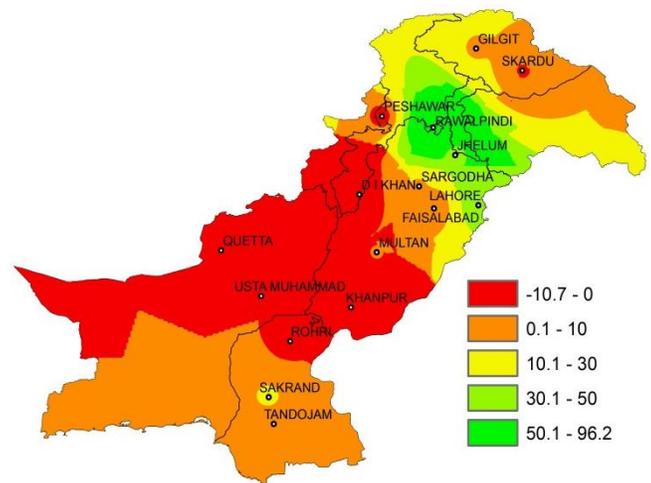
Light to moderate rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Barkhan, & Sibbi. Decadal minimum & maximum temperature both raised above normal by 1.3°C & 0.9°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were 94.7hrs, 5.9km/hr, 39% and 6.6mm/day respectively.

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

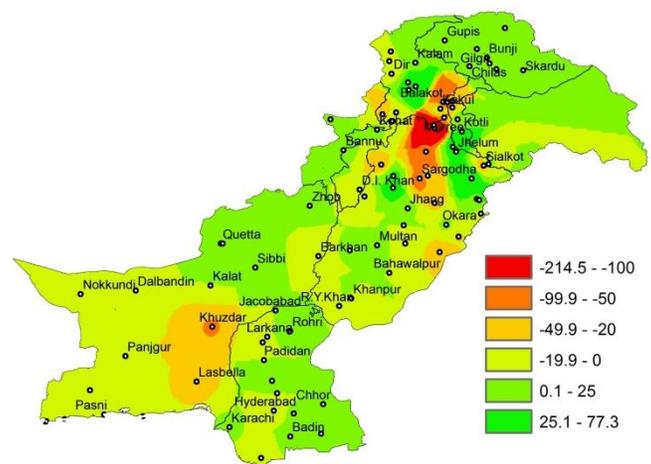
Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Rawalakot, Kotli & Muzaffarabad. Decadal minimum raised above normal by 0.5°C & maximum temperature dropped below normal by 0.1°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded 36.9hrs, 2.2km/hr, 46% and 3.8mm/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**  
(1<sup>st</sup> to 10<sup>th</sup> August, 2014)

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

Rainfall reported as 110.2mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 75%. Mean night temperature was 23.4°C while day temperature recorded as 34.3°C with 73.0hours bright sunshine duration. Wind speed recorded as 2.0km/h with mean wind direction *westerly*.

**Maize:** Emergence Stage

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

Rainfall reported as 6.7mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 62%. Mean night temperature was 28.1°C while day temperature recorded as 38.3°C with 88.2hours bright sunshine duration. Wind speed recorded as 3.5km/hr with mean wind direction *south easterly*.

**Cotton:** Normal condition, flowering stage completed.

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

Rainfall reported as 8.0mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 66%. Mean night temperature was 25.7°C while day temperature recorded as 36.0°C with 73.5hours bright sunshine duration. Wind speed recorded as 5.2km/hr with mean wind direction *south westerly*.

**Cotton (BT-3701):** Good condition, boll opening stage.

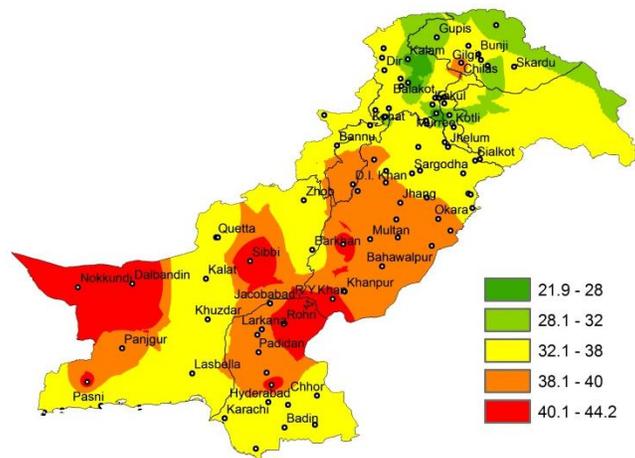
2.4 **RAMC, Usta Muhammad (Eastern Balochistan)**

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 52%. Mean night temperature was 28.3°C, while day temperature recorded as 39.9°C.

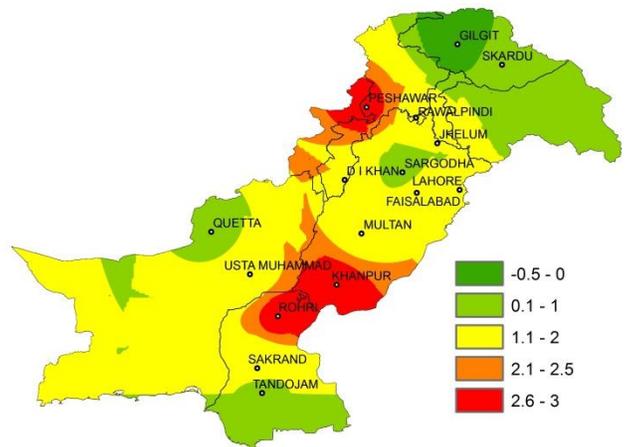
**Rice:** Good condition, 3<sup>rd</sup> Leaf maturity stage.

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

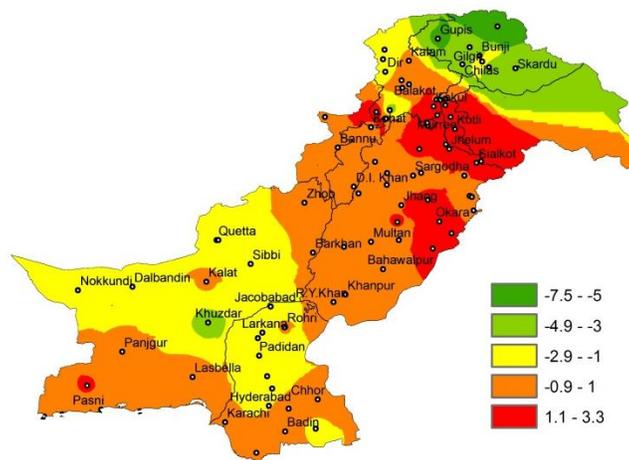
Dry weather reported during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 26%. Mean night temperature was 20.3°C while day temperature recorded as 35.5°C with 94.7hours bright sunshine duration and wind speed recorded as 5.9km/hr with mean wind direction *southerly*.



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 (1<sup>st</sup> to 10<sup>th</sup> August, 2014)**

**2.6 Jhelum**

Rainfall reported as 56.2mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 70%. Mean night temperature was 25.6°C while day temperature recorded as 35.8°C with 73.9hours bright sunshine duration. Wind speed recorded 3.6km/hr with mean wind direction *south westerly*.

**2.7 Lahore**

Rainfall reported as 47.9mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 70%. Mean night temperature was 26.1°C while day temperature recorded as 35.7°C with 75.0hours bright sunshine duration. Wind speed recorded as 3.4km/hr with mean wind direction *north easterly*.

**2.8 Sargodha**

Rainfall reported as 11.0mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 68%. Mean night temperature was 27.9°C while day temperature recorded as 37.0°C with 73.5hours bright sunshine duration. Wind speed recorded as 1.3km/hr with mean wind direction *easterly*.

**2.9 Multan**

Rainfall reported as 4.0mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 58%. Mean night temperature was 29.6°C while day temperature recorded as 39.1°C with 81.5hours bright sunshine duration. Wind speed recorded as 8.0km/hr with mean wind direction *south westerly*.

**2.10 Khanpur**

Dry weather reported during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 69%. Mean night temperature was 28.7°C while day temperature recorded as 39.4°C with 86.7hours bright sunshine duration. Wind speed recorded 5.7km/hr with mean wind direction *south westerly*.

**2.11 Sakrand**

Rainfall reported as 15.0mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 66%. Mean night temperature was 22.8°C while day temperature recorded as 37.1°C with 78.9hours bright sunshine duration. Wind speed recorded 10.5km/hr with mean wind direction *south easterly*.

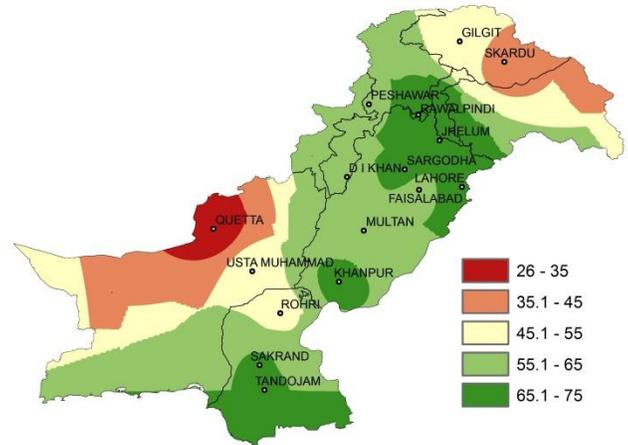


Figure.3: Relative Humidity in percentage (%)

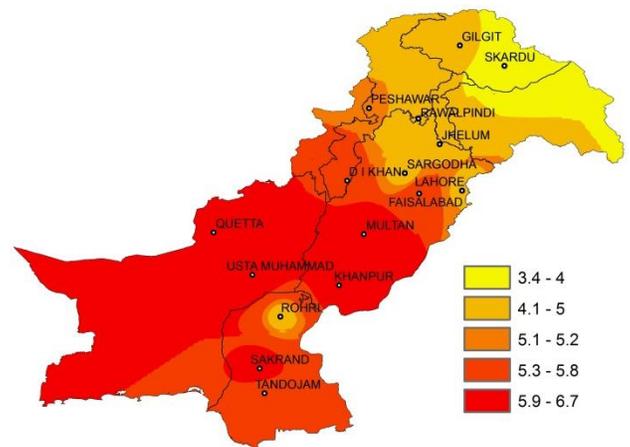


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

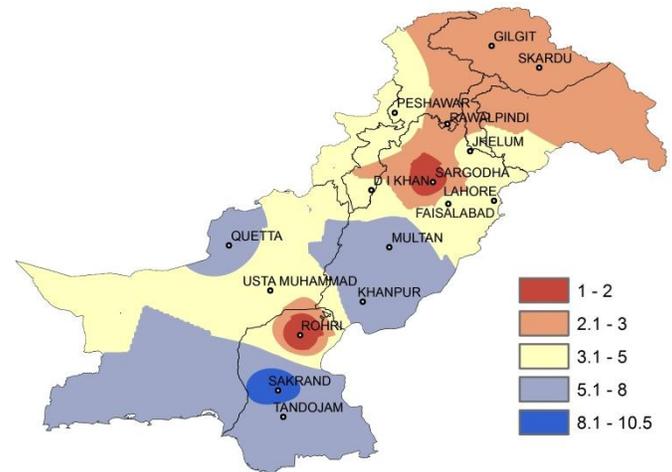


Figure 5: Wind Speed in kilometer per hour (km/h)

**2.12 Rohri**

Dry weather reported during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 52%. Mean night temperature was 29.3°C while day temperature recorded as 40.4°C with 74.6hours bright sunshine duration. Wind speed recorded as 1.0km/hr with mean wind direction *southerly*.

**2.13 D.I. Khan**

Dry weather reported during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 63%. Mean night temperature was 26.2°C while day temperature recorded as 38.7°C with 55.6hours bright sunshine duration.

**2.14 Peshawar**

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 59%. Mean night temperature was 27.1°C while day temperature recorded as 40.0°C with 67.0hours bright sunshine duration. Wind speed recorded as 4.3km/hr with mean wind direction *north westerly*.

**2.15 Skardu**

Dry weather reported during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 39%. Mean night temperature was 16.5°C while day temperature recorded as 32.8°C with 21.0hours bright sunshine duration. Wind speed recorded as 2.1km/hr with mean wind direction *south south-easterly*.

**2.16 Gilgit**

Rainfall reported as 9.5mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 52%. Mean night temperature was 18.4°C while day temperature recorded as 34.3°C with 52.8bright sunshine duration. Wind speed recorded as 2.3km/hr with mean wind direction *easterly*.

### **3. Ten Days Weather Advisory for Farmers (11<sup>th</sup> to 20<sup>th</sup> August, 2014)**

**3.1 Temperature Forecast**

Normal temperatures are expected in most of the agricultural plains of the country during the decade.

**3.2 Wind Forecast**

Dust storm/ gusty wind conditions likely to prevail in the country during the decade.

**3.3 Rain Forecast**

- ❖ **Punjab:** Light to moderate rainfalls at isolated places is expected over most of the agricultural plains of the province during the decade.
- ❖ **Khyber Pakhtunkhwa:** Heavy falls at isolated places is expected over most of the agricultural plains of the province during the decade.
- ❖ **Sindh:** Light rainfall expected at isolated places of lower Sindh during the decade.
- ❖ **Balochistan:** Mainly dry weather is expected in the province. However light rainfall expected in North western parts of Balochistan during the decade.
- ❖ **Gilgit Baltistan:** Mostly cloudy weather with light to moderate rainfall over hills is expected in most parts of GB during the decade.
- ❖ **Kashmir:** Mainly cloudy weather with light to moderate rainfall over hills is expected in isolated parts of Kashmir during the 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 expected monsoon rains during the decade 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.
- ❖ Farmers of cotton belt are 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 requirements in this regard should be taken.