

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Heavy rainfall reported in the agricultural plains of Punjab, G.B & Kashmir and light to moderate rainfall reported in Sindh & K.P light rainfall reported Balochistan during the last decade.
- ❖ Highest amount of rainfall reported as 215.0mm at Murree during the last decade.
- ❖ Highest maximum temperature recorded 42.0°C at Lasbella during the last decade.
- ❖ Light to moderate rainfall is expected in Upper Punjab, K.P, G.B and Kashmir from 9th to 10th 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.

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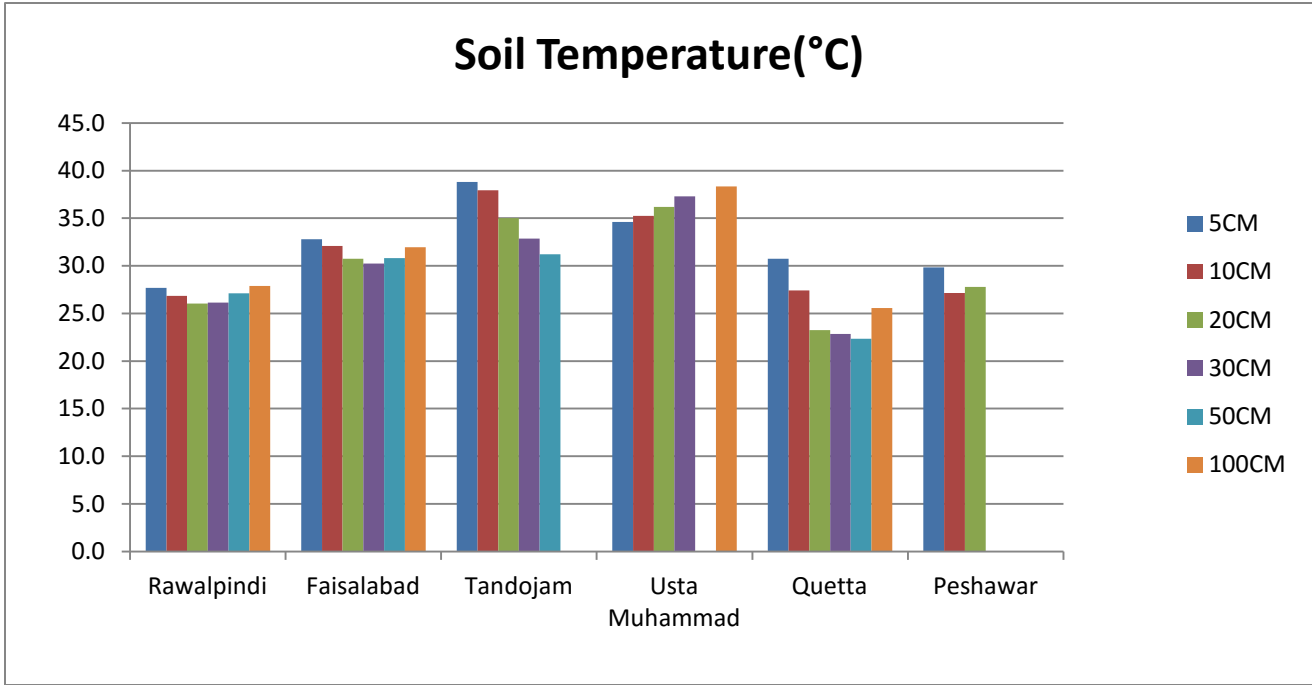
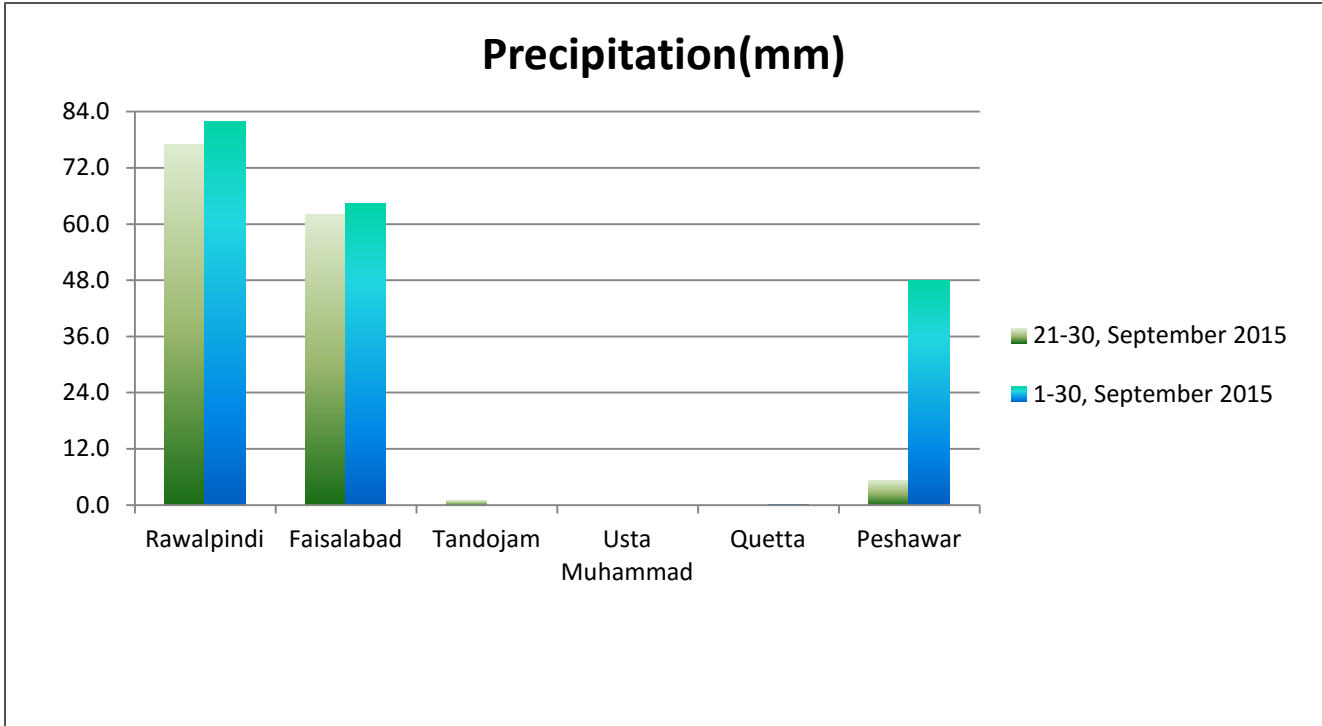
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Meteorological conditions during 3rd decade of September, 2015

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	1.9	77.0	75.1	-1.5	0.3	25.5	27.7	26.9	26.1	26.2	27.1	27.9	62	64.2	4.0	3.6
2	FAISALABAD	2.1	62.0	59.9	-2.9	0.4	27.5	32.8	32.1	30.8	30.3	30.8	32.0	41	72.1	2.1	3.6
3	JHELUM	0.9	118.5	117.6	-2.4	-1.3	26.6	29.1	28.5	28.5	28.0	28.7	***	67	72.3	1.7	3.4
4	LAHORE	1.1	111.6	110.5	-3.5	-2.3	26.6	31.7	30.5	28.3	27.7	***	28.9	71	66.5	3.3	3.5
5	SARGODHA	0.9	58.5	57.6	-4.0	-0.7	27.2	31.1	30.8	29.6	25.1	30.3	30.1	76	61.5	1.7	3.2
6	MULTAN	0.1	10.2	10.1	-2.8	-0.3	28.8	***	***	***	***	***	***	60	72.3	4.4	4.2
7	KHANPUR	0.0	0.0	0.0	-2.2	0.0	28.8	***	32.2	32.0	32.3	32.5	32.4	64	87.0	3.4	4.3
8	TANDOJAM	0.0	1.0	1.0	0.3	-0.8	29.6	38.8	38.0	35.0	32.9	31.2	***	61	92.7	8.4	5.8
9	SAKRAND ☆	0.0	0.1	0.1	-0.4	-4.7	27.2	42.4	38.7	***	***	***	35.2	55	97.9	3.3	4.7
10	ROHRI	0.0	0.0	0.0	-1.1	0.5	31.4	41.0	37.5	34.5	34.5	32.6	35.0	52	88.6	2.4	4.5
11	DI KHAN	0.7	0.1	-0.6	-1.1	-1.6	27.7	***	***	***	***	***	***	61	71.1	***	4.7
12	PESHAWAR	1.1	5.3	4.2	-1.1	-1.9	26.0	29.9	27.2	27.8	***	***	***	68	63.5	2.2	3.2
13	USTA MUHAMMAD	0.0	0.0	0.0	-2.4	-1.6	30.5	34.6	35.3	36.2	37.3	***	38.4	51	***	***	5.6
14	QUETTA	0.0	0.0	0.0	-2.8	2.0	19.1	30.8	27.4	23.3	22.9	22.4	25.6	21	97.9	4.8	4.3
15	SKARDU	0.1	61.9	61.8	-4.2	-0.9	13.3	***	***	***	***	***	***	66	51.8	3.1	2.4
16	GILGIT	0.2	24.7	24.5	-5.3	3.4	18.2	***	***	***	***	***	***	62	53.6	2.6	2.9

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 September, 2015



Past Weather (21st to 30th September, 2015)

Heavy rainfall reported in the agricultural plains of Punjab, G.B & Kashmir and light to moderate rainfall reported in Sindh & K.P light rainfall reported Balochistan during the last decade.

1.1 Punjab

Heavy rainfall reported in the agricultural plains of Punjab. Chief amount of rainfall received in Murree, Lahore & Islamabad. Decadal maximum raised & minimum temperature both dropped below normal by 2.8°C & 0.6°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 63%, 70.8hrs, 2.9km/hr and 3.7mm/day respectively.

1.2 Sindh

Light to moderate rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Chorr, Thatta & Jacobabad. Decadal maximum raised & minimum temperature both dropped below normal by 0.4°C & 1.7°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 56%, 93.1hrs, 4.7km/hr and 5.0mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

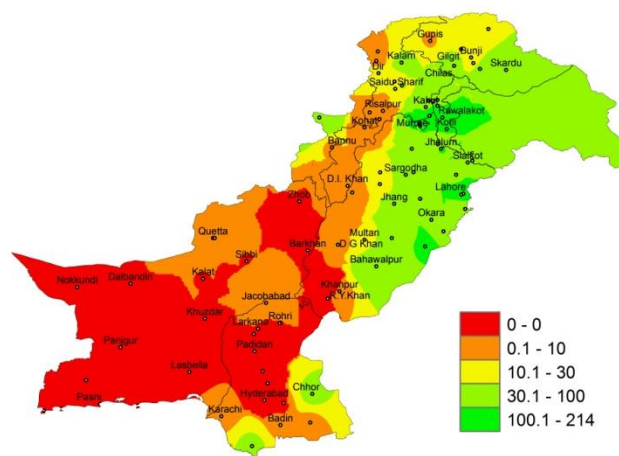
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Parachinar, Kakul & Kalat. Decadal maximum raised & minimum temperature both dropped below normal by 1.1°C & 1.8°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 65%, 67.3hrs, 2.2km/hr and 4.0mm/day respectively.

1.4 Balochistan

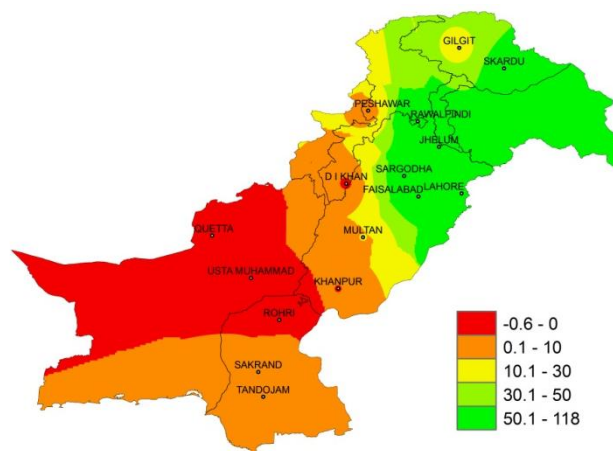
Light rainfall reported at one place of Balochistan i.e Quetta. Decadal maximum dropped below by 2.6°C & minimum temperature raised above normal by 0.2°C, in the province. Whereas mean values relative humidity, sunshine hour, wind speed & ETO were recorded as 36%, 97.9hrs, 4.8km/hr and 5.0mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

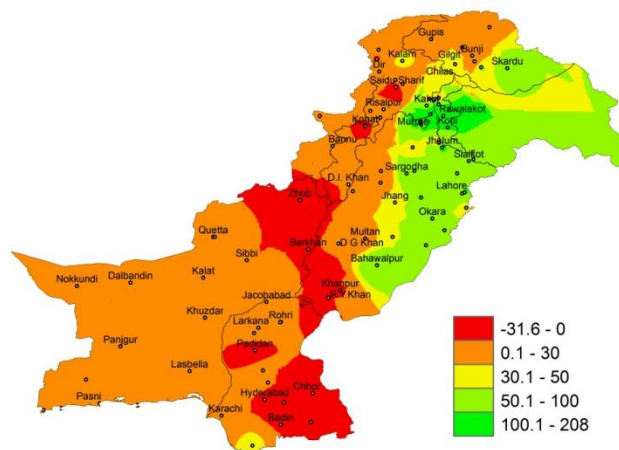
Heavy rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Rawalakot, Garhi Dopatta & Kotli. Decadal maximum dropped below normal by 4.8°C & minimum temperature raised above normal by 1.3°C, in the province. Relative humidity, sunshine hour, wind speed & ETO were recorded as 64%, 52.7hrs, 2.9km/hr and 2.7mm/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**
(21st to 30th September, 2015)

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

Rainfall reported as 77.0mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 62%. Mean day temperature was 31.4°C while night temperature recorded as 19.5°C with 64.2hours bright sunshine duration. Wind speed recorded as 4.0km/hr with mean wind direction *northerly*.

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

Rainfall reported as 62.0mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 59%. Mean day temperature was 32.5°C while night temperature recorded as 22.5°C with 72.10hours bright sunshine duration. Wind speed recorded as 2.1km/hr with mean wind direction *north westerly*.
Cotton: Very good condition, maturity stage.

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

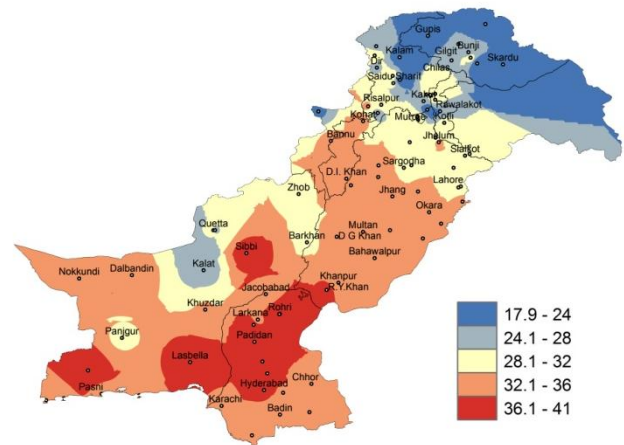
Rainfall reported as 1.0mm during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 61%. Mean day temperature was 36.7°C while night temperature recorded as 22.5°C with 92.7hours bright sunshine duration. Wind speed recorded as 8.4km/hr with mean wind direction *south westerly*.
Cotton (Sindh-I): Good condition, maturity Stage.

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

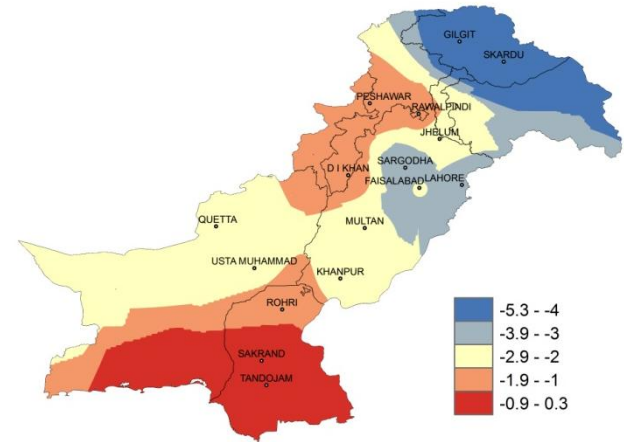
Dry weather reported during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 51%. Mean day temperature was 37.0°C while night temperature recorded as 23.9°C.
Rice (Paniri): Good Condition, wax maturity stage.

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

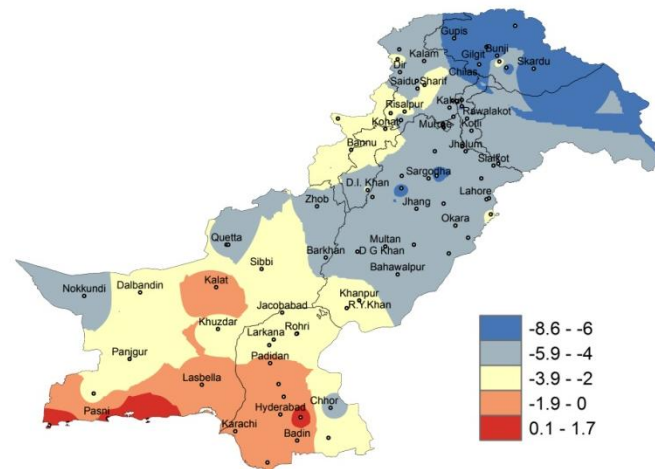
Dry weather reported during the decade, however weather remained cloudy for 03days. Average relative humidity recorded as 21%. Mean day temperature was 26.80°C while night temperature recorded as 11.3°C with 97.8hours bright sunshine duration and wind speed recorded as 4.8km/hr with mean wind direction *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 (21st to 30th September, 2015)**

2.6 **Jhelum**

Rainfall reported as 118.5mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 67%. Mean day temperature was 32.2°C while night temperature recorded as 21.0°C with 72.3hours bright sunshine duration and wind speed recorded as 1.7km/hr with mean wind direction *north westerly*.

2.7 **Lahore**

Rainfall reported as 111.6mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 71%. Mean day temperature was 30.9°C while night temperature recorded as 22.3°C with 66.5hours bright sunshine duration. Wind speed recorded as 3.3km/hr with mean wind direction *northerly*.

2.8 **Sargodha**

Rainfall reported as 58.5mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 76%. Mean day temperature was 31.5°C while night temperature recorded as 22.9°C with 61.5hours bright sunshine duration. Wind speed recorded as 1.7km/h with mean wind direction *easterly*.

2.9 **Multan**

Rainfall reported as 10.2mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 60%. Mean day temperature was 33.7°C while night temperature recorded as 23.9°C with 72.3hours bright sunshine duration. Wind speed recorded 4.4km/hr with mean wind direction *south westerly*.

2.10 **Khanpur**

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 64%. Mean day temperature was 34.6°C while night temperature recorded as 23.2°C with 87.0hours bright sunshine duration. Wind speed recorded 3.4km/hr with mean wind direction *north easterly*.

2.11 **Sakrand**

Rainfall reported as Trace (not measureable) during the decade however weather remains cloudy for 01day. Average relative humidity recorded as 55%. Mean day temperature was 36.6°C while night temperature recorded as 17.8°C with 97.9hours bright sunshine duration. Wind speed recorded 3.7km/hr with wind direction *south easterly*.

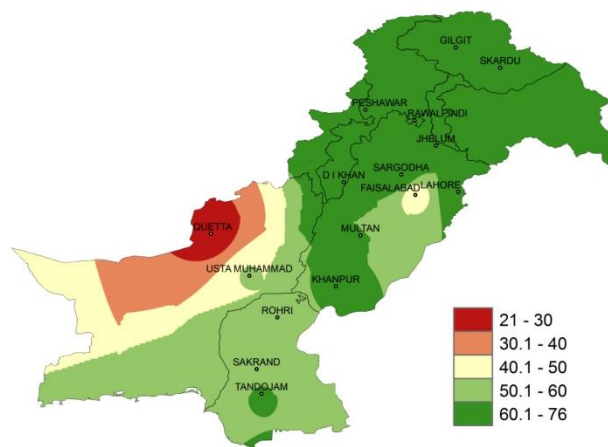


Figure.3: Relative Humidity in percentage (%)

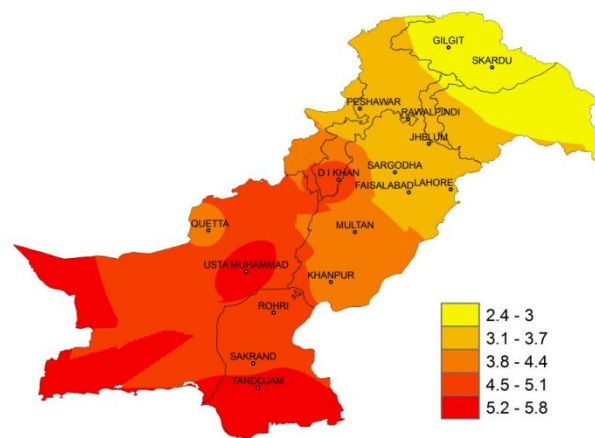


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

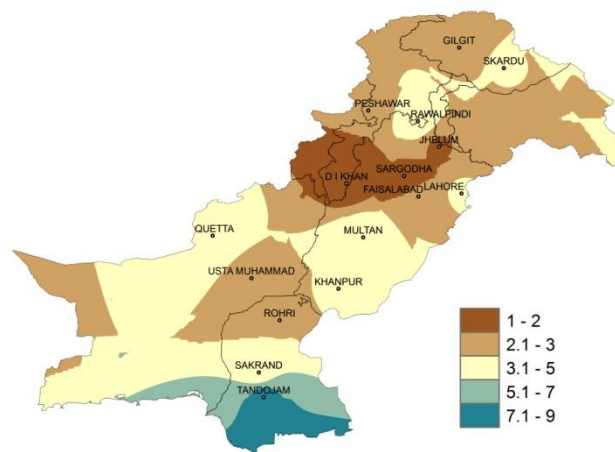


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Dry weather reported during the decade; however weather remained cloudy for 01day. Average relative humidity recorded as 52%. Mean day temperature was 36.8°C while night temperature recorded as 26.0°C with 88.6hours bright sunshine duration. Wind speed recorded as 2.4km/hr with mean wind direction *north easterly*.

2.13 D.I. Khan

Rainfall reported as Trace (not measureable) during the decade; however weather remained cloudy for 04days. Average relative humidity recorded as 61%. Mean day temperature was 34.8°C while night temperature recorded as 20.6°C with 71.1hours bright sunshine duration.

2.14 Peshawar

Rainfall reported as 5.3mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 68%. Mean day temperature was 32.6°C while night temperature recorded as 19.4°C with 63.5hours bright sunshine duration. Wind speed recorded as 2.2km/hr with mean wind direction *north easterly*.

2.15 Skardu

Rainfall reported 61.9mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 66%. Mean day temperature was 19.5°C while night temperature recorded as 7.1°C with 51.8hours bright sunshine duration. Wind speed recorded as 3.1km/hr with mean wind direction *north westerly*.

2.16 Gilgit

Rainfall reported as 24.7mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 62%. Mean day temperature was 24.2°C while night temperature recorded as 12.1°C with 53.6hours bright sunshine duration. Wind speed recorded as 2.6km/hr with mean wind direction *westerly*.

**3. Ten Days Weather Advisory for Farmers
(1st to 10th October, 2015)****3.1 Temperature Forecast**

Night temperatures are expected to drop slightly (1-2°C) and day time temperatures are likely to be slightly 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.

3.3 Rain Forecast

- ❖ **Punjab:** Mainly hot and dry weather is expected in most parts of the Punjab.
- ❖ **Khyber Pakhtunkhwa:** Mainly dry weather is expected in the province. However scattered light to moderate rainfall is expected in Bannu, Kohat and Hazara from 9th to 10th of this decade.
- ❖ **Sindh:** Dry weather is expected in most parts of the Sindh during this 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 on 9th of this decade.
- ❖ **Gilgit Baltistan:** Mainly dry weather is expected in most parts of the Gilgit Baltistan however light to moderate rain is expected at Gilgit, Skardu on 6th and 9th to 10th of this decade.
- ❖ **Kashmir:** Mainly dry weather is expected in most of the parts of the Kashmir however rain-thunderstorm is expected at Muzaffarabad, Kotli & Rawalakot from 9th to 10th 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.
- ❖ Farmers are advised to take in time precautionary measures to protect their crops, livestock and other property from any expected heavy rain.
- ❖ 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.