

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported from Punjab, KP, G.B & Kashmir however dry weather reported from Sindh & Balochistan during the last decade.
- ❖ Highest amount of rainfall recorded as 110mm at Lower Dir during the last decade.
- ❖ Highest maximum temperature recorded 44°C at Chorr during the last decade.
- ❖ Light to moderate rainfall are expected in Kashmir, K.P, G.B different parts of Punjab and a few in Balochistan in the decade.
- ❖ Normal to below normal temperature is expected in most of the agricultural plains of the country during the decade.
- ❖ Normal to gusty wind pattern may prevail in most of the agricultural plains of the country during the decade.
- ❖ Monsoon rains have accelerated pest/viral attacks and more weeds growth in cotton, sugarcane and other standing crops. Viral/pests attacks on cotton and sugarcane crops have been reported in agricultural plains of the country. Farmers should take in time precautionary measures through manual methods or chemical spraying to control weeds on time.
- ❖ Farmers are advised to cultivate winter vegetables in time so that present soil moisture may fully be utilized.

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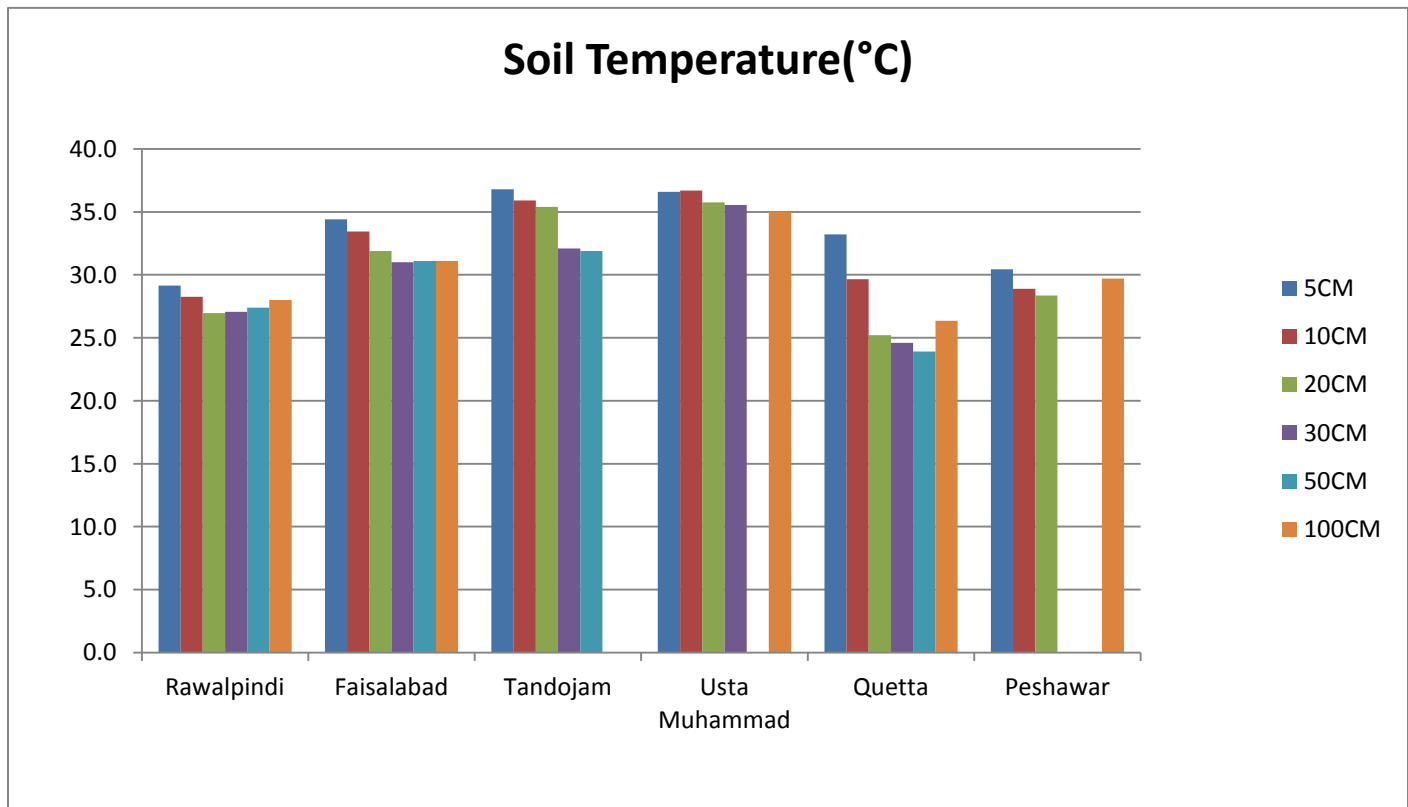
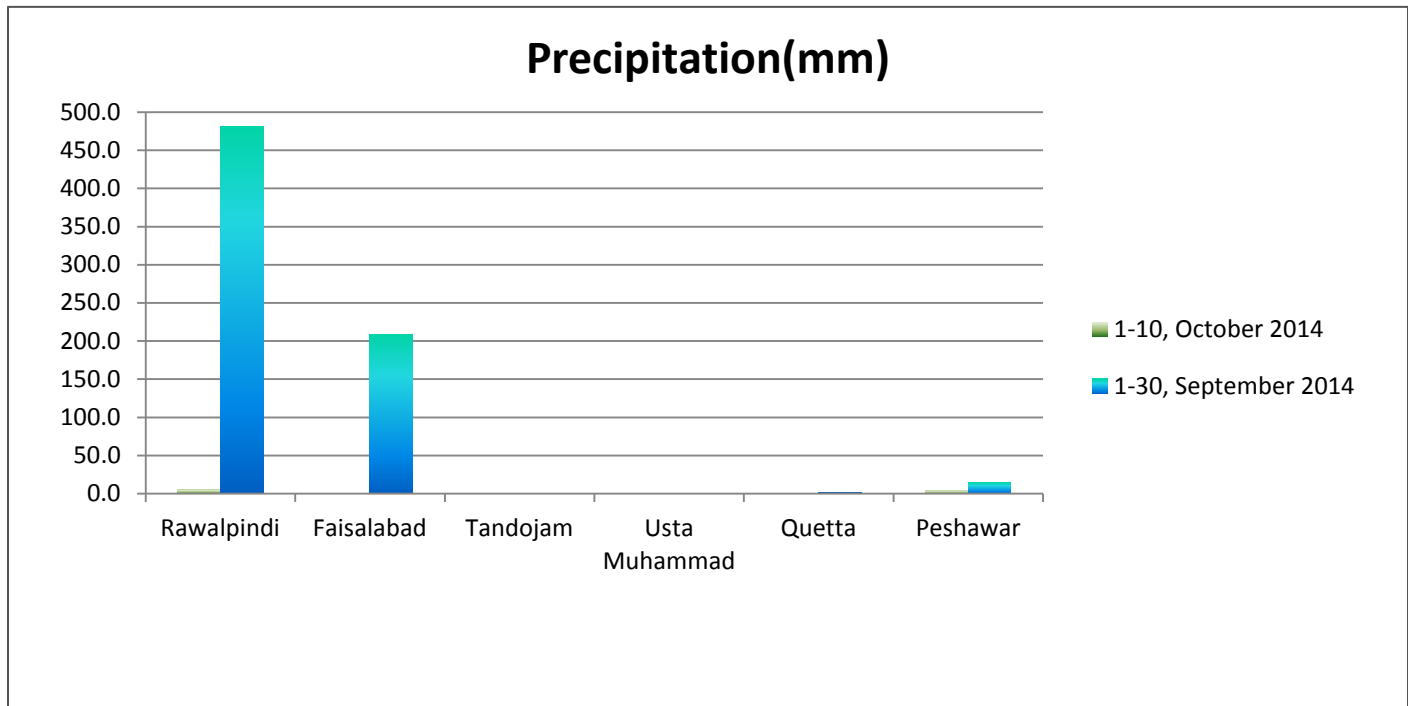
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Meteorological conditions during 1st decade of October, 2014

Sr. No.	Station	Precipitation (mm)			Air Temperature (°C)			Soil Temperatures (°C)						R.H (%)	Sunshine Duration (hours)	Wind Speed (km/hr)	ET _o (mm/day)
		Normal	Actual	Dep	T _{max} Dep	T _{min} Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	1.0	5.0	4.0	-0.4	2.5	26.3	29.2	28.3	27.0	27.1	27.4	28.0	66	69.4	3.9	3.4
2	FAISALABAD	0.2	0.1	-0.1	-0.6	2.7	28.8	34.4	33.5	31.9	31.0	31.1	31.1	55	81.3	2.3	3.6
3	JHELUM	0.4	37.6	37.2	-0.9	1.5	28.1	31.5	30.6	29.3	28.5	29.0	***	68	50.3	1.5	2.8
4	LAHORE	0.1	1.0	0.9	-0.7	1.2	29.1	29.5	29.8	29.1	29.1	***	29.1	66	64.3	2.1	3.3
5	SARGODHA	0.1	0.1	0.0	-2.5	1.7	29.4	34.0	33.1	30.8	30.4	30.6	29.9	63	73.2	0.4	3.1
6	MULTAN	0.2	0.0	-0.2	-0.4	2.8	30.4	***	***	***	***	***	***	51	86.8	4.5	4.5
7	KHANPUR	0.0	0.0	0.0	-0.4	0.9	29.5	***	33.4	33.3	33.7	34.1	33.5	55	91.9	3.4	4.4
8	TANDOJAM	0.8	0.0	-0.8	0.9	0.9	30.0	36.8	35.9	35.4	32.1	31.9	***	58	97.0	2.3	4.4
9	SAKRAND ☆	0.0	0.0	0.0	0.4	-3.2	27.9	36.5	36.1	***	***	***	35.0	59	108.1	7.0	5.7
10	ROHRI	0.0	0.0	0.0	0.1	0.9	31.4	40.6	37.8	34.2	34.3	33.0	34.7	50	100.9	3.1	4.8
11	DI KHAN	0.3	0.0	-0.3	0.6	1.0	29.1	***	***	***	***	***	***	55	87.8	***	5.1
12	PESHAWAR	1.1	4.0	2.9	-0.4	2.1	27.6	30.5	28.9	28.4	***	***	29.7	65	52.6	2.0	2.9
13	USTA MUHAMMAD	0.0	0.0	0.0	0.4	0.3	30.3	36.6	36.7	35.8	35.6	***	35.0	52	***	***	5.3
14	QUETTA	0.0	0.0	0.0	-8.4	4.3	17.3	33.2	29.7	25.2	24.6	23.9	26.4	24	103.8	5.3	4.0
15	SKARDU	0.1	1.8	1.7	-1.2	0.7	14.9	***	***	***	***	***	***	56	130.6	4.3	3.4
16	GILGIT	0.2	7.9	7.7	1.1	2.4	19.7	***	***	***	***	***	***	49	63.4	2.8	3.6

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; $\text{Dep} \div \text{Normal} \times 100$. T_{min} & T_{max} stands for minimum and maximum temperatures respectively. ET_o stands for reference crop evapotranspiration. *** stands for no data and (☆) indicates the station with five years climatic (normal) data for computing departures.

Graph at RAMC's during October, 2014



Past Weather (1st to 10th October, 2014)

Light to moderate rainfall reported from Punjab, KP, G.B & Kashmir however dry weather reported from Sindh & Balochistan during the last decade.

1.1 Punjab

Light to moderate rainfall reported in the agricultural plains of Punjab. Chief amount of rainfall received in Mangla Jhelum & Sialkot. Decadal maximum dropped below normal by 0.8°C & minimum temperature raised above normal by 1.9°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 61%, 73.9hrs, 2.6km/hr and 3.6mm/day respectively.

1.2 Sindh

Dry weather reported in the agricultural plains of Sindh. Decadal maximum raised above normal by 0.5°C & minimum temperature dropped below normal by 0.5°C & 0.9°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 56%, 102.0hrs, 4.1km/hr and 5.0mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

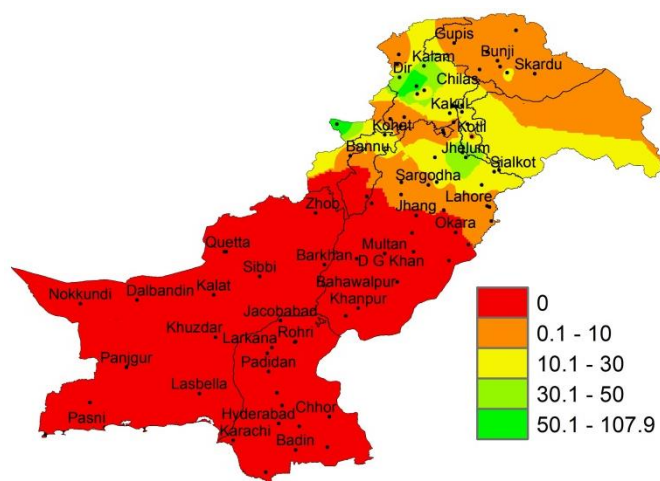
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in lower Dir, Parachinar & Kalam. Decadal maximum & minimum temperature both raised above normal by 0.1°C & 1.6°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 60%, 70.2hrs, 2.0km/hr and 4.0mm/day respectively.

1.4 Balochistan

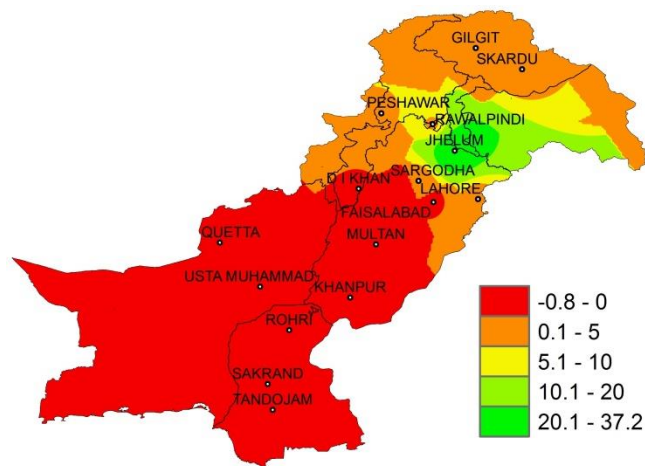
Dry weather reported in the agricultural plains of Balochistan. Decadal maximum dropped below normal by 4.0°C & minimum temperature raised above normal by 2.3°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 38%, 103.8hrs, 5.3km/hr and 4.7mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

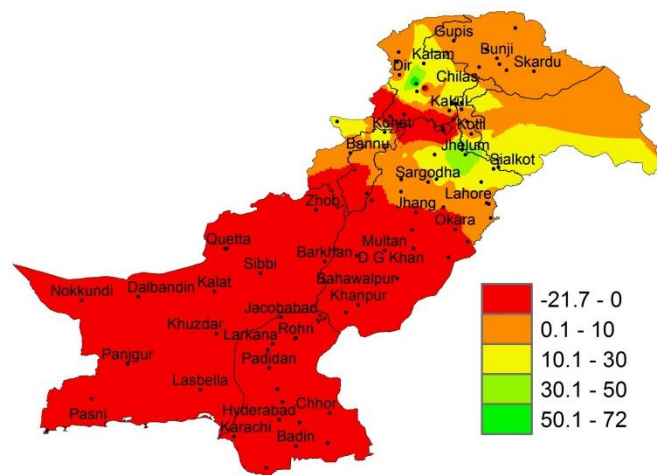
Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Muzaffarabad, Rawalakot & Astore. Decadal maximum & minimum temperature both dropped below normal by 0.1°C & 1.6°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 53%, 97.0hrs, 3.6km/hr and 3.5mm/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**
(1st to 10th October, 2014)

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

Rainfall reported as 5.0mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 66%. Mean day temperature was 33°C while night temperature recorded as 20°C with 69.4hours bright sunshine duration. Wind speed recorded as 3.9km/hr with mean wind direction *westerly*.

Maize: Good condition, flowering Stage

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

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 55%. Mean day temperature was 35°C while night temperature recorded as 23°C with 81.3hours bright sunshine duration. Wind speed recorded as 2.3km/hr with mean wind direction *south easterly*.

Cotton: Normal condition, boll opening stage.

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

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 58%. Mean day temperature was 38°C while night temperature recorded as 22°C with 97.0hours bright sunshine duration. Wind speed recorded as 2.3km/hr with mean wind direction *south westerly*.

Cotton (BT-3701): Good condition, maturity stage.

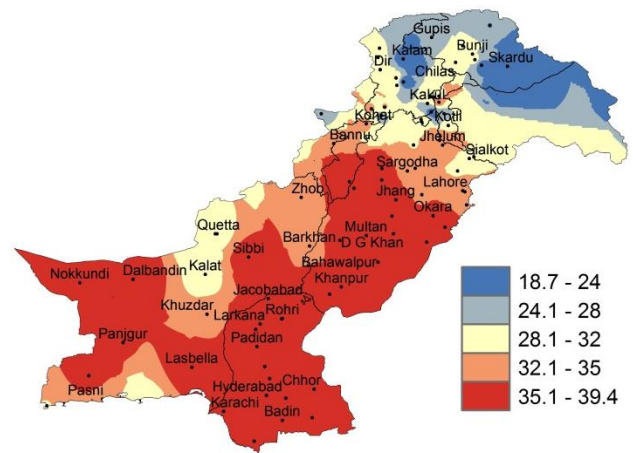
2.4 **RAMC, Usta Muhammad (Eastern Balochistan)**

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 52%. Mean day temperature was 37°C while night temperature recorded as 24°C.

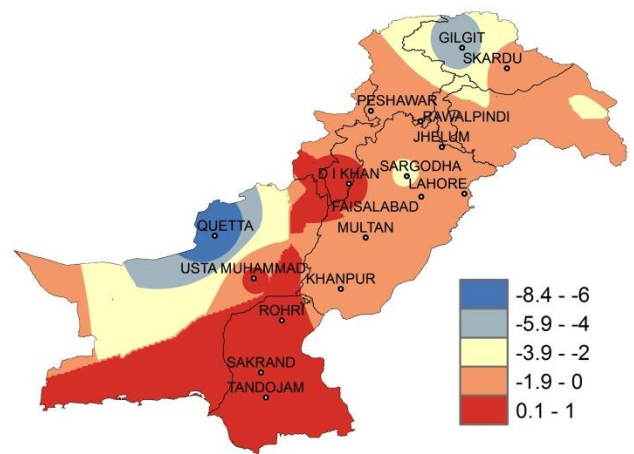
Rice: Good condition, wax maturity stage.

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

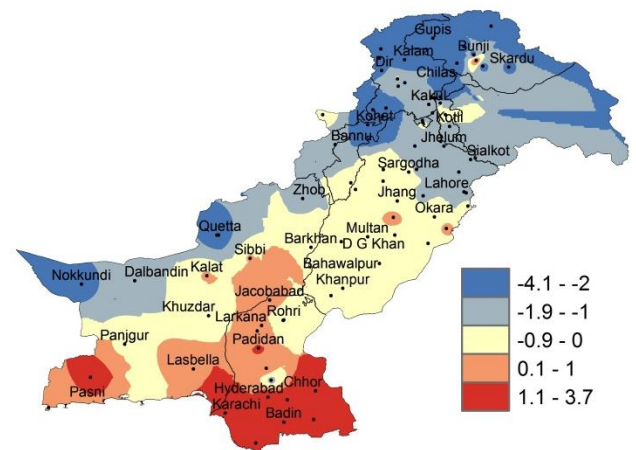
Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 24%. Mean day temperature was 29°C while night temperature recorded as 14°C with 103.8hours bright sunshine duration and wind speed recorded as 5.3km/hr with mean wind direction *north 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 (1st to 10th October, 2014)**

2.6 **Jhelum**

Rainfall reported as 37.6 during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 68%. Mean day temperature was 34°C while night temperature recorded as 22°C with 50.3hours bright sunshine duration. Wind speed recorded 1.5km/hr with mean wind direction *south westerly*.

2.7 **Lahore**

Rainfall reported as 1.0mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 66%. Mean day temperature was 33°C while night temperature recorded as 25°C with 64.3hours bright sunshine duration. Wind speed recorded as 2.1km/hr with mean wind direction *north easterly*.

2.8 **Sargodha**

Rainfall reported Trace (not measureable) during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 63%. Mean day temperature was 35°C while night temperature recorded as 24°C with 73.2hours bright sunshine duration. Wind speed recorded as 0.4km/hr with mean wind direction *easterly*.

2.9 **Multan**

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 51%. Mean day temperature was 36°C while night temperature recorded as 25°C with 86.8hours bright sunshine duration. Wind speed recorded 4.5km/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 55%. Mean day temperature was 37°C while night temperature recorded as 22°C with 91.9hours bright sunshine duration. Wind speed recorded 3.4km/hr with mean wind direction *south westerly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 59%. Mean day temperature was 38°C while night temperature recorded as 18°C with 108.1hours bright sunshine duration. Wind speed recorded 7.03km/hr with mean wind direction *south easterly*.

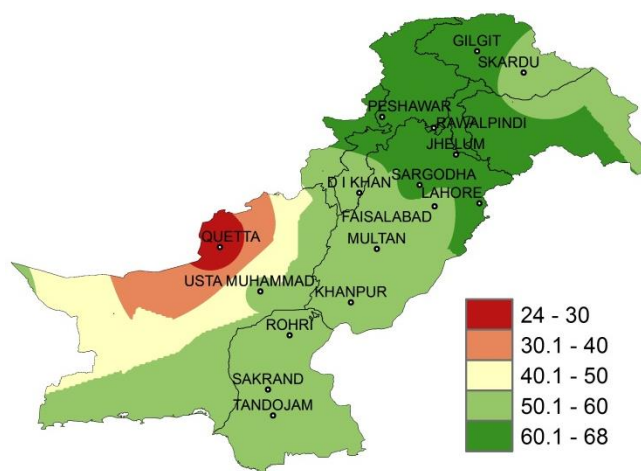


Figure.3: Relative Humidity in percentage (%)

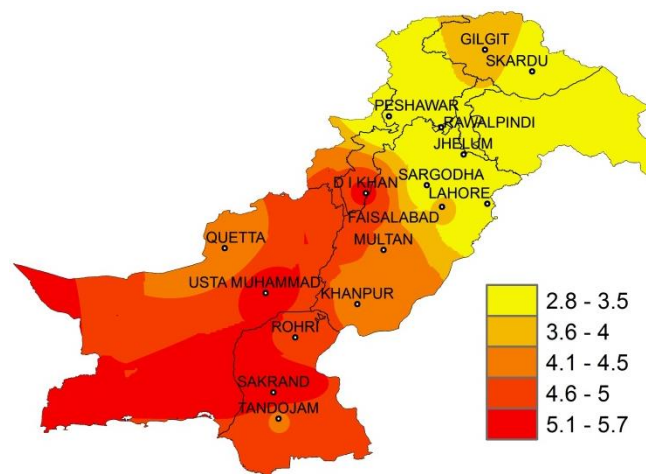


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

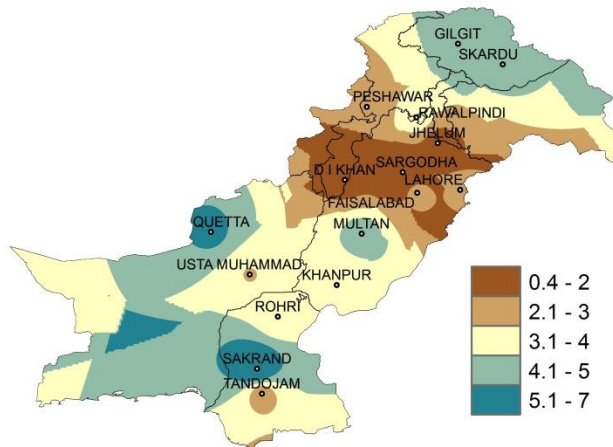


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 50%. Mean day temperature was 38°C while night temperature recorded as 25°C with 100.9hours bright sunshine duration. Wind speed recorded as 3.1km/hr with mean wind direction *south easterly*.

2.13 D.I. Khan

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 55%. Mean day temperature was 36°C while night temperature recorded as 22°C with 87.8hours bright sunshine duration.

2.14 Peshawar

Rainfall reported as 4.0mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 65%. Mean day temperature was 33°C while night temperature recorded as 22°C with 52.6hours bright sunshine duration. Wind speed recorded as 2.0km/hr with mean wind direction *north westerly*.

2.15 Skardu

Rainfall reported as 1.8mm during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 56%. Mean day temperature was 23°C while night temperature recorded as 7°C with 130.6hours bright sunshine duration. Wind speed recorded as 4.3km/hr with mean wind direction *south-south westerly*.

2.16 Gilgit

Rainfall reported as 7.9mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 49%. Mean day temperature was 29°C while night temperature recorded as 10°C with 63.4hours bright sunshine duration. Wind speed recorded as 2.8km/hr with mean wind direction *westerly*.

3. Ten Days Weather Advisory for Farmers (11th to 20th October, 2014)

3.1 Temperature Forecast

Normal to below normal temperature is expected in most of the agricultural plains of the country during the decade.

3.2 Wind Forecast

Normal to gusty wind pattern may prevail in most of the agricultural plains of the country during the decade.

3.3 Rain Forecast

- ❖ **Punjab:** Mostly dry weather is expected during the decade. However rain thunder showers are expected over most of the agricultural plains of the province during the decade 2nd half (mid night of 13th & 14th October & end of the decade).
- ❖ **Khyber Pakhtunkhwa:** Mostly cloudy & cold weather with light to moderate rainfall over hills is expected at K.P during the decade.
- ❖ **Sindh:** Dry weather expected in most of the parts of Sindh during the decade.
- ❖ **Balochistan:** Mainly dry weather is expected in the province. However light rainfall expected at a few places at Balochistan (Sibbi) during 1st half of the decade (13th October).
- ❖ **Gilgit Baltistan:** Mostly partially cloudy with light to moderate rainfall over hills is expected at few parts of GB during the decade.
- ❖ **Kashmir:** Mostly partially cloudy/cloudy weather is expected however light to moderate rainfall is expected over most parts of Kashmir during the decade.

3.4 Advisory for Farmers

- ❖ Monsoon rains have accelerated pest/viral attacks and more weeds growth in cotton, sugarcane and other standing crops. Viral/pests attacks on cotton and sugarcane crops have been reported in agricultural plains of the country. Farmers should take in time precautionary measures through manual methods or chemical spraying to control weeds on time.
- ❖ 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 cultivate winter vegetables in time so that present soil moisture may fully be utilized.
- ❖ Farmers of wheat growing areas are advised to sow their crops in time to get the optimum yield. The best suitable time for wheat cultivation is 1st November to 20th November.
- ❖ Farmers of rainfed areas are advised to sow their rabi crops during the period 15th October to 15th November. After this time the yield of wheat crop decreases gradually.
- ❖ Farmers of cotton crop areas are advised to prepare their field for incoming rabi crops and complete sowing in time.