

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported from Punjab, KP, Sindh, G.B & Kashmir however dry weather reported from Balochistan during the last decade.
- ❖ Highest amount of rainfall recorded as 73.0mm at Parachinar during the last decade.
- ❖ Lowest minimum temperature recorded -0.4°C at Kalam during the last decade.
- ❖ Light to moderate rainfall is expected from Punjab, KP, G.B & Kashmir.
- ❖ 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.
- ❖ Farmers of irrigated plains of Punjab, Sindh & K.P are advised to complete sowing of wheat crop before 15th December to get maximum yield. In case of late sowing, the recommended varieties should be cultivated to minimize the loss in yield.

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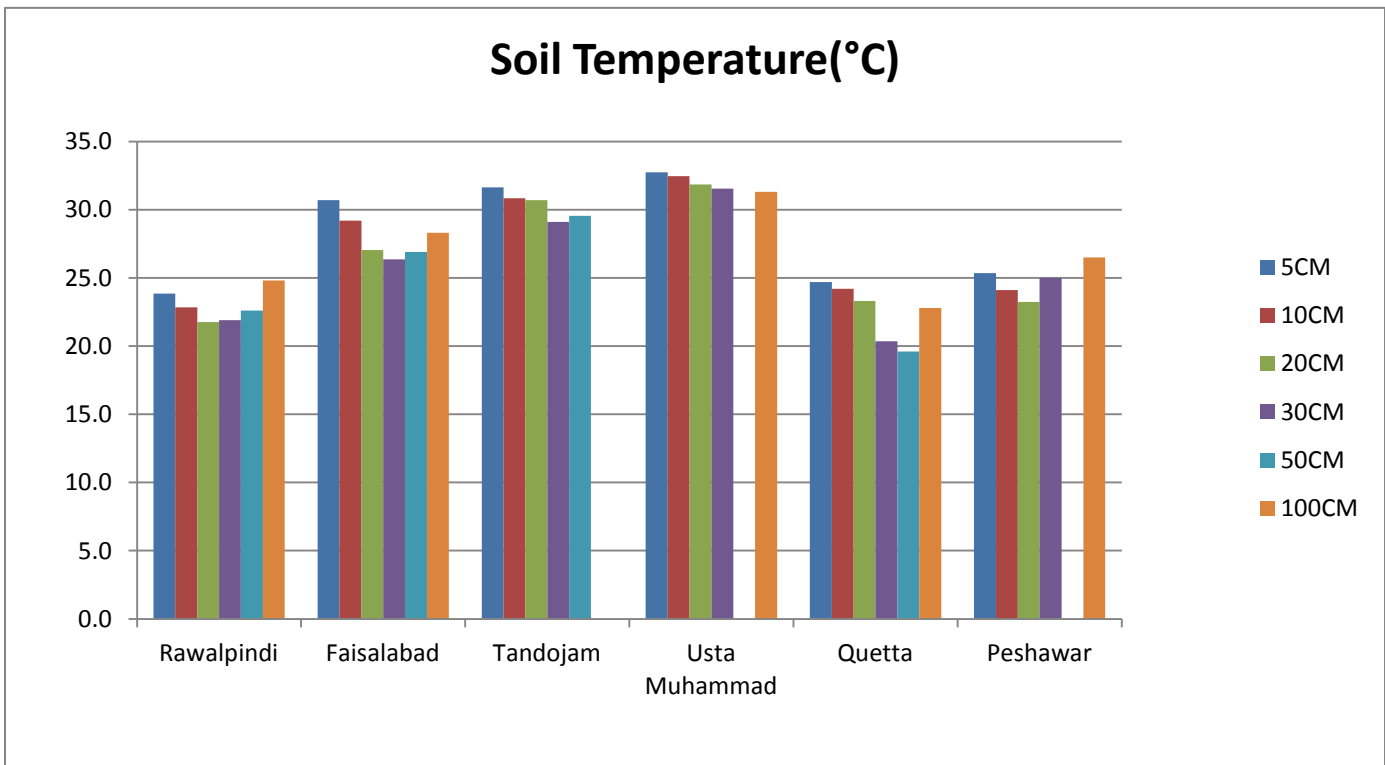
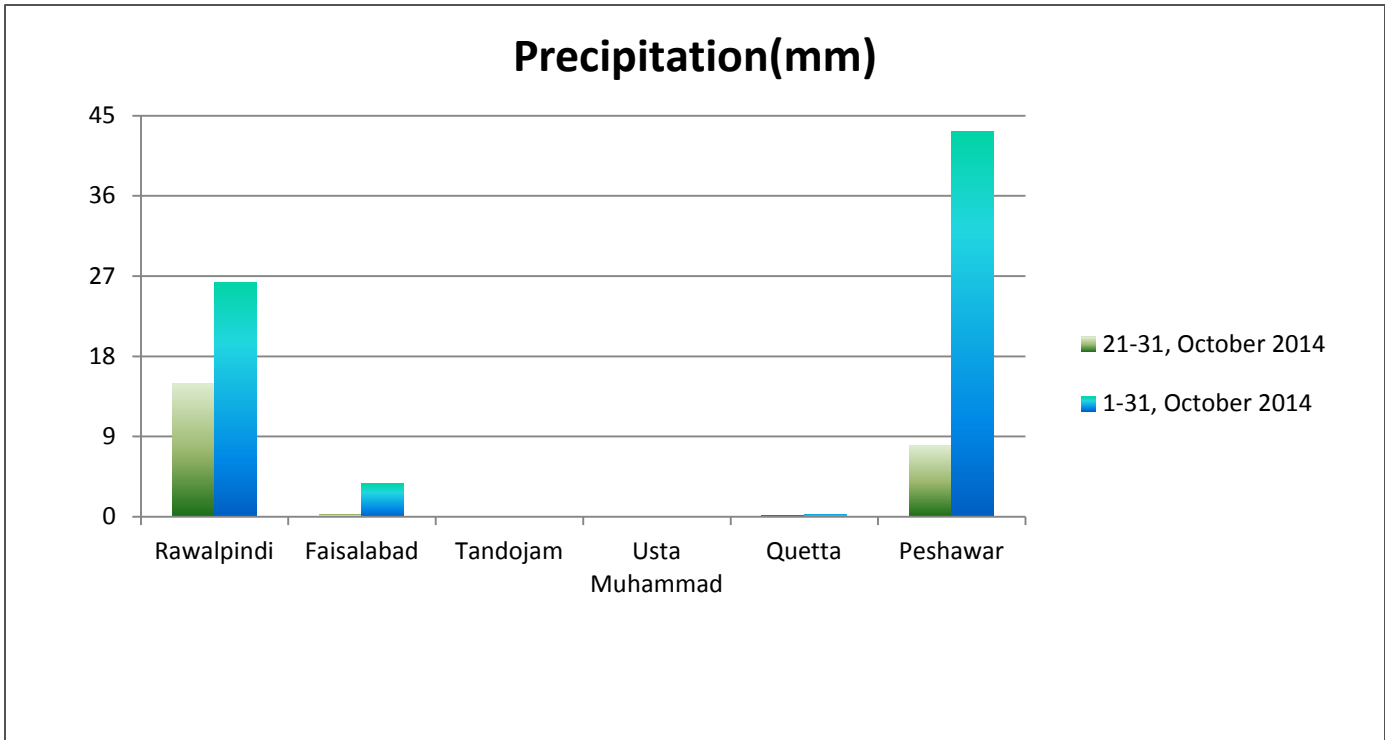
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Meteorological conditions during 3rd decade of October, 2014

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	Tmax Dep	Tmin Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	0.3	15.0	14.7	-1.7	0.8	20.3	23.9	22.9	21.8	21.9	22.6	24.8	61	82.9	2.8	2.5
2	FAISALABAD	0.0	0.2	0.2	-0.4	2.1	24.3	30.7	29.2	27.1	26.4	26.9	28.3	55	85.5	1.8	2.7
3	JHELUM	0.3	14.6	14.3	-1.7	0.4	22.9	24.6	24.0	23.4	23.0	24.1	***	64	91.8	2.6	2.8
4	LAHORE	0.1	2.0	1.9	-0.7	1.2	24.7	26.4	26.2	25.1	24.8	***	26.9	62	83.4	2.5	2.9
5	SARGODHA	0.2	20.8	20.6	-0.8	1.7	24.6	28.2	26.6	25.7	25.8	27.0	27.8	63	82.8	0.9	2.5
6	MULTAN	0.0	0.0	0.0	-1.8	3.0	25.3	***	***	***	***	***	***	57	76.3	3.4	3.1
7	KHANPUR	0.0	0.0	0.0	-0.6	2.0	25.6	***	28.4	28.6	29.1	30.0	30.5	61	74.1	2.8	3.1
8	TANDOJAM	0.0	0.0	0.0	1.8	1.0	28.1	31.7	30.9	30.7	29.1	29.6	***	49	76.8	0.7	2.9
9	SAKRAND ☆	0.0	0.0	0.0	1.1	-1.6	25.5	36.3	32.9	***	***	***	32.9	53	88.6	2.0	3.4
10	ROHRI	0.0	0.1	0.1	-0.1	1.4	28.0	29.9	33.4	35.0	32.9	30.7	30.0	51	93.6	4.1	4.0
11	DI KHAN	0.1	0.0	-0.1	-1.1	0.4	23.6	***	***	***	***	***	***	57	78.6	***	3.9
12	PESHAWAR	0.1	8.0	7.9	-0.9	1.3	22.3	25.4	24.1	23.3	25.0	***	26.5	68	47.9	1.0	1.9
13	USTA MUHAMMAD	0.0	0.0	0.0	1.0	-0.4	26.9	32.8	32.5	31.9	31.6	***	31.3	57	***	***	4.4
14	QUETTA	0.0	0.1	0.1	-0.9	3.6	17.1	24.7	24.2	23.3	20.4	19.6	22.8	30	62.9	5.6	3.4
15	SKARDU	0.0	0.0	0.0	-1.5	1.6	10.2	***	***	***	***	***	***	44	60.5	1.9	1.7
16	GILGIT	0.1	2.4	2.3	-3.0	3.9	14.7	***	***	***	***	***	***	58	56.4	1.9	2.0

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.

Graph at RAMC's during October, 2014



Past Weather (21st to 31st October, 2014)

Light to moderate rainfall reported from Punjab, KP, Sindh, G.B & Kashmir however dry weather reported from 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, Chakwal & Islamabad. Decadal maximum dropped below normal by 1.1°C & minimum temperature raised above normal by 1.6°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 60%, 82.4hrs, 2.4km/hr and 2.8mm/day respectively.

1.2 Sindh

Light to moderate rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Mirpur Khas, Karachi & Badin. Decadal maximum & minimum temperature both raised above normal by 0.9°C & 0.3 respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 51%, 86.3hrs, 2.3km/hr and 3.4mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

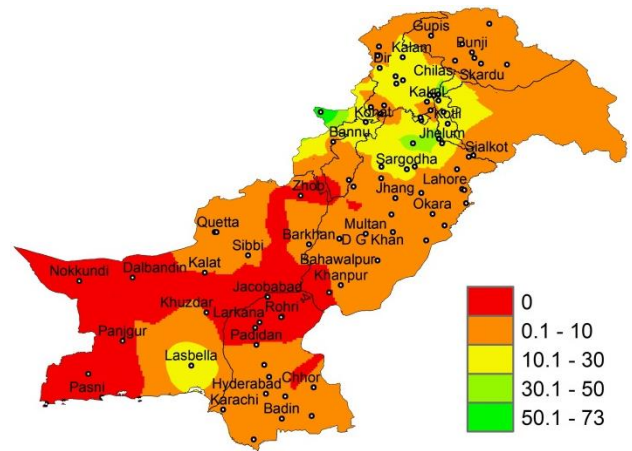
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Parachinar, Pattan & Malam Jabba. Decadal maximum dropped below normal by 1.0°C & minimum temperature raised above normal by 0.8°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 63%, 63.3hrs, 1.0km/hr and 2.9mm/day respectively.

1.4 Balochistan

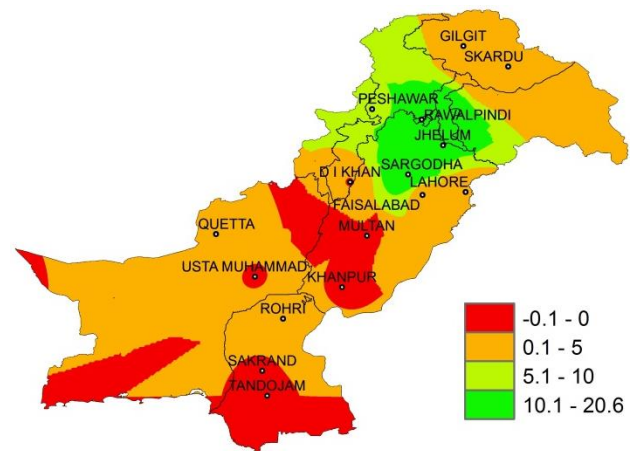
Rainfall reported as Trace (not measurable) at one station i.e Quetta. Decadal maximum & minimum temperature both raised above normal by 0.1°C & 0.6°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 44%, 82.9hrs, 5.6km/hr and 3.9mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

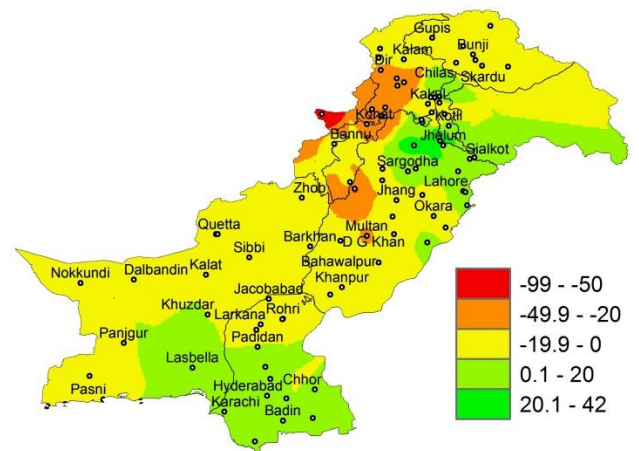
Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Kotli, Rawalakot & Garhi Doppatta. Decadal maximum dropped below normal by 2.3°C & minimum temperature raised above normal by 2.8°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 51%, 58.5hrs, 1.9km/hr and 1.9mm/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 31st October, 2014)

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

Rainfall reported as 15.0mm during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 61%. Mean day temperature was 28°C while night temperature recorded as 13°C with 82.9hours bright sunshine duration. Wind speed recorded as 2.8km/hr with mean wind direction *westerly*.

Maize: Good condition, wax maturity Stage

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

Rainfall reported as 0.2mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 55%. Mean day temperature was 31°C while night temperature recorded as 17°C with 82.4hours bright sunshine duration. Wind speed recorded as 1.8km/hr with mean wind direction *north westerly*.

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

Dry weather reported during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 49%. Mean day temperature was 37°C while night temperature recorded as 19°C with 76.8hours bright sunshine duration. Wind speed recorded as 0.7km/hr with mean wind direction *south westerly*.

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

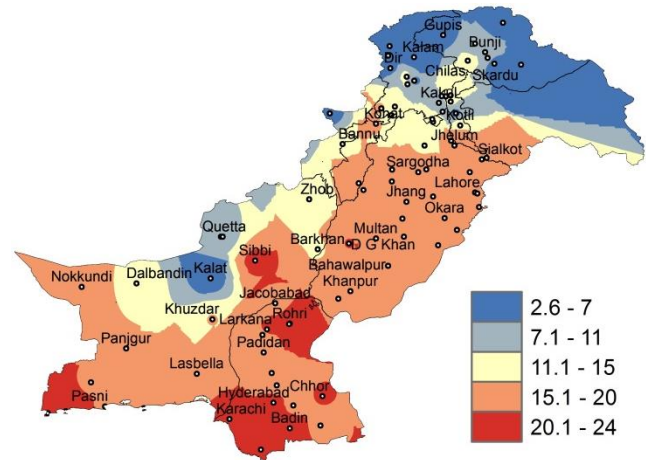
2.4 **RAMC, Usta Muhammad (Eastern Balochistan)**

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 57%. Mean day temperature was 34°C while night temperature recorded as 20°C.

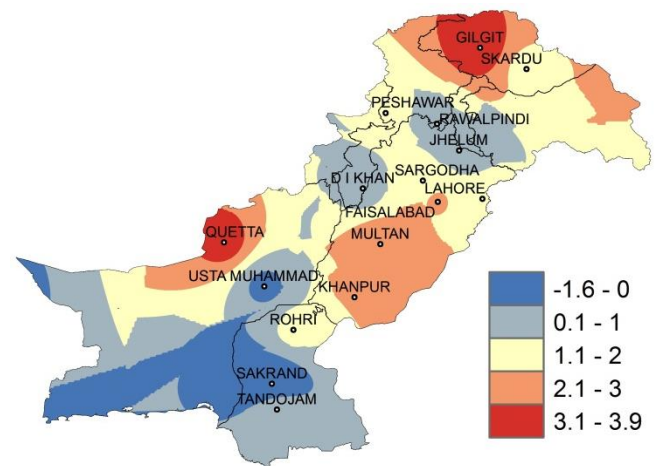
Rice: Good condition, full maturity stage.

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

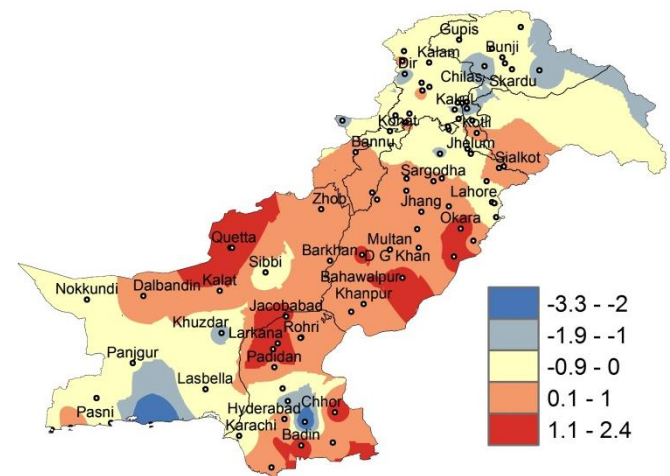
Rainfall reported as Trace (not measurable) during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 30%. Mean day temperature was 24°C while night temperature recorded as 10°C with 62.9hours bright sunshine duration and wind speed recorded as 5.6km/hr with mean wind direction *north westerly*.



I. Actual min-temp



II. Departure of min-temp from Normal



III. Departure of min-temp from Previous Decade

Figure.2: Minimum Temperature distribution during previous decade in "°C"

2(b) **Past Weather for Sub-Regional Agricultural Plains (21st to 31st October, 2014)**

2.6 **Jhelum**

Rainfall reported as 14.6 during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 64%. Mean day temperature was 30°C while night temperature recorded as 16°C with 91.8hours bright sunshine duration. Wind speed recorded 2.6km/hr with mean wind direction *north westerly*.

2.7 **Lahore**

Rainfall reported as 2.0mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 62%. Mean day temperature was 30°C while night temperature recorded as 20°C with 83.4hours bright sunshine duration. Wind speed recorded as 2.5km/hr with mean wind direction *north westerly*.

2.8 **Sargodha**

Rainfall reported as 20.8mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 63%. Mean day temperature was 31°C while night temperature recorded as 19°C with 82.2hours bright sunshine duration. Wind speed recorded as 0.9km/hr with mean wind direction *variable*.

2.9 **Multan**

Dry weather reported during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 57%. Mean day temperature was 31°C while night temperature recorded as 20°C with 76.3hours bright sunshine duration. Wind speed recorded 3.4km/hr with mean wind direction *northerly*.

2.10 **Khanpur**

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 61%. Mean day temperature was 32°C while night temperature recorded as 19°C with 74.1hours bright sunshine duration. Wind speed recorded 2.8km/hr with mean wind direction *north easterly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 53%. Mean day temperature was 35°C while night temperature recorded as 16°C with 88.6hours bright sunshine duration. Wind speed recorded 2.0km/hr with mean wind direction *calm*.

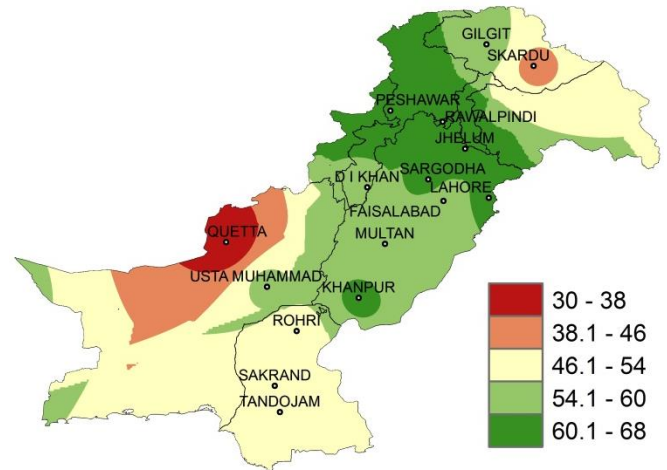


Figure.3: Relative Humidity in percentage (%)

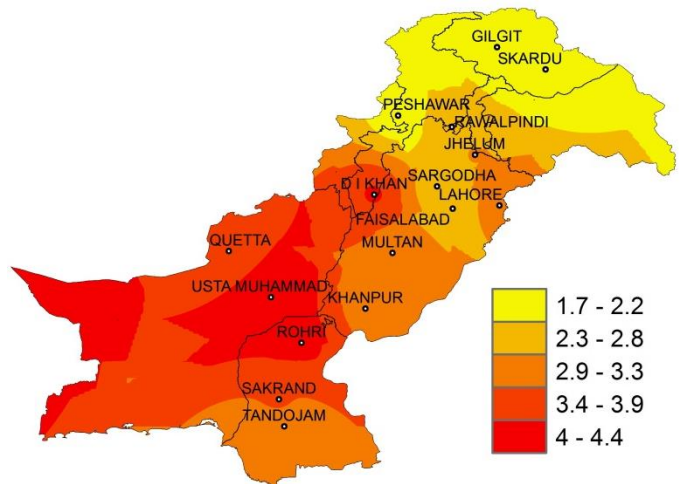


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

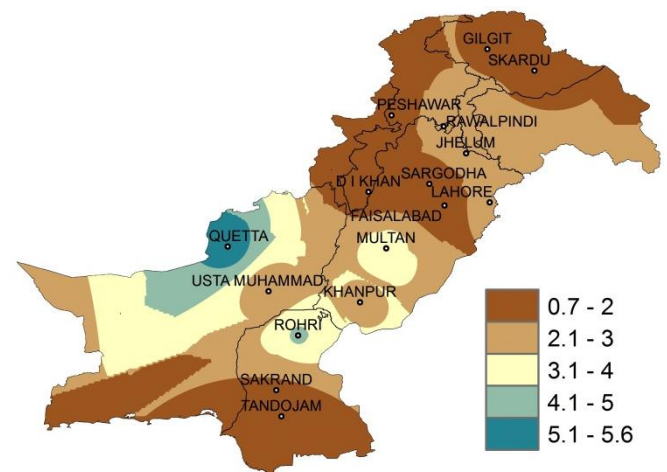


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 51%. Mean day temperature was 34°C while night temperature recorded as 22°C with 93.6hours bright sunshine duration. Wind speed recorded as 4.1km/hr with mean wind direction *north easterly*.

2.13 D.I. Khan

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 57%. Mean day temperature was 31°C while night temperature recorded as 16°C with 78.6hours bright sunshine duration.

2.14 Peshawar

Rainfall reported as 8.0mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 68%. Mean day temperature was 28°C while night temperature recorded as 16°C with 47.9hours bright sunshine duration. Wind speed recorded as 1.0km/hr with mean wind direction *north easterly*.

2.15 Skardu

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 44%. Mean day temperature was 18°C while night temperature recorded as 3°C with 60.5hours bright sunshine duration. Wind speed recorded as 1.9km/hr with mean wind direction *north westerly*.

2.16 Gilgit

Rainfall reported as 2.4mm during the decade however weather remained cloudy for 11days. Average relative humidity recorded as 58%. Mean day temperature was 22°C while night temperature recorded as 7°C with 56.4hours bright sunshine duration. Wind speed recorded as 1.9km/hr with mean wind direction *bvariable*.

3. Ten Days Weather Advisory for Farmers (1st to 10th November, 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 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 light to moderate rainfall is expected over most of the agricultural plains of the province (6th to 8th November).
- ❖ **Khyber Pakhtunkhwa:** Mostly dry weather with light to moderate rainfall over hills is expected at K.P during the 2nd half of 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 is expected over few parts of Baluchistan including kalat, Quetta & Zhob on 6th November.
- ❖ **Gilgit Baltistan:** Mostly/partially cloudy with light to moderate rainfall over hills is expected over most parts of GB during 2nd half of the decade.
- ❖ **Kashmir:** Mostly dry weather is expected. However light to moderate rainfall is expected over most parts of Kashmir during 2nd half of the decade (6th to 8th November).

3.4 Advisory for Farmers

- ❖ 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.
- ❖ Farmers of irrigated plains of Punjab, Sindh & K.P are advised to complete sowing of wheat crop before 15th December to get maximum yield. In case of late sowing, the recommended varieties should be cultivated to minimize the loss in yield.