

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported from agricultural plains of the country during the last decade.
- ❖ Highest maximum temperature recorded 46.0°C at Moin-Jo-Daro & Larkana during the last decade.
- ❖ Highest amount of rainfall recorded as 95.0mm at Malam Jabba during the last decade.
- ❖ Lower values of relative humidity reported from Gilgit, skardu region, Multan & Rohri regions while higher values reported from Peshawar region during the last decade.
- ❖ Lower values of ETo reported from Gilgit-Baltistan regions while higher values reported from Lower Punjab, Sindh & Balochistan during the last decade.
- ❖ Temperatures are likely to be normal/slightly below normal in most of the agricultural plains of the country during the decade.
- ❖ Rainfall with gusty winds is predicted for most of the days in upper half and for 2-3 days in lower half of the country during the decade.
- ❖ Farmers are advised to harvest the full matured wheat crop keeping the expected rains in mind.
- ❖ Farmers are also advised to protect the stored wheat due to the expected moist conditions during the decade.

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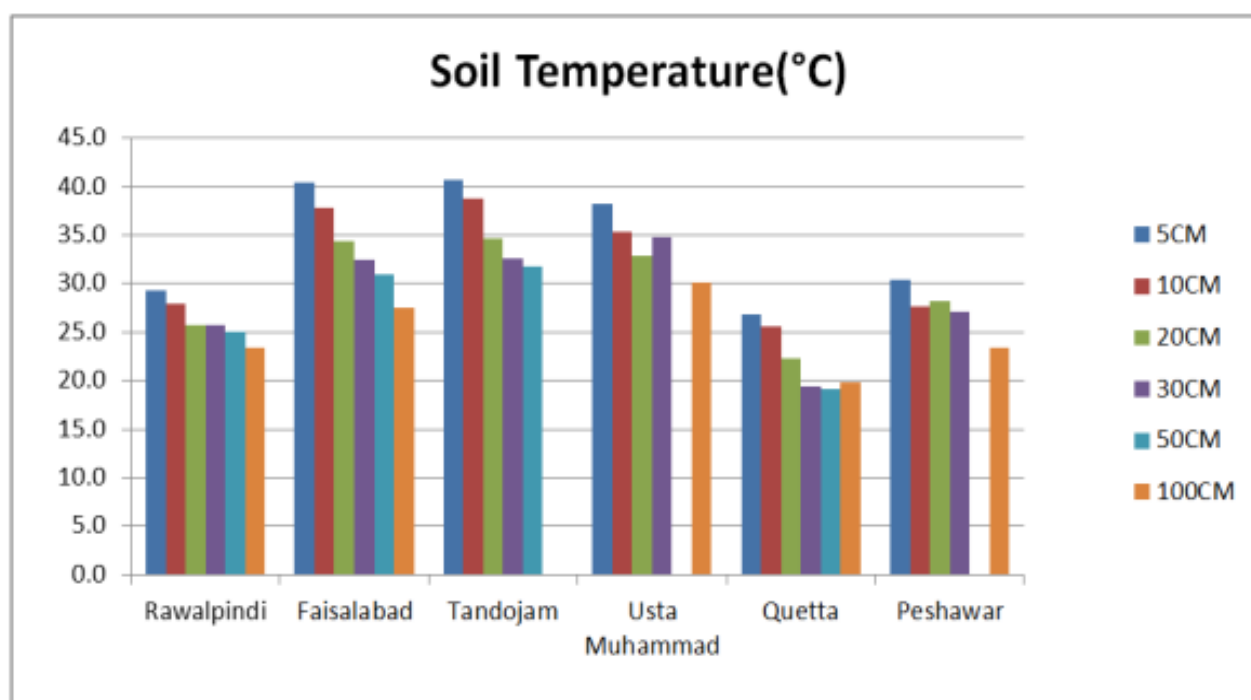
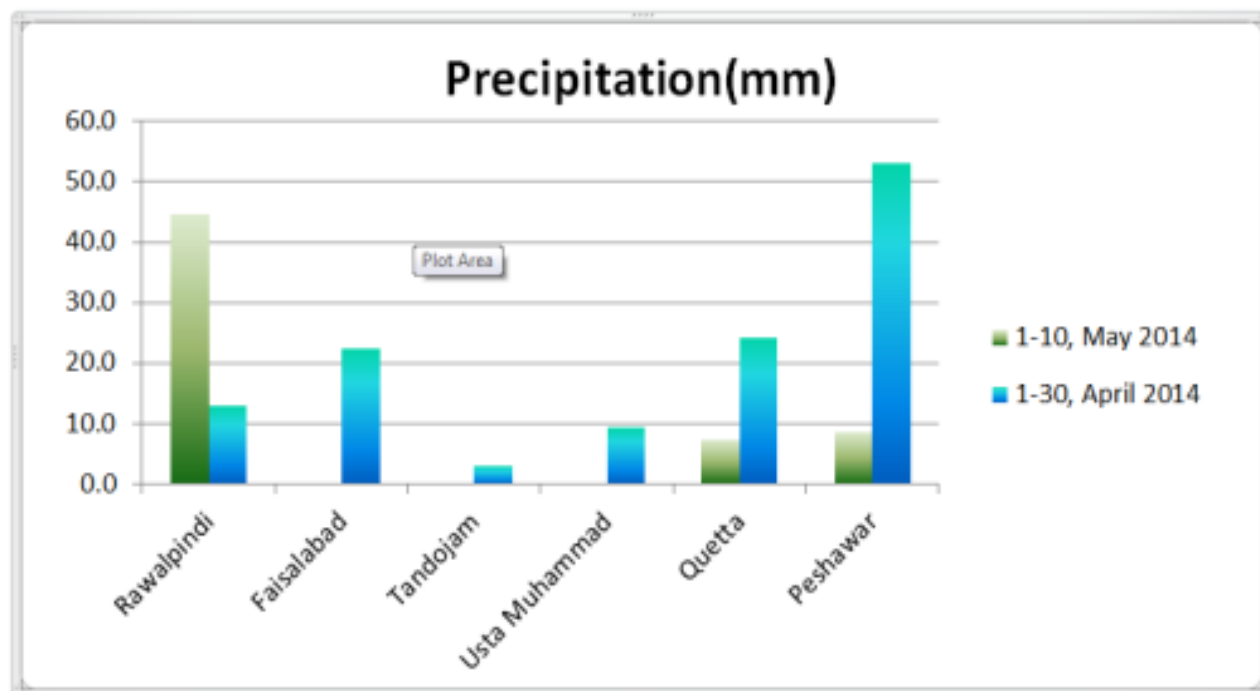
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Meteorological conditions during 1st Decade of May, 2014

Sr. No.	Station	*Precipitation (mm)			Air Temperature (°C)			Soil Temperatures (°C)						Sunshine Duration (hours)	Wind Speed (km/hr)	R.H (%)	ET _o (mm/day)
		Normal	Actual	Dep	Tmin Dep	Tmax Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	1.0	44.6	43.6	0.3	-0.6	27.3	29.3	28.0	25.7	25.7	25.0	23.4	96.7	2.8	47	2.4
2	FAISALABAD	0.7	0.1	-0.6	1.2	-0.1	31.5	40.5	37.8	34.4	32.4	30.9	27.5	85.4	3.2	36	2.8
3	JHELUM	1.5	37.4	35.9	-0.5	-1.0	29.6	33.7	32.0	29.3	27.4	27.5	***	99.8	4.1	51	3.2
4	LAHORE	0.7	3.5	2.8	-1.6	0.1	30.9	35.6	33.9	30.2	28.5	***	25.3	92.5	3.9	40	4.9
5	SARGODHA	0.5	0.5	0.0	1.4	-0.4	31.9	37.4	34.8	31.9	30.8	30.0	26.9	84.7	0.9	48	2.3
6	MULTAN	0.4	0.8	0.4	0.4	-1.2	32.2	***	***	***	***	***	***	85.8	6.1	32	5.4
7	KHANPUR	0.2	3.0	2.8	0.4	0.4	33.0	***	35.6	34.9	34.7	34.4	31.4	84.0	5.0	36	4.4
8	TANDOJAM	0.0	0.0	0.0	0.9	-0.1	32.9	40.7	38.8	34.7	32.6	31.8	***	95.6	3.4	45	5.5
9	SAKRAND ☆	0.0	8.0	8.0	-2.6	-2.2	31.1	43.7	39.4	***	***	***	31.1	110.6	7.0	40	6.2
10	ROHRI	0.0	1.4	1.4	0.1	-1.6	34.6	48.1	43.2	35.8	34.2	31.0	30.1	102.0	1.7	29	6.3
11	D I KHAN	0.1	0.1	0.0	0.2	-0.7	30.2	***	***	***	***	***	***	81.0	***	45	4.3
12	PESHAWAR	0.9	8.7	7.8	-0.5	0.2	28.0	30.4	27.7	28.2	27.2	***	23.4	65.4	3.9	48	2.3
13	USTA MUHAMMAD	0.1	0.0	-0.1	-2.5	-2.6	32.3	38.3	35.3	32.9	34.8	***	30.2	***	***	43	7.2
14	QUETTA	0.3	7.2	6.9	0.5	-2.6	20.6	26.8	25.6	22.3	19.5	19.2	19.8	73.3	5.9	43	4.8
15	SKARDU	1.1	0.0	-1.1	1.1	3.0	18.4	***	***	***	***	***	***	73.9	5.3	30	4.0
16	GILGIT	0.8	0.5	-0.3	2.3	1.8	22.5	***	***	***	***	***	***	57.8	3.6	38	4.2

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. ET_o stands for reference crop evapotranspiration. *** stands for no data and (☆) indicates the station with five years climatic (normal) data for computing departures. * stands for (rainfall + snowfall)

Graphs of RAMC's during May/April, 2014



Past Weather (1st to 10th May, 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 Mangla, Murree & Islamabad. Decadal minimum temperature raised above normal 0.2°C & maximum temperature dropped below normal by 0.4°C in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 89.8hrs, 3.7km/hr, 41% and 3.6mm/day respectively.

1.2 Sindh

Light rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Shaheed Benazirabad, Dadun & Jacobabad. Decadal minimum & maximum temperature both dropped below normal by 0.5°C & 1.3°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 102.7hrs, 4.0km/hr, 38% and 6.0mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

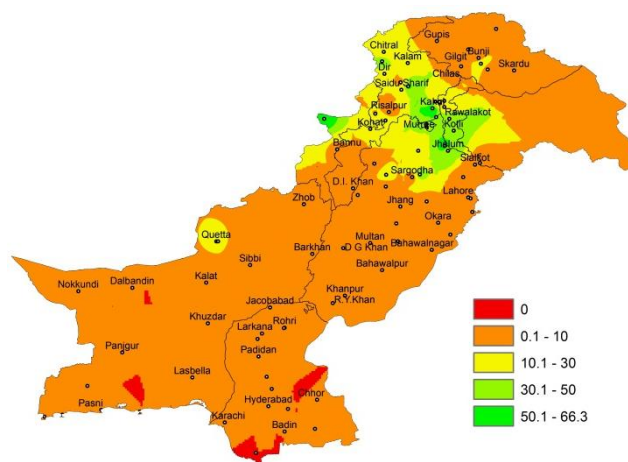
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall reported in Malam Jabba Kakul & Parachinar. Decadal minimum & maximum temperature dropped below normal by 0.2°C both, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 73.2hrs, 3.9km/hr, 47% and 3.4mm/day respectively.

1.4 Balochistan

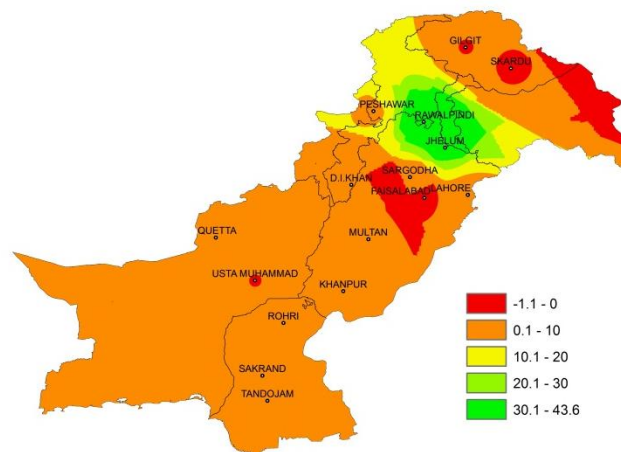
Light rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Lasbella, Quetta & Zhob. Decadal minimum & maximum temperature both dropped below normal by 1.0°C & 2.6°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were 73.3hrs, 5.9km/hr, 43% and 6.0mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

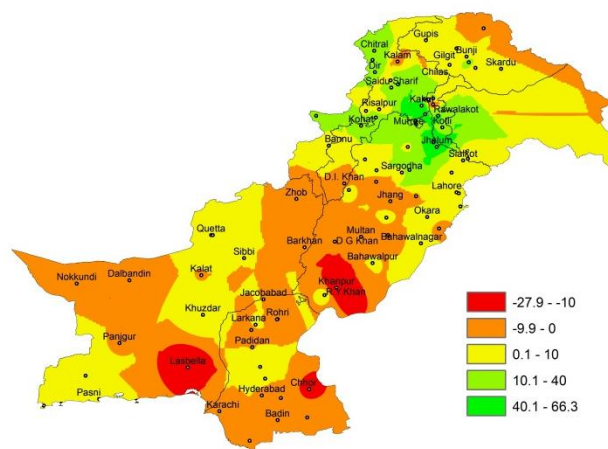
Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall reported in, Rawalakot, Muzaffarabad & Garhi Dopatta. Decadal minimum & maximum temperature both raised above normal by 1.7°C & 2.4°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded 65.9hrs, 4.5km/hr, 34% and 4.4mm/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 May, 2014)

2.1 RAMC, Rawalpindi (Potohar region)

Rainfall reported as 44.6mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 47%. Mean night temperature was 19.9°C while day temperature recorded as 34.7°C with 96.7 hours bright sunshine duration. Wind speed recorded as 2.7km/h with mean wind direction *westerly*.

Wheat (Chakwal 97): Good condition, Wax maturity stage.

2.2 RAMC, Faisalabad (Central Punjab)

Rainfall reported as Trace (not measurable) during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 36%. Mean night temperature was 22.7°C while day temperature recorded as 44.5°C with 86.0hours bright sunshine duration. Wind speed recorded as 3.2km/hr with mean wind direction *southwesterly*.
Cotton: Very Good condition, Third Leaf Completed stage.

2.3 RAMC, Tandojam (Lower Sindh)

Dry weather reported during the decade however weather remained cloudy for 03day. Average relative humidity recorded as 45%. Mean night temperature was 24.7°C while day temperature recorded as 41.0°C with 95.6hours bright sunshine duration. Wind speed recorded as 3.4km/hr with mean wind direction *south westerly*.

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

2.4 RAMC, Usta Muhammad (Eastern Balochistan)

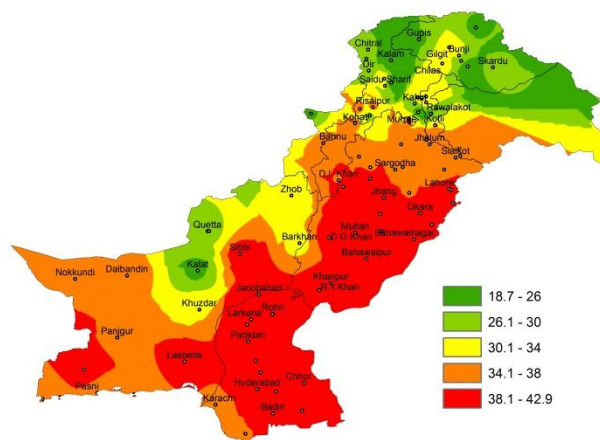
Dry weather reported during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 43%. Mean night temperature was 23.1°C, while day temperature recorded as 41.7°C.

Note: No crop in the field.

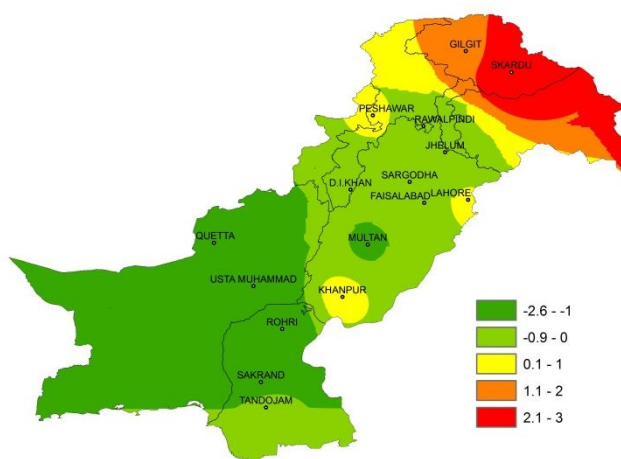
2.5 RAMC, Quetta (Northern Balochistan)

Rainfall reported as 7.2mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 43%. Mean night temperature was 13.9°C while day temperature recorded as 27.2°C with 73.3hours bright sunshine duration and wind speed recorded as 5.9km/hr with mean wind direction *southerly*.

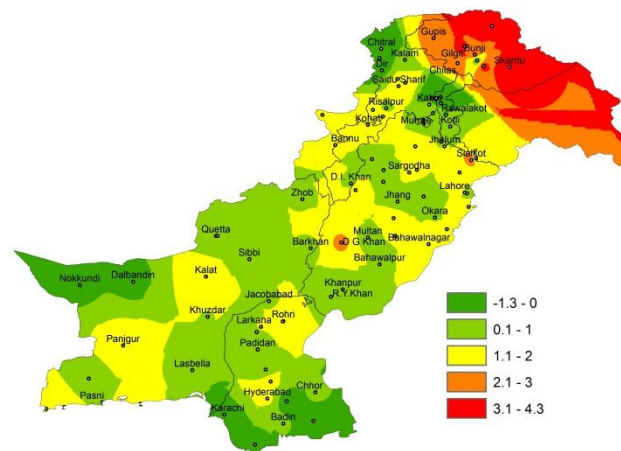
Wheat (Local White): Good condition, Milk Maturity Stage.



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 May, 2014)

2.6 Jhelum

Rainfall reported as 37.4mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 51%. Mean night temperature was 22.2°C while day temperature recorded as 36.9°C with 99.8hours bright sunshine duration. Wind speed recorded 4.1km/hr with mean wind direction northwesterly.

2.7 Lahore

Rainfall reported as 3.5mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 40%. Mean night temperature was 23.6°C while day temperature recorded as 38.1°C with 92.5hours bright sunshine duration. Wind speed recorded as 3.9km/hr with mean wind direction *northeasterly*.

2.8 Sargodha

Rainfall reported as 0.5mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 48%. Mean night temperature was 25.1°C while day temperature recorded as 38.7°C with 84.7hours bright sunshine duration. Wind speed recorded as 0.93km/hr with mean wind direction *westerly*.

2.9 Multan

Rainfall reported as 0.8mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 32%. Mean night temperature was 25.3°C while day temperature recorded as 39.1°C with 85.8hours bright sunshine duration. Wind speed recorded as 6.1km/hr with mean wind direction *northerly*.

2.10 Khanpur

Rainfall reported as 3.0mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 36%. Mean night temperature was 25.0°C while day temperature recorded as 40.9°C with 84.0hours bright sunshine duration. Wind speed recorded as 5.0km/hr with mean wind direction *westerly*.

2.11 Sakrand

Rainfall reported as 8.0mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 40%. Mean night temperature was 21.8°C while day temperature recorded as 40.3°C with 110.6hours bright sunshine duration. Wind speed recorded 7.0km/hr with mean wind direction south westerly.

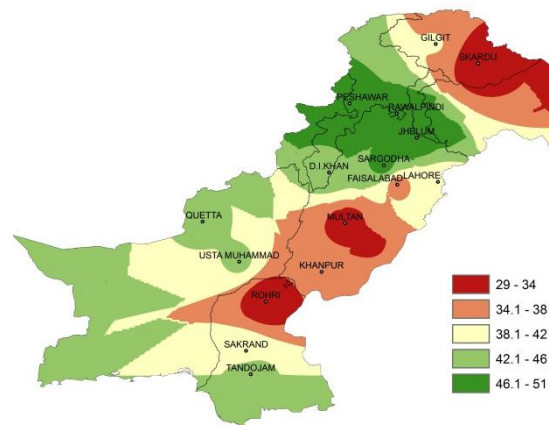


Figure.3: Relative Humidity in percentage (%)

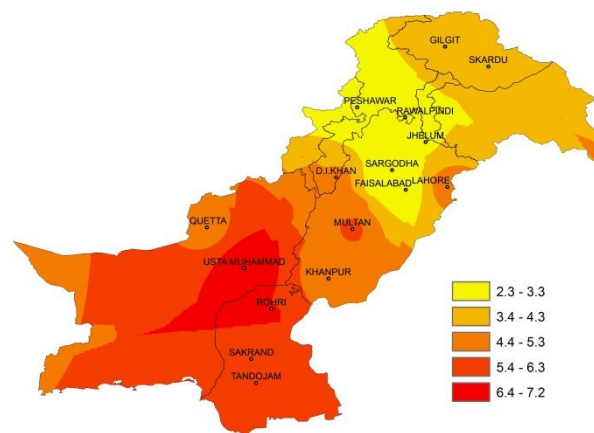


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

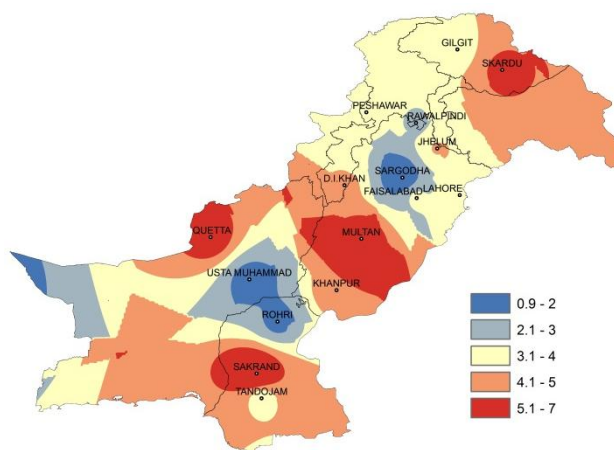


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Rainfall reported as 1.4mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 29%. Mean night temperature was 27.8°C while day temperature recorded as 41.4°C with 102.0hours bright sunshine duration. Wind speed recorded as 1.7km/hr with mean wind direction *variable*.

2.13 D.I. Khan

Rainfall reported as Trace (not measurable) during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 45%. Mean night temperature was 22.7°C while day temperature recorded as 37.7°C with 81.0hours bright sunshine duration.

2.14 Peshawar

Rainfall reported as 8.7mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 48%. Mean night temperature was 20.9°C while day temperature recorded as 35.0°C with 65.4hours bright sunshine duration. Wind speed recorded as 3.9km/hr with mean wind direction *north westerly*.

2.15 Skardu

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 30%. Mean night temperature was 9.8°C while day temperature recorded as 27.0°C with 73.9hours bright sunshine duration. Wind speed recorded as 5.3km/hr with mean wind direction *north south easterly*.

2.16 Gilgit

Rainfall reported as 0.5mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 38%. Mean night temperature was 13.3°C while day temperature recorded as 31.6°C with 57.8hours bright sunshine duration. Wind speed recorded as 3.6km/hr with mean wind direction *variable*.

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

3.1 Temperature Forecast

Temperatures are likely to be normal/slightly below normal in 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 rainfall with isolated heavy falls is expected in most of the agricultural plains of the province during the decade.
- ❖ **Khyber Pakhtunkhwa:** Light to moderate rainfall with isolated heavy falls is expected over most of the agricultural plains of the province during the decade.
- ❖ **Sindh:** Mainly dry weather is expected in the province. However light to moderate rainfall expected at isolated places on 14th and 15th May during the decade.
- ❖ **Balochistan:** Mainly dry weather is expected in the province. However light to moderate rainfall expected over northern Balochistan on 14th and 15th May during the decade.
- ❖ **Gilgit Baltistan:** Light to moderate with isolated heavy rainfall over hills is expected in most parts of GB during the decade.
- ❖ **Kashmir:** Light to moderate/ heavy rainfall over hills is expected in most parts of Kashmir during the decade.

3.4 Advisory for Farmers

- ❖ Wheat crop is fully matured in the agricultural plains of Punjab KP & Balochistan. Whereas harvesting/ threshing of wheat crop has been completed in agricultural plains of Sindh & adjoining areas of southern Punjab. Farmers are therefore advised to harvest the full matured crop keeping the expected rains in mind.
- ❖ Wheat obtained after threshing should be stored with proper treatment so that wheat may be kept for long time without any loss due to present and expected moist conditions.
- ❖ Cotton and sugarcane crops growers are informed to irrigate the crops keeping the expected rains in mind during the decade.