

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported from Punjab, KP, Baluchistan, G.B & Kashmir however dry weather reported from Sindh during the last decade.
- ❖ Highest amount of rainfall recorded as 78mm at Islamabad during the last decade.
- ❖ Highest maximum temperature recorded 43°C at Dalbandin during the last decade.
- ❖ Light to moderate rainfall are expected in Kashmir, K.P, G.B different parts of Punjab, coastal areas of Sindh and at few in Balochistan.
- ❖ Day time temperatures are expected normal 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.
- ❖ Recent monsoon rains/flash flooding may accelerate 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 the worst hit rain/flash flooding areas are advised to manage evacuation of stagnant water from standing crops like cotton and rice.

**NATIONAL AGROMET CENTRE (NAMC)
PAKISTAN METEOROLOGICAL DEPARTMENT
SECTOR H-8/2, ISLAMABAD**

Patron-in-Chief: *Hazrat Mir, Director General*

Editor-in-Chief: *Dr. Khalid M. Malik, Director*

Editor: *Khalida Noureen, Meteorologist*

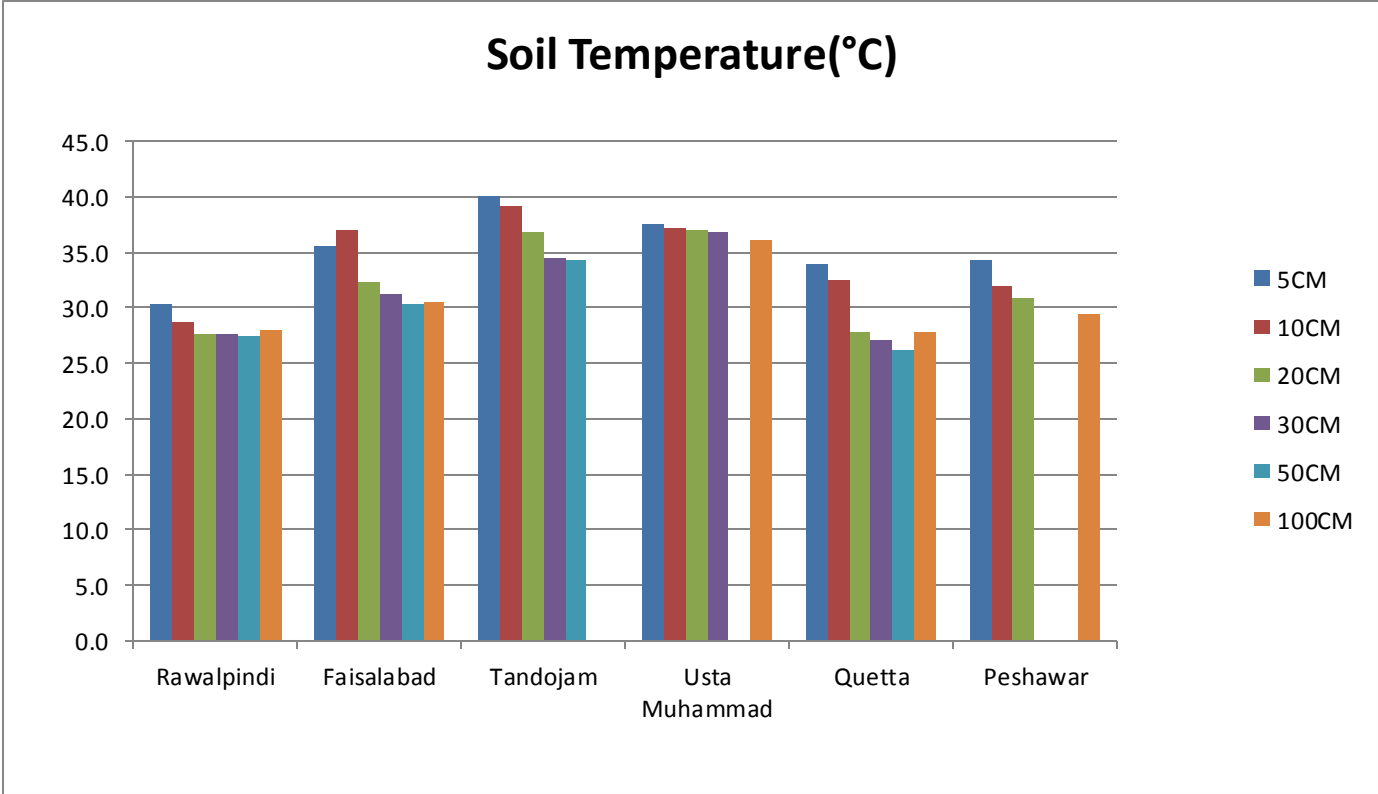
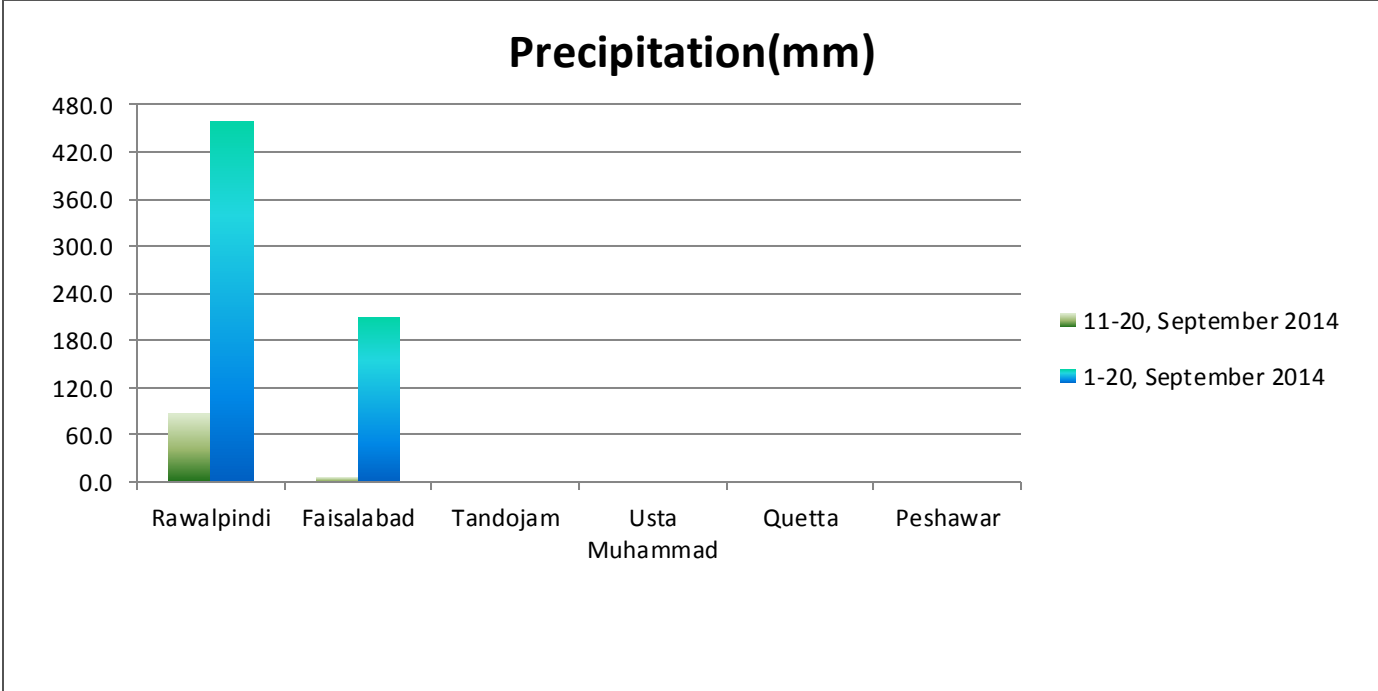
Phone: [+92-51-9250592](tel:+92-51-9250592) Email: info@namc.pmd.gov.pk

Meteorological conditions during 2nd decade of September, 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	3.4	89.0	85.6	-0.3	-1.2	26.7	30.4	28.8	27.7	27.7	27.4	28.0	68	81.6	4.3	4.2
2	FAISALABAD	1.2	5.4	4.2	0.2	1.3	30.2	35.5	37.1	32.3	31.3	30.4	30.5	53	88.4	2.8	4.5
3	JHELUM	1.3	16.8	15.5	-0.2	-0.1	29.3	31.9	30.9	29.6	28.8	29.3	***	70	77.5	2.2	5.7
4	LAHORE	1.4	13.2	11.8	0.1	0.3	29.8	30.4	30.6	29.4	29.3	***	28.4	72	58.6	2.0	4.8
5	SARGODHA	2.0	65.2	63.2	-1.4	0.4	29.7	32.5	31.0	29.4	29.2	29.3	29.0	74	76.6	0.7	3.8
6	MULTAN	0.8	0.1	-0.7	1.4	1.3	32.1	***	***	***	***	***	***	56	83.3	6.6	5.6
7	KHANPUR	0.0	0.0	0.0	1.4	0.3	31.7	***	36.7	36.5	36.3	37.0	35.4	53	96.6	5.1	5.7
8	TANDOJAM	0.0	0.0	0.0	1.7	1.0	31.3	40.1	39.3	36.9	34.6	34.3	***	61	73.6	3.4	4.7
9	SAKRAND ☆	0.0	0.0	0.0	1.1	-3.4	29.1	48.0	41.1	***	***	***	35.8	60	109.3	8.1	6.5
10	ROHRI	0.1	0.0	-0.1	1.4	-4.4	31.1	45.6	42.6	37.1	36.5	35.1	35.9	49	110.8	3.2	5.5
11	DI KHAN	2.3	0.0	-2.3	1.8	0.5	30.9	***	***	***	***	***	***	60	81.0	***	5.5
12	PESHAWAR	1.1	0.0	-1.1	1.3	0.6	30.2	34.3	32.0	31.0	***	***	29.4	58	71.2	3.1	4.2
13	USTA MUHAMMAD	0.0	0.0	0.0	-0.7	1.0	32.1	37.6	37.2	37.0	36.9	***	36.1	56	***	***	5.6
14	QUETTA	0.0	0.0	0.0	-0.3	2.9	23.5	34.0	32.5	27.8	27.2	26.1	27.9	24	102.3	4.7	5.0
15	SKARDU	0.2	1.8	1.6	0.7	-0.5	18.7	***	***	***	***	***	***	42	82.0	3.6	3.8
16	GILGIT	0.1	0.1	0.0	0.5	2.0	22.0	***	***	***	***	***	***	51	77.6	2.8	3.9

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.

Graph at RAMC's during September, 2014



Past Weather (11th to 20th September, 2014)

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

1.1 Punjab

Light to moderate rainfall reported in the agricultural plains of Punjab. Chief amount of rainfall received in Islamabad, Sargodha & Lahore. Decadal maximum & minimum temperature both raised above normal by 0.2°C & 0.3°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 64%, 80.4hrs, 3.4km/hr and 4.9mm/day respectively.

1.2 Sindh

Dry weather reported in the agricultural plains of Sindh. Decadal maximum raised above normal by 1.4°C & minimum temperature dropped below normal by 2.3°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 57%, 97.9hrs, 4.9km/hr and 5.6mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

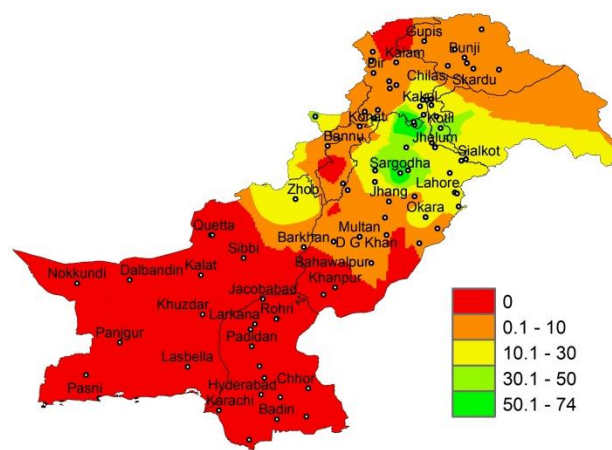
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Parachinar, Balakot & Cherat. Decadal maximum & minimum temperature both raised above normal by 1.6°C & 0.5°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 59%, 76.1hrs, 3.1km/hr and 4.9mm/day respectively.

1.4 Balochistan

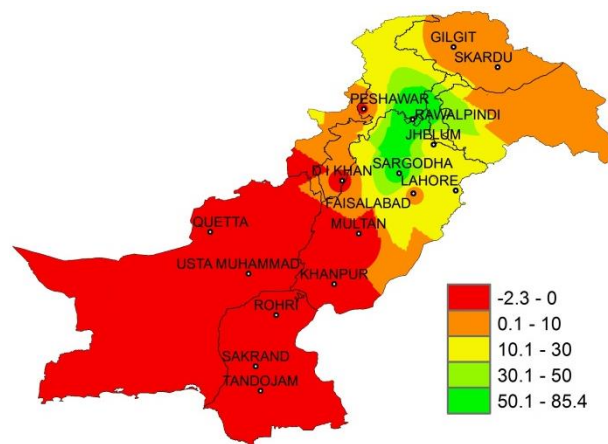
Light to moderate rainfall reported at one station of Balochistan i.e Zhob. Decadal maximum dropped below normal by 0.5°C & minimum temperature raised above normal by 2.0°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 40%, 102.3hrs, 4.7km/hr and 5.3mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

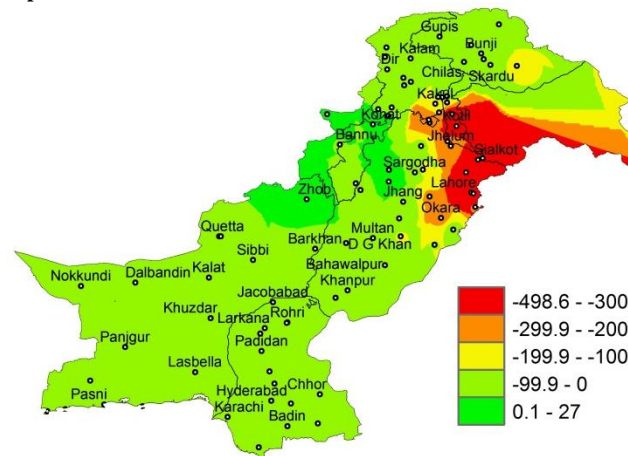
Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Kotli Muzaffarabad & Garhi dopatt. Decadal maximum & minimum temperature both raised above normal by 0.6°C & 0.8°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 47%, 79.8hrs, 3.2km/hr and 3.9mm/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
(11th to 20th September, 2014)**

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

Rainfall reported as 89mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 68%. Mean day temperature was 33°C while night temperature recorded as 20°C with 81.6hours bright sunshine duration. Wind speed recorded as 4.3km/h with mean wind direction *westerly*.

Maize: Good condition, tesseling Stage

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

Rainfall reported as 5.4mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 53%. Mean day temperature was 36°C while night temperature recorded as 25°C with 88.4hours bright sunshine duration. Wind speed recorded as 2.8km/hr with mean wind direction *south easterly*.

Cotton: Normal condition, picking stage.

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

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 61%. Mean day temperature was 37°C while night temperature recorded as 25°C with 73.6hours bright sunshine duration. Wind speed recorded as 3.4km/hr with mean wind direction *south westerly*.

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

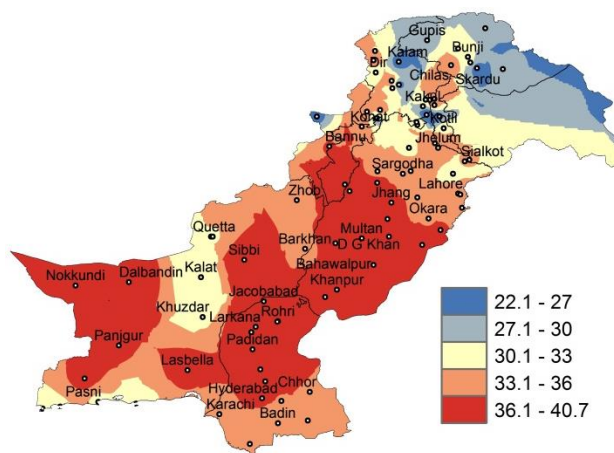
2.4 **RAMC, Usta Muhammad (Eastern Balochistan)**

Dry weather reported during the decade however weather remained cloudy for 01days. Average relative humidity recorded as 56%. Mean day temperature was 38°C while night temperature recorded as 26°C.

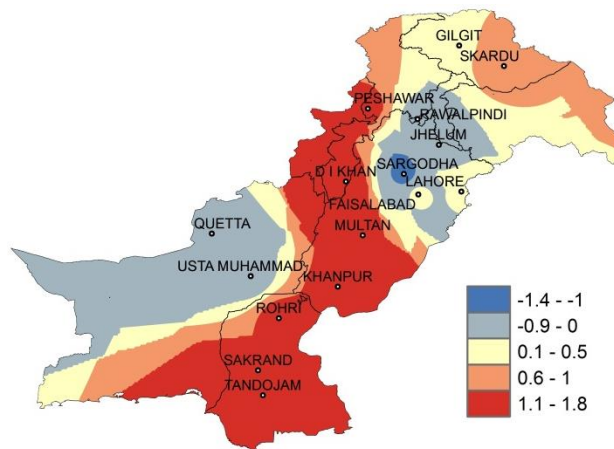
Rice: Good condition, shooting stage.

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

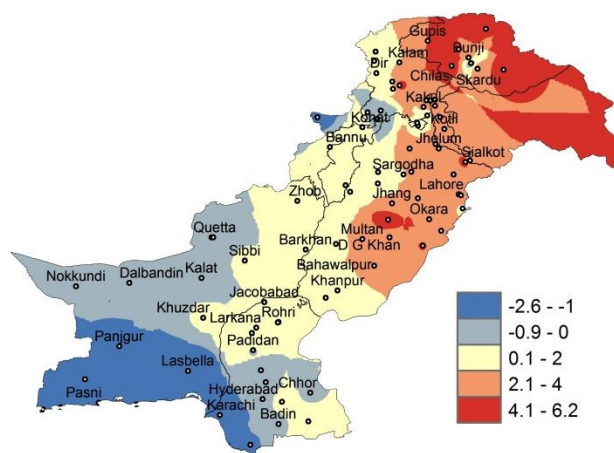
Dry weather reported during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 24%. Mean day temperature was 31°C while night temperature recorded as 16°C with 102.3hours bright sunshine duration and wind speed recorded as 4.7km/hr with mean wind direction *north 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 (11th to 20th September, 2014)**

2.6 **Jhelum**

Rainfall reported as 16.8mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 70%. Mean day temperature was 35°C while night temperature recorded as 24°C with 77.5hours bright sunshine duration. Wind speed recorded 2.2km/hr with mean wind direction *southerly*.

2.7 **Lahore**

Rainfall reported as 13.2mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 72%. Mean day temperature was 34°C while night temperature recorded as 26°C with 58.6hours bright sunshine duration. Wind speed recorded as 2.0km/hr with mean wind direction *north westerly*.

2.8 **Sargodha**

Rainfall reported as 65.2mm during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 74%. Mean day temperature was 34°C while night temperature recorded as 25°C with 76.6hours bright sunshine duration. Wind speed recorded as 0.7km/hr with mean wind direction *variable*.

2.9 **Multan**

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 56%. Mean day temperature was 37°C while night temperature recorded as 27°C with 83.3hours bright sunshine duration. Wind speed recorded as 6.6km/hr with mean wind direction *southerly*.

2.10 **Khanpur**

Dry weather reported during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 53%. Mean day temperature was 38°C while night temperature recorded as 25°C with 96.9hours bright sunshine duration. Wind speed recorded 5.1km/hr with mean wind direction *south westerly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 60%. Mean day temperature was 38°C while night temperature recorded as 20°C with 109.3hours bright sunshine duration. Wind speed recorded 8.1km/hr with mean wind direction *south easterly*.

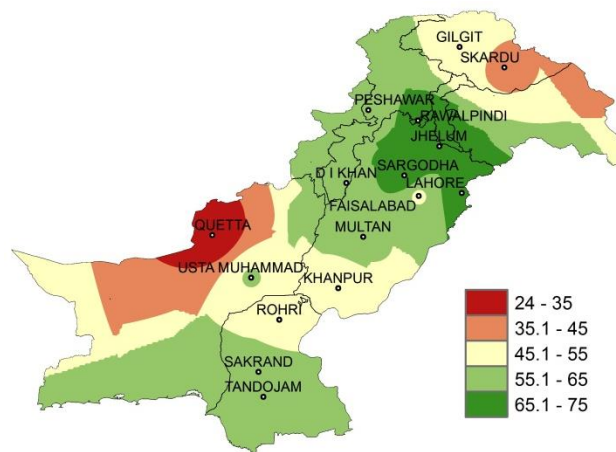


Figure.3: Relative Humidity in percentage (%)

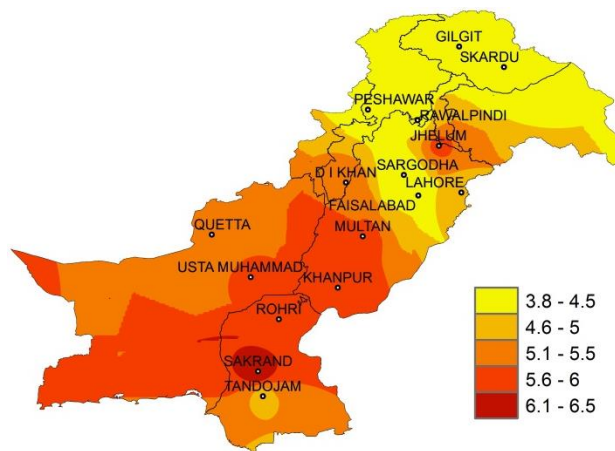


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

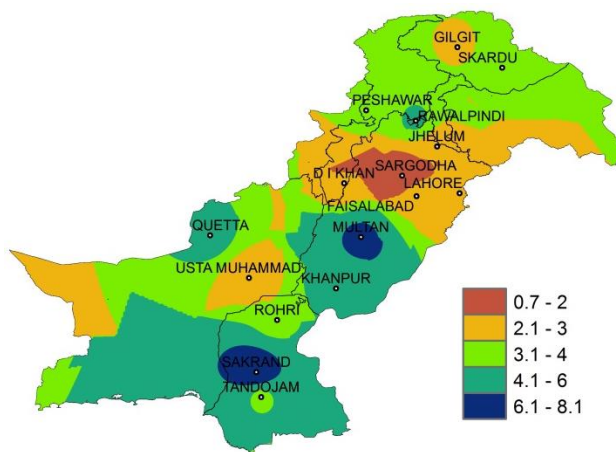


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 49%. Mean day temperature was 40°C while night temperature recorded as 23°C with 110.8hours bright sunshine duration. Wind speed recorded as 3.2km/hr with mean wind direction *south westerly*.

2.13 D.I Khan

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 60%. Mean day temperature was 38°C while night temperature recorded as 24°C with 81.0hours bright sunshine duration.

2.14 Peshawar

Dry weather reported during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 58%. Mean day temperature was 36°C while night temperature recorded as 24°C with 71.2hours bright sunshine duration. Wind speed recorded as 3.1km/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 42%. Mean day temperature was 28°C while night temperature recorded as 10°C with 82.0hours bright sunshine duration. Wind speed recorded as 3.6km/hr with mean wind direction *south easterly*.

2.16 Gilgit

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 51%. Mean day temperature was 32°C while night temperature recorded as 12°C with 77.6bright sunshine duration. Wind speed recorded as 2.8km/hr with mean wind direction *easterly*.

3. Ten Days Weather Advisory for Farmers (21st to 30th September, 2014)

3.1 Temperature Forecast

Day time temperatures are expected normal 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 upper half of the agricultural plains of the province including Lahore, Gujranwala & Rawalpindi divisions during mid of decade 25th to 27th September.
- ❖ **Khyber Pakhtunkhwa:** Rain thunder showers at isolated places expected over most of the agricultural plains of the province during the end of 1st half of the decade.
- ❖ **Sindh:** Dry weather expected with light rainfall at isolated places of lower Sindh during the 1st half of decade of the decade.
- ❖ **Balochistan:** Mainly dry weather is expected in the province. However light rainfall expected at a few places in northwest Balochistan during mid of the decade.
- ❖ **Gilgit Baltistan:** : Mostly dry weather with light to moderate rainfall over hills is expected in most parts of GB during mid of decade.
- ❖ **Kashmir:** Mainly cloudy weather with light to moderate rainfall is expected over most parts of Kashmir during mid of the decade.

3.4 Advisory for Farmers

- ❖ Recent monsoon rains/flash flooding may accelerate 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 the worst hit rain/flash flooding areas are advised to manage evacuation of stagnant water from standing crops like cotton and rice.
- ❖ 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 of cotton belt are advised to be aware of the adverse effects of stagnant water in the fields during monsoon. Mechanism for drainage of stagnant water from fields should be evolved on priority basis and necessary requirements in this regard should be taken.