

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported in Punjab, Sindh & K.P light rainfall reported Balochistan, G.B and Kashmir during the last decade.
- ❖ Highest amount of rainfall reported as 76.0mm at Chorr during the last decade.
- ❖ Highest maximum temperature recorded 46.0°C at Turbat during the last decade.
- ❖ Light to moderate rainfall is expected in Punjab, K.P, G.B and Kashmir from 21st to 26th and in Sindh & Baluchistan from 21st to 23rd 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.
- ❖ Due to onset of monsoon rains, farmers are advised to take in time precautionary measures to protect their crops, livestock and other property from any expected heavy rain.

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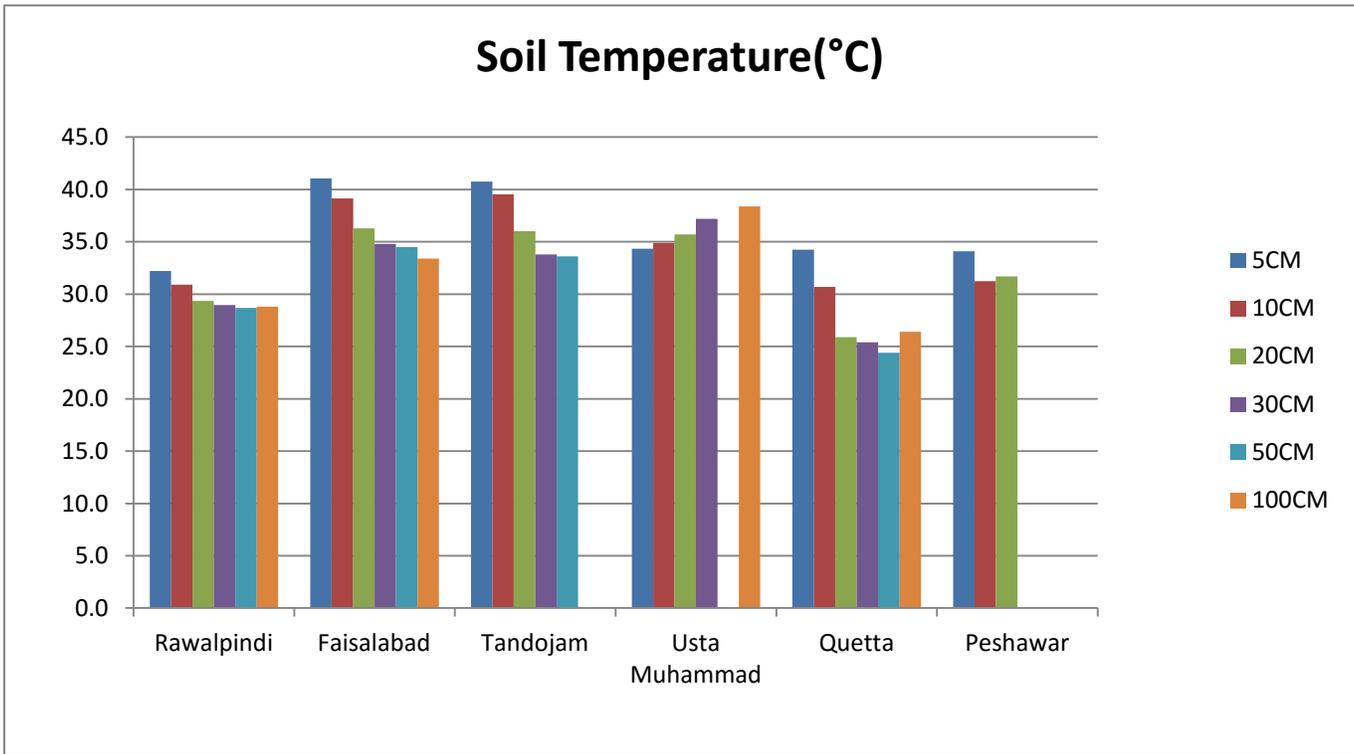
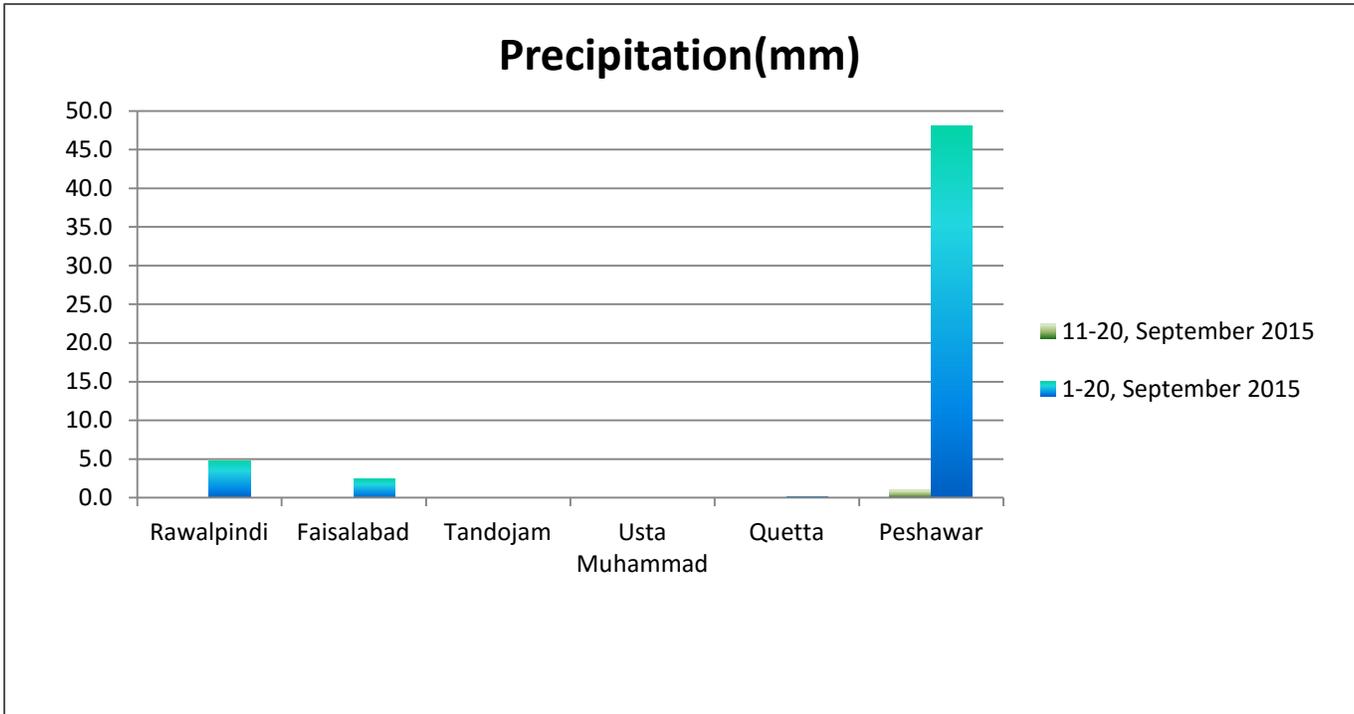
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Meteorological conditions during 2nd decade of September, 2015

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	3.4	0.0	-3.4	2.5	2.3	29.8	32.2	30.9	29.4	29.0	28.7	28.8	48	95.0	4.1	4.9
2	FAISALABAD	1.2	0.0	-1.2	2.4	2.0	31.7	41.1	39.2	36.3	34.8	34.5	33.4	52	87.6	2.8	4.7
3	JHELUM	1.3	0.0	-1.3	3.0	0.6	31.3	35.6	33.9	31.8	30.6	31.0	***	57	89.3	3.1	4.7
4	LAHORE	1.4	15.2	13.8	2.3	0.7	31.1	33.4	33.5	31.5	30.8	***	30.3	62	77.5	2.0	4.2
5	SARGODHA	2.0	0.0	-2.0	3.0	2.3	32.8	39.2	37.3	34.0	33.2	33.1	31.3	58	87.8	1.3	4.4
6	MULTAN	0.8	0.0	-0.8	2.4	1.6	32.8	***	***	***	***	***	***	47	83.9	3.7	5.0
7	KHANPUR	0.0	1.7	1.7	1.4	0.2	31.7	***	34.3	34.2	34.3	34.2	33.8	58	92.0	4.1	5.2
8	TANDOJAM	0.0	0.0	0.0	2.1	-0.2	30.9	40.8	39.6	36.0	33.8	33.6	***	59	59.0	7.4	5.4
9	SAKRAND ☆	0.0	0.0	0.0	0.9	-3.4	29.0	46.7	39.8	***	***	***	35.8	56	98.2	7.4	6.2
10	ROHRI	0.1	0.0	-0.1	1.5	0.5	33.6	43.6	39.9	36.3	35.8	33.9	35.2	46	104.0	4.2	5.9
11	DI KHAN	2.3	0.1	-2.2	2.6	-0.2	31.0	***	***	***	***	***	***	57	96.4	***	6.0
12	PESHAWAR	1.1	1.0	-0.1	0.8	-1.4	28.9	34.1	31.3	31.7	***	***	***	66	68.7	2.4	3.8
13	USTA MUHAMMAD	0.0	0.0	0.0	-0.6	-0.7	31.3	34.4	34.9	35.7	37.2	***	38.4	51	***	***	5.9
14	QUETTA	0.0	0.0	0.0	-0.7	2.1	22.9	34.3	30.7	25.9	25.4	24.4	26.4	21	101.2	5.1	5.1
15	SKARDU	0.2	0.1	-0.1	0.4	-1.3	18.2	***	***	***	***	***	***	42	61.3	5.3	3.9
16	GILGIT	0.1	0.1	0.0	0.9	1.7	22.1	***	***	***	***	***	***	42	82.2	3.3	4.1

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. 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 (11th to 20th September, 2015)

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

1.1 Punjab

Light to moderate rainfall reported in the agricultural plains of Punjab. Chief amount of rainfall received in Lahore, Bahawalnagar & Islamabad. Decadal maximum raised & minimum temperature both raised above normal by 2.4°C & 1.4°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 55%, 87.6hrs, 3.0km/hr and 4.7mm/day respectively.

1.2 Sindh

Light to moderate rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Chorr, Mithi & Mirpur Khas. Decadal maximum raised above normal by 1.5°C & minimum temperature dropped below normal by 1.0°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 54%, 87.1hrs, 6.3km/hr and 5.8mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

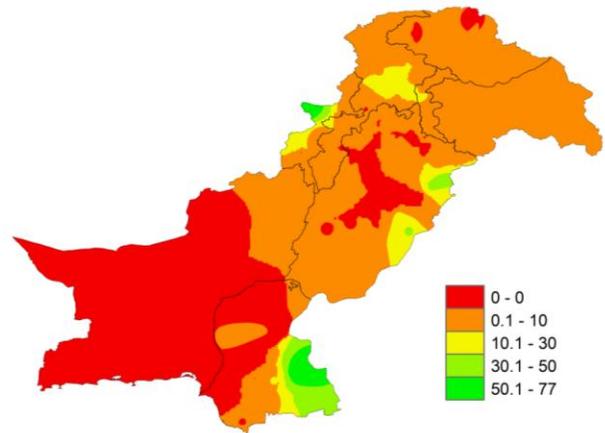
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Parachinar, Saidu Sharif & Malam Jabba. Decadal maximum raised above normal by 1.7°C & minimum temperature dropped below normal by 0.8°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 62%, 82.6hrs, 2.4km/hr and 4.9mm/day respectively.

1.4 Balochistan

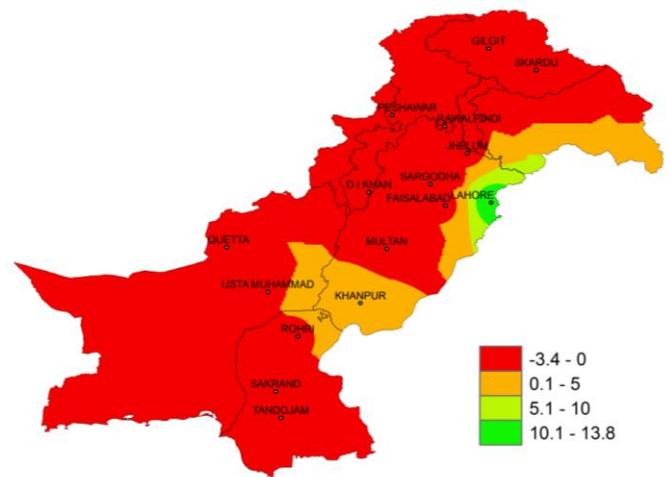
Light rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Zhob & Barkhan. Decadal maximum dropped below by 0.7°C & minimum temperature raised above normal by 0.7°C, in the province. Whereas mean values relative humidity, sunshine hour, wind speed & ETo were recorded as 36%, 101.2hrs, 5.1km/hr and 5.5mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

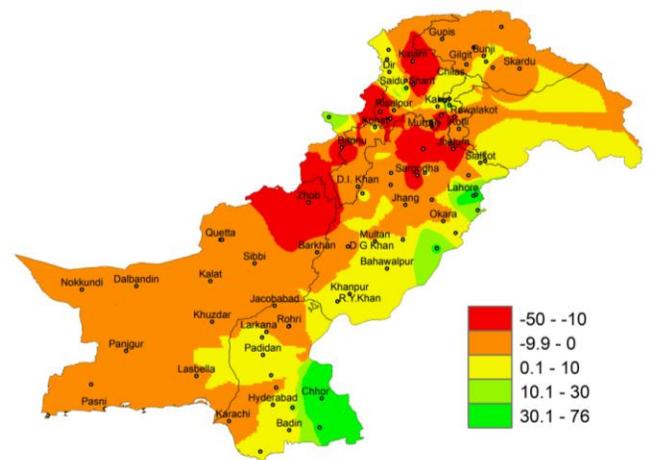
Light rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Garhi Dopatta, Muzaffarabad & Kotli. Decadal maximum & minimum temperature both raised above normal by 0.7°C & 0.2°C respectively, in the province. Relative humidity, sunshine hour, wind speed & ETo were recorded as 42%, 71.8hrs, 4.3km/hr and 4.0mm/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, 2015)**

2.1 RAMC, Rawalpindi (Potohar region)

Dry weather reported during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 48%. Mean day temperature was 35.9°C while night temperature recorded as 23.7°C with 95.0hours bright sunshine duration. Wind speed recorded as 4.1km/hr with mean wind direction *variable*.

2.2 RAMC, Faisalabad (Central Punjab)

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 52%. Mean day temperature was 37.7°C while night temperature recorded as 25.6°C with 87.6hours bright sunshine duration. Wind speed recorded as 2.8km/hr with mean wind direction *south easterly*.
Cotton: Very good condition, boll opening stage.

2.3 RAMC, Tandojam (Lower Sindh)

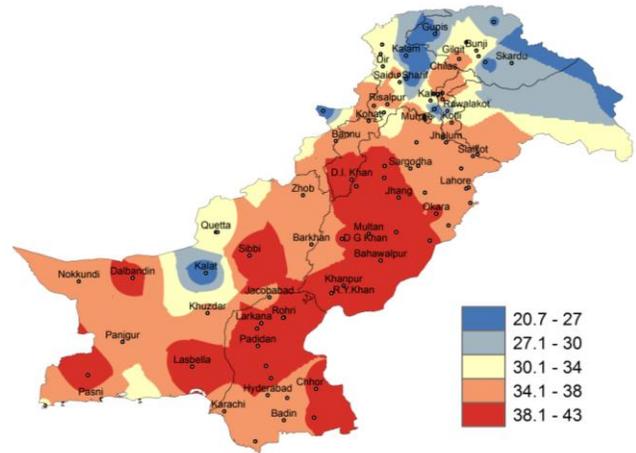
Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 59%. Mean day temperature was 37.7°C while night temperature recorded as 24.1°C with 59.0hours bright sunshine duration. Wind speed recorded as 7.4km/hr with mean wind direction *south westerly*.
Cotton (Sindh-I): Good condition, boll opening Stage.

2.4 RAMC, Usta Muhammad (Eastern Balochistan)

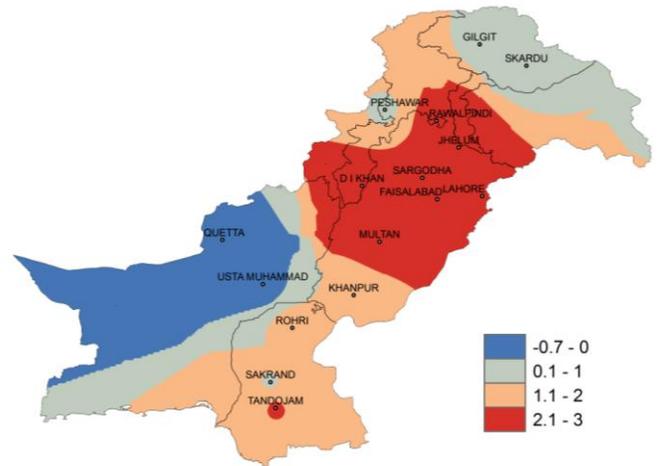
Dry weather reported during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 51%. Mean day temperature was 36.0°C while night temperature recorded as 24.6°C.
Rice (Paniri): Good Condition, flowering stage.

2.5 RAMC, Quetta (Northern Balochistan)

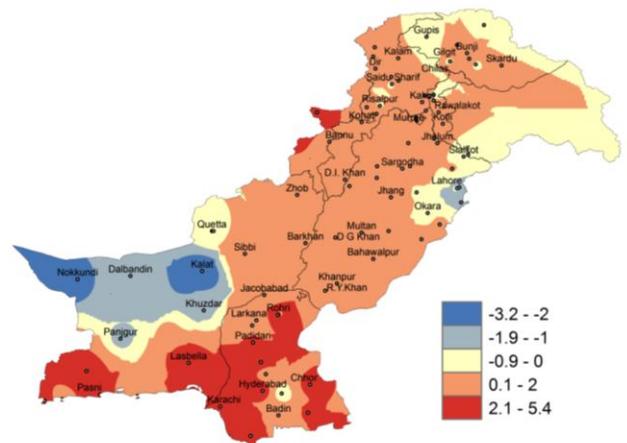
Dry weather reported during the decade, however weather remained cloudy for 06days. Average relative humidity recorded as 21%. Mean day temperature was 31.0°C while night temperature recorded as 14.7°C with 101.2hours bright sunshine duration and wind speed recorded as 5.1km/hr with mean wind direction *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, 2015)**

2.6 **Jhelum**

Dry weather reported during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 57%. Mean day temperature was 37.7°C while night temperature recorded as 24.0°C with 89.3hours bright sunshine duration and wind speed recorded as 3.1km/hr with mean wind direction *south westerly*.

2.7 **Lahore**

Rainfall reported as 15.2mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 62%. Mean day temperature was 36.0°C while night temperature recorded as 26.2°C with 77.5hours bright sunshine duration. Wind speed recorded as 2.0km/hr with mean wind direction *north westerly*.

2.8 **Sargodha**

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 58%. Mean day temperature was 38.6°C while night temperature recorded as 27.0°C with 87.8hours bright sunshine duration. Wind speed recorded as 1.3km/h with mean wind direction *easterly*.

2.9 **Multan**

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 47%. Mean day temperature was 38.4°C while night temperature recorded as 27.1°C with 83.9hours bright sunshine duration. Wind speed recorded 3.7km/hr with mean wind direction *south westerly*.

2.10 **Khanpur**

Rainfall reported as 1.7mm during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 58%. Mean day temperature was 38.2°C while night temperature recorded as 25.1°C with 92.0hours bright sunshine duration. Wind speed recorded 4.1km/hr with mean wind direction *south westerly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remains cloudy for 05days. Average relative humidity recorded as 56%. Mean day temperature was 37.8°C while night temperature recorded as 20.2°C with 98.2hours bright sunshine duration. Wind speed recorded 7.4km/hr with wind direction *south easterly*.

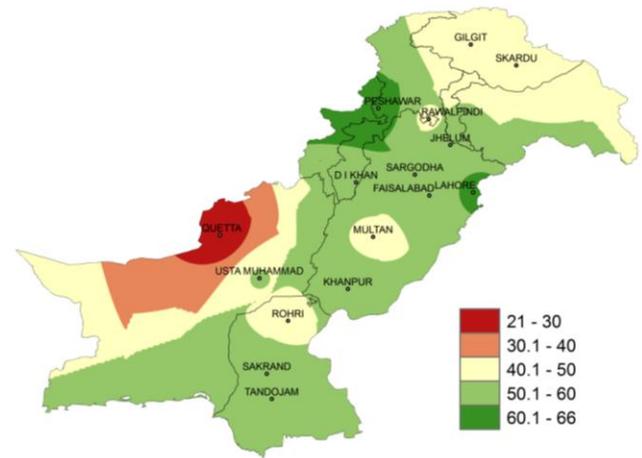


Figure.3: Relative Humidity in percentage (%)

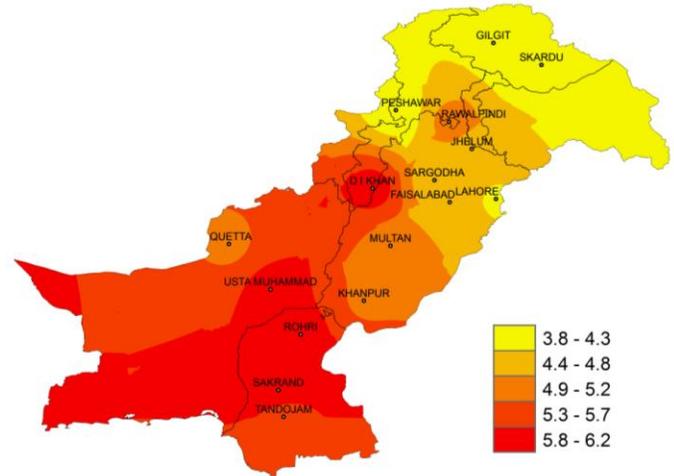


Figure.4: Reference Crop Evapotranspiration "ETo" in mm/day

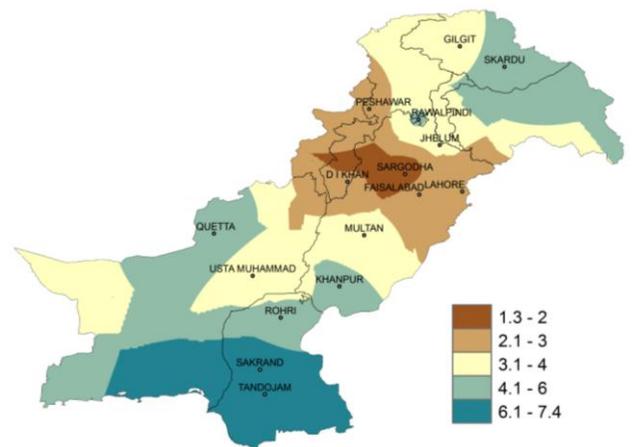


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Dry weather reported during the decade; however weather remained cloudy for 05days. Average relative humidity recorded as 46%. Mean day temperature was 39.6°C while night temperature recorded as 27.6°C with 104.0hours bright sunshine duration. Wind speed recorded as 4.2km/hr with mean wind direction *south westerly*.

2.13 D.I. Khan

Rainfall reported as Trace (not measureable) during the decade; however weather remained cloudy for 01day. Average relative humidity recorded as 57%. Mean day temperature was 38.6°C while night temperature recorded as 23.3°C with 96.4hours bright sunshine duration.

2.14 Peshawar

Rainfall reported as 1.0mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 66%. Mean day temperature was 35.4°C while night temperature recorded as 22.4°C with 68.7hours bright sunshine duration. Wind speed recorded as 2.4km/hr with mean wind direction *north westerly*.

2.15 Skardu

Rainfall reported Trace (not measureable) during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 42%. Mean day temperature was 27.2°C while night temperature recorded as 9.1°C with 61.3hours bright sunshine duration. Wind speed recorded as 5.3km/hr with mean wind direction *south easterly*.

2.16 Gilgit

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 42%. Mean day temperature was 32.2°C while night temperature recorded as 11.9°C with 82.2hours bright sunshine duration. Wind speed recorded as 3.3km/hr with mean wind direction *easterly*.

**3. Ten Days Weather Advisory for Farmers
(21st to 30th September, 2015)****3.1 Temperature Forecast**

Temperatures are likely to be slightly above 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 while during thunderstorm it may gust up to 30-50 knots.

3.3 Rain Forecast

- ❖ **Punjab:** Mainly hot and dry weather is expected in most parts of the Punjab however isolated light to moderate falls is expected in D.G khan, Bahwalpur from 21st to 23rd and light to moderate in Sargodha, Faisalabad, Lahore & Rawalpindi divisions division from 21st to 26th of the decade.
- ❖ **Khyber Pakhtunkhwa:** Mainly dry weather is expected in the province. However scattered light to moderate rainfall is expected in Bannu, Kohat, Hazara from 21st to 23rd and light to moderate in Peshawar, D.I khan, Hazara, Chitral, Dir region from 21st to 26th of the decade.
- ❖ **Sindh:** Mainly hot and dry weather is expected in most parts of the Sindh however light to moderate rainfall is expected in Sukkur, Larkana & Mirpur Khas divisions from 21st to 23rd of 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, Sibbi and Kalat 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 during the decade
- ❖ **Kashmir:** Mainly cloudy weather is expected in most of the parts of the Kashmir however rain-thunderstorm is expected at Muzaffarabad, Kotli & Rawalakot from during the 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.