

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported in Punjab & K.P light rainfall reported Balochistan, G.B and Kashmir and dry weather reported from Sindh during the last decade.
- ❖ Highest amount of rainfall reported as 62.0mm at Malam Jabba during the last decade.
- ❖ Highest maximum temperature recorded 45.5°C at Turbat during the last decade.
- ❖ Light to moderate rainfall is expected in Punjab, K.P, Baluchistan, G.B and Kashmir from 15th to 17th 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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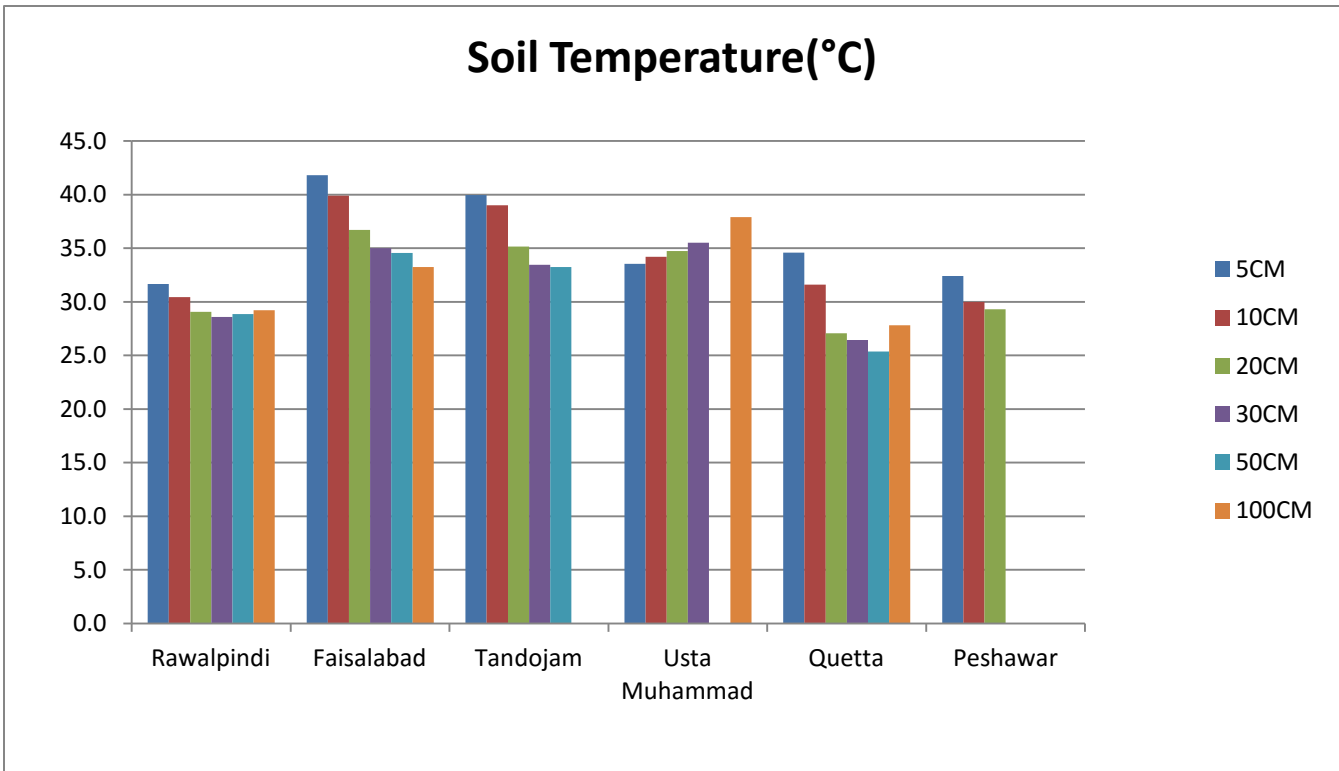
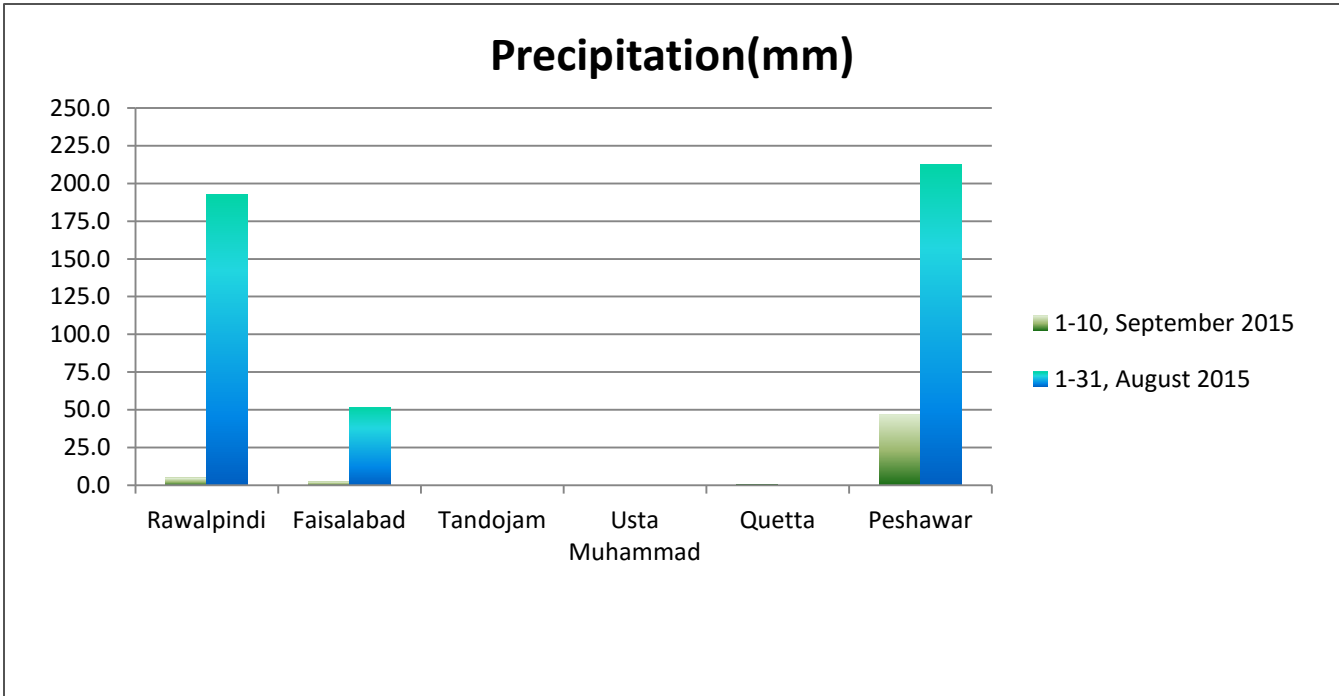
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Meteorological conditions during 1st decade of September, 2015

Sr. No.	Station	Precipitation (mm)			Air Temperature (°C)			Soil Temperatures (°C)						R.H (%)	Sunshine Duration(hours)	Wind Speed (km/hr)	ET ₀ (mm/day)
		Normal	Actual	Dep	Tmax Dep	Tmin Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	5.4	4.8	-0.6	2.0	0.1	28.8	31.7	30.5	29.1	28.6	28.9	29.2	51	100.1	4.0	5.1
2	FAISALABAD	1.6	2.4	0.8	1.9	1.5	31.6	41.8	39.9	36.7	35.0	34.6	33.3	51	95.3	3.5	5.3
3	JHELUM	3.4	19.0	15.6	2.3	-4.0	28.6	34.4	32.8	31.0	30.2	31.5	***	58	98.1	1.3	4.4
4	LAHORE	3.8	0.0	-3.8	2.2	0.7	31.6	35.6	34.9	32.6	31.3	***	30.4	53	89.8	1.9	4.6
5	SARGODHA	1.5	12.3	10.8	2.0	0.8	32.3	39.9	37.9	34.5	33.5	33.3	31.0	55	89.6	3.7	5.2
6	MULTAN	1.1	6.6	5.5	-0.7	1.6	31.9	***	***	***	***	***	***	67	70.0	6.1	5.0
7	KHANPUR	0.7	0.0	-0.7	0.3	-1.3	30.9	***	34.0	34.2	34.6	34.9	33.9	57	96.4	4.9	5.6
8	TANDOJAM	2.2	0.0	-2.2	0.2	-1.3	29.5	40.0	39.0	35.2	33.5	33.3	***	65	105.7	10.7	6.5
9	SAKRAND ☆	1.0	0.0	-1.0	-0.3	-5.1	27.9	45.7	39.9	***	***	***	36.3	58	100.7	8.7	6.3
10	ROHRI	0.1	0.0	-0.1	4.3	2.1	36.2	46.9	43.3	38.9	37.9	35.6	35.3	49	64.2	5.4	5.8
11	D I KHAN	1.1	0.0	-1.1	0.5	-1.0	30.1	***	***	***	***	***	***	57	91.3	***	5.9
12	PESHAWAR	1.1	47.0	45.9	-0.3	-3.3	28.0	32.4	30.0	29.3	***	***	***	64	60.4	3.2	3.9
13	USTA MUHAMMAD	0.6	0.0	-0.6	-2.6	-1.5	30.7	33.6	34.2	34.8	35.5	***	37.9	50	***	***	5.7
14	QUETTA	0.0	0.1	0.1	-2.2	1.4	22.9	34.6	31.6	27.1	26.5	25.4	27.8	19	105.3	4.9	5.4
15	SKARDU	0.8	0.2	-0.6	2.5	-2.4	17.4	***	***	***	***	***	***	50	74.1	3.3	3.6
16	GILGIT	0.5	3.4	2.9	-1.9	1.6	21.9	***	***	***	***	***	***	48	71.6	3.9	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. ET₀ 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 (1st to 10th September, 2015)

Light to moderate rainfall reported in Punjab & K.P light rainfall reported Balochistan, G.B and Kashmir and 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 Murree, Sargodha & Jhelum. Decadal maximum raised above normal by 1.4°C & minimum temperature dropped below normal by 0.1°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 56%, 91.3hrs, 3.6km/hr and 5.0mm/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 1.4°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 57%, 90.2hrs, 8.3km/hr and 6.2mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

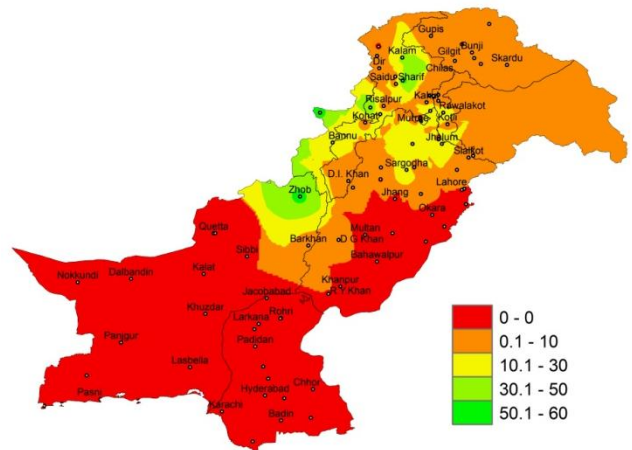
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Malam Jabba, Parachinar & Risalpur. Decadal maximum raised above normal by 0.1°C & minimum temperature dropped below normal by 2.2°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 61%, 75.9hrs, 3.2km/hr and 4.9mm/day respectively.

1.4 Balochistan

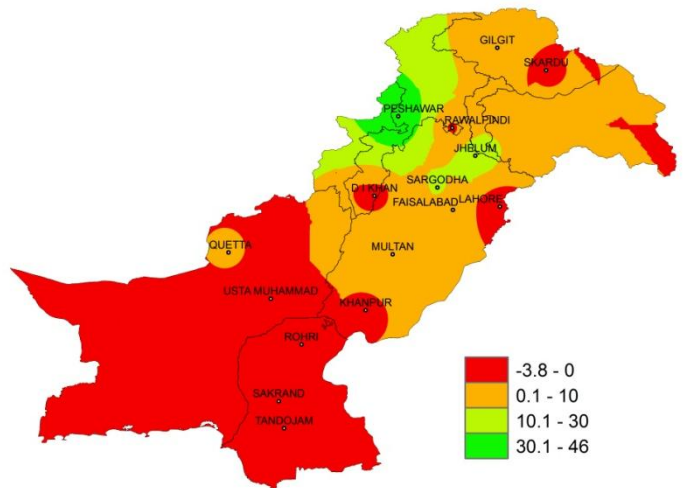
Light rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Barkhan & Zhob. Decadal maximum dropped below by 2.4°C & minimum temperature remains normal by 0.0°C, in the province. Whereas mean values relative humidity, sunshine hour, wind speed & ETo were recorded as 35%, 105.3hrs, 4.9km/hr and 5.6mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

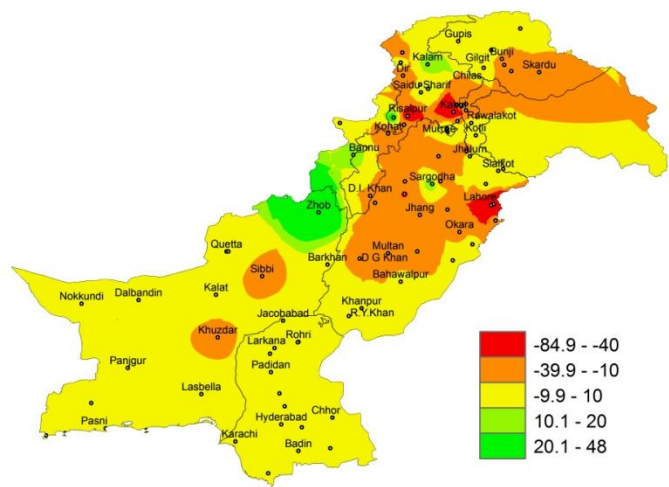
Light rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Rawalakot, Kotli & Asrore. Decadal maximum raised above normal by 0.3°C & minimum temperature dropped below normal by 0.4°C, in the province. Relative humidity, sunshine hour, wind speed & ETo were recorded as 49%, 72.9hrs, 3.6km/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**
(1st to 10th September, 2015)

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

Rainfall reported as 4.8mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 51%. Mean day temperature was 35.4°C while night temperature recorded as 22.2°C with 100.1hours bright sunshine duration. Wind speed recorded as 4.0km/hr with mean wind direction *variable*.

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

Rainfall reported as 2.4mm during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 51%. Mean day temperature was 37.6°C while night temperature recorded as 25.5°C with 95.30hours bright sunshine duration. Wind speed recorded as 3.5km/hr with mean wind direction *south westerly*.
Cotton: Very good condition, boll opening stage.

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

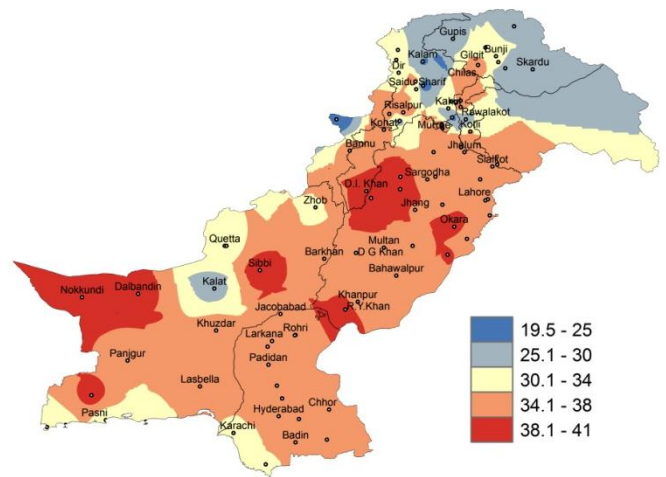
Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 65%. Mean day temperature was 35.7°C while night temperature recorded as 23.3°C with 105.7hours bright sunshine duration. Wind speed recorded as 10.7km/hr with mean wind direction *south westerly*.
Cotton (Sindh-I): Good condition, boll opening Stage.

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

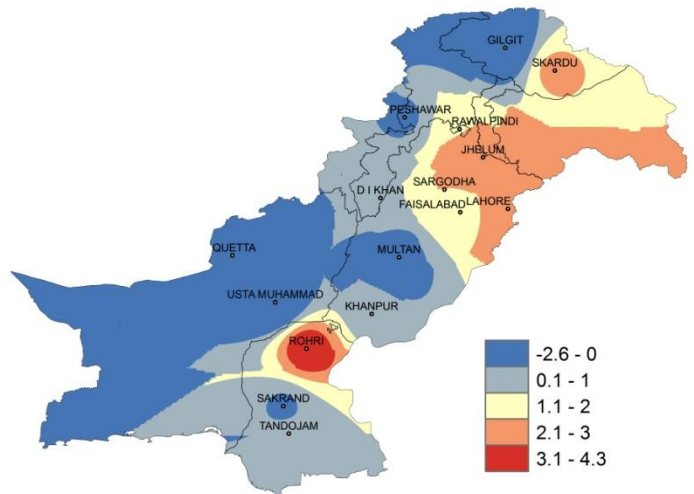
Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 50%. Mean day temperature was 36.2°C while night temperature recorded as 25.1°C.
Rice (Paniri): Good Condition, Shooting stage.

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

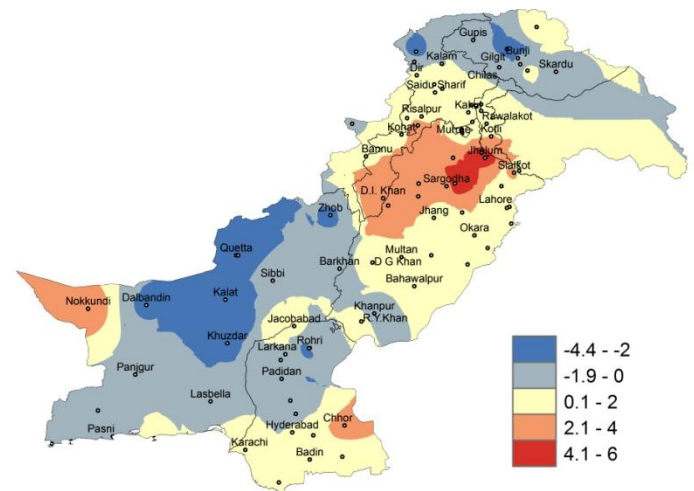
Rainfall reported as Trace (not measureable) during the decade, however weather remained cloudy for 06days. Average relative humidity recorded as 19%. Mean day temperature was 30.6°C while night temperature recorded as 15.1°C with 105.3hours bright sunshine duration and wind speed recorded as 4.9km/hr 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 September, 2015)**

2.6 **Jhelum**

Rainfall reported as 19.0mm during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 58%. Mean day temperature was 36.8°C while night temperature recorded as 20.4°C with 98.1hours bright sunshine duration and wind speed recorded as 1.3km/hr with mean wind direction *south easterly*.

2.7 **Lahore**

Rainfall reported as 36.4mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 53%. Mean day temperature was 36.4°C while night temperature recorded as 26.7°C with 89.8hours bright sunshine duration. Wind speed recorded as 1.9km/hr with mean wind direction *south westerly*.

2.8 **Sargodha**

Rainfall reported as 12.3mm during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 55%. Mean day temperature was 38.1°C while night temperature recorded as 26.5°C with 89.6hours bright sunshine duration. Wind speed recorded as 3.7km/h with mean wind direction *easterly*.

2.9 **Multan**

Rainfall reported as 39.0mm during the decade however weather remained cloudy for 11days. Average relative humidity recorded as 63%. Mean day temperature was 36.2°C while night temperature recorded as 26.6°C with 90.3hours bright sunshine duration. Wind speed recorded 6.8km/hr with mean wind direction *south westerly*.

2.10 **Khanpur**

Rainfall reported as 6.6mm during the decade however weather remained cloudy for 10day. Average relative humidity recorded as 67%. Mean day temperature was 35.9°C while night temperature recorded as 27.9°C with 70.0hours bright sunshine duration. Wind speed recorded 6.1km/hr with mean wind direction *south westerly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remains cloudy for 03days. Average relative humidity recorded as 58%. Mean day temperature was 36.1°C while night temperature recorded as 19.6°C with 100.7hours bright sunshine duration. Wind speed recorded 8.7km/hr with wind direction *south westerly*.

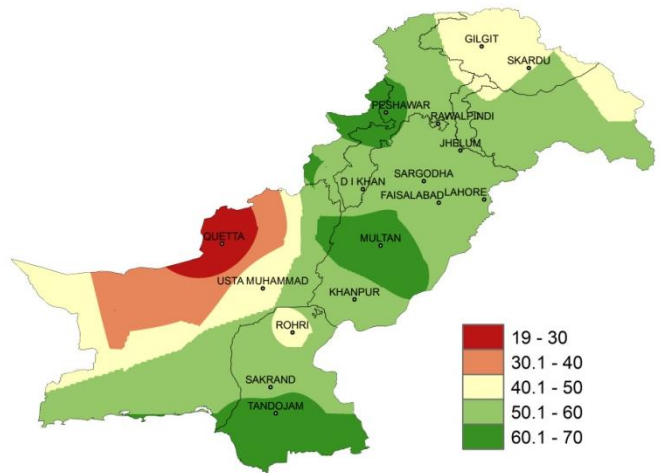


Figure.3: Relative Humidity in percentage (%)

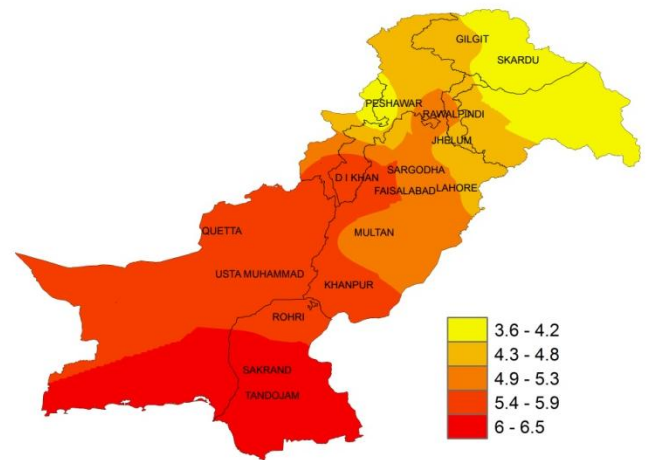


Figure.4: Reference Crop Evapotranspiration "ETo" in mm/day

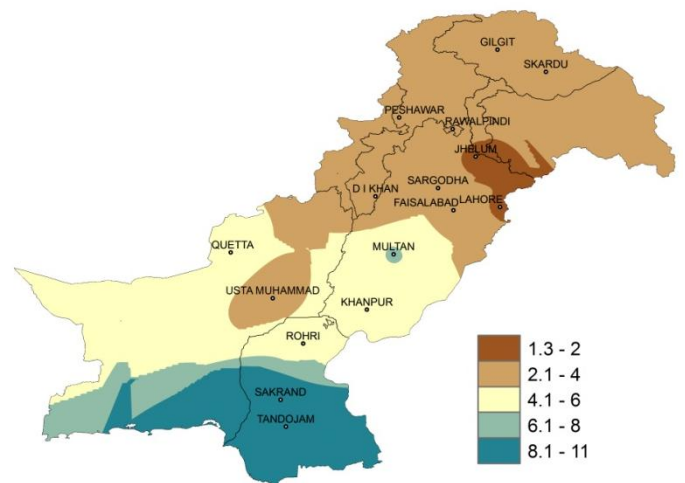


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Dry weather reported during the decade; however weather remained cloudy for 07days. Average relative humidity recorded as 49%. Mean day temperature was 42.3°C while night temperature recorded as 30.1°C with 64.2hours bright sunshine duration. Wind speed recorded as 5.4km/hr with mean wind direction *south westerly*.

2.13 D.I. Khan

Dry weather reported during the decade; however weather remained cloudy for 01day. Average relative humidity recorded as 57%. Mean day temperature was 36.9°C while night temperature recorded as 23.2°C with 91.3hours bright sunshine duration.

2.14 Peshawar

Rainfall reported as 47.0mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 64%. Mean day temperature was 34.7°C while night temperature recorded as 21.3°C with 60.4hours bright sunshine duration. Wind speed recorded as 3.2km/hr with mean wind direction *north easterly*.

2.15 Skardu

Rainfall reported 0.2mm during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 50%. Mean day temperature was 25.2°C while night temperature recorded as 9.5°C with 74.1hours bright sunshine duration. Wind speed recorded as 3.3km/hr with mean wind direction *south easterly*.

2.16 Gilgit

Rainfall reported as 3.4mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 48%. Mean day temperature was 30.1°C while night temperature recorded as 13.6°C with 71.5hours bright sunshine duration. Wind speed recorded as 3.9km/hr with mean wind direction *easterly*.

**3. Ten Days Weather Advisory for Farmers
(11th to 20th 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, Faisalabad, Lahore & Rawalpindi divisions division from 16th to 17th 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 16th to 18th of the decade.
 - ❖ **Sindh:** Mainly hot and dry weather is expected in most parts of the Sindh.
 - ❖ **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 from 15th to 17th 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 on 11th and 17th & 18th of this 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 16th to 19th of this 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.
 - ❖ 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.
 - ❖ Farmers of upper half of the country are advised to complete sowing of Kharif crops in time to utilize fully the present soil moisture especially growers of maize crop in rainfed areas.
 - ❖ 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.