

# Decadal Agromet Bulletin of Pakistan



## Highlights....

- ❖ Light to moderate rainfall reported in the agricultural plains of the Punjab, K.P, G.B & Kashmir and light rainfall reported from Sindh & Balochistan during the last decade.
- ❖ Highest amount of rainfall reported as 261.0mm at Islamabad during the last decade.
- ❖ Highest maximum temperature recorded 46.0°C at Dalbandin during the last decade.
- ❖ Light to moderate rainfall is expected in the agricultural plains of Punjab, K.P, Balochistan, Gilgit Baltistan & Kashmir and light rainfall is expected in Sindh from 16<sup>th</sup> to 20 of the decade.
- ❖ Farmers of upper half and northwest Balochistan should be careful about irrigation and spraying chemicals on the crops during or before expected rains during the decade.
- ❖ Due to prevailing dry weather and rising day time temperature, cotton and sugarcane farmers should irrigate the crops as per requirement.
- ❖ Pest/viral attacks and more weeds growth are expected after recent rains on sugarcane crop. Farmers are therefore advised to take in time precautionary measures 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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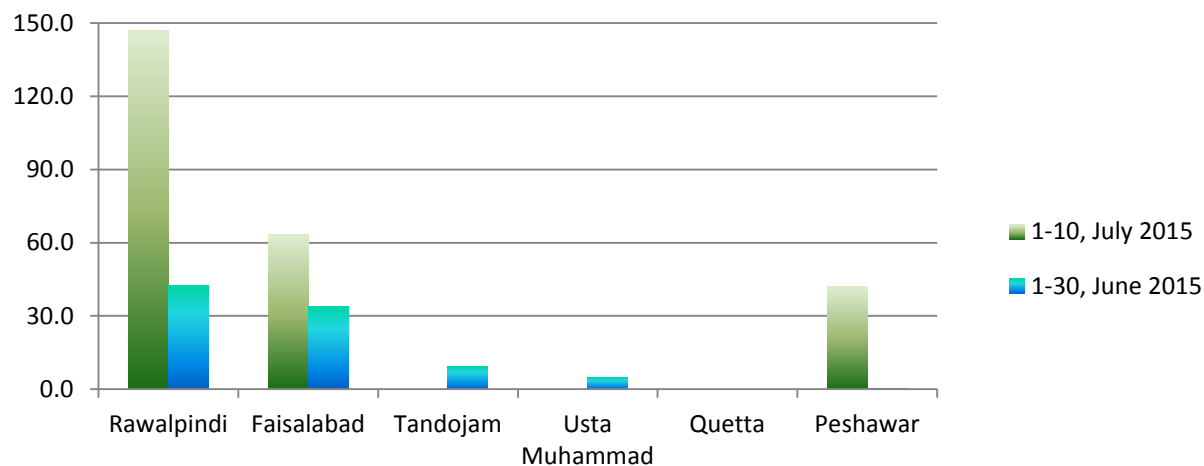
Meteorological conditions during 1<sup>st</sup> decade of July, 2015

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	7.9	147.0	139.1	-2.6	-1.1	28.2	31.2	30.0	29.8	29.7	29.2	28.4	66	71.0	4.9	5.1
2	FAISALABAD	2.9	63.2	60.3	3.2	0.8	34.4	41.2	39.3	36.9	35.6	34.9	33.1	58	65.6	4.4	5.7
3	JHELUM	4.1	48.0	43.9	0.6	0.2	32.4	38.2	36.4	35.1	33.9	33.6	***	61	63.1	5.3	5.5
4	LAHORE	4.4	86.6	82.2	2.6	-1.3	31.2	35.2	34.9	32.9	31.4	***	29.8	65	53.4	3.6	4.6
5	SARGODHA	3.0	46.8	43.8	-0.5	0.8	33.4	38.8	36.5	34.6	34.1	33.8	30.9	59	49.4	4.3	5.0
6	MULTAN	1.5	62.9	61.4	-3.3	-2.0	32.0	***	***	***	***	***	***	63	65.6	7.5	5.8
7	KHANPUR	0.4	22.8	22.4	-1.8	-1.1	33.8	***	37.6	37.4	37.6	37.5	37.5	65	62.6	6.4	5.7
8	TANDOJAM	2.0	0.0	-2.0	0.4	0.6	32.9	40.4	35.2	35.6	35.1	34.7	***	65	82.5	18.7	7.9
9	SAKRAND ☆	0.4	0.0	-0.4	1.2	-3.2	33.1	49.9	43.1	***	***	***	37.0	56	96.2	8.1	7.4
10	ROHRI	0.0	1.0	1.0	-0.1	-0.2	36.2	46.9	43.3	38.9	37.9	35.6	35.3	49	64.2	5.4	6.3
11	DI KHAN	2.7	25.0	22.3	0.4	-0.5	32.8	***	***	***	***	***	***	65	67.8	***	6.0
12	PESHAWAR	1.4	42.0	40.6	-0.7	0.4	32.5	36.0	33.3	32.7	***	***	***	66	70.6	3.9	5.3
13	USTA MUHAMMAD	0.3	0.0	-0.3	2.0	-0.7	36.5	40.0	39.2	38.7	38.0	***	37.3	31	***	***	8.7
14	QUETTA	0.3	0.0	-0.3	-0.4	1.2	29.3	40.9	37.3	31.8	30.9	29.0	28.8	26	86.1	5.0	6.2
15	SKARDU	0.4	9.5	9.1	3.5	-0.7	24.0	***	***	***	***	***	***	34	93.3	3.5	5.5
16	GILGIT	0.1	0.0	-0.1	2.0	2.8	28.7	***	***	***	***	***	***	40	92.9	2.3	5.6

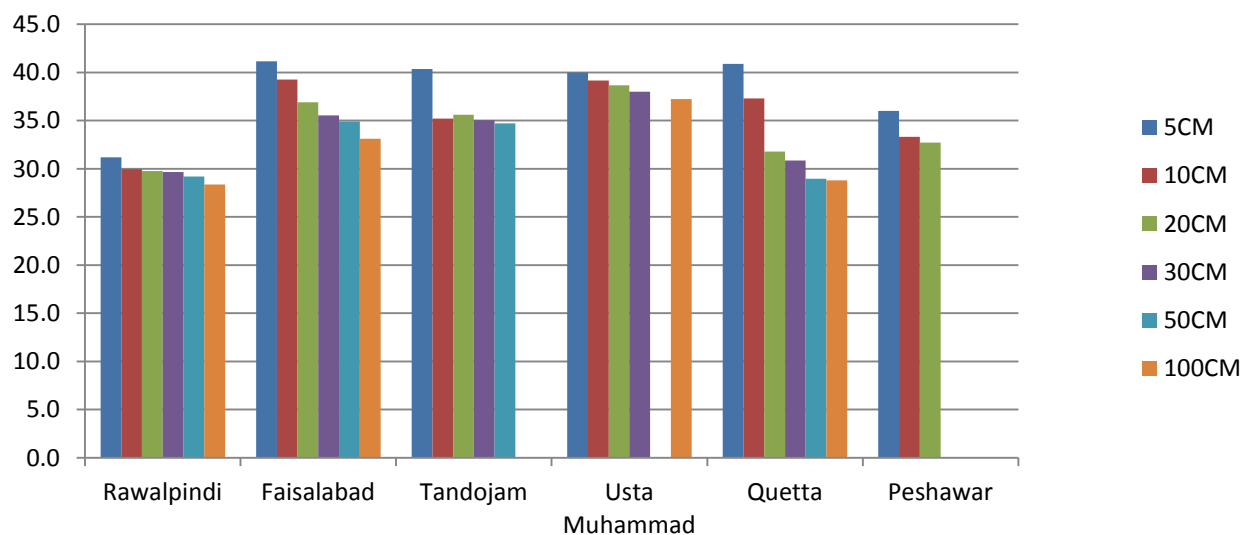
Table-1: Meteorological parameters for selected station of Pakistan. "Dep" in the table stands for difference from climatic normal, i.e. actual value minus normal. And "% Dep" is calculated by the formula; Dep divided by Normal multiplied by 100. Tmin & Tmax stands for minimum and maximum temperatures 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 July, 2015

### Precipitation(mm)



### Soil Temperature(°C)



**Past Weather (1<sup>st</sup> to 10<sup>th</sup> July, 2015)**

Light to moderate rainfall reported in the agricultural plains of the Punjab, K.P, G.B & Kashmir and light rainfall reported from Sindh & 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 Islamabad, Murree & Noorpur Thal. Decadal maximum & minimum temperature both dropped below normal by 0.3°C & 0.5°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 62%, 61.5hrs, 5.2km/hr and 5.3mm/day respectively.

**1.2 Sindh**

Light rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Jacobabad & Karachi. Decadal maximum raised above normal by 0.5°C & minimum temperature dropped below normal by 0.9°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 57%, 81.0hrs, 10.7km/hr and 7.2mm/day respectively.

**1.3 Khyber Pakhtunkhwa (KP)**

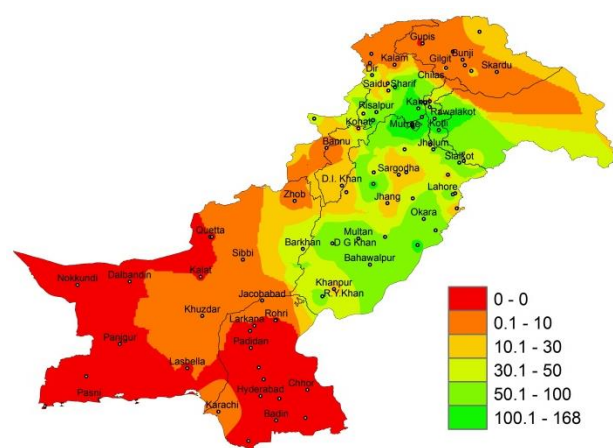
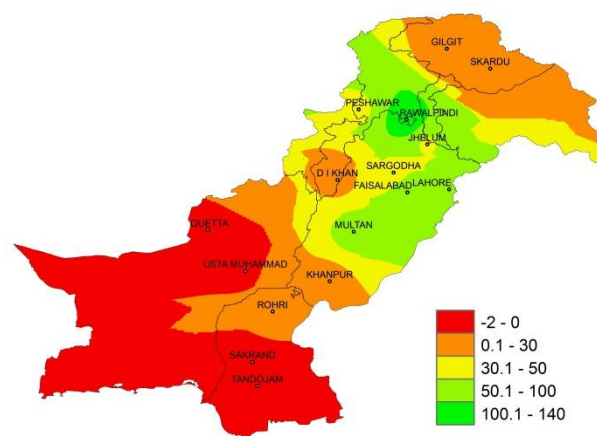
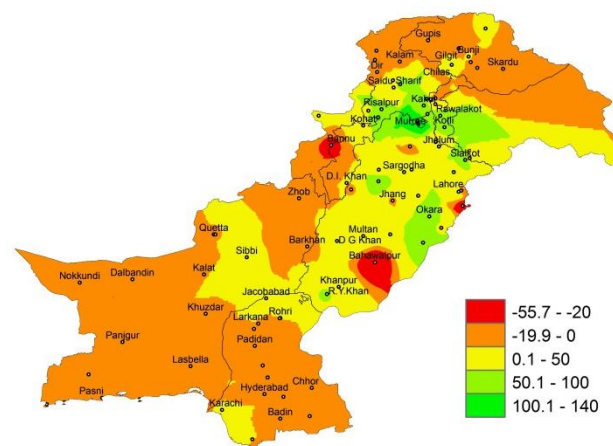
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Malam Jabba, Cherat & Balakot. Decadal maximum & minimum temperature both dropped below normal by 0.2°C & 0.1°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 66, 69.2hrs, 3.9km/hr and 5.7mm/day respectively.

**1.4 Balochistan**

Light rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Barkhan, Zhob & Sibbi. Decadal maximum raised & minimum temperature both raised above normal by 0.8°C & 0.3°C respectively, in the province. Whereas mean values relative humidity, sunshine hour, wind speed & ETo were recorded as 29%, 86.1hrs, 5.0km/hr and 7.5mm/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 Rawalakot, Kotli & Garhi Doppata. Decadal maximum & minimum temperature both raised above normal by 2.8°C & 1.1°C respectively, in the province. Relative humidity, sunshine hour, wind speed & ETo were recorded as 37%, 93.1hrs, 2.9km/hr and 5.6mm/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 (1<sup>st</sup> to 10<sup>th</sup> July, 2015)

### 2.1 RAMC, Rawalpindi (Potohar region)

Rainfall reported as 147.0mm during the decade however weather remained cloudy for 10day. Average relative humidity recorded as 66%. Mean day temperature was 33.8°C while night temperature recorded as 22.5°C with 71.0hours bright sunshine duration. Wind speed recorded as 4.9km/hr with mean wind direction *westerly*.

### 2.2 RAMC, Faisalabad (Central Punjab)

Rainfall reported as 63.2mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 58%. Mean day temperature was 41.0°C while night temperature recorded as 27.8°C with 65.55hours bright sunshine duration. Wind speed recorded as 4.4km/hr with mean wind direction *south easterly*.

**Cotton:** Excellent condition, flowering stage.

### 2.3 RAMC, Tandojam (Lower Sindh)

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 65%. Mean day temperature was 38.2°C while night temperature recorded as 27.6°C with 82.5hours bright sunshine duration. Wind speed recorded as 18.7km/hr with mean wind direction *south westerly*.

**Cotton (Sindh-I):** Good condition, budding Stage.

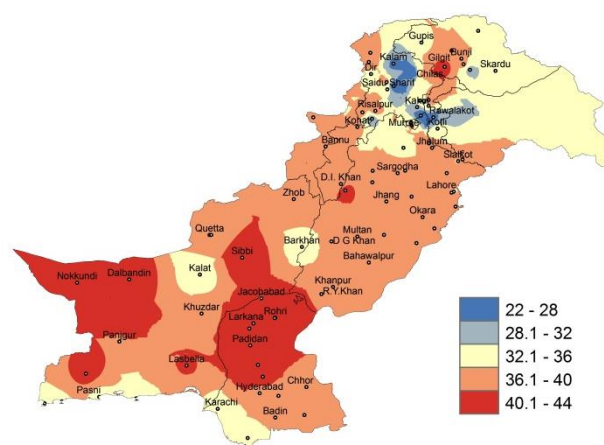
### 2.4 RAMC, Usta Muhammad (Eastern Balochistan)

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 31%. Mean day temperature was 44.7°C while night temperature recorded as 28.3°C.

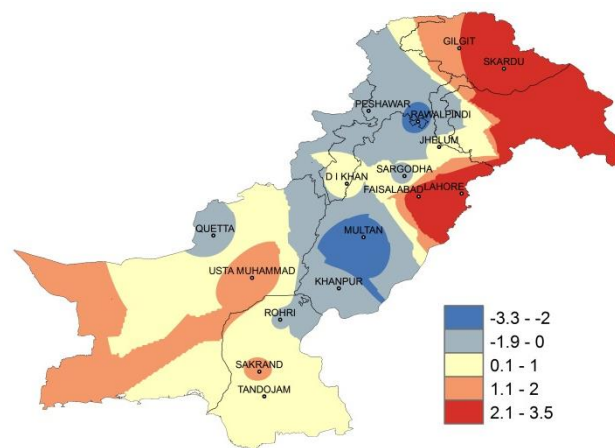
**Rice (Paniri):** Good Condition, 3<sup>rd</sup> leaf stage.

### 2.5 RAMC, Quetta (Northern Balochistan)

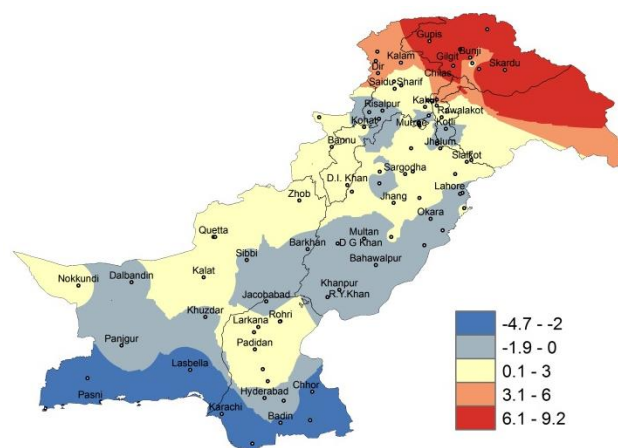
Dry weather reported during the decade, however weather remained cloudy for 09days. Average relative humidity recorded as 26%. Mean day temperature was 35.9°C while night temperature recorded as 22.7°C with 86.1hours bright sunshine duration and wind speed recorded as 5.0km/hr with mean wind direction *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 (1<sup>st</sup> to 10<sup>th</sup> July, 2015)

### 2.6 Jhelum

Rainfall reported as 48.0mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 61%. Mean day temperature was 37.8°C while night temperature recorded as 26.9°C with 63.1hours bright sunshine duration and wind speed recorded as 5.3km/hr with mean wind direction *south easterly*.

### 2.7 Lahore

Rainfall reported as 86.6mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 65%. Mean day temperature was 35.9°C while night temperature recorded as 26.4°C with 53.4hours bright sunshine duration. Wind speed recorded as 3.6km/hr with mean wind direction *north westerly*.

### 2.8 Sargodha

Rainfall reported as 46.8mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 59%. Mean day temperature was 38.0°C while night temperature recorded as 28.7°C with 49.4hours bright sunshine duration. Wind speed recorded as 4.3km/h with mean wind direction *easterly*.

### 2.9 Multan

Rainfall reported as 62.9mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 63%. Mean day temperature was 36.6°C while night temperature recorded as 27.4°C with 65.6hours bright sunshine duration. Wind speed recorded 7.5km/hr with mean wind direction *south westerly*.

### 2.10 Khanpur

Rainfall reported as 22.8mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 65%. Mean day temperature was 39.0°C while night temperature recorded as 28.5°C with 62.6hours bright sunshine duration. Wind speed recorded 6.4km/hr with mean wind direction *south westerly*.

### 2.11 Sakrand

Dry weather reported during the decade however weather remains cloudy for 01day. Average relative humidity recorded as 56%. Mean day temperature was 41.7°C while night temperature recorded as 24.4°C with 96.2hours bright sunshine duration. Wind speed recorded 8.14km/hr with wind direction *south westerly*.

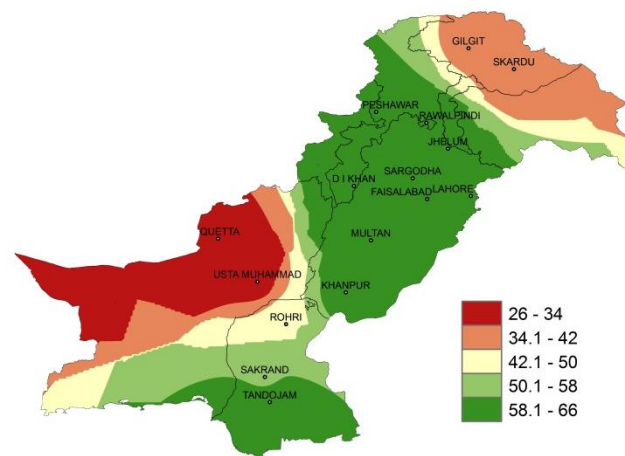


Figure.3: Relative Humidity in percentage (%)

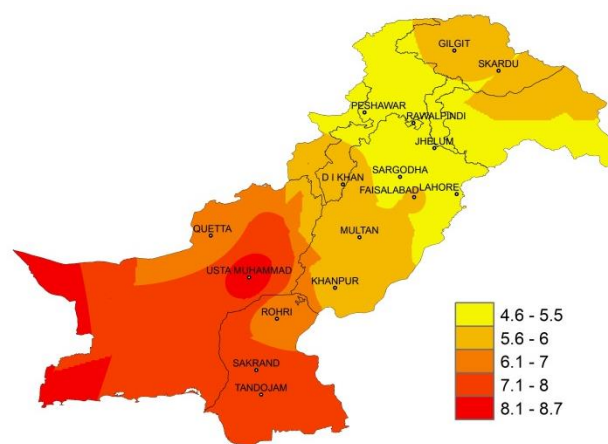


Figure.4: Reference Crop Evapotranspiration "ETo" in mm/day

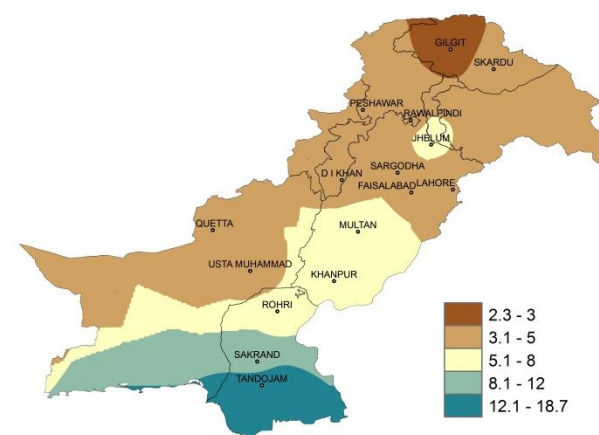


Figure 5: Wind Speed in kilometer per hour (km/h)

**2.12 Rohri**

Rainfall reported as 1.0mm during the decade; however weather remained cloudy for 07day. 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**

Rainfall reported as 25.0mm during the decade; however weather remained cloudy for 04days. Average relative humidity recorded as 65%. Mean day temperature was 39.5°C while night temperature recorded as 26.0°C with 67.8hours bright sunshine duration.

**2.14 Peshawar**

Rainfall reported as 42.0mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 66%. Mean day temperature was 37.5°C while night temperature recorded as 27.5°C with 70.6hours bright sunshine duration. Wind speed recorded as 3.9km/hr with mean wind direction *north easterly*.

**2.15 Skardu**

Rainfall reported 9.5mm during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 34%. Mean day temperature was 33.4°C while night temperature recorded as 14.6°C with 93.3hours bright sunshine duration. Wind speed recorded as 5.5km/hr with mean wind direction *south easterly*.

**2.16 Gilgit**

Dry weather reported during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 40%. Mean day temperature was 38.0°C while night temperature recorded as 19.4°C with 92.9hours bright sunshine duration. Wind speed recorded as 2.2km/hr with mean wind direction *easterly*.

### **3. Ten Days Weather Advisory for Farmers (11<sup>th</sup> to 20<sup>th</sup> July, 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 dust/thunderstorm it will 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 light to moderate rainfall is expected in the province including Rawalpindi, Gujranwala, Sargodha and Lahore division from 16<sup>th</sup> to 20<sup>th</sup> of the decade.
- ❖ **Khyber Pakhtunkhwa:** Mainly dry weather is expected in the province. However light to moderate rainfall is expected at few place including Hazara, Malakand, Peshawar Division 16<sup>th</sup> to 20<sup>th</sup> of the decade.
- ❖ **Sindh:** Mostly hot and dry weather is expected in most parts of the Sindh.
- ❖ **Balochistan:** Mostly hot and dry weather is expected in most parts of the Balochistan however light to moderate rain is expected at north-west Balochistan including Kalat, Khuzdar, Zhob and Quetta from 18<sup>th</sup> to 20<sup>th</sup> of the decade.
- ❖ **Gilgit Baltistan:** Rain-thunderstorm is expected in most parts of the G.B during the decade.
- ❖ **Kashmir:** Mainly dry weather is expected in most of the parts of the Kashmir however rain-thunderstorm is expected at Muzzafarabad, Kotli & Rawalakot during this decade.

**3.4 Advisory for Farmers**

- ❖ Farmers of upper half and northwest Balochistan should be careful about irrigation and spraying chemicals on the crops during or before expected rains during the decade.
- ❖ Due to prevailing dry weather and rising day time temperature, cotton and sugarcane farmers should irrigate the crops as per requirement.
- ❖ Pest/viral attacks and more weeds growth are expected after recent rains on sugarcane crop. Farmers are therefore advised to take in time precautionary measures in this regard.
- ❖ Farmers of rainfed areas in upper parts are advised to cultivate maize crop due to recent rains. Farmers obtaining crop water through tube wells are also advised to schedule the irrigation according to the expected weather mentioned during the decade.
- ❖ Farmers are advised to control further weeds growth at the present growing stages to stop any negative impact over the crops. Weeds removing practices should be started soon after expected rains in the mentioned areas.
- ❖ 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.