

# Decadal Agromet Bulletin of Pakistan



## Highlights....

- ❖ Light to moderate rainfall reported in the agricultural plains of Punjab, K.P, G.B & Kashmir however dry weather reported in the agricultural plains of the Sindh & Balochistan during the last decade.
- ❖ Highest amount of rainfall reported as 0.1mm at Quetta & Dalbandin during the last decade.
- ❖ Lowest Minimum temperature recorded  $-6.5^{\circ}\text{C}$  at Astore during the last decade.
- ❖ Wheat crop is in tillering/shooting/heading stages. Farmers are advised to stop irrigation the crops by keeping in view the expected rain in the agricultural plains of Punjab, KP & upper Sindh.
- ❖ At this stage of wheat crop, farmers should control weeds further growth by manual practices or any recommended spray.
- ❖ Farmers of irrigated/barani areas are advised to remove weeds from the fields, so that the present soil moisture may fully be utilized.
- ❖ Farmers in the lower half of the country especially those in central regions are advised to take up poultry rearing houses to maintain optimum room temperature and take care against the rapid changes in air temperature and relative humidity.
- ❖ Removing weeds from the standing crops is very important as weeds utilize moisture and food which may be utilized by the crop. As a result considerable loss in yield occurs every year. However operations against weeds should be started using weedicides or manually when the crop completely covers the fields.

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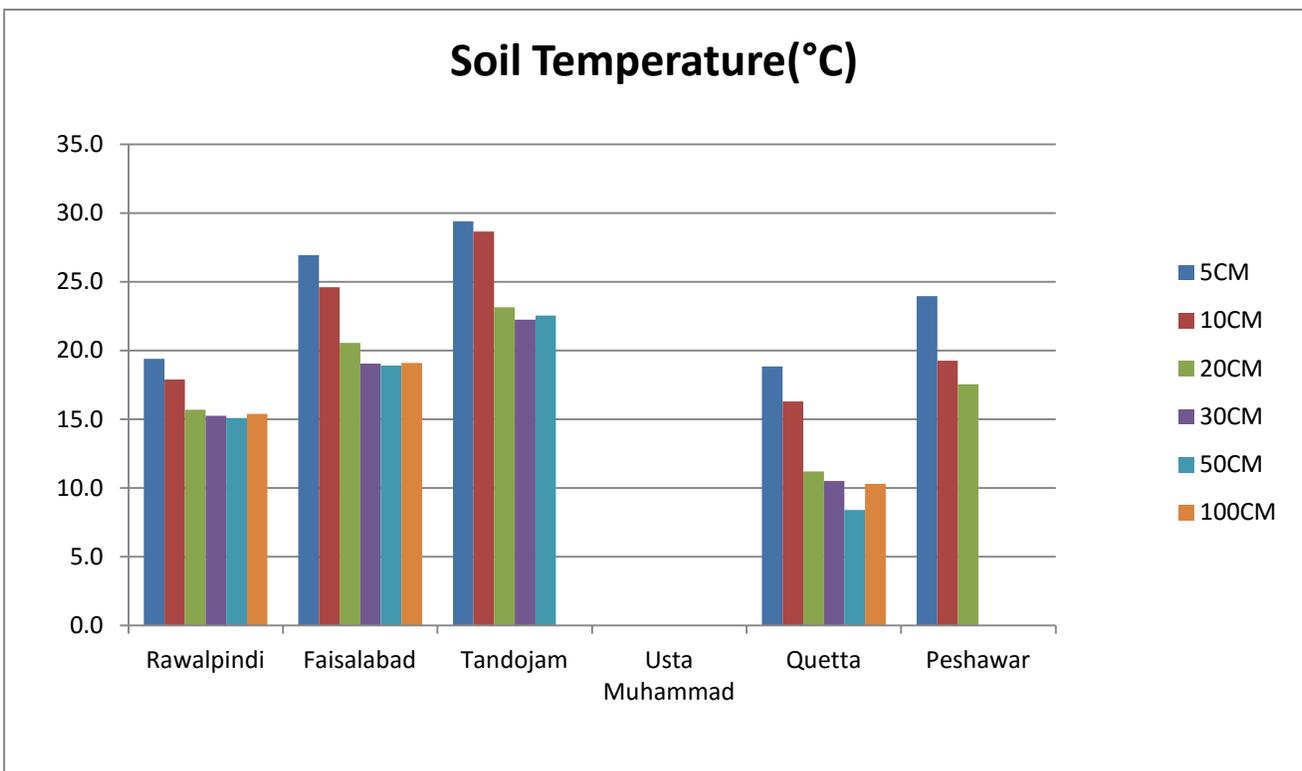
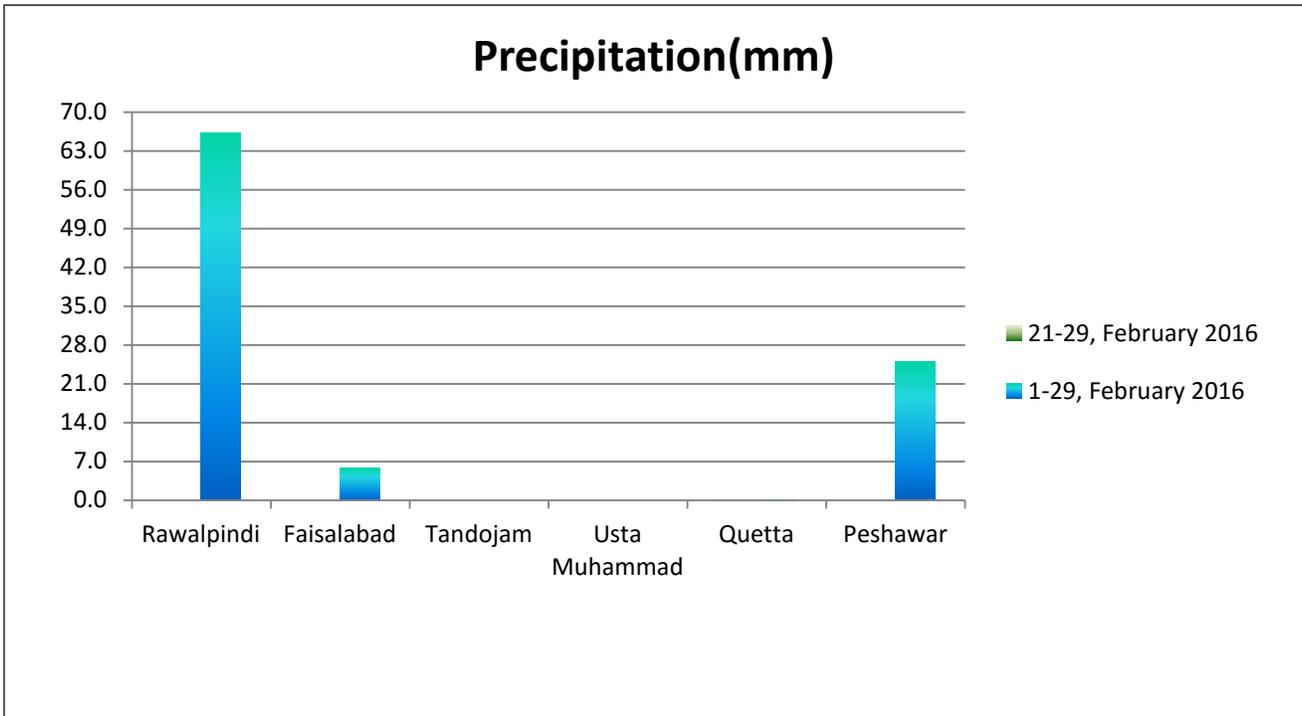
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Meteorological conditions during 3<sup>rd</sup> decade of February, 2016

Sr. No.	Station	Precipitation (mm)			Air Temperature (°C)			Soil Temperatures (°C)						R.H (%)	Sunshine Duration(hours)	Wind Speed (km/hr)	ET <sub>o</sub> (mm/day)
		Normal	Actual	Dep	Tmax Dep	Tmin Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	1.4	0.0	-1.4	5.3	1.8	18.6	19.4	17.9	15.7	15.3	15.1	15.4	52	88.1	3.7	3.0
2	FAISALABAD	0.3	0.0	-0.3	3.4	0.7	19.7	27.0	24.6	20.6	19.1	18.9	19.1	54	73.1	2.3	2.7
3	JHELUM	1.0	0.0	-1.0	4.5	0.0	19.7	20.5	18.7	17.1	16.3	16.9	***	55	84.5	1.1	2.5
4	LAHORE	0.5	0.0	-0.5	2.8	-0.9	20.0	21.8	20.7	18.6	17.6	***	18.5	60	81.2	2.0	2.7
5	SARGODHA	0.3	0.0	-0.3	3.2	1.2	20.2	23.5	18.1	18.9	18.3	18.2	18.9	64	59.0	1.5	2.3
6	MULTAN	0.5	0.0	-0.5	3.5	-0.2	20.4	***	***	***	***	***	***	53	69.3	2.4	2.9
7	KHANPUR	0.1	0.0	-0.1	3.3	-0.9	20.9	***	20.5	21.8	20.9	21.0	21.2	50	80.2	3.9	3.6
8	TANDOJAM	0.0	0.0	0.0	1.8	-2.6	21.6	29.4	28.7	23.2	22.3	22.6	***	45	83.9	2.0	3.4
9	SAKRAND ☆	0.0	0.0	0.0	2.9	0.1	22.2	35.7	27.9	***	***	***	23.7	46	91.8	3.0	3.7
11	D I KHAN	0.6	0.0	-0.6	1.8	-3.4	16.6	***	***	***	***	***	***	54	75.5	***	3.7
11	PESHAWAR	1.9	0.0	-1.9	6.8	0.2	19.3	24.0	19.3	17.6	***	***	***	55	70.5	1.7	2.4
12	USTA MUHAMMAD	0.4	0.0	-0.4	1.3	-2.4	20.5	***	***	***	***	***	***	50	***	1.5	3.1
13	QUETTA	1.2	0.1	-1.1	5.4	-0.6	12.7	18.9	16.3	11.2	10.5	8.4	10.3	23	80.6	4.8	3.4
14	SKARDU	1.1	0.0	-1.1	4.2	-1.8	5.1	***	***	***	***	***	***	52	81.3	0.3	1.6
15	GILGIT	0.3	0.0	-0.3	4.4	-2.4	10.2	***	***	***	***	***	***	41	83.7	2.2	2.1

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;  $\text{Dep} \div \text{Normal} \times 100$ . Tmin & Tmax stands for minimum and maximum temperatures respectively. ET<sub>o</sub> 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 March, 2016



**Past Weather (21<sup>st</sup> to 29<sup>th</sup> February, 2016)**

Trace (not measureable) rainfall reported in the agricultural plains of Balochistan and however dry weather reported in the agricultural plains Punjab, K.P, Sindh, G.B & Kashmir during the last decade.

**1.1 Punjab**

Dry weather reported in the agricultural plains of Punjab. Decadal maximum & minimum both raised above normal by 5.6°C & 2.1°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 55%, 76.5hrs, 2.4km/hr and 2.8mm/day respectively.

**1.2 Sindh**

Dry weather reported in the agricultural plains of Sindh. Decadal maximum & minimum temperature both raised above normal by 3.0°C & 1.0°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 30%, 58.6hrs, 1.7km/hr and 3.6mm/day respectively.

**1.3 Khyber Pakhtunkhwa (KP)**

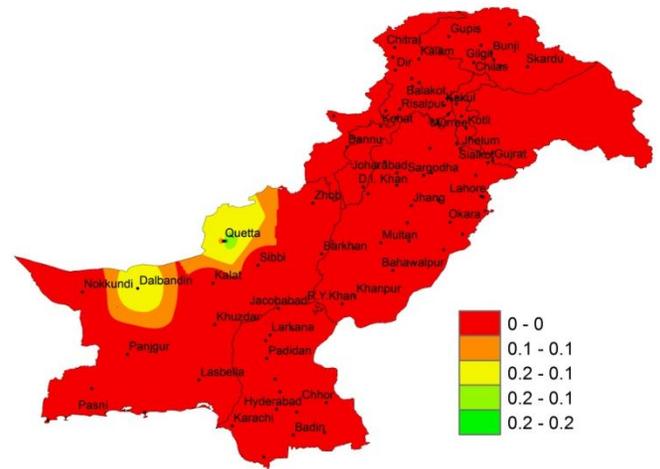
Dry weather reported in the agricultural plains of KP. Decadal maximum & minimum temperature both raised above normal by 6.4°C & 0.2°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 55%, 73.0hrs, 1.7km/hr and 3.1mm/day respectively.

**1.4 Balochistan**

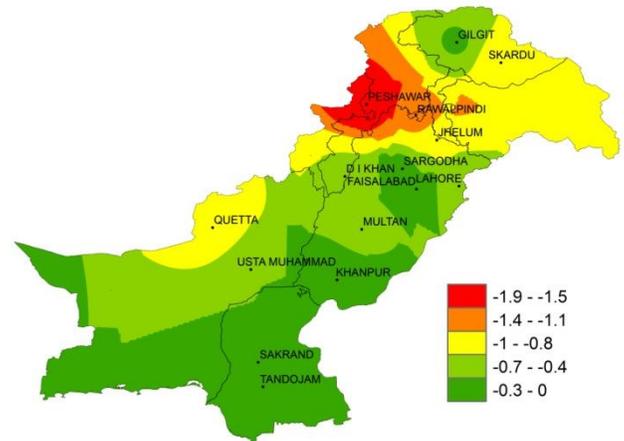
Rainfall reported as Trace (not measureable) in the agricultural plains of Balochistan. Chief amount of rainfall received in Quetta, Dalbandin. Decadal maximum & minimum temperature both raised above normal by 5.6°C & 1.2°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 37%, 80.6hrs, 3.2km/hr and 3.3mm/day respectively.

**1.5 Gilgit-Baltistan and Azad Jammu & Kashmir**

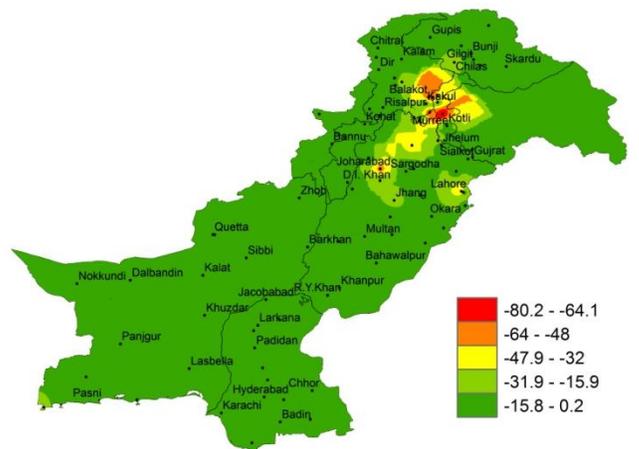
Dry weather reported in the agricultural plains of GB & Kashmir. Decadal maximum raised above normal by 5.7°C & minimum dropped below normal by 0.4°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 47%, 82.5hrs, 1.3km/hr and 1.9mm/day respectively.



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**  
**(21<sup>st</sup> to 29<sup>th</sup> February, 2016)**

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

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 52%. Mean day temperature was 27.4°C while night temperature recorded as 9.8°C with 88.1hours bright sunshine duration. Wind speed recorded as 3.7km/hr with mean wind direction *westerly*.

**Wheat (Chakwal-97):** Good condition, tillering stage.

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

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 54%. Mean day temperature was 28.4°C while night temperature recorded as 11.0°C with 73.10hours bright sunshine duration. Wind speed recorded as 2.3km/hr with mean wind direction *variable*.

**Wheat:** Very Good condition, shooting stage completed.

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

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 45%. Mean day temperature was 32.5°C while night temperature recorded as 10.7°C with 83.9hours bright sunshine duration. Wind speed recorded as 2.0km/hr with mean wind direction *northerly*.

**Wheat (TJ-83):** Good condition, flowering stage.

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

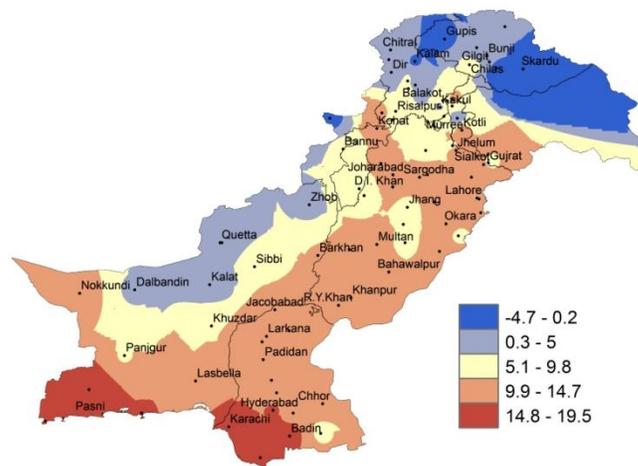
Dry weather reported during the decade however weather remained clear throughout the decade. Average relative humidity recorded as 50%. Mean day temperature was 30.5°C while night temperature recorded as 10.5°C. Wind speed recorded as 1.5km/hr with mean wind direction *south easterly*.

**Wheat (Zardana):** Good condition, shooting stage.

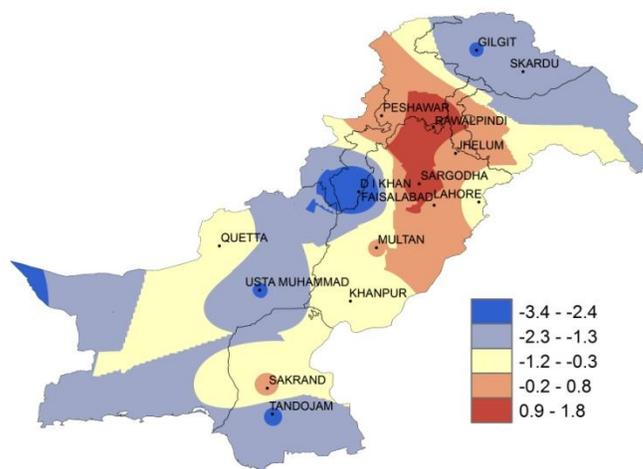
2.5 **RAMC, Quetta (Northern Balochistan)**

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 23%. Mean day temperature was 22.4°C while night temperature recorded as 3.0°C with 80.6hours bright sunshine duration. Wind speed recorded as 4.8km/hr with mean wind direction *southerly*

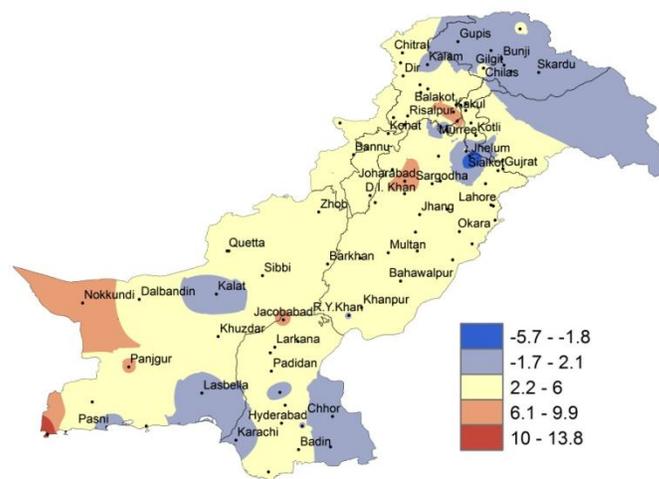
**Wheat:** Good condition, tillering stage.



❖ Actual min-temp



❖ Departure of min-temp from Normal



❖ Departure of min-temp from Previous Decade

**Figure.2: Minimum Temperature distribution during previous decade in °C**

2(b) **Past Weather for Sub-Regional Agricultural Plains (21<sup>st</sup> to 29<sup>th</sup> February, 2016)**

2.6 **Jhelum**

Dry weather reported during the decade however weather remained cloudy for 01days. Average relative humidity recorded as 55%. Mean day temperature was 28.7°C while night temperature recorded as 10.7°C with 84.5hours bright sunshine duration. Wind speed recorded 1.1km/hr with wind direction *south easterly*.

2.7 **Lahore**

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 60%. Mean day temperature was 27.2°C while night temperature recorded as 12.7°C with 81.2hours bright sunshine duration. Wind speed recorded as 2.0km/hr with mean wind direction *south easterly*.

2.8 **Sargodha**

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 64%. Mean day temperature was 28.2°C while night temperature recorded as 12.1°C with 59.0hours bright sunshine duration. Wind speed recorded 1.5km/hr with mean wind direction *variable*.

2.9 **Multan**

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 53%. Mean day temperature was 29.4°C while night temperature recorded as 11.3°C with 69.3hours bright sunshine duration. Wind speed recorded 2.4km/hr with mean wind direction *north easterly*.

2.10 **Khanpur**

Dry weather reported during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 50%. Mean day temperature was 30.8°C while night temperature recorded as 11.0°C with 80.2hours bright sunshine duration. Wind speed recorded 3.9km/hr with mean wind direction *variable*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remains cloudy for 03days. Average relative humidity recorded as 46%. Mean day temperature was 32.1°C while night temperature recorded as 12.3°C with 91.8hours bright sunshine duration. Wind speed recorded 3.0km/hr with wind direction *north westerly*.

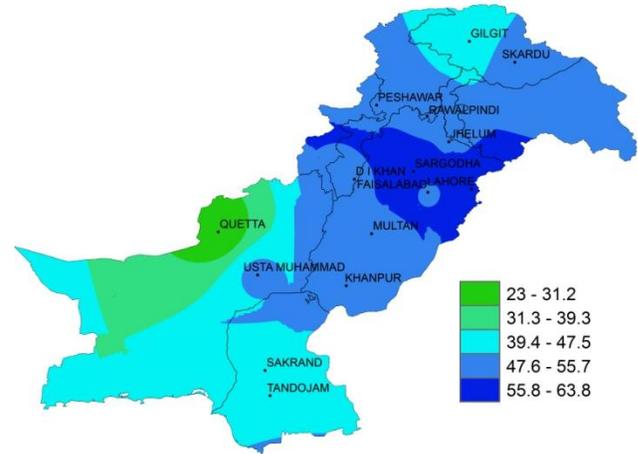


Figure.3: Relative Humidity in percentage (%)

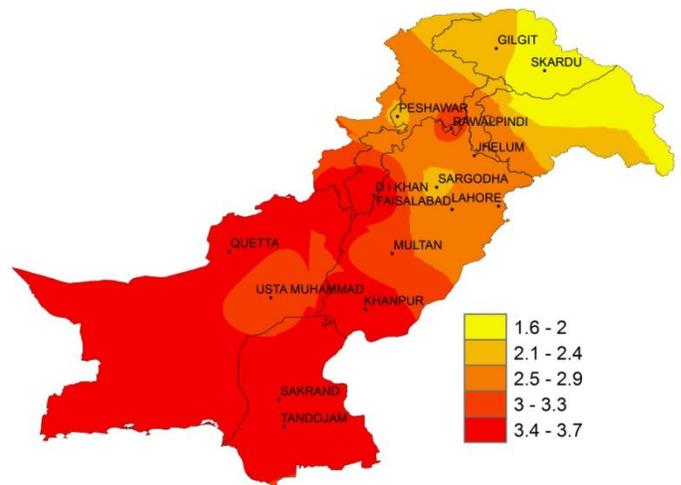


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

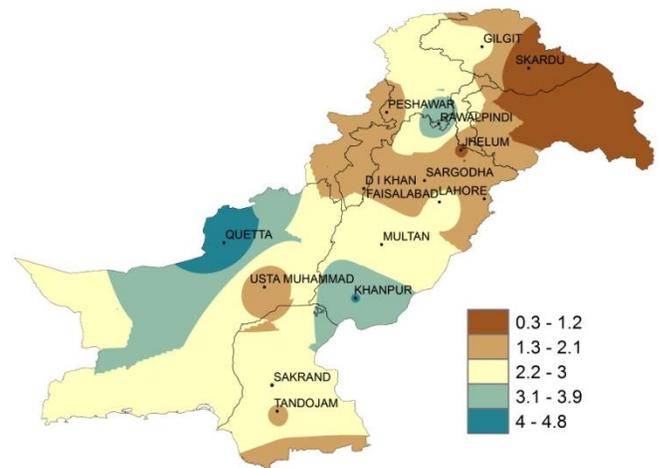


Figure 5: Wind Speed in kilometer per hour (km/h)

**2.12 D.I. Khan**

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 54%. Mean day temperature was 26.2°C while night temperature recorded as 6.9°C with 75.5hours bright sunshine duration.

**2.13 Peshawar**

Dry weather reported during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 55%. Mean day temperature was 28.5°C while night temperature recorded as 9.9°C with 70.5hours bright sunshine duration. Wind speed recorded as 1.7km/hr with mean wind direction *north westerly*.

**2.14 Skardu**

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 52%. Mean day temperature was 3.5°C while night temperature recorded as -3.4°C with 81.3hours bright sunshine duration. Wind speed recorded as 0.3km/hr with mean wind direction *south westerly*.

**2.15 Gilgit**

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 41%. Mean day temperature was 20.2°C while night temperature recorded as 0.2°C with 83.7hours bright sunshine duration. Wind speed recorded as 2.2km/hr with mean wind direction *south easterly*.

**3. Ten Days Weather Advisory for Farmers  
(1<sup>st</sup> to 10<sup>th</sup> March, 2016)****3.1 Temperature Forecast**

Day temperatures are slightly normal or above normal and night temperatures are expected 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.

**3.3 Rain Forecast**

❖ **Punjab:** Mostly dry weather is expected during the decade. However light to moderate rain is expected in most parts of the province including Faisalabad, Gujranwala, Rawalpindi, Lahore & D.G Khan divisions from 4<sup>th</sup> to 7<sup>th</sup> of the decade.

- ❖ **Khyber Pakhtunkhwa:** Mainly cloudy weather is expected in the province. However light to moderate rainfall (with light snowfall over the hills) is expected in Hazara, Peshawar & D.I Khan division during the decade.
- ❖ **Sindh:** Mainly dry weather is expected during the decade. However light rainfall reported in Hyderabad, Larkana from 3<sup>rd</sup> to 5<sup>th</sup> of the decade.
- ❖ **Balochistan:** Mainly cold and cloudy weather is expected in most parts of the Balochistan however light to moderate rain (with light snowfall over the hills) is expected in Zhob, Sibbi, & Kalat from 1<sup>st</sup> to 4<sup>th</sup> and 6<sup>th</sup> to 9<sup>th</sup> of the decade.
- ❖ **Gilgit Baltistan:** Mainly cold and cloudy weather is expected in most parts of the G.B however light to moderate rain (with light snowfall over the hills) is expected Gilgit, Skardu & Hunza during the decade.
- ❖ **Kashmir:** Widespread rain-thunderstorm (with snowfall over the hills) is expected in most parts of the Kashmir including Muzaffarabad, Rawalakot, Kotli during the decade.

**3.4 Advisory for Farmers**

- ❖ Wheat crop is in tillering/shooting/heading stages. Farmers are advised to stop irrigation the crops by keeping in view the expected rain in the agricultural plains of Punjab, KP & upper Sindh.
- ❖ At this stage of wheat crop, farmers should control weeds further growth by manual practices or any recommended spray.
- ❖ Farmers of irrigated/barani areas are advised to remove weeds from the fields, so that the present soil moisture may fully be utilized.
- ❖ Farmers in the lower half of the country especially those in central regions are advised to take up poultry rearing houses to maintain optimum room temperature and take care against the rapid changes in air temperature and relative humidity.
- ❖ Removing weeds from the standing crops is very important as weeds utilize moisture and food which may be utilized by the crop. As a result considerable loss in yield occurs every year. However operations against weeds should be started using weedicides or manually when the crop completely covers the fields.
- ❖ Farmers are advised to ensure field sanitation and spray prophylactic fungicidal sprays to prevent spread of diseases on vegetables.