

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported in the agricultural plains of Punjab, K.P & Balochistan and however light rainfall reported in the agricultural plains Sindh, G.B & Kashmir during the last decade.
- ❖ Highest amount of rainfall reported as 71.0mm at Sargodha during the last decade.
- ❖ Lowest Minimum temperature recorded -2.5°C at Parachinar during the last decade.
- ❖ Heavy rainfall is expected in Punjab, K.P, GB & Kashmir and light to moderate rainfall is expected in Balochistan and Sindh in 1st half of decade and light moderate rainfall is expected in 2nd half of decade in most parts of the country.
- ❖ 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.
- ❖ 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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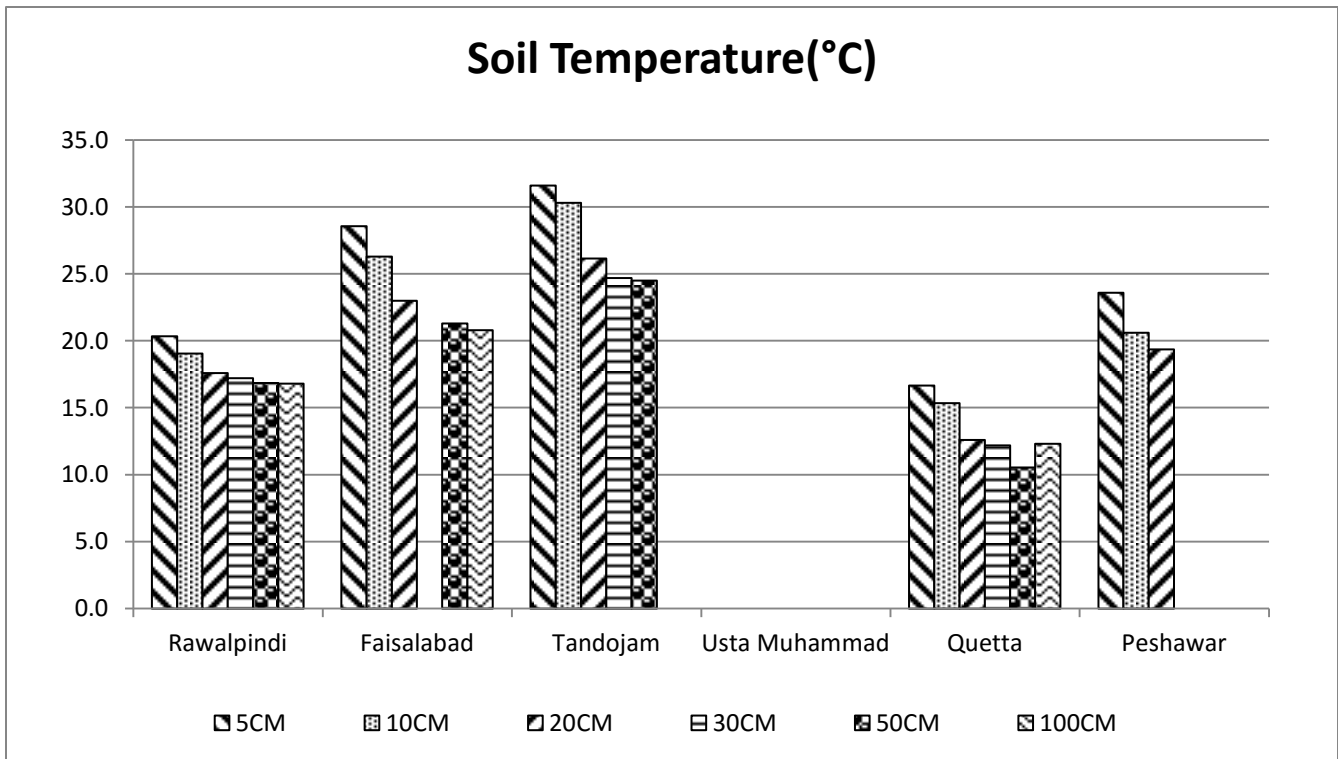
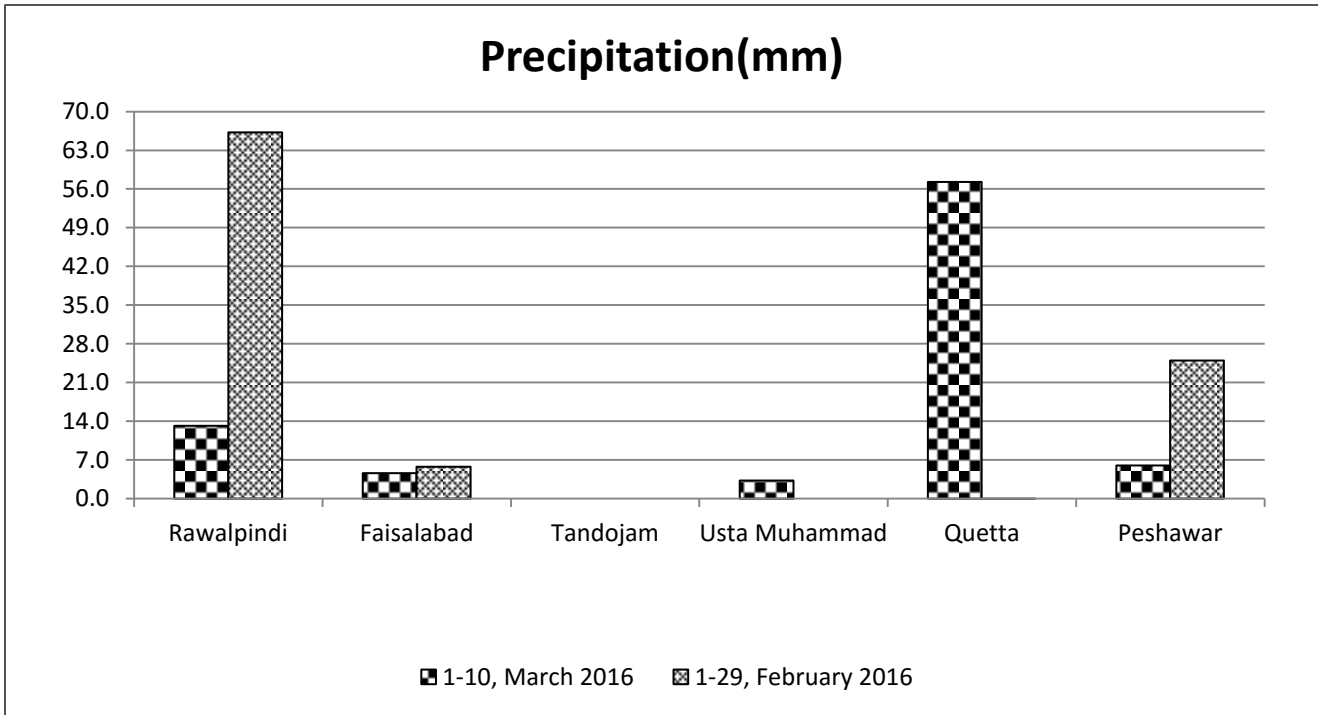
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Meteorological conditions during 1st decade of March, 2016

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	2.0	13.2	11.2	2.1	3.9	19.7	20.4	19.1	17.6	17.2	16.9	16.8	60	65.9	2.5	2.7
2	FAISALABAD	0.8	4.6	3.8	2.2	3.1	21.8	28.6	26.3	23.0	***	21.3	20.8	59	58.3	2.6	2.8
3	JHELUM	0.9	21.6	20.7	2.0	2.7	21.4	22.5	21.0	19.6	18.7	19.0	***	58	69.5	2.5	2.9
4	LAHORE	0.9	1.0	0.1	2.3	0.7	21.9	24.9	23.7	21.3	20.2	***	19.8	62	65.4	2.7	2.9
5	SARGODHA	0.5	58.6	58.1	-0.5	2.4	20.9	21.6	20.8	19.1	18.7	19.1	20.0	68	62.0	2.2	2.6
6	MULTAN	0.6	6.0	5.4	-0.1	3.4	21.8	***	***	***	***	***	***	58	57.0	4.8	3.3
7	KHANPUR	3.2	17.2	14.0	-0.6	1.7	21.9	***	23.0	23.2	23.3	23.5	23.2	61	73.2	5.4	3.7
8	TANDOJAM	0.0	0.0	0.0	-0.6	1.7	23.5	31.6	30.3	26.2	24.7	24.5	***	54	83.0	3.8	4.0
9	SAKRAND ☆	0.0	0.0	0.0	-0.9	2.9	23.4	36.0	29.6	***	***	***	24.9	59	78.5	2.5	3.5
11	D I KHAN	0.6	32.5	31.9	0.5	2.4	20.3	***	***	***	***	***	***	76	73.6	***	4.4
11	PESHAWAR	1.4	6.0	4.6	2.3	1.8	19.9	23.6	20.6	19.4	***	***	***	66	39.1	2.3	2.2
12	USTA MUHAMMAD	0.0	3.3	3.3	-1.7	-0.2	22.1	***	***	***	***	***	***	56	***	3.9	3.7
13	QUETTA	0.6	57.3	56.7	-1.7	4.4	12.0	16.7	15.4	12.6	12.2	10.6	12.3	67	53.1	4.9	2.4
14	SKARDU	0.7	0.0	-0.7	5.5	1.2	8.7	***	***	***	***	***	***	47	76.1	0.5	1.9
15	GILGIT	0.3	0.0	-0.3	3.3	2.0	13.5	***	***	***	***	***	***	38	72.8	2.7	2.5

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 March, 2016



Past Weather (1st to 10th March, 2016)

Light to moderate rainfall reported in the agricultural plains of Punjab, K.P & Balochistan and however light rainfall reported in the agricultural plains Sindh, G.B & 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 Sargodha, Jhang & Mianwali. Decadal maximum & minimum both raised above normal by 1.1°C & 2.6°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 61%, 64.5hrs, 3.2km/hr and 3.0mm/day respectively.

1.2 Sindh

Light rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Dadu, Sukkur & Larkana. Decadal maximum dropped below normal by 0.5°C & minimum temperature raised above normal by 1.5°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 38%, 53.8hrs, 2.1km/hr and 3.8mm/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, Kohat & Bannu. Decadal maximum & minimum temperature both raised above normal by 1.4°C & 2.1°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 71%, 56.4hrs, 2.3km/hr and 3.3mm/day respectively.

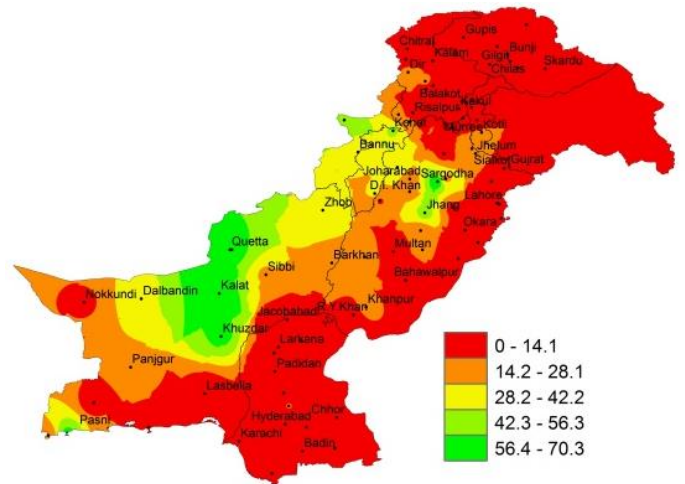
1.4 Balochistan

Light to moderate rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Kalat, Quetta & Gawadar. Decadal maximum dropped below normal by 1.7°C & minimum temperature raised above normal by 2.1°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 62%, 53.1hrs, 4.4km/hr and 3.1mm/day respectively.

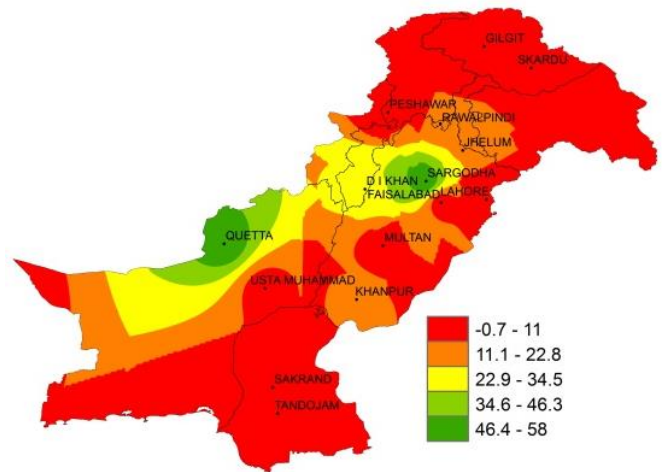
1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

Light rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Kotli, Rawalakot & Muzaffarabad. Decadal maximum & minimum temperature both raised above normal by 4.4°C & 1.6°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were

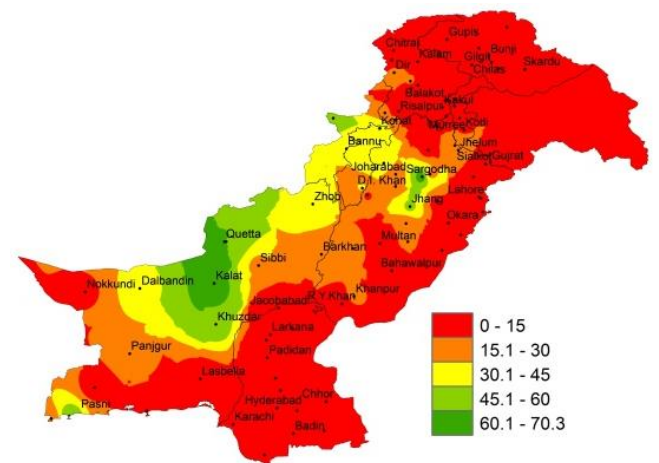
recorded as 43%, 74.5hrs, 1.6km/hr and 2.2mm/day respectively.



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 March, 2016)**

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

Rainfall reported as 13.2mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 60%. Mean day temperature was 26.5°C while night temperature recorded as 12.8°C with 88.1hours bright sunshine duration. Wind speed recorded as 2.5km/hr with mean wind direction *westerly*.

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

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

Rainfall reported as 4.6mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 59%. Mean day temperature was 28.8°C while night temperature recorded as 14.8°C with 58.30hours bright sunshine duration. Wind speed recorded as 2.6km/hr with mean wind direction *westerly*.

Wheat: Very Good condition, flowering stage.

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

Dry weather reported during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 54%. Mean day temperature was 31.5°C while night temperature recorded as 15.5°C with 83.0hours bright sunshine duration. Wind speed recorded as 3.8km/hr with mean wind direction *northerly*.

Wheat (TJ-83): Good condition, milk maturity stage.

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

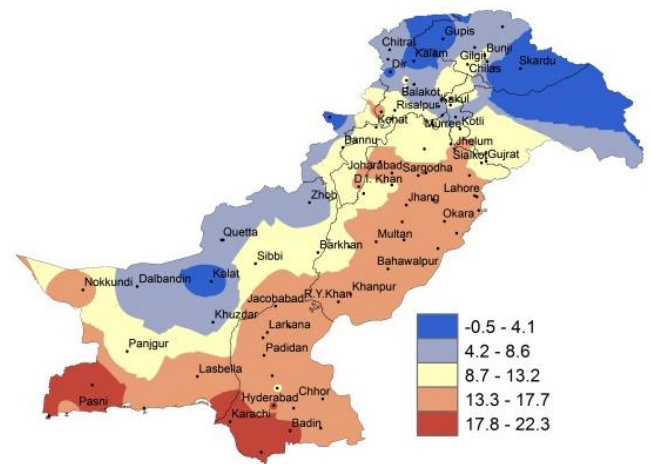
Rainfall reported as 3.3mm during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 56%. Mean day temperature was 29.7°C while night temperature recorded as 14.5°C. Wind speed recorded as 3.9km/hr with mean wind direction *south easterly*.

Wheat (Zardana): Good condition, shooting stage.

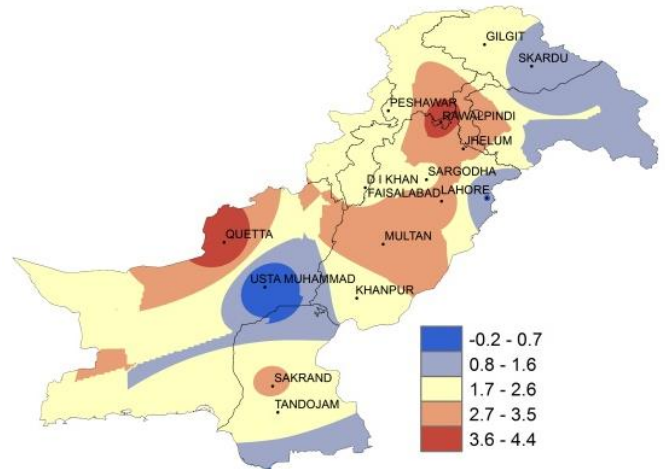
2.5 **RAMC, Quetta (Northern Balochistan)**

Rainfall reported as 57.3mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 67%. Mean day temperature was 16.3°C while night temperature recorded as 7.7°C with 80.6hours bright sunshine duration. Wind speed recorded as 4.9km/hr with mean wind direction *southerly*.

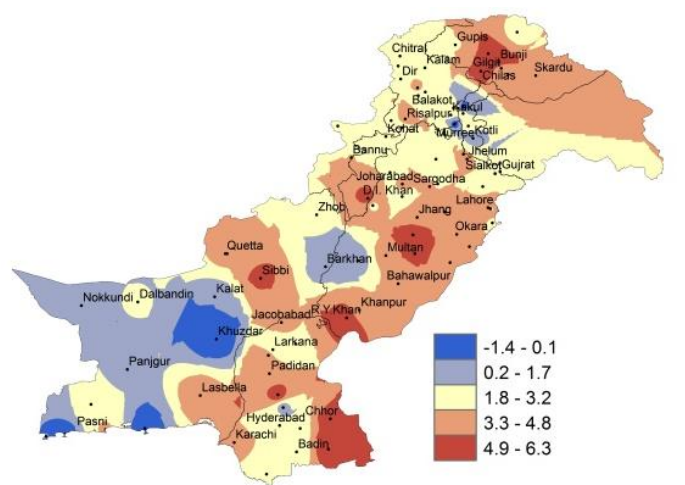
Wheat: Good condition, tillering stage.



I. Actual min-temp



II. Departure of min-temp from Normal



III. 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 (1st to 10th March, 2016)**

2.6 **Jhelum**

Rainfall reported as 21.6mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 58%. Mean day temperature was 28.5°C while night temperature recorded as 14.3°C with 69.5hours bright sunshine duration. Wind speed recorded 2.5km/hr with wind direction *north westerly*.

2.7 **Lahore**

Rainfall reported as 1.0mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 62%. Mean day temperature was 28.2°C while night temperature recorded as 15.6°C with 65.4hours bright sunshine duration. Wind speed recorded as 2.7km/hr with mean wind direction *north westerly*.

2.8 **Sargodha**

Rainfall reported as 58.6mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 68%. Mean day temperature was 26.7°C while night temperature recorded as 15.1°C with 52.0hours bright sunshine duration. Wind speed recorded 2.2km/hr with mean wind direction *variable*.

2.9 **Multan**

Rainfall reported as 6.0mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 58%. Mean day temperature was 27.5°C while night temperature recorded as 16.1°C with 57.0hours bright sunshine duration. Wind speed recorded 4.8km/hr with mean wind direction *northerly*.

2.10 **Khanpur**

Rainfall reported as 17.2mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 61%. Mean day temperature was 28.6°C while night temperature recorded as 15.1°C with 73.2hours bright sunshine duration. Wind speed recorded 5.4km/hr with mean wind direction *north easterly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remains cloudy for 09days. Average relative humidity recorded as 59%. Mean day temperature was 30.4°C while night temperature recorded as 16.3°C with 78.5hours bright sunshine duration. Wind speed recorded 2.5km/hr with wind direction *north westerly*.

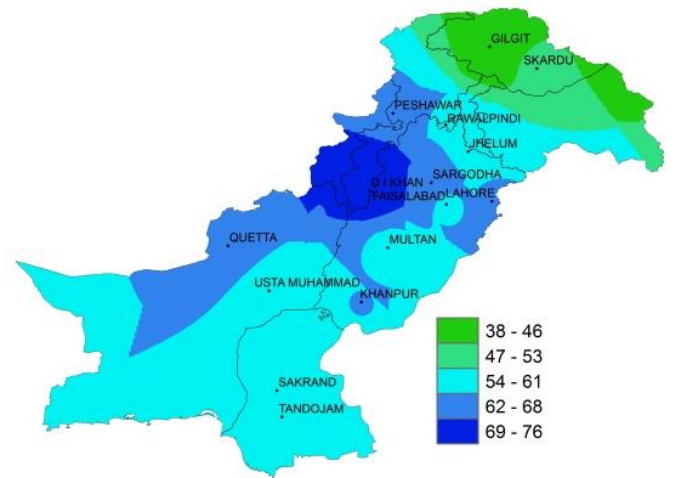


Figure.3: Relative Humidity in percentage (%)

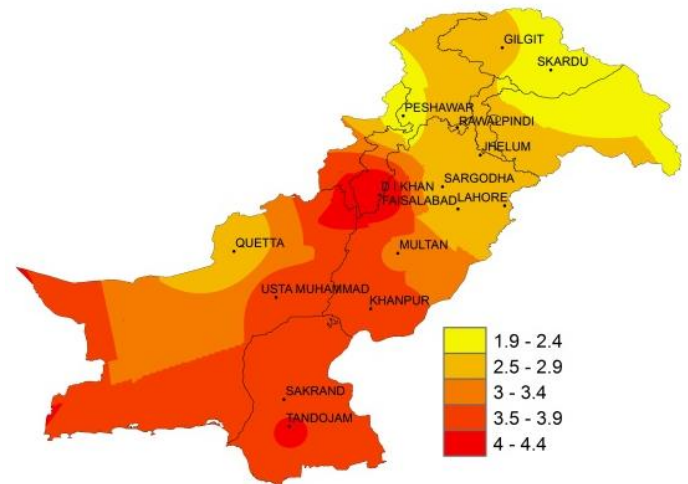


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

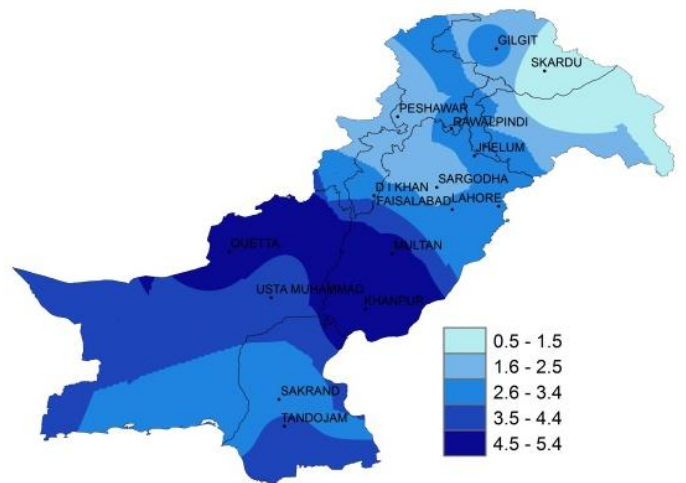


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 D.I. Khan

Rainfall reported as 32.5mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 76%. Mean day temperature was 27.0°C while night temperature recorded as 13.6°C with 73.6hours bright sunshine duration.

2.13 Peshawar

Rainfall reported as 6.0mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 66%. Mean day temperature was 26.4°C while night temperature recorded as 13.3°C with 39.1hours bright sunshine duration. Wind speed recorded as 2.3km/hr with mean wind direction *north westerly*.

2.14 Skardu

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 47%. Mean day temperature was 17.3°C while night temperature recorded as 0.1°C with 76.1hours bright sunshine duration. Wind speed recorded as 0.5km/hr with mean wind direction *east north-easterly*.

2.15 Gilgit

Dry weather reported during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 38%. Mean day temperature was 21.5°C while night temperature recorded as 5.4°C with 72.8hours bright sunshine duration. Wind speed recorded as 2.7km/hr with mean wind direction *easterly*.

**3. Ten Days Weather Advisory for Farmers
(11th to 20th March, 2016)****3.1 Temperature Forecast**

Day and night temperatures are slightly normal 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 cloudy weather is expected during the decade. However heavy rain is expected in most parts of the province including Rawalpindi, Lahore, Gujranwala & Sargodha divisions and light to moderate is expected in Bahawalpur, D.G Khan, Faisalabad & Multan divisions

from 11th to 14th and light to moderate rainfall is expected at scattered places in Punjab from 17th to 20th 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 Bannu, Hazara, Peshawar, Kohat, Mardan & D.I Khan division during the decade.
- ❖ **Sindh:** Mainly dry weather is expected during the decade. However light rainfall reported in Hyderabad, Larkana, Sukkur & Mirpurkhas divisions from 11th to 13th, 15th to 16th & 18th to 19th of the decade.
- ❖ **Balochistan:** Mainly cold weather is expected in most parts of the Balochistan however light to moderate rain (with light snowfall over the hills) is expected in Quetta, Zhob, Sibbi, & Kalat from 11th to 14th and 17th to 19th 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 the country.
- ❖ 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.