

# Decadal Agromet Bulletin of Pakistan



## Highlights....

- ❖ Heavy rainfall reported in the agricultural plains of Punjab, K.P, G.B & Kashmir and however light to moderate rainfall reported in the agricultural plains Sindh & Balochistan during the last decade.
- ❖ Highest amount of rainfall reported as 355.7mm at Rawalakot during the last decade.
- ❖ Lowest Minimum temperature recorded  $-2.5^{\circ}\text{C}$  at Kalam during the last decade.
- ❖ Light to moderate rainfall is expected in most parts of the country from 24<sup>th</sup> to 28<sup>th</sup> of the decade.
- ❖ Wheat crop is in shooting/heading/flowering stages in most of the agricultural plains of the country. 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.
- ❖ Farmers are advised to ensure field sanitation and spray prophylactic fungicidal sprays to prevent spread of diseases on vegetables.

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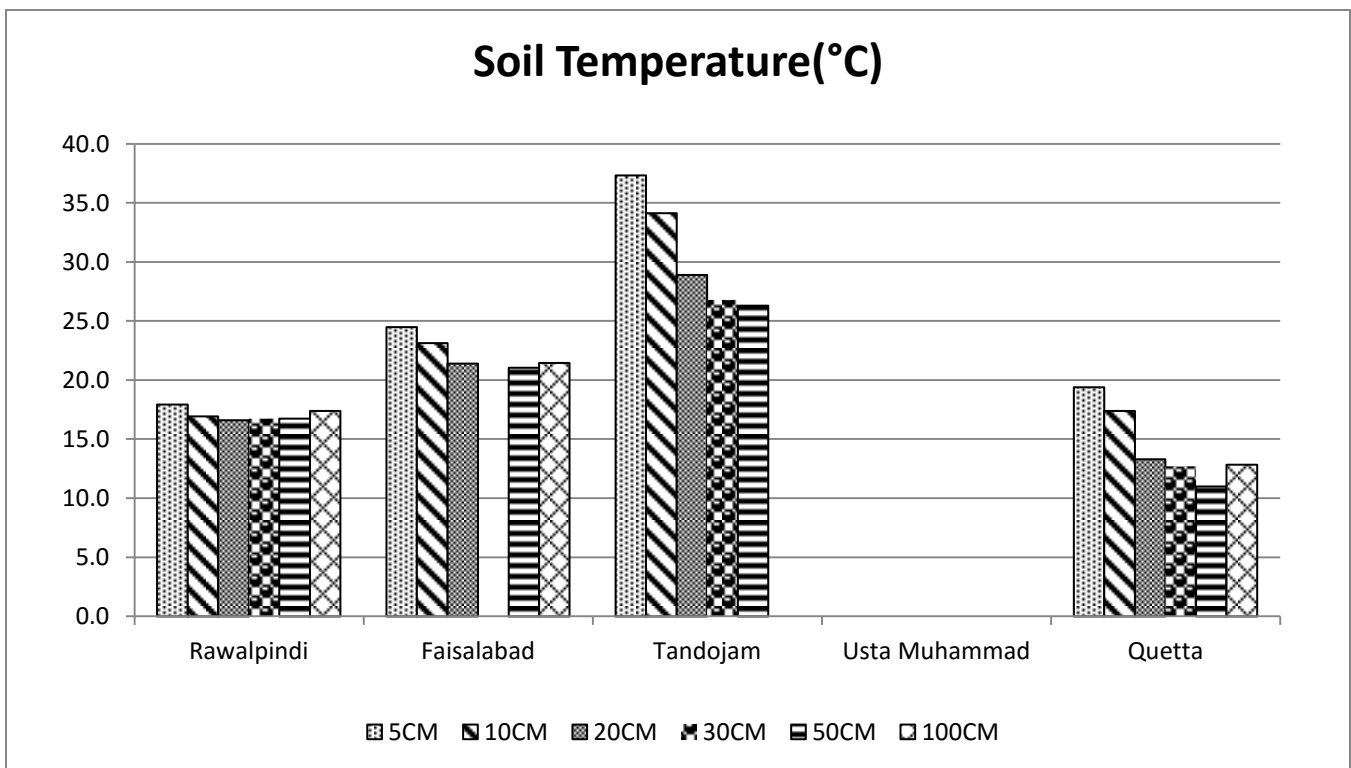
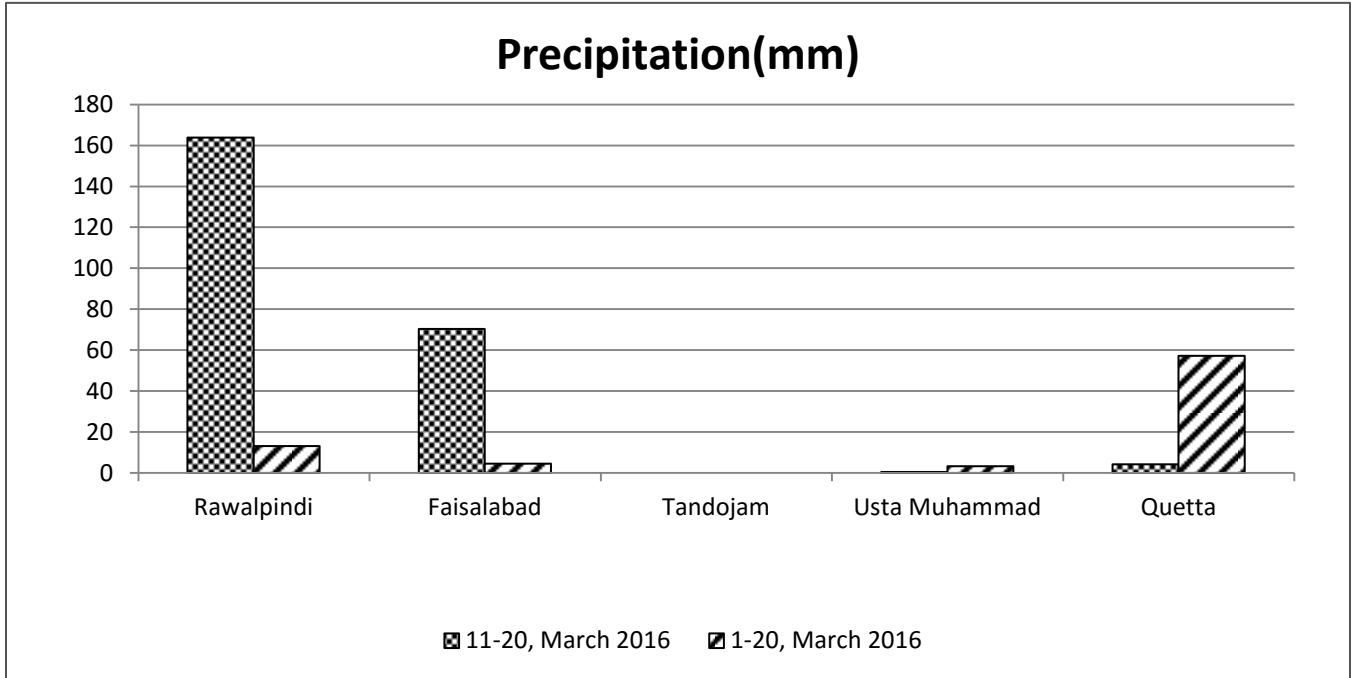
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Meteorological conditions during 2<sup>nd</sup> decade of March, 2016

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	163.9	161.9	-6.3	1.6	16.9	18.0	17.0	16.6	16.8	16.8	17.4	78	36.5	4.3	2.2
2	FAISALABAD	0.6	70.4	69.8	-5.0	1.0	19.8	24.5	23.2	21.4	***	21.1	21.5	69	58.1	3.3	2.8
3	JHELUM	1.5	92.8	91.3	-1.4	-0.2	20.7	20.3	19.4	18.9	18.5	18.8	***	74	48.0	6.2	3.1
4	LAHORE	0.7	27.4	26.7	-3.8	-2.7	19.9	22.9	22.3	21.0	21.5	***	20.5	69	47.0	4.1	2.8
5	SARGODHA	1.1	78.6	77.5	-6.3	-0.4	19.2	21.6	21.0	19.8	19.6	19.2	19.7	79	50.9	4.3	2.6
6	MULTAN	0.4	26.3	25.9	-4.9	0.0	20.7	***	***	***	***	***	***	59	59.3	4.5	3.3
7	KHANPUR	0.4	21.3	20.9	-3.5	0.7	22.1	***	24.2	24.3	24.4	133.5	24.3	65	72.9	5.6	3.8
8	TANDOJAM	0.9	0.0	-0.9	-0.5	2.2	26.3	37.4	34.2	28.9	26.8	26.3	***	46	91.2	7.0	5.6
9	SAKRAND ☆	0.8	0.1	-0.7	0.6	3.9	25.6	39.7	32.5	***	***	***	26.2	48	90.8	9.4	6.0
11	D I KHAN	1.1	33.0	31.9	-5.7	0.8	19.0	***	***	***	***	***	***	80	44.1	***	2.6
11	PESHAWAR	2.0	74.6	72.6	-7.7	0.0	16.6	19.3	18.4	17.7	***	***	***	84	23.1	2.9	1.8
12	USTA MUHAMMAD	0.7	0.5	-0.2	-10.3	-0.9	18.2	***	***	***	***	***	***	57	***	2.4	2.5
13	QUETTA	0.6	4.2	3.6	-4.1	1.3	12.6	19.4	17.4	13.3	12.7	11.0	12.9	46	89.2	6.3	3.5
14	SKARDU	0.8	34.8	34.0	-1.6	1.7	7.9	***	***	***	***	***	***	59	23.5	2.3	1.7
15	GILGIT	0.4	4.2	3.8	-2.9	1.9	12.7	***	***	***	***	***	***	49	25.5	4.9	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; 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.

## Graph at RAMC's during March, 2016



**Past Weather (11<sup>th</sup> to 20<sup>th</sup> March, 2016)**

Heavy rainfall reported in the agricultural plains of Punjab, K.P, G.B & Kashmir and however light to moderate rainfall reported in the agricultural plains Sindh & Balochistan during the last decade.

**1.1 Punjab**

Heavy rainfall reported in the agricultural plains of Punjab. Chief amount of rainfall received in Murree, Kamra & Islamabad. Decadal maximum dropped below normal by 4.5°C & minimum temperature remained normal, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 70%, 53.2hrs, 4.6km/hr and 2.9mm/day respectively.

**1.2 Sindh**

Light to moderate rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Moen Jo Daro, Larkana & Chhor. Decadal maximum remained normal & minimum temperature raised above normal by 2.0°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 31%, 60.7hrs, 5.5km/hr and 5.8mm/day respectively.

**1.3 Khyber Pakhtunkhwa (KP)**

Heavy rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Malam Jabba, Dir & Balakot. Decadal maximum dropped below normal by 6.7°C & minimum temperature raised above normal by 0.4°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 82%, 33.6hrs, 2.9km/hr and 2.2mm/day respectively.

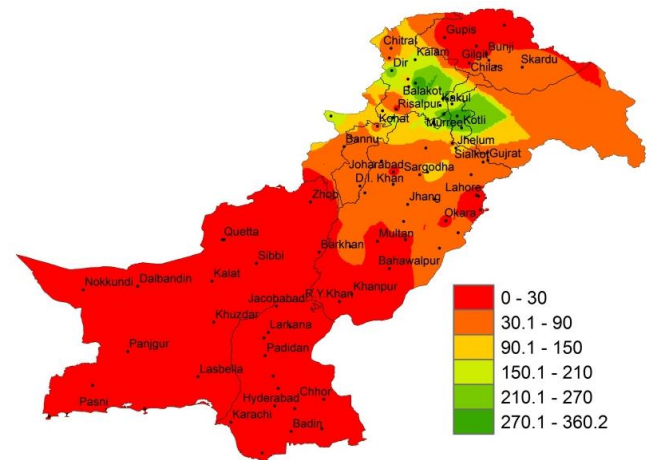
**1.4 Balochistan**

Light to moderate rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Quetta, Barkhan & Lasbella. Decadal maximum dropped below normal by 7.2°C & minimum temperature raised above normal by 0.2°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 52%, 89.2hrs, 4.4km/hr and 3.0mm/day respectively.

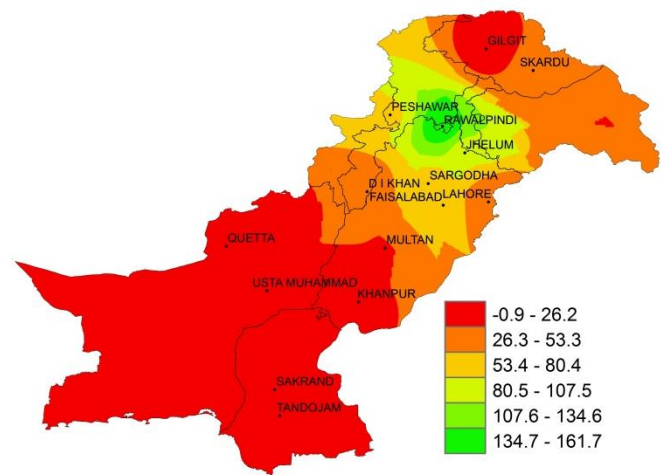
**1.5 Gilgit-Baltistan and Azad Jammu & Kashmir**

Heavy rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Rawalakot, Muzaffarabad & Kotli. Decadal maximum dropped below normal by 2.3°C & minimum temperature raised above normal by 1.8°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were

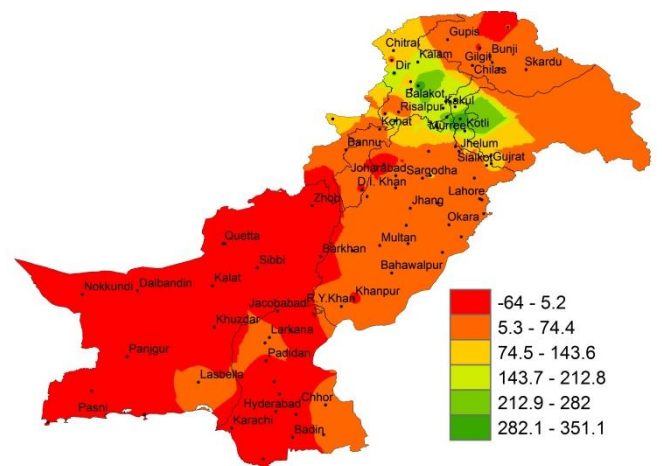
recorded as 54%, 24.5hrs, 3.6km/hr and 2.1mm/day respectively.



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 (11<sup>th</sup> to 20<sup>th</sup> March, 2016)**

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

Rainfall reported as 163.9mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 78%. Mean day temperature was 20.8°C while night temperature recorded as 12.9°C with 36.5hours bright sunshine duration. Wind speed recorded as 4.3km/hr with mean wind direction *easterly*.

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

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

Rainfall reported as 70.4mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 69%. Mean day temperature was 24.4°C while night temperature recorded as 15.1°C with 58.10hours bright sunshine duration. Wind speed recorded as 3.3km/hr with mean wind direction *south westerly*.

**Wheat:** Very Good condition, milk maturity stage.

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

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 46%. Mean day temperature was 34.4°C while night temperature recorded as 18.2°C with 91.2hours bright sunshine duration. Wind speed recorded as 7.0km/hr with mean wind direction *south westerly*.

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

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

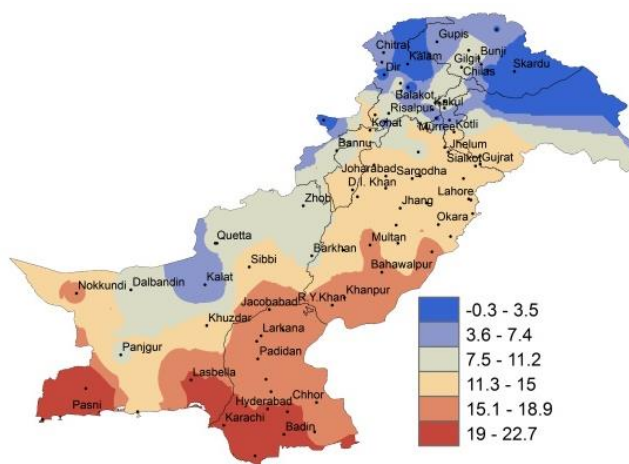
Rainfall reported as 0.5mm during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 57%. Mean day temperature was 21.4°C while night temperature recorded as 14.9°C. Wind speed recorded as 2.4km/hr with mean wind direction *south easterly*.

**Wheat (Zardana):** Good condition, wax maturity stage.

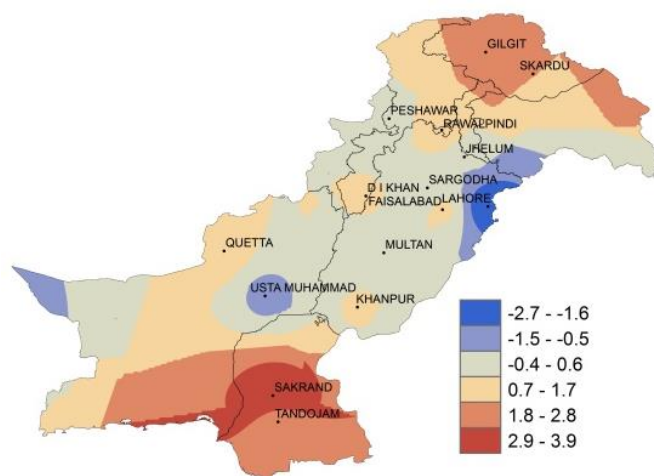
2.5 **RAMC, Quetta (Northern Balochistan)**

Rainfall reported as 4.2mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 46%. Mean day temperature was 17.7°C while night temperature recorded as 7.5°C with 89.2hours bright sunshine duration. Wind speed recorded as 6.3km/hr with mean wind direction *north westerly*.

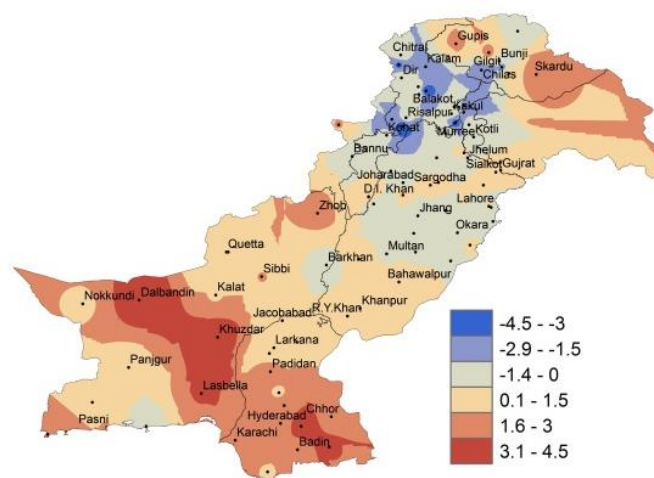
**Wheat:** Good condition, shooting stage.



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 (11<sup>th</sup> to 20<sup>th</sup> March, 2016)**

2.6 **Jhelum**

Rainfall reported as 92.8mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 74%. Mean day temperature was 27.6°C while night temperature recorded as 13.8°C with 48.0hours bright sunshine duration. Wind speed recorded 6.2km/hr with wind direction *south easterly*.

2.7 **Lahore**

Rainfall reported as 27.4mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 69%. Mean day temperature was 25.0°C while night temperature recorded as 14.8°C with 47.0hours bright sunshine duration. Wind speed recorded as 4.1km/hr with mean wind direction *north easterly*.

2.8 **Sargodha**

Rainfall reported as 78.6mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 79%. Mean day temperature was 23.7°C while night temperature recorded as 14.7°C with 50.9hours bright sunshine duration. Wind speed recorded 4.3km/hr with mean wind direction *easterly*.

2.9 **Multan**

Rainfall reported as 26.3mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 69%. Mean day temperature was 25.8°C while night temperature recorded as 15.5°C with 59.3hours bright sunshine duration. Wind speed recorded 4.5km/hr with mean wind direction *northerly*.

2.10 **Khanpur**

Rainfall reported as 21.3mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 65%. Mean day temperature was 28.0°C while night temperature recorded as 16.2°C with 72.9hours bright sunshine duration. Wind speed recorded 5.6km/hr with mean wind direction *northerly*.

2.11 **Sakrand**

Rainfall reported as Trace (not measureable) during the decade however weather remains cloudy for 07days. Average relative humidity recorded as 48%. Mean day temperature was 33.2°C while night temperature recorded as 17.9°C with 90.8hours bright sunshine duration. Wind speed recorded 9.4km/hr with wind direction *south westerly*.

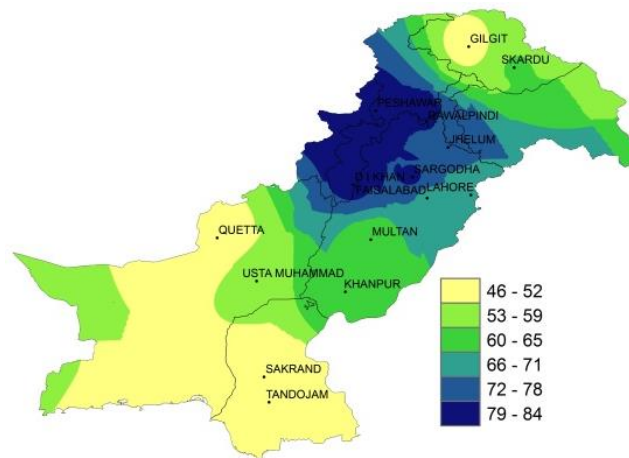


Figure.3: Relative Humidity in percentage (%)

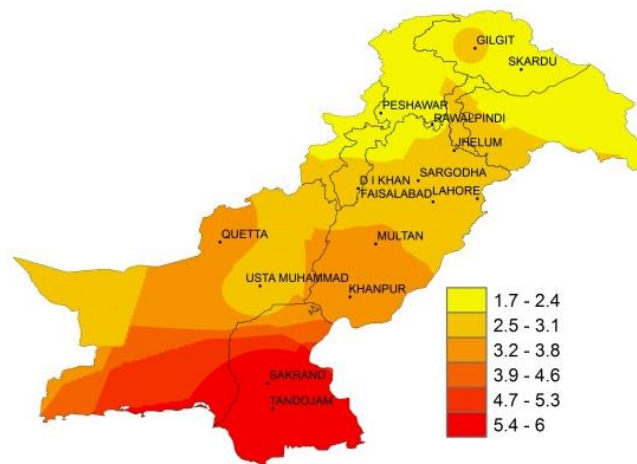


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

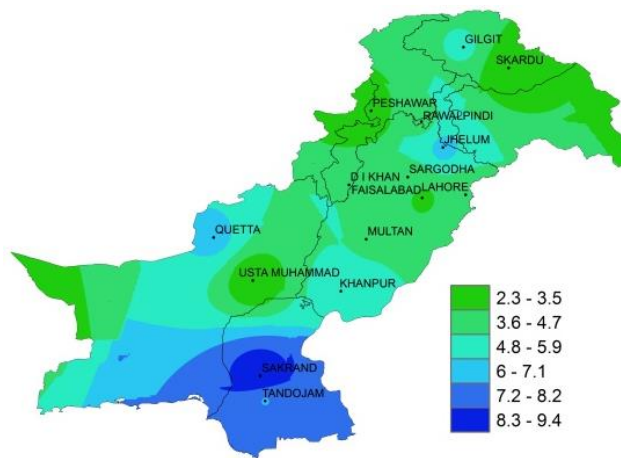


Figure 5: Wind Speed in kilometer per hour (km/h)

**2.12 D.I. Khan**

Rainfall reported as 33.0mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 80%. Mean day temperature was 23.0°C while night temperature recorded as 15.0°C with 44.1hours bright sunshine duration.

**2.13 Peshawar**

Rainfall reported as 74.6mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 84%. Mean day temperature was 19.3°C while night temperature recorded as 13.8°C with 23.1hours bright sunshine duration. Wind speed recorded as 2.9km/hr with mean wind direction *north westerly*.

**2.14 Skardu**

Rainfall reported as 34.8mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 59%. Mean day temperature was 12.9°C while night temperature recorded as 2.9°C with 23.5hours bright sunshine duration. Wind speed recorded as 2.3km/hr with mean wind direction *south easterly*.

**2.15 Gilgit**

Rainfall reported as 4.2mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 49%. Mean day temperature was 17.6°C while night temperature recorded as 7.7°C with 25.5hours bright sunshine duration. Wind speed recorded as 4.9km/hr with mean wind direction *easterly*.

### **3. Ten Days Weather Advisory for Farmers** **(21<sup>st</sup> to 31<sup>st</sup> March, 2016)**

**3.1 Temperature Forecast**

Day and night temperatures are expected slightly 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

**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 Rawalpindi, Lahore,

Gujranwala, Faisalabad & Sargodha divisions from 24th to 28th of the decade.

- ❖ **Khyber Pakhtunkhwa:** Mainly dry 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 from 24th to 28th of the decade.
- ❖ **Sindh:** Mainly dry weather is expected during the decade. However light rainfall is expected at isolated places of Hyderabad & Sukkur divisions from 24th to 26th of the decade.
- ❖ **Balochistan:** Mainly dry weather is expected in most parts of the Balochistan however light to moderate rain is expected at isolated places of Quetta, Zhob, Sibbi, & Kalat from 23rd to 26th 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 from 24th to end of decade.
- ❖ **Kashmir:** Light to moderate rain-thunderstorm (with snowfall over the hills) is expected in most parts of the Kashmir including Muzaffarabad, Rawalakot, Kotli from 24th to 28th of the decade.

**3.4 Advisory for Farmers**

- ❖ Wheat crop is in shooting/heading/flowering stages in most of the agricultural plains of the country. 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.