

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall with isolated heavy falls expected in KPK, Kashmir, GB, Punjab, and northwest Balochistan. Mostly dry weather is expected in Sindh. Light to moderate rainfall at a few places for one or two days during mid of the decade is expected in upper Sindh during the decade.
- ❖ Farmers of upper half and northwest Balochistan should be careful about irrigation and spraying chemicals on the crops.
- ❖ Light to moderate rainfall reported in the agricultural plains of Punjab, K.P, G.B & Kashmir and light rainfall in Balochistan, however dry weather reported in the agricultural plains of the Sindh during the last decade.
- ❖ Highest amount of rainfall reported as 92.0mm at Dir during the last decade.
- ❖ Lowest minimum temperature recorded -8.5°C at Parachinar during the last decade.
- ❖ Wheat crop is in shooting/heading/flowering stages. Farmers are advised to irrigate the crops keeping 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 are advised to ensure field sanitation and spray prophylactic fungicidal sprays to prevent spread of diseases on vegetables.

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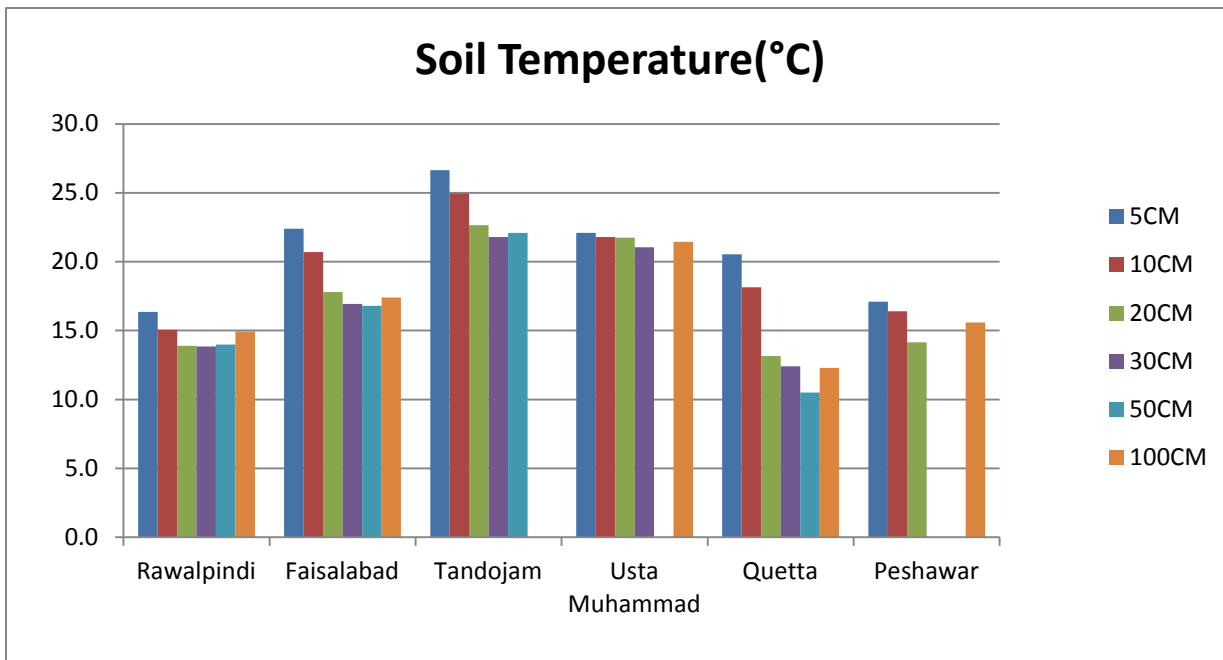
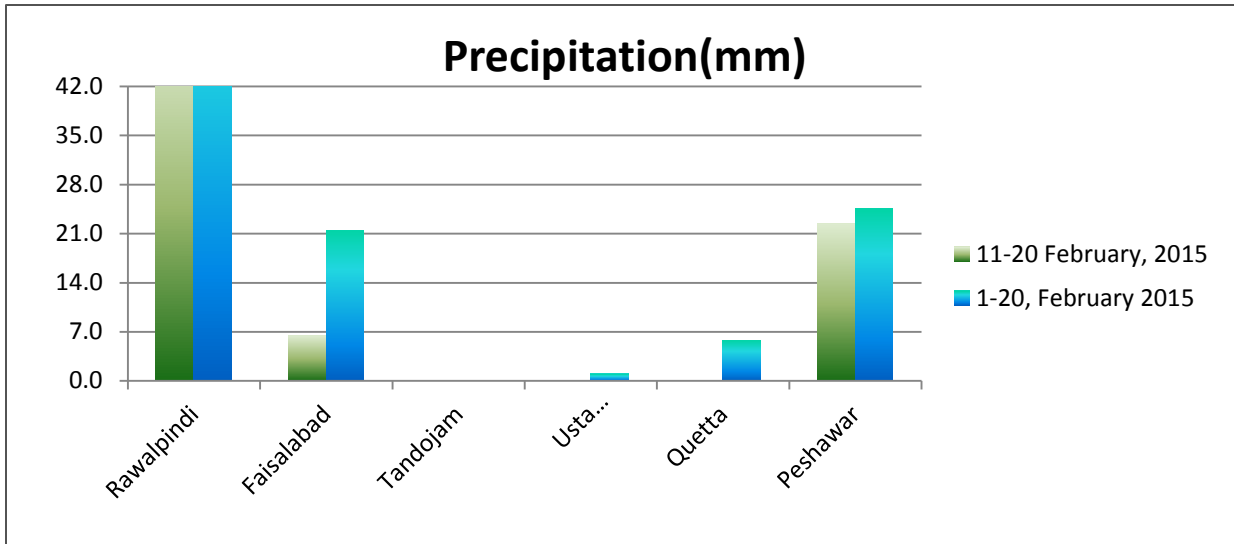
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Meteorological conditions during 2nd decade of February, 2015

| 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 | 3.4 | 50.5 | 47.1 | 1.7 | 2.4 | 15.6 | 16.4 | 15.1 | 13.9 | 13.9 | 14.0 | 15.0 | 60 | 49.2 | 4.8 | 2.3 |
| 2 | FAISALABAD | 1.3 | 6.5 | 5.2 | 1.6 | 2.2 | 17.9 | 22.4 | 20.7 | 17.8 | 17.0 | 16.8 | 17.4 | 64 | 78.2 | 3.6 | 2.5 |
| 3 | JHELUM | 3.3 | 25.6 | 22.3 | 0.7 | 1.0 | 16.8 | 18.0 | 16.9 | 15.8 | 15.5 | 15.8 | *** | 68 | 47.4 | 3.0 | 2.0 |
| 4 | LAHORE | 2.3 | 10.3 | 8.0 | 1.2 | 0.7 | 18.2 | 18.9 | 18.2 | 16.8 | 16.2 | *** | 17.1 | 67 | 57.2 | 3.9 | 2.4 |
| 5 | SARGODHA | 1.6 | 11.5 | 9.9 | 1.1 | 3.1 | 18.2 | 21.7 | 19.5 | 18.0 | 17.6 | 18.4 | 18.2 | 66 | 42.8 | 2.6 | 2.0 |
| 6 | MULTAN | 1.1 | 1.0 | -0.1 | 2.1 | 1.2 | 18.0 | *** | *** | *** | *** | *** | *** | 59 | 46.6 | 5.4 | 2.8 |
| 7 | KHANPUR | 0.1 | 0.0 | -0.1 | 2.3 | 2.9 | 19.9 | *** | 20.5 | 20.5 | 20.7 | 20.8 | 24.9 | 64 | 68.4 | 5.3 | 3.2 |
| 8 | TANDOJAM | 0.6 | 0.0 | -0.6 | 3.1 | 4.0 | 23.2 | 26.7 | 25.0 | 22.7 | 21.8 | 22.1 | *** | 61 | 91.3 | 1.9 | 3.2 |
| 9 | SAKRAND ☆ | 0.0 | 0.0 | 0.0 | 3.9 | 0.1 | 20.2 | 32.5 | 26.6 | *** | *** | *** | 23.5 | 57 | 92.4 | 4.8 | 3.8 |
| 10 | ROHRI | 0.0 | 0.0 | 0.0 | 2.4 | 3.2 | 22.5 | 29.2 | 26.8 | 23.2 | 23.2 | 20.8 | 24.1 | 59 | 98.1 | 4.4 | 3.6 |
| 11 | DI KHAN | 1.5 | 8.0 | 6.5 | 2.2 | 0.8 | 16.6 | *** | *** | *** | *** | *** | *** | 66 | 55.1 | 3.7 | 2.8 |
| 12 | PESHAWAR | 4.1 | 22.5 | 18.4 | -2.0 | 1.0 | 13.7 | 17.1 | 16.4 | 14.2 | *** | *** | 15.6 | 65 | 56.0 | 2.6 | 1.8 |
| 13 | USTA MUHAMMAD | 0.0 | 0.0 | 0.0 | 1.9 | 2.8 | 20.8 | 22.1 | 21.8 | 21.8 | 21.1 | *** | 21.5 | 59 | *** | *** | 3.8 |
| 14 | QUETTA | 1.7 | 0.1 | -1.6 | 6.4 | 5.7 | 14.1 | 20.6 | 18.2 | 13.2 | 12.4 | 10.5 | 12.3 | 32 | 91.4 | 5.3 | 3.3 |
| 15 | SKARDU | 1.0 | 1.2 | 0.2 | 2.7 | 6.2 | 6.7 | *** | *** | *** | *** | *** | *** | 59 | 39.1 | 0.2 | 1.2 |
| 16 | GILGIT | 0.6 | 0.2 | -0.4 | 1.7 | -0.7 | 8.2 | *** | *** | *** | *** | *** | *** | 51 | 42.0 | 2.8 | 1.8 |

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 February, 2015



Past Weather (11th to 20th February, 2015)

Light to moderate rainfall reported in the agricultural plains of the country 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, Sialkot & Islamabad. Decadal maximum and Minimum both raised above normal by 1.5°C and 1.9°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 64%, 55.76hrs 4.1 km/hr and 2.5mm/day respectively.

1.2 Sindh

No rainfall reported in the agricultural plains of Sindh during the decade. Decadal maximum and Minimum both raised above normal by 3.1°C and 2.4°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 59%, 93.9 hrs 3.7 km/hr and 3.5mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

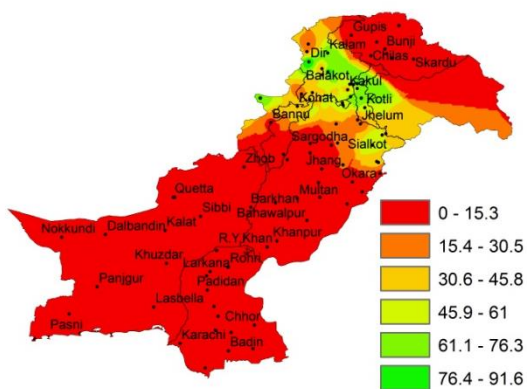
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Dir, Malmjabba & Pattant. Decadal maximum and Minimum both raised above normal by 0.1°C and 0.9°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 66%, 55.6 hrs, 2.8km/hr and 2.3 mm/day respectively.

1.4 Balochistan

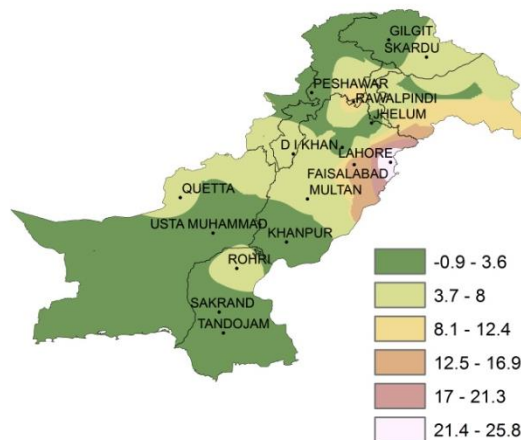
Light rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Zhob, Barkhan& Quetta. Decadal maximum and Minimum both raised above normal by 4.2°C and 4.3°C respectively. Relative humidity, sunshine hour, wind speed & ETO were recorded as 46 %, 91.4 hrs, 5.3km/hr and 3.6mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

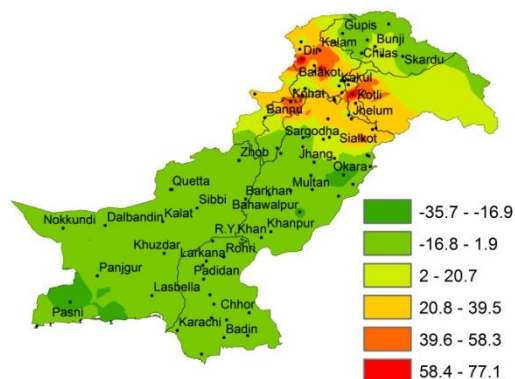
Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Rawalakot, Garhidopatta & Kotli. Decadal maximum and Minimum both raised above normal by 2.2 °C and 2.8°C respectively humidity, sunshine hour, wind speed & ETO were recorded as 55%, 40.6hrs, 1.5km/hr and 1.5 mm/day respectively.



I. Actual rainfall



II. Departure of rainfall from Normal



III. Departure of rainfall from Previous Decade

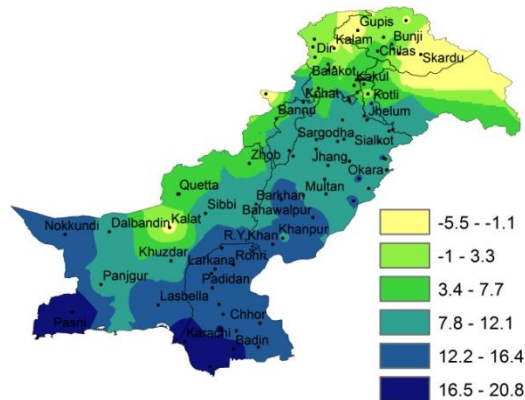
Figure.1: Rainfall distribution during previous decade in "mm"

2(a) **Past Weather for Major Agricultural Plains
(11th to 20th February, 2015)**

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

Rainfall reported as 50.5mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 60%. Mean day temperature was 21.9°C while night temperature recorded as 9.2°C with 49.2hours bright sunshine duration. Wind speed recorded as 4.8km/hr with mean wind direction *Variable*.

Wheat (Chakwal-97): Good condition, 9th leaf stage.

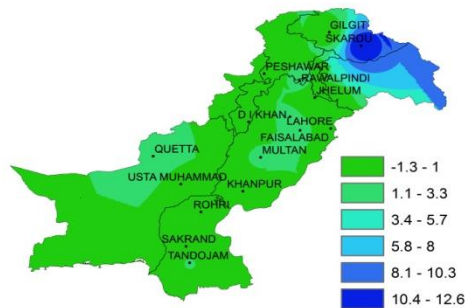


❖ Actual min-temp

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

Rainfall reported as 6.5mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 64%. Mean day temperature was 24.5°C while night temperature recorded as 11.2°C with 48.2hours bright sunshine duration. Wind speed recorded as 3.6km/hr with mean wind direction *South easterly*.

Wheat: Excellent condition, Heading.



❖ Departure of min-temp from Normal

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

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 61%. Mean day temperature was 31.6°C while night temperature recorded as 14.8°C with 91.3hours bright sunshine duration. Wind speed recorded as 1.9km/hr with mean wind direction *South westerly*.

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

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

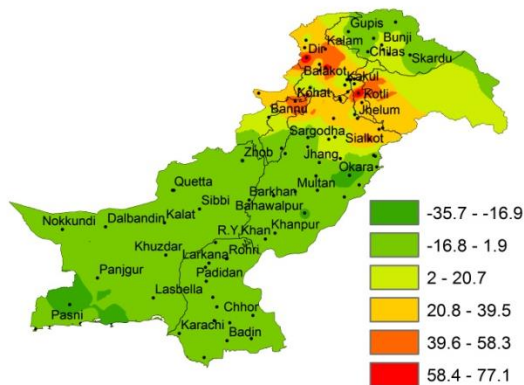
Dry weather reported during the decade however weather remained cloudy for 01days. Average relative humidity recorded as 59 %. Mean day temperature was 28.5°C while night temperature recorded as 13.1°C.

Wheat (Zardana): Good condition, Heading.

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

Rainfall reported as Trace (Non measurable) during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 32%. Mean day temperature was 21.6°C while night temperature recorded as 6.6°C with 91.4 hours bright sunshine duration and wind speed recorded as 5.3 km/hr with mean wind direction *Westerly*.

Wheat: Good condition, Tilting.



❖ 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 (11th to 20th February, 2015)**

2.6 **Jhelum**

Rainfall reported as 25.6mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 68%. Mean day temperature was 23.4°C while night temperature recorded as 10.1°C with 47.4hours bright sunshine duration. Wind speed recorded 3.0km/hr with wind direction *Variable*

2.7 **Lahore**

Rainfall reported as 10.3mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 67%. Mean day temperature was 23.9°C while night temperature recorded as 12.5°C with 57.2hours bright sunshine duration. Wind speed recorded as 3.9km/hr with mean wind direction *north easterly*.

2.8 **Sargodha**

Rainfall reported as 11.5mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 66%. Mean day temperature was 24.1°C while night temperature recorded as 12.3°C with 42.8hours bright sunshine duration. Wind speed recorded as 2.6km/h with mean wind direction *North easterly*.

2.9 **Multan**

Rainfall reported as 1.0mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 59%. Mean day temperature was 25.6°C while night temperature recorded as 10.4°C with 46.6 hours bright sunshine duration. Wind speed recorded 5.4km/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 64%. Mean day temperature was 27.9°C while night temperature recorded as 11.8°C with 68.4hours bright sunshine duration. Wind speed recorded 5.3km/hr with mean wind direction *Westerly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remains cloudy for 03days. Average relative humidity recorded as 57%. Mean day temperature was 31.0°C while night temperature recorded as 9.3°C with 92.4hours bright sunshine duration. Wind speed recorded 4.8 km/hr with wind direction *Southerly*.

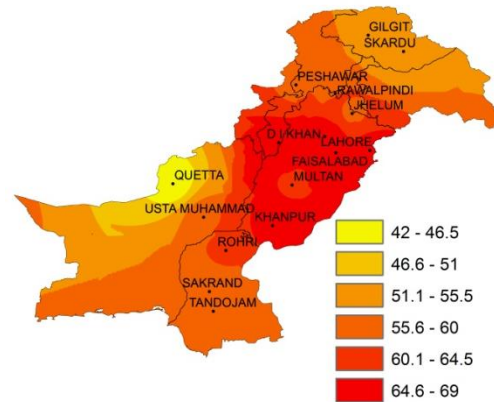


Figure.3: Relative Humidity in percentage (%)

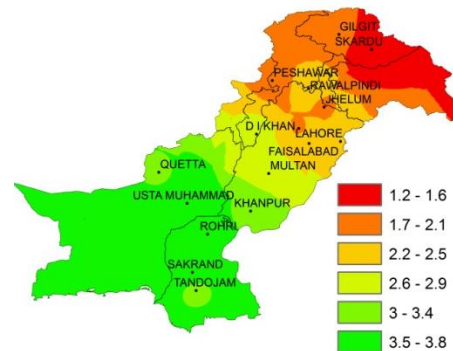


Figure.4:

Reference Crop Evapotranspiration “ETo” in mm/day

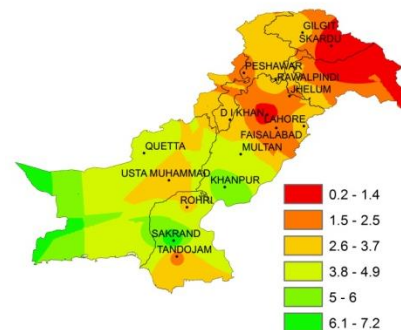


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Dry weather reported during the decade however ,however weather remained cloudy for 02days. Average relative humidity recorded as 59%. Mean day temperature was 29.3°C while night temperature recorded as 15.6°C with 98.1hours bright sunshine duration. Wind speed recorded as 4.4 km/hr with mean wind direction *north easterly*.

2.13 D.I. Khan

Rainfall reported as 8.0mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 66%. Mean day temperature was 24.3°C while night temperature recorded as 8.9°C with 55.1 hours bright sunshine duration.

2.14 Peshawar

Rainfall reported as 22.5mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 65%. Mean day temperature was 18.0°C while night temperature recorded as 9.3°C with 56.0 hours bright sunshine duration. Wind speed recorded as 2.6km/hr with mean wind direction *north westerly*.

2.15 Skardu

Rainfall reported as 1.2mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 59%. Mean day temperature was 10.5°C while night temperature recorded as 2.8°C with 59 hours bright sunshine duration. Wind speed recorded as 0.2 km/hr with mean wind direction *South easterly*.

2.16 Gilgit

Rainfall reported as 0.2mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 51%. Mean day temperature was 16.2°C while night temperature recorded as 0.2°C with 42.0 hours bright sunshine duration. Wind speed recorded as 2.8km/hr with mean wind direction *South easterly*

3. Ten Days Weather Advisory for Farmers **(21st to 28th February, 2015)**

3.1 Temperature Forecast

Night temperatures are expected to drop slightly (1-2°C) in most of the agricultural plains of the country especially in upper parts 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:** light to moderate rain is expected during the decade.
- ❖ **Khyber Pakhtunkhwa:** light to moderate rainfall (with snowfall over the hills) is expected during most of the days of the decade.
- ❖ **Sindh:** Dry weather expected in most of the parts of Sindh. However light to moderate rainfall for a 1-2 days is expected in upper parts of the province during mid of the decade.
- ❖ **Balochistan:** Mainly light to moderate rain (with light snowfall over the hills) is expected in northwestern parts of the providence. Whereas mostly dry weather is expected elsewhere in the province.
- ❖ **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 during the decade.
- ❖ **Kashmir:** Mainly cold and cloudy weather is expected in most parts of the Kashmir. Widespread rain-thunderstorm (with snowfall over the hills) is expected in most parts of the Kashmir in 2nd half of the decade.

3.4 Advisory for Farmers

- ❖ Wheat crop is in shooting/heading/flowering stages. Farmers are advised to irrigate the crops keeping 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 are advised to ensure field sanitation and spray prophylactic fungicidal sprays to prevent spread of diseases on vegetables.