

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported at a few places in agricultural plains of Punjab, KP, Kashmir and Gilgit Baltistan region. where as dry weather reported from rest of the country during the decade.
- ❖ Highest amount of rainfall recorded 10 mm at Islamabad, Chakwal & Jhelum each during the last decade.
- ❖ Lowest minimum temperature was recorded -3.0°C in sakrdu during the last decade.
- ❖ Lowest values of relative humidity recorded 28% in Balochistan, extreme lowest relative humidity recorded at Quetta.
- ❖ Highest values of ETo (above 3.0 mm/day) recorded in agricultural plains of Sindh .
- ❖ Day time temperatures expected to be drop $1-2^{\circ}\text{C}$ but night temperatures may drop $2-3^{\circ}\text{C}$ in most of the agricultural plains of the country during the next decade.
- ❖ Normal wind pattern may prevail in most parts of the country during the next decade.
- ❖ Generally dry weather with clear skies expected in all parts of the country during the next decade.

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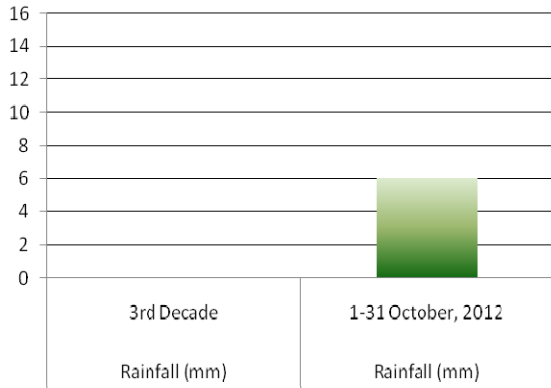
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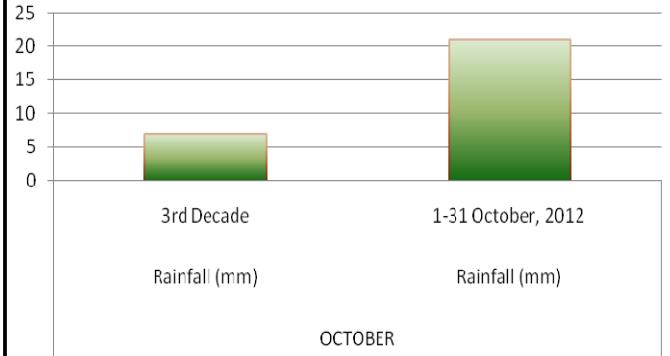
Editor: M. Zeeshan Javed, Assistant Meteorologist, NAMC Islamabad

Graphs for Rainfall (mm) during October 2012

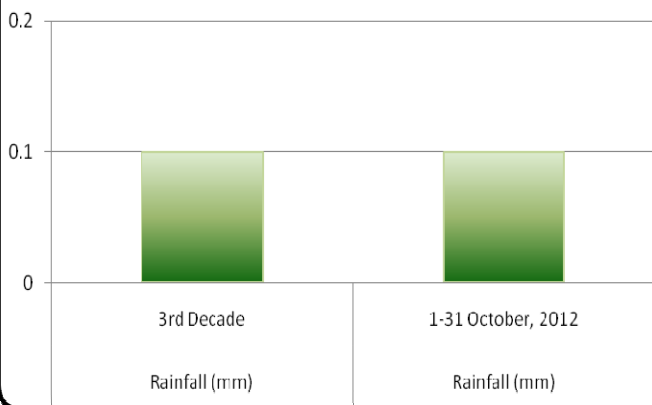
RAMC RAWALPINDI



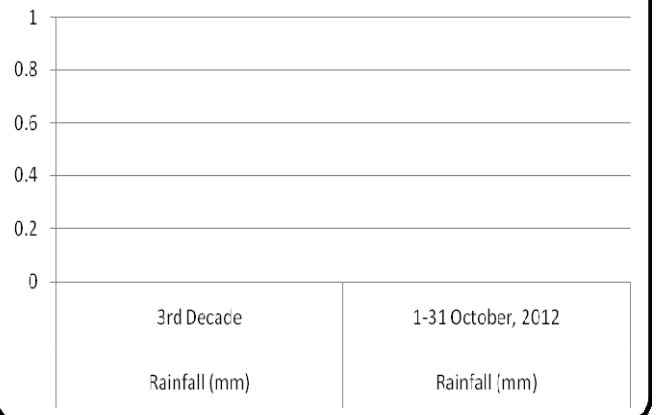
RAMC FAISALABAD



RAMC QUETTA



RAMC TANDOJAM



Note: No rainfall recorded at RAMC Tandojam, during the specified period (21st to 31st Oct, 2012).

Meteorological conditions during 3rd decade of October, 2012.

Sr. No.	Station	Precipitation (mm)			Air Temperature (°C)			Soil Temperatures (°C)						Sunshine Duration (hours)	Wind Speed (km/hr)	R.H (%)	ET _o (mm/day)
		Normal	Actual	Dep	Tmin Dep	Tmax Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	TANDOJAM	0.0	0.0	0.0	-3.3	0.5	25.3	30.1	31.4	30.3	28.1	28.9	29.0	96.6	0.7	54	3.1
2	SAKRAND ☆	0.0	0.0	0.0	-4.3	0.9	24.0	39.0	32.7	29.6	29.7	31.0	32.0	115.2	1.5	52	3.2
3	ROHRI	0.0	0.0	0.0	-2.5	0.4	26.3	32.5	30.8	29.6	29.9	29.5	31.9	103.0	3.1	49	3.5
4	QUETTA	0.0	TR	TR	-5.5	0.5	13.2	23.2	21.1	17.2	16.2	16.8	20.5	109.2	5.4	28	3.2
5	KHANPUR	0.0	0.0	0.0	-2.9	2.1	24.5	26.5	26.2	26.3	26.9	27.7	28.6	107.8	1.6	45	2.8
6	MULTAN	0.0	0.0	0.0	-1.5	-1.2	23.4	***	***	***	***	***	***	101.2	2.0	52	2.8
7	LAHORE	0.1	7.6	7.5	-4.5	-0.7	21.9	24.6	23.9	22.9	22.9	***	***	105.2	1.3	55	2.6
8	FAISALABAD	0.0	7.0	7.0	-3.2	-1.0	21.3	24.9	24.1	23.0	22.9	23.9	26.4	93.0	2.6	57	2.8
9	SARGODHA	0.2	0.0	-0.2	-3.1	-0.4	22.4	26.7	24.9	23.6	23.7	25.3	26.6	89.4	1.1	60	2.4
10	JHELUM	0.3	10.4	10.1	-4.9	0.4	21.3	24.5	23.5	22.4	22.2	23.7	***	100.2	1.9	61	2.6
11	RAWALPINDI	0.3	0.0	-0.3	-0.8	0.0	20.4	25.4	23.0	21.2	22.9	22.8	24.9	98.4	1.2	58	2.3
12	DI KHAN	0.1	0.0	-0.1	-3.8	-1.4	21.3	***	***	***	***	***	***	92.4	1.5	54	2.8
13	PESHAWAR	0.1	0.0	-0.1	-4.2	0.1	20.1	25.0	22.7	22.2	22.7	23.4	24.2	86.5	1.0	61	2.1
14	SKARDU	0.0	0.0	0.0	-4.7	0.9	8.2	***	***	***	***	***	***	26.8	1.5	41	1.2
15	GILGIT	0.1	0.0	-0.1	-1.9	1.5	14.0	***	***	***	***	***	***	80.2	1.8	51	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: **Dep divided by Normal multiplied by 100**. Tmin & Tmax stands for minimum and maximum temperatures respectively. ET_o stands for reference crop evapotranspiration. *** stands for no data and (☆) indicates the station with five years climatic (normal) data for computing departures.

Past Weather (21st to 31st October, 2012):

Light to moderate rainfall reported at a few places in agricultural plains of Punjab, KP, Kashmir and Gilgit Baltistan region where as dry weather reported from rest of the country during the decade.

1.1 Punjab

Light to moderate rainfall reported at a few places in the agricultural plains of Punjab (Fig. 1.a). Chief amount received at Chakwal , Jhelum and Islamabad. Decadal maximum temperature dropped below normal by 0.1 °C and minimum temperature dropped below normal by 3.0°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 1.7 km/hr, 55 %, and 2.6 mm/day respectively (Fig 3-4).

1.2 Sindh

Dry weathe reported from all over the province. Decadal maximum temperature raised above normal by 0.6 & and decadal minimum temperature dropped below normal by 3.4 °C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 1.8 km/hr, 52 %, and 3.3 mm/day respectively.

1.3 Khyber Pakhtoonkhawa (KP)

Light to moderate rainfall reported at a few places in agricultural plains of KP; chief amount received at Kalam, Parachinar and Dir etc. In KP region; Decadal maximum and minimum temperature dropped below normal by 0.7 & 4.0°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 1.3 km/hr, 58 %, and 2.5 mm/day respectively.

1.4 Balochistan

Dry weathe reported from most of the places in the province however rainfall in meager amount reported from a single location “Kalat” during the decade. Decadal maximum temperature raised above normal by 0.5 & minimum temperature dropped below normal by 5.5°C respectively. Whereas mean values of wind speed, relative humidity and ETo were 5.4 km/hr, 28%, and 3.2 mm/day respectively.

1.5 Gilgit Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall reported at a few places in the agricultural plains of Kashmir & Gilgit Baltistan region; chief amount received at Pattan, and Kotli etc. In GB & AJK region; decadal maximum raised above normal by 1.2 & decadal minimum below normal 3.3 °C respectively. Whereas mean values of wind speed, relative humidity and ETo were recorded 1.7 km/hr, 46 %, and 1.7 mm/day respectively.

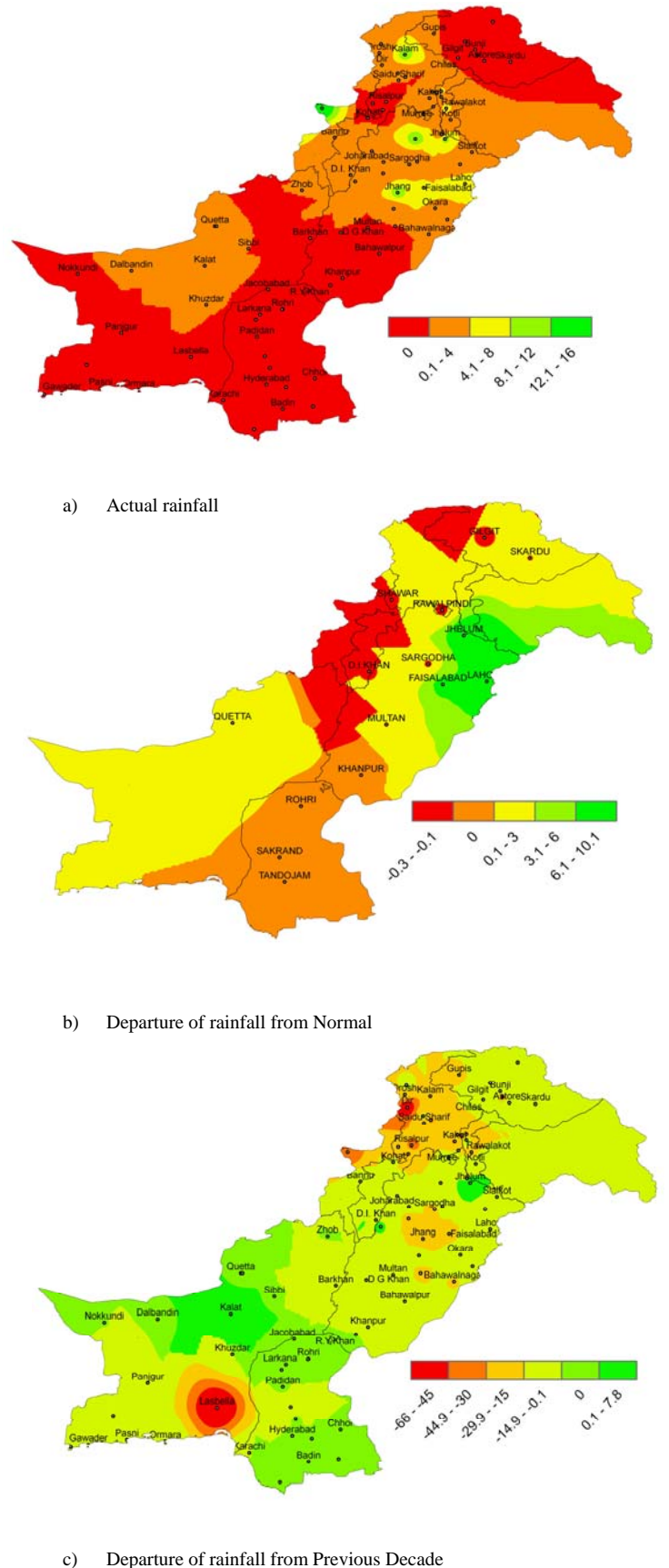


Figure.1: Rainfall distribution during previous decade in “mm”

2 (a) Past Weather for Major Agricultural Plains
21st to 31st October, 2012 as per Table-1

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

No rainfall reported during the decade, weather remained clear for 6 days,, average relative humidity recorded as 58%. Mean night temperature was 11.5°C while day temperature recorded as 29.2°C with 98.4 hours bright sunshine duration. Wind speed recorded as 1.2 Km/hr with mean direction *westerly*. Maiz crop at the station was harvested on 26-10-2012

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

No rainfall reported during the decade, weather remained clear during all the decade, average relative humidity recorded as 54%. Mean night temperature was 14.5°C while day temperature recorded as 36.0°C with 96.9 hours bright sunshine duration. Wind speed recorded as 0.4 km/hr with mean direction Easterly. Presently field is under preparation for next rabi crop.

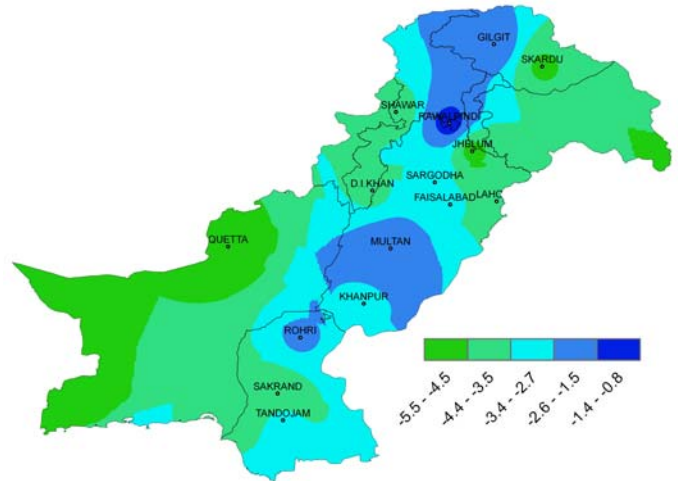
2.3 **RAMC, Faisalabad (Central Punjab)**

Rainfall reported amounting 7.0mm during the decade. weather remained cloudy for 2 days during the decade, average relative humidity recorded as 57%. Mean night temperature was 12.0°C while day temperature recorded as 30.6°C with 93.0 hours bright sunshine duration. Wind speed recorded as 2.6 Km/hr with mean direction *North westerly*. Presently one crop (irrigated conditions) is grown at the station as detailed below:

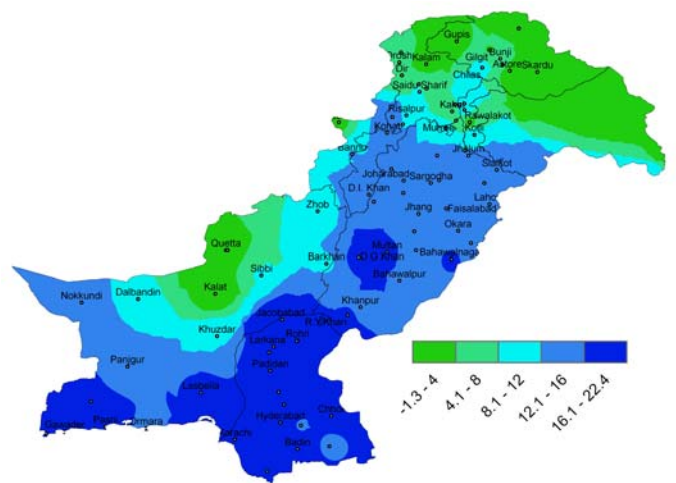
Sugarcane: Very Good condition, Tillering completed.
 Cotton: Very Good condition, Boll opening completed.

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

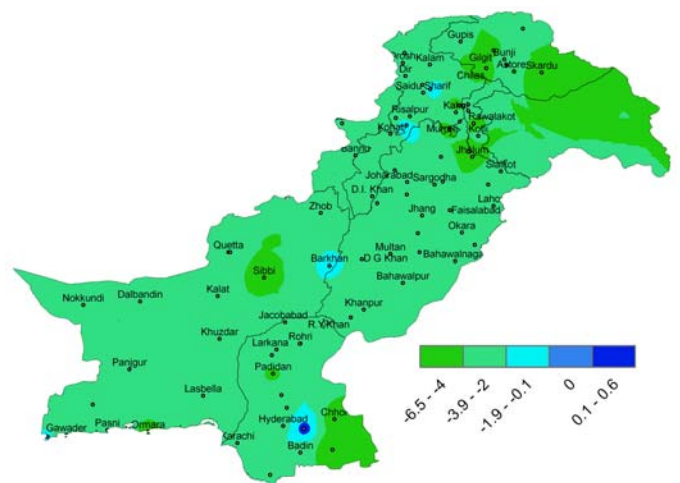
Rainfall reported amounting Trace (non measureable) during the decade, weather remained cloudy for 2 days during the decade, average relative humidity recorded as 28%. Mean night temperature was 1.2°C while day temperature recorded as 25.2°C with 109.2 hours bright sunshine duration and wind speed recorded as 5.4 Km/hr with mean direction *north westerly*. *Presently no crop is grown at the station.*



(a) Actual min-temp



(b) Departure of min-temp from Normal



(c) 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 (21st to 31st October, 2012)

2.6 Rohri

No rainfall reported during the decade, weather remained clear during all the decade. Average relative humidity recorded as 49%. Mean night temperature was 18.0°C while day temperature recorded as 34.5°C with 103.0 hours bright sunshine duration. Wind speed recorded as 3.1 Km/hr with mean direction *North easterly*.

2.7 Skardu

No rainfall reported during the decade, weather remained cloudy for 2 days, average relative humidity recorded as 41%. Mean night temperature was 3.8°C while day temperature recorded as 20.2°C with 26.8 hours bright sunshine duration. Wind speed recorded as 1.5 Km/hr with mean direction *South westerly*.

2.8 Multan

No rainfall reported during the decade, weather remained cloudy for 2 days, average relative humidity recorded as 52%. Mean night temperature was 17.1°C while day temperature recorded as 30.2°C with 101.2 hours bright sunshine duration. Wind speed recorded as 2.0 Km/hr with mean direction *Southerly*.

2.9 Lahore

rainfall reported amounting 7.6 mm during the decade & weather remained cloudy for 2 days during the decade, average relative humidity recorded as 55%. Mean night temperature was 15.7°C while day temperature recorded as 29.7°C with 105.2 hours bright sunshine duration. Wind speed recorded as 1.3 Km/hr with mean direction *South westerly*.

2.10 Peshawar

No rainfall reported during the decade, weather remained cloudy for 6 day, average relative humidity recorded as 61%. Mean night temperature was 12.5°C while day temperature recorded as 27.8°C with 86.5 hours bright sunshine duration. Wind speed recorded as 1.0 Km/hr with mean direction *North north easterly*.

2.11 Khanpur

No rainfall reported during the decade, weather remained clear during all the decade, average relative humidity recorded as 45%. Mean night temperature was 15.6°C while day temperature recorded as 31.8°C with 107.8 hours bright sunshine duration. Wind speed recorded as 1.6 Km/hr with mean direction *North easterly*.

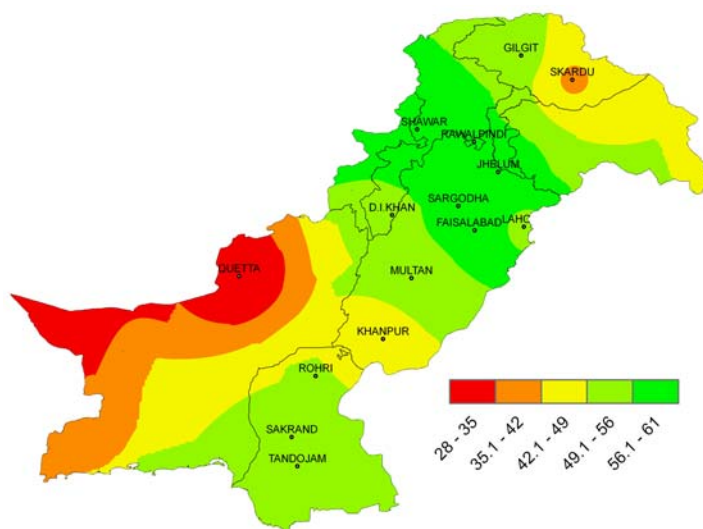


Figure.3: Relative Humidity in percentage

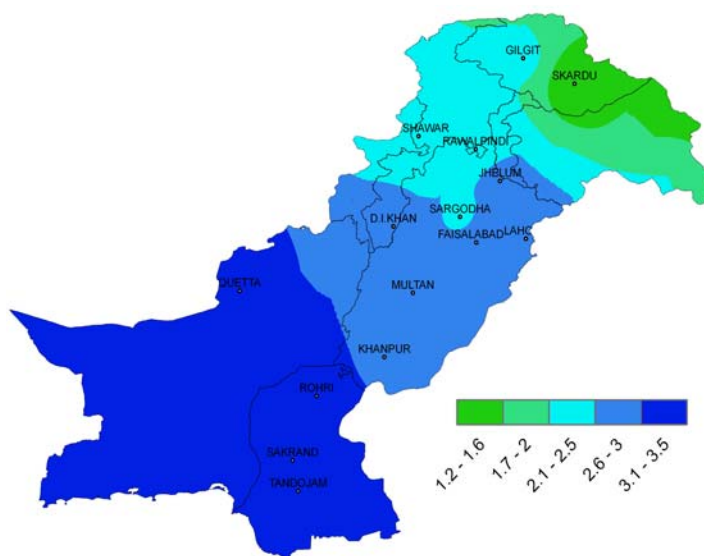


Figure.4: Reference Crop Evapotranspiration “ET₀” in mm/day

2.12 Sargodha

No rainfall reported during the decade, weather remained cloudy for 2 days, average relative humidity recorded as 60%. Mean night temperature was 16.1°C while day temperature recorded as 31.1°C with 89.4 hours bright sunshine duration. Wind speed recorded as 1.1 Km/hr with mean direction *Easterly*

2.13 Gilgit.

No rainfall reported during the decade, weather remained cloudy for 10 days and average relative humidity recorded as 51%. Mean night temperature was 3.4°C while day temperature recorded as 23.3°C with 80.2 hours bright sunshine. Wind speed recorded as 1.8 Km/hr with mean direction *westerly*.

2.14 Jhelum

rainfall reported amounting 10.4 mm during the decade, however weather remained cloudy for 5 days and average relative humidity recorded as 61%. Mean night temperature was 10.6°C while day temperature recorded as 32.0°C with 100.2 hours bright sunshine duration. Wind speed recorded as 1.9 Km/hr with mean direction *Variable*.

2.15 D.I. Khan

No rainfall reported during the decade & weather remained cloudy for 1 days during the decade, average relative humidity recorded as 54%. Mean night temperature was 12.0°C while day temperature recorded as 30.6°C with 92.4 hours bright sunshine duration. Wind speed recorded as 1.5 Km/hr with mean direction *Easterly*.

2.16 Sakrand

No rainfall reported during the decade, weather remained clear during all the decade and average relative humidity recorded as 52%. Mean night temperature was 15.0°C while day temperature recorded as 35.0°C with 115.2 hours bright sunshine duration. Wind speed recorded as 1.5 Km/hr with mean direction *North easterly*.

3. Ten days Weather advisory for Farmers

(1st to 10th November, 2012)

3.1 Temperature Forecast:

Day time temperatures expected to be dropped 1-2°C but night temperatures may drop 2-3°C in most of the agricultural plains of the country during the decade.

3.2 Rain Forecast:

- ❖ **Punjab:** Mainly dry weather is expected in most parts of the province during the decade.
- ❖ **Khyber Pakhtoonkhawa:** Mainly dry weather is expected in most parts of the province during the decade.
- ❖ **Sindh:** Mainly dry weather is expected in most parts of the province during the decade.
- ❖ **Balochistan:** Mainly dry weather is expected in most parts of the province during the decade.
- ❖ **Kashmir & Gilgit-Baltistan:** Mainly dry weather is expected in most parts of the province during the decade.

3.3 Wind Forecast:

Normal wind pattern may prevail in most of the agricultural plains of the country during the decade.

3.4 Advisory for Farmers:

- ❖ Farmers of Barani and irrigated areas are advised to remove weeds from the fields and prepare their fields for incoming Rabi crops.
- ❖ Farmers of Barani areas are advised to cultivate Rabi Crops including wheat in time so that present soil moisture may fully be utilized.
- ❖ Farmers of irrigated lands are advised to harvest Kharif crops including cotton in time so that in time sowing of Rabi crops especially wheat crop may be possible without any delay.
- ❖ The most suitable time for sowing of wheat crop with respect to available soil moisture, temperature and other weather parameters to get the optimum yield for the agricultural lands of Punjab, Sinh and KP is from late October to 20th November. Significant loss in the yield of the crops occurs, which are cultivated after 20th November.