

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall (with snow over hills) reported from the most of the agricultural plains of KP, Upper Punjab, Gilgit Baltistan & Kashmir during the last decade.
- ❖ Highest amount of rainfall recorded as 78.0 mm at Risalpur during the last decade.
- ❖ Lowest minimum temperature recorded as -15.3°C at Skardu during the last decade.
- ❖ Higher values of relative humidity (above 60%) reported from Upper and Central parts of the country during the last decade.
- ❖ Higher values of ETo reported from the agricultural plains of Sindh and most parts of Balochistan but lower values reported from Skardu region during last decade.
- ❖ Day & night temperatures expected to be dropped $2-4^{\circ}\text{C}$ & $3-5^{\circ}\text{C}$ respectively 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.
- ❖ Mainly cold & dry weather expected from most parts of the country except Gilgit Baltistan & Kashmir region, where isolated chances of light rainfall (with snow over hills) during the next decade.
- ❖ Moisture conditions in barani areas enhanced after the good spells of rainfall during the last month.
- ❖ Due to dry weather in southern parts of the country, Farmers of southern parts are advised to irrigate the crops as per requirement.

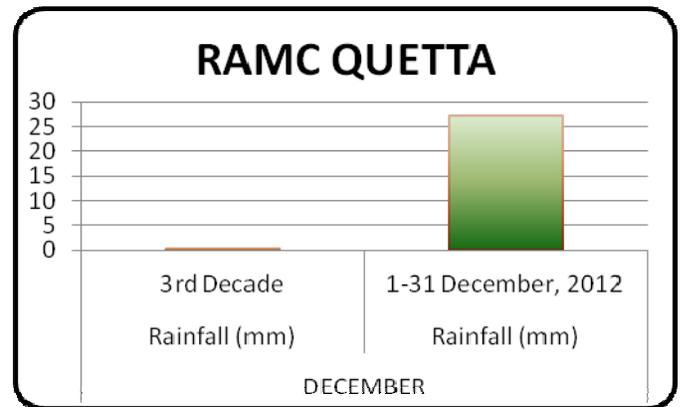
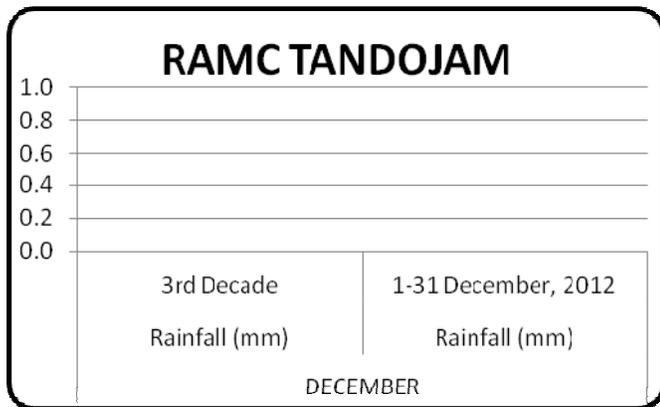
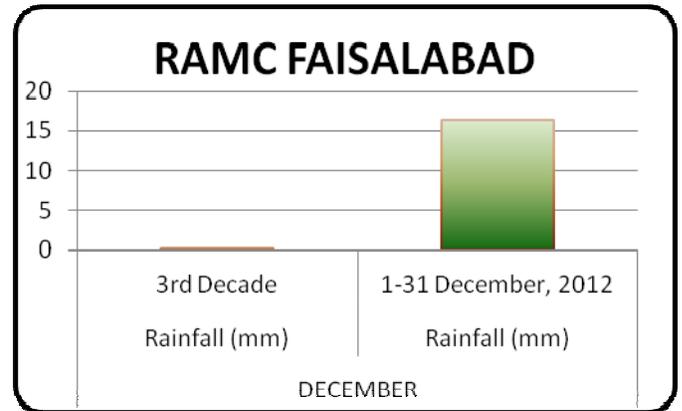
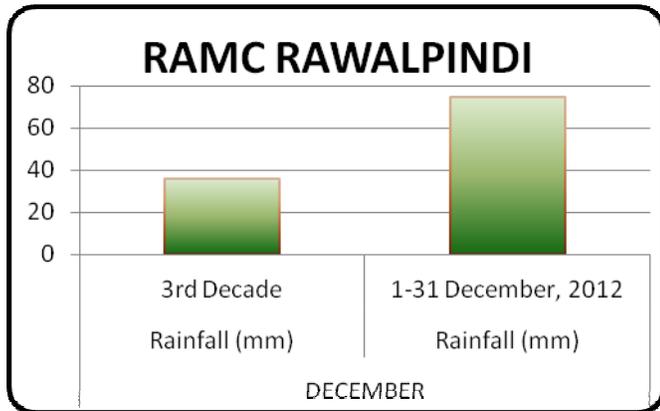
**NATIONAL AGROMET CENTRE (NAMC)
PAKISTAN METEOROLOGICAL DEPARTMENT
SECTOR H-8/2, ISLAMABAD**

Phone: [+92-51-9250592](tel:+92-51-9250592) Email: dirnamc@yahoo.com

Chief Editor: Dr. Khalid M. Malik, Director, NAMC Islamabad

Editor: Zeeshan Javed Hashmi, Assistant Meteorologist, NAMC Islamabad

Graphs for Rainfall (mm) during December 2012



Note: No Rainfall recorded at RAMC Tandojam during the 3rd decade and whole month of December.

Meteorological conditions during 3rd decade of December, 2012.

Sr. No.	Station	Precipitation (mm)			Air Temperature (°C)			Soil Temperatures (°C)						Sunshine Duration (hours)	Wind Speed (km/hr)	R.H (%)	ETo (mm/day)
		Normal	Actual	Dep	Tmin Dep	Tmax Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	TANDOJAM	0.4	0.0	-0.4	-0.7	0.2	16.5	20.05	20	***	19.65	20.7	22.8	87.3	1.7	51.0	1.8
2	SAKRAND ☆	0.0	0.0	0.0	-1.4	1.4	14.8	22.25	20.45	***	19.8	21.8	24.75	105.5	9.3	54.0	1.7
3	ROHRI	0.0	0.0	0.0	0.5	-0.1	16.4	22.6	20.75	19.2	20.55	20.75	25.1	93.5	2.3	50.0	1.8
4	QUETTA	0.4	TR	***	-0.3	-1.6	4.4	7.1	6.8	5.4	5.3	5.9	11.0	84.8	4.9	49.0	1.5
5	KHANPUR	0.1	0.0	-0.1	-1.0	1.1	14.3	14.7	15.3	15.8	16.3	17.6	19.6	83.8	1.3	55.5	1.4
6	MULTAN	0.1	0.0	-0.1	0.9	-0.8	13.6	***	***	***	***	***	***	77.6	1.8	63.0	1.3
7	LAHORE	0.3	5.4	5.1	-2.4	-4.3	10.7	12.8	12.8	13.0	13.7	***	18.1	41.5	2.2	82.0	1.0
8	FAISALABAD	0.2	0.2	0.0	0.3	-4.2	10.8	14.6	13.6	12.9	13.1	14.7	18.2	39.4	2.8	76.0	1.1
9	SARGODHA	0.4	TR	***	0.6	-3.8	11.7	14.7	14.0	14.0	14.8	16.9	19.3	43.1	1.3	83.0	0.9
10	JHELUM	0.4	8.6	8.2	0.1	-2.1	12.3	14.0	13.5	13.3	13.7	15.2	***	49.4	2.6	71.0	1.1
11	RAWALPINDI	0.5	35.6	35.1	1.0	0.2	11.9	12.2	12.9	13.3	13.9	13.8	16.8	58.1	1.3	80.0	1.0
12	DI KHAN	0.4	2.3	1.9	-1.1	-1.6	12.4	***	***	***	***	***	***	73.0	3.2	63.0	1.4
13	PESHAWAR	0.6	31.4	30.8	-0.8	-0.8	11.5	14.0	12.5	12.0	13.7	14.8	17.1	58.0	1.0	67.0	0.9
14	SKARDU	0.5	4.3" Snow	3.8	-2.7	-1.3	-2.4	***	***	***	***	***	***	30.3	0.4	65.0	0.5
15	GILGIT	0.4	4.9	4.5	0.2	0.6	4.8	***	***	***	***	***	***	35.6	1.3	56.0	0.9

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.

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

Light to moderate rainfall (with snow over hills) reported from the most of the agricultural plains of KP, Upper Punjab, Gilgit Baltistan & Kashmir, while meager rainfall reported from few places of Quetta divisions during the 2nd half of the decade. Dry weather reported from the rest parts of the country.

1.1 Punjab

Light to moderate rainfall reported at a number of places in agricultural plains of Punjab; chief amount received at Murree, Islamabad, Sialkot etc. Decadal maximum & minimum temperature dropped below normal by 2.0 & 0.1°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 1.9 k/hr, 73%, and 1.1 mm/day respectively (Fig 3-4).

1.2 Sindh

Dry & cold weather reported from the agricultural plains of Sindh. Decadal maximum temperature normal raised above normal by 0.5°C and minimum temperature dropped below normal by 0.5°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 4.4 km/hr, 52%, and 1.8 mm/day respectively.

1.3 Khyber Pakhtoonkhawa (KP)

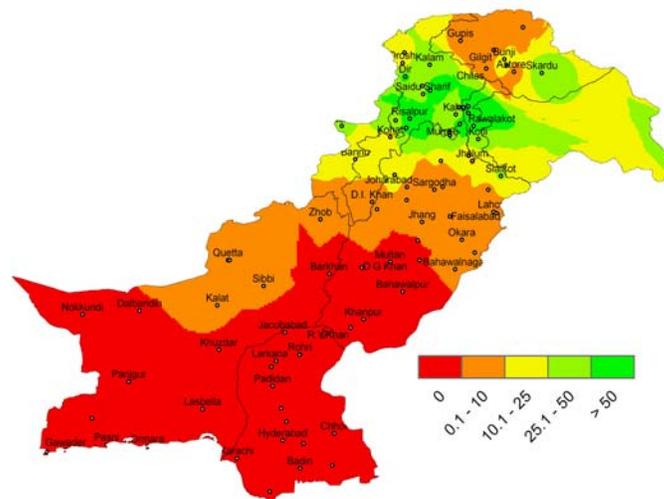
Light to moderate rainfall reported at a number of places in agricultural plains of KP; chief amount received at Risalpur, Malamjabba, Dir etc. In KP region; Decadal maximum & minimum temperature dropped below normal by 1.2 & 1.0°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 2.1 km/hr, 65%, and 1.2 mm/day respectively.

1.4 Balochistan

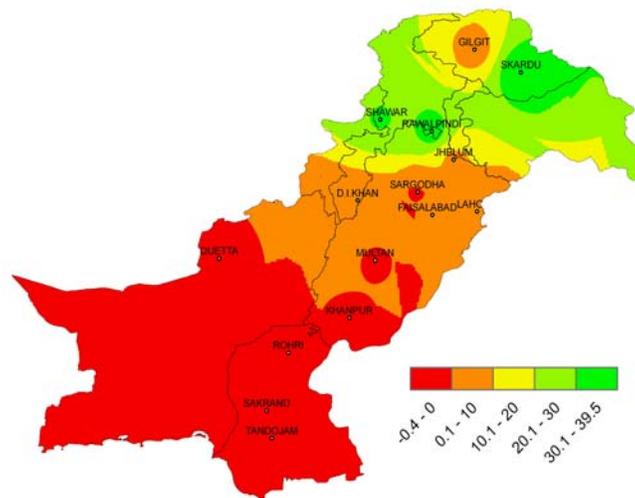
Meager rainfall reported at a few of places in agricultural plains of Balochistan; chief amount received at Samungli (Quetta). Decadal maximum & minimum temperature dropped below normal by 1.6 & 0.3°C respectively, in the province. Whereas mean values of wind speed, relative humidity and ETo were 4.9 km/hr, 49%, and 1.5 mm/day respectively.

1.5 Gilgit Baltistan and Azad Jammu & Kashmir

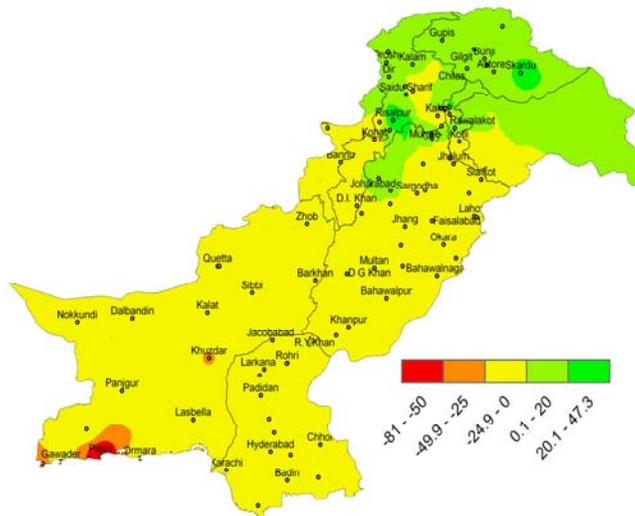
Light to moderate rainfall reported at a number of places in agricultural plains of GB & Kashmir; chief amount received at Pattan, Garhi dopatta, Rawalakot etc. In GB & AJK region; decadal maximum and minimum temperature dropped below normal by 0.4 & 1.3°C respectively. Whereas mean values of wind speed, relative humidity and ETo were recorded 0.9 km/hr, 61%, and 0.7 mm/day respectively.



a) Actual rainfall



b) Departure of rainfall from Normal



c) Departure of rainfall from Previous Decade

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

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

2.1 RAMC, Rawalpindi (Potohar region)

Rainfall reported as 35.6 mm during the decade, weather remained cloudy for 5 days, average relative humidity recorded as 80%. Mean night temperature was 4.3°C while day temperature recorded as 19.4°C with 58.1 hours bright sunshine duration. Wind speed recorded as 1.3 Km/hr with mean direction *westerly*. Presently one crop is grown at the station.

Wheat Chakwal 97: Good condition, Tillering stage.

2.2 RAMC, Tandojam (Lower Sindh)

No rainfall reported during the decade, weather remained cloudy for 1 day during the decade, average relative humidity recorded as 51%. Mean night temperature was 8.4°C while day temperature recorded as 24.5°C with 87.3 hours bright sunshine duration. Wind speed recorded as 1.7 km/hr with mean direction *northerly*.

Wheat (TJ 83): Good condition, Shooting stage.

2.3 RAMC, Faisalabad (Central Punjab)

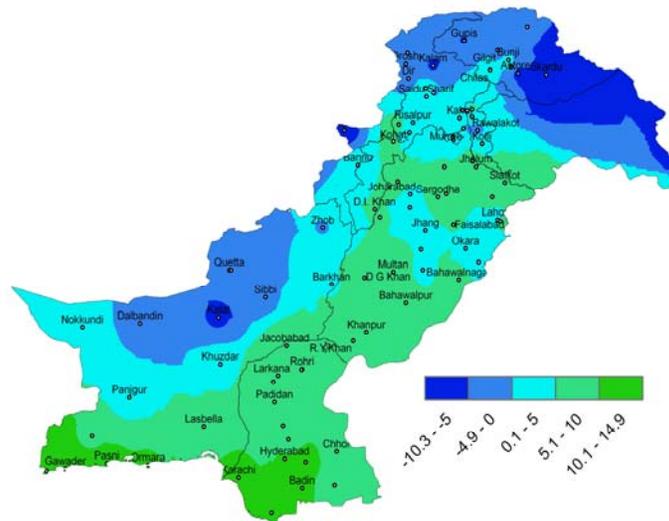
Rainfall reported as 0.2 mm during the decade, weather remained cloudy for 6 days, average relative humidity recorded as 76%. Mean night temperature was 5.2°C while day temperature recorded as 16.3°C with 39.6 hours bright sunshine duration. Wind speed recorded as 2.8 Km/hr with mean direction *westerly*.

Sugarcane: Very Good condition, Third leaf completed.
Wheat: Very Good condition, Third leaf stage.

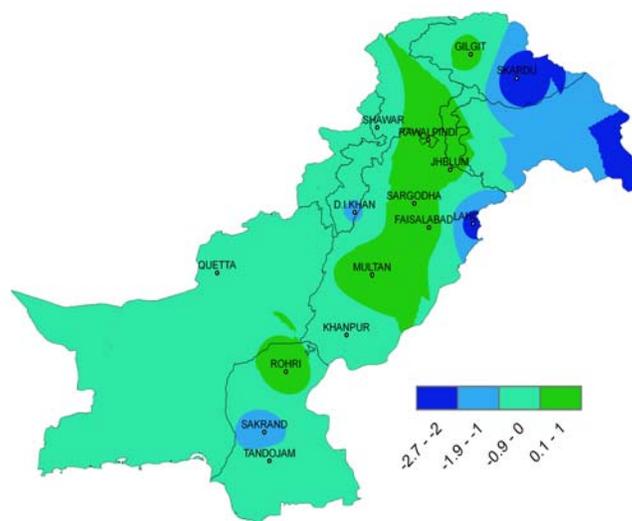
2.4 RAMC, Quetta (Northern Balochistan)

Trace (not measurable) rainfall reported during the decade, weather remained cloudy for 7 days, average relative humidity recorded as 49%. Mean night temperature was -2.4°C while day temperature recorded as 11.2°C with 84.8 hours bright sunshine duration and wind speed recorded as 4.9 Km/hr with mean direction *northerly*.

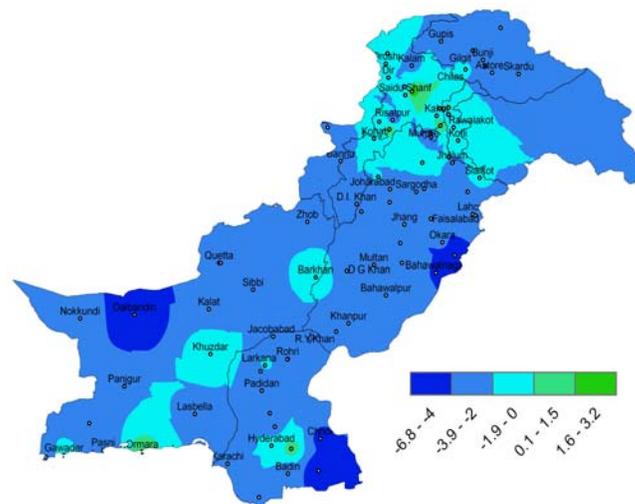
Wheat (Local white): Good condition, Third leaf stage.



(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 December, 2012)

2.5 Rohri

No rainfall reported during the decade, weather remained cloudy for 2 days, average relative humidity recorded as 50%. Mean night temperature was 9.9°C while day temperature recorded as 22.8°C with 93.5 hours bright sunshine duration. Wind speed recorded as 2.3 Km/hr with mean direction *north easterly*.

2.6 Skardu

Snowfall reported as 4.3 inch during the decade, weather remained cloudy for 7 days, average relative humidity recorded as 65%. Mean night temperature was -9.2°C while day temperature recorded as 4.5°C with 30.3 hours bright sunshine duration with mean speed 0.4 Km/hr and mean direction *north westerly*.

2.7 Multan

No rainfall reported during the decade, weather remained cloudy for 4 days, average relative humidity recorded as 63%. Mean night temperature was 6.6°C while day temperature recorded as 20.6°C with 77.6 hours bright sunshine duration. Wind speed recorded as 1.8 Km/hr with mean direction *northerly*.

2.8 Lahore

Rainfall reported as 5.4 mm during the decade, weather remained cloudy for 8 days, average relative humidity recorded as 82%. Mean night temperature was 6.0°C while day temperature recorded as 15.4°C with 41.5 hours bright sunshine duration. Wind speed recorded as 2.2 Km/hr with mean direction *south easterly*.

2.9 Peshawar

Rainfall reported as 31.4 mm during the decade, weather remained cloudy for 9 days, average relative humidity recorded as 67%. Mean night temperature was 4.2°C while day temperature recorded as 18.7°C with 58.0 hours bright sunshine duration. Wind speed recorded as 1.0 Km/hr with mean direction *south westerly*.

2.10 Khanpur

No rainfall reported during the decade, weather remained cloudy for 3 days during the decade, average relative humidity recorded as 56%. Mean night temperature was 5.3°C while day temperature recorded as 23.2°C with 83.8 hours bright sunshine duration. Wind speed recorded as 1.3 Km/hr with mean direction *north easterly*.

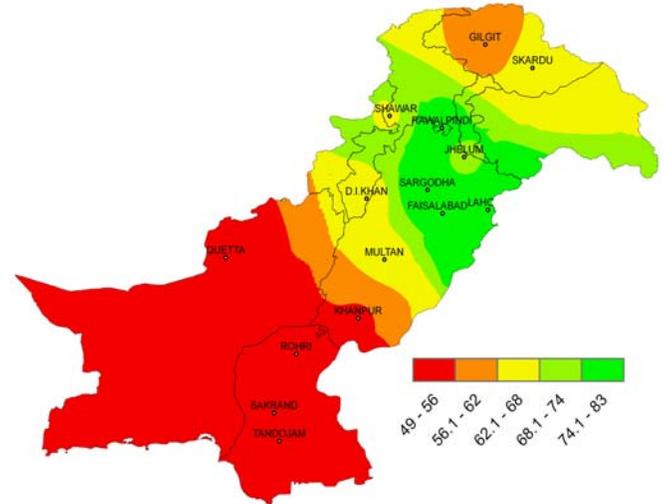


Figure.3: Relative Humidity in percentage

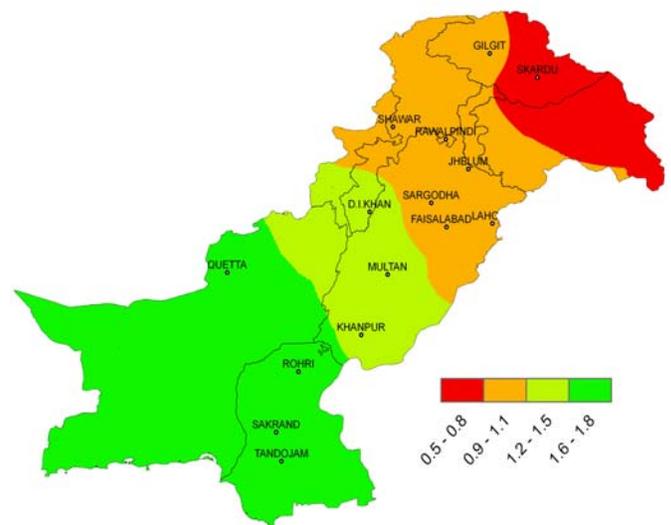


Figure.4: Reference Crop Evapotranspiration “ET₀” in mm/day

2.11 Sargodha

Trace (not measurable) rainfall reported during the decade, weather remained cloudy for 7 days during the decade, average relative humidity recorded as 78%. Mean night temperature was 6.5°C while day temperature recorded as 16.9°C with 43.1 hours bright sunshine duration. Wind speed recorded as 1.3 Km/hr with Variable direction.

2.12 Gilgit.

Rainfall reported as 4.9 mm during the decade. weather remained cloudy for 1 day and average relative humidity recorded as 56%. Mean night temperature was -2.4°C while day temperature recorded as 11.9°C with 35.6 hours bright sunshine. Wind speed recorded as 1.3 Km/hr with mean direction *easterly*.

2.13 Jhelum

Rainfall reported as 8.6 mm during the decade, weather remained cloudy for 9 days and average relative humidity recorded as 71%. Mean night temperature was 5.7°C while day temperature recorded as 18.9°C with 49.4 hours bright sunshine duration. Wind speed recorded as 2.6 Km/hr with mean direction *south westerly*.

2.14 D.I. Khan

Rainfall reported as 2.3 mm during the decade, weather remained cloudy for 5 days, average relative humidity recorded as 63%. Mean night temperature was 5.0°C while day temperature recorded as 19.7°C with 73.0 hours bright sunshine duration. Wind speed recorded as 3.2 Km/hr with mean direction *north westerly*.

2.15 Sakrand

No rainfall & cloudy day reported during the decade, average relative humidity recorded as 54%. Mean night temperature was 5.8°C while day temperature recorded as 23.8°C with 105.5 hours bright sunshine duration. Wind speed recorded as 0.9 Km/hr with mean direction *north easterly*.

3. Ten days Weather advisory for Farmers (1st to 10th January, 2013)

3.1 Temperature Forecast:

Day & night temperatures expected to be dropped 2-4°C & 3-5°C respectively in most of the agricultural plains of the country during the decade.

3.2 Rain Forecast:

- ❖ **Punjab:** Mainly cold & dry weather is expected in most parts of the province.
- ❖ **Khyber Pakhtoonkhawa:** Mainly cold & dry weather is expected in most parts of the province during the decade.
- ❖ **Sindh :** Mainly cold & dry weather is expected in most parts of the province during the decade.
- ❖ **Balochistan:** Mainly cold & dry weather is expected in most parts of the province during the decade.
- ❖ **Gilgit-Baltistan & Kashmir:** Mainly cold & dry weather is expected in most parts of the province during the decade. However isolated light rain/snow may occur during 3rd to 5th January and end days of 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:

- ❖ Moisture stress conditions in rainfed areas weakened after the good spells of rainfall during the last month. Farmers are advised to remove the weeds from standing crops.
- ❖ Removing weeds from standing crops is very important as weeds utilize moisture, which may be utilized by the crop. However weedicides or manually should be used against weeds and removed all type of weeds from the standing crops.
- ❖ Wheat crop is in Tillering/Shooting development stages in most of the agricultural plains of the country but in few areas wheat crop is in Emergence/Third Leaf stage.
- ❖ Farmers may irrigate the crops as per requirement keeping the coming conditions of weather in most of the southern agricultural plains of the country.
- ❖ Due to further drop of temperatures, especially farmers of upper areas are advised to protect their crops from the coming season of frost.