

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported from few agricultural plains of the country during the last decade.
- ❖ Highest maximum temperature recorded as 41.5°C at Turbat & Shaheed Benzairabad during the last decade.
- ❖ Highest amount of rainfall recorded as 73.0mm at Parachinar during the last decade.
- ❖ Lower values of relative humidity reported from Quetta & Skardu region and higher values reported from Northeastern parts of Punjab & Kashmir during the last decade.
- ❖ Higher values of ETo reported from upper agricultural plains of the country and lower values reported from southern parts of the country during the last decade.
- ❖ Normal temperatures are expected in most of the agricultural plains of the country during the current decade.
- ❖ Normal wind pattern may prevail in most parts of the country during the current decade.
- ❖ Light to moderate rainfall is expected in upper & central parts of the country during the current decade.
- ❖ Mostly dry & humid weather is expected in most of the agricultural plains of the country.

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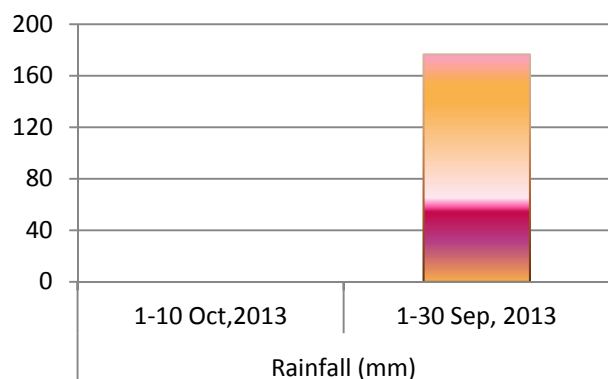
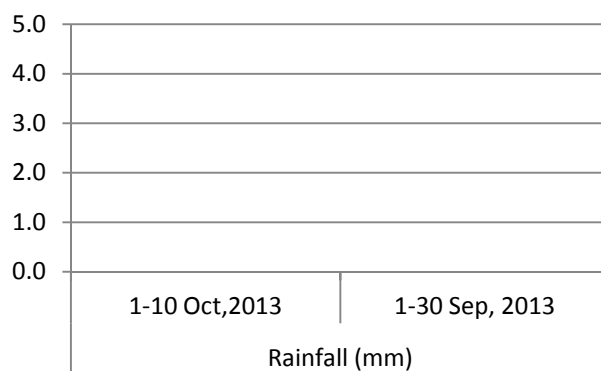
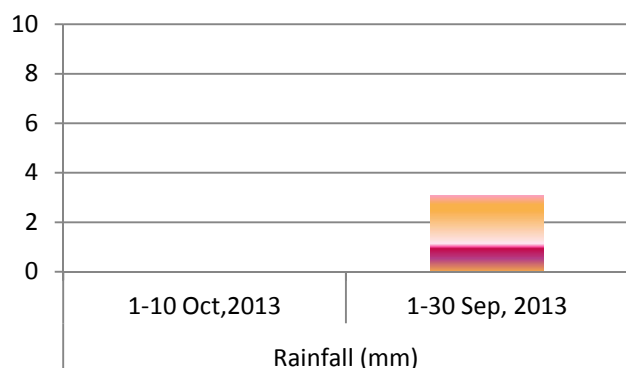
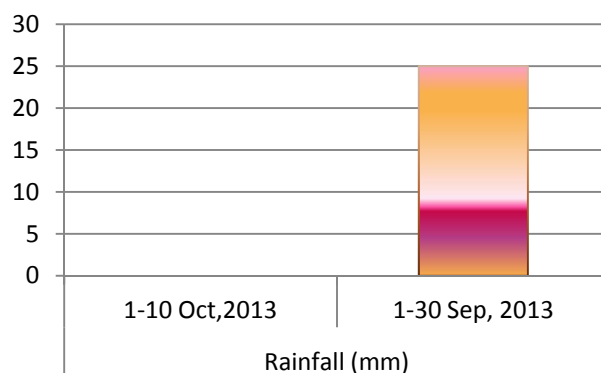
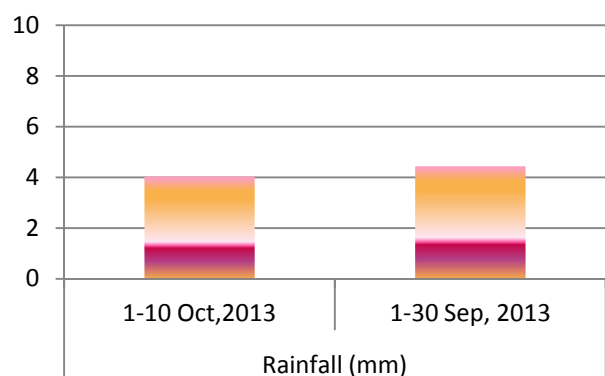
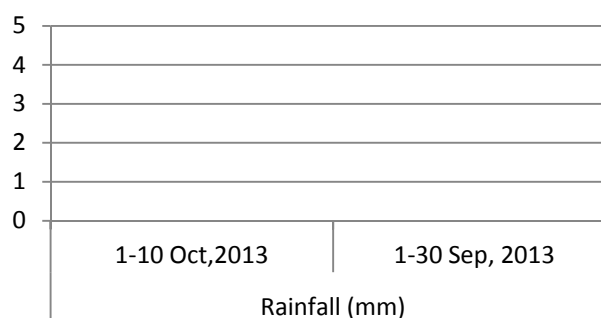
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Meteorological conditions during 1st decade of October, 2013

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	0.8	0.0	-0.8	3.5	-0.2	30.8	40.7	39.4	36.8	33.6	33.5	***	87.2	1.0	64	4.0
2	SAKRAND ☆	0.0	16.0	16.0	1.5	0.4	30.2	41.4	38.9	43.2	***	35.6	35.0	103.4	2.0	63	4.5
3	ROHRI	0.0	0.0	0.0	3.9	-0.1	32.8	40.9	38.5	35.7	35.2	33.9	34.8	111.0	4.5	54	5.4
4	USTA MUHAMMAD	0.0	0.0	0.0	1.9	0.1	31.0	31.5	31.7	31.6	32.1	***	30.1	***	***	61	4.8
5	QUETTA	0.0	0.0	0.0	-1.2	5.0	21.3	32.2	29.7	24.9	23.7	23.3	25.5	103.4	6.0	33	5.2
6	KHANPUR	0.0	0.0	0.0	4.0	0.3	31.4	34.8	34.5	34.6	34.7	35.1	33.8	99.6	2.8	62	4.6
7	MULTAN	0.2	0.0	-0.2	4.9	0.2	31.7	***	***	***	***	***	***	81.8	3.7	54	4.3
8	LAHORE	0.1	16.8	16.7	0.2	-0.8	28.6	31.4	31.1	29.7	29.4	***	29.8	52.4	2.0	75	3.0
9	FAISALABAD	0.2	0.0	-0.2	4.7	0.9	30.5	38.8	36.5	34.1	33.0	32.8	32.5	75.3	1.8	58	3.6
10	SARGODHA	0.1	0.0	-0.1	3.5	-2.4	30.4	32.9	31.4	30.1	29.7	30.1	29.9	68.6	1.5	67	3.3
11	JHELMUM	0.4	0.0	-0.4	0.9	-0.2	28.2	31.7	30.7	29.5	28.8	28.9	***	65.1	2.0	69	3.2
12	RAWALPINDI	1.0	0.0	-1.0	4.7	-0.4	27.4	29.5	29.7	28.2	28.0	27.6	28.0	68.4	1.6	67	3.0
13	DI KHAN	0.3	0.0	-0.3	1.9	1.0	29.8	***	***	***	***	***	***	84.1	0.2	59	3.3
14	PESHAWAR	1.1	4.0	2.9	2.6	1.0	28.6	31.2	30.0	29.3	29.8	***	29.3	56.8	1.1	67	2.8
15	SKARDU	0.1	0.1	0.0	1.2	5.4	18.4	***	***	***	***	***	***	83.6	1.4	33	2.7
16	GILGIT	0.2	0.0	-0.2	1.6	5.8	21.6	***	***	***	***	***	***	83.2	1.0	49	3.1

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.

Graphs for Rainfall (mm) during Oct/Sep 2013**RAMC RAWALPINDI****RAMC QUETTA****RAMC FAISALABAD****RAMC TANDOJAM****RMC PESHAWAR****RAMC USTA MUHAMMAD**

Past Weather (1st to 10th October, 2013):

Light to moderate rainfall reported from few agricultural plains of upper Punjab, KP, Sindh, Northeastern parts of Balochistan, GB & Kashmir, while dry weather reported from rest parts of the country during the period.

1.1 Punjab

Light to moderate with isolated heavy rainfall reported at few places in the agricultural plains of Punjab; chief amount received at Sialkot, Lahore & Murree etc. Decadal minimum raised above normal by 3.3°C & maximum temperature dropped below normal by 0.3°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded as 73.0hrs, 2.2km/hr, 65% and 3.6mm/day respectively.

1.2 Sindh

Light to moderate with isolated heavy rainfall reported at few places in the agricultural plains of Sindh; i.e. Mithi, Badin & Shaheed Benzairabad etc. Decadal minimum raised above normal by 3.0°C & decadal maximum remain normal by 0.0°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded as 100.5hrs, 2.5km/hr, 60% and 4.6mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

Light to moderate with isolated heavy rainfall reported at few places in the agricultural plains of KP; chief amount received at Parachinar, Dir & Saidu Sharif etc. Decadal minimum & maximum temperature both raised above normal by 2.3°C & 1.0°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded as 70.5hrs, 0.7km/hr, 63% and 3.1mm/day respectively.

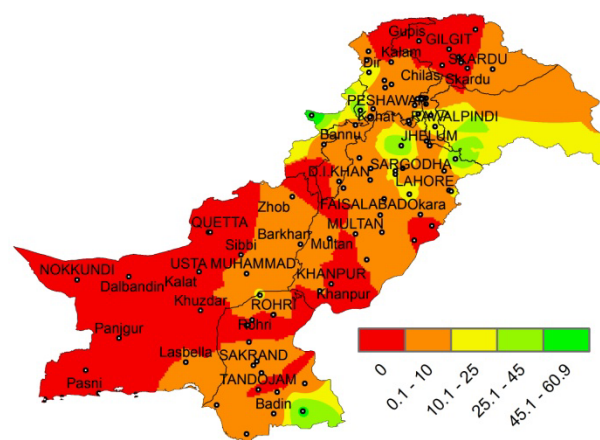
1.4 Balochistan

Rainfall reported as 3.1mm at one place in Balochistan; i.e. Barkhan. Decadal minimum & maximum temperature both raised above normal by 0.3°C & 2.6°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were 103.4hrs, 6.0km/hr, 47% and 5.0mm/day respectively.

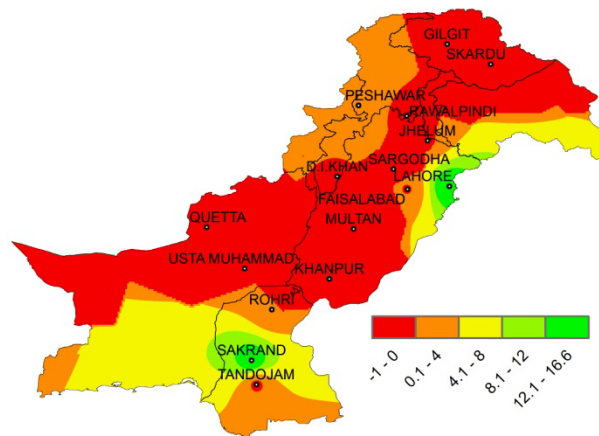
1.5 Gilgit Baltistan and Azad Jammu & Kashmir

Light to moderate with isolated heavy rainfall reported at a number of places in the agricultural plains of GB & Kashmir; chief amount received at Rawalakot, Kotli & Pattan etc. Decadal minimum & decadal maximum temperature both raised above normal by 1.4°C & 5.6°C respectively, in the province. Whereas mean values of sunshine hour, wind

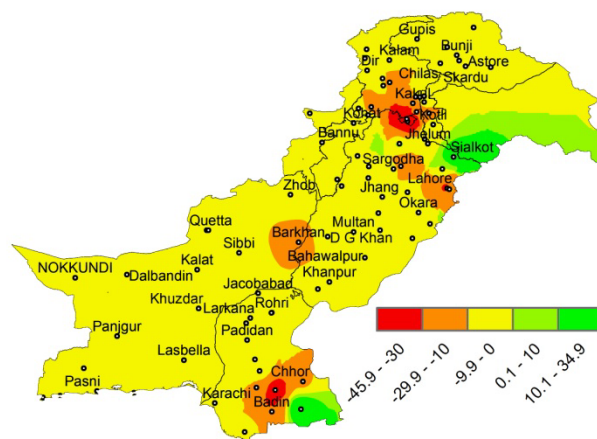
speed, relative humidity and ETo were recorded 83.4hrs, 1.2km/hr, 41% and 2.9mm/day respectively.



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 (1st to 10th October, 2013):

2.1 RAMC, Rawalpindi (Potohar region)

No rainfall reported during the decade, weather remained cloudy for 06days, average relative humidity recorded as 67%. Mean night temperature was 22.2°C while day temperature recorded as 32.5°C with 68.4 hours bright sunshine duration. Wind speed recorded as 1.6km/h with mean wind direction *westerly*.

Maize Agati 2002: Good condition, Tasseling stage.

2.2 RAMC, Faisalabad (Central Punjab)

No rainfall reported during the decade, weather remained cloudy for 10days, average relative humidity recorded as 58%. Mean night temperature was 24.9°C while day temperature recorded as 36.1°C with 75.3 hours bright sunshine duration. Wind speed recorded as 1.8km/hr with mean wind direction *south easterly*.

Sugarcane: Very Good condition, Tillering completed.

Cotton: Good condition, 1st picking stage.

2.3 RAMC, Tandojam (Lower Sindh)

No rainfall reported during the decade, weather remained cloudy for 02days, average relative humidity recorded as 64%. Mean night temperature was 24.7°C while day temperature recorded as 36.8°C with 87.2hours bright sunshine duration. Wind speed recorded as 1.0km/hr with mean wind direction *south westerly*.

Cotton: BT 3701, Good condition, Maturity stage.

2.4 RAMC, Quetta (Northern Balochistan)

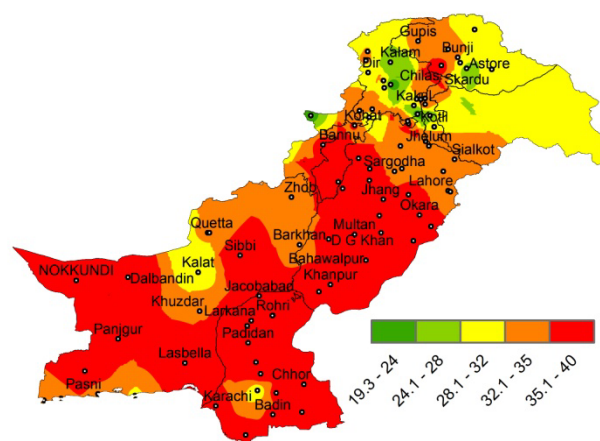
No rainfall reported during the decade, weather remained cloudy for 03days, average relative humidity recorded as 31%. Mean night temperature was 8.7°C while day temperature recorded as 33.8°C with 103.4hours bright sunshine duration and wind speed recorded as 6.0km/hr with mean wind direction *southerly*.

Note: No crop is grown at the station.

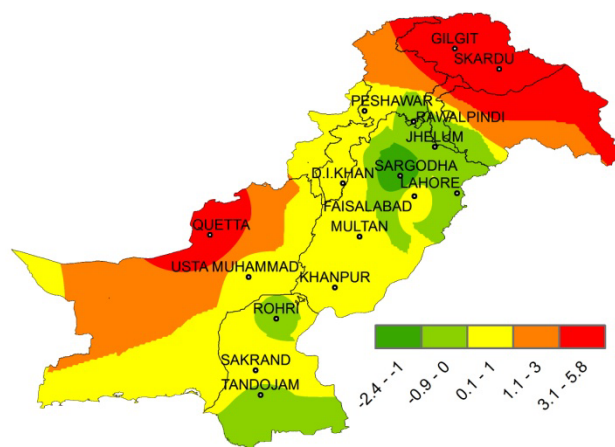
2.5 RAMC, Usta Muhammad (Eastern Balochistan)

No rainfall & cloudy day reported during the decade, average relative humidity recorded as 61%. Mean night temperature was 25.4°C, while day temperature recorded as 36.5°C. The data of bright sunshine hour and wind speed was not available, while mean wind direction was *south easterly*.

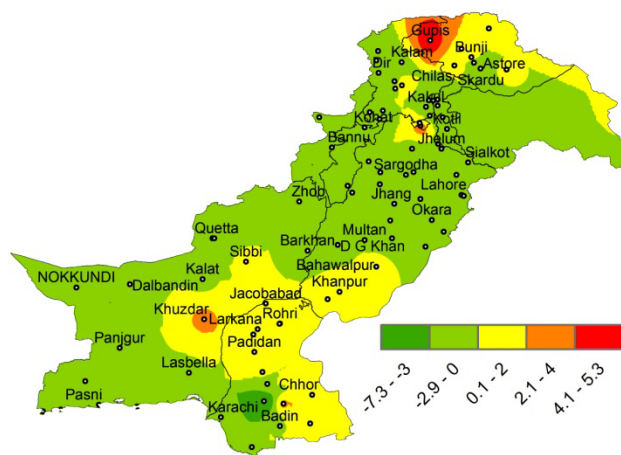
Rice: Good condition, wax maturity stage.



(a) Actual max-temp



(b) Departure of max-temp from Normal



(c) Departure of max-temp from Previous Decade

Figure.2: Maximum Temperature distribution during previous decade in "°C"

2(b) **Past Weather for sub regional Agricultural Plains (1st to 10th October, 2013):**

2.6 **Jhelum**

No rainfall reported during the decade, weather remained cloudy for 10days and average relative humidity recorded as 69%. Mean night temperature was 21.8°C while day temperature recorded as 34.5°C with 65.1hours bright sunshine duration. Wind speed recorded 2.0Km/hr with mean wind direction *south westerly*.

2.7 **Lahore**

Rainfall reported as 16.8mm during the decade, weather remained cloudy for 10days, average relative humidity recorded as 75%. Mean night temperature was 23.8°C while day temperature recorded as 33.3°C with 52.4 hours bright sunshine duration. Wind speed recorded as 2.0km/hr with mean direction *westerly*.

2.8 **Sargodha**

No rainfall reported during the decade, weather remained cloudy for 09days during the decade, average relative humidity recorded as 67%. Mean night temperature was 25.6°C while day temperature recorded as 35.1°C with 68.6hours bright sunshine duration. Wind speed recorded as 1.4km/hr with mean direction *variable*.

2.9 **Multan**

No rainfall reported during the decade, weather remained cloudy for 09days, average relative humidity recorded as 54%. Mean night temperature was 27.0°C while day temperature recorded as 36.4°C with 81.8hours bright sunshine duration. Wind speed recorded as 3.7km/hr with mean wind direction *variable*.

2.10 **Khan Pur**

No rainfall reported during the decade, weather remained cloudy for 03days, average relative humidity recorded as 62%. Mean night temperature was 25.5°C while day temperature recorded as 37.2°C with 99.6hours bright sunshine duration. Wind speed recorded as 2.8km/hr with mean wind direction *northerly*.

2.11 **Rohri**

No rainfall reported during the decade, weather remained cloudy for 01day, average relative humidity recorded as 54%. Mean night temperature was 28.1°C while day temperature recorded as 37.5°C with 111.0hours bright sunshine duration. Wind speed recorded 4.5km/hr with mean wind direction *north easterly*.

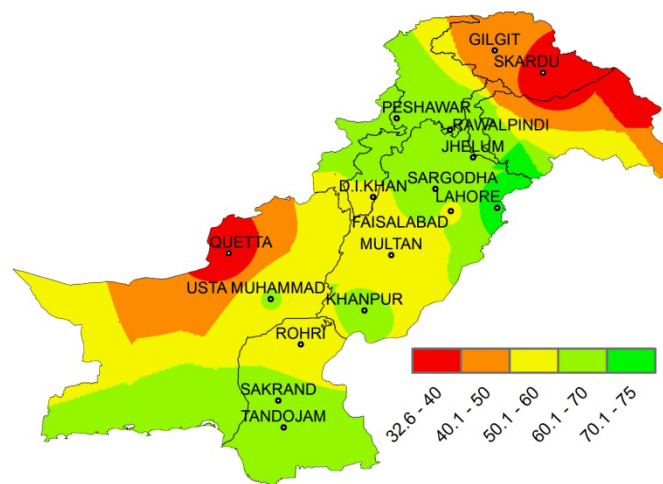


Figure.3: Relative Humidity in percentage

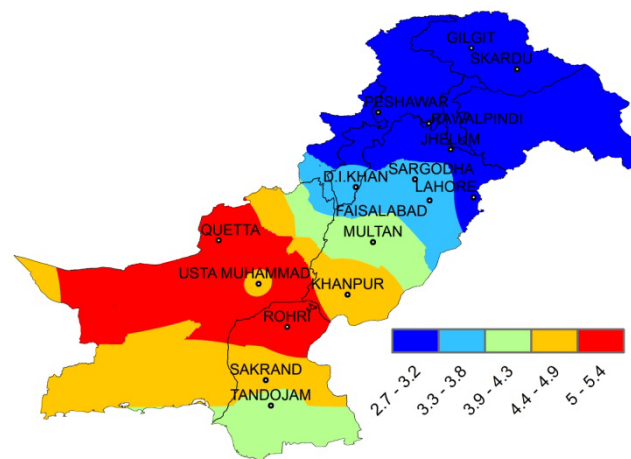


Figure.4: Reference Crop Evapotranspiration "ETo" in mm/day

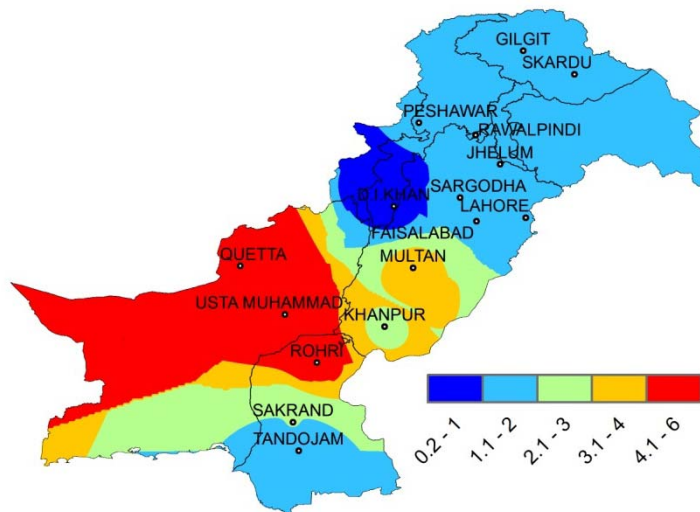


Figure 5: Wind Speed in kilometer per hour

2.12 Sakrand

Rainfall reported as 16.0mm during the decade, weather remained cloudy for 03days and average relative humidity recorded as 63%. Mean night temperature was 22.8°C while day temperature recorded as 37.6°C with 103.4hours bright sunshine duration. Wind speed recorded as 2.0km/hr with mean wind direction *southerly*.

2.13 Peshawar

Rainfall reported as 4.0mm during the decade, weather remained cloudy for 08days, average relative humidity recorded as 67%. Mean night temperature was 22.7°C while day temperature recorded as 34.4°C with 56.8hours bright sunshine duration. Wind speed recorded as 1.1km/hr with mean wind direction *north north-westerly*.

2.14 D.I. Khan

No rainfall reported during the decade, weather remained cloudy for 01day, average relative humidity recorded as 59%. Mean night temperature was 22.7°C while day temperature recorded as 36.8°C with 84.1hours bright sunshine duration. Wind speed recorded as 0.2km/hr with mean direction *north easterly*.

2.15 Gilgit

No rainfall reported during the decade, weather remained cloudy for 04days, average relative humidity recorded as 49%. Mean night temperature was 9.6°C while day temperature recorded as 33.6°C with 83.2hours bright sunshine duration. Wind speed recorded as 1.0km/hr with mean wind direction *variable*.

2.16 Skardu

Rainfall reported as Trace (not measurable) during the decade, weather remained cloudy for 01day, average relative humidity recorded as 33%. Mean night temperature was 7.4°C while day temperature recorded as 29.4°C with 83.6hours bright sunshine duration with mean speed 1.4km/hr with mean direction *variable*.

**3. Ten days Weather advisory for Farmers
(11th to 20th October, 2013):****3.1 Temperature Forecast:**

Normal temperatures are expected in most of the agricultural plains of the country during the decade.

3.2 Rain Forecast:

- ❖ **Punjab:** Mainly hot and humid weather is expected in most parts of the province during the decade, however, rain-thundershowers are expected at isolated places in the province during the 1st half of the decade.
- ❖ **Khyber Pakhtunkhwa:** Mainly hot and humid weather is expected in most parts of the province during the decade, however, rain-thundershowers are expected at isolated places in the province during the 1st half of the decade.
- ❖ **Sindh** Mainly hot and humid weather is expected in most parts of the province during the decade, however, rain-thundershower is expected at isolated places in southeastern/Lower parts parts during 11th / 12th October.
- ❖ **Balochistan:** Mainly hot & dry weather is expected in most parts of the province during the decade, however, rain-thunderstorm is likely at isolated places in Northeastern parts of Balochistan during the 1st half of the decade.
- ❖ **Gilgit-Baltistan & Kashmir:** Mainly dry/partly cloudy weather is expected in most parts of the GB & Kashmir, however, rain-thundershower is expected at scattered places in GB & Kashmir during the decade.

3.3 Wind Forecast:

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

Advisory for Farmers:

- ❖ Farmers of wheat growing areas are advised to sow their crops in time to get the optimum yield. The best suitable time for wheat cultivation is 1st November to 20th November.
- ❖ Farmers of rainfed areas are advised to sow their Rabi crops during the period 15th October to 15th November. After this time the yield of wheat crop decreases gradually.
- ❖ Farmers of cotton crop areas are advised to prepare their field for incoming Rabi crops and complete sowing process before 15th December. After this time the yield of wheat crop decreases gradually.
- ❖ Farmers are advised to cultivate winter vegetables in time so that present soil moisture may fully be utilized.