Decadal Agromet Bulletin of Pakistan

Highlights….

❖ Light to moderate rainfall reported from the agricultural plains of the country during the decade but dry and hot weather reported from the agricultural plains of Sindh.

❖ Highest maximum temperature recorded as 46.8°C at Mirpur Khas during the last decade.

❖ Highest amount of rainfall recorded as 51.0 mm at Malamjabba during the last decade.

❖ Lower values of relative humidity reported from Punjab and higher values reported from Gilgit and Biltastan during the last decade.

❖ Higher values of ETo reported from the agricultural plains of Sindh, GB and Punjab and lower values reported from Balochistan and KP during the last decade.

❖ Day temperatures likely to raise 2-4°C in upper and central parts and 3-5°C in southern parts of the country during the decade.

❖ Normal to gusty wind pattern may prevail in most parts of the country during the next decade.

❖ Chances of rainfall/Dust-thunderstorm at isolated places of Punjab, KP, GB & Kashmir but chances of hot/dry weather in Sindh & Balochistan during the next decade.
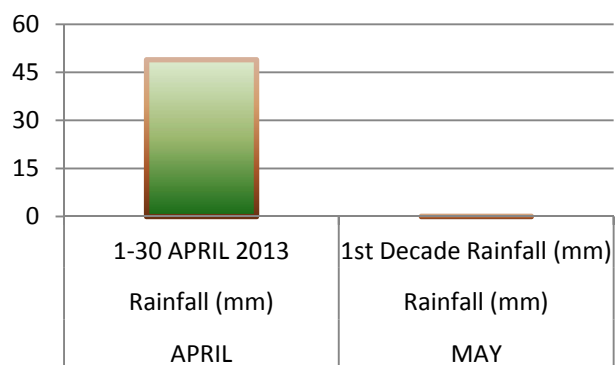
Meteorological conditions during 1st decade of May, 2013

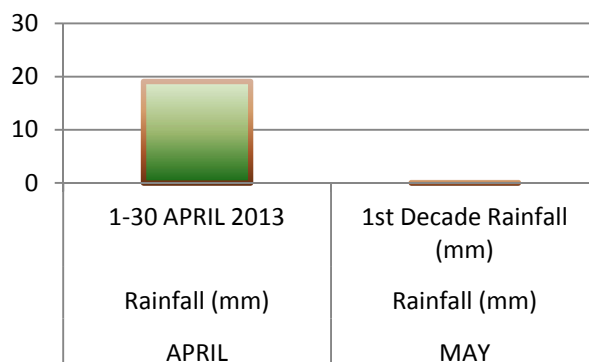| Sr. No.	Station	Precipitation (mm)			Air Temperature (°c)			Soil Temperatures (°c)						Sunshine Duration (hours)	Wind Speed (km/hr)	R.H (%)	ETo (mm/day)
		Normal	Actual	Dep	Tmin Dep	Tmax Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	TANDOJAM	0.0	0.0	0.0	-0.5	-1.1	31.7	41.9	33.4	36.3	33.2	32.1	28.7	104.8	3.9	39	4.9
2	SAKRAND ☆	0.0	0.0	0.0	-3.0	-1.2	31.4	44.5	42.7	***	33.6	33.8	31.2	121.0	8.3	32	6.7
3	ROHRI	0.0	0.0	0.0	-0.7	-1.4	34.3	48.2	42.6	35.1	33.1	30.4	29.9	106.0	5.0	26	5.4
4	USTA MUHAMMAD	0.1	0.0	-0.1	-3.7	-4.4	30.8	24.3	37.0	34.9	35.2	27.4	24.2	***	1.5	31	3.5
5	QUETTA	0.3	1.8	1.5	-2.5	-4.2	18.3	26.4	24.6	20.6	19.2	17.8	18.3	93.7	5.9	29	3.9
6	KHANPUR	0.2	1.0	0.8	-2.3	0.1	31.5	33.9	33.0	32.5	32.3	32.2	30.1	108.6	3.1	27	4.4
7	MULTAN	0.4	3.8	3.4	-2.0	-0.5	31.4	***	***	***	***	***	***	103.9	4.7	26	4.8
8	LAHORE	0.7	0.0	-0.7	-1.4	1.3	31.6	35.7	33.0	29.7	28.4	***	25.7	95.3	3.8	25	4.2
9	FAISALABAD	0.7	TR	-0.7	-0.9	0.0	30.5	34.9	32.7	30.5	29.2	27.9	25.8	97.8	5.2	25	4.7
10	SARGODHA	0.5	TR	-0.5	0.1	0.2	31.6	37.2	34.5	31.0	29.4	28.7	26.0	104.2	4.2	34	4.5
11	JHELUM	1.5	1.2	-0.3	-1.0	1.2	30.4	36.1	33.8	30.7	29.0	28.7	***	104.8	4.5	25	4.5
12	RAWALPINDI	1.0	TR	-1.0	-0.7	0.2	27.2	31.9	28.5	26.0	25.7	24.9	23.4	102.2	2.6	33	3.6
13	DI KHAN	0.1	TR	-0.1	-2.7	-0.8	28.7	***	***	***	***	***	***	100.7	3.6	31	4.1
14	PESHAWAR	0.9	TR	-0.9	-2.1	0.5	27.3	33.1	28.8	27.6	24.8	24.2	22.2	79.5	2.2	45	3.2
15	SKARDU	1.1	8.5	7.4	-0.4	-1.3	15.5	***	***	***	***	***	***	56.2	7.2	39	6.7
16	GILGIT	0.8	6.5	5.7	0.6	-4.0	18.7	***	***	***	***	***	***	50.6	1.5	47	2.4

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.

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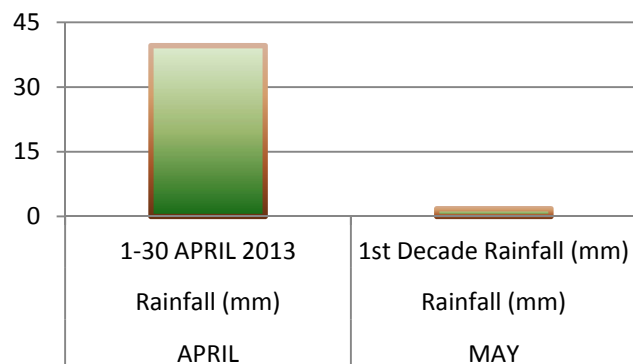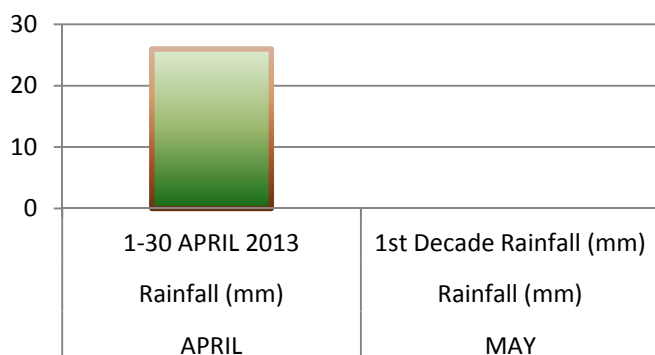## Graphs for Rainfall (mm) during April & May 2013

RAMC RAWALPINDI

APRIL	MAY
1-30 APRIL 2013 Rainfall (mm)	1st Decade Rainfall (mm) Rainfall (mm)

RAMC FAISALABAD

APRIL	MAY
1-30 APRIL 2013 Rainfall (mm)	1st Decade Rainfall (mm) Rainfall (mm)

RAMC QUETTA

APRIL	MAY
1-30 APRIL 2013 Rainfall (mm)	1st Decade Rainfall (mm) Rainfall (mm)

RAMC USTAMUHAMMAD

APRIL	MAY
1-30 APRIL 2013 Rainfall (mm)	1st Decade Rainfall (mm) Rainfall (mm)

RAMC TANDOJAM

APRIL	MAY
1-30 APRIL 2013 Rainfall (mm)	1st Decade Rainfall (mm) Rainfall (mm)

3

Past Weather (1ˢᵗ to 10ᵗʰ May, 2013):

Light to moderate rainfall reported from the agricultural plains of KP, GB & Kashmir, while light rainfall reported from the agricultural plains of Punjab & Balochistan during the decade. Dry and hot weather reported from the agricultural plains of Sindh.

1.1   Punjab

Light rainfall reported at a few places in the agricultural plains of Punjab; chief amount received at, DG Khan Murree, and Bhakkar etc. Decadal maximum temperature & decadal minimum temperature both dropped below normal by 1.2°C and 1.4°C respectively in the province. Mean values of wind speed, relative humidity and ETo were recorded as 5.7 km/hr, 32%, and 5.7 mm/day respectively.

1.2   Sindh

No rainfall reported from the agricultural plains of Sindh during the decade; Decadal maximum temperature dropped below normal by 1.8°C & Decadal minimum raised above normal by 0.6°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 5.0 km/hr, 33%, and 6.0 mm/day respectively.

1.3   Khyber Pakhtunkhwa (KP)

Light to moderate rainfall reported from most of the places in the agricultural plains of KP; chief amount received at Parachinar, Malamjabba, Lower Dir etc. In KP region; both Decadal maximum and decadal minimum dropped below normal by 0.1°C & 2.4°C in the province. Mean values of wind speed, relative humidity and ETo were recorded as 2.9 km/hr, 38%, and 3.7 mm/day respectively.
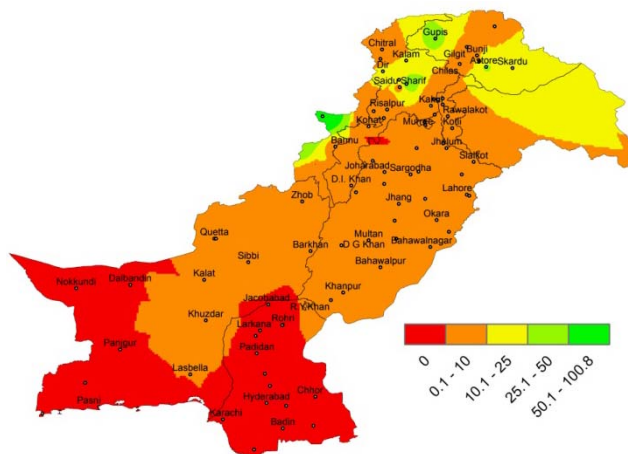
1.4   Balochistan

Light rainfall reported from only three places in the agricultural plains of Balochistan; chief amount received at Sibbi, Barkhan and Samungli (Quetta). Decadal maximum & minimum temperature both dropped below normal by 4.3°C & 3.1°C respectively, in the province. Whereas mean values of wind speed, relative humidity and ETo were 3.7 km/hr, 30%, and 3.7 mm/day respectively.
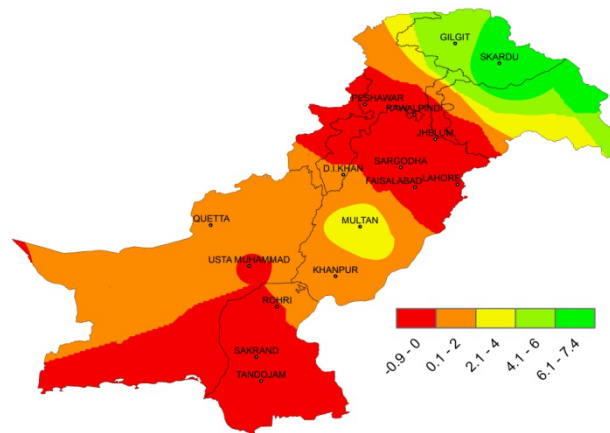
1.5 Gilgit Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall reported at a number of places in agricultural plains of GB & Kashmir; chief amount received at, Astore, Gupis, Sakrdu etc. In GB & AJK region; Decadal maximum dropped below normal by 2.7°C while decadal minimum raised above normal by 0.1°C in the province. Whereas mean values of wind speed, relative humidity and
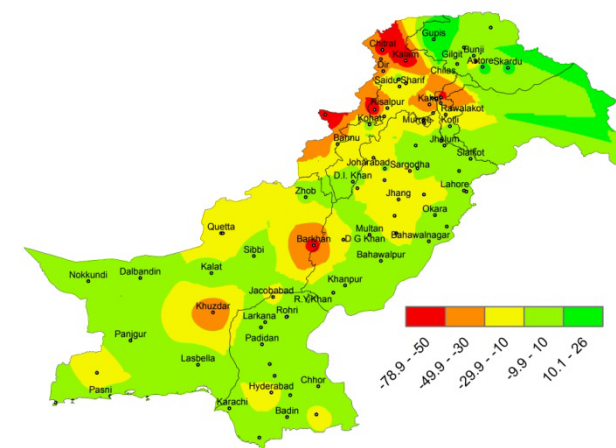
ETo were recorded 4.4 km/hr, 43%, and 4.6 mm/day respectively.

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

2.1   RAMC, Rawalpindi (Potohar region)

Rainfall reported as Trace (non measureable) during the decade, weather remained cloudy for 6 days, average relative humidity recorded as 33%. Mean night temperature was 18.9°C while day temperature recorded as 35.5°C with 102.2 hours bright sunshine duration. Wind speed recorded as 2.6 Km/hr with mean direction *westerly*. Presently one crop is grown at the station.

Wheat Chakwal 97: Good condition, Full maturity.

2.2   RAMC, Faisalabad (Central Punjab)

Rainfall reported as Trace (non measureable) during the decade, weather remained cloudy for 8 days, average relative humidity recorded as 25%. Mean night temperature was 22.0°C while day temperature recorded as 38.9°C with 97.8 hours bright sunshine duration. Wind speed recorded as 5.2 Km/hr with mean direction *north westerly.*

Sugarcane: Very Good condition, Tillering completed.
Cotton: Very Good condition, Third leaf.

2.3   RAMC, Tandojam (Lower Sindh)

No rainfall reported during the decade, weather remained cloudy for 1 day during the decade, average relative humidity recorded as 39%. Mean night temperature was 23.3°C while day temperature recorded as 40.0°C with 104.8 hours bright sunshine duration. Wind speed recorded as 3.9 km/hr with mean direction *south westerly.*
Cotton:BT 3701 Good condition , Emergence stage
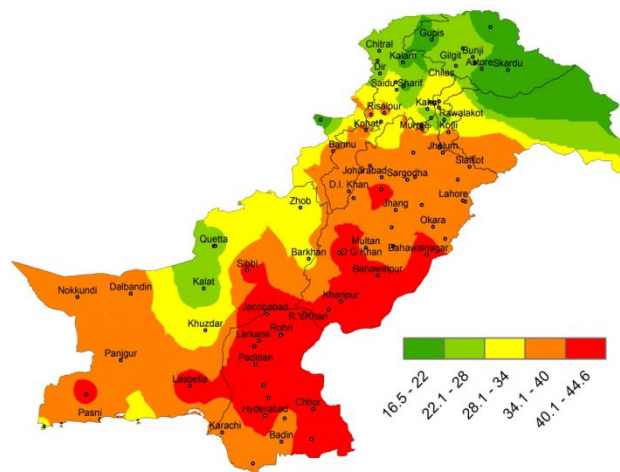
2.4   RAMC, Quetta (Northern Balochistan)

Rainfall reported as 1.8 mm during the decade, weather remained cloudy for 10 days, average relative humidity recorded as 29%. Mean night temperature was 10.9°C while day temperature recorded as 25.6°C with 93.7 hours bright sunshine duration and wind speed recorded as 5.9 Km/hr with mean direction north *westerly*.

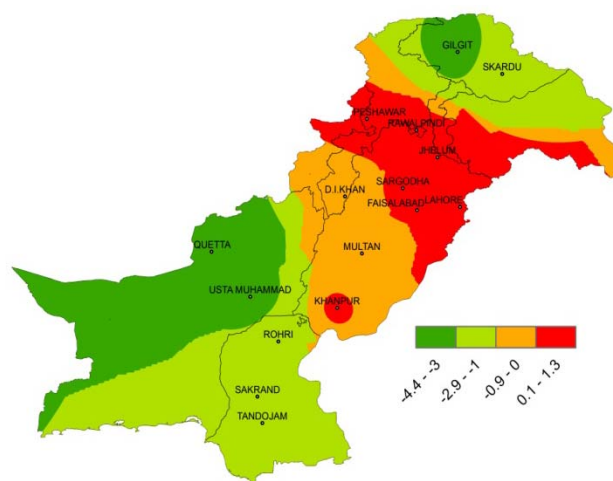Wheat (Local white): Good condition, Wax maturity stage.

2.5   RAMC, Usta Muhammad (Eastern Balochistan)

No rainfall reported during the decade, weather remained cloudy for 3 days, average relative humidity recorded as 31%. Mean night temperature was 21.9°C while day temperature recorded as 39.7°C with wind speed recorded as 1.5 Km/hr with mean direction *westerly*.
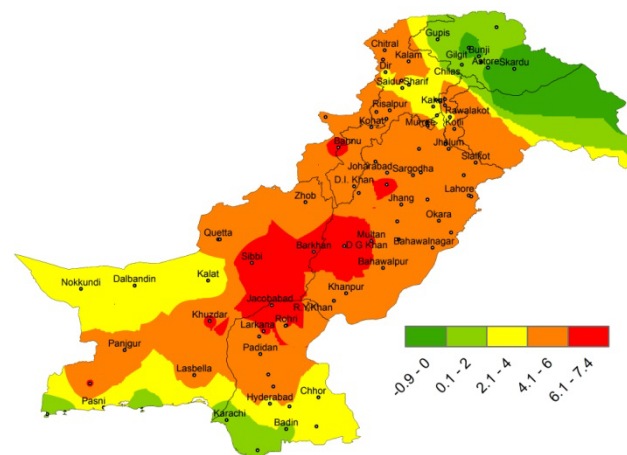Wheat: Harvesting and threshing going on.

(a)   Actual max-temp

(b)   Departure of max-temp from Normal

(c)   Departure of max-te   mp from Previous Decade

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

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

2.6   Jhelum

Rainfall reported as 1.2 mm during the decade, weather remained cloudy for 9 days and average relative humidity recorded as 25%. Mean night temperature was 21.7°C while day temperature recorded as 39.1°C with 104.8 hours bright sunshine duration. Wind speed recorded 4.5 Km/hr with mean direction *north westerly*.

2.7   Lahore

No rainfall reported during the decade, weather remained cloudy for 6 days, average relative humidity recorded as 25%. Mean night temperature was 23.8°C while day temperature recorded as 39.3°C with 95.3 hours bright sunshine duration. Wind speed recorded as 3.8 Km/hr with mean direction *north westerly*.

2.8   Sargodha

Rainfall reported as Trace (non measureable) during the decade, weather remained cloudy for 8 days during the decade, average relative humidity recorded as 34%. Mean night temperature was 23.8°C while day temperature recorded as 39.2°C with 104.2 hours bright sunshine duration. Wind speed recorded as 4.2 Km/hr with mean direction *north easterly*.

2.9   Multan

Rainfall reported as 3.8 mm during the decade, weather remained cloudy for 8 days, average relative humidity recorded as 26%. Mean night temperature was 22.9°C while day temperature recorded as 39.8°C with 103.9 hours bright sunshine duration. Wind speed recorded as 4.7 Km/hr with variable direction.

2.10   Khanpur

Rainfall reported as 1.0 mm during the decade, weather remained cloudy for 6 days during the decade, average relative humidity recorded as 27%. Mean night temperature was 22.3°C while day temperature recorded as 40.6°C with 108.6 hours bright sunshine duration. Wind speed recorded as 3.1 Km/hr with mean direction *westerly*.

2.11   Rohri

No rainfall reported during the decade, weather remained cloudy for 6 days, average relative humidity recorded as 26%. Mean night temperature was 27.0°C while day temperature recorded as 41.6°C with 106.0 hours bright

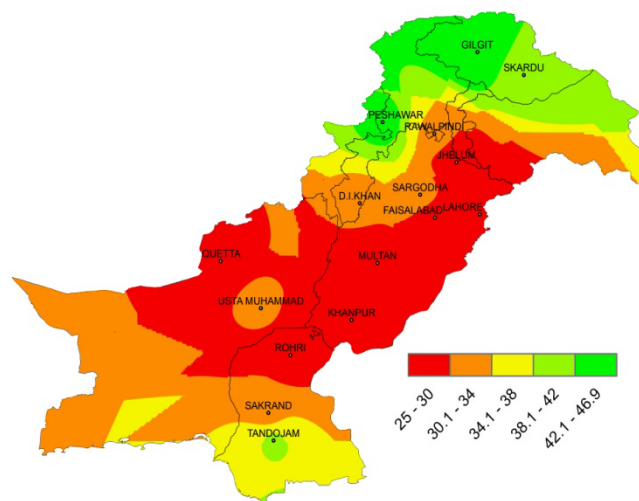sunshine duration. Wind speed recorded as 5.0 Km/hr with mean direction *north easterly*.

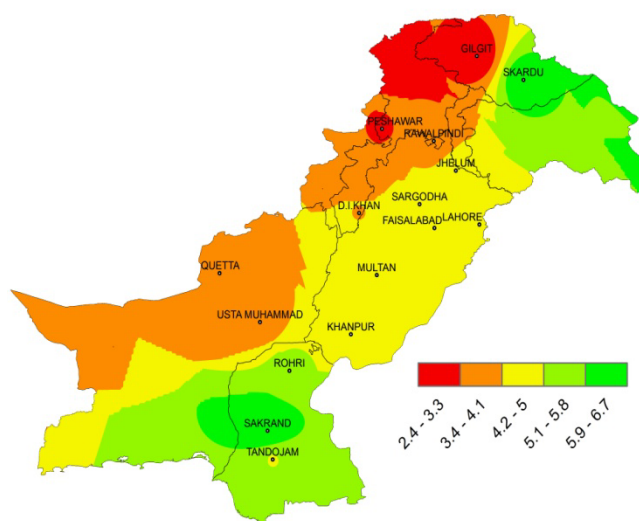Figure.3: Relative Humidity in percentage

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

2.12   Sakrand

No rainfall reported during the decade, weather remained cloudy for 5 days during the decade, average relative humidity recorded as 32%. Mean night temperature was 21.4°C while day temperature recorded as 41.3°C with 121.0 hours bright sunshine duration. Wind speed recorded as 4.5 Km/hr with mean direction *south easterly*.

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2.13   Peshawar

Rainfall reported as Trace (non measureable) during the decade, weather remained cloudy for 9 days, average relative humidity recorded as 45%. Mean night temperature was 19.3°C while day temperature recorded as 35.3°C with 79.5 hours bright sunshine duration. Wind speed recorded as 2.2 Km/hr with mean direction *north westerly*.

2.14   D.I. Khan

Rainfall reported as Trace (non measureable) during the decade weather remained cloudy for 5 days, average relative humidity recorded as 31%. Mean night temperature was 19.8°C while day temperature recorded as 37.6°C with 100.7 hours bright sunshine duration. Wind speed recorded as 3.6 Km/hr with mean direction *northerly*.

2.15   Gilgit

Rainfall reported as 6.5 mm during the decade. weather remained cloudy for 10days and average relative humidity recorded as 47%. Mean night temperature was 11.6°C while day temperature recorded as 25.8°C with 50.6 hours bright sunshine. Wind speed recorded as 1.5 Km/hr with variable direction.

2.16   Skardu

Rainfall reported as 8.5 mm during the decade, weather remained cloudy for 6 days, average relative humidity recorded as 32%. Mean night temperature was 8.3°C while day temperature recorded as 22.7°C with 56.2 hours bright sunshine duration with mean speed 7.2 Km/hr with *variable* direction .

3.   Ten days Weather advisory for Farmers 11ᵗʰ to 20ᵗʰ May, 2013)

3.1 Temperature Forecast:
Day temperatures likely to raise 2-4°C in upper and central parts and 3-5°C in southern parts of the country during the decade.

3.2 Rain Forecast:

❖ **Punjab**: Mainly hot/dry weather is expected in most parts of the province during the decade. However, Rainfall/Thunderstorm is expected at isolated places in upper & central parts during 11ᵗʰ / 12ᵗʰ May.
❖ **Khyber Pakhtunkhwa**: Mainly dry weather is expected in most parts of the province. However, Rainfall/Thunderstorm is expected at isolated places during 1ˢᵗ half of the decade.
❖ **Sindh** : Mainly hot/dry weather is expected in most parts of the province during the decade.
❖ **Balochistan:** Mainly hot/dry weather is expected in most parts of the province during the decade.
❖ **Gilgit-Baltistan & Kashmir:** Mainly dry weather is expected in most parts of the province. However, Rainfall/Thunderstorm is expected at scattered places during 1ˢᵗ half of the decade.

3.3 Wind Forecast:

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

3.4 Advisory for Farmers:

❖ Farmers of upper & central parts are advised to complete harvesting process at earliest possible and safe the crop and fodder to avoid any loss.
❖ During the harvesting process, farmers are advised to be aware about the weather conditions and keep listening & watching carefully the weather advisories issued through radio and televisions.
❖ During the rainy days, stop the harvested crop and safe the crop and fodder to avoid any loss.
❖ Farmers of lower half of the country are advised to prepare the fields for the coming Kharif crops in time.
❖ Farmers of lower half including Southern Punjab, Sindh and Balochistan should early complete sowing of cotton, so that to fully utilize present soil moisture.

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