

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported in the agricultural plains of the country during the last decade.
- ❖ Highest amount of rainfall reported as 147.0mm at Bahawalpur during the last decade.
- ❖ Highest maximum temperature recorded 49.5°C at Turbat during the last decade.
- ❖ Light to moderate rainfall is expected in the agricultural plains of Punjab, K.P, Balochistan, Gilgit Baltistan & Kashmir and light rainfall is expected in Sindh during the next decade.
- ❖ Farmers of Southern Punjab & Sindh are advised to prepare land for cotton in time so that best grains conditions may be fully utilized during the whole crop life.
- ❖ Farmers of upper half and northwest Balochistan should be careful about irrigation and spraying chemicals on the crops during or before expected rains during the decade.
- ❖ Due to prevailing dry weather and rising day time temperature, cotton and sugarcane farmers should irrigate the crops as per requirement.
- ❖ Pest/viral attacks and more weeds growth are expected after recent rains on sugarcane crop. Farmers are therefore advised to take in time precautionary measures in this regard.

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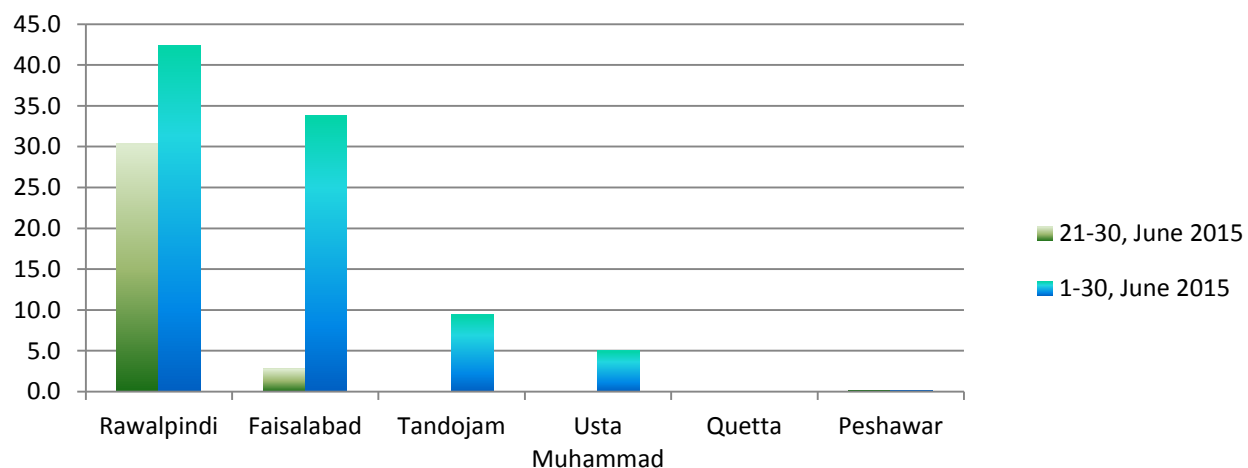
Meteorological conditions during 3rd decade of June, 2015

Sr. No.	Station	Precipitation (mm)			Air Temperature (°C)			Soil Temperatures (°C)						R.H (%)	Sunshine Duration(hours)	Wind Speed (km/hr)	ET _o (mm/day)
		Normal	Actual	Dep	T _{max} Dep	T _{min} Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	5.4	30.4	25.0	-0.6	-1.2	29.9	32.1	31.0	29.9	30.1	29.9	28.1	51	82.2	5.6	6.1
2	FAISALABAD	1.9	2.8	0.9	-1.5	-1.3	31.6	39.8	38.2	36.0	34.1	33.6	32.5	52	85.6	4.0	5.8
3	JHELUM	4.2	3.6	-0.6	-1.0	-2.1	31.2	37.5	35.6	33.6	32.5	32.3	***	53	84.1	6.5	6.4
4	LAHORE	2.2	12.1	9.9	-0.6	-2.0	31.6	35.5	34.9	32.4	31.1	***	29.4	56	82.8	3.6	5.6
5	SARGODHA	3.3	12.3	9.0	-2.9	-2.4	31.5	38.2	36.3	33.4	32.4	32.4	30.1	56	80.1	4.3	5.7
6	MULTAN	1.0	29.5	28.5	-3.2	-2.0	32.9	***	***	***	***	***	***	53	68.1	6.6	6.1
7	KHANPUR	0.5	0.7	0.2	-1.8	-0.7	34.0	***	39.1	38.8	38.7	38.5	35.8	56	75.7	5.5	6.2
8	TANDOJAM	0.7	0.0	-0.7	1.0	0.6	33.4	45.1	42.9	37.7	36.4	35.8	***	60	80.0	12.5	7.5
9	SAKRAND ☆	1.7	0.0	-1.7	-0.2	-2.4	32.5	50.5	43.5	***	***	***	36.5	63	97.5	5.0	6.5
10	ROHRI	0.0	0.0	0.0	-0.4	0.8	36.1	47.8	43.7	39.3	38.2	35.7	35.1	48	101.0	5.7	7.3
11	D I KHAN	0.8	24.5	23.7	-3.1	-2.5	30.5	***	***	***	***	***	***	58	78.9	***	6.2
12	PESHAWAR	1.3	0.1	-1.2	-1.0	-1.9	31.9	39.2	34.8	34.0	***	***	***	51	75.0	4.1	5.7
13	USTA MUHAMMAD	1.8	0.0	-1.8	4.2	-0.9	37.7	40.3	38.8	41.6	39.4	***	36.3	22	***	***	9.5
14	QUETTA	0.0	0.0	0.0	-1.0	1.7	28.5	39.6	36.0	30.7	29.8	27.9	27.8	27	94.1	6.6	6.8
15	SKARDU	0.4	25.7	25.3	-6.6	-0.7	18.8	***	***	***	***	***	***	51	54.1	5.9	4.3
16	GILGIT	0.7	9.0	8.3	-4.6	-0.1	22.8	***	***	***	***	***	***	49	63.1	3.2	4.7

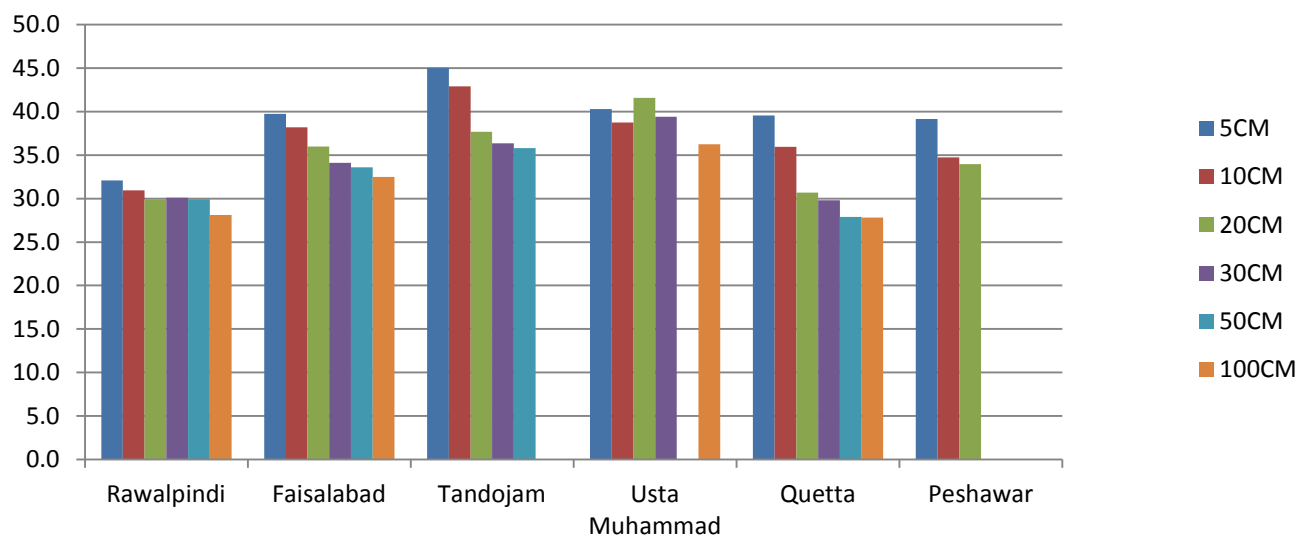
Table-1: Meteorological parameters for selected station of Pakistan. "Dep" in the table stands for difference from climatic normal, i.e. actual value minus normal. And "% Dep" is calculated by the formula; *Dep divided by Normal multiplied by 100*. T_{min} & T_{max} stands for minimum and maximum temperatures 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 of RAMC's during June, 2015

Precipitation(mm)



Soil Temperature(°C)



Past Weather (21st to 30th June, 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 Bahawalpur, Murree & Lahore. Decadal maximum & minimum temperature both dropped below normal by 1.7°C & 1.7°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 54%, 79.8hrs, 5.2km/hr and 6.0mm/day respectively.

1.2 Sindh

Light to moderate rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Dadu, Chorr & Padidan. Decadal maximum & minimum temperature both dropped below normal by 0.1°C & 0.3°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 57%, 92.8hrs, 7.7km/hr and 7.1mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

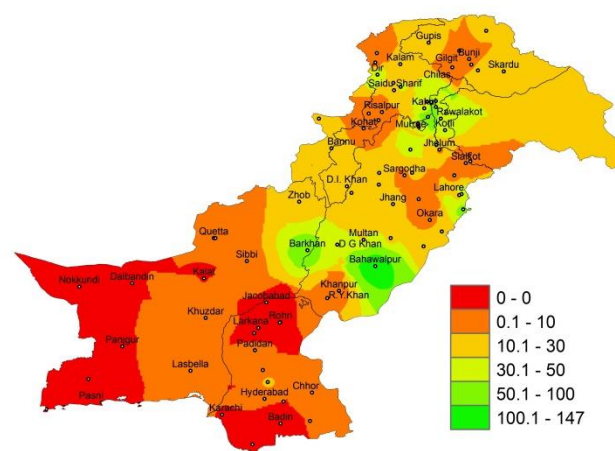
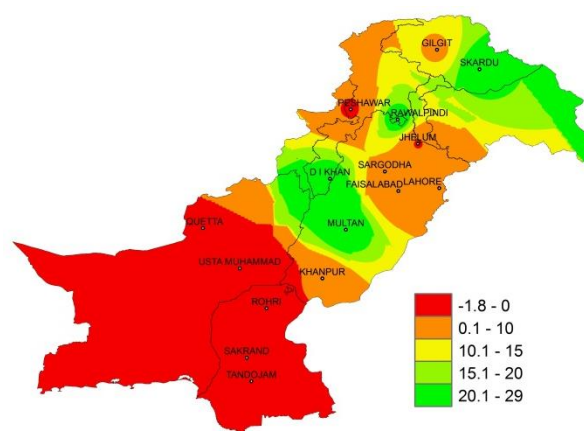
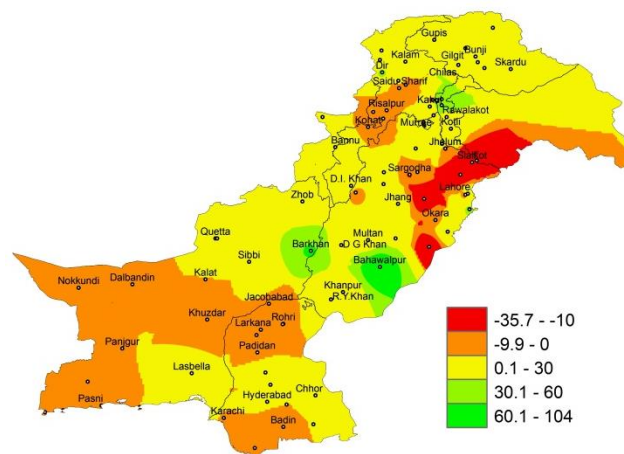
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Dir, Malam Jabba & Kakul. Decadal maximum & minimum temperature both dropped below normal by 2.2°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 55, 77.0hrs, 4.1km/hr and 6.0mm/day respectively.

1.4 Balochistan

Light to moderate rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Barkhan, Zhob & Lasbella. Decadal maximum raised & minimum temperature both raised above normal by 1.6°C & 0.4°C respectively, in the province. Whereas mean values relative humidity, sunshine hour, wind speed & ETo were recorded as 25%, 94.1hrs, 6.6km/hr and 8.2mm/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 Muzaffargarh, Garhi Doppata & Rawalakot. Decadal maximum & minimum temperature both dropped below normal by 5.6°C & 0.4°C respectively, in the province. Relative humidity, sunshine hour, wind speed & ETo were recorded as 50%, 58.6hrs, 4.6km/hr and 4.5mm/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 (21st to 30th June, 2015)

2.1 RAMC, Rawalpindi (Potohar region)

Rainfall reported as 30.4mm during the decade however weather remained cloudy for 08day. Average relative humidity recorded as 51%. Mean day temperature was 36.8°C while night temperature recorded as 23.0°C with 82.2hours bright sunshine duration. Wind speed recorded as 5.6km/hr with mean wind direction *westerly*.

2.2 RAMC, Faisalabad (Central Punjab)

Rainfall reported as 2.8mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 52%. Mean day temperature was 37.5°C while night temperature recorded as 25.7°C with 85.6hours bright sunshine duration. Wind speed recorded as 4.0km/hr with mean wind direction *south westerly*.

Cotton: Excellent condition, budding almost completed.

2.3 RAMC, Tandojam (Lower Sindh)

Dry weather reported during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 60%. Mean day temperature was 39.2°C while night temperature recorded as 27.5°C with 80.0hours bright sunshine duration. Wind speed recorded as 12.9km/hr with mean wind direction *southerly*.

Cotton (Sindh-I): Good condition, budding Stage.

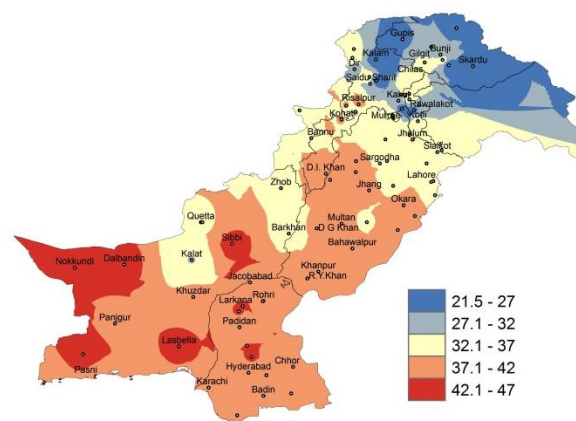
2.4 RAMC, Usta Muhammad (Eastern Balochistan)

Dry weather reported during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 22%. Mean day temperature was 47.2°C while night temperature recorded as 28.1°C.

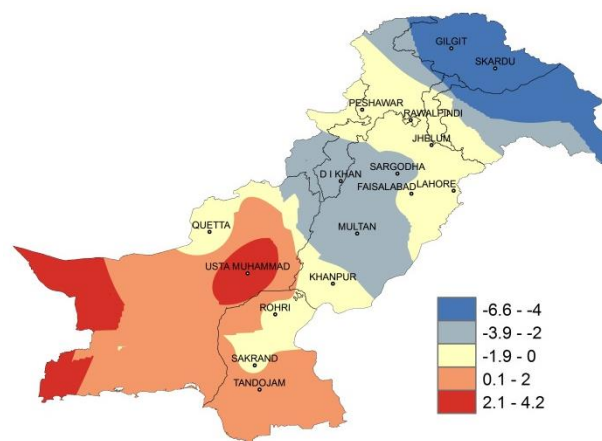
Rice (Paniri): Good Condition, Germination stage.

2.5 RAMC, Quetta (Northern Balochistan)

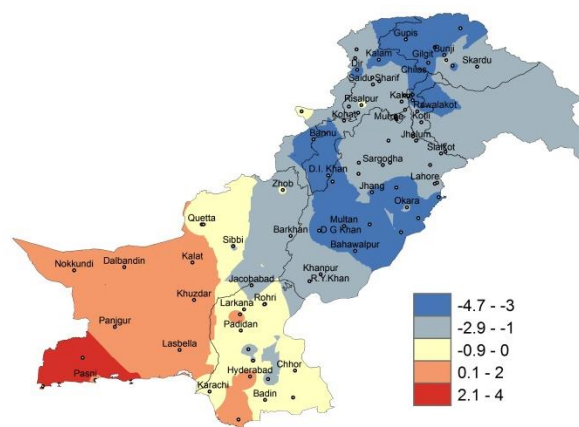
Dry weather reported during the decade, however weather remained cloudy for 10days. Average relative humidity recorded as 27%. Mean day temperature was 34.8°C while night temperature recorded as 22.2°C with 94.1hours bright sunshine duration and wind speed recorded as 6.6km/hr with mean wind direction *north westerly*.



I. Actual max-temp



II. Departure of max-temp from Normal



III. 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 (21st to 30th June, 2015)

2.6 Jhelum

Rainfall reported as 3.6mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 53%. Mean day temperature was 37.4°C while night temperature recorded as 24.9°C with 84.1hours bright sunshine duration and wind speed recorded as 6.5km/hr with mean wind direction *variable*.

2.7 Lahore

Rainfall reported as 12.1mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 56%. Mean day temperature was 36.7°C while night temperature recorded as 26.4°C with 82.8hours bright sunshine duration. Wind speed recorded as 3.6km/hr with mean wind direction *north westerly*.

2.8 Sargodha

Rainfall reported as 12.3mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 56%. Mean day temperature was 37.3°C while night temperature recorded as 25.6°C with 80.1hours bright sunshine duration. Wind speed recorded as 4.3km/h with mean wind direction *easterly*.

2.9 Multan

Rainfall reported as 29.5mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 53%. Mean day temperature was 37.8°C while night temperature recorded as 27.9°C with 68.1hours bright sunshine duration. Wind speed recorded 6.6km/hr with mean wind direction *south westerly*.

2.10 Khanpur

Rainfall reported as 0.7mm during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 56%. Mean day temperature was 39.7°C while night temperature recorded as 28.3°C with 75.7hours bright sunshine duration. Wind speed recorded 5.5km/hr with mean wind direction *south westerly*.

2.11 Sakrand

Dry weather reported during the decade however weather remains cloudy for 03days. Average relative humidity recorded as 63%. Mean day temperature was 40.2°C while night temperature recorded as 24.8°C with 97.5hours bright sunshine duration. Wind speed recorded 5.0km/hr with wind direction *south easterly*.

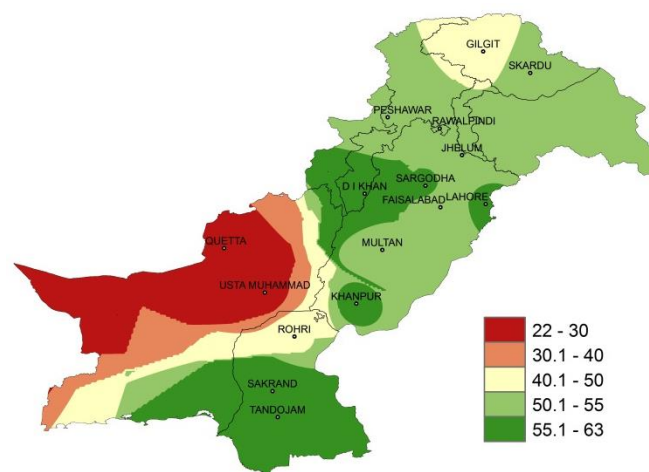


Figure.3: Relative Humidity in percentage (%)

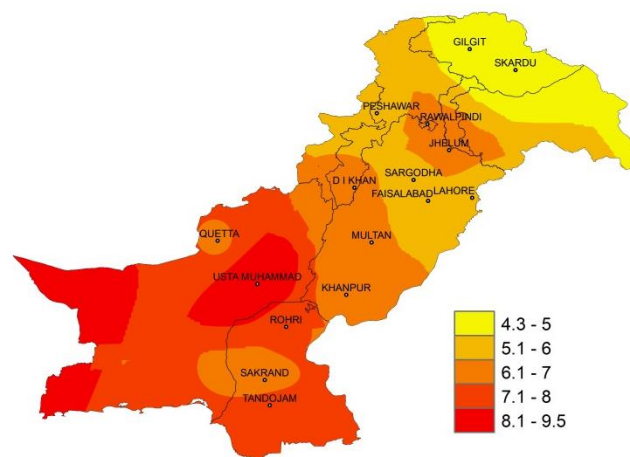


Figure.4: Reference Crop Evapotranspiration "ETo" in mm/day

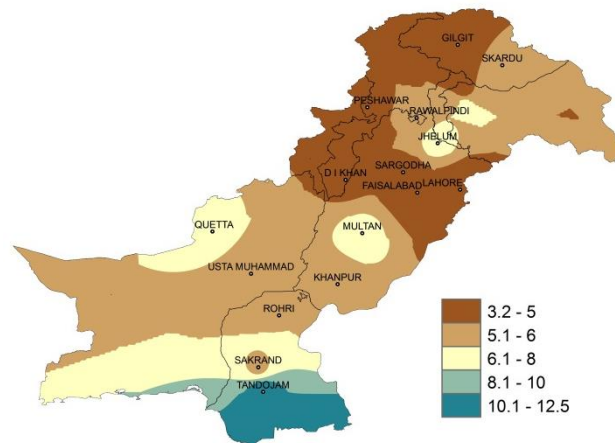


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Dry weather reported during the decade; however weather remained cloudy for 03day. Average relative humidity recorded as 48%. Mean day temperature was 41.5°C while night temperature recorded as 30.6°C with 101.0hours bright sunshine duration. Wind speed recorded as 5.7km/hr with mean wind direction *south westerly*.

2.13 D.I. Khan

Rainfall reported as 24.5mm during the decade; however weather remained cloudy for 06days. Average relative humidity recorded as 58%. Mean day temperature was 37.3°C while night temperature recorded as 23.6°C with 78.9hours bright sunshine duration.

2.14 Peshawar

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 51%. Mean day temperature was 38.5°C while night temperature recorded as 25.2°C with 75.0hours bright sunshine duration. Wind speed recorded as 4.1km/hr with mean wind direction *south easterly*.

2.15 Skardu

Rainfall reported 25.7mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 51%. Mean day temperature was 24.4°C while night temperature recorded as 13.1°C with 54.1hours bright sunshine duration. Wind speed recorded as 5.9km/hr with mean wind direction *south westerly*.

2.16 Gilgit

Rainfall reported as 9.0mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 49%. Mean day temperature was 30.0°C while night temperature recorded as 15.5°C with 63.1hours bright sunshine duration. Wind speed recorded as 3.2km/hr with mean wind direction *easterly*.

3. Ten Days Weather Advisory for Farmers (1st to 10th July, 2015)

3.1 Temperature Forecast

Temperatures are likely to be slightly above normal in most of the agricultural plains 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 while during dust/thunderstorm it will gust up to 30-50 knots.

3.3 Rain Forecast

- ❖ **Punjab:** Mainly hot and dry weather is expected in most parts of the Punjab however light to moderate rainfall is expected in the province including Rawalpindi, Gujranwala, Sargodha and Lahore division from 1st to 2nd and from 6th to 8th rainfall expected in Rawalpindi, Gujranwala, Sargodha, Faisalabad, Sahiwal and Lahore division.
- ❖ **Khyber Pakhtunkhwa:** Mainly dry weather is expected in the province. However light to moderate rainfall is expected at few place including Hazara, Malakand, Peshawar Division from 1st to 2nd and from 6th to 8th rainfall expected in Hazara, Malakand, Peshawar and Kohat Division.
- ❖ **Sindh:** Mostly hot and dry weather is expected in most parts of the Sindh.
- ❖ **Balochistan:** Mostly hot and dry weather is expected in most parts of the Balochistan however light to moderate rain is expected at north-west Balochistan including Kalat, Khuzdar, Zhob and Quetta from 1st to 3rd and from 7th to 9th of the decade.
- ❖ **Gilgit Baltistan:** Rain-thunderstorm is expected in most parts of the G.B during the decade.
- ❖ **Kashmir:** Mainly dry weather is expected in most of the parts of the Kashmir however rain-thunderstorm is expected at Muzaffarabad, Kotli & Rawalakot during this decade.

3.4 Advisory for Farmers

- ❖ Farmers of Southern Punjab & Sindh are advised to prepare land for cotton in time so that best grains conditions may be fully utilized during the whole crop life.
- ❖ Farmers of upper half and northwest Balochistan should be careful about irrigation and spraying chemicals on the crops during or before expected rains during the decade.
- ❖ Due to prevailing dry weather and rising day time temperature, cotton and sugarcane farmers should irrigate the crops as per requirement.
- ❖ Pest/viral attacks and more weeds growth are expected after recent rains on sugarcane crop. Farmers are therefore advised to take in time precautionary measures in this regard.
- ❖ Farmers of rainfed areas in upper parts are advised to cultivate maize crop due to recent rains. Farmers obtaining crop water through tube wells are also advised to schedule the irrigation according to the expected weather mentioned during the decade
- ❖ Farmers are advised to control further weeds growth at the present growing stages to stop any negative impact

over the crops. Weeds removing practices should be started soon after expected rains in the mentioned areas.

- ❖ Due to onset of monsoon rains, farmers are advised to take in time precautionary measures to protect their crops, livestock and other property from any expected heavy rain.