

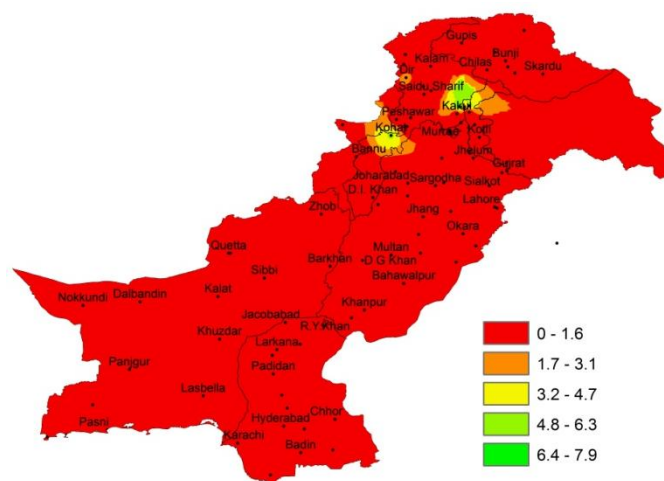
Weekly Weather and Crop Bulletin for Pakistan

**NATIONAL AGROMET CENTRE
PAKISTAN METEOROLOGICAL
DEPARTMENT SECTOR H-8/2,
ISLAMABAD.**

Phone: +92-51-9250299

Email: dirnamc@yahoo.com

**Rainfall Distribution (mm) during the
Previous Week (from 17th to 23rd Oct, 2016)**



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Highlights of Past Weather (from 17th to 23rd October, 2016)

Slightly above normal day time temperature was reported in most parts of the country during the week.

Province wise distribution of rainfall reported as follows:

- Light rainfall reported at isolated places in Punjab.
- Light rainfall reported at many places in Gilgit-Baltistan and Khyber Pakhtunkhwa.
- Dry weather was reported in Sindh and Balochistan.

Patron-in-Chief: Dr. Ghulam Rasul (Director General)

Editor-in-Chief: Dr. Azmat Hayat Khan (Director)

Editor: Asma Jawad Hashmi (Deputy Director)

Past Weather of Provinces (from 17th to 23rd October, 2016)

Punjab

Light rainfall reported at isolated places in Punjab during the week. Weekly maximum and minimum temperatures recorded as 33.7°C & 17.5°C respectively. For the present season on average 144.1 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 60% and wind speed in the morning/evening recorded as 0.7/1.7 Knots. During the previous week the highest amount of rainfall reported at Kamra 1.0 mm and highest maximum temperature was recorded as 38.0°C at Noor pur thal.

Sindh

Dry weather was reported in Sindh during the week. Weekly maximum and minimum temperatures recorded as 36.0°C & 21.0°C respectively. For the present season, on average 164.1 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 63% and wind speed in the morning/evening recorded as 2.1/4.1 Knots. During the previous week the highest maximum temperature recorded as 38.5°C at Sukhar.

Khyber Pakhtunkhwa

Light rainfall reported at many places in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 28.6°C & 12.6°C respectively. For the present season on average 109.6 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 53% and wind speed in the morning/evening recorded as 0.4/2.6 Knots. During the previous week the highest amount of rainfall reported at Balakot 8.0 mm and highest maximum temperature recorded as 35.5°C at D.I.Khan.

Balochistan

Dry weather was reported in Balochistan during the week. Weekly maximum and minimum temperatures recorded as 32.1°C & 15.9°C respectively. For the present season on average 137.6 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 46% and wind speed in the morning/evening recorded as 1.4/5.3 Knots. During the previous week the highest maximum temperature was recorded as 41.5°C at Turbat.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light rainfall reported at many places in Gilgit-Baltistan & Kashmir regions during the week. Weekly maximum and minimum temperatures recorded as 25.4°C & 9.7°C respectively. For the present season on average 90.5 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 48% and wind speed in the morning/evening recorded as 0.4/1.6 Knots. During the previous week the highest amount of rainfall reported at Bagrote 1.3mm and highest maximum temperature recorded as 32.8°C at Garhi Dopatta.

**Past Weather for Major Agricultural Plains
(from 17th to 23rd October, 2016)****Rawalpindi (Potohar region)**

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 0.0/0.0 Oktas while, average relative humidity observed as 60.3%. Mean day time temperature recorded as 32.1°C & for the present season 118.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/0.9 Knots.

Faisalabad (Central Punjab)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.0/0.0 Oktas while, average relative humidity observed as 58%. Mean day time temperature recorded as 34.2°C & for the present season 149.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/0.6 Knots.

Tandojam (Lower Sindh)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.6/0.0 Oktas while, average relative humidity observed as 63%. Mean day time temperature recorded as 36.5°C & for the present season 160.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/2.3 Knots.

Quetta (Northern Baluchistan)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.0/0.0 Oktas while, average relative humidity observed as 29%. Mean day time temperature recorded as 29.0°C & for the present season 94.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 3.3/7.1 Knots.

Usta Muhammad (Eastern Balochistan)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded 0.0/0.0 Oktas while, average relative humidity observed as 82%. Mean day time temperature recorded as 35.6°C & for the present season 154.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/3.1 Knots.

**Past Weather for Sub-Regional Agricultural
Plains (from 17th to 23rd October, 2016)****Multan**

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.0/0.0 Oktas while, average relative humidity observed as 55%. Mean day time temperature recorded as 34.6°C & for the present season 156.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/4.3 Knots.

Lahore

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 0.0/0.0 Oktas while, average relative humidity observed as 55%. Mean day time temperature recorded as 33.8°C & for the present season 150.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.7 Knots.

Zhob

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.0/0.0 Oktas while, average relative humidity observed as 36%. Mean day time temperature recorded as 28.8°C & for the present season 111.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.9/5.0 Knots.

D.I. Khan

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 0.0/0.0 Oktas while, average relative humidity observed as 64%. Mean day time temperature recorded as 34.4°C & for the present season 149.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1.4 Knots.

Peshawar

Rainfall reported as 1.0mm during the week; cloudiness in the morning/evening recorded as 0.3/2.0 Oktas while, average relative humidity observed as 64%. Mean day time temperature recorded as 32.0°C & for the present season 140.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.6 Knots.

Murree

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 0.1/1.0 Oktas while, average relative humidity observed as 51%. Mean day time temperature recorded as 21.0°C & for the present season 76.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.3/0.6 Knots.

Kalam

Rainfall reported as 1.0mm during the week; cloudiness in the morning/evening recorded as 0.7/3.9 Oktas while, average relative humidity observed as 55%. Mean day time temperature recorded as 21.4°C & for the present season 52.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.3 Knots.

Gilgit

Rainfall reported as 0.1mm during the week; cloudiness in the morning/evening recorded as 2.6/5.3 Oktas while, average relative humidity observed as 61%. Mean day time temperature recorded as 25.8°C & for the present season 80.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 Knots.

Skardu

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 2.1/4.6 Oktas while, average relative humidity observed as 44%. Mean day time temperature recorded as 21.1°C & for the present season 50.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.7/2.9 Knots.

**Crop Situation for Major Agricultural Plains
(Based on data from Regional Agromet Centres)****Potohar Region (Rawalpindi)**

There is presently one crop (irrigated condition) grown in the fields of RAMC Rawalpindi.

Maize: Good condition at *full maturity* stage.

Central Punjab (Faisalabad)

There is presently one crop (irrigated condition) grown in the fields of RAMC Faisalabad.

Cotton: Very good condition *Maturity* stage completed.

Lower Sindh (Tandojam)

There is presently one crop (irrigated condition) grown in the fields of RAMC Tandojam.

Cotton: the crop is harvested.

Northern Balochistan (Quetta)

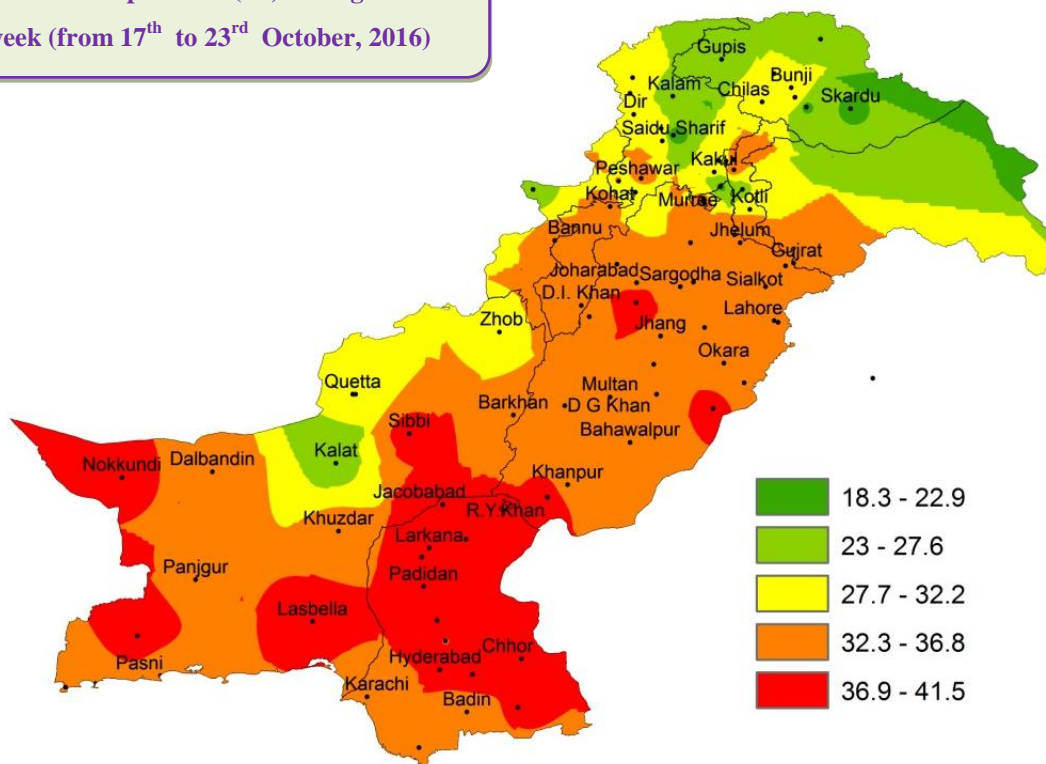
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Balochistan (Usta Muhammad)

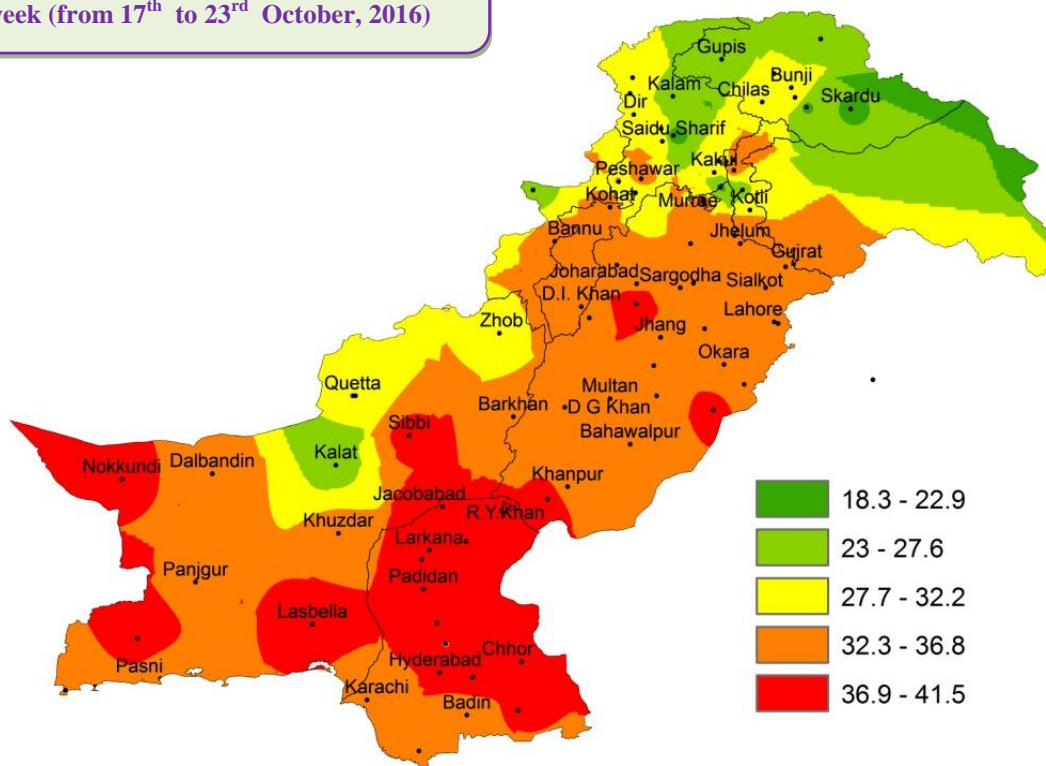
There is presently one crop (irrigated condition) grown in the fields of RAMC Usta Muhammad.

Rice: Good condition at *Wax maturity* stage.

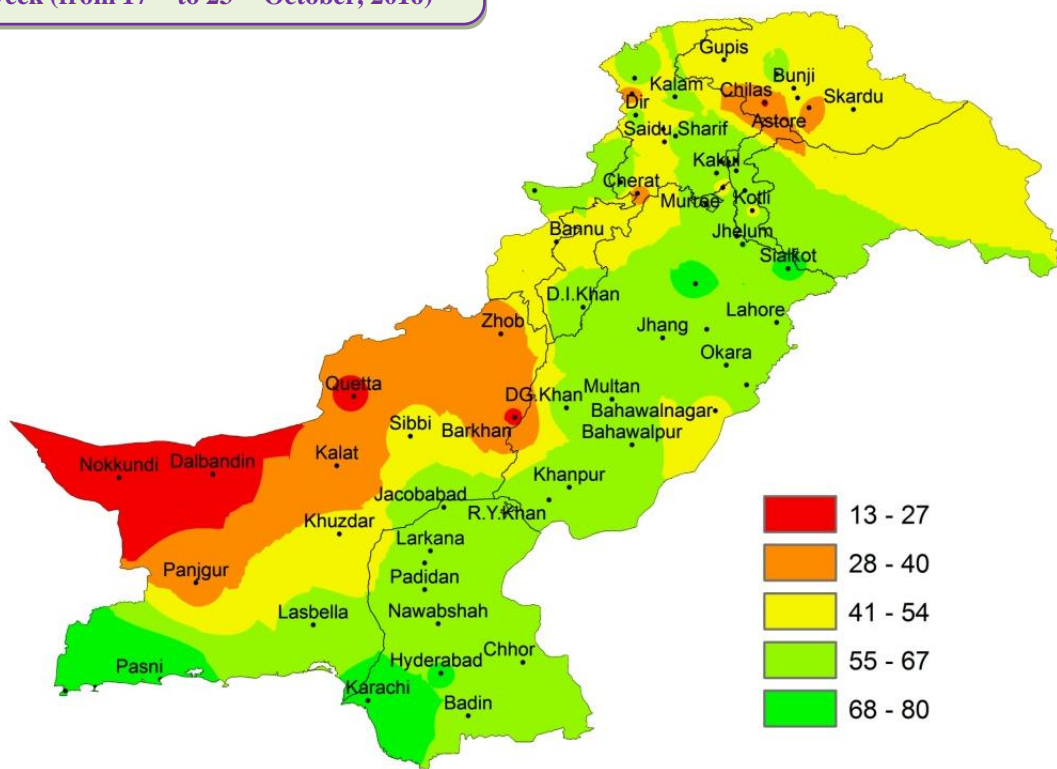
Mean Maximum Temperature (°C) during the Previous week (from 17th to 23rd October, 2016)



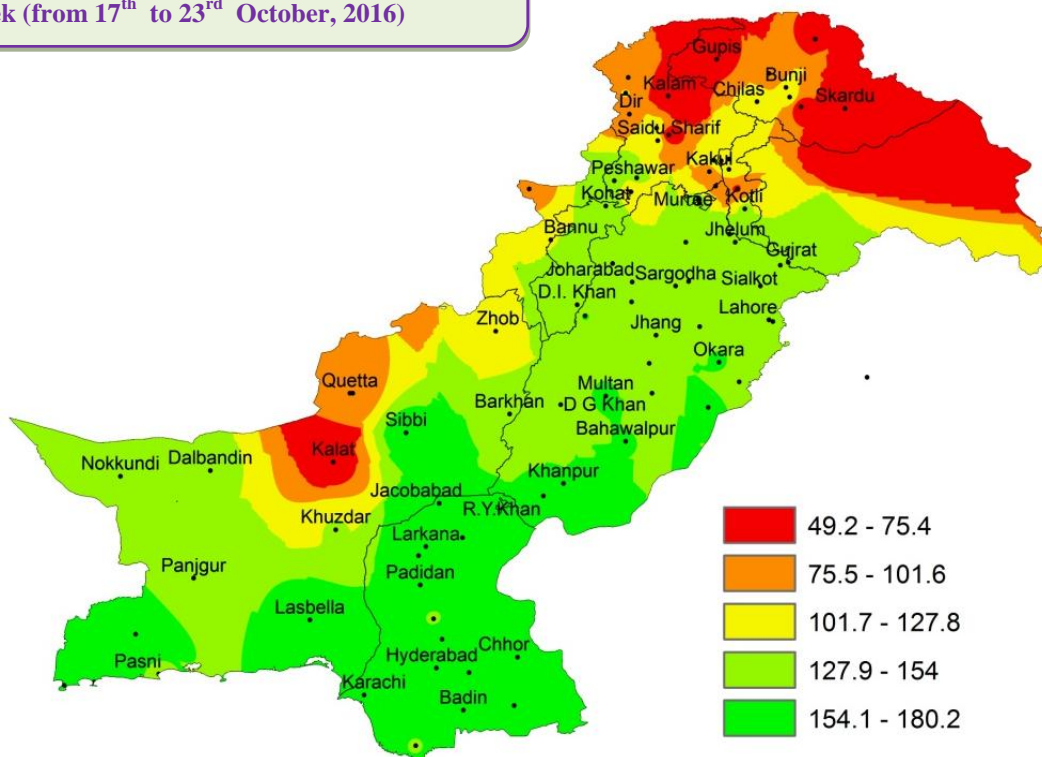
Highest Maximum Temperature (°C) during the Previous week (from 17th to 23rd October, 2016)



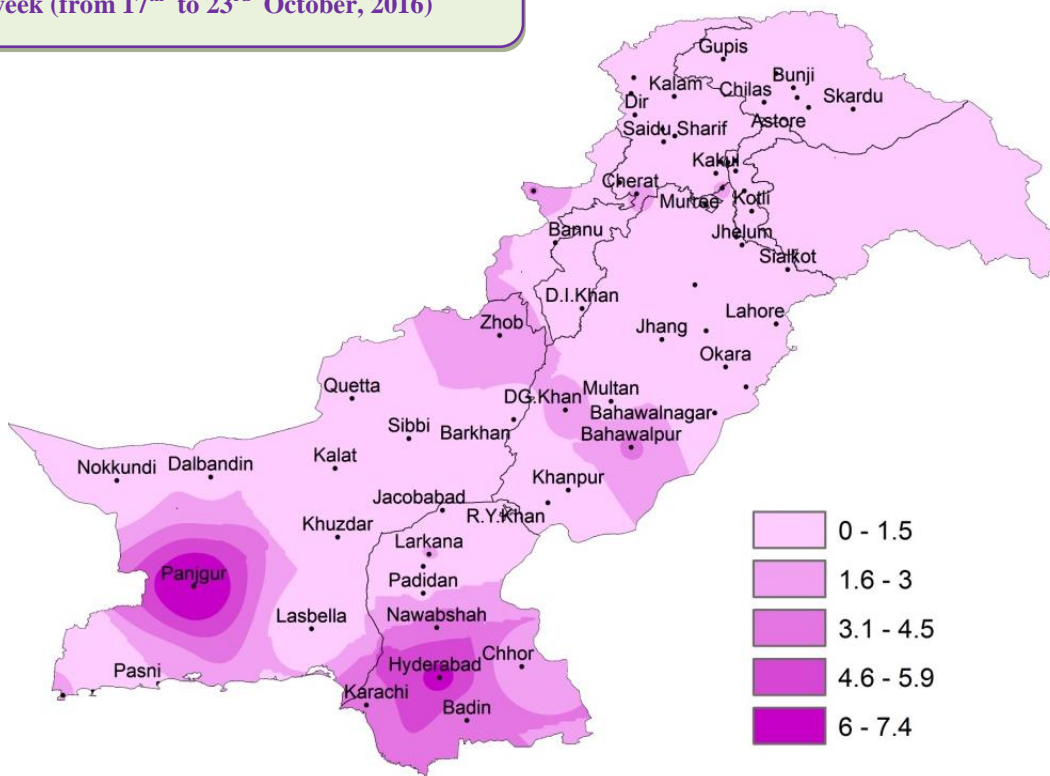
Mean Relative Humidity (%) during the Previous week (from 17th to 23rd October, 2016)



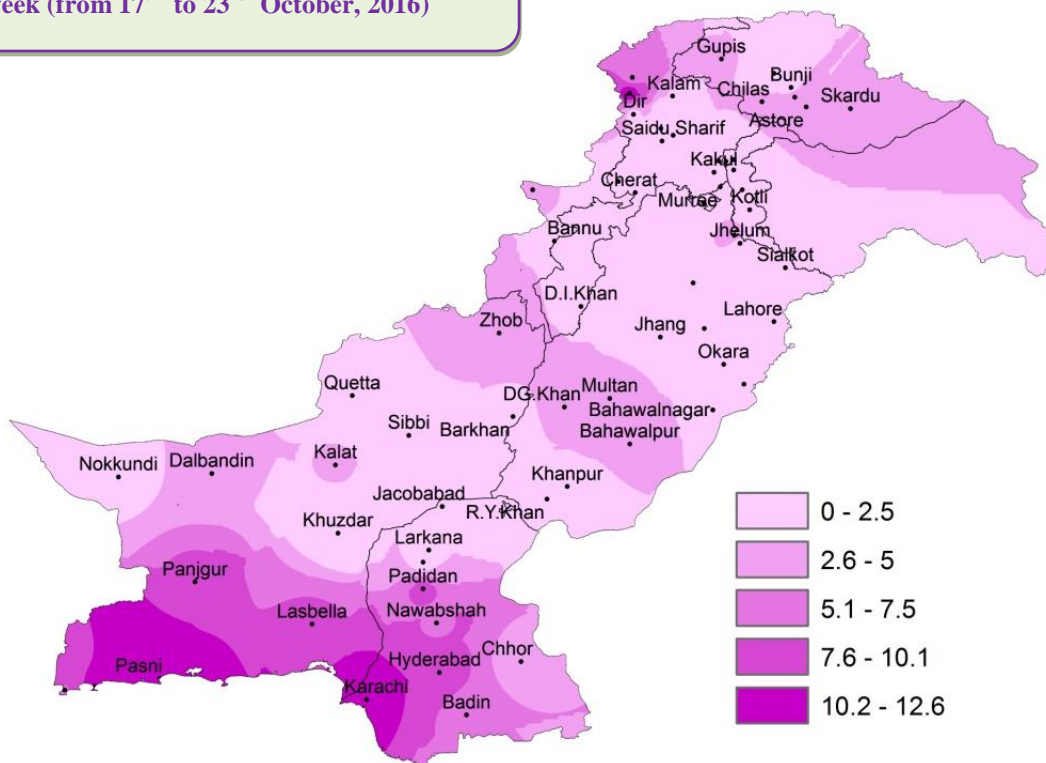
Total Growing Degree Days accumulated during the Previous week (from 17th to 23rd October, 2016)



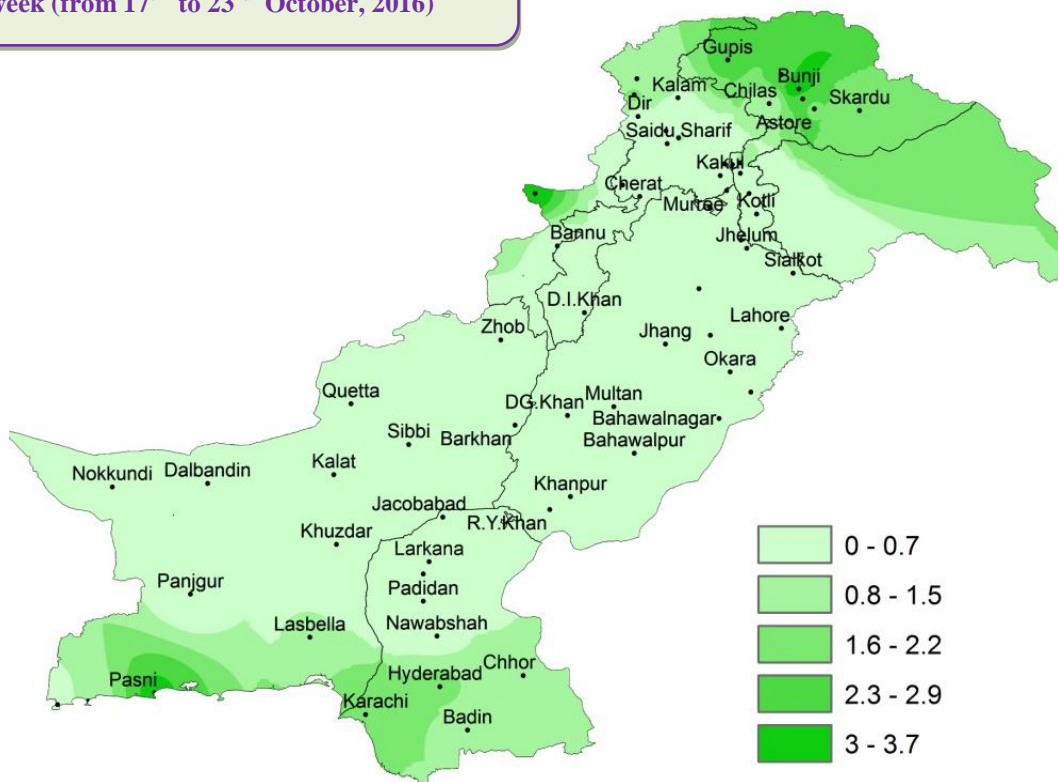
Mean Wind Speed (Knots) at 0800PST during the Previous week (from 17th to 23rd October, 2016)



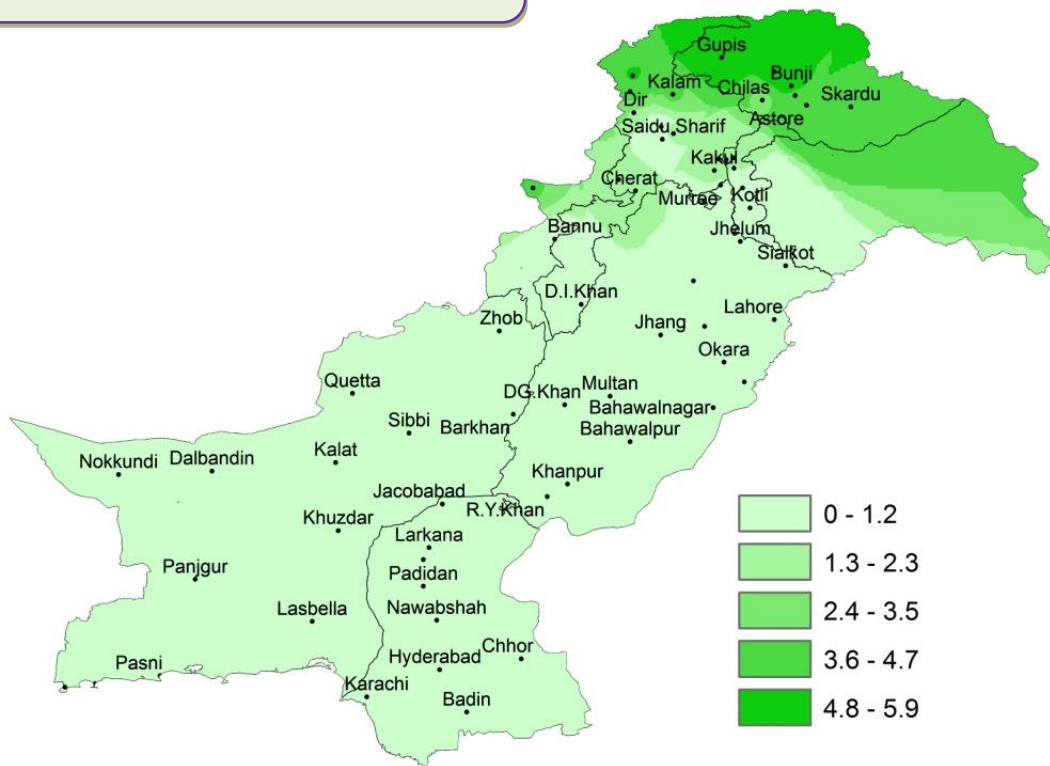
Mean Wind Speed (Knots) at 1200PST during the Previous week (from 17th to 23rd October, 2016)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (from 17th to 23rd October, 2016)



Mean Cloudiness (Oktas) at 1200 PST during the Previous week (from 17th to 23rd October, 2016)



Weekly Weather Advisory for Farmers**(From 24th to 30th October, 2016)**

Continental air is prevailing over most parts of the country. A shallow westerly wave is still affecting northern areas of the country.

**MONDAY
24-10-2016**

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at a few places in Malakand division and Gilgit-Baltistan.

**TUESDAY
25-10-2016**

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at a few places in Malakand division and Gilgit-Baltistan.

**WEDNESDAY
26-10-2016**

Mainly dry weather is expected in most parts of the country.

**THURSDAY
27-10-2016**

Mainly dry weather is expected in most parts of the country.

**FRIDAY
28-10-2016**

Mainly dry weather is expected in most parts of the country.

**SATURDAY
29-10-2016**

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at a few places in Malakand division and Gilgit-Baltistan.

**SUNDAY
30-10-2016**

Mainly dry weather is expected in most parts of the country.

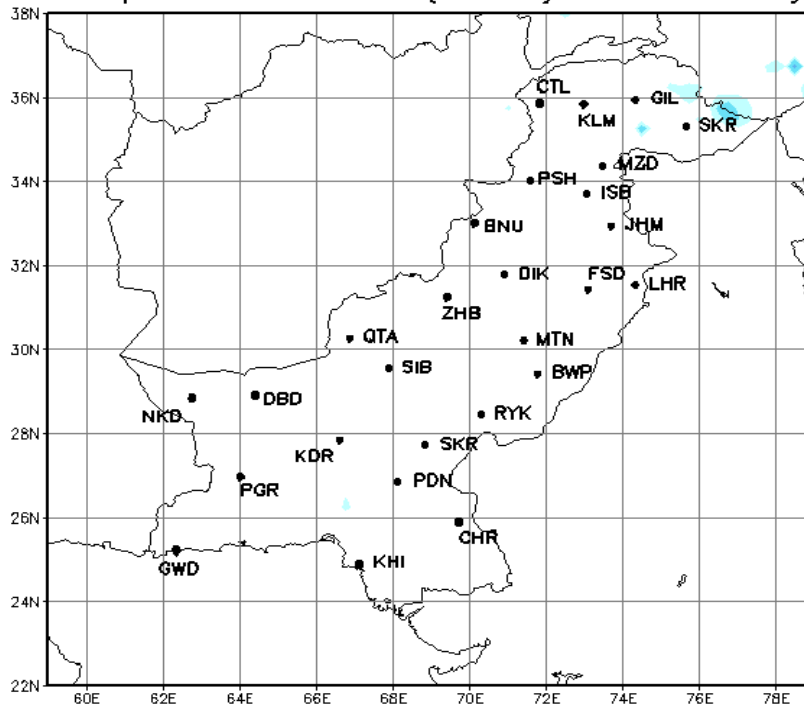
ADVISES FOR CROPS

- ❖ Farmers obtaining crop water through tube wells are advised to schedule the irrigation according to the expected weather mentioned during the week.
- ❖ Farmers are advised to control further weeds growth at the present growing stages to stop any negative impact on the crops. Weeds removing practices should be started soon after expected rains in the mentioned.
- ❖ Pest/viral attacks are expected over cotton and sugarcane crops during hot and humid conditions during monsoon. Farmers should be very careful and take in time precautionary measures in this regard.

Weather Outlook from 17th to 23th October, 2016

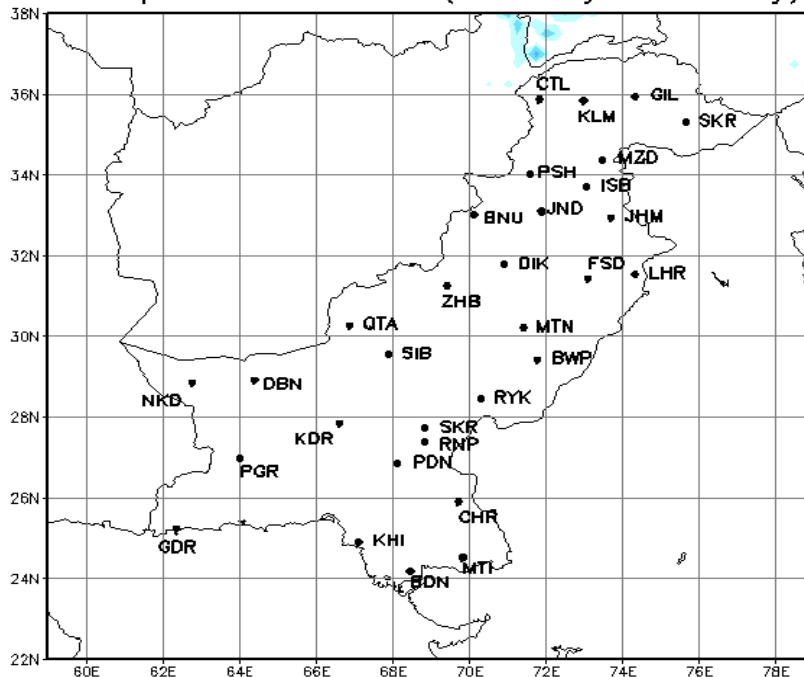
The outlook from 17th to 19th October, 2016 shows that light rainfall is expected at isolated places in upper GB & Kashmir whereas dry weather is expected elsewhere in the country.

Precipitation Forecast (Monday to Wednesday)



The outlook from 20th to 23th October, 2016 shows that dry weather is expected in all parts of the country.

Precipitation Outlook (Thursday to Sunday)



National Weather Data of Selected Cities
(Weekly Data from 17th to 23rd October, 2016)

Stations	Maximum/Day time Temperature (°C)		Growing Deg. Days	Relative Humidity (%)	Rainfall (mm)	Cloudiness (Oktas) 0800PST	Cloudiness (Oktas) 1700PST	Wind Speed (Knots) 0800PST	Wind Speed (Knots) 1700PST
	Mean	Highest							
Astore	18.8	21.5	48.9	38	0.1	2.0	4.1	0.3	3.4
Badin	33.8	35.5	165.4	66	0.0	1.0	0.0	3.4	5.7
Bahawalnagar	36.2	37.5	158.6	51	0.0	0.0	0.0	0.0	1.7
Bahawalpur	34.8	35.2	154.2	54	0.0	0.0	0.0	3.1	3.1
Balakot	29.1	30.2	108.6	59	8.0	0.0	1.1	0.4	0.0
Bannu	33.3	34.7	127.8	46	0.0	0.0	0.0	0.3	2.3
Barkhan	31.3	33.0	137.4	26	0.0	0.0	0.0	0.6	0.9
Bunji	25.7	27.8	102.4	41	0.0	3.7	5.6	0.9	1.1
Cherat	26.0	27.5	111.0	36	0.0	0.7	1.6	2.0	2.0
Chhor	35.8	37.2	161.6	62	0.0	1.1	0.0	2.0	3.4
Chilas	28.6	31.0	121.0	26	0.0	0.7	3.1	0.3	3.7
Chitral	26.2	30.5	82.5	66	0.0	0.7	4.9	0.0	6.0
D.I.Khan	34.4	35.5	149.0	64	0.0	0.0	0.0	0.3	1.4
Dalbandin	34.2	36.0	137.8	22	0.0	0.0	0.0	1.1	3.1
DG.Khan	35.0	35.7	140.8	60	0.0	0.0	0.0	2.0	4.3
Dir	27.0	29.0	80.0	58	2.0	0.4	2.3	0.0	1.4
Drosh	27.9	31.0	104.0	27	0.0	1.7	4.0	0.0	12.3
Faisalabad	34.2	35.5	149.9	58	0.0	0.0	0.0	0.6	0.3
Garidopatta	31.1	32.8	120.7	55	0.0	0.3	1.0	0.0	0.9
Gawader	32.0	33.0	159.3	78	0.0	1.1	0.6	0.0	10.9
Gilgit	25.8	28.0	80.1	61	0.1	2.6	5.3	0.0	0.0
Gupis	20.8	24.5	61.7	41	0.0	2.6	5.9	1.1	2.9

Hyderabad	20.9	25.0	69.9	68	0.0	1.7	0.0	6.3	10.0
Islamabad	32.2	32.8	128.4	61	0.7	0.0	0.3	0.0	0.3
Jacobabad	36.4	37.0	164.2	65	0.0	0.0	0.0	0.0	0.0
Jhang	35.2	36.4	150.6	65	0.0	0.0	0.0	0.3	0.6
Jhelum	33.6	34.0	142.6	68	0.0	0.7	0.0	0.3	0.9
Jiwani	31.5	33.0	158.0	75	0.0	0.0	0.0	2.0	7.4
Kakul	26.8	28.5	94.4	56	0.0	0.7	1.9	0.0	0.6
Kalam	21.4	24.5	52.7	55	1.0	0.7	3.9	0.0	2.3
Kalat	23.0	25.0	52.5	29	0.0	0.0	0.0	0.0	2.9
Karachi	32.8	34.0	164.7	71	0.0	2.1	0.9	4.0	11.7
Khanpur	35.6	36.0	154.0	59	0.0	0.0	0.0	0.6	1.4
Khuzdar	32.6	34.0	129.5	42	0.0	0.0	0.0	1.1	0.3
Kotli	31.9	32.2	133.7	53	0.0	0.0	0.0	1.4	0.3
Lahore	33.8	34.5	150.0	55	0.0	0.0	0.0	0.0	1.7
Larkana	37.0	38.0	171.4	57	0.0	0.0	0.0	1.7	1.7
Lasbella	37.2	39.0	168.1	58	0.0	0.9	0.0	0.0	8.6
Lower Dir	31.6	32.5	121.5	43	0.0	0.0	0.3	0.0	2.0
M.B Din	33.5	34.5	146.3	69	0.0	0.0	0.0	0.0	0.3
Malam Jabba	16.4	18.0	47.7	59	0.0	0.9	2.0	0.0	0.0
Mangla	32.9	34.0	137.4	57	0.0	0.4	0.3	0.0	4.3
Mir Khani	31.0	33.0	126.7	45	1.4	2.3	4.0	0.4	4.4
Moinjodaro	37.8	38.5	162.3	55	0.0	0.0	0.0	0.6	1.0
Multan	34.6	35.3	156.4	55	0.0	0.0	0.0	0.9	4.3
Murree	21.0	22.0	76.0	51	0.0	0.1	1.0	2.3	0.6
Muzaffarabad	29.9	31.3	114.0	57	1.0	0.4	1.6	0.0	0.9
Nawabshah	37.7	38.5	152.8	60	0.0	0.4	0.0	4.4	7.0

Nokkundi	34.9	37.5	148.5	13	0.0	0.0	0.0	0.0	0.9
Okara	35.0	36.0	155.5	62	0.0	0.0	0.0	0.0	1.1
Padidan	36.5	37.5	163.3	58	0.0	0.0	0.1	1.3	8.9
Panjgur	33.8	35.0	137.1	36	0.0	0.0	0.0	7.4	8.9
Parachinar	21.7	24.2	81.6	60	0.0	3.4	3.7	3.0	3.0
Pasni	31.8	32.5	151.4	81	0.0	3.1	0.0	1.4	12.6
Pattan	30.5	34.0	123.3	54	6.2	1.1	1.9	0.0	0.3
Peshawar	32.0	32.3	140.8	64	1.0	0.3	2.0	0.0	0.6
Quetta	25.9	29.0	94.2	29	0.0	0.0	0.0	1.8	3.8
R.Y.Khan	36.9	37.8	158.2	66	0.0	0.0	0.0	0.6	2.0
Rawalakot	25.3	26.0	72.2	63	0.1	0.0	0.3	0.0	1.4
Rawalpindi	32.1	32.5	118.0	60	0.0	0.0	0.0	0.2	0.5
Sahiwal	34.6	35.5	142.3	58	0.0	0.0	0.0	0.9	0.6
Saidu Sharif	30.3	31.0	117.6	53	0.0	0.0	0.0	0.0	0.0
Sialkot	31.7	32.5	136.5	68	0.0	0.0	0.0	0.0	0.3
Sibbi	37.9	39.0	180.2	46	0.0	0.0	0.0	1.1	1.1
Skardu	21.1	22.4	50.7	44	0.0	2.1	4.6	0.7	2.9
Tandojam	36.5	37.5	160.5	63	0.0	0.6	0.0	1.7	2.3
Usta.M	35.6	36.0	154.0	82	0.0	0.0	0.0	0.0	3.1
Zhob	28.8	30.0	111.1	36	0.0	0.0	0.0	2.9	5.0

*** Shows that data was not available.

Findings of AgMIP Pakistan, University of Agriculture, Faisalabad

1. There would be significant increase in temperature i.e., 2.8°C in day and 2.2°C in the night during mid-century (2040-2069)
2. There would be significant variability in rainfall patterns (about 25% increase in summer & 12% decrease in winter during 2040-2069)
3. Climate Change will affect the crop yields negatively (about 17% for rice and 14 % for wheat)
4. If there will be no adaptation to Climate Change, majority of farmers would be the economic losers
5. With Adaptation to Climate Change (through technology and management), there would be significant decrease in poverty and improvement in the livelihood of farming community.

*(Agricultural Model Inter-comparison and Improvement Project (AgMIP
Pakistan 2012-2014)*

- 1- سال 2040-69 کے دوران درجہ حرارت میں قابل ذکر اضافہ ہو سکتا ہے۔ جو کہ دن کے وقت 2.8°C اور رات کو 2.2°C تک ہوگا۔
- 2- گرمیوں کی بارش میں 25 فیصد اضافہ اور سردیوں کی بارش میں 12 فیصد تک کمی کا امکان ہے۔
- 3- مندرجہ بالا موسمی تغیرات کی وجہ سے دھان کی پیداوار میں 17 فیصد اور گندم کی پیداوار میں 14 فیصد تک کمی ہو سکتی ہے۔
- 4- اگر موسمی تغیرات کا مناسب بندوبست نہ کیا گیا۔ تو کسانوں کی اکثریت کو معاشی نقصان کا سامنا کرنا پڑے گا۔
- 5- موسمی تغیرات کے سدباب (بذریعہ نئی ٹیکنالوجی کا استعمال اور بہتر نظم و نسق) سے غربت میں کمی اور کسانوں کی زندگی میں خوشحالی لائی جاسکتی ہے۔

(ایگمپ پاکستان 2012-2014)