

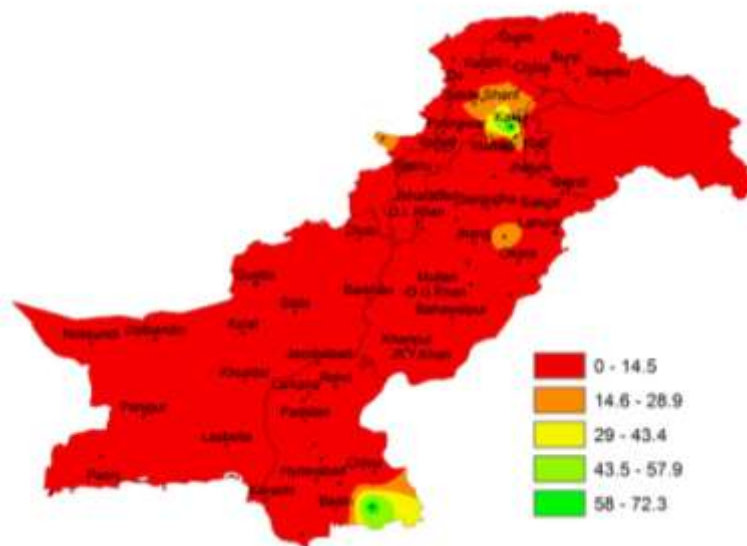
Weekly Weather and Crop Bulletin for Pakistan

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PAKISTAN METEOROLOGICAL
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**Rainfall Distribution (mm) during the
Previous Week (from 3rd to 9th Oct, 2016)**



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Highlights of Past Weather (from 3rd to 9th Oct, 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 to moderate rainfall was reported at many places in Khyber Pakhtunkhwa. Punjab and Gilgit Baltistan
- Light to moderate rainfall was reported at isolated places in Sindh.
- Dry weather was reported in 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 3rd to 9th Oct, 2016)

Punjab

Light to moderate rainfall was reported at many places in Punjab during the week. Weekly maximum and minimum temperatures recorded as 35.7°C & 23.2°C respectively. For the present season on average 170.2 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 64% and wind speed in the morning/evening recorded as 0.9/2.5Knots. During the previous week the highest amount of rainfall was recorded as 28.0mm Murree & highest maximum temperature was recorded as 40.5°C at Noorpurthal.

Sindh

Light to moderate rainfall was reported at isolated places in Sindh during the week. Weekly maximum and minimum temperatures recorded as 38.2°C & 24.8°C respectively. For the present season, on average 185.3 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 65% and wind speed in the morning/evening recorded as 2.2/3.5Knots. During the previous week the highest amount of rainfall was recorded as 62.0mm Mithi & highest maximum temperature recorded as 42.5°C at Nawabshah.

Khyber Pakhtunkhwa

Light to moderate rainfall reported at many places in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 30.8°C & 16.2°C respectively. For the present season on average 129.7 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 60% and wind speed in the morning/evening recorded as 0.8/2.4Knots. During the previous week the highest amount of rainfall was recorded as 73.0mm at Kakul & the highest maximum temperature recorded as 38.0°C at D.I.Khan.

Balochistan

Dry weather was reported in Balochistan during the week. Weekly maximum and minimum temperatures recorded as 35.0°C & 20.0°C respectively. For the present season on average 158.1 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 1.6/5.6Knots. During the previous week the highest maximum temperature was recorded as 43.5°C at Turbat.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall was reported at many places in Gilgit-Baltistan & Kashmir regions during the week. Weekly maximum and minimum temperatures recorded as 26.2°C & 13.7°C respectively. For the present season on average 106.5 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 0.8/2.9Knots. During the previous week the highest amount of rainfall was recorded as 21.0mm at Muzaffarabad & highest maximum temperature recorded as 36.5°C at Garhi Dopatta.

**Past Weather for Major Agricultural Plains
(from 3rd to 9th Oct, 2016)****Rawalpindi (Potohar region)**

Rainfall reported as 24.5mm during the week; cloudiness in the morning/evening recorded as 1.7/0.9 Oktas while, average relative humidity observed as 65%. Mean day time temperature recorded as 33.1°C & for the present season 151.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.2/0.0Knots.

Faisalabad (Central Punjab)

Rainfall reported as 25.0mm during the week; however cloudiness in the morning/evening recorded as 0.0/3.3Oktas while, average relative humidity observed as 68%. Mean day time temperature recorded as 36.1°C & for the present season 173.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/0.9 Knots.

Tandojam (Lower Sindh)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.3/0.3Oktas while, average relative humidity observed as 65%. Mean day time temperature recorded as 38.8°C & for the present season 183.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.2/1.2Knots.

Quetta (Northern Baluchistan)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.0/0.0Oktas while, average relative humidity observed as 23%. Mean day time temperature recorded as 27.9°C& for the present season 113.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.0/3.1Knots.

Usta Muhammad (Eastern Balochistan)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded 0.0/0.0Oktas while, average relative humidity observed as 65%. Mean day time temperature recorded as 38.2°C & for the present season 176.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/2.3Knots.

**Past Weather for Sub-Regional Agricultural
Plains (from 3rd to 9th Oct,2016)****Multan**

Rainfall reported as 28.0mm during the week; however cloudiness in the morning/evening recorded as 1.6/1.6Oktas while, average relative humidity observed as 65%. Mean day time temperature recorded as 22.1°C & for the present season 87.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/1.1 Knots.

Lahore

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 0.0/1.1Oktas while, average relative humidity observed as 59%. Mean day time temperature recorded as 35.3°C & for the present season 173.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/4.0Knots.

Zhob

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.0/0.0Oktas while, average relative humidity observed as 31%. Mean day time temperature recorded as 34.1°C & for the present season 151.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 5.0/5.0 Knots.

D.I. Khan

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 0.6/0.4Oktas while, average relative humidity observed as 67%. Mean day time temperature recorded as 36.6°C & for the present season 176.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1.1Knots.

Peshawar

Rainfall reported as 0.1mm during the week; cloudiness in the morning/evening recorded as 1.0/5.1Oktas while, average relative humidity observed as 63%. Mean day time temperature recorded as 34.0°C & for the present season 162.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/1.4Knots.

Murree

Rainfall reported as 28.0mm during the week; cloudiness in the morning/evening recorded as 1.6/1.6Oktas while, average relative humidity observed as 65%. Mean day time temperature recorded as 22.1°C & for the present season 87.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/1.1Knots.

Kalam

Rainfall reported as 8.0mm during the week; cloudiness in the morning/evening recorded as 1.3/6.0Oktas while, average relative humidity observed as 68%. Mean day time temperature recorded as 22.1°C & for the present season 65.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.1Knots.

Gilgit

Rainfall reported as 0.5mm during the week; cloudiness in the morning/evening recorded as 3.6/6.4Oktas while, average relative humidity observed as 54%. Mean day time temperature recorded as 27.8°C & for the present season 104.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/8.9 Knots.

Skardu

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 3.6/6.0Oktas while, average relative humidity observed as 44%. Mean day time temperature recorded as 24.9°C & for the present season 82.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/3.7Knots.

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 *Milk maturity* stage.

Central Punjab (Faisalabad)

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

Cotton: Very good condition at *Maturity* stage completed.

Lower Sindh (Tandojam)

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

Cotton: Good condition at *Maturity* stage completed.

Northern Balochistan (Quetta)

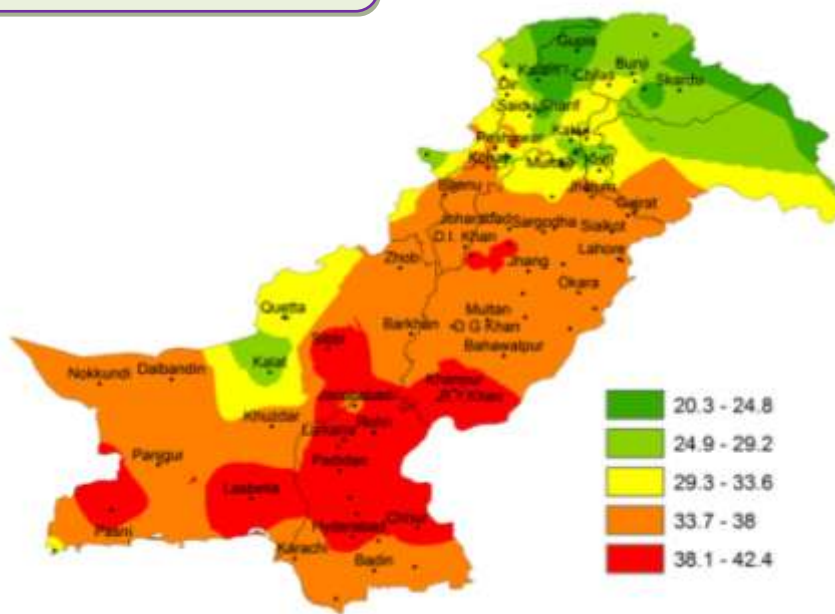
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Balochistan (Usta Muhammad)

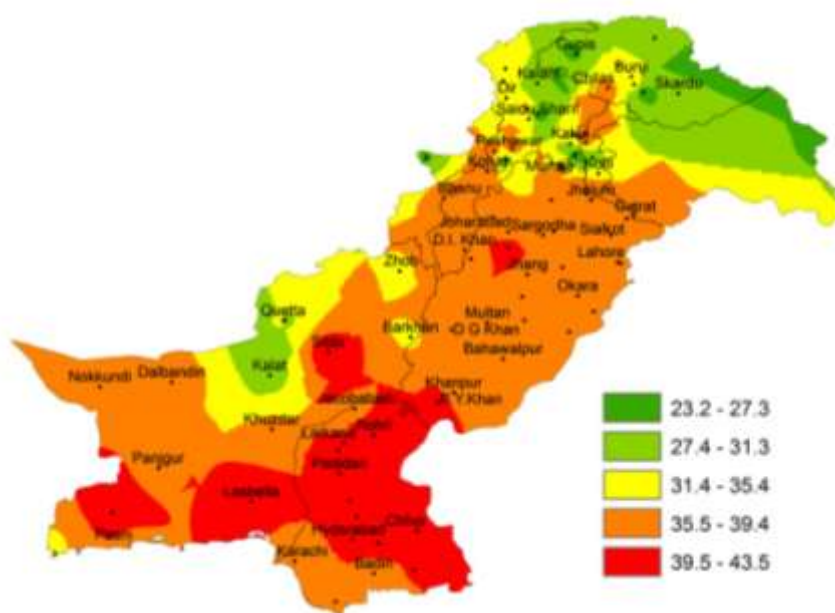
There is presently one crop (irrigated condition) grown in the fields of RAMC Usta Muhammad.

Rice: Good condition at *Flowering* stage.

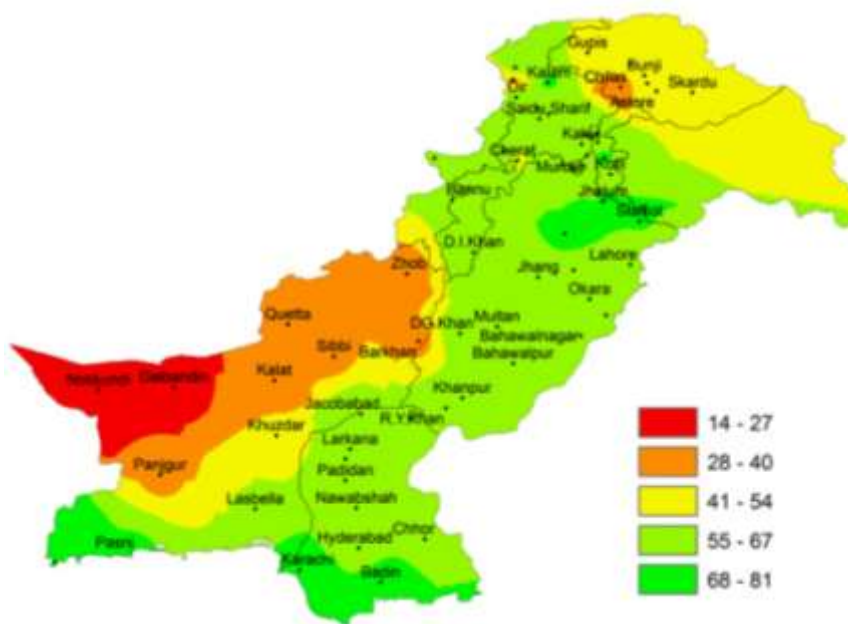
Mean Maximum Temperature (°C) during the Previous week (from 3rd to 9th Oct, 2016)



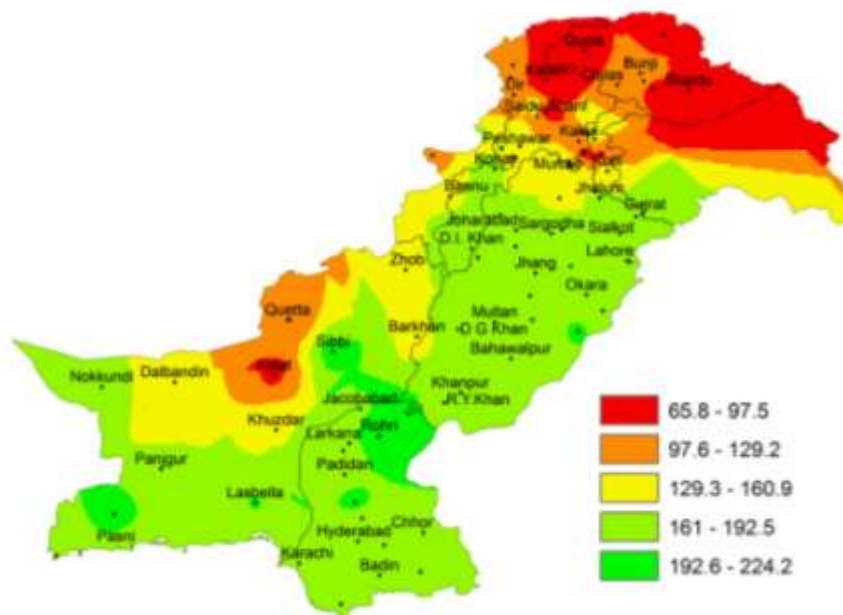
Highest Maximum Temperature (°C) during the Previous week (from 3rd to 9th Oct, 2016)



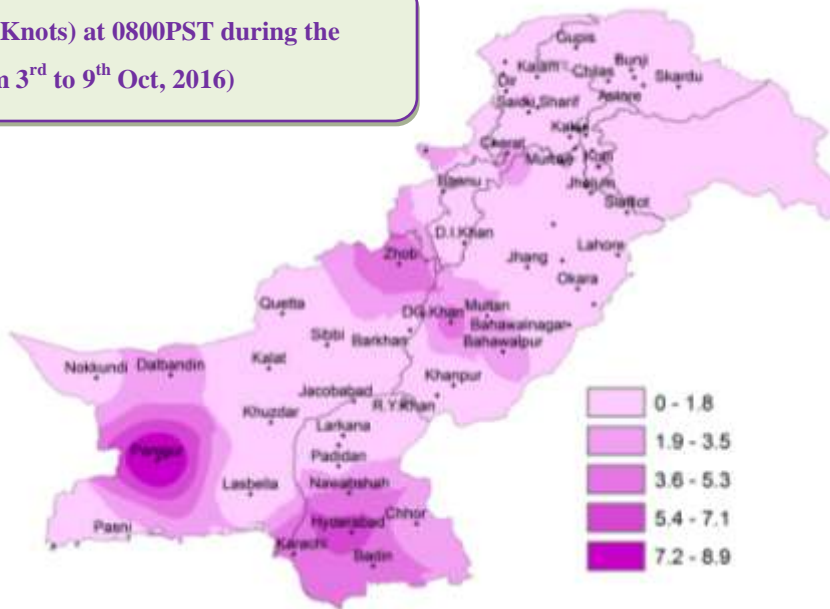
Mean Relative Humidity (%) during the Previous week (from 3rd to 9th Oct, 2016)



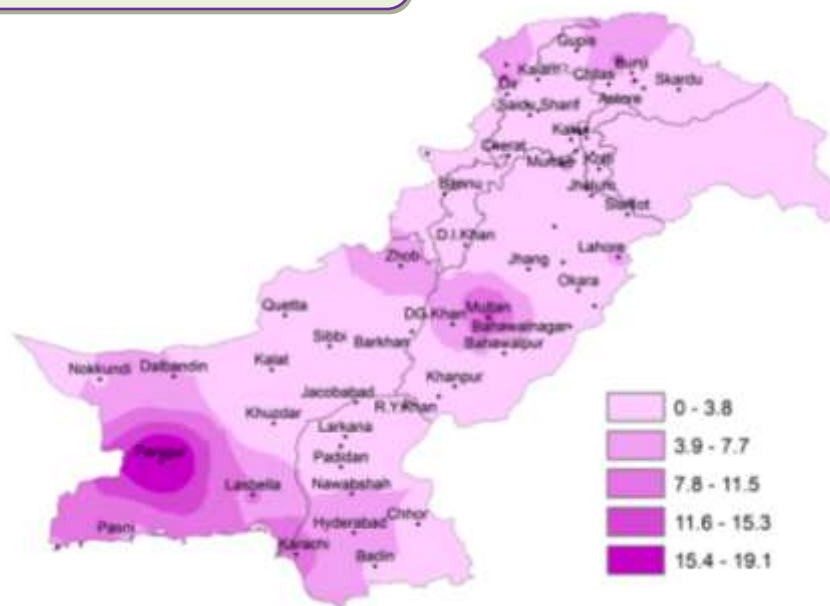
Total Growing Degree Days accumulated during the Previous week (from 3rd to 9th Oct, 2016)



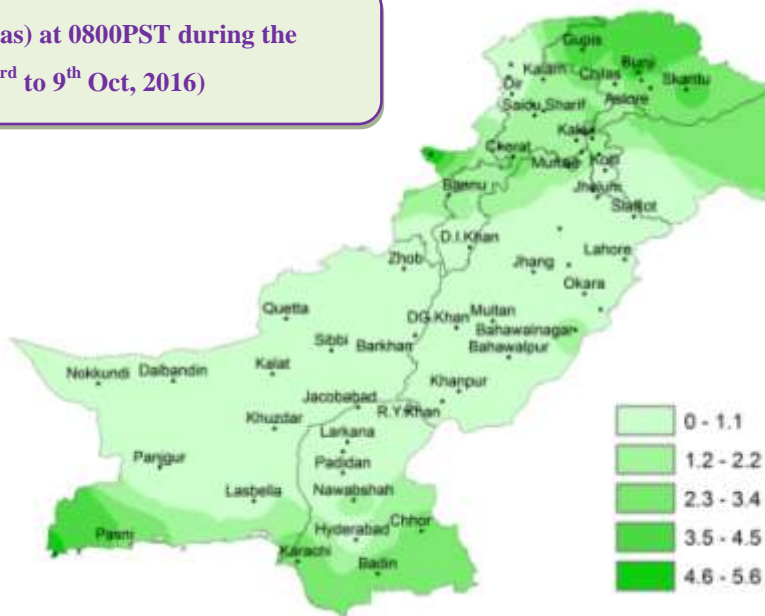
Mean Wind Speed (Knots) at 0800PST during the Previous week (from 3rd to 9th Oct, 2016)



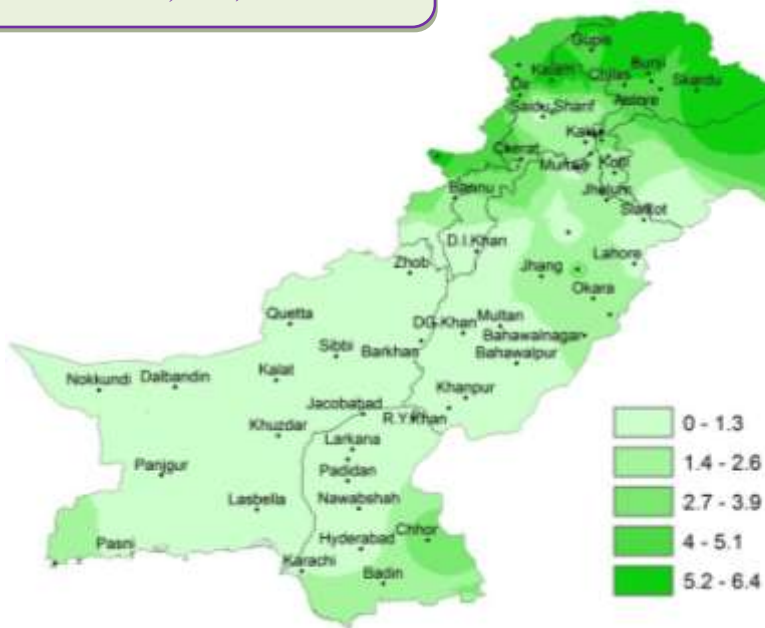
Mean Wind Speed (Knots) at 1200PST during the Previous week (from 3rd to 9th Oct, 2016)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (from 3rd to 9th Oct, 2016)



Mean Cloudiness (Oktas) at 1200 PST during the Previous week (from 3rd to 9th Oct, 2016)



Weekly Weather Advisory for Farmers**(From 10th to 16th October,2016)**

A westerly wave is present over upper parts of the country.

MONDAY**10-10-2016**

Mainly dry weather is expected in most of the country. However, rain-thunderstorm with gusty winds is expected at a few places in Malakand, Hazara divisions, upper FATA, Gilgit-Baltistan and Kashmir.

TUESDAY**11-10-2016**

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Gilgit-Baltistan, Kashmir and adjoining areas.

WEDNESDAY**12-10-2016**

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Malakand, Hazara divisions, Gilgit-Baltistan, Kashmir and adjoining areas.

THURSDAY**13-10-2016**

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Malakand, Hazara divisions, Gilgit-Baltistan, Kashmir and adjoining areas.

FRIDAY**14-10-2016**

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Malakand, Hazara divisions, Gilgit-Baltistan, Kashmir and adjoining areas.

SATURDAY**15-10-2016**

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Malakand, Hazara divisions, Gilgit-Baltistan, Kashmir and adjoining areas.

SUNDAY**16-10-2016**

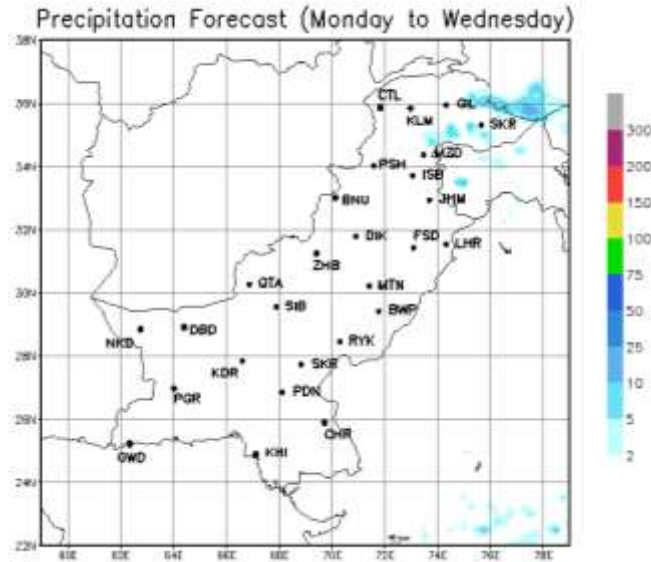
Mainly hot and dry weather is expected in most parts of the country.

ADVISES FOR CROPS

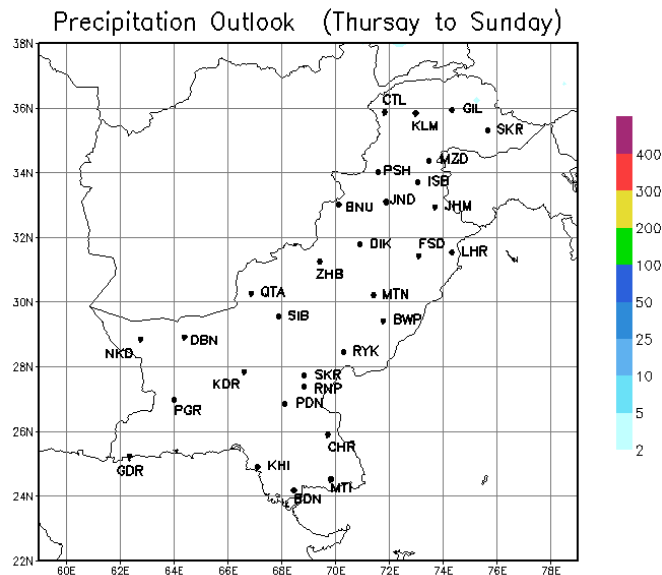
- ❖ Farmers obtaining crop water through tube wells are advised to schedule the irrigation according to the expected weather mentioned during the week.
- ❖ Farmers are advised to control further weeds growth at the present growing stages to stop any negative impact on the crops. Weeds removing practices 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 10th to 16th Oct 2016

The outlook from 10th to 12th October, 2016 shows that dry weather is expected in most parts of the country.



The outlook from 13th to 16th October, 2016 shows that dry weather is expected in most parts of the country.



National Weather Data of Selected Cities**(Weekly Data from 3rd to 9th Oct, 2016)**

Stations	Maximum/Day time Temperature (°C)		Growing Degree Days	Relative Humidity (%)	Rainfall (mm)	Cloudiness (Oktas) 0800PST	Cloudiness (Oktas) 1700PST	Wind Speed (Knots) 0800PST	Wind Speed (Knots) 1700PST
	Mean	Highest							
Astore	21.3	25.0	70.7	47	0.0	3.1	4.6	0.0	2.3
Badin	35.5	38.0	180.8	71	0.0	3.1	2.0	4.3	3.4
Bahawalnagar	37.9	38.5	194.7	59	0.0	1.4	1.6	0.0	0.3
Bahawalpur	37.8	38.7	185.8	62	0.0	0.4	0.3	2.3	2.0
Balakot	31.0	34.5	125.4	67	22.0	2.0	1.3	0.0	1.1
Bannu	35.9	37.6	158.2	58	7.0	1.1	2.3	0.6	2.9
Barkhan	34.3	35.0	152.1	36	0.0	0.0	0.1	0.9	0.9
Bunji	27.6	31.7	121.1	48	0.2	5.7	6.1	1.4	1.7
Cherat	27.5	30.0	125.3	52	0.0	2.9	2.9	2.3	2.0
Chhor	38.5	41.0	188.8	66	0.0	2.4	3.1	2.3	2.9
Chilas	31.1	36.5	107.1	30	0.0	1.4	4.6	0.9	1.7
Chitral	28.7	33.0	99.3	63	0.0	0.9	4.0	0.0	4.0
D.I.Khan	36.6	38.0	176.3	67	0.0	0.6	0.4	0.3	1.1
Dalbandin	36.3	37.0	150.9	20	0.0	0.3	0.7	2.6	3.9
DG.Khan	37.3	38.3	180.5	64	0.6	0.0	1.0	4.3	6.3
Dir	30.3	32.0	102.9	62	0.0	0.9	4.3	0.6	2.0
Drosh	30.8	34.8	121.6	37	2.8	0.9	5.1	0.0	9.1
Faisalabad	36.1	38.5	173.8	68	25.0	0.0	3.3	1.1	0.9
Garidopatta	31.5	36.2	132.5	64	8.0	1.4	3.6	0.6	2.6
Gawader	34.5	36.5	174.0	72	0.0	3.6	1.6	0.6	11.4
Gilgit	27.8	32.0	104.4	54	0.5	3.6	6.4	1.4	8.9
Gupis	21.4	27.0	75.2	48	3.0	4.1	5.0	1.4	3.1

Hyderabad	38.7	40.0	185.8	63	0.0	0.7	0.9	6.0	7.1
Islamabad	33.2	35.8	146.0	65	9.0	1.4	1.1	1.4	0.3
Jacobabad	37.8	39.0	186.4	64	0.0	0.0	0.0	0.0	0.0
Jhang	37.4	39.0	180.2	63	0.1	0.0	1.7	0.9	1.1
Jhelum	34.7	37.2	165.8	73	5.4	0.3	1.9	0.0	0.9
Jiwani	33.0	33.5	170.8	81	0.0	5.0	1.9	0.9	7.1
Kakul	28.3	31.0	110.4	65	73.0	1.6	1.6	0.6	0.6
Kalam	22.1	27.5	65.8	68	8.0	1.3	6.0	0.0	1.1
Kalat	28.3	29.5	93.6	33	0.0	0.0	0.9	0.0	2.6
Karachi	35.4	36.6	181.7	74	0.0	3.0	1.3	4.9	8.3
Khanpur	38.0	38.5	182.7	64	0.0	0.0	0.7	0.0	0.0
Khuzdar	35.1	36.0	157.0	43	0.0	0.0	0.4	0.6	2.0
Kotli	32.3	35.0	149.7	61	9.0	0.9	1.3	2.0	1.4
Lahore	35.3	36.5	173.8	59	0.0	0.0	1.1	0.0	4.0
Larkana	38.8	39.5	192.8	61	0.0	0.0	0.0	0.9	1.4
Lasbella	40.1	42.5	192.9	57	0.0	1.0	0.9	0.0	7.7
Lower Dir	33.6	36.5	144.5	59	9.0	1.4	1.0	2.3	2.0
M.B Din	35.2	37.0	168.0	69	0.0	0.0	1.0	0.3	0.0
Malam Jabba	20.1	23.0	66.5	59	26.0	1.7	3.1	1.7	0.0
Mangla	33.9	37.0	159.3	64	4.9	0.7	1.9	0.0	3.7
Mir Khani	32.3	34.0	132.9	52	0.0	1.9	4.0	0.0	4.9
Moinjodaro	38.5	39.5	180.8	59	0.0	0.0	0.0	1.4	3.4
Multan	37.5	39.2	188.3	57	0.1	0.1	1.1	1.7	11.9
Murree	22.1	24.4	87.8	65	28.0	1.6	1.6	1.1	1.1
Muzaffarabad	31.0	35.6	129.6	63	21.0	2.0	1.4	0.3	1.3
Nawabshah	40.7	42.5	194.8	57	0.0	1.4	0.7	5.1	4.3

Nokkundi	36.1	37.5	166.0	14	0.0	0.6	1.0	0.9	3.7
Okara	37.2	38.0	180.7	67	0.0	0.4	2.1	0.0	1.4
Padidan	39.4	40.0	190.2	65	0.0	0.3	0.4	1.1	2.0
Panjgur	36.5	38.0	161.8	36	0.0	0.0	0.6	8.9	19.1
Parachinar	25.7	27.0	109.7	67	18.0	5.0	5.6	3.0	3.0
Pasni	34.0	38.0	172.8	71	0.0	3.1	0.6	1.4	6.9
Pattan	32.7	36.0	142.6	53	14.0	2.7	4.3	0.0	4.0
Peshawar	34.0	36.0	162.8	63	0.1	1.0	5.1	1.1	1.4
Quetta	27.9	30.0	113.5	23	0.0	0.0	0.0	2.0	3.1
R.Y.Khan	39.3	40.5	185.1	64	0.0	0.0	0.3	0.6	1.1
Rawalakot	25.8	28.5	92.7	69	6.2	1.2	1.9	0.3	1.4
Rawalpindi	33.1	36.0	151.3	65	24.5	1.7	0.9	0.2	0.0
Sahiwal	36.7	37.7	180.4	66	0.0	0.3	1.9	0.3	2.0
Saidu Sharif	31.7	34.0	132.3	61	15.0	1.1	1.0	0.0	1.4
Sialkot	34.1	35.5	165.9	68	0.0	0.3	0.9	1.0	1.1
Sibbi	41.4	42.0	204.0	37	0.0	0.0	0.6	1.1	3.1
Skardu	24.9	27.6	82.2	44	0.0	3.6	6.0	0.0	3.7
Tandojam	38.8	40.0	183.5	65	0.0	0.3	0.3	1.2	1.2
Usta.M	38.2	39.3	176.3	65	0.0	0.0	0.0	0.6	2.3
Zhob	34.1	35.0	151.3	31	0.0	0.0	0.0	5.0	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 (بذر یعنی ٹیکنالوجی کا استعمال اور بہتر نظم و نسق) سے غربت میں کمی اور کسانوں کی زندگی میں خوشحالی لائی جاسکتی ہے۔

(ایگمپ پاکستان 2014-2012)