

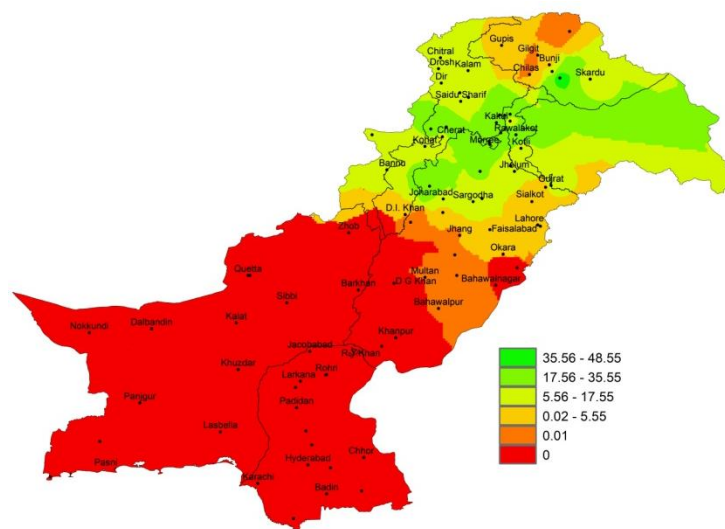
Weekly Weather and Crop Bulletin for Pakistan

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PAKISTAN METEOROLOGICAL
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**Rainfall Distribution (mm) during the Previous
Week (8th October to 14th October, 2018)**



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Highlights of Past Weather (8th October to 14th October, 2018)

Above normal night time temperatures were observed in Punjab and Sindh. However, mix trend was observed in rest of the country.

Province wise distribution of rainfall reported as follows:

- Light to moderate rainfall observed at scattered places in Punjab, Khyber Pakhtunkhwa, Gilgit-Baltistan, Azad Jammu and Kashmir during the previous week.
- Dry weather observed in Sindh and Baluchistan during the previous week.

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

Editor-in-Chief: Asma Jawad Hashmi (Deputy Director)

Editor: Saeeda Saleh (Assistant Meteorologist)

Past Weather of Provinces (8th October to 14th October, 2018)

Punjab

Light to moderate rainfall observed at scattered places in Punjab during the week. Weekly maximum and minimum temperatures recorded as 31.7°C & 17.9°C respectively. For the recent week on average 138.5 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 59% and wind speed in the morning/evening recorded as 1.7/2.5 Knots. During the previous week the highest amount of rainfall was recorded as 37.0 mm at Islamabad & lowest minimum temperature was recorded as 08°C at Murree.

Sindh

Dry weather observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 36.5°C & 21.3°C respectively. For the recent week, on average 167.3 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 54% and wind speed in the morning/evening recorded as 1.0/3.7 Knots. During the previous week the lowest minimum temperature was recorded as 16.0°C at Moin-jo-Daro.

Khyber Pakhtunkhwa

Light to moderate rainfall observed at scattered places in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 25.4°C & 10.9°C respectively. For the recent week on average 92.0 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 62% and wind speed in the morning/evening recorded as 0.7/2.5 Knots. During the previous week the highest amount of rainfall was recorded as 35.5 mm at Kakul & lowest minimum temperature was recorded as -0.5°C at Kalam.

Baluchistan

Dry weather observed in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 31.1°C & 14.5°C respectively. For the recent week on average 124.4 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 36% and wind speed in the morning/evening recorded as 2.0/5.0 Knots. During the previous week the lowest minimum temperature was recorded as 4.0°C at Kalat.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall observed at scattered places in Gilgit-Baltistan & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 22.3°C & 8.7°C respectively. For the recent week on average 71.0 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 57% and wind speed in the morning/evening recorded as 0.9/3.7 Knots. During the previous week the highest amount of rainfall was recorded as 47.50 mm at Astore & lowest minimum temperature was recorded as 0.0°C at Astore.

Past Weather for Major Agricultural Plains (8th October to 14th October, 2018)

Rawalpindi (Potohar region)

Rainfall reported as 48.00 mm from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 0.6/1.9 Oktas while, average relative humidity observed as 65%. Mean night time temperature recorded as 14.9°C & for the recent week 119.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/0.6 Knots.

Faisalabad (Central Punjab)

Rainfall reported as 0.60 mm from Rawalpindi during the week; however, clear weather recorded while, average relative humidity observed as 61%. Mean night time temperature recorded as 18.6°C & for the recent week 143.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/1.2 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; ; however, cloudiness in the morning/evening recorded as 0.0/0.8 Oktas while, average relative humidity observed as 58%. Mean night time temperature recorded as 18.0°C & for the recent week 156.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/0.2 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, clear weather was recorded in the morning/evening while, average relative humidity observed as 67%. Mean night time temperature recorded as 22.5°C & for the recent week 160.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.6 Knots.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening

recorded as 1.0/0.6 Oktas while, average relative humidity observed as 23%. Mean night time temperature recorded as 6.8°C & for the recent week 65.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.5/3.9 Knots.

Past Weather for Sub-Regional Agricultural Plains (8th October to 14th October, 2018)

Multan

Dry weather reported from Multan during the week; however, clear weather recorded while, average relative humidity observed as 49%. Mean night time temperature recorded as 20.6°C & for the recent week 152.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.0/3.7 Knots.

Lahore

Rainfall reported as 0.01 mm from Lahore during the week; however, cloudiness in the morning/evening recorded as 0.0/1.8 Oktas while, average relative humidity observed as 59%. Mean night time temperature recorded as 20.3°C & for the recent week 147.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening 1.6/1.7 Knots.

Zhob

Dry weather reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 1.2/0.7 Oktas while, average relative humidity observed as 40%. Mean night time temperature recorded as 15.3°C & for the recent week 108.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 5.0/5.0 Knots.

Murree

Rainfall reported as 25.01 mm from Murree during the week; however, cloudiness in the morning/evening recorded as 1.0/4.7 Oktas while, average relative humidity observed as 56%. Mean night time temperature recorded as 10.4°C & for the recent week 67.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.8/2.0 Knots.

D.I. Khan

Dry weather reported from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 1.2/0.0 Oktas while, average relative humidity observed as 55%. Mean night time temperature recorded as 19.1°C & for the recent week 148.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.8/1.3 Knots.

Peshawar

Rainfall reported as 21.00 mm from Peshawar during the week; however, cloudiness in the morning/evening recorded as 0.0/4.7 Oktas while, average relative humidity observed as 67%. Mean night time temperature recorded as 14.6°C & for the recent week 119.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.7 Knots.

Kalam

Rainfall reported as 7.00 mm from Kalam during the week; however, cloudiness in the morning/evening recorded as 3.2/6.0 Oktas while, average relative humidity observed as 64%. Mean night time temperature recorded as 3.1°C & for the recent week 36.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.3 Knots.

Gilgit

Dry weather reported from Gilgit during the week; However, cloudiness in the morning/evening recorded as 2.3/6.7 Oktas while, average relative humidity observed as 57%. Mean night time temperature recorded as 6.5°C & for the recent week 68.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/6.0 Knots.

Skardu

Rainfall reported as 10.20 mm from Skardu during the week; however, cloudiness in the morning/evening recorded as 5.4/5.3 Oktas while, average relative humidity observed as 51%. Mean night time temperature recorded as 4.3°C & for the recent week 42.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.0 Knots.

**Crop Situation for Major Agricultural Plains
(Based on data from Regional Agro met Centers)****Potohar Region (Rawalpindi)**

Presently maize crop is sown in the fields of RAMC Rawalpindi.

Maize: *Good, flowering stage.*

Central Punjab (Faisalabad)

Presently cotton crop is sown in the fields of RAMC Faisalabad.

Cotton: *Good, full Maturity stage completed.*

Lower Sindh (Tandojam)

There is presently cotton crop in the fields of RAMC Tandojam.

Cotton (CIM 602): *3rd Picking stage.*

Northern Baluchistan (Quetta)

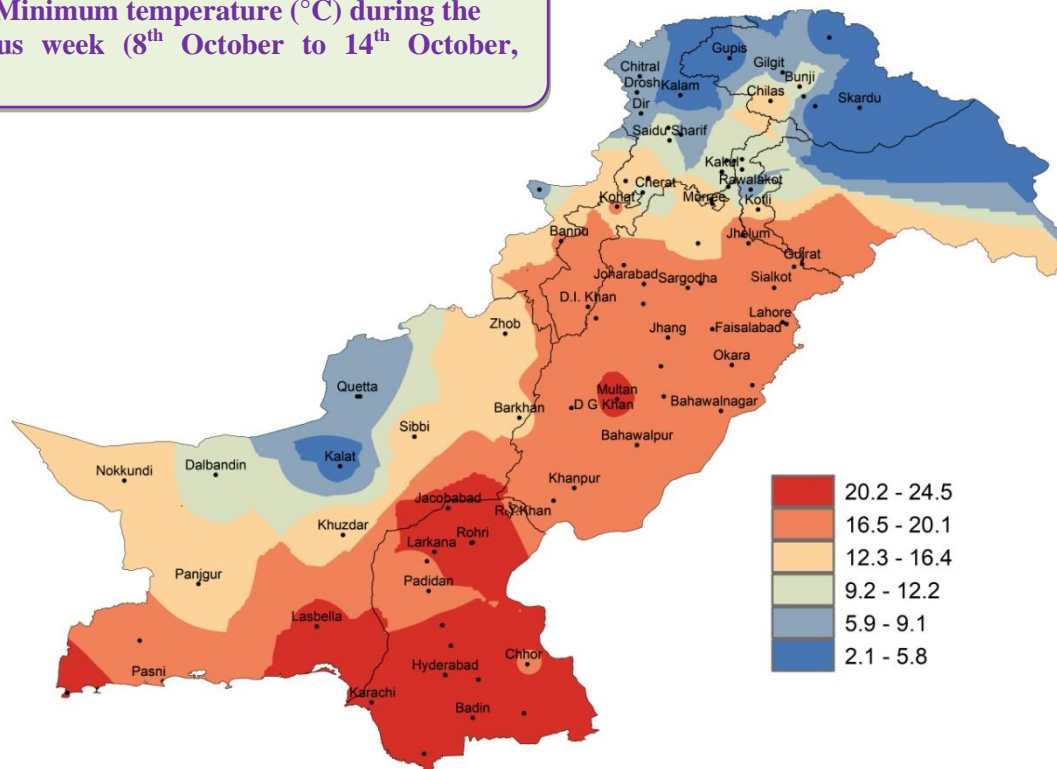
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

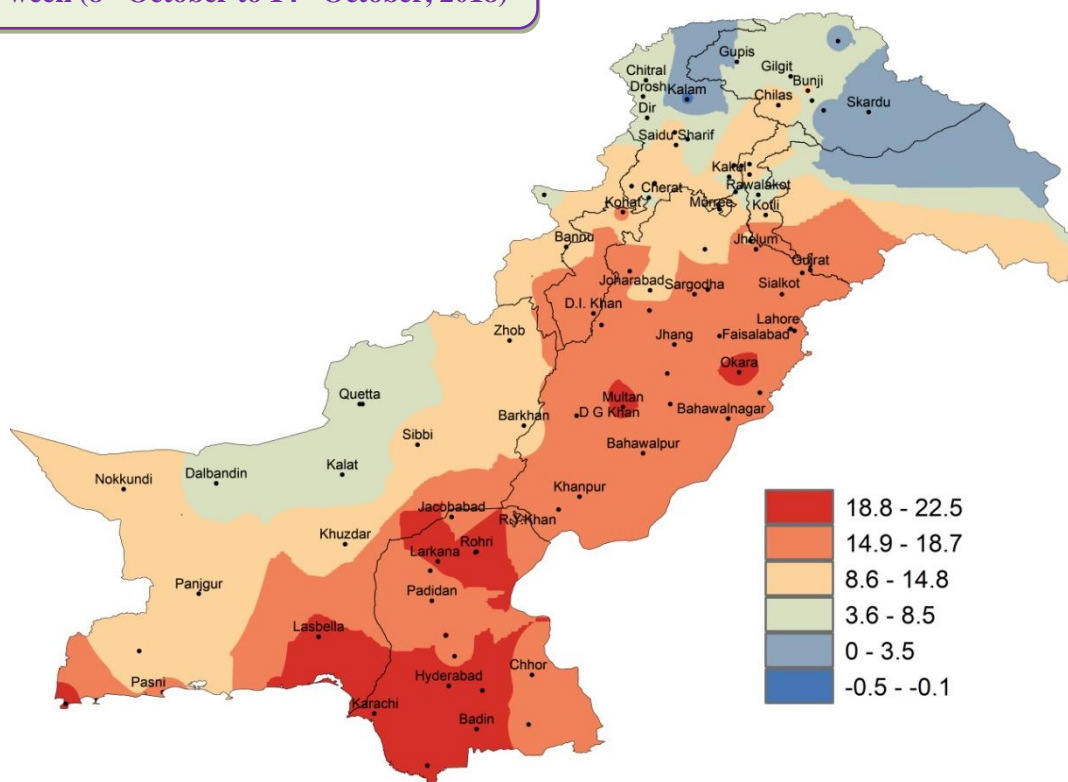
There is presently rice crop in the fields of RAMC Usta Muhammad.

Rice: *Good, Milk maturity stage.*

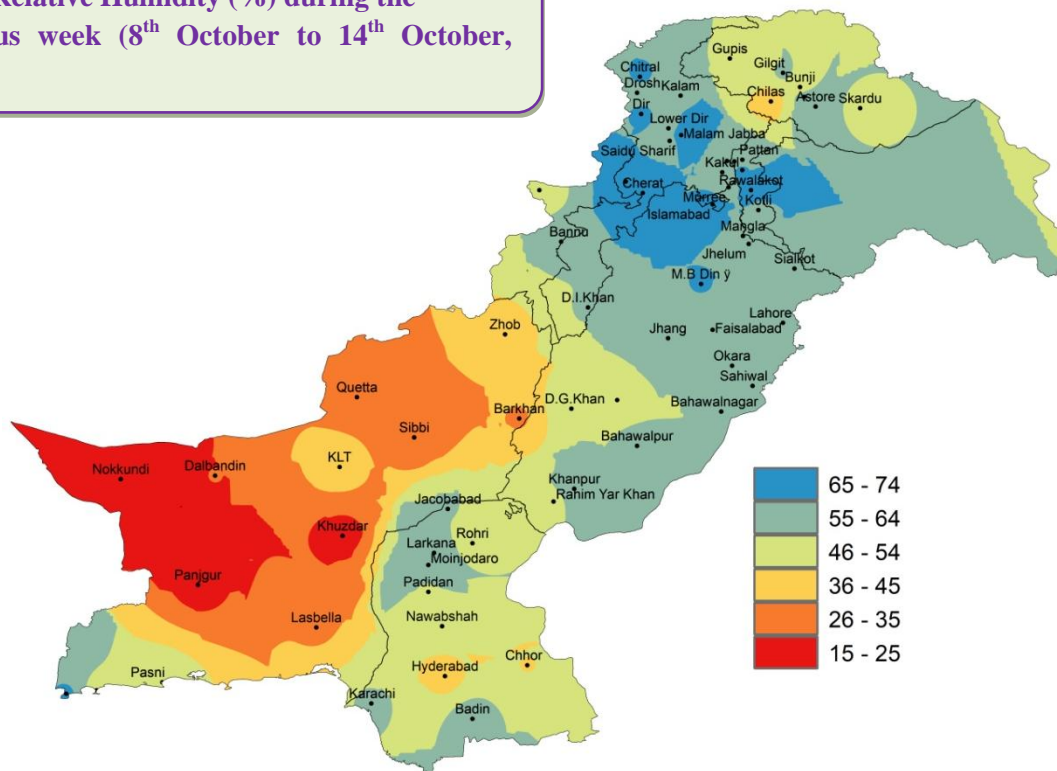
Mean Minimum temperature ($^{\circ}\text{C}$) during the Previous week (8th October to 14th October, 2018)



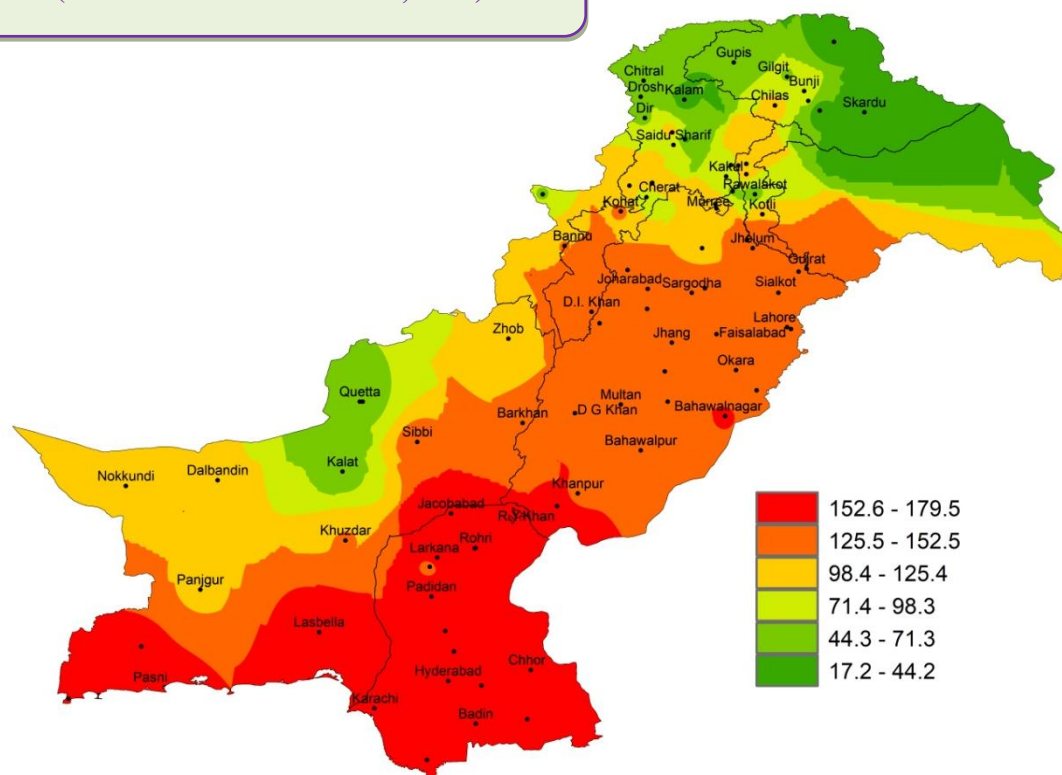
Lowest Minimum Temperature ($^{\circ}\text{C}$) during the Previous week (8th October to 14th October, 2018)



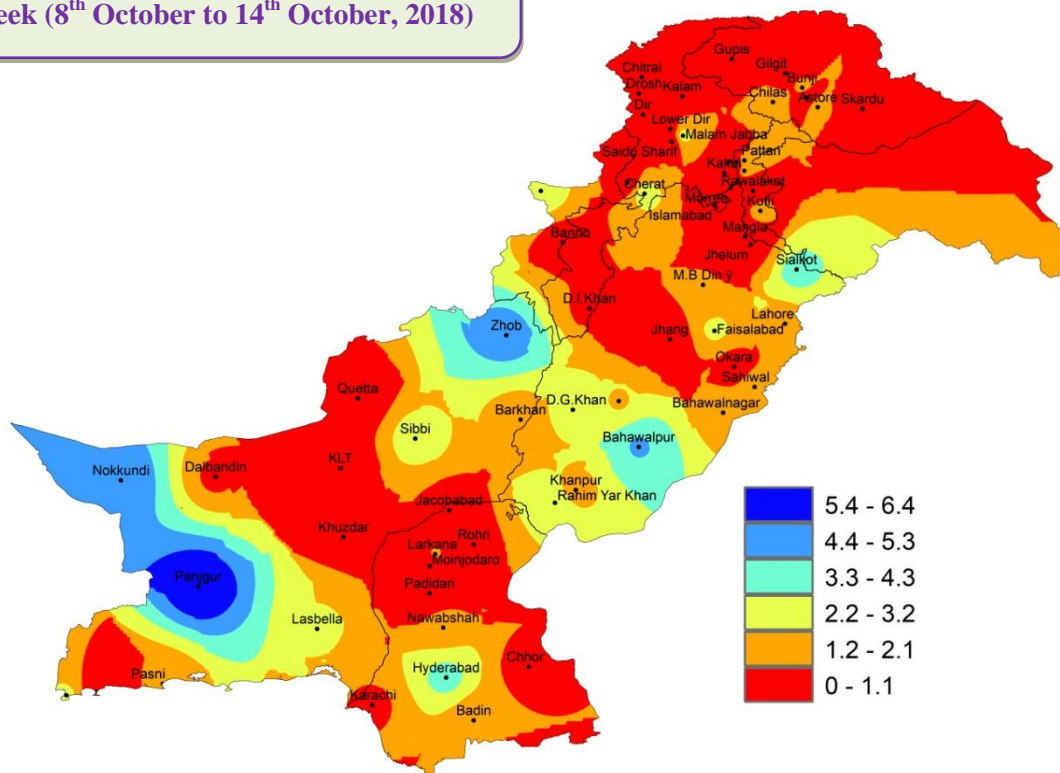
Mean Relative Humidity (%) during the
Previous week (8th October to 14th October,
2018)



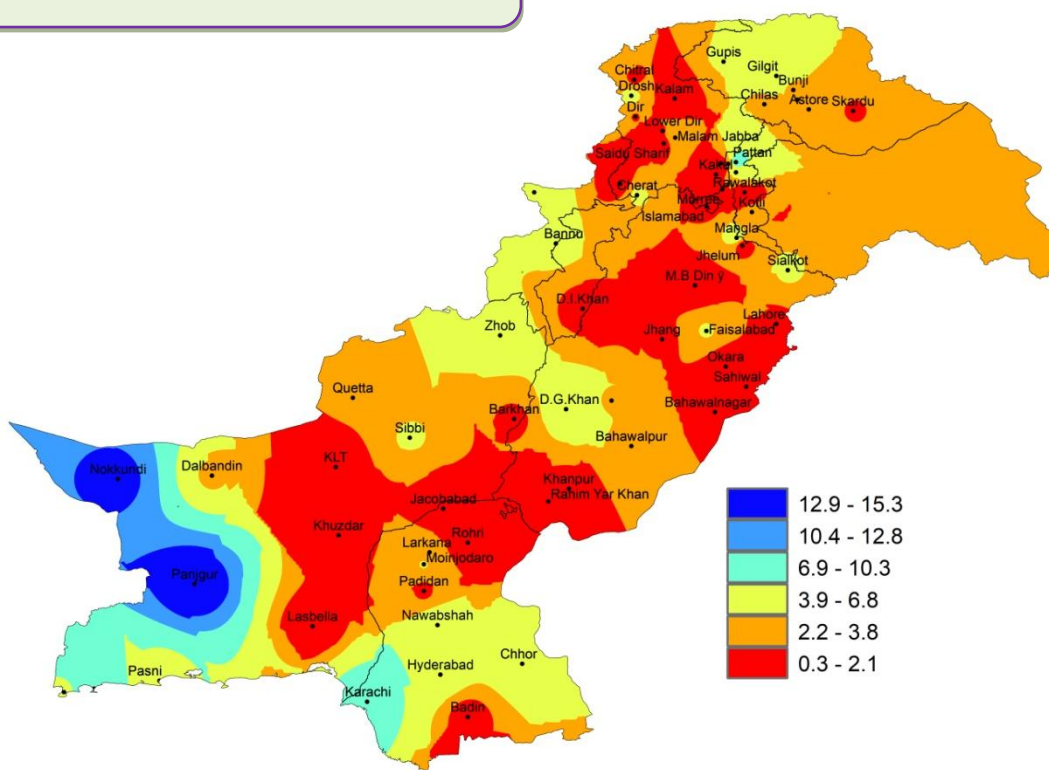
Total Growing Degree Days accumulated during the
Previous week (8th October to 14th October, 2018)



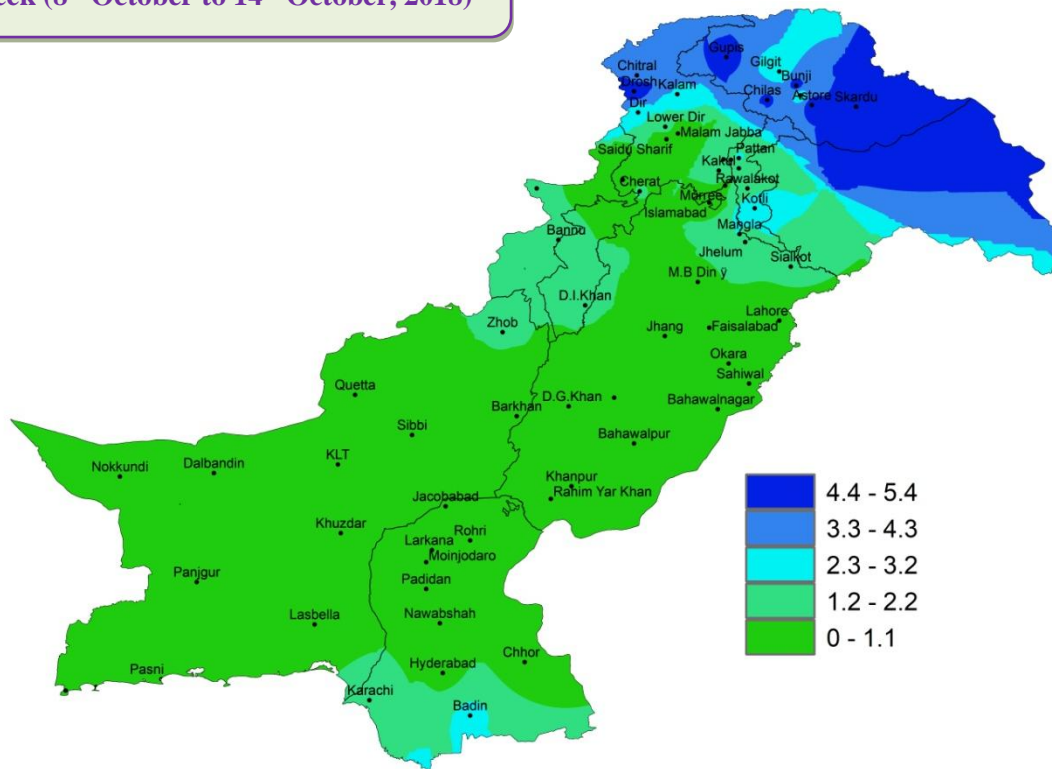
Mean Wind Speed (Knots) at 0800PST during the Previous week (8th October to 14th October, 2018)



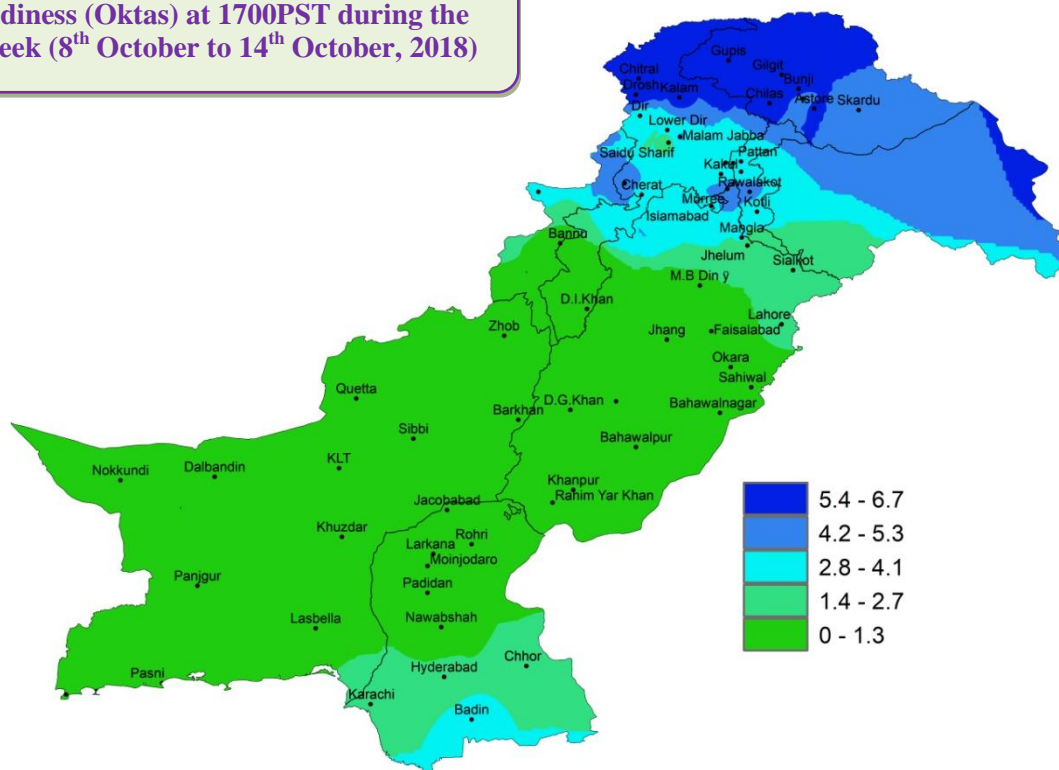
Mean Wind Speed (Knots) at 1700PST during the Previous week (8th October to 14th October, 2018)



**Mean Cloudiness (Oktas) at 0800PST during the
Previous week (8th October to 14th October, 2018)**



**Mean Cloudiness (Oktas) at 1700PST during the
Previous week (8th October to 14th October, 2018)**



Weekly Weather Advisory for Farmers
(15th October to 21st October, 2018)

Continental air is prevailing over most parts of the country. A westerly wave is likely to enter upper parts of the country today and may persist till Tuesday

MONDAY
15-10-2018

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm (with snowfall over the hills) accompanied by gusty wind/duststorm is expected at isolated places in Malakand, Hazara, Peshawar, Kohat, Mardan, Rawalpindi divisions, Islamabad, Kashmir and Gilgit-Baltistan. Hailstorm is also expected at few places during the period.

TUESDAY
16-10-2018

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm (with snowfall over the hills) accompanied by gusty wind is expected at isolated places in Malakand, Hazara, Peshawar, Mardan, Rawalpindi, Gujranwala divisions, Islamabad, Kashmir and Gilgit-Baltistan. Hailstorm is also expected at few places during the period.

WEDNESDAY
17-10-2018

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

THURSDAY
18-10-2018

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm with gusty

wind is expected at isolated places in Gilgit-Baltistan.

FRIDAY
19-10-2018

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm with gusty wind is expected at isolated places in Gilgit-Baltistan.

SATURDAY
20-10-2018

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

SUNDAY
21-10-2018

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

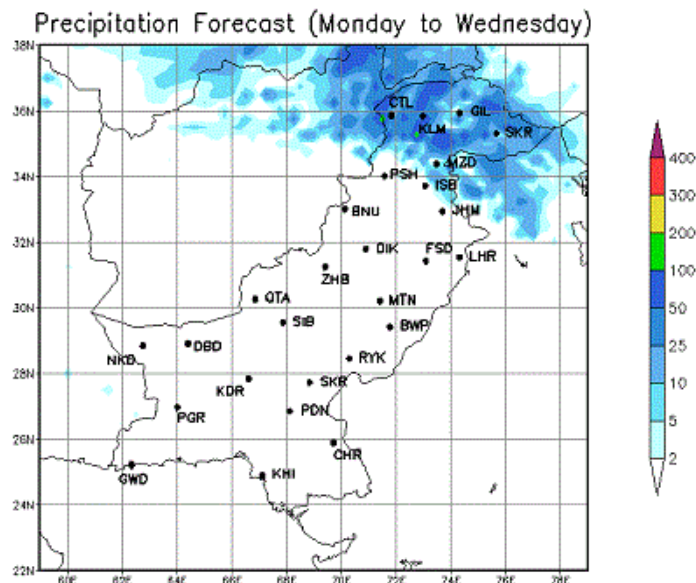
ADVISES FOR FARMERS

During the last week, light to moderate rainfall occurred in upper half of the country while hot and dry weather prevailed in rest parts. This may continue with almost the same pattern in coming days as well. Keeping in view the expected weather conditions following advises are suggested for farming community.

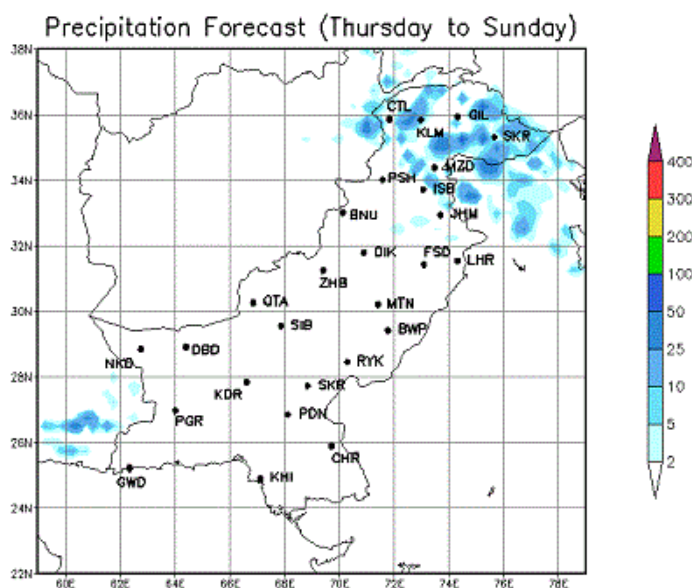
- Use proper precautions during picking of cotton because the cost of good and clean quality cotton is high than that of the filthy one.
- Use pesticides to avoid the attack from pests on the crops as advised by the agriculture department.

Weather Outlook from (15th October to 21st October, 2018)

The outlook from 15th October to 17th October, 2018 shows that light to moderate rainfall is expected in upper Khyber Pakhtunkhwa, Gilgit-Baltistan, Kashmir and Islamabad. However, dry weather may prevail in rest of the country.



The outlook from 18th October to 21st October, 2018 shows that light rainfall is expected at isolated places of upper KP, GB and Kashmir. However, dry weather may prevail in rest of the country.



National Weather Data of Selected Cities (Weekly Data from 8th October to 14th October, 2018)

Stations	Minimum/Night time Temperature (°C)		Growing Degree Days	Relative Humidity (%)	Rainfall (mm)	Cloudiness (Oktas) 0800 PST	Cloudiness (Oktas) 1700 PST	Wind Speed (Knots) 0800 PST	Wind Speed (Knots) 1700 PST
	Mean	lowest							
Astore	2.0	0.0	19.4	61	47.50	5.0	5.5	1.6	3.0
Badin	23.9	22.0	175.3	60	0.00	2.4	3.2	1.2	1.0
Bahawalnagar	19.0	17.0	153.3	55	0.00	0.4	0.0	1.6	1.7
Bahawalpur	18.7	15.6	147.7	58	0.00	0.0	0.0	4.4	3.3
Balakot	11.1	9.7	94.0	65	23.01	1.0	3.8	0.0	0.3
Bannu	16.6	14.0	125.9	57	10.00	1.4	0.8	0.4	4.3
Barkhan	15.8	13.5	127.0	34	0.00	0.0	0.0	1.2	1.7
Bunji	12.9	9.4	93.3	44	0.01	5.0	6.7	1.6	3.3
Cherat	9.3	7.0	75.0	70	15.00	1.2	3.8	2.8	4.3
Chhor	20.0	18.0	175.1	44	0.00	0.6	2.2	0.4	5.7
Chilas	15.1	13.0	104.5	40	0.01	4.4	5.5	1.6	3.3
Chitral	7.1	5.0	68.2	66	9.81	4.0	5.8	0.0	1.7
D.I.Khan	19.3	17.6	148.6	53	0.00	0.0	0.0	2.8	5.7
Dalbandin	19.1	18.5	148.3	55	0.00	1.2	0.0	0.8	1.3
D.G.Khan	10.6	7.0	107.0	25	0.00	0.0	0.3	0.8	3.3
Dir	5.9	4.5	69.0	66	15.00	2.6	3.3	0.0	2.0
Drosh	7.0	5.7	67.5	58	8.40	5.2	6.5	0.0	4.7
Faisalabad	18.6	18.0	143.4	61	0.60	0.0	0.0	0.6	1.2
Garidopatta	11.9	10.6	103.2	68	12.00	1.0	3.7	1.2	3.7
Gawader	20.3	18.0	177.3	51	0.00	0.4	0.5	0.0	9.7
Gilgit	6.5	4.0	68.8	57	0.00	2.3	6.7	0.0	6.0
Gupis	4.7	3.5	44.8	51	4.00	4.6	5.7	0.8	4.0
Hyderabad	22.5	20.5	173.6	41	0.00	0.8	1.8	3.6	6.0

Islamabad	13.4	12.0	110.8	69	25.00	0.8	4.0	0.0	1.3
Jacobabad	20.5	18.5	158.4	55	0.00	0.0	0.0	0.4	0.7
Jhang	18.0	16.4	143.8	62	0.00	0.4	0.5	0.0	1.7
Jhelum	17.6	16.4	138.6	63	9.00	1.6	1.5	0.4	0.7
Jiwani	21.6	19.5	163.0	66	0.00	0.6	1.0	2.4	6.3
Kakul	8.8	8.0	80.9	62	35.50	1.4	3.7	0.0	1.3
Kalam	3.1	-0.5	36.5	64	7.00	3.2	6.0	0.0	0.3
Karachi	24.0	22.5	179.3	56	0.00	1.8	2.7	0.8	9.3
Khanpur	18.6	17.5	150.9	60	0.00	0.0	0.0	1.6	1.7
Khuzdar	16.1	14.5	126.8	21	0.00	0.0	0.0	0.8	0.7
Kalat	4.7	4.0	56.0	40	0.00	0.0	0.0	0.0	0.7
Kotli	16.1	14.8	126.3	61	13.00	3.0	3.2	1.5	2.3
Lahore	20.3	18.5	147.6	59	0.01	0.0	1.8	1.6	1.7
Larkana	23.2	22.0	165.5	61	0.00	0.0	0.0	1.2	2.3
Lasbella	20.8	19.0	174.5	34	0.00	0.0	0.0	2.4	0.7
Lower Dir	12.4	11.0	108.3	61	15.00	2.0	2.7	0.4	2.0
M.B Din	17.4	16.0	137.6	65	9.00	0.6	1.2	1.2	0.3
Malam Jabba	5.4	4.5	35.3	68	12.00	0.4	4.3	2.8	3.7
Mangla	16.5	14.4	132.2	62	10.80	2.2	3.0	0.0	5.7
Mir Khani	8.6	7.0	75.6	61	14.00	2.2	4.3	0.0	3.5
Moinjodaro	18.1	16.0	148.1	64	0.00	0.0	0.0	0.0	4.0
Multan (PBO)	20.6	19.0	152.0	49	0.00	0.0	0.0	2.0	3.7
Murree	10.4	8.0	67.6	56	25.01	1.0	4.7	0.8	2.0
Muzaffarabad	11.9	10.5	100.8	62	33.00	1.8	3.8	0.0	1.8
Nawabshah	20.2	18.7	166.8	50	0.00	0.4	0.0	1.6	5.7
Nokkundi	14.4	12.0	123.3	15	0.00	0.0	0.0	5.2	13.7

Okara	20.1	19.0	148.6	61	0.00	0.0	0.5	0.4	0.7
Padidan	19.9	16.5	161.5	52	0.00	0.0	0.0	0.4	1.7
Panjgur	14.2	12.0	118.3	22	0.00	0.0	0.0	6.4	15.3
Parachinar	8.5	7.0	70.3	50	12.00	1.2	3.0	3.2	6.0
Pasni	19.9	15.5	163.5	50	0.00	0.0	0.3	1.2	4.5
Pattan	10.1	8.0	104.3	53	18.00	2.4	3.3	1.8	10.2
Peshawar	14.6	11.5	119.2	67	21.00	0.0	4.7	0.0	0.7
Quetta	6.8	5.0	65.3	23	0.00	1.0	0.6	1.5	3.9
Rahim Y. Khan	19.0	17.5	157.9	52	0.00	0.0	0.0	3.0	1.5
Rawalakot	5.8	3.8	59.8	74	32.41	1.8	4.5	0.0	1.3
Rawalpindi	14.9	13.2	119.9	65	48.00	0.6	1.9	0.3	0.6
Rohri	21.9	19.0	164.8	49	0.00	0.0	0.0	0.8	0.7
Sahiwal	19.1	18.5	144.4	62	0.00	0.0	0.0	1.6	1.3
Saidu Sharif	11.0	10.0	95.7	63	14.00	0.0	2.2	0.0	1.3
Sialkot	17.8	15.8	132.5	60	4.01	1.4	2.0	3.8	4.2
Sibbi	15.0	11.0	144.0	26	0.00	0.0	0.0	2.8	4.0
Skardu	4.3	1.8	42.8	51	10.20	5.4	5.3	0.0	2.0
Tandojam	18.0	16.5	155.3	58	0.00	0.0	0.8	0.9	0.2
Usta.M	22.5	20.0	160.0	67	0.00	0.0	0.0	0.0	2.6
Zhob	15.3	13.0	108.5	40	0.00	1.2	0.7	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 (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)