

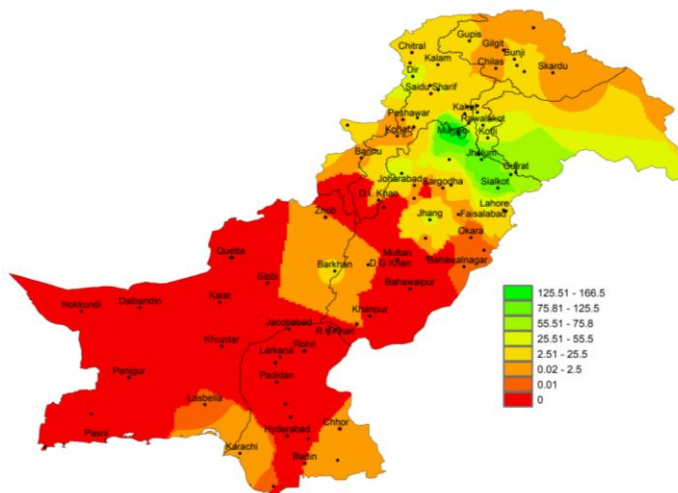
Weekly Weather and Crop Bulletin for Pakistan

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PAKISTAN METEOROLOGICAL
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**Rainfall Distribution (mm) during the Previous
Week (20th August to 26th August, 2018)**



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Highlights of Past Weather (20th August to 26th August, 2018)

Above normal day temperature was observed in Khyber Pakhtunkhwa, Punjab, Sindh, Gilgit-Baltistan and Azad Jammu & Kashmir during the previous week. However, mix trend was observed in Balochistan.

Province wise distribution of rainfall reported as follows:

- Moderate to heavy rainfall observed in Punjab during the previous week.
- Light to moderate rainfall observed in Khyber Pakhtunkhwa, Balochistan, Sindh, Gilgit-Baltistan and Azad Jammu & Kashmir during the previous week.

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

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

Editor: Saeeda Saleh (Assistant Meteorologist)

Past Weather of Provinces (20th August to 26th August, 2018)**Punjab**

Moderate to heavy rainfall observed in Punjab during the week. Weekly maximum and minimum temperatures recorded as 36.5°C & 26.8°C respectively. For the recent week on average 186.4 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 68% and wind speed in the morning/evening recorded as 3.4/3.1 Knots. During the previous week the highest amount of rainfall was recorded as 166.3 mm at Islamabad & highest maximum temperature was recorded as 43.0°C at Bhakkar.

Sindh

Light to moderate rainfall observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 36.9°C & 26.0°C respectively. For the recent week, on average 185.4 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 66% and wind speed in the morning/evening recorded as 4.6/6.0 Knots. During the previous week the highest amount of rainfall was recorded as 0.05mm at Karachi & highest maximum temperature was recorded as 42.7°C at Dadu.

Khyber Pakhtunkhwa

Light to moderate rainfall observed in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 33.7°C & 21.9°C respectively. For the recent week on average 159.9 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 66% and wind speed in the morning/evening recorded as 0.7/3.4 Knots. During the previous week the highest amount of rainfall was recorded as 58 mm at Dir & highest maximum temperature was recorded as 42.5°C at D. I. Khan.

Baluchistan

Light to moderate rainfall observed in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 36.5°C & 23.7°C respectively. For the recent week on average 176.4 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 2.4/6.2 Knots. During the previous week the highest amount of rainfall was recorded as 3.0 mm Barkhan & highest maximum temperature was recorded as 44.5°C at Nokkundi.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall observed in Gilgit-Baltistan & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 33.5°C & 19.8°C respectively. For the recent week on average 143.1 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 55% and wind speed in the morning/evening recorded as 0.6/3.7 Knots. During the previous week the highest amount of rainfall was recorded as 51.0 mm at Kotli & highest maximum temperature was recorded as 43.0°C at Chilas.

Past Weather for Major Agricultural Plains (20th August to 26th August, 2018)**Rawalpindi (Potohar region)**

Rainfall reported as 68.0 mm from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 5.8/5.1 Oktas while, average relative humidity observed as 77%. Mean day time temperature recorded as 33.3°C & for the recent week 167.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/0.4 Knots.

Faisalabad (Central Punjab)

Rainfall reported as 0.0 mm (trace) from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 1.9/3.7 Oktas while, while, average relative humidity observed as 66%. Mean day time temperature recorded as 37.9°C & for the recent week 196.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.1/1.8 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness recorded in the morning/evening as 1.6/3.3 Oktas while, average relative humidity observed as 70%. Mean day time temperature recorded as 35.9°C & for the recent week 173.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 3.5/4.9 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 0.4/0.5 Oktas while, average relative humidity observed as 70%. Mean day time temperature recorded as 39.3°C & for the recent week 201.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 3.1/4.8 Knots.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 2.3/1.1 Oktas while, average relative humidity observed as 23%. Mean day time

temperature recorded as 34.7°C & for the recent week 154.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.1/3.4 Knots.

Past Weather for Sub-Regional Agricultural Plains (20th August to 26th August, 2018)**Multan**

Dry weather reported from Multan during the week; however, cloudiness in the morning/evening recorded as 1.5/0.9 Oktas while, average relative humidity observed as 60%. Mean day time temperature recorded as 37.3°C & for the recent week 197.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 12.3/11.7 Knots.

Lahore

Rainfall reported as 2.21 mm from Lahore during the week; however, cloudiness in the morning/evening recorded as 3.7/6.0 Oktas while, average relative humidity observed as 71%. Mean day time temperature recorded as 35.8°C & for the recent week 188.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening 2.0/1.4 Knots.

Zhob

Dry weather reported from during the week; however, cloudiness in the morning/evening recorded as 0.0/0.4 Oktas while, average relative humidity observed as 47%. Mean day time temperature recorded as 37.6°C & for the recent week 187.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.7/4.6 Knots.

Murree

Rainfall reported as 25.00 mm from Murree during the week; however, cloudiness in the morning/evening recorded as 4.3/7.4 Oktas while, average relative humidity observed as 84%. Mean day time temperature recorded as 23.2°C & for the recent week 106.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.7/0.6 Knots.

D.I. Khan

Dry weather reported from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 0.0/0.4 Oktas while, average relative humidity observed as 69%. Mean day time temperature recorded as 40.6°C & for the recent week 207.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.0/0.9 Knots.

Peshawar

Rainfall reported as 0.02 mm from Peshawar during the week; however, cloudiness in the morning/evening recorded as 3.8/3.7 Oktas while, average relative humidity observed as 66%. Mean day time temperature recorded as 36.0°C & for the recent week 181.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.7/1.4 Knots.

Kalam

Rainfall reported as 7.90 mm Kalam during the week; however, cloudiness in the morning/evening recorded as 3.7/5.0 Oktas while, average relative humidity observed as 69%. Mean day time temperature recorded as 27.9°C & for the recent week 114.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.1 Knots.

Gilgit

Rainfall reported as 1.90 mm from Gilgit during the week; However, cloudiness in the morning/evening recorded as 3.7/5.6 Oktas while, average relative humidity observed as 53%. Mean day time temperature recorded as 37.4°C & for the recent week 161.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/4.9 Knots.

Skardu

Rainfall reported as 1.10 mm Skardu during the week; however, cloudiness in the morning/evening recorded as 2.8/6.3 Oktas while, average relative humidity observed as 42%. Mean day time temperature recorded as 31.2°C & for the recent week 130.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/3.4 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; *Emergence* stage.

Central Punjab (Faisalabad)

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

Cotton; *Very Good*, *Flowering* stage completed and field irrigated.

Lower Sindh (Tandojam)

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

Cotton (CIM 602); *Good*, *Boll opening* stage.

Northern Baluchistan (Quetta)

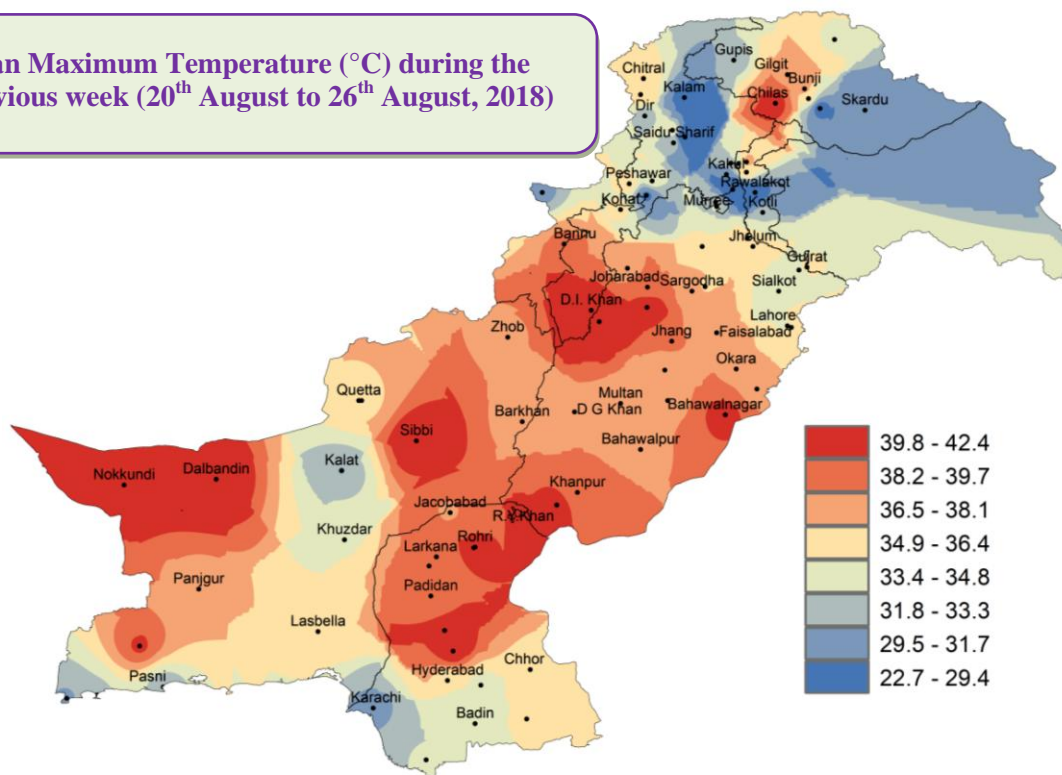
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

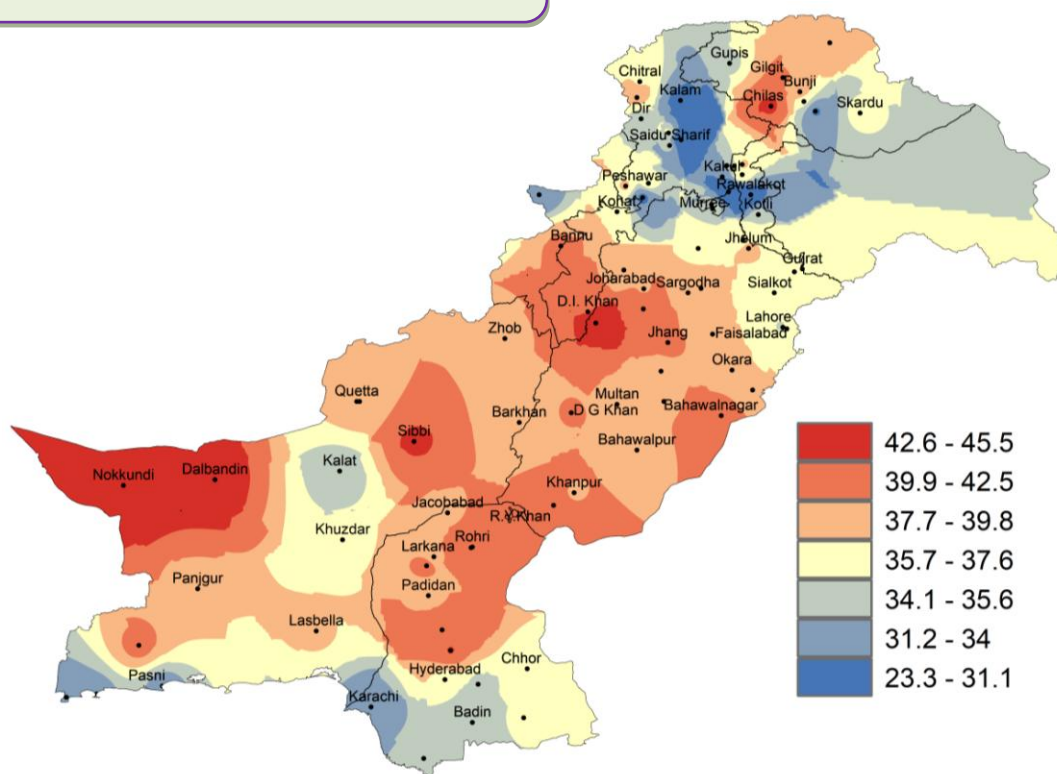
There is presently rice crop in the fields of RAMC Usta Muhammad.

Rice; *Tillering* stage.

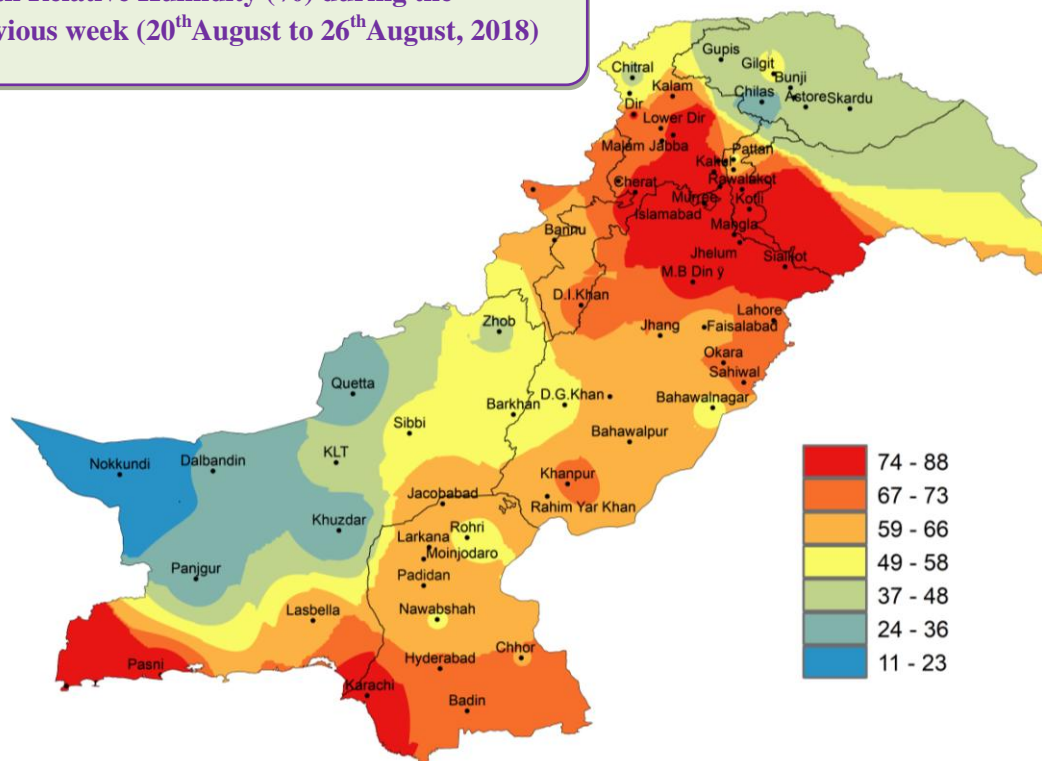
Mean Maximum Temperature ($^{\circ}\text{C}$) during the Previous week (20th August to 26th August, 2018)



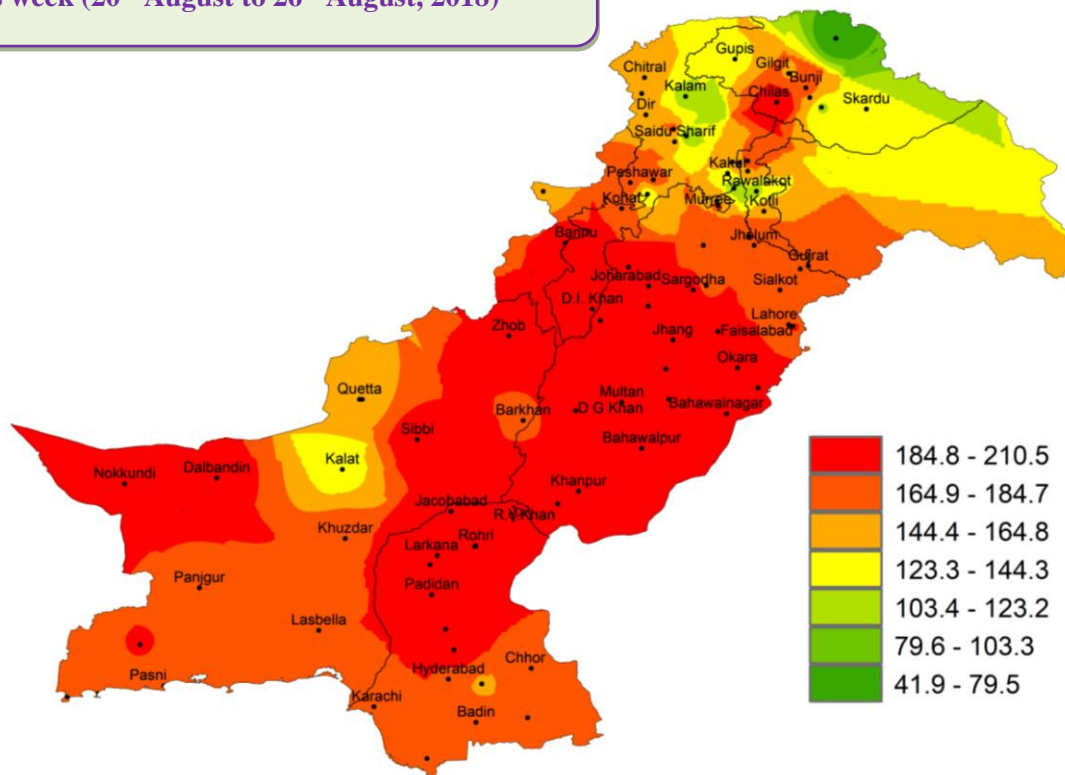
Highest maximum Temperature ($^{\circ}\text{C}$) during the Previous week (20th August to 26th August, 2018)



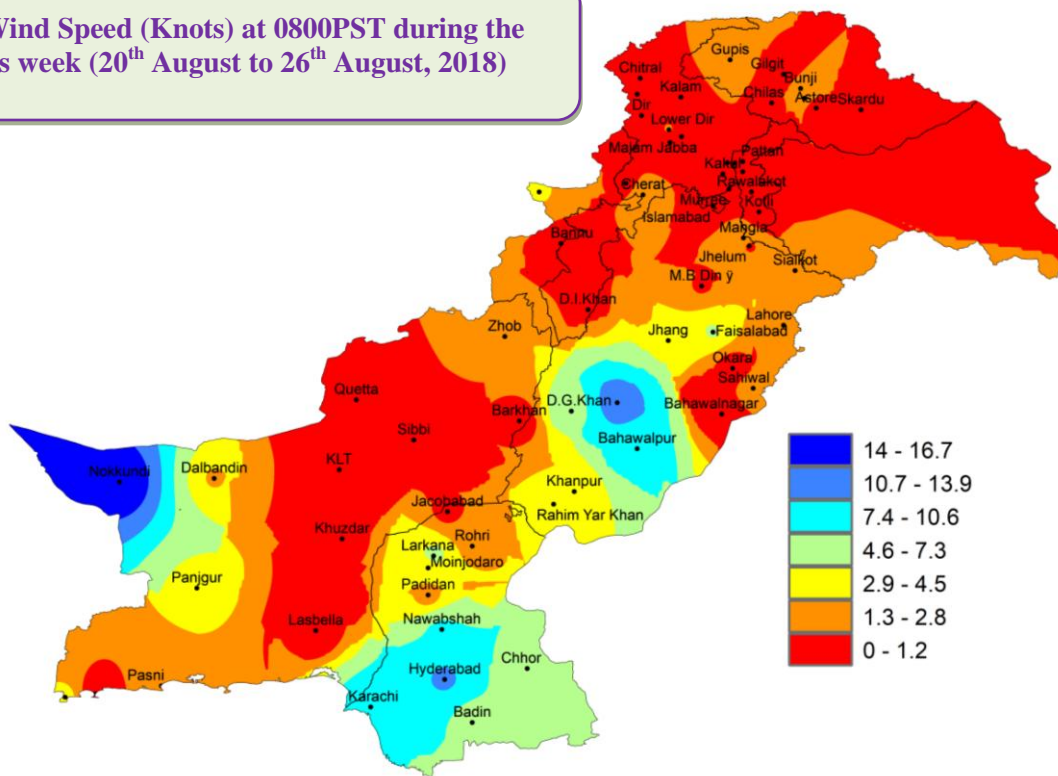
Mean Relative Humidity (%) during the
Previous week (20th August to 26th August, 2018)



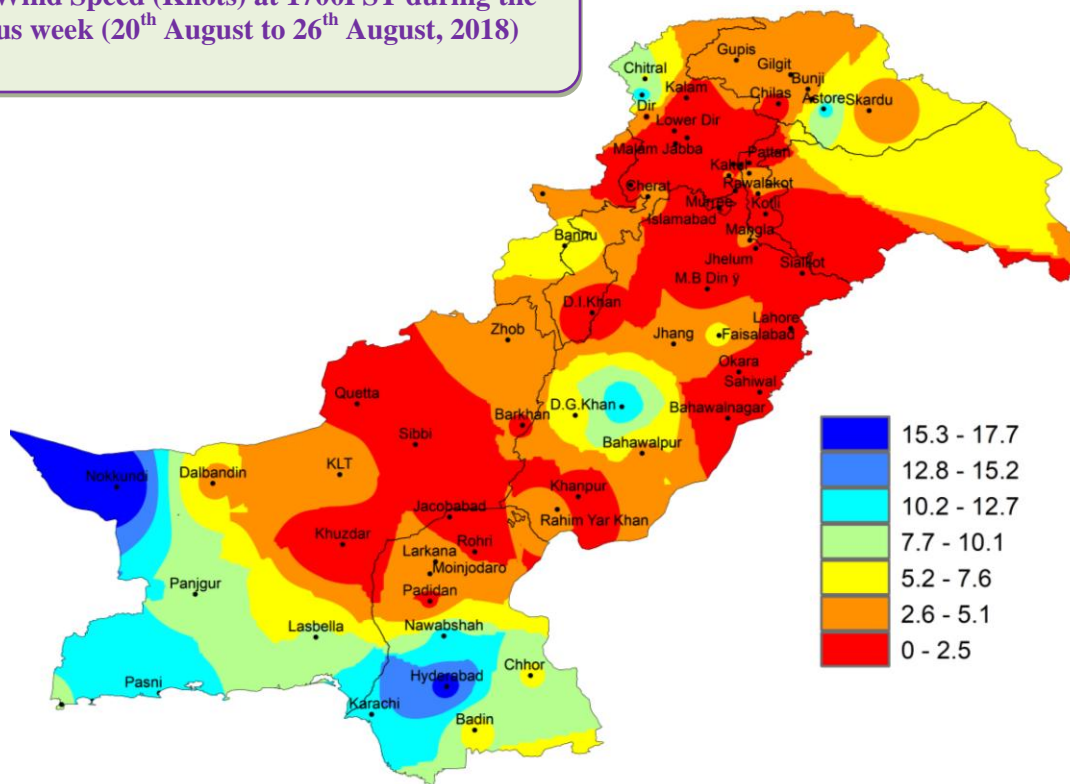
Total Growing Degree Days accumulated during the
Previous week (20th August to 26th August, 2018)



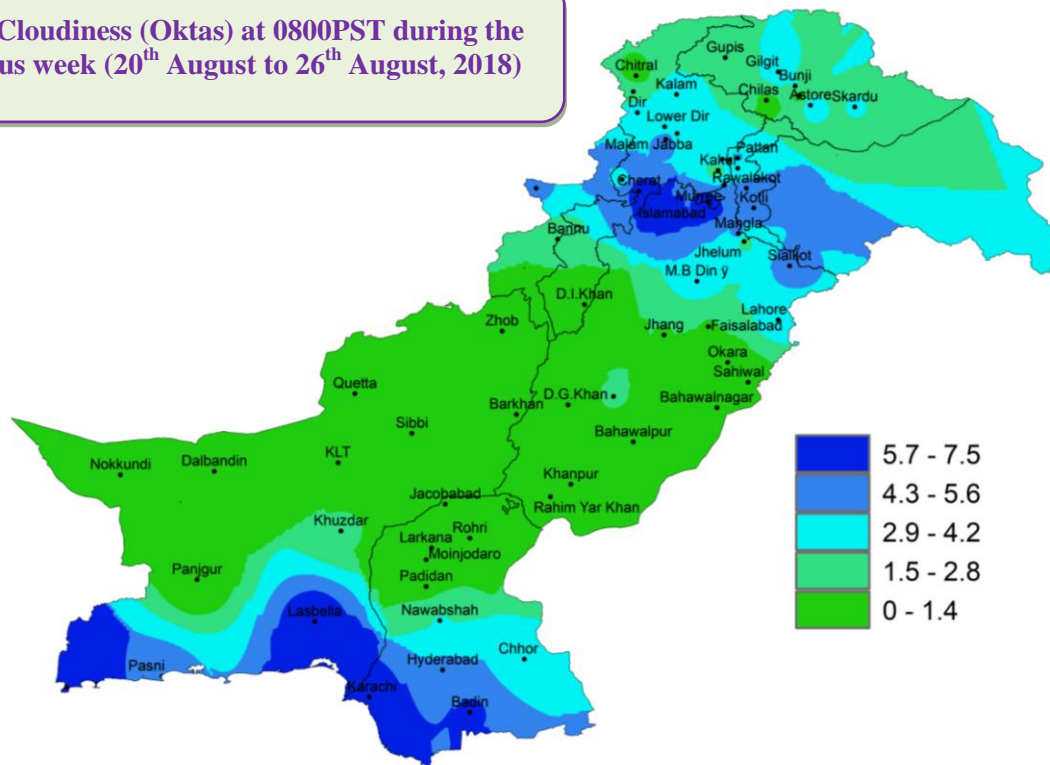
Mean Wind Speed (Knots) at 0800PST during the Previous week (20th August to 26th August, 2018)



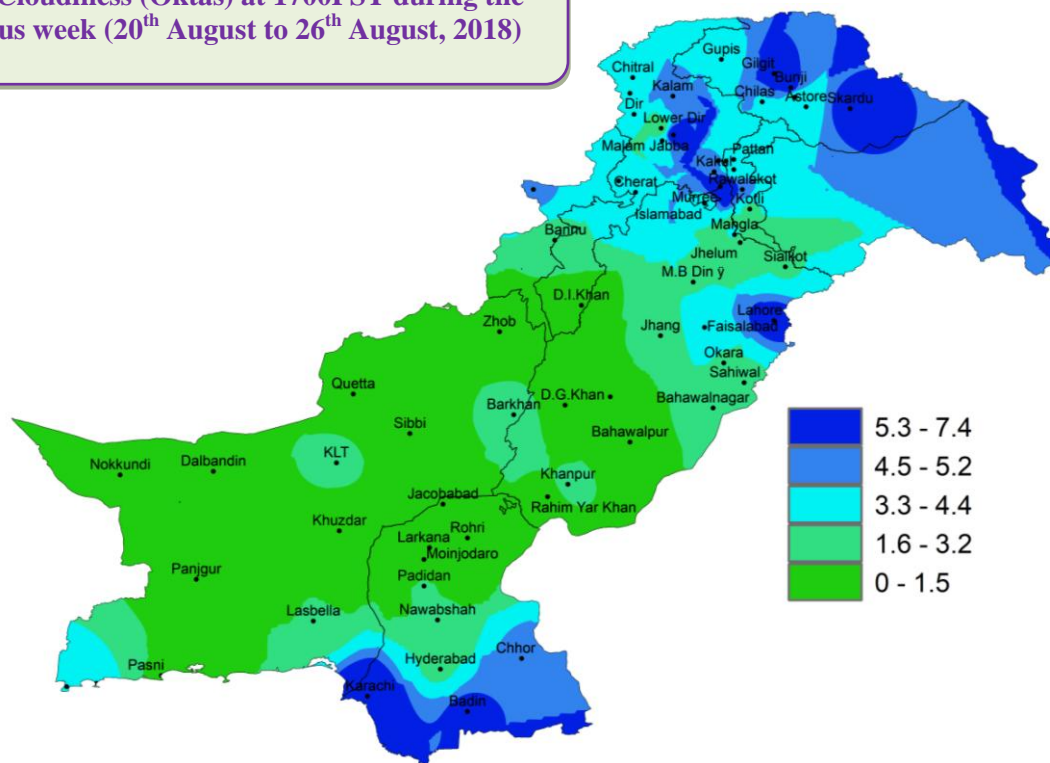
Mean Wind Speed (Knots) at 1700PST during the Previous week (20th August to 26th August, 2018)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (20th August to 26th August, 2018)



Mean Cloudiness (Oktas) at 1700PST during the Previous week (20th August to 26th August, 2018)



Weekly Weather Advisory for Farmers**(27th August to 2nd September, 2018)**

Seasonal low lies over northeast Balochistan. A westerly wave is persisting over northern areas of the country.

MONDAY**27-08-2018**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower with gusty winds is expected at few places in Malakand, Rawalpindi, Zhob divisions and Gilgit-Baltistan.

TUESDAY**28-08-2018**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower with gusty winds is expected at isolated places in Kashmir and its adjoining hilly areas.

WEDNESDAY**29-08-2018**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower with gusty winds is expected at few places in Hazara, Rawalpindi, Gujranwala divisions, Islamabad and Kashmir.

THURSDAY**30-08-2018**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower with gusty winds is expected at isolated places in Malakand, Peshawar, Rawalpindi divisions and Kashmir.

FRIDAY**31-08-2018.**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower with gusty winds is expected at isolated places in Kashmir and its adjoining hilly areas.

SATURDAY**01-09-2018**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower with gusty winds is expected at isolated places in Malakand, Mardan, Peshawar divisions and Kashmir.

SUNDAY**02-09-2018**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower with gusty winds is expected at isolated places in Malakand, Hazara, Peshawar, Mardan, Rawalpindi divisions, Islamabad and Kashmir.

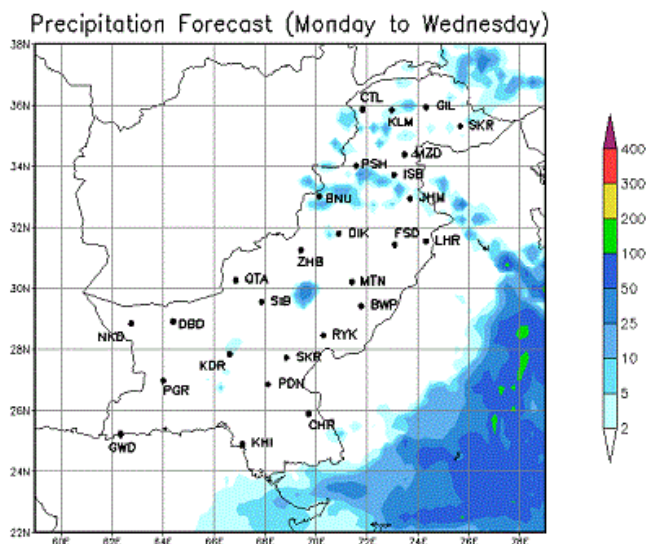
ADVISES FOR FARMERS

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.

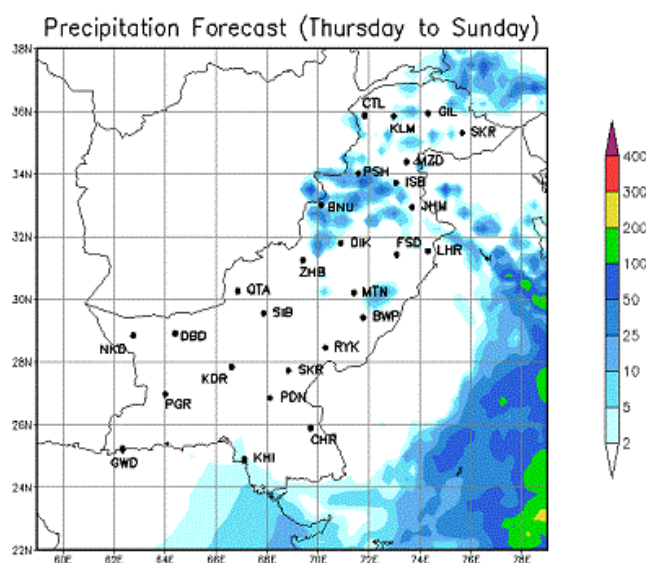
- Use pesticides to avoid the attack from pests on the crops as advised by the agriculture department.
- Use proper precautions during picking of cotton because the cost of good and clean quality cotton is high than that of the filthy one.

Weather Outlook from (27th August to 2nd September, 2018)

The outlook from 27th August to 29th August, 2018 shows that light rainfall is expected in scattered places of GB & Kashmir, Upper Punjab, KP and at isolated places in Eastern Balochistan.



The outlook from 30th August to 2nd September, 2018 shows that light to moderate rainfall is expected in scattered places of GB, KP, central and lower Punjab.



National Weather Data of Selected Cities (Weekly Data from 20th August to 26th August, 2018)

Stations	Maximum/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	highest							
Astore	27.5	30.5	115.9	48	2.70	3.5	4.0	0.7	11.6
Badin	33.6	34.0	174.0	71	0.00	5.8	5.7	6.0	6.9
Bahawalnagar	40.5	42.0	209.9	56	0.00	0.0	2.1	0.0	1.1
Bahawalpur	37.7	39.0	195.9	63	0.00	0.7	1.0	9.0	4.6
Balakot	32.5	34.0	157.0	75	3.00	4.0	4.9	0.0	1.6
Bannu	39.0	40.6	199.5	59	0.00	2.0	2.6	0.3	7.1
Barkhan	37.3	38.0	182.3	50	3.00	0.0	2.3	0.0	2.3
Bunji	37.1	40.0	182.8	36	2.20	3.0	6.1	2.0	3.4
Cherat	28.5	30.0	128.5	81	0.00	6.3	4.3	2.0	3.1
Chhor	35.9	36.8	180.3	66	0.00	3.2	5.1	5.3	7.4
Chilas	40.9	43.0	205.0	29	0.00	1.2	4.3	0.7	2.0
Chitral	36.4	37.5	163.2	46	1.00	0.7	3.9	0.0	7.4
D.I.Khan	37.7	40.0	192.2	58	0.00	1.0	0.4	6.0	7.1
Dalbandin	40.6	42.5	207.8	69	0.00	0.0	0.4	1.0	0.9
DG.Khan	42.1	44.5	198.8	24	0.00	0.0	0.6	2.7	4.6
Dir	32.2	34.0	145.5	74	58.00	3.5	4.1	0.0	2.3
Drosh	36.5	38.6	159.6	47	18.10	2.5	4.4	0.0	11.7
Faisalabad	37.9	40.2	196.0	66	0.01	1.9	3.7	2.1	1.8
Garidopatta	35.1	37.4	162.9	64	30.00	3.8	3.6	0.0	4.6
Gawader	32.9	33.0	168.8	75	0.00	5.7	4.0	0.0	11.4
Gilgit	37.4	40.0	161.8	53	1.90	3.7	5.6	0.0	4.9
Gupis	31.9	35.0	134.0	40	3.00	1.7	3.9	2.7	4.6

Hyderabad	35.0	36.6	176.2	68	0.00	4.3	3.0	11.0	16.0
Islamabad	32.9	35.0	163.7	77	166.30	6.5	3.4	0.3	0.0
Jacobabad	37.9	39.0	192.8	65	0.00	0.7	0.6	0.7	1.7
Jhang	38.4	40.5	198.9	66	31.40	1.3	2.1	3.3	3.4
Jhelum	35.9	38.0	179.4	75	95.20	2.2	2.3	1.0	1.7
Jiwani	31.5	32.5	164.8	75	0.00	7.0	3.3	3.3	9.4
Kakul	30.1	31.5	136.9	74	23.00	2.0	4.7	0.0	2.9
Kalam	27.9	29.5	114.1	69	7.90	3.7	5.0	0.0	1.1
Kalat	31.2	32.0	165.1	77	0.05	6.8	7.0	9.3	12.6
Karachi	38.7	39.6	196.3	70	0.00	0.7	1.7	3.0	1.1
Khanpur	34.5	36.0	181.3	26	0.00	1.7	0.3	0.0	0.0
Khuzdar	31.7	34.0	130.5	40	0.00	0.0	2.0	0.0	4.6
Kotli	32.7	35.0	163.3	78	51.00	5.3	2.9	0.3	1.1
Lahore	35.8	36.5	188.3	71	2.21	3.7	6.0	2.0	1.4
Larkana	38.9	39.5	197.5	60	0.00	0.0	0.4	5.0	3.4
Lasbella	36.2	38.0	181.8	66	0.00	6.8	1.6	0.0	7.7
Lower Dir	35.4	36.5	173.5	66	8.00	3.3	1.7	1.3	2.0
M.B Din	36.2	37.7	179.1	77	8.01	3.7	3.1	1.0	0.9
Malam Jabba	22.4	23.0	97.0	86	34.00	3.7	7.4	0.7	2.0
Mangla	34.9	37.1	173.6	74	80.10	4.7	3.4	2.3	3.1
Mir Khani	35.4	36.0	163.1	40	9.00	0.7	3.0	1.5	4.3
Moinjodaro	38.9	40.0	190.8	66	0.00	0.0	0.9	3.7	3.7
Multan	37.3	39.1	197.3	60	0.00	1.5	0.9	12.3	11.7
Murree	23.2	24.0	106.5	84	25.00	4.3	7.4	0.7	0.6
Muzaffarabad	33.7	35.4	160.2	68	13.00	3.7	3.4	0.7	1.7
Nawabshah	39.9	40.5	197.0	57	0.00	2.8	1.6	8.0	10.9

Nokkundi	40.6	45.5	198.3	11	0.00	0.0	0.0	16.7	17.7
Okara	37.6	38.0	195.3	68	0.00	1.0	3.1	0.0	0.6
Padidan	38.6	39.5	191.3	66	0.00	1.2	1.6	2.0	2.0
Panjgur	37.0	38.5	174.5	29	0.00	0.0	0.0	3.7	9.4
Parachinar	31.1	31.5	144.5	70	9.00	4.5	5.0	3.0	3.0
Pasni	32.2	33.0	169.5	77	0.00	5.0	1.0	2.0	11.3
Pattan	37.4	38.0	173.5	55	5.00	4.3	3.7	0.0	0.9
Peshawar	36.0	38.0	181.1	66	0.02	3.8	3.7	0.7	1.4
Quetta	34.7	35.8	154.7	23	0.00	2.3	1.1	2.1	3.4
R.Y.Khan	40.4	41.4	203.0	61	0.00	0.2	1.1	3.8	3.3
Rawalakot	26.5	27.5	116.3	88	31.80	4.3	5.1	0.0	2.6
Rawalpindi	33.3	35.0	167.5	77	68.00	5.8	5.1	0.3	0.4
Rohri	39.7	41.5	200.3	55	0.00	0.0	0.6	2.0	2.4
Sahiwal	37.2	37.8	193.4	67	0.01	0.5	2.4	2.3	1.7
Saidu Sharif	33.6	35.2	153.3	69	0.00	4.8	3.3	0.0	0.6
Sialkot	33.8	35.6	174.2	75	82.01	4.7	3.0	2.7	1.7
Sibbi	42.4	43.0	205.0	55	0.00	0.0	0.0	0.0	0.0
Skardu	31.2	36.4	130.6	42	0.01	2.8	6.3	0.0	3.4
Tandojam	35.9	37.0	173.3	70	0.00	1.6	3.3	3.5	4.9
Zhob	39.3	39.5	154.7	70	0.00	0.4	0.5	3.1	4.8
Usta.M	37.6	38.5	187.3	47	0.00	0.0	0.4	2.7	4.6

*** 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)