

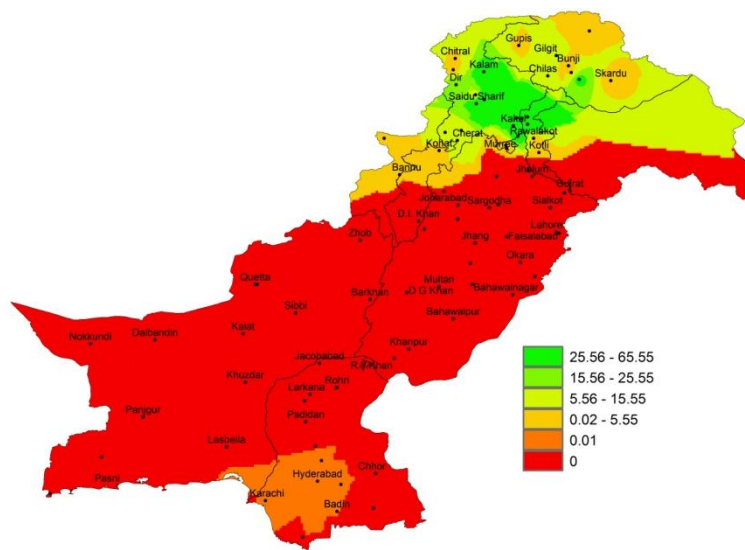
Weekly Weather and Crop Bulletin for Pakistan

**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 (15th October to 21st October, 2018)**



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Highlights of Past Weather (15th October to 21st October, 2018)

Below normal night time temperatures were observed in Khyber Pakhtunkhwa, Gilgit-Baltistan, Azad Jammu & Kashmir. However, mix trend was observed in Punjab, Sindh and Baluchistan.

Province wise distribution of rainfall reported as follows:

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

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

Editor: Khalida Noureen (Meteorologist)

Past Weather of Provinces (15th October to 21st 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 & 16.6°C respectively. For the recent week on average 134.3 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 55% and wind speed in the morning/evening recorded as 0.8/1.6 Knots. During the previous week the highest amount of rainfall was recorded as 42.10 mm at Murree & lowest minimum temperature was recorded as 4.5°C at Murree.

Sindh

Light rainfall observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 36.2°C & 19.7°C respectively. For the recent week, on average 129.8 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 51% and wind speed in the morning/evening recorded as 0.7/3.0 Knots. During the previous week the the highest amount of rainfall was recorded 0.01 mm at Hyderabad & lowest minimum temperature was recorded as 15.5°C at Padidan.

Khyber Pakhtunkhwa

Light to moderate rainfall observed at scattered places in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 23.9°C & 9.6°C respectively. For the recent week on average 82.2 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 1.1/3.0 Knots. During the previous week the highest amount of rainfall was recorded as 66.00 mm at Pattan & 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 29.9°C & 14.0°C respectively. For the recent week on average 118.4 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 39% and wind speed in the morning/evening recorded as 1.6/4.8 Knots. During the previous week the lowest minimum temperature was recorded as 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 20.2°C & 6.7°C respectively. For the recent week on average 56.9 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 58% and wind speed in the morning/evening recorded as 0.4/1.5 Knots. During the previous week the highest amount of rainfall was recorded as 35.00 mm at Garhi Dopatta & lowest minimum temperature was recorded as -2.°C at Skardu.

Past Weather for Major Agricultural Plains (15th October to 21st October, 2018)

Rawalpindi (Potohar region)

Dry weather reported from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 1.3/1.3 Oktas while, average relative humidity observed as 63%. Mean night time temperature recorded as 12.6°C & for the recent week 111.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/0.3 Knots.

Faisalabad (Central Punjab)

Dry weather reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 0.0/0.9 Oktas while, average relative humidity observed as 73%. Mean night time temperature recorded as 17.3°C & for the recent week 140.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/0.0 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 57%. Mean night time temperature recorded as 18.1°C & for the recent week 151.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/3.6 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 0.3/0.0 Oktas while, average relative humidity observed as 663%. Mean night time temperature recorded as 19.1°C & for the recent week 150.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.9 Knots.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 0.9/0.7 Oktas while, average relative humidity observed as 25%. Mean night time temperature recorded as 7.7°C & for the recent week 62.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.9/3.6 Knots.

Past Weather for Sub-Regional Agricultural Plains (15th October to 21st October, 2018)

Multan

Dry weather reported from Multan during the week; however, cloudiness in the morning/evening recorded as 0.3/1.7 Oktas while, average relative humidity observed as 50%. Mean night time temperature recorded as 19.5°C & for the recent week 147.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.7 Knots.

Lahore

Dry weather reported from Lahore during the week; however, cloudiness in the morning/evening recorded as 0.0/1.0 Oktas while, average relative humidity observed as 54%. Mean night time temperature recorded as 18.8°C & for the recent week 141.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening 0.0/0.7 Knots.

Zhob

Dry weather reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 0.0/1.7 Oktas while, average relative humidity observed as 40%. Mean night time temperature recorded as 12.9°C & for the recent week 98.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 4.7/5.0 Knots.

Murree

Rainfall reported as 42.10 mm from Murree during the week; however, cloudiness in the morning/evening recorded as 1.2/2.5 Oktas while, average relative humidity observed as 53%. Mean night time temperature recorded as 8.6°C & for the recent week 57.0 growing degree days accumulated

by the end of last week. Wind speed recorded in the morning/evening as 1.0/0.7 Knots.

D.I. Khan

Dry weather reported from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 0.0/1.0 Oktas while, average relative humidity observed as 57%. Mean night time temperature recorded as 17.3°C & for the recent week 140.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.7/1.7 Knots.

Peshawar

Rainfall reported as 8.01 mm from Peshawar during the week; however, cloudiness in the morning/evening recorded as 1.2/4.2 Oktas while, average relative humidity observed as 70%. Mean night time temperature recorded as 12.0°C & for the recent week 105.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/13.7 Knots.

Kalam

Rainfall reported as 35.0 mm from Kalam during the week; however, cloudiness in the morning/evening recorded as 2.7/4.7 Oktas while, average relative humidity observed as 65%. Mean night time temperature recorded as 0.2°C & for the recent week 20.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 Knots.

Gilgit

Rainfall reported as 11.30 mm from Gilgit during the week; However, cloudiness in the morning/evening recorded as 4.0/6.2 Oktas while, average relative humidity observed as 67%. Mean night time temperature recorded as 4.1°C & for the recent week 51.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.0 Knots.

Skardu

Dry weather reported from Skardu during the week; however, cloudiness in the morning/evening recorded as 4.0/5.8 Oktas while, average relative humidity observed as 54%. Mean night time temperature recorded as 1.5°C & for the recent week 52.5 growing degree days accumulated by the end of

last week. Wind speed recorded in the morning/evening as 0.0/2.8 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: *Very Good, Full Maturity* stage completed.

Lower Sindh (Tandojam)

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

Cotton (CIM 602): *Harvested on 17-10-2018.*

Northern Baluchistan (Quetta)

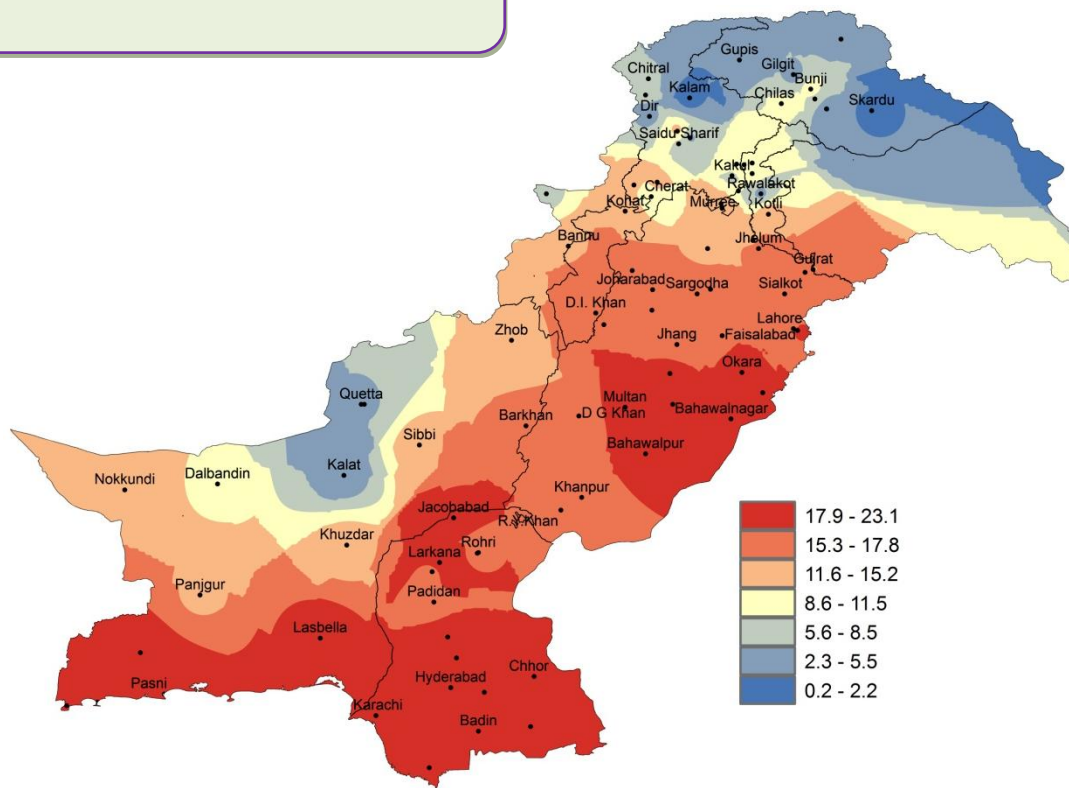
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

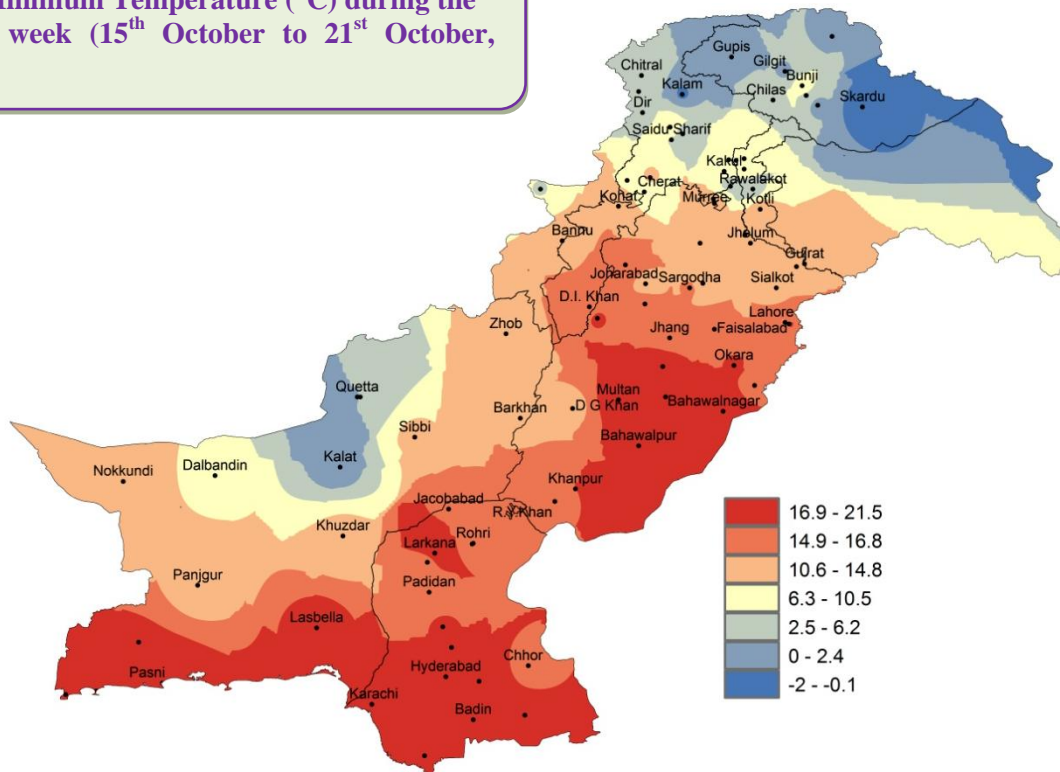
There is presently rice crop in the fields of RAMC Usta Muhammad.

Rice: *Good, maturity* stage.

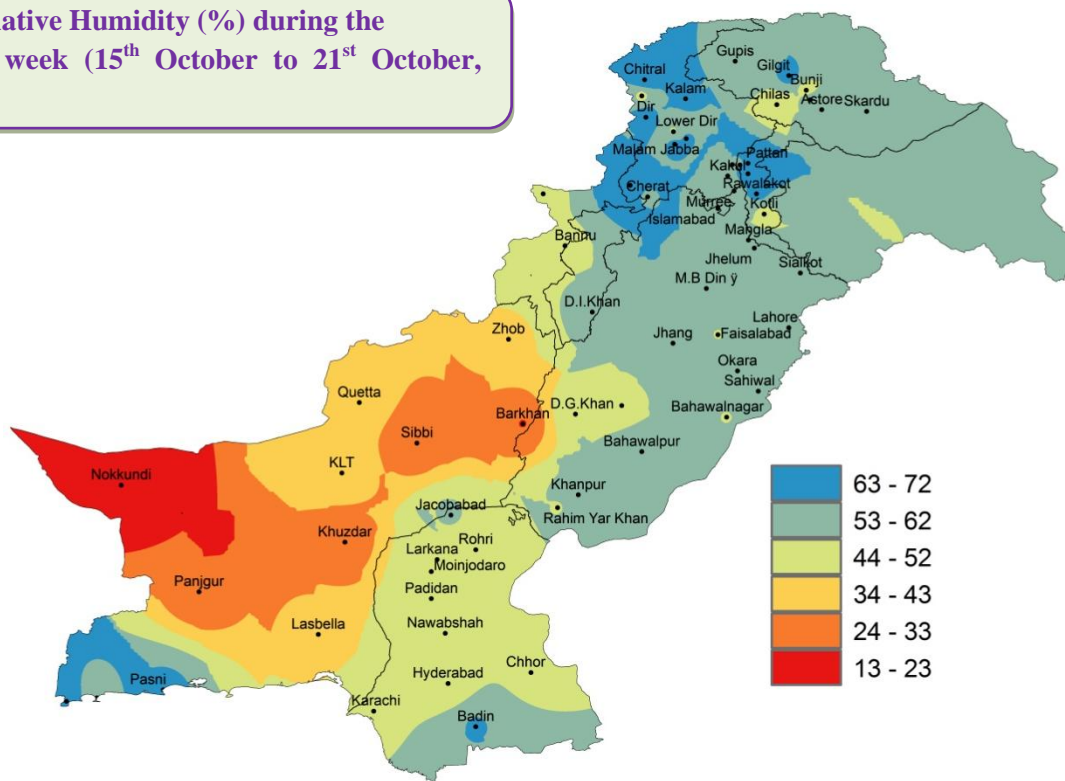
Mean Minimum temperature ($^{\circ}\text{C}$) during the Previous week (15th October to 21st October, 2018)



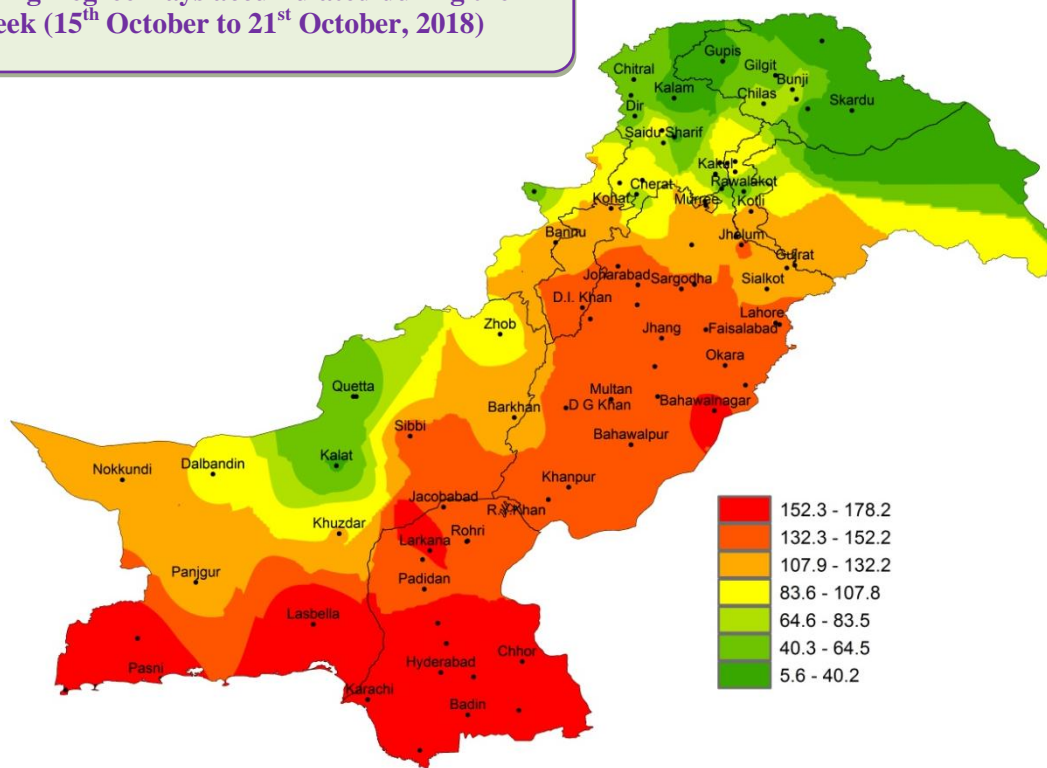
Lowest Minimum Temperature ($^{\circ}\text{C}$) during the Previous week (15th October to 21st October, 2018)



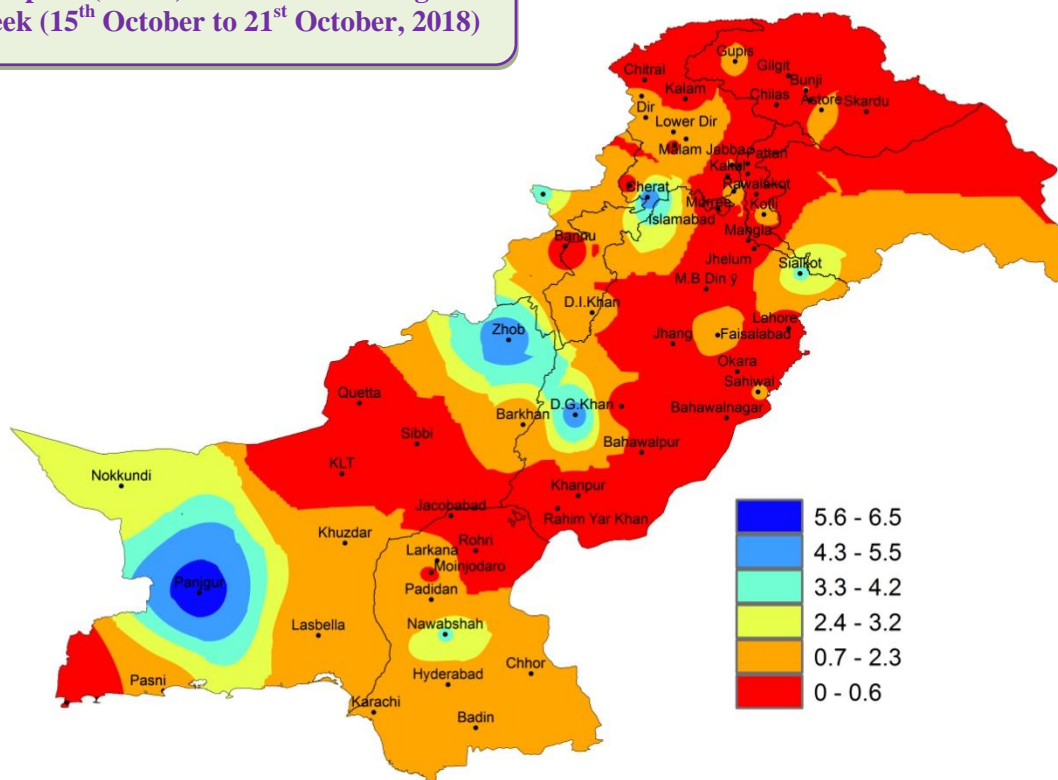
Mean Relative Humidity (%) during the
Previous week (15th October to 21st October,
2018)



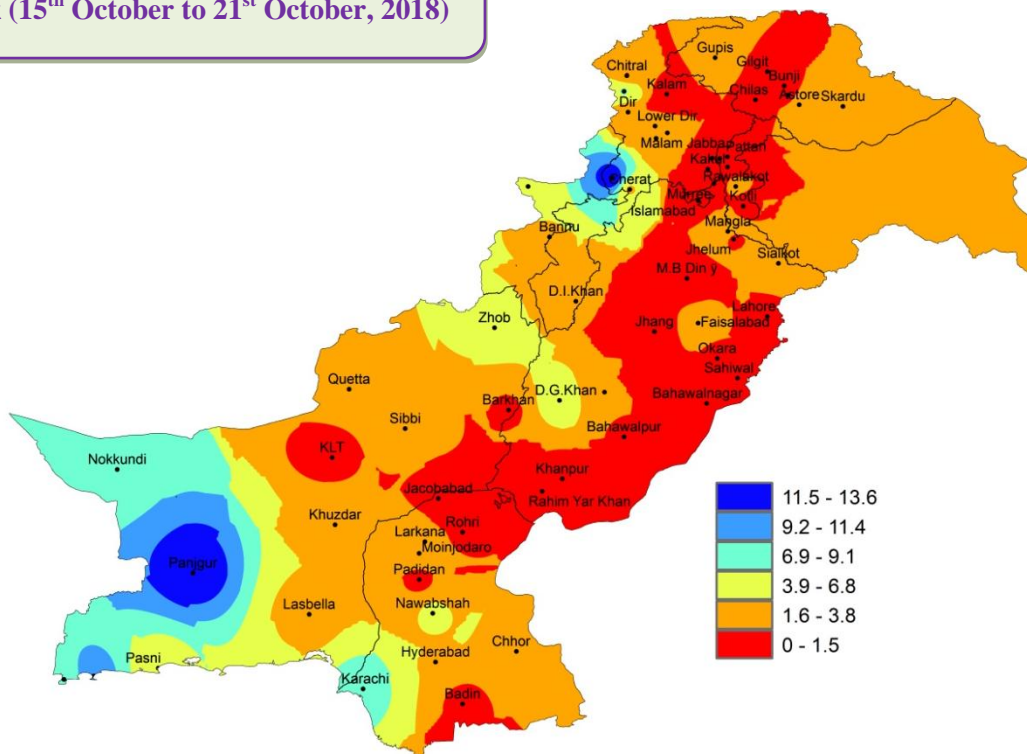
Total Growing Degree Days accumulated during the
Previous week (15th October to 21st October, 2018)



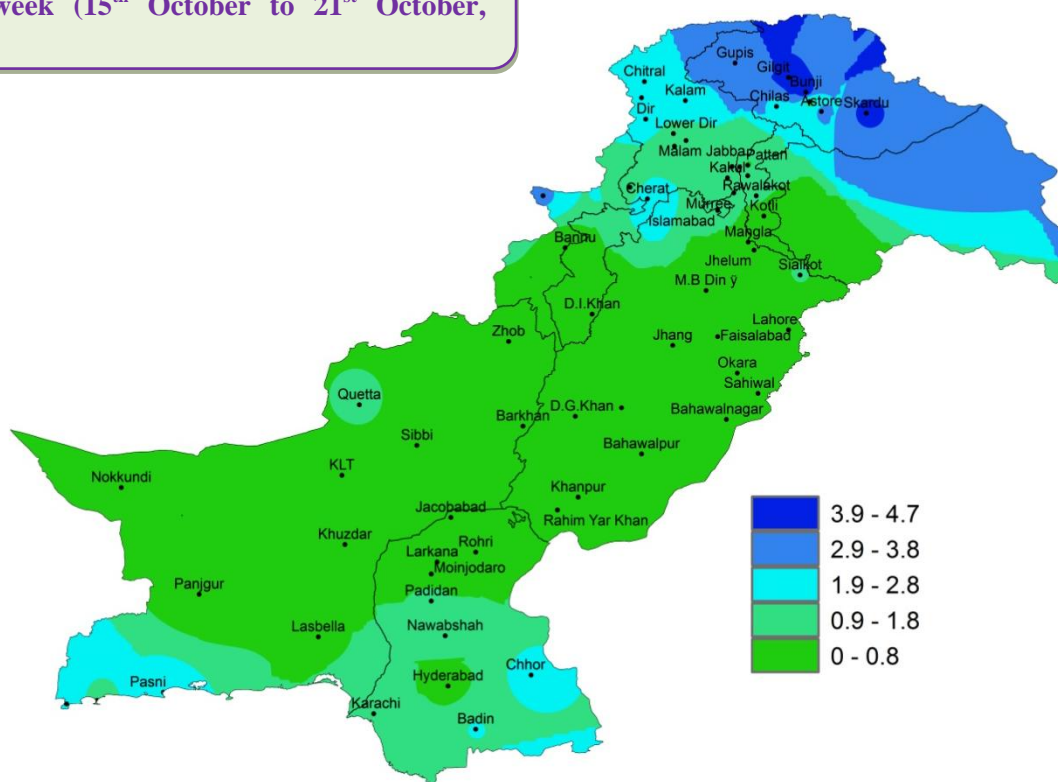
**Mean Wind Speed (Knots) at 0800PST during the
Previous week (15th October to 21st October, 2018)**



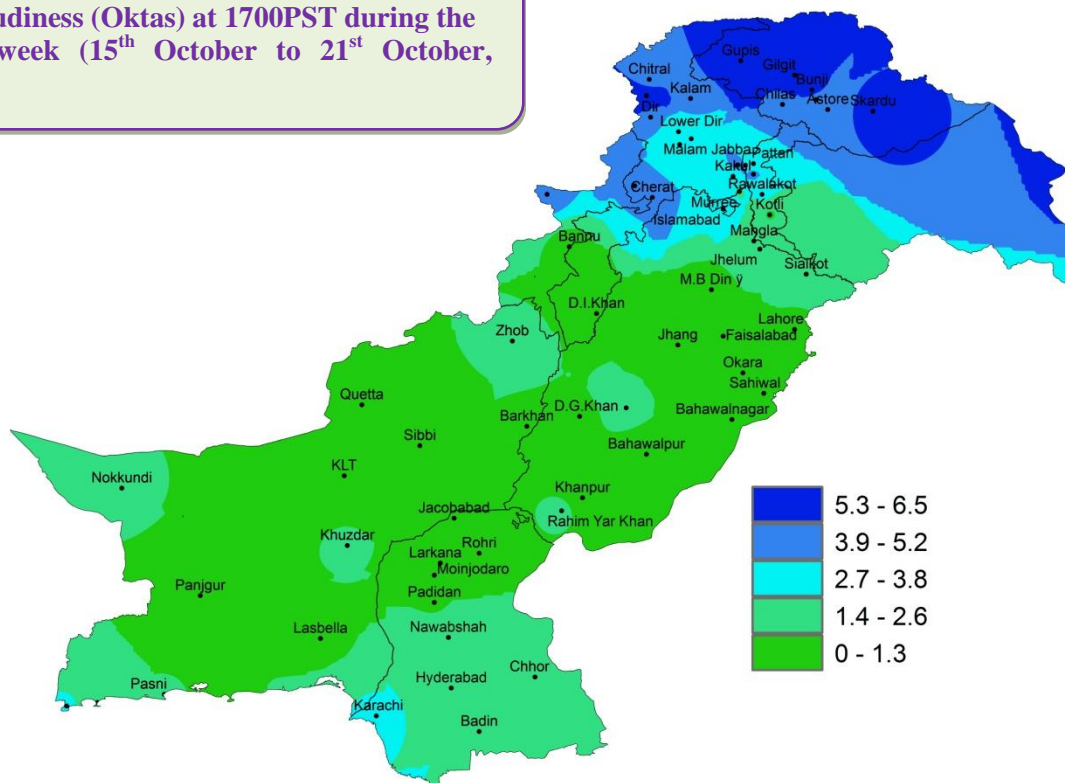
**Mean Wind Speed (Knots) at 1700PST during the
Previous week (15th October to 21st October, 2018)**



Mean Cloudiness (Oktas) at 0800PST during the Previous week (15th October to 21st October, 2018)



Mean Cloudiness (Oktas) at 1700PST during the Previous week (15th October to 21st October, 2018)



Weekly Weather Advisory for Farmers
(22nd October to 28th October, 2018)

Continental air is prevailing over most parts of the country.

MONDAY

22-10-2018

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

TUESDAY

23-10-2018

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

WEDNESDAY

24-10-2018

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Makran division.

THURSDAY

25-10-2018

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Kohat division.

FRIDAY

26-10-2018

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Malakand division.

SATURDAY

27-10-2018

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

SUNDAY

28-10-2018

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

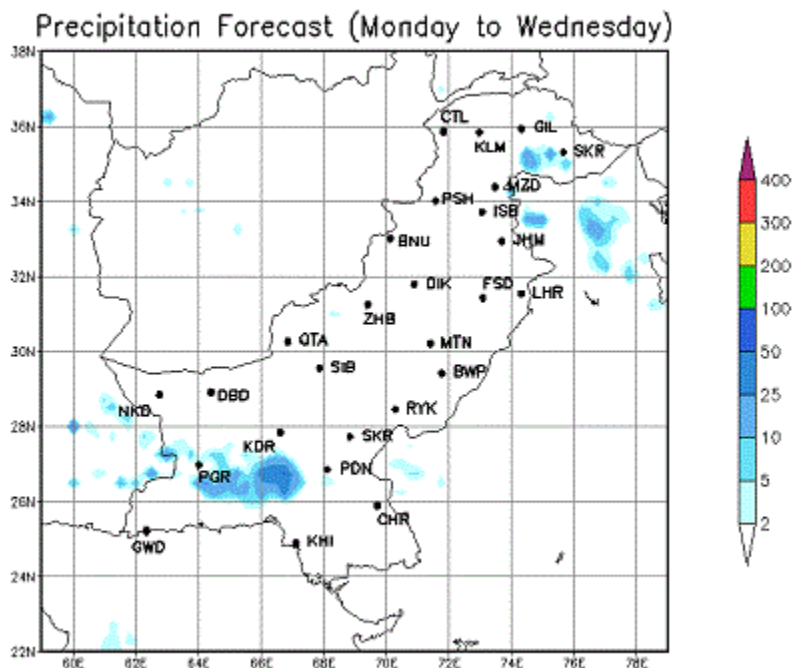
ADVISES FOR FARMERS

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.

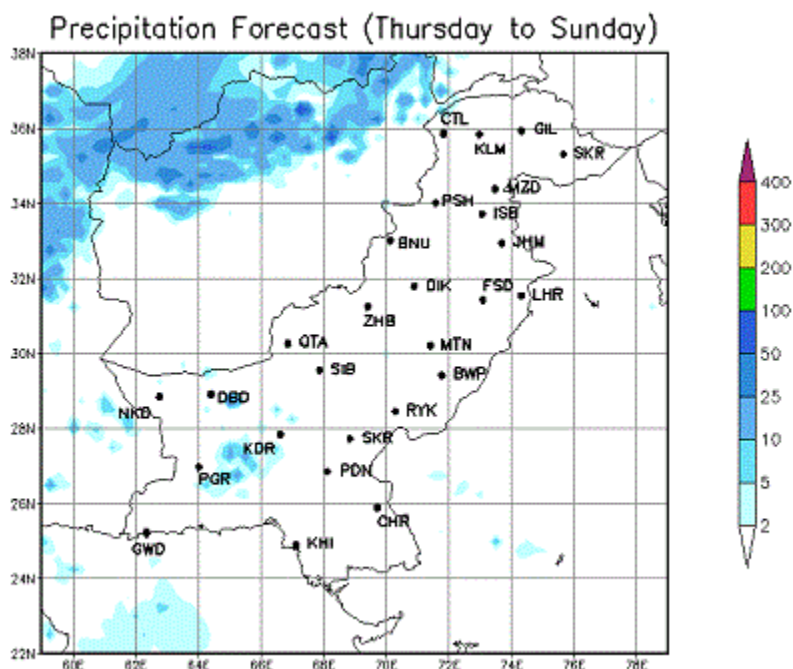
- Use proper precautions during picking of cotton because the cost of good and clean quality cotton is high than that of the filthy one.
- Use pesticides to avoid the attack from pests on the crops as advised by the agriculture department.

Weather Outlook from (22th October to 28th October, 2018)

The outlook from 22nd October to 24th October, 2018 shows that light to moderate rainfall is expected at isolated places of Gilgit-Baltistan, Kashmir, south eastern part of Baluchistan and adjoining areas of Sindh. However, dry weather may prevail in rest of the country.



The outlook from 25th October to 28th October, 2018 shows that light rainfall is expected at isolated places of Baluchistan. However, dry weather may prevail in rest of the country.



National Weather Data of Selected Cities (Weekly Data from 15th October to 21st 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	1.9	0.5	15.0	58	32.10	3.0	4.8	1.0	2.7
Badin	23.1	21.5	170.1	63	0.00	1.8	2.5	1.7	0.7
Bahawalnagar	19.9	19.0	157.0	52	0.00	0.0	0.0	0.0	0.8
Bahawalpur	18.3	17.8	146.4	57	0.00	0.3	0.7	0.3	1.0
Balakot	9.6	8.3	85.4	62	50.00	1.8	4.0	0.8	0.8
Bannu	14.8	13.4	120.8	50	0.00	0.0	0.5	0.3	3.3
Barkhan	16.3	14.5	121.0	23	0.00	0.0	1.2	1.3	1.0
Bunji	10.1	8.3	69.5	47	0.02	4.8	6.3	0.7	1.3
Cherat	8.9	8.0	66.5	61	8.00	2.5	4.0	5.0	3.3
Chhor	18.7	16.0	163.6	50	0.00	2.0	1.7	1.3	3.3
Chilas	9.1	5.0	76.8	46	10.00	2.6	4.7	0.4	1.0
Chitral	6.1	4.5	60.8	72	4.80	2.8	4.5	0.0	1.3
D.I.Khan	15.7	14.0	137.9	52	0.00	0.3	1.2	4.7	5.7
Dalbandin	17.3	16.0	140.5	57	0.00	0.0	1.0	0.7	1.7
D.G.Khan	4.5	3.5	58.5	69	26.00	2.2	4.8	0.7	1.8
Dir	5.9	5.3	62.7	49	2.30	1.8	6.3	1.0	7.3
Drosh	17.3	15.0	140.5	73	0.00	0.0	0.9	1.1	0.0
Faisalabad	9.9	8.5	84.4	71	35.00	1.3	4.0	0.7	1.0
Garidopatta	18.9	17.5	157.5	60	0.00	1.5	1.3	0.0	10.7
Gawader	1.9	0.5	15.0	58	32.10	3.0	4.8	1.0	2.7
Gilgit	4.1	1.5	51.0	67	11.30	4.0	6.2	0.0	1.0
Gupis	3.1	1.5	34.3	56	4.00	3.7	6.5	0.7	2.7

Hyderabad	21.1	19.5	165.0	45	0.01	0.5	1.8	1.7	3.7
Islamabad	12.5	10.5	105.9	62	0.00	1.0	3.0	0.3	0.3
Jacobabad	18.8	16.5	150.9	53	0.00	0.7	0.8	0.0	0.3
Jhang	16.8	15.5	139.4	60	0.00	0.0	0.5	0.3	0.3
Jhelum	15.8	12.8	134.0	59	0.00	0.2	2.2	0.3	0.7
Jiwani	21.4	18.5	157.3	64	0.00	2.7	2.8	0.3	7.7
Kakul	8.1	7.0	69.3	59	25.00	1.3	3.3	0.0	1.0
Kalam	0.2	-0.5	20.5	65	35.00	2.7	4.7	0.0	0.0
Karachi	22.8	20.5	178.2	51	0.00	1.4	2.8	1.2	8.7
Khanpur	17.3	16.8	145.7	59	0.00	0.7	0.7	0.0	0.0
Khuzdar	13.5	12.5	108.5	25	0.00	0.0	1.5	1.3	3.7
Kalat	2.9	0.0	39.3	40	0.00	0.0	0.0	0.0	0.7
Kotli	14.8	14.0	121.2	49	0.00	0.0	1.2	0.8	0.8
Lahore	18.8	17.5	141.9	54	0.00	0.0	1.0	0.0	0.7
Larkana	21.5	19.0	161.8	52	0.00	0.3	0.5	1.3	2.7
Lasbella	19.8	18.0	175.5	37	0.00	0.7	1.0	1.3	2.0
Lower Dir	12.6	11.0	104.8	51	8.00	1.8	2.7	1.7	2.0
M.B Din	16.2	14.0	134.0	61	0.00	0.0	0.5	0.3	0.0
Malam Jabba	4.8	3.5	26.0	63	60.00	1.2	3.2	2.3	2.3
Mangla	14.9	12.2	128.6	53	0.00	0.7	2.5	0.0	4.0
Mir Khani	8.1	6.0	75.8	58	4.00	1.2	3.8	0.0	0.8
Moinjodaro	16.4	15.5	144.8	50	0.00	0.7	0.8	0.3	3.3
Multan (PBO)	19.5	18.5	147.5	50	0.00	0.3	1.7	0.0	1.7
Murree	8.6	4.5	57.0	53	42.10	1.2	2.5	1.0	0.7
Muzaffarabad	10.7	9.5	88.7	61	26.00	1.3	3.8	0.0	1.3
Nawabshah	18.5	17.0	159.4	48	0.00	1.0	2.5	3.3	4.3

Nokkundi	14.9	13.0	124.0	13	0.00	0.0	1.5	2.3	7.7
Okara	18.4	17.0	143.4	59	0.00	0.0	0.7	0.0	1.0
Padidan	19.1	18.5	150.9	66	0.00	0.3	0.0	0.0	2.9
Panjgur	17.1	15.5	149.0	51	0.00	1.0	1.2	1.0	0.7
Parachinar	14.6	13.0	118.5	23	0.00	0.0	0.7	6.0	13.3
Pasni	7.1	6.0	59.4	50	3.00	3.0	4.8	3.3	4.0
Pattan	20.8	20.0	156.3	65	0.00	2.3	1.3	2.0	4.5
Peshawar	11.2	8.5	87.8	63	66.00	0.7	3.0	0.0	0.0
Quetta	12.0	10.0	105.0	70	8.01	1.2	4.2	0.0	13.7
Rahim Y. Khan	7.7	4.5	62.7	25	0.00	0.9	0.7	2.9	3.6
Rawalakot	17.3	16.7	149.4	52	0.00	0.0	1.5	0.0	1.5
Rawalpindi	4.6	3.0	54.2	66	2.30	1.0	2.8	0.0	2.0
Rohri	12.6	10.5	111.9	63	0.00	1.3	1.3	0.3	0.3
Sahiwal	17.7	16.5	150.0	44	0.00	0.5	1.2	0.0	0.7
Saidu Sharif	18.0	16.0	141.9	58	0.00	0.0	0.0	0.7	1.3
Sialkot	8.1	6.0	78.0	65	30.00	1.2	2.8	0.0	2.0
Sibbi	15.7	14.5	127.4	53	0.00	0.8	1.8	3.3	3.5
Skardu	14.9	12.0	143.5	24	0.00	0.0	0.0	0.3	3.0
Tandojam	1.5	-2.0	25.5	54	0.00	4.0	5.8	0.0	2.8
Usta.M	18.1	16.5	151.8	57	0.00	0.0	0.8	0.0	3.6
Zhob	12.9	12.0	98.5	40	0.00	0.0	1.7	4.7	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)