

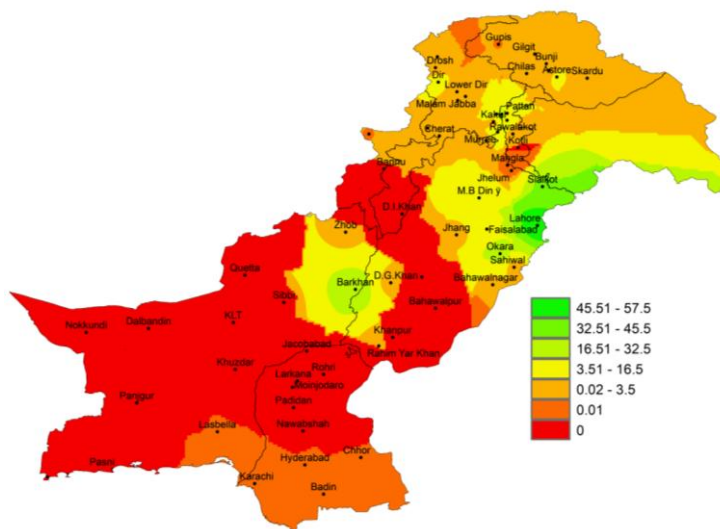
Weekly Weather and Crop Bulletin for Pakistan

**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 (3rd September to 9th September, 2018)**



Contents

Highlights of past weather (General)	1-2
Past weather for Agri Plains	3-4
Crop progress	4
Min Temperature maps	5
R.H and GDD	6
Wind speed maps	7
Cloudiness maps	8
Farmers advisory	9
Weather Outlook	10
National data for selected stations	11-13
AgMIP findings	14

Highlights of Past Weather (3rd September to 9th September, 2018)

Above normal day temperature was observed all over the country.

Province wise distribution of rainfall reported as follows:

- Light to moderate rainfall observed in Punjab, Gilgit-Baltistan and Azad Jammu & Kashmir during the previous week.
- Light rainfall observed in Khyber Pakhtunkhwa, Baluchistan and Sindh 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 (3rd September to 9th September, 2018)

Punjab

Light to moderate rainfall observed in Punjab during the week. Weekly maximum and minimum temperatures recorded as 36.6°C & 26.0°C respectively. For the recent week on average 184.1 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 65% and wind speed in the morning/evening recorded as 1.9/2.5 Knots. During the previous week the highest amount of rainfall was recorded as 56.63 mm at Lahore & highest maximum temperature was recorded as 43.0°C at Bhakkar.

Sindh

Light rainfall observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 36.7°C & 24.9°C respectively. For the recent week, on average 180.8 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 4.3/5.2 Knots. During the previous week the highest amount of rainfall was recorded as 0.01mm (trace) at Karachi and Badin & highest maximum temperature was recorded as 42.1°C at Dadu.

Khyber Pakhtunkhwa

Light rainfall observed in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 33.6°C & 19.5°C respectively. For the recent week on average 154.2 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 0.6/3.1 Knots. During the previous week the highest amount of rainfall was recorded as 10 mm at Risalpur & highest maximum temperature was recorded as 41.0°C at D. I. Khan.

Baluchistan

Light rainfall observed in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 34.9°C & 20.2°C respectively. For the recent week on average 156.5 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 47% and wind speed in the morning/evening recorded as 0.9/4.9 Knots. During the previous week the highest amount of rainfall was recorded as 27.00 mm Barkhan & highest maximum temperature was recorded as 43.5°C at Sibbi.

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 31.7°C & 18.5°C respectively. For the recent week on average 133.2 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 1.2/3.7 Knots. During the previous week the highest amount of rainfall was recorded as 36.00 mm at Muzaffarabad & highest maximum temperature was recorded as 39.5°C at Chillas.

Past Weather for Major Agricultural Plains (3rd September to 9th September, 2018)

Rawalpindi (Potohar region)

Dry weather reported from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 2.6/2.3 Oktas while, average relative humidity observed as 70%. Mean day time temperature recorded as 35.7°C & for the recent week 174.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/0.6 Knots.

Faisalabad (Central Punjab)

Rainfall reported as 1.4 mm from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 1.9/2.4 Oktas while, while, average relative humidity observed as 62%. Mean day time temperature recorded as 37.5°C & for the recent week 190.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.8/1.0 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness recorded in the morning/evening as 0.3/1.0 Oktas while, average relative humidity observed as 67%. Mean day time temperature recorded as 36.9°C & for the recent week 172.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 3.8/5.9 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 0.0/0.3 Oktas while, average relative humidity observed as 74%. Mean day time temperature recorded as 36.9°C & for the recent week 186.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.2/3.4 Knots.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 0.9/1.3 Oktas while, average relative humidity observed as 17%. Mean day time

temperature recorded as 31.8°C & for the recent week 127.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.2/3.3 Knots.

Past Weather for Sub-Regional Agricultural Plains (3rd September to 9th September, 2018)

Multan

Dry weather reported from Multan during the week; however, cloudiness in the morning/evening recorded as 0.9/1.1 Oktas while, average relative humidity observed as 57%. Mean day time temperature recorded as 37.6°C & for the recent week 194.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 5.1/6.0 Knots.

Lahore

Rainfall reported as 56.63 mm from Lahore during the week; however, cloudiness in the morning/evening recorded as 4.4/5.3 Oktas while, average relative humidity observed as 69%. Mean day time temperature recorded as 35.9°C & for the recent week 186.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening 0.3/2.9 Knots.

Zhob

Dry weather reported from during the week; however, cloudiness in the morning/evening recorded as 0.0/2.0 Oktas while, average relative humidity observed as 52%. Mean day time temperature recorded as 34.6°C & for the recent week 162.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/9.6 Knots.

Murree

Rainfall reported as 11.30 mm from Murree during the week; however, cloudiness in the morning/evening recorded as 2.1/5.7 Oktas while, average relative humidity observed as 81%. Mean day time temperature recorded as 23.5°C & for the recent week 101.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/0.9 Knots.

D.I. Khan

Dry weather reported from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 0.9/1.3 Oktas while, average relative humidity observed as 64%. Mean day time temperature recorded as 39.9°C & for the recent week 199.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/1.1 Knots.

Peshawar

Rainfall reported as 1.00 mm from Peshawar during the week; however, cloudiness in the morning/evening recorded as 1.9/2.6 Oktas while, average relative humidity observed as 68%. Mean day time temperature recorded as 36.3°C & for the recent week 179.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/1.7 Knots.

Kalam

Dry weather reported from Kalam during the week; however, cloudiness in the morning/evening recorded as 0.0/3.5 Oktas while, average relative humidity observed as 52%. Mean day time temperature recorded as 27.3°C by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.5 Knots.

Gilgit

Rainfall reported as 0.60 mm (trace) from Gilgit during the week; However, cloudiness in the morning/evening recorded as 5.3/7.0 Oktas while, average relative humidity observed as 57%. Mean day time temperature recorded as 32.5°C & for the recent week 139.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/0.9 Knots.

Skardu

Rainfall reported as 0.02 mm from Skardu during the week; however, cloudiness in the morning/evening recorded as 4.7/5.4 Oktas while, average relative humidity observed as 47%. Mean day time temperature recorded as 29.3°C & for the recent week 119.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.3 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; Very Good, 9th leaf stage.

Central Punjab (Faisalabad)

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

Cotton; Very Good, Boll opening stage and the field is irrigated.

Lower Sindh (Tandojam)

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

Cotton (CIM 602); Good, Maturity stage.

Northern Baluchistan (Quetta)

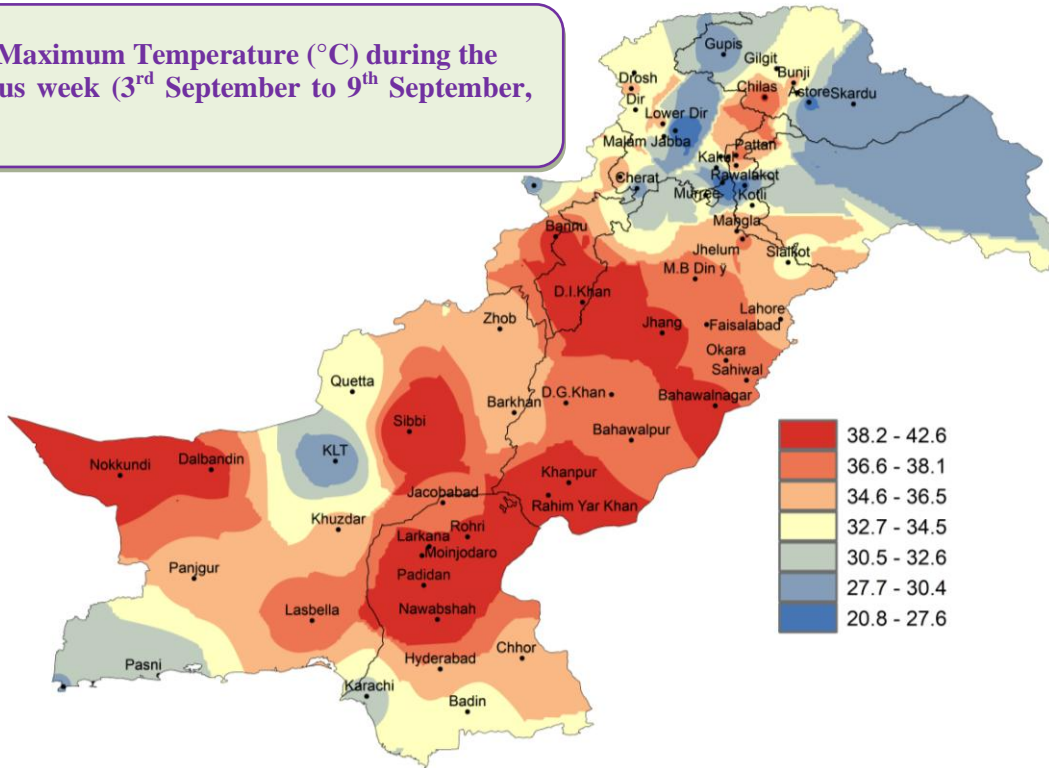
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

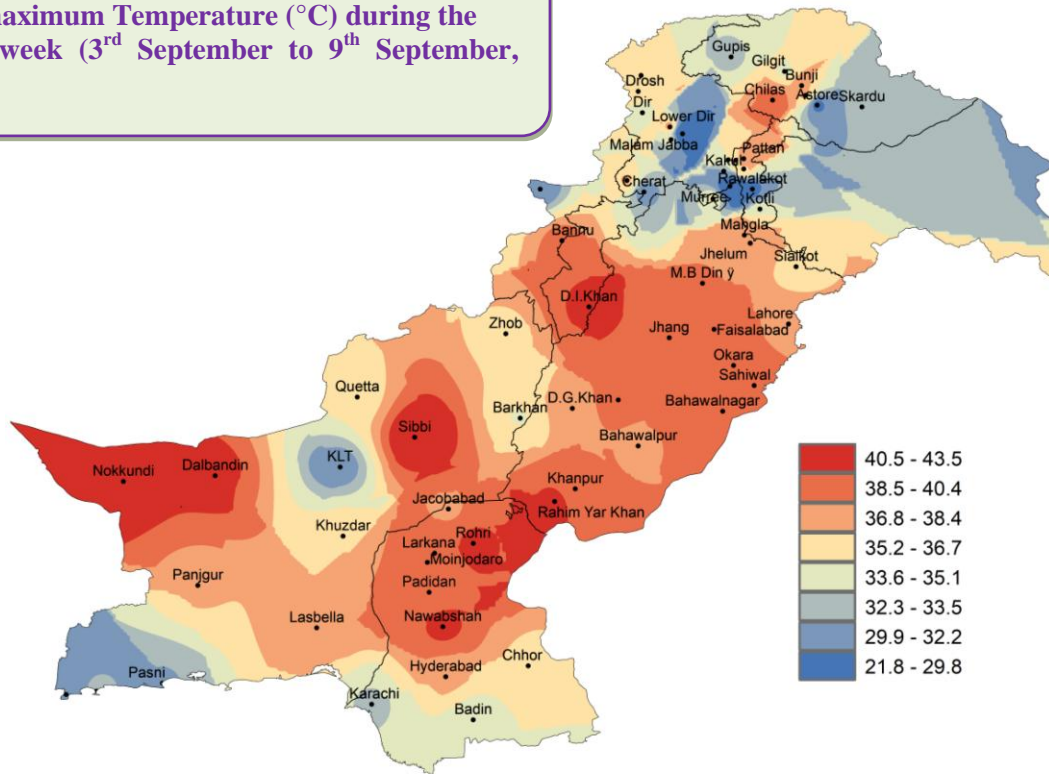
There is presently rice crop in the fields of RAMC Usta Muhammad.

Rice; Tillering stage.

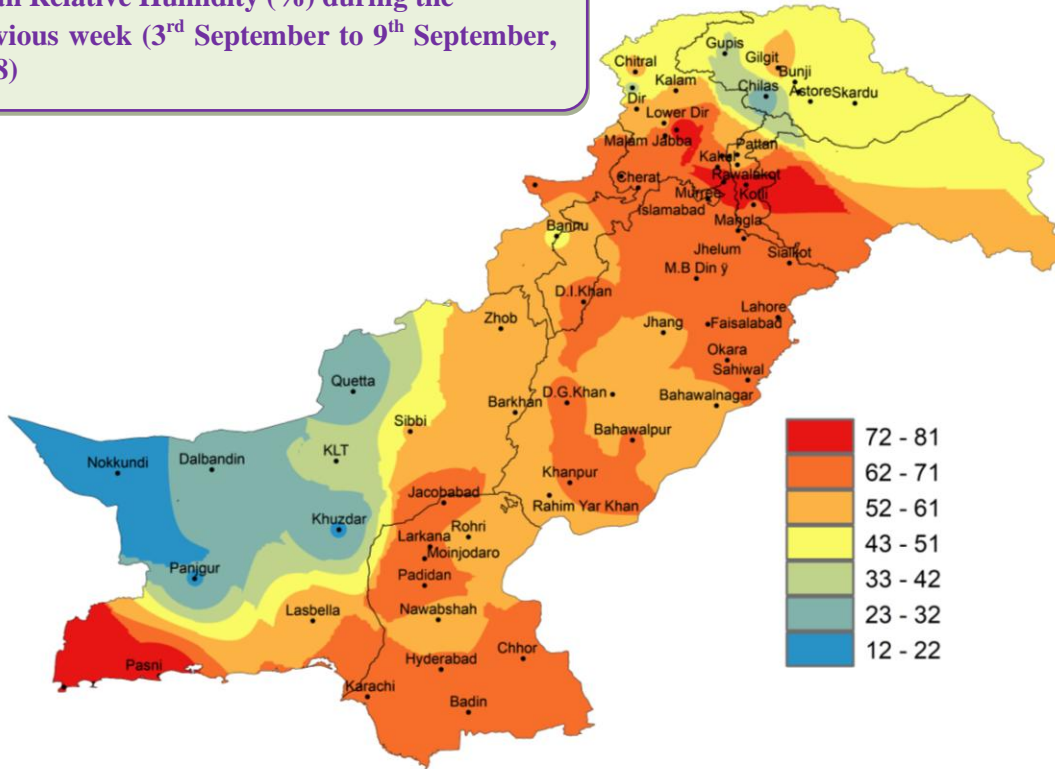
Mean Maximum Temperature (°C) during the Previous week (3rd September to 9th September, 2018)



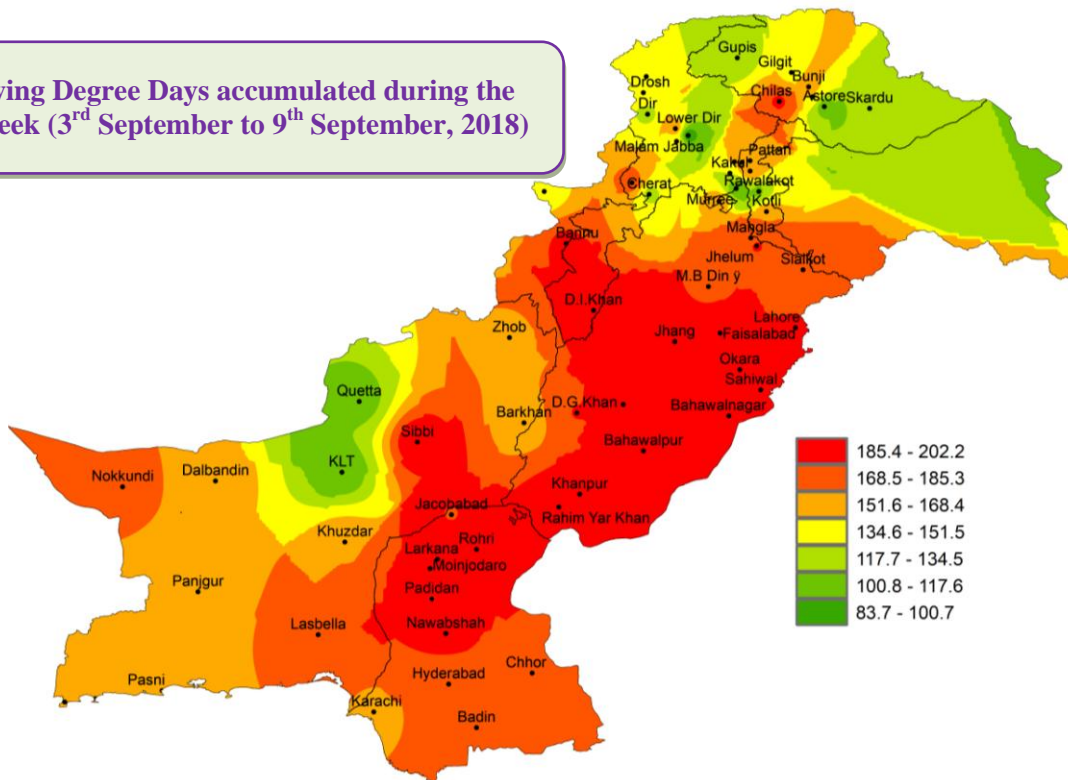
Highest maximum Temperature (°C) during the Previous week (3rd September to 9th September, 2018)



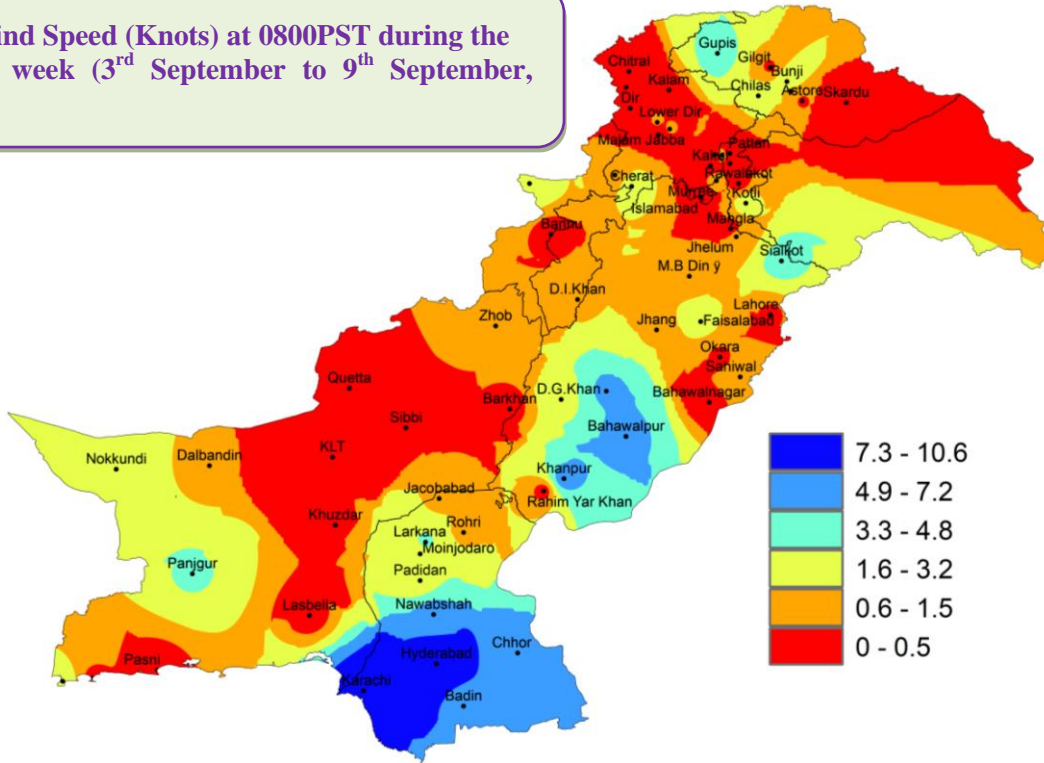
Mean Relative Humidity (%) during the Previous week (3rd September to 9th September, 2018)



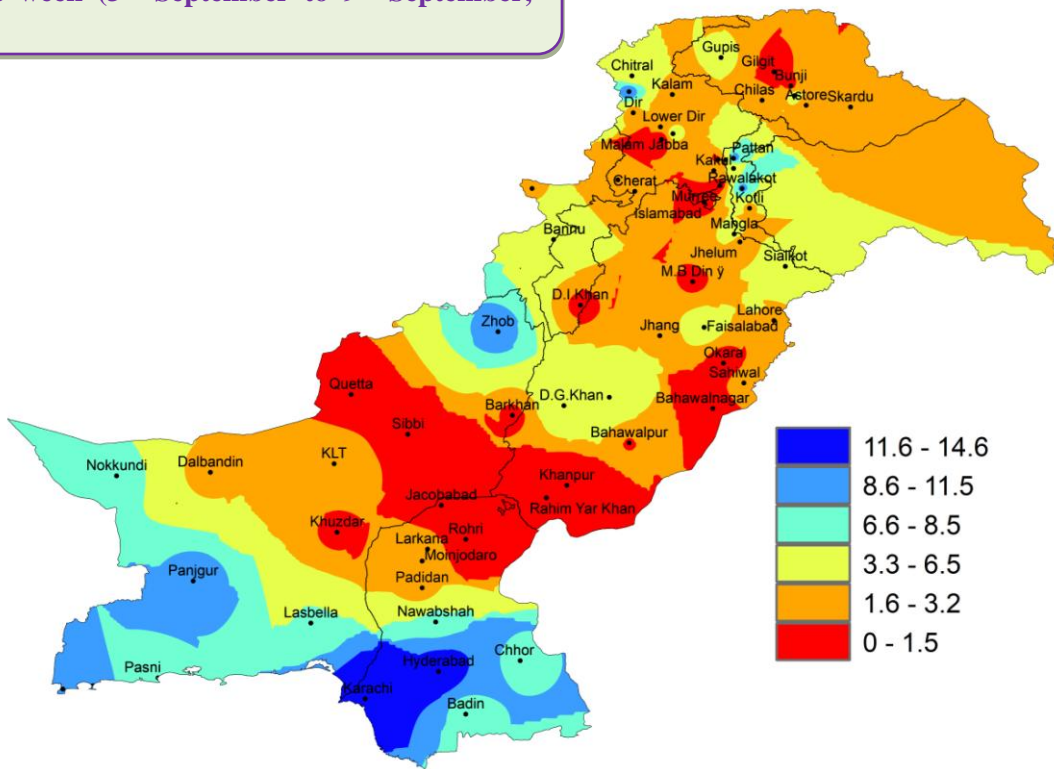
Total Growing Degree Days accumulated during the Previous week (3rd September to 9th September, 2018)



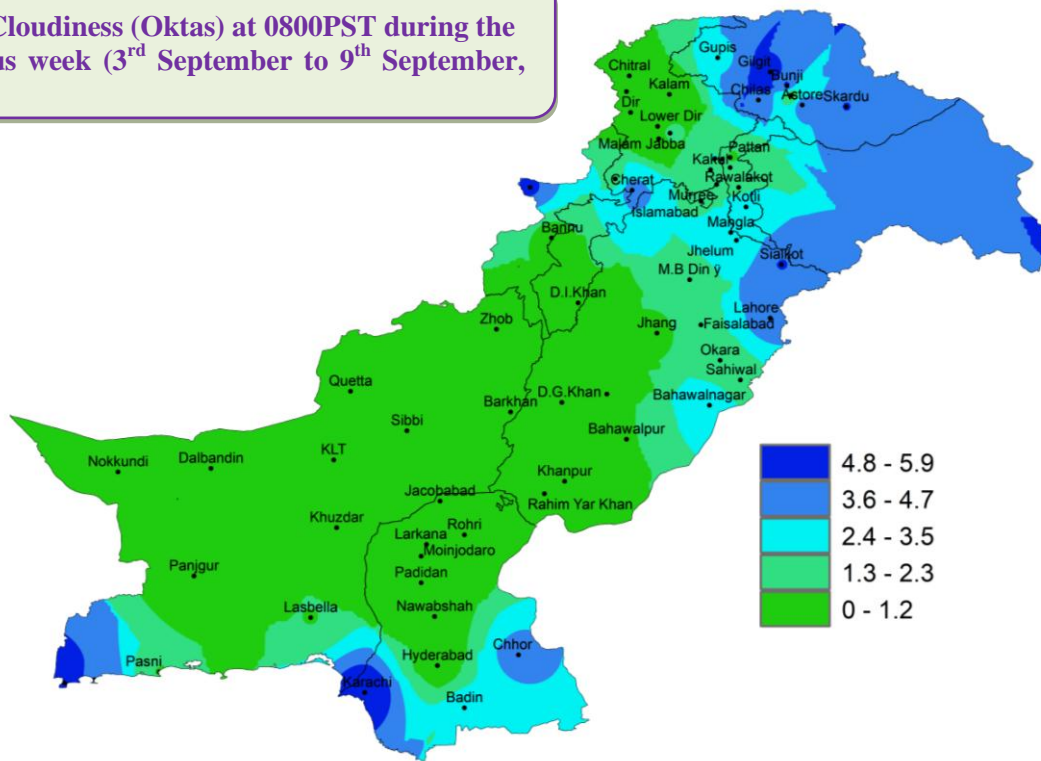
Mean Wind Speed (Knots) at 0800PST during the Previous week (3rd September to 9th September, 2018)



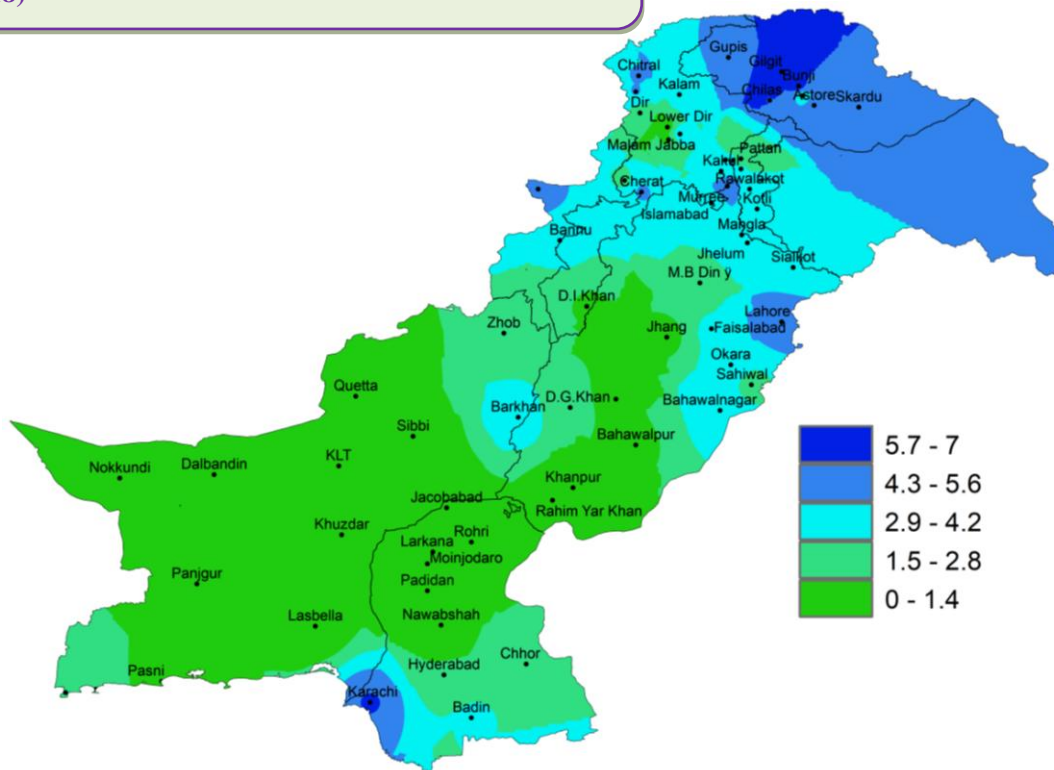
Mean Wind Speed (Knots) at 1700PST during the Previous week (3rd September to 9th September, 2018)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (3rd September to 9th September, 2018)



Mean Cloudiness (Oktas) at 1700PST during the Previous week (3rd September to 9th September, 2018)



Weekly Weather Advisory for Farmers**(10th September to 16th September, 2018)**

Seasonal low lies over northeast Balochistan. Moist currents from Arabian Sea will start to penetrate upper parts of the country from Friday. A fresh westerly wave is also likely to approach upper parts on Friday.

MONDAY**3-09-2018**

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 Rawalpindi, Gujranwala, Lahore divisions and Kashmir.

TUESDAY**4-09-2018**

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 Gujranwala division and Kashmir.

WEDNESDAY**5-09-2018**

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

THURSDAY**6-09-2018**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thunder shower with gusty winds is expected at isolated places in Hazara, Rawalpindi, Gujranwala, Sargodha divisions, Islamabad, Kashmir and Gilgit-Baltistan.

FRIDAY**7-09-2018.**

Rain-thundershower with gusty winds is expected at scattered places in Kohat, Bannu, D.I Khan, Peshawar, Sargodha, Rawalpindi divisions, Islamabad, Gilgit-Baltistan and Kashmir, whereas at isolated places in Malakand, Hazara, Mardan, Gujranwala, Lahore divisions.

SATURDAY**8-09-2018**

Rain-thundershower with gusty winds is expected at scattered places in Hazara, Rawalpindi, Sargodha, Gujranwala divisions, Islamabad, Kashmir and Gilgit-Baltistan, whereas at isolated places in Malakand, Kohat, Mardan, Peshawar, Lahore, Zhob divisions.

SUNDAY**9-09-2018**

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

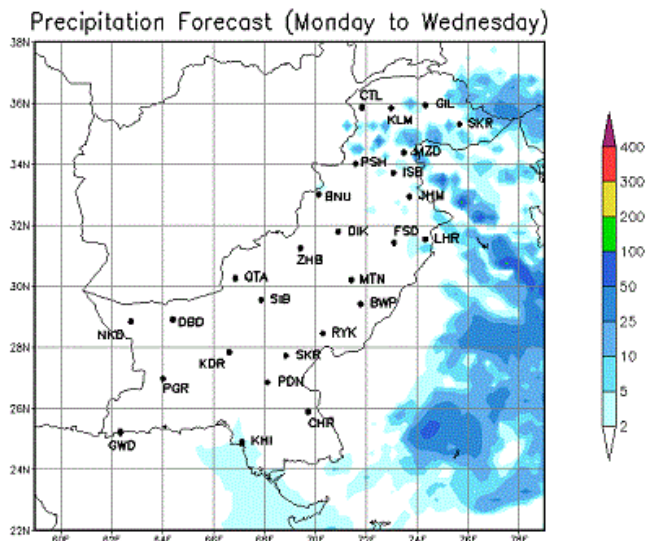
ADVISES FOR FARMERS

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.

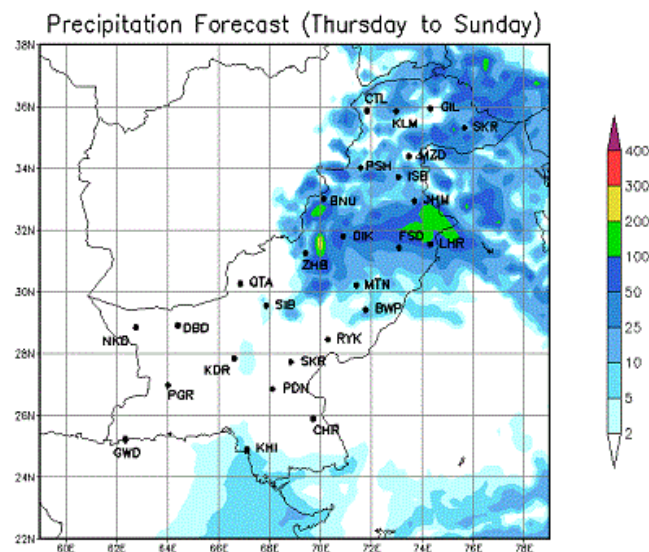
- Use pesticides to avoid the attack from pests on the crops as advised by the agriculture department.
- Use proper precautions during picking of cotton because the cost of good and clean quality cotton is high than that of the filthy one.

Weather Outlook from 10th September to 16th September, 2018)

The outlook from 10th September to 12th September, 2018 shows that light rainfall is expected in scattered places of GB & Kashmir, Upper Punjab and northern KP. However, dry weather may prevail in the rest of the country.



The outlook from 13th September to 16th September, 2018 shows that light to moderate rainfall is expected in most places of Azad Jammu & Kashmir, KP, Punjab and coastal areas of Sindh. However, heavy rainfall is expected in north eastern Punjab and Baluchistan.



National Weather Data of Selected Cities (Weekly Data from 3rd September to 9th September , 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	26.0	28.5	103.7	47	5.00	4.3	4.7	0.3	2.3
Badin	33.0	34.0	171.5	69	0.01	2.8	3.0	6.0	7.1
Bahawalnagar	39.1	40.0	199.8	56	0.00	3.1	3.9	0.3	0.6
Bahawalpur	37.1	38.1	188.5	62	0.00	1.1	1.1	5.4	1.4
Balakot	34.1	35.0	154.1	65	4.00	2.4	2.9	0.3	1.1
Bannu	38.7	39.5	189.5	50	0.00	0.6	3.3	0.0	6.0
Barkhan	34.8	35.0	158.3	56	27.00	0.0	3.7	0.0	1.1
Bunji	35.1	37.8	167.0	47	3.00	5.0	6.6	2.9	0.9
Cherat	29.6	31.0	129.0	70	0.00	4.1	4.4	2.3	2.6
Chhor	35.7	36.0	175.9	67	0.00	4.0	2.7	5.1	8.0
Chilas	38.3	39.5	188.0	26	0.02	4.6	5.6	2.0	2.6
Chitral	33.4	35.5	138.6	55	0.01	1.1	4.3	0.0	3.4
D.I.Khan	37.3	37.8	185.6	64	0.00	0.6	1.7	2.3	5.4
Dalbandin	39.9	41.0	199.3	64	0.00	0.9	1.3	1.1	1.1
DG.Khan	38.4	41.0	162.0	29	0.00	0.0	0.0	0.6	2.3
Dir	32.9	34.0	129.3	59	7.00	0.3	2.1	0.0	2.0
Drosh	35.2	36.6	148.1	38	0.00	0.7	4.3	0.0	10.6
Faisalabad	37.5	39.5	190.6	62	1.40	1.9	2.4	0.8	1.0
Garidopatta	36.2	36.5	168.1	61	8.30	1.3	3.1	0.3	4.0
Gawader	32.3	32.5	157.2	73	0.00	4.4	2.0	0.3	8.6
Gilgit	32.5	34.5	139.9	57	0.60	5.3	7.0	0.3	0.9

Gupis	29.1	33.0	118.5	41	0.00	3.1	4.4	4.3	3.7
Hyderabad	36.4	37.0	174.6	63	0.00	0.4	1.4	10.6	14.6
Islamabad	34.3	35.5	167.8	64	1.00	2.1	3.1	0.0	1.1
Jacobabad	36.7	38.0	185.0	66	0.00	0.0	0.0	1.1	0.3
Jhang	38.6	39.5	195.2	60	0.00	0.9	0.9	1.1	2.6
Jhelum	36.9	38.5	186.6	68	0.01	2.4	3.0	0.9	1.7
Jiwani	30.1	30.5	156.3	78	0.00	5.7	1.6	2.3	8.9
Kakul	30.8	32.0	134.0	71	0.01	1.7	3.3	0.0	2.3
Kalam	27.3	28.0	***	52	0.00	0.0	3.5	0.0	1.5
Kalat	32.0	33.2	166.1	71	0.01	5.9	5.7	9.7	13.7
Karachi	38.5	39.0	192.3	63	0.00	0.0	0.7	6.0	0.0
Khanpur	35.1	36.5	165.8	21	0.00	0.3	0.0	0.3	1.1
Khuzdar	28.1	31.0	101.0	36	0.00	0.0	0.0	0.0	3.1
Kotli	33.8	35.0	163.4	70	0.00	3.0	2.9	2.3	2.6
Lahore	35.9	37.8	186.3	69	56.63	4.4	5.3	0.3	2.9
Larkana	38.1	39.0	191.8	62	0.00	0.0	0.0	3.4	1.7
Lasbella	37.4	38.2	184.9	60	0.00	1.1	0.0	0.0	6.6
Lower Dir	36.7	38.0	169.0	57	0.00	0.4	0.7	0.6	2.0
M.B Din	36.6	38.5	182.2	71	16.01	1.7	2.0	1.1	1.1
Malam Jabba	20.5	21.5	82.3	80	1.00	1.6	4.3	0.6	4.3
Mangla	35.9	37.5	180.7	67	0.00	3.6	4.0	0.0	4.6
Mir Khani	34.5	37.2	149.9	44	0.00	0.6	3.3	1.1	4.3
Moinjodaro	38.9	40.0	186.3	66	0.00	0.0	0.0	2.6	2.6
Multan	37.6	39.0	194.8	57	0.00	0.9	1.1	5.1	6.0
Murree	23.5	24.3	101.7	81	11.30	2.1	5.7	0.9	0.9

Muzaffarabad	34.6	36.0	158.7	61	36.00	2.3	3.3	0.9	2.3
Nawabshah	39.8	41.0	191.0	56	0.00	0.3	0.7	6.0	7.7
Nokkundi	38.9	42.0	174.0	12	0.00	0.0	0.0	3.1	7.1
Okara	37.4	39.5	192.8	66	25.00	1.7	3.9	0.3	0.3
Padidan	38.4	39.0	185.3	67	0.00	0.3	0.7	2.0	2.0
Panjgur	35.4	37.0	155.5	21	0.00	0.0	0.0	3.4	9.4
Parachinar	30.1	30.5	136.5	65	0.00	4.9	5.0	3.0	3.0
Pasni	31.1	32.0	152.3	81	0.00	1.1	0.9	0.0	8.0
Pattan	37.3	38.0	161.8	50	0.00	0.9	1.3	0.0	10.4
Peshawar	36.3	37.0	179.8	68	1.00	1.9	2.6	0.6	1.7
Quetta	31.8	33.2	127.6	17	0.00	0.9	1.3	1.2	3.3
R.Y.Khan	40.1	41.0	195.4	58	0.00	0.0	0.7	0.0	0.3
Rawalakot	26.9	28.0	113.8	81	0.00	2.1	3.6	0.0	9.1
Rawalpindi	35.7	37.0	174.0	70	0.00	2.6	2.3	0.6	0.6
Rohri	38.7	41.0	193.0	56	0.00	0.0	0.0	1.1	0.3
Sahiwal	37.3	38.7	191.6	65	0.01	1.9	2.3	1.1	2.6
Saidu Sharif	33.4	34.5	144.8	64	0.00	0.6	1.1	0.0	0.0
Sialkot	34.1	35.8	172.7	67	38.40	4.7	3.4	4.1	4.9
Sibbi	42.6	43.5	202.3	52	0.00	0.0	0.0	0.0	0.6
Skardu	29.3	32.7	119.1	47	0.02	4.7	5.4	0.0	2.3
Tandojam	36.9	38.0	172.0	67	0.00	0.3	1.0	3.8	5.9
Zhob	36.9	37.7	186.6	74	0.00	0.0	0.3	2.2	3.4
Usta.M	34.6	36.0	162.7	52	0.00	0.0	2.0	1.1	9.6

*** 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)