

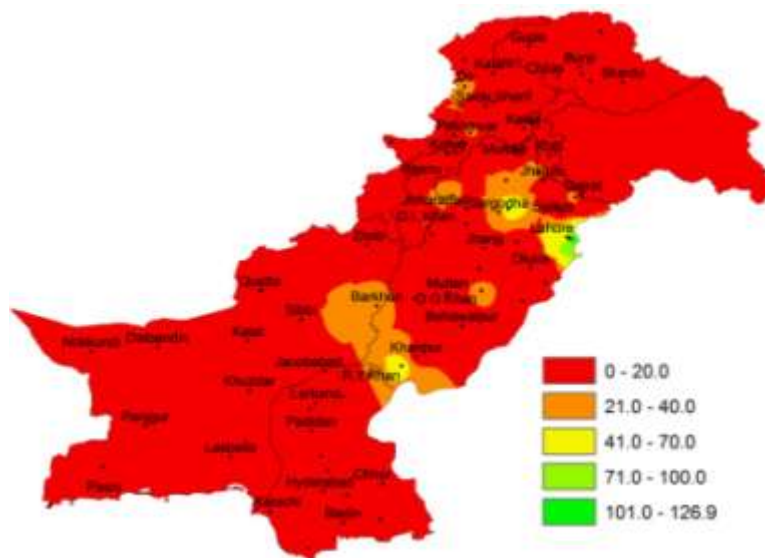
# Weekly Weather and Crop Bulletin for Pakistan

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Rainfall Distribution (mm) during the  
Previous Week (from 29<sup>th</sup> Aug to 4<sup>th</sup> Sep, 2016)



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## Highlights of Past Weather (from 29<sup>th</sup> August to 4<sup>th</sup> September, 2016)

Slightly above normal day time temperature was reported in Khyber Pakhtunkhwa, Sindh and Balochistan while below normal day time temperature was reported in Gilgit Balochistan during the week.

Province wise distribution of rainfall reported as follows:

- Light to moderate rainfall was reported at many places in Punjab, Khyber Pakhtunkhwa and Gilgit Balochistan.
- Light to moderate rainfall was reported at few places in Sindh and 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 29<sup>th</sup> August to 4<sup>th</sup> September, 2016)

### Punjab

Light to moderate rainfall reported at most of the places in Punjab during the week. Weekly maximum and minimum temperatures recorded as 35.2°C & 24.1°C respectively. For the present season on average 172.8 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 69% and wind speed in the morning/evening recorded as 1.4/2.9 Knots. During the previous week the highest amount of rainfall was recorded as 149.0 mm at Lahore & highest maximum temperature was recorded as 41.0°C at Bhakkar.

### Sindh

Light to moderate rainfall reported at isolated places in Sindh during the week. Weekly maximum and minimum temperatures recorded as 36.3°C & 25.4°C respectively. For the present season, on average 179.9 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 67% and wind speed in the morning/evening recorded as 4.6/5.9 Knots. During the previous week the highest amount of rainfall was recorded as 19.0 mm at Jacobabad & highest maximum temperature recorded as 40.5°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 32.2°C & 18.4°C respectively. For the present season on average 142.2 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 63% and wind speed in the morning/evening recorded as 1.3/2.9 Knots. During the previous week the highest amount of rainfall was recorded as 42.0 mm at Dir & the highest maximum temperature recorded as 38.0°C at D.I.Khan.

### Balochistan

Light to moderate rainfall reported at a single station in Balochistan during the week. Weekly maximum and minimum temperatures recorded as 35.3°C & 21.6°C respectively. For the present season on average 164.7 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 1.9/7.1 Knots. During the previous week the highest amount of rainfall was recorded as 44.1 mm at Bhakkar & highest maximum temperature was recorded as 44.0°C at Turbat.

### Gilgit-Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall reported at many places in Gilgit-Baltistan & Kashmir regions during the week. Weekly maximum and minimum temperatures recorded as 28.2°C & 15.9°C respectively. For the present season on average 122.1 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 0.6/2.4 Knots. During the previous week the highest amount of rainfall was recorded as 17.0 mm at Muzafarabad & highest maximum temperature recorded as 37.0 °C at Chilas.

**Past Weather for Major Agricultural Plains  
(from 29<sup>th</sup> August to 4<sup>th</sup> September, 2016)**

**Rawalpindi (Potohar region)**

Rainfall reported as 3.0 mm during the week, cloudiness in the morning/evening recorded as 2.7/2.9 Oktas while, average relative humidity observed as 71%. Mean day time temperature recorded as 34.2°C & for the present season 162.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/0.6Knots.

**Faisalabad (Central Punjab)**

Rainfall reported as 17.8mm during the week; however cloudiness in the morning/evening recorded as 0.4/2.4 Oktas while, average relative humidity observed as 69%. Mean day time temperature recorded as 35.8°C & for the present season 177.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/1.3 Knots.

**Tandojam (Lower Sindh)**

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.3/0.4 Oktas while, average relative humidity observed as 73%. Mean day time temperature recorded as 35.1°C & for the present season 171.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.8/4.2Knots.

**Quetta (Northern Baluchistan)**

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.7/2.0 Oktas while, average relative humidity observed as 31%. Mean day time temperature recorded as 34.0°C & for the present season 143.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.5/2.5Knots.

**Usta Muhammad (Eastern Balochistan)**

Rainfall reported as 3.0mm during the week; however cloudiness in the morning/evening recorded 1.0/0.7Oktas while, average relative humidity observed as 72%. Mean day time temperature recorded as 36.8°C & for the present season 183.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/1.7 Knots.

**Past Weather for Sub-Regional Agricultural Plains (from 29<sup>th</sup> August to 4<sup>th</sup> September, 2016)**

**Multan**

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 1.3/2.6 Oktas while, average relative humidity observed as 63%. Mean day time temperature recorded as 36.4°C & for the present season 186.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 4.0/5.4 Knots.

**Lahore**

Rainfall reported as 134.6mm during the week, cloudiness in the morning/evening recorded as 1.6/3.6 Oktas while, average relative humidity observed as 71%. Mean day time temperature recorded as 33.9°C & for the present season 166.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/1.1 Knots.

**Zhob**

Rainfall reported as 134.6mm during the week; however cloudiness in the morning/evening recorded as 1.3/1.3 Oktas while, average relative humidity observed as 32%. Mean day time temperature recorded as 33.0°C & for the present season 152.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/6.6 Knots.

**D.I. Khan**

Rainfall reported as 27.0mm during the week, cloudiness in the morning/evening recorded as 2.3/3.1 Oktas while, average relative humidity observed as 70%. Mean day time temperature recorded as 35.5°C & for the present season 173.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.9 Knots.

**Peshawar**

Rainfall reported as 3.1mm during the week, cloudiness in the morning/evening recorded as 2.4/3.3Oktas while, average relative humidity observed as 61%. Mean day time temperature recorded as 36.0°C & for the present season 175.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/2.3 Knots.

**Murree**

Rainfall reported as 17.6mm during the week, cloudiness in the morning/evening recorded as 3.1/4.0 Oktas while, average relative humidity observed as 72%. Mean day time temperature recorded as 22.7°C & for the present season 94.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.1/1.1 Knots.

**Kalam**

Rainfall reported as 21.0mm during the week, cloudiness in the morning/evening recorded as 2.1/4.9 Oktas while, average relative humidity observed as 67%. Mean day time temperature recorded as 23.1°C & for the present season 79.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.3 Knots.

**Gilgit**

Rainfall reported as 2.9mm during the week, cloudiness in the morning/evening recorded as 5.1/5.3 Oktas while, average relative humidity observed as 62%. Mean day time temperature recorded as 28.8°C & for the present season 119.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/8.0 Knots.

**Skardu**

Rainfall reported as 8.1mm during the week, cloudiness in the morning/evening recorded as 5.6/5.1 Oktas while, average relative humidity observed as 68%. Mean day time temperature recorded as 23.4°C & for the present season 90.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0Knots.

**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 9<sup>th</sup> leaf stage.

**Central Punjab (Faisalabad)**

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

**Cotton:** Very good condition at *Boll opening* stage.

**Lower Sindh (Tandojam)**

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

**Cotton:** Good condition at *Boll opening* stage.

**Northern Balochistan (Quetta)**

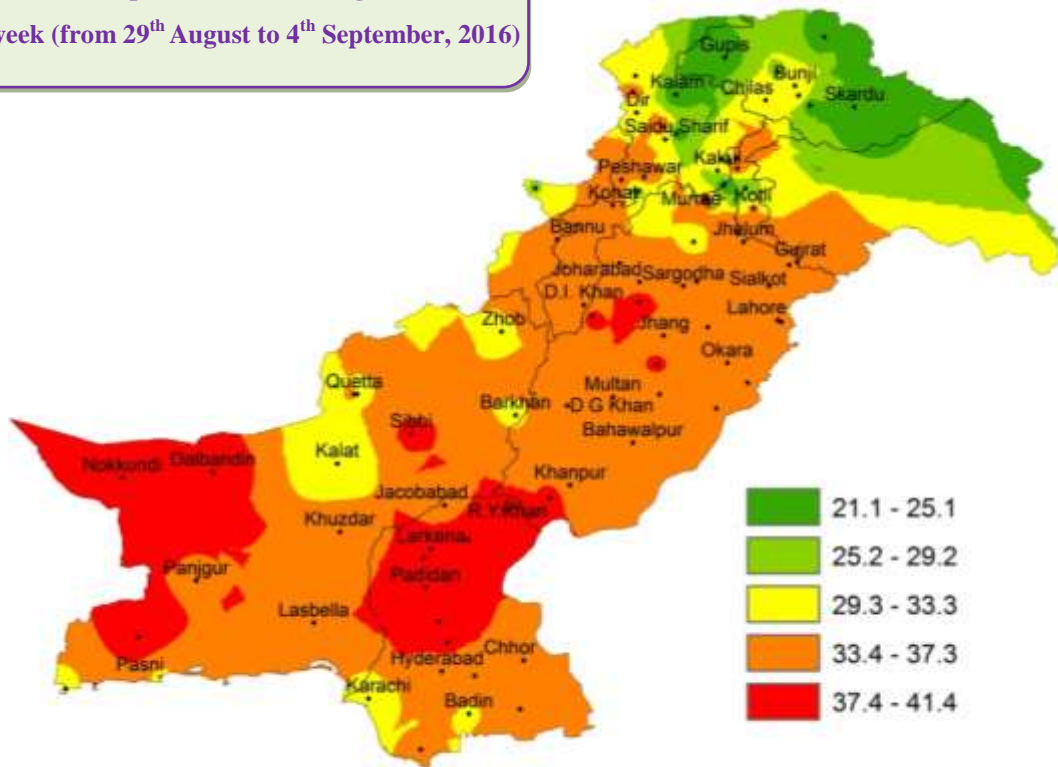
There is presently no crop grown in the fields of RAMC Quetta.

**Eastern Balochistan (Usta Muhammad)**

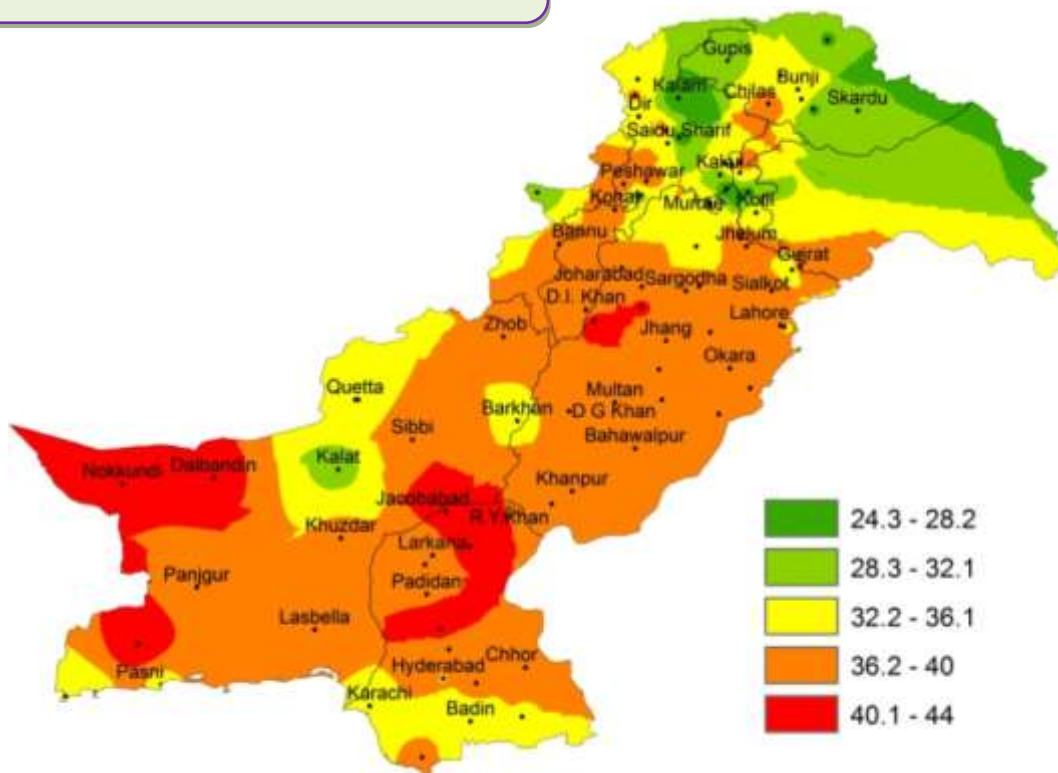
There is presently one crop (irrigated condition) grown in the fields of RAMC Usta Muhammad.

**Rice:** Good condition at *Tillering* stage.

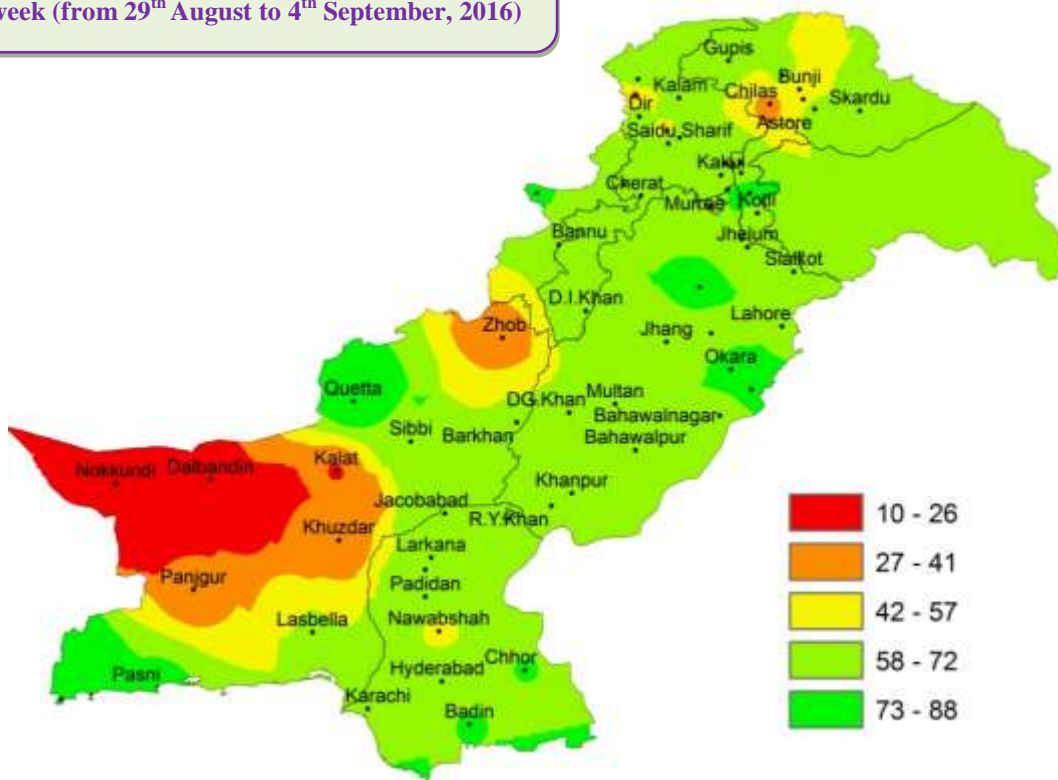
Mean Maximum Temperature (°C) during the Previous week (from 29<sup>th</sup> August to 4<sup>th</sup> September, 2016)



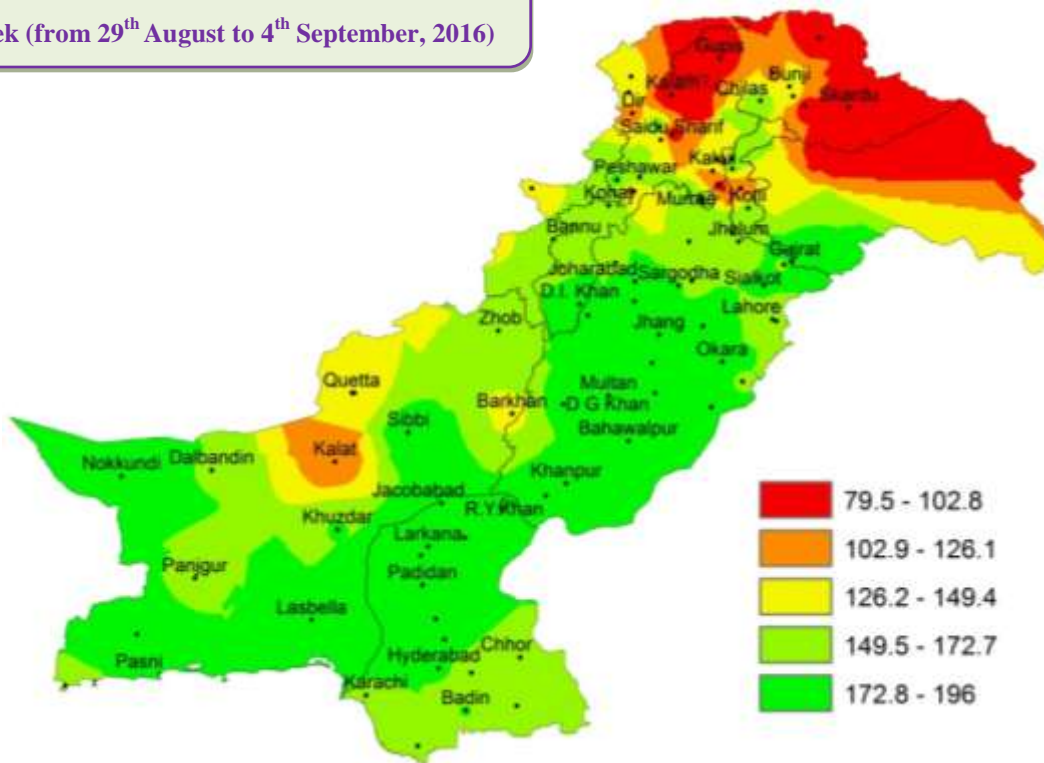
Highest Maximum Temperature (°C) during the Previous week (from 29<sup>th</sup> August to 4<sup>th</sup> September, 2016)



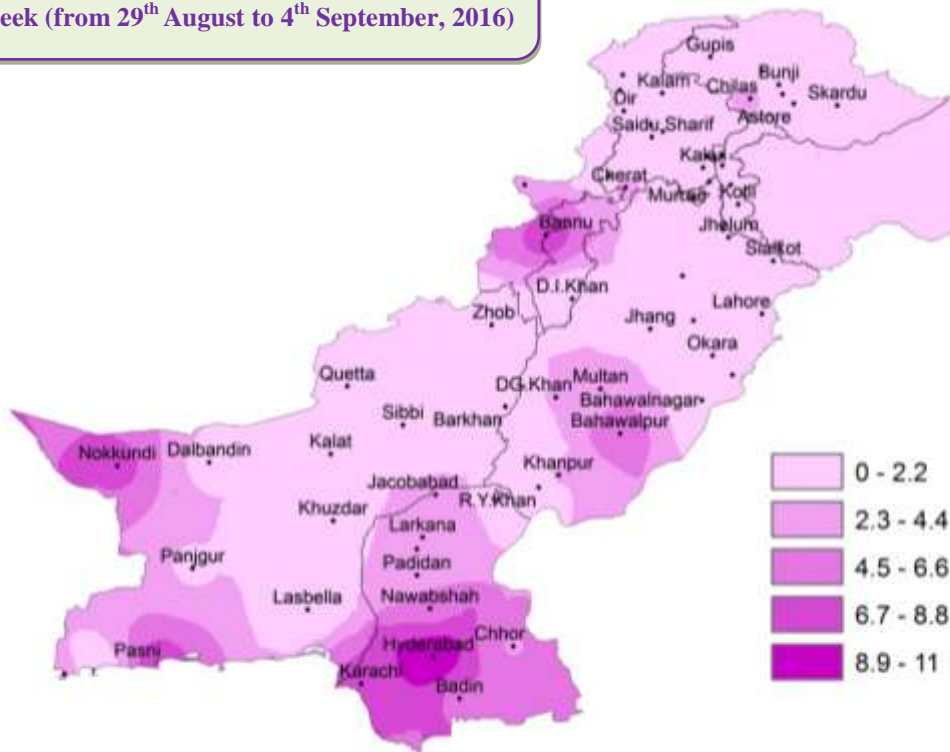
Mean Relative Humidity (%) during the Previous week (from 29<sup>th</sup> August to 4<sup>th</sup> September, 2016)



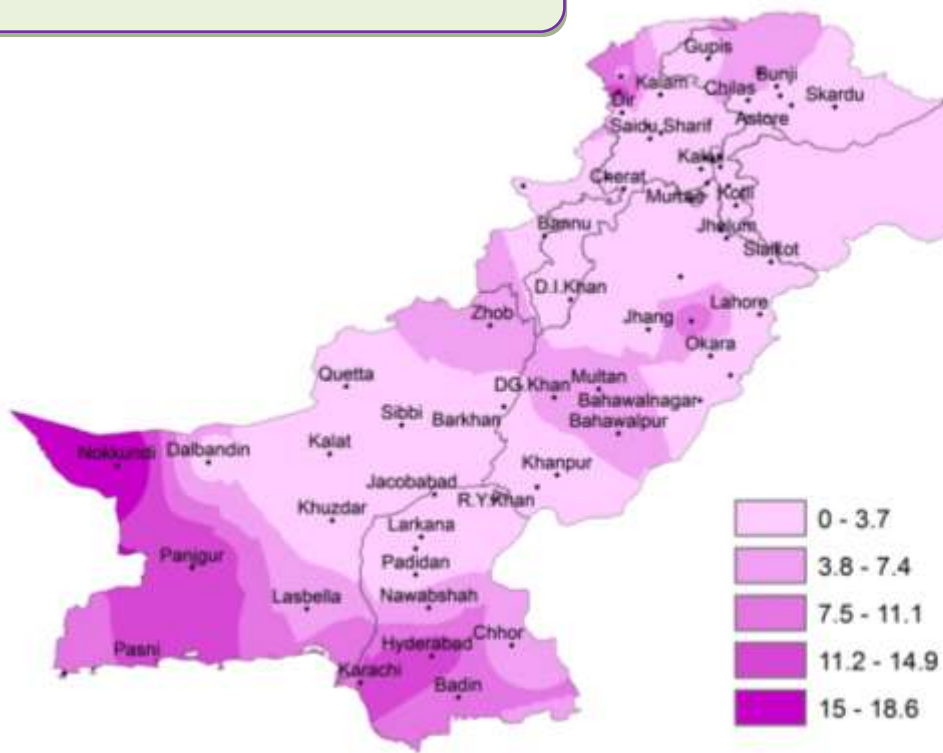
Total Growing Degree Days accumulated during the Previous week (from 29<sup>th</sup> August to 4<sup>th</sup> September, 2016)



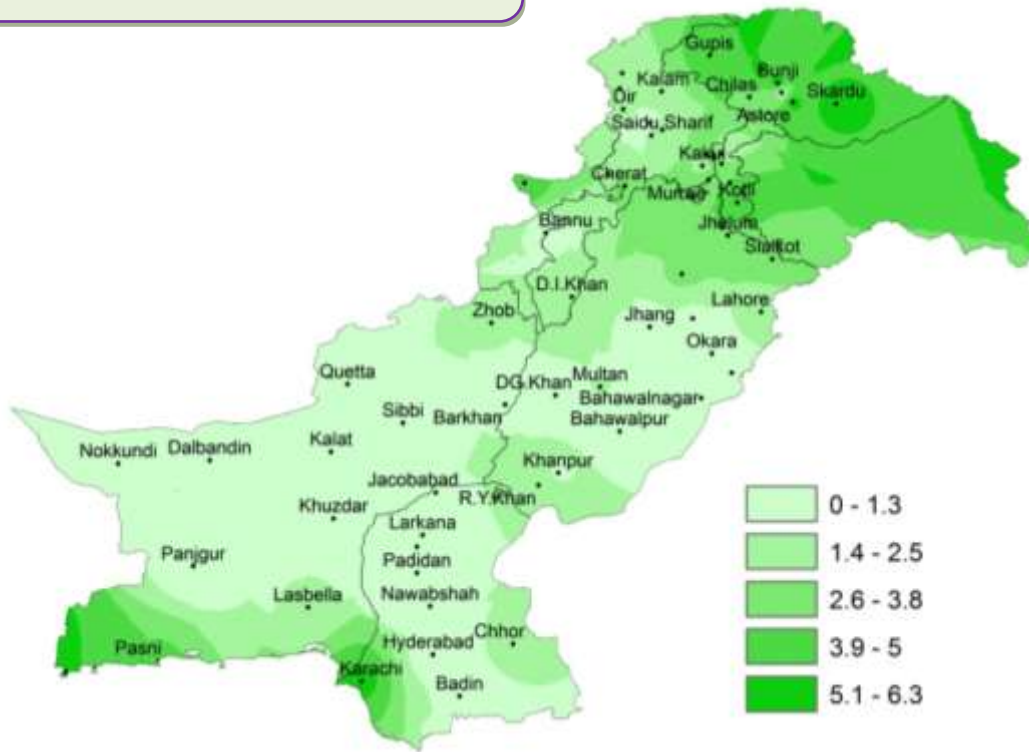
Mean Wind Speed (Knots) at 0800PST during the Previous week (from 29<sup>th</sup> August to 4<sup>th</sup> September, 2016)



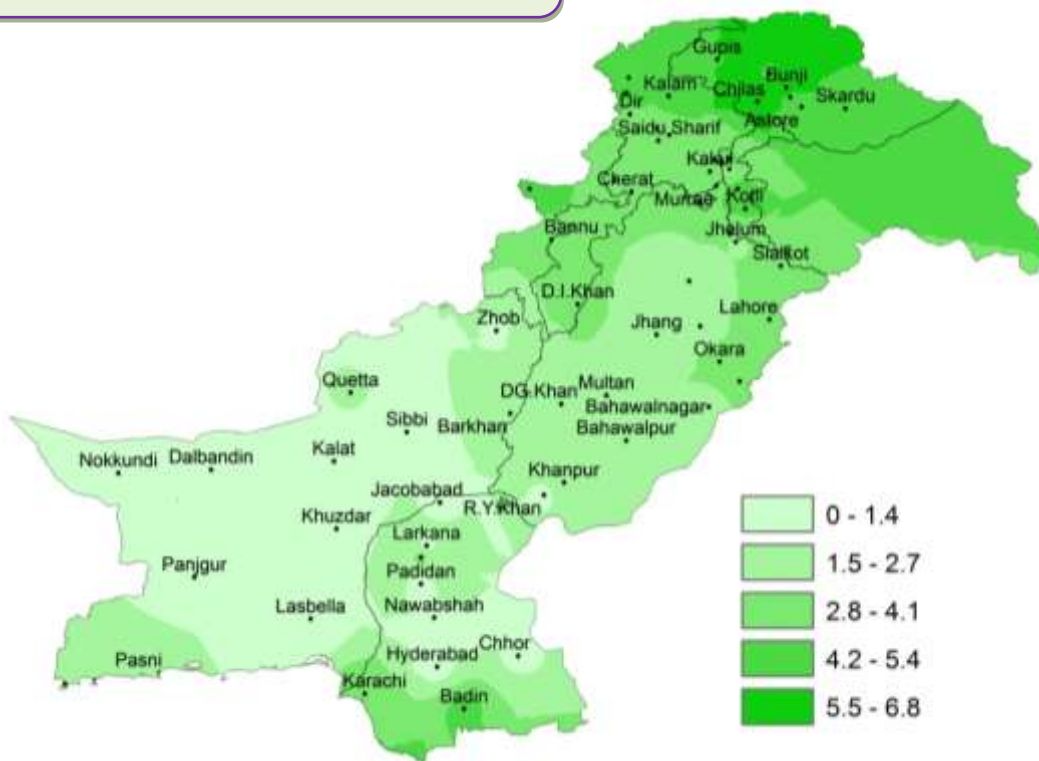
Mean Wind Speed (Knots) at 1200PST during the Previous week (from 29<sup>th</sup> August to 4<sup>th</sup> September, 2016)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (from 29<sup>th</sup> August to 4<sup>th</sup> September, 2016)



Mean Cloudiness (Oktas) at 1200 PST during the Previous week (from 29<sup>th</sup> August to 4<sup>th</sup> September, 2016)





**Weekly Weather Advisory for Farmers****(From 5<sup>th</sup> to 11<sup>th</sup> September, 2016)**

Week seasonal low lies over northeast Balochistan. A shallow westerly wave lies over northern parts of the country and its adjoining areas. Another shallow westerly wave is likely to enter upper parts of the country on coming weekend. Under the influence of these meteorological conditions weather will remain as follows:

**MONDAY****05-09-2016**

Hot and dry weather is expected in most parts of the country. However rain-dust-thunderstorm is expected at isolated places in Rawalpindi, Hazara divisions, Islamabad Gilgit-Baltistan and Kashmir during (evening/night).

**TUESDAY****06-09-2016**

Hot and dry weather is expected in most parts of the country. However rain-dust-thunderstorm is expected at isolated places in Rawalpindi, Malakand, Hazara divisions, Islamabad, Gilgit-Baltistan and Kashmir.

**WEDNESDAY****07-09-2016**

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

**THURSDAY****08-09-2016**

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

**FRIDAY****09-09-2016**

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

**SATURDAY****10-09-2016**

Mainly hot and dry weather is expected in most parts of the country. However rain-dust-thunderstorm is expected at isolated places in Rawalpindi, Malakand, Hazara, Peshawar, Mardan divisions, Islamabad, Gilgit-Baltistan and Kashmir.

**SUNDAY****11-09-2016**

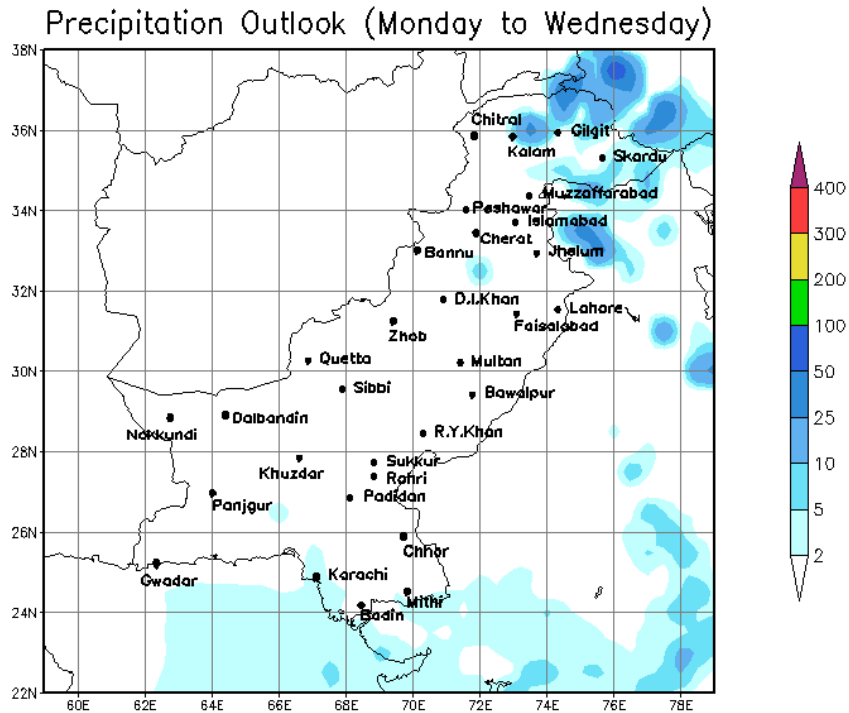
Mainly hot and dry weather is expected in most parts of the country. However rain-dust-thunderstorm is expected at isolated places in Rawalpindi, Malakand, Hazara, Peshawar, Mardan divisions, Islamabad, Gilgit-Baltistan and Kashmir.

**ADVISES FOR CROPS**

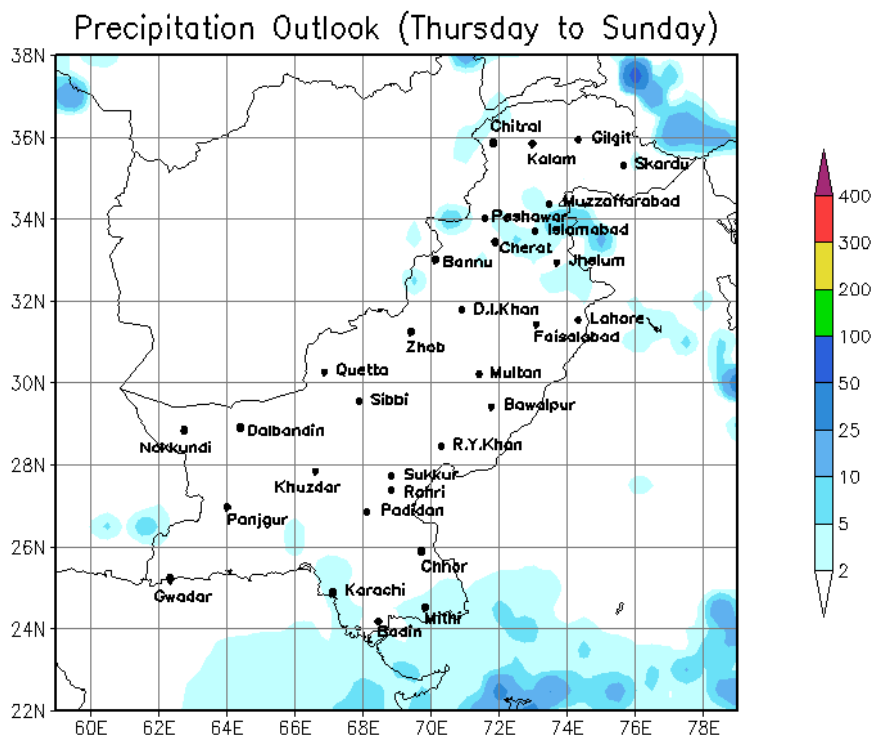
- ❖ Farmers obtaining crop water through tube wells are advised to schedule the irrigation according to the expected weather mentioned during the week.
- ❖ Farmers are advised to control further weeds growth at the present growing stages to stop any negative impact on the crops. Weeds removing practices should be started soon after expected rains in the mentioned.
- ❖ Farmers are advised to take in time precautionary measures to protect their crops, livestock and other property from any expected heavy rains at particular places.
- ❖ 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 5<sup>th</sup> September to 11<sup>th</sup> September, 2016

The outlook from 5<sup>th</sup> to 7<sup>th</sup> September, 2016 shows that isolated rainfall expected in northeastern parts of the country.



The outlook from 8<sup>th</sup> to 11<sup>th</sup> September, 2016 shows that no rainfall is expected in most parts of the country.



**National Weather Data of Selected Cities**  
**(Weekly Data from 29<sup>th</sup> August to 4<sup>th</sup> September, 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	22.6	27.0	81.8	64	7.3	5.6	5.1	1.4	3.1
Badin	33.0	34.0	173.0	73	0.0	0.9	4.6	6.0	8.0
Bahawalnagar	35.1	37.5	178.8	69	0.0	0.6	2.1	0.0	1.7
Bahawalpur	36.8	37.6	185.6	64	0.0	1.0	1.6	5.4	4.9
Balakot	31.7	33.5	135.9	72	24.4	3.1	3.0	0.0	0.0
Bannu	35.3	37.6	154.8	65	11.2	0.4	3.3	7.9	3.7
Barkhan	33.0	35.5	143.5	61	44.1	1.1	2.0	0.0	1.4
Bunji	29.3	33.9	130.8	51	0.4	5.7	6.9	0.6	2.4
Cherat	27.8	31.0	122.5	66	8.0	2.7	3.1	2.6	2.6
Chhor	34.5	36.2	172.4	73	0.0	1.6	1.1	4.3	5.7
Chilas	32.8	37.0	158.3	38	0.3	3.3	6.0	2.9	2.9
Chitral	32.3	34.6	131.1	70	0.0	1.9	4.0	0.9	6.6
D.I.Khan	35.5	38.0	173.7	70	27.0	2.3	3.1	0.0	0.9
Dalbandin	39.5	41.5	171.8	17	0.0	0.0	0.0	1.7	2.6
DG.Khan	36.4	37.0	181.9	63	1.1	0.9	1.6	2.3	5.1
Dir	30.7	33.0	114.0	65	42.0	1.4	3.7	0.0	2.0
Drosh	34.2	36.6	142.1	37	2.0	2.0	5.7	0.0	14.7
Faisalabad	35.8	37.4	177.5	69	17.8	0.4	2.4	1.1	1.3
Garidopatta	34.4	36.0	152.8	66	10.0	2.7	2.3	0.0	1.1
Gawader	33.9	35.0	171.8	73	0.0	4.2	2.3	0.0	10.9
Gilgit	28.8	34.5	119.8	62	2.9	5.1	5.3	0.0	8.0

Gupis	23.2	30.0	86.0	63	12.0	4.7	5.4	0.0	3.1
Hyderabad	35.2	36.0	174.8	63	0.0	0.4	0.9	11.0	14.3
Islamabad	33.9	35.5	156.5	67	6.1	3.3	3.3	0.0	1.1
Jacobabad	36.6	40.5	188.3	65	19.0	1.1	1.1	2.3	3.1
Jhang	36.3	37.0	179.4	67	0.1	0.7	1.6	0.0	2.3
Jhelum	35.6	37.5	169.8	70	7.4	3.3	2.4	0.0	2.0
Jiwani	32.3	33.0	169.0	74	0.0	6.3	1.4	3.1	9.1
Kakul	29.6	31.0	126.6	67	2.0	2.1	3.6	0.3	1.1
Kalam	23.1	25.0	79.5	67	21.0	2.1	4.9	0.0	0.3
Kalat	29.4	31.0	105.5	25	0.0	0.0	1.0	0.0	3.4
Karachi	32.4	35.0	172.1	72	0.0	5.4	3.9	7.1	11.1
Khanpur	37.0	38.0	182.6	67	14.0	1.1	2.3	2.3	1.1
Khuzdar	35.7	37.0	174.0	30	0.0	0.4	0.3	0.0	0.3
Kotli	33.7	34.4	160.2	65	0.0	4.6	4.4	1.6	2.6
Lahore	33.9	35.6	166.1	71	134.6	1.6	3.6	0.6	1.1
Larkana	38.1	39.5	193.1	63	0.0	0.0	1.0	2.6	2.3
Lasbella	37.3	39.2	188.1	59	0.0	1.5	0.0	0.3	7.1
Lower Dir	36.2	37.5	165.8	52	5.0	0.7	3.0	2.3	2.9
M.B Din	34.8	36.5	170.0	77	73.0	2.9	1.4	0.6	0.6
Malam Jabba	20.8	24.0	78.3	69	10.0	1.7	4.1	1.1	0.0
Mangla	34.6	36.1	165.6	66	45.1	3.9	3.1	0.0	4.0
Mir Khani	34.2	36.0	144.9	50	18.0	1.1	4.9	0.0	3.4
Moinjodaro	37.6	39.5	187.5	59	0.0	0.7	3.1	4.3	2.7
Multan	36.4	37.2	186.3	63	0.0	1.3	2.6	4.0	5.4
Murree	22.7	24.4	94.9	72	17.6	3.1	4.0	2.1	1.1
Muzaffarabad	32.2	34.4	138.7	70	17.0	2.7	3.1	0.3	1.4

Nawabshah	39.3	40.5	192.8	54	0.0	1.1	1.3	6.1	6.0
Nokkundi	39.4	40.5	192.3	10	0.0	0.4	0.0	7.1	18.6
Okara	35.0	36.2	175.8	75	7.0	0.9	3.1	0.6	1.7
Padidan	38.5	40.0	191.5	66	0.0	0.9	1.0	2.3	2.3
Panjgur	36.9	38.0	166.0	29	0.0	0.0	0.0	2.0	14.3
Parachinar	29.1	29.5	134.4	74	18.0	5.0	5.4	3.0	3.0
Pasni	32.9	35.0	175.8	79	0.0	4.0	2.3	7.7	13.1
Pattan	34.8	37.0	161.5	57	7.0	2.0	4.7	0.0	0.0
Peshawar	36.0	38.0	175.9	61	3.1	2.4	3.3	1.1	2.3
Quetta	34.0	39.2	143.7	34	0.0	0.7	2.0	2.5	2.5
R.Y.Khan	37.6	39.4	183.8	70	64.0	2.0	1.1	1.4	1.6
Rawalakot	25.9	27.2	102.6	82	11.6	3.9	4.6	0.0	1.4
Rawalpindi	34.2	35.8	162.6	71	3.0	2.7	2.9	0.3	0.6
Sahiwal	35.2	36.5	171.8	73	1.0	1.1	3.3	1.1	1.1
Saidu Sharif	33.7	35.8	149.2	59	8.0	1.3	3.1	0.0	0.0
Sialkot	34.4	35.0	170.8	70	37.0	3.1	3.3	0.0	2.3
Sibbi	37.9	40.0	191.5	69	23.5	1.2	0.9	1.2	1.7
Skardu	23.4	28.5	90.0	68	8.1	5.6	5.1	0.0	0.0
Tandojam	35.1	37.0	171.8	73	0.0	0.3	0.4	2.8	4.2
Usta.M	36.8	38.5	183.2	72	3.0	1.0	0.7	1.4	1.7
Zhob	33.0	36.5	152.8	32	2.0	1.3	1.3	0.0	6.6

\*\*\* 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 (بذر ایجنسی 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)