

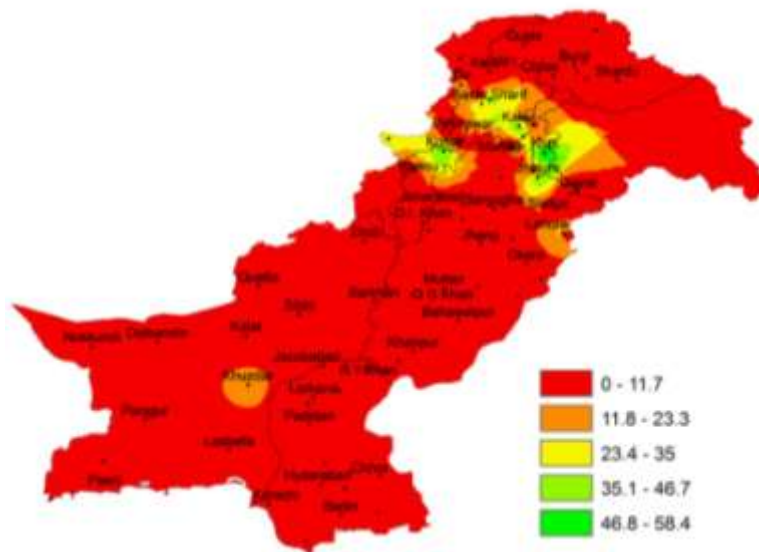
Weekly Weather and Crop Bulletin for Pakistan

**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 (from 5th to 11th September, 2016)**



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Highlights of Past Weather (from 5th to 11th September, 2016)

Slightly above normal day time temperature was reported in most parts of the country 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 Baltistan.
- Rainfall was reported only at single station (Khuzdar = 16.0mm) in Balochistan.
- Dry weather was reported in Sindh.

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 5th to 11th September, 2016)

Punjab

Light to moderate rainfall reported at many places in Punjab during the week. Weekly maximum and minimum temperatures recorded as 36.6°C & 25.5°C respectively. For the present season on average 181.8 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 66% and wind speed in the morning/evening recorded as 2.7/3.4Knots. During the previous week the highest amount of rainfall was recorded as 49.0mm at Jhelum & highest maximum temperature was recorded as 41.5°C at Noorpurthal.

Sindh

Dry weather was reported in Sindh during the week. Weekly maximum and minimum temperatures recorded as 36.2°C & 24.8°C respectively. For the present season, on average 179.3 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 5.8/7.0Knots. During the previous week the highest maximum temperature recorded as 40.5°C at Sukkur.

Khyber Pakhtunkhwa

Light to moderate rainfall reported at many places in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 33.8°C & 20.1°C respectively. For the present season on average 153.7 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 0.4/3.6Knots. During the previous week the highest amount of rainfall was recorded as 48.0mm at Kohat & the highest maximum temperature recorded as 39.6°C at Bannu.

Balochistan

Rainfall was reported only at single station (Khuzdar = 16.0mm) in Balochistan during the week. Weekly maximum and minimum temperatures recorded as 35.9°C & 22.2°C respectively. For the present season on average 172.2 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 49% and wind speed in the morning/evening recorded as 1.6/5.4Knots. During the previous week the highest maximum temperature was recorded as 43.0°C at Nokkundi.

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 31.1°C & 17.1°C respectively. For the present season on average 136.7 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 56% and wind speed in the morning/evening recorded as 0.4/2.4Knots. During the previous week the highest amount of rainfall was recorded as 59.0mm at Kotli & highest maximum temperature recorded as 40.0°C at Chilas.

Past Weather for Major Agricultural Plains (from 5th to 11th September, 2016)**Rawalpindi (Potohar region)**

Rainfall reported as 3.4mm during the week, cloudiness in the morning/evening recorded as 1.0/2.0 Oktas while, average relative humidity observed as 65%. Mean day time temperature recorded as 35.9°C & for the present season 181.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/0.9 Knots.

Faisalabad (Central Punjab)

Rainfall reported as 2.0mm during the week; however cloudiness in the morning/evening recorded as 0.7/1.1 Oktas while, average relative humidity observed as 60%. Mean day time temperature recorded as 37.6°C & for the present season 184.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/0.9 Knots.

Tandojam (Lower Sindh)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.3/0.3 Oktas while, average relative humidity observed as 71.5%. Mean day time temperature recorded as 35.0°C & for the present season 169.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 5.2/5.9 Knots.

Quetta (Northern Baluchistan)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.0/0.7 Oktas while, average relative humidity observed as 29%. Mean day time temperature recorded as 32.8°C & for the present season 141.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.6/3.1 Knots.

Usta Muhammad (Eastern Balochistan)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded 0.0/0.0 Oktas while, average relative humidity observed as 72%. Mean day time temperature recorded as 35.9°C & for the present season 175.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/0.8 Knots.

Past Weather for Sub-Regional Agricultural Plains (from 5th to 11th September, 2016)**Multan**

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.0/0.6 Oktas while, average relative humidity observed as 64%. Mean day time temperature recorded as 36.0°C & for the present season 185.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 8.6/8.6 Knots.

Lahore

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 1.0/2.6 Oktas while, average relative humidity observed as 60%. Mean day time temperature recorded as 36.0°C & for the present season 185.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/2.9 Knots.

Zhob

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.3/0.6 Oktas while, average relative humidity observed as 37%. Mean day time temperature recorded as 35.9°C & for the present season 164.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.9/3.4 Knots.

D.I. Khan

Rainfall reported as 0.1mm during the week; cloudiness in the morning/evening recorded as 0.3/0.0Oktas while, average relative humidity observed as 67%. Mean day time temperature recorded as 38.4°C & for the present season 190.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.9Knots.

Peshawar

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 0.6/1.9Oktas while, average relative humidity observed as 62%. Mean day time temperature recorded as 37.5°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 1.1/2.9Knots.

Murree

Rainfall reported as 35.0mm during the week, cloudiness in the morning/evening recorded as 2.9/6.3Oktas while, average relative humidity observed as 82%. Mean day time temperature recorded as 23.0°C & for the present season 96.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/1.4Knots.

Kalam

Dry weather was reported during the week, cloudiness in the morning/evening recorded as 0.6/5.4Oktas while, average relative humidity observed as 65%. Mean day time temperature recorded as 25.9°C & for the present season 95.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.7Knots.

Gilgit

Rainfall reported as 7.2mm during the week, cloudiness in the morning/evening recorded as 3.6/6.3Oktas while, average relative humidity observed as 63%. Mean day time temperature recorded as 32.0°C & for the present season 128.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/4.4 Knots.

Skardu

Rainfall reported as 0.1mm during the week, cloudiness in the morning/evening recorded as 1.6/4.6Oktas while, average relative humidity observed as 43%. Mean day time temperature recorded as 28.4°C & for the present season 107.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.0Knots.

Crop Situation for Major Agricultural Plains
(Based on data from Regional AgrometCentres)

Potohar Region (Rawalpindi)

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

Maize: Good condition at 9th leafstage.

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)

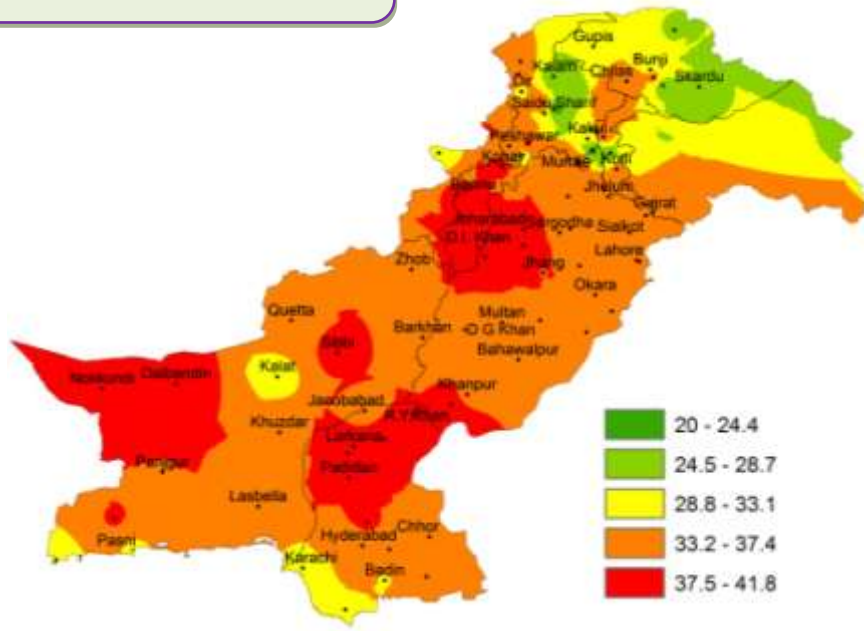
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Balochistan (Usta Muhammad)

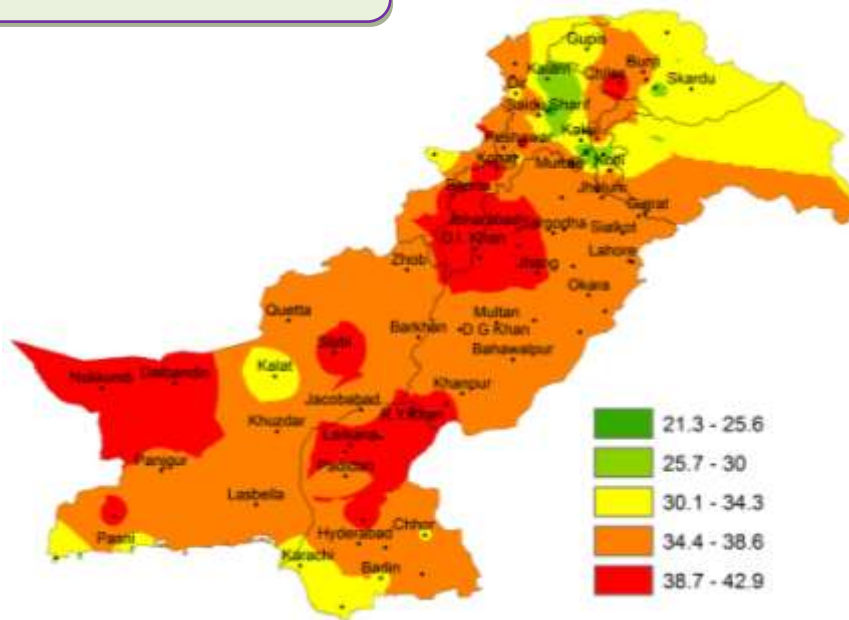
There is presently one crop (irrigated condition) grown in the fields of RAMC Usta Muhammad.

Rice: Good condition at *Tillering* stage.

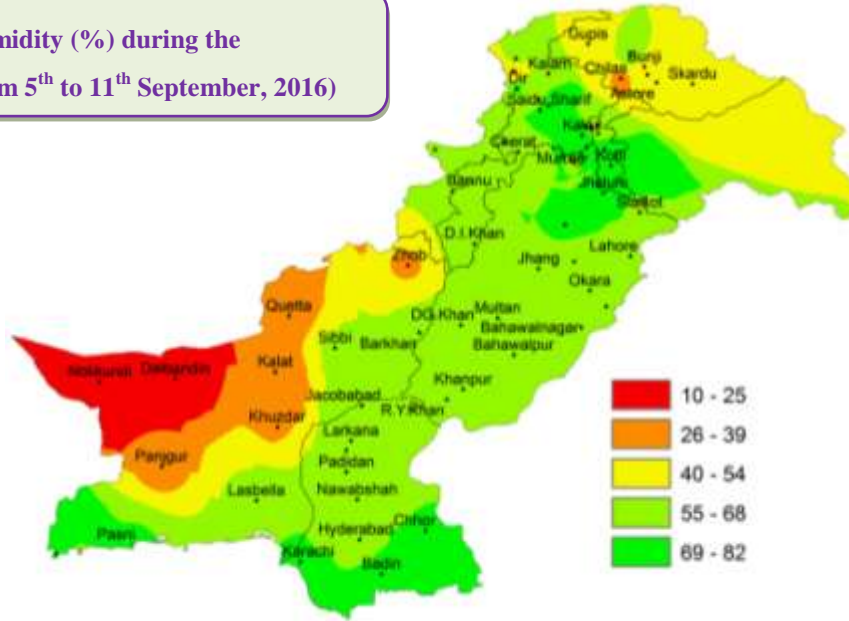
Mean Maximum Temperature (°C) during the Previous week (from 5th to 11th September, 2016)



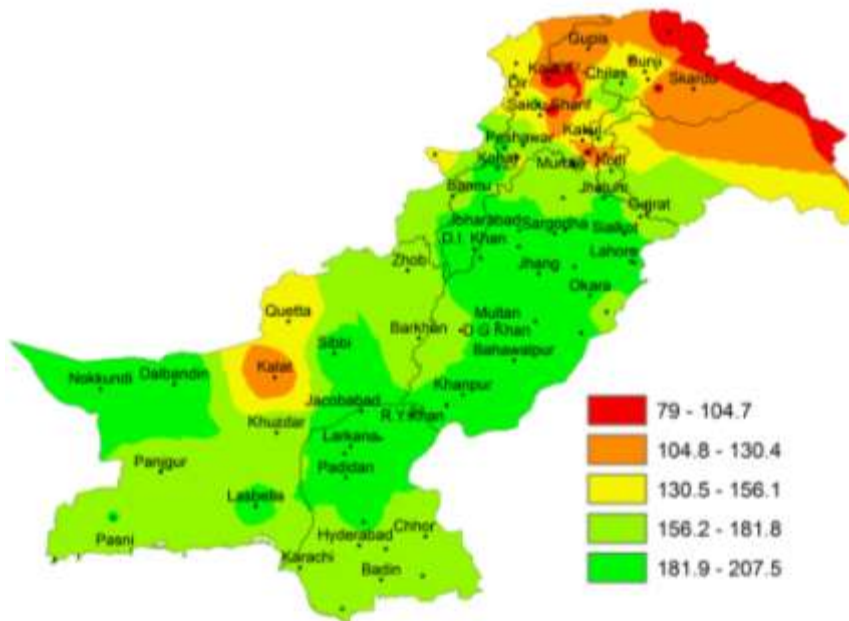
Highest Maximum Temperature (°C) during the Previous week (from 5th to 11th September, 2016)



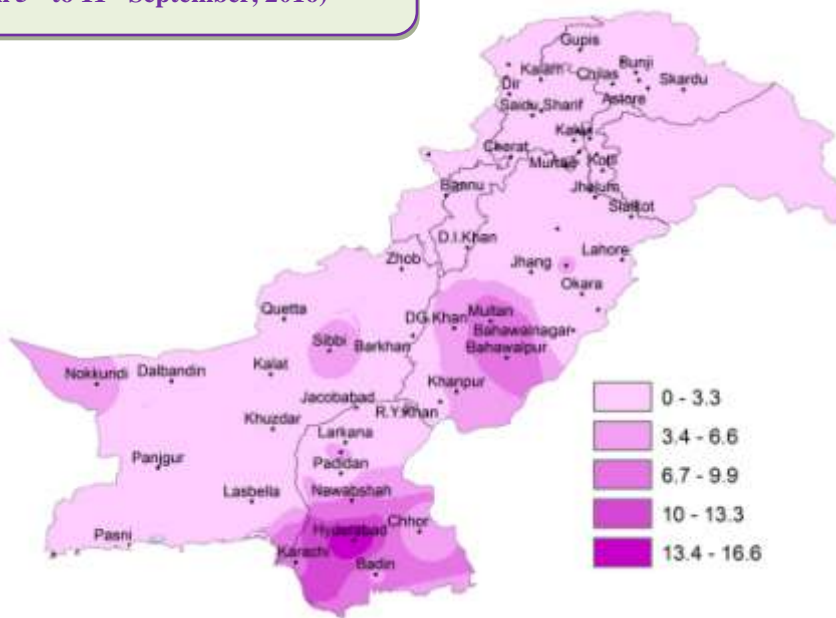
Mean Relative Humidity (%) during the Previous week (from 5th to 11th September, 2016)



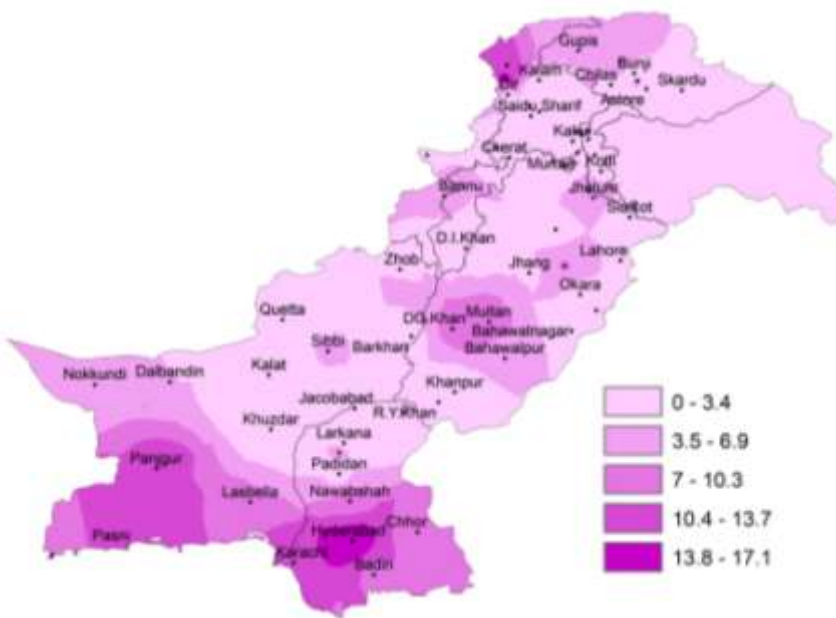
Total Growing Degree Days accumulated during the Previous week (from 5th to 11th September, 2016)



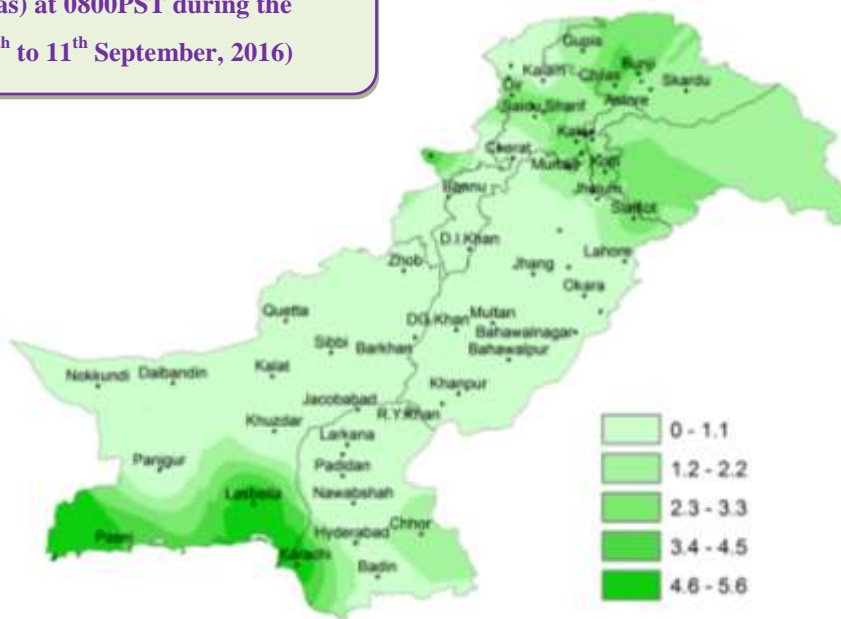
Mean Wind Speed (Knots) at 0800PST during the Previous week (from 5th to 11th September, 2016)



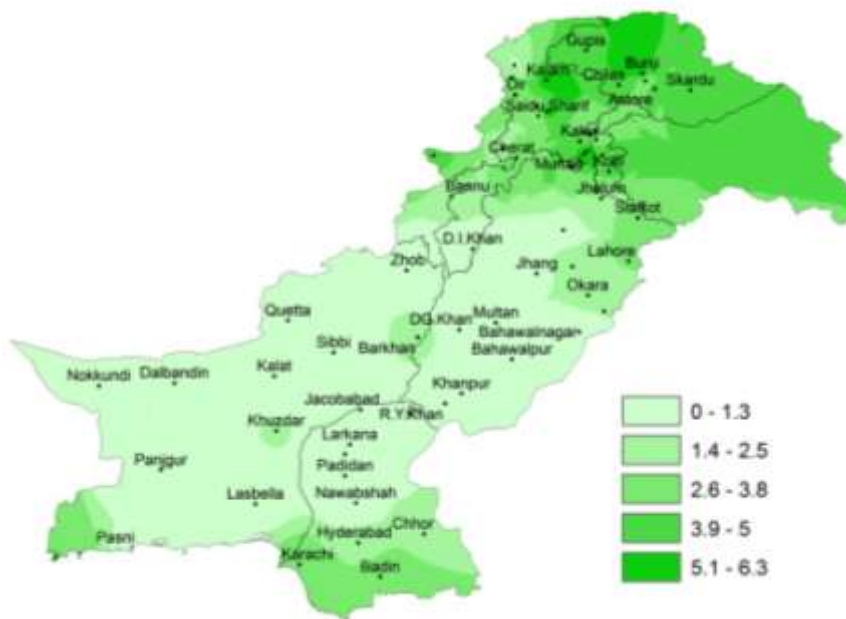
Mean Wind Speed (Knots) at 1200PST during the Previous week (from 5th to 11th September, 2016)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (from 5th to 11th September, 2016)



Mean Cloudiness (Oktas) at 1200 PST during the Previous week (from 5th to 11th September, 2016)



Weekly Weather Advisory for Farmers**(From 14th to 18th September,2016)**

Weak Seasonal low lies over north Balochistan and its adjoining areas. A westerly wave is affecting upper parts of the country and likely to persist during next 24hrs

WEDNESDAY**14-09-2016**

Mainly hot and dry weather is expected in most parts of the country. However rain-thunderstorm is expected at few places in Malakand, Hazara, Rawalpindi, Gujranwala, and Lahore divisions, Islamabad, upper FATA, Gilgit-Baltistan and Kashmir.

THURSDAY**15-09-2016**

Mainly hot and dry weather is expected in most parts of the country. However rain-thunderstorm is expected at few places in Malakand, Rawalpindi, Gujranwala, Lahore divisions and Kashmir.

FRIDAY**16-09-2016**

Mainly hot and dry weather is expected in most parts of the country. However, rain is expected at a few places of Kashmir and its adjoining hilly areas.

SATURDAY**17-09-2016**

Mainly hot and dry weather is expected in most parts of the country. However, rain is expected at a few places of Kashmir and its adjoining hilly areas.

SUNDAY**18-09-2016**

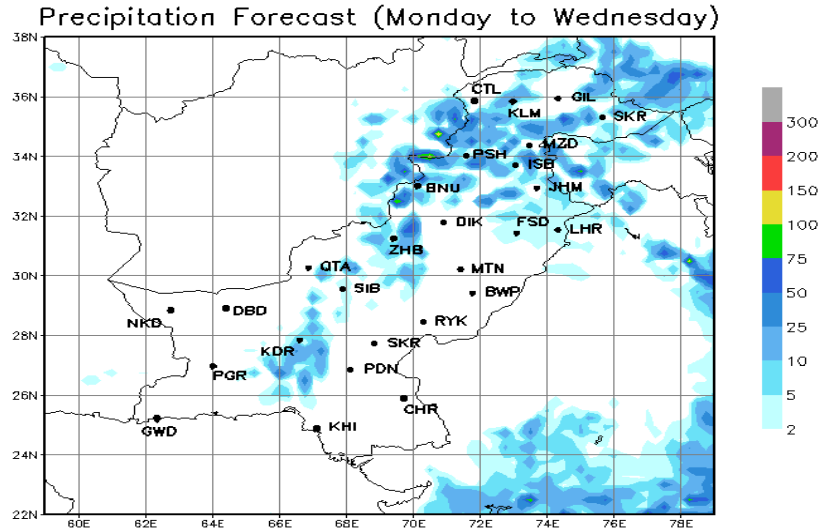
Mainly hot and dry weather is expected in most parts of the country.

ADVISES FOR CROPS

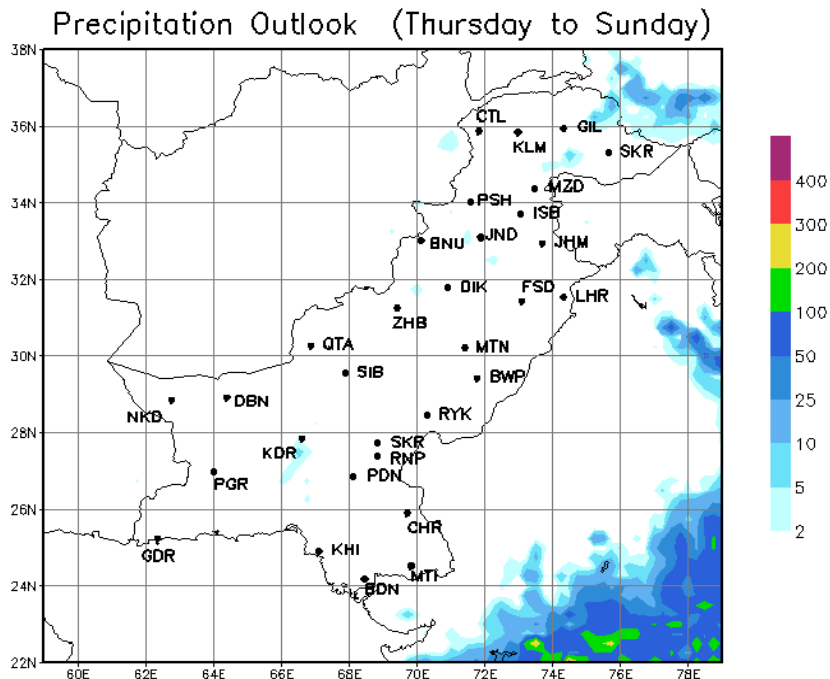
- ❖ Farmers obtaining crop water through tube wells are advised to schedule the irrigation according to the expected weather mentioned during the week.
- ❖ Farmers are advised to control further weeds growth at the present growing stages to stop any negative impact on the crops. Weeds removing practices should be started soon after expected rains in the mentioned.
- ❖ 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 12th to 18th September 2016

The outlook from 12th to 14th September, 2016 shows that light to moderate rainfall is expected in monsoon effected areas of the country.



The outlook from 15th to 18th September, 2016 shows that dry weather is expected in most partsof the country



National Weather Data of Selected Cities
(Weekly Data from 5th to 11th 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	25.4	28.0	96.0	51	0.2	1.7	4.1	0.6	3.1
Badin	32.9	34.0	171.0	70	0.0	0.6	3.0	6.3	9.3
Bahawalnagar	37.0	38.5	185.3	61	0.0	0.0	0.0	1.4	1.7
Bahawalpur	36.9	37.8	185.8	62	0.0	0.0	0.1	8.9	4.6
Balakot	32.6	34.0	140.9	67	15.0	1.0	3.7	0.3	0.0
Bannu	38.4	39.6	178.9	58	0.0	0.0	2.0	0.0	4.3
Barkhan	35.0	36.0	167.8	60	0.0	0.0	1.7	0.0	2.0
Bunji	32.3	35.0	147.5	48	3.0	3.9	6.0	0.6	2.6
Cherat	30.9	33.0	144.0	54	3.0	0.3	3.7	2.0	3.4
Chhor	33.8	34.2	165.7	70	0.0	1.6	2.4	5.1	8.0
Chilas	36.6	40.0	178.5	36	5.0	2.9	4.1	1.1	3.1
Chitral	34.8	36.0	144.6	59	0.0	0.3	1.0	0.0	10.6
D.I.Khan	38.4	39.5	190.8	67	0.1	0.3	0.0	0.0	0.9
Dalbandin	41.8	43.0	207.5	17	0.0	0.0	0.0	1.0	3.4
DG.Khan	35.8	36.6	181.3	64	0.0	0.0	0.4	5.7	8.0
Dir	32.4	33.5	127.8	71	15.0	2.6	3.9	0.0	1.7
Drosh	35.9	37.0	158.7	36	0.0	1.6	2.7	0.0	15.7
Faisalabad	37.6	38.6	184.2	60	2.0	0.7	1.1	0.9	0.9
Garidopatta	35.6	36.5	163.1	61	9.0	2.1	3.0	0.0	0.6
Gawader	33.1	34.0	170.5	68	0.0	4.7	3.1	0.0	10.3
Gilgit	32.0	37.0	128.0	63	7.2	3.6	6.3	0.0	4.4
Gupis	29.7	32.5	114.8	44	0.0	1.6	4.3	0.9	4.0

Hyderabad	34.8	35.5	170.1	65	0.0	1.1	2.0	16.6	17.1
Islamabad	35.6	37.0	173.8	65	3.0	1.3	3.1	0.0	0.0
Jacobabad	36.1	37.0	186.0	65	0.0	0.0	0.0	1.1	2.9
Jhang	37.4	38.7	188.3	63	0.0	0.0	0.6	1.4	2.9
Jhelum	36.6	37.5	185.3	71	49.0	1.0	1.1	0.0	3.1
Jiwani	31.4	32.0	165.0	72	0.0	5.6	3.9	3.1	7.7
Kakul	29.9	31.0	133.0	73	44.0	3.3	3.9	0.0	1.7
Kalam	25.9	27.5	95.3	65	0.0	0.6	5.4	0.0	1.7
Kalat	31.3	32.0	111.0	27	0.0	0.0	0.0	0.0	0.0
Karachi	32.1	33.2	169.1	70	0.0	5.1	3.6	9.7	12.6
Khanpur	37.0	37.4	184.1	65	0.0	0.0	0.0	4.0	1.1
Khuzdar	36.1	37.0	172.0	38	16.0	0.0	1.4	0.6	0.0
Kotli	34.1	34.7	168.4	70	59.0	3.3	4.1	0.7	2.0
Lahore	36.0	37.0	185.0	60	0.0	1.0	2.6	0.3	2.9
Larkana	38.9	40.0	197.5	58	0.0	0.0	0.0	2.3	2.9
Lasbella	36.3	36.8	183.5	63	0.0	5.1	0.0	0.0	7.7
Lower Dir	37.5	39.0	171.5	58	0.0	2.9	3.0	0.0	2.3
M.B Din	37.0	38.0	186.3	72	0.0	0.7	0.6	0.6	1.4
Malam Jabba	19.7	21.0	77.3	80	42.0	3.1	6.1	0.0	0.0
Mangla	36.0	36.5	180.3	68	6.0	1.1	3.1	0.6	6.9
Mir Khani	35.1	36.0	152.2	43	0.0	0.7	2.1	0.0	3.7
Moinjodaro	38.2	38.5	184.5	62	0.0	0.0	0.0	4.6	4.0
Multan	36.0	37.0	185.8	64	0.0	0.0	0.6	8.6	8.6
Murree	23.0	24.0	96.7	82	35.0	2.9	6.3	1.7	1.4
Muzaffarabad	33.5	34.4	150.4	68	23.0	3.1	3.7	0.0	2.9
Nokkundi	41.6	43.0	203.8	10	0.0	0.3	0.3	3.9	4.7

Okara	37.0	37.5	184.1	65	0.0	0.0	1.9	1.1	1.7
Padidan	37.6	38.0	181.8	66	0.0	0.0	0.0	1.1	2.0
Panjgur	37.3	38.0	167.3	31	0.0	0.0	0.0	2.3	12.9
Parachinar	29.7	30.2	137.6	67	30.0	3.7	4.6	3.0	3.0
Pasni	32.4	32.5	170.3	72	0.0	4.4	0.0	1.4	13.4
Peshawar	37.5	38.5	186.3	62	0.0	0.6	1.9	1.1	2.9
Quetta	32.8	33.5	141.2	29	0.0	0.0	0.7	1.6	3.1
R.Y.Khan	38.4	39.3	186.6	63	0.0	0.0	0.0	2.9	1.7
Rawalakot	26.9	27.5	113.3	81	16.0	2.1	4.7	0.0	2.0
Rawalpindi	35.9	37.0	181.2	65	3.4	1.0	2.0	0.9	0.9
Sahiwal	36.5	37.5	177.1	64	0.0	0.0	1.3	2.0	3.1
Saidu Sharif	33.6	35.0	152.8	69	32.0	0.6	2.0	0.0	1.7
Sialkot	35.2	35.8	178.0	67	9.0	2.7	3.3	1.1	0.3
Sibbi	39.1	40.0	198.8	59	0.0	0.3	0.0	5.1	3.7
Skardu	28.4	31.3	107.2	43	0.1	1.6	4.6	0.0	2.0
Tandojam	35.0	36.0	169.3	72	0.0	0.3	0.3	5.2	5.9
Usta.M	35.9	36.7	175.6	72	0.0	0.0	0.0	0.9	0.8
Zhob	35.9	37.0	164.0	37	0.0	0.3	0.6	2.9	3.4

*** 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)