

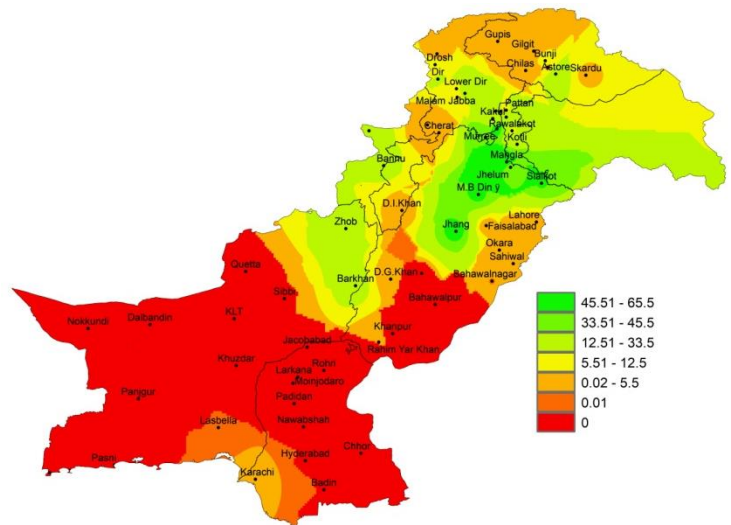
Weekly Weather and Crop Bulletin for Pakistan

**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 (24th September to 30th 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 (24th September to 30th September, 2018)

Above normal day temperature was observed in Sindh. However, normal to below normal day temperature was observed in Khyber Pakhtunkhwa Punjab, Gilgit-Baltistan, Azad Jammu & Kashmir and Baluchistan.

Province wise distribution of rainfall reported as follows:

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

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

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

Editor: Saeeda Saleh (Assistant Meteorologist)

Past Weather of Provinces (24th September to 30th September, 2018)**Punjab**

Light to moderate rainfall observed in Punjab during the week. Weekly maximum and minimum temperatures recorded as 34.50°C & 22.0°C respectively. For the recent week on average 162.9 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 63% and wind speed in the morning/evening recorded as 1.6/2.7 Knots. During the previous week the highest amount of rainfall was recorded as 43.0 mm at Islamabad & highest maximum temperature was recorded as 41.4°C at Rahimyar Khan.

Sindh

Light rainfall observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 37.4°C & 24.3°C respectively. For the recent week, on average 180 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 2.8/4.5 Knots. During the previous week the highest amount of rainfall was recorded as 3.00mm at Hyderabad & highest maximum temperature was recorded as 41.5°C at Nawabshah.

Khyber Pakhtunkhwa

Light to moderate rainfall observed in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 30.8°C & 16.6°C respectively. For the recent week on average 131.9 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 0.7/2.8 Knots. During the previous week the highest amount of rainfall was recorded as 25.00 mm at Balakot & highest

maximum temperature was recorded as 39.5°C at D. I. Khan.

Baluchistan

Light to moderate rainfall observed in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 33.7°C & 18.6°C respectively. For the recent week on average 145.5 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 46% and wind speed in the morning/evening recorded as 1.3/4.5 Knots. During the previous week the highest amount of rainfall was recorded as 35.0 mm Lasbella & highest maximum temperature was recorded as 41.5°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 28.2°C & 14.3°C respectively. For the recent week on average 108.6 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 0.8/2.4 Knots. During the previous week the highest amount of rainfall was recorded as 8.00 mm Kotli & highest maximum temperature was recorded as 36.0°C at Chillas.

Past Weather for Major Agricultural Plains (24th September to 30th September, 2018)

Rawalpindi (Potohar region)

Rainfall reported as 16.7mm from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 4.4/2.6 Oktas while, average relative humidity observed as 78%. Mean day time temperature recorded as 33.7°C & for the recent week 156.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/1.0 Knots.

Faisalabad (Central Punjab)

Rainfall reported as 84.0mm from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 1.3/3.1 Oktas while, while, average relative humidity observed as 68%. Mean day time temperature recorded as 35.3°C & for the recent week 165.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.3/1.7 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness recorded in the morning/evening as 0.0/0.8 Oktas while, average relative humidity observed as 65%. Mean day time temperature recorded as 38.8°C & for the recent week 180.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.8/2.5 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, clear weather was recorded while, average relative humidity observed as 66%. Mean day time temperature recorded as 36.1°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 0.8/4.0 Knots.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 1.7/1.1 Oktas while, average relative humidity observed as 18%. Mean day time temperature recorded as 28.1°C & for the recent

week 108.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.6/3.1 Knots.

Past Weather for Sub-Regional Agricultural Plains (24th September to 30th September, 2018)

Multan

Dry weather reported from Multan during the week; however, cloudiness in the morning/evening recorded as 0.9/0.9 Oktas while, average relative humidity observed as 55%. Mean day time temperature recorded as 35.9°C & for the recent week 160.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/6.0 Knots.

Lahore

Rainfall reported as 5.0mm from Lahore during the week; however, cloudiness in the morning/evening recorded as 0.4/2.0 Oktas while, average relative humidity observed as 66%. Mean day time temperature recorded as 32.5°C & for the recent week 162.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening 1.1/1.7 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 43%. Mean day time temperature recorded as 31.2°C & for the recent week 145.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.9/6.1 Knots.

Murree

Rainfall reported as 0.02mm from Murree during the week; however, cloudiness in the morning/evening recorded as 0.7/5.7 Oktas while, average relative humidity observed as 71%. Mean day time temperature recorded as 21.1°C & for the recent week 173.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/0.9 Knots.

D.I. Khan

Rainfall reported as 0.01mm from D.I. Khan during the week; however, cloudiness in the

morning/evening recorded as 1.3/0.0 Oktas while, average relative humidity observed as 58%. Mean day time temperature recorded as 37.0°C & for the recent week 106.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/0.9 Knots.

Peshawar

Rainfall reported as 0.01 mm from Peshawar during the week; however, cloudiness in the morning/evening recorded as 0.7/5.4 Oktas while, average relative humidity observed as 63%. Mean day time temperature recorded as 34.4°C & for the recent week 159.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/0.9 Knots.

Kalam

Dry weather reported from Kalam during the week; however, cloudiness in the morning/evening recorded as 1.1/5.4 Oktas while, average relative humidity observed as 61%. Mean day time temperature recorded as 23.6° 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 0.0/0.0 Knots.

Gilgit

Rainfall reported as 1.82mm from Gilgit during the week; However, cloudiness in the morning/evening recorded as 3.9/6.1 Oktas while, average relative humidity observed as 55%. Mean day time temperature recorded as 29.3°C & for the recent week 83.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/2.6 Knots.

Skardu

Rainfall reported as 6.02mm from Skardu during the week; however, cloudiness in the morning/evening recorded as 5.4/6.4 Oktas while, average relative humidity observed as 47%. Mean day time temperature recorded as 24.0°C & for the recent week 108.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.6 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, Full maturity stage.

Lower Sindh (Tandojam)

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

Cotton (CIM 602); Good, 3rd Picking stage.

Northern Baluchistan (Quetta)

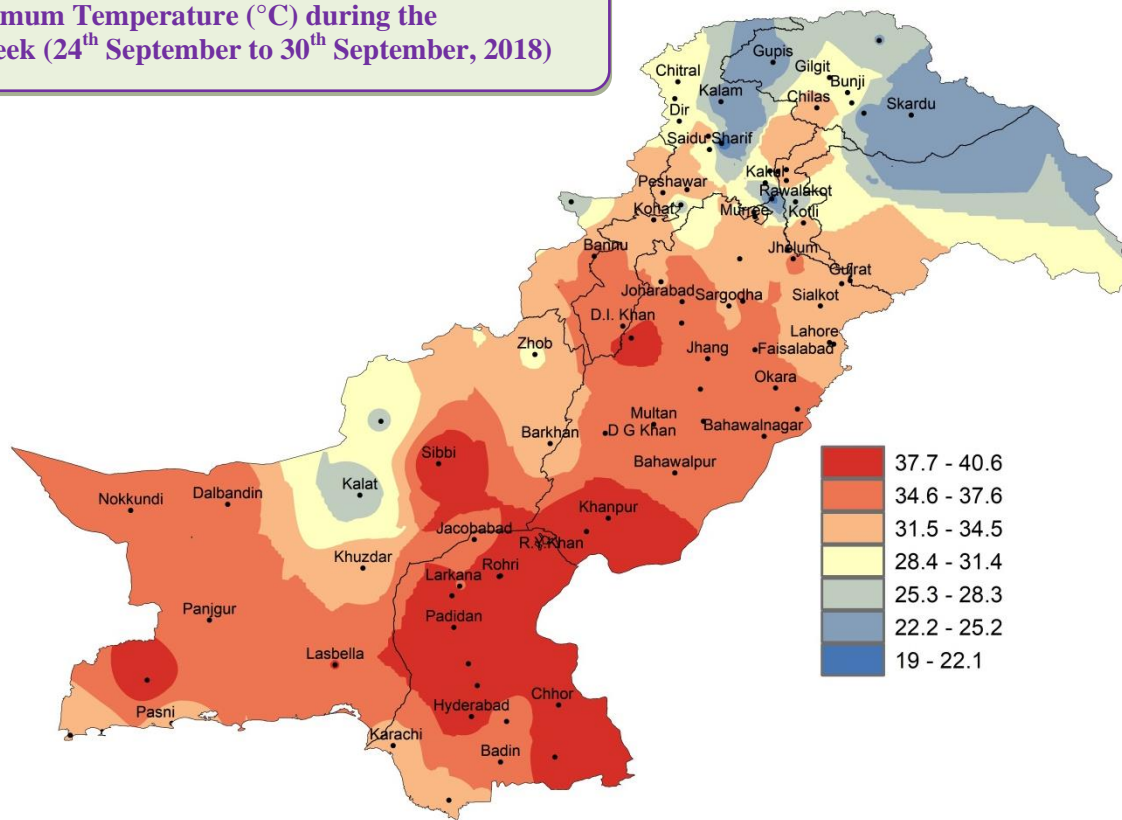
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

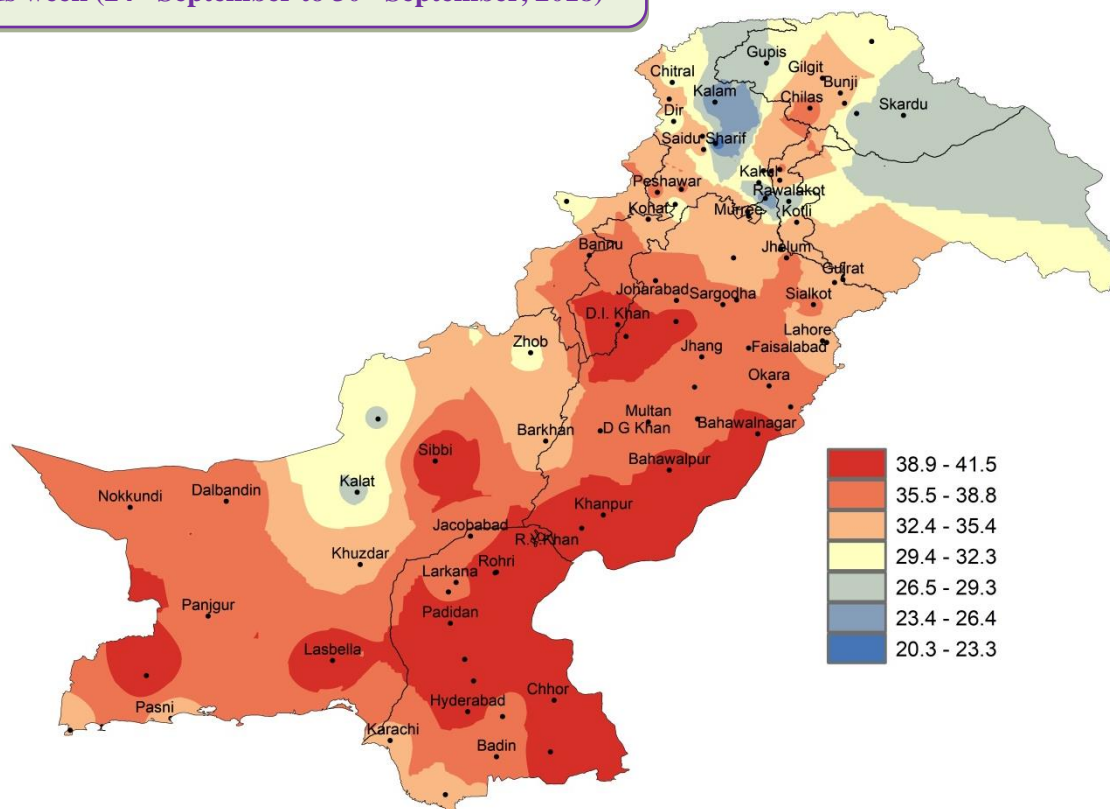
There is presently rice crop in the fields of RAMC Usta Muhammad.

Rice; Flowering stage.

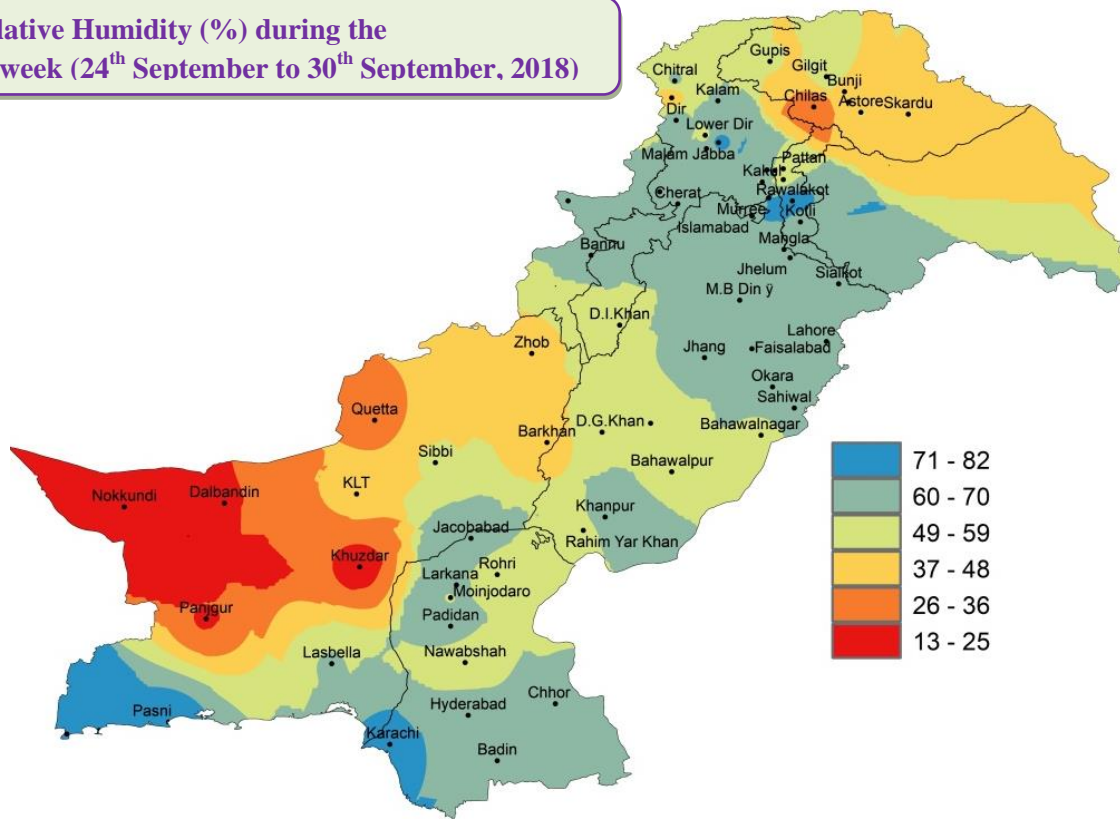
Mean Maximum Temperature ($^{\circ}\text{C}$) during the Previous week (24th September to 30th September, 2018)



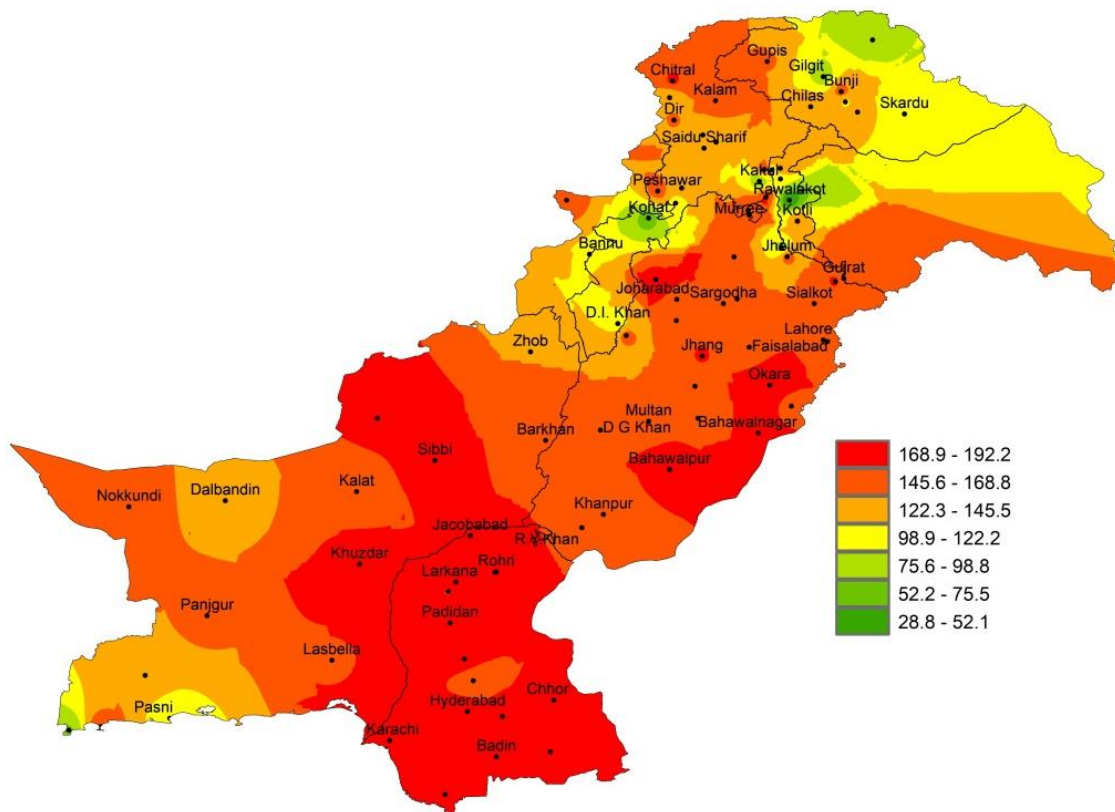
Highest maximum Temperature ($^{\circ}\text{C}$) during the Previous week (24th September to 30th September, 2018)



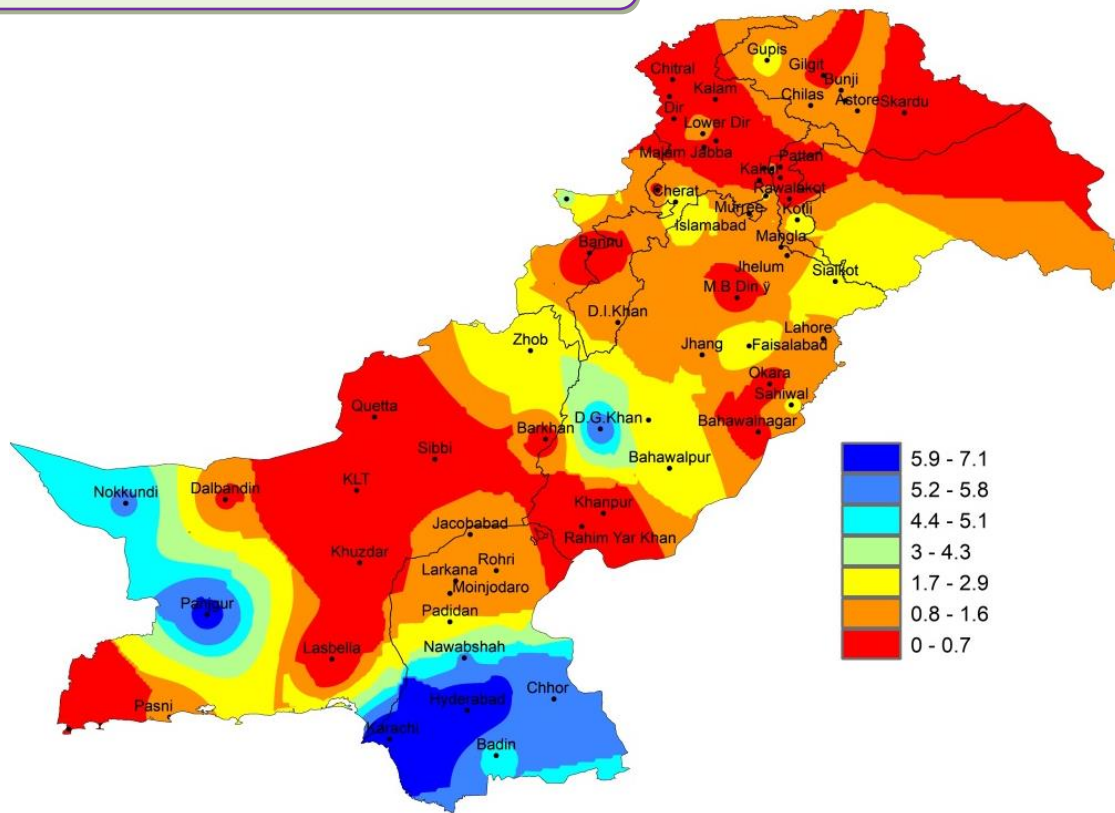
Mean Relative Humidity (%) during the
Previous week (24th September to 30th September, 2018)



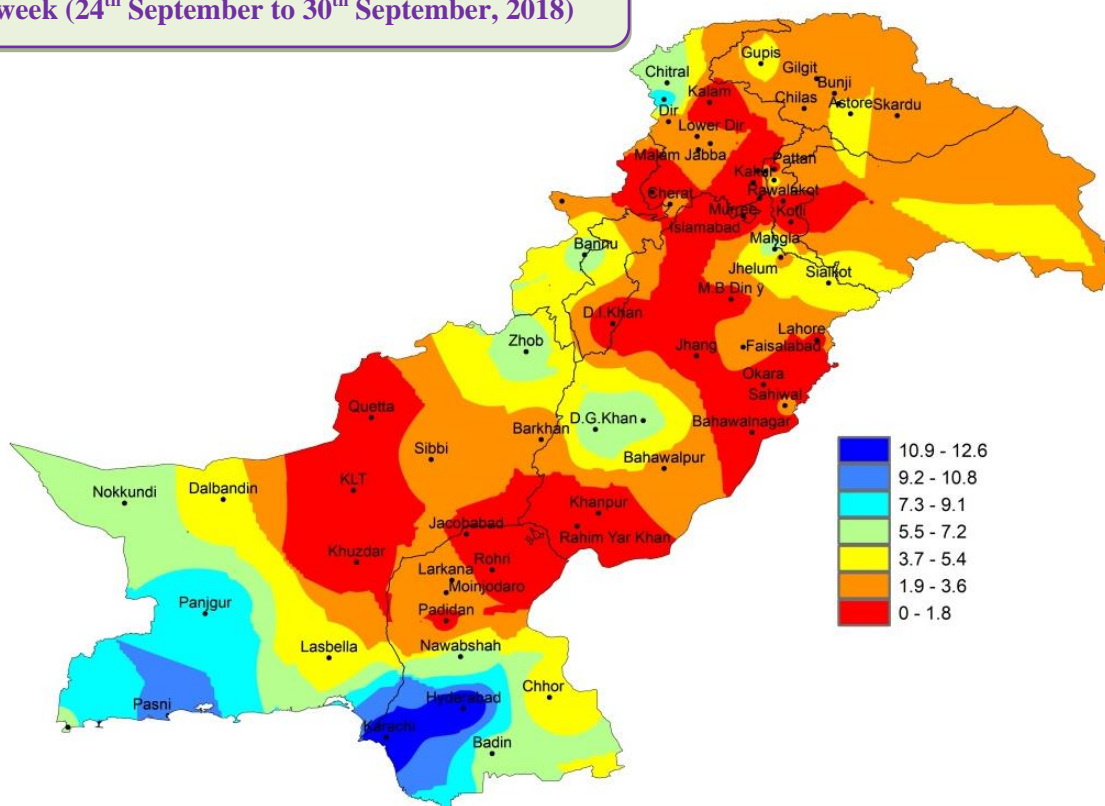
Total Growing Degree Days accumulated during the
Previous week (24th September to 30th September, 2018)



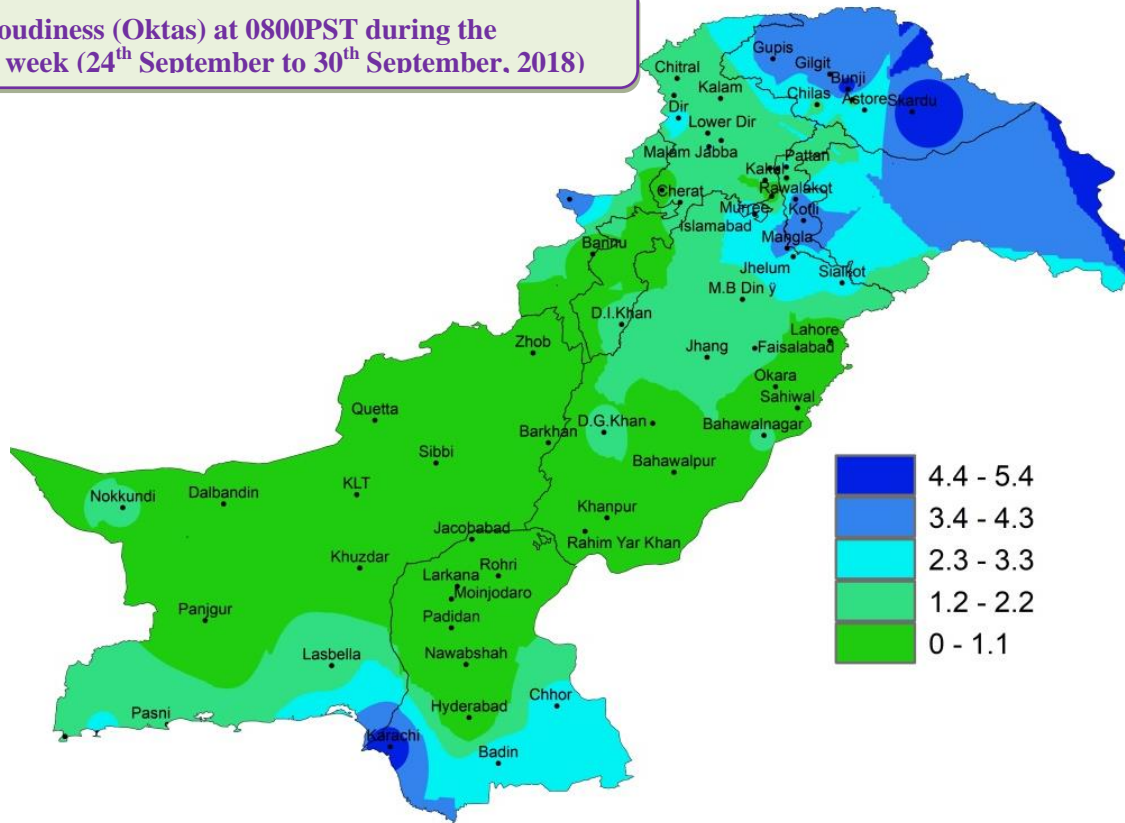
**Mean Wind Speed (Knots) at 0800PST during the
Previous week (24th September to 30th September, 2018)**



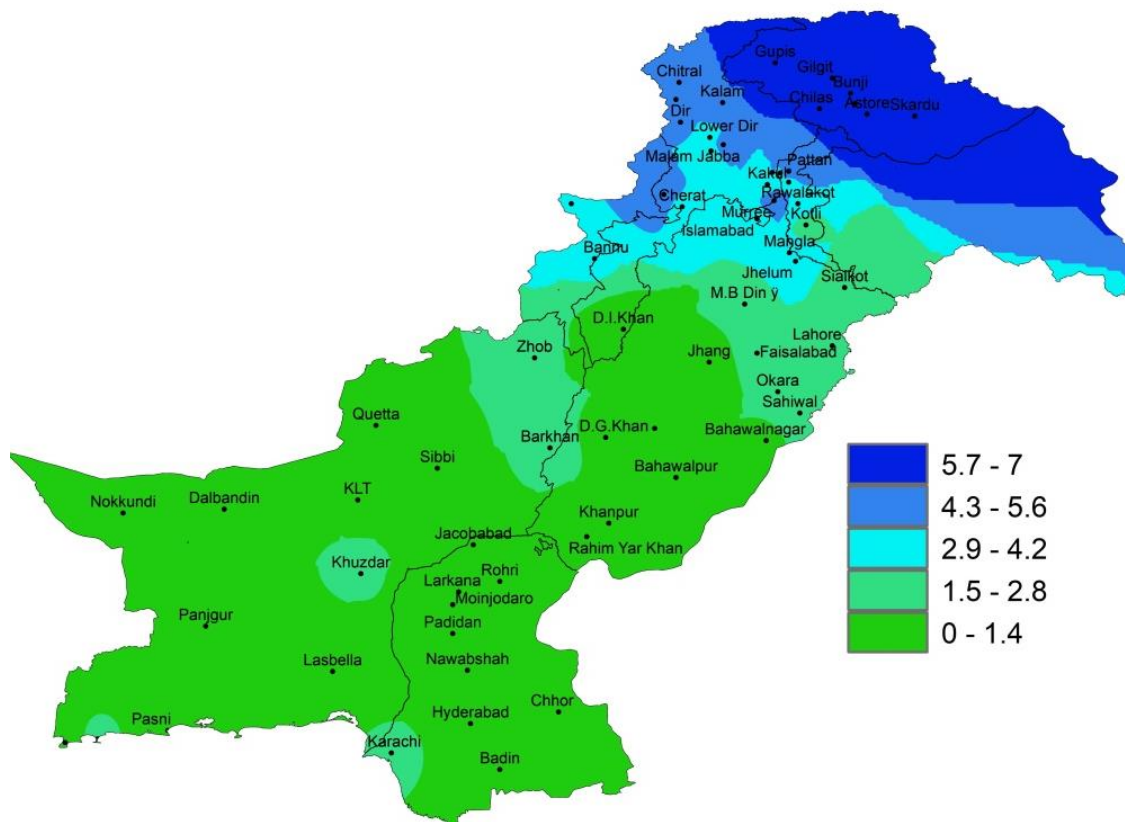
**Mean Wind Speed (Knots) at 1700PST during the
Previous week (24th September to 30th September, 2018)**



Mean Cloudiness (Oktas) at 0800PST during the
Previous week (24th September to 30th September, 2018)



Mean Cloudiness (Oktas) at 1700PST during the
Previous week (24th September to 30th September, 2018)



Weekly Weather Advisory for Farmers
(1st October to 7th October, 2018)

A shallow trough of westerly wave is affecting northern parts of the country.

MONDAY**01-10-2018**

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

TUESDAY**02-10-2018**

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Malakand, Zhob divisions and Gilgit-Baltistan.

WEDNESDAY**03-10-2018**

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

THURSDAY**04-10-2018**

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Malakand, Kohat, Bannu, D.I.Khan, Sargodha, Rawalpindi divisions, Islamabad and Gilgit-Baltistan.

FRIDAY**05-10-2018**

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

SATURDAY**06-10-2018**

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

SUNDAY**07-10-2018**

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

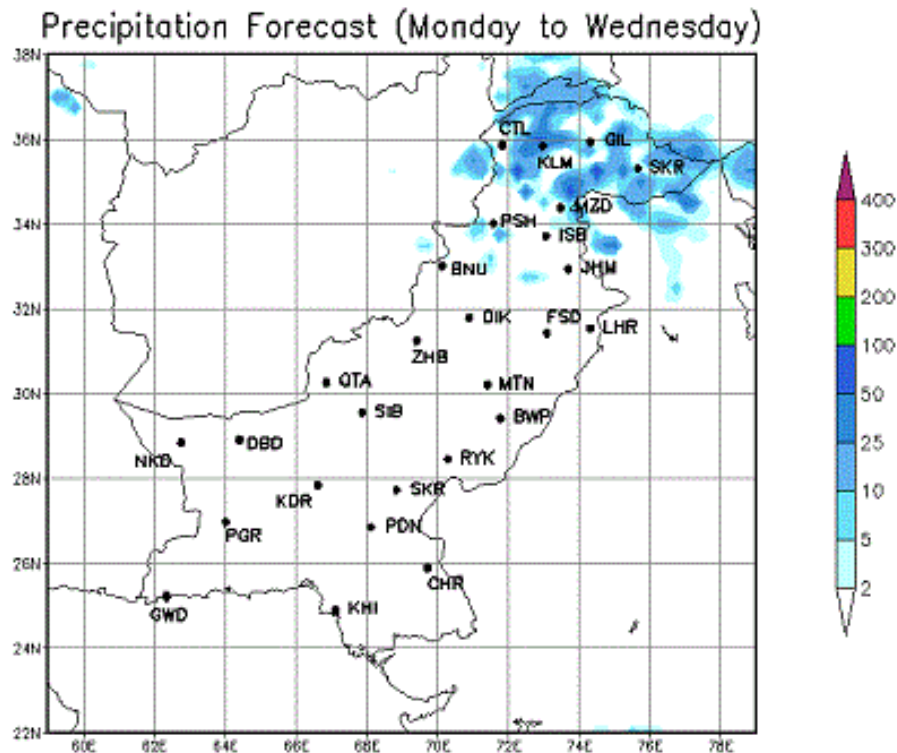
ADVISES FOR FARMERS

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.

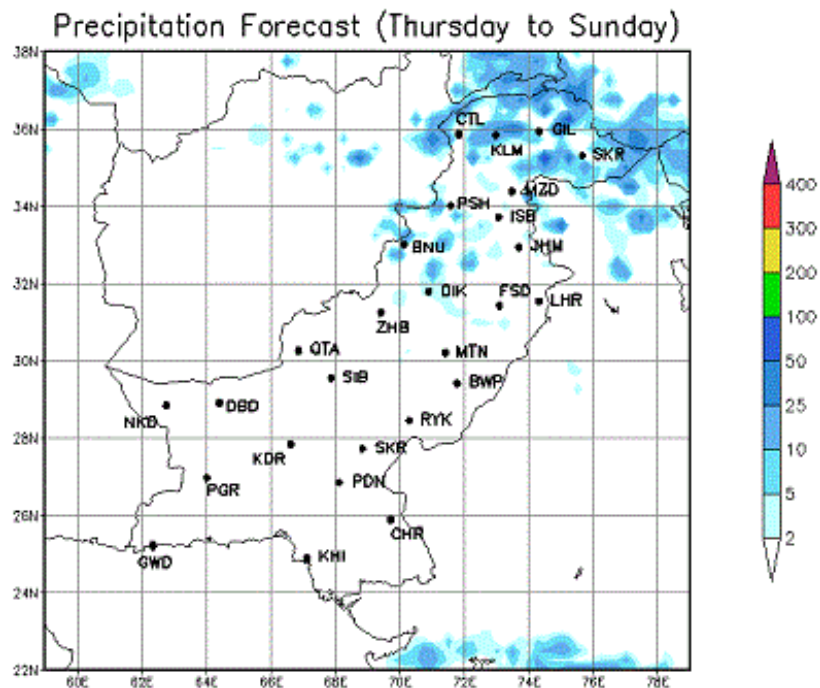
- Use pesticides to avoid the attack from pests on the crops as advised by the agriculture department.
- Use proper precautions during picking of cotton because the cost of good and clean quality cotton is high than that of the filthy one.

Weather Outlook from (1st October to 7th October, 2018)

The outlook from 1st October to 3rd October, 2018 shows that light to moderate rainfall is expected at isolated places of upper Khyber Pakhtunkhwa, Gilgit-Baltistan, Kashmir and FATA. However, dry weather may prevail in rest of the country.



The outlook from 4th October to 7th October, 2018 shows that light to moderate rainfall is expected in scattered places of Khyber Pakhtunkhwa, GB, FATA and Kashmir. However, dry weather may prevail in rest of the country.



National Weather Data of Selected Cities (Weekly Data from 24th September to 30th 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	22.0	26.0	130.8	48	1.60	2.4	6.1	0.9	4.0
Badin	34.6	35.5	183.3	68	0.00	3.0	0.6	4.9	6.3
Bahawalnagar	36.9	40.0	173.8	55	0.00	1.1	1.3	0.6	0.6
Bahawalpur	37.1	39.5	179.25	59	2.00	0.9	0.3	2.3	2.9
Balakot	30.9	32.0	171.2	72	25.00	1.0	4.3	0.0	0.7
Bannu	35.0	37.0	119	59	0.00	0.4	3.1	0.0	6.0
Barkhan	32.9	34.0	147	40	0.01	0.3	2.0	0.3	2.0
Bunji	29.6	34.4	157.25	45	0.01	5.3	7.0	0.9	1.7
Cherat	26.9	30.0	115	65	0.00	1.4	3.4	2.3	2.0
Chhor	38.2	39.6	179.5	62	0.00	2.4	0.9	5.1	4.0
Chilas	33.1	36.0	138.1	25	0.00	2.0	5.9	1.4	2.0
Chitral	30.1	32.0	174.25	61	4.81	2.0	5.6	0.0	6.0
D.I.Khan	35.4	36.8	165.9	58	25.00	1.3	1.0	5.7	6.3
Dalbandin	37.0	39.5	106.75	58	0.01	1.3	0.0	1.4	0.9
D.G.Khan	35.5	37.0	133.25	25	0.00	0.3	0.3	0.6	3.7
Dir	29.4	31.5	148.25	67	9.00	2.6	5.1	0.3	1.9
Drosh	30.9	33.5	121.75	37	0.00	1.1	5.0	0.0	8.9
Faisalabad	35.3	37.5	165.3	68	84.00	1.3	3.1	1.3	1.7
Garidopatta	33.2	34.5	109	57	2.00	0.9	3.6	0.0	4.3
Gawader	33.5	35.5	160	76	0.00	2.4	2.0	0.0	9.1
Gilgit	29.3	33.5	83.25	55	1.82	3.9	6.1	0.3	2.6
Gupis	33.8	35.7	158.1	48	15.40	3.6	7.0	1.7	4.0

Hyderabad	38.4	39.5	182.25	63	3.00	0.3	0.9	7.1	12.6
Islamabad	31.3	33.5	167.55	69	43.00	3.0	3.1	1.1	0.0
Jacobabad	36.7	37.0	172	67	0.00	0.0	0.3	1.0	1.7
Jhang	35.6	37.0	169.65	62	0.00	1.4	0.0	1.4	0.9
Jhelum	34.9	35.8	157.65	64	0.01	3.0	3.1	1.1	2.6
Jiwani	32.3	34.0	73.25	82	0.00	1.3	0.0	0.6	6.6
Kakul	27.9	29.0	68.8	58	0.00	1.1	2.9	0.0	0.9
Kalam	23.6	24.5	161.75	61	0.00	1.1	5.4	0.0	0.0
Karachi	33.7	35.0	185	74	0.00	4.7	1.7	6.3	11.1
Khanpur	38.1	39.0	151.2	62	0.00	0.3	0.7	0.0	1.4
Khuzdar	32.9	35.0	182.75	20	2.40	0.3	1.7	0.0	1.1
KLT	26.5	29.0	150.75	40	0.00	0.0	1.1	0.0	0.0
Kotli	32.2	33.9	149.2	66	8.00	3.6	2.3	2.0	0.0
Lahore	32.5	34.2	162.3	66	5.00	0.4	2.0	1.1	1.7
Larkana	37.4	38.5	190.0	61	0.00	0.7	0.0	1.1	2.0
Lasbella	37.6	39.5	166.8	59	35.00	2.0	0.0	0.0	4.6
Lower Dir	33.8	35.5	126.5	56	2.00	1.0	3.4	1.4	2.3
M.B Din	34.7	35.5	163.3	69	0.01	1.3	2.1	0.3	1.4
Malam Jabba	18.7	20.0	134.1	76	21.00	2.0	5.4	0.0	2.3
Mangla	33.7	35.0	86.8	68	0.01	3.4	3.4	1.1	7.4
Mir Khani	31.4	33.3	116.8	39	0.00	1.6	5.6	1.0	4.3
Moinjodaro	38.2	38.5	167.0	59	0.00	0.0	0.0	0.9	3.1
Multan(PBO)	35.9	37.2	160.5	55	0.00	0.9	0.9	1.7	6.0
Murree	21.1	24.0	173.5	71	0.02	0.7	5.7	1.7	0.9
Muzaffarabad	32.6	33.4	97.8	56	0.00	2.3	3.7	1.1	2.6
Nawabshah	36.1	38.5	156.0	54	0.00	0.3	0.3	5.1	6.0

Nokkundi	37.4	40.0	161.8	13	39.00	1.1	1.0	5.1	6.9
Okara	34.6	37.5	186.7	69	15.00	0.4	1.4	0.0	0.3
Padidan	39.1	40.5	192.3	62	0.00	1.0	0.7	2.0	1.1
Panjgur	35.3	38.0	154.0	24	0.00	0.0	0.9	6.0	8.6
Parachinar	26.8	30.0	163.3	67	11.00	4.1	4.1	3.0	3.0
Pasni	32.4	33.5	106.3	77	0.00	1.7	0.0	0.9	9.6
Pattan	33.7	36.0	149.5	53	0.00	2.3	5.9	0.0	1.1
Peshawar	34.4	36.0	159.4	63	0.01	0.7	5.4	0.6	0.9
Quetta	28.1	29.5	108.0	18	0.00	1.7	1.1	1.6	3.1
Rahim Y. Khan	39.8	41.4	155.5	57	0.00	0.7	0.7	0.0	0.3
Rawalakot	25.6	26.5	26.5	78	0.01	3.6	3.7	0.0	1.4
Rawalpindi	38.8	40.5	186.3	52	0.00	0.4	0.0	1.1	1.2
Rohri	33.7	35.0	156.1	78	16.70	4.4	2.6	0.9	1.0
Sahiwal	35.2	37.5	163.0	62	0.01	0.9	1.7	1.7	2.0
Saidu Sharif	31.8	33.6	131.9	58	5.00	2.3	3.1	0.0	2.0
Sialkot	32.6	34.3	170.1	68	0.01	2.3	2.0	2.7	5.1
Sibbi	40.6	41.5	182.5	49	0.00	0.0	0.6	0.0	2.6
Skardu	24.0	26.6	108.6	47	6.02	5.4	6.4	0.0	2.6
Tandojam	38.8	40.0	180.5	65	0.00	0.0	0.9	2.8	2.5
Usta.M	36.1	37.0	179.8	66	0.00	0.0	0.0	0.8	4.0
Zhob	31.2	32.0	145.5	43	0.00	0.0	1.7	2.9	6.1

*** 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 2014-2012)