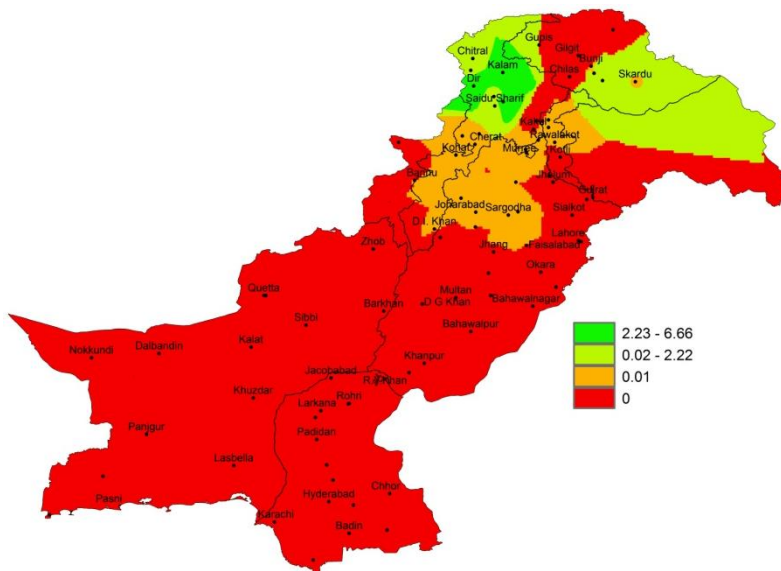


Weekly Weather and Crop Bulletin for Pakistan

**NATIONAL AGROMET CENTRE
PAKISTAN METEOROLOGICAL
DEPARTMENT SECTOR H-8/2,
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Rainfall Distribution (mm) during the Previous Week (5th November to 11th November, 2018)

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Highlights of Past Weather (5th November to 11th November, 2018)

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

Province wise distribution of rainfall reported as follows:

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

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

Editor: Khalida Noureen (Meteorologist)

Past Weather of Provinces (5th November to 11th November, 2018)

Punjab

Light rainfall observed at scattered places in Punjab during the week. Weekly maximum and minimum temperatures recorded as 27.2°C & 10.7°C respectively. For the recent week on average 97.7 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 59% and wind speed in the morning/evening recorded as 0.6/0.8 Knots. During the previous week the highest amount of rainfall was recorded as 0.01 mm from few stations & lowest minimum temperature was recorded as 4.0°C at Murree.

Sindh

Dry weather observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 35.2°C & 18.3°C respectively. For the recent week, on average 155.5 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 48% and wind speed in the morning/evening recorded as 1.7/2.1 Knots. During the previous week lowest minimum temperature was recorded as 11.0°C at Moin Jo Daro.

Khyber Pakhtunkhwa

Light rainfall observed at scattered places in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 21.9°C & 5.9°C respectively. For the recent week on average 62.4 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 57% and wind speed in the morning/evening recorded as 1.4/1.8 Knots. During the previous week the highest amount of rainfall was recorded as 7.00 mm at Dir & lowest minimum temperature was recorded as -3.4°C at Kalam.

Baluchistan

Dry weather observed in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 27.8°C & 10.7°C respectively. For the recent week on average 99.5 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 40% and wind speed in the morning/evening recorded as 1.4/3.4 Knots. During the previous week the lowest minimum temperature was recorded as -1.5°C at Quetta.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light rainfall observed at scattered places in Gilgit-Baltistan & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 16.7°C & 3.0°C respectively. For the recent week on average 48.0 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 1.0/1.2 Knots. During the previous week the highest amount of rainfall was recorded as 0.3 mm at Astore & the lowest minimum temperature was recorded as -5.2°C at Skardu.

Past Weather for Major Agricultural Plains (5th November to 11th November, 2018)

Rawalpindi (Potohar region)

Rainfall reported as Trace (not measurable) from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 1.4/2.0 Oktas while, average relative humidity observed as 71%. Mean night time temperature recorded as 7.7°C & for the recent week 79.4 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, clear weather observed while, average relative humidity observed as 59%. Mean night time temperature recorded as 10.8°C & for the recent week 101.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/0.2 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, clear weather observed while, average relative humidity observed as 61%. Mean night time temperature recorded as 14.5°C & for the recent week 132.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.3 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, clear weather observed while, average relative humidity observed as 67%. Mean night time temperature recorded as 13.5°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 0.8/1.1 Knots.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 1.0/1.5 Oktas while, average relative humidity observed as 17%. Mean night time temperature recorded as 4.2°C & for the recent week

52.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/3.1 Knots.

Past Weather for Sub-Regional Agricultural Plains (5th November to 11th November, 2018)

Multan

Dry weather reported from Multan during the week; however, cloudiness in the morning/evening recorded as 1.0/0.7 Oktas while, average relative humidity observed as 54%. Mean night time temperature recorded as 12.7°C & for the recent week 105.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.7 Knots.

Lahore

Dry weather reported from Lahore during the week; however, cloudiness in the morning/evening recorded as 1.4/2.3 Oktas while, average relative humidity observed as 54%. Mean night time temperature recorded as 13.9°C & for the recent week 109.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening 0.0/0.3 Knots.

Zhob

Dry weather reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 1.3/1.0 Oktas while, average relative humidity observed as 43%. Mean night time temperature recorded as 7.1°C & for the recent week 76.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 3.1/5.0 Knots.

Murree

Dry weather reported from Murree during the week; however, cloudiness in the morning/evening recorded as 0.7/2.7 Oktas while, average relative humidity observed as 52%. Mean night time temperature recorded as 6.4°C & for the recent week 44.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/1.7 Knots.

D.I. Khan

Dry weather reported from D.I. Khan during the week; however, cloudiness in the morning/evening

recorded as 1.7/1.7 Oktas while, average relative humidity observed as 65%. Mean night time temperature recorded as 10.8°C & for the recent week 103.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/0.0 Knots.

Peshawar

Rainfall reported as 0.01 mm from Peshawar during the week; however, cloudiness in the morning/evening recorded as 2.3/3.2 Oktas while, average relative humidity observed as 68%. Mean night time temperature recorded as 6.9°C & for the recent week 79.9 growing degree days accumulated by the end of last week. Calm weather recorded in the morning/evening.

Kalam

Rainfall reported as 5.7 mm from Kalam during the week; however, cloudiness in the morning/evening recorded as 4.6/4.5 Oktas while, average relative humidity observed as 57%. Mean night time temperature recorded as 0.1°C & for the recent week 18.8 growing degree days accumulated by the end of last week. Calm weather recorded in the morning/evening.

Gilgit

Dry weather reported from Gilgit during the week; However, cloudiness in the morning/evening recorded as 3.9/5.3 Oktas while, average relative humidity observed as 73%. Mean night time temperature recorded as 1.6°C & for the recent week 31.5 growing degree days accumulated by the end of last week. Calm weather recorded in the morning/evening.

Skardu

Dry weather reported from Skardu during the week; however, cloudiness in the morning/evening recorded as 6.0/5.8 Oktas while, average relative humidity observed as 65%. Mean night time temperature recorded as -3.2°C by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.8 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, Wax Maturity 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)

Wheat crop is sown in the fields of RAMC Tandojam on 1st November 2018.

Wheat: *Good, Emergence stage*

Northern Baluchistan (Quetta)

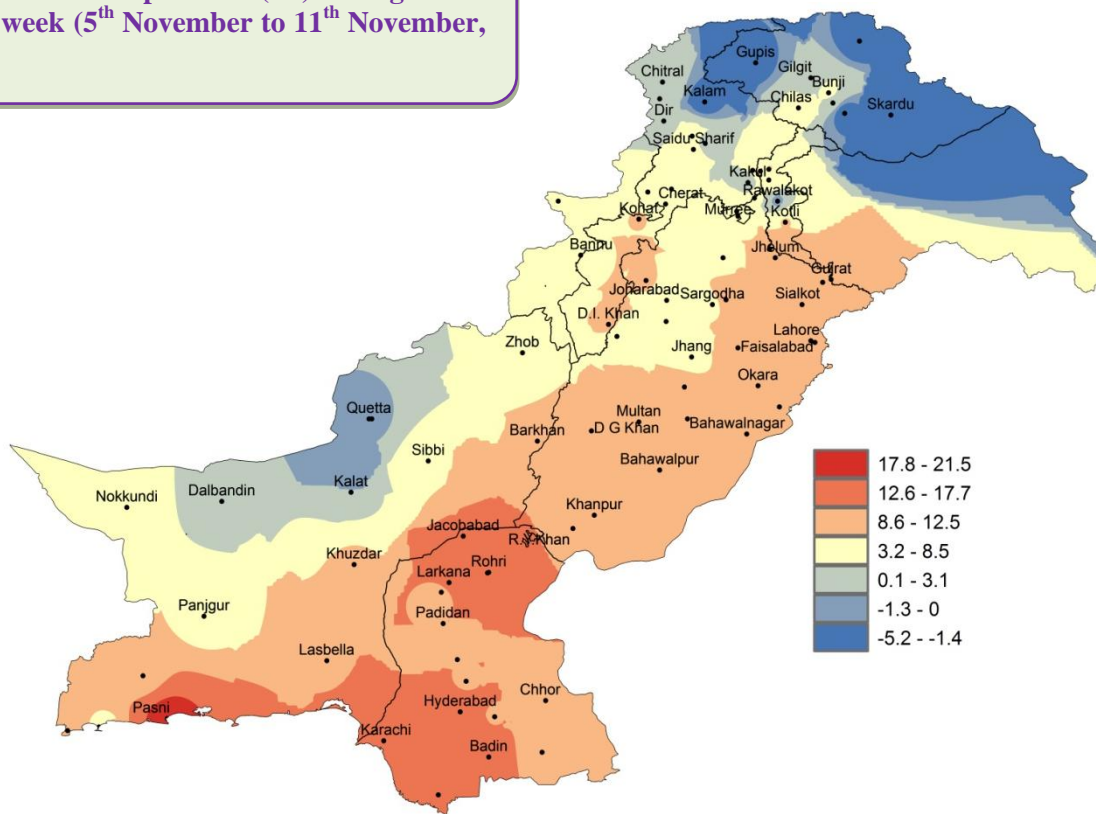
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

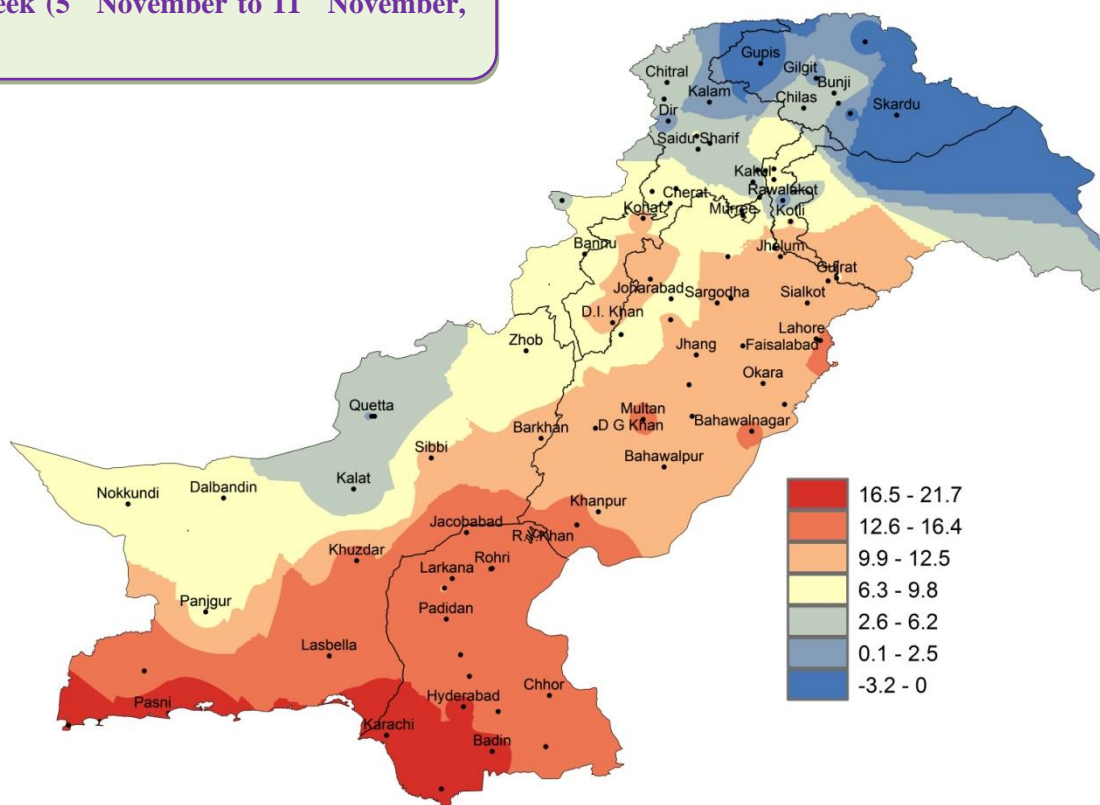
There is presently no crop grown in the fields of RAMC Usta Muhammad.

Rice: *Harvested.*

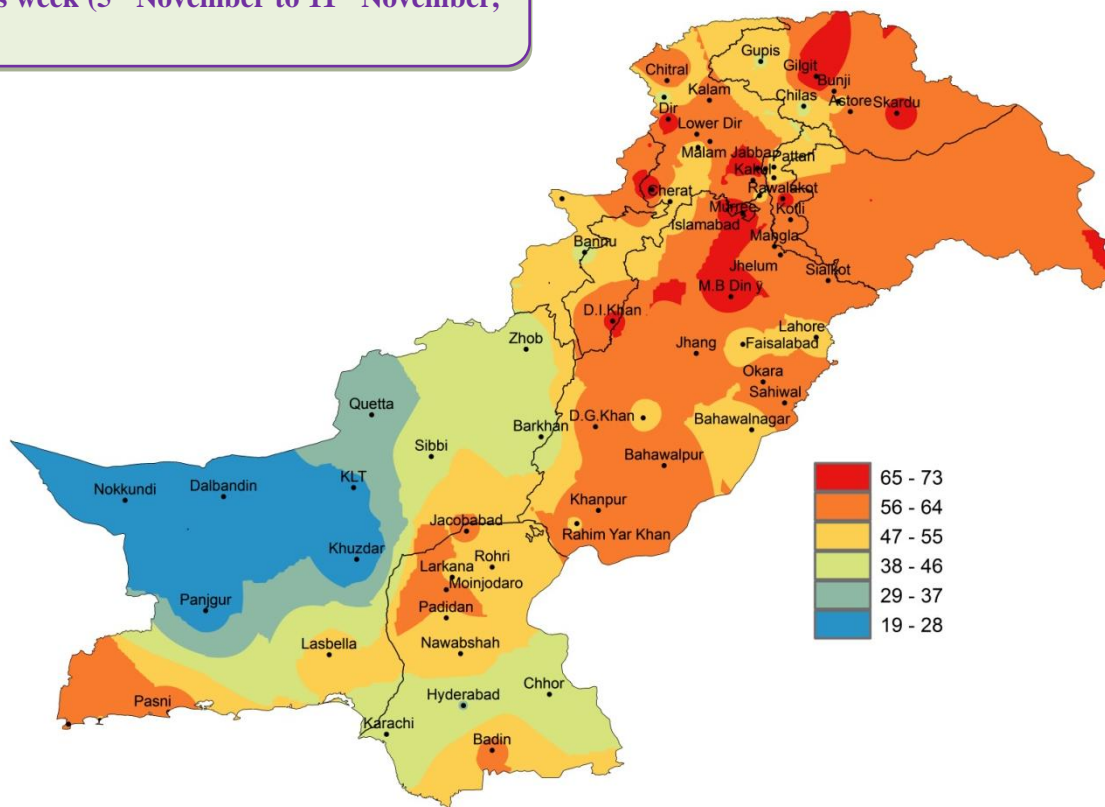
Mean Minimum temperature (°C) during the Previous week (5th November to 11th November, 2018)



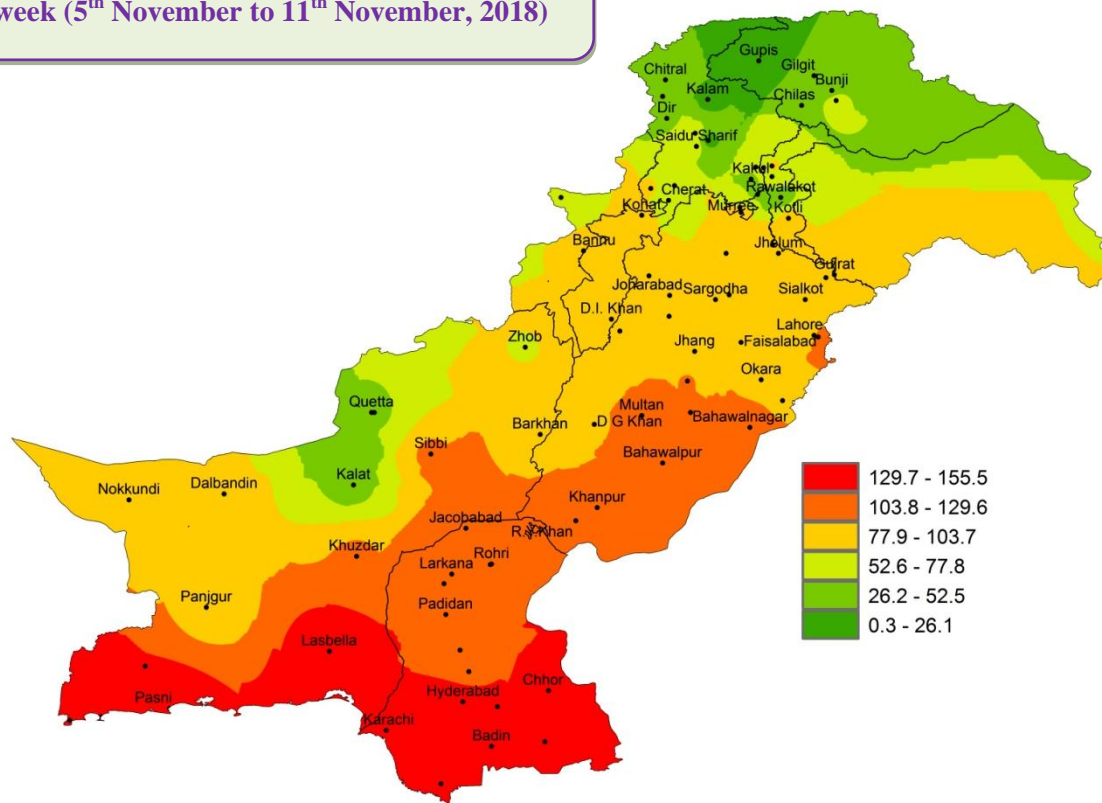
Lowest Minimum Temperature (°C) during the Previous week (5th November to 11th November, 2018)



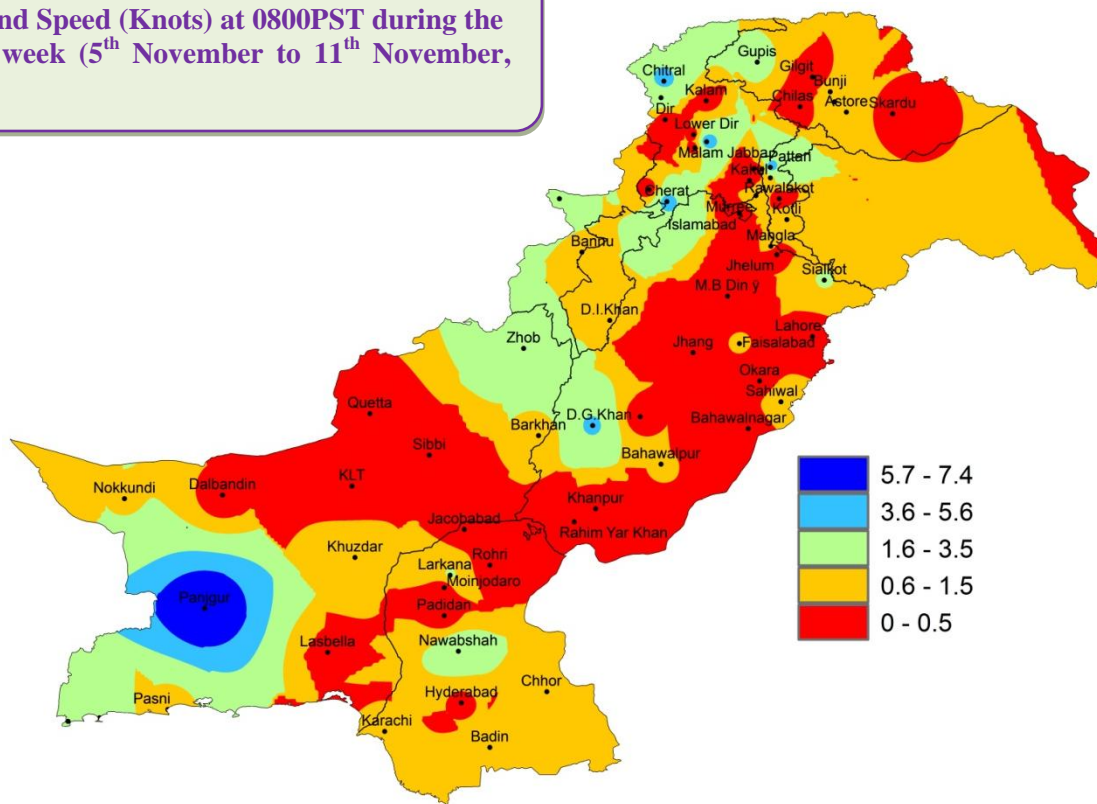
Mean Relative Humidity (%) during the Previous week (5th November to 11th November, 2018)



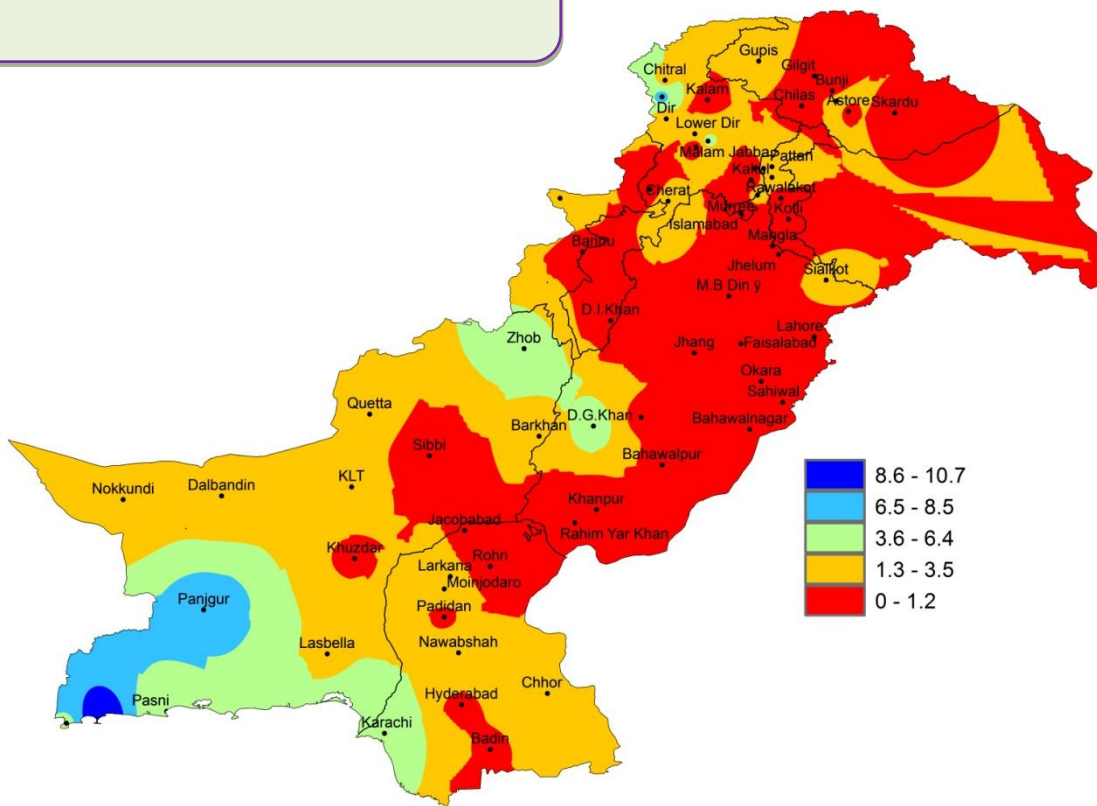
Total Growing Degree Days accumulated during the Previous week (5th November to 11th November, 2018)



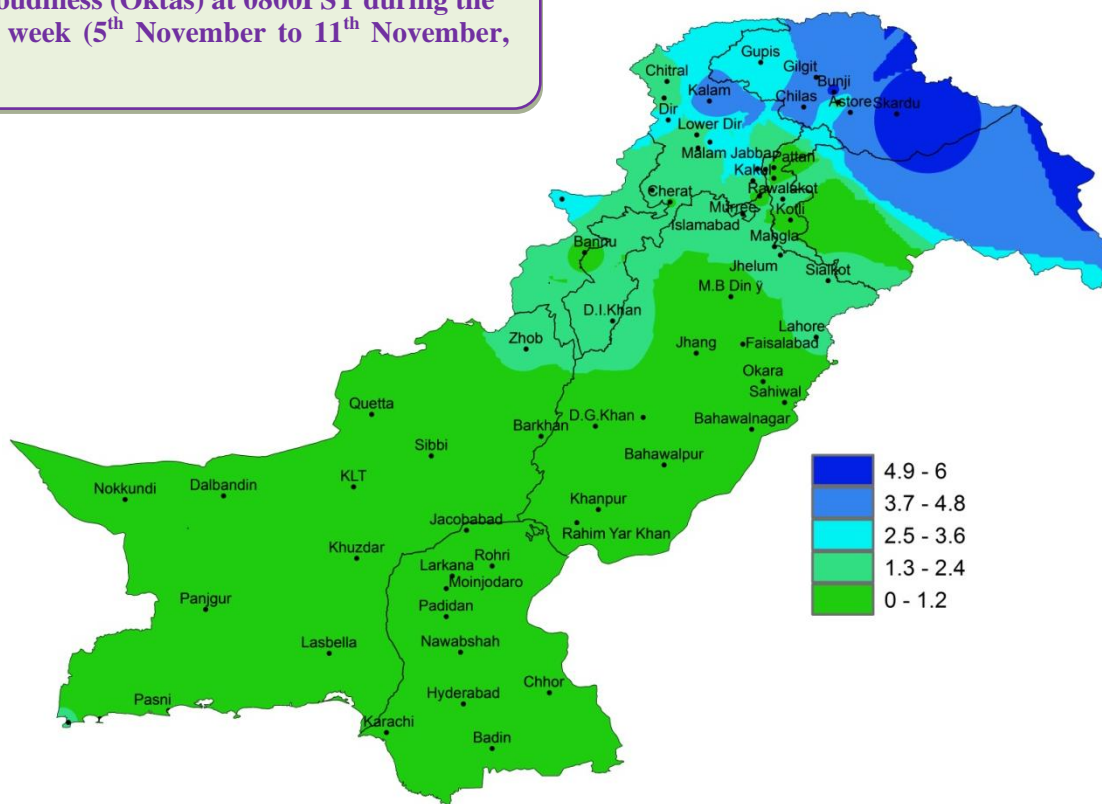
Mean Wind Speed (Knots) at 0800PST during the Previous week (5th November to 11th November, 2018)



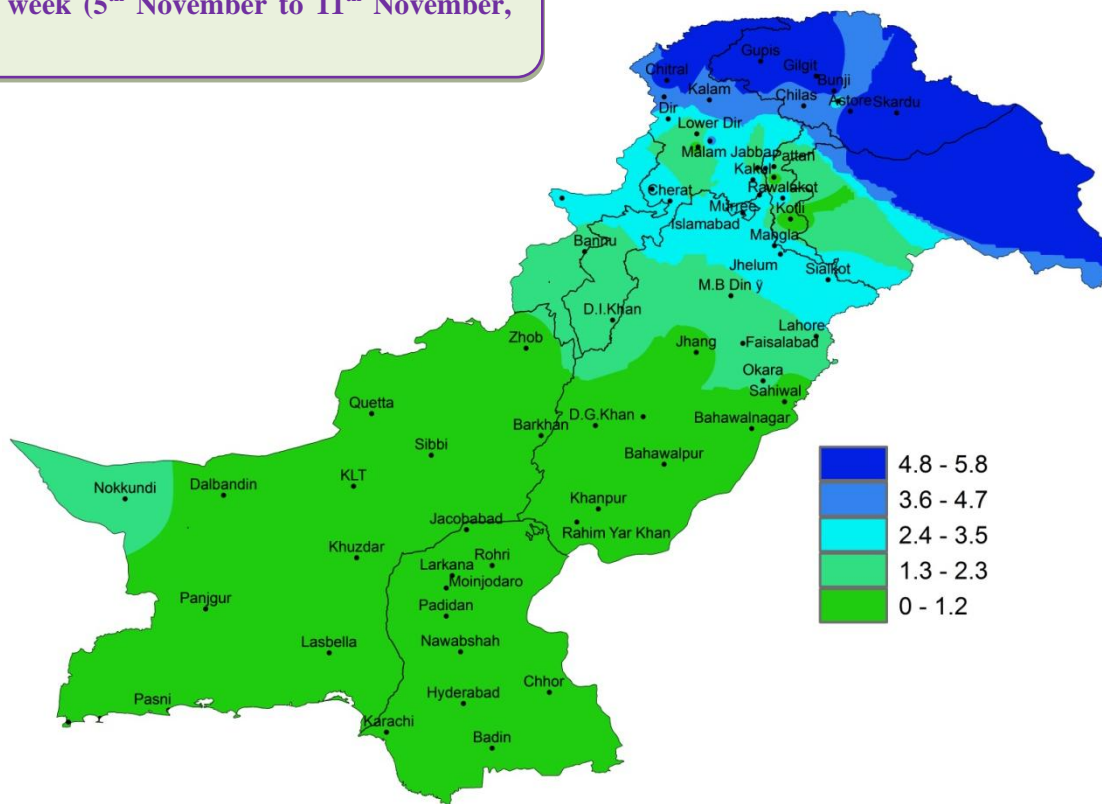
Mean Wind Speed (Knots) at 1700PST during the Previous week (5th November to 11th November, 2018)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (5th November to 11th November, 2018)



Mean Cloudiness (Oktas) at 1700PST during the Previous week (5th November to 11th November, 2018)



Weekly Weather Advisory for Farmers
(12th November to 18th November, 2018)

A westerly wave is present over upper parts of the country and likely to persist till Wednesday.

MONDAY
12-11-2018

Cloudy weather conditions are likely in northern parts of the country. Rain-thunderstorm (with snowfall over the hills) is expected at scattered places in Malakand, Hazara, Mardan divisions and Gilgit-Baltistan, while at isolated places in Kohat, Peshawar, Sargodha, Rawalpindi, Lahore, Gujranwala divisions, Islamabad and Kashmir. Cold and dry weather is expected elsewhere in the country.

TUESDAY
13-11-2018

Mainly cold and dry weather is expected in most parts of the country. However, rain-thunderstorm (with snowfall over the hills) is expected at isolated places in Malakand, Hazara, Mardan, Kohat, Peshawar, Bannu, Rawalpindi divisions, Islamabad Kashmir and Gilgit-Baltistan.

WEDNESDAY
14-11-2018

Rain-thunderstorm (with snowfall over the hills) is expected at scattered places in Rawalpindi, Gujranwala divisions, Islamabad, Kashmir and Gilgit-Baltistan, while at isolated places in Malakand, Hazara, Peshawar Mardan and Sargodha divisions. Cold and dry weather is expected elsewhere in the country.

THURSDAY
15-11-2018

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

FRIDAY
16-11-2018

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

SATURDAY
17-11-2018

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

SUNDAY
17-11-2018

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

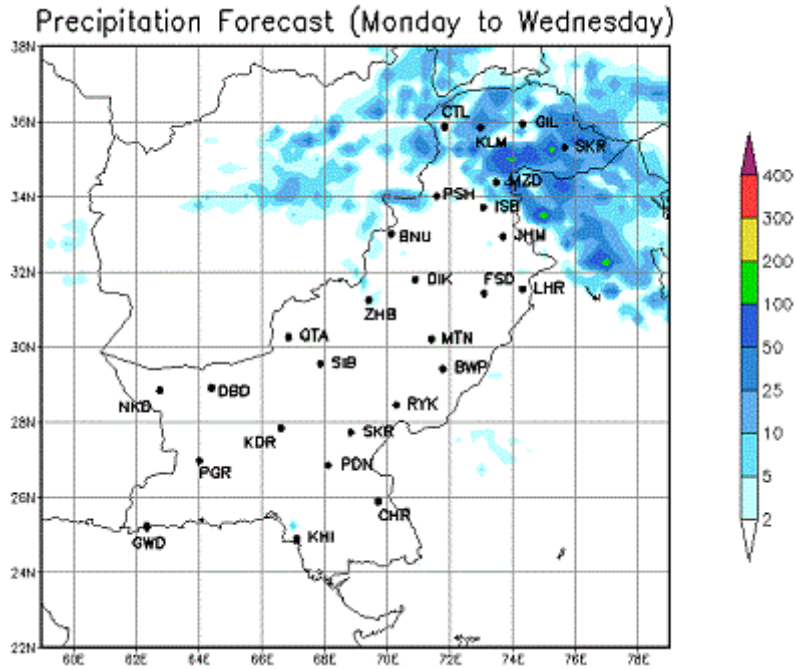
ADVISES FOR FARMERS

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.

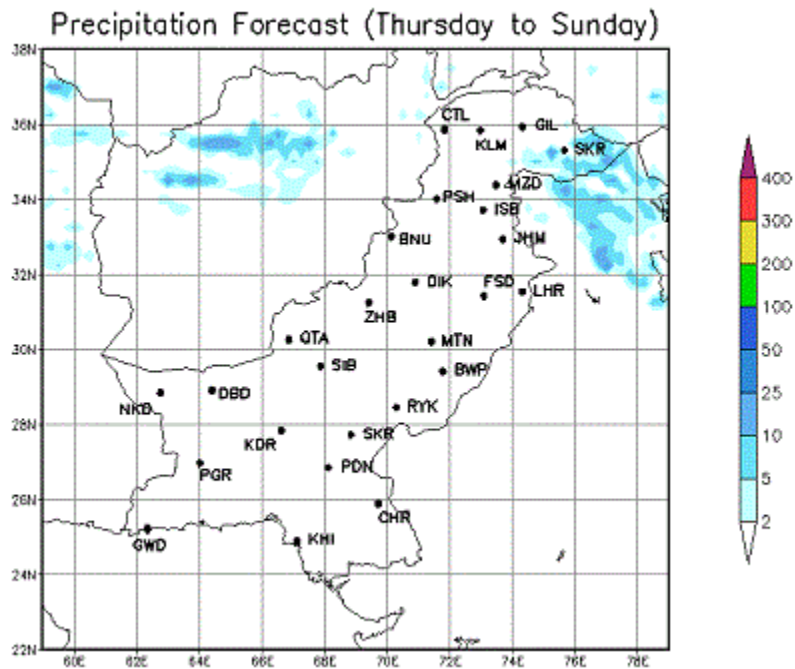
- Complete the cultivation of fodder crops on proper time.
- Apply deep ploughing in the fields, to preserve the soil moisture for the next crops.
- Use proper precautions during picking of cotton because the cost of good and clean quality cotton is high than that of the filthy one.
- Use pesticides to avoid the attack from pests on the crops as advised by the agriculture department.

Weather Outlook from (12th November to 18th November, 2018)

The outlook from 12th November to 14th November, 2018 shows that light to moderate rainfall is expected in Gilgit-Baltistan, Kashmir and upper KP. However, dry weather may prevail in rest of the country.



The outlook from 15th November to 18th November, 2018 shows that light rainfall at isolated places is expected in eastern Gilgit Baltistan and Kashmir. However, dry weather may prevail in rest of the country.



National Weather Data of Selected Cities (Weekly Data from 5th November to 11th November, 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	-0.7	-4.0	***	58	0.30	4.7	5.8	1.0	1.0
Badin	18.3	16.5	143.5	57	0.00	0.0	0.0	0.9	1.0
Bahawalnagar	12.6	12.0	115.3	49	0.00	0.6	0.0	0.0	0.0
Bahawalpur	11.9	10.6	111.4	59	0.00	0.0	0.0	0.6	0.7
Balakot	5.0	3.1	57.1	72	0.00	3.9	1.8	0.0	0.0
Bannu	8.8	7.7	85.7	45	0.00	1.0	1.7	1.1	0.7
Barkhan	10.2	9.0	92.0	40	0.00	0.7	0.0	0.9	2.0
Bunji	6.2	5.0	43.5	64	0.00	5.6	5.3	0.6	0.3
Cherat	8.1	7.0	60.3	46	0.00	1.1	2.3	4.0	2.7
Chhor	13.0	11.4	135.2	41	0.00	0.0	0.0	0.6	3.3
Chilas	6.0	4.5	48.5	45	0.00	3.9	3.7	0.0	0.0
Chitral	4.2	1.7	47.3	61	0.20	2.1	5.0	4.0	2.7
D.G.Khan	11.1	10.4	102.9	61	0.00	0.7	1.2	3.7	4.7
D.I.Khan	10.8	9.0	103.3	65	0.00	1.7	1.7	0.6	0.0
Dalbandin	6.8	1.0	84.3	25	0.00	1.0	0.8	0.0	2.0
Dir	1.7	0.5	44.5	67	7.00	2.7	2.5	0.0	1.7
Drosh	3.8	2.2	42.4	41	1.20	2.1	4.5	2.3	7.3
Faisalabad	10.8	8.4	101.2	59	0.00	0.0	1.6	0.3	0.2
Garidopatta	9.2	6.8	75.7	54	0.01	1.1	0.5	1.1	3.0
Gawader	16.9	8.0	135.3	55	0.00	0.0	0.0	2.3	10.7
Gilgit	1.6	0.0	31.5	73	0.00	3.9	5.3	0.0	0.0
Gupis	-2.1	-3.0	0.3	46	0.00	2.9	5.2	2.0	3.0

Hyderabad	17.4	16.5	141.2	37	0.00	0.4	0.0	0.3	1.0
Islamabad	7.6	6.0	76.4	70	0.01	2.1	3.0	0.0	0.0
Jacobabad	14.3	13.0	117.6	56	0.00	0.4	0.3	0.0	1.0
Jhang	10.2	7.5	99.4	61	0.00	0.7	0.8	0.0	0.3
Jhelum	10.3	9.2	97.3	63	0.00	1.6	3.5	0.3	0.0
Jiwani	17.7	10.8	132.4	61	0.00	1.4	0.0	1.7	6.0
Kakul	2.5	1.5	47.8	62	0.00	1.9	2.8	0.0	0.3
Kalam	0.1	-3.4	18.8	57	5.70	4.6	4.5	0.0	0.0
Kalat	3.7	0.0	41.8	28	0.00	0.0	0.0	0.0	2.0
Karachi	18.9	16.5	148.0	44	0.00	0.0	0.3	0.6	6.3
Khanpur	12.3	11.5	113.4	61	0.00	0.0	0.0	0.0	0.0
Khuzdar	13.1	9.5	108.8	24	0.00	0.0	0.0	1.1	1.0
Kotli	10.1	9.0	88.3	63	0.00	0.0	0.0	1.0	0.3
Lahore	13.9	12.8	109.3	54	0.00	1.4	2.3	0.0	0.3
Larkana	16.4	15.0	128.8	52	0.00	0.0	0.0	1.7	1.3
Lasbella	15.3	12.0	147.3	49	0.00	0.0	0.0	0.3	3.3
Lower Dir	6.5	5.5	73.8	63	0.00	1.9	1.3	0.0	2.0
M.B Din	11.3	10.0	98.5	67	0.00	0.4	1.8	0.0	0.3
Malam Jabba	3.0	1.0	9.3	59	5.00	3.1	4.0	4.9	4.3
Mangla	9.6	8.6	92.9	60	0.00	2.1	3.2	0.6	1.0
Mir Khani	2.3	1.0	59.5	50	0.00	1.4	2.5	1.6	2.3
Moinjodaro	12.1	11.0	114.5	62	0.00	0.0	0.0	0.0	3.0
Multan(PBO)	12.7	11.9	105.3	54	0.00	1.0	0.7	0.0	0.7
Murree	6.4	4.0	44.9	52	0.00	0.7	2.7	1.4	1.7
Muzaffarabad	6.2	5.6	63.2	58	0.00	1.7	2.8	0.0	1.8
Nawabshah	13.3	12.5	127.1	51	0.00	0.0	0.0	2.9	3.3

Nokkundi	9.1	5.0	96.0	19	0.00	0.7	1.7	1.4	1.3
Okara	10.8	10.0	97.2	58	0.00	0.0	1.5	0.0	0.0
Padidan	13.5	12.5	124.0	53	0.00	0.3	0.0	0.0	0.7
Panjgur	9.3	6.0	84.5	26	0.00	0.0	0.0	7.4	8.0
Parachinar	6.0	5.0	56.5	54	0.00	3.1	3.2	3.0	3.0
Pasni	21.8	21.5	155.5	58	0.00	0.0	0.0	0.9	4.0
Pattan	10.0	9.0	81.8	44	0.00	0.6	2.3	4.9	3.3
Peshawar	6.9	4.5	79.9	68	0.01	2.3	3.2	0.0	0.0
Quetta	4.2	0.5	52.4	17	0.00	1.0	1.5	1.7	3.1
Rahim Yar Khan	13.1	11.5	118.7	55	0.00	0.0	0.0	0.3	0.0
Rawalakot	0.7	-1.0	33.1	66	0.00	2.1	2.8	0.0	0.0
Rawalpindi	7.7	6.5	79.4	71	0.01	1.4	2.0	0.3	0.3
Rohri	17.1	16.0	131.3	49	0.00	0.0	0.0	0.0	0.0
Sahiwal	12.0	11.0	100.6	63	0.00	0.0	0.3	1.1	0.7
Saidu Sharif	5.3	5.0	63.5	48	1.00	1.1	0.7	0.0	0.0
Sialkot	10.8	8.8	92.1	61	0.00	1.4	2.7	1.6	1.8
Sibbi	10.6	8.0	109.8	46	0.00	0.0	0.0	0.0	0.0
Skardu	-3.2	-5.2	***	65	0.00	6.0	5.8	0.0	0.8
Tandojam	14.5	14.0	132.0	61	0.00	0.0	0.0	0.0	0.3
Usta.M	13.5	13.2	108.0	67	0.00	0.0	0.0	0.8	1.1
Zhob	7.1	6.5	76.5	43	0.00	1.3	1.0	3.1	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 سبب (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)