

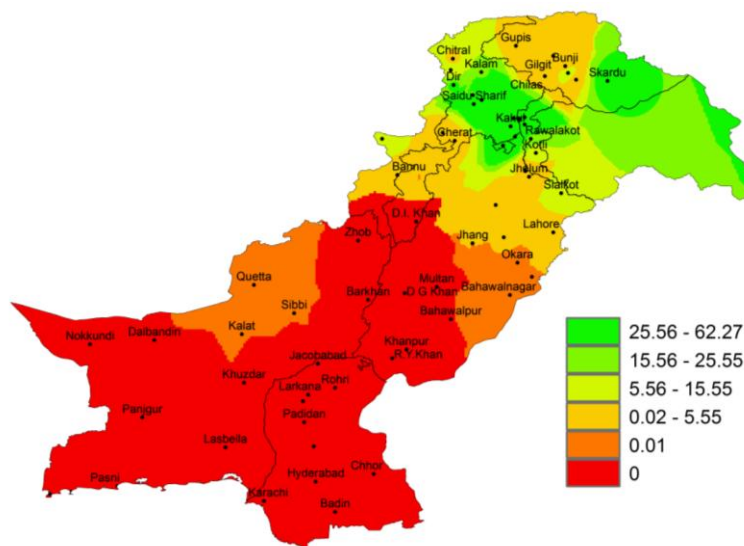
Weekly Weather and Crop Bulletin for Pakistan

**NATIONAL AGROMET CENTRE
PAKISTAN METEOROLOGICAL
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**Rainfall Distribution (mm) during the Previous
Week (31st December, 2018 to 6th January,
2019)**



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Highlights of Past Weather (31st December, 2018 to 6th January, 2019)

Normal to above normal night time temperatures were observed all over the country during the week.

Province wise distribution of rainfall reported as follows:

- Light to moderate rainfall observed in Punjab , GB & Azad Jammu Kashmir and Khyber Pakhunkhwa during the previous week.
- Light rainfall observed at north eastern Baluchistan while dry weather observed in Sindh and rest of Baluchistan during the previous week.

Patron-in-Chief: Mr. Riaz Khan (Director General)

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

Editor: Saeeda Saleh (Assistant Meteorologist)

Past Weather of Provinces (31st December, 2018 to 6th January, 2019)**Punjab**

Light to moderate rainfall observed in Punjab during the week. Weekly maximum and minimum temperatures recorded as 18.5°C & 5.0°C respectively. For the recent week on average 47.8 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 74% and wind speed in the morning/evening recorded as 0.6/1.7 Knots. During the previous the highest precipitation was recorded as 36.30mm while the lowest minimum temperature was recorded as -2.4°C at Murree.

Baluchistan

Light rainfall observed in north eastern Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 21.7°C & 6.5°C respectively. For the recent week on average 62.8 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 50% and wind speed in the morning/evening recorded as 1.3/4.0 Knots. During the previous week the highest precipitation recorded as 0.02mm at Quetta while the lowest minimum temperature was recorded as -7.0°C at Kalat.

Khyber Pakhtunkhwa

Light to moderate rainfall observed in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 13.0°C & -1.0°C respectively. For the recent week on average 16.5 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 1.0/2.3 Knots. During the previous week the highest precipitation recorded as 63.00mm at Malam Jabba while the lowest minimum temperature was recorded as -11.5°C at Kalam.

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 8.4°C & -2.3°C respectively. Average relative humidity recorded as 68% and wind speed in the morning/evening recorded as 1.8/0.6 Knots. During the previous week the highest precipitation recorded as 44.01mm at Muzaffarabad while the lowest minimum temperature was recorded as -10.6°C at Skardu.

Sindh

Dry weather observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 24.7°C & 9.1°C respectively. For the recent week, on average 83.4 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 1.1/2.4 Knots. During the previous week lowest minimum temperature was recorded as 4.4°C at Mithi.

Past Weather for Major Agricultural Plains (31st December, 2018 to 6th January, 2019)

Rawalpindi (Potohar region)

27.5mm rainfall reported from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 2.9/3.7 Oktas while, average relative humidity observed as 82%. Mean night time temperature recorded as 1.0°C & for the recent week 29.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/0.6 Knots.

Faisalabad (Central Punjab)

Trace rainfall reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 1.6/2.3 Oktas while, average relative humidity observed as 43%. Mean night time temperature recorded as 5.8°C & for the recent week 54.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.2/0.5 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 0.0/0.3 Oktas while, average relative humidity observed as 65%. Mean night time temperature recorded as 10.1°C & for the recent week 87.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.4/1.1 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 1.1/0.0 Oktas while, average relative humidity observed as 67%. Mean night time temperature recorded as 5.6°C & for the recent week 63.3 growing degree days accumulated by the end of last week. Calm weather recorded in the morning/evening.

Quetta (Northern Baluchistan)

Trace rainfall reported from Quetta during the week; however, cloudiness in the morning/evening

recorded as 2.9/2.4 Oktas while, average relative humidity observed as 34%. Mean night time temperature recorded as 2.7°C & for the recent week 25.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/2.9 Knots.

Past Weather for Sub-Regional Agricultural Plains (31st December, 2018 to 6th January, 2019)

Multan

Dry weather reported from Multan during the week; however, cloudiness in the morning/evening recorded as 1.5/0.6 Oktas while, average relative humidity observed as 73%. Mean night time temperature recorded as 6.3°C & for the recent week 56.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.8 Knots.

Lahore

3.00 mm rainfall was reported from Lahore during the week; however, however, cloudiness in the morning/evening recorded as 2.7/2.2 Oktas while, average relative humidity observed as 76%. Mean night time temperature recorded as 7.6°C & for the recent week 57.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.7/1.2 Knots.

Zhob

Dry weather reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 0.6/1.4 Oktas while, average relative humidity observed as 38%. Mean night time temperature recorded as 0.3°C & for the recent week 19.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.4/3.8 Knots.

Murree

36.30mm rainfall was reported from Murree during the week; however, cloudiness in the morning/evening recorded as 3.7/5.6 Oktas while, average relative humidity observed as 61%. Mean night time temperature recorded as -0.9°C by the end of last week. Wind speed recorded in the morning/evening as 2.3/0.8 Knots.

D.I. Khan

Dry weather reported from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 3.0/2.0 Oktas while, average relative humidity observed as 81%. Mean night time temperature recorded as 4.7°C & for the recent week 52.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.4/1.6 Knots.

Peshawar

0.03 mm rainfall was reported from Peshawar during the week; however, cloudiness in the morning/evening recorded as 3.6/3.6 Oktas while, average relative humidity observed as 71%. Mean night time temperature recorded as 5.3°C & for the recent week 39.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.2 Knots.

Kalam

23.00mm rainfall was reported from Kalam during the week; however, cloudiness in the morning/evening recorded as 3.8/4.6 Oktas while, average relative humidity observed as 76%. Mean night time temperature recorded as -7.1°C by the end of last week. Calm weather recorded in the morning/evening.

Gilgit

3.01mm rainfall was reported from Gilgit during the week; However, cloudiness in the morning/evening recorded as 6.2/5.8 Oktas while, average relative humidity observed as 73%. Mean night time temperature recorded as -1.2°C by the end of last week. Wind speed recorded in the morning/evening as 0.8/0.4 Knots.

Skardu

40.60mm rainfall was reported from Skardu during the week; however, cloudiness in the morning/evening recorded as 4.3/4.0 Oktas while, average relative humidity observed as 76%. Mean night time temperature recorded as -9.1 °C by the end of last week. Calm weather recorded in the morning/evening.

Crop Situation for Major Agricultural Plains
(Based on data from Regional Agro met Centers)**Potohar Region (Rawalpindi)**

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

Central Punjab (Faisalabad)

Presently wheat crop is grown in the fields of RAMC Faisalabad.

Wheat: *Very Good, Tillering stage completed.*

Lower Sindh (Tandojam)

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

Wheat (TJ-83): *Good, Heading stage.*

Northern Baluchistan (Quetta)

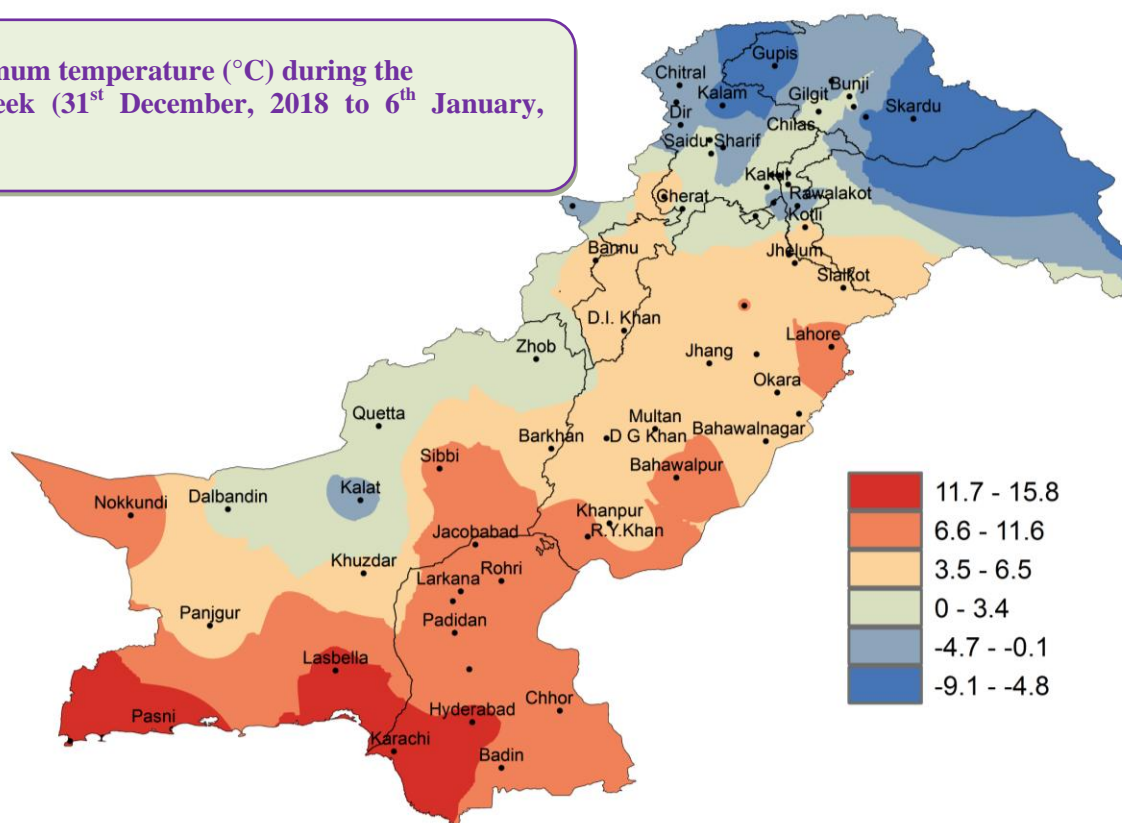
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

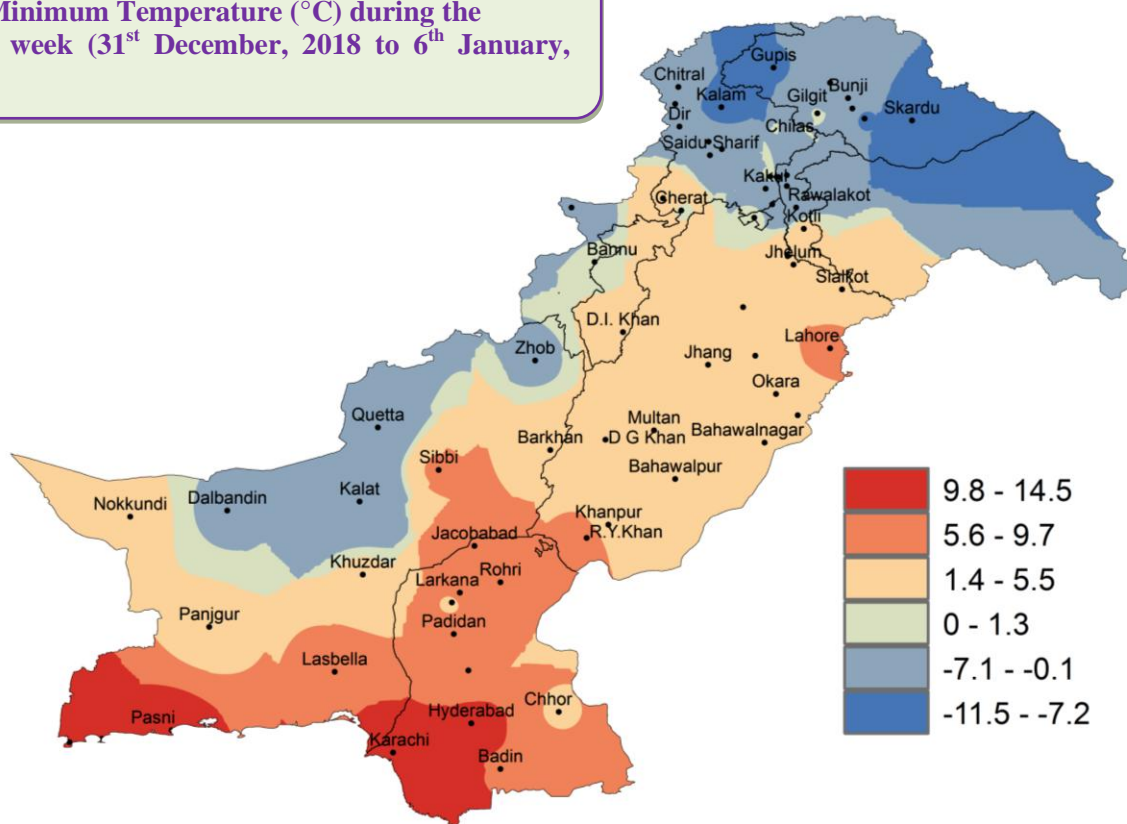
Presently wheat crop is sown in the fields of RAMC Usta Muhammad.

Wheat: *Good, Third leaf stage.*

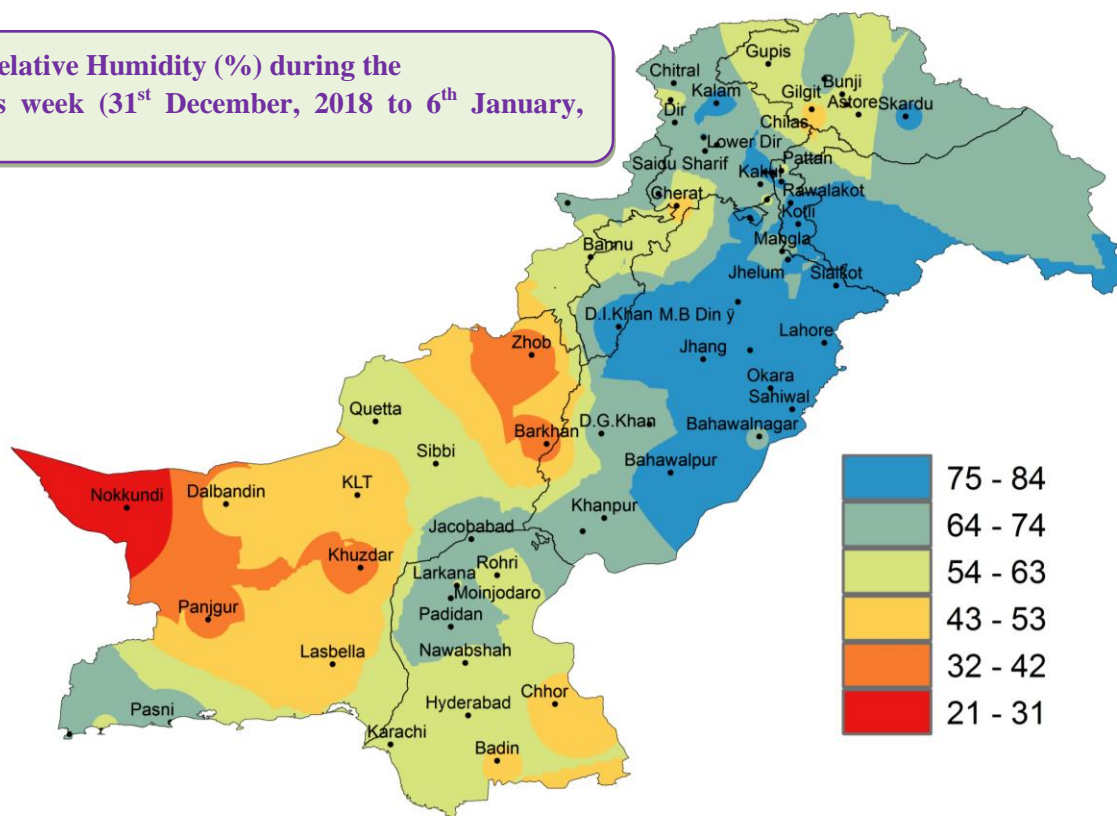
Mean Minimum temperature (°C) during the Previous week (31st December, 2018 to 6th January, 2019)



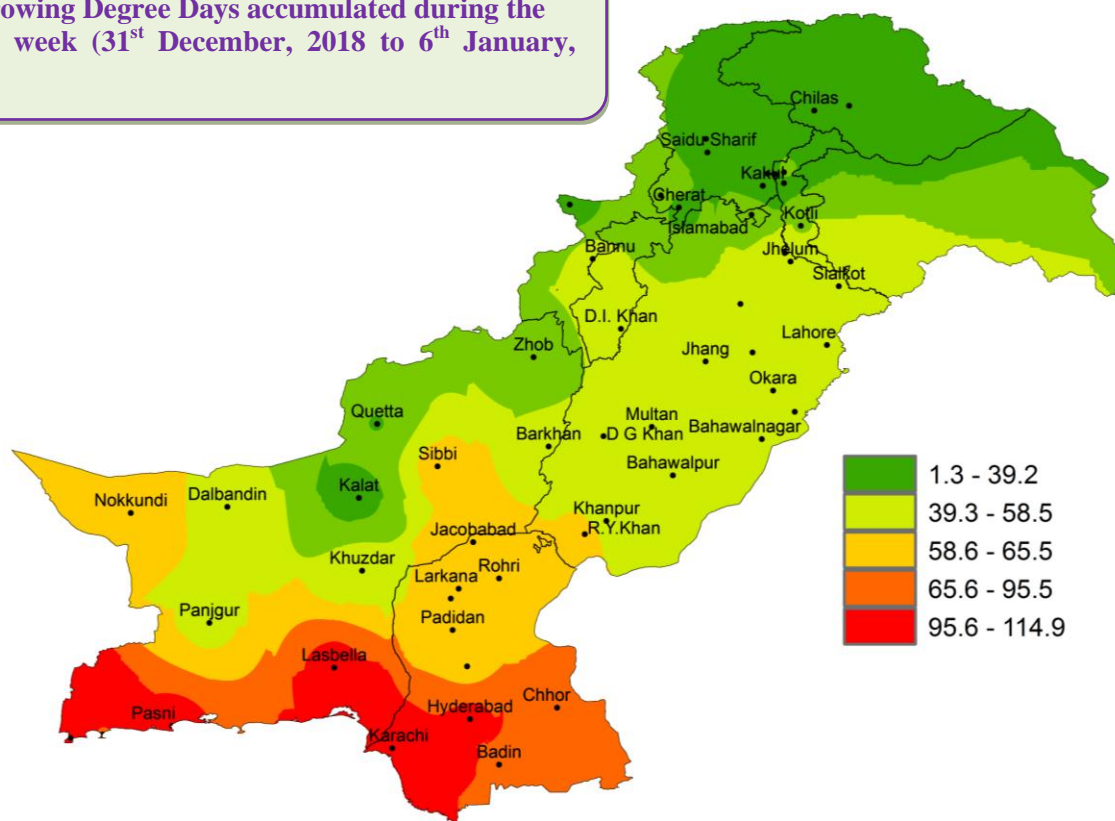
Lowest Minimum Temperature (°C) during the Previous week (31st December, 2018 to 6th January, 2019)



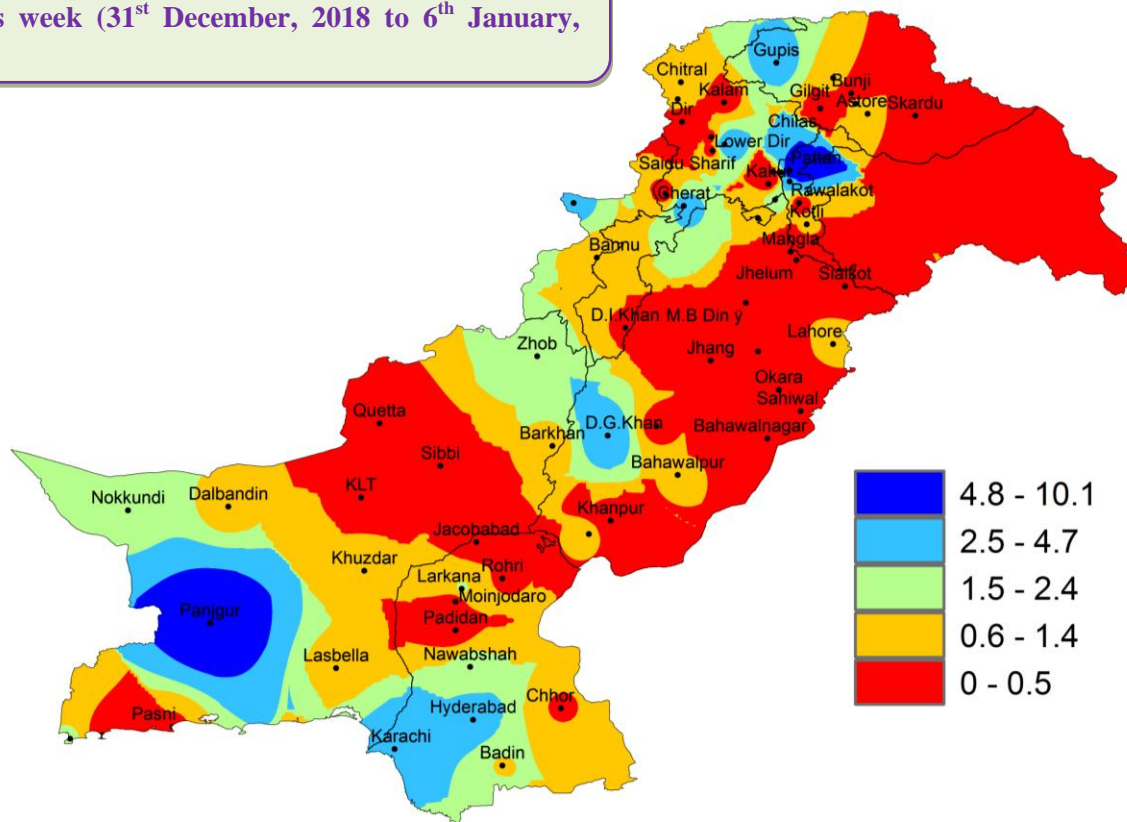
Mean Relative Humidity (%) during the
Previous week (31st December, 2018 to 6th January,
2019)



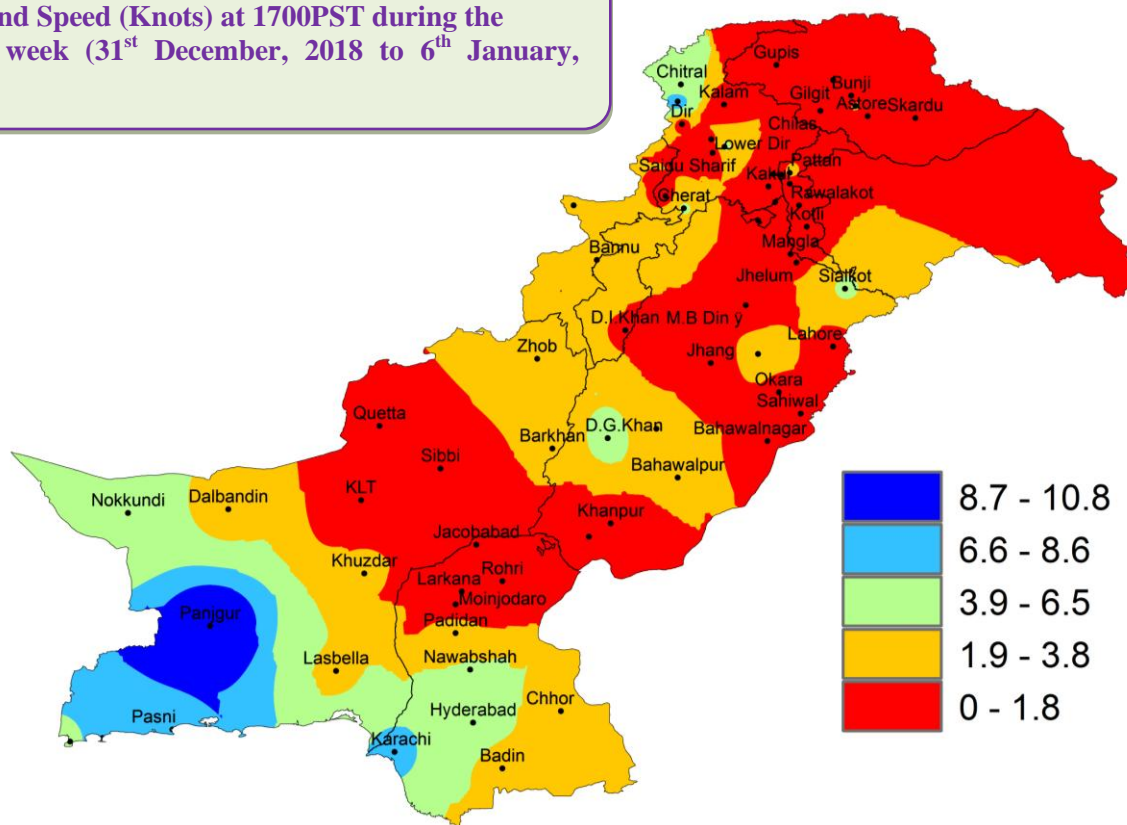
Total Growing Degree Days accumulated during the
Previous week (31st December, 2018 to 6th January,
2019)



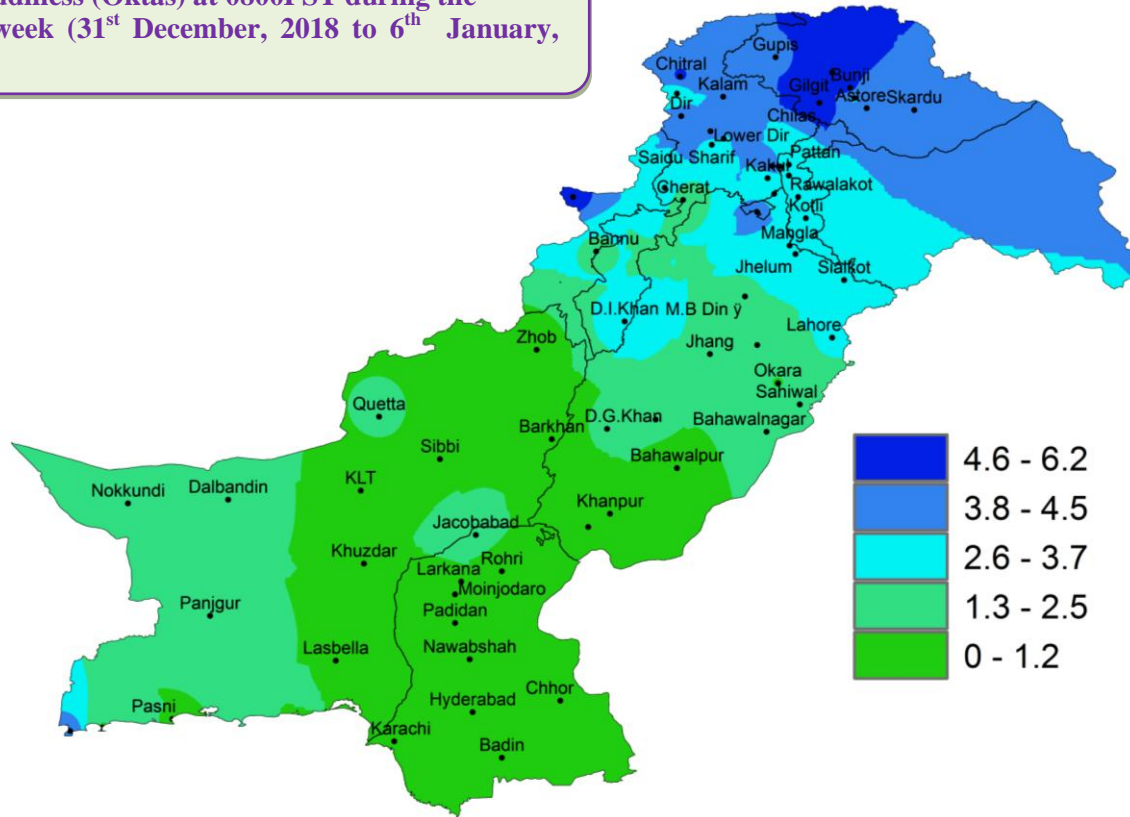
Mean Wind Speed (Knots) at 0800PST during the Previous week (31st December, 2018 to 6th January, 2019)



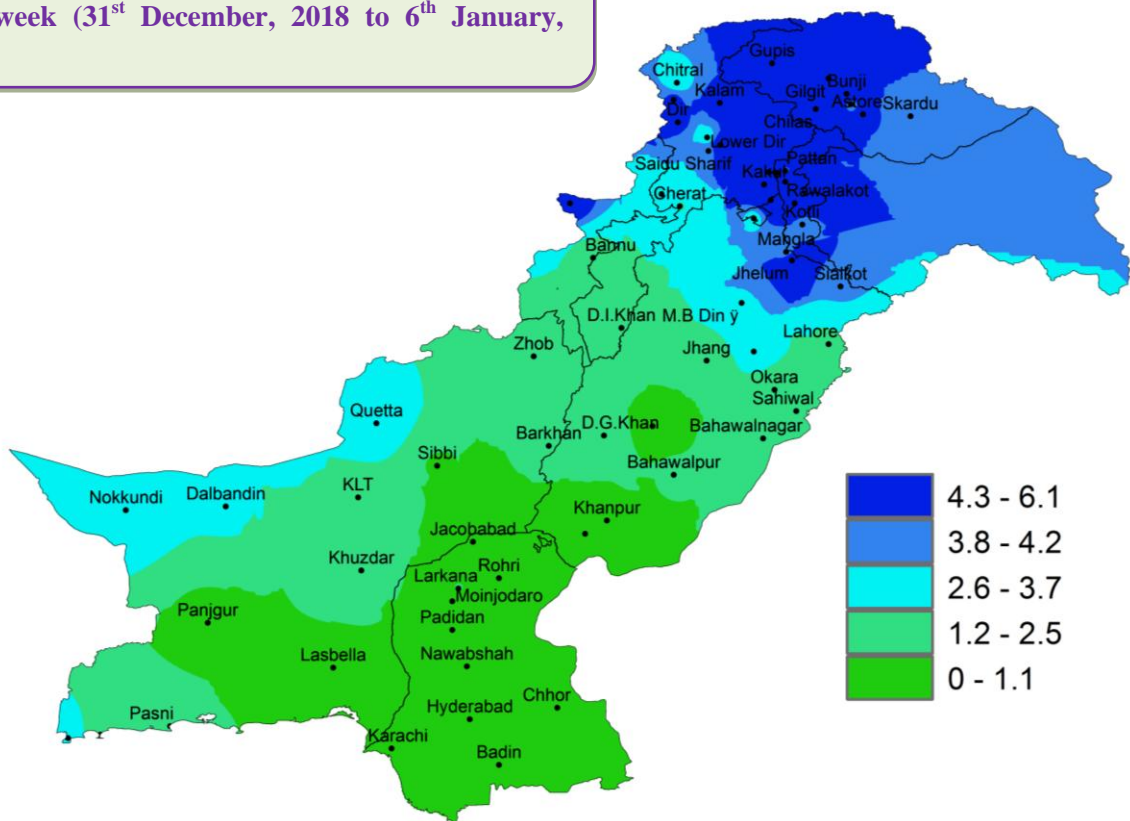
Mean Wind Speed (Knots) at 1700PST during the Previous week (31st December, 2018 to 6th January, 2019)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (31st December, 2018 to 6th January, 2019)



Mean Cloudiness (Oktas) at 1700PST during the Previous week (31st December, 2018 to 6th January, 2019)



Weekly Weather Advisory for Farmers
(7th January to 13th January, 2019)

A fresh westerly wave is likely to approach upper parts of the country on Thursday and likely to persist till Saturday.

MONDAY

07-01-2019

Mainly very cold and dry weather is expected in most parts of the country. Foggy conditions are expected at a few places in plain areas of Punjab, upper Sindh and Peshawar division during night/morning hours.

TUESDAY

08-01-2019

Mainly very cold and dry weather is expected in most parts of the country. However, light rain with snowfall is expected in Malakand division, Kashmir and Gilgit-Baltistan. Foggy conditions are expected at a few places in plain areas of Punjab, upper Sindh and Peshawar division during night/morning hours.

WEDNESDAY

09-01-2019

Mainly very cold and dry weather is expected in most parts of the country. Foggy conditions are expected in plain areas of Punjab, upper Sindh and Peshawar division during night/morning hours.

THURSDAY

10-01-2019

Mainly very cold and dry weather is expected in most parts of the country. However, rain-thunderstorm with snow over the hills is expected at isolated places in Malakand, Hazara division, Gilgit-Baltistan and Kashmir. Foggy conditions are expected in plain areas of Punjab, upper Sindh and Peshawar division during night/morning hours..

FRIDAY

11-01-2019

Mainly very cold and dry weather is expected in most parts of the country. However, rain-

thunderstorm with snow over the hills is expected at isolated places in Malakand, Hazara, Mardan, Peshawar, Sargodha, Rawalpindi divisions, Islamabad, Kashmir and Gilgit-Baltistan. Foggy conditions are expected in plain areas of Punjab, upper Sindh and Peshawar division during night/morning hours.

SATURDAY

12-01-2019

Rain-thunderstorm with snowfall over the hills is expected at scattered places in Malakand, Hazara, Rawalpindi divisions, Islamabad, GB and Kashmir, while at isolated places in Peshawar, Mardan, Kohat, Sargodha, Gujranwala, Lahore divisions. Foggy conditions are expected in plain areas of Punjab, upper Sindh and Peshawar division during night/morning hours.

SUNDAY

13-01-2019

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

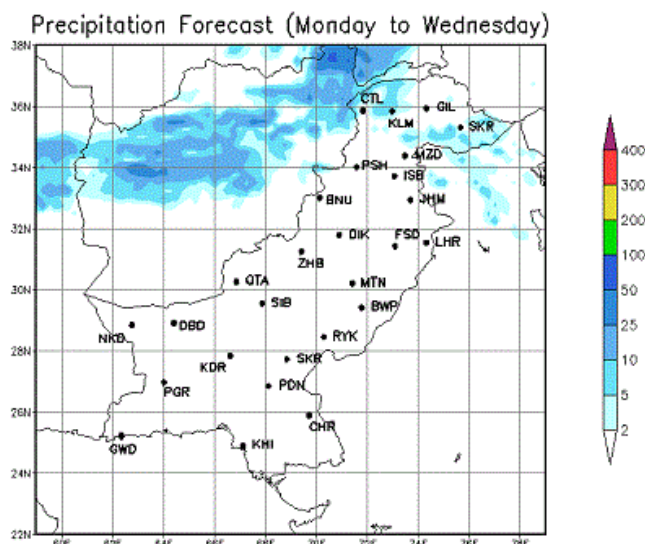
ADVISES FOR FARMERS

During the last week, light rainfall occurred at scattered places in GB and upper KP, while cold 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.

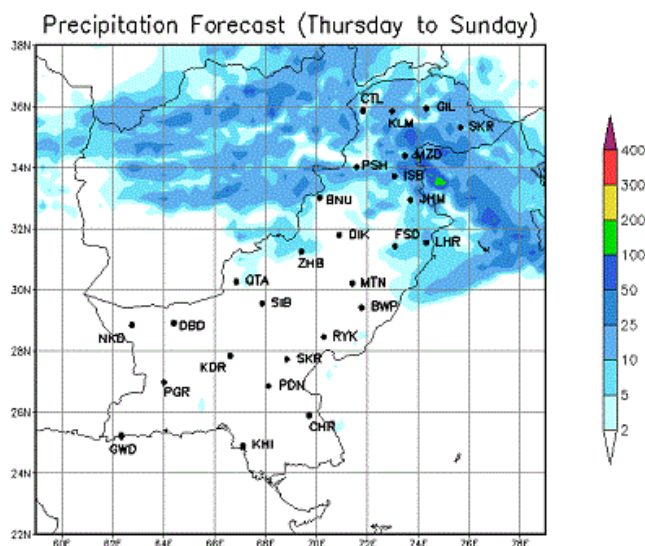
- Farmers are advised to use ensured and certified seed for the sowing of Rabi crops in accordance with the proper moisture conditions.
- Store cotton crop in proper and dry place because the cost of good and clean quality cotton is high than that of the filthy one.
- Protect your nurseries from frost.

Weather Outlook from 7th January to 12th January, 2019

The outlook from 7th January to 9th January, 2019 shows that light rain is expected in scattered places of GB, Kashmir and upper KP. However, dry weather may prevail over rest of the country.



The outlook from 10th January to 13th January, 2019 shows that that light to moderate rain is expected in GB, Kashmir, KP and scattered places of north Eastern part of Baluchistan, upper and central Punjab. However, dry weather may prevail over rest of the country.



National Weather Data of Selected Cities Weekly Data from 31st December, 2018 to 6th January, 2019

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	-6.8	-9.5	***	62	0.00	4.3	4.4	0.7	0.4
Badin	11.1	9.5	98.0	52	0.00	0.7	0.8	1.3	2.5
Bahawalnagar	6.3	4.5	60.8	73	0.01	2.0	2.0	0.0	1.2
Bahawalpur	6.8	4.9	55.9	78	0.00	0.6	1.2	0.7	2.0
Balakot	1.7	0.6	15.3	80	36.60	4.5	4.6	0.0	0.0
Bannu	4.9	0.6	45.9	57	0.00	2.2	1.8	0.7	3.2
Barkhan	5.2	3.5	45.5	38	0.00	0.0	1.3	0.8	2.0
Bunji	0.1	-0.8	-5.6	60	1.01	4.8	6.2	0.0	0.0
Cherat	1.9	1.0	10.5	47	1.00	1.7	2.4	3.3	4.0
Chhor	7.6	5.0	89.7	51	0.00	1.0	1.0	0.4	2.5
Chilas	0.4	0.0	1.3	51	0.01	5.0	5.5	0.3	0.0
Chitral	-0.9	-3.3	-1.9	66	3.50	4.7	3.2	1.3	4.0
D.G.Khan	4.4	3.3	51.1	67	0.00	1.5	1.8	4.0	4.5
D.I.Khan	4.7	3.5	52.0	81	0.00	3.0	2.0	0.4	1.6
Dalbandin	2.9	-1.0	54.5	44	0.00	2.4	2.6	0.8	2.8
Dir	-2.2	-3.0	-5.0	73	28.00	4.0	4.4	0.0	1.2
Drosh	-1.0	-3.6	-4.0	58	7.00	3.0	4.4	0.7	8.0
Faisalabad	5.8	4.5	54.0	43	0.01	1.6	2.3	0.5	4.5
Garidopatta	0.3	-0.8	11.3	76	41.01	3.7	4.6	3.3	0.0
Gawader	12.6	10.0	99.0	62	0.00	1.2	2.0	0.0	7.5
Gilgit	-1.2	-3.0	-8.7	73	3.01	6.2	5.8	0.8	0.4
Gupis	-7.2	-8.5	-44.0	53	0.00	4.2	5.6	3.3	0.4
Hyderabad	12.8	12.0	104.3	60	0.00	1.0	0.6	3.2	6.0

Islamabad	3.3	1.0	31.3	79	32.00	3.8	3.4	0.5	0.0
Jacobabad	8.6	7.0	70.0	68	0.00	2.0	0.6	0.0	0.4
Jhang	4.7	3.0	52.7	77	0.00	2.3	1.4	0.0	0.0
Jhelum	4.6	2.2	46.2	75	1.70	3.5	5.0	0.0	1.6
Jiwani	15.8	14.0	114.9	70	0.00	4.4	3.0	1.6	6.0
Kakul	0.0	-1.5	5.6	67	29.60	3.2	5.0	0.0	0.8
Kalam	-7.1	-11.5	-38.8	76	23.00	3.8	4.6	0.0	0.0
Kalat	13.5	11.4	109.5	58	0.00	1.2	1.0	3.2	6.8
Karachi	5.6	3.5	49.1	73	0.00	0.0	0.8	0.0	1.2
Khanpur	3.6	2.0	48.5	40	0.00	0.7	1.8	0.7	2.0
Khuzdar	-0.8	-7.0	10.0	43	0.00	0.4	2.0	0.4	1.2
Kotli	4.4	2.8	38.2	82	6.70	2.7	4.0	0.7	1.0
Lahore	7.6	6.5	57.1	76	3.00	2.7	2.2	0.7	1.2
Larkana	8.2	7.0	68.5	63	0.00	1.2	1.2	1.6	0.8
Lasbella	12.4	8.0	107.0	50	0.00	1.2	0.8	0.8	3.6
Lower Dir	1.8	-1.0	17.0	75	22.00	4.5	3.2	0.0	1.6
M.B Din	6.5	3.5	51.5	85	3.00	2.2	3.6	0.4	0.4
Malam Jabba	-3.0	-4.5	***	65	63.00	3.7	5.2	4.7	4.4
Mangla	4.2	1.6	44.1	69	5.90	3.3	3.8	0.0	1.6
Mir Khani	0.6	-0.5	13.9	51	12.00	3.5	3.8	0.7	2.2
Moinjodaro	6.4	5.0	65.6	70	0.00	0.6	0.0	0.0	0.8
Multan (PBO)	6.3	5.2	56.0	73	0.00	1.5	0.6	0.0	2.8
Murree	-0.9	-2.4	-11.3	61	36.30	3.7	5.6	2.3	0.8
Muzaffarabad	0.4	-1.0	10.2	78	44.01	3.3	5.8	0.3	0.4
Nawabshah	6.9	5.5	76.3	60	0.00	1.2	0.6	2.0	4.0
Nokkundi	7.8	2.5	73.5	21	0.00	2.4	3.4	1.6	4.4

Okara	6.3	4.5	54.2	77	0.00	1.2	1.6	0.0	1.2
Padidan	8.4	6.0	75.5	68	0.00	0.0	0.2	0.0	2.8
Panjgur	4.9	2.0	54.8	41	0.00	1.8	0.6	8.3	10.8
Parachinar	-2.4	-4.0	3.8	65	13.00	4.8	4.8	3.0	3.0
Pasni	13.6	12.5	107.0	67	0.00	1.2	1.4	0.3	8.2
Pattan	3.1	0.0	24.3	57	28.00	2.7	4.0	10.5	2.8
Peshawar	5.3	3.5	39.3	71	0.03	3.6	3.6	0.0	1.2
Quetta	2.7	-2.4	25.0	34	0.01	2.9	2.4	1.4	2.9
Rahim Yar Khan	8.0	7.1	68.9	69	0.00	0.3	0.8	0.7	1.5
Rawalakot	-2.6	-3.8	-13.0	75	23.60	3.0	5.0	0.0	1.6
Rawalpindi	8.4	5.6	73.1	61	0.00	0.0	0.0	0.4	0.4
Rohri	1.0	0.5	29.0	82	27.50	2.9	3.7	0.9	0.6
Sahiwal	6.3	3.8	52.5	80	0.01	2.0	2.4	0.0	1.6
Saidu Sharif	0.9	0.0	9.5	68	31.60	3.3	4.0	0.0	0.0
Sialkot	4.7	4.0	44.0	76	9.01	3.3	3.8	0.3	4.0
Sibbi	7.6	6.5	71.0	56	0.00	0.8	1.0	0.0	0.0
Skardu	-9.1	-10.6	***	76	40.60	4.3	4.0	0.0	0.0
Tandojam	10.1	7.0	87.8	65	0.00	0.0	0.3	0.4	1.1
Usta.M	5.6	4.5	63.3	67	0.00	1.1	0.0	0.0	0.0
Zhob	0.3	-1.0	19.8	38	0.00	0.6	1.4	2.4	3.8

*** 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)