

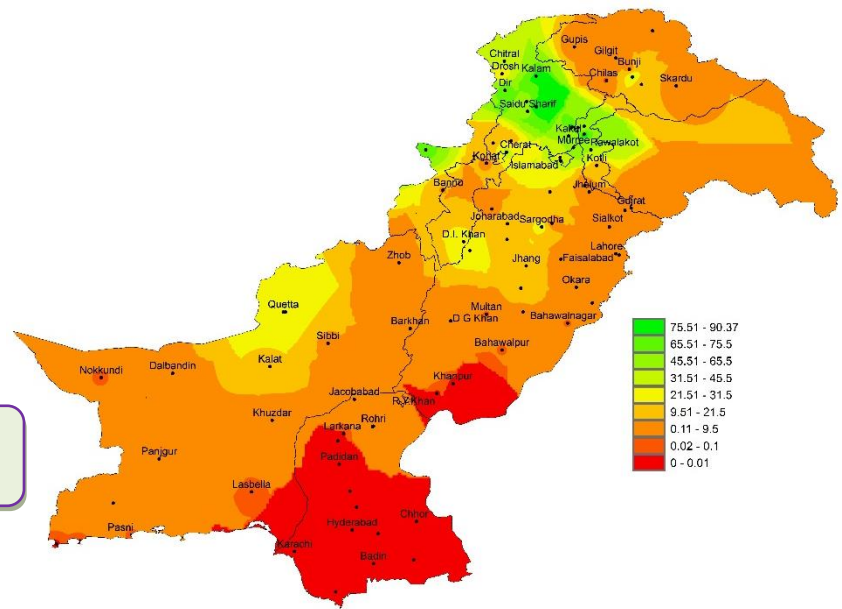
Weekly Weather and Crop Bulletin for Pakistan

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Rainfall Distribution (mm) during the previous
Week (26th February to 4th March, 2018)



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Highlights of Past Weather (26th February to 4th March, 2018)

Above normal night temperatures were observed all over the country.

Province wise rainfall distribution reported as follows:

- Light to moderate rainfall observed at many places in Punjab, KPK, GB, Azad Kashmir and Balochistan during the previous week.
- Light rainfall reported from scattered places in Sindh during the previous week.

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

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

Editor: Khalida Noureen (Meteorologist)

Past Weather of Provinces (26th February to 4th March, 2018)

Punjab

Light to moderate rainfall observed at many places in Punjab during the previous week. Weekly maximum and minimum temperatures recorded as 26.9°C & 13.3°C respectively. For the recent week on average 105.7 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 1.3/3.0 knots. During the previous week highest amount of rainfall was reported as 61.0 mm at Murree & lowest minimum temperature was recorded as 0.0°C at Murree.

Balochistan

Light to moderate rainfall reported from Balochistan during the week. Weekly maximum and minimum temperatures recorded as 25.4°C & 11.6°C respectively. For the recent week on average 94.7 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 55% and wind speed in the morning/evening recorded as 1.3/4.7 knots. During the previous week highest amount of rainfall was reported as 30.01 mm at Quetta & lowest minimum temperature was recorded as 1.0°C at Kalat.

Khyber Pakhtunkhwa

Light to moderate rainfall observed at many places in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 19.1°C & 7.3°C respectively. For the recent week on average 57.5 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 70% and wind speed in the morning/evening recorded as 1.1/2.1 knots. During the previous week highest amount of rainfall was reported as 91 mm at Malam Jabba &

lowest minimum temperature was recorded as -5.0°C at Kalam.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall observed at many places in Gilgit-Baltistan and Azad Jammu & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 17.3°C & 6.1°C respectively. For the recent week on average 46.4 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 1.1/2.8 knots. During the previous week highest amount of rainfall was reported as 82.0 mm at Garhi Dopatta and lowest minimum temperature was recorded as -1.5°C at Skardu.

Sindh

Light rainfall reported from scattered places of Sindh during the week. Weekly maximum and minimum temperatures recorded as 32.9°C & 17.3°C respectively. For the recent week, on average 140.2 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 1.4/2.9 knots. During the previous week highest amount of rainfall was reported as 1.0 mm at Sukkur & lowest minimum temperature was recorded as 12.5°C at Mirpur Khas.

Past Weather for Major Agricultural Plains (26th February to 4th March, 2018)

Rawalpindi (Potohar region)

Rainfall reported as 21.8 mm from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 3.2/4.1 Oktas while average relative humidity observed as 75%. Mean night time temperature recorded as 10.7°C & for the recent week 87.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/0.7 knots.

Faisalabad (Central Punjab)

Rainfall reported as 1.6 mm from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 2.4/2.9 Oktas while average relative humidity observed as 68%. Mean night time temperature recorded as 14.1°C & for the recent week 110.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.2/1.8 knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 2.0/2.1 Oktas while average relative humidity observed as 62%. Mean night time temperature recorded as 16.4°C & for the recent week 138.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/0.6 knots.

Usta Muhammad (Eastern Balochistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded 1.4/1.7 Oktas while average relative humidity observed as 65%. Mean night time temperature recorded as 17.2°C & for the recent week 125.9 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)

Rainfall reported as 21.4 mm from Quetta during the week; however, cloudiness in the morning/evening recorded as 5.6/4.9 Oktas while average relative humidity observed as 54%. Mean night time temperature recorded as 7.0°C & for the

recent week 49.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.4/3.1 knots.

Past Weather for Sub-Regional Agricultural Plains (26th February to 4th March, 2018)

Multan

Rainfall reported as 0.03mm from Multan during the week; however, cloudiness in the morning/evening recorded as 3.0/3.4 Oktas while average relative humidity observed as 66%. Mean night time temperature recorded as 14.8°C & for the recent week 117.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/6.0 knots.

Lahore

Rainfall reported as 2.10mm from Lahore during the week; however, cloudiness in the morning/evening recorded as 3.1/3.0 Oktas while average relative humidity observed as 64%. Mean night time temperature recorded as 15.7°C & for the recent week 114.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/3.1 knots.

Zhob

Rainfall reported as 2.00 mm from Zhob during the week; however, cloudiness in the morning/evening recorded as 2.7/4.3 Oktas while average relative humidity observed as 54%. Mean night time temperature recorded as 3.3°C & for the recent week 52.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.1/4.4 knots.

Murree

Rainfall reported as 61.0 mm from Murree during the week; however, cloudiness in the morning/evening recorded as 4.6/6.1 Oktas while average relative humidity observed as 71%. Mean night time temperature recorded as 3.4°C & for the recent week 22.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/2.4 knots.

D.I. Khan

Rainfall reported as 23.02 mm from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 3.3/5.4 Oktas while

average relative humidity observed as 70%. Mean night time temperature recorded as 13.6°C & for the recent week 107.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1.7 knots.

Peshawar

Rainfall reported as 17.0mm from Peshawar during the week; however, cloudiness in the morning/evening recorded as 5.0/6.3 Oktas while average relative humidity observed as 75%. Mean night time temperature recorded as 13.1°C & for the recent week 92.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/1.7 knots.

Kalam

Rainfall reported as 76.5 mm from Kalam during the week; however, cloudiness in the morning/evening recorded as 6.0/7.3 Oktas while average relative humidity observed as 86%. Mean night time temperature recorded as -0.8°C & for the recent week 3.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.6 knots.

Gilgit

Rainfall reported as 0.41 mm during the week; However, cloudiness in the morning/evening recorded as 6.4/7.4 Oktas while average relative humidity observed as 56%. Mean night time temperature recorded as 6.4°C & for the recent week 53.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/10.9 knots.

Skardu

Rainfall reported as 1.00 mm from Skardu during the week; However, cloudiness in the morning/evening recorded as 6.7/7.3 Oktas while average relative humidity observed as 54%. Mean night time temperature recorded as 2.0°C & for the recent week 23.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/4.3 knots.

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)

There is presently one crop in the fields of RAMC Faisalabad.

Wheat (*Galaxy*); Very Good, Heading stage in irrigated Conditions.

Lower Sindh (Tandojam)

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

Wheat (*Sindh*); Good, at Wax Maturity stage.

Northern Baluchistan (Quetta)

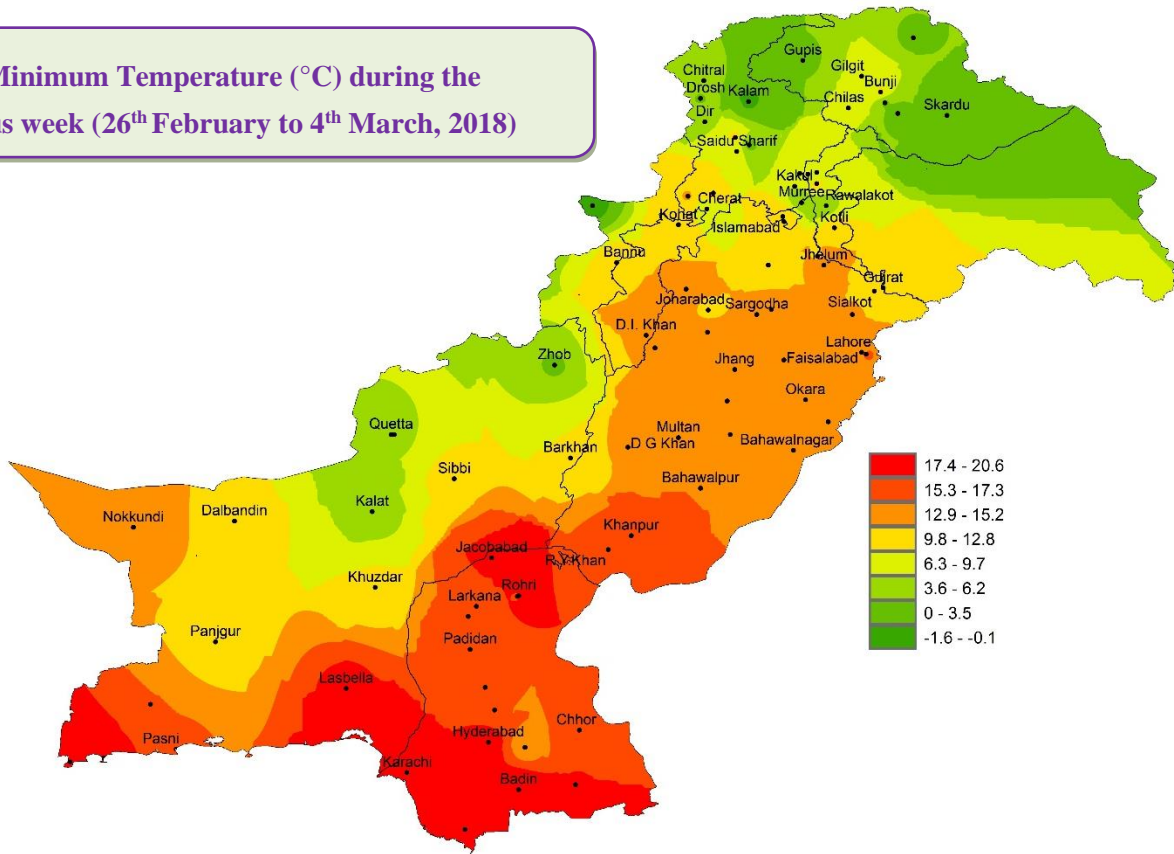
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

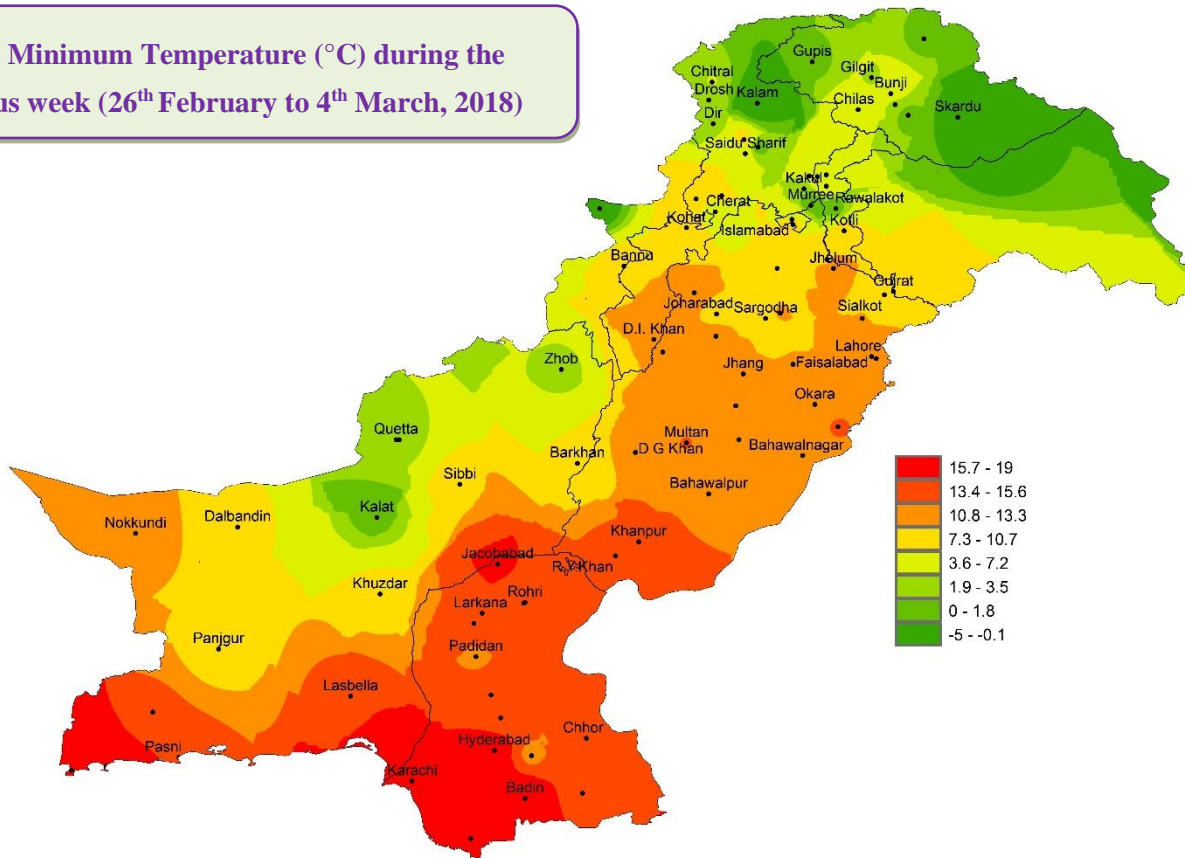
There is presently one crop grown in the fields of RAMC Usta Muhammad.

Wheat (*Galaxy*); Good, at shooting stage.

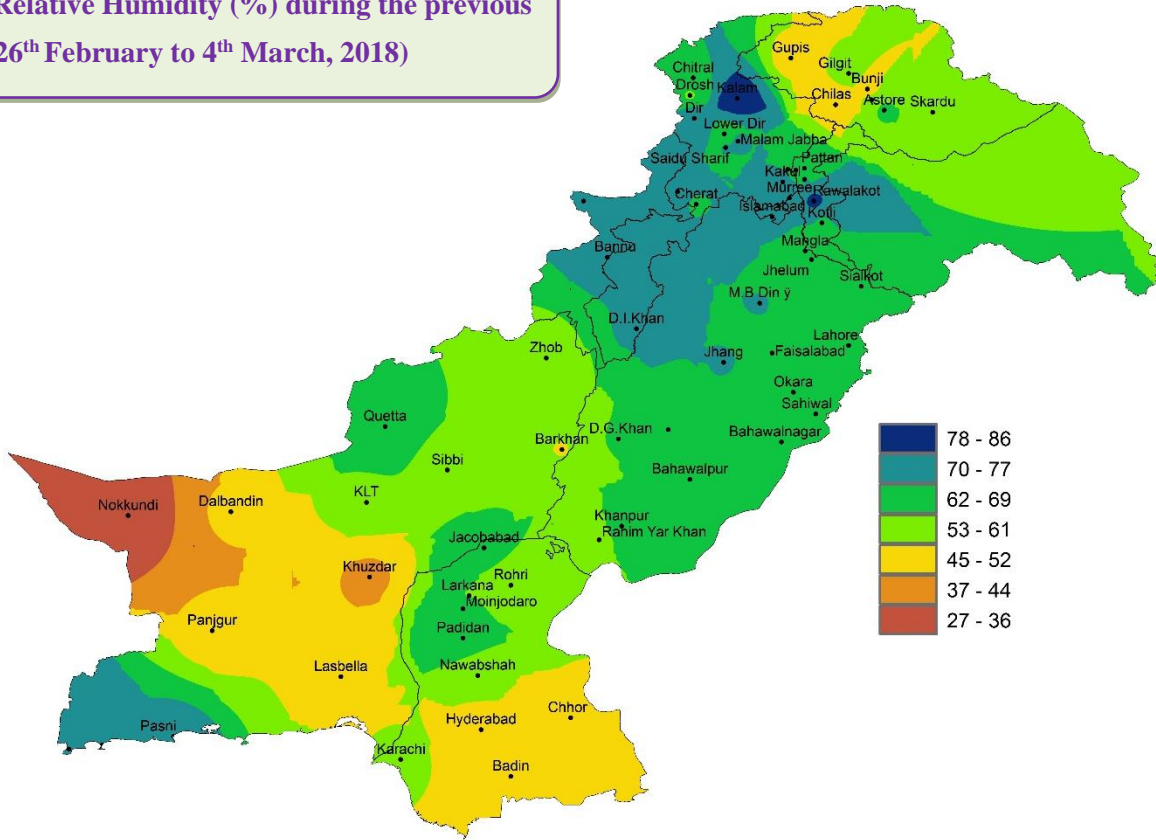
Mean Minimum Temperature (°C) during the Previous week (26th February to 4th March, 2018)



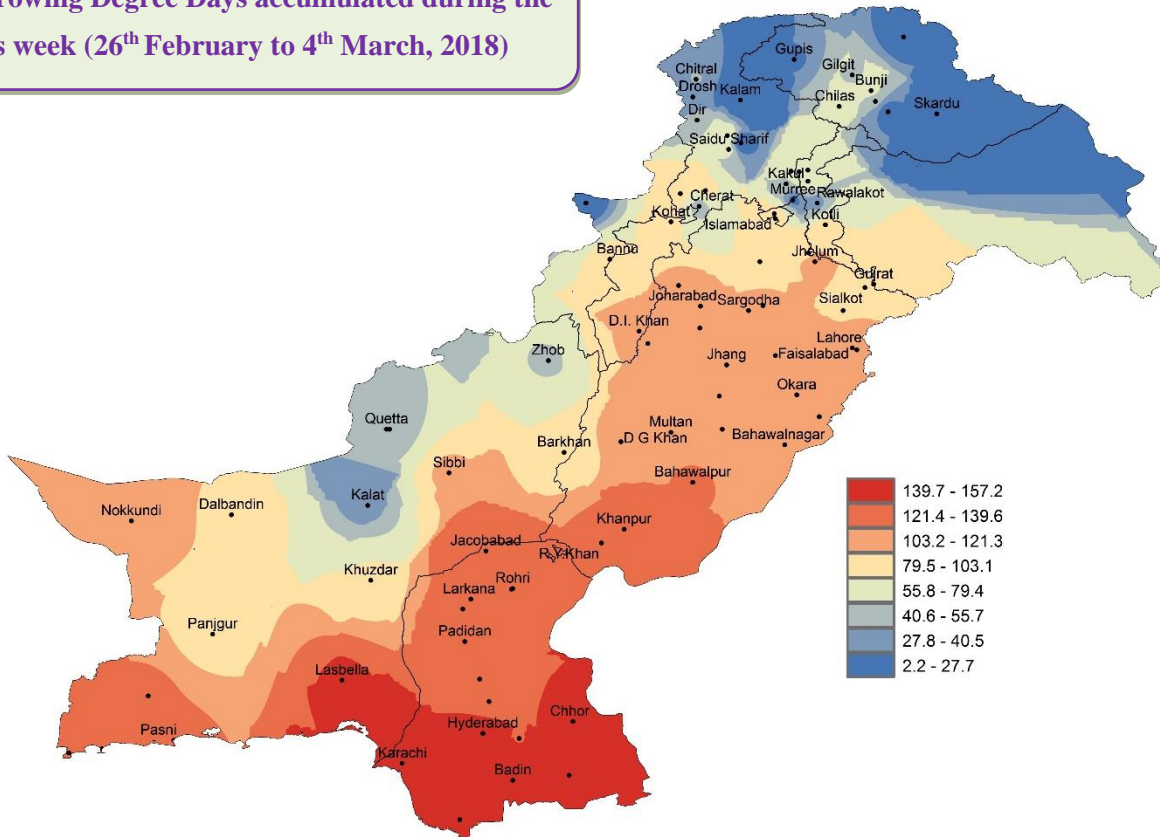
Lowest Minimum Temperature (°C) during the Previous week (26th February to 4th March, 2018)



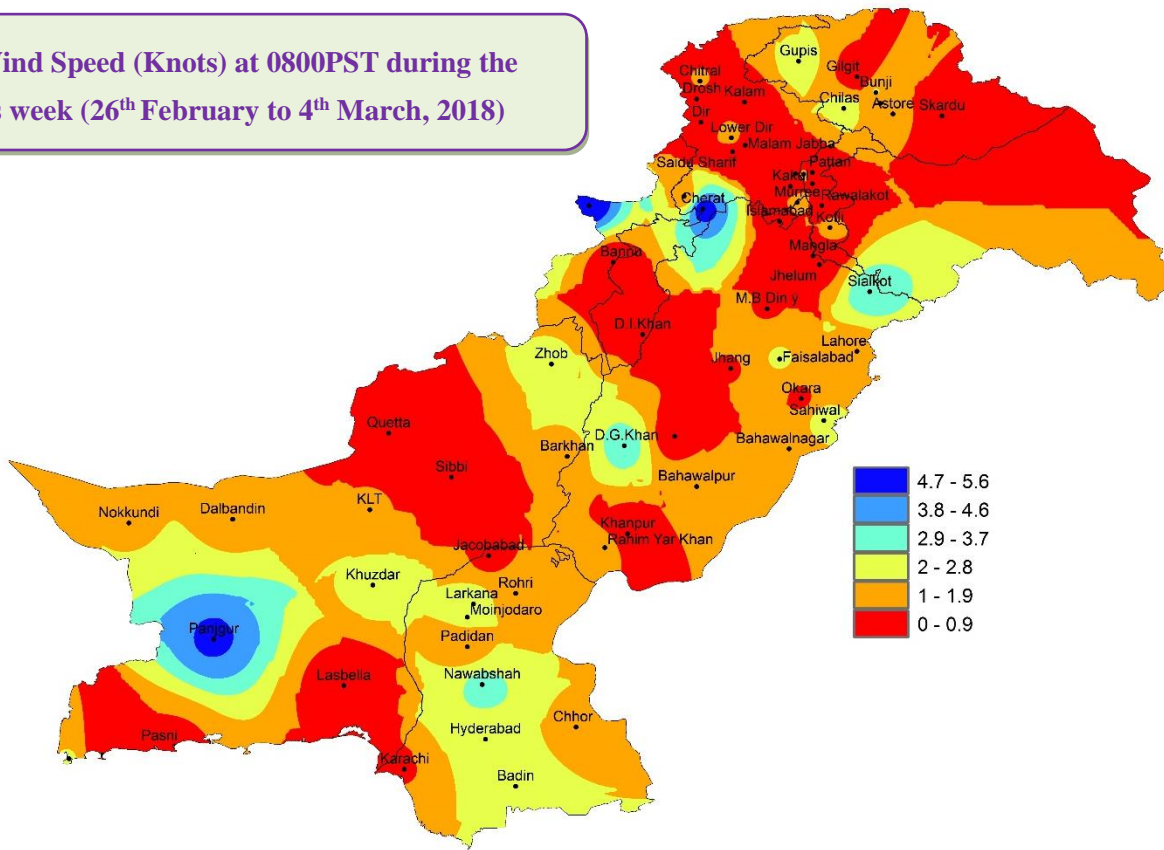
Mean Relative Humidity (%) during the previous week (26th February to 4th March, 2018)



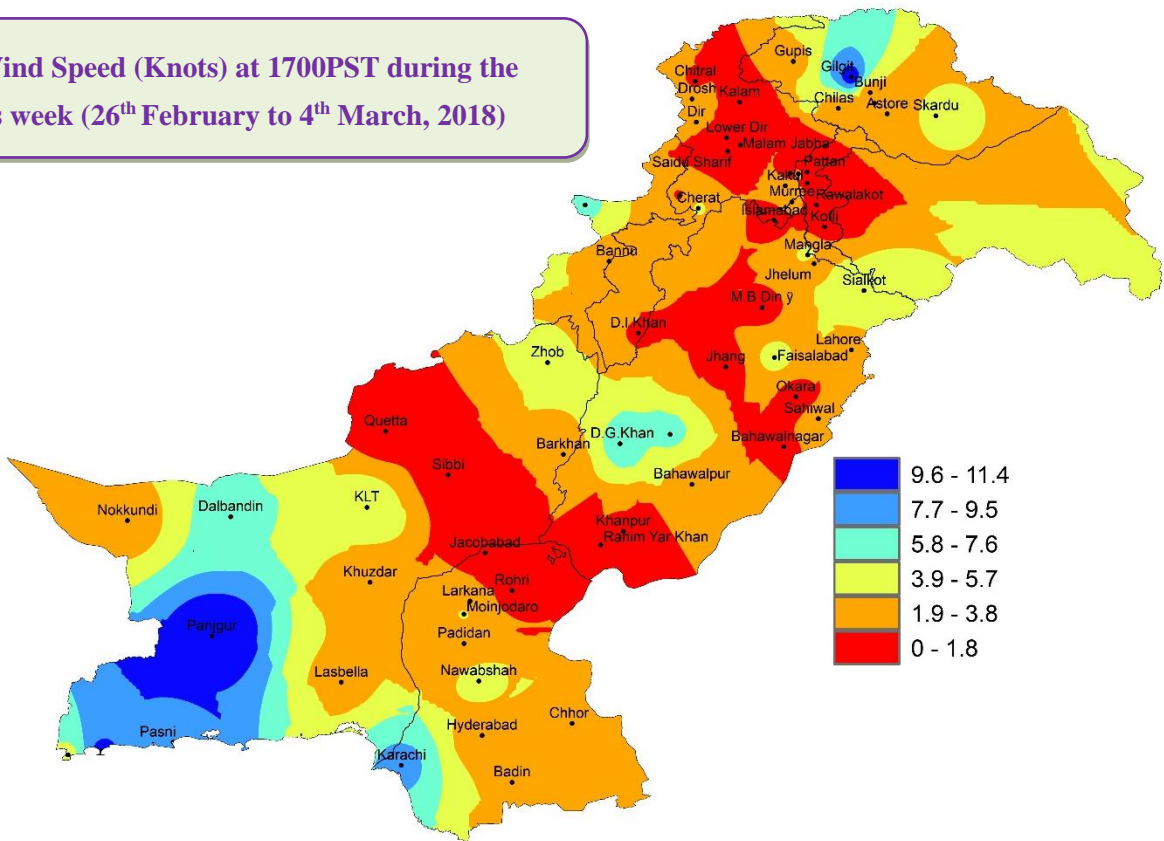
Total Growing Degree Days accumulated during the previous week (26th February to 4th March, 2018)



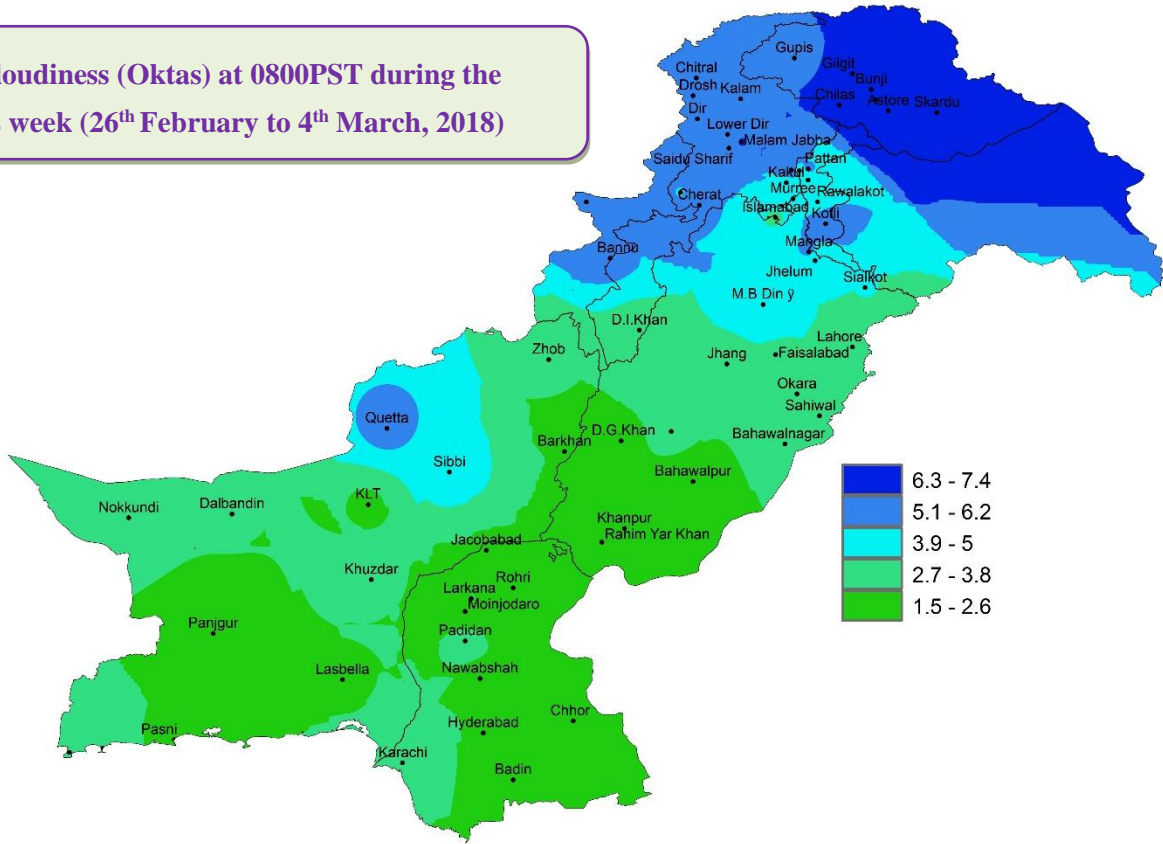
Mean Wind Speed (Knots) at 0800PST during the previous week (26th February to 4th March, 2018)



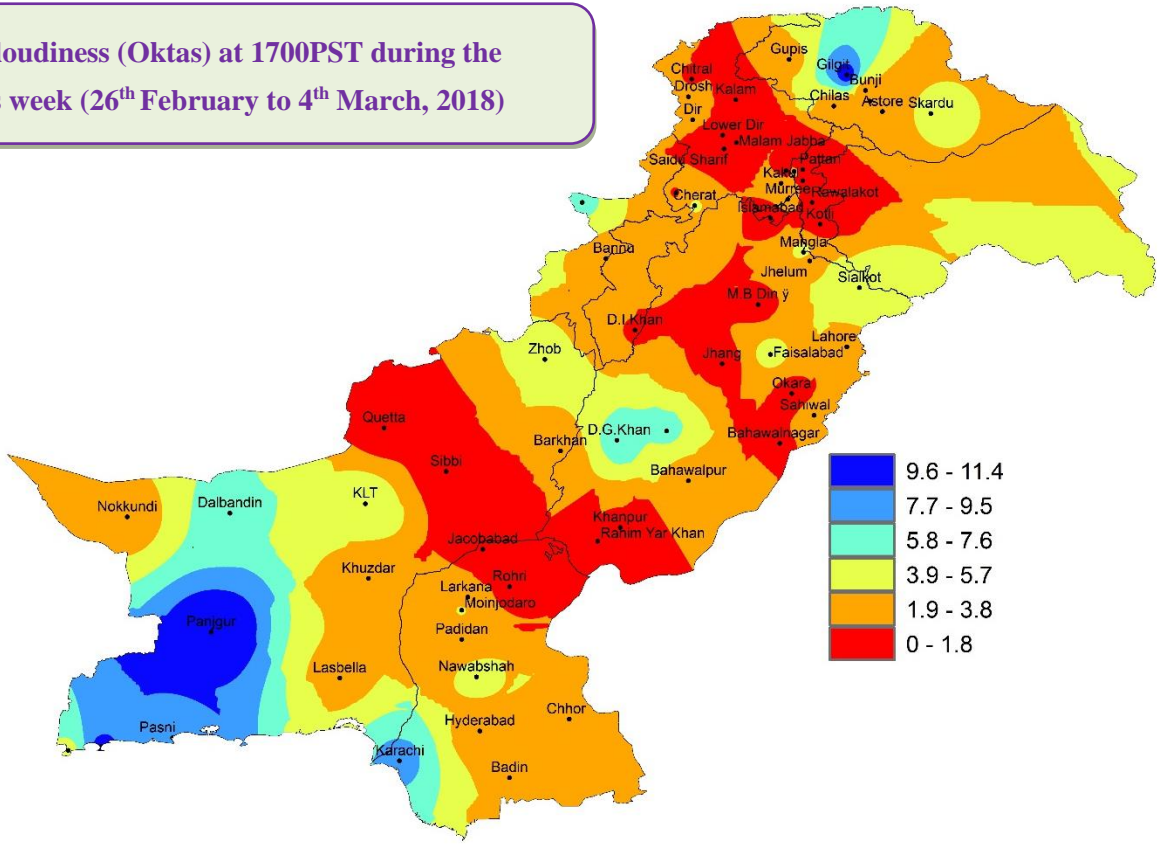
Mean Wind Speed (Knots) at 1700PST during the previous week (26th February to 4th March, 2018)



Mean Cloudiness (Oktas) at 0800PST during the previous week (26th February to 4th March, 2018)



Mean Cloudiness (Oktas) at 1700PST during the previous week (26th February to 4th March, 2018)



Weekly Weather Advisory for Farmers**(5th to 11th March, 2018)**

Dry continental air is prevailing over most parts of the country.

MONDAY**(05-03-2018)**

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

TUESDAY**(06-03-2018)**

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

WEDNESDAY**(07-03-2018)**

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

THURSDAY**(08-03-2018)**

Mainly dry weather is expected in most plain areas and cold in upper parts of the country. However, rain-thunderstorm (snowfall over the hills) with gusty winds is expected at isolated places in Zhob, D.I Khan divisions and FATA.

FRIDAY**(09-03-2018)**

Mainly dry weather is expected in most plain areas and cold in upper parts of the country. However, rain-thunderstorm (snowfall over the hills) with gusty winds is expected at few places in upper FATA, Malakand and Zhob divisions.

SATURDAY**(10-03-2018)**

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

SUNDAY**(11-03-2018)**

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

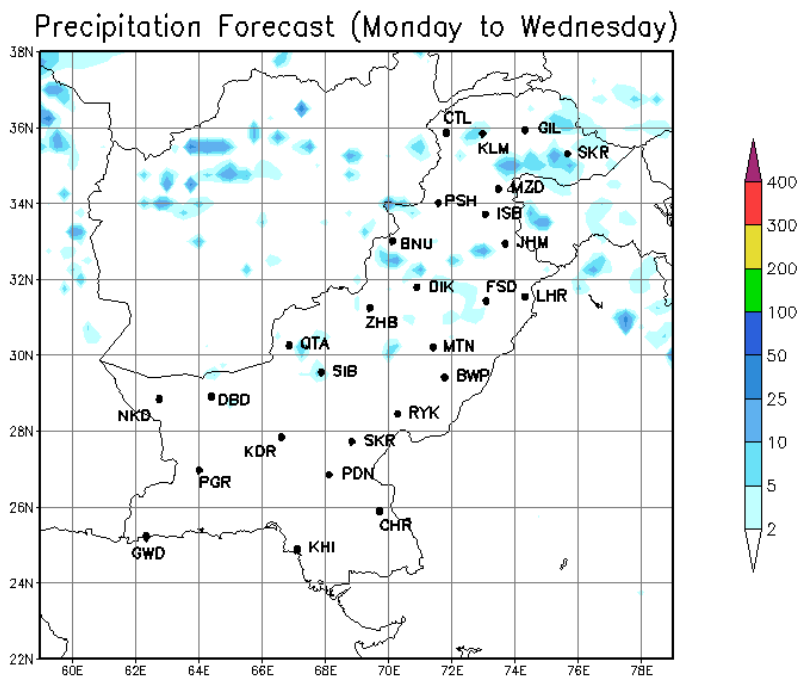
ADVISES FOR FARMERS

During the last week, light to moderate rainfall was observed in most of the agricultural plains of the country. In the next week, dry weather is expected in most agricultural plains of the country. Accordingly, following advises are suggested for the farming community.

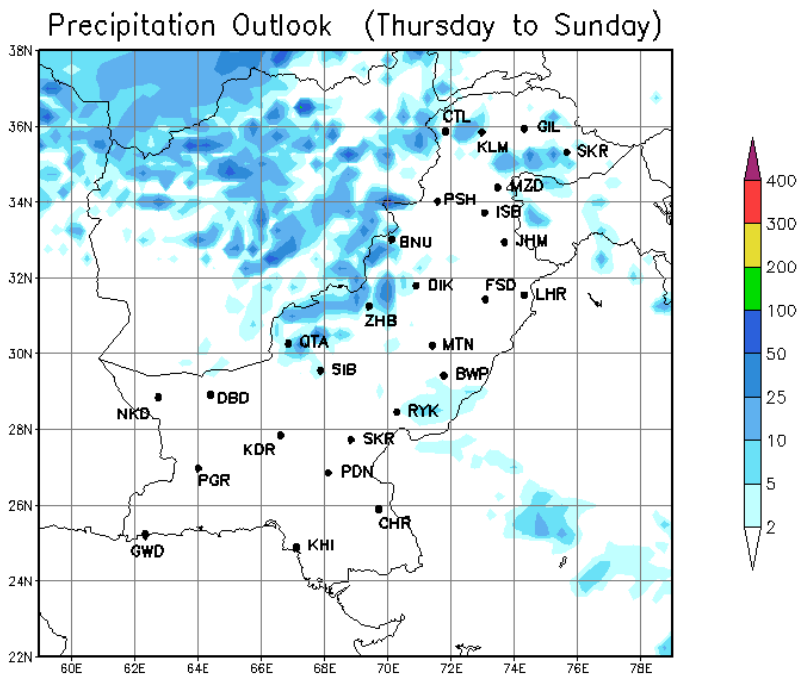
- Necessary precautionary measures may be taken to protect crops/nurseries from effects of extreme weather conditions.
- Farmers of irrigated areas should irrigate the crop as per phonological requirement keeping in mind the expected weather in mind.
- Removing weeds from the standing crops is very important as weeds utilize moisture and food which may be utilized by the crop. As a result considerable loss in yield occurs every year. However operations against weeds should be started using weedicides or manually when the crop completely covers the fields.

Weather Outlook from 5th to 11th March 2018

The outlook for the period 5th to 7th March, 2018 shows that dry weather may prevail in most parts of the country, however light rainfall is expected at isolated places in GB, Azad Kashmir, Balochistan, Punjab and KP.



The outlook for the period 8th to 11th March, 2018 shows that light to moderate rainfall is expected at scattered places in Gilgit-Baltistan, Azad Kashmir, North eastern Balochistan and lower KPK.



National Weather Data of Selected Cities (26th February to 4th March, 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	1.9	0.5	11.1	64	10.62	7.3	7.1	1.4	2.6
Badin	20.6	19.0	157.2	49	0.00	1.7	2.1	2.3	3.4
Bahawalnagar	14.3	12.0	119.3	63	0.00	3.1	3.3	1.4	1.7
Bahawalpur	15.2	12.7	123.6	67	0.01	2.0	2.1	1.7	2.3
Balakot	9.0	3.9	65.8	69	81.00	6.3	6.1	0.0	1.0
Bannu	11.9	10.0	91.4	73	9.00	5.3	5.3	0.0	2.9
Barkhan	9.9	7.5	82.8	52	4.00	2.6	3.6	1.4	2.3
Bunji	10.4	6.7	66.7	48	4.02	7.4	7.6	2.0	2.0
Cherat	6.5	4.0	42.8	68	35.00	5.3	5.4	5.4	4.0
Chhor	16.7	15.5	146.5	50	0.00	2.3	3.4	1.4	3.7
Chilas	7.0	6.0	59.0	47	0.03	6.4	6.3	2.3	2.6
Chitral	5.5	3.6	41.5	68	36.20	5.4	6.7	1.1	1.4
D.G.Khan	13.5	12.0	111.0	61	2.00	2.4	3.9	3.4	6.3
D.I.Khan	13.6	11.5	107.5	70	23.02	3.3	5.4	0.3	1.7
Dalbandin	11.9	8.0	101.0	45	6.80	2.7	3.9	1.4	6.3
Dir	5.3	2.0	44.5	77	76.00	5.3	6.0	0.0	2.0
Drosh	3.2	2.5	29.0	59	21.00	5.6	6.7	0.0	3.4
Faisalabad	14.1	11.5	110.8	68	1.60	2.4	2.9	1.2	1.8
Garidopatta	10.4	5.2	75.4	70	82.00	4.0	6.1	0.9	1.7
Gawader	19.3	18.5	138.8	71	0.00	3.6	2.1	0.0	10.0
Gilgit	6.4	3.0	53.8	56	0.41	6.4	7.4	0.0	10.9
Gupis	2.6	1.0	24.8	48	1.01	6.0	5.9	2.3	3.1
Hyderabad	19.3	18.5	151.5	46	0.00	2.6	2.0	2.6	2.6

Islamabad	11.4	7.0	86.4	75	29.60	3.7	4.3	0.0	0.9
Jacobabad	17.8	16.0	131.2	64	1.00	2.6	1.3	0.6	0.0
Jhang	13.3	11.3	109.4	69	19.40	3.3	3.4	0.9	0.9
Jhelum	13.7	11.4	108.4	62	7.80	3.9	4.1	0.3	3.1
Jiwani	18.0	16.5	127.0	69	0.00	3.4	1.9	2.0	5.1
Kakul	6.2	2.0	51.0	73	46.50	4.4	5.6	0.3	2.6
Kalam	-0.8	-5.0	3.0	86	76.50	6.0	7.3	0.0	0.6
Kalat	4.2	1.0	34.8	59	18.00	2.4	4.7	1.1	5.7
Karachi	19.5	17.5	148.3	54	0.00	3.6	4.0	0.9	8.3
Khanpur	16.2	13.5	131.4	61	0.00	1.6	3.0	0.0	1.4
Khuzdar	10.3	8.5	82.5	42	1.80	3.0	5.3	2.3	2.3
Kotli	12.2	9.6	89.4	68	16.00	5.7	5.7	1.1	0.6
Lahore	15.7	13.5	114.8	64	2.10	3.1	3.0	1.1	3.1
Larkana	16.6	15.5	137.5	61	0.00	2.7	2.6	2.3	2.6
Lasbella	18.3	15.5	144.4	48	0.01	2.4	3.1	0.0	3.1
Lower Dir	10.6	9.0	78.5	66	59.00	5.3	4.4	1.7	0.9
M.B Din	13.9	11.0	109.4	69	4.00	4.9	3.3	0.9	1.1
Malam Jabba	2.2	0.0	0.8	70	91.00	6.3	6.9	0.0	0.0
Mangla	12.7	10.5	100.3	61	7.81	5.3	4.9	0.6	4.3
Mir Khani	3.0	2.5	44.5	54	36.00	6.4	5.9	0.9	3.0
Moinjodaro	15.5	13.5	126.3	63	0.01	1.4	1.9	2.0	4.0
Multan (PBO)	14.8	13.3	117.2	66	0.03	3.0	3.4	0.0	6.0
Murree	3.4	0.0	22.9	71	61.00	4.6	6.1	1.4	2.4
Muzaffarabad	7.5	6.5	66.7	63	55.00	4.1	6.3	1.4	2.4
Nawabshah	15.9	14.5	137.0	56	0.00	2.4	3.6	3.1	4.6

Nokkundi	14.6	13.0	114.5	27	0.00	3.0	3.3	1.7	2.6
Okara	13.1	11.0	119.5	65	2.00	2.7	1.7	0.7	0.9
Padidan	15.6	13.0	124.0	65	0.00	3.1	3.7	1.1	2.0
Panjgur	10.6	8.5	88.5	46	2.00	2.1	3.7	4.9	11.4
Parachinar	-1.6	-2.5	9.9	72	73.00	5.9	6.3	5.6	6.1
Pasni	15.9	15.5	127.8	74	0.00	2.0	2.4	0.6	8.7
Pattan	7.6	5.5	58.3	61	45.00	5.4	5.7	0.0	0.0
Peshawar	13.1	10.5	92.8	75	17.00	5.0	6.3	0.9	1.7
Quetta	7.0	4.7	49.9	54	21.40	5.6	4.9	2.4	3.1
Rahim Yar Khan	16.3	14.7	128.9	60	0.00	1.9	2.9	1.4	1.7
Rawalakot	3.7	0.5	33.7	79	45.20	4.7	6.0	0.3	0.9
Rawalpindi	10.7	7.0	87.4	75	21.80	3.2	4.1	0.3	0.7
Rohri	18.1	15.0	137.8	56	0.01	1.7	3.0	1.1	0.9
Sahiwal	14.6	13.5	112.8	67	5.20	2.7	2.7	2.3	2.6
Saidu Sharif	7.7	5.0	62.6	69	61.00	6.0	5.4	0.0	0.0
Sialkot	12.1	9.5	95.0	67	1.62	3.9	4.1	3.7	5.7
Sibbi	11.8	10.5	111.8	56	7.00	4.6	3.4	0.0	0.6
Skardu	2.0	-1.5	23.7	54	1.00	6.7	7.3	0.0	4.3
Tandojam	16.4	14.5	138.8	62	0.00	2.0	2.1	0.9	0.6
Usta.M	17.2	16.5	125.9	65	0.00	1.4	1.7	0.8	1.1
Zhob	3.3	2.5	52.8	54	2.00	2.7	4.3	2.1	4.4

*** Shows that data was not available.

*Trace shows not-measurable data

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)