

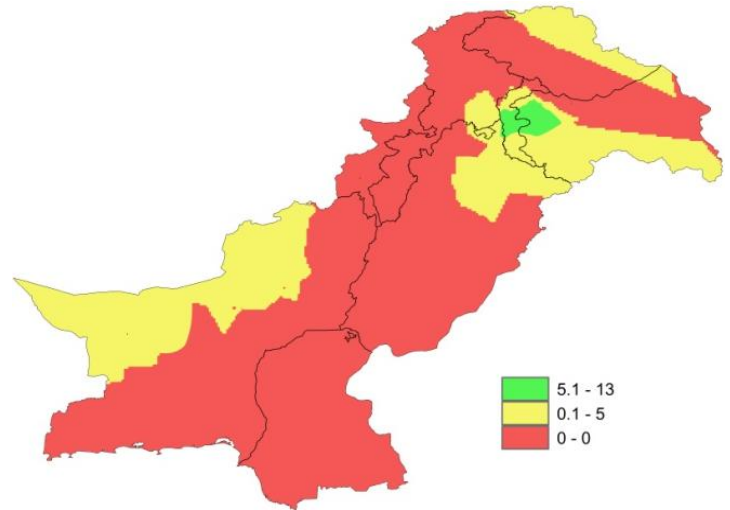
Weekly Weather and Crop Bulletin for Pakistan

**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 20th to 26th February, 2017)



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Highlights of Past Weather (from 20th to 26th February, 2017)

Slightly below normal night temperatures reported from most parts of the country.

Province wise distribution of rainfall reported as follows:

- Light rainfall reported from particular places of Balochistan, Khyber Pakhtunkhwa (KP), Gilgit-Baltistan (GB) & Kashmir and Punjab.
- Dry weather reported from Sindh.

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

Editor-in-Chief: Dr. Khalid M. Malik (Director)

Editor: Khalida Noureen (Meteorologist)

Past Weather of Provinces (from 20th to 26th February, 2017)

Punjab

Light rainfall reported from particular places of Punjab during the week. Weekly maximum and minimum temperatures recorded as 25.9°C & 9.2°C respectively. For the present season on average 87.9 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 53% and wind speed in the morning/evening recorded as 1.1/2.9 Knots. During the previous week the highest amount of rainfall was recorded as 0.3 mm at Mandi Bahuddin & the lowest minimum temperature was recorded as 2.0°C at Murree.

Sindh

Dry weather reported from Sindh during the week. Weekly maximum and minimum temperatures recorded as 30.8°C & 12.3°C respectively. For the present season, on average 116.4 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 45% and wind speed in the morning/evening recorded as 1.1/3.0 Knots. During the previous week the lowest minimum temperature was recorded as 7.0°C at Mitthi.

Khyber Pakhtunkhwa

Light rainfall reported from particular places of Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 18.5°C & 4.0°C respectively. For the present season on average 54.8 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 51% and wind speed in the morning/evening recorded as 2.6/3.3 Knots. During the previous week the highest amount of rainfall was recorded as 4.0 mm at Kakul & the lowest minimum temperature was recorded as -8.0°C at Kalam.

Balochistan

Light rainfall reported from particular places of Balochistan during the week. Weekly maximum and minimum temperatures recorded as 23.4°C & 7.9°C respectively. For the present season on average 75.3 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 44% and wind speed in the morning/evening recorded as 1.6/3.4 Knots. During the previous week the highest amount of rainfall was recorded as 2.0 mm at Quetta & the lowest minimum temperature was recorded as -4.0°C at Kalat.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light rainfall reported from particular places of Gilgit-Baltistan & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 15.0°C & 2.0°C respectively. For the present season on average 49.8 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 1.9/2.5 Knots. During the previous week the highest amount of rainfall was recorded as 12.4 mm at Rawalakot & the lowest minimum temperature was recorded as -5.0°C at Astore.

**Past Weather for Major Agricultural Plains
(from 20th to 26th February, 2017)**

Rawalpindi (Potohar region)

Dry weather reported from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 0.2/0.5 Oktas while, average relative humidity observed as 58%. Mean night time temperature recorded as 7.9°C & for the present season 77.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.8/1.7 Knots.

Faisalabad (Central Punjab)

Dry weather reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 0.3/0.6 Oktas while, average relative humidity observed as 50%. Mean night time temperature recorded as 9.3°C & for the present season 91.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.5/1.5 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 0.0/0.0 Oktas while, average relative humidity observed as 56%. Mean night time temperature recorded as 11.2°C & for the present season 110.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.8 Knots.

Usta Muhammad (Eastern Balochistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded 1.4/1.0 Oktas while, average relative humidity observed as 58%. Mean night time temperature recorded as 10.6°C & for the present season 101.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.5/0.3 Knots.

Quetta (Northern Baluchistan)

Rainfall reported from 2.2 mm during the week; however, cloudiness in the morning/evening recorded as 1.6/1.3 Oktas while, average relative humidity observed as 39%. Mean night time temperature recorded as 1.8°C at 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 (from 20th to 26th February, 2017)

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 48%. Mean night time temperature recorded as 11.3°C & for the present season 95.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.0/4.3 Knots.

Lahore

Dry weather reported from Lahore during the week; however, cloudiness in the morning/evening recorded as 0.7/0.3 Oktas while, average relative humidity observed as 49%. Mean night time temperature recorded as 10.7°C & for the present season 92.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/2.9 Knots.

Zhob

Dry weather reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 0.3/1.0 Oktas while, average relative humidity observed as 41.0%. Mean night time temperature recorded as 5.6°C & for the present season 51.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 4.9/7.3 Knots.

Murree

Rainfall reported from 1.3 mm during the week; however, cloudiness in the morning/evening recorded as 1.1/1.0 Oktas while, average relative humidity observed as 49.0%. Mean night time temperature recorded as 3.1°C & for the present season 21.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.3/0.9 Knots.

D.I. Khan

Dry weather reported from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 0.0/0.0 Oktas while, average relative humidity observed as 43.0%. Mean night time temperature recorded as 11.1°C & for the present season 99.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 3.1/0.9 Knots.

Peshawar

Dry weather reported from Peshawar during the week; however, cloudiness in the morning/evening recorded as 0.4/0.0 Oktas while, average relative humidity observed as 43%. Mean night time temperature recorded as 7.6°C & for the present season 78.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/3.1 Knots.

Kalam

Dry weather reported from Kalam during the week; however, cloudiness in the morning/evening recorded as 1.3/3.1 Oktas while, average relative humidity observed as 69%. Mean night time temperature recorded as -5.6°C by the end of last week. Wind speed recorded in the morning/evening as 1.4/0.3 Knots.

Gilgit

Dry weather reported from Gilgit during the week; However, cloudiness in the morning/evening recorded as 4.9/4.3 Oktas while, average relative humidity observed as 28%. Mean night time temperature recorded as 4.3°C & for the present season 35.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 3.7/8.9 Knots.

Skardu

Dry weather reported from Skardu during the week;; however, cloudiness in the morning/evening recorded as 5.3/5.0 Oktas while, average relative humidity observed as 66%. Mean night time temperature recorded as -0.7°C by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.3 Knots.

**Crop Situation for Major Agricultural Plains
(Based on data from Regional Agromet Centres)****Potohar Region (Rawalpindi)**

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

Central Punjab (Faisalabad)

There is presently one crop (irrigated conditions) grown in the fields of RAMC Faisalabad.

Wheat: Very good condition, *Heading* stage completed.

Lower Sindh (Tandojam)

There is presently one crop (irrigated conditions) grown in the fields of RAMC Tandojam.

Wheat (Imdad): Good condition at *Wax Maturity* stage.

Northern Balochistan (Quetta)

There is presently one crop (irrigated conditions) grown in the fields of RAMC Quetta.

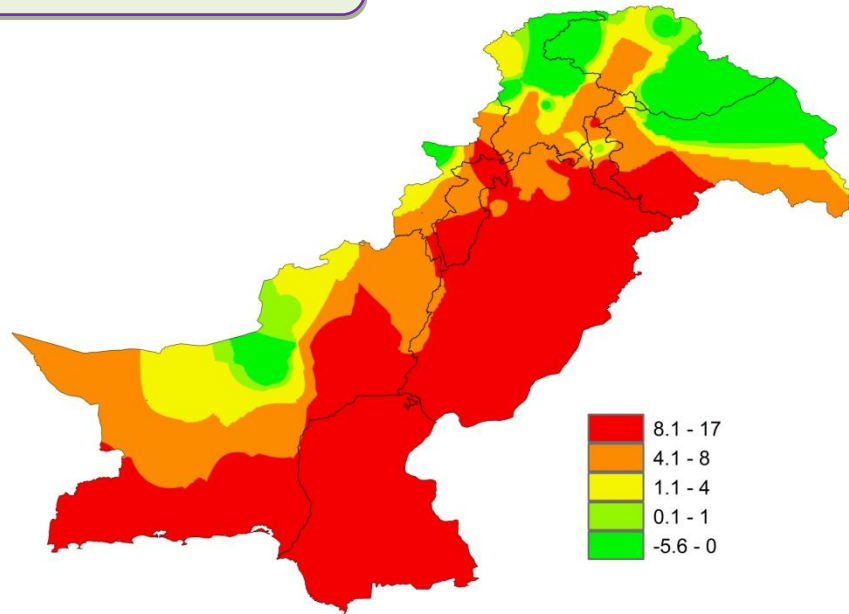
Wheat (Local white): Good condition at *Tillering* stage.

Eastern Balochistan (Usta Muhammad)

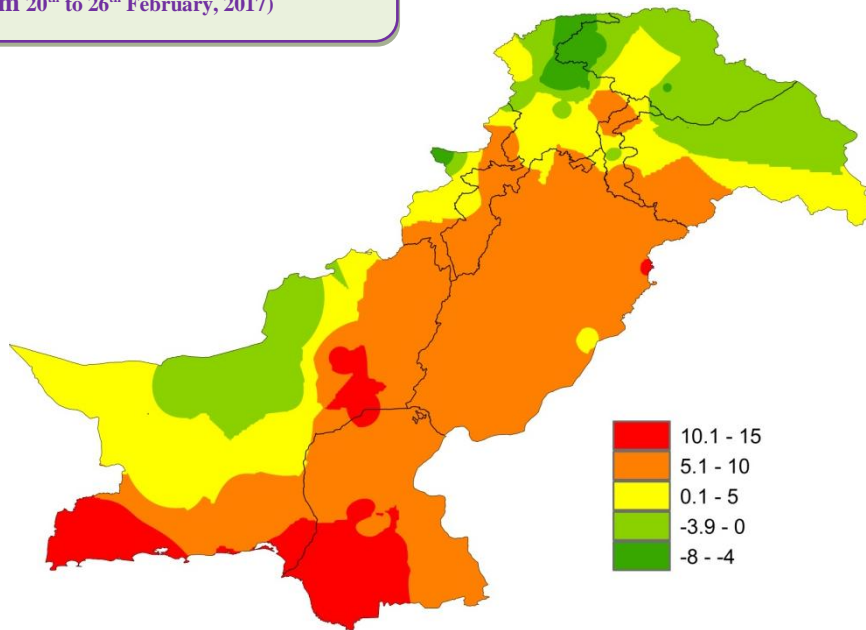
There is presently one crop (irrigated conditions) grown in the fields of RAMC Usta Muhammad.

Wheat: Good condition at *Shooting* stage.

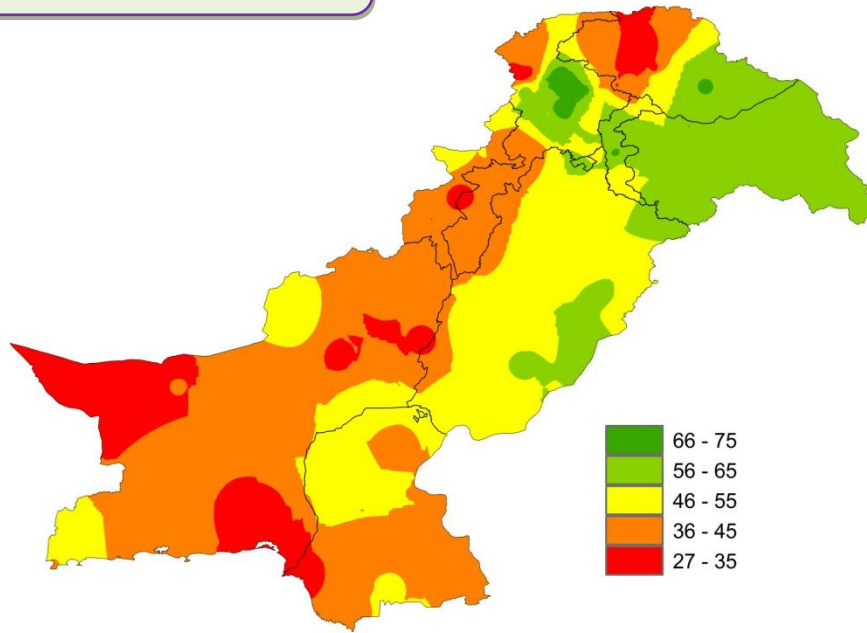
Mean Minimum Temperature (°C) during the Previous week (from 20th to 26th February, 2017)



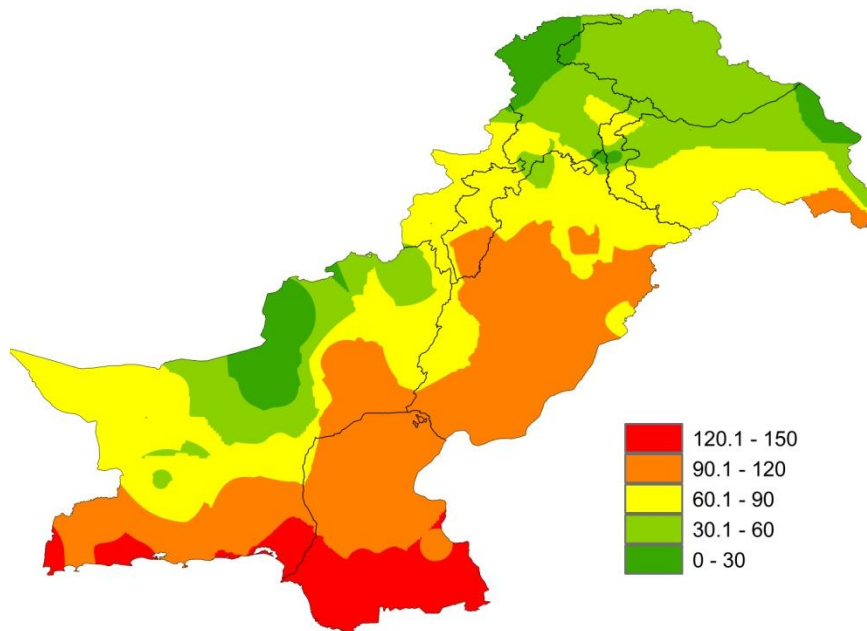
Lowest Minimum Temperature (°C) during the Previous week (from 20th to 26th February, 2017)



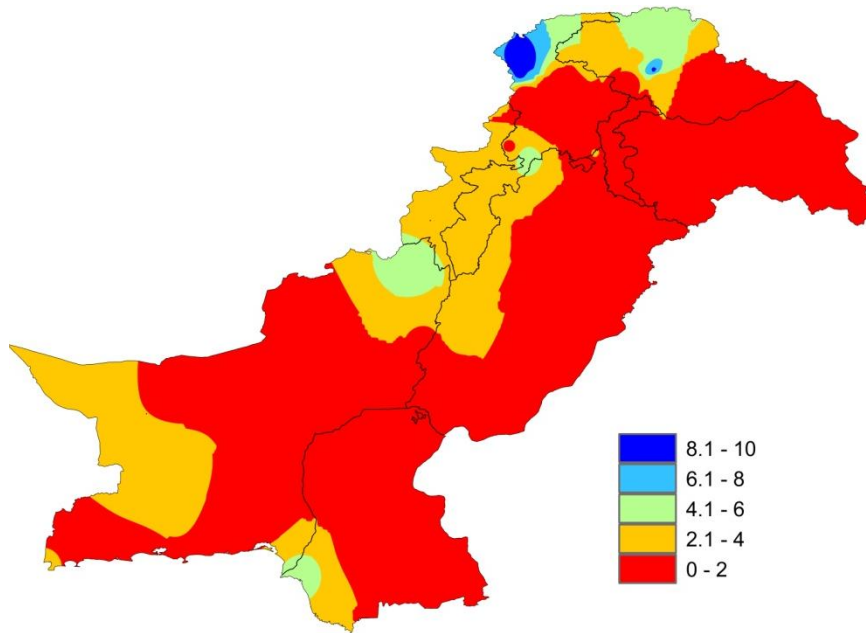
Mean Relative Humidity (%) during the Previous week (from 20th to 26th February, 2017)



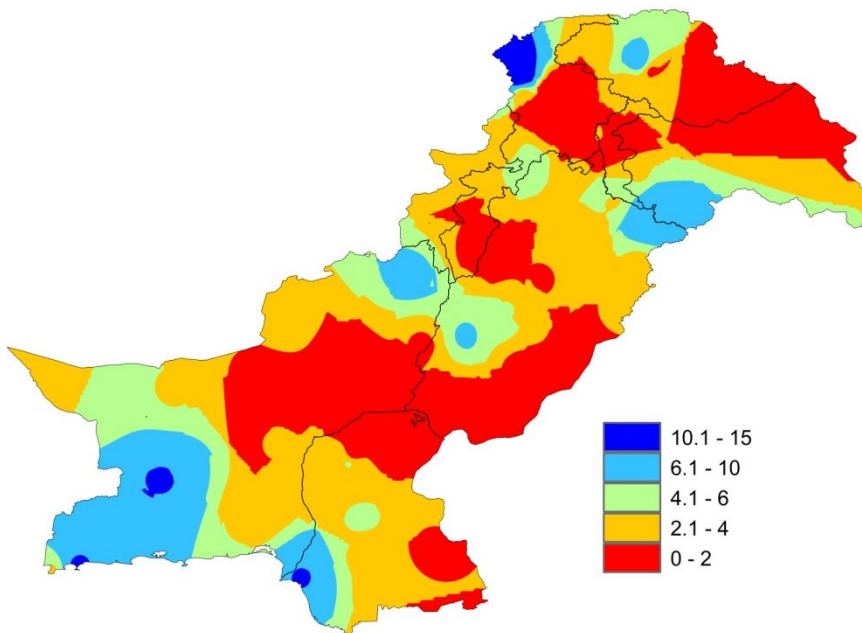
Total Growing Degree Days accumulated during the Previous week (from 20th to 26th February, 2017)



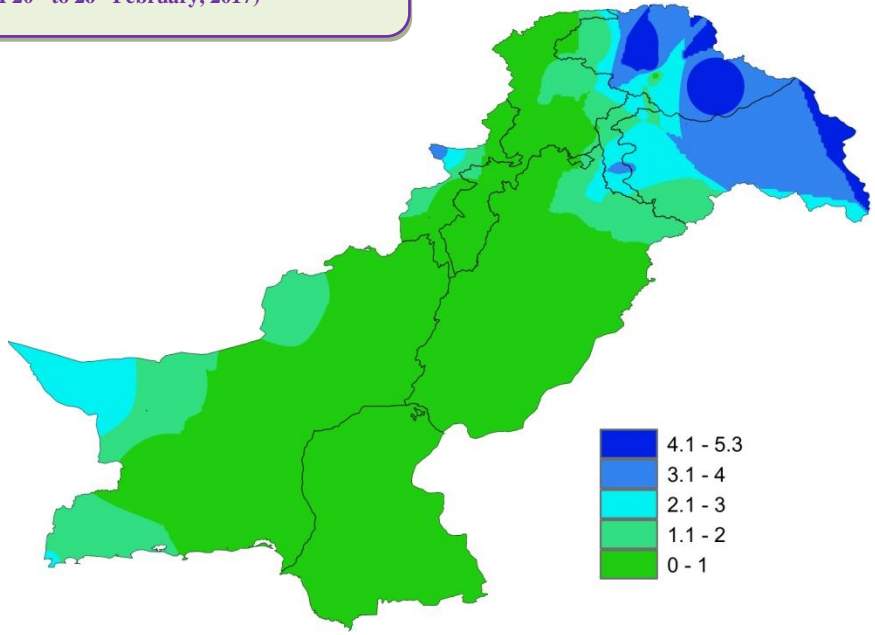
Mean Wind Speed (Knots) at 0800PST during the Previous week (from 20th to 26th February, 2017)



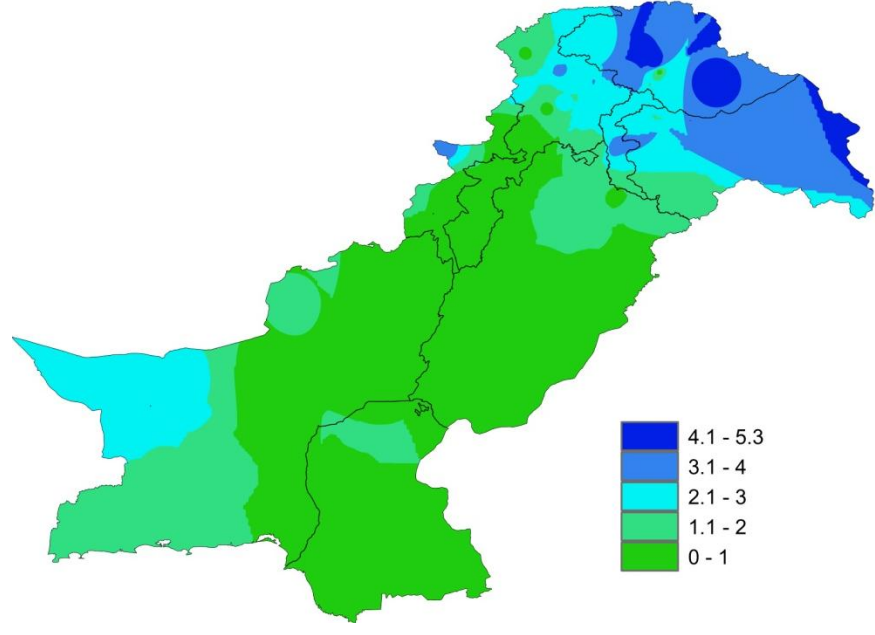
Mean Wind Speed (Knots) at 1700PST during the Previous week (from 20th to 26th February, 2017)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (from 20th to 26th February, 2017)



Mean Cloudiness (Oktas) at 1700PST during the Previous week (from 20th to 26th February, 2017)



Weekly Weather Advisory for Farmers
(From 27th February to 5th March, 2017)

A shallow westerly wave is affecting western parts of the country and likely to persist over upper parts till Thursday.

MONDAY
27-02-2017

Rain-thunderstorm is expected at scattered places in Quetta, Zhob, Kalat divisions, while at isolated places in Malakand, Bannu, D.I. Khan divisions, FATA, Gilgit-Baltistan and Kashmir. However, dry weather elsewhere in the country.

TUESDAY
28-02-2017

Rain-thunderstorm is expected at isolated places in Malakand, Hazara, Rawalpindi, Zhob divisions, FATA, Gilgit-Baltistan and Kashmir. However, dry weather elsewhere in the country.

WEDNESDAY
01-03-2017

Rain-thunderstorm is expected at isolated places in Malakand, Hazara, Peshawar, Kohat, Zhob, Rawalpindi, Gujranwala, Lahore divisions, Islamabad, Kashmir and Gilgit-Baltistan. However, dry weather elsewhere in the country.

THURSDAY
02-03-2017

Rain-thunderstorm is expected at isolated places in Malakand, Hazara, Peshawar, Rawalpindi, Gujranwala divisions, FATA, Islamabad, Kashmir and Gilgit-Baltistan. However, dry weather elsewhere in the country.

FRIDAY
03-03-2017

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

SATURDAY
04-03-2017

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

SUNDAY
05-03-2017

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

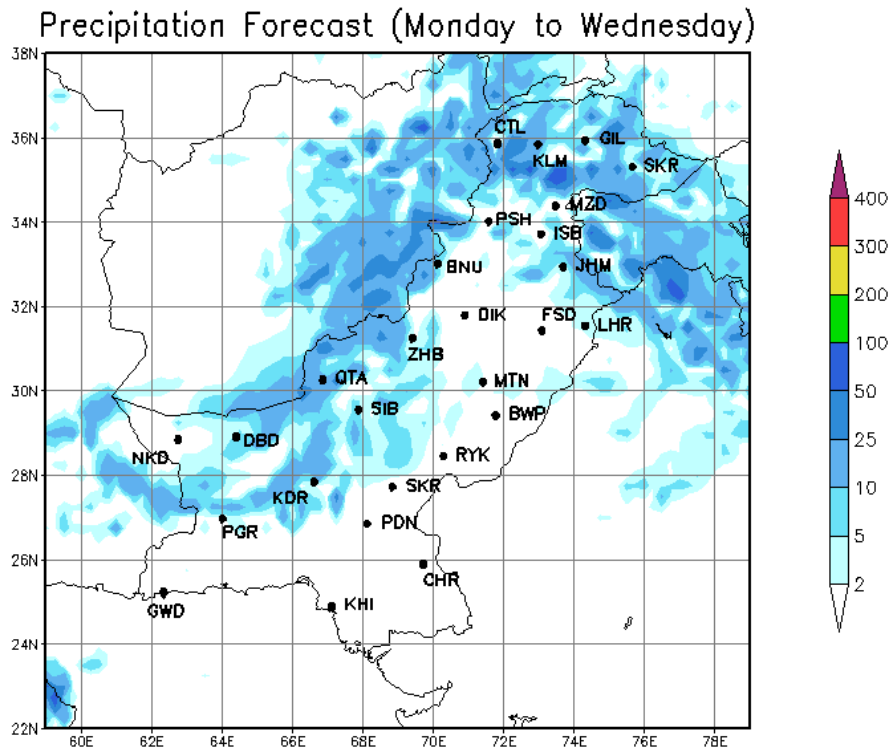
ADVISES FOR FARMERS

During the last week, weather remained cold and dry in most of the agricultural plains of the country while light rainfall recorded at particular places in southwestern Baluchistan and northeastern areas. This may continue in the same manner in coming days as well. Keeping in view the expected weather conditions following advises are suggested for farming community.

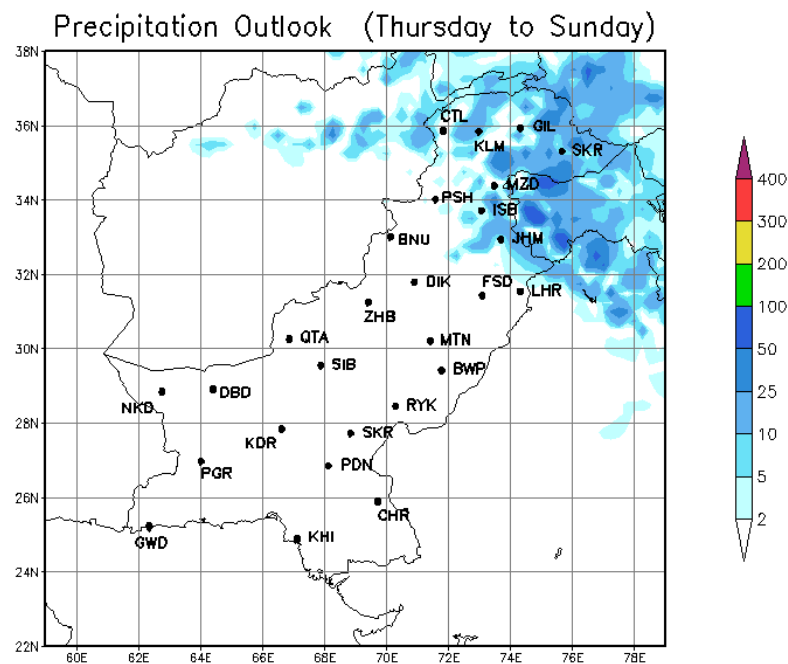
- Farmers of irrigated areas should irrigate the crop as per requirement keeping in mind the expected weather conditions.
- Removing weeds from the standing crops is very important as weeds utilize moisture and food which may be utilized by the crop. As a result considerable loss in yield occurs every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

Weather Outlook from 27th February to 5th March, 2017

The forecast from 27th February to 1st March, 2017 shows that light to moderate rainfall is expected at scattered places in KP, upper Punjab, north western Balochistan, GB and Kashmir.



The outlook from 2nd to 5th March, 2017 shows that light to moderate rainfall is expected at scattered places in upper KP, upper Punjab, GB and Kashmir. However, dry weather may prevail in rest of the country.



National Weather Data of Selected Cities
(Weekly Data from 20th to 26th February, 2017)

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	Lowest							
Astore	-3.3	-5.0	***	55	0.0	2.6	2.7	2.0	2.3
Badin	15.1	13.0	128.8	46	0.0	0.4	0.9	1.7	2.0
Bahawalnagar	10.8	4.5	97.1	57	0.0	0.0	0.0	0.0	1.1
Bahawalpur	10.0	8.4	94.7	56	0.0	0.7	0.3	1.1	0.9
Balakot	5.0	4.0	55.7	52	0.0	1.0	2.1	1.0	0.0
Bannu	4.7	3.3	68.1	33	0.0	0.6	0.0	2.3	2.0
Barkhan	7.8	5.0	66.0	33	0.0	1.0	0.0	1.7	1.4
Bunji	6.0	3.3	41.4	32	0.0	5.3	5.4	8.6	0.9
Cherat	5.9	4.5	34.4	42	0.0	0.7	0.3	5.1	5.4
Chhor	10.2	7.2	119.2	42	0.0	0.3	0.3	0.0	1.7
Chilas	5.5	5.0	47.1	36	0.0	3.0	3.3	0.3	2.6
Chitral	2.0	0.6	16.9	37	0.0	0.0	0.9	9.4	11.4
D.I.Khan	11.1	9.0	99.1	43	0.0	0.0	0.0	3.1	0.9
Dalbandin	2.3	-0.5	61.3	35	0.0	1.3	2.6	1.3	3.7
D.G.Khan	8.6	6.0	89.1	52	0.0	0.6	0.9	2.6	6.6
Dir	-2.0	-3.5	19.5	58	0.0	0.0	3.0	0.0	2.1
Drosh	1.7	1.0	16.3	27	0.0	0.0	1.3	8.6	14.6
Faisalabad	9.3	6.8	91.5	50	0.0	0.3	0.6	0.5	1.5
Garidopatta	6.3	4.0	65.9	64	8.0	1.6	2.7	0.0	0.9
Gawader	16.0	12.5	118.0	47	0.0	1.3	1.4	1.1	11.1
Gilgit	4.3	1.0	35.1	28	0.0	4.9	4.3	3.7	8.9

Gupis	-3.1	-5.0	***	39	0.0	1.0	2.4	4.0	2.3
Hyderabad	15.6	14.0	126.5	38	0.0	0.0	0.6	0.9	3.4
Islamabad	7.2	5.5	69.8	57	0.0	1.0	1.3	1.1	2.7
Jacobabad	12.6	10.5	106.6	55	0.0	0.4	0.9	0.3	0.3
Jhang	9.4	7.5	94.5	53	0.0	0.4	0.7	0.6	1.7
Jhelum	9.0	5.9	88.0	52	0.1	1.4	0.7	0.9	3.4
Jiwani	16.6	13.5	122.8	45	0.0	2.1	1.6	2.3	3.7
Kakul	3.5	1.5	37.8	57	4.0	0.7	1.9	0.0	1.1
Kalam	-5.6	-8.0	***	69	0.0	1.3	3.1	1.4	0.3
KLT	-1.4	-4.0	9.0	40	0.0	0.0	0.0	0.0	0.0
Karachi	15.8	13.5	141.7	33	0.0	0.7	0.9	4.7	10.3
Khanpur	9.4	7.0	101.0	51	0.0	0.6	0.4	0.0	1.1
Khuzdar	5.4	1.5	61.1	42	0.0	0.3	0.9	1.1	2.1
Kotli	9.5	7.8	79.5	53	2.4	3.1	2.3	1.7	4.0
Lahore	10.7	8.5	92.2	49	0.0	0.7	0.3	0.6	2.9
Larkana	11.8	10.0	108.3	45	0.0	0.6	1.3	2.0	1.1
Lasbella	11.5	8.2	117.7	31	0.0	0.3	1.0	0.6	2.0
Lower Dir	5.4	4.0	57.5	58	0.0	1.4	1.0	0.6	1.7
M.B Din	9.9	8.5	92.8	54	3.0	0.7	1.9	0.0	2.0
Malam Jabba	-1.7	-3.0	***	73	0.0	0.9	2.9	0.0	0.0
Mangla	9.2	7.2	87.0	46	0.6	2.9	1.3	0.6	5.4
Mir Khani	2.3	1.5	31.3	55	0.0	0.3	0.4	2.1	3.3
Moinjodaro	9.9	7.0	100.4	50	0.0	0.0	0.9	0.7	4.3
Multan(PBO)	11.3	9.5	95.9	48	0.0	1.0	0.7	2.0	4.3
Murree	3.1	2.0	21.3	49	1.3	1.1	1.0	2.3	0.9
Muzaffarabad	5.8	4.2	62.0	57	0.0	0.9	2.6	0.9	4.0

Nawabshah	12.1	11.0	115.5	45	0.0	0.0	0.0	1.6	4.6
Nokkundi	6.1	2.0	67.4	27	1.7	3.0	3.0	2.6	4.0
Okara	11.3	10.0	98.2	57	0.0	0.0	0.4	0.3	2.0
Padidan	10.6	8.0	105.3	54	0.0	0.3	0.3	1.4	2.0
Panjgur	5.3	1.0	58.5	39	0.0	0.3	1.9	3.4	10.3
Parachinar	-4.3	-5.5	***	53	0.0	3.1	3.6	3.0	3.0
Pasni	16.1	13.5	128.3	43	0.0	1.4	1.7	1.6	6.1
Pattan	9.3	7.5	66.5	56	0.0	1.9	2.0	0.0	1.0
Peshawar	7.6	5.8	78.3	43	0.0	0.4	0.0	1.7	3.1
Quetta	1.8	-1.6	18.5	39	2.2	1.6	1.3	2.4	3.1
Rahim Yar Khan	8.5	6.4	102.0	47	0.0	0.4	0.4	0.0	0.3
Rawalpindi	7.9	7.0	77.0	58	0.0	0.2	0.5	0.8	1.7
Rawalakot	0.0	-2.3	17.6	66	12.4	2.7	3.9	0.0	0.9
Rohri	11.6	10.0	108.0	41	0.0	0.0	1.0	0.3	1.1
Sahiwal	8.2	6.5	85.1	53	0.0	0.0	0.0	1.7	2.3
Saidu Sharif	5.9	4.5	55.8	55	0.0	0.0	0.6	0.0	0.3
Sialkot	9.9	7.0	85.0	61	2.6	1.6	1.7	1.9	9.6
Sibbi	12.6	11.0	112.3	33	0.0	0.0	0.6	1.4	0.0
Skardu	-0.7	-1.8	***	66	0.0	5.3	5.0	0.0	0.3
Tandojam	11.2	8.5	110.8	56	0.0	0.0	0.0	0.0	0.8
Usta.M	10.6	8.5	101.0	58	0.0	1.4	1.0	0.5	0.3
Zhob	5.6	5.0	51.0	41	0.0	0.3	1.0	4.9	7.3

*** 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)