

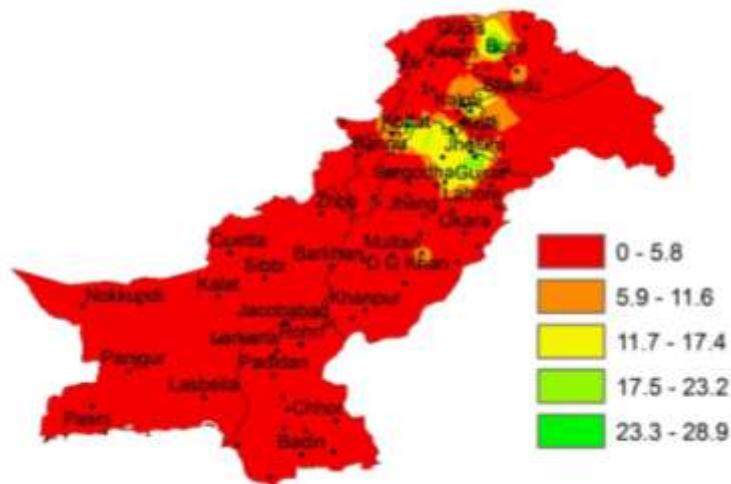
Weekly Weather and Crop Bulletin for Pakistan

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Rainfall Distribution (mm) during the
Previous Week (from 29th May to 4th June, 2017)



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Highlights of Past Weather (from 29th May to 4th June, 2017)

Above normal day temperatures reported from most parts of the country.

Province wise distribution of rainfall reported as follows:

- Light to moderate rainfall reported from most places of Punjab, Khyber Pakhtunkhwa (KP), Gilgit-Baltistan and Azad Kashmir.
- Light rainfall reported from a single station in Balochistan (Khuzdar (5.0 mm)).
- Traces of rainfall are reported from Sindh

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Editor: Dr. Dildar Kazmi (Meteorologist)

Past Weather of Provinces (from 29th May to 4th June, 2017)

Punjab

Light to moderate rainfall reported from most places of Punjab during the week. Weekly maximum and minimum temperatures recorded as 40.8°C & 25.9°C respectively. For the recent week on average 198.1 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 43% and wind speed in the morning/evening recorded as 2.8/3.8 Knots. During the previous week the highest amount of rainfall was recorded as 22.5mm at Jhelum & highest maximum temperature was recorded as 52.2°C at Noorpur Thal.

Balochistan

Light rainfall reported from only one station of Balochistan during the week. Weekly maximum and minimum temperatures recorded as 41.3°C & 25.0°C respectively. For the recent week on average 196.4 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 36% and wind speed in the morning/evening recorded as 1.7/7.2 Knots. During the previous week the highest amount of rainfall was recorded as 5.0 mm at Khuzdar & highest maximum temperature was recorded as 53.0°C at Turbat.

Khyber Pakhtunkhwa

Light to moderate rainfall reported from most of the places in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 36.7°C & 20.7°C respectively. For the recent week on average 166 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 1.2/3.5 Knots. During the previous week the highest amount of rainfall was recorded as 24.0 mm at Cherat & highest maximum temperature was recorded as 51.0°C at D.I.Khan.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall reported from few places of Gilgit-Baltistan & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 32°C & 16°C respectively. For the recent week on average 133.2 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 37% and wind speed in the morning/evening recorded as 1.6/2.5 Knots. During the previous week the highest amount of rainfall was recorded as 29.0 mm at Gilgit & highest maximum temperature was recorded as 44.2°C at Muzafarabad.

Sindh

Light rainfall (Traces) reported from isolated places of Sindh during the week. Weekly maximum and minimum temperatures recorded as 43.6°C & 28.4°C respectively. For the recent week, on average 217 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 4.5/5.2 Knots. During the previous week the highest amount of rainfall was recorded as 0.01 mm at Karachi, highest maximum temperature was recorded as 49°C at Daddu.

**Past Weather for Major Agricultural Plains
(from 29th May to 4th June, 2017)****Rawalpindi (Potohar region)**

Rainfall reported as 22.8 mm from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 1.2/1.0 Oktas while, average relative humidity observed as 50%. Mean day time temperature recorded as 39.1°C & for the recent week 188.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.0/3.1 Knots.

Faisalabad (Central Punjab)

Dry weather reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 0.7/0.6 Oktas while, average relative humidity observed as 39%. Mean day time temperature recorded as 41.1°C & for the recent week 199 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.4/1.8 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 0.6/0.0 Oktas while, average relative humidity observed as 62%. Mean day time temperature recorded as 41.7°C & for the recent week 201.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.0/3.1 Knots.

Usta Muhammad (Eastern Balochistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded 0.0/0.0 Oktas while, average relative humidity observed as 35%. Mean day time temperature recorded as 48.5°C & for the recent week 240 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.4/1.8 Knots.

Quetta (Northern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 0.4/0.9 Oktas while, average relative humidity observed as 22%. Mean day time temperature recorded as 34.6°C & for the

recent week 154.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 4.4/4.9 Knots.

**Past Weather for Sub-Regional Agricultural
Plains (from 29th May to 4th June, 2017)****Multan**

Dry weather reported from Multan during the week; however, cloudiness in the morning/evening recorded as 0.1/0.0 Oktas while, average relative humidity observed as 33%. Mean day time temperature recorded as 42.4°C & for the recent week 219.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 8.3/8.9 Knots.

Lahore

Dry weather reported from Lahore during the week; however, cloudiness in the morning/evening recorded as 0.1/0.0 Oktas while, average relative humidity observed as 38%. Mean day time temperature recorded as 40.2°C & for the recent week 200 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1.4 Knots.

Zhob

Dry weather reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 0.0/0.0 Oktas while, average relative humidity observed as 39%. Mean day time temperature recorded as 39.1°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 2.1/4.3 Knots.

Murree

Dry weather reported from Murree during the week; however, cloudiness in the morning/evening recorded as 0.6/1.7 Oktas while, average relative humidity observed as 52%. Mean day time temperature recorded as 26.4°C & for the recent week 113.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.0/1.7 Knots.

D.I. Khan

Dry weather reported from D.I.Khan during the week; however, cloudiness in the morning/evening recorded as 1.3/1.3 Oktas while, average relative humidity observed as 42%. Mean day time temperature recorded as 43.1°C & for the recent week 209.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/1.7 Knots.

Peshawar

Dry weather reported from Peshawar during the week; however, cloudiness in the morning/evening recorded as 0.7/0.6 Oktas while, average relative humidity observed as 37%. Mean day time temperature recorded as 41.7°C & for the recent week 198.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.7/0.6 Knots.

Kalam

Rainfall reported as 0.5 mm from Kalam during the week; however, cloudiness in the morning/evening recorded as 0.3/2.4 Oktas while, average relative humidity observed as 44%. Mean day time temperature recorded as 28.7°C & for the recent week 100.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.0 Knots.

Gilgit

Rainfall reported as 29.0 mm from Kalam during the week; However, cloudiness in the morning/evening recorded as 1.9/5.0 Oktas while, average relative humidity observed as 30%. Mean day time temperature recorded as 38.0°C & for the recent week 165.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/9.1 Knots.

Skardu

Rainfall reported as 1.2 mm from Skardu during the week; cloudiness in the morning/evening recorded as 2.0/4.6 Oktas while, average relative humidity observed as 32%. Mean day time temperature recorded as 28.6°C & for the recent week 166.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.3 Knots.

Crop Situation for Major Agricultural Plains
(Based on data from Regional Agromet Centers)**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.

Cotton: Good condition, *Third Leaf stage*.

Lower Sindh (Tandojam)

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

Cotton (HH-906): Good condition, *Budding stage*.

Northern Balochistan (Quetta)

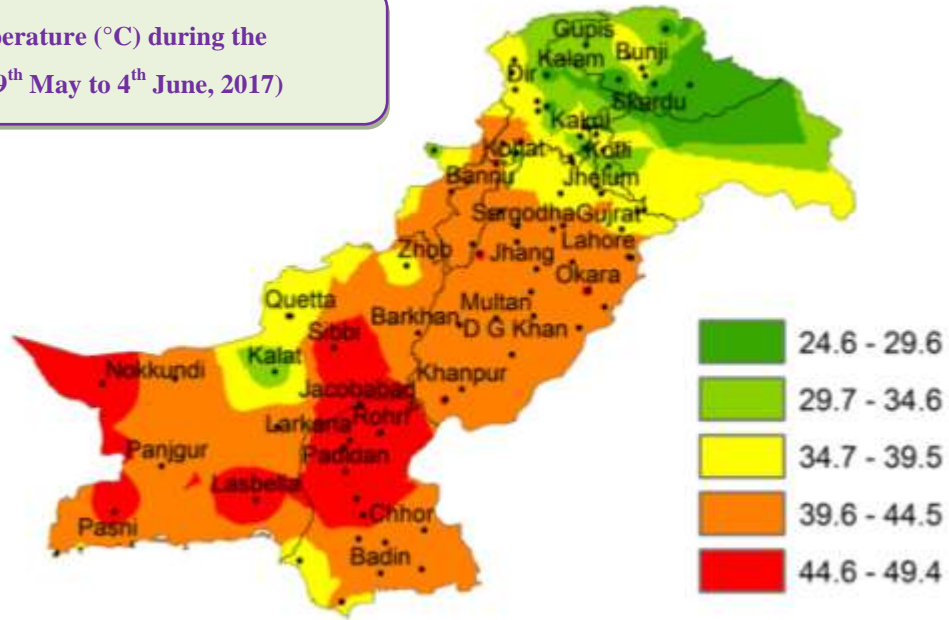
There is presently one crop (irrigated conditions) grown in the fields of RAMC Quetta.

Wheat (Local white): Harvested on 3rd June, 2017.

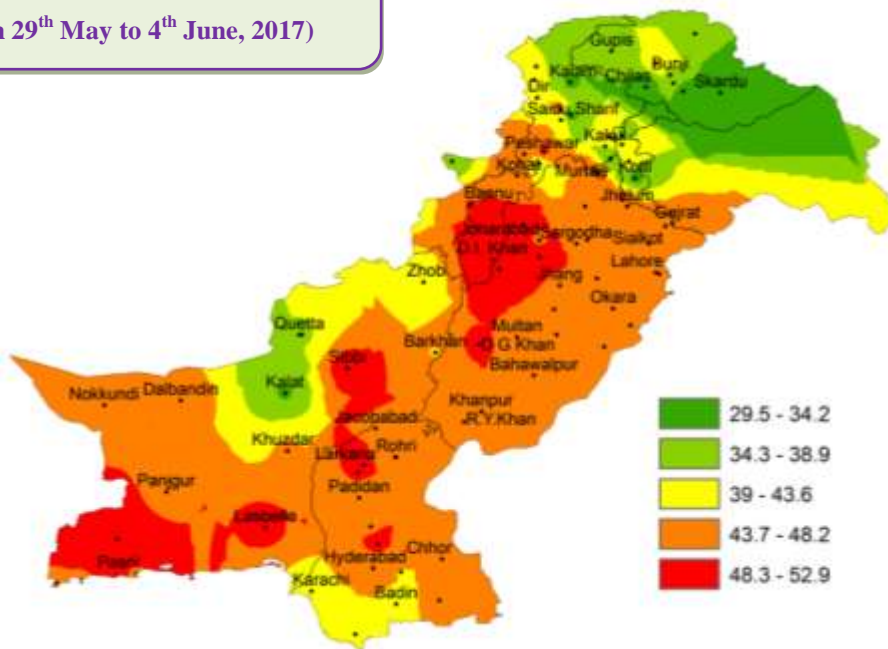
Eastern Balochistan (Usta Muhammad)

Land has been prepared for new crop.

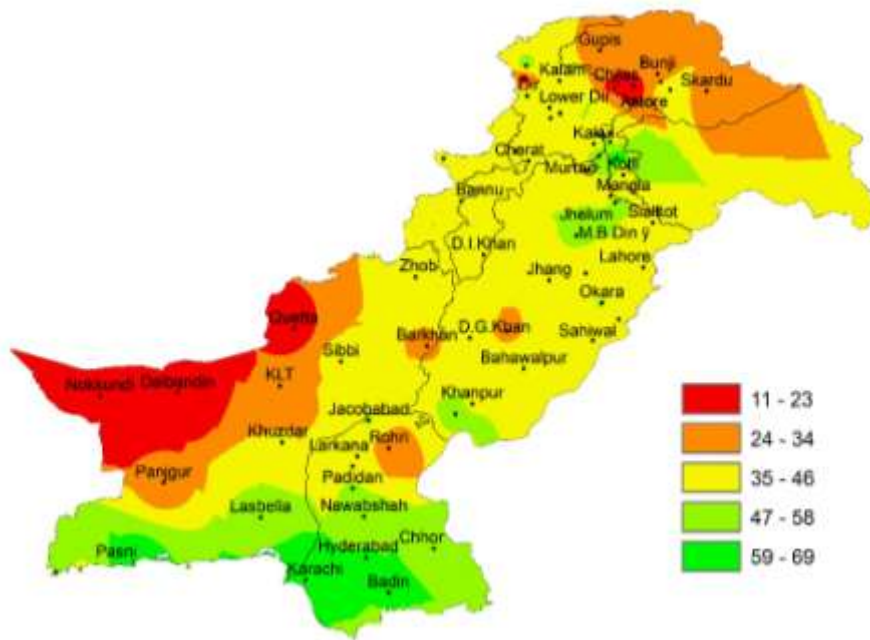
Mean Maximum Temperature (°C) during the Previous week (from 29th May to 4th June, 2017)



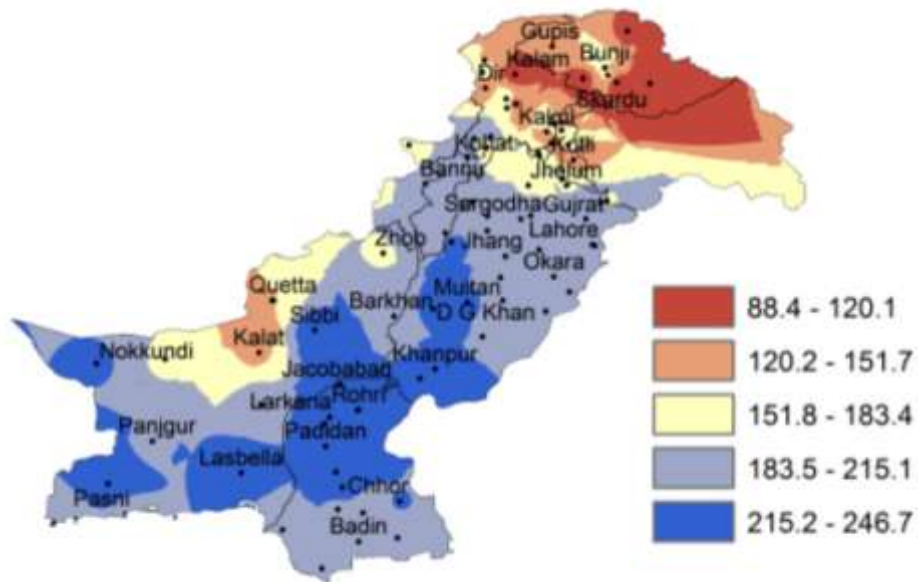
Highest Maximum Temperature (°C) during the Previous week (from 29th May to 4th June, 2017)



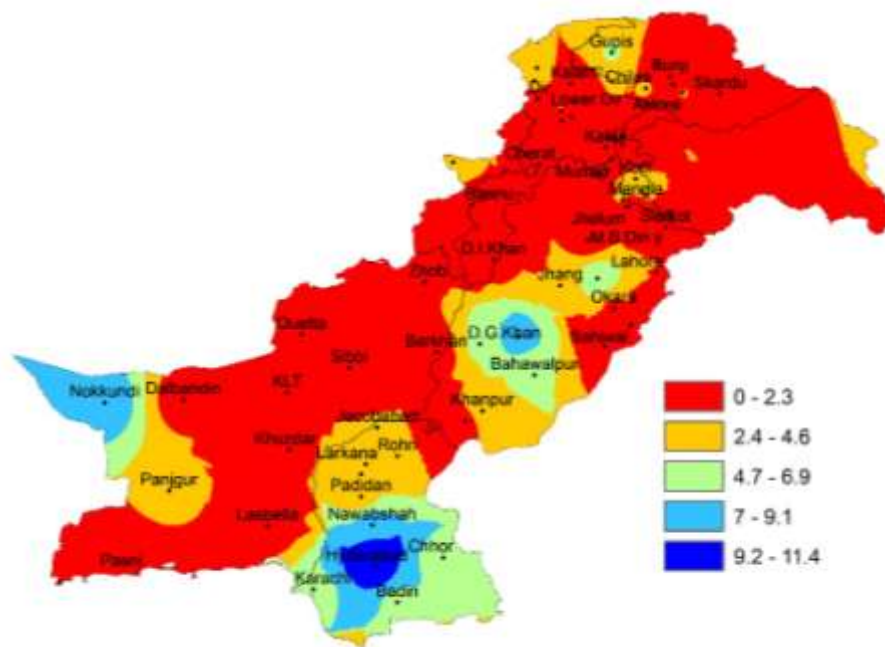
Mean Relative Humidity (%) during the Previous week (from 29th May to 4th June, 2017)



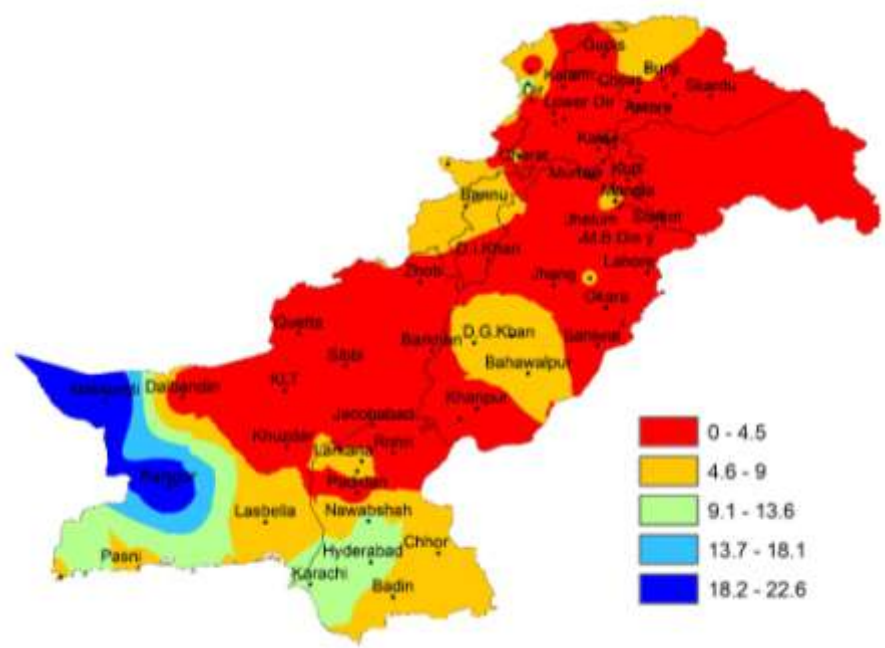
Total Growing Degree Days accumulated during the Previous week (from 29th May to 4th June, 2017)



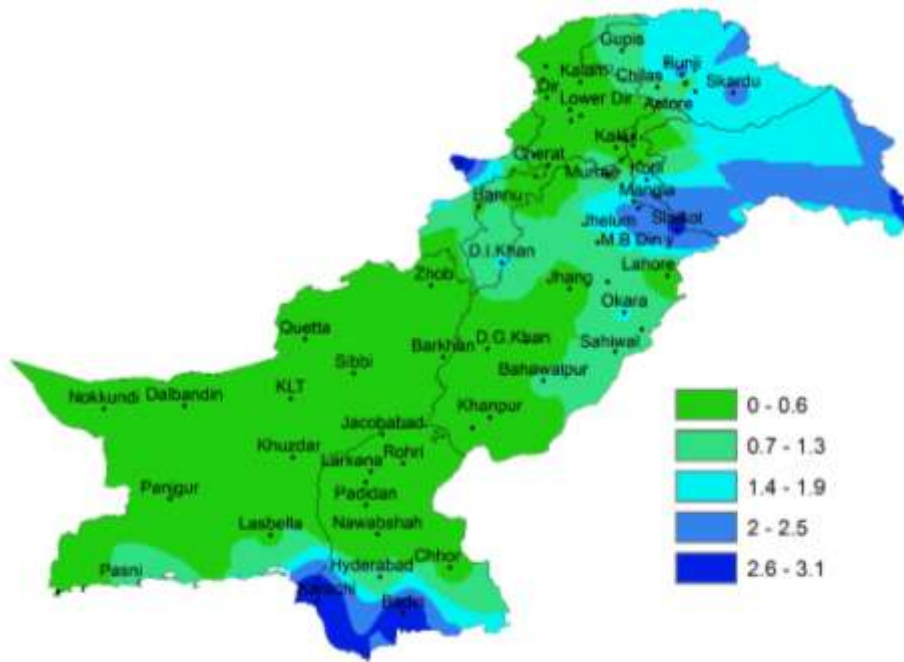
Mean Wind Speed (Knots) at 0800PST during the Previous week (from 29th May to 4th June, 2017)



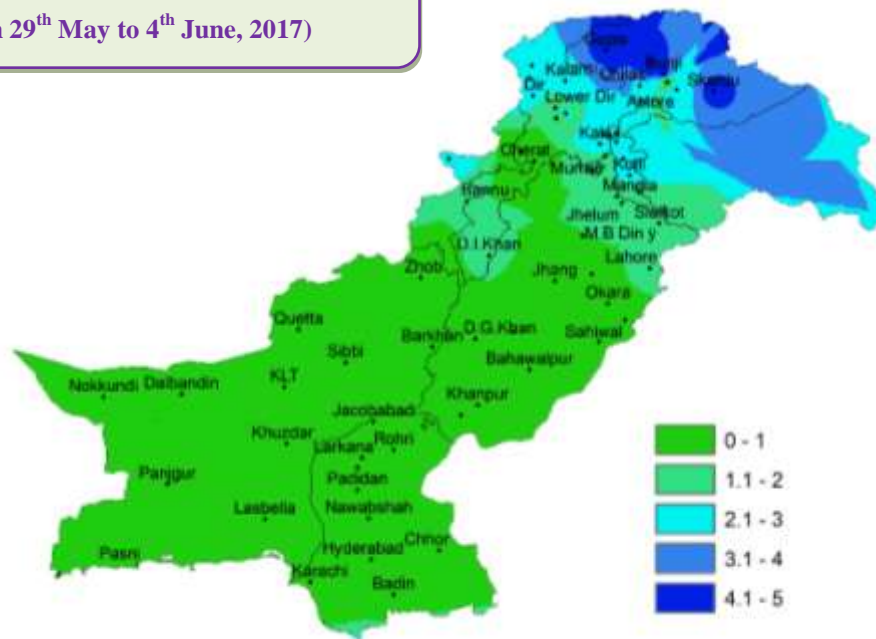
Mean Wind Speed (Knots) at 1700PST during the Previous week (from 29th May to 4th June, 2017)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (from 29th May to 4th June, 2017)



Mean Cloudiness (Oktas) at 1700PST during the Previous week (from 29th May to 4th June, 2017)



Weekly Weather Advisory for Farmers
(from 5th June to 11th June, 2017)

Continental air is prevailing over most parts of the country. A westerly wave is likely to enter upper parts of the country on Monday (evening/night) and likely to persist during next 2-3 days.

MONDAY
05-06-2017

Mainly hot and dry weather is expected in most parts of the country, while very hot weather conditions are expected over plain areas of Punjab, KP and upper Sindh during day time. However, rain-thunderstorm is expected at isolated places in Malakand, Hazara, Rawalpindi divisions, Islamabad, Gilgit-Baltistan and Kashmir during (evening/night).

TUESDAY
06-06-2017

Mainly hot and dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Malakand, Hazara, Rawalpindi divisions, Islamabad, upper FATA, Gilgit-Baltistan and Kashmir during (evening/night).

WEDNESDAY
07-07-2017

Rain-thunderstorm with gusty winds is expected at scattered places in KP, upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha divisions, Islamabad, FATA, GB & Kashmir, while at isolated places in Faisalabad, Sahiwal, Multan and D.G. Khan divisions. Hot and dry weather is expected elsewhere in the country.

THURSDAY
08-06-2017

Rain-thunderstorm with gusty winds is expected at isolated places in KP, upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha divisions), Islamabad, FATA, GB & Kashmir, while at isolated places in Faisalabad, Sahiwal, Multan and D.G. Khan divisions. Hot and dry weather is expected elsewhere in the country.

FRIDAY
09-06-2017

Rain-thunderstorm with gusty winds is expected at isolated places in KP, upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha divisions), Islamabad, FATA, GB & Kashmir. Hot and dry weather is expected elsewhere in the country.

SATURDAY
10-06-2017

Rain-thunderstorm with gusty winds is expected at isolated places in KP, upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha divisions), Islamabad, FATA, GB & Kashmir, while at isolated places in Faisalabad, Sahiwal, Multan and D.G. Khan divisions. Hot and dry weather is expected elsewhere in the country.

SUNDAY
11-06-2017

Rain-thunderstorm with gusty winds is expected at scattered places in upper KP, upper FATA, upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha divisions), Islamabad, GB & Kashmir. Hot and dry weather elsewhere in the country.

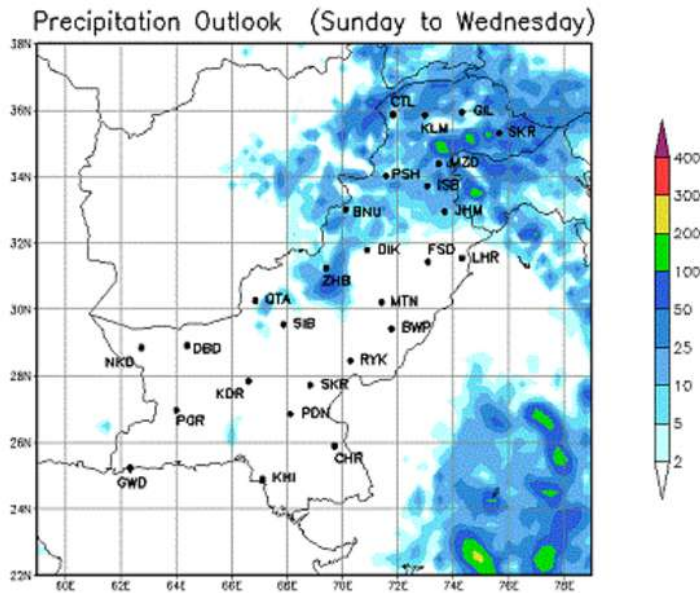
ADVISES FOR FARMERS

During the last week, light to moderate rainfall occurred mainly in upper half of the country except Sindh where dry and hot weather recorded. This may continue with almost the same pattern over northern parts of the country in coming days as well. Keeping in view the expected weather conditions following advises are suggested for farming community.

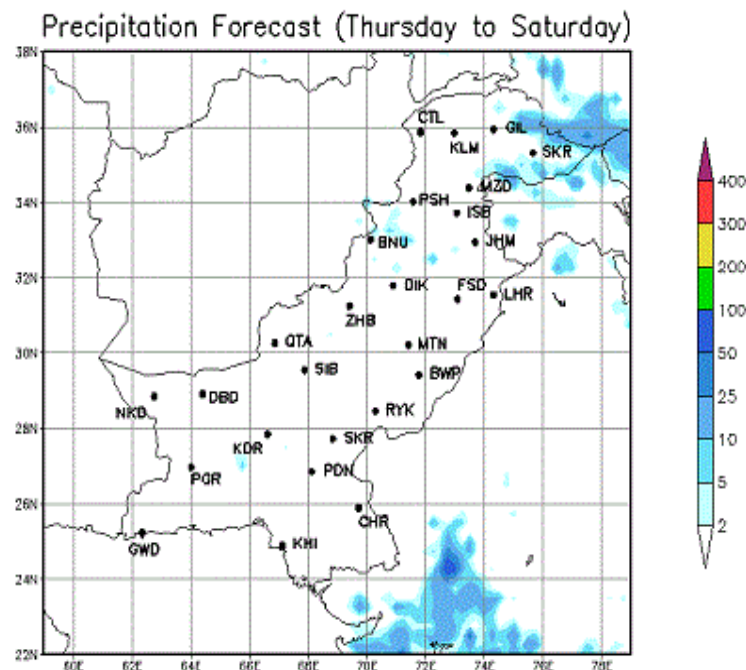
- Farmers of irrigated areas may irrigate the standing crops in the evening/night to avoid the wastage of water through evapotranspiration due to extreme hot and dry conditions.
- Farmers of peanut growing areas may sow this crop if the appropriate moisture is available in the fields.

Weather Outlook from 5th June to 11th June, 2017

The forecast from 5th to 7th June, 2017 shows that light rainfall is expected at scattered places of Northern Baluchistan, KP, northeastern Punjab, GB and Kashmir.



The outlook from 8th June to 11th June, 2017 shows that dry weather is expected in most parts of the country. However, light rainfall is expected at isolated places in lower KP, GB and Kashmir.



National Weather Data of Selected Cities
(Weekly Data from 29th May to 4th June, 2017)

Stations	Maximum/Nighttime 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	24.49	10.50	87.45	38.14	9.20	1.86	3.00	2.57	1.71
Badin	40.37	28.34	205.50	59.71	0.00	3.14	0.00	6.00	7.14
Bahawalnagar	42.71	27.57	211.00	42.79	2.00	1.14	0.43	0.57	2.57
Bahawalpur	42.20	28.79	213.45	43.36	0.01	0.71	0.57	4.57	5.14
Balakot	36.29	19.43	160.00	41.50	6.00	0.00	2.43	0.00	0.71
Bannu	41.81	22.30	189.40	34.71	0.00	0.57	1.14	0.57	8.86
Barkhan	39.71	25.71	194.00	33.17	0.00	0.00	0.43	0.57	2.86
Bunji	33.97	18.71	149.40	29.57	1.51	2.43	5.14	0.57	2.57
Cherat	31.57	21.29	150.00	40.00	24.00	0.00	0.71	2.29	2.57
Chhor	42.80	28.93	216.05	54.43	0.00	0.43	0.14	5.71	6.00
Chilas	25.29	12.21	96.25	16.71	0.50	0.86	2.71	2.57	1.43
Chitral	35.16	17.96	150.90	52.00	0.00	0.00	2.57	2.86	2.57
D.G.Khan	43.37	30.11	222.20	38.50	0.00	0.00	0.57	5.14	6.00
D.I.Khan	43.14	26.64	209.25	42.14	0.00	1.29	1.29	0.86	1.71
Dalbandin	44.21	16.43	177.25	14.86	0.00	0.00	0.00	0.57	2.86
Dir	34.46	12.36	128.85	47.07	0.00	0.00	2.43	0.00	2.71
Drosh	36.69	19.96	163.25	16.93	0.00	0.00	2.71	3.71	12.29
Faisalabad	41.36	26.96	204.10	35.89	0.00	0.86	0.57	6.86	4.86
Garidopatta	37.93	25.36	186.50	46.93	22.20	0.00	2.14	0.00	1.43
Gawader	39.29	29.36	205.25	44.43	0.00	0.43	0.43	0.86	10.57
Gilgit	38.04	19.33	165.80	30.43	29.00	1.86	5.00	1.14	9.14
Gupis	33.57	14.14	132.00	26.64	0.00	1.00	4.43	4.86	4.00

Hyderabad	42.24	27.21	208.10	58.50	0.00	0.71	0.00	11.43	10.86
Islamabad	38.10	21.36	173.10	41.43	10.00	1.14	1.00	0.29	1.43
Jacobabad	46.64	30.64	235.50	46.36	0.00	0.00	0.00	2.29	2.00
Jhang	41.93	26.84	205.70	37.29	1.00	0.29	0.00	2.57	2.86
Jhelum	39.64	22.97	184.15	48.86	22.50	2.43	1.71	0.86	2.29
Jiwani	40.43	28.43	206.00	54.07	0.00	0.00	0.00	2.29	8.57
Kakul	33.64	17.57	144.25	40.64	1.01	0.57	2.86	0.29	3.14
Kalam	28.71	10.10	100.85	44.14	0.50	0.29	2.43	0.00	2.00
Kalat	32.86	18.29	144.00	23.14	0.00	0.00	0.00	0.00	0.29
Karachi	38.03	28.99	199.55	69.07	0.01	3.14	0.57	5.71	10.00
Khanpur	43.14	28.86	217.00	45.50	0.00	0.14	0.00	4.00	3.71
Khuzdar	42.00	25.29	200.50	35.07	5.00	0.00	0.00	1.43	4.29
Kotli	29.93	15.07	122.50	41.86	2.40	1.71	2.14	4.00	1.14
Lahore	40.21	26.93	200.00	38.36	0.02	0.29	1.43	2.29	2.86
Larkana	45.93	28.33	224.90	45.71	0.00	0.00	0.00	3.14	5.14
Lasbella	45.70	29.19	227.10	51.86	0.00	0.57	0.86	0.00	6.29
Lower Dir	40.07	23.29	186.75	35.79	5.00	0.00	1.29	2.57	2.29
M.B Din	25.21	14.00	102.25	48.71	2.00	1.14	1.00	0.57	1.14
Malam Jabba	40.04	23.76	188.30	47.14	19.00	0.57	2.29	0.00	0.00
Mangla	39.41	23.01	183.50	42.57	14.00	1.71	1.43	2.57	6.86
Mir Khani	37.13	20.39	166.30	34.79	0.00	0.00	0.00	0.00	2.29
Moinjodaro	45.71	28.27	223.95	38.07	0.00	0.00	0.00	3.71	4.86
Multan(PBO)	42.44	30.27	219.50	32.71	0.00	0.14	0.00	8.29	8.86
Murree	26.44	16.04	113.70	52.36	0.00	0.57	1.71	2.00	1.71
Muzaffarabad	38.00	23.33	179.65	51.71	23.00	0.00	2.43	1.43	1.71
Nawabshah	44.86	27.86	219.50	48.21	0.00	0.00	0.00	9.14	10.00

Nokkundi	43.43	27.79	214.25	11.29	0.00	0.00	0.14	9.14	22.57
Okara	41.21	27.14	204.25	46.29	0.01	1.29	0.57	1.71	0.86
Padidan	44.93	27.71	219.25	47.36	0.00	0.00	0.00	2.86	3.14
Panjgur	43.86	26.43	211.00	26.79	0.00	0.00	0.00	3.43	20.71
Parachinar	33.97	25.07	171.65	38.64	0.00	2.86	3.00	4.14	4.71
Pasni	39.79	28.71	204.75	67.64	0.00	1.00	0.00	0.00	7.86
Pattan	28.36	12.10	106.60	32.36	3.00	0.00	1.86	0.00	0.00
Peshawar	41.67	24.96	198.20	36.50	0.00	0.71	0.57	1.43	4.86
Quetta	36.92	16.71	142.50	18.07	0.00	0.00	0.00	0.86	3.43
Rahim Yar Khan	44.54	29.59	224.45	47.79	0.00	0.00	0.00	1.14	4.29
Rawalakot	37.13	17.89	157.55	63.57	3.40	0.43	2.29	0.29	1.71
Rawalpindi	39.10	24.60	188.10	50.00	22.80	1.20	1.00	1.00	3.10
Rohri	45.21	30.71	230.75	24.93	0.00	0.00	0.00	2.29	2.00
Sahiwal	41.30	25.93	200.30	41.93	0.01	1.14	0.57	2.00	2.29
Saidu Sharif	37.43	19.79	165.25	43.29	5.00	0.00	0.86	0.00	1.14
Sialkot	39.13	24.59	188.00	43.00	4.90	2.57	2.00	1.14	3.71
Sibbi	49.43	31.07	246.75	41.15	0.00	0.00	0.00	0.33	2.86
Skardu	28.57	11.74	106.10	31.71	1.20	2.00	4.57	0.00	2.29
Tandojam	41.70	25.90	201.80	62.00	0.00	0.60	0.00	3.10	4.80
Usta.M	48.50	30.00	240.00	35.00	0.00	0.00	0.00	0.40	1.80
Zhob	39.14	22.43	180.50	38.71	0.00	0.00	0.00	2.14	4.29

*** 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)