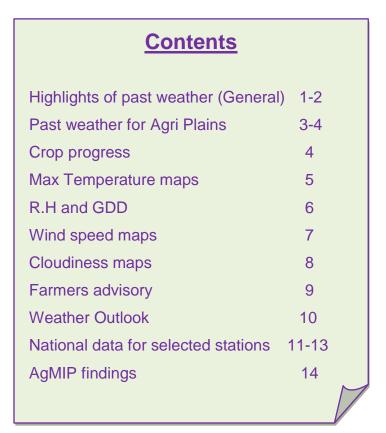
Weekly Weather and Crop Bulletin for Pakistan

NATIONAL AGROMET CENTRE PAKISTAN METEOROLOGICAL **DEPARTMENT SECTOR H-8/2,** ISLAMABAD.

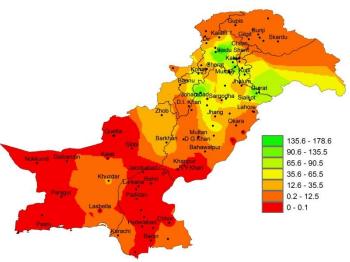
Phone: +92-51-9250299 Email: dirnamc@yahoo.com

> Rainfall Distribution (mm) during the previous Week (7th August to 13th August, 2017)



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

Editor-in-Chief: Dr. Khalid M. Malik (Director) **Editor:** Ms. Khalida Noureen (Meteorologist)



Highlights of Past Weather (7th August to 13th **August**, 2017)

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

Province wise distribution of rainfall reported as follows:

- Light to moderate rainfall reported from Punjab, Khyber Pakhtunkhwa, Gilgit-Baltistan and Azad Kashmir during the week.
- Light rainfall was reported from a few places of Baluchistan and Sindh.

Past Weather of Provinces (7th August to 13th **August**, 2017)

Punjab

Light to moderate rainfall reported from most part of Punjab during the week. Weekly maximum and minimum temperatures recorded as 37.6°C & 27.6°C respectively. For the recent week on average 193.2 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 3.9/4.6 knots. During the previous week the highest amount of rainfall was recorded as 129.4 mm at Sialkot & highest maximum temperature was recorded as 44.0°C at Bhakkar.

Balochistan

Light rainfall was reported from scattered places of Balochistan province during the week. Weekly maximum and minimum temperatures recorded as 37.4°C & 24.1°C respectively. For the recent week on average 171.4 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 2.9/6.7 knots. During the previous week the highest amount of rainfall was recorded as 26 mm at Zhob & highest maximum temperature was recorded as 44.5°C at Dalbadin.

Khyber Pakhtunkhwa

Light to moderate rainfall reported from most part of Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 34.6°C & 22.4°C respectively. For the recent week on average 164.8 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 64% and wind speed in the morning/evening recorded as 0.7/4.6 knots. During the previous week the highest amount of rainfall was recorded as 181.0 mm at Malamjabba & highest maximum temperature was recorded as 42.5 °C at D.I. Khan.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall reported from most part of Gilgit-Baltistan & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 33.0°C & 20.4°C respectively. For the recent week on average 143.7 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 0.9/3.9 knots. During the previous week the highest amount of rainfall was recorded as 68.4 mm at Kotli & highest maximum temperature was recorded as 40.5°C at Chilas.

Sindh

Light rainfall reported from two stations of Sindh during the week. Weekly maximum and minimum temperatures recorded as 37.1°C & 27.0°C respectively. For the recent week, on average 192.9 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 65% and wind speed in the morning/evening recorded as 5.1/6.3 knots. During the previous week the highest amount of rainfall was recorded as 1.23 mm at Karachi & highest maximum temperature was recorded as 43.6°C at Dadu.

Past Weather for Major Agricultural Plains (7th August to 13th August, 2017)

Rawalpindi (Potohar region)

Rainfall reported as 123.2 mm from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 3.7/3.3 Oktas while, average relative humidity observed as 69%. Mean day time temperature recorded as 35.5°C & for the recent week 176.2 growing degree accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1.0 knots.

Faisalabad (Central Punjab)

Rainfall reported as 18.3 mm from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 1.0/2.7 Oktas while, average relative humidity observed as 58%. Mean day time temperature recorded as 39.1°C & for the recent week 203.8 growing degree accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/2.0 knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 4.0/3.0 Oktas while, average relative humidity observed as 76%. Mean day time temperature recorded as 35.3°C & for the recent week 175.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 4.0/4.2 knots.

Usta Muhammad (Eastern Balochistan)

Dry weather reported from Usta Muhammad during week; however, cloudiness the morning/evening recorded 0.0/0.0 Oktas while, average relative humidity observed as 75%. Mean day time temperature recorded as 37.9°C & for the week 199.2 growing degree accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.5/2.5 knots.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 0.0/1.4 Oktas while, average relative humidity observed as 26.0%. Mean day time temperature recorded as 35.2°C & for the recent week 155.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.2/3.8 knots.

Past Weather for Sub-Regional Agricultural Plains (7th August to 13th August, 2017)

Multan

Rainfall reported as 0.01 mm from Multan during week: however. cloudiness morning/evening recorded as 1.1/1.3 Oktas while, average relative humidity observed as 61%. Mean day time temperature recorded as 37.6°C & for the recent week 199.2 growing degree accumulated by the end of last week. Wind speed recorded in the morning/evening as 10.0/10.9 knots.

Lahore

Rainfall reported as 6.4 mm from Lahore during the week; however, cloudiness in the morning/evening recorded as 2.3/4.1 Oktas while, average relative humidity observed as 67%. Mean day time temperature recorded as 37.0°C & for the recent week 193.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 3.4/2.5 knots.

Zhob

Rainfall reported as 26.0 mm from Zhob during the week; however, cloudiness in the morning/evening recorded as 2.3/3.3 Oktas while, average relative humidity observed as 44%. Mean day time temperature recorded as 38.3°C & for the recent week 169.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 5.0/5.0 knots.

Murree

Rainfall reported as 14.6 mm from Murree during cloudiness week; however, morning/evening recorded as 2.6/6.6 Oktas while, average relative humidity observed as 87%. Mean day time temperature recorded as 24.2°C & for the recent week 106.2 growing degree accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/1.4 knots.

D.I. Khan

Rainfall reported as 0.01 mm from D.I.Khan during week: however, cloudiness in the morning/evening recorded as 3.4/1.9 Oktas while, average relative humidity observed as 72%. Mean day time temperature recorded as 41.4°C & for the recent week 210.0 growing degree accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/2.0 knots.

Peshawar

Rainfall reported as 36.01 mm from Peshawar during the week; however, cloudiness in the morning/evening recorded as 4.0/5.0 Oktas while, average relative humidity observed as 73%. Mean day time temperature recorded as 36.4°C & for the recent week 187.3 growing degree accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/12.0 knots.

Kalam

Rainfall reported as 13.0 mm from Kalam during week: however, cloudiness morning/evening recorded as 2.1/5.1 Oktas while, average relative humidity observed as 68%. Mean day time temperature recorded as 28.1°C & for the recent week 113.5 growing degree accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/6.3 knots.

Gilgit

Rainfall reported as 1.62 mm from Gilgit during the week; However, cloudiness in the morning/evening recorded as 4.7/5.6 Oktas while, average relative humidity observed as 57%. Mean day time temperature recorded as 34.3°C & for the recent week 152.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/5.8 knots.

Skardu

Rainfall reported as 1.81 mm from Skardu during week; However, cloudiness morning/evening recorded as 3.9/6.9 Oktas while, average relative humidity observed as 53%. Mean day time temperature recorded as 30.4°C & for the week 127.8 recent growing degree accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/5.1 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, flowering stage completed.

Lower Sindh (Tandojam)

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

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

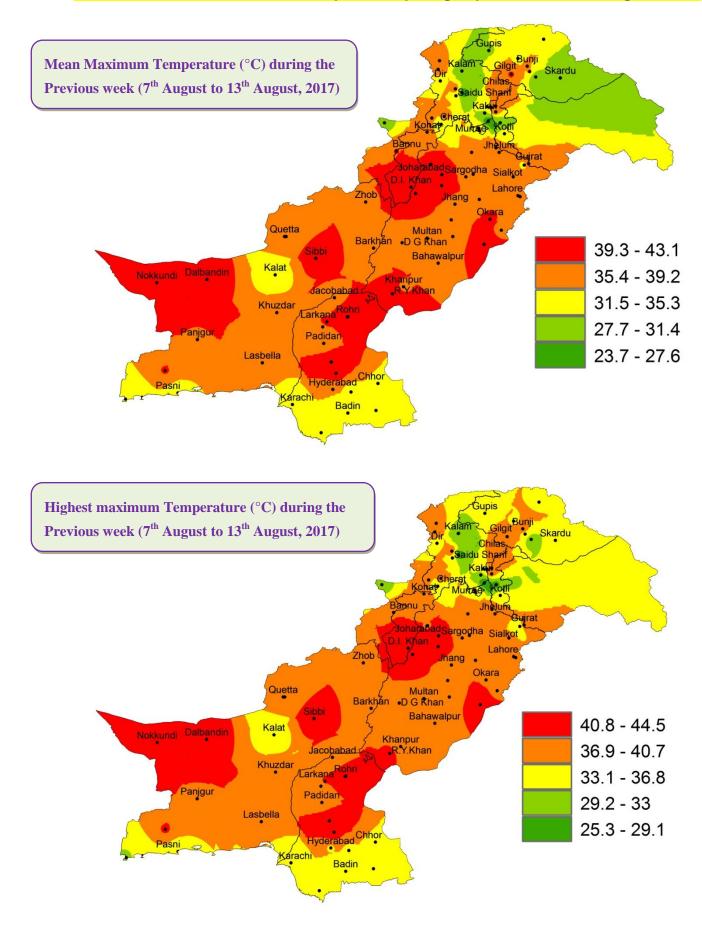
Northern Baluchistan (Quetta)

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

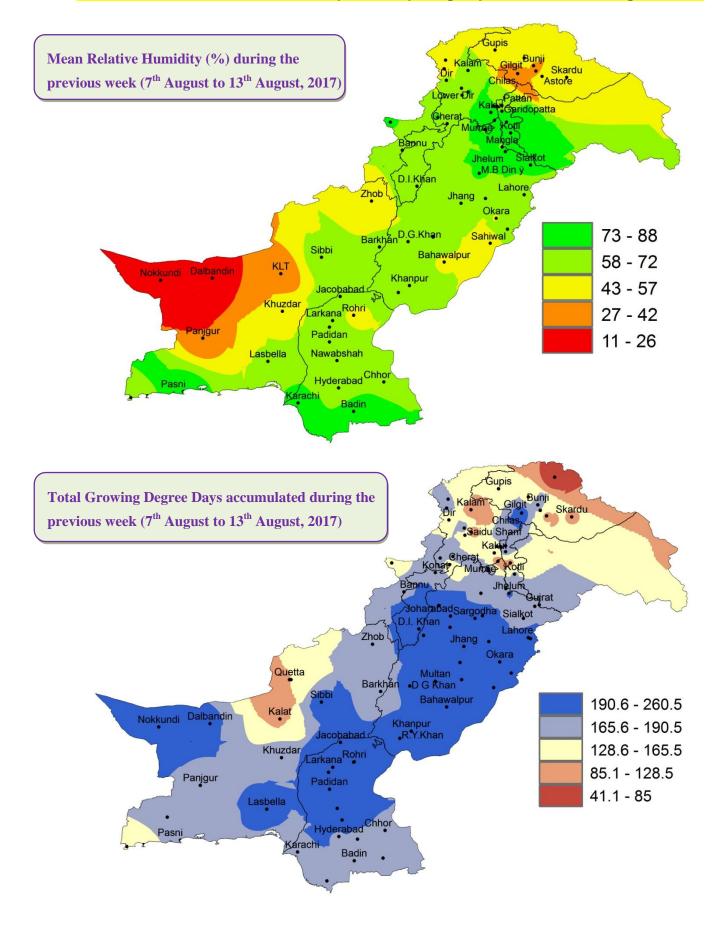
Eastern Baluchistan (Usta Muhammad)

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

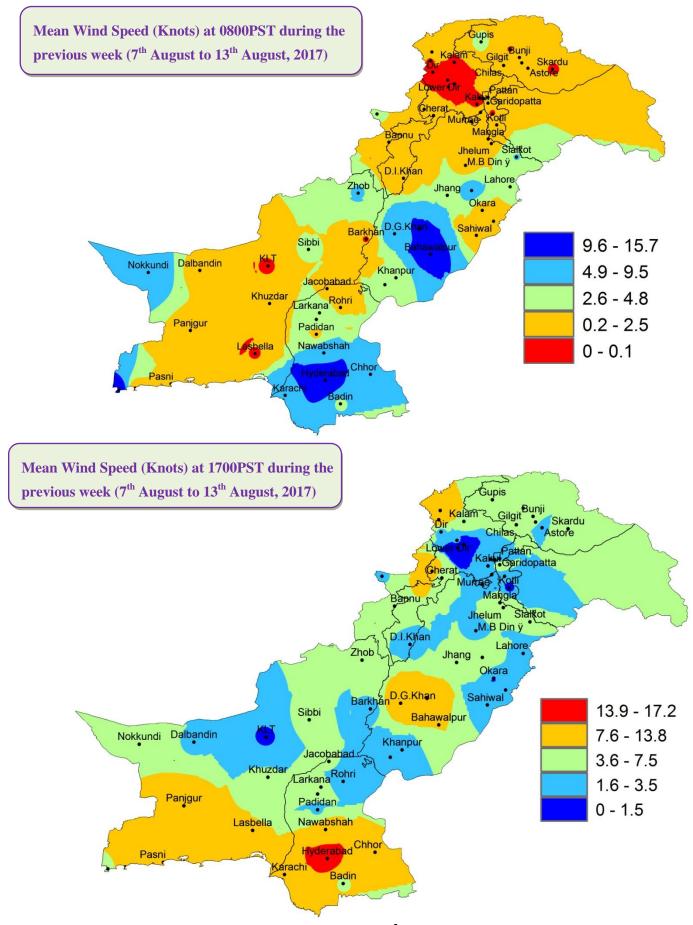
Rice: Good condition, third leaf stage.



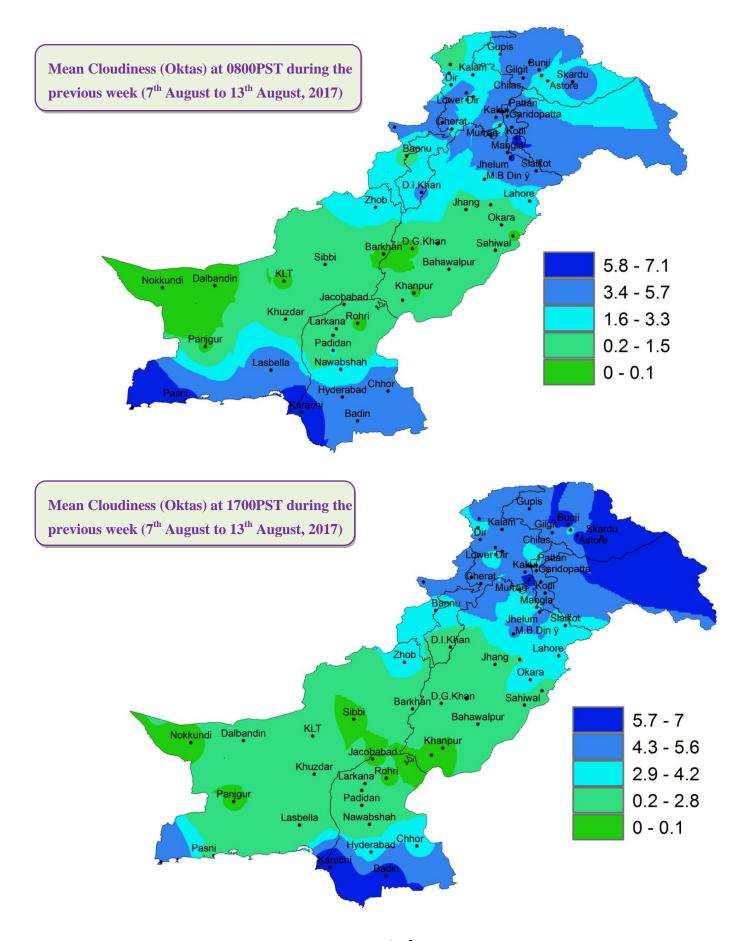
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Weekly Weather Advisory for Farmers (15th July to 21st August, 2017)

Seasonal low lies over north-east Balochistan. Moist monsoon currents are penetrating upper parts of the country and likely to persist during 24 to 48 hours. A westerly wave is also affecting upper parts of the country.

TUESDAY (15-08-2017)

Mainly hot and dry weather is expected in most part of the country. However, rain-thunderstorm is expected at few places in Malakand division and Gilgit-Baltistan.

WEDNESDAY (16-08-2017)

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

THURSDAY (17-08-2017)

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

FRIDAY (18-08-2017)

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

SATURDAY (19-08-2017)

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

SUNDAY (20-08-2017)

Mainly hot and dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Rawalpindi, Malakand, Hazara, Gujranwala, Peshawar, Mirpurkhas divisions, Islamabad, upper FATA, Gilgit-Baltistan and Kashmir.

MONDAY (21-08-2017)

Rain-thunderstorm is expected at isolated places in upper KP, upper Punjab, Islamabad, upper FATA, Multan, D.G.Khan, Mirpurkhas, Kalat divisions and Kashmir. Hot and dry weather is expected elsewhere in the country.

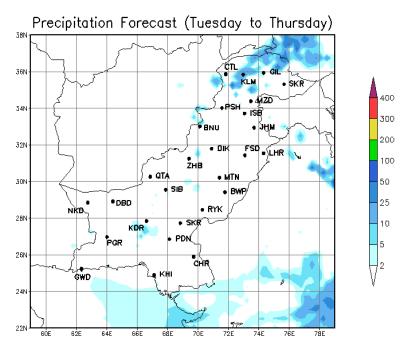
ADVISES FOR FARMERS

During the last week, light to moderate rainfall occurred in most of the agricultural plains of the country. In the coming days, mainly hot and very humid weather is expected in most parts of the country. However, rainfall is expected at few places of northern areas of Pakistan. Keeping in view the expected weather conditions following advises are suggested for farming community.

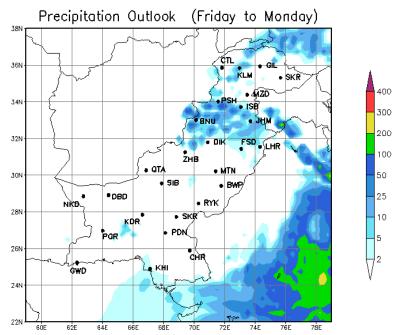
- Pest/viral attacks and more weeds growth are expected after consistent rains in standing crops.
 Farmers are therefore advised to take in time precautionary measures in this regard.
- Farmers of irrigated areas may irrigate the standing crops as per requirement in accordance with the expected weather conditions.

Weather Outlook from 15th August to 21st August, 2017

The outlook from 15th August to 17th August, 2017 shows that light rainfall is expected at isolated places of KP and GB.



The outlook from 18th to 21st August, 2017 shows that light to moderate rainfall is expected at scattered places of lower KP, GB, Kashmir, north & northeastern parts of Punjab and light rainfall at the coastal belt of Sindh.



National Weather Data of Selected Cities (7th August to 13th August, 2017)

Stations	Maximum/Nighttime Temperature (°C)		Growing Degree Days	Relative Humidity (%)	Rainfall (mm)	Cloudiness (Oktas) 0800	Cloudiness (Oktas) 1700	Wind Speed (Knots)	Wind Speed (Knots)
	Mean	highest				PST	PST	0800 PST	1700 PST
Astore	27.3	30.0	114.5	48	1.0	3.3	6.3	1.4	3.3
Badin	33.4	35.0	174.5	75	0.0	5.0	6.5	4.3	7.0
Bahawalnagar	41.1	42.5	206.3	54	0.0	1.4	2.4	2.0	1.8
Bahawalpur	38.5	39.1	199.6	56	0.0	0.6	0.9	12.0	7.5
Balakot	33.4	34.5	155.8	77	72.6	3.9	4.5	0.0	3.6
Bannu	39.3	40.6	189.1	60	20.0	1.0	3.5	0.6	6.5
Barkhan	36.8	37.5	173.5	60	23.0	0.0	1.4	0.0	2.0
Bunji	35.9	39.4	177.6	41	0.0	5.6	7.0	1.1	3.8
Cherat	30.8	33.5	143.0	63	12.0	3.1	4.8	2.3	4.0
Chhor	35.0	36.4	181.6	72	0.0	4.3	4.0	4.9	7.5
Chilas	39.4	40.5	199.8	30	6.0	4.0	5.1	2.0	5.3
Chitral	36.6	38.7	166.3	56	2.0	1.0	4.5	0.9	8.3
D.G.Khan	38.1	39.5	197.9	61	7.0	0.0	1.6	6.9	12.0
D.I.Khan	41.4	42.5	210.0	72	0.0	3.4	1.9	0.6	2.0
Dalbandin	43.1	44.5	193.3	18	0.0	0.0	0.9	1.1	2.8
Dir	33.1	35.0	145.8	62	19.0	3.3	5.0	0.0	2.3
Drosh	37.5	39.0	173.2	40	3.4	1.6	3.3	0.0	11.8
Faisalabad	39.1	40.0	203.8	58	18.3	1.0	2.7	1.7	2.0
Garidopatta	35.8	37.2	174.5	78	27.9	4.6	4.9	0.3	5.8
Gawader	33.7	34.0	151.3	71	0.0	6.7	4.9	0.0	10.0
Gilgit	34.3	36.0	152.8	57	1.6	4.7	5.6	0.0	5.8
Gupis	31.0	34.0	135.0	44	7.6	3.3	4.6	2.9	6.3
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Hyderabad	35.4	36.5	180.8	68	0.0	4.3	3.9	15.7	17.3	
Islamabad	34.8	36.0	172.3	72	57.0	3.7	3.5	0.6	1.5	
Jacobabad	37.8	38.5	197.3	66	0.0	0.3	0.0	2.0	3.8	
Jhang	38.1	39.0	202.0	63	29.6	0.7	1.9	3.7	5.1	
Jhelum	37.4	38.5	192.4	77	20.0	5.9	4.5	2.0	3.6	
Jiwani	32.2	32.5	164.5	69	0.0	6.6	4.9	15.1	6.3	
Kakul	30.6	31.5	143.4	80	71.0	4.0	5.4	0.0	2.8	
Kalam	28.1	29.0	113.5	68	13.0	2.1	5.1	0.0	6.3	
Kalat	32.4	34.0	124.0	28	0.0	0.0	0.4	0.0	1.3	
Karachi	32.6	33.5	174.2	76	1.2	7.1	7.0	7.4	9.8	
Khanpur	39.0	39.5	199.7	60	0.0	0.0	0.0	3.4	2.3	
Khuzdar	37.3	38.5	184.4	49	13.0	0.9	2.5	0.3	3.8	
Kotli	33.6	35.0	168.3	75	68.4	6.0	5.5	1.7	1.0	
Lahore	37.0	38.0	193.8	67	6.4	2.3	4.1	3.4	2.5	
Larkana	39.3	40.8	201.5	62	0.0	1.0	1.0	3.4	3.5	
Lasbella	38.4	39.0	195.8	60	0.0	5.0	1.1	0.0	8.0	
Lower Dir	38.4	40.0	183.5	58	13.0	4.7	4.6	0.0	2.4	
M.B Din	37.3	38.8	192.3	74	63.6	2.9	4.3	1.1	2.3	
Malam Jabba	23.4	25.0	102.0	75	181.0	2.6	5.1	0.0	0.0	
Mangla	36.1	37.5	185.1	72	39.6	5.0	3.7	1.7	6.9	
Mir Khani	35.8	36.0	167.5	38	4.0	0.4	2.7	1.1	3.6	
Moinjodaro	39.1	40.0	200.3	63	0.0	0.0	0.0	3.7	4.9	
Multan(PBO)	37.6	39.0	199.2	61	0.0	1.1	1.3	10.0	10.9	
Murree	24.2	25.5	106.2	87	114.6	2.6	6.6	0.6	1.4	
Muzaffarabad	35.3	36.5	168.0	69	36.0	4.6	3.7	0.0	2.0	
Nawabshah	40.4	42.5	200.0	58	0.0	1.7	2.1	8.0	12.0	

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Nokkundi	42.2	44.0	209.5	11	0.0	0.0	0.0	9.1	6.9
Okara	39.4	40.5	207.3	57	1.8	0.3	4.1	1.4	1.4
Padidan	38.0	39.0	191.5	67	0.0	1.6	1.3	2.0	2.6
Panjgur	38.9	40.0	183.5	26	0.0	0.0	0.0	1.1	12.0
Parachinar	29.4	30.5	138.8	74	9.0	4.6	5.1	3.0	3.0
Pasni	33.1	33.5	171.3	88	0.0	6.0	2.0	0.4	8.4
Pattan	37.9	39.5	188.3	56	3.0	3.4	4.1	0.7	2.1
Peshawar	36.4	37.5	187.3	73	36.0	4.0	5.0	1.4	12.0
Quetta	35.2	36.6	155.6	26	0.0	0.0	1.4	1.2	3.8
Rahim Yar Khan	40.6	41.2	204.5	60	0.0	0.9	0.0	2.6	1.7
Rawalakot	27.3	28.0	121.8	86	58.8	3.9	4.7	0.0	2.6
Rawalpindi	35.5	37.0	176.2	69	123.2	3.7	3.3	0.3	1.0
Rohri	40.4	41.0	204.0	54	0.0	0.0	0.0	2.3	2.6
Sahiwal	38.8	40.2	197.2	62	0.0	0.0	1.6	1.7	2.6
Saidu Sharif	34.7	37.0	163.9	65	105.0	2.7	3.4	0.0	0.0
Sialkot	35.0	36.0	178.3	74	129.4	3.9	4.0	4.9	4.0
Sibbi	41.9	44.0	205.4	66	0.0	1.3	0.0	2.9	4.3
Skardu	30.4	35.8	127.8	53	1.8	3.9	6.9	0.0	5.1
Tandojam	35.3	37.0	175.3	76	0.0	4.0	3.0	4.0	4.2
Usta.M	37.9	38.4	199.2	75	0.0	0.0	0.0	2.5	2.5
Zhob	38.3	39.0	169.5	44	26.0	2.3	3.3	5.0	5.0

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^{***} 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 69-2040 کے دوران درجہ حرارت میں قابل ذکراضافہ ہوسکتا ہے۔ جو کہ دن کے وقت 2.8° دوران درجہ حرارت میں قابل ذکراضافہ ہوسکتا ہے۔ جو کہ دن کے وقت 2.8° دوران درجہ حرارت میں قابل ذکراضافہ ہوسکتا ہے۔ جو کہ دن کے وقت 2.8° دوران درجہ حرارت میں
 - 2۔ گرمیوں کی بارش میں 25 فیصد اضا فہ اور سردیوں کی بارش میں 12 فیصد تک کمی کا امرکان ہے۔
 - 3۔ مندرجہ بالاموسم تغیرات کی وجہ سے دھان کی پیداوار میں 17 فیصد اور گندم کی پیداوار میں 14 فیصد تک کمی ہوسکتی ہے۔
 - 4۔ اگرموسی تغیرات کامناسب بندوبست نہ کیا گیا۔ تو کسانوں کی اکثریت کومعاشی نقصان کا سامنا کرنا پڑے گا۔
- 5۔ موتی تغیرات کے سدّیاب (بذریعینی ٹیکنالوجی کااستعال اور بہترنظم ونسق) سے غربت میں کمی اور کسانوں کی زندگی میں خوشحالی لائی جاسکتی ہے۔

(ایگمپ پاکتان 2012-2014)