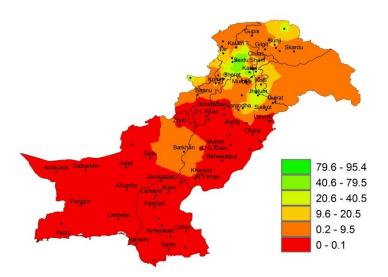
Weekly Weather and Crop Bulletin for Pakistan

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

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Rainfall Distribution (mm) during the previous Week (14th August to 20th August, 2017)



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Highlights of Past Weather (14th August to 20th 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 most parts of upper Punjab, Khyber Pakhtunkhwa, Gilgit-Baltistan and Azad Kashmir during the week.
- Light rainfall was reported from only two places of Baluchistan.
- Light rainfall recorded at a single station of Sindh.

Past Weather of Provinces (14th August to 20th **August**, 2017)

Punjab

Light to moderate rainfall reported from Punjab during the week. Weekly maximum and minimum temperatures recorded as 36.6°C & 25.8°C respectively. For the recent week on average 183.7 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 2.0/3.0 knots. During the previous week the highest amount of rainfall was recorded as 35 mm at Jhelum & highest maximum temperature was recorded as 44.0°C at Bhakkar.

Balochistan

Light rainfall was reported from two places of Balochistan province during the week. Weekly maximum and minimum temperatures recorded as 36.5°C & 22.3°C respectively. For the recent week on average 173.2 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 46% and wind speed in the morning/evening recorded as 1.3/5.3 knots. During the previous week the highest amount of rainfall was recorded as 5.0 mm at Lasbella & highest maximum temperature was recorded as 45.0°C at Sibbi.

Khyber Pakhtunkhwa

Light to moderate rainfall reported from most part of Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 33.5°C & 19.6°C respectively. For the recent week on average 151.1 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 61% and wind speed in the morning/evening recorded as 0.6/3.5 knots. During the previous week the highest amount of rainfall was recorded as 97.0 mm at Malamjabba & highest maximum temperature was recorded as 42.0 °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 30.8°C & 17.3°C respectively. For the recent week on average 126.6 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 0.8/3.2 knots. During the previous week the highest amount of rainfall was recorded as 30.0 mm at Garhi Dopatta & highest maximum temperature was recorded as 41.0°C at Chilas.

Sindh

Light rainfall recorded at a single station of Sindh during the week. Weekly maximum and minimum temperatures recorded as 37.6°C & 26.4°C respectively. For the recent week, on average 193.2 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 4.7/5.3 knots. During the previous week the highest amount of rainfall was recorded as 0.01 mm at Karachi & highest maximum temperature was recorded as 43.8°C at Dadu.

Past Weather for Major Agricultural Plains (14th August to 20th August, 2017)

Rawalpindi (Potohar region)

Rainfall reported as 6.4 mm from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 1.1/2.1 Oktas while, average relative humidity observed as 69%. Mean day time temperature recorded as 35.2°C & for the recent week growing degree 172.7 accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.5/1.4 knots.

Faisalabad (Central Punjab)

Rainfall reported as 18.3 mm from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 1.7/0.6 Oktas while, average relative humidity observed as 62%. Mean day time temperature recorded as 37.6°C & for the recent week 186.3 growing degree accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.5/1.0 knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 0.9/1.9 Oktas while, average relative humidity observed as 66%. Mean day time temperature recorded as 37.6°C & for the recent week 186.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.8/3.2 knots.

Usta Muhammad (Eastern Balochistan)

Dry weather reported from Usta Muhammad during week; however, cloudiness the morning/evening recorded 1.0/1.7 Oktas while, average relative humidity observed as 67%. Mean day time temperature recorded as 37.2°C & for the week growing degree 194.2 accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.3/5.1 knots.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 0.0/1.8 Oktas while, average relative humidity observed as 24.0%. Mean day time temperature recorded as 33.4°C & for the recent week 136.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.8/3.1 knots.

Past Weather for Sub-Regional Agricultural Plains (14th August to 20th August, 2017)

Multan

Dry weather reported from Multan during the week; however, cloudiness in the morning/evening recorded as 1.0/0.3 Oktas while, average relative humidity observed as 60%. Mean day time temperature recorded as 37.7°C & for the recent week 193.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 6.0/7.1 knots.

Lahore

Rainfall reported as 0.01 mm from Lahore during week; however, cloudiness morning/evening recorded as 1.6/3.5 Oktas while, average relative humidity observed as 67%. Mean day time temperature recorded as 36.0°C & for the recent week 184.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/2.8 knots.

Zhob

Dry weather reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 0.7/0.9 Oktas while, average relative humidity observed as 37%. Mean day time temperature recorded as 36.3°C & for the recent week 166.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 4.3/4.7 knots.

Murree

Rainfall reported as 24.0 mm from Murree during week: however. cloudiness the morning/evening recorded as 2.1/5.4 Oktas while, average relative humidity observed as 79%. Mean day time temperature recorded as 23.7°C & for the recent week 98.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/1.4 knots.

D.I. Khan

Dry weather reported from D.I.Khan during the week; however, cloudiness in the morning/evening recorded as 1.7/1.5 Oktas while, average relative humidity observed as 67%. Mean day time temperature recorded as 39.1°C & for the recent week 195.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/1.8 knots.

Peshawar

Rainfall reported as 0.01 mm from Peshawar during the week; however, cloudiness in the morning/evening recorded as 0.9/2.3 Oktas while, average relative humidity observed as 66%. Mean day time temperature recorded as 35.8°C & for the recent week 177.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/3.0 knots.

Kalam

Rainfall reported as 8.0 mm from Kalam during the week; however, cloudiness in the morning/evening recorded as 1.0/5.0 Oktas while, average relative humidity observed as 64%. Mean day time temperature recorded as 26.6°C & for the recent week 93.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.6 knots.

Gilgit

Rainfall reported as 6.8 mm from Gilgit during the week; However, cloudiness in the morning/evening recorded as 3.4/5.0 Oktas while, average relative humidity observed as 57%. Mean day time temperature recorded as 31.6°C & for the recent week 130.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/11.0 knots.

Skardu

Rainfall reported as 0.21 mm from Skardu during the week; However, cloudiness in the morning/evening recorded as 3.1/5.6 Oktas while, average relative humidity observed as 52%. Mean day time temperature recorded as 28.4°C & for the recent week 113.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.7 knots.

<u>Crop Situation for Major Agricultural Plains</u> (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, *Boll Opening* stage.

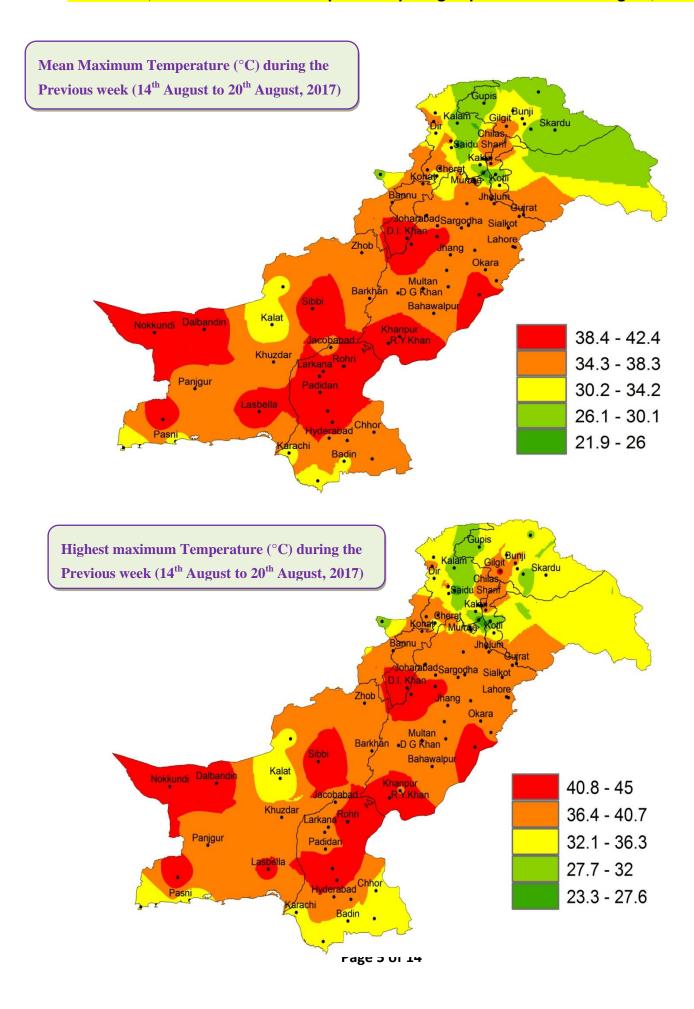
Northern Baluchistan (Quetta)

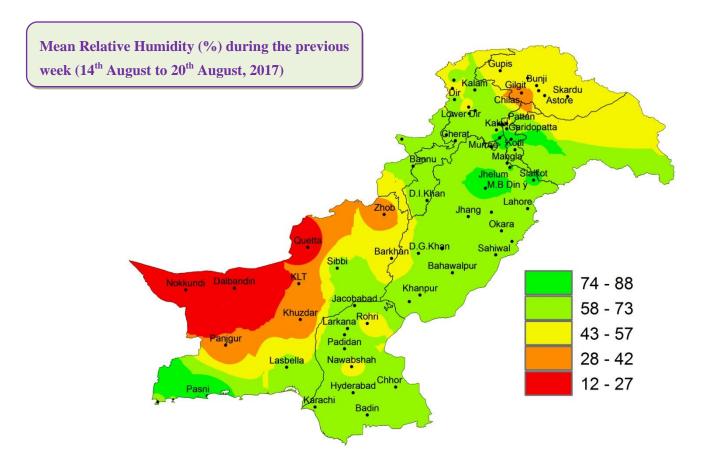
There is presently no crop grown in the fields of RAMC Quetta.

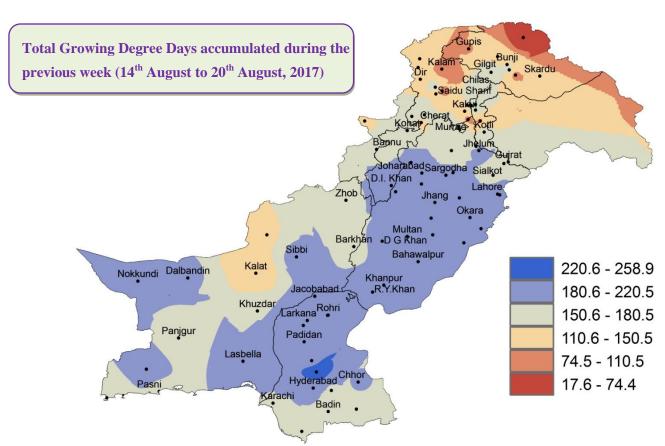
Eastern Baluchistan (Usta Muhammad)

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

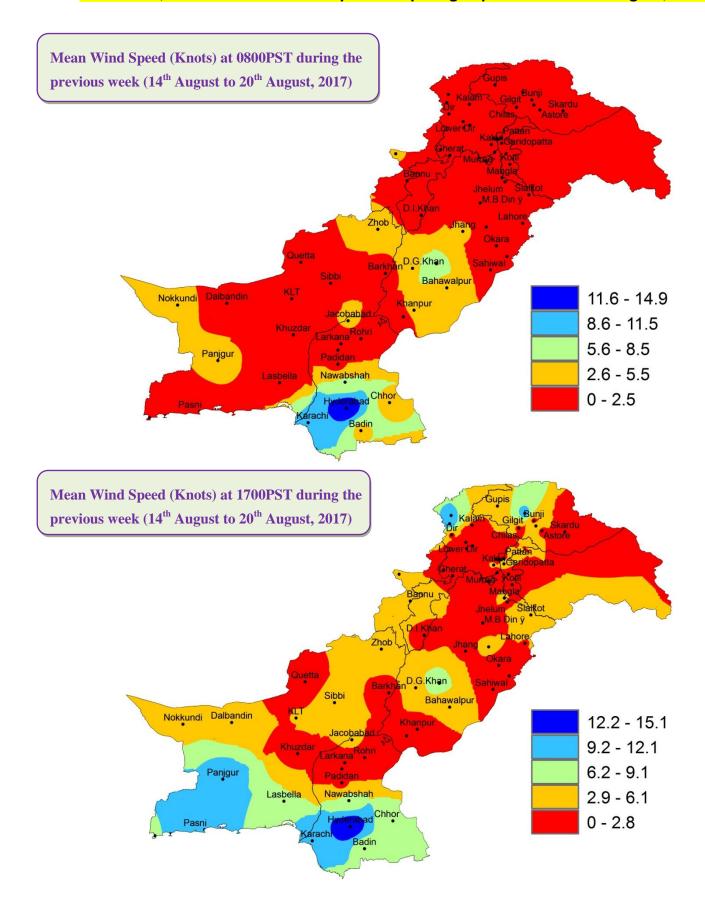
Rice: Good condition, *Third Leaf* stage.



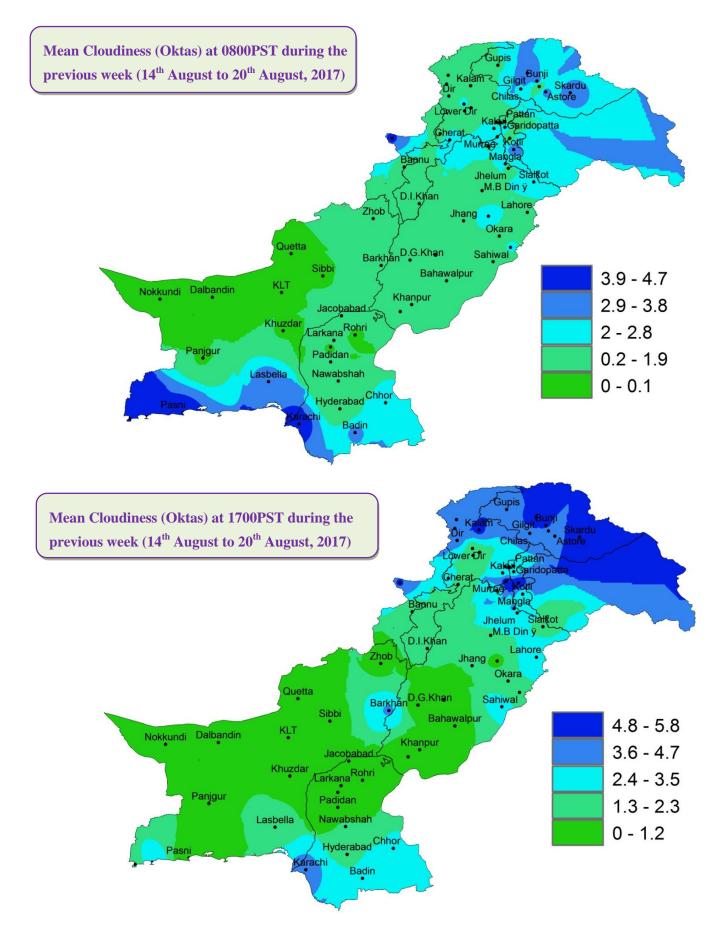




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Weekly Weather Advisory for Farmers (21st August to 27th August, 2017)

Weak seasonal low lies over Balochistan. Monsoon currents from Bay of Bengal are penetrating northeastern parts of the country. A westerly wave is likely to affect upper parts of the country during next few days.

MONDAY (21-08-2017)

Mainly hot and humid weather is expected in most part of the country. However, rain-thunderstorm with gusty winds is expected at isolated places in Khyber-Pakhtunkhwa. lower Sindh. Rawalpindi, Gujranwala, Lahore, Sargodha divisions, Islamabad, FATA, Gilgit-Baltistan and Kashmir.

TUESDAY (22-08-2017)

Mainly hot and humid weather is expected in most part of the country. However, rain-thunderstorm with gusty winds is expected at isolated places in upper Khyber-Pakhtunkhwa, lower Sindh, upper Punjab (Rawalpindi, Guiranwala, Lahore, Sargodha, Faisalabad divisions), Islamabad, FATA, Gilgit-Baltistan, Kashmir & Kalat division.

WEDNESDAY (23-08-2017)

Rain-thunderstorm is expected at scattered places in Khyber-Pakhtunkhwa, Zhob, Rawalpindi division, Islamabad, FATA, Kashmir, while at isolated places in Mirpurkhas, Gujranwala and Lahore divisions. Hot and humid weather is expected elsewhere in the country.

THURSDAY (24-08-2017)

Mainly hot and humid weather is expected in most parts of the country. However, rain-thunderstorm is expected at scattered places in upper Punjab, Kashmir, while at isolated places in Khyber-Pakhtunkhwa, FATA, Zhob, Multan, D.G.Khan, Mirpurkhas divisions.

FRIDAY (25-08-2017)

Mainly hot and humid weather is expected in most parts of the country. However, rain-thunderstorm is expected at scattered places in upper Punjab, Islamabad, Khyber-Pakhtunkhwa, FATA, Zhob, Multan, D.G.Khan, Mirpurkhas divisions and Kashmir.

SATURDAY (26-08-2017)

Mainly hot and humid weather is expected in most parts of the country. However, rain-thunderstorm is expected at scattered places in upper Punjab, Islamabad, Khyber-Pakhtunkhwa, FATA Kashmir, While at isolated places in Zhob, Multan, D.G.Khan, Mirpurkhas, Sibbi divisions.

SUNDAY (27-08-2017)

Mainly hot and humid weather is expected in most part of the country.

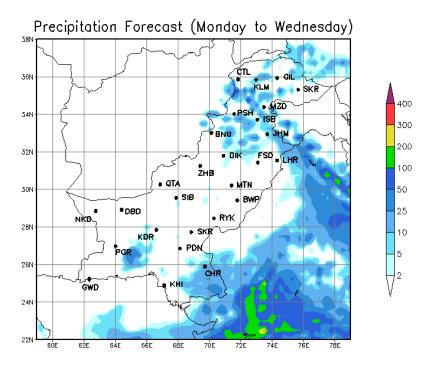
ADVISES FOR FARMERS

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 of the agricultural plains of the country. However, light to moderate rainfall is expected at isolated places of KP, Punjab, GB and Kashmir. Keeping in view the expected weather conditions following advises are suggested for farming community.

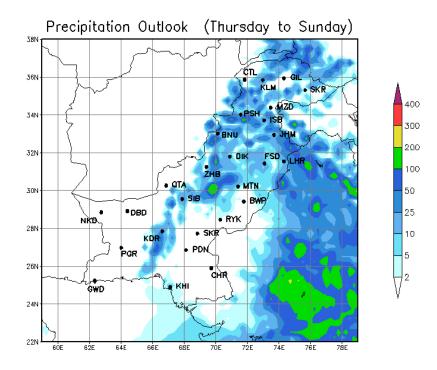
- · Pest/viral attacks and more weeds growth are expected after consistent rains in standing crops. Farmers are therefore advised to take in time precautionary measures in this regard.
- Farmers of irrigated areas may irrigate the standing crops as per requirement in accordance with the expected weather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

Weather Outlook from 21st August to 27th August, 2017

The outlook from 21st August to 23rd August, 2017 shows that light rainfall is expected in isolated parts of KP, GB, Azad Kashmir, upper Punjab, southern Balochistan and southeastern Sindh.



The outlook from 24th to 27th August, 2017 shows that light to moderate rainfall is expected in most parts of the country except Sindh and western Baluchistan.



National Weather Data of Selected Cities (14th August to 20th 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	25.4	29.0	96.8	51	7.1	3.3	4.5	1.4	2.5
Badin	33.9	35.0	175.3	69	0.0	3.0	3.1	4.6	6.8
Bahawalnagar	40.3	43.0	200.5	58	0.0	0.6	2.6	0.6	2.0
Bahawalpur	38.0	39.5	193.8	63	0.0	0.7	0.9	5.1	3.5
Balakot	33.2	34.5	149.5	67	5.0	1.4	2.6	0.0	1.9
Bannu	37.5	39.4	170.1	59	0.0	1.4	1.4	0.0	5.5
Barkhan	35.4	37.5	167.5	52	5.0	1.0	3.6	0.3	1.0
Bunji	32.5	37.2	150.5	48	16.7	3.7	5.0	0.6	2.0
Cherat	29.9	35.0	135.5	60	11.0	2.4	1.6	2.0	2.5
Chhor	35.7	36.3	181.7	69	0.0	2.4	2.5	4.3	6.5
Chilas	36.8	41.0	177.8	34	3.0	2.7	4.4	2.3	2.5
Chitral	34.0	36.0	140.4	61	0.0	1.1	3.6	0.0	9.5
D.G.Khan	37.8	39.0	195.8	58	0.0	1.0	0.4	5.4	5.8
D.I.Khan	39.1	42.0	195.3	67	0.0	1.7	1.5	0.6	1.8
Dalbandin	41.3	42.5	186.8	14	0.0	0.0	0.3	0.0	3.9
Dir	32.7	34.0	124.5	64	19.0	0.9	4.3	0.0	2.3
Drosh	35.1	37.0	149.7	42	1.0	1.0	4.3	0.0	10.8
Faisalabad	37.6	39.5	186.3	62	18.3	1.7	0.6	0.5	1.0
Garidopatta	35.4	37.0	165.3	76	30.0	2.1	2.5	0.0	4.3
Gawader	33.6	34.0	172.3	72	0.0	4.7	3.5	0.0	11.1
Gilgit	31.6	35.6	130.3	57	6.8	3.4	5.0	0.3	11.0
Gupis	27.9	31.5	108.3	48	3.0	1.7	4.4	2.3	3.8
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Hyderabad	37.9	39.0	187.8	64	0.0	0.4	1.9	14.9	15.1
Islamabad	34.5	36.0	167.4	67	3.0	1.9	3.0	0.0	1.3
Jacobabad	37.6	39.5	194.0	65	0.0	0.9	1.1	2.9	3.8
Jhang	37.4	39.5	188.3	63	0.0	1.7	1.3	2.9	2.3
Jhelum	36.6	38.4	184.0	74	35.0	1.7	2.4	0.0	2.5
Jiwani	32.1	32.5	166.8	72	0.0	4.0	1.6	1.4	7.4
Kakul	30.1	31.5	132.0	71	64.0	2.3	2.6	0.0	3.3
Kalam	26.6	28.5	93.3	64	8.0	1.0	5.0	0.0	2.6
Kalat	31.0	33.0	116.0	27	0.0	0.0	0.3	0.0	2.9
Karachi	34.0	36.0	178.8	67	0.0	4.4	4.0	9.1	10.5
Khanpur	38.8	40.5	195.2	64	0.0	1.0	0.8	3.4	2.0
Khuzdar	36.9	37.5	179.3	31	0.0	0.0	0.9	0.0	2.0
Kotli	33.7	35.0	166.2	68	14.6	3.3	2.6	1.4	1.5
Lahore	36.0	39.0	184.1	67	0.0	1.6	3.5	1.1	2.8
Larkana	38.9	40.5	194.4	59	0.0	0.4	0.8	0.9	1.3
Lasbella	39.1	41.0	196.7	61	0.0	3.4	1.6	0.0	6.5
Lower Dir	36.4	38.0	170.8	50	1.0	2.3	2.0	1.4	2.5
M.B Din	36.5	38.5	182.2	80	21.0	1.4	2.3	0.9	1.8
Malam Jabba	21.6	23.0	84.3	68	97.0	1.3	2.4	0.6	0.3
Mangla	35.9	37.5	179.1	68	22.0	2.0	3.8	0.0	3.3
Mir Khani	34.8	35.5	160.4	41	0.0	0.0	4.0	1.0	4.4
Moinjodaro	39.0	40.0	195.2	66	0.0	0.0	0.4	2.3	2.9
Multan(PBO)	37.7	39.3	193.6	60	0.0	1.0	0.3	6.0	7.1
Murree	23.7	24.6	98.9	79	24.0	2.1	5.4	0.6	1.4
Muzaffarabad	34.6	36.8	159.3	64	8.0	2.0	2.6	0.3	2.3
Nawabshah	40.6	42.2	199.9	54	0.0	0.7	1.3	6.0	7.4

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Nokkundi	40.6	41.5	194.0	12	0.0	0.0	0.0	3.7	5.4
Okara	38.1	40.5	194.6	62	0.0	1.6	2.1	1.1	1.4
Padidan	39.7	40.5	197.8	66	0.0	0.2	0.3	1.7	2.0
Panjgur	36.4	38.0	165.5	29	0.0	0.0	0.9	3.7	11.7
Parachinar	29.7	30.5	140.4	69	22.0	3.9	4.7	3.0	3.0
Pasni	32.8	33.0	172.0	88	0.0	4.3	0.0	0.9	9.3
Pattan	37.7	40.0	170.0	50	16.0	1.4	3.3	0.0	2.6
Peshawar	35.8	37.5	177.5	66	0.0	1.4	3.0	0.9	2.3
Quetta	33.4	34.5	136.1	24	0.0	0.0	1.8	1.8	3.1
Rahim Yar Khan	40.6	42.8	198.8	59	0.0	1.0	0.0	1.4	1.1
Rawalakot	26.5	27.0	106.8	79	0.0	1.4	5.9	0.0	1.4
Rawalpindi	35.2	37.0	172.7	69	6.4	1.1	2.1	0.5	1.4
Rohri	40.2	42.0	205.8	54	0.0	0.0	0.4	2.3	0.9
Sahiwal	37.9	40.2	189.6	62	0.0	2.0	1.9	1.1	2.6
Saidu Sharif	33.7	34.7	146.6	62	29.0	1.0	1.4	0.0	0.0
Sialkot	34.6	36.7	178.0	73	1.0	2.3	2.0	1.7	5.1
Sibbi	42.4	45.0	197.3	62	0.0	0.0	0.4	2.0	4.9
Skardu	28.4	33.7	113.5	52	0.2	3.1	5.6	0.0	1.7
Tandojam	37.6	38.5	186.3	66	0.0	0.9	1.9	2.8	3.2
Usta.M	37.2	39.0	194.2	67	0.0	1.0	1.7	2.3	5.1
Zhob	36.3	38.0	166.8	37	0.0	0.7	0.9	4.3	4.7

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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)