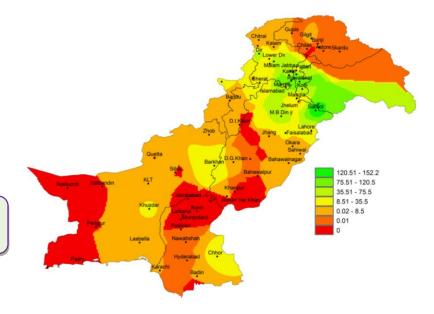
Weekly Weather and Crop Bulletin for Pakistan

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 (9th July to 15th July, 2018)

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<u>Patron-in-Chief:</u> Dr. Ghulam Rasul (Director General) <u>Editor-in-Chief:</u> Asma Jawad Hashmi (Director) <u>Editor</u>: Saeeda Saleh (Assistant Meteorologist)

Highlights of Past Weather (9th July to 15th July, 2018)

Above normal day temperature was observed all over the country during the previous week.

Province wise distribution of rainfall reported as follows:

- Light to moderate rainfall observed in Gilgit-Baltistan and Azad Jammu & Kashmir however, light rainfall observed in Baluchistan and Sindh during the previous week.
- Moderate to heavy rainfall observed in Punjab and Khyber Pakhtunkhwa during the previous week.

Past Weather of Provinces (9th July to 15th July, 2018)

Punjab

Moderate to heavy rainfall observed in Punjab during the week. Weekly maximum and minimum temperatures recorded as 38.0°C & 28.1°C respectively. For the recent week on average 196.5 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 61% and wind speed in the morning/evening recorded as 4.1/3.8 Knots. During the previous week the highest amount of rainfall was recorded as 152.2 mm at Sialkot & highest maximum temperature was recorded as 46°C at Bhakkar.

Sindh

Light rainfall observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 39.6°C & 27.6°C respectively. For the recent week, on average 200.3 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 4.4/5.3 Knots. During the previous week the highest amount of rainfall was recorded as 15 mm at Chhor & highest maximum temperature was recorded as 44.8°C at Dadu.

Khyber Pakhtunkhwa

Moderate to heavy rainfall observed in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 36.1°C & 23.7°C respectively. For the recent week on average 174.3 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 1.1/4.4 Knots. During the previous week the highest amount of rainfall was recorded as 112.00 mm at Risalpur & highest maximum temperature was recorded as 47.0°C at D.I.Khan.

Baluchistan

Light rainfall observed from a single station in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 39.5°C & 26.1°C respectively. For the recent week on average 192.4 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 2.3/5.4 Knots. During the previous week the highest amount of rainfall was recorded as 27.00 mm at Barkhan & highest maximum temperature was recorded as 48.5°C at Sibbi.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall observed in Gilgit-Baltistan & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 35.9°C & 20.9°C respectively. For the recent week on average 154.3 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 49% and wind speed in the morning/evening recorded as 1.1/1.9 Knots. During the previous week the highest amount of rainfall was recorded as 88.5 mm at Rawlakot & highest maximum temperature was recorded as 45.5°C at Chilas.

Past Weather for Major Agricultural Plains (9th July to 15th July, 2018)

Rawalpindi (Potohar region)

Rainfall reported as 46.8 mm from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 5.3/2.9 Oktas while, average relative humidity observed as 67%. Mean day time temperature recorded as 36.3°C & for the recent week 179.5 growing degree davs accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/1.7 Knots.

Faisalabad (Central Punjab)

Rainfall reported as 13.0 mm from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 2.4/1.2 Oktas while, average relative humidity observed as 63%. Mean day time temperature recorded as 38.5°C & for the recent week 203.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.1/1.2 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness recorded in the morning/evening as 1.6/0.6 Oktas while, average relative humidity observed as 68%. Mean day time temperature recorded as 37.0°C & for the recent week 183.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 4.9/5.2 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during week: however. cloudiness the in the morning/evening recorded as 0.7/2.0 Oktas while, average relative humidity observed as 54%. Mean day time temperature recorded as 42.1°C & for the week recent 213.6 growing degree davs accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/2.9 Knots.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 0.4/2.3 Oktas while, average relative humidity observed as 29%. Mean day time temperature recorded as 37.5°C & for the recent week 173.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.8/3.8 Knots.

Past Weather for Sub-Regional Agricultural Plains (25th June to 1st July, 2018)

Multan

Dry weather reported from Multan during the week; however, cloudiness in the morning/evening recorded as 1.2/0.9 Oktas while, average relative humidity observed as 51%. Mean day time temperature recorded as 40.4°C & for the recent week 216.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 9.4/8.9 Knots.

Lahore

Rainfall reported as 22.90 mm from Lahore during the week; however, cloudiness in the morning/evening recorded as 4.3/2.0 Oktas while, average relative humidity observed as 66%. Mean day time temperature recorded as 35.6°C & for the recent week 187.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.3/1.1 Knots.

Zhob

Rainfall reported as 4.00 mm from during the week; however, cloudiness in the morning/evening recorded as 0.9/3.9 Oktas while, average relative humidity observed as 36%. Mean day time temperature recorded as 38.1°C & for the recent week 191.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 4.3/9.9 Knots.

Murree

Rainfall reported as 119.31 mm from Murree during week: however. cloudiness the in the morning/evening recorded as 7.6/6.6 Oktas while, average relative humidity observed as 83%. Mean day time temperature recorded as 23.6°C & for the recent week 106.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.6/0.6 Knots.

D.I. Khan

Dry weather reported from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 1.1/0.7 Oktas while, average relative humidity observed as 62%. Mean day time temperature recorded as 43.4°C & for the recent week 217.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/0.6 Knots.

Peshawar

Rainfall reported as 7.01 mm from Peshawar during week: however. cloudiness in the the morning/evening recorded as 4.1/3.0 Oktas while, average relative humidity observed as 68%. Mean day time temperature recorded as 37.8°C & for the recent week 195.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.0/2.0 Knots.

Kalam

Rainfall reported as 2.50 mm from Kalam during the week; however, cloudiness in the morning/evening recorded as 3.9/5.4 Oktas while, average relative humidity observed as 64%. Mean day time temperature recorded as 28.8°C & for the recent week 119.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/.7 Knots.

Gilgit

Rainfall reported as 0.02 mm from Gilgit during the week; However, cloudiness in the morning/evening recorded as 2.1/4.9 Oktas while, average relative humidity observed as 46%. Mean day time temperature recorded as 40.1°C & for the recent week 171.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1.1 Knots.

Skardu

Rainfall reported as 0.01 mm from Skardu during week: however, cloudiness in the the morning/evening recorded as 1.9/5.1 Oktas while, average relative humidity observed as 35%. Mean day time temperature recorded as 35.5°C & for the recent week 147.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.1 Knots.

<u>Crop Situation for Major Agricultural Plains</u> (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)

Presently cotton crop is sown in the fields of RAMC Faisalabad.

Cotton ; Very Good, Budding stage completed and field irrigated.

Lower Sindh (Tandojam)

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

Cotton (CIM 602); Good, Flowering stage .

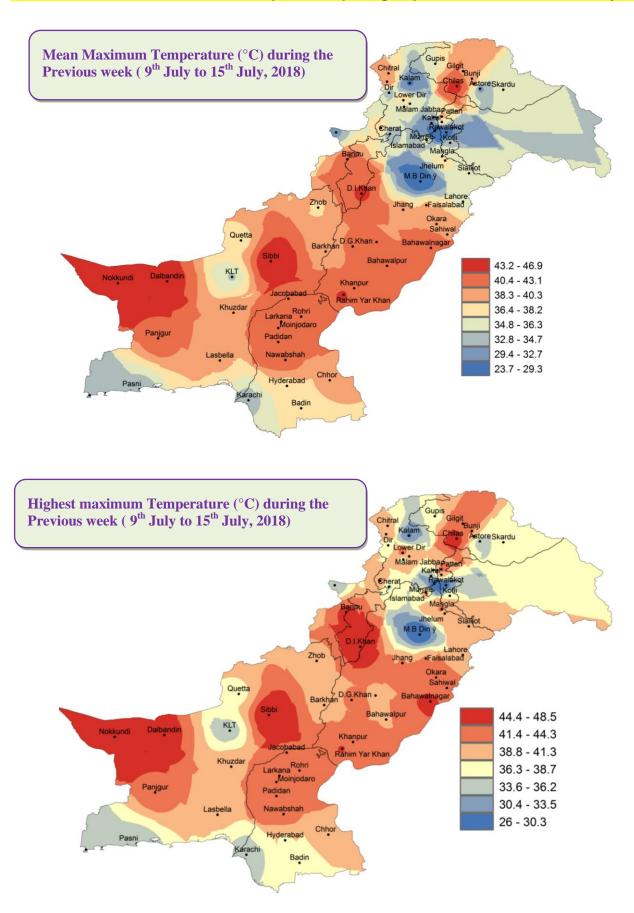
Northern Baluchistan (Quetta)

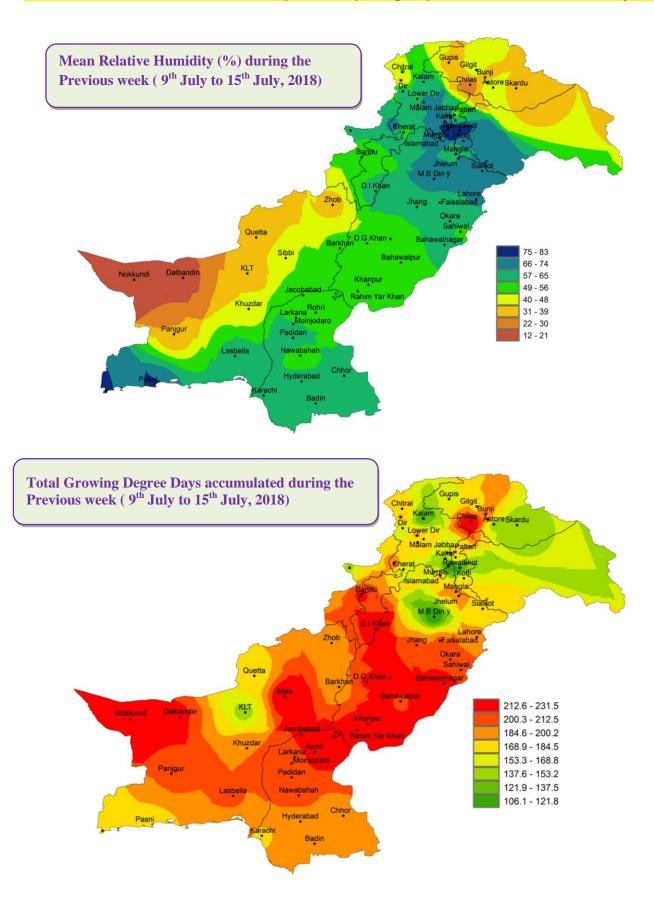
There is presently no crop grown in the fields of RAMC Quetta.

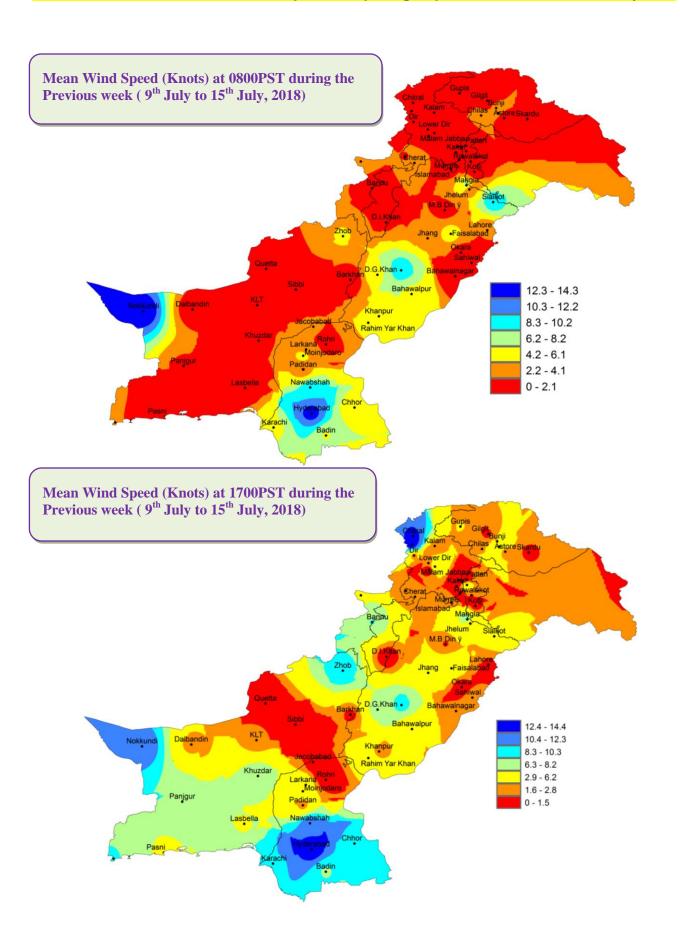
Eastern Baluchistan (Usta Muhammad)

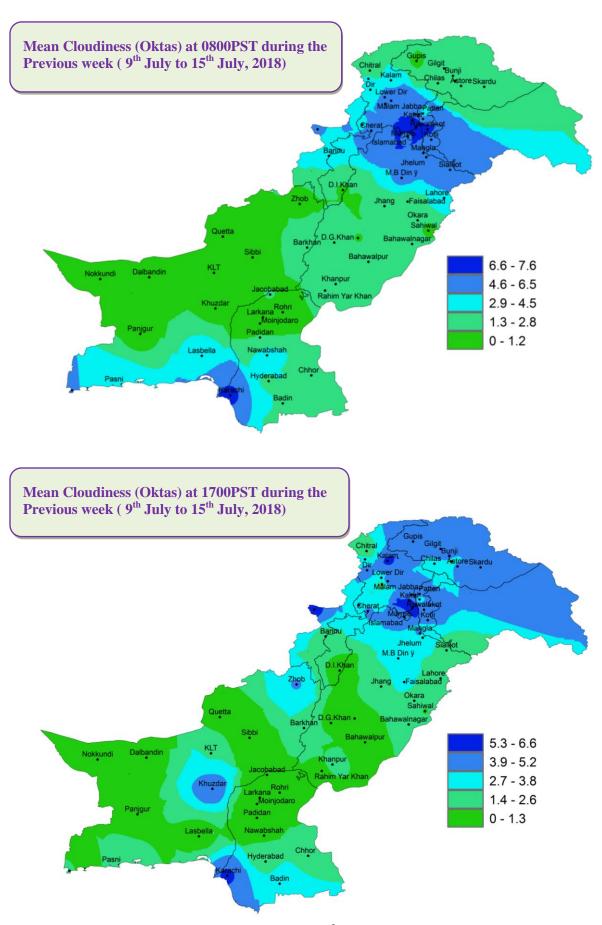
Rice saplings are transferred in the fields of RAMC Usta Muhammad.

http://namc.pmd.gov.pk









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Weekly Weather Advisory for Farmers (16th July to 22nd July, 2018)

Seasonal Low lies over North Balochistan with its trough extending southeastward. Moderate monsoon currents are penetrating central and upper parts of the country and likely to continue during coming days.

MONDAY

16-07-2018

Rain-thundershower with gusty winds is expected at scattered places in Hazara, Malakand, Peshawar, Rawalpindi, Kohat. Mardan, Gujranwala, L:ahore divisions, Islamabad and Kashmir, while at isolated places in Sargodha, Bahawalpur, Multan, D.G.Khan, D.I.Khan, Zhob, Kalat, Mirpur Khas divisions, FATA and Gilgit-Baltistan. Very hot and humid weather is expected elsewhere in the country. **TUESDAY**

17-07-2018

Rain-thundershower with gusty winds is expected at scattered places in Malakan, Hazara, Mardan, Rawalpindi divisions, Gujranwala, Lahore, Islamabad and Kashmir, while at isolated places in Peshawar, Kohat, Bannu, D.I.Khan, Sargodha, Faisalabad, Sahiwal, Multan, Bahawalpur, D.G Khan, Zhob, Kalat, Mirpur Khas divisions, FATA and Gilgit-Baltistan. Heavyfalls are also expected at a few placesin Hazara, Rawalpindi, Gujranwala divisions and Kashmir. Very hot and humid weather is expected elsewhere in the country.

WEDNESDAY

18-07-2018

Rain-thundershower with gusty winds is expected at scattered places in Rawalpindi, Gujranwala, Lahore, Hazara, Peshawar, Malakand. Kohat, Mardan, divisions, FATA, Islamabad and Kashmir, while at isolated places in Kalat, Sargodha, Bannu, D.I.Khan, D.G.Khan, Mirpurkhas divisions and Gilgit-Baltistan. Heavyfalls are also expected at isolated places in Hazara, Rawalpindi, Gujranwala, Lahore divisions and Kashmir. Very hot and humid weather is expected elsewhere in the country.

THURSDAY

19-07-2018

Rain-thundershower with gusty winds is expected at scattered places in upper Punjab (Rawalpindi, Gujranwala, Sargodha, Lahore, Faisalabad divisions), KP, Islamabad, FATA and Kashmir while at isolated places in Multan, D.G.Khan, Bahawalpur, Sahiwal,, Mirpurkhas divisions and Gilgit-Baltistan. Isolated heavy falls are also expected in Peshawar and Kohat divisions.

FRIDAY

20-07-2018.

Rain-thundershower is expected at isolated places in upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha, Faisalabad divisions), KP, Islamabad, FATA, Kashmir, Multan, D.G.Khan, Bahawalpur, Sahiwal, Mirpurkhas divisions and Gilgit-Baltistan. Hot and humid weather is expected elsewhere in the country.

SATURDAY

21-07-2018

Rain-thundershower is expected at isolated places in upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha, Faisalabad divisions), KP, Islamabad, FATA, Kashmir, Multan, D.G.Khan, Sahiwal divisions and Gilgit-Baltistan. Hot and humid weather is expected elsewhere in the country.

SUNDAY

22-07-2018

Rain-thundershower is expected at isolated places in upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha, Faisalabad divisions), KP, Islamabad, FATA, Kashmir, Multan, D.G.Khan, Sahiwal divisions and Gilgit-Baltistan. Hot and humid weather is expected elsewhere in the country.

ADVISES FOR FARMERS

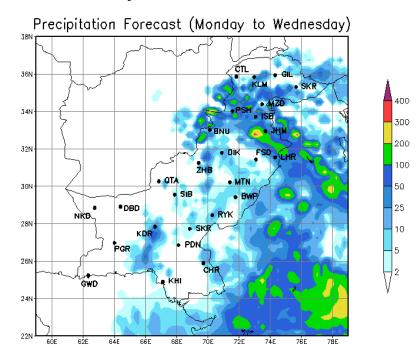
During the last week, light to moderate rainfall occurred in upper half of the country while hot and dry weather prevailed in rest parts. This may continue with almost the same pattern in coming days as well. Keeping in view the expected weather conditions following advises are suggested for farming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

- · Farmers of southern Punjab and Sindh are advised to complete the sowing of cotton and other Kharif crops to utilize the maximum soil moisture.
- Farmers of upper regions are advised to complete the cultivation of millet and sorghum in the upper regions because of the moister availability in field.
- Extra water from the fields of Cotton and vegetables should be removed.

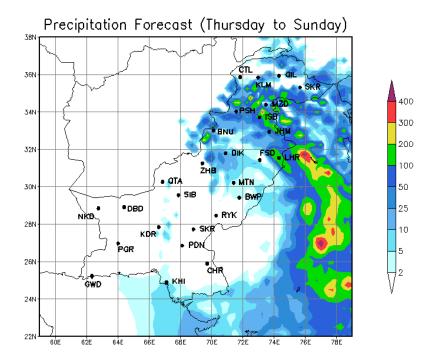
http://namc.pmd.gov.pk

Weather Outlook from (16th July to 22nd July, 2018)

The forecast from 16th July to 18th July, 2018 shows that light to moderate rainfall is expected in most of the places of GB & Kashmir, FATA, Punjab and KP while at scattered places of Balochistan and Sindh. Heavy rainfall is expected in northeastern Punjab.



The outlook from 19th July to 22nd July, 2018 shows that moderate to heavy rainfall is expected in GB, Kashmir, upper & central Punjab, KP and light rainfall is expected in few places of north and northeastern Baluchistan.



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National Weather Data of Selected Cities (Weekly Data from 9th July to 15th July, 2018)

Stations	Maximum/Night time 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	31.5	33.5	133.3	43	0.01	2.1	4.3	1.4	1.7
Badin	36.9	37.5	191.2	65	0.00	2.6	3.7	6.0	8.0
Bahawalnagar	42.7	45.0	218.0	59	2.00	2.3	1.9	1.1	1.7
Bahawalpur	40.6	41.2	212.1	53	0.00	1.4	0.9	5.4	3.1
Balakot	33.2	37.5	157.8	70	68.00	5.9	4.0	0.0	0.6
Bannu	41.8	45.1	214.8	48	0.00	3.1	2.0	0.9	8.3
Barkhan	38.9	40.0	191.3	51	27.00	2.1	2.6	0.3	1.1
Bunji	40.1	41.7	203.4	30	0.00	2.1	5.6	2.9	2.6
Cherat	33.6	36.0	155.5	54	22.00	5.7	4.0	3.1	2.3
Chhor	38.9	40.0	197.3	60	15.00	1.3	2.3	4.3	9.1
Chilas	44.1	45.5	226.5	25	0.00	2.4	3.1	2.9	2.6
Chitral	38.9	39.6	178.4	48	0.00	1.1	1.9	0.3	12.9
D.I.Khan	43.4	47.0	217.5	62	0.00	1.1	0.7	1.7	0.6
Dalbandin	44.9	46.0	214.3	17	0.00	0.4	0.3	0.3	2.3
D.G.Khan	40.7	41.5	213.6	49	0.02	2.1	1.0	5.9	6.9
Dir	33.6	37.0	157.0	63	49.00	4.1	4.6	0.3	2.0
Drosh	39.9	40.6	186.8	36	0.00	3.1	2.7	0.6	14.4
Faisalabad	38.5	41.5	203.5	63	13.00	2.4	1.2	2.1	1.2
Garidopatta	35.0	39.5	167.1	67	99.00	6.1	3.4	2.3	5.1
Gawader	34.1	34.5	180.5	71	0.00	3.6	0.3	1.1	7.7
Gilgit	40.1	43.5	171.4	46	0.02	2.1	4.9	0.3	1.1
Gupis	35.8	37.5	158.3	36	0.00	1.0	4.9	1.4	2.9

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Hyderabad	37.5	38.5	189.0	58	0.00	2.7	2.0	13.0	14.0
Islamabad	35.7	40.0	181.5	67	68.01	6.3	4.0	0.6	2.6
Jacobabad	42.0	44.0	213.0	56	0.00	1.3	0.6	2.3	1.1
Jhang	39.7	41.5	207.8	58	0.00	1.3	2.1	2.9	4.3
Jhelum	36.6	40.8	188.0	67	4.41	5.6	3.0	2.0	2.3
Jiwani	33.4	34.2	174.6	77	0.00	5.6	1.6	3.7	8.6
Kakul	30.8	34.0	146.5	71	67.01	6.9	5.6	0.3	1.4
Kalam	28.8	30.0	119.5	64	2.50	3.9	5.4	0.0	1.7
Kalat	34.6	35.0	148.0	33	2.00	0.0	2.6	0.9	1.7
Karachi	34.0	34.8	183.6	64	0.01	6.9	5.4	5.4	9.7
Khanpur	41.6	42.5	214.5	53	0.00	1.9	1.7	4.9	2.3
Khuzdar	39.6	40.5	200.3	42	10.00	0.7	4.7	1.1	8.0
Kotli	34.1	38.6	171.2	67	67.60	5.7	3.9	0.3	0.6
Lahore	35.6	39.5	187.0	66	22.90	4.3	2.0	2.3	1.1
Larkana	41.7	42.5	210.3	55	0.00	0.9	0.3	2.6	3.1
Lasbella	38.5	39.3	201.5	62	1.00	4.0	0.6	0.0	6.0
Lower Dir	38.4	42.5	188.3	54	11.00	4.6	3.7	0.0	2.0
M.B Din	24.2	26.0	106.0	72	56.00	5.3	2.7	1.1	1.4
Malam Jabba	35.7	40.7	181.0	72	56.60	6.3	4.9	0.3	5.7
Mangla	36.3	41.5	185.0	62	18.60	6.4	4.0	7.1	8.9
Mir Khani	38.7	40.2	196.1	43	0.00	2.3	1.9	2.3	6.1
Moinjodaro	41.4	43.0	207.3	57	0.00	0.3	0.9	5.1	5.1
Multan(PBO)	40.4	41.2	216.2	51	0.00	1.2	0.9	9.4	8.9
Murree	23.6	26.5	106.3	83	119.31	7.6	6.6	1.6	0.6
Muzaffarabad	34.9	38.4	159.8	69	72.00	6.6	4.7	0.3	1.3
Nawabshah	41.8	42.5	207.0	54	0.01	3.6	1.3	9.7	12.3

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Nokkundi	45.1	46.0	228.3	12	0.00	0.0	0.0	14.3	12.3
Okara	39.6	42.5	208.8	64	0.00	1.4	1.7	1.1	0.3
Padidan	40.7	43.0	203.8	60	0.00	1.3	0.4	2.0	2.0
Panjgur	42.1	43.5	205.5	30	0.00	0.3	0.9	1.7	8.0
Parachinar	32.2	33.5	151.5	60	14.00	4.7	5.7	3.3	5.9
Pasni	33.8	34.5	178.8	75	0.00	4.4	2.3	1.4	5.6
Pattan	39.9	43.5	180.8	42	0.00	2.7	4.0	0.0	0.0
Peshawar	37.8	41.5	195.0	68	7.01	4.1	3.0	2.0	2.0
Quetta	37.5	38.0	173.0	29	0.00	0.4	2.3	1.8	3.8
R. Y. Khan	43.4	44.4	220.3	54	0.00	1.9	0.7	4.3	4.6
Rawalakot	26.6	28.6	116.4	83	88.50	6.9	4.9	0.6	1.4
Rohri	42.6	43.5	216.5	54	0.00	0.0	0.0	1.4	0.0
Sahiwal	40.2	42.0	208.1	54	0.00	1.0	1.3	1.4	2.6
Saidu Sharif	34.5	37.5	168.0	63	26.00	4.6	1.7	1.1	0.0
Sialkot	34.9	39.3	176.0	69	152.20	6.4	1.9	9.7	4.4
Sibbi	46.9	48.5	231.5	46	0.00	0.0	0.0	0.6	0.6
Skardu	35.5	37.6	147.3	35	0.01	1.9	5.1	0.0	1.1
Zhob	38.1	39.0	191.8	36	4.00	0.9	3.9	4.3	9.9
Rawalpindi	36.3	40.5	179.5	67	46.80	5.3	2.9	1.4	1.7
Tandojam	37.0	37.5	183.8	68	0.00	1.6	0.6	4.9	5.2
Usta. M	42.1	43.0	213.6	54	0.00	0.7	2.0	0.6	2.9

*** Shows that data was not available.

Findings of AgMIP Pakistan, University of Agriculture, Faisalabad

- 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).
- There would be significant variability in rainfall patterns (about 25% increase in summer & 12% decrease in winter during 2040-2069).
- 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 6°2.8 اور رات کو 6°2.2 تک ہوگا۔

- 2۔ گرمیوں کی بارش میں 25 فیصد اضافہ اور سردیوں کی بارش میں 12 فیصد تک کمی کا امکان ہے۔
- 3۔ مندرجہ بالاموسی تغیرات کی وجہ ہےدھان کی پیداوار میں 17 فیصد اور گندم کی پیداوار میں 14 فیصد تک کمی ہو سکتی ہے۔
 - 4۔ اگرموسی تغیرات کا مناسب بندوبست نہ کیا گیا۔ تو کسانوں کی اکثریت کومعاشی نقصان کا سامنا کرنا پڑے گا۔

5۔ موتی تغیرات کے سبرّ باب(بذریعہ نی ٹیکنالوجی کا استعال اور بہترنظم ونسق) سے غربت میں کمی اور کسانوں کی زندگی میں خوشحالی لائی جاسکتی ہے۔