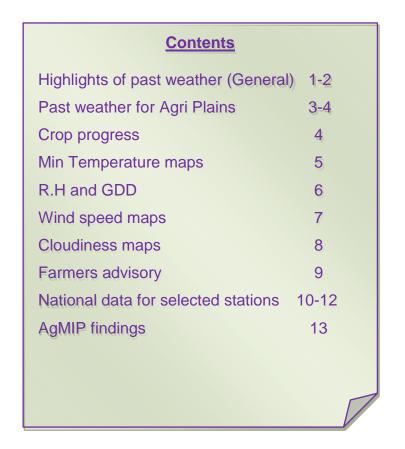
Weekly Weather and Crop Bulletin for Pakistan

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

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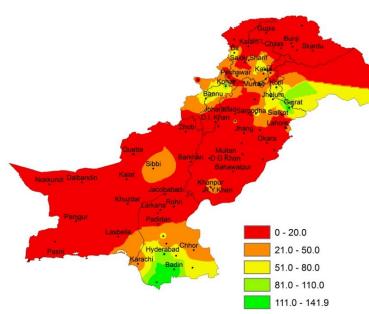
> Rainfall Distribution (mm) during the **Previous Week (from 1st to 7th August, 2016)**



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

Editor-in-Chief: Dr. Azmat Hayat Khan (Director)

Editor: Asma Jawad Hashmi (Deputy Director)



Highlights of Past Weather (from 1st to 7th **August**, 2016)

Slightly above normal day time temperature was reported in north to northwestern parts while slightly below normal in rest of the country during the week.

Province wise distribution of rainfall reported as follows:

- Light to moderate rainfall was reported at several places in Khyber Pakhtunkhwa, Punjab, Sindh and Gilgit-Baltistan & Kashmir regions.
- While in Balochistan, light to moderate rainfall was reported at few places.

Past Weather of Provinces (from 1st to 7th **August**, 2016)

Punjab

Light to moderate rainfall reported at most of the places in Punjab during the week. Weekly maximum and minimum temperatures recorded as 35.8°C & 26.9°C respectively. For the present season on average 184.4 growing degree days accumulated by the end of the last week. Average relative humidity recorded as 72% 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 145.0 mm at Sialkot & highest maximum temperature was recorded as 43.2°C at Rahim Yar Khan.

Sindh

Light to Moderate rainfall reported at many places in Sindh during the week. Weekly maximum and minimum temperatures recorded as 36.2°C & 26.5°C respectively. For the present season, on average 184.2 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 71% and wind speed in the morning/evening recorded as 3.8/5.6 Knots. During the previous week the highest amount of rainfall was recorded as 131.0 mm at Badin & highest maximum temperature recorded as 44.2°C at Dadu.

Khyber Pakhtunkhwa

Light to moderate rainfall reported at many places in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 33.8°C & 21.9°C respectively. For the present season on average 160.1 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 0.7/4.3 Knots. During the previous week the highest amount of rainfall was recorded as 93.1 mm at Kohat & the highest maximum temperature recorded as 41.0°C at Bannu.

Balochistan

Light to Moderate rainfall reported at few places in Balochistan during the week. Weekly maximum and minimum temperatures recorded as 36.3°C & 24.1°C respectively. For the present season on average 176.2 growing degree days accumulated by the end of last week. Average relative humidity recorded as 53% and wind speed in the morning/evening recorded as 2.4/6.0 Knots. During the previous week the highest amount of rainfall was recorded as 53.5mm at Sibbi & highest maximum temperature was recorded as 45.5°C at Turbat.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall reported at many places in Gilgit-Baltistan & Kashmir regions during the week. Weekly maximum and minimum temperatures recorded as 33.6°C & 20.5°C respectively. For the present season on average 160.2 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 55% and wind speed in the morning/evening recorded as 0.5/2.3 Knots. During the previous week the highest amount of rainfall was recorded as 89.0mm at Kotli & highest maximum temperature recorded as 43.0°C at Chilas.

Past Weather for Major Agricultural Plains (from 1st to 7th August, 2016)

Rawalpindi (Potohar region)

Rainfall reported as 35.3 mm during the week, cloudiness in the morning/evening recorded as 2.7/4.3 Oktas while, average relative humidity observed as 70%. Mean day time temperature recorded as 34.8°C & for the present season 177.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/2.0 Knots.

Faisalabad (Central Punjab)

Rainfall reported as 25.7 mm during the week, cloudiness in the morning/evening recorded as 3.1/5.9 Oktas while, average relative humidity observed as 71%. Mean day time temperature recorded as 35.8°C & for the present season 188.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.3/2.0 Knots.

Tandojam (Lower Sindh)

Rainfall reported as 123.1 mm during the week, cloudiness in the morning/evening recorded as 4.9/5.7 Oktas while, average relative humidity observed as 77%. Mean day time temperature recorded as 34.5°C & for the present season 161.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.2/2.0 Knots.

Quetta (Northern Baluchistan)

Rainfall reported as 4.1 mm during the week, cloudiness in the morning/evening recorded as 4.0/4.4 Oktas while, average relative humidity observed as 44%. Mean day time temperature recorded as 33.3°C & for the present season 153.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.5/3.2 Knots.

Usta Muhammad (Eastern Balochistan)

Rainfall reported as 96.0 mm during the week, cloudiness in the morning/evening recorded 3.2/4.8 Oktas while, average relative humidity observed as 72%. Mean day time temperature recorded as 37.6°C & for the present season 188.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.3/3.4 Knots.

Past Weather for Sub-Regional Agricultural Plains (from 1st to 7th August, 2016)

Multan

Rainfall reported as 5.1 mm during the week, cloudiness in the morning/evening recorded as 3.0/6.0 Oktas while, average relative humidity observed as 67%. Mean day time temperature recorded as 37.1°C & for the present season 198.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 3.7/3.7 Knots.

Lahore

Rainfall reported as 36.2 mm during the week, cloudiness in the morning/evening recorded as 5.4/6.1 Oktas while, average relative humidity observed as 72%. Mean day time temperature recorded as 34.9°C & for the present season 182.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/1.7 Knots.

Zhob

Rainfall reported as 5.0 mm during the week, cloudiness in the morning/evening recorded as 0.9/5.0 Oktas while, average relative humidity observed as 54%. Mean day time temperature recorded as 34.4°C & for the present season 157.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 5.0/8.0 Knots.

D.I. Khan

Rainfall reported as 0.2 mm during the week, cloudiness in the morning/evening recorded as 4.0/5.0 Oktas while, average relative humidity observed as 75%. Mean day time temperature recorded as 36.6°C & for the present season 187.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.7 Knots.

Peshawar

Rainfall reported as 24.1 mm during the week, cloudiness in the morning/evening recorded as 5.3/4.6 Oktas while, average relative humidity observed as 68%. Mean day time temperature recorded as 36.8°C & for the present season 191.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/2.6 Knots.

Murree

Rainfall reported as 33.1 mm during the week, cloudiness in the morning/evening recorded as 5.3/7.3 Oktas while, average relative humidity observed as 88%. Mean day time temperature recorded as 22.6°C & for the present season 99.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/2.6 Knots.

Kalam

Rainfall reported as 4.0 mm during the week, cloudiness in the morning/evening recorded as 2.9/4.7 Oktas while, average relative humidity observed as 62%. Mean day time temperature recorded as 26.1°C & for the present season 104.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/3.4 Knots.

Gilgit

Rainfall reported as 1.6 mm during the week, cloudiness in the morning/evening recorded as 3.4/5.9 Oktas while, average relative humidity observed as 53%. Mean day time temperature recorded as 36.5°C & for the present season 159.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 Knots.

Skardu

Rainfall reported as 1.1 mm during the week, cloudiness in the morning/evening recorded as 3.0/5.7 Oktas while, average relative humidity observed as 40%. Mean day time temperature recorded as 33.2°C & for the present season 136.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.6Knots.

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 condition) grown in the fields of RAMC Faisalabad.

Cotton: Very good condition, Flowering stage completed.

Lower Sindh (Tandojam)

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

Cotton: Good condition at *Boll formation* stage.

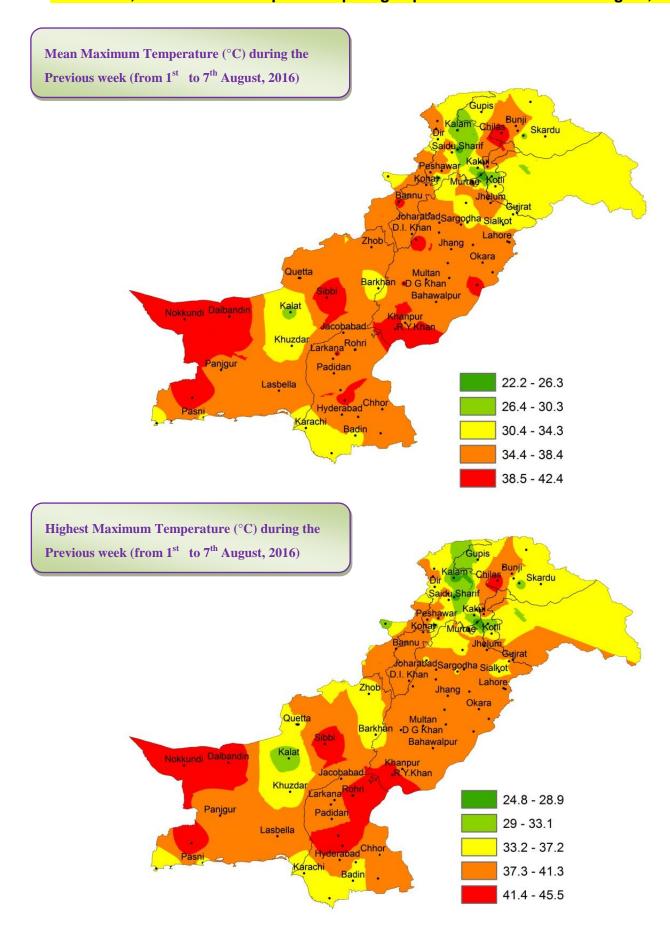
Northern Balochistan (Quetta)

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

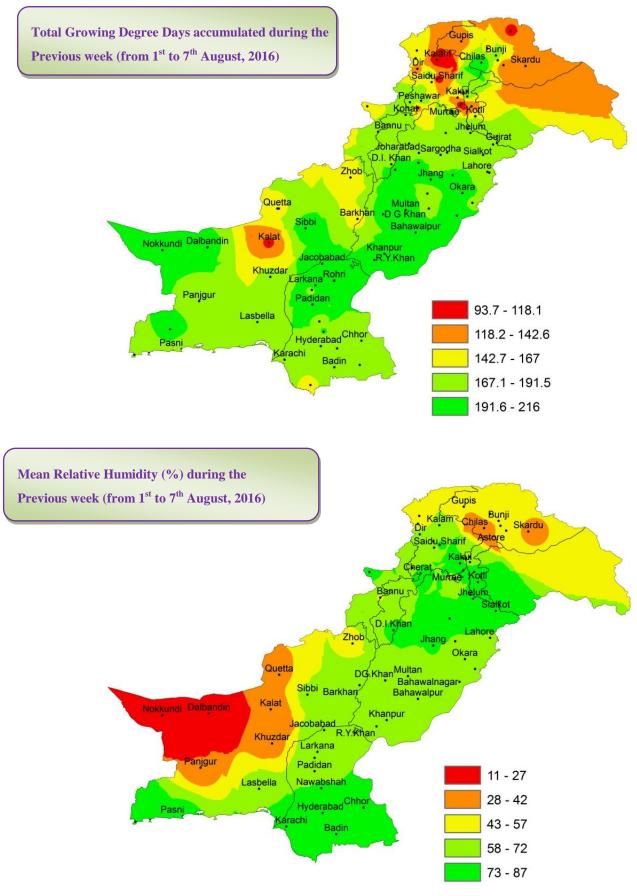
Eastern Balochistan (Usta Muhammad)

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

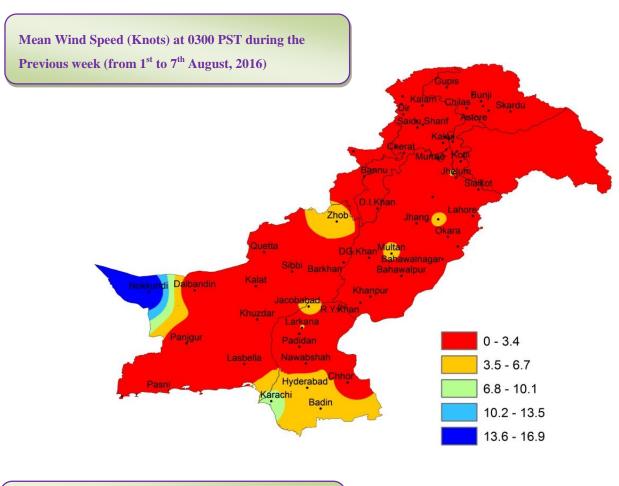
Rice: Good condition, third leave stage completed.

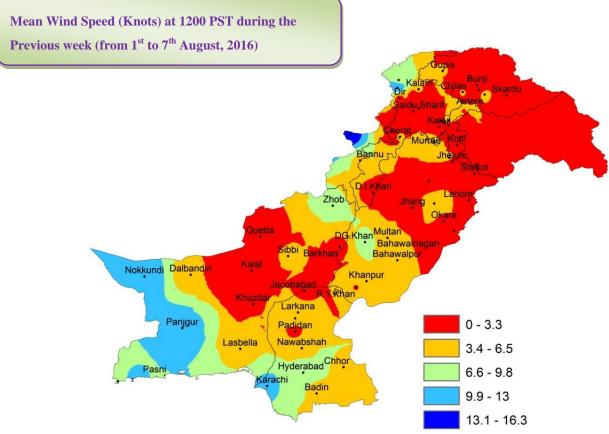


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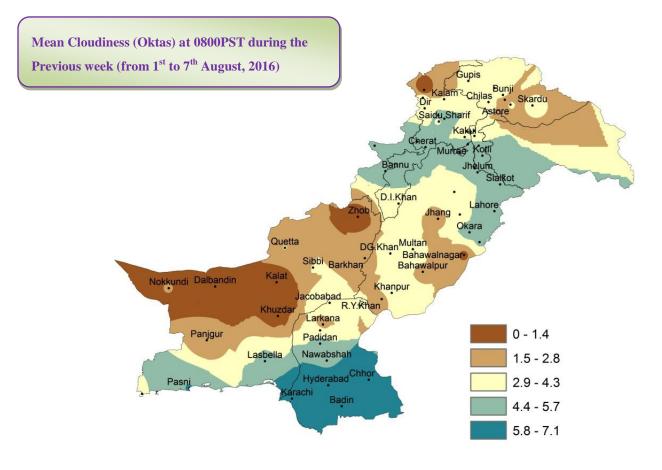


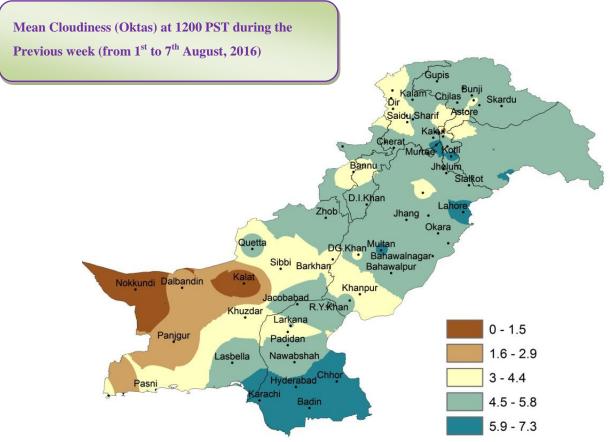
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Weekly Weather Advisory for Farmers (From 8th to 14th August, 2016)

Heat low lies over north Balochistan and its adjoining area. Monsoon currents are penetrating in upper and central parts of the country and likely to continue during next 3 to 4 days. A westerly wave is still affecting northern parts of the country. Under the influence of these meteorological conditions weather will remain as follows:

MONDAY 08-08-2016

Rain-thunderstorm (with isolated heavy falls) is expected at scattered places in Islamabad, upper Punjab (Rawalpindi, Gujranwala, Lahore, Faisalabad, Sargodha divisions), KP (Malakand, Hazara, Peshawar, Mardan, Kohat, D.I Khan, Bannu divisions), FATA, Lower Sindh and Kashmir; while at isolated places in upper Sindh, Eastern Balochistan, South Punjab and Gilgit-Baltistan. Heavyfalls may generate flash flooding and landslides in the vulnerable areas of Punjab, KP, Gilgit-Baltistan and Kashmir.

TUESDAY 09-08-2016

Rain-thunderstorm (with isolated heavy falls) is expected at scattered places in Islamabad, upper Punjab (Rawalpindi, Gujranwala, Lahore, Faisalabad, Sargodha divisions), KP (Malakand, Hazara, Peshawar, Mardan, Kohat, D.I Khan, Bannu divisions), FATA and Kashmir; while at isolated places in Southeastern Sindh, south Punjab and Gilgit-Baltistan. Heavy falls may generate flash flooding and landslides in the vulnerable areas of Punjab, KP, Gilgit-Baltistan and Kashmir.

WEDNESDAY 10-08-2016

Rain-thunderstorm (with isolated heavy falls) is expected at scattered places in Islamabad, upper Punjab (Rawalpindi, Gujranwala, Lahore, Faisalabad, Sargodha divisions), KP (Malakand, Hazara, Peshawar, Mardan, Kohat, D.I Khan, Bannu divisions), FATA and Kashmir, while at isolated places in eastern Balochistan, south Punjab and Gilgit-Baltistan. Heavy falls may generate flash flooding and landslides in the vulnerable areas of Punjab, KP, Gilgit-Baltistan and Kashmir.

THURSDAY 11-08-2016

Rain-thunderstorm (with isolated heavy falls) is expected at scattered places in Islamabad, upper Punjab (Rawalpindi, Gujranwala, Lahore, Faisalabad, Sargodha

divisions), KP (Malakand, Hazara, Peshawar, Mardan, Kohat, D.I Khan, Bannu divisions), FATA and Kashmir, while at isolated places in eastern Balochistan, south Punjab and Gilgit-Baltistan. Heavy falls may generate flash flooding and landslides in the vulnerable areas of Punjab, KP, Gilgit-Baltistan and Kashmir.

FRIDAY 12-08-2016

Rain-thunderstorm is expected at scattered places in Islamabad, upper Punjab (Rawalpindi, Gujranwala, Lahore, Faisalabad, Sargodha divisions), KP (Malakand, Hazara, Peshawar, Mardan, Kohat, D.I Khan, Bannu divisions), FATA and Kashmir, while at isolated places in eastern Balochistan, south Punjab and Gilgit-Baltistan.

SATURDAY

13-08-2016

Mainly hot and humid weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Islamabad, Punjab, KP, FATA, Kashmir and Gilgit-Baltistan.

SUNDAY 14-08-2016

Mainly hot and humid weather is expected in most parts of the country. However, rain-thunderstorm is expected at few places in upper Punjab, upper KP, FATA, Kashmir and Gilgit-Baltistan.

ADVISES FOR CROPS

- ❖ Farmers obtaining crop water through tube wells are advised to schedule the irrigation according to the expected weather mentioned during the week.
- ❖ Farmers are advised to control further weeds growth at the present growing stages to stop any negative impact on the crops. Weeds removing practices should be started soon after expected rains in the mentioned.
- ❖ Farmers are advised to take in time precautionary measures to protect their crops, livestock and other property from any expected heavy rains.
- ❖ Pest/viral attacks are expected over cotton and sugarcane crops during hot and humid conditions during monsoon. Farmers should be very careful and take in time precautionary measures in this regard.
- ❖ Stagnant water due to heavy monsoon rains is fatal for standing crops like cotton. Farmers are advised to take suitable measures to resolve the issue.

National Weather Data of Selected Cities (Weekly Data from 1st to 7th August, 2016)

Stations	time Ten (°	um/Day nperature (C)	Growing Degree Days	Relative Humidit y	Rainfall (mm)	Cloudiness (Oktas) 0800PST	Cloudiness (Oktas) 1700PST	Wind Speed (Knots)	Wind Speed (Knots)
	Mean	Highest		(%)				0800PST	1700PST
Astore	29.1	31.5	117.3	49	3.1	3.0	4.7	0.6	4.0
Badin	33.9	36.0	177.8	80	131.0	6.1	6.4	5.4	5.7
Bahawalnagar	38.7	40.5	202.5	62	3.0	1.1	5.7	0.3	1.7
Bahawalpur	38.0	40.4	198.4	69	16.1	2.7	4.4	1.1	4.0
Balakot	33.2	35.5	157.7	74	91.8	3.6	5.3	0.0	0.9
Bannu	38.6	41.0	180.8	57	64.0	5.0	3.9	0.0	5.7
Barkhan	33.1	35.5	160.5	65	23.0	1.9	4.3	0.0	2.0
Bunji	36.8	38.3	177.6	44	4.9	3.7	5.2	1.0	1.0
Cherat	29.2	32.0	133.1	77	4.0	4.3	4.9	2.9	3.4
Chhor	36.0	37.2	183.5	74	43.8	6.4	6.4	2.6	6.3
Chilas	40.7	43.0	209.9	27	0.1	3.4	4.4	2.3	3.4
Chitral	34.8	37.0	156.2	57	0.0	0.0	4.3	0.0	8.6
D.I.Khan	36.6	39.0	187.3	75	0.2	4.0	5.0	0.0	1.7
Dalbandin	42.4	44.5	198.0	13	0.0	0.9	1.7	1.1	3.4
DG.Khan	38.5	40.1	201.4	61	1.0	4.1	4.3	2.9	8.6
Dir	31.9	34.0	134.3	71	80.0	3.4	3.7	0.0	2.0
Drosh	36.3	39.0	161.9	41	9.7	4.0	3.9	0.6	13.0
Faisalabad	35.8	38.2	188.1	71	25.7	3.1	5.9	1.3	2.0
Garidopatta	35.8	39.2	171.5	69	42.8	3.1	5.1	0.0	0.9
Gawader	34.6	35.5	174.3	78	0.0	5.7	1.6	0.0	10.0
Gilgit	36.5	38.5	159.3	53	1.6	3.4	5.9	0.0	0.0
Gupis	31.3	33.0	131.3	42	19.0	3.1	4.6	1.1	3.4

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Hyderabad	35.5	39.5	179.5	80	116.1	6.6	6.0	4.9	8.0
Islamabad	34.5	37.0	172.4	66	63.2	4.6	4.9	0.0	5.1
Jacobabad	37.5	40.0	198.0	64	5.1	3.7	5.0	3.4	2.6
Jhang	37.7	38.5	192.6	73	17.0	2.4	5.4	1.4	1.7
Jhelum	35.0	38.3	182.2	76	73.1	4.3	4.4	1.7	1.4
Jiwani	32.6	35.0	174.5	75	0.0	3.0	3.6	3.1	9.1
Kakul	30.1	32.0	141.8	76	39.0	4.1	4.9	0.0	1.1
Kalam	26.1	28.0	104.3	62	4.0	2.9	4.7	0.0	3.4
Kalat	29.9	31.0	115.5	28	0.0	0.0	0.0	0.0	0.0
Karachi	32.4	34.5	171.8	79	44.0	7.1	7.0	7.4	10.6
Khanpur	38.1	40.5	194.3	70	39.0	3.7	4.1	0.3	5.7
Khuzdar	33.5	36.0	173.3	34	8.3	1.1	4.0	0.0	2.9
Kotli	33.1	36.4	168.6	75	89.0	5.6	6.1	0.6	1.3
Lahore	34.9	38.2	182.1	72	36.2	5.4	6.1	1.1	1.7
Larkana	38.7	40.5	199.2	67	2.2	2.4	4.4	3.4	3.7
Lasbella	37.3	40.5	182.8	67	27.0	4.5	5.0	0.3	4.7
Lower Dir	37.5	40.0	180.8	57	0.0	4.3	2.9	2.3	1.7
M.B Din	33.6	38.5	175.2	80	71.1	3.7	4.1	0.6	0.9
Malam Jabba	21.9	24.5	92.0	79	52.0	5.0	5.6	0.0	1.4
Mangla	34.8	38.5	179.3	73	64.1	4.6	4.9	4.0	4.6
Mir Khani	36.4	36.8	167.6	44	6.0	1.4	3.9	0.0	2.3
Moinjodaro	36.3	39.5	189.0	65	2.2	3.1	3.7	2.9	5.4
Multan	37.1	39.3	198.0	67	5.1	3.0	6.0	3.7	3.7
Murree	22.6	25.2	99.2	88	33.1	5.3	7.3	0.9	2.6
Muzaffarabad	34.1	36.2	164.9	69	49.2	4.3	4.6	0.0	4.0
Nawabshah	38.2	42.0	190.8	73	63.0	5.6	5.6	2.9	6.3

Volume 16, No. 32			http://namc.pmd.gov.pk				August, 2016			
Nokkundi	41.1	42.5	206.8	11	0.0	1.4	0.4	16.9	12.9	
Okara	38.4	40.5	199.9	67	0.0	4.9	5.3	1.7	2.6	
Padidan	37.6	40.5	193.3	72	27.2	5.3	5.0	2.0	2.3	
Panjgur	37.5	38.0	176.8	28	0.0	1.7	1.7	0.9	12.3	
Parachinar	30.7	32.2	144.5	77	27.2	5.4	5.3	3.0	16.3	
Pasni	33.9	36.5	179.0	81	0.0	5.7	4.1	1.7	9.7	
Pattan	37.8	40.0	188.8	53	2.0	2.7	2.0	0.0	4.6	
Peshawar	36.8	39.0	191.5	68	24.1	5.3	4.6	1.7	2.6	
Quetta	33.3	34.6	153.4	44	4.1	4.0	4.4	2.5	3.2	
R.Y.Khan	39.5	43.0	202.5	71	6.0	2.4	4.4	0.6	3.1	
Rawalakot	27.0	29.0	122.8	87	6.0	4.9	5.0	0.0	1.7	
Rawalpindi	34.8	38.0	177.7	70	35.3	2.7	4.3	1.1	2.0	
Sahiwal	36.8	39.4	188.1	70	24.1	4.4	4.9	1.1	2.6	
Saidu Sharif	34.7	37.0	167.3	65	11.0	4.1	3.9	0.0	0.6	
Sialkot	32.8	37.0	172.0	78	145.0	5.4	5.6	1.1	1.4	
Sibbi	40.5	44.0	204.8	62	53.5	2.9	3.6	1.7	4.0	
Skardu	33.2	36.6	136.1	40	1.1	3.0	5.7	0.0	0.6	
Tandojam	34.5	35.8	161.2	77	123.1	4.9	5.7	1.2	2.0	
Usta.M	37.6	41.5	188.7	72	96.0	3.2	4.8	2.3	3.4	
Zhob	34.4	36.5	157.3	54	5.0	0.9	5.0	5.0	8.0	

^{***} 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)
- 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 قابل ذکراضافہ ہوسکتا ہے۔
 - 2۔ گرمیوں کی بارش میں 25 فیصد اضا فیاور سر دیوں کی بارش میں 12 فیصد تک کمی کا امکان ہے۔
 - 3۔ مندرجہ بالاموسی 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۔

(أيكمپ يا كتان 2012-2014)