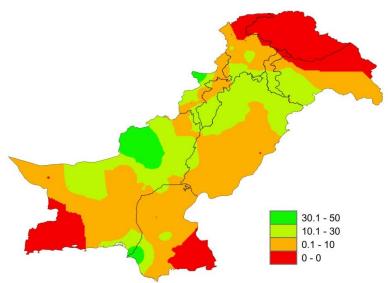
Weekly Weather and Crop Bulletin for Pakistan

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

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Rainfall Distribution (mm) during the

Previous Week (from 9th to 15th January, 2017)



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## Highlights of Past Weather (from 9th to 15th **January**, 2017)

Slightly above normal night temperatures reported from most parts of the country.

Province wise distribution of rainfall reported as follows:

- Light to moderate rainfall was reported from few places in Khyber Pakhtunkhwa, Sindh and Balochistan.
- Light rainfall was reported from isolated places in Punjab and Gilgit-Baltistan & Kashmir.

## Past Weather of Provinces (from 9<sup>th</sup> to 15<sup>th</sup> January, 2017)

#### **Punjab**

Light rainfall was reported from isolated places in Punjab during the week. Weekly maximum and minimum temperatures recorded as 17.1°C & 3.3°C respectively. For the present season on average 38.3 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 63% and wind speed in the morning/evening recorded as 0.4/1.7 Knots. During the previous week the highest amount of rainfall was recorded as 28.0 mm at Layyah & the lowest minimum temperature was recorded as -6.0°C at Murree.

#### Sindh

Light to moderate rainfall was reported from few places in Sindh during the week. Weekly maximum and minimum temperatures recorded as 20.7°C & 7.1°C respectively. For the present season, on average 62.2 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 59% 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 38.3 mm at Karachi & the lowest minimum temperature was recorded as 0.8°C at Mithi.

#### Khyber Pakhtunkhwa

Light to moderate rainfall was reported from few places in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 11.4°C & -1.1°C respectively. For the present season on average 20.7 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 1.4/2.5 Knots. During the previous week the highest amount of rainfall was recorded as 49.0 mm at Parachinar & the lowest minimum temperature was recorded as -15.5°C at Kalam.

#### **Balochistan**

Light to moderate rainfall was reported from few places in Balochistan during the week. Weekly maximum and minimum temperatures recorded as 18.8°C & 4.0°C respectively. For the present season on average 67.1 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 52% and wind speed in the morning/evening recorded as 1.8/3.0 Knots. During the previous week the highest amount of rainfall was recorded as -37.0 mm at Quetta & the lowest minimum temperature was recorded as -1.0°C at Quetta.

#### Gilgit-Baltistan and Azad Jammu & Kashmir

Light rainfall was reported from isolated places in Gilgit-Baltistan & Kashmir regions during the week. Weekly maximum and minimum temperatures recorded as 8.4°C & -4.0°C respectively. For the present season, on average 21.1 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 0.5/2.6 Knots. During the previous week the highest amount of rainfall was recorded as 14.8 mm at Kotli & the lowest minimum temperature was recorded as -13.8°C at Skardu.

## Past Weather for Major Agricultural Plains (from 9<sup>th</sup> to 15<sup>th</sup> January, 2017)

#### Rawalpindi (Potohar region)

Rainfall was reported as 14.3 mm during the week; cloudiness in the morning/evening recorded as 2.3/3.4 Oktas while, average relative humidity observed as 71%. Mean night time temperature recorded as 1.6°C & for the present season 25.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.7 Knots.

#### Faisalabad (Central Punjab)

Rainfall was reported as 4.8 mm during the week; however cloudiness in the morning/evening recorded as 1.6/2.3 Oktas while, average relative humidity observed as 66%. Mean night time temperature recorded as 3.5°C & for the present season 41.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/1.4 Knots.

#### Tandojam (Lower Sindh)

Rainfall was reported as 1.0 mm during the week; however cloudiness in the morning/evening recorded as 2.0/2.3 Oktas while, average relative humidity observed as 65%. Mean night time temperature recorded as 6.1°C & for the present season 61.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.8/1.6 Knots.

#### **Quetta (Northern Baluchistan)**

Rainfall was reported as 44.2 mm during the week; however cloudiness in the morning/evening recorded as 2.6/3.1 Oktas while, average relative humidity observed as 47%. Mean night time temperature recorded as -4.6°C by the end of last week. Wind speed recorded in the morning/evening as 1.5/3.1 Knots.

#### **Usta Muhammad (Eastern Balochistan)**

Rainfall was reported as 6.0 mm during the week; however cloudiness in the morning/evening recorded 3.4/2.9 Oktas while, average relative humidity observed as 82%. Mean night time temperature recorded as 6.4°C & for the present season 53.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/2.0 Knots.

## Past Weather for Sub-Regional Agricultural Plains (from 9<sup>th</sup> to 15<sup>th</sup> January, 2017)

#### Multan

Rainfall was reported as 2.4 mm during the week; however cloudiness in the morning/evening recorded as 1.0/0.0 Oktas while, average relative humidity observed as 65%. Mean night time temperature recorded as 5.9°C & for the present season 45.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/4.5 Knots.

#### Lahore

Rainfall was reported as 20.8 mm during the week; however cloudiness in the morning/evening recorded as 0.0/0.0 Oktas while, average relative humidity observed as 52%. Mean night time temperature recorded as 5.2°C & for the present season 47.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.8/3.0 Knots.

#### Zhob

Rainfall was reported as 8.0 mm during the week; however cloudiness in the morning/evening recorded as 0.4/0.0 Oktas while, average relative humidity observed as 39%. Mean night time temperature recorded as -1.7°C by the end of last week. Wind speed recorded in the morning/evening as 3.6/5.0 Knots.

#### D.I. Khan

Rainfall was reported as 20.0 mm during the week; cloudiness in the morning/evening recorded as 0.0/0.0 Oktas while, average relative humidity observed as 62%. Mean night time temperature recorded as 3.5°C & for the present season 38.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.5 Knots.

#### **Peshawar**

Rainfall was reported as 6.0 mm during the week; cloudiness in the morning/evening recorded as 2.2/0.0Oktas while, average relative humidity observed as 59%. Mean night time temperature recorded as 2.3°C & for the present season 30.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.8/5.0 Knots.

#### Murree

Rainfall was reported as 20.1 mm during the week; cloudiness in the morning/evening recorded as 0.0/1.5 Oktas while, average relative humidity observed as 70%. Mean night time temperature recorded as -3.7°C by the end of last week. Wind speed recorded in the morning/evening as 2.8/2.0 Knots.

#### Kalam

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 1.2/1.5 Oktas while, average relative humidity observed as 93%. Mean night time temperature recorded as -12.6°C by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 Knots.

#### Gilgit

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 2.4/4.3 Oktas while, average relative humidity observed as 63%. Mean night time temperature recorded as -5.3°C by the end of last week. Wind speed recorded in the morning/evening as 0.8/0.0 Knots.

#### Skardu

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 2.0/3.3 Oktas while, average relative humidity observed as 70%. Mean night time temperature recorded as -11.3°C by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 Knots.

#### **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 conditions) grown in the fields of RAMC Faisalabad.

Wheat: Very Good condition at *Tillering* stage.

#### Lower Sindh (Tandojam)

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

Wheat (Imdad): Good condition at *Flowering* stage.

#### Northern Balochistan (Quetta)

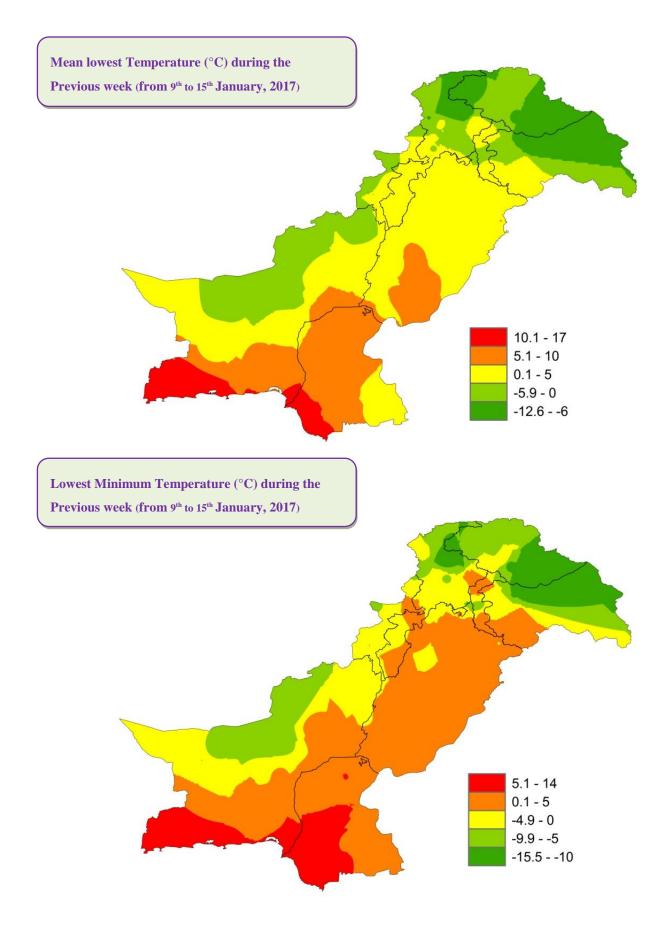
There is presently one crop (irrigated conditions) grown in the fields of RAMC Quetta.

Wheat (Local white): Very Good condition at *Tillering* stage.

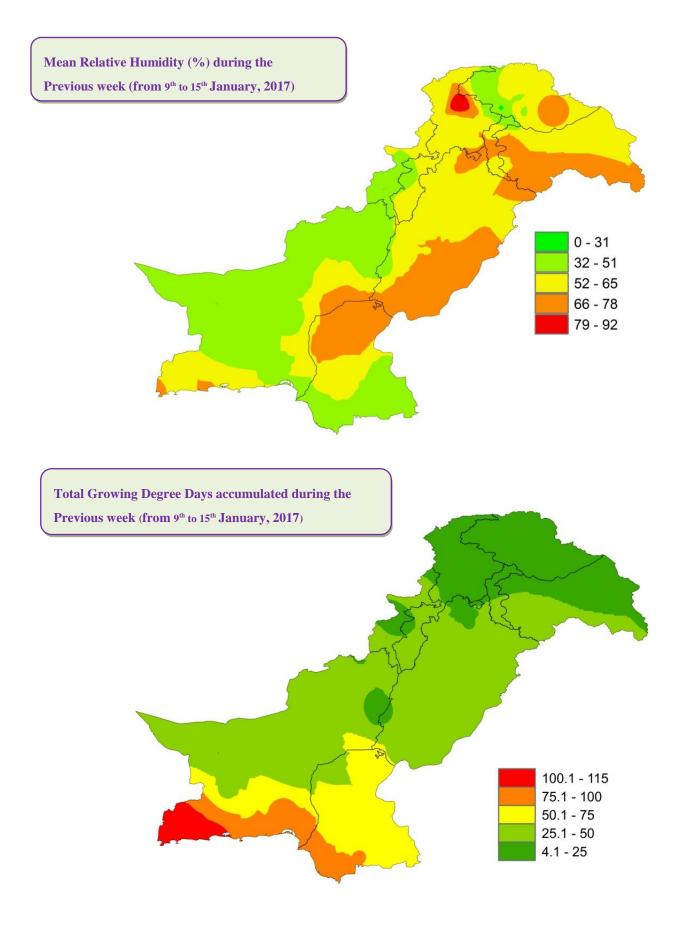
#### **Eastern Balochistan (Usta Muhammad)**

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

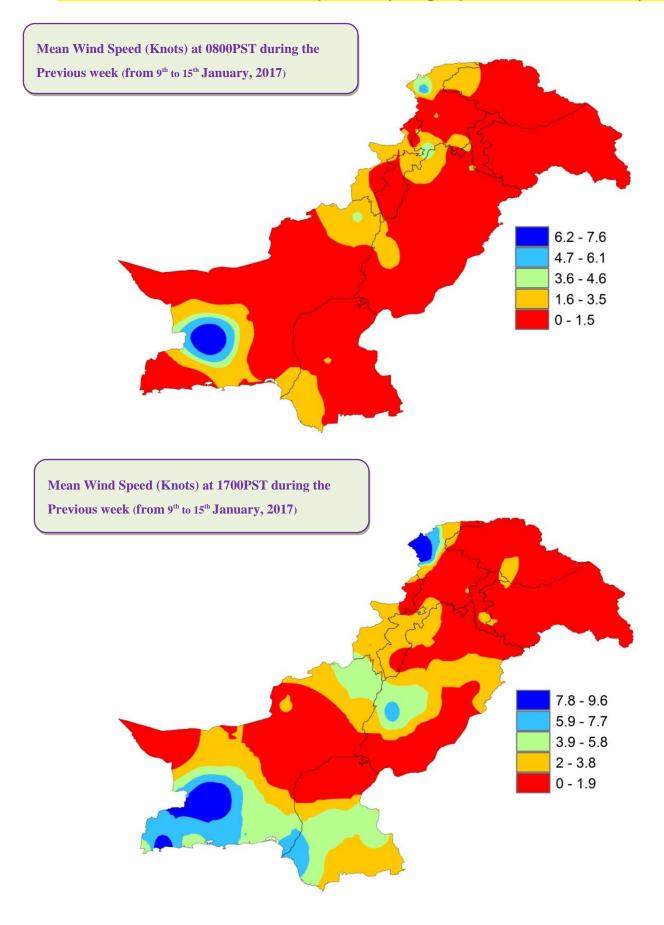
Wheat: Good condition at *Tillering* stage.



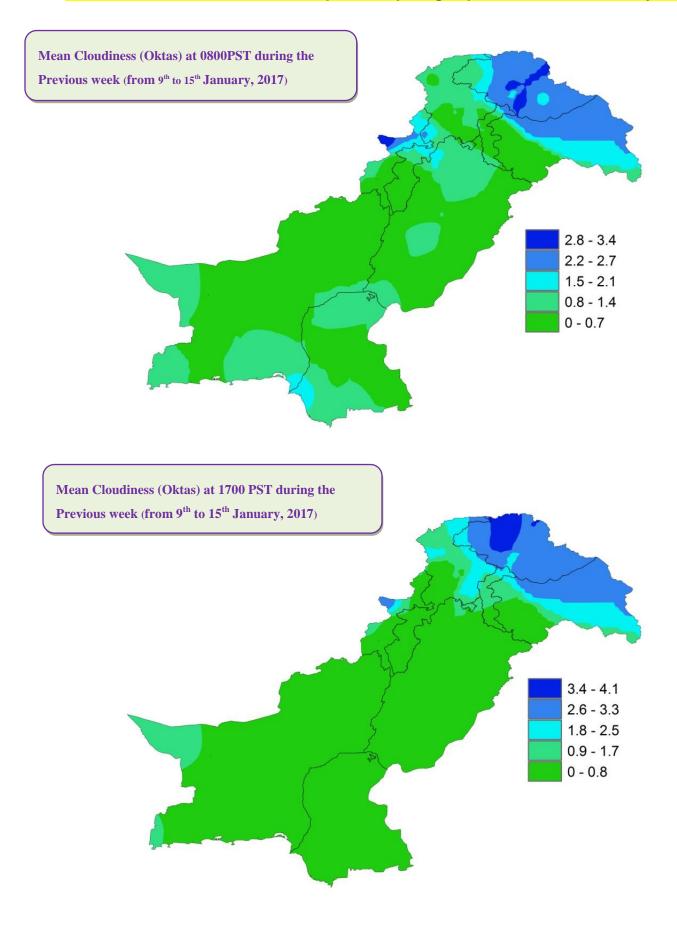
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## **Weekly Weather Advisory for Farmers** (From 16<sup>th</sup> to 22<sup>nd</sup> January, 2017)

Westerly wave is affecting upper parts of the country and likely to persist till Wednesday. Another shallow westerly wave is likely to affect western parts of the country during the weekend.

#### **MONDAY** 16-01-2017

More rain with snowfall over the hills is expected at isolated places in Malakand, Hazara, Peshawar, Mardan, Rawalpindi, Gujranwala, Lahore divisions, Islamabad, upper FATA, Kashmir & Gilgit-Baltistan. Very cold and dry weather is expected in other parts of the country.

#### **TUESDAY** 17-01-2017

Mainly very cold and dry weather is expected in most parts of the country. However, more rain with snowfall over the hills is expected at isolated places in Malakand, Hazara, Rawalpindi, Gujranwala, Zhob, Makran divisions, Islamabad, upper FATA, Kashmir & Gilgit-Baltistan.

#### WEDNESDAY 18-01-2017

Mainly very cold and dry weather is expected in most parts of the country. However, more rain with snowfall over the hills is expected at isolated places Malakand, Hazara, Rawalpindi divisions. Islamabad, upper FATA, Kashmir & Gilgit-Baltistan.

#### **THURSDAY** 19-01-2017

Mainly very cold and dry weather is expected in most parts of the country. However, more rain with snowfall over the hills is expected at isolated places in Malakand, Zhob, Quetta & Makran divisions.

#### **FRIDAY** 20-01-2017

Mainly very cold and dry weather is expected in most parts of the country. However, more rain with snowfall over the hills is expected at isolated places in Malakand, Zhob, Quetta & Makran divisions.

#### **SATURDAY** 21-01-2017

Mainly very cold and dry weather is expected in most parts of the country. However, more rain with snowfall over the hills is expected at isolated places in Malakand, Zhob, Quetta & Makran divisions.

#### **SUNDAY** 22-01-2017

Mainly very cold and dry weather is expected in most parts of the country. However, more rain with snowfall over the hills is expected at isolated places in Malakand, Zhob, Quetta & Makran divisions.

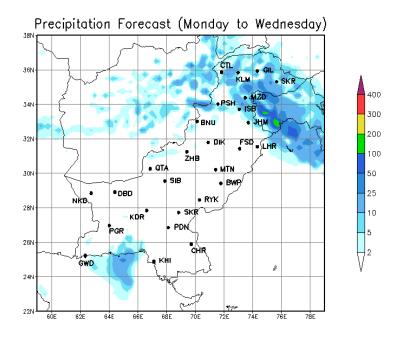
#### **ADVISES FOR CROPS**

In the last week, light to moderate rain (with snowfall over the mountains) occurred over most of places in the northern half of the country. Accordingly, soil moisture conditions may get better in particular areas. However, night temperatures are getting low day by day in the northern half of the country and northwestern Baluchistan, which may increase the chances of frost. Keeping in view the expected weather conditions following advises are suggested for farming community especially for rainfed areas of KP and Punjab.

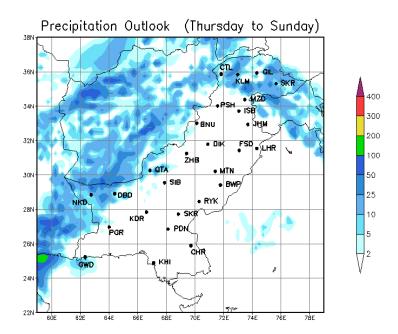
- Farmers of rainfed areas obtaining water through tube wells are advised to stop irrigation due to the recent rains.
- Precautionary measures should be taken to preserve the standing crops from the harmful effects of frost in particular areas.
- In areas like Potohar region and adjoining areas of KP where rain water storages are available, farmers are advised to irrigate crops by using available irrigation methods like sprinkler irrigation etc.
- Due to recent rains fog has vanished, farmers may do necessary tasks in the field.

## Weather Outlook From 16<sup>th</sup> to 22<sup>nd</sup> January, 2017

The outlook from 16<sup>th</sup> to 18<sup>th</sup> January, 2017 shows that dry weather is expected in most parts of the country. However, light to moderate rainfall is expected at particular places in coastal area of Balochistan, upper KP, northern Punjab, Gilgit-Baltistan and Kashmir.



The outlook from 19<sup>th</sup> to 22<sup>nd</sup> January, 2017 shows that dry weather is expected in most parts of the country. However, light to moderate rainfall is expected at particular places in north and northwestern Balochistan, upper KP, Gilgit-Baltistan and Kashmir.



# National Weather Data of Selected Cities (Weekly Data from 9<sup>th</sup> to 15<sup>th</sup> January, 2017)

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	Lowest				PST	PST	0800 PST	1700 PST
Astore	-9.4	-13.5	***	48	0.0	3.6	2.8	1.2	2.5
Badin	9.6	7.5	78.3	49	0.0	1.0	0.0	1.2	2.5
Bahawalnagar	4.5	3.0	46.0	67	0.0	0.0	0.0	0.0	0.5
Bahawalpur	5.6	3.7	47.9	68	1.0	0.3	0.0	0.8	1.0
Balakot	-0.5	-2.0	8.0	66	4.0	1.2	2.3	0.0	2.5
Bannu	0.6	-2.4	19.7	45	5.0	0.0	0.0	1.2	2.5
Barkhan	1.1	-0.5	15.8	37	21.0	0.0	0.0	0.8	2.0
Bunji	-0.7	-2.8	***	43	0.0	3.8	3.5	0.0	0.5
Cherat	1.1	0.0	***	61	15.0	1.2	0.5	4.8	3.5
Chhor	4.7	2.0	64.7	44	0.0	0.2	0.5	0.8	4.0
Chilas	-1.2	-2.0	***	29	0.0	2.2	2.8	0.4	1.0
Chitral	-3.0	-4.1	***	53	0.0	0.4	1.3	6.0	8.5
D.I.Khan	3.5	1.0	38.8	62	20.0	0.0	0.0	0.0	1.5
Dalbandin	-2.8	-6.0	37.3	38	22.1	0.0	0.7	0.0	2.0
D.G.Khan	4.5	3.0	41.5	65	1.1	0.6	0.0	2.4	6.5
Dir	-6.2	-8.0	***	63	11.0	1.0	0.5	0.0	2.0
Drosh	-3.8	-4.8	***	52	0.0	1.4	2.5	0.0	10.0
Faisalabad	3.5	1.2	41.4	66	4.8	1.6	2.3	0.6	1.4
Garidopatta	0.5	-1.0	14.3	70	7.0	0.8	0.8	0.0	0.0
Gwadar	13.6	11.0	108.3	60	0.0	0.8	0.5	0.0	9.5
Gilgit	-5.3	-8.5	***	63	0.0	2.4	4.3	0.8	0.0
Gupis	-8.3	-9.5	***	41	0.0	1.2	2.8	2.4	1.5

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Hyderabad	9.2	7.5	70.0	53	0.4	0.6	0.0	1.2	4.0		
Islamabad	0.3	-1.5	20.7	69	14.0	1.0	0.8	0.0	0.5		
Jacobabad	6.2	3.0	49.8	76	13.0	0.8	0.0	0.0	0.0		
Jhelum	2.4	1.0	35.5	62	13.3	0.6	0.0	0.4	2.0		
Jiwani	16.4	13.0	114.8	67	0.0	1.2	1.5	0.8	4.5		
Kakul	-2.6	-3.5	***	56	5.4	0.2	2.0	3.0	0.5		
Kalam	-12.6	-15.5	***	93	0.0	1.2	1.5	0.0	0.0		
Karachi	11.0	9.5	84.5	49	38.3	1.6	0.3	3.2	7.0		
Khanpur	5.4	3.0	48.9	71	1.4	0.0	0.0	0.0	1.5		
Khuzdar	2.1	0.5	30.5	48	10.0	0.0	0.0	0.0	1.5		
Kotli	2.6	1.6	34.2	61	14.8	0.0	0.0	0.0	2.5		
Lahore	5.2	2.5	47.2	52	20.8	0.0	0.0	0.8	3.0		
Larkana	5.3	4.0	45.0	66	8.0	0.8	0.0	0.4	1.0		
Lasbella	8.5	4.0	82.5	51	5.0	1.2	0.5	0.4	4.5		
Lower Dir	1.7	-0.5	15.5	64	4.0	0.6	0.0	2.0	2.0		
M.B Din	3.7	2.0	38.1	64	7.0	1.0	0.0	0.4	1.5		
Malam Jabba	-5.9	-7.5	***	58	15.0	0.8	1.3	0.0	0.0		
Mangla	2.2	0.6	33.9	60	11.0	1.6	0.0	2.0	1.0		
Mir Khani	0.0	-1.3	4.1	64	0.0	0.8	1.8	0.0	2.3		
Moinjodaro	5.7	2.5	47.3	71	4.5	0.8	0.0	0.8	1.0		
Multan (PBO)	5.9	5.0	45.9	65	2.4	1.0	0.0	0.0	4.5		
Murree	-3.7	-6.0	***	70	20.1	0.0	1.5	2.8	2.0		
Muzaffarabad	1.0	0.0	14.9	68	6.0	0.8	2.0	0.4	1.0		
Nawabshah	7.3	5.5	63.3	63	1.0	0.6	0.0	1.6	5.5		
Nokkundi	2.8	-0.8	45.7	40	0.0	1.2	1.0	0.8	0.0		
Okara	3.4	2.0	40.7	67	4.4	0.0	0.0	0.4	1.0		

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Padidan	6.9	4.5	59.5	70	0.0	0.4	0.0	0.0	2.0
Panjgur	2.4	0.0	44.8	41	0.0	0.6	0.5	7.6	9.5
Parachinar	-5.2	-5.5	***	51	49.0	3.4	3.3	2.8	3.0
Pasni	16.4	13.5	112.2	66	0.0	0.6	0.0	0.0	5.0
Pattan	3.6	3.0	24.5	53	0.0	0.0	1.0	1.2	1.0
Peshawar	2.3	0.2	30.4	59	6.0	2.2	0.0	0.8	0.5
Quetta	-4.6	-9.5	***	47	44.2	2.6	3.1	1.5	3.1
Rawalpindi	1.6	0.5	25.6	71	14.3	2.3	3.4	0.0	1.7
Rahim Yar Khan	4.5	3.2	47.7	71	1.0	1.3	0.0	0.8	1.0
Rawalakot	-5.7	-8.0	***	75	12.0	0.0	1.8	0.0	0.0
Sahiwal	4.0	2.0	40.4	66	2.0	0.0	0.0	0.0	3.0
Saidu Sharif	0.1	-0.5	5.5	58	7.0	0.0	0.0	0.0	0.0
Sialkot	2.0	-0.1	32.0	75	13.2	0.0	0.0	0.8	0.0
Sibbi	4.4	4.0	45.8	52	34.0	0.0	0.0	0.0	0.0
Skardu	-11.3	-13.8	***	70	0.0	2.0	3.3	0.0	0.0
Tandojam	6.1	3.5	61.3	65	1.0	2.0	2.3	0.8	1.6
Usta.M	6.4	3.0	53.9	82	6.0	3.4	2.9	1.4	2.0
Zhob	-1.7	-5.0	***	39	8.0	0.4	0.0	3.6	5.0

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<sup>\*\*\*</sup> Shows that data was not available.

## Findings of AgMIPPakistan, 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
  - 2۔ گرمیوں کی بارش میں 25 فیصد اضا فیداور سر دیوں کی بارش میں 12 فیصد تک کمی کا امرکان ہے۔
  - 3۔ مندرجہ بالاموتی تغیرات کی وجہ سے دھان کی پیداوار میں 17 فیصد اور گندم کی پیداوار میں 14 فیصد تک کمی ہوسکتی ہے۔
    - 4۔ اگرموسی تغیرات کا مناسب بندوبست نہ کیا گیا۔ تو کسانوں کی اکثریت کومعاثی نقصان کا سامنا کرنا پڑے گا۔
- 5۔ موتی تغیرات کے سدّیاب (بذریعینی ٹیکنالوجی کااستعال اور بہترنظم ونسق) ہے غربت میں کمی اور کسانوں کی زندگی میں خوشحالی لائی جاسکتی ہے۔

(الگمپ یا کتان 2012-2014)