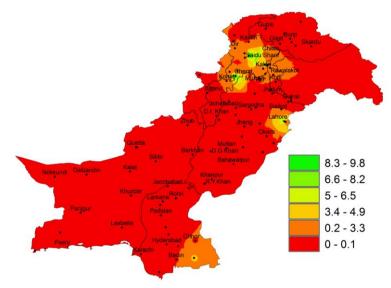
Weekly Weather and Crop Bulletin for Pakistan

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

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Rainfall Distribution (mm) during the previous Week (18th to 24th September, 2017)

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<u>Highlights of Past Weather (18th to 24th</u> <u>September, 2017)</u>

Above normal day time temperatures reported from most parts of the country and slightly above normal from most parts of Baluchistan.

Province wise distribution of rainfall reported as follows:

- Light rainfall reported from few places from Kashmir, KP and Gilgit-Baltistan, during this week.
- Light rainfall occurred only at Lahore (Punjab) and Mithi (Sindh) during this week respectively.
- Dry weather reported from rest parts of the country

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Past Weather of Provinces (18th to 24th September, 2017)

Punjab

Light rainfall reported from single place in Punjab during the week. Weekly maximum and minimum temperatures recorded as 36.5°C & 22.8°C respectively. For the recent week on average 172.7 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 62% and wind speed in the morning/evening recorded as 1.6/2.4 knots. During the previous week the highest amount of rainfall was recorded as 8.81mm at Lahore & highest maximum temperature was recorded as 44.0°C at Rahim Yar Khan.

Balochistan

Dry weather reported from Balochistan province during the week. Weekly maximum and minimum temperatures recorded as &18.7°C 35.2°C respectively. For the recent week on average 153.2 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 40% and wind speed in the morning/evening recorded as 1.4/5.2knots. During the previous week highest maximum temperature was recorded as 44.0°C at Lasbella.

Khyber Pakhtunkhwa

Light rainfall reported from isolated places of Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 32.4°C &16.3°C respectively. For the recent week on average 135.7 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 54% and wind speed in the morning/evening recorded as 0.6/2.2 knots. During the previous week the highest amount of rainfall was recorded as 10.0 mm at Malam Jabba & highest maximum temperature was recorded as 40.0°C at D.I.Khan.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light rainfall reported from isolated places of Gilgit-Baltistan& Kashmir during the week. Weekly maximum and minimum temperatures recorded as 30.7°C &14.1°C respectively. For the recent week on average 122.4 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 0.8/1.9 knots. During the previous week the highest amount of rainfall was recorded as 2.4 mm at Garhi Dopatta &highest maximum temperature was recorded as 36.5°C at Chilas.

Sindh

Light rainfall was reported from single place (Mithi 3.5 mm) from Sindh province during the week. Weekly maximum and minimum temperatures recorded as 38.0°C & 25.1°C respectively. For the recent week, on average 189.2 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 62% and wind speed in the morning/evening recorded as 4.2/3.8 knots. Highest maximum temperature was recorded as 42.6°C at Dadu.

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Past Weather for Major Agricultural Plains (18th to 24th September, 2017)

Rawalpindi (Potohar region)

Dry weather reported from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 0.5/0.8 Oktas while, average relative humidity observed as 65%. Mean day time temperature recorded as 35.2°C & for the recent week 162.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.2/0.6 knots.

Faisalabad (Central Punjab)

Dry weather reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 0.0/0.3 Oktas while, average relative humidity observed as 60%. Mean day time temperature recorded as 37.4°C & for the recent week 177.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.8/0.9knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 0.0/0.3 Oktas while, average relative humidity observed as 69%. Mean day time temperature recorded as 37.4°C & for the recent week 176.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/2.3 knots.

Usta Muhammad (Eastern Balochistan)

Dry weather reported from Usta Muhammad during week: however, cloudiness in the the morning/evening recorded 0.0/0.6 Oktas while, average relative humidity observed as 66%. Mean day time temperature recorded as 39.1°C & for the recent week growing degree 189.7 days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/3.4 knots.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 0.0/0.0 Oktas while, average relative humidity observed as 21%. Mean day time temperature recorded as 28.7°C & for the recent week 95.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.8/1.3knots.

Past Weather for Sub-Regional Agricultural Plains (18th to 24th September, 2017)

Multan

Dry weather reported from Multan during the week; however, cloudiness in the morning/evening recorded as 0.0/0.2 Oktas while, average relative humidity observed as 50%. Mean day time temperature recorded as 38.1°C & for the recent week 191.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.7/5.7 knots.

Lahore

Rainfall reported as trace (0.01mm) from Lahore during the week; however, cloudiness in the morning/evening recorded as 0.3/0.7 Oktas while, average relative humidity observed as 66%. Mean day time temperature recorded as 35.0°C & for the recent week 171.0 growing degree davs accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/2.0 knots.

Zhob

Dry weather reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 0.0/0.0 Oktas while, average relative humidity observed as 28%. Mean day time temperature recorded as 32.8°C & for the recent week 141.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/4.8knots.

Murree

Rainfall reported as 2.0 mm from Murree during week: however. cloudiness the in the morning/evening recorded as 0.5/1.7 Oktas while, average relative humidity observed as 69%. Mean day time temperature recorded as 23.4°C & for the recent week 96.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.0/0.7 knots.

D.I. Khan

Dry weather reported from D.I.Khan during the week; however, cloudiness in the morning/evening recorded as 0.0/0.0 Oktas while, average relative humidity observed as 60%. Mean day time temperature recorded as 38.6°C & for the recent week 180.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.7/0.7 knots.

Peshawar

Dry weather reported from Peshawar during the week; however, cloudiness in the morning/evening recorded as 0.0/2.5 Oktas while, average relative humidity observed as 61%. Mean day time temperature recorded as 35.9°C & for the recent week 162.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1.7 knots.

Kalam

Dry weather reported from Kalam during the week; however, cloudiness in the morning/evening recorded as 0.0/4.0 Oktas while, average relative humidity observed as 57%. Mean day time temperature recorded as 26.8°C & for the recent week 86.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as0.0/2.0 knots.

Gilgit

Dry weather reported from Gilgit during the week; However, cloudiness in the morning/evening recorded as 3.2/4.8 Oktas while, average relative humidity observed as 54%. Mean day time temperature recorded as 32.1°C& for the recent week 120.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.3 knots.

Skardu

Dry weather reported from Skardu during the week; However, cloudiness in the morning/evening recorded as 2.0/3.5 Oktas while, average relative humidity observed as 47%. Mean day time temperature recorded as 27.6°C & for the recent week 89.1 growing degree days accumulated 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 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, Boll opening stage completed

Lower Sindh (Tandojam)

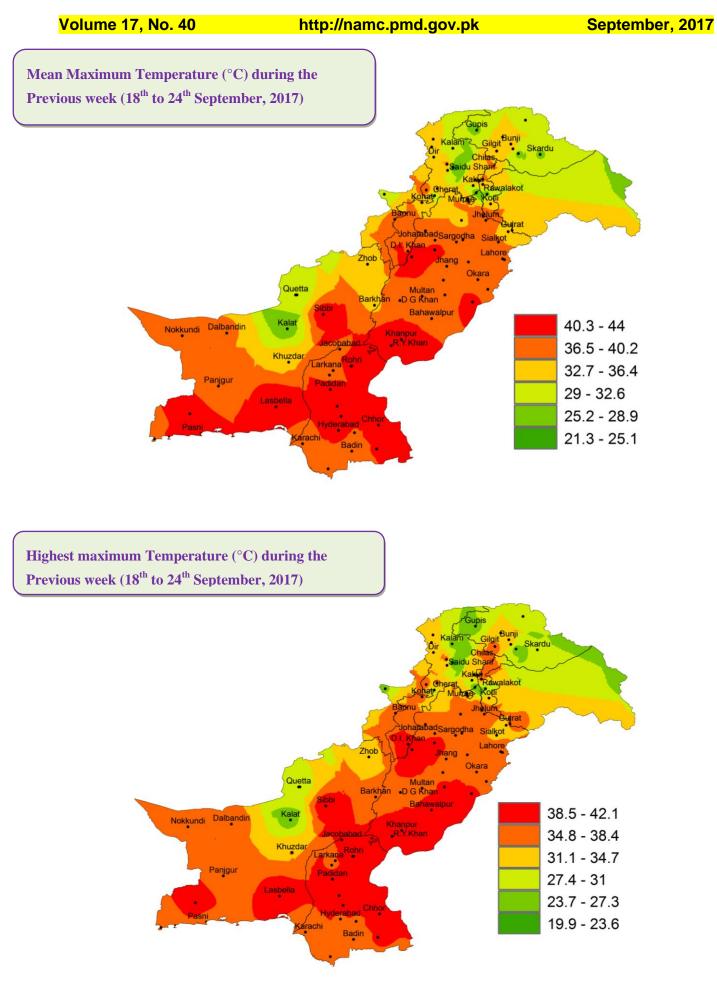
There is presently one crop (irrigated conditions) grown in the fields of RAMC Tandojam. Cotton (HH-906): Good condition, *Picking* stage.

Northern Baluchistan (Quetta)

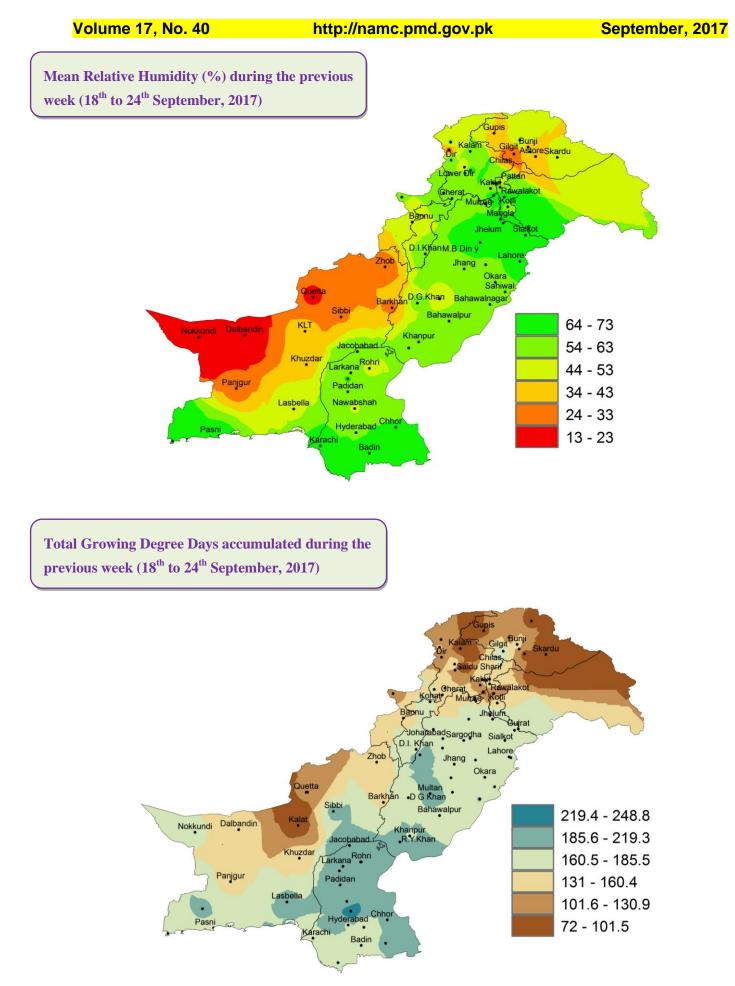
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

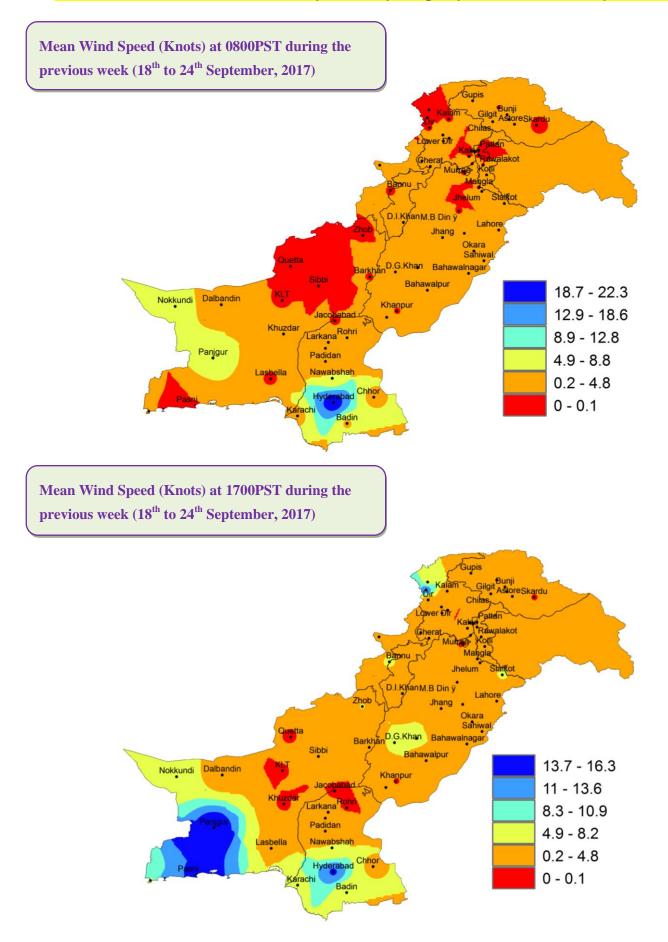
There is presently one crop (irrigated conditions) grown in the fields of RAMC Usta Muhammad. Rice: Good condition, *Tillering* stage.



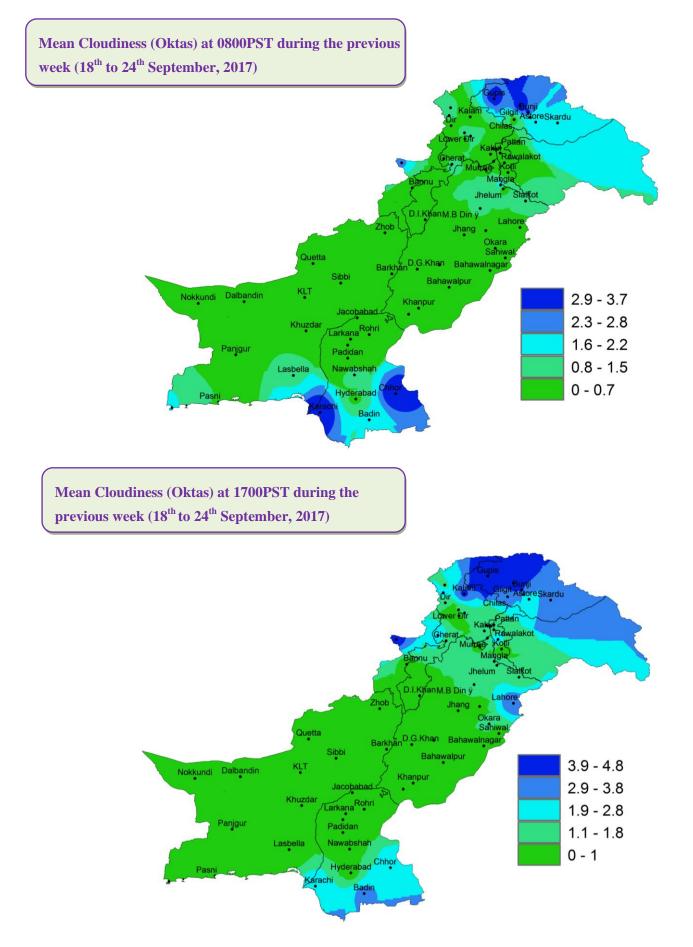
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Weekly Weather Advisory for Farmers (25th September to 1st October, 2017)

Weak seasonal low lies over Balochistan and adjoining areas. A weak westerly wave is affecting upper parts of the country.

MONDAY

25-09-2017

Mainly hot and dry weather is expected in most parts of the country. However, rain-thunderstorm (with gusty winds) is expected at isolated places in Malakand, Rawalpindi divisions, Hazara, Kashmir and Gilgit-Baltistan.

TUESDAY

26-09-2017

Mainly hot and dry weather is expected in most parts of the country. However, rain-thunderstorm (with gusty winds) is expected at isolated places in Malakand divisions and Gilgit-Baltistan.

WEDNESDAY

27-09-2017

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

THURSDAY

28-09-2017

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

FRIDAY 29-09-2017

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

SATURDAY 30-09-2017

Mainly hot and dry weather is expected in most part of the country. However, rain-thunderstorm (with gusty winds) is expected at isolated places in Malakand, Hazara, Rawalpindi divisions, FATA, Islamabad, Kashmir and Gilgit Baltistan.

SUNDAY 01-10-2017

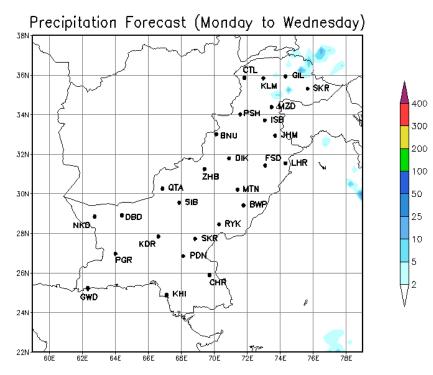
ADVISES FOR FARMERS

During the last week, light rainfall occurred at isolated places in the agricultural plains of the country. In the coming days, hot and dry weather is expected in most parts of the country. Keeping in view the expected weather conditions following advises are suggested for farming community.

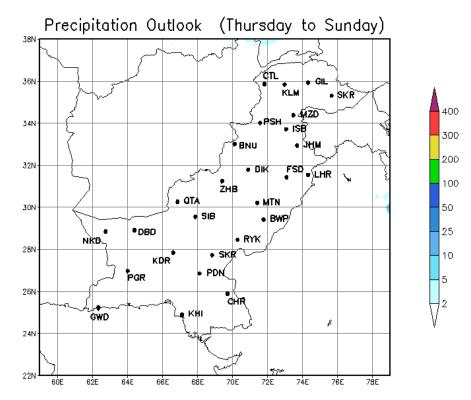
- · Pest/viral attacks and more weeds growth are expected in standing crops in the particular areas, during this season. Farmers are therefore advised to do regular pest scouting and take in time precautionary measures accordingly.
- · Farmers of irrigated areas may irrigate the standing crops as per requirement in accordance with the expected weather and crop conditions.

Weather Outlook from 25th September to 1st October, 2017

The outlook for the period 25th to 27th September, 2017 shows that dry weather is expected at most parts of the country however light rainfall is expected at isolated places in Gilgit-Baltistan.



The outlook for the period 28th September to 1st October, 2017 shows that dry weather is expected at most parts of the country.



National Weather Data of Selected Cities (18thSeptember to 24th September, 2017)

| Stations | Temp | n/Night time oerature °C) highest | Growing Degree Days | Relative Humidity (%) | Rainfall (mm) | Cloudiness (Oktas) 0800 PST | Cloudiness (Oktas) 1700 PST | Wind Speed (Knots) 0800 | Wind Speed (Knots) 1700 |
|--------------|------|--|---------------------------|-----------------------------|------------------|--------------------------------------|--------------------------------------|----------------------------------|----------------------------------|
| | | | | | | | | PST | PST |
| Astore | 24.8 | 27.5 | 86.8 | 34 | 0.00 | 2.2 | 2.3 | 1.0 | 3.0 |
| Badin | 35.0 | 38.0 | 179.3 | 69 | 0.00 | 1.7 | 3.2 | 4.3 | 5.0 |
| Bahawalnagar | 39.0 | 41.0 | 185.8 | 55 | 0.00 | 0.0 | 0.5 | 1.0 | 0.3 |
| Bahawalpur | 39.0 | 39.8 | 183.1 | 56 | 0.00 | 0.0 | 0.3 | 3.7 | 2.0 |
| Balakot | 33.1 | 34.5 | 134.6 | 65 | 7.40 | 0.5 | 1.0 | 0.0 | 0.0 |
| Bannu | 36.7 | 37.8 | 153.8 | 46 | 0.00 | 0.0 | 0.5 | 0.0 | 5.0 |
| Barkhan | 35.3 | 36.0 | 158.5 | 31 | 0.00 | 0.0 | 0.5 | 0.0 | 1.0 |
| Bunji | 32.9 | 34.4 | 140.2 | 40 | 0.00 | 3.0 | 4.0 | 2.0 | 1.6 |
| Cherat | 29.5 | 30.5 | 131.0 | 57 | 9.00 | 1.0 | 1.3 | 2.7 | 2.0 |
| Chhor | 39.3 | 42.2 | 193.0 | 63 | 0.00 | 3.5 | 2.5 | 3.7 | 4.0 |
| Chilas | 35.6 | 36.5 | 173.8 | 22 | 0.00 | 0.5 | 2.8 | 1.3 | 3.3 |
| Chitral | 31.6 | 33.6 | 117.3 | 55 | 0.00 | 0.8 | 1.7 | 0.0 | 6.7 |
| D.G.Khan | 38.0 | 38.7 | 177.4 | 56 | 0.00 | 0.0 | 0.2 | 4.3 | 5.7 |
| D.I.Khan | 38.6 | 40.0 | 180.5 | 60 | 0.00 | 0.0 | 0.0 | 0.7 | 0.7 |
| Dalbandin | 36.9 | 37.0 | 146.0 | 13 | 0.00 | 0.0 | 0.0 | 1.3 | 2.0 |
| Dir | 31.1 | 32.5 | 104.5 | 63 | 1.00 | 0.5 | 1.0 | 0.0 | 1.3 |
| Drosh | 33.1 | 34.0 | 134.4 | 27 | 0.00 | 0.8 | 2.3 | 0.0 | 14.0 |
| Faisalabad | 37.4 | 39.5 | 177.6 | 60 | 0.00 | 0.0 | 0.3 | 0.8 | 0.9 |
| Garidopatta | 34.8 | 35.5 | 148.1 | 56 | 2.40 | 0.0 | 1.7 | 0.0 | 2.3 |
| Gawader | 36.1 | 41.0 | 172.0 | 71 | 0.00 | 1.3 | 0.0 | 0.0 | 11.3 |
| Gilgit | 32.1 | 33.5 | 120.0 | 54 | 0.00 | 3.2 | 4.8 | 0.0 | 2.3 |
| Gupis | 26.1 | 28.5 | 96.5 | 41 | 0.00 | 3.0 | 4.7 | 2.0 | 1.3 |

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|--------------|-----------|------|----------|---------|-----------------------|-----|-----------------|------|------|--|
| Hyderabad | 37.9 | 41.5 | 183.2 | 63 | 0.00 | 0.7 | 0.7 | 22.3 | 14.0 | |
| Islamabad | 34.4 | 35.7 | 153.9 | 61 | 0.00 | 0.6 | 0.8 | 0.0 | 0.0 | |
| Jacobabad | 38.4 | 40.0 | 187.3 | 60 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Jhang | 38.0 | 39.0 | 176.9 | 58 | 0.00 | 0.0 | 0.0 | 2.0 | 1.7 | |
| Jhelum | 36.1 | 38.5 | 172.5 | 71 | 0.00 | 0.3 | 1.5 | 0.3 | 2.0 | |
| Jiwani | 35.0 | 36.5 | 177.8 | 73 | 0.00 | 1.7 | 0.0 | 0.3 | 8.0 | |
| Kakul | 30.2 | 32.0 | 121.9 | 59 | 1.00 | 0.0 | 1.0 | 0.0 | 1.0 | |
| Kalam | 26.8 | 29.0 | 86.5 | 57 | 0.00 | 0.0 | 4.0 | 0.0 | 2.0 | |
| Kalat | 26.0 | 27.0 | 82.0 | 36 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Karachi | 35.0 | 37.6 | 178.5 | 68 | 0.00 | 3.7 | 2.5 | 3.7 | 7.3 | |
| Khanpur | 39.7 | 41.5 | 184.6 | 63 | 0.00 | 0.0 | 0.5 | 0.0 | 0.0 | |
| Khuzdar | 34.8 | 36.0 | 146.3 | 38 | 0.00 | 0.0 | 0.4 | 1.3 | 0.0 | |
| Kotli | 33.8 | 35.6 | 158.1 | 60 | 0.00 | 0.3 | 0.5 | 2.7 | 1.7 | |
| Lahore | 35.0 | 37.3 | 171.0 | 66 | 0.01 | 0.3 | 3.7 | 0.3 | 2.0 | |
| Larkana | 38.4 | 39.5 | 190.9 | 63 | 0.00 | 0.0 | 0.0 | 1.6 | 0.7 | |
| Lasbella | 40.6 | 44.0 | 190.0 | 52 | 0.00 | 1.3 | 0.0 | 0.0 | 4.0 | |
| Lower Dir | 36.9 | 38.0 | 160.5 | 43 | 0.00 | 1.0 | 1.0 | 2.0 | 2.0 | |
| M.B Din | 35.7 | 37.5 | 169.8 | 72 | 0.00 | 1.0 | 1.7 | 0.0 | 2.0 | |
| Malam Jabba | 19.6 | 21.0 | 70.5 | 68 | 10.00 | 1.2 | 1.5 | 0.0 | 0.0 | |
| Mangla | 35.4 | 37.3 | 165.8 | 66 | 0.00 | 1.8 | 1.2 | 0.0 | 5.0 | |
| Mir Khani | 32.2 | 33.6 | 131.2 | 46 | 0.00 | 1.2 | 2.7 | 0.0 | 2.8 | |
| Moinjodaro | 38.1 | 39.5 | 185.9 | 63 | 0.00 | 0.0 | 0.0 | 1.0 | 3.0 | |
| Multan(PBO) | 38.1 | 39.4 | 191.5 | 50 | 0.00 | 0.0 | 0.2 | 2.7 | 5.7 | |
| Murree | 23.4 | 25.3 | 96.8 | 69 | 2.00 | 0.5 | 1.7 | 2.0 | 0.7 | |
| Muzaffarabad | 34.2 | 35.6 | 140.7 | 58 | 0.00 | 0.0 | 1.7 | 0.3 | 2.3 | |
| Nawabshah | 40.2 | 42.5 | 193.3 | 52 | 0.00 | 1.0 | 0.8 | 5.3 | 5.0 | |

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|----------------|-----------------------|------|----------|---------|----------|-----|-----------------|-----|------|--|
| Nokkundi | 35.8 | 37.0 | 163.3 | 13 | 0.00 | 0.0 | 0.0 | 6.7 | 6.3 | |
| Okara | 37.4 | 39.0 | 180.5 | 62 | 0.00 | 0.0 | 1.3 | 1.0 | 1.3 | |
| Padidan | 39.9 | 42.0 | 191.5 | 61 | 0.00 | 0.0 | 0.8 | 1.3 | 1.0 | |
| Panjgur | 35.4 | 36.5 | 152.3 | 27 | 0.00 | 0.0 | 0.0 | 8.0 | 16.3 | |
| Parachinar | 26.9 | 29.0 | 114.3 | 54 | 0.00 | 2.3 | 4.3 | 3.0 | 3.0 | |
| Pasni | 36.4 | 41.5 | 182.3 | 68 | 0.00 | 0.7 | 0.0 | 0.0 | 15.3 | |
| Pattan | 35.5 | 37.0 | 153.0 | 50 | 1.00 | 0.2 | 1.0 | 0.0 | 2.0 | |
| Peshawar | 35.9 | 38.0 | 162.9 | 61 | 0.00 | 0.0 | 2.5 | 0.3 | 1.7 | |
| Quetta | 28.7 | 29.5 | 95.4 | 21 | 0.00 | 0.0 | 0.0 | 1.8 | 1.3 | |
| Rahim Yar Khan | 41.6 | 44.0 | 192.6 | 55 | 0.00 | 0.0 | 0.2 | 1.0 | 1.3 | |
| Rawalakot | 26.9 | 28.0 | 98.6 | 73 | 0.00 | 0.0 | 2.2 | 0.0 | 0.7 | |
| Rawalpindi | 3.2 | 36.0 | 162.1 | 65 | 0.00 | 0.5 | 0.8 | 0.2 | 0.6 | |
| Rohri | 39.1 | 40.5 | 191.8 | 50 | 0.00 | 0.0 | 0.0 | 0.4 | 0.0 | |
| Sahiwal | 37.3 | 38.5 | 173.8 | 62 | 0.00 | 0.0 | 0.5 | 1.0 | 1.3 | |
| Saidu Sharif | 32.7 | 34.0 | 130.8 | 58 | 0.00 | 0.3 | 0.3 | 0.0 | 0.0 | |
| Sialkot | 33.8 | 35.0 | 165.4 | 68 | 0.00 | 1.3 | 1.2 | 3.2 | 5.0 | |
| Sibbi | 41.9 | 43.0 | 192.3 | 32 | 0.00 | 0.0 | 0.0 | 0.0 | 2.7 | |
| Skardu | 27.6 | 28.8 | 89.1 | 47 | 0.00 | 2.0 | 3.5 | 0.0 | 0.0 | |
| Tandojam | 37.4 | 40.5 | 176.0 | 69 | 0.00 | 0.0 | 0.3 | 1.4 | 2.3 | |
| Usta Muhammad | 39.1 | 41.0 | 189.7 | 66 | 0.00 | 0.0 | 0.6 | 0.6 | 3.4 | |
| Zhob | 32.8 | 33.5 | 141.0 | 28 | 0.00 | 0.0 | 0.0 | 0.0 | 4.8 | |

*** 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).
- 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۔ سال69-2040 کے دوران درجہ حرارت میں قابل ذکراضافہ ہوسکتا ہے۔ جو کہ دن کے وقت °2.8 اور رات کو ۲°2.2 تک ہوگا۔ ب
 - 2۔ گرمیوں کی بارش میں 25 فیصد اضافہ اور سر دیوں کی بارش میں 12 فیصد تک کمی کا امکان ہے۔
 - 3۔ مندرجہ بالاموسی تغیرات کی دجہ ہےدھان کی پیدادار میں 17 فیصد اور گندم کی پیدادار میں 14 فیصد تک کمی ہوسکتی ہے۔
 - 4۔ اگرموسی تغیرات کا مناسب بندوبست نہ کیا گیا۔ تو کسانوں کی اکثریت کومعاشی نقصان کا سامنا کرنا پڑے گا۔
- 5۔ موسی تغیرات کے سدِّ باب(بذریعہ نٹی ٹیکنالوجی کا استعال اور بہتر نظم ونسق) سے غربت میں کمی اور کسانوں کی زندگی میں خوشحالی لائی جاسکتی ہے۔

(ايكمي ياكتان 2012-2014)