

PEST SITUATION ON COTTON CROP IN PUNJAB DURING 1ST WEEK OF OCTOBER, 2022

Whitefly: On overall Punjab basis 5.49 above ETL spots have been observed during current week as compared to 10.30% % in last week and 37.96% during the same corresponding period of last year. And 87.59% below ETL spots have been observed during current week as compared to 87.69% in last week and 61.47% during the same corresponding period of last year.

Tehsil wise percentage of hot spots of Whitefly

| S. NO. | TEHSIL | %AGE | S.NO. | TEHSIL | %AGE |
|--------|---------------|------|-------|--------------|------|
| 1 | BAHAWAL PUR | 38.0 | 16 | ALI PUR | 7.4 |
| 2 | HAROOON ABAD | 22.5 | 17 | LODHRAN | 7.0 |
| 3 | SADIQ ABAD | 21.4 | 18 | HASILPUR | 6.3 |
| 4 | R.Y.KHAN | 20.8 | 19 | KEHROR PACCA | 5.1 |
| 5 | YAZMAN | 16.7 | 20 | VEHARI | 4.8 |
| 6 | FORT ABBAS | 15.6 | 21 | MAILSI | 4.3 |
| 7 | LIAQUAT PUR | 15.0 | 22 | MIANWALI | 4.2 |
| 8 | A.P.EAST | 14.3 | 23 | KALLOR KOT | 4.0 |
| 9 | KHAN PUR | 13.5 | 24 | MANKERA | 3.7 |
| 10 | BAHAWAL NAGAR | 12.5 | 25 | PIPLAN | 3.6 |
| 11 | ISA KHEL | 12.5 | 26 | BURE WALA | 2.5 |
| 12 | MINCHAN ABAD | 12.2 | 27 | MUZUFAR GARH | 2.4 |
| 13 | CHISHTIAN | 10.7 | 28 | KOT ADDU | 2.0 |
| 14 | JATOI | 10.0 | 29 | LAYYAH | 1.9 |
| 15 | BHAKKAR | 8.6 | | | |

Jassid: On overall Punjab basis 4.11% above ETL spots has been observed as compared to 6.44% in last week and same week of last year 5.01%. And 85.48% below ETL spots have been observed during current week as compared to 88.05% in last week and 82.70% during the same corresponding period of last year.

Tehsil wise percentage of hot spots of Jassid

| S. NO. | TEHSIL | %AGE | S.NO. | TEHSIL | %AGE |
|--------|---------------|------|-------|--------------|------|
| 1 | GOJRA | 20.0 | 21 | KOT CHUTTA | 4.7 |
| 2 | OKARA | 17.6 | 22 | TANDLIANWALA | 4.3 |
| 3 | SAHIWAL | 17.2 | 23 | R.Y.KHAN | 4.2 |
| 4 | CHICHA WATNI | 15.0 | 24 | KALLOR KOT | 4.0 |
| 5 | MANKERA | 14.8 | 25 | RAJAN PUR | 4.0 |
| 6 | ISA KHEL | 12.5 | 26 | KHAN PUR | 3.8 |
| 7 | T.T.SINGH | 12.5 | 27 | SHORKOT | 3.8 |
| 8 | ARIF WALA | 12.0 | 28 | ALI PUR | 3.7 |
| 9 | BHAKKAR | 11.4 | 29 | A.P.EAST | 3.6 |
| 10 | FORT ABBAS | 11.1 | 30 | CHISHTIAN | 3.6 |
| 11 | RENALA KHURD | 11.1 | 31 | SUMUNDRI | 3.6 |
| 12 | KEHROR PACCA | 10.3 | 32 | PIR MAHAL | 3.4 |
| 13 | BAHAWAL NAGAR | 10.0 | 33 | A.P.SIAL | 3.2 |
| 14 | MINCHAN ABAD | 9.8 | 34 | KAROR L.E. | 2.5 |
| 15 | DEPALPUR | 9.1 | 35 | MUZUFAR GARH | 2.4 |
| 16 | HAROOON ABAD | 7.5 | 36 | BAHAWAL PUR | 2.0 |
| 17 | TAUNSA | 7.5 | 37 | JATOI | 2.0 |

| | | | | | |
|----|-------------|-----|----|----------|-----|
| 18 | SADIQ ABAD | 7.1 | 38 | KOT ADDU | 2.0 |
| 19 | LIAQUAT PUR | 5.0 | 39 | LAYYAH | 1.9 |
| 20 | PAK PATTAN | 4.8 | 40 | D.G.KHAN | 1.8 |

Thrips: On overall Punjab basis 0.00% above ETL spots has been observed as compared to 0.00% in last week and same week of last year i.e. 0.10%. And 62.33.6% below ETL spots have been observed during current week as compared to 71.56% in last week and 69.21% during the same corresponding period of last year.

Tehsil wise percentage of hot spots of Thrips

No hot spot found in this week.

Mealy Bug: On overall Punjab basis 6.31% spots (all considered above ETL) of Mealy Bug have been observed as compared to 8.93% in last week and 39.05% spots during the same corresponding period of the last year.

Tehsil wise percentage of hot spots of Mealy bug

| S. NO. | TEHSIL | %AGE | S.NO. | TEHSIL | %AGE |
|--------|---------------|------|-------|--------------|------|
| 1 | JALAL PUR P.W | 35.0 | 19 | CHICHA WATNI | 7.5 |
| 2 | YAZMAN | 31.3 | 20 | MINCHAN ABAD | 7.3 |
| 3 | BAHAWAL PUR | 28.0 | 21 | RAJAN PUR | 6.0 |
| 4 | A.P.EAST | 23.2 | 22 | LAYYAH | 5.6 |
| 5 | SHUJABAD | 22.6 | 23 | PAK PATTAN | 4.8 |
| 6 | FORT ABBAS | 20.0 | 24 | MUZUFAR GARH | 4.8 |
| 7 | CHISHTIAN | 16.1 | 25 | MIANWALI | 4.2 |
| 8 | ALI PUR | 14.8 | 26 | PIPLAN | 3.6 |
| 9 | ROJHAN | 13.6 | 27 | PIR MAHAL | 3.4 |
| 10 | ISA KHEL | 12.5 | 28 | DUYAPUR | 3.4 |
| 11 | JATOI | 12.0 | 29 | GOJRA | 3.3 |
| 12 | MULTAN | 10.5 | 30 | BHAKKAR | 2.9 |
| 13 | BAHAWAL NAGAR | 10.0 | 31 | BURE WALA | 2.5 |
| 14 | HARROON ABAD | 10.0 | 32 | HASILPUR | 2.1 |
| 15 | JHANG | 10.0 | 33 | MIAN CHANNU | 2.1 |
| 16 | LODHRAN | 9.3 | 34 | D.G.KHAN | 1.8 |
| 17 | KEHROR PACCA | 7.7 | 35 | LIAQUAT PUR | 1.7 |
| 18 | SHORKOT | 7.7 | | | |

Mites: On overall Punjab basis 0.00% above ETL spots have been observed during current week as compared to 0.00% in last week and 0.00% during the same corresponding period of last year. And 1.91% below ETL spots have been observed during current week as compared to 2.33% in last week and 2.38% during the same corresponding period of last year.

Tehsil wise percentage of hot spots of Mites

No hot spot found in this week.

Dusky Cotton Bug: On overall Punjab basis 8.54% above ETL spots have been observed during current week as compared to 7.96% in last week and 0.00% during the same corresponding period of last year. And 64.44% below ETL spots have been observed during current week as compared to 62.95% in last week and 58.32% during the same corresponding period of last year.

Tehsil wise percentage of hot spots of Dusky Cotton Bug

| S. NO. | TEHSIL | %AGE | S.NO. | TEHSIL | %AGE |
|--------|---------------|------|-------|--------------|------|
| 1 | HASILPUR | 52.1 | 18 | R.Y.KHAN | 8.3 |
| 2 | MULTAN | 45.6 | 19 | DARYA KHAN | 7.7 |
| 3 | BAHAWAL PUR | 42.0 | 20 | MANKERA | 7.4 |
| 4 | SHUJABAD | 28.3 | 21 | DUYAPUR | 6.9 |
| 5 | JALAL PUR P.W | 27.5 | 22 | YAZMAN | 6.3 |
| 6 | T.T.SINGH | 27.1 | 23 | MINCHAN ABAD | 4.9 |
| 7 | KEHROR PACCA | 25.6 | 24 | MUZUFAR GARH | 4.8 |
| 8 | PIPLAN | 21.4 | 25 | VEHARI | 4.8 |
| 9 | A.P.EAST | 19.6 | 26 | JAHANIAN | 4.3 |
| 10 | PIR MAHAL | 17.2 | 27 | KABIR WALA | 4.2 |
| 11 | MIANWALI | 16.7 | 28 | KHAN PUR | 3.8 |
| 12 | GOJRA | 16.7 | 29 | LIAQUAT PUR | 3.3 |
| 13 | CHISHTIAN | 16.1 | 30 | BURE WALA | 2.5 |
| 14 | KHANEWAL | 16.0 | 31 | SADIQ ABAD | 2.4 |
| 15 | ISA KHEL | 12.5 | 32 | MAILSI | 2.1 |
| 16 | MIAN CHANNU | 10.4 | 33 | JATOI | 2.0 |
| 17 | LODHRAN | 9.3 | | | |

Armyworm: On overall Punjab basis 1.06% spots (all considered above ETL) of Armyworm have been observed as compared to 2.57% in last week and 1.96% spots during the same corresponding period of the last year.

Tehsil wise percentage of hot spots of Army worm

| S. NO. | TEHSIL | %AGE | S.NO. | TEHSIL | %AGE |
|--------|--------------|------|-------|-------------|------|
| 1 | KEHROR PACCA | 10.3 | 9 | BHAKKAR | 2.9 |
| 2 | JATOI | 6.0 | 10 | CHOBARA | 2.5 |
| 3 | KHAN PUR | 5.8 | 11 | SADIQ ABAD | 2.4 |
| 4 | FORT ABBAS | 4.4 | 12 | LODHRAN | 2.3 |
| 5 | MIANWALI | 4.2 | 13 | KABIR WALA | 2.1 |
| 6 | R.Y.KHAN | 4.2 | 14 | KOT ADDU | 2.0 |
| 7 | LAYYAH | 3.7 | 15 | SHUJABAD | 1.9 |
| 8 | DUYAPUR | 3.4 | 16 | LIAQUAT PUR | 1.7 |

Pink Boll Worm: On overall Punjab basis 21.32% above ETL spots have been observed as compared to 20.72% in last week and 32.28% same corresponding period of the last year. And 38.81% below ETL spots have been observed as compared to 37.33% in last week and 43.70% during same corresponding period of last year.

Tehsil wise percentage of hot spots of PBW

| S. NO. | TEHSIL | %AGE | S.NO. | TEHSIL | %AGE |
|--------|---------------|------|-------|--------------|------|
| 1 | MULTAN | 56.1 | 27 | MANKERA | 18.5 |
| 2 | SHUJABAD | 54.7 | 28 | PIPLAN | 17.9 |
| 3 | JALAL PUR P.W | 50.0 | 29 | MIANWALI | 16.7 |
| 4 | DUYAPUR | 48.3 | 30 | ALI PUR | 16.7 |
| 5 | R.Y.KHAN | 45.8 | 31 | JATOI | 16.0 |
| 6 | LODHRAN | 44.2 | 32 | DARYA KHAN | 15.4 |
| 7 | BAHAWAL PUR | 44.0 | 33 | MINCHAN ABAD | 14.6 |
| 8 | HASILPUR | 43.8 | 34 | MIAN CHANNU | 14.6 |
| 9 | YAZMAN | 37.5 | 35 | KOT ADDU | 14.0 |
| 10 | KHANEWAL | 36.0 | 36 | ROJHAN | 13.6 |
| 11 | KEHROR PACCA | 35.9 | 37 | MAILSI | 12.8 |
| 12 | SADIQ ABAD | 35.7 | 38 | ISA KHEL | 12.5 |
| 13 | LIAQUAT PUR | 35.0 | 39 | HAROON ABAD | 12.5 |
| 14 | KHAN PUR | 34.6 | 40 | CHICHA WATNI | 12.5 |
| 15 | BHAKKAR | 31.4 | 41 | ARIF WALA | 12.0 |
| 16 | LAYYAH | 29.6 | 42 | KALLOR KOT | 12.0 |
| 17 | JAHANIAN | 28.3 | 43 | MUZUFAR GARH | 11.9 |
| 18 | CHOBARA | 27.5 | 44 | VEHARI | 11.9 |
| 19 | A.P.EAST | 25.0 | 45 | D.G.KHAN | 10.7 |
| 20 | BAHAWAL NAGAR | 25.0 | 46 | RAJAN PUR | 8.0 |
| 21 | KAROR L.E. | 25.0 | 47 | TAUNSA | 7.5 |
| 22 | BURE WALA | 22.5 | 48 | SAHIWAL | 6.9 |
| 23 | FORT ABBAS | 22.2 | 49 | OKARA | 5.9 |
| 24 | CHISHTIAN | 19.6 | 50 | KOT CHUTTA | 4.7 |
| 25 | PAK PATTAN | 19.0 | 51 | T.T.SINGH | 4.2 |
| 26 | KABIR WALA | 18.8 | 52 | PIR MAHAL | 3.4 |

American Bollworm: On overall Punjab basis 0.00% above ETL spots have been observed as compared to 0.00 in last week and 0.10% during same corresponding period of last year. And 1.22% below ETL spots have been observed as compared to 1.09% in last week and 0.67% during same corresponding period of last year.

Tehsil wise percentage of hot spots of American Bollworm

No hot spot found in this week.

Spotted Bollworm: On overall Punjab basis 0.00% above ETL spots have been observed as compared to 0.12% in last week and 0.19% during same corresponding period of last year & 0.61% below ETL spots have been observed as compared to 0.56% in last week and 1.29% during same corresponding period of last year.

Tehsil wise percentage of hot spots of Spotted Bollworm

No hot spot found in this week.

CLCuV: On overall Punjab basis 20.46% spots (all considered above ETL) of CLCV have been observed as compared to 29.00% in last week and 27.89% during the same corresponding period of the last year.

Tehsil wise percentage of hot spots CLCuV

| S. NO. | TEHSIL | %AGE | S.NO. | TEHSIL | %AGE |
|--------|---------------|-------|-------|---------------|------|
| 1 | JALAL PUR P.W | 100.0 | 30 | LIAQUAT PUR | 16.7 |
| 2 | BHAKKAR | 91.4 | 31 | GOJRA | 16.7 |
| 3 | HASILPUR | 58.3 | 32 | A.P SIAL | 16.1 |
| 4 | MANKERA | 51.9 | 33 | CHISHTIAN | 16.1 |
| 5 | KABIR WALA | 45.8 | 34 | JATOI | 16.0 |
| 6 | DARYA KHAN | 42.3 | 35 | KHAN PUR | 15.4 |
| 7 | KALLOR KOT | 36.0 | 36 | DUYAPUR | 13.8 |
| 8 | R.Y.KHAN | 35.4 | 37 | ROJHAN | 13.6 |
| 9 | PIPLAN | 32.1 | 38 | JAHANIAN | 13.0 |
| 10 | SHUJABAD | 32.1 | 39 | KEHROR PACCA | 12.8 |
| 11 | KHANEWAL | 30.0 | 40 | A.P.EAST | 12.5 |
| 12 | T.T.SINGH | 29.2 | 41 | HAROON ABAD | 12.5 |
| 13 | SADIQ ABAD | 28.6 | 42 | CHICHA WATNI | 12.5 |
| 14 | BURE WALA | 27.5 | 43 | RAJAN PUR | 12.0 |
| 15 | BAHAWAL PUR | 26.0 | 44 | MUZUFAR GARH | 11.9 |
| 16 | MAILSI | 25.5 | 45 | LODHRAN | 11.6 |
| 17 | MIANWALI | 25.0 | 46 | RENALA KHURD | 11.1 |
| 18 | MIAN CHANNU | 25.0 | 47 | SAHIWAL | 10.3 |
| 19 | ISA KHEL | 25.0 | 48 | JHANG | 10.0 |
| 20 | TAUNSA | 25.0 | 49 | MINCHAN ABAD | 9.8 |
| 21 | MULTAN | 24.6 | 50 | DEPALPUR | 9.1 |
| 22 | PAK PATTAN | 23.8 | 51 | SHORKOT | 7.7 |
| 23 | FORT ABBAS | 22.2 | 52 | CHOBARA | 7.5 |
| 24 | ALI PUR | 20.4 | 53 | BAHAWAL NAGAR | 7.5 |
| 25 | ARIF WALA | 20.0 | 54 | LAYYAH | 7.4 |
| 26 | VEHARI | 19.0 | 55 | D.G.KHAN | 7.1 |
| 27 | OKARA | 17.6 | 56 | KOT CHUTTA | 4.7 |
| 28 | KAROR L.E. | 17.5 | 57 | TANDLIANWALA | 2.2 |
| 29 | PIR MAHAL | 17.2 | 58 | KOT ADDU | 2.0 |

FORECAST FOR THE NEXT WEEK

Meteorological data of the current week 2021-2022

| Districts | 2022 | | | | 2021 | | | |
|----------------|----------------|--------------|--------------|---------------|----------------|--------------|--------------|----------------|
| | Temperature °C | | R.H% | Rainfall (mm) | Temperature °C | | RH% | Rainfall (mm) |
| | Max. | Min. | | | Max. | Min. | | |
| MULTAN | 38.1 | 23.1 | 63.1 | 0.0 | 36.0 | 27.7 | 69.8 | 0.0 |
| KHANEWAL | 37.7 | 23.7 | 60.7 | 0.0 | 36.3 | 27.4 | 64.6 | 0.0 |
| VEHARI | 36.4 | 24.0 | 65.9 | 0.0 | 35.0 | 28.0 | 66.6 | 1.0 |
| LODHRAN | 35.8 | 23.5 | 63.5 | 0.0 | 34.5 | 26.0 | 73.8 | 3.0 |
| Sahiwal | 36.3 | 22.0 | 72.0 | 0.0 | 34.0 | 25.0 | 74.0 | 9.5 |
| Pakpattan | 35.6 | 21.5 | 71.5 | 0.0 | 35.0 | 26.0 | 72.0 | 12.2 |
| Okara | 35.0 | 21.0 | 72.4 | 0.0 | 34.0 | 24.0 | 73.0 | 8.6 |
| Bahawalpur | 37.7 | 23.4 | 54.1 | 0.0 | 36.9 | 26.1 | 70.3 | 23.5 |
| Bahawalnagar | 37.6 | 25.4 | 67.8 | 0.0 | 38.8 | 25.7 | 58.0 | 0.0 |
| R.Y.Khan | 35.9 | 25.8 | 66.7 | 0.0 | 38.5 | 24.9 | 47.4 | 0.0 |
| D.G. Khan | 35.4 | 24.4 | 66.8 | 0.0 | 35.1 | 23.4 | 54.9 | 0.0 |
| Muzaffar Garh | 33.8 | 22.5 | 62.2 | 0.0 | 35.5 | 24.5 | 55.8 | 0.0 |
| Rajanpur | 37.4 | 25.6 | 49.2 | 0.0 | 36.4 | 27.6 | 53.4 | 5.0 |
| Layyah | 35.0 | 23.0 | 78.0 | 0.0 | 41.0 | 23.0 | 65.0 | 0.0 |
| TOT/AVG | 36.26 | 23.50 | 65.28 | 0.00 | 36.22 | 25.67 | 64.18 | 62.80 |

Weather forecast for next 7 day in cotton zone

| Division | Dated | 6/10 | 7/10 | 8/10 | 9/10 | 10/10 | 11/10 | 12/10 |
|-----------------------|------------|-------|------|------|------|-------|-------|-------|
| Multan | Max.Temp. | 37 | 36 | 36 | 36 | 36 | 35 | 34 |
| | Min.Temp. | 22 | 22 | 23 | 21 | 22 | 23 | 21 |
| | Humidity % | 22 | 26 | 31 | 30 | 33 | 21 | 13 |
| Sahiwal | Max.Temp. | 37 | 36 | 35 | 34 | 33 | 35 | 36 |
| | Min.Temp. | 21 | 21 | 21 | 22 | 21 | 21 | 21 |
| | Humidity % | 21 | 35 | 31 | 34 | 38 | 24 | 19 |
| Bahawalpur | Max.Temp. | 37 | 36 | 35 | 35 | 35 | 37 | 37 |
| | Min.Temp. | 22 | 22 | 22 | 22 | 22 | 23 | 23 |
| | Humidity % | 20 | 29 | 36 | 32 | 35 | 23 | 11 |
| D.G. Khan | Max.Temp. | 37 | 35 | 36 | 36 | 36 | 35 | 34 |
| | Min.Temp. | 21 | 21 | 21 | 21 | 23 | 19 | 21 |
| | Humidity % | 22 | 28 | 27 | 27 | 30 | 18 | 12 |
| Average Cotton Region | Max.Temp. | 35.61 | | | | | | |
| | Min.Temp. | 21.61 | | | | | | |
| | Humidity % | 26 | | | | | | |

Source: timeanddate.com

Summary of weather forecast

Overall weather for seven days in cotton zone during next week will remain moderate, sunny and humid.

Forecast of Sucking Pests:

Whitefly: This pest flourishes best in hot dry climate with optimum temperature 35-42 °C with relative humidity below 50%. Maximum lethal temperature for this pest is 45-51 °C. The current weather conditions on overall Punjab basis (temp. Max. 36.26 °C, Min. 23.50 °C with R. humidity 65.28%) & forecast for the next week temp. Max. 35.61 °C, Min. 21.61°C with humidity 26.00%. Keeping in view above all, it is predicted that population of this pest will decrease from this week.

Jassid: This pest flourishes best in hot and humid climate with optimum temperature 35-40 °C with relative humidity above 70%. Maximum lethal temperature for this pest is 45-51 °C. The current weather conditions on overall Punjab basis (temp. Max. 36.26 °C, Min. 23.50 °C with R. humidity 65.28%) & forecast for the next week temp.

Max. 35.61 °C, Min. 21.61°C with humidity 26.00%. Keeping in view above all, it is predicted that population of this pest may sustain during the coming week.

Thrips: This pest flourishes best in hot dry climate with optimum temperature 35-40 °C with relative humidity below 60%. Maximum lethal temperature for this pest is 45-51 °C The current weather conditions on overall Punjab basis (temp. Max. 36.26 °C, Min. 23.50 °C with R. humidity 65.28%) & forecast for the next week temp. Max. 35.61 °C, Min. 21.61°C with humidity 26.00%. Keeping in view above all, it is predicted that population of this pest will sustain during the coming week.

Mealy Bug: This pest flourishes best in moderate climate with optimum temperature 35-40 °C with relative humidity above 60-80%. Maximum lethal temperature for this pest is 45-51 °C. . The current weather conditions on overall Punjab basis (temp. Max. 36.26 °C, Min. 23.50 °C with R. humidity 65.28%) & forecast for the next week temp. Max. 35.61 °C, Min. 21.61°C with humidity 26.00%. Keeping in view above all, it is predicted that population of this pest will sustain on cotton crop.

Mites: This pest flourishes best in dry climate with optimum temperature 28-40 °C with relative humidity above 40-50. The current weather conditions on overall Punjab basis (temp. Max. 36.26 °C, Min. 23.50 °C with R. humidity 65.28%) & forecast for the next week temp. Max. 35.61 °C, Min. 21.61°C with humidity 26.00%. Keeping in view above all, it is predicted that population of this pest will sustain during the coming week.

Dusky Cotton Bug: This pest flourishes best in moderate climate with optimum temperature 28-40 °C with relative humidity above 50-80%. The current weather conditions on overall Punjab basis (temp. Max. 36.26 °C, Min. 23.50 °C with R. humidity 65.28%) & forecast for the next week temp. Max. 35.61 °C, Min. 21.61°C

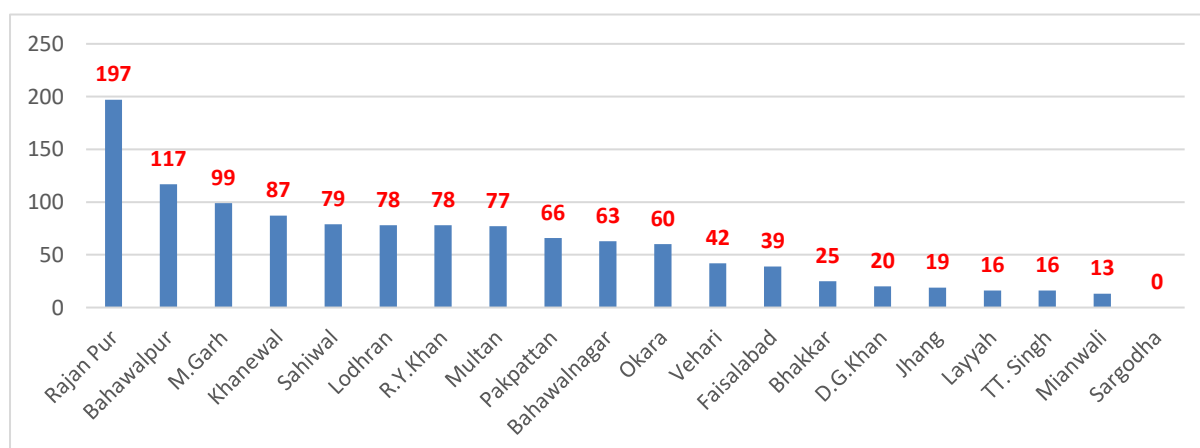
with humidity 26.00%. Keeping in view above all, it is predicted that population of this pest can increase during coming week.

Pink Bollworm: This pest flourishes best at moderate climate with optimum temperature 32-40 °C with relative humidity above 60-80%. Maximum lethal temperature for this pest is 45-53 °C. The current weather conditions on overall Punjab basis (temp. Max. 36.26 °C, Min. 23.50 °C with R. humidity 65.28%) & forecast for the next week temp. Max. 35.61 °C, Min. 21.61°C with humidity 26.00%. It is predicted that population of this pest will increase on cotton crop.

Moth Catches in Pheromone Traps during 1st Week of October, 2022

| Moth Catches in Pheromone Traps During 1st Week of October 2022 | | | |
|---|-----------------|------------------------|-----------------------------|
| District | Traps Installed | Moth catches/Trap/week | Av. Moth catches/Trap/night |
| Multan | 6 | 77 | 1.83 |
| Khanewal | 8 | 87 | 1.55 |
| Vehari | 6 | 42 | 1.00 |
| Lodhran | 6 | 78 | 1.86 |
| Sahiwal | 4 | 79 | 2.82 |
| Pakpattan | 4 | 66 | 2.36 |
| Okara | 4 | 60 | 2.14 |
| Bahawalpur | 8 | 117 | 2.09 |
| Bahawalnagar | 10 | 63 | 0.90 |
| R.Y.Khan | 8 | 78 | 1.39 |
| D.G.Khan | 6 | 20 | 0.48 |
| M.Garh | 8 | 99 | 1.77 |
| Rajan Pur | 6 | 197 | 4.69 |
| Layyah | 6 | 16 | 0.38 |
| Sargodha | 0 | 0 | 0.00 |
| Mianwali | 4 | 13 | 0.46 |
| Bhakkar | 8 | 25 | 0.45 |
| Faisalabad | 6 | 39 | 0.93 |
| TT. Singh | 6 | 16 | 0.38 |
| Jhang | 4 | 19 | 0.68 |

Note. 3 moth catches on 3 consecutive nights in a trap is considered as ETL



American Bollworm: This pest flourishes best at dry & moderate climate with optimum temperature 32-40 °C with relative humidity above 50-70%. Maximum lethal temperature for this pest is 45-53 °C. The current weather conditions on overall Punjab basis (temp. Max. 36.26 °C, Min. 23.50 °C with R. humidity 65.28%) & forecast for the next week temp. Max. 35.61 °C, Min. 21.61°C with humidity 26.00%. It is predicted that population of this pest will sustain on cotton crop during the coming week.

Moth catches on light traps during 1st week of October, 2022

| Moth Catches on Light Traps/Trap/week During 1st Week of October, 2022 | | | | |
|---|-----------------|-------|-------|----------|
| District | Traps Installed | A.B.W | S.B.W | Armyworm |
| Multan | 3 | 0.3 | 0.0 | 0.9 |
| Khanewal | 4 | 0.9 | 0.0 | 4.7 |
| Vehari | 3 | 0.0 | 0.0 | 1.0 |
| Lodhran | 3 | 0.6 | 0.0 | 3.6 |
| Sahiwal | 2 | 1.6 | 0.0 | 1.6 |
| Pakpattan | 2 | 1.4 | 0.0 | 1.6 |
| Okara | 3 | 1.4 | 0.0 | 1.7 |
| Bahawalpur | 4 | 0.9 | 0.6 | 2.6 |
| Bahawalnagar | 5 | 1.3 | 0.9 | 2.3 |
| R.Y.Khan | 4 | 1.9 | 1.7 | 2.9 |
| D.G.Khan | 3 | 0.4 | 0.6 | 1.2 |
| M.Garh | 4 | 0.3 | 0.4 | 0.7 |
| Rajan Pur | 3 | 0.6 | 0.6 | 0.4 |
| Layyah | 3 | 0.0 | 0 | 0.6 |
| Note. 3 moth catches of a pest on 3 consecutive nights in a trap is considered as ETL | | | | |

Spotted Bollworm: This pest flourishes best at mild & humid climate with optimum temperature 30-40 °C with relative humidity above 60-100%. Maximum lethal temperature for this pest is 45-53 °C. The current weather conditions on overall Punjab basis (temp. Max. 36.26 °C, Min. 23.50 °C with R. humidity 65.28%) & forecast for the next week temp. Max. 35.61 °C, Min. 21.61°C with humidity 26.00%. Due to cultivation of more BT varieties, it is predicted that population of this pest will remain as such on cotton crop in the coming week.

Armyworm: This pest flourishes best in mild & humid climate with optimum temperature 30-40 °C with relative humidity below 70-100. The current weather conditions on overall Punjab basis (temp. Max. 36.26 °C, Min. 23.50 °C with R. humidity 65.28%) & forecast for the next week temp. Max. 35.61 °C, Min. 21.61°C with humidity 26.00%. In view above all, it is predicted that population of this pest will sustain during the coming week.

CLCuV: The incidence of this disease is expected to sustain on cotton crop to the next week.

RECOMMENDATIONS

WHITEFLY MANAGEMENT

1. Conduct regular pest scouting of Whitefly.
2. Control the pest without delay when population reaches ETL i.e. nymphs or adults or both 5 per leaf.
3. Control weeds in and outside the field especially near water channels and fallow lands.

Alternate host plants of whitefly

| Crops | Vegetables | Orchards | Weeds/ Ornamentals | Trees |
|-----------|-------------|-------------------------|-----------------------|---------|
| Sunflower | Okra | Citrus | Gardenia | Shisham |
| Tobacco | Brinjal | Litchi | Mako | Shareen |
| | Cucurbits | Pomegranate | Maina | |
| | Tomato | Ber (<i>Zizyphus</i>) | Karund | |
| | Cabbage | Guava | Lehli | |
| | Cauliflower | Mulberry | | |
| | Peas | Papaya | | |
| | Potato | | | |
| | Onion | | | |
| | Spinach | | | |

JASSID MANAGEMENT

1. Eradicate weeds.

2. Conduct Pest Scouting at least twice a week.
3. Use *Chrysoperla* Cards @ 80-90 cards per acre having 20-25 eggs on each card which are available at AARI Faisalabad, Sahiwal, Okara and Vehari.
(Repeat this process after every two weeks).

THRIPS MANAGEMENT

1. Conduct Pest Scouting regularly at least twice a week.
2. Avoid intercropping of cotton crop with vegetables.
3. Control weeds in and outside the field.

MEALY BUG MANAGEMENT

1. Visit the fields daily to detect the infestation for effective management of mealy bug well in time.
2. Keep field and water courses etc. free from weeds especially Itsit & Hazaardani.
3. To avoid its shifting from one place to another, keep the horticultural nurseries free from its infestation. Spray such infested nurseries before shifting the plants.
4. Uproot and keep the infested plants gently in plastic bags and bury in the soil outside the field.
5. Avoid water stress to the plants.
6. Avoid repeated visits of workers from infested fields to healthy fields.

Alternate host plants of cotton mealy bug

| Crops | Vegetables | Ornamentals | Weeds | Orchards |
|--------------|-------------------|--------------------|--------------|-----------------|
| Sunflower | Okra | China Rose | Hazar Dani | Citrus |
| Tobacco | Brinjal | Huddle | Amarantus | Mulberry |
| Jantar | Tomato | Cotton Rose | Bhakra | Ficus |
| Sesame | Chillies | Gulchain | Mako | Ber |

| | | | | |
|--|---------|-------------|------------|--|
| | Pumpkin | Lantana | Sueda | |
| | | Din Ka Raja | Itsit | |
| | | Rat Ki Rani | Karund | |
| | | Anthorium | Aksen | |
| | | Gul-e-Daudi | Bathu | |
| | | Gainda | Puth Kanda | |
| | | | Kanghi | |

MANAGEMENT OF DUSKY COTTON BUG

1. Eradicate weeds.
2. Conduct Pest Scouting at least twice a week.
3. Remove alternate host plants

MANAGEMENT OF ARMY WORM

1. Keep the fields clean from weeds especially Its it which is a preferred host of armyworm.
2. Avoid sowing of Jantar near cotton fields.
3. Regular pest scouting at least twice a week.
4. Hand picking and destruction of egg masses at initial stage as initially its attack starts in patches and is clearly visible.

CLCuV MANAGEMENT

1. Keep Cotton fields free from all kinds of weeds.
2. Eradicate other alternate host plants of CLCuV and dispose them off carefully.
3. Thinning out and destruction of Virus affected plants.
4. Remove CLCuV effected plants in less than 60 DAS (Days after sowing) crop.
5. Hoeing after each irrigation or rain at wattar condition till canopies permit.

6. Apply post emergence Glyphosate for both broad and narrow leaved weeds and Glyphosate for grassy weeds with shield and use Flat Fan Nozzle, if needed.
7. Irrigate the fields when needed keeping in view weather conditions e.g. temperature, rainfall, soil water holding capacity and plant need.
8. Balanced use of Fertilizer i.e. N.P.K.
9. Keep transmission vector (whitefly) at the low ebb

Alternate host plants of CLCuV

| Crops | Vegetables | Ornamentals | Weeds |
|-----------|------------|-------------|--------------|
| Sunflower | Okra | Gurhal | Leh |
| Melon | Brinjal | Chambeli | Lehli |
| Tobacco | Chillies | | Mako |
| | Tomato | | Maina |
| | Potato | | Karund/Bathu |
| | Cucumber | | Gardenia |
| | | | Hazardani |
| | | | Rattan jot |
| | | | Sun Kukra |

Economic threshold levels of cotton pests

| Insect pests | Economic threshold levels |
|--------------------|---|
| Jassid | 1 Adult or Nymph per leaf |
| Whitefly | 5 Adults or Nymphs or both per Leaf |
| Thrips | 8-10 Adults or Nymphs per Leaf |
| Mealy bug | 0 (on appearance) |
| Mites | On damage appearance |
| Spotted Boll worm | 3 Larvae/ 25 plants. |
| Pink Boll worm | 5 Larvae /100 bolls. |
| American boll worm | 5 brown eggs or 3 small larvae or both 5 per 25 plants on non Bt varieties. 2 larvae of 2 nd instar per 25 plants on Bt varieties. |
| Army worm | 0 (On appearance) |
| Aphid | Spray on visible damage on top terminals. |
| Dusky Cotton bug | 10 per leaf/bud |