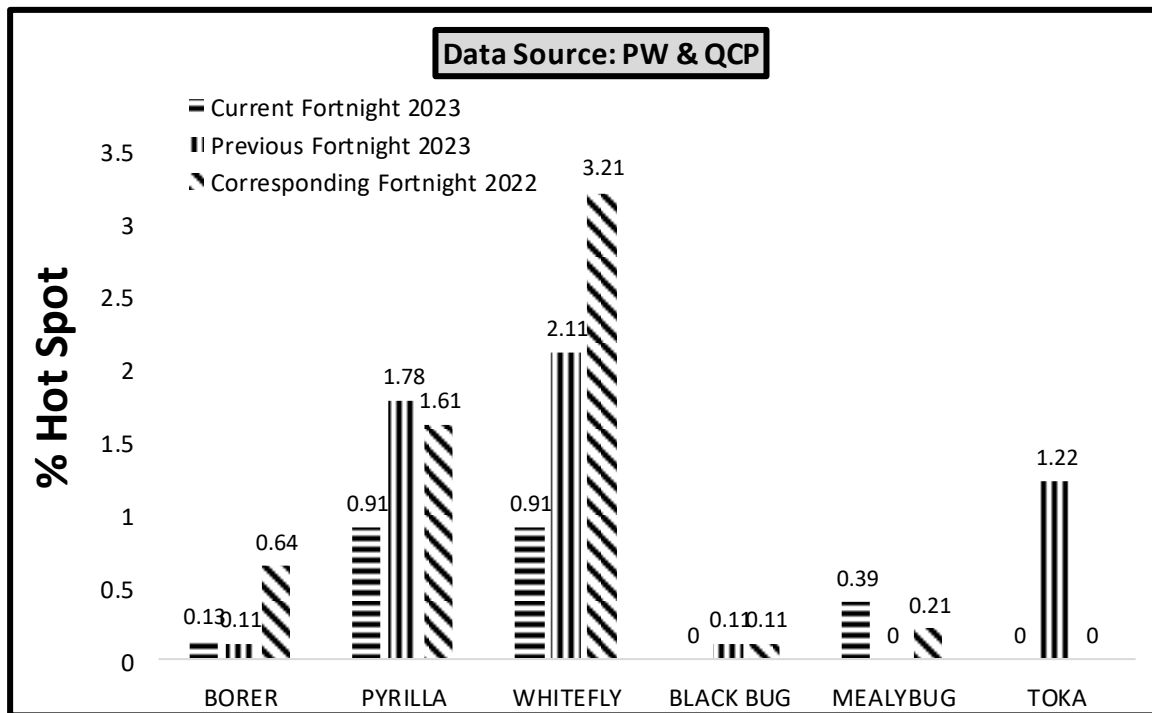




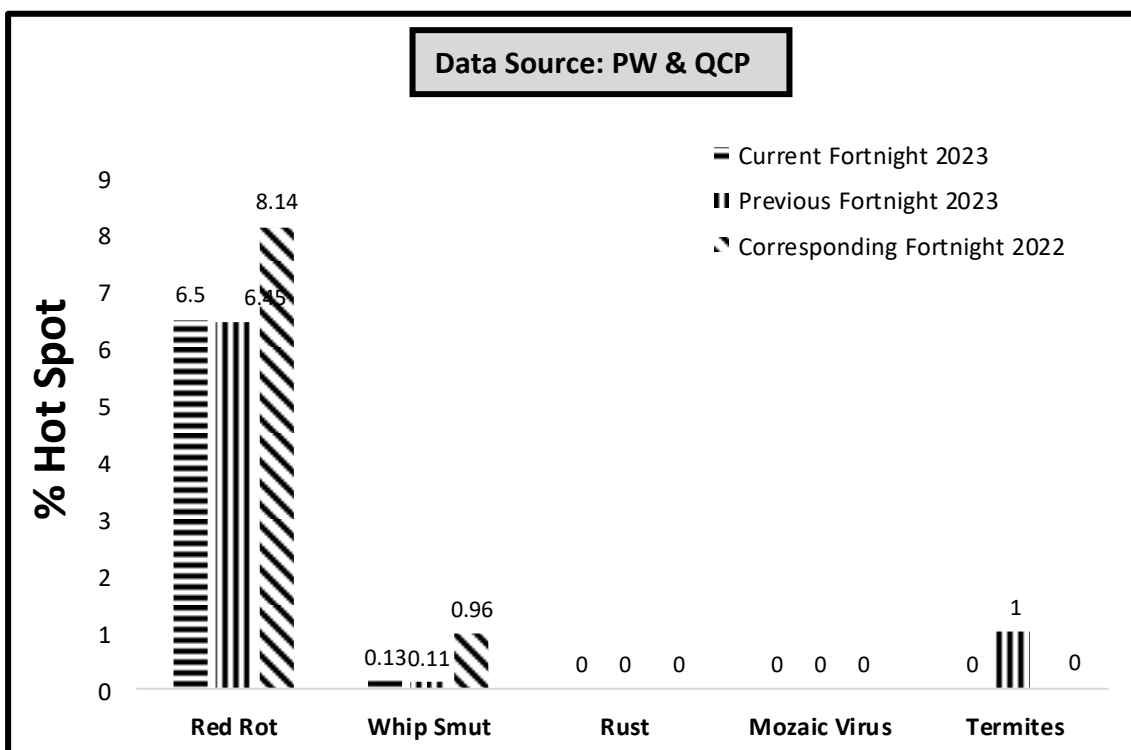
**Pest Situation of Sugarcane  
Crop in Punjab  
15<sup>TH</sup> – 31<sup>ST</sup> OCTOBER 2023)**

# GRAPHICAL PEST SITUATION ON SUGARCANE CROP IN PUNJAB FOR THE 2<sup>ND</sup> FORTNIGHT OF OCTOBER 2023

## A- Insect Pest



## B- Disease



## FORTNIGHTLY PEST SCOUTING AND FORECAST REPORT OF SUGARCANE CROP FOR THE 2ND FORTNIGHT OF OCTOBER 2023

| Pest Situation of Sugarcane Pests |              |                      |       |                       |       |                               |       |                   |
|-----------------------------------|--------------|----------------------|-------|-----------------------|-------|-------------------------------|-------|-------------------|
|                                   |              | %age of spots        |       |                       |       |                               |       | Remarks           |
| Sr. No.                           | Pest Name    | Current F.Night 2023 |       | Previous F.Night 2023 |       | Corresponding F.Night of 2022 |       |                   |
|                                   |              | AETL                 | BETL  | AETL                  | BETL  | AETL                          | BETL  |                   |
| 1                                 | BORER        | 0.12                 | 17.95 | 0.11                  | 14.24 | 0.64                          | 17.67 | Sustaining        |
| 2                                 | PYRILLA      | 0.91                 | 13.00 | 1.78                  | 11.01 | 1.61                          | 20.45 | Decreasing        |
| 3                                 | WHITEFLY     | 0.91                 | 18.47 | 2.11                  | 18.58 | 3.21                          | 18.09 | Decreasing        |
| 4                                 | BLACK BUG    | 0.00                 | 5.46  | 0.11                  | 5.45  | 0.11                          | 3.85  | Decreasing        |
| -5                                | MITES        | 0.00                 | 1.17  | 0.00                  | 1.22  | 0.00                          | 0.00  | -                 |
| 6                                 | TOKA         | 0.00                 | 11.18 | 1.22                  | 10.57 | 0.00                          | 11.56 | Decreasing        |
| 7                                 | MEALY BUG    | 0.39                 | -     | 0.00                  | -     | 0.21                          | -     | <b>Increasing</b> |
| 8                                 | RED ROT      | 6.50                 | -     | 6.45                  | -     | 8.14                          | -     | <b>Increasing</b> |
| 9                                 | WHIP SMUT    | 0.13                 | -     | 0.11                  | -     | 0.96                          | -     | Sustaining        |
| 10                                | MOSAIC VIRUS | 0.00                 | -     | 0.00                  | -     | 0.00                          | -     | -                 |
| 11                                | RUST         | 0.00                 | -     | 0.00                  | -     | 0.00                          | -     | -                 |

## METEOROLOGICAL DATA OF THE FORTNIGHT

| Districts      | 2023        |             |             |               | 2022        |             |             |               |
|----------------|-------------|-------------|-------------|---------------|-------------|-------------|-------------|---------------|
|                | Temperature |             | R.H%        | Rainfall (mm) | Temperature |             | RH%         | Rainfall (mm) |
|                | Max.        | Min.        |             |               | Max.        | Min.        |             |               |
| Multan         | 34.3        | 24.4        | 69.9        | 0.0           | 36.1        | 18.5        | 62.7        | 0.0           |
| Khanewal       | 34.6        | 23.1        | 52.9        | 0.0           | 34.1        | 19.3        | 52.5        | 0.0           |
| Vehari         | 34.0        | 23.4        | 56.9        | 0.0           | 35.1        | 18.6        | 67.2        | 0.0           |
| Lodhran        | 33.0        | 23.9        | 65.0        | 0.0           | 32.9        | 20.1        | 67.5        | 0.0           |
| Sahiwal        | 31.6        | 18.3        | 70.5        | 0.0           | 32.0        | 16.0        | 63.0        | 0.0           |
| Pakpattan      | 30.0        | 18.3        | 65.0        | 0.0           | 34.0        | 17.0        | 65.0        | 0.0           |
| Okara          | 30.2        | 17.5        | 63.5        | 0.0           | 30.9        | 18.3        | 52.5        | 0.0           |
| Bahawalpur     | 32.5        | 20.0        | 66.3        | 13.0          | 35.2        | 17.9        | 52.7        | 0.0           |
| Bahawalnagar   | 31.2        | 19.1        | 65.1        | 24.0          | 33.7        | 18.4        | 63.0        | 0.0           |
| R.Y. Khan      | 34.6        | 21.3        | 66.6        | 0.0           | 36.9        | 20.4        | 55.4        | 0.0           |
| D.G Khan       | 30.5        | 24.6        | 57.8        | 0.1           | 37.4        | 26.7        | 69.6        | 0.0           |
| M. Garh        | 33.5        | 21.0        | 0.5         | 0.0           | 32.3        | 21.1        | 69.7        | 0.0           |
| Rajanpur       | 33.4        | 22.2        | 61.9        | 5.0           | 36.7        | 22.3        | 53.6        | 5.0           |
| Layyah         | 32.5        | 21.5        | 60.0        | 0.5           | 30.0        | 19.5        | 69.0        | 0.0           |
| <b>TOT/AVG</b> | <b>32.6</b> | <b>21.3</b> | <b>58.7</b> | <b>42.6</b>   | <b>34.1</b> | <b>19.6</b> | <b>61.7</b> | <b>5.0</b>    |

## **FORECAST FOR THE NEXT FORTNIGHT**

### **BORERS**

This pest flourish best at optimum temperature 35-41°C with relative humidity below 65-70%. The current weather conditions on overall Punjab basis is as; maximum temperature **32.6°C**, minimum **21.3°C** with R. humidity **58.7**. It is predicted that the population of this pest will sustain during the next fortnight.

### **PYRILLA**

This pest flourish best at optimum temperature 29-40°C with relative humidity 75-84%. The current weather conditions on overall Punjab basis is as; maximum temperature **32.6°C** minimum **21.3°C** with R. humidity **58.7**. It is predicted that the population of this pest will sustain during the next fortnight.

### **WHITEFLY**

This pest flourish best at optimum temperature 29-40°C with relative humidity 75-84%. The current weather conditions on overall Punjab basis is as; maximum temperature **32.6°C**, minimum **21.3°C** with R. humidity **58.7**. It is predicted that the population of this pest will increase during the next fortnight.

### **BLACK BUG**

This pest flourish best at optimum temperature 22.9-40.9°C with relative R. humidity 46%. The current weather conditions on overall Punjab basis is as; maximum temperature **32.6°C**, minimum **21.3°C** with R. humidity **58.7**. It is predicted that the population of this pest will sustain during the next fortnight.

## **TOKA**

The optimal temperature and RH conditions for the feeding activities are 28.5-33°C and 60-70°C respectively. The current weather conditions on overall Punjab basis is as; maximum temperature **32.6°C**, minimum **21.3°C** with R. humidity **58.7**. It is predicted that the population of this pest will sustain during the next fortnight.

## **MEALY BUG**

This pest flourish best at optimum temperature 29-40°C with relative humidity 75-84%. The current weather conditions on overall Punjab basis is as; maximum temperature **32.6°C**, minimum **21.3°C** with R. humidity **58.7**. It is predicted that the population of this pest will sustain during the next fortnight.

## **TERMITES**

The optimal temperature and RH conditions for the feeding activities are 35-40 and 70-80% respectively. The current weather conditions on overall Punjab basis is as; maximum temperature **32.6°C**, minimum **21.3°C** with R. humidity **58.7**. It is predicted that the population of this pest will sustain during the next fortnight.

## **MITES**

The optimal temperature and RH conditions for the feeding activities are 30-36°C and 20-40% respectively. The current weather conditions on overall Punjab basis is as; maximum temperature **32.6°C**, minimum **21.3°C** with R. humidity **58.7**. It is predicted that the population of this pest will sustain during the next fortnight.

## **RUST**

This disease flourish best at optimum temperature 12-14°C with relative humidity below 80-85%. The current weather conditions on overall Punjab basis is as; maximum

temperature **32.6°C**, minimum **21.3°C** with R. humidity **58.7**. It is predicted that this disease will sustain during the next fortnight.

### **RED ROT**

This disease flourish best at optimum temperature 25.5-26.5°C with relative humidity 60%. The current weather conditions on overall Punjab basis is as; maximum temperature **32.6°C**, minimum **21.3°C** with R. humidity **58.7**. It is predicted that the population of this pest will increase during the next fortnight.

### **WHIP SMUT**

This disease flourish best at optimum temperature 14-35°C with relative humidity 55-80%. The current weather conditions on overall Punjab basis is as; maximum temperature **32.6°C**, minimum **21.3°C** with R. humidity **58.7**. It is predicted that the population of this pest will increase during the next fortnight.

### **MOSAIC VIRUS**

The current weather conditions on overall Punjab basis is as; maximum temperature **32.6°C**, minimum **21.3°C** with R. humidity **58.7**. It is predicted that the population of this pest will sustain during the next fortnight.

### **RECOMMENDATIONS**

#### **BORERS MANAGEMENT**

- ❖ Install cards of beneficial insects (*Trichogramma*) from the start of crop.
- ❖ Apply granular insecticide carbofuron 3G@ 12-14 kg/acre to the fields where infestation of sugarcane borers observed above ETL.

## **PYRILLA MANAGEMENT**

- ❖ Promote parasitic insects (*Tetrastichus pyrillae*) against eggs of pyrilla and (*Epiricania melanoleuca*) against nymphs and adults of pyrilla.
- ❖ Cut the leaves 6 inch in length from those fields having parasite eggs and pupae in abundance and shift/hang them in fields where parasites are not found.
- ❖ Apply Granular insecticide Carbofuron 3G@ 12-14 kg/acre to the fields where infestation of sugarcane Pyrilla reaches ETL and parasites are not found.  
Application of granules may be done till the 6 feet height of canes.

## **WHITEFLY MANAGEMENT**

- ❖ Cut severe infested leaves of whitefly and bury in the soil.
- ❖ Install cards of beneficial insects i.e *Chrysoperla carnea*

## **BLACK BUG MANAGEMENT**

- ❖ Avoid the cane fields from water stress.
- ❖ Apply granular insecticide carbofuron 3G@ 12-14 kg/acre

## **RUST MANAGEMENT**

- ❖ Cultivate resistant varieties.
- ❖ Cut and burn the diseased plants/ Plant pests.

## **WHIP SMUT MANAGEMENT**

- ❖ Cut and burn the diseased plants / Plant pests

## ECONOMIC THRESHOLD LEVELS (ETLs) OF SUGARCANE PESTS

| INSECT PESTS | ECONOMIC THRESHOLD LEVEL |
|--------------|--------------------------|
| Borers       | 10% infested canes.      |
| Pyrilla      | 3 per leaf.              |
| Whitefly     | 10 per Leaf              |
| Black bug    | 10 per sheath.           |
| Toka         | 3 per sweep              |
| Mites        | 10 per Leaf              |
| Mealy bug    | Only presence            |
| Termites     | 10% damage               |
| Rodents      | 5 live burrows per acre  |
| Diseases     | Only presence            |