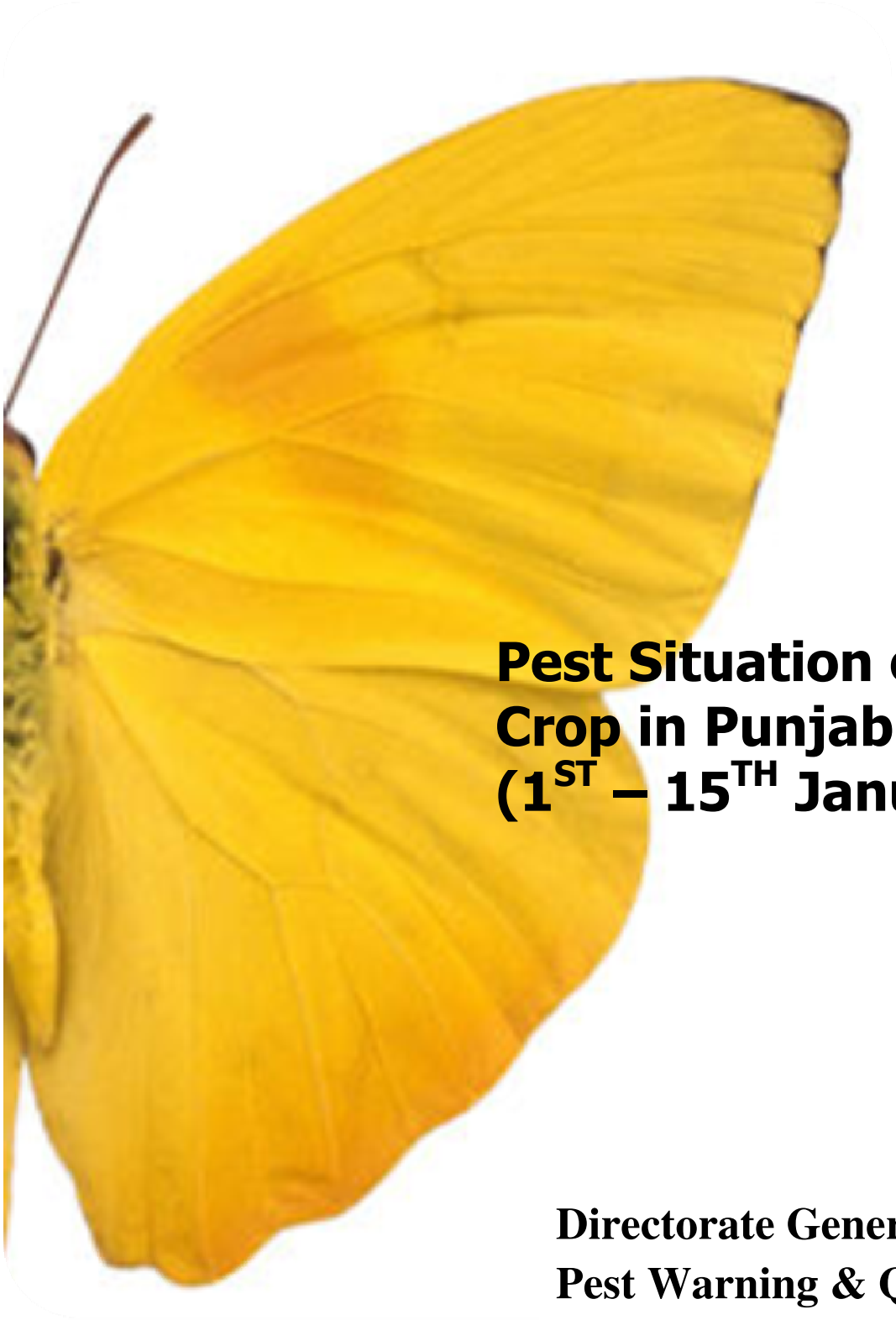

# Pest Situation of Sugarcane Crop in Punjab (1ST – 15TH January 2021)

**Directorate General**
**Pest Warning & Quality Control of Pesticides Punjab, Lahore**

# FORTNIGHTLY PEST SCOUTING AND FORECAST REPORT OF SUGARCANE CROP FOR THE 1ST FORTNIGHT OF JANUARY 2021

| Pest Situation of Sugarcane Pests | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | %age of spots | | | | | | Remarks |
| Sr. No. | Pest Name | Current Week | | Previous week | | Corresponding week of Last Year | | |
| | | AETL | BETL | AETL | BETL | AETL | BETL | |
| 1 | BORER | 0.00 | 0.44 | 0.00 | 1.48 | 0.00 | 0.89 | - |
| 2 | PYRILLA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| 3 | WHITEFLY | 0.00 | 0.00 | 0.00 | 1.48 | 0.00 | 0.45 | - |
| 4 | BLACK BUG | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| 5 | MITES | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| 6 | TOKA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| 7 | MEALY BUG | 0.00 | - | 0.00 | - | 0.00 | - | - |
| 8 | RED ROT | 0.88 | - | 0.74 | - | 0.00 | - | Low |
| 9 | WHIP SMUT | 0.44 | - | 0.37 | - | 0.45 | - | Low |
| 10 | MOSAIC VIRUS | 0.00 | - | 0.00 | - | 0.00 | - | - |
| 11 | RUST | 0.00 | - | 0.00 | - | 0.00 | - | - |

## METEOROLOGICAL DATA OF THE FORTNIGHT

| Districts | 2021 | | | | 2020 | | | |
|---|---|---|---|---|---|---|---|---|
| | Temperature | | R.H% | Rainfall (mm) | Temperature | | RH% | Rainfall ( mm) |
| | Max. | Min. | | | Max. | Min. | | |
| **Multan** | 20.80 | 5.80 | 81.60 | 0.00 | 9.90 | 4.60 | 83.40 | 25.10 |
| **Khanewal** | 19.60 | 6.40 | 74.10 | 2.00 | 12.60 | 4.90 | 82.40 | 12.00 |
| **Vehari** | 10.50 | 5.50 | 73.00 | 12.00 | 9.50 | 5.90 | 41.30 | 24.30 |
| **Lodhran** | 18.60 | 6.00 | 70.70 | 0.00 | 9.30 | 3.90 | 87.40 | 9.00 |
| **Sahiwal** | 15.00 | 7.00 | 82.00 | 0.00 | 15.30 | 5.70 | 79.04 | 29.00 |
| **Pakpattan** | 16.00 | 6.00 | 78.00 | 0.00 | 13.90 | 7.30 | 78.00 | 37.00 |
| **Okara** | 17.00 | 6.40 | 82.00 | 3.00 | 15.40 | 7.50 | 88.00 | 23.00 |
| **Bahawalpur** | 17.27 | 5.20 | 76.32 | 0.62 | 14.11 | 5.10 | 82.74 | 1.60 |
| **Bahawalnagar** | 17.04 | 5.96 | 86.26 | 1.25 | 15.83 | 7.08 | 87.63 | 0.00 |
| **R.Y. Khan** | 21.00 | 6.63 | 69.75 | 0.00 | 17.25 | 6.25 | 85.25 | 3.00 |
| **D.G Khan** | 18.99 | 6.50 | 54.10 | 0.00 | 17.22 | 6.40 | 74.82 | 0.00 |
| **M. Garh** | 15.27 | 7.33 | 73.20 | 0.00 | 16.26 | 6.56 | 75.12 | 0.00 |
| **Rajanpur** | 22.30 | 5.20 | 59.35 | 0.00 | 19.20 | 4.40 | 59.70 | 0.00 |
| **Layyah** | 21.21 | 5.07 | 80.86 | 0.00 | 15.21 | 5.14 | 53.71 | 9.00 |
| **TOT/AVG** | **17.90** | **6.07** | **74.37** | **18.87** | **14.36** | **5.77** | **75.61** | **173.00** |

**FORECAST FOR THE NEXT FORTNIGHT**

**BORERS**

This pest flourish best at optimum temperature 35-41C$^{o}$ with relative humidity below 65-70%. The current weather conditions on overall South Punjab basis is as; maximum temperature **22.94** C$^{o}$, minimum **12.01** C$^{o}$ with R. humidity **69.05**. It is predicted that the population of this pest will sustain during the next fortnight.

**PYRILLA**

This pest flourish best at optimum temperature 29-40C with relative humidity 75-84%. The current weather conditions on overall South Punjab basis is as; maximum temperature **22.94** C$^{o}$, minimum **12.01** C$^{o}$ with R. humidity **69.05**. It is predicted that the population of this pest will sustain during the next fortnight.

**WHITEFLY**

This pest flourish best at optimum temperature 29-40C with relative humidity 75-84%. The current weather conditions on overall South Punjab basis is as; maximum temperature **22.94** C$^{o}$, minimum **12.01** C$^{o}$ with R. humidity **69.05**. It is predicted that the population of this pest will sustain during the next fortnight.

**BLACK BUG**

This pest flourish best at optimum temperature 22.9-40.9C with relative R. humidity 46%. The current weather conditions on overall South Punjab basis is as; maximum temperature **22.94** C$^{o}$, minimum **12.01** C$^{o}$ with R. humidity **69.05**. 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 28.5-33C and 60-70 C$^{o}$ % respectively. The current weather conditions on overall South Punjab basis is as; maximum temperature **22.94** C$^{o}$, minimum **12.01** C$^{o}$ with R. humidity **69.05**. It is predicted that the population of this pest may sustain during the next fortnight.

**MEALY BUG**

This pest flourish best at optimum temperature 29-40C with relative humidity 75-84%. The current weather conditions on overall South Punjab basis is as; maximum temperature **22.94** C$^{o}$, minimum **12.01** C$^{o}$ with R. humidity **69.05**. It is predicted that the population of this pest will sustain as such during the next fortnight.

**TERMITES**

The optimal temperature and RH conditions for the feeding activities are 35°-40C and 70-80% respectively. The current weather conditions on overall South Punjab basis is as; maximum

temperature **22.94** C°, minimum **12.01** C° with R. humidity **69.05**. It is predicted that the population of this pest will may sustain as such during the next fortnight.

**MITES**

The optimal temperature and RH conditions for the feeding activities are 30°-36C and 20-40% respectively. The current weather conditions on overall South Punjab basis is as; maximum temperature **22.94** C°, minimum **12.01** C° with R. humidity **69.05**. It is predicted that the population of this pest will sustain as such during the next fortnight**.**

**RUST**

This disease flourish best at optimum temperature 12-14C with relative humidity below 80-85%. The current weather conditions on overall South Punjab basis is as; maximum temperature **22.94** C°, minimum **12.01** C° with R. humidity **69.05**. It is predicted that this disease may sustain as such in the coming fortnight.

**RED ROT**

This disease flourish best at optimum temperature 25.5-26.5C with relative humidity 60%. The current weather conditions on overall South Punjab basis is as; maximum temperature **22.94** C°, minimum **12.01** C° with R. humidity **69.05**. It is predicted that the incidence of this disease may increase in the coming fortnight.

**WHIP SMUT**

Pest situation reveals that its incidence **0.00**% has observed as compared to **0.00**% spots during the past fortnight and **0.00**% during same corresponding period of the last year. This disease flourish best at optimum temperature 14-35C with relative humidity 55-80%. The current weather conditions on overall South Punjab basis is as; maximum temperature **22.94** C°, minimum **12.01** C° with R. humidity **69.05**. It is predicted that incidence is expected to sustain as such during the next fortnight.

**MOSAIC VIRUS**

This disease flourish best at optimum temperature 14-35C with relative humidity 55-80%. The current weather conditions on overall South Punjab basis is as; maximum temperature **22.94** C°, minimum **12.01** C° with R. humidity **69.05**. Incidence of this disease is not expected during the coming fortnight.

**RECOMMENDATIONS**

**BORERS MANAGEMENT**

- Install cards of beneficial insects (*Trichograma*) 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 |