



# **Pest Situation of Sugarcane Crop of Punjab (1<sup>ST</sup> -15<sup>TH</sup> AUGUST 2018)**

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**PEST SITUATION OF SUGARCANE CROP IN THE PUNJAB FOR THE  
1<sup>ST</sup> FORTNIGHT OF AUGUST, 2018**

**PEST SITUATION ON SUGARCANE CROP**

**BORERS**

On overall Punjab basis, 0.46% spots above ETL of borers have been observed as compared to 0.32% spots during the past fortnight and 1.01% during same corresponding period of the last year. Similarly, 25.94% below ETL spots have been observed as compared to 26.57% spots during the past fortnight and 24.52% during same corresponding period of the last year.

**PYRILLA**

On overall Punjab basis 0.08% spots above ETL of Pyrilla have been observed as compared to 0.40% spots during the past fortnight and 0.67% during same corresponding period of the last year. Similarly, 11.40% spots below ETL have been observed as compared to 9.75% spots during the past fortnight and 15.23% during same corresponding period of the last year.

**WHITEFLY**

On overall Punjab basis 3.14% spots above ETL of Whitefly have been observed as compared to 0.63% spots during the past fortnight and 1.79% during same corresponding period of the last year. Similarly, 14.61% spot below ETL have been observed as compared to 5.63% spot during the past fortnight and 21.50% during same corresponding period of the last year.

**BLACK BUG**

On overall Punjab basis 6.04% spots below ETL have been observed as compared to 5.87% spots during the past fortnight and 10.30% during same corresponding period of the last year.

**MITES**

On overall Punjab basis 0.15% spot above ETL of Mites have been observed as compared to 0.00% spots during the past fortnight and 0.34% during same corresponding period of the last year. Similarly, 1.45% spots below ETL have been observed as compared to

0.08% spots during the past fortnight and 1.79% during same corresponding period of the last year.

#### **TOKA**

On overall Punjab basis 3.98% spots below ETL have been observed as compared to 3.25% spots during the past fortnight and 8.06% during same corresponding period of the last year.

#### **MEALY BUG**

On overall Punjab basis 0.61% of Mealy bug have been observed as compared to 0.08% spots above ETL during the past fortnight and 0.56% during same corresponding period of the last year.

#### **RED ROT**

On overall Punjab basis 4.97% spot of Red Rot have been observed as compared to 4.04% spots above ETL during the past fortnight and 6.94% during same corresponding period of the last year.

#### **WHIP SMUT**

On overall Punjab basis, 3.98% of Whip Smut have been observed as compared to 4.20% spots during the past fortnight and 3.36% during same corresponding period of the last year.

#### **RUST**

On overall Punjab basis, 0.00% of Rust has been observed as compared to 0.00% spots above ETL during the past fortnight and 1.34% during same corresponding period of the last year.

### METEOROLOGICAL DATA OF THE FORTNIGHT

Districts	2018				2017			
	Temperature		R.H%	Rainfall (mm)	Temperature		RH%	Rainfall (mm)
	Max.	Min.			Max.	Min.		
Multan	34.90	29.30	72.80	0.00	33.20	27.70	52.00	0.00
Khanewal	38.50	29.30	53.80	0.00	39.00	29.90	58.80	0.00
Vehari	36.60	30.80	49.50	0.00	38.20	28.50	56.80	0.00
Lodhran	36.70	27.70	51.50	4.00	37.00	28.10	57.00	0.00
Sahiwal	35.60	27.40	64.40	0.00	37.10	27.10	66.20	0.00
Pakpattan	35.10	28.10	61.14	0.00	35.10	28.70	62.60	0.00
Okara	36.50	28.20	81.00	0.00	39.30	29.30	78.00	0.00
Bahawalpur	38.07	27.53	62.31	83.00	38.41	28.31	61.38	9.00
Bahawalnagar	39.82	28.88	54.77	0.00	40.36	28.41	53.95	0.00
R.Y.Khan	40.16	27.80	52.57	0.00	38.84	28.26	63.60	0.00
D.G Khan	40.71	27.43	51.75	0.00	40.29	29.79	51.71	0.00
M. Garh	38.40	29.32	63.10	4.00	38.29	27.60	64.36	0.00
Rajanpur	39.01	28.09	45.30	0.00	37.49	28.79	62.60	0.00
Layyah	43.22	31.33	36.44	9.30	42.00	29.33	40.55	0.00
<b>AVERAGE</b>	<b>38.09</b>	<b>28.66</b>	<b>57.17</b>	<b>100.30</b>	<b>38.18</b>	<b>28.56</b>	<b>59.25</b>	<b>9.00</b>

### Weather forecast for Next 15 Days

Division	Dated	15/ 8	16/ 8	17/ 8	18/ 8	19/ 8	20/ 8	21/ 8	22/ 8	23/ 8	24/ 8	25/ 8	26/ 8	27/ 8	28/ 8	29/ 8
Multan	Max.Temp.	37	37	38	39	39	43	38	37	37	37	37	37	37	37	37
	Min.Temp.	29	28	31	31	30	32	30	28	28	29	29	29	29	29	29
	Humidity %	49	47	45	47	42	31	23	25	24	23	30	28	27	24	24
Sahiwal	Max.Temp.	36	38	37	36	38	42	36	34	35	34	34	35	35	35	35
	Min.Temp.	27	28	30	30	28	31	30	28	28	29	29	29	29	29	29
	Humidity %	53	51	49	53	45	31	22	27	29	26	30	30	29	28	23
Bahawal pur	Max.Temp.	39	38	38	40	38	42	37	36	36	36	36	36	36	36	36
	Min.Temp.	31	32	31	31	31	31	29	27	27	28	28	28	28	28	28
	Humidity %	44	46	42	44	45	34	26	29	29	29	40	34	33	28	27
D.G.Khan	Max.Temp.	39	39	40	40	40	44	38	36	37	37	37	37	37	37	37
	Min.Temp.	31	31	31	32	32	32	32	29	29	29	29	29	29	29	29
	Humidity %	44	43	39	40	40	27	22	27	23	28	28	27	23	23	22
Average Cotton Zone	Max.Temp.	<b>37.37</b>														
	Min.Temp.	<b>29.43</b>														
	Humidity %	<b>33.35</b>														



## **FORECAST FOR THE NEXT FORTNIGHT**

### **BORERS**

This pest flourish best at optimum temperature 35-41C° with relative humidity below 65-70%. The current weather conditions on overall Punjab basis is as; maximum temperature 38.09 C°, minimum 28.66 C° with R. humidity 57.17%. Weather forecast for the next fifteen days is as; maximum temperature 37.37 C°, minimum temperature 29.43 C° with humidity 33.35%. It is predicted that the population of this pest will increase 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 Punjab basis is as; maximum temperature 38.09 C°, minimum 28.66 C° with R. humidity 57.17%. Weather forecast for the next fifteen days is as; maximum temperature 37.37 C°, minimum temperature 29.43 C° with humidity 33.35%. It is predicted that the population of this pest will increase 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 Punjab basis is as; maximum temperature 38.09 C°, minimum 28.66 C° with R. humidity 57.17%. Weather forecast for the next fifteen days is as; maximum temperature 37.37 C°, minimum temperature 29.43 C° with humidity 33.35%. It is predicted that the population of this pest may increase 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 Punjab basis is as; maximum temperature 38.09 C°, minimum 28.66 C° with R. humidity 57.17%. Weather forecast for the next fifteen days is as; maximum temperature 37.37 C°, minimum temperature 29.43 C° with humidity 33.35%. It is predicted that due to increasing trend in temperature the population of this pest will increase during the next fortnight.

### **TOKA**

The optimal temperature and RH conditions for the feeding activities are 28.5-33C and 60-70 C° % respectively. The current weather conditions on overall Punjab basis is as; maximum temperature 38.09 C°, minimum 28.66 C° with R. humidity 57.17%. Weather forecast for the next fifteen days is as; maximum temperature 37.37 C°, minimum temperature 29.43 C° with humidity 33.35% 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 Punjab basis is as; maximum temperature 38.09 C°, minimum 28.66 C° with R. humidity 57.17%. Weather forecast for the next fifteen days is as; maximum temperature 37.37 C°, minimum temperature 29.43 C° with humidity 33.35%. It is predicted that the population of this pest may increase 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 Punjab basis is as; maximum temperature 38.09 C°, minimum 28.66 C° with R. humidity 57.17%. Weather forecast for the next fifteen days is as; maximum temperature 37.37 C°, minimum temperature 29.43 C° with humidity 33.35%. It is predicted that the population of this pest will may sustain on zero 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 Punjab basis is as; maximum temperature 38.09 C°, minimum 28.66 C° with R. humidity 57.17%. Weather forecast for the next fifteen days is as; maximum temperature 37.37 C°, minimum temperature 29.43 C° with humidity 33.35%. It is predicted that the population of this pest will increase during the next fortnight subject to dry weather.

**RUST**

This disease flourish best at optimum temperature 12-14C with relative humidity below 80-85%. The current weather conditions on overall Punjab basis is as; maximum temperature 38.09 C°, minimum 28.66 C° with R. humidity 57.17%. Weather forecast for the next fifteen days is as; maximum temperature 37.37 C°, minimum temperature 29.43 C° with humidity 33.35%. It is predicted that the present climatic conditions are not favorable for the development of this disease.

**RED ROT**

This disease flourish best at optimum temperature 25.5-26.5C with relative humidity 60%. The current weather conditions on overall Punjab basis is as; maximum temperature 38.09 C°, minimum 28.66 C° with R. humidity 57.17%. Weather forecast for the next fifteen days is as; maximum temperature 37.37 C°, minimum temperature 29.43 C° with humidity 33.35%. It is predicted that the incidence of this disease may increase in the coming fortnight.

## **WHIP SMUT**

This disease flourish best at optimum temperature 14-35C with relative humidity 55-80%. The current weather conditions on overall Punjab basis is as; maximum temperature 38.09 C°, minimum 28.66 C° with R. humidity 57.17%. Weather forecast for the next fifteen days is as; maximum temperature 37.37 C°, minimum temperature 29.43 C° with humidity 33.35%. It is predicted that the present climatic conditions are favorable for the disease development so its incidence is expected to increase 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 Punjab basis is as; maximum temperature 38.09 C°, minimum 28.66 C° with R. humidity 57.17%. Weather forecast for the next fifteen days is as; maximum temperature 37.37 C°, minimum temperature 29.43 C° with humidity 33.35%. As virus is transmitted by insect vector like aphid and whitefly. The attack of these insect pests has been reported due to which the incidence of viral disease can be expected in 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 pest.

**ECONOMIC THRESHOLD LEVELS (ETLs) OF SUGARCANE PESTS**

<b>INSECT PESTS</b>	<b>ECONOMIC THRESHOLD LEVEL</b>
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