




**Pest Situation of  
Sugarcane Crop in Punjab  
(1<sup>ST</sup> – 15<sup>TH</sup> JUNE 2020)**



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

**PEST SITUATION OF SUGARCANE CROP IN THE PUNJAB FOR THE  
1<sup>ST</sup> FORTNIGHT OF JUNE, 2020  
PEST SITUATION ON SUGARCANE CROP**

**BORER**

On overall Punjab basis 2.97% spots above ETL have been observed as compared to 3.04% spots during the past fortnight and 1.73% during same corresponding period of the last year while 40.78% spots below ETL have been observed as compared to 29.53% spots during the past fortnight and 25.36% during same corresponding period of the last year.

**PYRILLA**

On overall Punjab basis 4.26% spots below ETL have been observed as compared to 5.70% spot during the past fortnight and 3.59% during same corresponding period of the last year.

**WHITEFLY**

On overall Punjab basis 0.00% spots below ETL have been observed as compared to 1.90% spot during the past fortnight and 0.48% during same corresponding period of the last year.

**BLACK BUG**

On overall Punjab basis 1.11% spots above ETL have been observed as compared to 3.42% spots during the past fortnight and 0.00% during same corresponding period of the last year while 21.22% below ETL spots have been observed as compared to 38.53% spots during the past fortnight and 13.89% during same corresponding period of the last year.

**MITES**

On overall Punjab basis 2.50% below ETL spots have been observed as compared to 0.51% spots during the past fortnight and 1.38% during same corresponding period of the last year.

**TOKA**

On overall Punjab basis 0.19% spots above ETL have been observed as compared to 0.00% spots during the past fortnight and 0.41% during same corresponding period of the last year while 7.60% spots below ETL have been observed as compared to 3.17% spot during the past fortnight and 4.42% during same corresponding period of the last year.

**TERMITES**

On overall Punjab basis 0.93% spot of Termites has observed as compared to 0.38% spots above ETL during the past fortnight and 0.00% during same corresponding period of the last year.

**RED ROT**

On overall Punjab basis 3.89% spot of Red Rot has observed as compared to 4.06% spots above ETL during the past fortnight and 1.31% during same corresponding period of the last year.

**WHIP SMUT**

On overall Punjab basis 4.17% spot of Whip Smut has observed as compared to 1.90% spots above ETL during the past fortnight and 4.35% during same corresponding period of the last year.

**RUST**

On overall Punjab basis 0.09% spot of Rust has observed as compared to 0.00% spots above ETL during the past fortnight and 0.00% during same corresponding period of the last

### METEOROLOGICAL DATA OF THE FORTNIGHT

Districts	2020				2019			
	Temperature		R.H%	Rainfall (mm)	Temperature		RH%	Rainfall (mm)
	Max.	Min.			Max.	Min.		
<b>Multan</b>	38.90	28.30	68.20	2.20	43.60	29.90	51.30	0.00
<b>Khanewal</b>	39.30	28.60	60.90	3.00	44.00	29.00	43.60	0.00
<b>Vehari</b>	39.70	28.70	67.40	20.00	44.80	30.60	50.00	0.00
<b>Lodhran</b>	38.30	27.90	66.60	11.00	44.50	29.40	42.10	0.00
<b>Sahiwal</b>	37.50	24.80	54.27	1.00	38.00	23.00	55.00	0.00
<b>Pakpattan</b>	38.00	24.60	49.60	0.00	38.20	26.80	50.00	0.00
<b>Okara</b>	41.00	23.28	53.57	0.00	41.74	25.35	55.57	0.00
<b>B. Pur</b>	39.56	25.93	49.83	0.84	43.83	27.06	37.97	0.00
<b>B. Nagar</b>	39.13	24.17	47.29	3.17	46.71	27.50	27.50	0.00
<b>R.Y.Khan</b>	42.29	28.71	47.14	0.00	47.00	30.14	47.71	0.00
<b>D.G Khan</b>	41.31	29.33	62.96	2.00	45.36	33.29	51.68	0.00
<b>M. Garh</b>	40.78	27.73	29.50	1.00	42.57	29.81	32.14	0.00
<b>Rajanpur</b>	41.50	24.50	69.90	3.00	44.90	28.20	113.80	0.00
<b>Layyah</b>	39.00	26.65	46.08	1.00	41.36	27.93	39.29	2.00
<b>TOT/AVG</b>	<b>39.73</b>	<b>26.66</b>	<b>55.23</b>	<b>48.21</b>	<b>43.33</b>	<b>28.43</b>	<b>49.83</b>	<b>2.00</b>

### Weather forecast for Next 15 Days

Division	Dated	15/6	16/6	17/6	18/6	19/6	20/6	21/6	22/6	23/6	24/6	25/6	26/6	27/6	28/6	29/6
Multan	Max.Temp.	44	46	47	48	45	44	40	41	42	43	43	43	43	44	44
	Min.Temp.	31	32	32	33	35	31	31	33	32	32	32	32	32	32	32
	Humidity %	16	12	9	11	19	23	16	14	12	12	14	14	16	22	21
Sahiwal	Max.Temp.	44	45	46	48	43	45	37	38	40	39	39	39	40	41	41
	Min.Temp.	30	31	30	32	30	32	30	32	32	32	32	32	32	32	33
	Humidity %	13	11	9	10	22	21	17	14	12	12	13	18	16	24	25
Bahawalpur	Max.Temp.	45	46	48	48	44	43	40	41	42	41	41	41	42	43	43
	Min.Temp.	32	32	32	32	33	30	29	30	30	30	30	30	30	30	30
	Humidity %	14	12	10	12	22	25	19	18	16	16	16	22	19	27	24
D.G.Khan	Max.Temp.	46	47	49	49	46	45	39	41	42	43	43	43	43	44	44
	Min.Temp.	32	32	32	33	32	31	30	33	33	34	34	33	33	33	34
	Humidity %	12	10	7	10	17	21	17	12	11	12	12	15	15	20	20
Average Cotton Zone	Max.Temp.	<b>43.23</b>														
	Min.Temp.	<b>31.72</b>														
	Humidity %	<b>15.85</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 South Punjab basis is as; maximum temperature 39.73 C°, minimum 26.66 C° with R. humidity 55.23. Weather forecast for the next fifteen days is as; maximum temperature 43.23 C°, minimum 31.72 C° with R. humidity 15.85. 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 South Punjab basis is as; maximum temperature 39.73 C°, minimum 26.66 C° with R. humidity 55.23. Weather forecast for the next fifteen days is as; maximum temperature 43.23 C°, minimum 31.72 C° with R. humidity 15.85. 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 South Punjab basis is as; maximum temperature 39.73 C°, minimum 26.66 C° with R. humidity 55.23. Weather forecast for the next fifteen days is as; maximum temperature 43.23 C°, minimum 31.72 C° with R. humidity 15.85. It is predicted that the population of this pest will increase during the next fortnight.

### **BLACK BUG**

This pest flourish best at optimum temperature 22.9-40.9C with relative R. humidity 46%. The current weather conditions on overall South Punjab basis is as; maximum temperature 39.73 C°, minimum 26.66 C° with R. humidity 55.23. Weather forecast for the next fifteen days is as; maximum temperature 43.23 C°, minimum 31.72 C° with R. humidity 15.85. It is predicted that the population of this pest will decrease 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 South Punjab basis is as; maximum temperature 39.73 C°, minimum 26.66 C° with R. humidity 55.23. Weather forecast for the next fifteen days is as; maximum temperature 43.23 C°, minimum 31.72 C° with R. humidity 15.85. It is predicted that the population of this pest may increase 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 39.73 C°, minimum

26.66 C° with R. humidity 55.23. Weather forecast for the next fifteen days is as; maximum temperature 43.23 C°, minimum 31.72 C° with R. humidity 15.85. It is predicted that the population of this pest may 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 39.73 C°, minimum 26.66 C° with R. humidity 55.23. Weather forecast for the next fifteen days is as; maximum temperature 43.23 C°, minimum 31.72 C° with R. humidity 15.85. 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 39.73 C°, minimum 26.66 C° with R. humidity 55.23. Weather forecast for the next fifteen days is as; maximum temperature 43.23 C°, minimum 31.72 C° with R. humidity 15.85. It is predicted that the population of this pest will increase 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 39.73 C°, minimum 26.66 C° with R. humidity 55.23. Weather forecast for the next fifteen days is as; maximum temperature 43.23 C°, minimum 31.72 C° with R. humidity 15.85. It is predicted that the present climatic conditions may not be favorable for the increase of this disease 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 39.73 C°, minimum 26.66 C° with R. humidity 55.23. Weather forecast for the next fifteen days is as; maximum temperature 43.23 C°, minimum 31.72 C° with R. humidity 15.85. 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 South Punjab basis is as; maximum temperature 39.73 C°, minimum 26.66 C° with R. humidity 55.23. Weather forecast for the next fifteen days is as; maximum temperature 43.23 C°, minimum 31.72 C° with R. humidity 15.85. It is predicted that 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 South Punjab basis is as; maximum temperature 39.73 C°, minimum 26.66 C° with R. humidity 55.23. Weather forecast for the next fifteen days is as; maximum temperature 43.23 C°, minimum 31.72 C° with R. humidity 15.85. Incidence of this disease is not expected during the coming 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

### **TOKA MANAGEMENT**

- ❖ For the management of Toka, eradicate the weeds along with water channels and field boundaries.
- ❖ In case its population exceeds ETL, dusting should be made with suitable insecticides around field bunds of Sugarcane.

### **RUST MANAGEMENT**

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

**RED ROT MANAGEMENT**

- ❖ Select the seed for cultivation from diseased free crop.
- ❖ Cultivate resistant varieties.
- ❖ Cut and burn the diseased plants with stubbles.
- ❖ If diseased plants are observed in the fields then avoid ratooning of crop.
- ❖ Sowing of cane after dipping the sets in the solution of Thiaphenate Methyl.

**WHIP SMUT MANAGEMENT**

- ❖ Cut and burn the diseased plants / Plant pests

**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