




Pest Situation of Sugarcane Crop of Punjab (15TH -31ST AUGUST 2018)



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

**PEST SITUATION OF SUGARCANE CROP IN THE PUNJAB FOR THE
2ND FORTNIGHT OF AUGUST, 2018**

PEST SITUATION ON SUGARCANE CROP

BORERS

On overall Punjab basis, 0.36% above ETL of borers has observed as compared to 0.46% spots during the past fortnight and 0.56% during same corresponding period of the last year. Similarly, 21.68% below ETL spots have observed as compared to 25.94% spots during the past fortnight and 26.57% during same corresponding period of the last year.

PYRILLA

On overall Punjab basis 1.37% above ETL of has observed as compared to 0.08% spots during the past fortnight and 0.78% during same corresponding period of the last year. Similarly, 14.39% spots below ETL have observed as compared to 11.40% spots during the past fortnight and 19.73% during same corresponding period of the last year.

WHITEFLY

On overall Punjab basis 3.46% above ETL of Whitefly has observed as compared to 3.14% spots during the past fortnight and 3.14% during same corresponding period of the last year. Similarly, 18.21% spot below ETL have observed as compared to 14.61% spot during the past fortnight and 25.00% during same corresponding period of the last year.

BLACK BUG

On overall Punjab basis 5.46% below ETL have observed as compared to 6.04% spots during the past fortnight and 8.30% during same corresponding period of the last year.

MITES

On overall Punjab basis 0.18% spot above ETL of Mites has observed as compared to 0.15% spots during the past fortnight and 0.22% during same corresponding period of the last year. Similarly, 1.18% below ETL has observed as compared to 1.45% spots during the past fortnight and 2.69% during same corresponding period of the last year.

TOKA

On overall Punjab basis 4.64% below ETL has observed as compared to 3.98% spots during the past fortnight and 8.52% during same corresponding period of the last year.

MEALY BUG

On overall Punjab basis 0.46% of Mealy bug have observed as compared to 0.61% spots above ETL during the past fortnight and 0.56% during same corresponding period of the last year.

TERMITES

On overall Punjab basis no spot of Termites has observed as compared to 0.00% spots during the past fortnight and 0.11% during same corresponding period of the last year

RED ROT

On overall Punjab basis 4.19% spot of Red Rot has observed as compared to 4.97% spots above ETL during the past fortnight and 6.61% during same corresponding period of the last year.

WHIP SMUT

On overall Punjab basis, 3.10% of Whip Smut has observed as compared to 3.98% spots during the past fortnight and 1.91% during same corresponding period of the last year.

MOSAIC VIRUS

On overall Punjab basis, 1.18% of Mosaic Virus has observed as compared to 0.00% spots above ETL during the past fortnight and 0.00% during same corresponding period of the last year.

RUST

On overall Punjab basis, 0.00 of Rust has observed as compared to 0.00% spots above ETL during the past fortnight and 1.12% 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	36.60	28.80	69.30	77.10	36.10	28.10	73.10	0.00
Khanewal	37.70	28.50	58.70	0.00	38.90	29.40	56.00	0.00
Vehari	36.10	30.30	49.50	0.00	38.20	28.50	56.80	0.00
Lodhran	33.20	21.90	63.70	5.00	37.60	27.60	56.80	0.00
Sahiwal	37.20	28.10	63.50	0.00	38.10	26.00	64.25	5.00
Pakpattan	35.10	24.90	82.44	0.00	34.30	24.30	80.70	0.00
Okara	37.50	27.80	82.00	0.00	35.40	26.80	84.00	90.20
Bahawalpur	37.01	28.34	64.07	21.00	38.41	27.94	61.97	Traces
Bahawalnagar	39.83	28.69	60.33	3.00	37.17	27.90	66.33	0.00
R.Y.Khan	39.47	27.97	79.50	0.00	40.36	25.05	81.88	0.00
D.G Khan	40.36	30.29	51.75	Drizzling	40.07	29.14	53.85	0.00
M. Garh	38.38	28.89	68.75	13.00	38.01	29.36	61.96	0.00
Rajanpur	39.00	29.26	46.05	15.00	39.88	26.57	62.70	0.00
Layyah	39.83	28.00	46.00	15.00	38.66	27.33	46.41	7.00
AVERAGE	37.66	27.98	63.26	149.10	37.94	27.43	64.77	102.20

Weather forecast for Next 15 Days

Division	Dated	29/ 8	30/ 8	31/ 8	1/ 9	2/ 9	3/ 9	4/ 9	5/ 9	6/ 9	7/ 9	8/ 9	9/ 9	10/ 9	11/ 9	12/ 9
Multan	Max.Temp.	41	42	41	41	37	42	38	38	36	37	37	37	37	37	38
	Min.Temp.	29	30	30	29	29	28	29	30	28	27	27	28	28	28	28
	Humidity %	26	26	30	32	41	34	19	14	20	20	23	24	26	24	22
Sahiwal	Max.Temp.	40	42	41	38	37	41	36	36	36	36	36	36	36	36	37
	Min.Temp.	27	29	29	28	27	27	28	30	28	28	28	28	28	28	28
	Humidity %	34	29	32	40	42	35	22	17	18	24	24	24	25	23	18
Bahawal pur	Max.Temp.	40	41	40	40	39	42	38	38	36	36	36	35	35	36	35
	Min.Temp.	29	30	30	28	28	28	27	28	26	25	25	25	25	25	25
	Humidity %	28	28	33	33	37	32	19	18	22	25	31	30	31	29	26
D.G.Khan	Max.Temp.	40	42	40	40	40	40	37	38	36	37	37	37	37	38	38
	Min.Temp.	30	30	30	30	30	29	30	31	29	28	28	28	28	29	29
	Humidity %	31	23	29	30	34	37	19	13	19	18	16	20	24	22	22
Average Cotton Zone	Max.Temp.	38.12														
	Min.Temp.	28.20														
	Humidity %	26.12														

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 37.66 C°, minimum 27.98 C° with R. humidity 63.26%. Weather forecast for the next fifteen days is as; maximum temperature 38.12 C°, minimum temperature 28.20 C° with humidity 26.12%. It is predicted that the population of this pest will decrease 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 37.66 C°, minimum 27.98 C° with R. humidity 63.26%. Weather forecast for the next fifteen days is as; maximum temperature 38.12 C°, minimum temperature 28.20 C° with humidity 26.12%. 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 37.66 C°, minimum 27.98 C° with R. humidity 63.26%. Weather forecast for the next fifteen days is as; maximum temperature 38.12 C°, minimum temperature 28.20 C° with humidity 26.12%. 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 37.66 C°, minimum 27.98 C° with R. humidity 63.26%. Weather forecast for the next fifteen days is as; maximum temperature 38.12 C°, minimum temperature 28.20 C° with humidity 26.12%. 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 37.66 C°, minimum 27.98 C° with R. humidity 63.26%. Weather forecast for the next fifteen days is as; maximum temperature 38.12 C°, minimum temperature 28.20 C° with humidity 26.12% 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 37.66 C°, minimum 27.98 C° with R. humidity 63.26%. Weather forecast for the next fifteen days is as; maximum temperature 38.12 C°, minimum temperature 28.20 C° with humidity 26.12%. 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 37.66 C°, minimum 27.98 C° with R. humidity 63.26%. Weather forecast for the next fifteen days is as; maximum temperature 38.12 C°, minimum temperature 28.20 C° with humidity 26.12%. 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 37.66 C°, minimum 27.98 C° with R. humidity 63.26%. Weather forecast for the next fifteen days is as; maximum temperature 38.12 C°, minimum temperature 28.20 C° with humidity 26.12%. 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 37.66 C°, minimum 27.98 C° with R. humidity 63.26%. Weather forecast for the next fifteen days is as; maximum temperature 38.12 C°, minimum temperature 28.20 C° with humidity 26.12%. 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 37.66 C°, minimum 27.98 C° with R. humidity 63.26%. Weather forecast for the next fifteen days is as; maximum temperature 38.12 C°, minimum temperature 28.20 C° with humidity 26.12%. 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 37.66 C°, minimum 27.98 C° with R. humidity 63.26%. Weather forecast for the next fifteen days is as; maximum temperature 38.12 C°, minimum temperature 28.20 C° with humidity 26.12%. 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 37.66 C°, minimum 27.98 C° with R. humidity 63.26%. Weather forecast for the next fifteen days is as; maximum temperature 38.12 C°, minimum temperature 28.20 C° with humidity 26.12%. 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 is expected to increase 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 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