




**Pest Situation of Sugarcane
Crop in Punjab
(1ST – 15TH SEPTEMBER 2019)**



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PEST SITUATION OF SUGARCANE CROP IN THE PUNJAB FOR THE**1ST FORTNIGHT OF SEPTEMBER, 2019****PEST SITUATION ON SUGARCANE CROP****BORER**

On overall Punjab basis 1.03% spots above ETL have been observed as compared to 1.16% spots during the past fortnight and 0.09% during same corresponding period of the last year while 18.30% spots below ETL have been observed as compared to 16.99% spots during the past fortnight and 17.73% during same corresponding period of the last year.

PYRILLA

On overall Punjab basis 0.00% spots above ETL have been observed as compared to 0.00% spots during the past fortnight and 2.06% during same corresponding period of the last year while 7.65% spots below ETL have been observed as compared to 8.23% spots during the past fortnight and 14.68% during same corresponding period of the last year.

WHITEFLY

On overall Punjab basis 1.03% spots above ETL have been observed as compared to 0.89% spots during the past fortnight and 6.27% during same corresponding period of the last year while 14.27% spots below ETL have been observed as compared to 12.16% spots during the past fortnight and 22.74% during same corresponding period of the last year.

BLACK BUG

On overall Punjab basis 0.00% spots above ETL have been observed as compared to 0.00% spots during the past fortnight and 0.18% during same corresponding period of the last year while 7.24% spots below ETL have been observed as compared to 7.42% spots during the past fortnight and 5.37% during same corresponding period of the last year

MITES

On overall Punjab basis 0.00% spots above ETL have been observed as compared to 0.00% spots during the past fortnight and 0.18% during same corresponding period of the last year while 0.10% below ETL spots have been observed as compared to 0.72% spots during the past fortnight and 2.06% during same corresponding period of the last year.

TOKA

On overall Punjab basis 6.00% spots below ETL have been observed as compared to 5.19% spots during the past fortnight and 4.57% during same corresponding period of the last year.

MEALY BUG

On overall Punjab basis 0.00% spot of Mealy Bug has observed as compared to 0.00% spots above ETL during the past fortnight and 0.72% during same corresponding period of the last year.

RED ROT

On overall Punjab basis 4.14% spot of Red Rot has observed as compared to 2.77% spots above ETL during the past fortnight and 5.91% during same corresponding period of the last year.

WHIP SMUT

On overall Punjab basis 1.24% spot of Whip Smut has observed as compared to 2.06% spots above ETL during the past fortnight and 1.88% during same corresponding period of the last year.

RUST

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

METEOROLOGICAL DATA OF THE FORTNIGHT

Districts	2019				2018			
	Temperature		R.H%	Rainfall (mm)	Temperature		RH%	Rainfall (mm)
	Max.	Min.			Max.	Min.		
Multan	38.10	30.40	74.10	22.30	35.20	27.40	76.00	0.00
Khanewal	39.00	29.10	64.40	3.00	37.80	28.20	55.70	0.00
Vehari	38.20	29.70	69.50	21.00	34.10	30.00	51.50	0.00
Lodhran	38.80	30.70	61.10	0.00	36.10	28.40	52.70	0.00
Sahiwal	39.20	27.70	65.00	0.00	36.20	27.00	68.67	0.00
Pakpattan	37.60	27.00	64.00	0.00	36.00	25.40	67.00	0.00
Okara	41.50	32.00	68.00	0.00	38.00	28.50	69.00	0.00
Bahawalpur	39.31	28.96	65.66	0.00	39.85	24.66	61.84	0.00
Bahawalnagar	39.33	28.25	60.04	0.00	39.38	28.85	57.17	0.00
R.Y.Khan	41.03	29.16	78.00	0.00	39.72	27.59	79.68	0.00
D.G Khan	41.07	28.86	56.36	0.00	39.43	27.43	51.47	0.00
M. Garh	37.93	28.74	64.67	0.00	39.94	28.07	64.66	0.00
Rajanpur	40.88	29.14	65.20	0.00	38.49	27.62	45.85	0.00
Layyah	37.71	26.06	47.98	14.00	43.55	28.48	40.60	0.00
TOT/AVG	39.26	28.98	64.57	60.30	38.13	27.69	60.13	0.00

Weather forecast for Next 15 Days

Division	Dated	13 /9	14 /9	15 /9	16 /9	17 /9	18 /9	19 /9	20 /9	21 /9	22 /9	23 /9	24 /9	25 /9	26 /9	27 /9
Multan	Max. Temp.	42	40	41	41	41	42	38	37	37	37	37	37	37	38	38
	Min. Temp.	31	29	29	27	27	29	29	28	27	27	27	27	27	28	28
	Humidity %	25	28	26	27	25	24	8	10	13	13	16	16	20	22	27
Sahiwal	Max. Temp.	40	39	40	40	42	42	36	35	36	35	35	35	35	37	36
	Min. Temp.	29	27	27	26	26	27	26	27	27	26	26	26	27	27	27
	Humidity %	31	30	29	28	26	26	17	19	21	15	19	17	20	23	25
Bahawalpur	Max. Temp.	42	41	42	42	43	43	40	39	38	37	37	37	38	39	39
	Min. Temp.	31	30	29	28	28	28	27	27	26	25	25	26	26	26	26
	Humidity %	25	26	25	24	22	22	8	12	11	11	19	20	23	27	31
D.G. Khan	Max. Temp.	43	42	42	43	42	43	38	37	36	37	37	37	37	38	38
	Min. Temp.	31	29	29	28	28	29	30	28	27	27	27	27	28	28	28
	Humidity %	22	25	26	23	25	19	8	16	15	12	15	16	21	23	29
Average Cotton Zone	Max. Temp.	38.88														
	Min. Temp.	27.55														
	Humidity %	20.78														

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 39.26 C°, minimum 28.98 C° with R. humidity 64.57. Weather forecast for the next fifteen days is as; maximum temperature 38.88 C°, minimum 27.55 C° with R. humidity 20.78. 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 39.26 C°, minimum 28.98 C° with R. humidity 64.57. Weather forecast for the next fifteen days is as; maximum temperature 38.88 C°, minimum 27.55 C° with R. humidity 20.78. 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 39.26 C°, minimum 28.98 C° with R. humidity 64.57. Weather forecast for the next fifteen days is as;

maximum temperature 38.88 C°, minimum 27.55 C° with R. humidity 20.78. It is predicted that the population of this pest will decrease 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 39.26 C°, minimum 28.98 C° with R. humidity 64.57. Weather forecast for the next fifteen days is as; maximum temperature 38.88 C°, minimum 27.55 C° with R. humidity 20.78. It is predicted that 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 39.26 C°, minimum 28.98 C° with R. humidity 64.57. Weather forecast for the next fifteen days is as; maximum temperature 38.88 C°, minimum 27.55 C° with R. humidity 20.78. 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 Punjab basis is as; maximum temperature 39.26 C°, minimum 28.98 C° with R. humidity 64.57. Weather forecast for the next fifteen days is as; maximum temperature 38.88 C°, minimum 27.55 C° with R. humidity 20.78. It is predicted that the population of this pest may remain 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 Punjab basis is as; maximum temperature 39.26 C°, minimum 28.98 C° with R. humidity 64.57. Weather forecast for the next fifteen days is as; maximum temperature 38.88 C°, minimum 27.55 C° with R. humidity 20.78. 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 Punjab basis is as; maximum temperature 39.26 C°, minimum 28.98 C° with R. humidity 64.57. Weather forecast for the next fifteen days is as; maximum temperature 38.88 C°, minimum 27.55 C° with R. humidity 20.78. It is predicted that the population of this pest will decrease 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 Punjab basis is as; maximum temperature 39.26 C°, minimum 28.98 C° with R. humidity 64.57. Weather forecast for the next fifteen days is as; maximum temperature 38.88 C°, minimum 27.55 C° with R. humidity 20.78. It is predicted that the present climatic conditions may be favorable for the development 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 Punjab basis is as; maximum temperature 39.26 C°, minimum 28.98 C° with R. humidity 64.57. Weather forecast for the next fifteen days is as; maximum temperature 38.88 C°, minimum 27.55 C° with R. humidity 20.78. 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 39.26 C°, minimum 28.98 C° with R. humidity 64.57. Weather forecast for the next fifteen days is as; maximum temperature 38.88 C°, minimum 27.55 C° with R. humidity 20.78. It is predicted that the present climatic conditions are not 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 39.26 C°, minimum 28.98 C° with R. humidity 64.57. Weather forecast for the next fifteen days is as; maximum temperature 38.88 C°, minimum 27.55 C° with R. humidity 20.78. 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

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.

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.

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