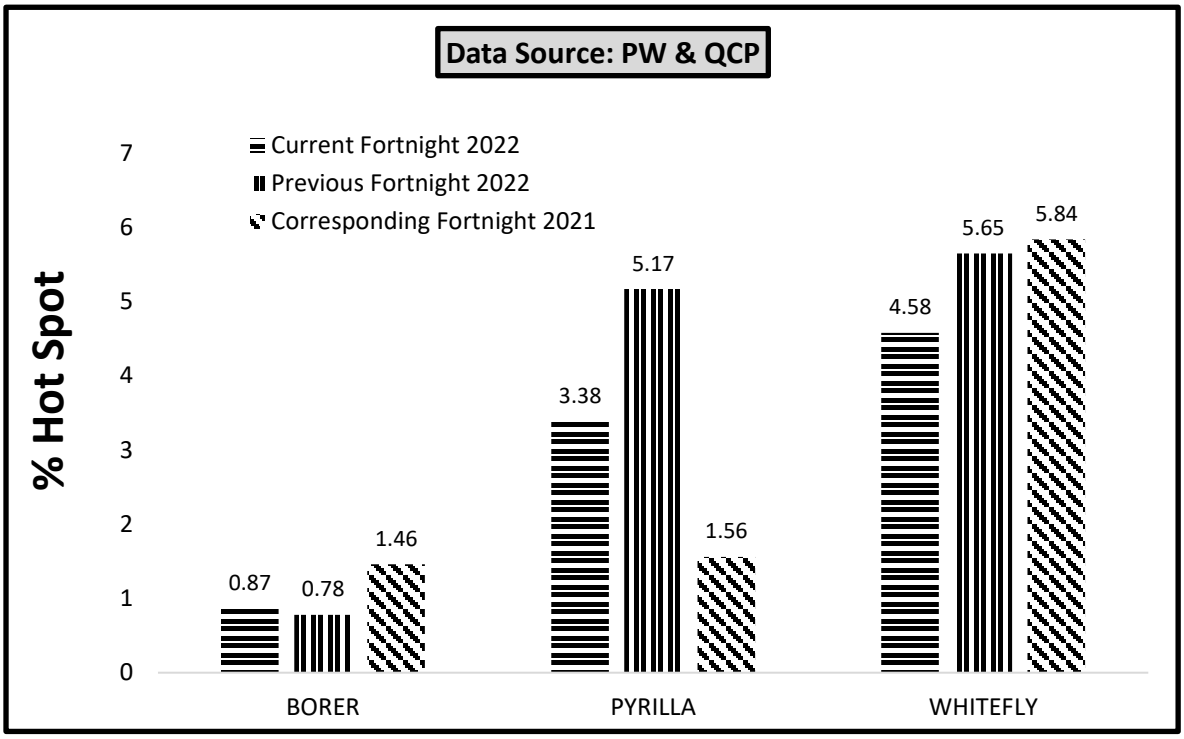
Pest Situation of Sugarcane Crop in Punjab (1ST – 15TH OCTOBER 2022)

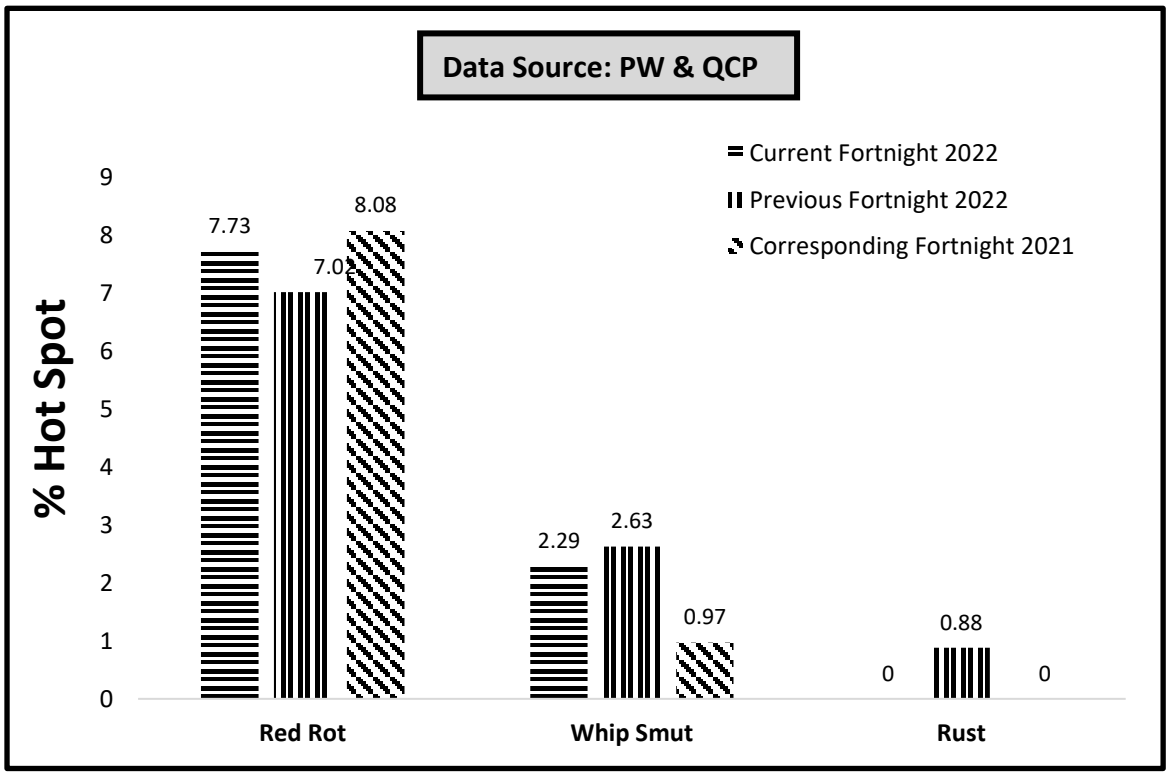
DIRECTORATE GENERAL OF PEST WARNING AND QUALITY CONTROL OF PESTICIDES
PUNJAB, LAHORE

GRAPHICAL PEST SITUATION ON SUGARCANE CROP IN PUNJAB FOR THE 1ST FORTNIGHT OF OCTOBER 2022

A- Insect Pest



B- Disease



FORTNIGHTLY PEST SCOUTING AND FORECAST REPORT OF SUGARCANE CROP FOR THE 1ST FORTNIGHT OF OCTOBER 2022

Pest Situation of Sugarcane Pests								
		%age of spots						Remarks
Sr. No.	Pest Name	Current F.Night 2022		Previous F.Night 2022		Corresponding F.Night of 2021		
		AETL	BETL	AETL	BETL	AETL	BETL	
1	BORER	0.87	16.56	0.78	17.45	1.46	19.18	**Increasing**
2	PYRILLA	3.38	23.86	5.17	29.04	1.56	18.40	Decreasing
3	WHITEFLY	4.58	22.88	5.65	28.07	5.84	25.71	Decreasing
4	BLACK BUG	0.11	5.34	0.10	4.00	0.00	2.34	Sustaining
-5	MITES	0.00	0.00	0.10	0.19	0.29	1.27	Decreasing
6	TOKA	0.11	13.07	0.19	16.28	0.10	13.34	Decreasing
7	MEALY BU0	0.11	-	0.00	-	0.49	-	**Increasing**
8	RED ROT	7.73	-	7.02	-	8.08	-	**Increasing**
9	WHIP SMUT	2.29	-	2.63	-	0.97	-	Decreasing
10	MOSAIC VIRUS	0.00	-	0.00	-	0.00	-	**-**
11	RUST	0.00	-	0.88	-	0.00	-	Decreasing

METEOROLOGICAL DATA OF THE FORTNIGHT

Districts	2022				2021			
	Temperature		R.H%	Rainfall (mm)	Temperature		RH%	Rainfall (mm)
	Max.	Min.			Max.	Min.		
Multan	36.6	22.4	64.7	0.0	35.5	27.21	66.54	36.5
Khanewal	36.5	23.0	63.2	0.0	35.6	26.59	66.97	4.0
Vehari	35.3	22.4	68.1	0.0	34.8	27.36	68.04	1.0
Lodhran	34.7	23.1	67.3	0.0	34.5	25.13	73.25	18.0
Sahiwal	31.5	20.1	73.1	0.0	35.0	22	67	0.0
Pakpattan	32.0	20.5	72.4	0.0	36.0	23	71	0.0
Okara	31.0	21.2	72.5	0.0	34.0	24	72	0.0
Bahawalpur	36.8	22.5	56.5	0.0	36.5	25.74	69.72	17.0
Bahawalnagar	35.3	23.2	68.1	0.0	37.0	24.04	65.71	0.0
R.Y. Khan	36.1	21.4	56.8	0.0	37.4	24.63	57.05	0.0
D.G Khan	34.9	23.9	66.4	0.0	35.8	24.43	54.86	0.0
M. Garh	24.4	10.2	62.7	0.0	23.4	7.583	61.04	0.0
Rajanpur	29.7	13.2	58.6	0.0	21.0	19.08	58.87	0.0
Layyah	34.5	22.0	76.0	0.0	37.5	22.5	60.5	0.0
TOT/AVG	**33.5**	**20.7**	**66.2**	**0.0**	**33.9**	**23.1**	**65.2**	**76.5**

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 **33.5** C°, minimum **20.7** C° with R. humidity **66.2**. 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 Punjab basis is as; maximum temperature **33.5** C°, minimum **20.7** C° with R. humidity **66.2**. It is predicted that the population of this pest will decrease 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 **33.5** C°, minimum **20.7** C° with R. humidity **66.2**. 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 Punjab basis is as; maximum temperature **33.5** C°, minimum **20.7** C° with R. humidity **66.2**. 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° % respectively. The current weather conditions on overall Punjab basis is as; maximum temperature **33.5** C°, minimum **20.7** C° with R. humidity **66.2**. It is predicted that the population of this pest will 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 **33.5** C°, minimum **20.7** C° with R. humidity **66.2**. It is predicted that the population of this pest will sustain 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 **33.5** C°, minimum **20.7** C° with R. humidity **66.2**. It is predicted that the population of this pest will sustain 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 **33.5** C°, minimum **20.7** C° with R. humidity **66.2**. It is predicted that the population of this pest will sustain 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 **33.5** C°, minimum **20.7** C° with R. humidity **66.2**. It is predicted that the population of this pest will sustain during the next 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 **33.5** C°, minimum **20.7** C° with R. humidity **66.2**. It is predicted that the population of this pest will increase during the next 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 **33.5** C°, minimum **20.7** C° with R. humidity **66.2**. It is predicted that the population of this pest will increase during the next fortnight.

MOSAIC VIRUS

The current weather conditions on overall Punjab basis is as; maximum temperature **33.5** C°, minimum **20.7** C° with R. humidity **66.2**. It is predicted that the population of this pest will sustain during the next 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