GRAPHICAL PEST SITUATION ON RICE CROP IN PUNJAB DURING 1ST WEEK OF NOVEMBER, 2023
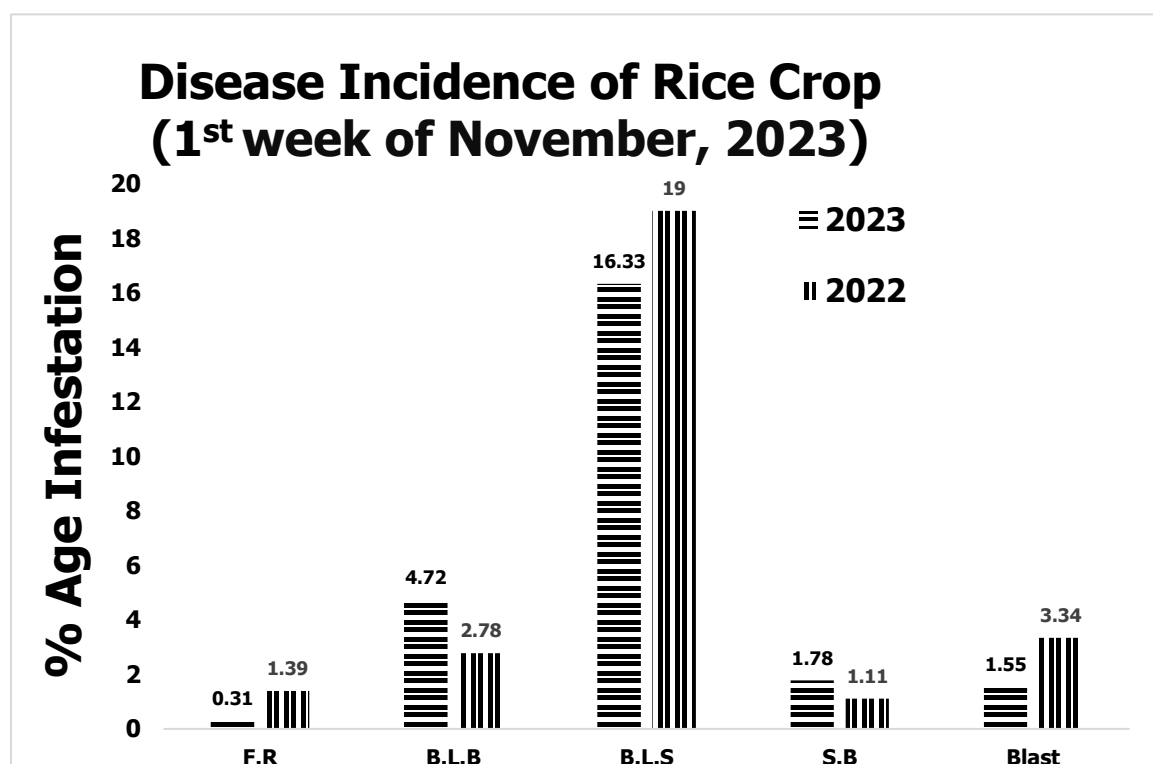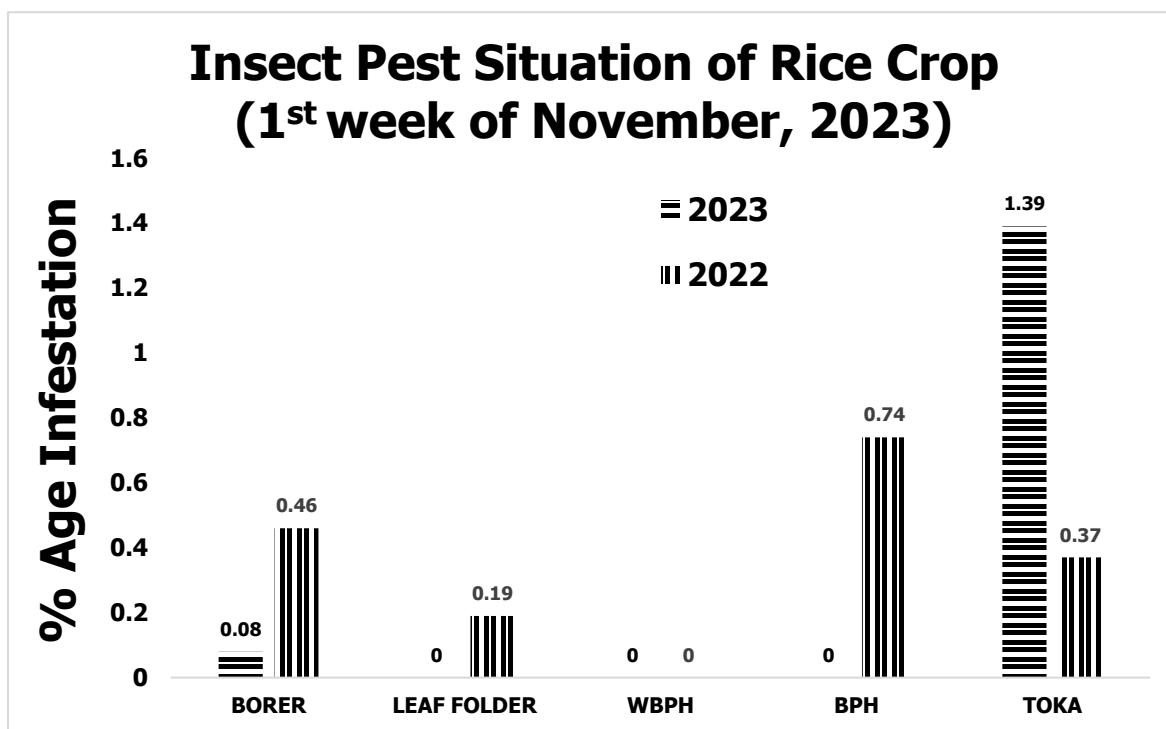
Insect Pest Situation of Rice Crop (1st week of November, 2023)

Legend: ≡ 2023, ⦀ 2022

Y-axis: % Age Infestation

Pest	2023	2022
BORER	0.08	0.46
LEAF FOLDER	0	0.19
WBPH	0	0
BPH	0	0.74
TOKA	1.39	0.37

Disease Incidence of Rice Crop (1st week of November, 2023)

Legend: ≡ 2023, ⦀ 2022

Y-axis: % Age Infestation

Disease	2023	2022
F.R	0.31	1.39
B.L.B	4.72	2.78
B.L.S	16.33	19
S.B	1.78	1.11
Blast	1.55	3.34

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

PEST SITUATION ON RICE CROP IN PUNJAB DURING 1ST WEEK OF NOVEMBER, 2023

Sr. No.	Pest Name	%Age of spots						Remarks
		Current Week		Previous Week		Corresponding week of Last Year		
		AETL	BETL	AETL	BETL	AETL	BETL	
1	RICE BORER	0.08	7.12	0.22	9.58	0.46	11.31	Decreasing
2	LEAF FOLDER	0.00	6.27	0.00	3.36	0.19	2.97	-
3	WPBH	0.00	1.47	0.00	1.05	0.00	1.48	-
4	BPH	0.00	6.19	0.17	4.63	0.74	12.33	Decreasing
5	TOKA	1.39	17.03	1.10	19.88	0.37	24.84	**Increasing**
6	FOOT ROT	0.31	-	0.44	-	1.39	-	Decreasing
7	B.L.B	4.72	-	7.60	-	2.78	-	Decreasing
8	B.L.S	16.33	-	17.73	-	19.0	-	Decreasing
9	SHEAT H BLIGHT	1.78	-	1.93	-	1.11	-	Decreasing
10	BLAST	1.55	-	2.48	-	3.34	-	Decreasing
NO. OF TOTAL SPOTS VISITED		1816						
TOTAL AREA VISITED (Acres)		11676						

Pest Situation of Rice Pests — (table title above)

Tehsil wise percentage of hot spots of Rice Borer

Sr.	TEHSIL	%AGE
1	Ferozwala	3

Tehsil wise percentage of hot spots of Rice Leaf Folder

Nill

Tehsil wise percentage of hot spots of White-Backed Plant Hopper

Nill

Tehsil wise percentage of hot spots of Brown Plant Hopper

Nill

Tehsil wise percentage of hot spots of Rice Toka

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Muridke	15	4	Safdarabad	7.7
2	Narang Mandi	13.8	5	Ferozwala	6.1
3	Sheikhupura	11.5	6	Sharqpur	5.6

Tehsil wise percentage of hot spots of Foot Rot

Sr.	TEHSIL	%AGE
1	Muridke	10

Tehsil wise percentage of hot spots of Bacterial Leaf Blight

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Noshehra Virkan	52	9	Gujranwala	13.3

2	Wazirabad	35.7	10	M.B.Din	13.3
3	Jalal Pur	33.3	11	Kamonke	10.3
4	Ferozwala	27.3	12	Pindi Bhattian	9.4
5	Malikwal	25.0	13	Narang Mandi	6.9
6	Phalia	20.0	14	Pattoki	6.9
7	Muridke	20.0	15	Sharqpur	5.6
8	Multan	20.0	16	Kot Radha Kishan	2.4

Tehsil wise percentage of hot spots of Brown Leaf Spots

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Jalal Pur Jattan	64	23	Pindi Bhattian	21.9
2	Kharian	57.1	24	Narang Mandi	20.7
3	Sarai Alamgir	57.1	25	Multan	20.0
4	Gujrat	55.6	26	Ahmadpur	20.0
5	Narowal	45.0	27	Kot Radha Kishan	19.5
6	Phalia	43.3	28	Sheikhupura	19.2
7	Baddomalhi	36.4	29	Pattoki	17.2
8	M.B.Din	33.3	30	Sialkot	16.7
9	Jalal Pur	33.3	31	Karor	16.7
10	Ferozwala	30.3	32	Chistian	16.7
11	Mian Channu	30.0	33	Bahawalnagar	16.7
12	Wazirabad	28.6	34	Sambrial	16.1
13	Sharqpur	27.8	35	Zafarwal	15.0
14	Gujranwala	26.7	36	Pasrur	13.3
15	Kabirwala	26.7	37	Lahore	11.1
16	Shakargarh	26.3	38	Kehror Pacca	11.1
17	Malikwal	25.0	39	Noshehra Virkan	9.5
18	Muridke	25.0	40	Nankana Sahib	4.9
19	Khanewal	25.0	41	Shahkot	4.4
20	Layyah	25.0	42	Kasur	4.2
21	Hasilpur	25.0	43	Sangla Hill	4.0
22	Safdarabad	23.1	44	Kamonke	2.6

Tehsil wise percentage of hot spots of Sheath Blight

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Ferozwala	21	5	Gujranwala	6.7
2	Pakpattan	16.7	6	Depalpure	5.9
3	Muridke	12.5	7	Kamonke	5.1
4	Kot Radha Kishan	12.2	8	Phalia	3.3

Tehsil wise percentage of hot spots of Rice Blast

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Silanwali	25	7	Kehror Pacca	11.1
2	Karor	16.7	8	Shorkot	7.1
3	Chistian	16.7	9	Depalpure	5.9
4	Bahawalnagar	16.7	10	Zafarwal	5.0
5	Pattoki	13.8	11	Kasur	4.2
6	Kot Radha Kishan	12.2			

Meteorological data of the current week 2023

Districts	2023				2022			
	Temperature		R.H%	Rainfall (mm)	Temperature		RH%	Rainfall (mm)
	Max.	Min.			Max.	Min.		
Gujranwala	31.2	21.6	60.0	0.0	34.5	26.5	72.5	0.0
Hafizbad	30.8	18.2	59.0	4.0	31.0	19.1	60.0	2.0
Sialkot	28.0	21.0	65.0	10.0	26.0	20.0	70.0	20.0
Narowal	26.4	13.0	68.1	0.0	27.0	14.8	74.5	0.0
Gujrat	30.7	18.9	60.0	3.5	30.0	19.0	61.0	5.0
M.B.Din	30.9	17.6	63.0	5.0	32.0	20.2	59.0	4.0
Lahore	28.5	18.3	63.1	0.0	30.1	17.4	64.8	0.0
Sheikhupura	28.6	17.6	75.0	0.0	27.6	18.0	73.4	0.0
Nankana	27.9	18.2	40.0	0.0	28.2	18.7	41.0	0.0
Kasur	33.3	21.0	29.6	0.0	28.9	16.4	28.1	0.0
Faisalabad	30.3	18.3	92.3	0.0	30.0	18.5	86.0	0.0
Jhang	28.7	16.3	61.5	0.0	30.8	17.1	60.2	0.0
Toba Tek Singh	31.4	18.0	85.8	0.0	30.2	14.7	78.8	0.0
Chiniot	29.3	17.8	53.3	0.0	30.0	18.3	53.7	0.0
Sargodha	27.0	18.0	60.0	0.0	29.0	14.0	40.0	0.0
Khushab	32.7	19.5	51.0	4.5	32.5	18.5	72.0	0.0
Mianwali	34.0	21.0	55.0	3.0	38.0	27.0	45.0	0.0
Bhakkar	32.0	19.0	43.0	0.0	34.0	18.0	48.0	0.0
Multan	32.7	20.6	67.7	0.0	35.3	18.1	62.7	0.0
Khanewal	31.4	19.4	57.5	0.0	33.1	19.1	57.0	0.0
Vehari	33.4	20.4	57.0	0.0	35.0	18.0	72.1	0.0
Lodhran	27.7	19.1	67.2	0.0	30.1	18.0	71.9	0.0
Sahiwal	31.6	18.3	70.5	0.0	32.0	16.0	63.0	0.0
Pakpattan	30.0	18.3	65.0	0.0	34.0	17.0	65.0	0.0
Okara	30.2	17.5	63.5	0.0	30.9	18.3	52.5	0.0
Bahawalpur	32.5	19.0	67.6	0.0	34.4	17.4	60.8	0.0
Bahawalnagar	31.4	19.2	65.1	0.0	32.0	18.9	69.9	0.0
R.Y.Khan	34.8	21.5	52.9	0.0	36.6	20.1	34.8	0.0
D.G. Khan	34.3	20.2	52.0	0.0	28.5	18.0	65.0	0.0
Muzaffar Garh	34.5	20.4	48.0	0.0	29.8	18.2	65.8	0.0
Rajanpur	33.3	22.2	62.8	0.0	34.7	20.8	52.7	0.0
Layyah	29.0	15.0	50.0	0.0	28.0	19.0	65.0	0.0
Average	**30.89**	**18.88**	**60.36**	**30.0**	**31.38**	**18.54**	**60.82**	**31.0**

Table title: METEOROLOGICAL DATA FOR 1ST WEEK OF NOVEMBER 2023

Forecast of Rice Pests:

Borer: This pest flourishes best in warm humid climate with optimum temperature 17-30 °C with relative humidity between 45-80%. Based on the temperature outlook for the current week and the weather forecast for the next week, it is anticipated that the population of this pest might experience growth decline in the upcoming

week. This projection is due to the continued unfavorable temperature conditions that support the pest's development.

Leaf Folder: This pest flourishes best in warm humid climate with optimum temperature 25-30°C. Based on the temperature outlook for the current week and the weather forecast for the next week, it is anticipated that the population of this pest might experience growth decline in the upcoming week. This projection is due to the continued unfavorable temperature conditions that support the pest's development.

White-backed plant hopper: This pest flourishes best in warm humid climate with optimum temperature 25-29°C with relative humidity between 80-90%. Keeping in view the temperature for current week and weather forecast of next week, it is predicted that population of this pest may decrease during the coming week as the temperature remain not favorable for the development of this pest.

Brown plant hopper: This pest flourishes best in warm humid climate with optimum temperature 28-30°C with relative humidity below 80-90%. Keeping in view the temperature for current week and weather forecast of next week, it is predicted that population of this pest may decrease during the coming week as the temperature remain not favorable for the development of this pest.

Toka: This pest flourishes best in warm humid climate with optimum temperature 24-40°C with relative humidity between 30-80%. Based on the temperature outlook for the current week and the weather forecast for the next week, it is anticipated that the population of this pest might experience growth decline in the upcoming week. This projection is due to the continued unfavorable temperature conditions that support the pest's development.

Foot rot: High humidity and cloudy weather during heading stage are favorable for the development of foot rot of rice. The fungus has a wide range of temperature for optimum growth which is between 30-35 °C. Based on the temperature forecast for the current week and the projected weather conditions for the next week, there is a prediction that the intensity of the disease might decrease in the upcoming week.

This prognosis is based on the unfavorable temperature conditions that support the development of this particular disease.

Bacterial Leaf Blight: Heavy rain, heavy dew, flooding, deep irrigation water are favorable factors for the development of disease. Temperature for optimum growth is between 25-34 °C with relative humidity above 70%. Based on the temperature forecast for the current week and the projected weather conditions for the next week, there is a prediction that the intensity of the disease might decrease in the upcoming week. This prognosis is based on the unfavorable temperature conditions that support the development of this particular disease.

Brown Leaf spots: Non-flooded and nutrient deficient soils or soils with accumulation of toxic substances are favorable for the development of disease. Temperature for optimum growth is between 16-36 °C with relative humidity from 86-100%. Based on the temperature forecast for the current week and the projected weather conditions for the next week, there is a prediction that the intensity of the disease might decrease in the upcoming week. This prognosis is based on the unfavorable temperature conditions that support the development of this particular disease.

Sheath Blight: Crop plants during rainy season are more vulnerable to the disease. Temperature for optimum growth is between 28-32 °C with relative humidity from 85-100%. Based on the temperature forecast for the current week and the projected weather conditions for the next week, there is a prediction that the intensity of the disease might decrease in the upcoming week. This prognosis is based on the unfavorable temperature conditions that support the development of this particular disease.

Blast: Intermittent drizzles, cloudy weather, more of rainy days, Low night temperature and longer duration of dew are favorable factors for the development of disease. Based on the temperature forecast for the current week and the projected weather conditions for the next week, there is a prediction that the intensity of the disease might decrease in the upcoming week. This prognosis is based on the unfavorable temperature conditions that support the development of this particular disease.

RECOMMENDATION

RICE BORER MANAGEMENT

- Handpick and destroy egg masses.
- Install light traps up to September to monitor moth population of stem borers.
- Use balanced Fertilizers (NPK) within 45 days after transplanting of nursery.
- Complete application of nitrogen up to 31st August because due to late application of nitrogenous fertilizer, the plant becomes succulent and dark-green which attracts the insects, and helps in their rapid multiplication along with increasing disease incidence.

BOWN LEAF SPOT MANAGEMENT

- Avoid water stress before maturity.
- Control the disease with one of the following pesticides.

S#	Common Name	Brand Name	Dose / Acre
1	Propineb 70 WP	Gift, Cover, Protest	800 gm
2	Mancozeb 80 WP	Shelter, Dithane-M	800 gm
3	Propiconazole 25 EC	Tilt	80 ml

FOOT ROT MANAGEMENT

- Uproot the diseased plants and destroy them.
- Use Potash 1 Bag within 14 days of transplanting.
- Flooding of Copper Sulphate 1.5-2 Kg/Acre.

BACTERIAL LEAF BLIGHT MANAGEMENT

- Use disease free seeds for next crop.
- Spray copper-based fungicides without delay when disease incidence is observed.

PADDY BLAST MANAGEMENT

- For leaf blast, re-flood if field has been drained. Maintain water level at 3-4inches to ensure that soil is covered.
- Avoid late use of nitrogenous fertilizers.
- Control the disease with one of the following fungicides;

S#	Common Name	Brand Name	Dose / Acre
1	Kasugamycin 6% WP	Fork	250 gm
2	Trifloxystrobin+Tebuconazole 75%WP	Nativo	65 gm
3	Azoxystrobin 25 % SC	Primacy	200 ml

4	Difenoconazole 250 EC	Score	125 ml

ECONOMIC THRESHOLD LEVELS OF RICE PESTS

INSECT PESTS	ECONOMIC THRESHOLD LEVELS
Borers (White, Yellow & Pink)	0.5% attack on rice nursery while 8-10 Moth/Trap/Night & 5% dead heart on rice crop.
Toka	3 per net on rice nursery & 5 on rice crop.
Leaf Folder	2 rolled leaves per plant in July-August & 3 rolled leaves per plant in September-October.
Brown Plant Hopper	15 Nymphs or Adults per plant in July-August & 20 Nymphs or Adults per plant in September-October. Or 7-10 Nymphs or Adults per net
White Backed Plant Hopper	15 Nymphs or Adults per plant in July-August & 20 Nymphs or Adults per plant in September-October. Or 7-10 Nymphs or Adults per net
Hispa	1 per plant
Diseases	On appearance