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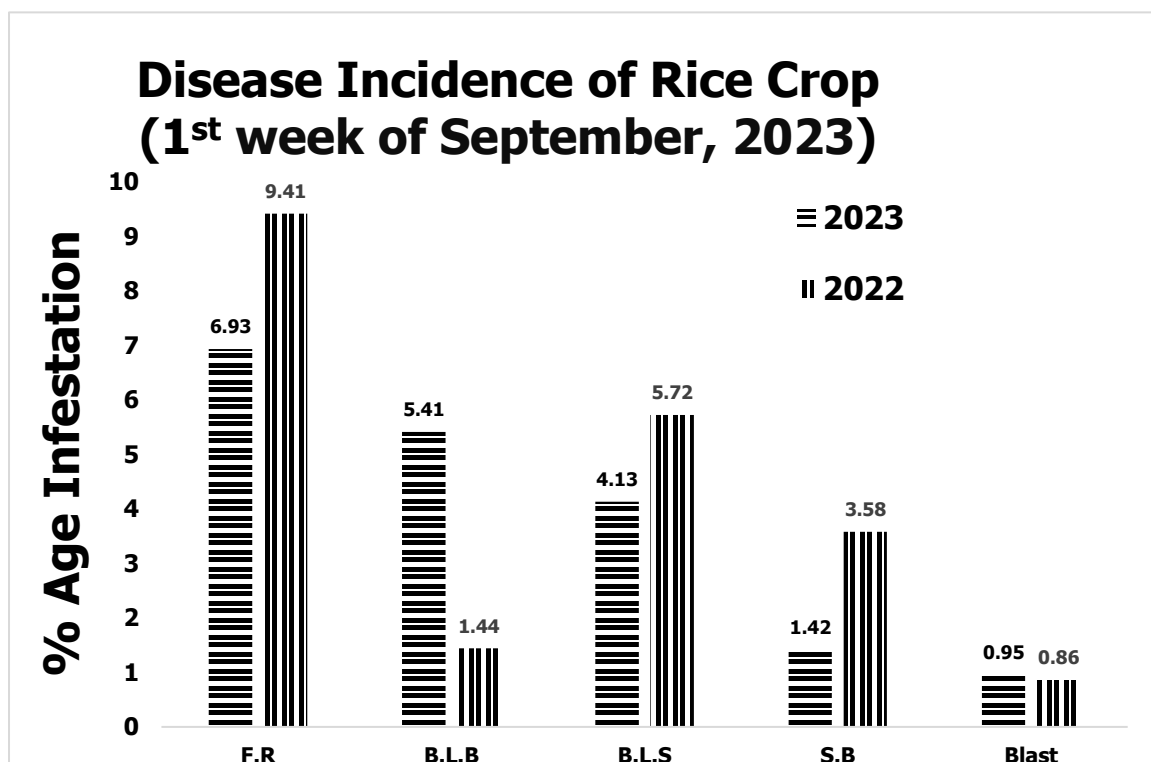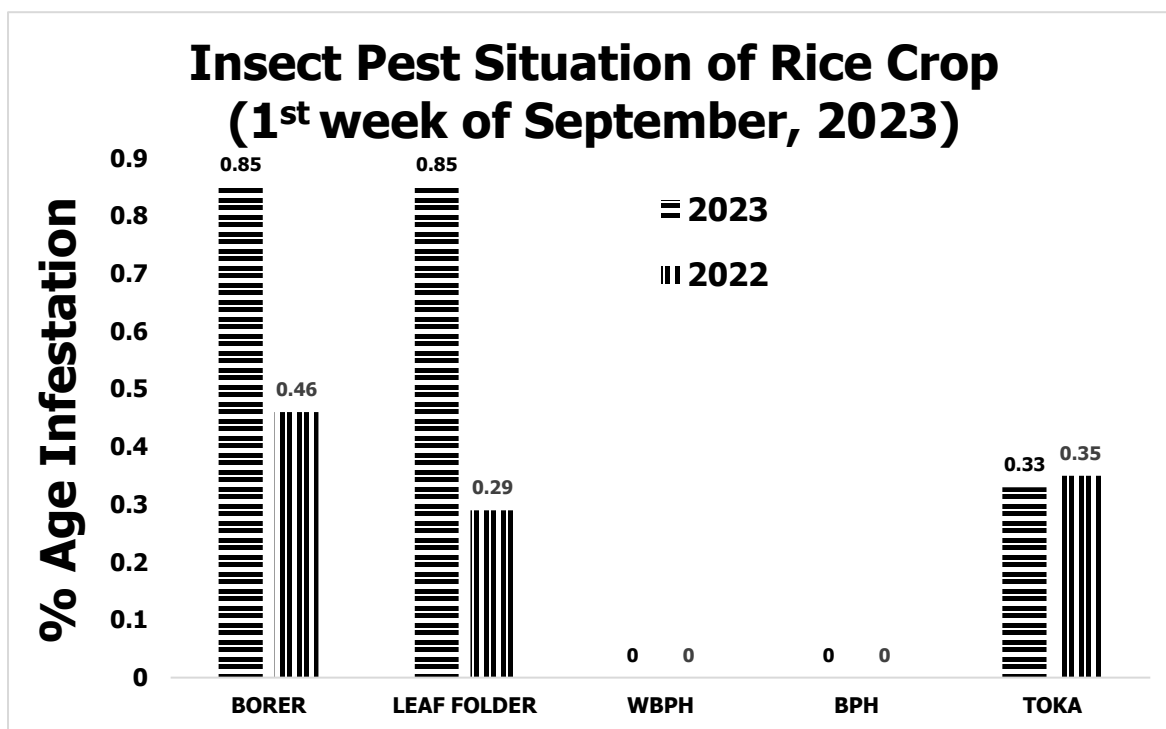
Insect Pest Situation of Rice Crop (1st week of September, 2023)

Y-axis: **% Age Infestation**

Legend: ≡ 2023, ⫴ 2022

Pest	2023	2022
BORER	0.85	0.46
LEAF FOLDER	0.85	0.29
WBPH	0	0
BPH	0	0
TOKA	0.33	0.35

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

Y-axis: **% Age Infestation**

Legend: ≡ 2023, ⫴ 2022

Disease	2023	2022
F.R	6.93	9.41
B.L.B	5.41	1.44
B.L.S	4.13	5.72
S.B	1.42	3.58
Blast	0.95	0.86

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

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

Pest Situation of Rice Pests							
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	0.85	10.53	0.75	11.03	0.46	12.88	**Increasing**
2	LEAF FOLDER	0.85	12.43	0.65	12.02	0.29	14.95	**Increasing**
3	WPBH	0.00	0.00	0.00	0.00	0.00	0.06	-
4	BPH	0.00	0.28	0.00	0.00	0.00	0.17	-
5	TOKA	0.33	19.78	0.70	18.38	0.35	19.23	Decreasing
6	FOOT ROT	6.93	-	7.50	-	9.41	-	Decreasing
7	B.L.B	5.41	-	3.87	-	1.44	-	**Increasing**
8	B.L.S	4.13	-	2.29	-	5.72	-	**Increasing**
9	SHEAT H BLIGHT	1.42	-	1.19	-	3.58	-	**Increasing**
10	BLAST	0.95	-	0.70	-	1.62	-	Decreasing
NO. OF TOTAL SPOTS VISITED		2108					
TOTAL AREA VISITED (Acres)		16470					

Tehsil wise percentage of hot spots of Rice Borer

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Kot chutta	4	6	Kabirwala	10
2	Sangla Hill	4.7	7	Pakpattan	10
3	Nankana Sahib	5.1	8	Muzaffargarh	20
4	Shahkot	8.6	9	Khanewal	33.3
5	Minchanabad	9.5			

Tehsil wise percentage of hot spots of Rice Leaf Folder

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	M.B.Din	3	6	Minchanabad	10
2	Nankana Sahib	3.4	7	D.G Khan	14
3	Shahkot	3.4	8	Muzaffargarh	20
4	Kot chutta	3.7	9	Alipur	20
5	Sangla Hill	9.3	10	Karor	20

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	Sheikhupura	2	4	Muridke	4
2	Narang Mandi	2.0	5	Sangla Hill	5
3	MB. Din	3.3			

Tehsil wise percentage of hot spots of Foot Rot

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Chiniot	2	25	Pakpattan	10
2	Sheikhupura	2.0	26	Muzaffargarh	10
3	Jhang	2.5	27	Shahkot	10
4	Lalian	2.6	28	Pattoki	13
5	Shorkot	3.2	29	Sahiwal	13
6	MB. Din	3.3	30	Pasrur	13.3
7	Chunian	3.9	31	Sharqpur	13.6
8	Lahore	4.1	32	Depalpure	13.6
9	Sangla Hill	4.7	33	Ferozwala	14
10	Malikwal	5.0	34	Sahiwal	16
11	Kamalia	5.1	35	Nankana Sahib	16.9
12	Safdarabad	5.6	36	Sambrial	20
13	Sialkot	5.7	37	Baddomalhi	22.2
14	Narang Mandi	6.1	38	Sarai Alamgir	25
15	Daska	6.5	39	Kot Momin	26.7
16	Kharian	6.7	40	Jatoi	37.5
17	Zafarwal	7.0	41	Sargodha	40
18	Bhowana	7.4	42	Silanwali	50
19	Hafizabad	7.5	43	Bhera	50
20	Muridke	8.3	44	R.Y.Khan	50
21	Narowal	9.7	45	Sadiq Abad	50
22	Pindi Bhattian	9.8	46	Liaqautpur	50
23	Gujrat	10	47	Khan pur	50
24	Kabirwala	10	48	Bhalwal	80

Tehsil wise percentage of hot spots of Bacterial Leaf Blight

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Safdarabad	2	15	Shakargarh	9
2	Chunian	2	16	Sheikhupura	10
3	Muridke	2.1	17	M.B.Din	10
4	Pindi Bhattian	2.4	18	Kabirwala	10
5	Shorkot	3.2	19	Muzaffargarh	10
6	Nankana Sahib	3.4	20	Phalia	13.6
7	Sangla Hill	4.7	21	Malikwal	15.0
8	Gujrat	5	22	Narang Mandi	16.3
9	Jhang	5	23	Sambrial	17
10	Lahore	5.4	24	Pasrur	27
11	Hafizabad	6	25	Noshehra Virkan	28.1
12	Mian Channu	6.3	26	Gujranwala	34
13	Kharian	6.7	27	Daska	38.7
14	Sialkot	8.6	28	Kamonke	50

Tehsil wise percentage of hot spots of Brown Leaf Spots

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Narang Mandi	2	16	Kamonke	10
2	Kasur	2	17	Sargodha	10

3	Ferozwala	2.3	18	Khushab	10
4	Sialkot	2.9	19	Nankana Sahib	12
5	Narowal	3.2	20	Baddomalhi	13
6	Zafarwal	3.5	21	Bhakkar	14.3
7	Lahore	4.1	22	MB. Din	20
8	Shakargarh	5	23	Malikwal	25
9	Gujranwala	5	24	Minchanabad	29
10	Pindi Bhattian	4.9	25	Kabirwala	30
11	Muridke	6	26	Phalia	31.8
12	Sangla Hill	7	27	Khanewal	33
13	Safdarabad	7.4	28	Chistian	50
14	Hafizabad	7.5	29	Bahawalnagar	50
15	Pattoki	9.4			

Tehsil wise percentage of hot spots of Sheath Blight

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Hafizabad	1	8	Safdarabad	6
2	Nankana Sahib	2	9	Sialkot	6
3	Sheikhupura	2.0	10	Gujranwala	7
4	Chunian	2.0	11	Daska	13
5	Sambrial	3.3	12	MB. Din	13
6	Muridke	4.2	13	Phalia	13.6
7	Shakargarh	4.5	14	Malikwal	15

Tehsil wise percentage of hot spots of Rice Blast

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Pattoki	3	5	Minchanabad	10
2	Chunian	4	6	Daska	13
3	Kot Radha Kishan	5.0	7	Depalpure	14
4	Nankana Sahib	8.5	8	Muzaffargarh	20

Meteorological data of the current week 2023

METEOROLOGICAL DATA FOR 1ST WEEK OF SEPTEMBER							
Districts	2023				2022		
	Temperature		R.H%	Rainfall (mm)	Temperature		RH%	Rainfall (mm)
	Max.	Min.			Max.	Min.		
Gujranwala	36.0	27.0	54.0	20.0	34.5	26.5	72.5	0.0
Hafizabad	37.2	26.0	0.6	5.0	38.0	22.0	0.7	10.0
Sialkot	38.0	26.0	75.0	65.0	37.0	25.0	70.0	50.0
Narowal	32.7	22.0	83.3	20.0	34.3	23.3	79.8	3.0
Gujrat	36.9	25.0	0.7	3.0	37.0	25.0	0.7	9.0
MB. Din	37.0	24.0	0.6	4.0	36.8	22.0	0.7	12.0
Lahore	36.4	25.8	57.9	0.0	36.1	27.3	61.0	10.0
Sheikhupura	36.6	26.2	49.0	0.0	35.5	25.7	48.0	0.0
Nankana	36.0	26.3	50.2	0.0	36.0	28.3	59.1	0.5
Kasur	35.0	24.2	54.8	0.0	34.8	25.4	54.6	0.0

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

Faisalabad	37.7	26.4	71.8	0.0	36.5	26.5	77.4	12.4
Jhang	37.4	26.4	56.2	0.0	39.1	31.7	59.4	0.0
Toba Tek Singh	38.3	30.4	74.6	0.0	36.5	27.1	83.7	0.0
Chiniot	37.7	27.5	63.0	0.0	33.4	26.6	55.5	0.0
Sargodha	37.0	28.0	46.0	0.0	34.0	25.0	52.0	0.0
Khushab	40.2	29.3	66.7	0.0	39.2	27.4	68.7	0.0
Mianwali	38.0	32.0	41.0	0.0	37.0	23.0	51.0	0.0
Bhakkar	39.0	39.0	43.0	0.0	42.0	28.0	57.0	0.0
Multan	37.2	29.1	72.5	0.0	38.0	27.1	67.6	0.0
Khanewal	37.9	26.6	46.1	0.0	36.7	26.9	71.1	0.4
Vehari	36.3	26.9	54.9	0.0	35.9	25.9	62.3	0.0
Lodhran	36.9	26.0	64.7	0.0	35.4	24.6	78.7	1.3
Sahiwal	36.8	26.8	72.4	0.0	36.9	28.0	70.5	14.0
Pakpattan	36.1	26.0	71.9	0.0	36.2	28.2	69.6	4.0
Okara	36.5	26.6	72.5	0.0	36.0	28.4	70.2	6.0
Bahawalpur	38.1	26.4	59.4	0.0	37.5	51.9	66.3	0.0
Bahawalnagar	38.0	26.8	48.3	0.0	36.5	26.1	61.7	0.0
RY Khan	40.3	26.1	57.3	0.0	35.1	25.6	67.0	0.0
D.G. Khan	36.1	28.6	59.3	0.0	35.7	27.9	64.3	0.0
Muzaffargarh	39.0	26.3	46.0	0.0	32.3	21.4	78.0	3.0
Rajanpur	38.6	27.0	54.4	4.0	33.2	22.6	74.1	0.0
Layyah	37.0	22.0	50.0	4.0	34.0	23.0	88.0	0.0
Average	**37.24**	**26.96**	**53.68**	**3.91**	**36.16**	**26.66**	**60.66**	**4.24**

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 in the upcoming week. This projection is due to the continued favorable 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 in the upcoming week. This projection is due to the continued favorable 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 increase 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 increase 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 in the upcoming week. This projection is due to the continued favorable 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 escalate in the upcoming week.

This prognosis is based on the favorable 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 escalate in the upcoming week. This prognosis is based on the favorable 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 escalate in the upcoming week. This prognosis is based on the favorable 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 escalate in the upcoming week. This prognosis is based on the favorable 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 escalate in the upcoming week. This prognosis is based on the favorable 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