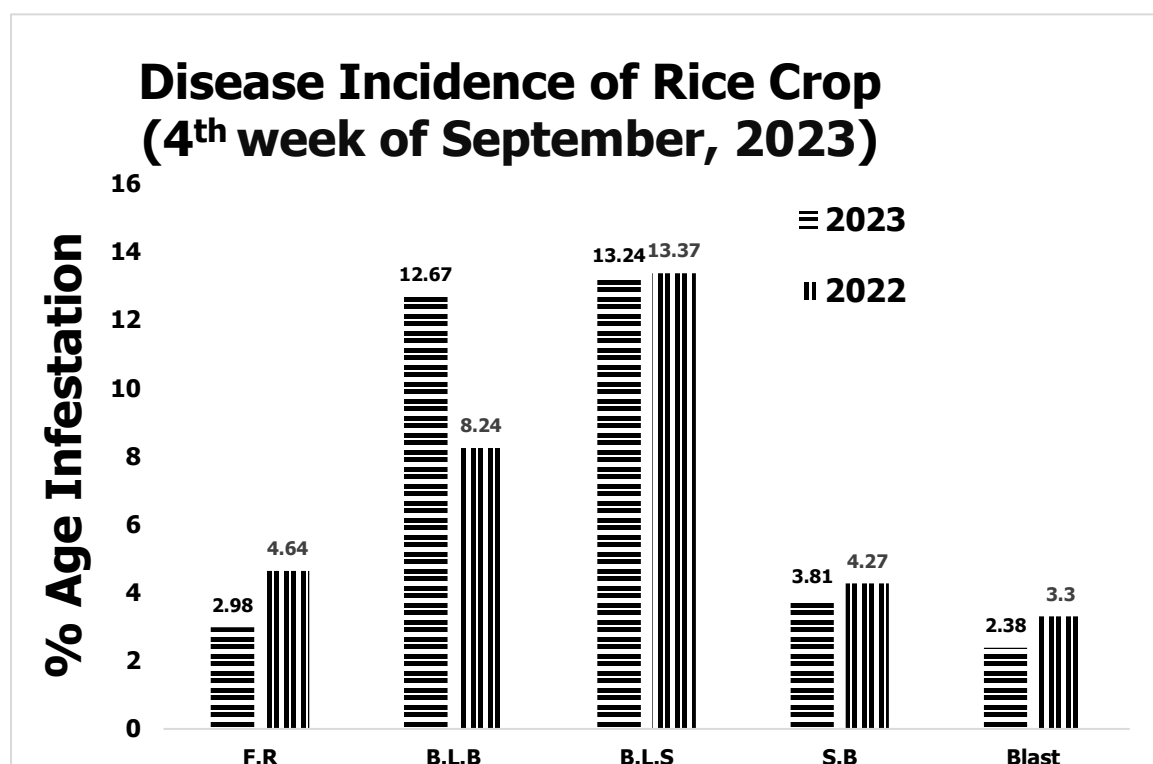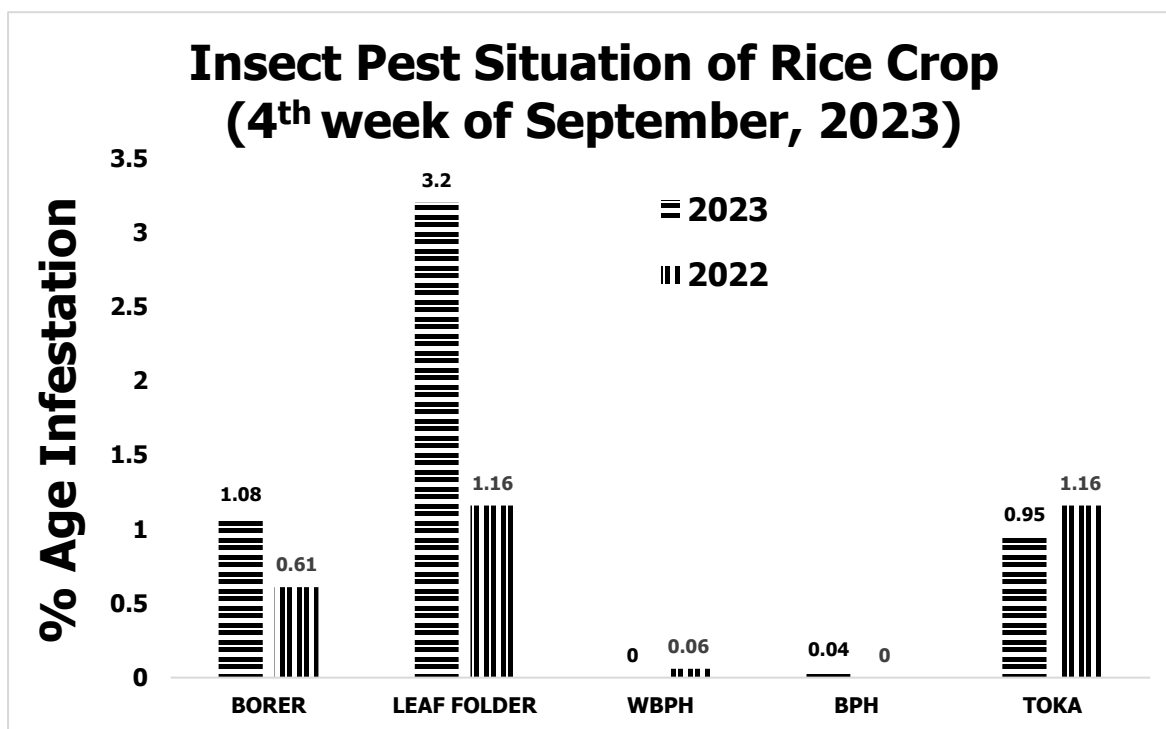# GRAPHICAL PEST SITUATION ON RICE CROP IN PUNJAB DURING 4ᵀᴴ WEEK OF SEPTEMBER, 2023

Insect Pest Situation of Rice Crop (4th week of September, 2023)

% Age Infestation

Legend: ≡ 2023 ‖‖ 2022

Pest	2023	2022
BORER	1.08	0.61
LEAF FOLDER	3.2	1.16
WBPH	0	0.06
BPH	0.04	0
TOKA	0.95	1.16

Disease Incidence of Rice Crop (4th week of September, 2023)

% Age Infestation

Legend: ≡ 2023 ‖ 2022

Disease	2023	2022
F.R	2.98	4.64
B.L.B	12.67	8.24
B.L.S	13.24	13.37
S.B	3.81	4.27
Blast	2.38	3.3

PEST SITUATION ON RICE CROP IN PUNJAB DURING 4ᵀᴴ WEEK OF SEPTEMBER, 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	1.08	12.28	0.82	13.63	0.61	13.06	Increasing
2	LEAF FOLDER	3.20	23.53	2.62	23.86	1.16	17.70	Increasing
3	WPBH	0.00	0.74	0.00	0.87	0.06	2.32	-
4	BPH	0.04	1.47	0.00	1.02	0.00	3.85	Sustaining
5	TOKA	0.95	19.03	0.44	20.27	1.16	21.92	Increasing
6	FOOT ROT	2.98	-	5.38	-	4.64	-	Decreasing
7	B.L.B	12.67	-	12.56	-	8.24	-	Increasing
8	B.L.S	13.24	-	9.75	-	13.37	-	Increasing
9	SHEAT H BLIGHT	3.81	-	3.25	-	4.27	-	Increasing
10	BLAST	2.38	-	1.89	-	3.30	-	Increasing
NO. OF TOTAL SPOTS VISITED		2312						
TOTAL AREA VISITED (Acres)		18130						

Tehsil wise percentage of hot spots of Rice Borer

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Chistian	50	8	Muzaffargarh	10.0
2	Bahawalnagar	50.0	9	Pakpattan	7.7
3	Alipur	25.0	10	Shahkot	6.3
4	Bahawalpur	18.2	11	Pattoki	4.8
5	Yazman	16.7	12	Sangla Hill	4.3
6	Minchanabad	15.8	13	Nankana Sahib	3.8
7	Hasilpur	14.3	14	Ferozwala	2.1

Tehsil wise percentage of hot spots of Rice Leaf Folder

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Bahawalnagar	50	21	Kot chutta	6.7
2	R.Y.Khan	50.0	22	Ferozwala	6.3
3	Liaqautpur	50.0	23	Kot Momin	5.0
4	Khan pur	33.3	24	Depalpure	4.8
5	Hasilpur	28.6	25	Kasur	4.0
6	Alipur	25.0	26	Jhang	4.0
7	Yazman	16.7	27	Lalian	2.9
8	Minchanabad	15.8	28	Muridke	2.7
9	Muzaffargarh	10.0	29	AP Sial	2.7
10	Hafizabad	9.8	30	Wazirabad	2.6
11	M.B.Din	9.8	31	Sialkot	2.6
12	Phalia	9.8	32	Safdarabad	2.6
13	Pattoki	9.5	33	Sangla Hill	2.2
14	Malikwal	9.1	34	Shahkot	2.1
15	D.G Khan	9.1	35	Zafarwal	2.0
16	Bahawalpur	9.1	36	Chiniot	2.0
17	Shakargarh	8.7	37	Nankana Sahib	1.9

18	Lahore	8.5	38	Gujranwala	1.5
19	Pindi Bhattian	7.9	39	Jaranwala	1.5
20	Narang Mandi	7.9			

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

Nill

Tehsil wise percentage of hot spots of Brown Plant Hopper

Sr.	TEHSIL	%AGE
1	18-Hazari	3

Tehsil wise percentage of hot spots of Rice Toka

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Chunian	8	7	Shahkot	4.5
2	Kot Radha Kishan	6.3	8	Narowal	2.8
3	Kharian	5.9	9	Wazirabad	2.6
4	Nankana Sahib	5.9	10	Zafarwal	2.6
5	Jalal Pur Jattan	5.3	11	Chak Jhumra	2.1
6	Sangla Hill	4.9	12	Pasrur	1.4

Tehsil wise percentage of hot spots of Foot Rot

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Liaqautpur	100	12	Sharqpur	18.2
2	Khan pur	66.7	13	Safdarabad	17.9
3	R.Y.Khan	50.0	14	Sheikhupura	11.1
4	Sadiqabad	50.0	15	Depalpure	9.5
5	Jatoi	42.9	16	Ferozwala	8.3
6	Narang Mandi	26.3	17	Pakpattan	7.7
7	Silanwali	20.0	18	Nankana Sahib	5.7
8	Sahiwal	20.0	19	Sangla Hill	2.2
9	Muzaffargarh	20.0	20	Shahkot	2.1
10	Muridke	18.9	21	Lahore	1.4
11	Alipur	18.8	31	Sialkot	2.6
12	Sharqpur	18.2			

Tehsil wise percentage of hot spots of Bacterial Leaf Blight

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Gujranwala	48	19	Zafarwal	14.3
2	Daska	47.2	20	Muridke	13.5
3	Pasrur	47.1	21	Wazirabad	13.2
4	Narowal	44.8	22	Sarai Alamgir	10.0
5	Sambrial	40.5	23	Sahiwal	10.0
6	Baddomalhi	40.0	24	Sheikhupura	8.3
7	Narang Mandi	39.5	25	Shahkot	8.3
8	Sialkot	35.9	26	Mian Channu	8.3
9	Kamonke	29.7	27	Safdarabad	7.7
10	Hafizabad	29.4	28	Pakpattan	7.7

11	Malikwal	27.3	29	Lahore	7.0
12	Pindi Bhattian	26.3	30	Sangla Hill	6.5
13	M.B.Din	23.5	31	Noshehra Virkan	5.8
14	D.G Khan	18.2	32	Nankana Sahib	5.7
15	Shakargarh	17.4	33	Chunian	5.0
16	Phalia	17.1	34	Depalpure	4.8
17	Jaranwala	14.7	35	Kamalia	1.7
18	Ferozwala	14.6			

Tehsil wise percentage of hot spots of Brown Leaf Spots

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Kot Momin	90	29	Gujranwala	15.4
2	Narowal	58.6	30	Chunian	15.0
3	Sargodha	57.1	31	Phalia	14.6
4	Chistian	50.0	32	Lahore	14.1
5	Bahawalnagar	50.0	33	Malikwal	13.6
6	Ahmadpur	50.0	34	Muridke	13.5
7	R.Y.Khan	50.0	35	Silanwali	13.3
8	Sadiqabad	50.0	36	Nankana Sahib	13.2
9	Liaqautpur	50.0	37	Chak Jhumra	12.8
10	Baddomalhi	46.7	38	Lalian	11.4
11	Sarai Alamgir	40.0	39	Bhowana	10.5
12	Pattoki	35.7	40	Pirmahal	10.0
13	Ferozwala	33.3	41	Sangla Hill	8.7
14	Khan pur	33.3	42	Shahkot	8.3
15	Safdarabad	30.8	43	Jhang	8.0
16	Zafarwal	28.6	44	Pasrur	7.1
17	Khushab	28.6	45	Kot Radha Kishan	7.0
18	Jalal Pur Jattan	25.0	46	Chiniot	6.1
19	Jaranwala	23.5	47	AP Sial	5.4
20	Gujrat	23.1	48	Sialkot	5.1
21	Shakargarh	21.7	49	Kamalia	5.1
22	Hafizabad	21.6	50	Kasur	4.0
23	Quaidabad	21.4	51	Kharian	3.2
24	Pindi Bhattian	21.1	52	18-Hazari	3.2
25	Minchanabad	21.1	53	Wazirabad	2.6
26	Sheikhupura	19.4	54	Sambrial	2.4
27	M.B.Din	17.6	55	Daska	1.9
28	Khanewal	16.7			

Tehsil wise percentage of hot spots of Sheath Blight

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Gujranwala	32	15	Sambrial	4.8
2	Malikwal	18.2	16	Sangla Hill	4.3
3	Shakargarh	17.4	17	Ferozwala	4.2
4	Kot Momin	15.0	18	Shahkot	4.2
5	Daska	11.3	19	Hafizabad	3.9
6	Wazirabad	10.5	20	M.B.Din	3.9
7	Pattoki	9.5	21	Noshehra Virkan	3.8

8	Muridke	8.1	22	Sheikhupura	2.8
9	Kasur	8.0	23	Pindi Bhattian	2.6
10	Narang Mandi	7.9	24	Safdarabad	2.6
11	Chunian	7.5	25	Kot Radha Kishan	2.3
12	Pasrur	7.1	26	Sharqpur	2.3
13	Kamonke	5.4	27	Nankana Sahib	1.9
14	Phalia	4.9			

Tehsil wise percentage of hot spots of Rice Blast

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Kot Momin	20	12	Nankana Sahib	5.7
2	Pattoki	19.0	13	AP Sial	5.4
3	Depalpure	14.3	14	Minchanabad	5.3
4	Chunian	12.5	15	Shakargarh	4.3
5	Sangla Hill	10.9	16	M.B.Din	3.9
6	Muzaffargarh	10.0	17	Shorkot	3.8
7	18-Hazari	9.7	18	Pindi Bhattian	2.6
8	Shahkot	8.3	19	Phalia	2.4
9	Pakpattan	7.7	20	Sharqpur	2.3
10	Kot Radha Kishan	7.0	21	Hafizabad	2.0
11	Zafarwal	6.1	22	Jaranwala	1.5

Meteorological data of the current week 2023

METEOROLOGICAL DATA FOR 3RD WEEK OF SEPTEMBER 2023							
Districts	2023				2022		
	Temperature		R.H%	Rainfall	Temperature		RH%	Rainfall
	Max.	Min.		(mm)	Max.	Min.		(mm)
Gujranwala	32.0	22.0	65.0	15.0	33.5	24.5	60.0	0.0
Hafizabad	36.0	22.0	0.6	2.0	36.1	22.0	0.7	3.0
Sialkot	35.0	22.0	78.0	40.0	34.0	21.0	65.0	40.0
Narowal	30.9	20.0	86.7	65.0	31.7	21.0	81.9	30.0
Gujrat	35.0	21.0	0.6	3.0	34.0	21.0	0.6	2.0
M.B Din	35.8	21.9	0.7	2.8	35.0	22.0	0.6	0.0
Lahore	31.8	23.7	79.0	15.5	29.5	23.7	78.7	1.1
Sheikhupura	33.7	22.5	59.0	30.0	36.5	24.2	46.0	0.0
Nankana	31.0	23.7	62.7	4.4	31.7	24.7	65.9	0.9
Kasur	31.3	23.3	78.4	4.7	35.9	24.9	70.0	1.4
Faisalabad	34.5	24.3	80.2	119.0	35.0	24.5	72.0	35.0
Jhang	34.3	25.5	67.5	0.0	35.3	26.5	64.3	0.0
Toba Tek Singh	35.3	24.5	85.0	0.0	36.9	24.1	84.7	9.8
Chiniot	31.2	24.2	76.0	0.0	32.6	23.2	54.7	0.0
Sargodha	35.0	22.0	0.0	38.0	35.0	25.0	0.0	58.0
Khushab	35.7	26.5	61.3	7.5	30.0	24.5	79.0	82.1
Mianwali	34.0	21.0	55.0	3.0	38.0	27.0	45.0	0.0
Bhakkar	39.0	39.0	43.0	0.0	42.0	28.0	57.0	0.0
Multan	36.8	25.2	63.0	0.0	36.6	24.4	60.2	0.0
Khanewal	36.4	25.1	61.9	0.0	36.9	25.3	59.9	0.0
Vehari	36.3	26.4	62.9	0.0	34.9	26.9	65.6	0.0

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

Lodhran	36.6	26.0	64.0	0.0	36.3	23.1	70.5	0.0
Sahiwal	34.8	24.0	75.6	8.5	33.8	23.2	76.5	6.0
Pakpattan	35.1	24.7	74.0	0.0	33.5	23.8	76.1	0.0
Okara	34.1	23.3	76.3	25.6	33.6	23.5	76.6	11.5
Bahawalpur	37.7	26.5	63.6	0.0	37.7	25.2	61.3	0.0
Bahawalnagar	36.1	25.0	68.3	0.0	37.3	24.7	69.5	0.0
R.Y.Khan	38.3	25.5	67.1	0.0	37.5	23.5	59.4	0.0
D.G. Khan	36.1	26.4	62.6	0.0	37.4	26.7	69.6	0.0
Muzaffargarh	37.5	26.6	1.0	0.0	34.2	24.5	60.5	0.0
Rajanpur	38.3	28.0	59.1	4.0	38.2	27.3	55.0	5.0
Layyah	38.6	18.0	50.0	0.0	36.0	24.0	80.0	24.7
TOT/AVG	**35.13**	**24.37**	**57.13**	**388.0**	**35.20**	**24.31**	**58.33**	**310.5**

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