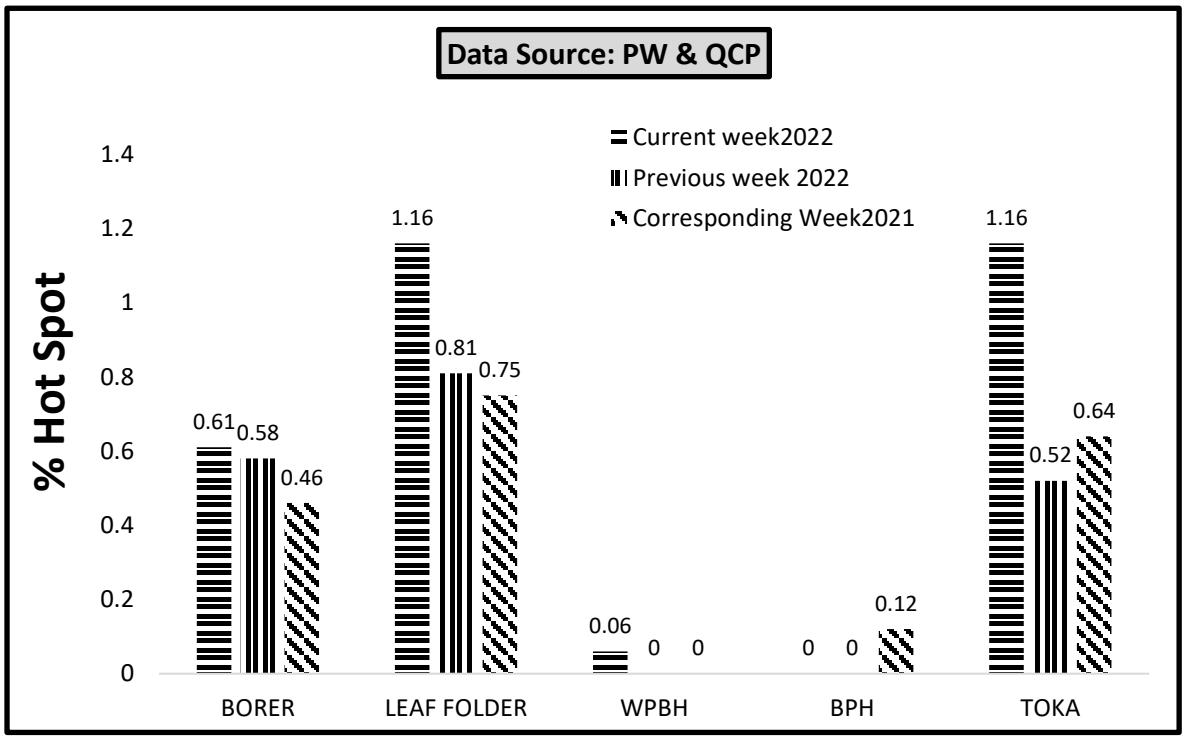
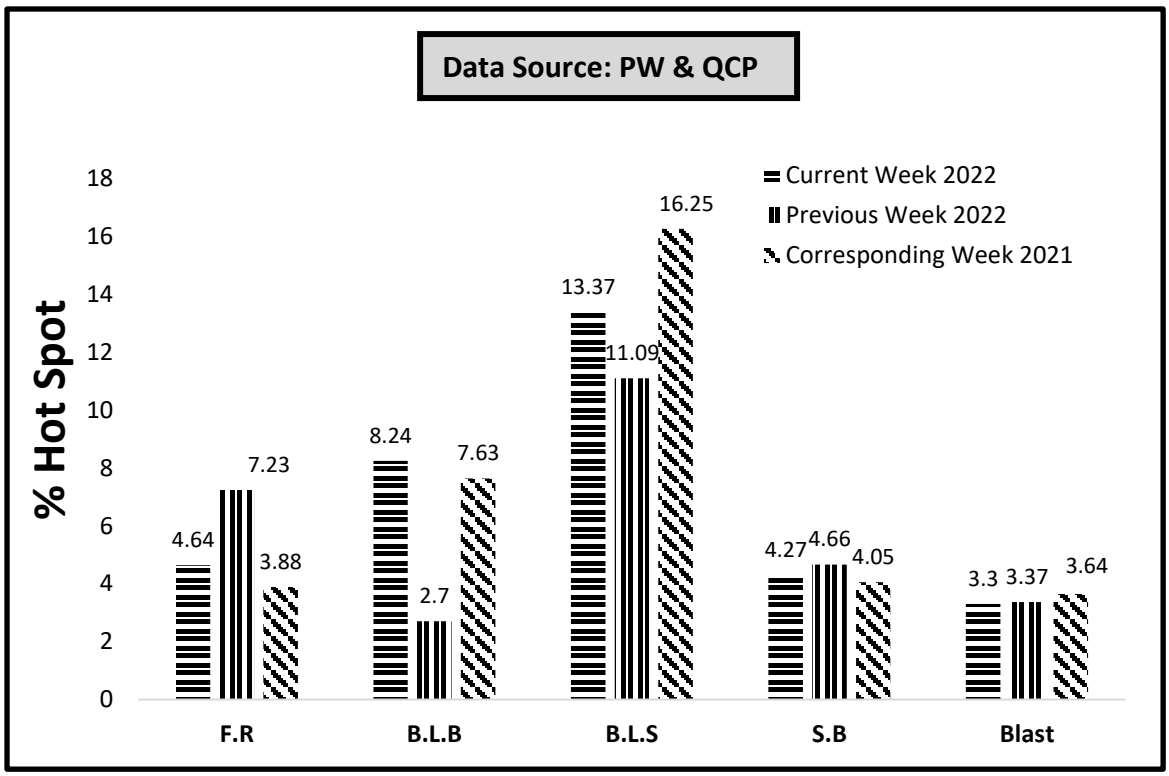
PEST SITUATION ON RICE CROP IN PUNJAB DURING 4TH WEEK OF SEPTEMBER, 2022

A- Insect Pest



B- Disease



(**FR:** Foot Rot, **BLB:** Bacterial Leaf Blight, **BLS:** Brown Leaf spot, **SB:** Sheath Blight

PEST SITUATION ON RICE CROP IN PUNJAB DURING 4TH WEEK OF SEPTEMBER, 2022

Pest Situation of Rice Pests								
		%Age of spots						Remarks
Sr. No.	Pest Name	Current Week		Previous Week		Corresponding week of Last Year		
		AETL	BETL	AETL	BETL	AETL	BETL	
1	RICE BORER	0.61	13.06	0.61	12.50	0.46	12.38	Sustaining
2	LEAF FOLDER	1.16	17.70	1.23	18.63	0.75	13.24	Decreasing
3	WPBH	0.06	2.32	0.00	0.92	0.00	0.87	**Increasing**
4	BPH	0.00	3.85	0.00	1.47	0.12	1.62	-
5	TOKA	1.16	21.92	0.61	20.83	0.64	21.46	**Increasing**
6	FOOT ROT	4.64	-	7.23	-	3.88	-	Decreasing
7	B.L.B	8.24	-	2.70	-	7.63	-	**Increasing**
8	B.L.S	13.37	-	11.09	-	16.25	-	**Increasing**
9	SHEAT H BLIGHT	4.27	-	4.66	-	4.05	-	Decreasing
10	BLAST	3.30	-	3.37	-	3.64	-	Decreasing
NO. OF TOTAL SPOTS VISITED			1638					
TOTAL AREA VISITED (Acres)			11978					

Tehsil wise percentage of hot spots of Rice Borer

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Shujabad	25	5	Multan	11.8
2	Lodhran	22.2	6	Kehror Pacca	10.0
3	Mian Channu	20.0	7	D.G Khan	7.1
4	Dunya Pur	16.7	8	Minchinabad	4.0

Tehsil wise percentage of hot spots of Rice Leaf Folder

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Jahanain	50	8	Depalpure	6.3
2	Khanewal	33.3	9	M.B.Din	5.9
3	Mian Channu	20.0	10	Shakargarh	4.8
4	Multan	17.6	11	Minchinabad	4.0
5	Hafizabad	7.9	12	Pindi Bhattian	3.0
6	Gujranwala	7.1	13	Kamonke	2.5
7	Phalia	7.1			

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

Sr.	TEHSIL	%AGE
1	Sheikhupura	2

Tehsil wise percentage of hot spots of Brown Plant Hopper

Nil

Tehsil wise percentage of hot spots of Rice Toka

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Lahore	13	4	M.B.Din	5.9
2	Safdarabad	11.9	5	Phalia	3.6
3	Gujranwala	7.1	6	Sheikhupura	3.4

Tehsil wise percentage of hot spots of Foot Rot

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Jatoi	55	17	Muridke	10.4
2	Nankana Sahib	38.1	18	Pasrur	10.0
3	Sangla Hill	36.4	19	AP Sial	10.0
4	Bhera	33.3	20	Lahore	8.1
5	Shahkot	30.0	21	Shorkot	6.7
6	Muzaffargarh	28.6	22	Narang Mandi	6.3
7	Silanwali	25.0	23	Pindi Bhattian	6.1
8	Shahpur	20.0	24	M.B.Din	5.9
9	Kehror Pacca	20.0	25	Malikwal	5.9
10	Sahiwal	18.2	26	kamoke	5.0
11	Dunya Pur	16.7	27	Sialkot	4.2
12	Sargodha	14.3	28	Khushab	3.9
13	Pakpattan	14.3	29	Phalia	3.6
14	Pirmahal	13.3	30	Hafizabad	2.6
15	Depalpure	12.5	31	Kamalia	2.5
16	Lodhran	11.1	32	Sheikhupura	1.7

Tehsil wise percentage of hot spots of Bacterial Leaf Blight

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Wazirabad	50	14	Gujranwala	14.3
2	Sheikhupura	34.5	15	Shakargarh	14.3
3	Kabirwala	33.3	16	Zafarwal	13.6
4	Daska	30.4	17	Muridke	12.5
5	Noshehra Virkan	28.6	18	Hafizabad	10.5
6	Sialkot	25.0	19	Safdarabad	9.5
7	Phalia	25.0	20	Narowal	6.3
8	M.B.Din	23.5	21	Narang Mandi	6.3
9	Gujrat	23.3	22	Pindi Bhattian	6.1
10	Kharian	18.2	23	Lahore	4.8
11	Sambrial	17.9	24	Baddomalhi	4.0
12	Malikwal	17.6	25	Chunian	2.7
13	Pasrur	16.7	26	Kamonke	2.5

Tehsil wise percentage of hot spots of Brown Leaf Spots

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Sahiwal	90	30	Sangla Hill	18.2
2	M.B.Din	41.2	31	Malikwal	17.6
3	Shakargarh	38.1	32	Safdarabad	16.7
4	Lalian	35.3	33	Muridke	16.7
5	Layyah	33.3	34	Dunya Pur	16.7

6	Chistian	33.3	35	Hafizabad	15.8
7	Bahawalnagar	33.3	36	Kot Momin	15.4
8	R.Y.Khan	33.3	37	Jaranwala	15.2
9	Liaqautpur	33.3	38	Bhowana	13.6
10	Noshehra Virkan	28.6	39	Pasrur	13.3
11	Jalal Pur Jattan	25.0	40	Lahore	12.9
12	Phalia	25.0	41	Silanwali	12.5
13	Nankana Sahib	23.8	42	Ferozwala	12.0
14	Chiniot	23.5	43	Chak Jhumra	12.0
15	Bhera	22.2	44	Sheikhupura	10.3
16	Pattoki	21.9	45	Shahpur	10.0
17	Wazirabad	21.4	46	Kehror Pacca	10.0
18	Baddomalhi	20.0	47	Khushab	9.8
19	Gujrat	20.0	48	Zafarwal	9.1
20	Shahkot	20.0	49	Kharian	9.1
21	Jhang	20.0	50	Daska	8.7
22	Shorkot	20.0	51	Kamalia	7.5
23	AP Sial	20.0	52	Gujranwala	7.1
24	Bhakkar	20.0	53	Sargodha	7.1
25	Karor	20.0	54	D.G Khan	7.1
26	Minchinabad	20.0	55	Sambrial	5.1
27	Narowal	18.8	56	kamoke	5.0
28	Narang Mandi	18.8	57	Sialkot	4.2
29	Pindi Bhattian	18.2	58	Kasur	3.1

Tehsil wise percentage of hot spots of Sheath Blight

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Sahiwal	30	15	Sialkot	8.3
2	kamoke	20.0	16	Lahore	8.1
3	Malikwal	17.6	17	Pasrur	6.7
4	Ferozwala	16.0	18	Narang Mandi	6.3
5	Daska	15.2	19	Hafizabad	5.3
6	Sharqpur	14.3	20	Sambrial	5.1
7	D.G Khan	14.3	21	Nankana Sahib	4.8
8	Pirmahal	13.3	22	Muridke	4.2
9	Silanwali	12.5	23	Phalia	3.6
10	Sheikhupura	12.1	24	Pakpattan	3.6
11	M.B.Din	11.8	25	Kasur	3.1
12	Wazirabad	10.7	26	Pattoki	3.1
13	Shahkot	10.0	27	Chunian	2.7
14	Pindi Bhattian	9.1	28	Kamalia	2.5

Tehsil wise percentage of hot spots of Rice Blast

Sr.	TEHSIL	%AGE	Sr.	TEHSIL	%AGE
1	Shujabad	50	16	Noshehra Virkan	7.1
2	Jalal Pur	33.3	17	Phalia	7.1
3	Sahiwal	30.0	18	D.G Khan	7.1
4	Depalpure	25.0	19	Jhang	6.7
5	Taunsa	25.0	20	M.B.Din	5.9

6	Kot chutta	21.4	21	Lalian	5.9
7	Pirmahal	20.0	22	Chunian	5.4
8	Multan	11.8	23	Baddomalhi	4.0
9	Pakpattan	10.7	24	Minchinabad	4.0
10	Shahkot	10.0	25	Khushab	3.9
11	Kamalia	10.0	26	Kasur	3.1
12	Shahpur	10.0	27	Sambrial	2.6
13	Nankana Sahib	9.5	28	Zafarwal	2.3
14	Pattoki	9.4	29	Muridke	2.1
15	Sangla Hill	9.1	30	Lahore	1.6

Meteorological data of the current week 2022

METEOROLOGICAL DATA FOR 4TH WEEK OF SEPTEMBER 2022								
Districts	2022				2021			
	Temperature		R.H%	Rainfall	Temperature		RH%	Rainfall
	Max.	Min.		(mm)	Max.	Min.		(mm)
Gujranwala	34.5	26.5	72.5	0.0	37.3	26.6	79.6	5.0
Hafizbad	36.0	25.5	58.0	0.0	34.0	25.0	60.0	0.0
Sialkot	35.0	21.0	82.0	65.0	42.0	22.0	0.7	40.0
Narowal	31.7	21.0	81.9	30.0	32.3	21.0	86.3	23.0
Gujrat	36.0	26.0	58.0	14.0	34.0	26.7	62.0	0.0
M.B.Din	38.0	24.0	70.0	8.0	36.0	23.0	73.0	12.0
Lahore	30.4	23.9	76.4	0.8	28.0	25.6	59.5	1.0
Sheikhupura	36.2	25.7	49.0	42.0	35.5	24.6	48.0	31.0
Nankana	31.7	24.7	65.9	0.9	32.3	25.3	54.5	0.0
Kasur	33.3	22.8	1.7	4.0	33.0	23.5	61.0	2.8
Faisalabad	31.7	21.0	81.9	30.0	32.3	21.0	86.3	23.0
Jhang	36.6	24.4	60.2	0.0	35.0	26.7	63.3	36.5
Toba Tek Singh	36.9	24.1	84.7	9.8	35.8	24.8	87.1	0.0
Chiniot	35.7	29.5	66.2	0.0	33.0	26.7	66.5	0.0
Sargodha	37.0	26.0	67.0	0.0	38.0	28.0	70.0	0.0
Khushab	30.0	245.0	79.0	82.1	42.0	34.0	65.0	0.0
Mianwali	39.0	24.0	44.0	0.0	40.0	26.0	45.0	0.0
Bhakkar	39.0	24.0	44.0	0.0	40.0	26.0	45.0	0.0
Multan	36.6	24.4	60.2	0.0	35.0	26.7	63.3	36.5
Khanewal	36.9	25.3	59.9	0.0	35.0	25.8	69.4	4.0
Vehari	34.9	26.9	65.6	0.0	34.6	26.7	69.5	0.0
Lodhran	36.3	23.1	70.5	0.0	34.5	24.3	72.8	15.0
Sahiwal	33.8	23.2	76.5	6.0	33.0	25.0	80.0	31.0
Pakpattan	33.5	23.8	76.1	0.0	36.0	26.0	78.0	20.0
Okara	33.6	23.5	76.6	11.5	34.0	25.0	72.0	5.0
Bahawalpur	37.7	25.2	61.3	0.0	35.8	25.1	68.7	17.0
Bahawalnagar	37.6	25.4	67.8	0.0	38.8	25.7	58.0	0.0
R.Y.Khan	37.5	23.5	59.6	0.0	34.9	25.3	58.0	0.0
D.G. Khan	37.4	26.7	69.4	0.0	37.3	24.6	52.4	0.0
Muzaffar Garh	34.2	24.5	60.5	0.0	33.7	27.7	55.0	3.0
Rajanpur	38.8	28.0	61.3	0.0	40.5	30.0	55.6	0.0
Layyah	36.0	24.0	80.0	24.7	41.1	21.9	62.1	6.0
TOT/AVG	**35.41**	**31.46**	**65.24**	**328.8**	**35.77**	**25.50**	**63.36**	**331.8**

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%. 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.

Leaf Folder: This pest flourishes best in warm humid climate with optimum temperature 25-30°C. 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.

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%. 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.

Foot rot: High humidity and cloudy weather during heading stage are favorable for the development of foot rot of rice. The fungus have a wide range of temperature for optimum growth which is between 30-35 °C. 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 favorable for the development of this 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%. 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 favorable for the development of this 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%. 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 favorable for the development of this 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%. 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 favorable for the development of this 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. 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 favorable for the development of this 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