



Phone: 0129-2413985
E-mail:-ppa@nic.in

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भारतसरकार/ Government of India

कृषि एवं किसान कल्याण मंत्रालय / Ministry of Agriculture & Farmers Welfare

कृषि एवं किसान कल्याण विभाग / Department of Agriculture & Farmers Welfare

वनस्पति संरक्षण, संगरोध एवं संग्रहनिदेशालय / Directorate of Plant Protection, Quarantine & Storage

एनएच4, फरीदाबाद(हरियाणा) – 121 001/ NH-IV, Faridabad (Haryana) – 121 001

Dated: 22.07.2022

To

The Directors of Agriculture
All States/ UTs

Sub: Advisory on blast disease (*Magnaporthe oryzae*) on rice crop -reg.

Sir,

I have the honor to bring to your notice that Paddy blast is an important disease which is responsible for significant yield losses in rice crop. This disease is caused by the fungus *Magnaporthe oryzae* which can infect rice crop at all growth stages and all aerial parts of the plant leaves, neck, nodes and seeds. Leaf and neck infections are more severe and infection during seedling stage may cause severe damage to the crop. Rice blast is favored by low temperatures (22-28°C), high relative humidity (>95%), dew deposits, leaf wetness for more than 10 hours, application of high nitrogen and aerobic soils.

Keeping in view the prevailing favourable weather conditions for the disease development the rice crop should be monitored regularly for disease development and adopt Integrated Disease Management techniques. AESA based IPM Package of practices of rice and disease specific package of practices of rice blast are available at DPPQ&S website in the link <http://ppqs.gov.in/ipm-packages>. Important IPM practices are listed below

- Keep the field clean, remove infected seeds, panicles, and plant debris after harvest.
- Crop rotation with non host crops, it provides a mechanism that separates viable spores in crop residue from the newly emerging seedlings
- Use high quality disease free certified seeds. Infected seeds may serve as inoculum for further spread and development.
- Treat the seeds with *Pseudomonas fluorescence* 0.5% WP (TNAU Strain Accession No. ITCC BE 0005) 10g/Kg of seed or *Pseudomonas fluorescens* 1.5% WP (BIL-331 Accession No. MTCC5866) 5g/Kg of seed or *Pseudomonas fluorescens* 1.5% LF (MTCC no. 5671, Strain designation Pf-1) 4.5 ml/Kg of seed gives protection soil borne and seed borne diseases.
- Dip the seedlings in with *Pseudomonas fluorescence* 5g/lit of water for 20 minutes before transplanting. *Pseudomonas* suppresses the diseases and also acts as plant growth promotion and reduces the severity of many diseases.
- Broadcast 1 kg *Pseudomonas fluorescens* 0.5% WP (TNAU Strain Accession No. ITCC BE 0005) by mixing with 2.5 kg organic manure in one ha area
- Removal and destruction (burn) of diseased plant parts
- Maintaining a proper water level for the paddy to grow. Rice blast is known to be more severe in fields or parts of fields in which the water in paddy falls below recommended levels.

.....To be continued

- Foliar spray with *Pseudomonas fluorescence* (TNAU Strain Accession No. ITCC BE 0005) 5g/lit of water @ 1kg/ha at an interval of 15-20 days after transplanting or *Pseudomonas fluorescens* 1.5% LF (MTCC no. 5671, Strain designation Pf-1) @ 6 lt/ha could be applied.
- Fungicides must be used as per label claim approval by the Registration Committee. Detailed information is available at directorate website. <http://ppqs.gov.in/divisions/cib-rc/major-uses-of-pesticides>. Further the list of RC approved fungicides against rice blast are attached as Annexure-I.


Further the following strategies should be adopted for spreading awareness among farmers

- Regular monitoring of disease incidence is very essential to take necessary proactive measures. Accurate and timely forecasting of the disease incidence would support in planning effective mitigation.
- Awareness among farming community through newspapers, printing and electronic media, KisanGosthi, leaflet and pamphlets.
- The concerned officials at the district/ division/ block level may be advised to take the suitable plant protection measures immediately

The detailed information on disease incidence may also be sent to the directorate through email ppa@nic.in or appa.ipm-dppqs@gov.in urgently to apprise the same to Department of Agriculture & Farmers' Welfare.

Yours faithfully

Encl: as above


(Dr. J.P.Singh)
Plant Protection Adviser

Copy for information:

1. PPS to Joint Secretary(PP), DA & FW, Krishi Bhawan, New Delhi- I 10001
2. PPS to PPA for information
3. Officer In-charges, all CIPMCs with directions to conduct regular survey in the area to ensure and necessary follow-up with the state authorities.

Approved registered Fungicides for blast (*Magnaporthe oryzae*) of Rice

Chemical	Disease	Dosage/ha			Waiting period (Days)
		a.i (gm)	Formulation (gm/ml) %	Dilution in Water (Liter)	
Aureofungin 46.15% w/v SP	Rice blast		0.005%	500	30
Carbendazim 50% WP	Rice blast	125-250 gm	200-500 gm	750	(Wet slurry treatment)
Carpropamid 27.8% SC	Rice blast	0.03%	0.1%	300-500 depending upon crop stage	
Ediphenphos 50% EC	Rice blast	250-300	500-600	750-1000	21
Hexaconazole 5% EC	Rice blast	50 gm	100 ml	500	40
Isoprothiolane 40% EC	Rice blast	300	750	500-1000	60
Kasugamycin 3% SL	Rice blast	30-50 gm 0.030% 0.050%	1000-1500 ml	750-1000	30
Kitazin 17% GR	Rice blast	0.5 kg	3 kg		15
Kresoxim-methyl 44.3% SC	Rice blast	250	500 ml	500	30
Mancozeb 75% WP	Rice blast	1.125-1.5 kg	1.5- 2kg	750	
Metiram 70% WG	Rice blast	1050-1400	1500-2000	500	51
Picoxystrobin 22.52% w/w SC	Rice blast	150	600	500	12
Prochloraz 39.6% w/w EC	Rice blast	450	1000	500	26
Pyraclostrobin 100 g/l CS	Rice blast	100	1000	500	18
Tebuconazole	Rice blast	0.125-	0.500-0.750	500	5

25.9% EC		0.1875 kg	lit		
Tebuconazole 25% WG	Rice blast	0.1875 Kg	750	500	10
Tricyclazole 75% WP	Rice blast	225- 300 gm	300-400 gm	500	30
Zineb 75% WP	Rice blast	1.125- 1.5KG	1.5 – 2kg	750- 1000	
Azoxystrobin 18.2% + Difenoconazole 11.4% w/w SC	Rice blast	0.03% or 0.3 g/l	0.1% or 1 ml / Litre water	500	31
Azoxystrobin 120 g/L + Tebuconazole 240 g/L SC	Rice blast	249 g	830 ml	500	24
Azoxystrobin 5.1%w/w +Tebuconazole 9.1% w/w+ Prochloraz 18.2 % w/w EC	Rice blast	98.0 + 175.0 + 350.0	1750	500	40
Azoxystrobin 16.7% + Tricyclazole 33.30% SC	Rice blast	83.5 + 166.5	500	500	24
Carbendazim 1.92% + Mancozeb 10.08% GR	Rice blast	240+1260	12.5	Broadcasting	46
Carbendazim 12%+ Mancozeb 63% WP	Rice blast	563 g	750 gm	750	57
Carbendazim 25%+ Mancozeb 50% WS	Rice blast	(7.5+15) to (8.75+17.5)	30 - 35	0.1	-
Difenoconazole 10 % + Mancozeb 50% WDG	Rice blast	62.5 + 312.5	625 gm	500	33
Flubendiamide 7.5% + Kresoxim- Methyl 37.5% SC	Rice blast	50 + 250	667	500	30
Hexaconazole 4% + Carbendazim 16% SC	Rice blast	(30+120)	750	400-500	40

Hexaconazole 5.00% + Validamycin 2.50% SC	Rice blast	50+25	1000	500	22
Hexaconazole 4% + Zineb 68% WP	Rice blast	720-900	1000-1250	500	34
Iprodione 25% + Carbendazim 25% WP	Rice blast	250 gm	500 gm	500	30
Kasugamycin 5% + copper oxychloride 45% WP	Rice blast	350	700	375	26
Picoxystrobin 6.78% + Tricyclazole 20.33 %w/w SC	Leaf Blast & Neck Blast	300	1000	500	29
Tebuconazole 15% + Zineb 57% WDG	Rice blast	187.5 + 712.5	1250	500	21
Tricyclazole 45% + Hexaconazole 10% WG	Rice blast	225+50	500	500	23