




Wheat blast

Magnaporthe oryzae Triticum

	Prevention	Monitoring	Direct Control
 <p>Severely infected rachis and damaged spikelets (Tofazzal Islam, BSMR Agricultural University, BSMRAU, Bangladesh)</p>  <p>Head symptoms showing blackened rachis with entire wheat head bleached (Tofazzal Islam, BSMRAU, Bangladesh)</p>  <p>Sporulating wheat leaf lesions from the field in Bangladesh (Tofazzal Islam, BSMRAU, Bangladesh)</p>	<ul style="list-style-type: none"> • Use certified/clean seed as the fungus is seed-borne • Time sowing of seed so that heading occurs when weather is dry (the disease prefers wet conditions) • Use resistant varieties if available • Regularly remove and destroy weeds, particularly grasses such as <i>Eleusine indica</i>, <i>Echinochloa</i>, <i>Brachiaria</i>, <i>Digitaria</i>, <i>Lolium</i>, <i>Cenchrus</i>, and <i>Chloris</i> in and around the wheat field. Many weeds act as secondary hosts and spread the disease • Deep plough or burn crop residues as the fungus can survive on these and spread. Fungus can be present on seed that appears healthy • Rotations are not effective. The fungus appears sporadically on wheat and grows well on numerous grasses and crops 	<ul style="list-style-type: none"> • Check crop regularly, particularly when temperature (18-30°C) and humidity is high for several days followed by heavy rain and/dew. Also check for symptoms in fields where barriers (e.g. trees) shade the field, allowing dew to remain on plant surfaces, and also on fertilized fields rich in nitrogen • Symptoms are visible in leaf, spike and seeds: <ul style="list-style-type: none"> • Seeds: Small, shrivelled, light weight, discolored, or no formation • Rachis/Spikelets: Brown to black area on rachis which later becomes light to dark grey (indicating blast sporulation), above which all spikelets are destroyed and become bleached • Awns: Brown to white discolouration • Glumes/Culm/Neck/Sheath: Bleached heads with traces of gray from blast sporulation. Spots on glumes with white to light-brown centres, often becoming grey later on, and with reddish-brown to dark-grey margins. These spots vary in shape (oval to elongated) on the culm, neck and sheath • Leaves: Oval shaped water soaked lesion on green leaves which turns into eye/oval-shaped necrotic lesion with gray center, ranging in size and shape. Older leaves are more susceptible than young expanding leaves • Leaf spots can be: <ul style="list-style-type: none"> • Small, dark brown, with light corners • Larger, round or eye-shaped, with white to light-brown centres, often becoming grey later on, and reddish-brown to dark-grey margins • Symptoms closely resemble infection by <i>Fusarium</i> spp. which can cause more widespread bleaching of the plant than wheat blast, and produces pink to orange colouration, particularly on the outside of the glumes <ul style="list-style-type: none"> • If uncertain, send samples of affected crop to a lab for disease identification 	<ul style="list-style-type: none"> • There are no direct controls for this disease

Note: Pesticides may be available to control this pest. Please check with the Ministry of Agriculture in your country to find out which pesticides are registered in your country and the local restrictions for their use.