

# Black sigatoka of plantain

*Mycosphaerella fijiensis*



Developing symptoms on a leaf with necrotic patches (Neil Palmer, CIAT)



Collapse of the older leaves showing symptoms of black sigatoka (Neil Palmer, CIAT)

Prevention	Monitoring	Direct Control	Direct Control	Restrictions			
<ul style="list-style-type: none"> <li>When planting new crops in a disease hot spot area consider using resistant FHIA hybrids (e.g. FHIA 02) or use planting materials from healthy plants</li> <li>Use large planting spacing (3m x 2m) to ensure good air circulation between the plants. This reduces humidity and promotes dry leaf surfaces making conditions unfavourable for the disease</li> <li>Remove suckers to avoid clustering</li> <li>Ensure good drainage in the fields and weed frequently as this reduces the humidity and the disease</li> <li>Avoid transporting infected plants into disease-free regions</li> </ul>	<ul style="list-style-type: none"> <li>Monitor the field regularly looking for symptoms of the disease:</li> <li>The early symptoms include reddish brown specks on lower leaf surfaces. As the disease develops the specks become larger and wider running parallel with the leaf veins and eventually overlap. They turn dark brown to black in colour and can be visible on the upper side of the leaf.</li> <li>Take necessary action when the early symptoms are observed</li> <li>The symptoms of black Sigatoka are very similar to yellow Sigatoka but the disease management method is the same</li> </ul>	<ul style="list-style-type: none"> <li>Rogue out young infected plants that have just shown symptoms and burn</li> <li>Remove older infected leaves regularly and burn or stack them in heaps, keeping the lower leaf surface facing the ground to help prevent disease spread</li> </ul>	<ul style="list-style-type: none"> <li>When using a pesticide or botanical, always wear protective clothing and follow the instructions on the product label</li> </ul>	<ul style="list-style-type: none"> <li>Where there is a high risk of the pathogen developing fungicide resistance it is advisable to change the type of fungicide used every year or use a mixture incorporating a broad spectrum protectant fungicide such as a copper compound</li> </ul>			
			<ul style="list-style-type: none"> <li>Do not use chemicals with the same mode of action year after year as this can lead to resistance</li> </ul>		<ul style="list-style-type: none"> <li>Always consult the most recent list of registered pesticides of MOFA, Ghana</li> </ul>	<ul style="list-style-type: none"> <li>According to the Fungicide Resistance Action Committee (FRAC) <i>Mycosphaerella fijiensis</i> has a high risk of developing resistance to fungicides</li> </ul>	<ul style="list-style-type: none"> <li>WHO Class U (unlikely to present acute hazard in normal use). Start application when disease first appears, ensure spray reaches the youngest leaves on the top of the plant. Repeat every 7-14 days observe REI of 24hrs.</li> </ul>
			<ul style="list-style-type: none"> <li>Spray with Thiophanate methyl (400g/l) (Callis 400 OL) Apply at a rate of Apply 31-41g/15litre knapsack. Methyl benzimidazole carbamate (MBC) fungicide with systemic action (FRAC group: B1)</li> </ul>		<ul style="list-style-type: none"> <li>Propiconazole 250EC (Tilt). Apply at a rate of 15mls / 15ltr knapsack as a full-coverage spray to the point of drip. Triazoles fungicide with systemic action (FRAC group: G1)</li> </ul>	<ul style="list-style-type: none"> <li>WHO Class II (Moderately hazardous) Apply as soon as disease is seen or when the wet season begins, ensure spray reaches the youngest leaves on the top of the plant. Repeat at 21-28 days interval. Do not enter treated areas within 24 hours after spray.</li> </ul>	

## Ghana

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