Fact sheet

Sorghum downy mildew

What is Sorghum downy mildew?

Sorghum downy mildew (*Peronosclerospora sorghi*) is a serious fungal disease of sorghum and maize. It is found worldwide in tropical and subtropical regions where it can cause yield loss of 30% or more. Sorghum downy mildew has not been recorded in Australia.

What does it look like?

Infected seedlings are stunted and chlorotic (yellow), with symptoms most noticeable on the lower half of the first infected leaf. Infected young plants may die. Older leaves may exhibit alternating parallel stripes of green and yellowish-green to white tissue. Under cool, humid conditions a white downy growth is produced on the lower leaf surface. The chlorotic tissue stripes eventually die and leaves become shredded. Heads produced on these plants are fully or partially sterile. Local infection symptoms are less dramatic, with short necrotic streaks (stipples) produced on leaf blades.

What can it be confused with?

Stunting and chlorosis symptoms caused by Sorghum downy mildew infection can be confused with chemical damage, viral infection or nutritional deficiency. Key distinguishing symptoms include white downy growth on both surfaces of infected leaves and also shredding of the leaves.

What should I look for?

Look for chlorosis in seedlings or yellow-green to white stripes on leaves of older plants. White downy growth may be seen on both surfaces of leaves under cool humid conditions and shredding of leaves may occur.

CIMMYT

Sorghum downy mildew on maize

CIMMYT

Underside of maize leaf showing downy growth

Luciano Viana Cota

Symptoms of local infection

Luciano Viana Cota

Necrotic lesion stripes

Luciano Viana Cota

Systemic infection causing chlorosis and necrosis

Rob Williams/CABI Crop Protection Compendium

Sorghum blades and heads showing varying degrees of systemic infection

How does it spread?

The fungus can spread locally through movement of spores in the air. Sorghum downy mildew can be seed-borne so longer distance dispersal may be possible through movement of infected seed or spore-contaminated soil.

Where is it now?

Sorghum downy mildew is widely distributed throughout Asia, Africa and North, Central and South America.

How can I protect my farm from Sorghum downy mildew?

As the pathogen is seedborne, source seed from accredited suppliers, and preferably only use certified seed. Check your crops frequently for the presence of new pests and unusual symptoms. Soil-borne infection can be avoided through cleaning shoes and clothing of soil or plant material before returning from overseas.

If you see anything unusual, call the Exotic Plant Pest Hotline

EXOTIC PLANT PEST HOTLINE
1800 084 881

GRAINS FARM BIOSECURITY PROGRAM

GPA GRAIN PRODUCERS AUSTRALIA

Plant Health AUSTRALIA

PHA11-052