

Sooty Mould

Identification and Management

Recent rains as crops mature and during harvest have led to increased levels of sooty mould. Sooty mould is not a true crop disease. It is mainly the result of a complex of saprophytic fungi that colonizes dead or dying plant tissues under moist conditions and worsens the longer the mature crop sits out in the field before being harvested.

Damage: The effect on grain is not major as it does not reduce yield. It does not cause plant death as it does not affect healthy plant tissue. It may affect quality due to the blackish/dark grey discoloration of kernels as well as causing a dustier harvest due to masses of sooty mould spores. Black point of kernels may occur, although it may be more the consequence of the spot blotch and kernel smudge pathogen. The spot blotch and kernel smudge pathogen can cause issues related to seed germination versus the saprophytic sooty mould fungi. Downgrading in cereals may occur due to discoloration, which indicates weathering as well as the potential for higher microbial load on grain. Plants with sooty mould may also be less palatable for livestock, while masses of spores could result in allergenic reactions.

Identification: It appears as speckled black, grey or dark green growth on the surface of cereal grain heads, leaves and stems.

Conditions: It's most likely to develop when rain has fallen in the final stages of crop maturity and if there has been high humidity and a delay in harvest. In addition, prematurely ripened plants are also at risk if moist conditions occur. Premature plant death may occur due to abiotic stresses such as flooding, drought, temperature stress, hail damage, etc. or biotic factors such as root rots (e.g., take-all, crown rot), wheat stem maggot, fusarium head blight, etc.

Scouting: The best time to see sooty mould is in the later stages of crop development up until the crop has been harvested. Sooty mould might occur more often on wheat that died prematurely from the abiotic and biotic issues mentioned above.

Management: Management is typically impractical or not needed. Timely harvest reduces chances for further sooty



mould development. When feasible, avoid harvesting the heavily moulded areas of the field as seed in these areas is likely of poor quality and size, which may downgrade the rest of the seed lot. If planning to use the grain for seed next year make sure to get a seed test to check for germination, vigour and pathogen load. Where possible limiting abiotic and biotic stresses using good agronomics, disease resistant varieties, etc. may limit premature crop ripening and subsequent potential for sooty mould development.



Additional Resources:

[2022 Crop Diagnostic Handbook – Government of Saskatchewan - Ministry of Agriculture](#)

[Sooty Mold: A Saprophytic Fungi Observed in Wheat \(sdstate.edu\)](#)

[University of Kentucky - Black "Sooty" Head Mold of Wheat](#)

<https://extension.psu.edu/sooty-mold-on-small-grains>

<https://ahdb.org.uk/knowledge-library/sooty-moulds-and-milling-quality-of-cereals>

<https://cropprotectionnetwork.org/encyclopedia/black-head-molds-of-wheat>