

Sorghum XV

Covered Kernel Smut

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Identification and Life Cycle

Covered kernel smut is caused by the fungus *Sporisorium sorghi* (Syn. *Sphacelotheca sorghi*) and occurs in most regions where sorghum is grown. Teliospores of *S. sorghi* are seedborne and germinate within the seed. Seedling plants are infected, but symptoms generally are not apparent until booting or heading. The pathogen grows within the plant to the meristem and invades floral tissues. Maturing fungal fruiting structures called sori rupture and release teliospores that infect seeds on other plants. Only seedborne spores cause infection.

Plant Response and Damage

Disease is apparent only after heading. Individual ovules are replaced by smut fruiting bodies that vary in size from less than the size of glumes to greater than 0.4 inches in length. Most sori are conical or oval and resemble an elongated sorghum seed, but vary in color from white to gray or brown. Infected plants are generally the same height and size as healthy plants.

Management Approaches

Biological Control

No biological control strategies have been developed for covered kernel smut.

Cultural Control

Plant only high quality seed free of the covered kernel smut pathogen. Varieties vary in their susceptibility to covered kernel smut, and less susceptible varieties should be grown if available.

Chemical Control

Economical and complete protection from covered kernel smut can be achieved with proper seed treatment.

Product List for Covered Kernel Smut:

Pesticide	Product per 100 lb seed	Remarks
Captan		
Captan 30DD	3.5 fl oz	Seed treatment

Captan 400	1.75-4.5 fl oz	Seed treatment
Captan 400-C	1.75-4.5 fl oz	Seed treatment
EBDC		
Dithane F45	4.3-7.2 fl oz	Seed treatment
Dithane M45	2.7-4.5 oz	Seed treatment
Manzate 75 DF	2.7-4.5 oz	Seed treatment
Manzate 80 WP	2.7-4.5 oz	Seed treatment
Manzate Flowable	4.3-7.2 fl oz	Seed treatment

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Categories: Sorghum, Diseases, Covered Kernel Smut

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