

Sunflower XIV

Rhizopus Head Rot

Howard F. Schwartz and David H. Gent

Identification and Life Cycle

Rhizopus head rot is caused by various fungi in the genus *Rhizopus*, including *R. arrhizus*, *R. stolonifer*, and *R. microsporus*. These fungi are cosmopolitan in soil and decaying organic matter. The Rhizopus head rot pathogens require free moisture and a wound to successfully infect sunflower heads. Plants are virtually immune to infection at the bud stage, but become increasingly susceptible as they age. The pathogens are favored by warm (68 to 86°F), wet weather, and can completely rot heads within 3 to 7 days when conditions are optimal for disease. Sporangia of the fungi are readily disseminated by splashing water and wind, and are commonly spread among plants by insects and birds. Heads damaged by birds, irrigation equipment, hail, or mechanical injuries are most susceptible to infection. Rhizopus head rot pathogens survive in the soil on decaying organic matter.

Plant Response and Damage

Disease symptoms begin as small, water-soaked spots on the back of heads. These spots gradually enlarge, causing a brown, watery rot of the entire receptacle. Coarse, thread-like strands or cottony masses of whitish fungal mycelium are often apparent in the hollow part of the receptacle during humid or wet weather. Small, black spore-producing sporangia are later apparent in the fungal mycelium. Sunflower heads become shredded as they die. Rhizopus head rot can be very damaging in warm, humid weather, especially if sunflower moth damage is widespread.

Management Approaches

Biological Control

No biological control strategies have been developed for Rhizopus head rot.

Cultural Control

Select hybrids with nodding heads that avoid bird injury. Control sunflower head moths; as populations of sunflower head moths are often directly related to *Rhizopus* head rot loss.

Chemical Control

No fungicides are available for *Rhizopus* head rot control.

Categories: Sunflower, Disease, *Rhizopus* Head Rot

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