

Stachybotrys

Mitosporic ("mitosis" and "sporic") fungus. Hyphomycetes.

Characteristics

Distribution

Approx. 15 species.

Where Found

Soil, decaying plant substrates, decomposing cellulose (hay, straw), leaf litter, and seeds. Growth not influenced by soil pH or copper; growth enhanced by manure.

Mode of Dissemination

Wet spore. Insects, water splash. Wind when dried out.

Growth Indoors

Commonly found indoors on wet materials containing cellulose, such as wallboard, jute, wicker, straw baskets, and other paper materials. (See "Characteristics: Growth/Culture"). Aw=0.94

Industrial Uses

Not known.

Other Comments

Many human reports of Stachybotrys toxicosis are anecdotal. Stachybotrys mycotoxicosis is currently the subject of toxin research.

Potential Health Effects

Allergens

Not well studied. Type I allergies reported.

Potential Opportunist or Pathogen

No reports of human infection. (No species grow well at 37°C.)

Potential Toxin Production

Macrocyclic trichothecenes: verrucarin J, roridin E, satratoxin F, G & H, sporidesmin G, trichoverrol; cyclosporins, stachybotryolactone. Stachybotrys mycotoxicosis: human toxicosis has been described; may be characterized by dermatitis, cough, rhinitis, itching or burning sensation in mouth, throat, nasal passages and eyes. The best described toxicoses are from domestic animals that have eaten contaminated hay and straw or inhaled infected material from contaminated bedding.

Laboratory Notes

Growth/Culture Characteristics

Grows well on general fungal media. Stachybotrys is slow growing as compared to Penicillium and other common mold genera and may not compete well in the presence of other fungi. However, when water availability is high for prolonged periods on environmental material, Stachybotrys may gradually become the predominating mold, especially on cellulose containing materials.

Spore Trap Recognition

Spores of the species *S. chartarum* are distinctive, and not easily confused with other genera. Carbon fragments which may be oval and of similar size may sometimes be confused with *S. chartarum*. Memmoniella and Gliomastix produce spores with similar gray black pigment. Note: Spore trap samples are more likely to demonstrate the presence of Stachybotrys than culturable samples (Andersen).

