

Aspergillus on stored garlic (Black Mold)

Cause

Aspergillus niger van Tiegham (Mathur & Mathur)
A. ochraceus K. Wilh. (= *A. alutaceus* Berk. & Curt.)

Occurrence

Common in warm dry climates. *A. niger* has a worldwide distribution. *A. ochraceus*, a common fungus found in soil in N. America, has been recovered from garlic cloves in Oregon and Washington but was not found to be consistently aggressive.

Symptoms



Aspergillus niger on garlic cloves.
Photo by Maryna Serdani

Outer scales or the neck will show black streaking due to dark fungal growth. Bruised areas may also be discolored. Initially infected tissues look water soaked; they then become dry and shrivel with masses of black spores visible between the outer scales.

Disease Cycle

Aspergillus is a fungus which survives in the soil on dead plant tissues; it may also be carried on seed. Species of *Aspergillus* are very common in the soil and in the air. Spores produced in diseased plant debris or in soil infect the current years' growth. The fungus is not a vigorous pathogen. Tissues injured from bruising or mechanical damage are often first colonized, or the fungus may gain entry through the basal plate. Infection can also

take place in the neck when the foliage dries after harvest. As the fungus takes hold, black streaking develops in the dead outer scales, and then in the fleshy cloves. *Aspergillus* infection may be followed by entry of other pathogens, including soft rot bacteria. The fungus is known to produce mycotoxins in infected tissue.

Management

- Store bulbs at low temperature and low humidity
- Avoid bruising and mechanical injury to bulbs at harvest and when storing
- Fungicide application to seed prior to planting

References

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