

Storage Fungal Diseases

Black mold (*Aspergillus niger*)

Blue mold (*Penicillium species*)

Gray mold or neck rot (*Botrytis species*)

Fusarium rot (*Fusarium oxysporum* f. sp. *cepae*)

COMMON HOSTS

Onion, Garlic

SYMPTOMS (ON ONION)

Figure 1 & 2:

Black mold develops as black discoloration (usually at the neck), shallow lesions on outer scales, streaks of black mycelium and conidia beneath the outer dry scales, and black discoloration in bruised areas. Bulbs usually do not rot, unless secondary bacterial infection occurs.

Figure 3 & 4:

Gray mold (neck rot) develops as a semi-watery decay, usually in the neck, that progresses down through the bulb. Flesh scales soften and become water-soaked and translucent, with white to gray mycelium between scales. Gray to black sclerotia and gray mold may form on outer and inner scales.

Figure 5 & 6:

White rot appears as yellowing and dying of older leaves, stunting of plants, and death of foliage. Infected roots will exhibit white, fluffy mycelium on the basal plate with presence of small, poppy-sized brown to black sclerotia in and on tissues.

FACTORS FAVOURING

Most bacteria are favoured by:

- Temperatures greater than 28°C (82°F) during late vegetative to mid bulbing stages favor infection by Fusarium basal rot and pink root; while white rot is favored by lower temperatures.
- Moisture stress (deficiency or excess) may predispose the crop to infection by Fusarium and pink root.
- These soil-borne diseases are favored by frequent cropping to Alliums (every 3–4 years), planting of contaminated transplants and sets of susceptible varieties, and injury to roots by cultivation and insect feeding.

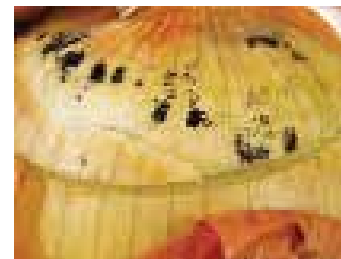


Fig 1

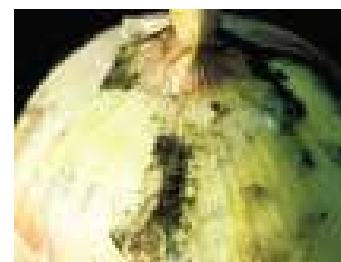


Fig 2



Fig 3

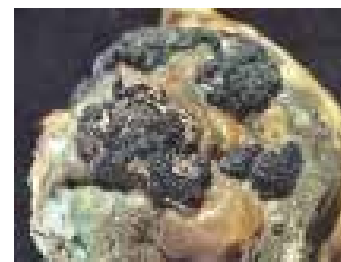


Fig 4

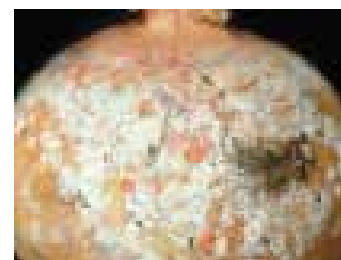


Fig 5

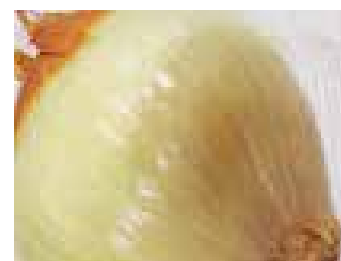


Fig 6