

Soil-Borne Diseases

Fusarium Basal Rot (*Fusarium oxysporum f. sp. cepae*)

Pink Root (*Phoma terrestris*)

White Rot (*Sclerotium cepivorum*)

COMMON HOSTS

Onion, Garlic

SYMPTOMS (ON ONION)

Figure 1 & 2:

Fusarium basal rot appears as yellow and tan to brown leaves, usually beginning at the leaf tips and developing downward. Plants may wilt and then die; infected bulbs appear discolored (tan to brown) and roots and basal plates are rotted.

Figure 3 & 4:

Pink root appears as discolored roots (yellow to brown to red to purple); infected roots may disintegrate. Leaf number and bulb size may be reduced by severe infection.

Figure 5:

Blue mold first appears as pale yellow blemishes, watery soft spots, and occasionally purple-red stain on scales. A green to blue mold may develop on the surface of lesions, there may be a light tan or gray color on the fleshy scales, and bulbs may become tough (punky) with a musty odour.

Figure 6:

Fusarium basal rot starts in the field and can progress in storage from a dry basal plate rot to a dry rot of the fleshy scales.

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.

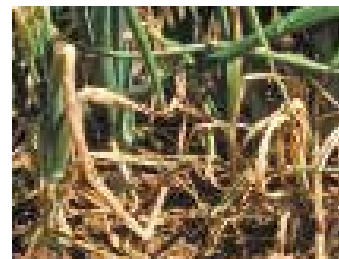


Fig 1

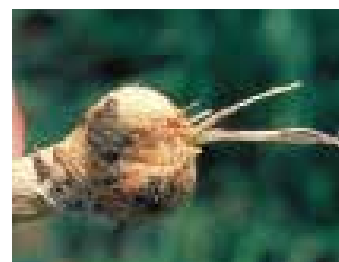


Fig 2



Fig 3



Fig 4

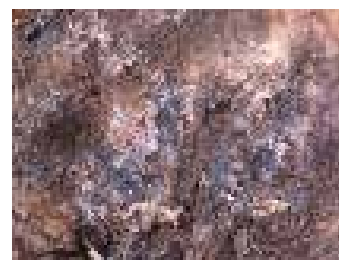


Fig 5

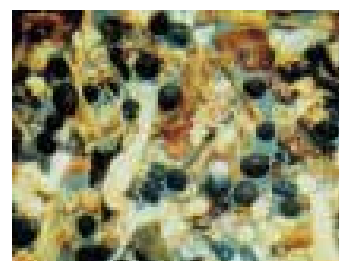


Fig 6