

Fungi associated with diseases of big onion (*Allium cepa* L.) prevalent in Matale District, Sri Lanka.

L.N.R.Gunaratna. Nelum Deshappriya

Abstract

Big onion (*Allium cepa* L.) is used as a condiment in many countries of the world including Sri Lanka. However, onion yield is reduced due to a number of diseases some of which are of fungal origin that occur in different parts of the big onion plants. It is important that the presence of the more prevalent diseases are surveyed and the causative fungi characterized as it will provide the background essential to carryout disease management practices. Therefore, the present study was aimed at surveying the diseases prevalent at different growth stages of onion crops in the Matale district and isolating and identifying the causative fungi associated with these diseases. The more common symptoms observed in the fields were lesions at the collar region of seedlings, yellowing of leaves and leaf die back, formation of 2-3 mm wide oval shaped patches on leaves and flower stalks and discoloration and softening of bulbs. A *Fusarium* sp. was isolated and identified from infected bulbs. *Colletotrichum gloeosporioides* was isolated from the infected leaves and flower stalks. *Fusarium*, *Curvularia*, *Alternaria*, and *Sclerotium* spp were isolated and identified from seedlings showing

damping off symptoms. Koch's postulates were carried out to confirm the pathogenicity of *Fusarium* sp., two *Curvularia* sp. and *Alternaria* sp. isolated from seedlings and it was confirmed that the *Fusarium* sp. isolated was the causative agent of damping off disease of big onion seedlings in the Matale district.

Keywords: *Allium cepa* L., fungal pathogens, *Fusarium* sp., damping off disease, Pathogenicity