

Sunflower Seed Borne Diseases

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Abstract

Sunflower is one of the most often sown field crops in our country. It can be parasitized by a number of pathogens causing micoses, bacterioses and viroses. Some of the most dangerous sunflower pathogens are the seed born ones. Besides that, sunflower seed can be infected as well by numerous saprophytic microorganisms causing a decrease in seed quality. Seed parasites decrease its nutritive value, and the oil obtained from the infected seed possesses unfavorable food characteristics. Parasitic microorganisms most often found on sunflower seed are fungi causing grey (*Botrytis cinerea*) and white mould (*Sclerotinia sclerotiorum*). The most often found saprophytic microorganisms are the following ones: *Alternaria alternata*, *Trichothecium roseum*, *Verticillium lateritium*, *Penicillium* sp., *Aspergillus* sp. and *Rhizopus* sp.

In the present study, 20 seed samples of sunflower hybrid and line produced during 2005-2007 were used for testing on *Botrytis cinerea* and *Sclerotinia sclerotiorum* presence. Testing of grey mould was done according to the ISTA method WS 44. Presence of white mold was determined according to the NSHS Sf. 3.1. method. Analysis performed revealed that both pathogens were found in low percentage in all tested samples. *Botrytis cinerea* infection ranged from 0.5-2%, while the infection caused by *Sclerotinia sclerotiorum* ranged from 1-6%. The following saprophytic fungi species were detected as well: *Trichothecium* sp., *Verticillium* sp., *Penicillium* sp., *Aspergillus* sp. and *Rhizopus* sp. at levels of 1%, 2%, 10%, 10%, 5-35%, respectively. In the analyzed seed material the presence of saprophytic fungus *A. alternata*, which is often detected on sunflower seeds, ranged from 12% to 80% in the form of black mycelia and conidia.

On the basis of the obtained results it can be concluded that the method applied was efficient for fungi detection and that the presence of the two analyzed parasitic fungi was at low and at acceptable level for sunflower seed tested.

Key words: sunflower, *Botrytis cinerea*, *Sclerotinia sclerotiorum*, seed

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