

RESEARCHES ON RESISTANCE SOME SUNFLOWER HYBRIDS TO THE ARTIFICIAL INFECTION WITH *SCLEROTINIA SCLEROTIORUM*

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Abstract

Among the main diseases that cause significant production (quantitative and qualitative), decreases in sunflower, the white rot (white rot, white mould) is frequently met. It is also known as wet rot (cottony soft rot, watery soft rot), and withering (wilt), cancer (canker), etc. (Mordue and Holliday, 1976). Disease known to be spread rapidly, it can be found in several regions of the country, particularly in Moldavia. The fungus attacks different organs of the plant: roots, stems, leaves, capitulum (Castano *et al.*, 1987). *Sclerotinia sclerotiorum* (Lib.) De Bary is a parasite attacks over 400 plant species of 75 botanical families, of which many species are crops with particular importance in agriculture (sunflower, rapeseed, soybean). This disease produces losses of yield due to its virulence in certain environmental conditions and due to the impossibility of compliance a rotation by most farmers.

In this study, we have tested the resistance of some sunflower hybrids (*Helianthus annuus* L.) to the pathogen *Sclerotinia sclerotiorum*. The research material is represented by 12 commercial sunflower hybrids. For the artificial inoculation, we have used the method provided by Rashid (1997). For the artificial infection, we have used 2 isolates the fungus, provided from Romania and Germany. There have been noticed differences in virulence of the pathogen isolates used and also differences in the response of the studied genotypes. Sunflower genotypes responded differently to artificial inoculation with two isolates of *Sclerotinia* depending on the environmental conditions of the year 2011, at the Ezăreni teaching resort from Iasi. Thus, the Iasi isolate, behaved in a more aggressive way, compared to the Giessen isolate, which presented lower virulence.

Key words: *Sclerotinia sclerotiorum*, genetic diversity, artificial infection

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