

## ***Sclerotinia Sclerotiorum* (Lib.) De Bary – First Report on Cultivated *Camelina Sativa* in Romania**

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**STELICA CRISTEA\***, **STEFANA JURCOANE\*\***

\**University of Agricultural Science and Veterinary Medicine from Bucharest, Romania*

\*\**Microbial Biotechnology Centre-BIOTEHGEN*

\**Corresponding author E- mail: stelicacristea@yahoo.com*

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### **1. Introduction\***

*Camelina sativa* is an oleaginous plant, cultivated for its oilseeds with multiple industrial uses. Because of camelina oil's qualities, suitable for bio kerosene production, in the past years has been registered an increased interest for its cultivation (PUTNAM & al.[12], MORARU & al.[10]). Regarding technological aspects, camelina's crop does not imply special claims (DOBRE & al. [7], DOBRE & al. [8]). Within crop technology a special attention is given to the phytosanitary condition of the culture (CRISTEA & al. [5], CRISTEA & al.[6], PODGOREANU & al. [11]). The research conducted within FP 7 ITAKA (Initiative Towards a Sustainable Kerosene for Aviation) led to the record on 18 May 2016, for the first time in Romania, of white mold attack on grown camelina, variety GP 204, in cultivated lots from Șindrilița, Ilfov County.

### **2. Material and Methods**

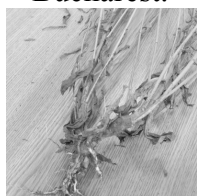
Spring culture of *Camelina sativa*, variety GP204 (originated from Germany) has been set up and monitored for seeds production, further to be used in oil production. During the culture's monitoring, have been noticed symptoms of white mold attack. At a first glance, the symptoms were very close to an attack of *Sclerotinia sclerotiorum* (Lib.) de Bary. In this regard, samples picked-up in the field have been studied under the microscope for its vegetative mass characteristics.

### **3. Results and Discussions**

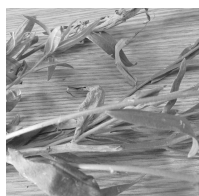
*Sclerotinia sclerotiorum* (Lib.) de Bary is the fungal pathogen responsible for the white mold attack at numerous plant species. The state of art literature indicates the presence of the pathogen on more than 400 plant species (BOLAND & al. [2], BOLTON & al. [3]). This fungus is frequently encountered in cruciferous crops (CRISTEA [4]) and it attacks the plants in all stages of growth (AGRIOS [1]). The pathogen develops mycelium and sclerotia; through its germination appear pedunculated apothecia with ascus and ascospores (GHEORGHIȘ & al. [9]). Specific symptoms were observed at plant's base (**Fig.1**), at the stem's ramification area (**Fig.2**), at different levels on the stem's length (**Fig.3**) and on inflorescence (**Fig.4**). On the attacked organs there were observed stains on discolored tissue, covered with a dense vegetative mass, of white color, with cotton texture. The affected tissue rot presents an aspect of necrotic lesion and leaves get brown and dry. The plants with specific symptoms wither and dry out (**Fig. 5**). Microscopic identification: the fungus forms colorless hypha, septated transversally, branched and forming dense, compact mycelia (**Fig.6**). The pathogen belongs to

Kingdom: Fungi, Division: *Ascomycota*, Class: *Leotiomycetes*, Order: *Helotiales*, Family: *Sclerotiniaceae*, Genus: *Sclerotinia*, Sp: *S. Sclerotiorum* (Lib.) de Bary.

The research will be continued in the Phytopathology Laboratory of the Faculty of Agriculture within the University of Agricultural Science and Veterinary Medicine, Bucharest.



**Fig. 1.** Plant's base attack of *Sclerotinia sclerotiorum*



**Fig. 2.** Stem ramification attack of *Sclerotinia sclerotiorum*



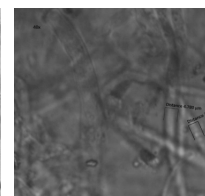
**Fig.3.** Stem length attack of *Sclerotinia sclerotiorum*



**Fig.4.** Inflorescence attack of *Sclerotinia sclerotiorum*



**Fig.5.** Plants wither produced by *Sclerotinia sclerotiorum* attack



**Fig.6.** *Sclerotinia sclerotiorum* - fungus mycelia

## 4. Conclusions

The typical white mold attack with the pathogen *Sclerotinia sclerotiorum* (Lib.) de Bary found on cultivated camelina plants is firstly reported in our country on this crop. The presence of *Sclerotinia sclerotiorum* (Lib.) de Bary pathogen will require a special attention regarding the crop's technology, with implications in plant's breeding and crop's protection.

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