

CURRENT STATUS OF SUNFLOWER CROP MANAGEMENT IN MOLDOVA

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ABSTRACT

Broomrape (*Orobanche cumana* Wallr.) is one of the main risk factors in sunflower production, causing significant quality and quantity crop damages. Extension of sunflowers land and its irrational exploitation contributes to the increasing of frequency and intensity of pathogen attack. This work presents the results of integrative study of sunflower farm fields from different geographical areas of Moldova, with the focus on cultivated hybrids of *Helianthus annuus* L., crop rotation and the frequency and intensity of the broomrape attack in natural conditions. Observation and sociological survey of sunflower growers were used as study methods. The investigations were conducted in the period of July-August, 2014, in 80 locations from center, south and north of Moldova. It was found that *Orobanche cumana* Wallr. is preferentially widespread in the central and southern part of country, frequency and intensity of the broomrapes attack, also, being higher in these regions. Around eleven hybrids, especially belonging from Pioneer Seed, Saaten Union and Syngenta companies, were cultivated on analysed fields. One from these hybrids, was found to be resistant (ARENA PR), three tolerant (SY SUBTYL, PARAISO 102 CL and P63 LE10) and others were susceptible and high susceptible to broomrape infection. It was established that efficient and programmed culture of sunflower in a well-organized rotation (using maize and wheat as a proceeding crops, with a return of sunflower to the same field at least after a period of 4 years) decreases the number of plants affected by *Orobanche*.

Key Words : *Helianthus annuus* L., broomrape, *Orobanche cumana* Wallr., crop rotation, hybrids