

ANALYSIS OF THE SOIL PARAMETERS IN THE CONTEXT OF SUNFLOWER INFECTION BY *Orobanche cumana* WALLR.

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Abstract

The holoparasitic angiosperm plant *Orobanche cumana* Wallr. is one of the main constraints on sunflower production. Environmental factors (temperature, rainfall average), soil fertility and the nutrient availability are important factors which influence the development and spreading of infestation. According to reported data, broomrape infection tends to be associated with less fertile soil conditions, high pH, low nitrogen and available phosphor content.

The aim of present study was to estimate the influence of soil parameters on the frequency and intensity of the broomrape attack in different habitats from Moldova with variable level of natural infection. The frequency and intensity of the broomrape attack in natural the conditions has been established by field observation in settlements across the center, south and north of Moldova, during July-August, 2014. From each infected habitats soil samples has been collected and analyzed (humus, nitrogen, phosphorus and mineral elements content, pH, humidity etc.).

Some correlation between soil parameters and *Orobanche* attack intensity has been established. Thus, in majority of studied habitats, the broomrape attack frequency is positively influenced by high humus content and negatively by high potassium concentration. In the most of locations from south part of Moldova the attack frequency correlated with the pH value. Total nitrogen, ammonium and available phosphor content had no effect on *Orobanche* attack intensity.

Key words: *Orobanche cumana*, attack frequency, sunflower, soil parameters
