

FIRST REPORT OF SUNFLOWER BROOMRAPE (*OROBANCHE CUMANA* WALLR.) IN CHAMOMILE

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Abstract

The parasitic plant *Orobanche cumana* Wallr. is the most important biotic constraint to the production of sunflower seed in all countries where sunflower is grown except in North and South America. *Orobanche cumana* is a close relative of *Orobanche cernua*, two different *Orobanche* species that have long been considered as single one (Roman et al., 2013). In fact, *O. cumana* and *O. cernua* mainly differ in their host range pattern. *O. cernua* is able to parasitize different wild species of the Compositae family, mainly the genus *Artemisia*, and a few other species, while *O. cumana* has only been described as a specific parasite of sunflower crop. However, we recently discover that *O. cumana* is able to parasitize other crops of the Compositae family. In 2016, we observed for the first time *Orobanche* shoot in a field of Chamomile (*Matricaria reticulata*) close to Marchena (Seville). From these *Orobanche* shoot, we collected both tissues for genotyping and seeds for phenotyping analysis. Results from the genotyping with a kit of 200 SNP dedicated to *O. cumana* diversity study (Coque et al., 2016), indicate that *Orobanche* shoots sampled into Chamomile plants are genetically very close to *O. cumana* populations parasiting the sunflower in Andalucia. Seeds from *Orobanche* parasiting the Chamomile were collected and the race of the parasite examined according to an internal differential set of lines. Both genotyping and phenotyping results confirm that *Orobanche* shoots sampled into Chamomile field are from *Orobanche cumana* species.

Keywords: chamomile, broomrape, parasiting, genotyping, phenotyping