

## Control of Broomrape in Iran

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### ABSTRACT

Broomrape is one of the most dangerous parasitic plants for many crops. The communities of weed broomrapes were investigated from sunflower fields in Iran. In the sunflower fields the populations of weed broomrapes consists of plants of *Orobanche aegyptica*, *O.ramosa*, *O.cumana* and *O.crenata*. There are present in Iran but sporadically, other species of *Orobanche*. Method of control and management for each parasite were included: crop rotation, clean seeds, sowing dates, biological control, genetic resistance and herbicides. The behaviour of some Iranian sunflower cultivars (RT21, AS508, Hysun 33, Hysun 25, Euroflore, Record,...) to *O. aegyptica* attack was tested in the artificial inoculation and natural contamination. It could be noted that all hybrid cultivars and from OP, Record exhibited an absolute resistance. To eradicate this dangerous plant was and still is the aim of specialists worldwide. In order to diminish the negative effect of broomrape on sunflower yield, there were tested the next methods: herbicides: crop - rotation, deep ploughing, deep seeding or watering, biological control by trap - plants, insects(*Phthomyza orobanche*), fungi(*Fusarium oxysporum* f.sp. *orthoceras*), herbicides. The chemical method was proved to be a necessity for a modern agriculture. It was tested the efficacy of 5 variants of herbicides (Treflan 48 EC + Glyforom RV, Stomp 330 EC + Glyphogan 480 SL, Treflan 48 EC + Basta EC, Stomp 330 EC + Assert 250 EC, Stomp 350 + Basta EC) in 2 experimental field. The best results was with Treflan 48 EC (trifluralin 480 g/l) preemergent 2 l/ha + Glyforom RV (glyphosate 360 g/l) post emergent 0,2 l/ha + 0,3 l/ha applied at 40 and 60 days from planting with efficacy 82,7% and Stomp 330 EC (pendimethalin 330 g/l) preemergent 4 l/ha + Glyphogan 480 SL (glyphosate sal 360 g/l) postemergent 0,2 + 0,3 l/ha, efficacy 80,7%, in the broomrape control.

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