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Effect of sowing date of faba bean (*Vicia faba* L) cultivars on *Orobanche crenata* seed bank and faba bean production

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Abstract

The broomrape, *Orobanche crenata* Forsk (Orobanchaceae) is an annual parasitic weed. It is a serious parasitic weed causing considerable losses in many major crops including faba bean (*Vicia faba* L.). In Egypt, losses due to *O. crenata* parasitism may reach 40 to 100 %. Several methods have been used for controlling *O. crenata* but without success. Some of these methods are unfeasible and costly. Little is known about the effect of different control strategies on *O. crenata*. Sowing date seems to be one of the potential solutions for controlling *O. crenata*. In this work we studied the effect of sowing dates on both the degree of infection by *O. crenata* and the pod yield of faba bean using resistant (Giza 843) and susceptible (Nubaria 1) faba bean cultivars in naturally *Orobanche* infested soil. The results demonstrated that, late sowing (3 weeks after normal sowing date) reduced significantly the number of emerged *O. crenata* shoots for both the resistant and the susceptible cultivars . Pod yield increased significantly on late sowing especially for the resistant Giza 843 cultivar (115.2 kg per plot) which produces much higher pod yield than the susceptible Nubaria 1 cultivar (86.4 kg per plot). This can be explained by the reduced number and dry weight of *O. crenata* attachments and a slight decrease in shoot dry weight of the resistant cultivar. So, combining both resistant cultivar with late sowing could be a useful tool as a part of an integrated strategy to control *O. crenata* in faba bean fields.

Keywords: Faba been cultivars, *Orobanche crenata* seed bank, Faba bean production, sowing date

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