

Status of *Orobancha Cernua* Loefl. and Weeds in Sunflower Production in Turkey

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ABSTRACT

Broomrape (*O. cernua*) is one of the most serious hindrances in sunflower production throughout the Turkey and Eastern Europe. Previous and late studies have shown that imidazolinone (IMI) herbicides applied onto IMI resistant sunflower effectively controls *O. cernua* by rapid absorption, translocation and accumulation in the root attached parasite. However, susceptibility level of susceptible sunflower varieties to the herbicides has been an obstacle in application of these herbicides. Preliminary studies were conducted with susceptible sunflower varieties. But the best results obtained from single foliar treatment of Imazamox (35 g/l)+imazapyr (15 g/l), 43,75+18,75 g/ha was applied on IMI resistant sunflower plants 8-10 true leaf stage. The treatment caused serious damage to susceptible sunflower plants but no damage observed IMI resistant varieties and completely controlled *O. cernua*, resulting in a three-fold increase in sunflower seed yield over the non-treated control. In addition same treatment controlled key weeds that seriously harm sunflower production. Further studies are in progress to determine affectivity of other members of IMI herbicides application rates and timing. Broomrape (*O.cernua*) and weeds have infested and reduced yield in the sunflower production area with high economic level. But using IMI resistant and broomrape tolerant inbred varieties have suppressing and decreasing weed population and epidemics effectively in last three years.

Key Words: *Orobancha cernua*, weed control, imidazolinone herbicides, sunflower