

The use of flex-tine harrow, torsion weeder and finger weeder in saffron (*Crocus sativus* L.)

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The use of mechanical weed control devices designed in Northern Europe need to be adapted to Mediterranean conditions to achieve high efficacy. The problems found in saffron are discussed in this communication.

Saffron is grown usually in the Spanish cold drylands and need weed control after harvesting the flowers in late October until summer, afterwards few weeds grow due to drought. Weed control during winter needs to respect the leaves which develop after flowering and die in May. The corms with the new flower buds develop in March and soil should not be disturbed during that period. Afterwards tillage can be conducted overall without respecting the crop, which remains buried at 20 cm depth. One problem found in this crop is the presence of tap-rooted weeds like *Descurainia sophia*, fibrous rooted dicots like *Lamium amplexicaule* or grass weeds like *Lolium rigidum* which needs to be controlled very early with mechanical methods. As the plantation of the corms is conducted in rows at 20 cm distance, the devices need to be fitted at small distance and accurate steering is needed with torsion and finger weeder. In early spring, the flex-tine harrow offers good possibilities as aggressive positions can be used due to the depth of the corms. Two passes, one in winter and one beginning of spring will normally be necessary. Weed harrowing is probably the best solution for weed control, provided that the weeds are small enough. Precision tools are difficult to use as weeds will be too big due to rainfall in autumn and winter and because of irregular planting.