

The problematic of weeds in the cultivation of saffron and mechanical solutions for control

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We have studied the weed flora of saffron and some mechanical control methods in the Jiloca Valley (Teruel, Spain) from 2007 to 2010. In the eight field trials we have tested the flex-tine harrow, a finger weeder and a torsion weeder. The dominant weed species were the dicotyledons *Lamium amplexicaule* L., *Veronica hederifolia* L., *Descurainia sophia* (L) Webb., *Hypocoum procumbens* L., *Papaver argemone* L. and the grass weed *Lolium rigidum* Gaudin. The presence of these weeds caused losses in the number of flowers ranging between 44% and 62%. We conclude that the flex-tine harrow is cheap, convenient and simple tool, well adapted to this crop and capable to reach 60-90% weed control maintaining the effect for 50-60 days depending on rainfall provided it is conducted early after flower harvest. The torsion and the finger weeder are not considered appropriate because of the characteristics of saffron plantations in this area, mainly stony soils and non-precise planting.