Implementation of super high-density systems and suspended harvesting meshes for dried fig production: Effects on agronomic behaviour and fruit quality

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Abstract

The demand for dried figs has increased in recent years. This, together with rising production costs and difficult access to labour for harvesting, has made it necessary to seek alternatives to the traditional systems. The fig tree is a fruit species with a high adaptive capacity. In this work, we studied for 5 consecutive years the adaptation of the Calabacita variety, traditionally used for dried fig production in the southwest of Spain, under high density conditions (1000 trees per hectare with a planting frame of 5 × 2 m). In addition, a suspended mesh netting structure was installed to facilitate the harvesting process. Compared to the traditional system, the results obtained with this system are higher. In addition to improving the harvesting operation, use of the suspended mesh netting may also reduce damage caused by insects. The dried figs obtained were firmer and had a darker brown colour than those using the traditional system, probably because the suspended meshes favour the drying process by facilitating air circulation. Finally, use of the suspended mesh netting also constitutes an important advance from a sanitary perspective, as the lower moisture content of the figs harvested this way impedes the proliferation of mycotoxigenic fungi and, consequently, the possible presence of mycotoxins.