

The synergetic effects of a recollection and conservation method designed for small producers on the quality parameters of the produced olive oil.

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Abstract

The production of ‘Premium’ olive oil depends in large part of the quality of the fruit. Small producers see themselves confronted with vast investments and logistic snags when they intend to optimize the recollection. Recently manual devices at an affordable price promises less damaged fruit when compared to the traditional picking with nets while the use of a cooling room on the farm might offer a solution when the picking needs to be stretched out over several days. The effects of picking with a manual inverted umbrella, together with a storage up to 14 days at 5 °C was studied, taking into account ten quality parameters of the produced oil during two years and three cultivars: ‘Arbequina’, ‘Picual’ and ‘Verdial’. The results indicate that such a combination guaranteed the best quality end product as compared with any of the three other ones. The strength of each factor, estimated with the omega-square statistic, varied in time and according to the cultivar. ‘Arbequina’ showed to be the most sensible with a rapid increase of the importance of the conservation factor. ‘Picual’ showed to be the most resistant to deterioration with a lower explanatory value of this factor as compared to the picking method. The study indicates that small producers, even under financial and logistic restrictions, can obtain a high quality end product. Either by combining both methods or by choosing the one that guaranties the best results given the cultivar and the specific storage time they opt to take into account.

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Figure 1. Magnitude of strength of the factors recollection and conservation and their interaction for three different varieties (Arbequina, Picual and Verdial), based on the mean of the calculated omega squared (ω^2) values of 10 parameters (FFA, peroxides, K232, K270, oxidative stability, photosynthetic pigments, bitterness index, total polyphenols, α -tocopherols) over a time period of 14 days.

