

QUALITY CHARACTERIZATION OF TRADITIONAL, ITALIAN AND CONICAL PEPPER CULTIVARS

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The province of Almería, southeast of Spain, has more than 30,000 hectares of greenhouse dedicated to the cultivation of vegetables and one third of them are pepper crops. There are different types of pepper, being the Italian and conical elongated peppers, 9% of recent interest in the market is for its high taste quality and different ripening colors. A segment of the market is interested in this same type as traditional non-hybrid cultivars called “cuerno de toro”. The objective of the present study was to characterize the physicochemical and nutritional profile in three cultivars of Italian pepper, three conical cultivars with three colors, red, orange and yellow and one traditional red elongated pepper cultivar. These analyses were performed from three randomly selected fruits for each of the three replications per cultivar. Plants were grown in a Mediterranean greenhouse of the IFAPA “La Mojonera” Research Center, Almería using integrative production management techniques. Methodologies used are supported in the scientific literature and the results were analyzed statistically. Cultivars showed a wide variability for most of the characters studied. The yellow fruits had the highest average

weight of 109.61–122.21 g. In relation to the color, different chroma is obtained, the yellow cultivars showed the highest tone value of hue >58. The pH ranged between 5.08–5.54 and the acidity is 0.18–0.26 g of citric acid/100 g of fresh weight. With significant differences between types and cultivars, all cultivars showed high sweetness standing out significantly with 8.81 °Brix, the red conical type. Total phenolic content was similar between 10.26–12.97 mg eq. gallic acid/g f.w. The orange and conical red and orange Italian fruits showed significantly higher vitamin C content of 84.7–101.17 mg/100 g. The traditional cultivar showed the highest carotenoid content with 4.32 mg/g f.w.

Biography

María del Carmen García García is an Agricultural Technical Engineer from the University of Barcelona, Graduate in Agricultural Engineering and Master in Protected Horticulture from the University of Almería. Current lines of work are organic agriculture and diversification of horticultural crops in the Mediterranean greenhouse.

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