

Title Agronomical performance and fruit quality of early harvesting pear cultivars in Spain
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Abstract

Italy and Spain are the main pear producing countries in the European Union with respective total annual productions of approximately 860000 and 540000 tons, respectively. In Spain, 'Blanquilla', 'Conference', 'Ercolini' ('Coscia') and 'Dr Jules Guyot' are the four main cultivars, the last two being summer harvesting cultivars. Due to its geographical location, Spain has an advantage in the production of early, or summer, cultivars for both national and European markets. Some new early cultivars have been obtained in recent decades, mainly in Italy and France. Eleven of these were tested between 1994 and 2006 in Catalonia (NE Spain) where pear cultivation is important. Some of these cultivars were particularly interesting as they offered the opportunity to diversify the rather limited number of cultivars currently cultivated. Blooming periods ranged from three days before 'Ercolini 6079', an early blooming cultivar, to the late blooming 'Dr J Guyot 6098', both could be considered reference cultivars. Early blooming was recorded for 'Precoce di Fiorano' while the last cultivar to bloom was 'Carmen'. The harvest period ranged from June 22nd ('Delbard Premiere') to August 9th ('Superred'). Early yields were obtained with 'Turandot', 'Carmen', 'Dr J Guyot 6098' and 'IGE-2002', whereas 'Norma' and 'Superred' were the least precocious. Based on fruit size, 'Carmen' and 'Norma' provided good values, when compared to 'Ercolini-6079'. Late in the season, 'Dr J Guyot 6098' and 'IGE-2002' were similar in terms of appearance, but 'IGE-2002' exhibited superior eating quality (a less gritty texture) and greater precocity. Fruit quality parameters showed differences among cultivars: high soluble solids contents were registered with 'Precoce di Fiorano', 'Carmen' and 'Norma', whereas 'Carmen', 'Norma' and 'Turandot' provided fruits with high acidity. 'Superred' is a very red, brightly coloured cultivar, with good size and medium eating quality, but like 'Delbard Premiere', it is susceptible to internal breakdown. Based on fruit texture, juiciness and aroma content, the best eating quality cultivars were 'Ercolini 6079', 'Tosca' and 'Carmen'.