

Title In ovule culture success as affected by sugar source and fruit storage duration in nectarine
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Abstract

Green [*Prunus persica* (L.) Batsch] fruit from two nectarine cultivars was collected, and within a week of harvest and then again three weeks later, ovules with small immature embryos (1.5 to 2.4 mm in length) were extracted from the fruit and cultured in Stewart and Hsu Medium with 1% activated charcoal and a sugar source of either 6% sucrose, 6% fructose, or a combination of 3% sucrose and 3% fructose. These were cultured in the dark at 25°C for 4 weeks in ovule at which time the viable embryos were cultured in Woody Plant Media with 2% sucrose. After 10 weeks in a cold room at 4°C, the embryos were removed and placed under lights at a temperature of 18°C. The plants were rated for their shoot and root growth after 2 weeks under the lights. There were no differences observed among the carbohydrate treatments in either top or root growth although in general the 6% sucrose and the 3% sucrose-3% fructose treatments had more or equal embryo growth and better survival than the 6% fructose treatment. In addition, the 3 week storage period had a large detrimental effect on both embryo growth and survival.