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Somatic Embryogenesis from Immature Cotyledons of Some European Chestnut (Castanea sativa Mill.) Cultivars

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Abstract: In 4 European chestnut (Castanea sativa Mill.) cultivars ('Haciibiş', 'Karamehmet', 'Osmanoğlu' and 'Sarıaşlama'), somatic embryogenesis from immature cotyledons of open-pollinated seeds collected 5, 6, 7, and 8 weeks after anthesis and cultured on Driver and Kuniyuki walnut (DKW) medium was determined in this study. The percentage of embryogenic cotyledons and the number of embryos per embryogenic cotyledon were recorded at the end of the second subculture. The results showed that the highest percentage of embryogenesis ranged from 40% to 70% and the number of embryos per embryogenic cotyledon varied from 4.04 to 7.70 among the cultivars. Cotyledons collected 5, 6, and 7 weeks after anthesis were the most embryogenic.

Key Words: Chestnut, Castanea sativa Mill., somatic embryogenesis

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