



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**Investigations on the Possibility to Obtain Mal Secco (*Phoma tracheiphila*
Kanc. et Ghik.) Resistant Varieties Via Protoplast Fusion (Somatic
Hybridization) in Lemon**

Namık Kemal KOÇ, Mukadder KAYIM, Ahmet ÇINAR
Çukurova Üniversitesi, Ziraat Fakültesi, Bitki Koruma Bölümü, Adana-TÜRKİYE
Mustafa KÜSEK
Kahramanmaraş Sütçü İmam Üniversitesi, Ziraat Fakültesi, Bitki Koruma Bölümü,
Kahramanmaraş-TÜRKİYE

 [Keywords](#)
 [Authors](#)



agric@tubitak.gov.tr

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Abstract: Protoplasts were isolated from cell suspension culture of Kütdiken (*Citrus limon* (L.) Burm. f.) and from the leaves of Zagara Bianca lemon (*Citrus limon* (L.) Burm. f.) varieties, and fused by using 40% polyethylen glycol (PEG: 6000 MW). Fusion products were cultured in the basal MT medium containing 0.6 M sucrose and 250 plants were regenerated from globuler embryos derived fusion products. Out of 250 regenerant plant, 150 plants showed root development out of which 100 plants were observed to have morphological differens from their parent plants. Genomic DNA was isolated for 37 of the 100 morphologically different plants and the DNAs of 12 samples were analysed for Kütdiken and Zagara Bianca specific RAPD markers by using two primers. The electroforesis of DNA samples showed that Kütdiken has 1 and 2, and Zagara Bianca has 3 and 4 specific bands in the case of E09 and P03 primers respectively. Among the twelve samples, only one fusion regenerant produced specific bands for both lemon varieties. Ploidy level of fusion regenerants was measured by flow cytometric analysis, the nuclear DNA contents $2C=0.74-0.78$ pg of the parents were approximately half of the somatic hybrid plant $2C=1.19-1.22$ pg.

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