

**Dağüstü N (2008)** Comparison of callus formation and plantlet regeneration capacity from immature embryo culture of wheat (*Triticum aestivum* L.) genotypes. *Biotechnology and Biotechnological Equipment* 22(3):778-781.

#### Abstract

Seventeen winter wheat (*Triticum aestivum* L.) genotypes were evaluated on the capacity of callus formation and plantlet regeneration from immature embryo cultures. The genotypes tested were: Katia, Pehlivan, Samsun 46, Tahirova, Samsun 526, Adapazarı 562, Ziyabey, Basribey, Bandırma 97, Karacabey, Prostor, Saray Bosna, Marmara 86, Özdemirbey, Samsun-Bafra 333, Ceyhan 271 and Population 311. Immature embryos of 12 - 16 days old were placed with the scutellum upward on a modified Murashige and Skoog (MS) medium containing 1.0 mg 2,4-dichlorophenoxyacetic acid/liter (2,4-D). Shoots and plantlets developed were regenerated by transferring to 2,4-D free medium. Calluses were either compact and frequently embryogenic, or soft and watery. The regeneration capacity was higher on compact callus than soft. The actual percentage callus formation ranged from 2.4 to 100%, depending upon genotype. All the genotypes tested induced callus, 15 had callus with green spots, and 13 regenerated plantlets. Over 250 plantlets were regenerated from callus tissue. The influence of genotype on callus formation and plantlets regeneration “. The genotypes with the high regeneration capacity, as Basribey at 93.3%, Tahirova at 79.7%, and Pehlivan at 79.5% are good biological materials for experiments involving transformation of callus from zygotic immature embryos.