

ANDROGENETIC PLANT PRODUCTION IN LOCAL AND FOREIGN BREAD WHEAT GENOTYPES

K. Z. Korkut¹ I. Bařer¹ (✉) H. Turhan² O. Bilgin¹

¹) Trakya University, Tekirdađ Agricultural Faculty of. Department of Field Crops, Tekirdađ, Turkey.

²) Onsekiz Mart University, Faculty of Agricultural, Department of Field Crops, anakkale, Turkey.

ABSTRACT

In the research, Atilla-12, Sana, Bezostaja-1, MV-17, Saraybosna, Seri-82, MV Tamara bread wheat cultivars and 18 bread wheat lines selected from CIMMYT nurseries which found promising for the region were used as plant materials. Anthers were cultured on liquid potato II medium supplemented with 1.5 mg l⁻¹ 2,4-D, 0.5 mg l⁻¹ kinetin and 80 gl⁻¹ maltose. 190-II medium was used for plant regeneration.

The aim of the study was to determine the responses of seven bread wheat cultivars and 18 bread wheat genotypes to anther culture. Although the callus, albino and normal plant responses of the genotypes were usually low. 23 of the 25 genotypes produced callus. 20 of those 23 genotypes showed organogenesis but the rest three (MV-17, Saraybosna and IBWSN-30) did not. Callus induction percentage based on 300 anthers for each of positive responded genotypes changed between 0.7 % and 27.0 %. ISWYN-30, FAWWON-14 and IBWSN-58 produced more number of normal plants than the others. However, IBWSN-69 did not have number of normal green plants as high as number of calli. Low haploid plant regeneration efficiency of a cultivar could be improved by crossing with a high responsive genotype.

Key Words : Bread Wheat, callus, medium, green plantlet, organogenesis, anther.