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"Gheorghe Asachi" Technical University of Iasi, Romania

THE EFFECTS OF CARBENDAZİM ON DNA DAMAGE AND RETROTRANSPOSON POLYMORPHİSM İN ZEA *MAYS*

Nalan Yildirim[1], Serap Sunar[2*], Guleray Agar[3]

[1]Department of Biology, Faculty of Science, Erzincan Binali Yıldırım University, 24100 Erzincan, Turkey
[2]Department of Pharmaceutical Botany, Faculty of Pharmacy, Erzincan Binali Yıldırım University, 24000, Erzincan, Turkey.
[3]Department of Biology, Faculty of Science, Ataturk University, 25240 Erzurum, Turkey

Abstract

Carbendazim (CBZ - methyl 2-benzimidazolecarbamate) is used widely in agriculture against fungal diseases. We aimed to determine the effects of CBZ(0, 0.1, 0.2 and 0.4 mM) on LTR Retrotransposon Polymorphism and Genomic template stability (GTS), DNA damage using Inter-Simple Sequence Repeats (ISSR) and Inter-retrotransposon amplified polymorphisms (IRAP)marker techniques. Our results showed that all doses of CBZ compose retrotransposition polymorphism. In additional, our result showed that all CBZ treatment decrease Genomic template stability (GTS) and DNA damage increased. These results suggest that carbendazim, widely used in agriculture, can influence unfavorable growth and development of both target and non-target organisms and impend risk to organisms even in trace levels.

Key words: carbendazim, DNA damage, Genomic template instability, IRAP, ISSR

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* Author to whom all correspondence should be addressed: e-mail: ssunar@erzincan.edu.tr