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DETERMINATING THE LETHAL DOSE 50 DL AT SOJA (*SOJA HISPIDA L.*) UNDER THE INFLUENCE OF THE CHEMICAL MUTAGENE INDUCTED IN VITRO

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SUMMARY

To compare and appreciate the sensibility at mutagen agents the lethal dose DL50 must be used. To appreciate and compare the sensibility at mutagens agents at plants it used the DL50, generality considered the critical dose, to which 50% of the treated individuals survive and get to maturity. The doze of chemical mutagens agents oscillates depending of the concentration of the mutagen solution for the same time of treatment.

The used material was composed of soya seeds of the types Diamant and Agat. As mutagen substances two alkylating agents have been used: DE=diletil sulphate and DM=dimetil sulphate in two concentrations introduced in an aseptic environment.

Following the effects of different concentrations, it can be observed that a strong contribution of the mutagen agent determines a pronounced lethality of the plants, while a weaker concentration will reduce the incidence of the obtained mutations, which could have a healthy effect upon the variability of the biological material.

The obtained results underline the decrease of the neoplants viability, conditioned by the genotype and of the concentration of the used mutagen agent. DL50%, in the both used genotypes, is situated to a concentration of 0,2 ppm as in the case of using as mutagen agent DE (diletil sulphate) the no. of viable plants being of 54% at Diamant and of 56% at Agat type. The obtained results show a slight difference between the percentages of viable explants between genotypes with superior values at Agat.

Under the aspect of the second used mutagen agent (DM) (dimetil sulphate) appropriate values of DL50% are done in the both cases of studied genotypes, at a 0,2 ppm, respective 58% viable neoplants at the Diamant type and 50% viable explants at Agat type.

In this case is obvious the similar behaviour at the two studied types.

Out of the dates presented in the two charts results that DL50% in the cases of the two types of soya is situated at the level of variants v_5 and v_6, (0,2 ppm, respective 2,0 ppm), concentrations which will be used during our experiences.

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