



P54 : AN INVESTIGATION OF THE EFFECTS OF CATIONIC, ANIONIC AND NONIONIC SURFACTANTS ON GERMINATION RATES OF TRITICUM AESTIVUM L

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In this study, the effects of different concentrations of a cationic surfactant (CTAB) cetrymonium bromid, cetyltrimethylammonium bromide, hexadecyltrimethylammonium bromide (CTAB), an anionic surfactant sodium dodecyl sulphate (SDS) and a nonionic surfactant Triton X-100 on germination rates of *Triticum aestivum* L. are observed. Surfactants are compounds that lower the surface tension of a liquid, the interfacial tension between two liquids, or between a liquid and a solid. Detergents, wetting agents, emulsifiers and solvents are in the group of surfactants. They are frequently used in formulation and spray application of foliar-applied agrochemicals to improve performance of the active ingredient in crop production. In this study; the effects of a cationic, an anionic and a nonionic surfactant with 1%, 0.5% and 0.25% (w/v) concentration rates at 16 ± 0.5 °C laboratory conditions on germination rates of (*Triticum aestivum* L.) wheat are determined. According to previous studies it is determined that cationic surfactants are more toxic than the nonionic surfactants on root lengths of wheat and leaf morphology of wheat. However in this study, nonionic surfactant Triton X-100 made the most toxic effect on wheat germination rates. It is observed that, anionic surfactant made less toxic effect and the cationic surfactant (CTAB) made stimulatory effect according the control group.

Keywords: anionic, cationic, nonionic, toxic effect, wheat