



Effects of Lead ($PbCl_2$) Stress on Germination of Lentil (*Lens culinaris* Medic.) Cultivars

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Abstract: Heavy metals in soil, water and air are cause of pollution. They are one of the most important environmental pollutants and reaching dangerous amount requires more research. This study was conducted to investigate the effects of lead ($PbCl_2$) stress on germination of different lentil cultivars. Seeds of four different lentil (*Lens culinaris* Medic.) cultivars (Firat-87, Sakar, Seyran-96 and Yerli Kırmızı) were placed in the temperature adjustable germination cabinet at 15°C with 10 different lead solutions (Control, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0 and 4.5 mM) and germination percentage, mean germination time, vigour index, plumule length and radicle length were observed. Lead concentrations showed negative effect on germination percentage, mean germination time, vigour index, plumule length and radicle length. Lead concentrations decreased germination percentage, vigour index, plumule length, radicle length and increased mean germination time. Firat-87 cultivar was determined to be more sensitive to lead pollution. On the other hand, Yerli Kırmızı cultivar compared to other varieties was found to be relatively resistant to $PbCl_2$.

Key Words: Lentil (*Lens culinaris* L.), $PbCl_2$, germination, vigour index, plumule and radicle length

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