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*Irrigation Water Salinity and Its Effect on Early Plant Growth*

Irrigation water salinity is the leading contributor to soil salinization, which is a significant environmental issue experienced in Colorado and in other semi-arid to arid climates worldwide. *Irrigation Water Salinity and Its Effect on Early Plant Growth* is a study of the reaction of young plants to saline irrigation water. Four different sources of irrigation water were applied to three different crops grown from seed in a test garden setup. To determine the effect of irrigation water on the plants, the number of plants germinated was recorded daily and the height of each plant was measured after 25 days and 32 days. Each water sample was tested for sodium (Na<sup>+</sup>), conductivity, and total dissolved solids, which are common measurements used to describe the salinity of irrigation water. A correlation was found between the salinity of the water samples and health of the plants as determined by height, germination rate, and the percentage of seeds germinated. A conclusion drawn from this project is that seed germination is negatively impacted by increasing levels of salinity in irrigation water, which could lead to decreased crop yields.