# Drought Resurrection: A Novel Method to Induce Drought Resistance in Plants

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Drought is a severe dilemma in both the developed and the developing world. Water scarcity causes desiccation and makes it difficult to cultivate vital plants. This study investigated the potential usage of resurrection plant Selaginella lepidophylla (SL) to reduce water usage and mitigate drought stress in wheatgrass during drought. 0%, 0.5%, and 1% SL concentrations were given to plants subjected to drought and compared to non-stressed plants. Height, leaf temperature (to be compared to air temperature), and chlorophyll concentration were measured. Two such experiments were conducted, and both showed that 0.5% SL grew the tallest in comparison to the non-stressed group. Additionally, it was shown that 0.5% and 1% SL groups were the least stressed based on leaf temperature, at times even less stressed than the No Stress group. The 0% group was consistently the most stressed of the four groups. The chlorophyll concentration measurement showed the 0.5% SL was very close to the No Stress group, followed by 1%. The 0% group had a very low chlorophyll concentration. The overall trend shows that 0.5% is more effective than 1%. This study's results showed that a medium concentration of SL is effective in conserving water while increasing growth and chlorophyll concentration and mitigating drought stress. SL could possibly be made into a cheap, effective product that could be distributed to many drought-stricken regions to conserve water.

**Awards Won:**