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*How Acidic Mine Drainage Affects Plant Growth*

Mining is an essential part of American society, however, when heavy metals left in mines combine with rain water, acidic toxic water forms. In 2015, this water was accidentally released from the Gold King Mine in Colorado causing heavy metals to become present in farm irrigation water. If plant health is visibly impacted by such toxins, crops may be disposed of; if not they may be consumed by humans. What is the effect of toxic mine water on plant growth? It was hypothesized that the growth of pea plants will be visibly, negatively affected by toxins found in acidic mine drainage. This experiment was tested by growing six groups of six plants each for two weeks after germination. Distilled water was used as a control in one group, and concentrations of one, three, five, eight, and ten percent acidic mine drainage was used to water the other groups. Plant heights were measured and compared at the start and end of the treatment period. The averages of the change of heights for each group varied but were very similar; the control group grew the most (average of 8.80 centimeters) and the ten percent concentration grew the least (average 8.12 centimeters). The remaining experimental groups' average growth between 8.80 and 8.12 centimeters was not related to treatment concentrations. Based on the results, the data represents no relationship between the variables. To conclude, the growth of pea plants was not visibly negatively affected by acidic mine drainage, therefore, the hypothesis was not supported.