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Ashes, Ashes, Will We All Grow?

The purpose of this investigation was to determine the effect on the rate of seed germination (days) of a local grass seed when there is ash present in the soil (0%/ 25%/ 50% / 75%). I hypothesized that the grass seeds with the lower to medium range of ash in the soil would grow better than the seeds with higher percentages of ash in the soil because ash can be used as fertilizer, but too much can be suffocating.

The experiment involved placing five seeds in each compartment that contained a certain amount of ash and soil (seven compartments per category) and recording how long it took the seeds to germinate.

The data did not support the original hypothesis. For instance, the hypothesis stated that the seeds with the higher percentages of ash would take longer to germinate than the seeds with lower percentages of ash in the soil. However, the opposite happened. The 75% ash's mean germination time (12.1 days) was less than all of the others, and the 0% ash's mean germination time (17.3 days) was more than all of the others. The 25% ash's mean germination time (14 days) and the 50% ash's mean germination time (13.3 days) also fit in with these findings because the 50% ash's mean germination time was less than the 25% ash's mean germination time.

These findings lead to the conclusion that the amount of ash in the soil does affect the mean germination time.