

Means of Counteracting Salt Damage by Natural Disasters

Japan is a country where many natural disasters occur, such as the Great East Japan Earthquake. This caused great damage to the prefectures of Miyagi and Fukushima, including damage to their soils by high salt levels. Therefore, our motivation was to use plants with high salt tolerance to make use of high salinity soils, while removing salt from the soils at the same time. For our experiments, we used green beans, leeks and radishes. The soils we used were combinations of potting soil and red ball soil, as well as vermiculite and red ball soil. We measured salinity, electrical conductivity and the pH of our soils throughout the experiments. From our measurements, salt absorption by green beans in the vermiculite-red ball soil was observed; the same was true for leeks in the potting-red ball soil. However, the decrease in salinity was minimal. In future experiments, we would like to use our plants in real-life damaged soil and compare the results to the results of this experiment.