Soil Profiles

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We tested if natural disasters had an effect on the micronutrient count in the soil. If we test the following scenarios: forest fire, grassland fire, and blizzards to see how they affect the micronutrients present in the soil, then we predict that the grassland fires will have the most effect on the micronutrients present, because of the reduction of foliation on the soil. To start off testing we gathered our equipment. We used a Soil Probe, Quart-Sized Baggies, a Freezer, CRP fields, and a measuring tape. Samples were taken before and after disasters. In the lab, weigh an amount of soil into a centrifuge tube. The amount of soil tested is depended on extracted concentration so that that the measured amount in instrument is within range of calibration. Then, add 20 mL deionized water, shake or mix to extract micronutrients from soil into a water solution. Centrifuge to separate soil solids from water extract.Withdraw the liquid and filter into a testing vial. Place the vial in an ion chromatograph. Record and repeat steps for each sample that needs to be tested for anions. For cations, follow the same procedure adding .18 molar sulfuric acid to aid in extraction. The Nitrate levels rose 52%, Nitrite fell 28%, Ammonium rose 30% and the Potassium levels rose 73%. Forest fires also had good results. The Nitrate levels increased by 94%, Nitrite dropped 190%, Ammonium rose 157%, and Potassium fell 113%.Plot three, blizzards, had the most negative results. All of the micronutrient levels dropped. Nitrate dropped 338%, Nitrite by 136%, Ammonium by 222%, and Potassium by 333%. In conclusion, the grassland fire had the most positive effect.

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