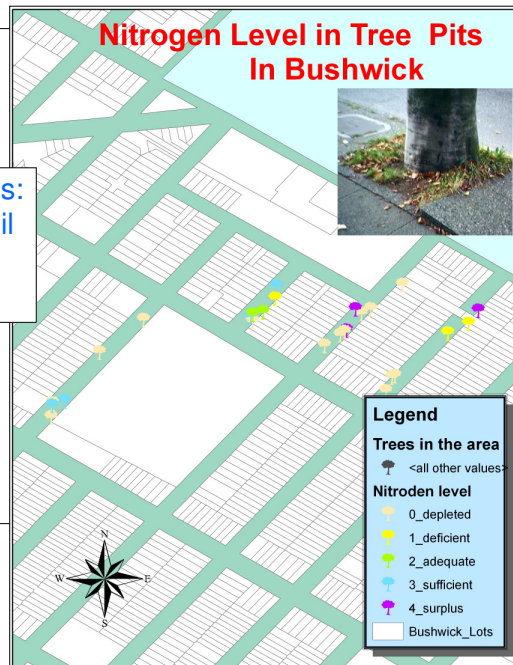


Excavating For Nitrogen

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Initial Observations:
Nitrogen in the Soil
- GIS Map



Soil Fertility (Nitrogen)

- Directly responsible for producing leaf growth and green leaves.
- Deficiency causes yellow leaves and stunted growth.
- Too much causes overabundant foliage with delayed flowering; the plant becomes subject to disease and its fruit is of poor quality.

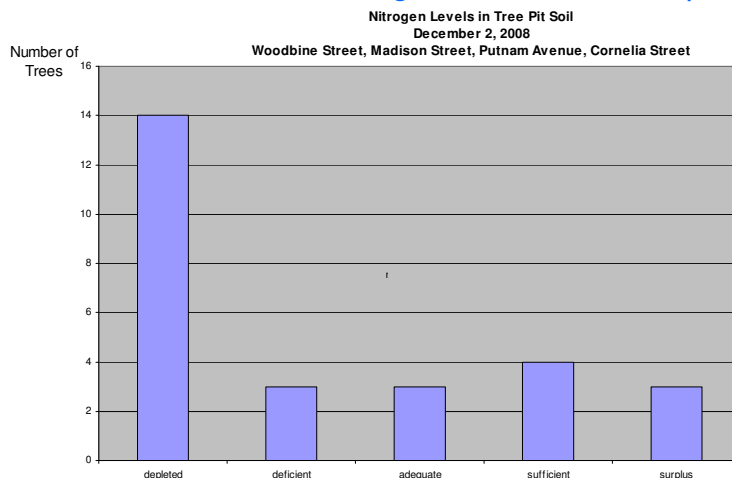
Hypothesis

A plant with more soil can convert and use higher concentrations of ammonia.

Experiment

- 4 plants with different sized pots.
- Test the soil for nitrogen, phosphorus, and potassium first.
- Every two days, add some ammonia mixed with water.
- For 3 weeks.
- Everyday check the plants development.
- Test the soil for nitrogen, phosphorus, and potassium in the end.

Initial Observation: Nitrogen in the Soil - Graph



Predictions

- Every mineral in the plants will deplete except for nitrogen.
- Some plants leaves will become more green and grow, and some plants might not flower.

Initial Research

- Atmospheric nitrogen combines with hydrogen to form ammonia (NH₃).
- Bacteria in the soil combine ammonia with oxygen.
- Ammonia changes to nitrites.
- Bacteria in soil convert nitrites to nitrates.
- Plants absorb nitrates and grow.