

ThinkGreen Experiment Overview

By: Victoria, Grace, Elizabeth



Wild Types

(CS70000) Columbia:

Basic Information:

- Generally sensitive to salt



(CS76164) Landsberg:

Basic Information:

- Genetically modified to grow taller
- More sensitive



How salt affects:

- Causes roots to shorten
- Interruption in water transport causing roots to burn

Mutant: CS(sos1-1, salt overly sensitive)

Our mutant is overly salt sensitive, so it will have a hard time germinating and growing in high saline environments.

NaCl causes potassium deficiency which affects growth.



What Our Experiment Tests

If certain variations of *Arabidopsis thaliana* are more apt to survive in environments contaminated by varying degrees of salt.

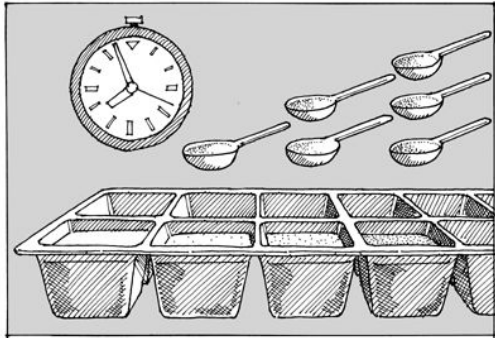


Variables

Independent Variable:

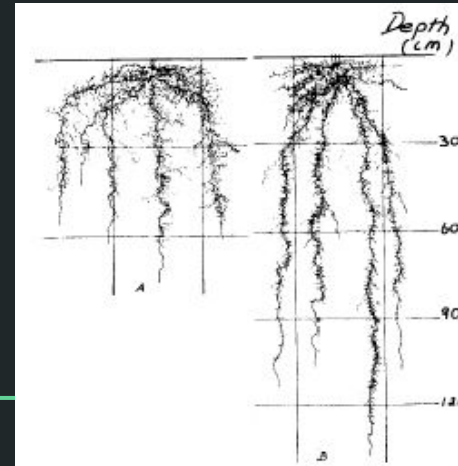
Salt concentration in the water

(Water can't be drawn up through the plant to the correct places because the salt affects the transpiration of the plant).

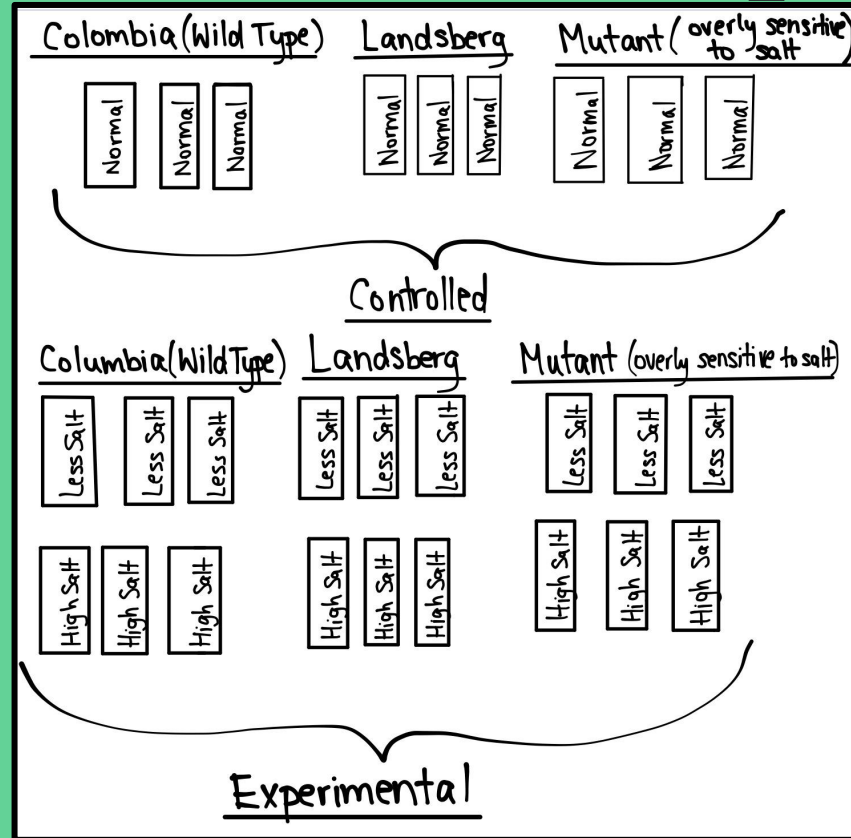


Dependent variables:

- shoot height
- Root length



Drawing of Experimental and Control Setups



Bibliography

<http://www.combio.pl/mirex/> Picture for slide 2(Columbia)

<https://ec.europa.eu/research/press/1999/pr1412en.html> Picture for slide 2
(Landsburg)

<http://www.regional.org.au/au/roc/1984/roc198407.htm> (picture of roots, slide 5)

<http://www.gma.org/surfing/antarctica/salt.html> (Picture of sal concentration, slide 5)

<http://www.gettyimages.com/detail/photo/measuring-arabidopsis-royalty-free-image/518932398> (Shoot length picture)