



Plants are not passive adaptors.
(Mescher and De Moraes, 2015)

INTERACTIONS WITH NON-HUMANS

Spring Onion

Background

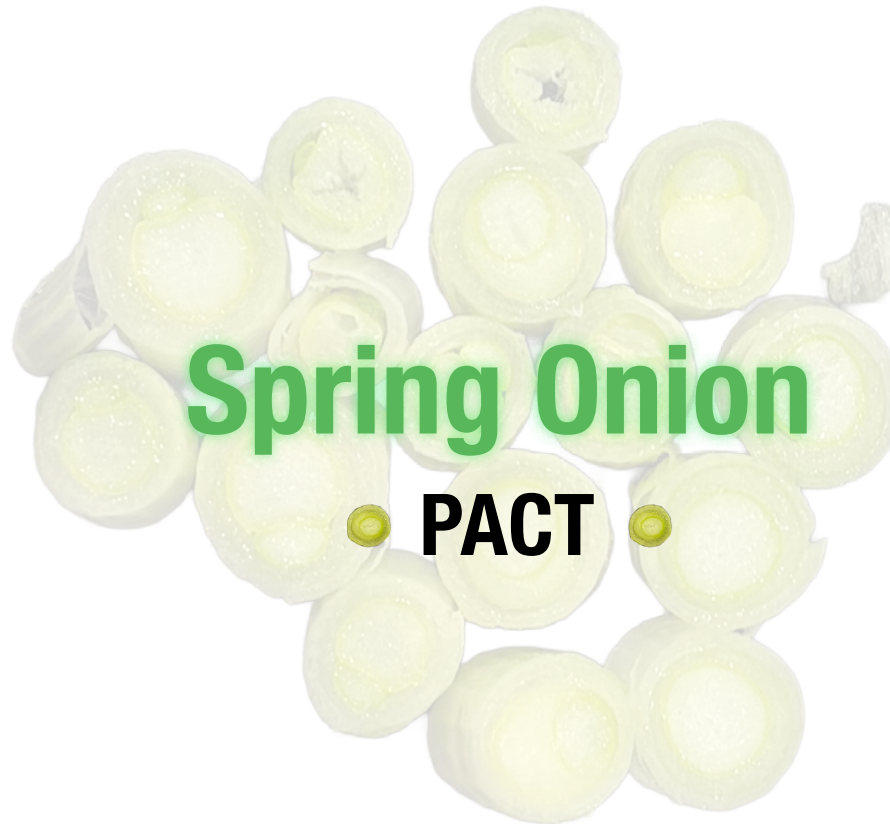
In my family, we have a habit of cutting the green part of the green part and leaving a piece of white part, and then continuing to grow it with water. I also raised a bundle of spring onions. And green onions can also grow without much human intervention.

● PEOPLE

- Spring onion

● CONTEXTS

- Winter
- Water(hydroponics)
- Oxygen
- Supermarket
- In front of the kitchen window
- Limited light



● ACTIVITIES

- Regeneration
- Breathe
- Photosynthesis
- Grow

● TECHNOLOGIES

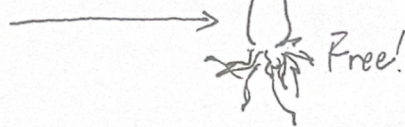
- Ceiling light
- Mineral water bottles

Research

Plant Perception

- light
- Temperature
- gravity
- Touch
- Smell
- Vibration

Spring Onion



Roots are thin and good at ~~absorbing~~ absorbing oxygen

Roots cannot be all in water

Hydroponics → change solution frequently (2-3 days)

concentration is difficult to stabilize fertilization

root loves ~~the~~ dark

roots are ← Soil
thick and sensitive to hypoxic environment

→ Many microorganisms and sufficient nutrition

Root hairs are needed to assist in absorbing water



The root beard skin (grasp the soil)

- Thick
- Hard
- Curved
- Has many bifurcation

- Mechanical Perception (Collision And Sound)
- Chemical Perception
- Olfactory Chemical Perception

- Shallots do not need sunlight at their roots, and the leaves need.
- Water that cannot completely cover the roots (lack of oxygen).
- At first, spring onion will consume its own stored energy, so it needs to be fertilized in time.

Portraits

Needs

- Adequate Nutrients
- Microorganisms
- Oxygen
- Space Water

Dreams

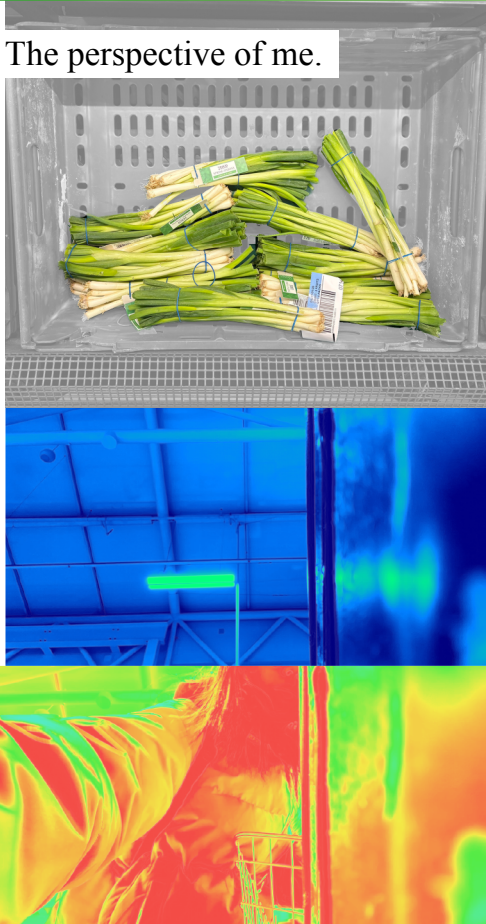
- Not Bound By Rubber Bands
- Adequate Nutrition

Job

- Compensating For Seasonal Gaps In Fresh Produce Supply
- Deworming
- Providing Nutrition
- Flavoring
- Anti-Inflammatory

-Human Interaction Scenarios

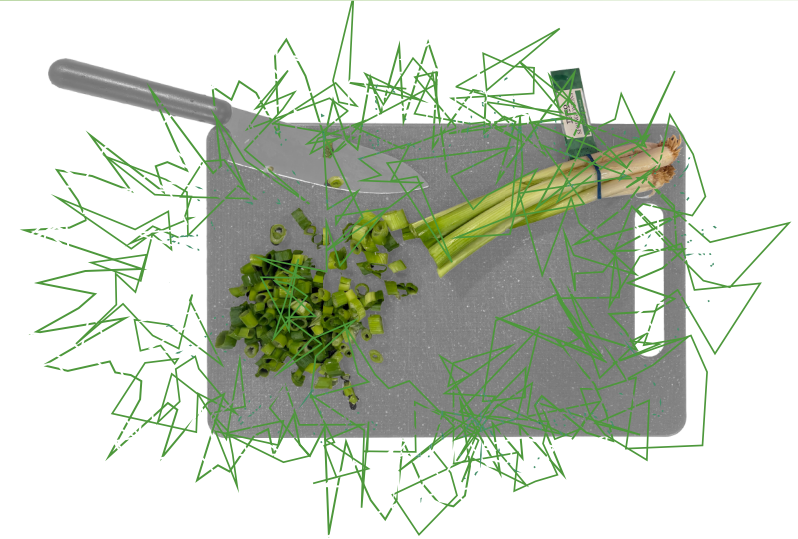
The perspective of me.



The perspective of spring onions.



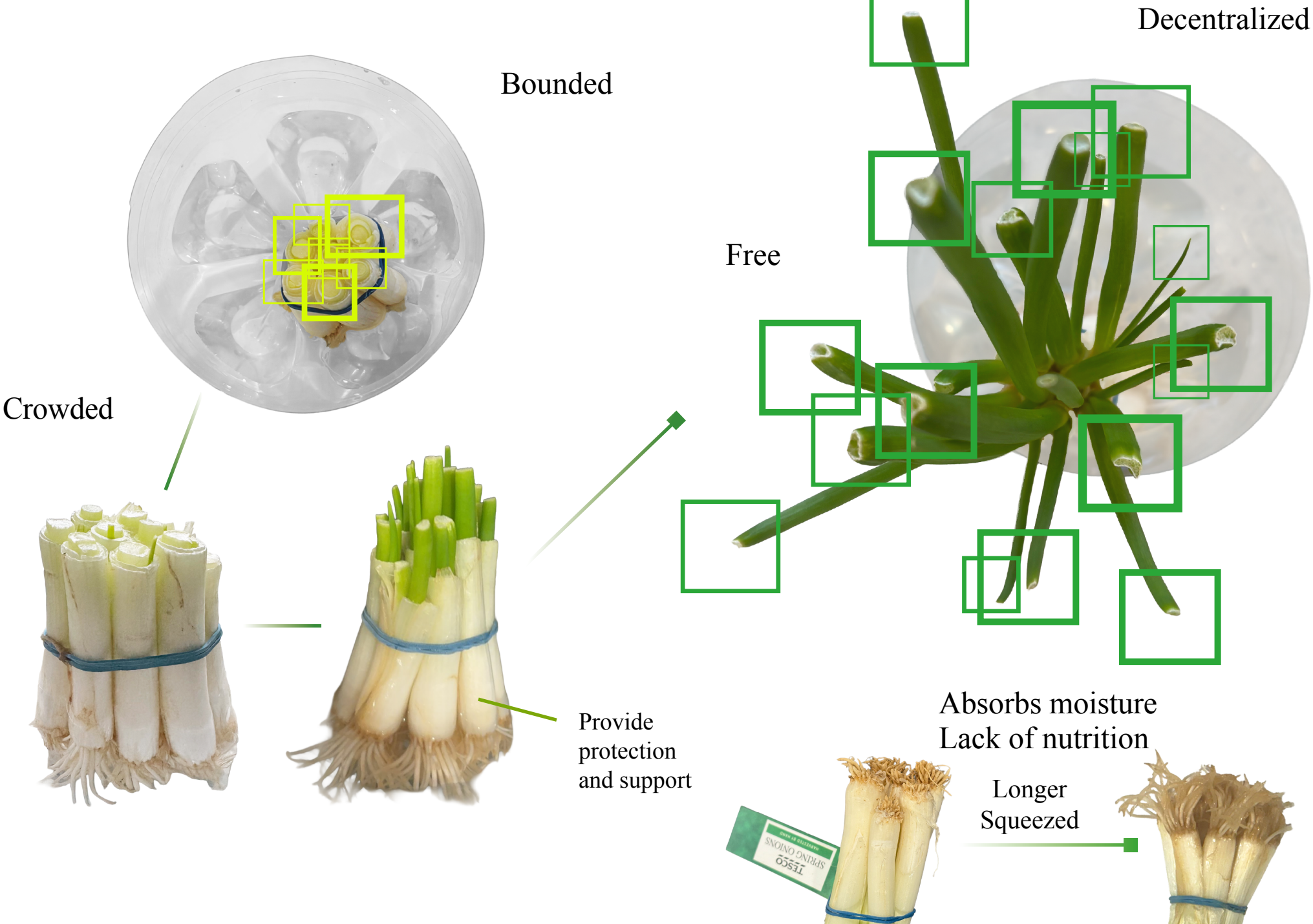
- I remove the label.
- I change the water every two days.



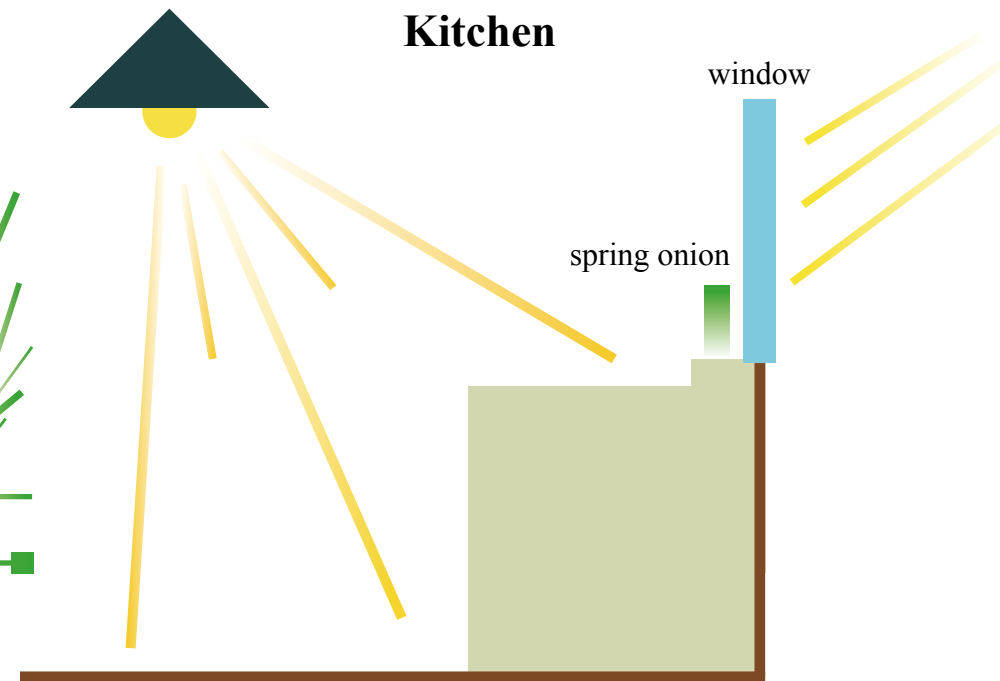
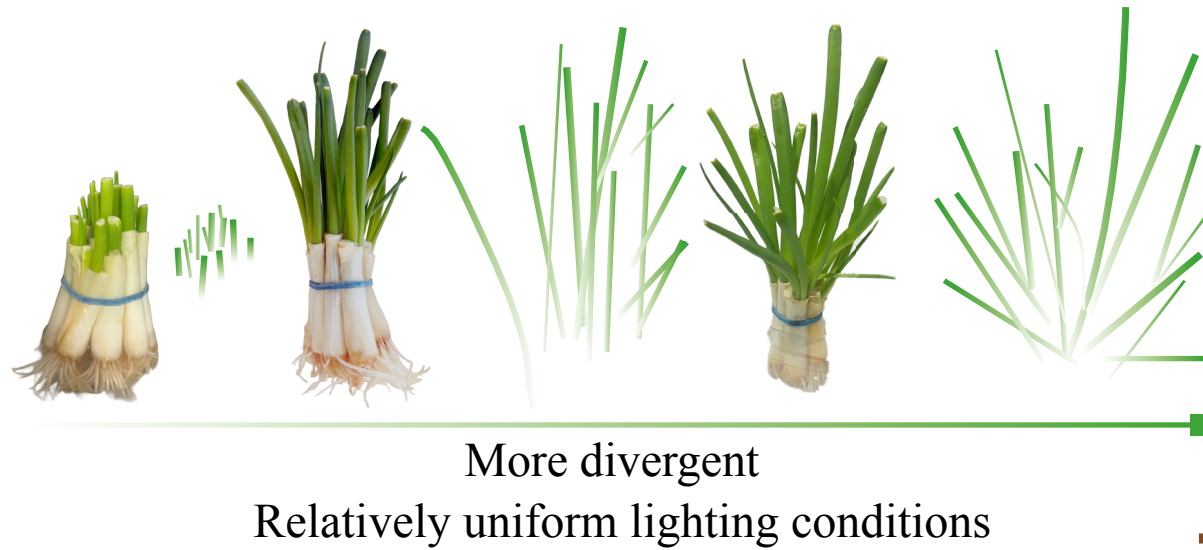
Emitting a pungent odor.



Interaction Scenarios-Nature

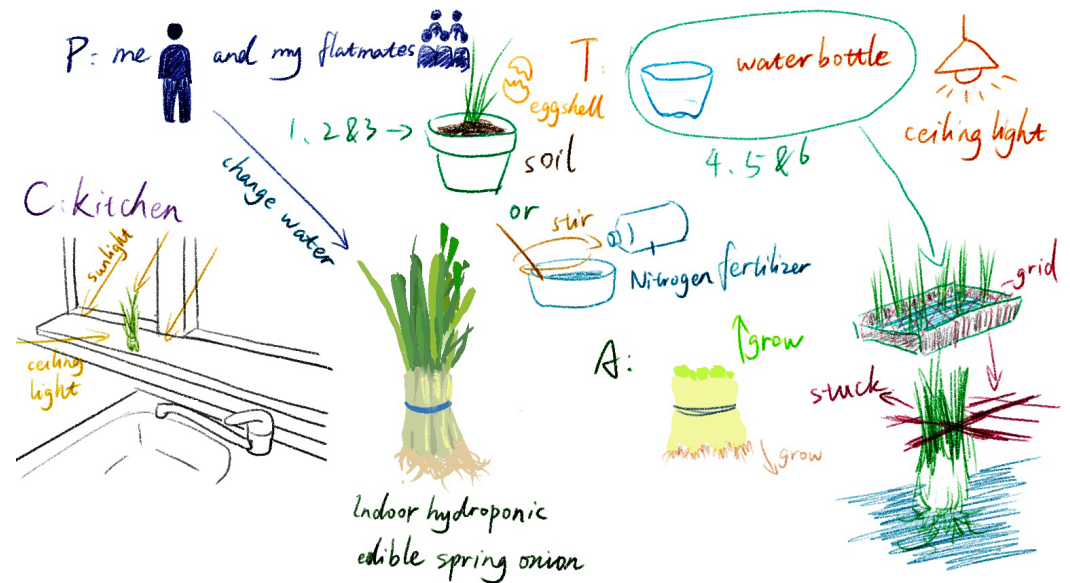


Interaction Scenarios-Nature



Painpoint

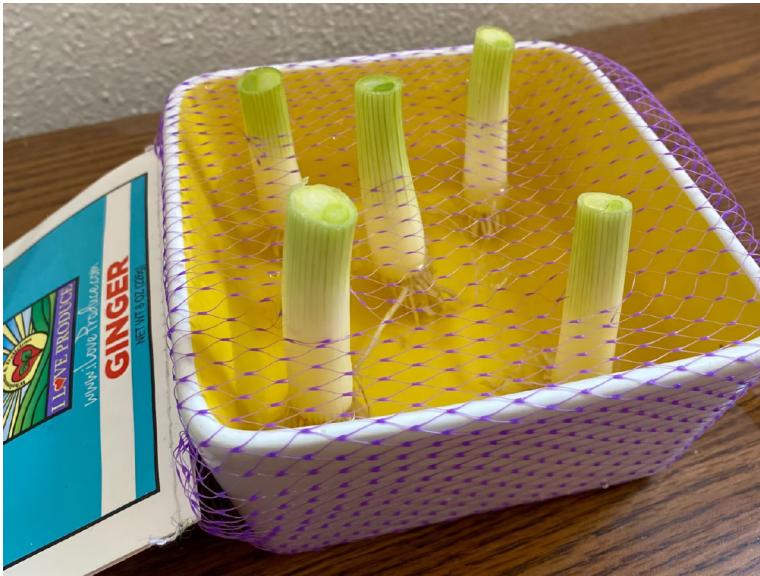
1. Insufficient nutrient supply due to no fertilization;
2. Hydroponic fertilization is difficult to maintain the concentration of the solution, and it is easy to rot the roots;
3. It is not soil culture, so it lacks trace elements;
4. The water level is difficult to control;
5. Rubber band restraint hinders growth, but cannot stand (fixed) without rubber band;
6. The root of the transparent plastic bottle will be illuminated by light.



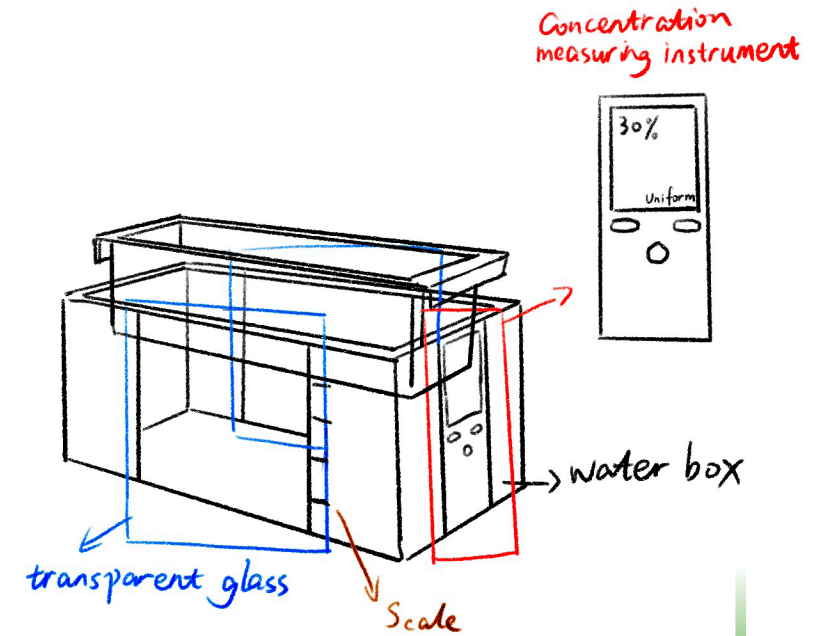
- PainPoint:
1. Insufficient nutrition
 2. fertilization
 3. lack trace elements
 4. water level
 5. Rubber
 6. root ~~transparent bottle~~ light

Outcome

Speculative Prototype



Supportive, spacious but compression
root growth

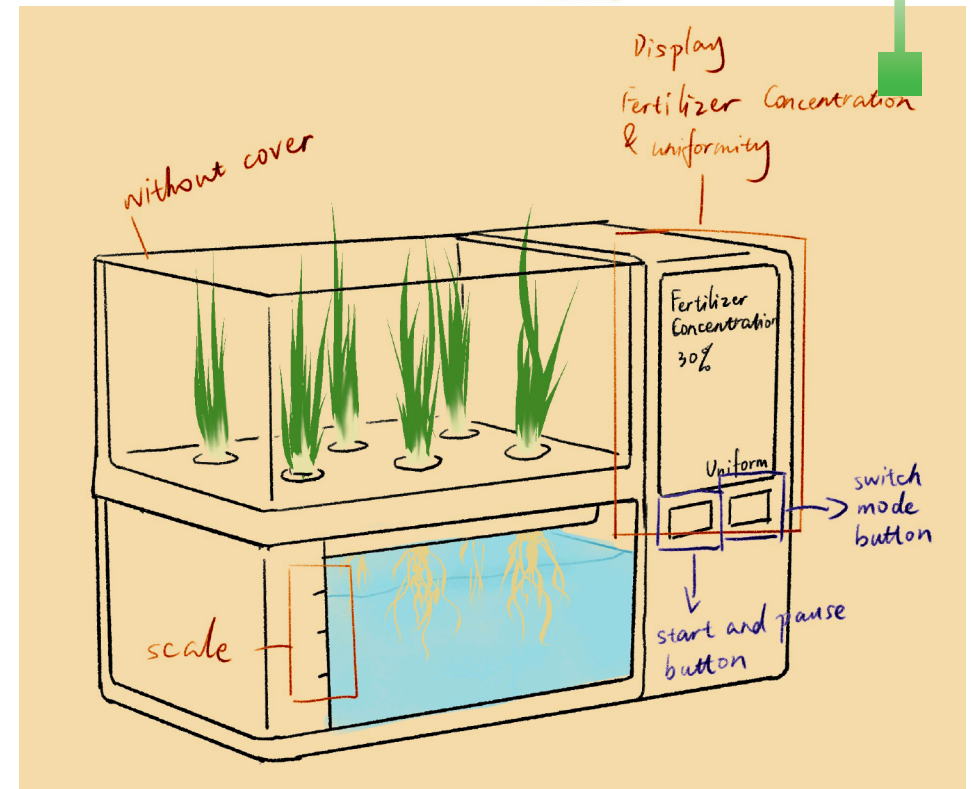


Supportive

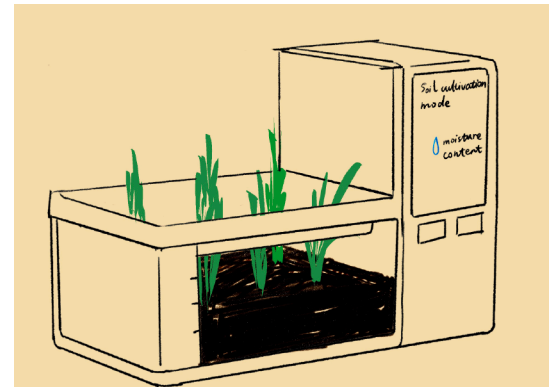
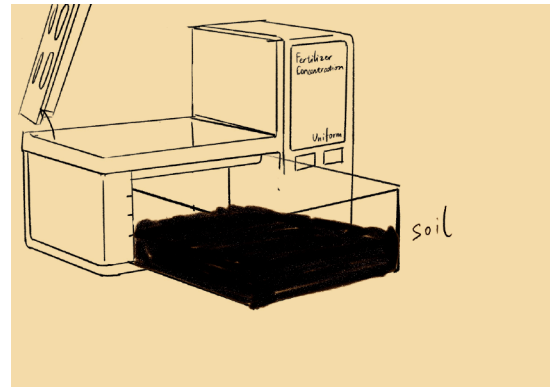
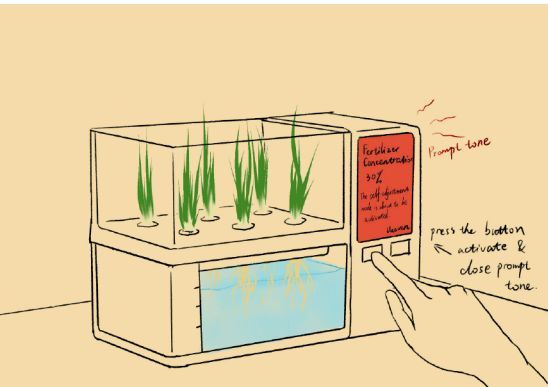
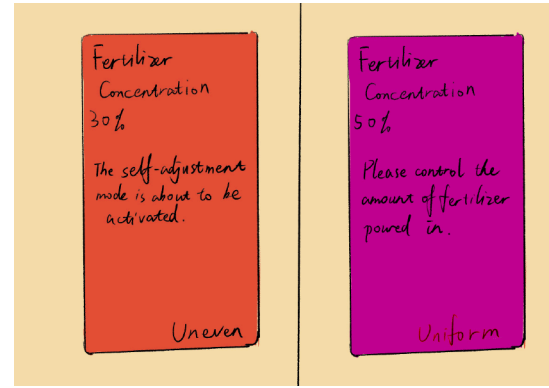
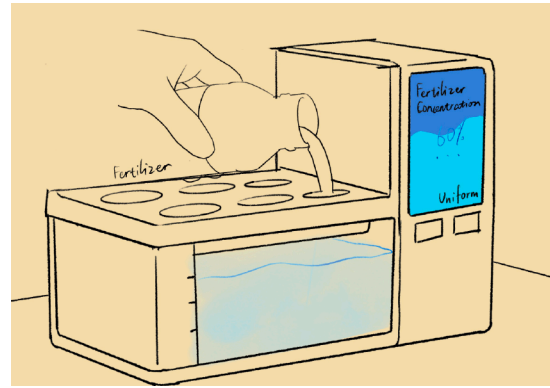
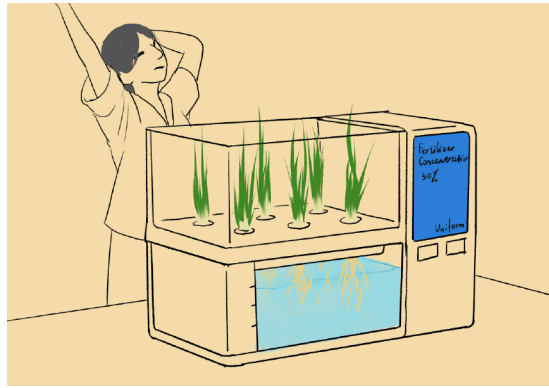
Divided



Separate Water



Storyboard



Spring onion can convey information about whether the growing environment is reasonable through the incubator, and the electronic screen prompt tone is not "criticizing human improper maintenance", but "informing the problem + providing solutions" (automatic adjustment mode), and the design should build a collaborative relationship, not between the manager and the managed. Design is not only a tool for humans to transform the world, but also a coordinator of the relationship between humans and other living beings. Help non-human organisms convey information and form a community for the harmonious development of diverse life.

Reflection

This project made me realize more deeply that interaction is a two-way street. There was a very chaotic period in the production process, and I felt that I had deviated from the main body of shallots while doing it, and turned to the perspective of cultivating people. I found that this is because when using technology, it is necessary to consider not only the experience of using shallots, but also the experience of the people who use this technology, and balance the adaptability of both parties.

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