

# Keep Your Plants Perfectly Hydrated



**rootin**

A wireless soil moisture sensor  
tells you exactly when your plants need water

Background

**Do you have experience  
with indoor plants?**





**My first experience  
as a science project**



Despite my efforts,  
plants kept dying

# Facebook Posts

7:17 ⚡ 🔋 11

plant help

체 게시물 사람 릴스 그룹 페이지 동영상 사진

**Houseplant Central**  
공개 · 멤버 90만명 · 일일 게시물 50개+  
[가입](#)

**Succulents & Propagation**  
공개 · 멤버 60만명 · 일일 게시물 50개+  
[가입](#)

**House plant care, identification, and support group 🌿**  
비공개 · 멤버 23만명 · 일일 게시물 90개+  
[가입](#)

**Help with House Plants**  
공개 · 멤버 84만명 · 일일 게시물 90개+  
[가입](#)

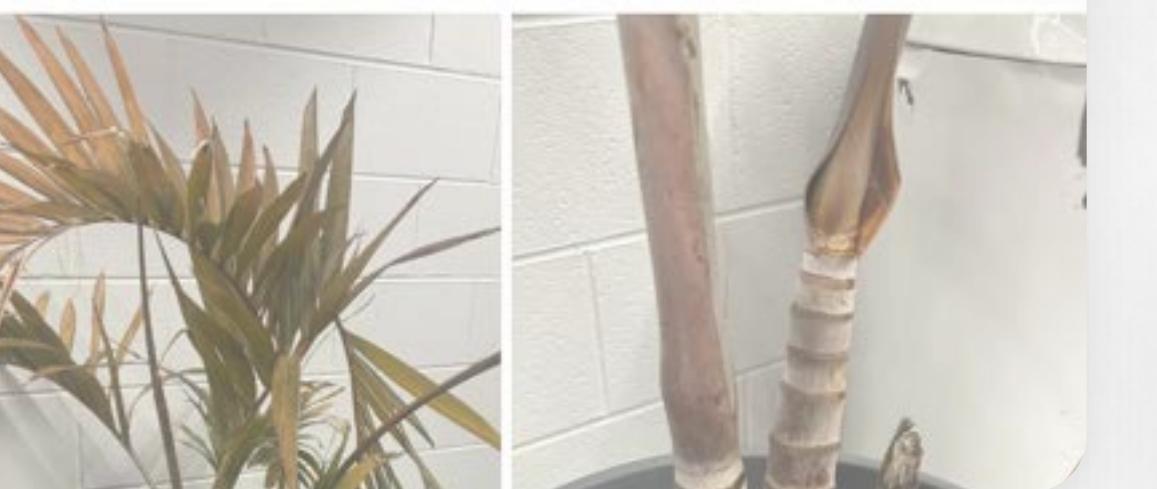
**Plants At Home**  
공개 · 멤버 94만명 · 일일 게시물 30개  
[가입](#)

**Indoor plants caring and guide tips**  
비공개 · 멤버 8.4만명 · 일일 게시물 20개

동영상 친구 Marketplace 알림 메뉴

frost I'm wondering if there's ANYTHING I can do to save it (I didn't do this to it) it was left out by work works management and they said I can take it home if I want it. What can I do to help her I wanted her so bad

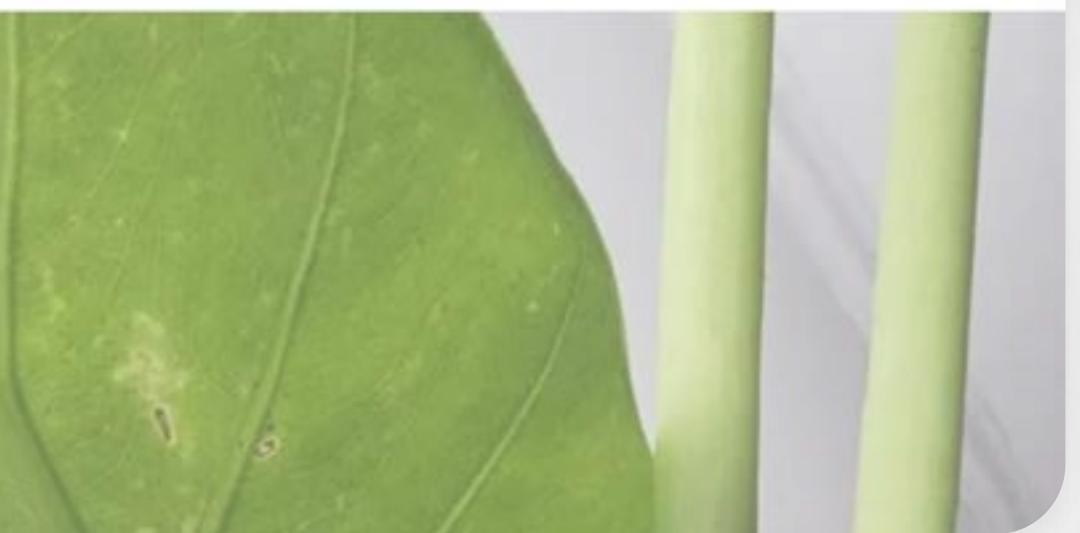
번역 보기



Tchnavia Carter  
10시간 ·

Help! I found little black bugs on Mt elephant ear and don't know what to do. I've tried spraying, clipping, new soil, cinnamon, baking soda water and vinegar. Nothing seems to be working. Can anyone help me??

번역 보기



Heather Brewer  
11시간 ·

Someone help me!! This leaf is falling apart. It feels wet and rotten. Not really happening to the other leaves

번역 보기



Tiffany Mannorind  
9시간 ·

Why is my monstera so veiny? I checked the soil it isn't over watered the other leaves look fine

번역 보기



Jesi McDonald  
46분 ·

Can anyone tell me why my new little leaf on my fiddle leaf fig is coming in spotted?

번역 보기



Brown spots???... is it infected?, need more sun! Advice needed thank you

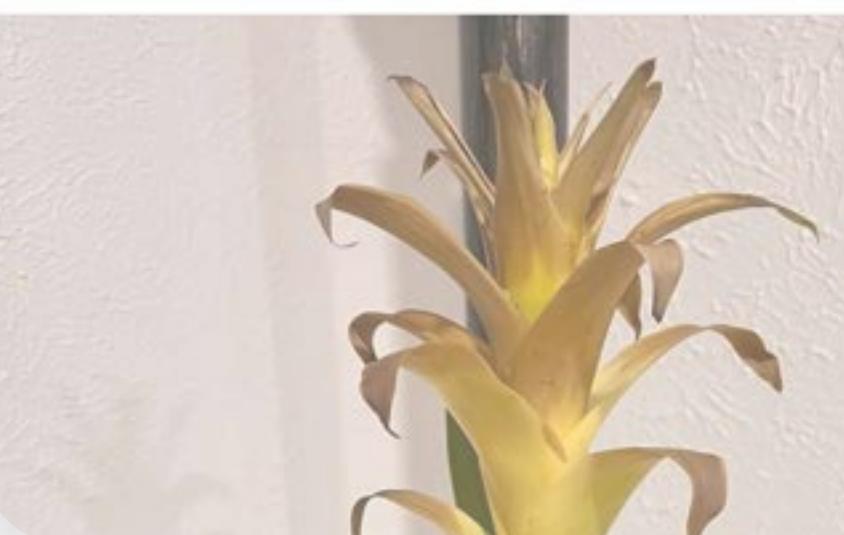
번역 보기



MichaelandWendie Garza  
8분 ·

Hello  
I need your help.  
I put her outside thinking she may like some extra sun. she's brown. How can I fix this.

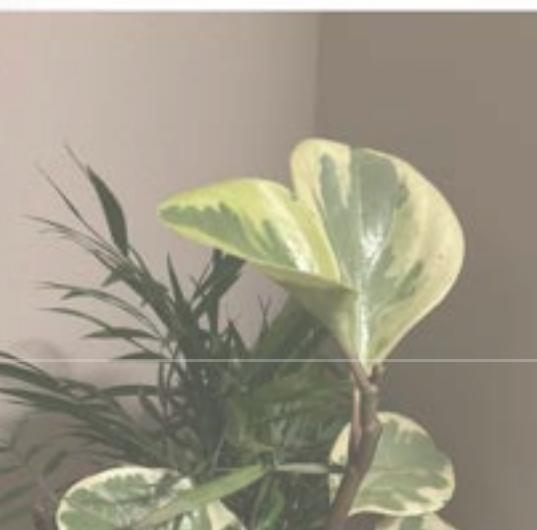
번역 보기



Kiandra Stewart  
14시간 ·

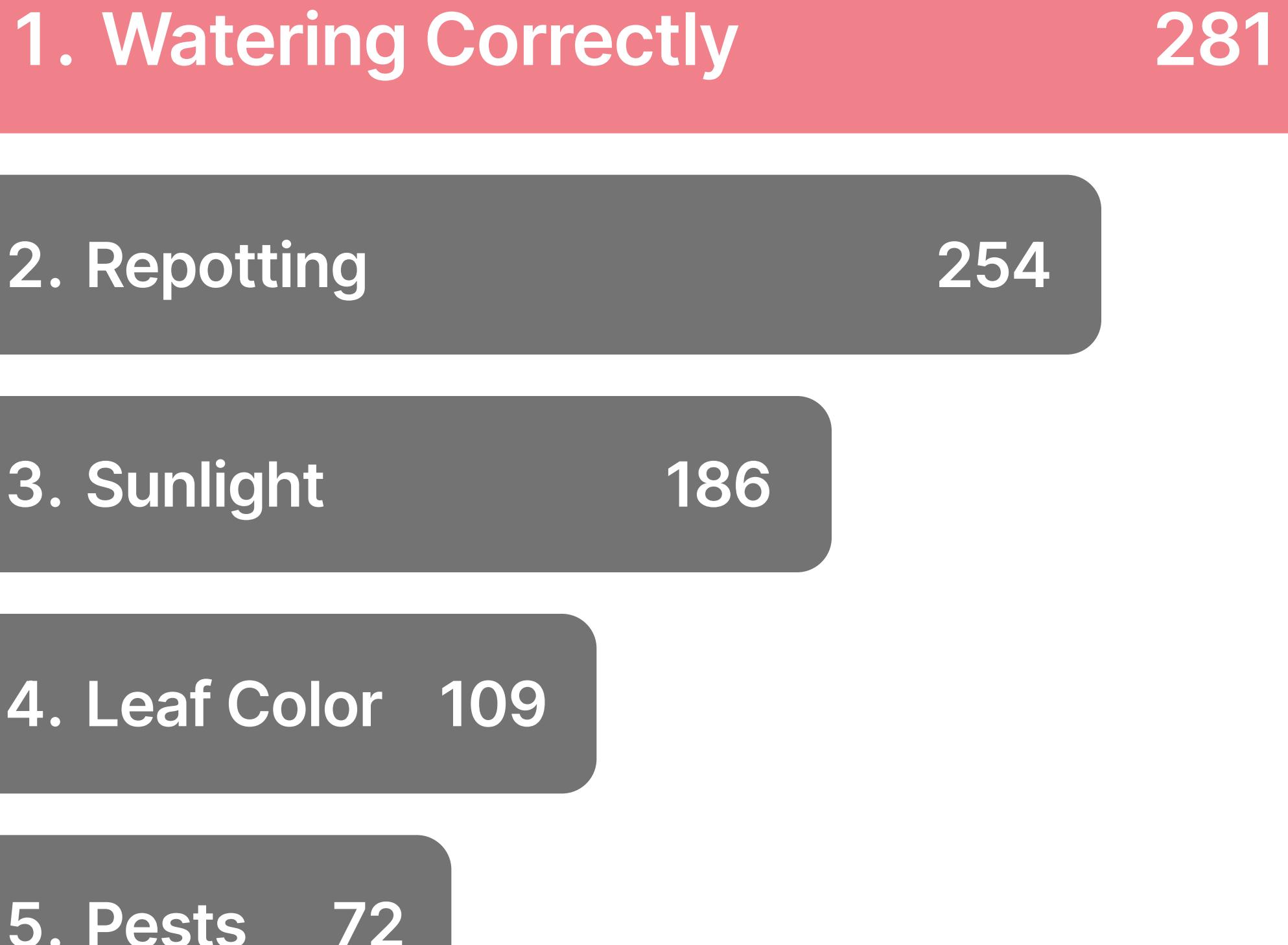
Hello! Would anyone have any ideas as to why this plant would be dropping healthy looking leaves? Its lost 5 over the past week

번역 보기



# The top 5 challenges plant owners experienced

Facebook Plant Groups & Reddit Web Crawling  
(n=1,046 posts, Collected Sep 21-27, 2024)

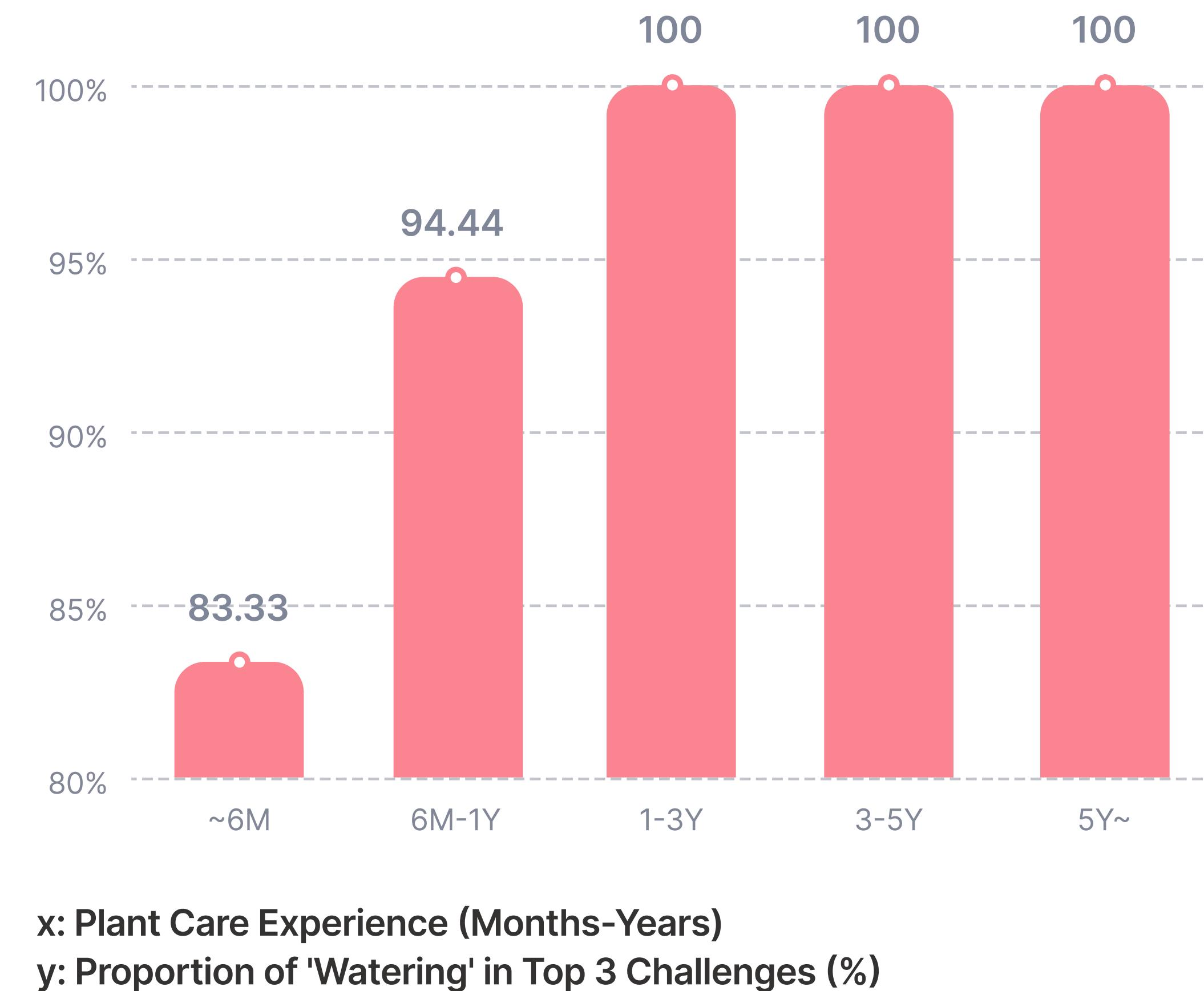


(Category, Number of respondents)

## User Research: Survey

**From beginners to experts,  
'Watering' was the biggest  
struggle**

**Plant Care Survey**  
(n=84, Collected Sep 27-29, 2024)



## User Research: In-depth Interview

# Why is watering so challenging?



In-depth Interviews  
(n=5, Collected Oct 02-18, 2024)



H\*\*\*, Medical Student with 20 Plants

*"I follow general watering advice, but it doesn't always work for every plant. The guilt of seeing one fail really hits me."*



T\*\*, University Staff with 3 Plants

*"I've been busy with work, so I didn't have time to take care of my plant. It was hard to check their condition and care for them myself."*

## Why is watering so challenging?

- Each plant requires a different amount of water
- Knowing the actual soil moisture level is challenging
- Keeping track of watering is difficult due to busy schedules

# Meet Rootin, The Smart Way to Water Your Plants.



## Pain Points

**1**

Different  
watering needs  
of each plant

**2**

Identifying the  
actual soil  
moisture level

**3**

Keeping track  
on watering  
schedules

**4**

Personalized  
guidance and  
diagnostics

## Solutions

**1**

Different  
watering needs  
of each plant



Over 1 billion  
plant data

**2**

Identifying the  
actual soil  
moisture level



Real-time  
soil moisture  
sensor

**3**

Keeping track  
on watering  
schedules



Notifications  
for watering  
schedules

**4**

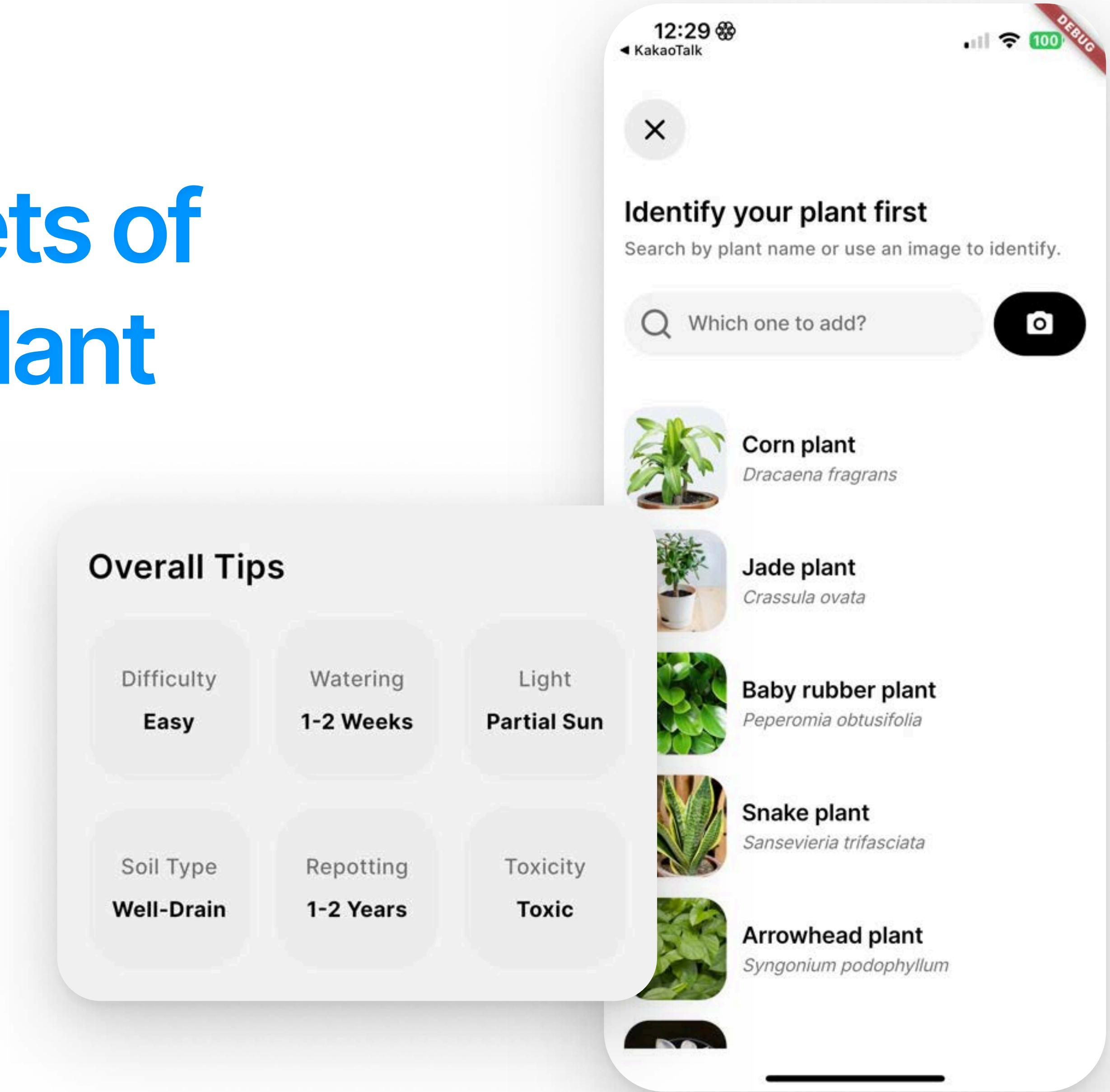
Personalized  
guidance and  
diagnostics



LLM-based  
'Plant AI'  
chatbot

## Solution 1: Wide Range of Plant Data

**Offers over 1 billion sets of plant data including plant names, photos, and overall care tips**

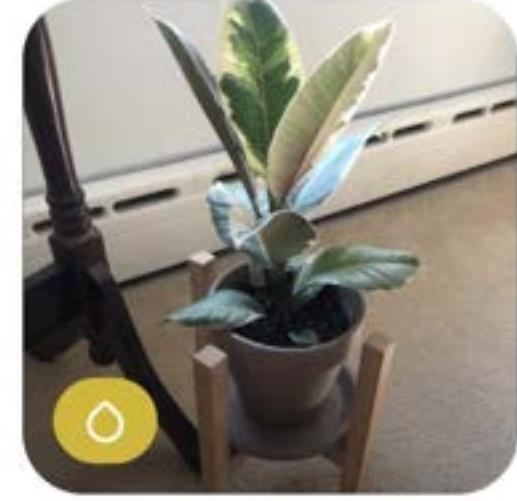


## Solution 2: Real-time Soil Moisture Sensor

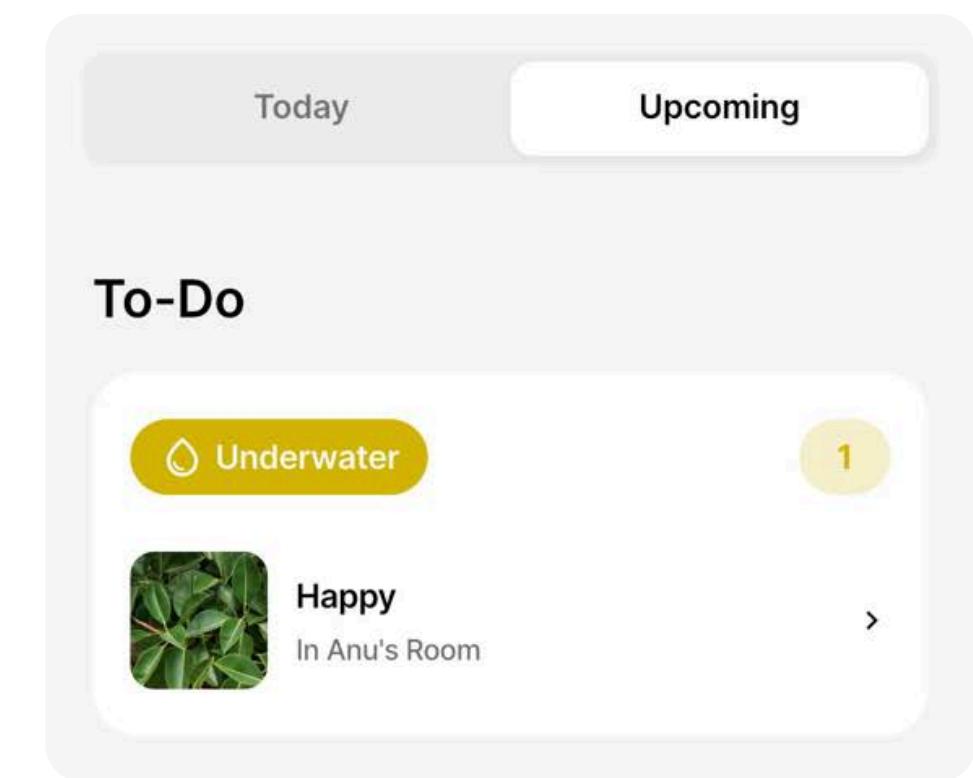
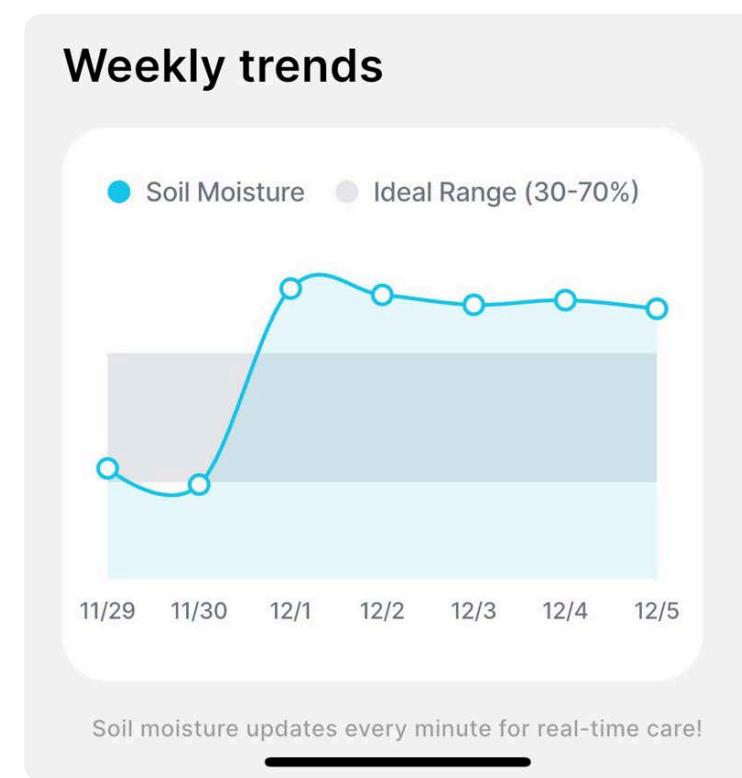
# Rootin's sensor provides:



Pretty  
Monstera Dubia  
In Bedroom



Happy  
Variegated Rubber  
In Bedroom



### Plant Status

Displays the current status of each plant to allow intuitive recognition.

### Real-time Data Graph

Provides the weekly trend of each plant to help track of healthy growth.

### Upcoming Watering

Calculates the upcoming week's watering schedule to help care.

## Solution 2-1: Plant Status

**We classify plant status into four categories:**



**Ideal**



**Underwatered**

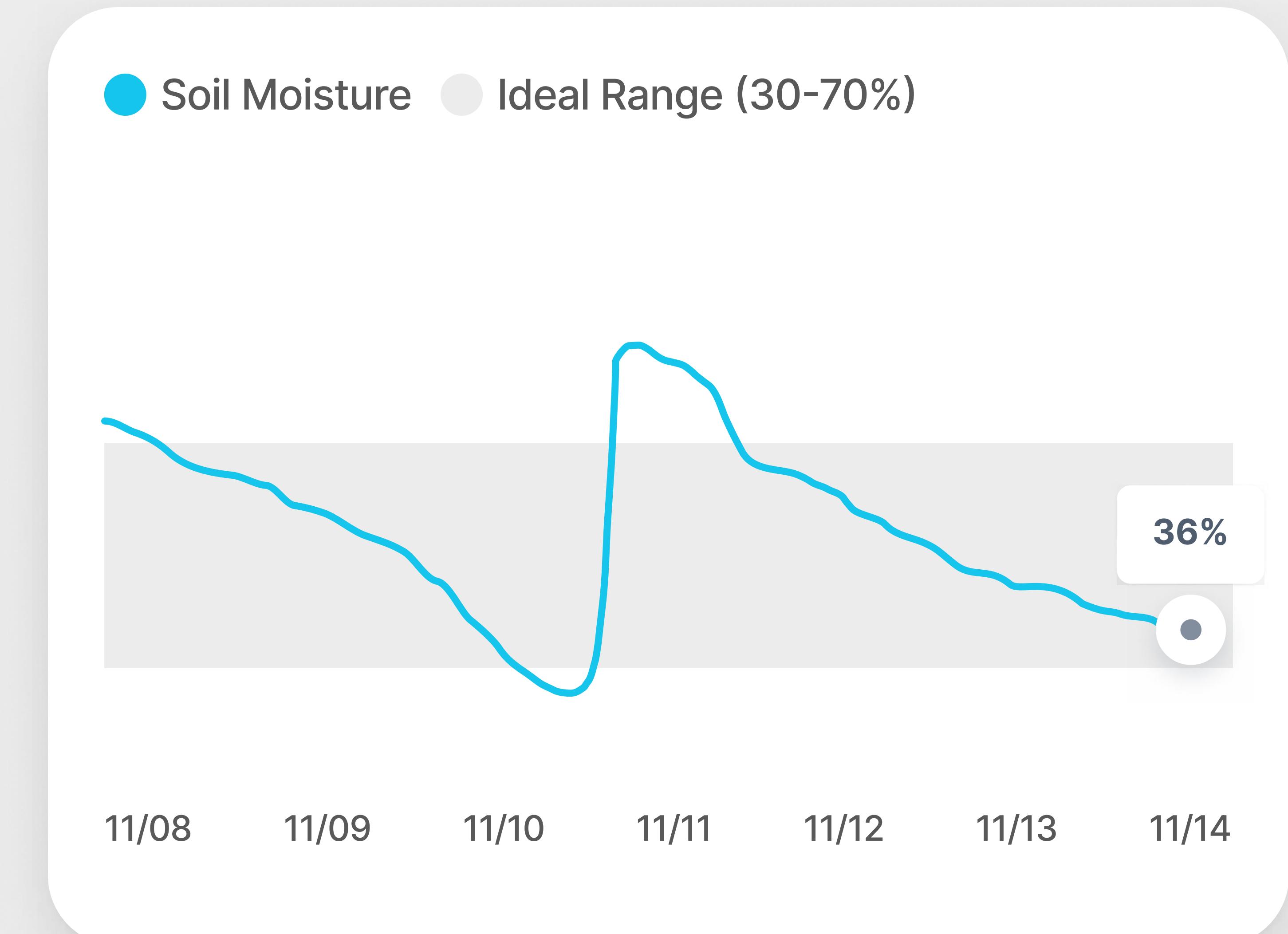
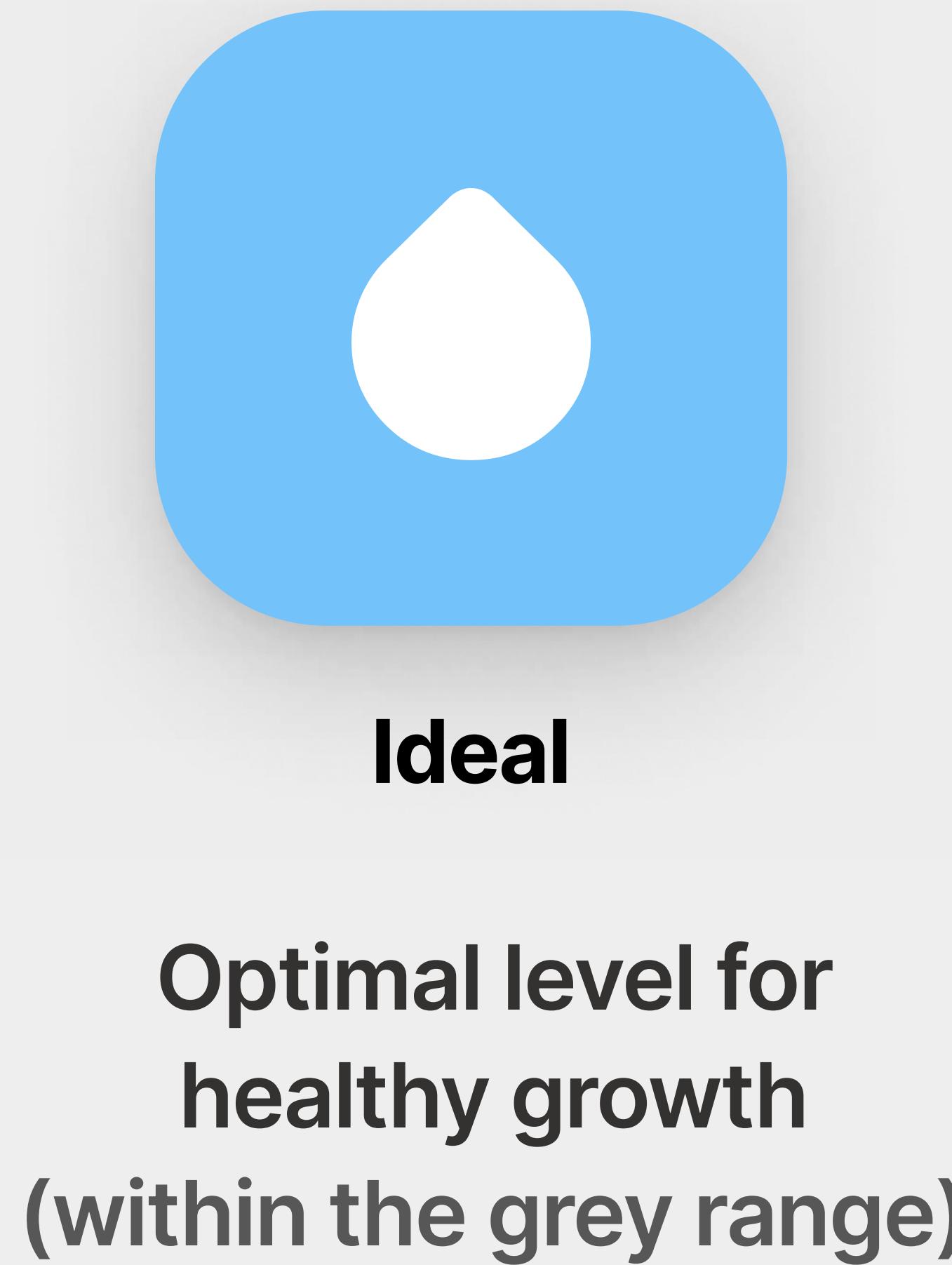


**Overwatered**



**Water-logged**

## Solution 2-1: Plant Status



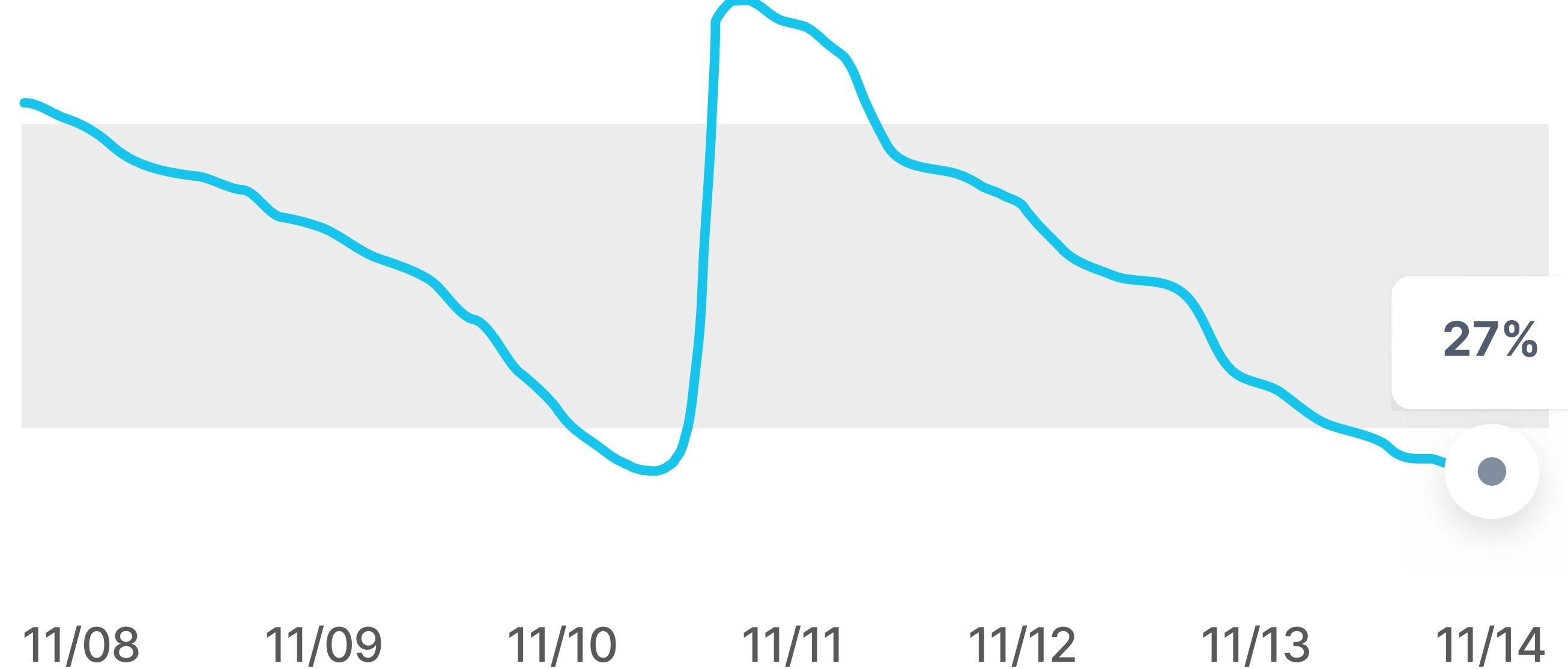
## Solution 2-1: Plant Status



**Underwatered**

The plant is drying out  
and needs watering  
(below the grey range)

● Soil Moisture    ● Ideal Range (30-70%)



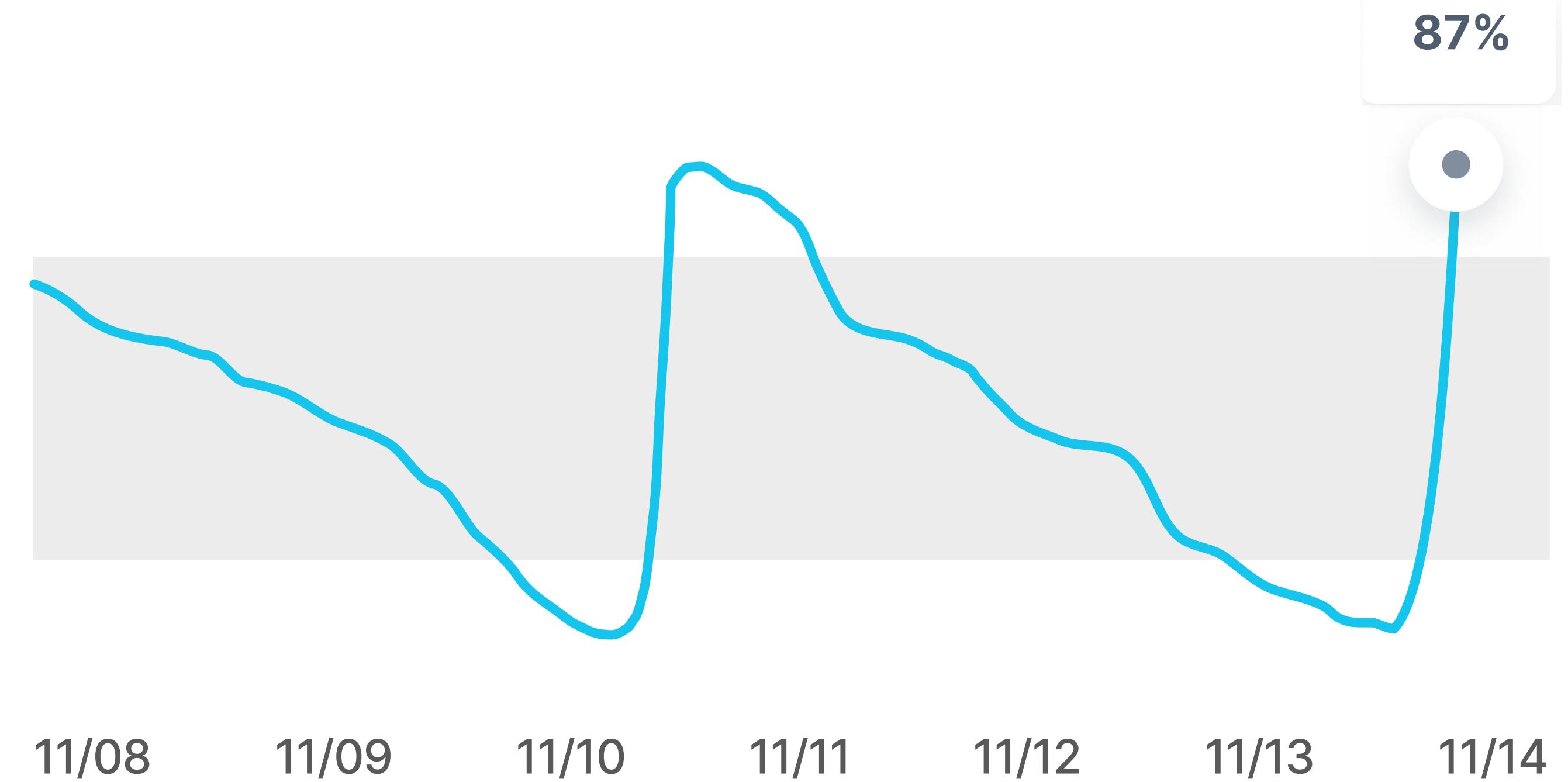
## Solution 2-1: Plant Status



**Overwatered**

Excess water is  
remaining in the soil  
(above the grey range)

● Soil Moisture    ● Ideal Range (30-70%)

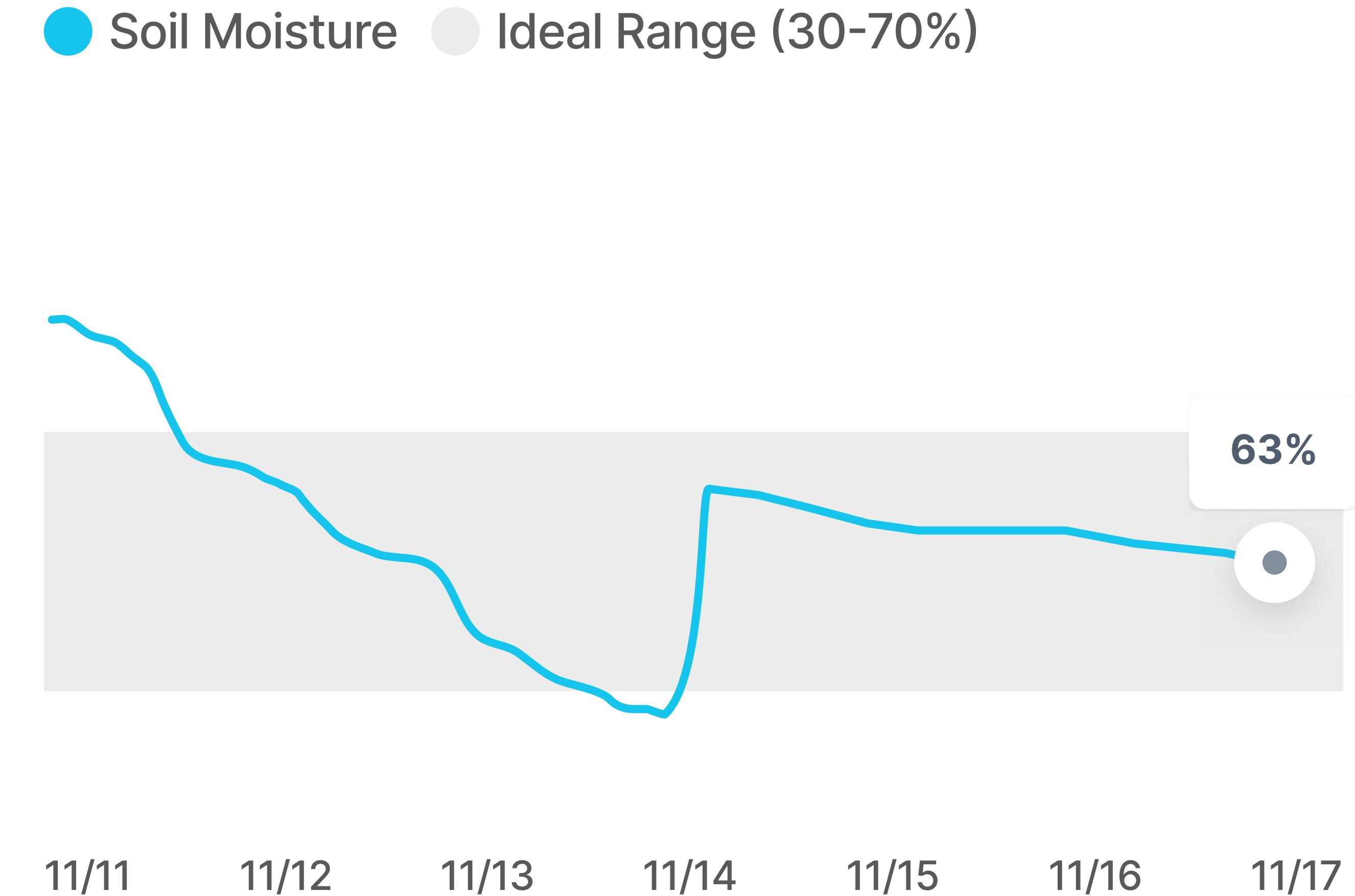


## Solution 2-1: Plant Status



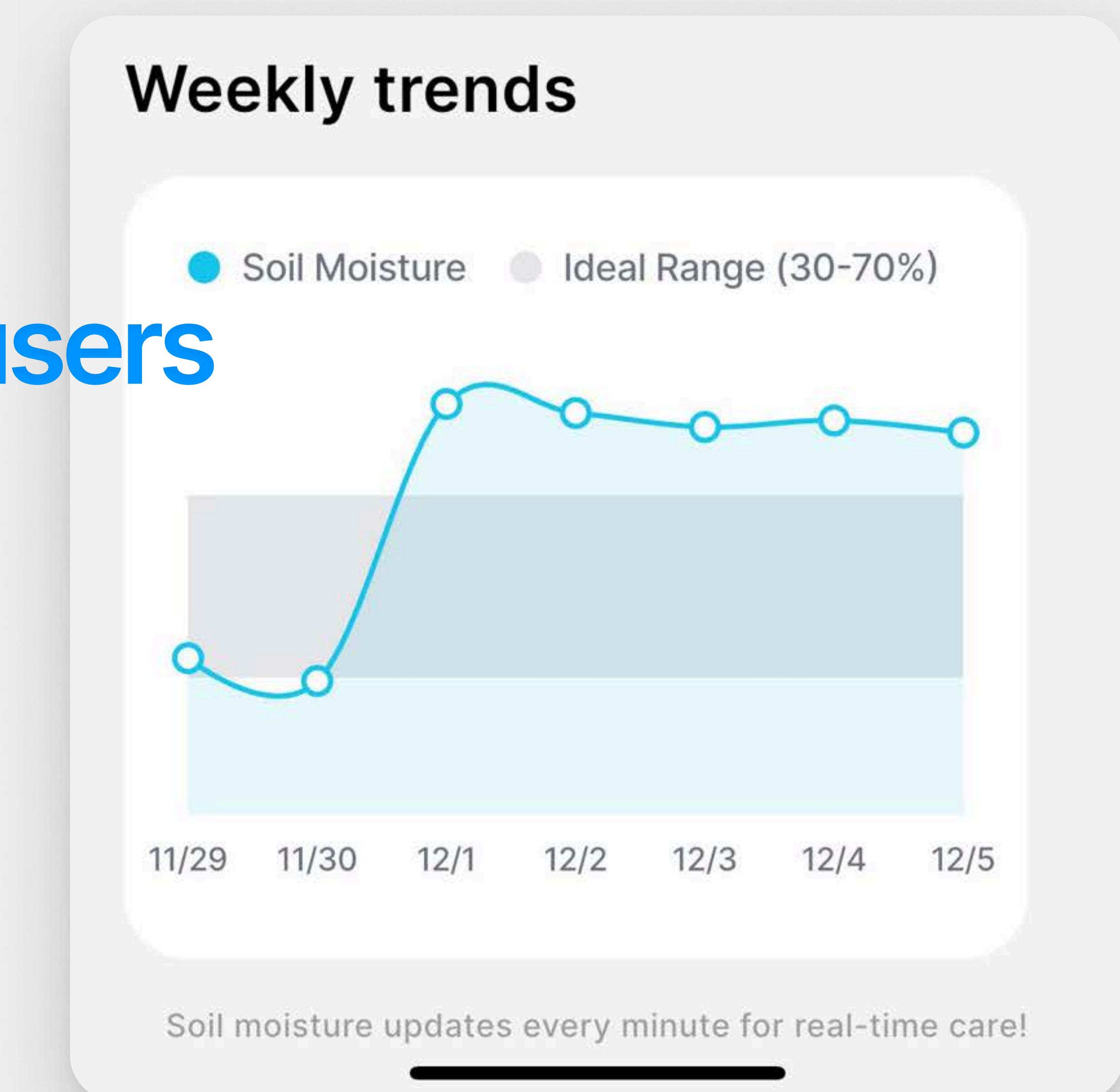
**Water-logged**

The drainage is abnormal, which implies plant problems



## Solution 2-2: Real-time Data Graph

**Rootin provides  
'Weekly trends' to help users  
monitor plant growth**



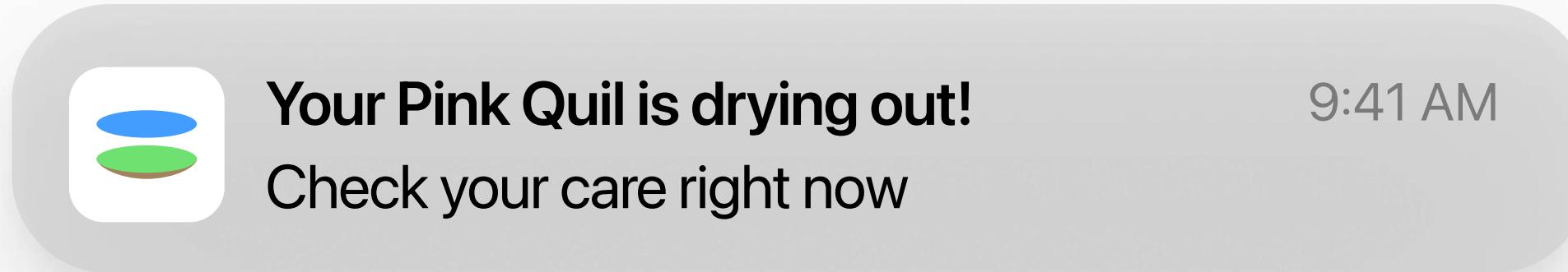
## Solution 2-3: Upcoming Watering

Based on the data,  
we calculate the upcoming  
week's watering schedule



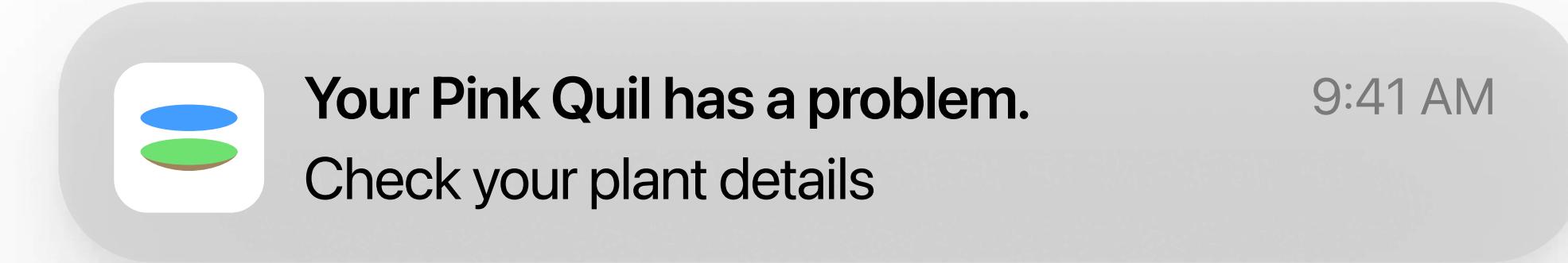
## Solution 3: Notifications

# Rootin gives notifications on:



## Watering related issues

When the moisture level drops to 'Underwatered.'

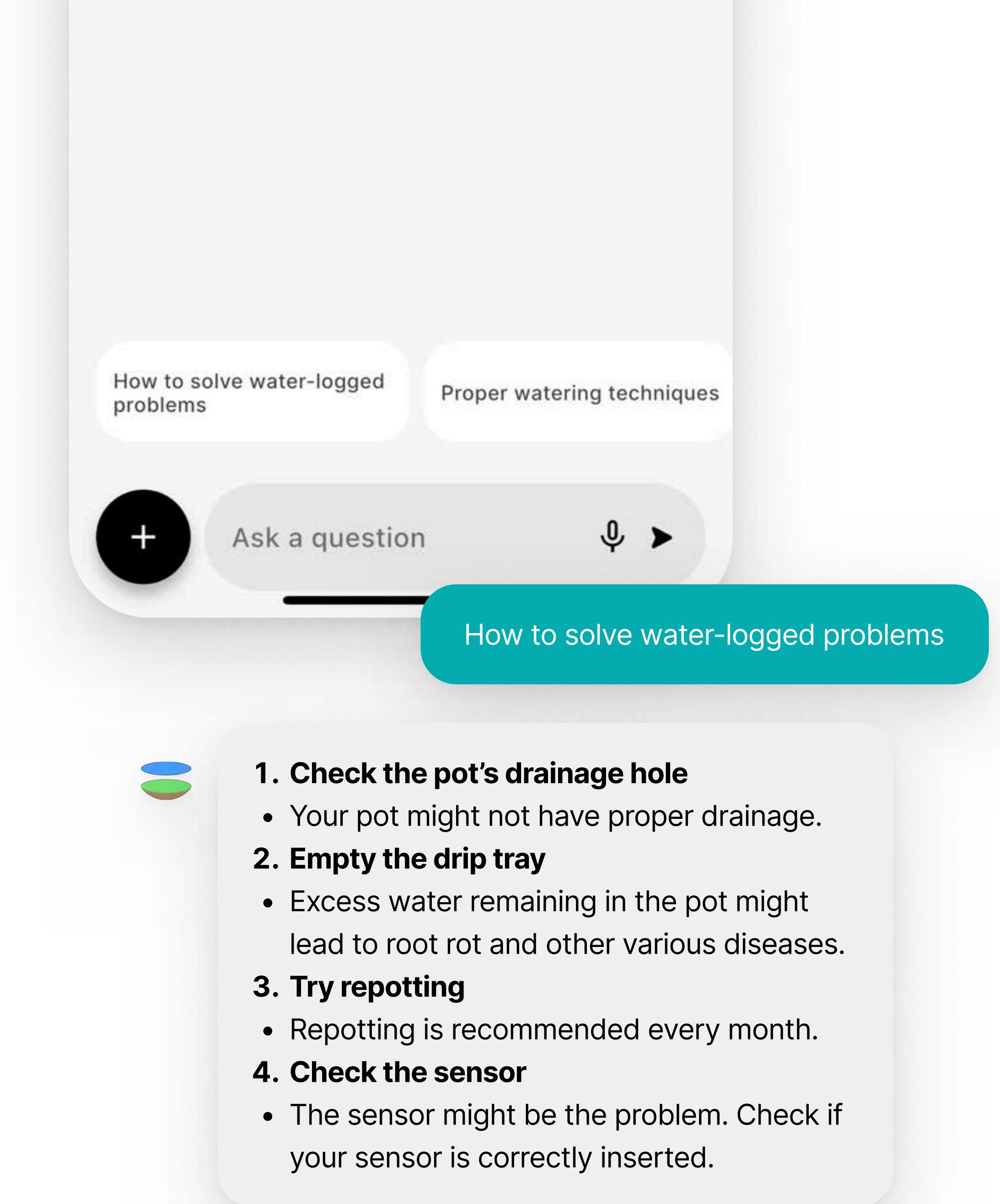


## Water-logged issues

When poor drainage persists for three days (under 10%)

# Users can chat by text or voice to solve their curiosities

- **Water-logged instructions**
- **Personalized diagnostics**
- **Tips on plant caring besides watering issues**



# Demo Overview

Add plant

Watering a Thirsty Plant

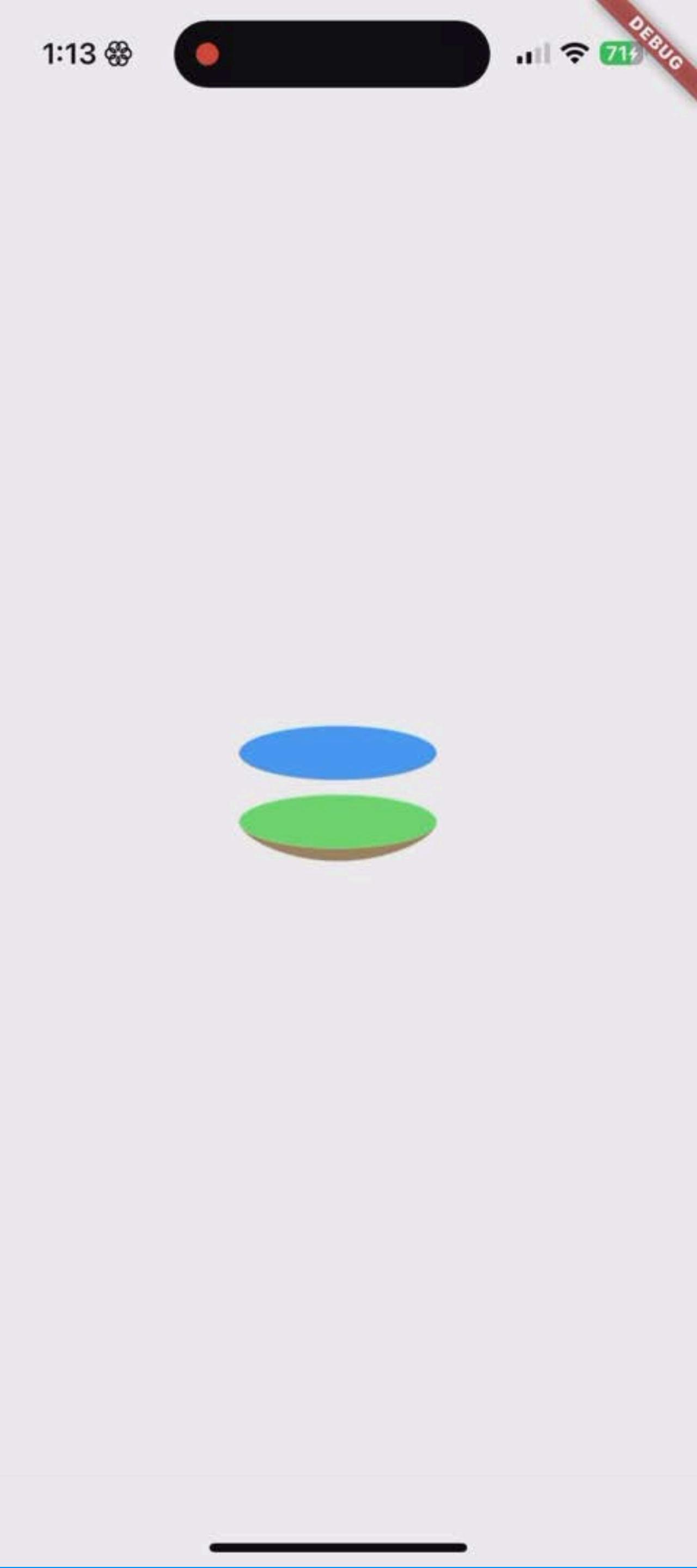
Resolving a Water-logged Plant

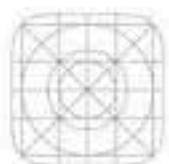


# Onboarding

## Add Plant

### Connect to Sensor





RootinIt1 ▾

Distribution

TestFlight

Xcode Cloud

## Builds

iOS



rootin

Internal Group • 2 Testers • 0 Builds

Testers

Builds

Settings

## Feedback

Crashes

Testers (2)

Add Filter



## Testers

All

INTERNAL TESTING

rootin

EXTERNAL TESTING

## Additional

Test Information

About TestFlight Data

<input type="checkbox"/> TESTER	STATUS ^	SESSIONS	CRASHES	FEEDBACK	DEVICES
<input type="checkbox"/> anu.bn@kookmin.ac.kr Anu Bilegemberel · Internal	Installed 1.0.0 (1) Nov 29, 2024	152			Unknown iOS 18.0.1
<input type="checkbox"/> kaspee@naver.com hojun Lim · Internal	Installed 1.0.0 (1) Nov 29, 2024	20			Unknown iOS 18.2

## Market Opportunity

# Smart Plant Monitor Market Size

2022

Global Smart Plant  
Monitor Market

**\$635M**

U.S. Market  
**\$283M**

Target Segment  
**\$70M**

25% of  
U.S Market

2030

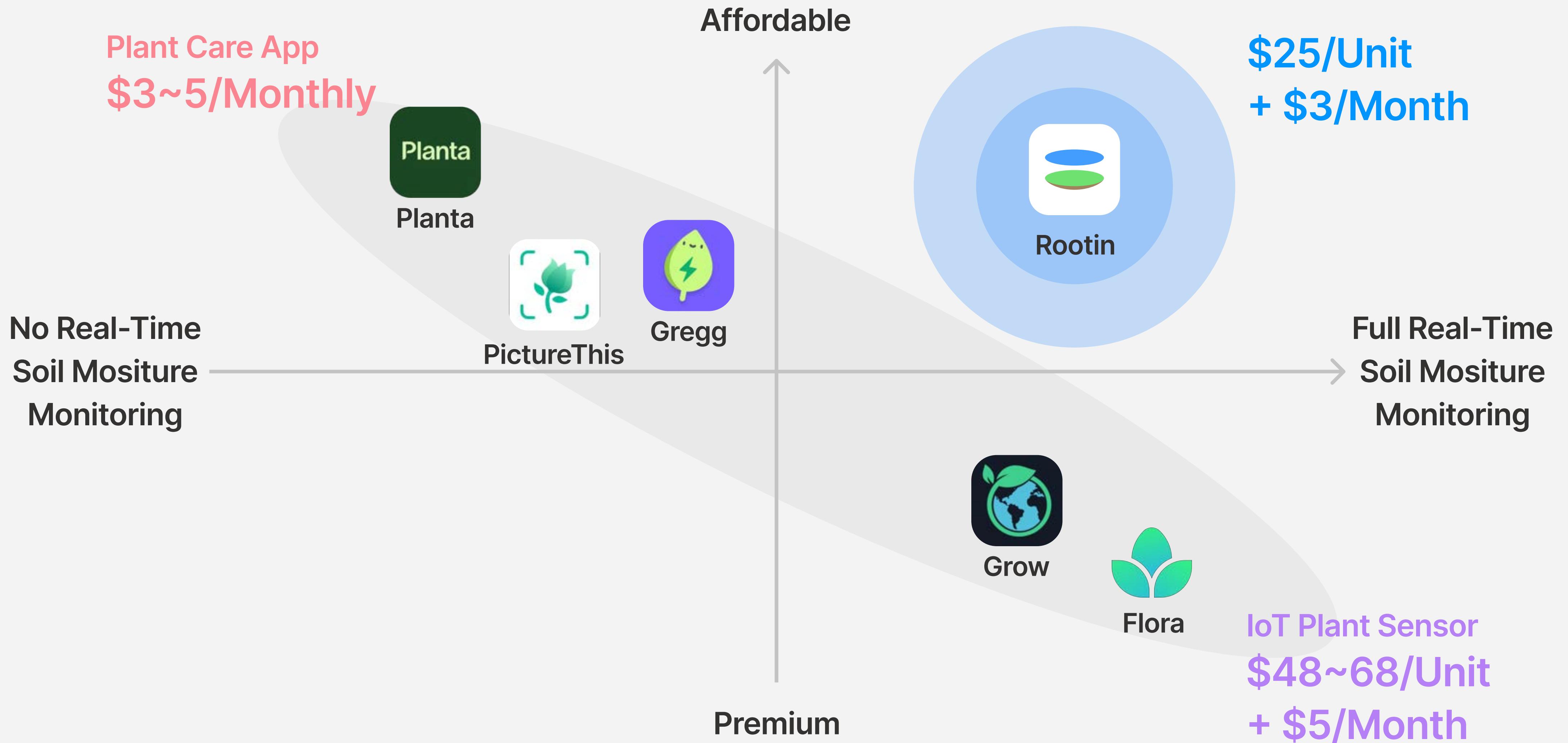
Compound Annual  
Growth Rate  
15.9%



Target Segment  
**\$233M**

Source: Industry Arc, Statista, Market Research.biz

## Competitor Analysis



## Competitor Analysis

**Already disappointed by too many features and overpricing.**

X



Cmclarke, 01/27/2024

**Trash**

Extremely disappointed. I had high hopes for this gadget. I was hoping as it was promoted to make plant care easier. And to take the guess work out of caring for your plants. Don't waste your money or time. Not user friendly. Time consuming to pair each time while trying to link a plant to the device. WiFi can't find the device over and over. Reset and try again over and over. I was only able to link one plant. Cheaply made. Such a disappointment considering it was recommended by highly respected YouTube influencer. This thing is going in the junk pile.



Eddie P.



**Too expensive**

Reviewed in the United States on February 17, 2024

**Way overpriced and too much maintenance**

3 people found this helpful

[Helpful](#) | [Report](#)

## Business Model

**Simple but powerful product that solves watering issues.**

IoT Sensor Sales

**\$25/Unit**

45% more affordable

+

Subscription Services(Plant AI)

**\$3/Month**

After a 3-month free trial

Initial Target Customers

**Busy, tech-savy millennials  
in Irvine:**

**Loving Plants, Struggling  
with Care**



## Go to Market Strategy

### 1. Direct-to-Consumer



Launch through Rootin's website and app marketplace.

### 2. Online plant care communities



Highlight the “watering solution” in targeted ads.

### 3. Retail Partnerships



Collaborate with plant retailers to sell bundled kits.

Let's work together to create  
a future where no plant is left  
behind!



# TEAM



**Hojun Lim**

Backend Developer, Rootin

Computer Science



**Kihoon Kim**

Data Engineer, Rootin

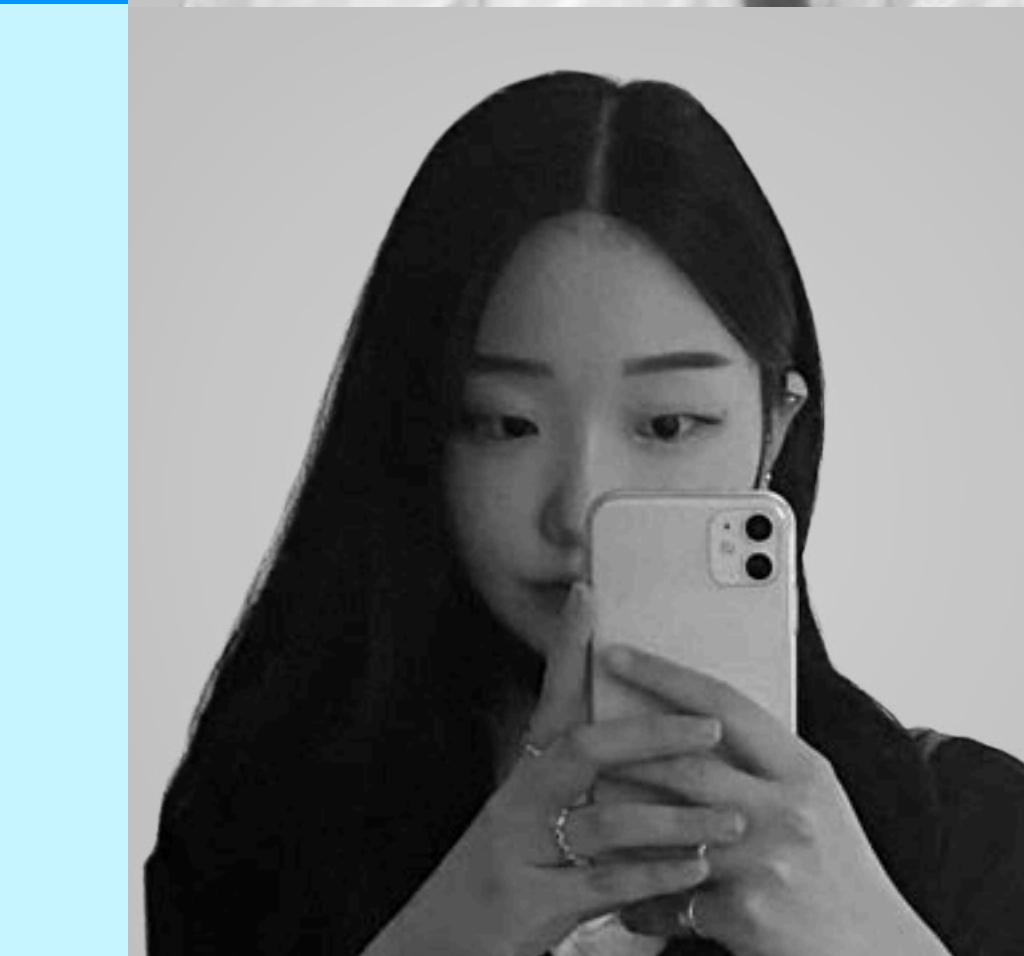
Nano-Electronic Physics



**Deokryong Na**

Product Owner, Rootin

Management Information System



**Jeonghee Lee**

UXUI Designer, Rootin

English Language & Literature



**Anu Bilegdemberel**

Frontend Developer, Rootin

Computer Science

## Competitive Advantage

# What sets us apart?

Feature	Rootin	Flora	Grow	PictureThis	Planta
LLM-Based Diagnostics and Chat	✓	✓	✓	✓	✓
Personalized Watering Reminders	✓	✓	✓	✗	✗
Real-time Soil Moisture Monitoring	✓	✓	✓	✗	✗
Affordable Pricing	✓	✗	✗	✗	✗

## Appendix

# Estimated Cost per Unit (Direct Sourcing)

Component	Retail Price	Factory Price	Gross Margin
Arduino Board	\$20-\$25	\$7-\$10	
Soil Moisture Sensor	\$2-\$5	\$0.50-\$1.50	
Additional Components(e.g. Shipping, Assembly)	-	\$5-\$7	
Total Per Unit	\$22-\$30	\$12.5-\$18.5	26\$-50\$

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Feature	Rootin	Flora	Grow	Gregg	Planta
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Personalized Watering Reminders	✓	✓	✓	-	-
Real-time Soil Monitoring	✓	✓	✓	✗	✗
Affordable Pricing	✓	-	-	✗	✗

## Appendix

# GPR (Gaussian Process Regression)

