



FarmGazer

An innovative monitoring system designed for farmers in all connectivity scenarios. Provides better crop health tracking, documentation, and actionable insights for enhanced productivity.

Problem

The **lack of technology adoption** and insufficient in-person labor in farms are significantly affecting management capabilities. **Unpredictable weather** leads to challenging terrain, vast farm sizes complicate comprehensive farmland monitoring for farmers, while varying working styles further **hinder communication**.

Design Question

*How can we leverage a **remote monitoring system** to proactively assist farmers in remotely managing fields when trying to **save time, labor costs and preventing crop illness**?*

Solution

Our solution includes a **stationary camera device** capable of capturing multi-angle images, adaptable to field conditions with image transfer via LoRa or WiFi. Integrated into our app, it delivers daily status notifications to farmers. We also incorporated **generative AI** to analyze images like a virtual farm worker, providing concise explanations.

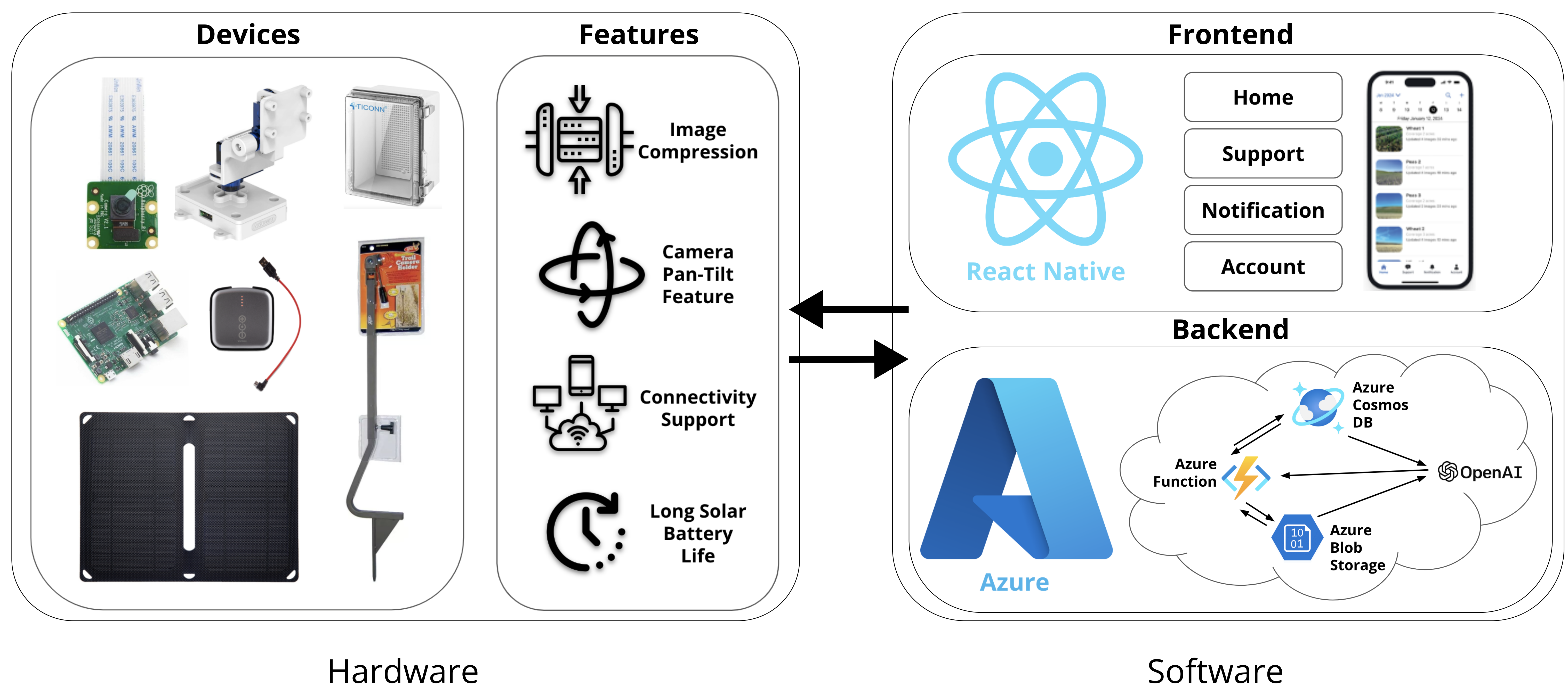
Research Process

Through visits to **2 organic farmers' markets**, **4 small-scale farms**, and **1 large-scale farm**, we collected valuable feedback on the challenges farmers face.

We **identified farmer needs** for frequent crop checks and detailed records, focusing on growth, soil conditions, and leaf color for optimal management.



Hardware and Software Diagrams



Key Features



Gaze Buddy

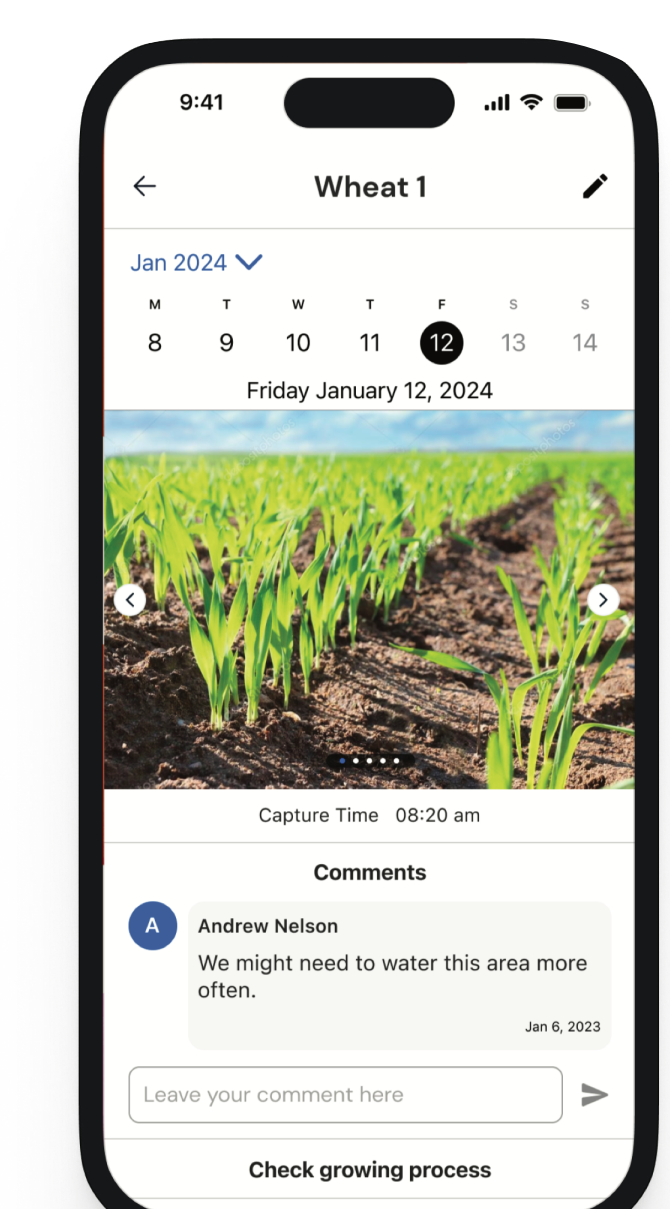
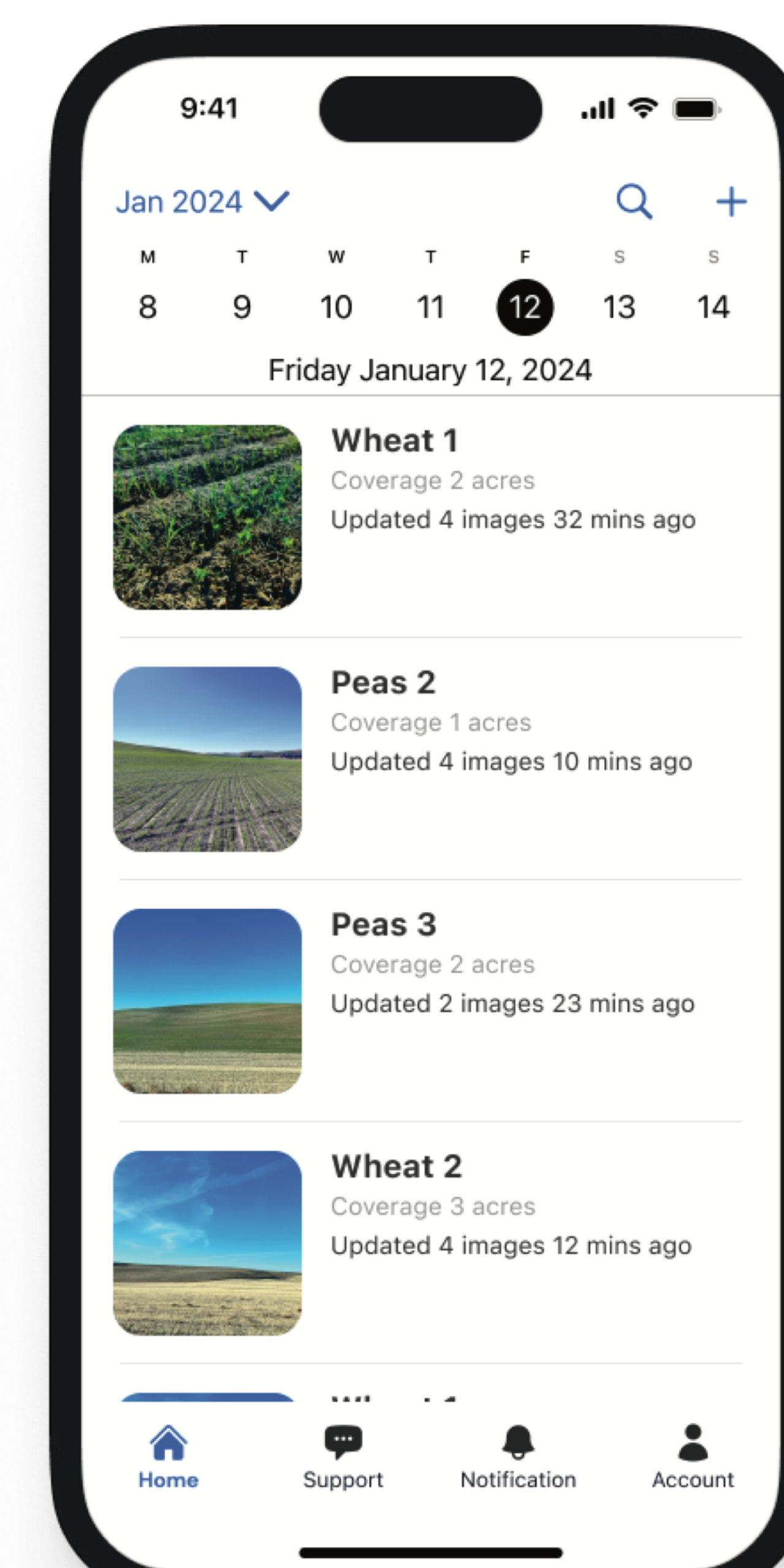
One-Time Setup

FarmGazer is designed for a simple, one-time installation, ensuring immediate operation with no further adjustments needed.

FarmGazer App

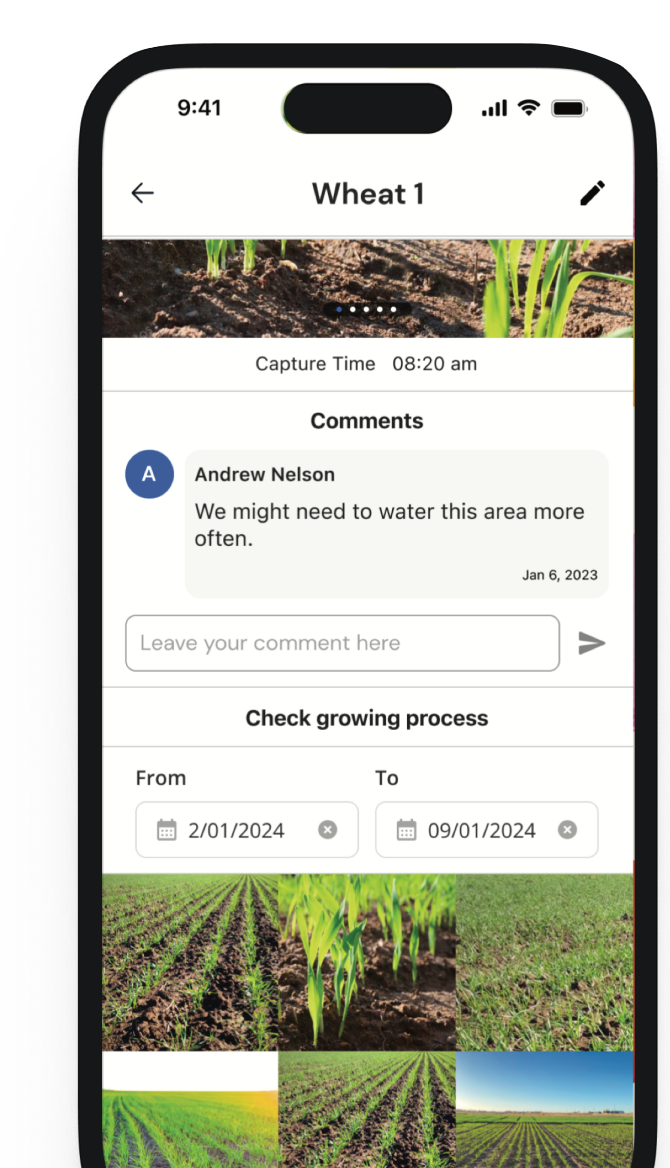
List View

Seamlessly view sections based on field size and the number of devices deployed, ensuring easy management and monitoring.



Detail of Each Section

Viewing of section images and growth progress, alongside the ability to leave comments for colleague collaboration on tasks.



Growing Process Tracking

Select a specific date range for an overview of the growth process and assess crop development from comprehensive perspectives.

