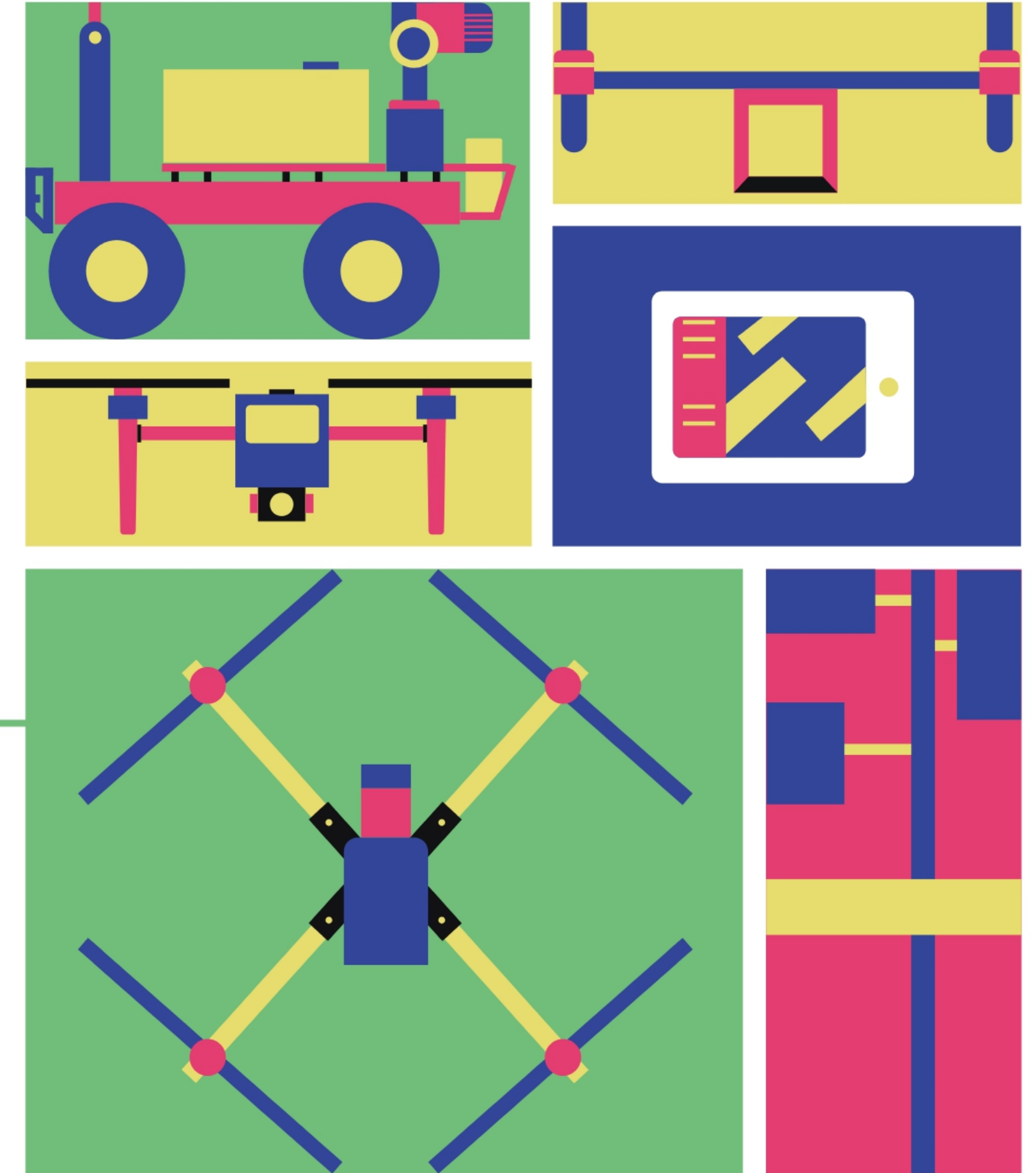


XAG Agricultural Drone Spot Mode Operation Guide



Background

- ❑ In oil palm plantation scenarios where the hearts of palm are prone to pest infestation, the drone needs to hover directly above the palm hearts and **accurately spray sufficient pesticide onto them** to effectively control pests.



Background

- Another example is the durian cultivation scenario. As durian fruits grow on the trunk, the drone needs to spray an adequate dosage of liquid solution **on the trunk area** to ensure flowering and fruiting.



Background

- ❑ To address these needs, the drone is required to hover at a fixed position to carry out spraying operations, meeting demand for both **accurate spraying** and **controllable spray volume at each single point**, and to move to the next target point after completing spraying at one point. Hence, XAG launched the **Spot Mode** function.

Note: The spot mode function is only supported on the P100 Pro and P100 models currently, but will be compatible with new models in the future. The XAG One App must be updated to version 6.1.0 or higher.

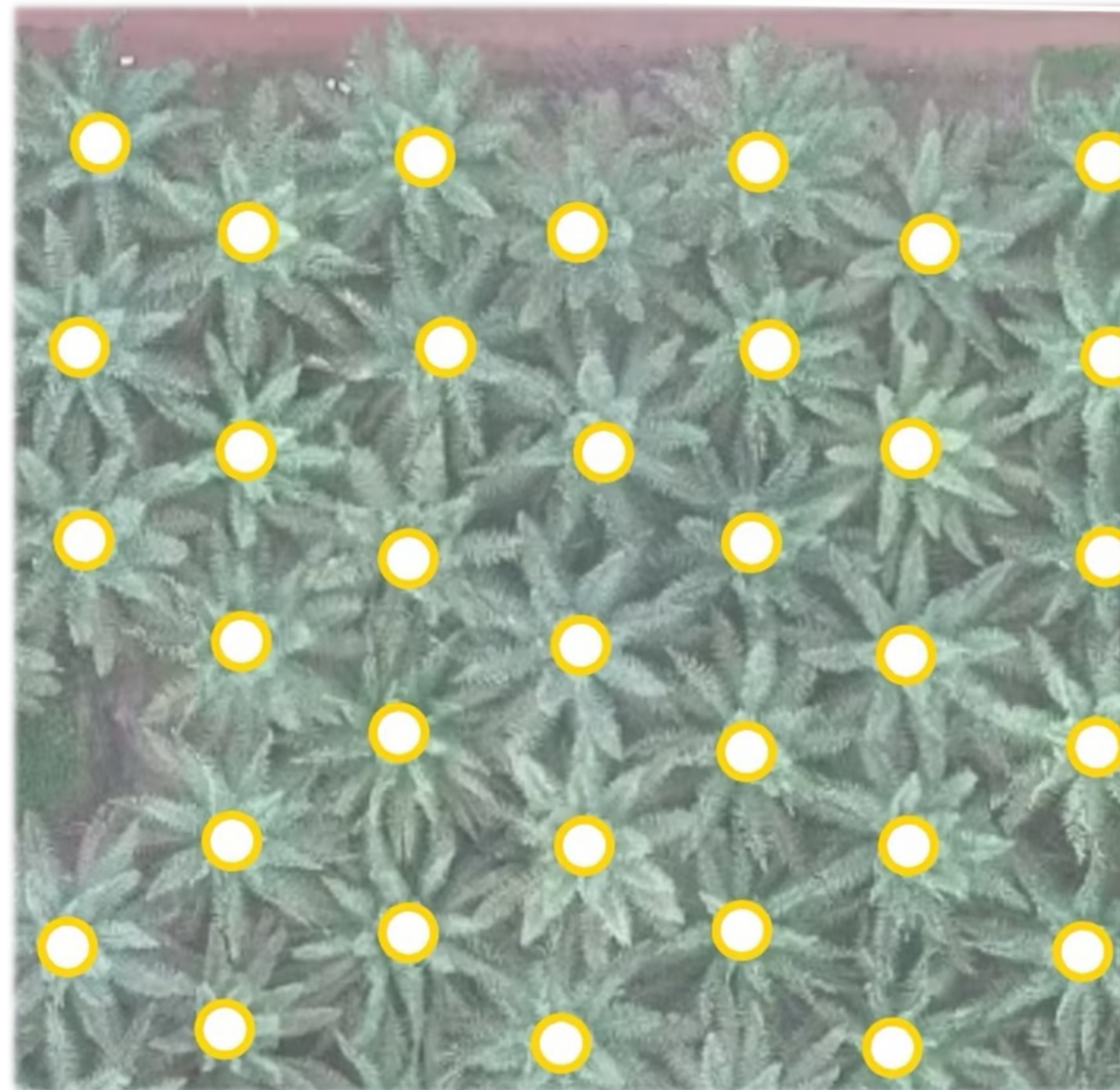
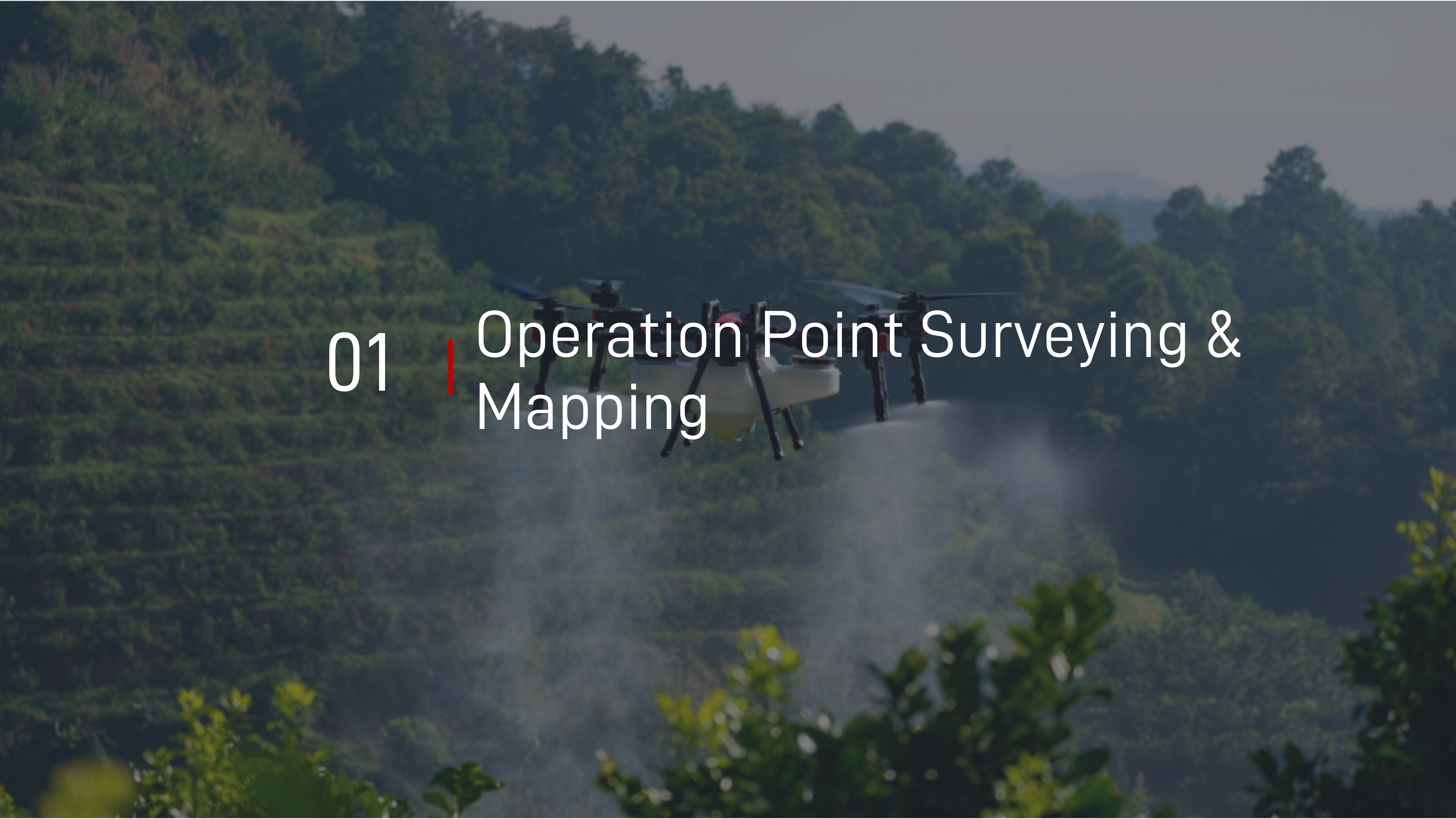




Table of Contents

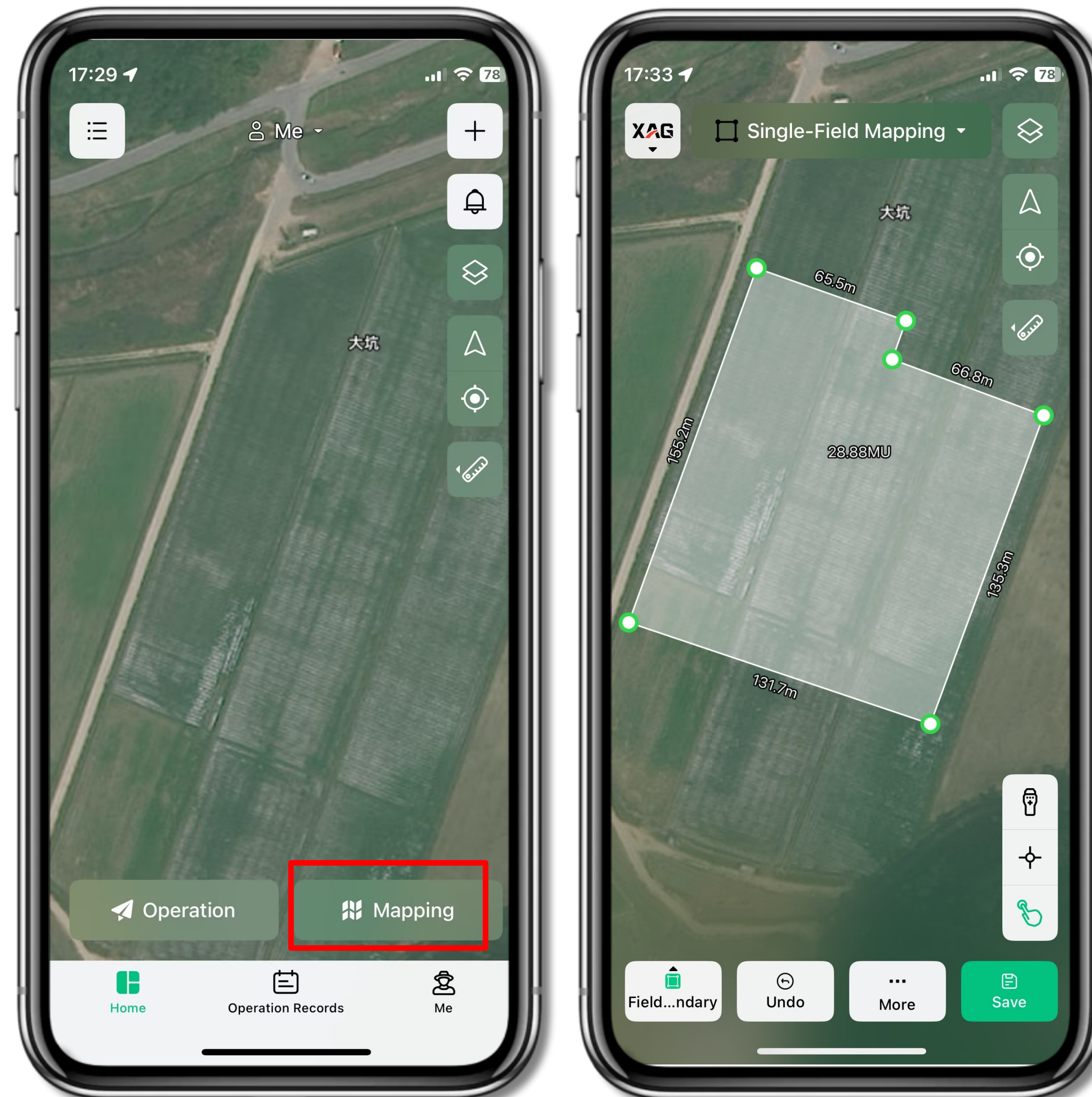
- 01 | Operation Point Surveying & Mapping
- 02 | Spot Route Generation
- 03 | Spot Mode Operations

A white drone with four rotors is shown in flight, positioned centrally in the frame. It is spraying a fine, white mist or smoke that trails behind it, creating a dynamic visual effect. The background is a dense, lush green forest covering a hillside, with some distant mountain peaks visible under a clear sky. The overall scene suggests a surveying or mapping operation in a natural environment.

01 | Operation Point Surveying & Mapping

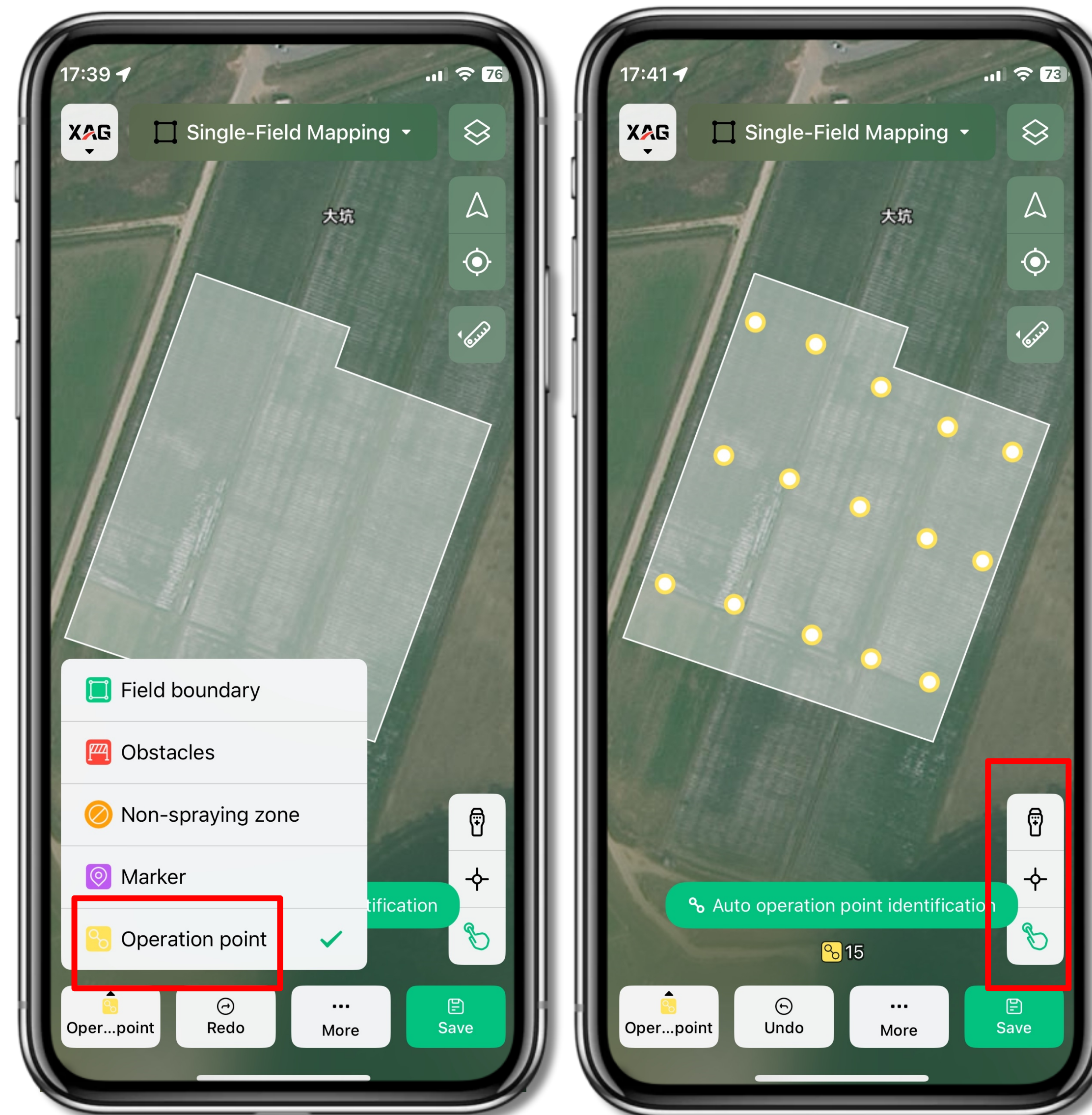
Surveying & Mapping of Field

- Open the XAG One App and tap "Mapping" on the home screen. Follow the field mapping requirements to complete basic surveys of the field boundary, obstacles, and non-spraying zones.



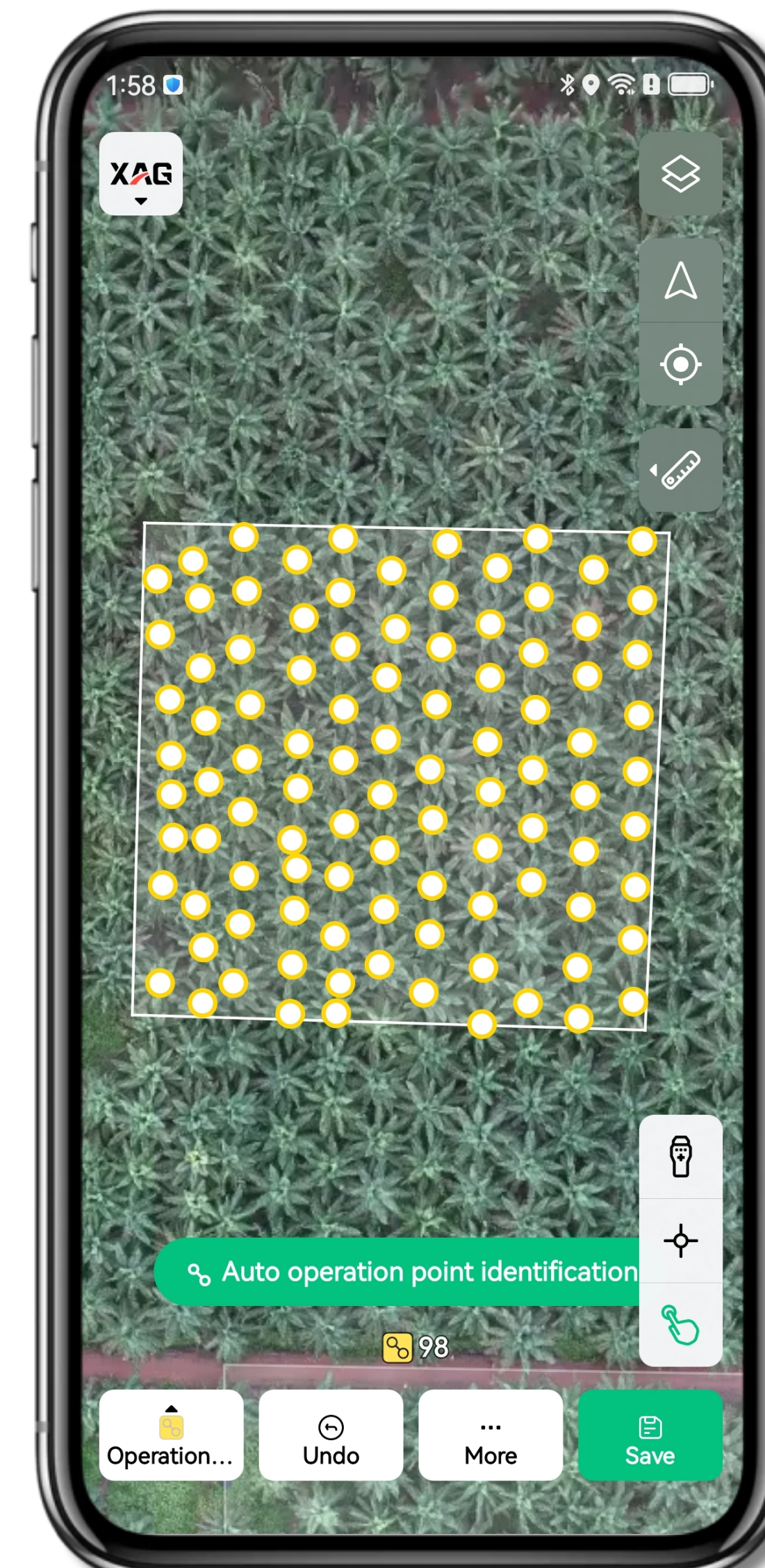
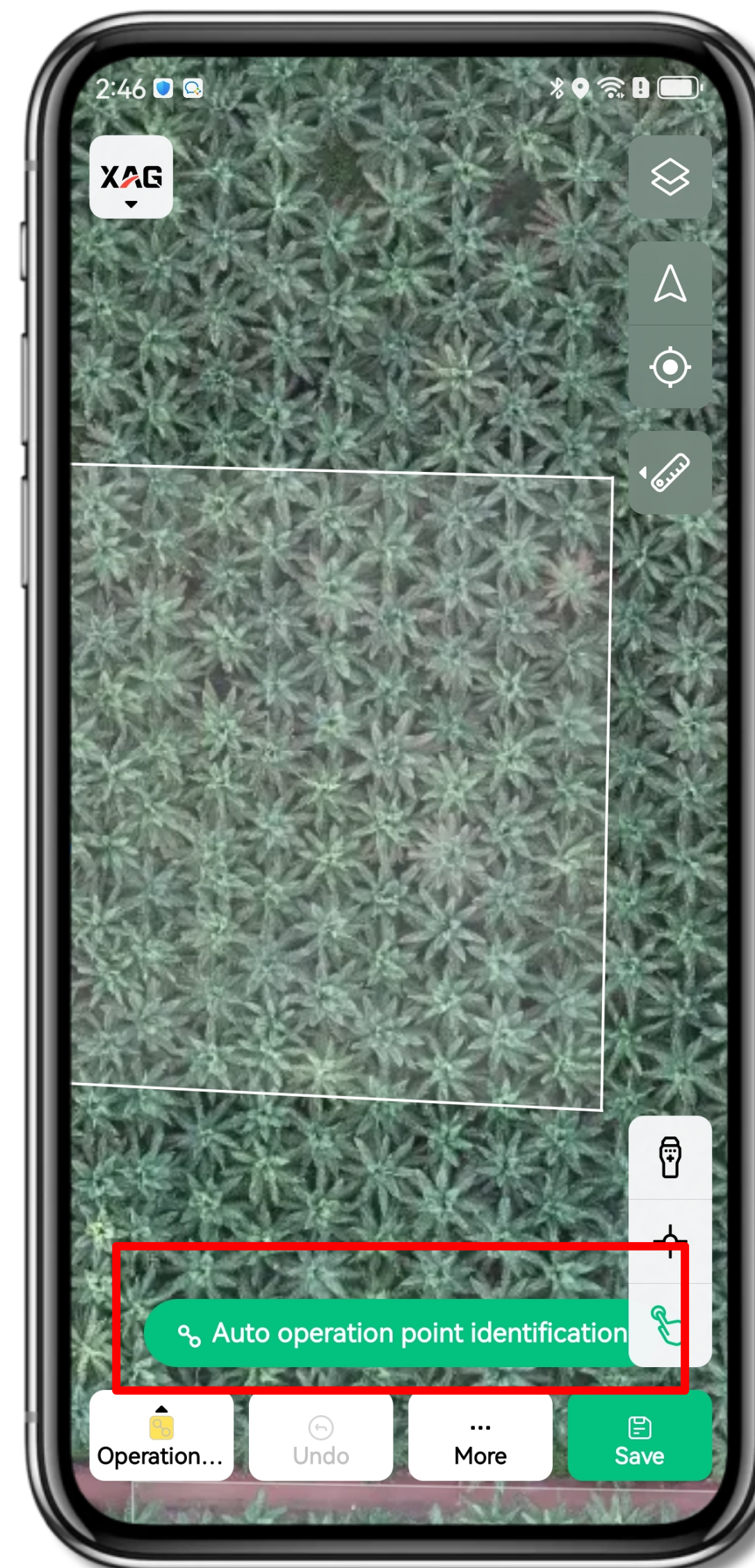
Surveying & Mapping of Operation Point

- Select the mapping type as "Operation point" in the bottom-left corner to enter the operation point mapping screen.
- Based on actual operational needs, map out the "Operation point" in this field.
- The Tap to Mark, crosshair cursor marking, remote controller marking and Fly to Mark are available for mapping the operation point.
- After mapping the operation point, tap "Save" to finalize the operation point mapping in the field.



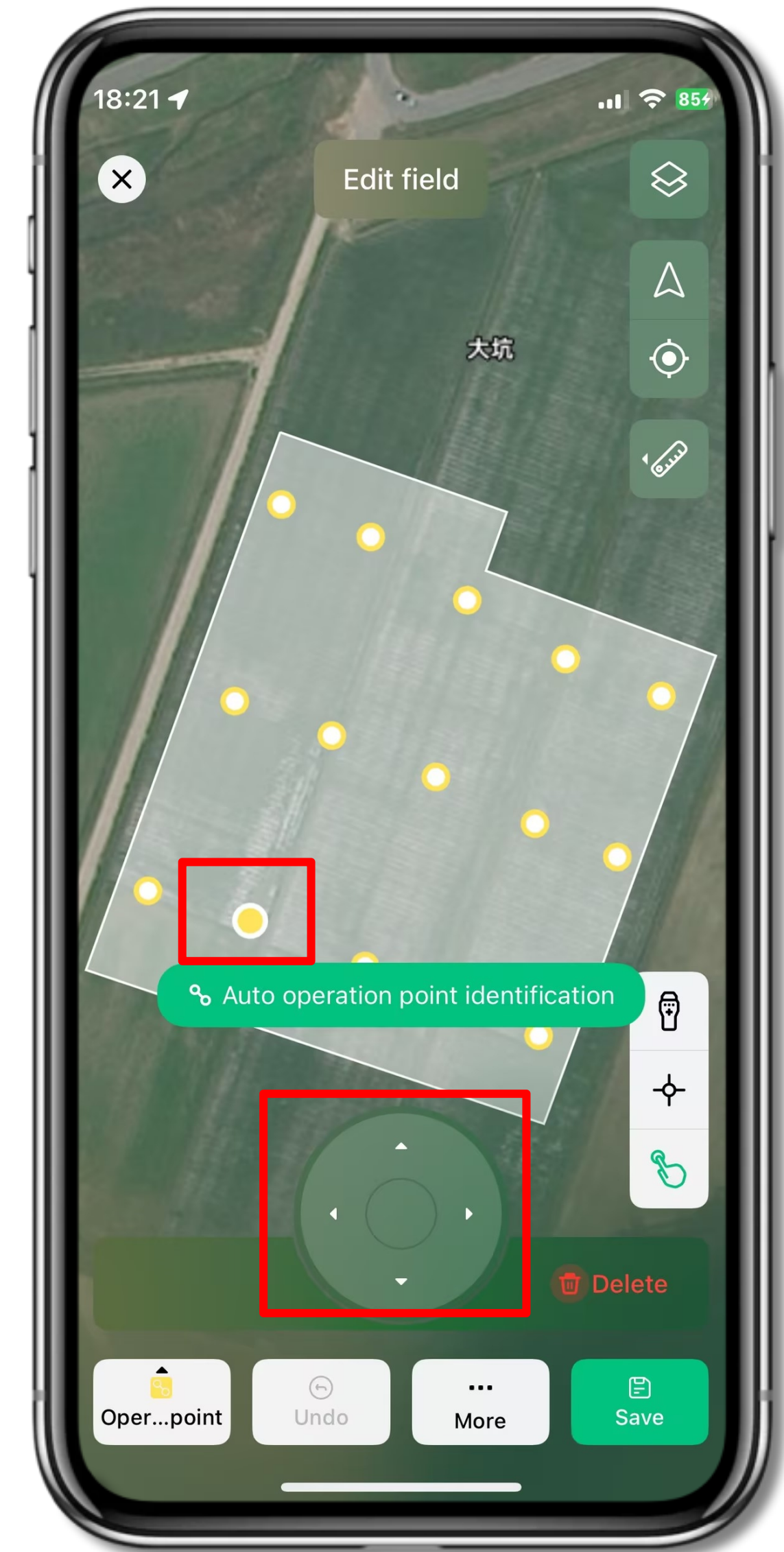
Auto Operation Point Identification Based on HD Map

- If the XAG One App has a local HD Map of the orchard, for example, an oil palm orchard, you can tap the "Auto operation point identification" to automatically identify the hearts of palm trees.
- Any missed or additional operation points can be supplemented by manual operation point mapping.



Adjustment of Operation Point

- In case that the operation points mapped out or automatically identified based on an HD map deviate from actual positions, you can select the operation point to be adjusted in the mapping screen and adjust the position manually.
- Tap "Save" after the adjustment is completed.

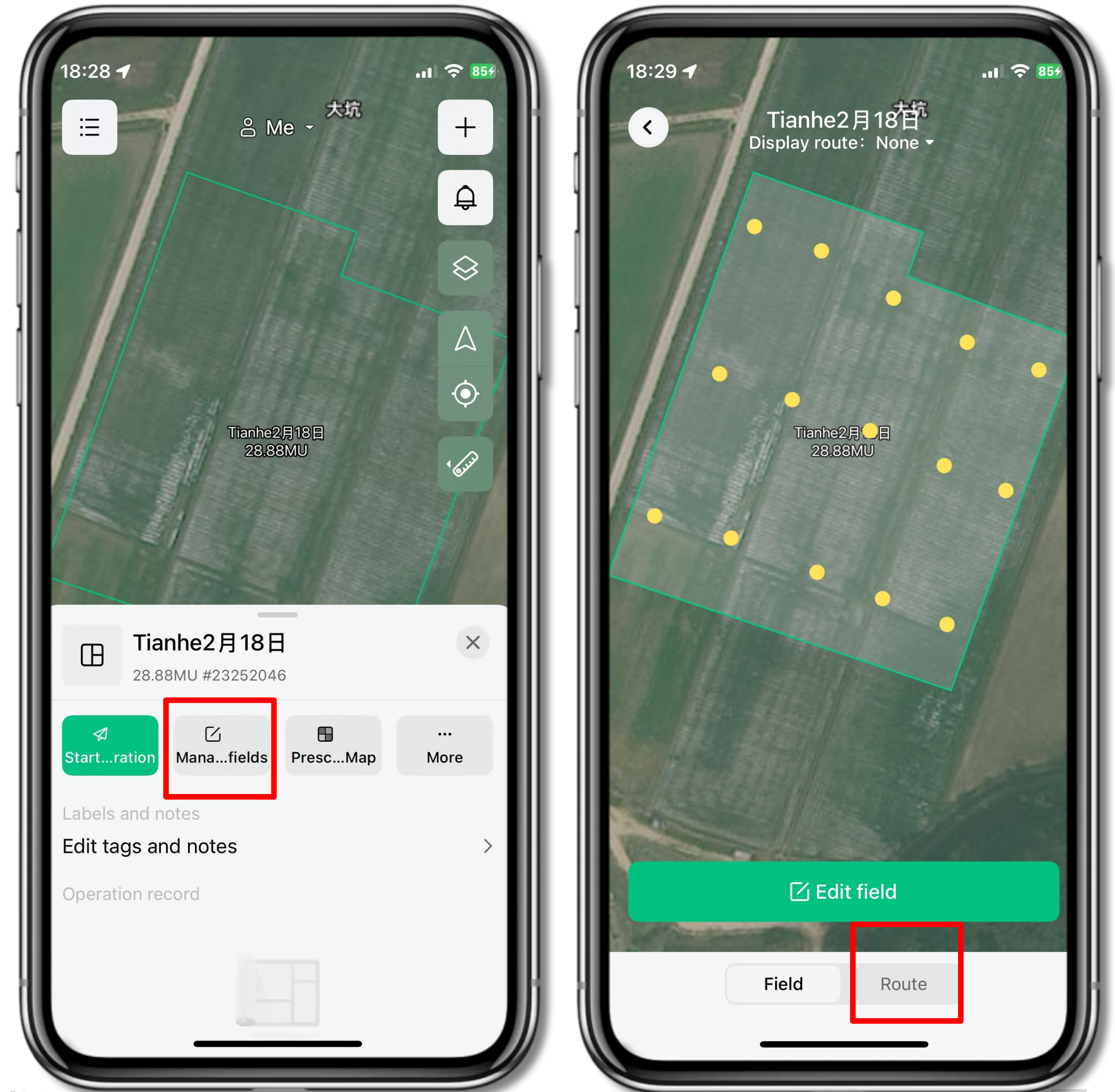


02 | Spot Route Generation



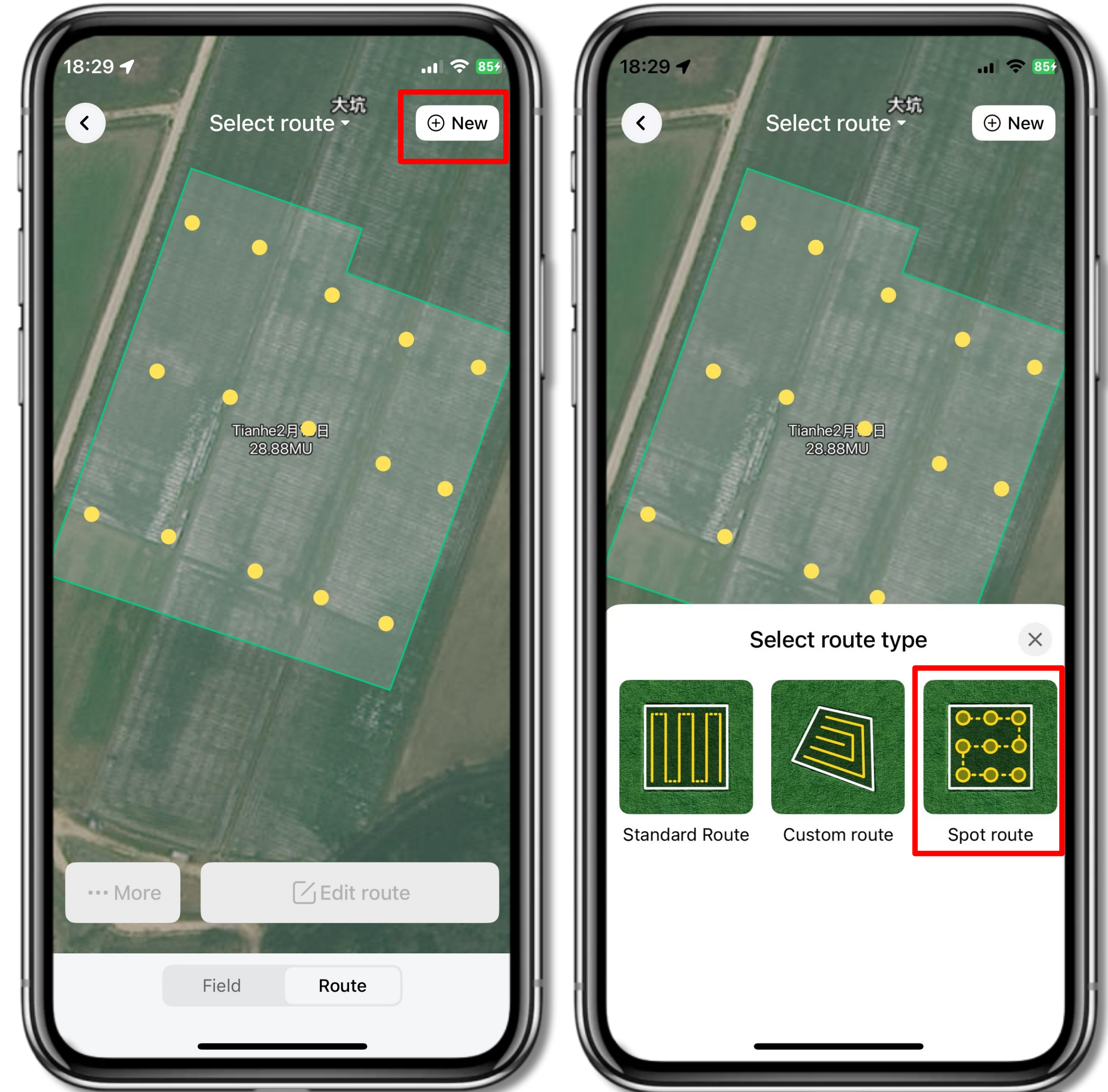
Spot Route Generation

- Select the field where the operation points have been mapped out, and tap "Manage Fields".
- Then tap the "Route" button below to enter the route setting screen.



Spot Route Generation

- Tap "New" in the upper right corner, and select the route type as "Spot Mode".



Spot Route Generation

- When the new spot route is selected, the system will automatically connect the operation points in this field.
- If you are dissatisfied with any operation route generated by the system, you can directly tap it to delete it.
- Any unconnected points need to be manually connected by users.
- Once no unconnected points remain, tap "Save" to complete spot route creation.

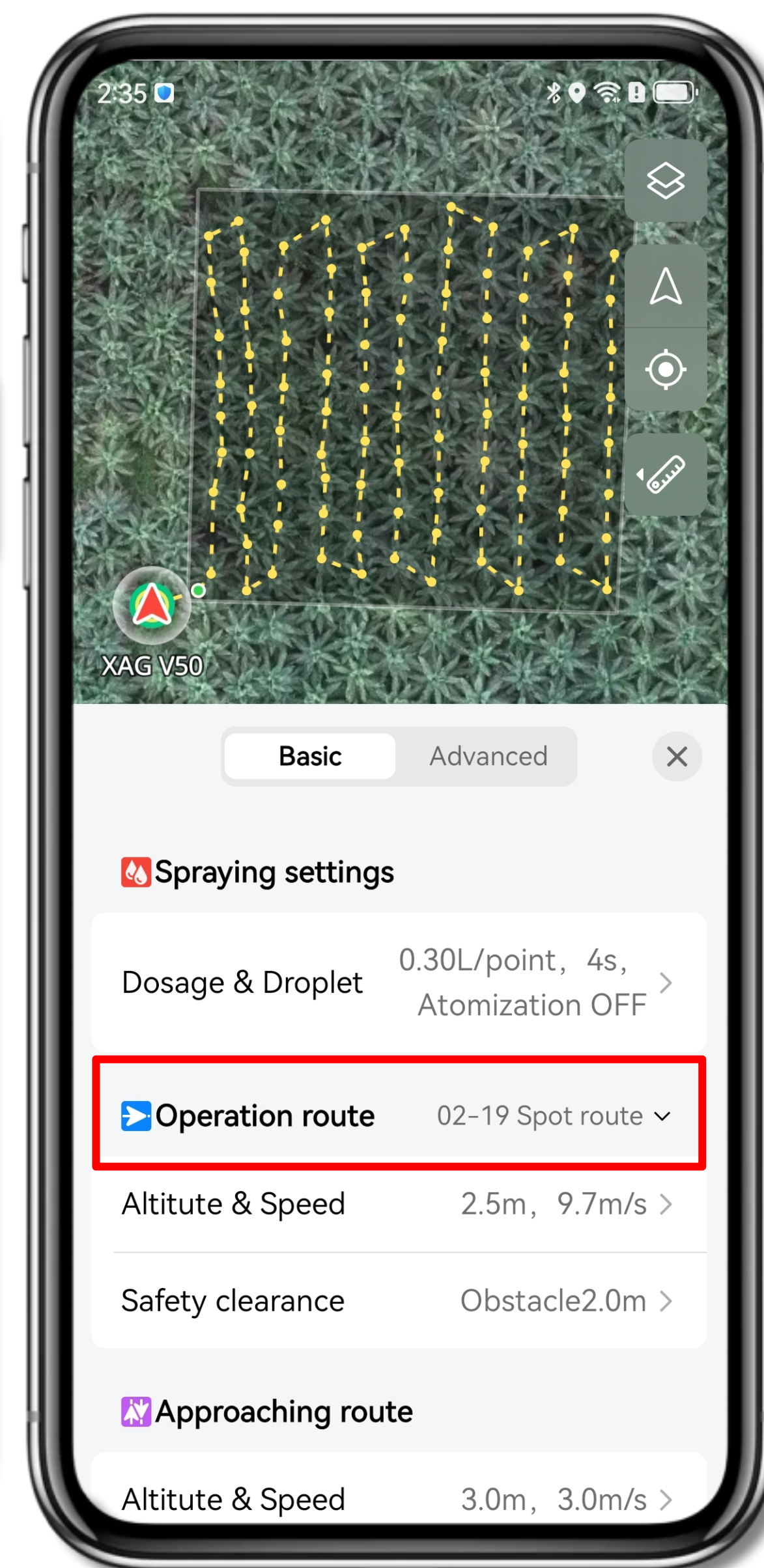
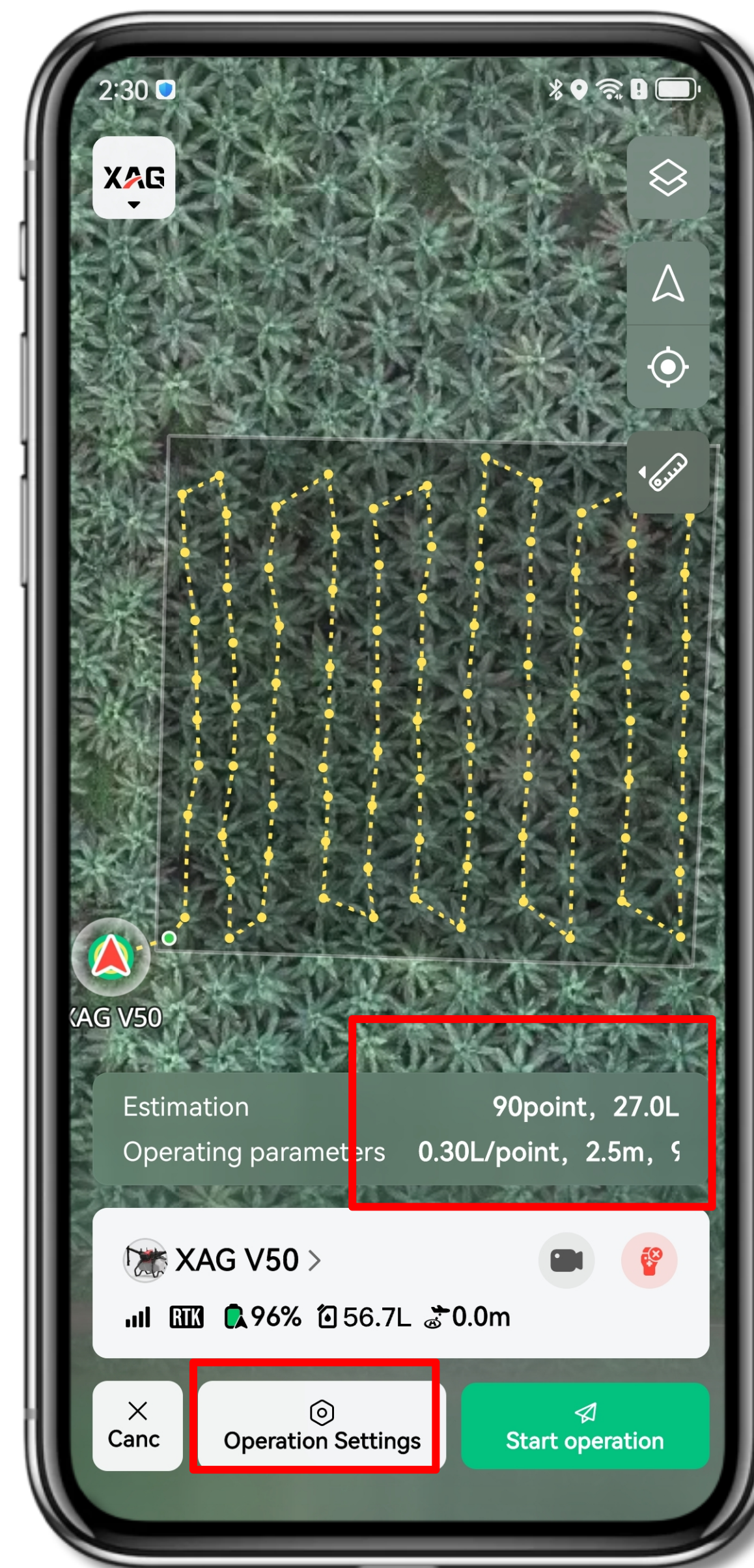


03 | Spot Mode Operations



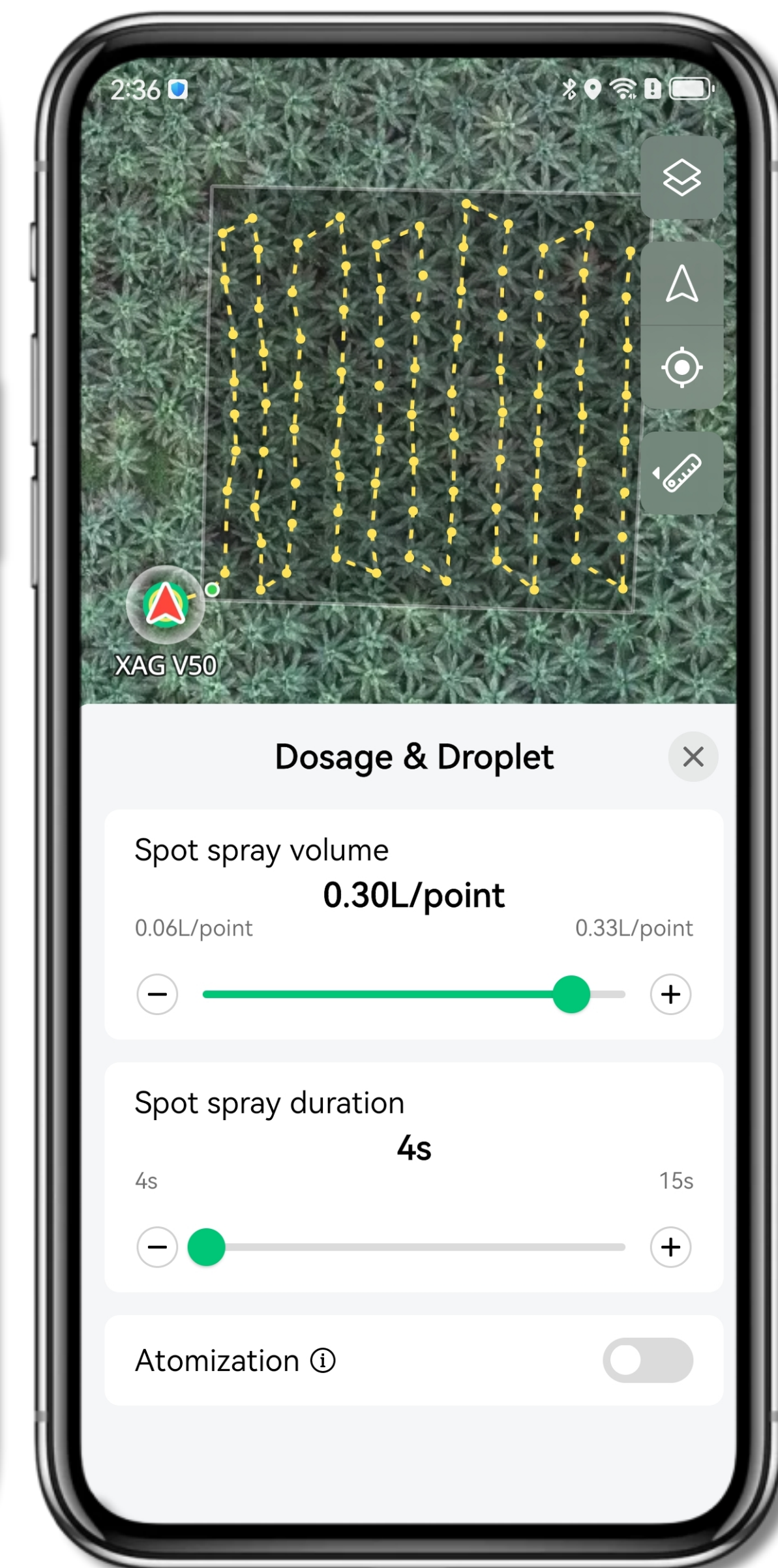
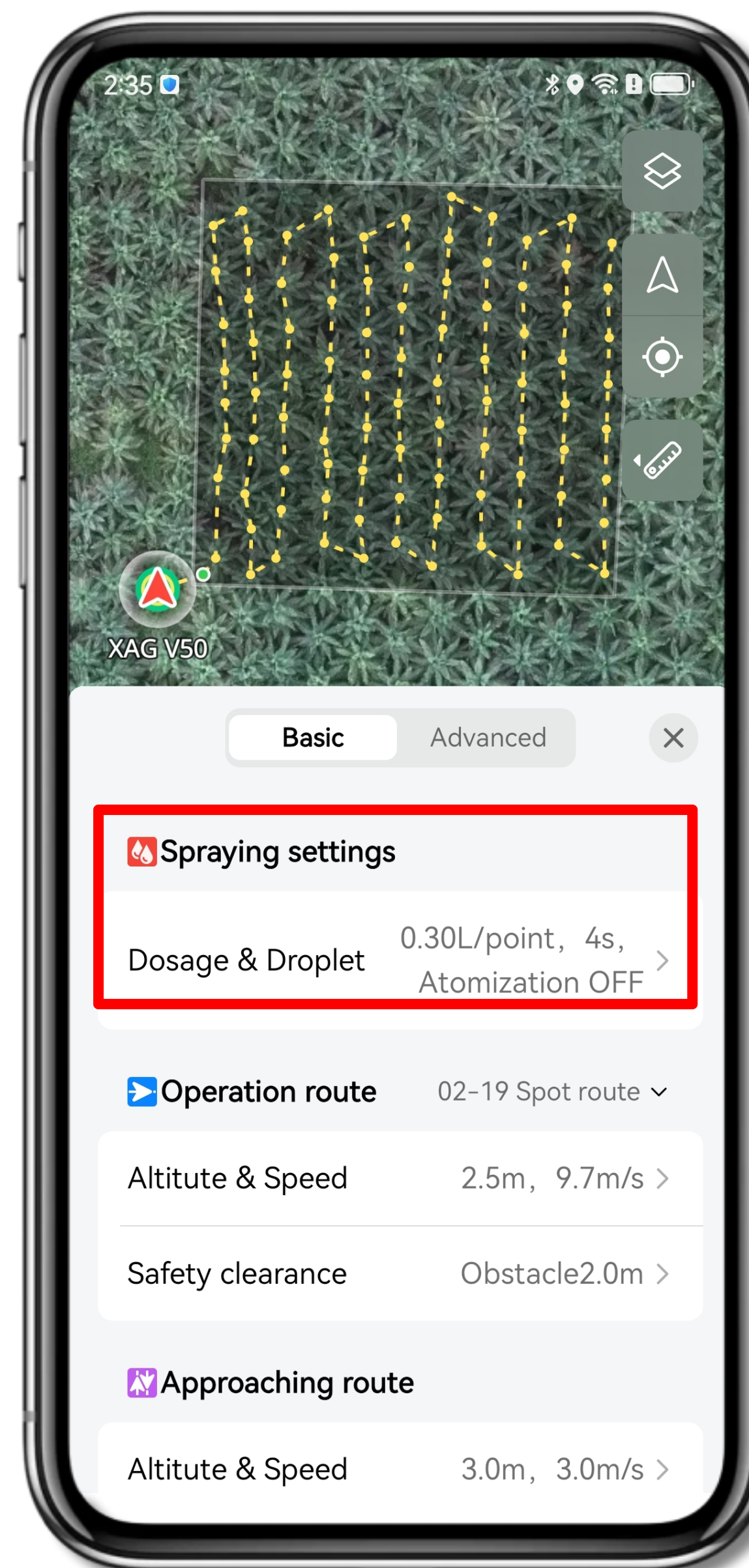
Planning for Spot Mode Operation

- Upon entering the operation screen, select the target field and corresponding spot route. The App will then initiate planning for the spot mode operation mission.
- The operation screen will display task parameters such as the number of operation points, estimated usage, spot spray volume, flight altitude and speed.



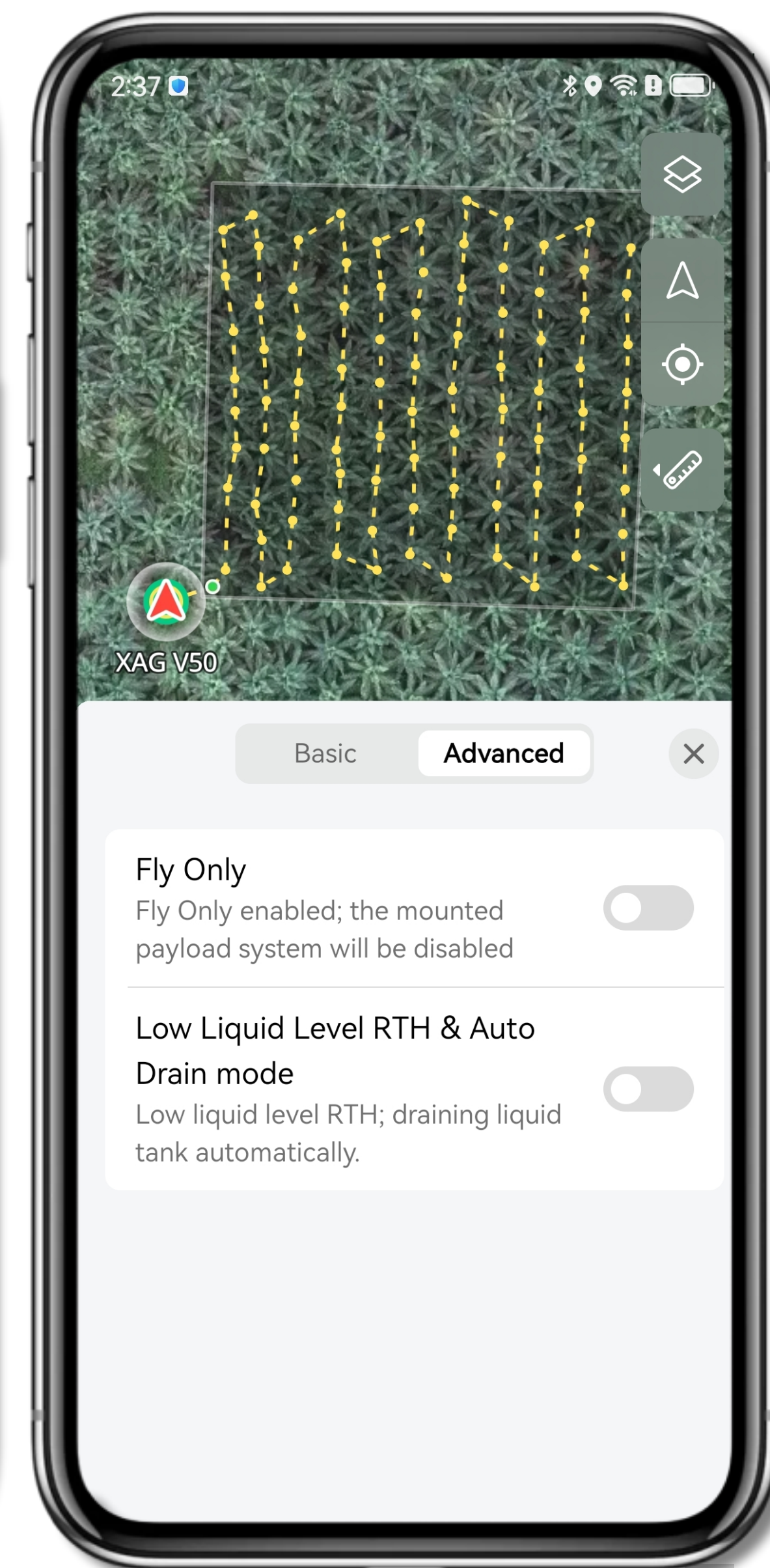
Operation Settings - Spot Spraying Settings

- If equipped with a spraying actuator, tap "Dosage & Droplet" to set the spot spray volume, spot spray duration and atomization.
- Spot spray volume: Total liquid volume sprayed per operation point.
- Spot spray duration: Time from the start to the end of spraying at each operation point.
- Atomization: Atomized droplet size of the liquid.



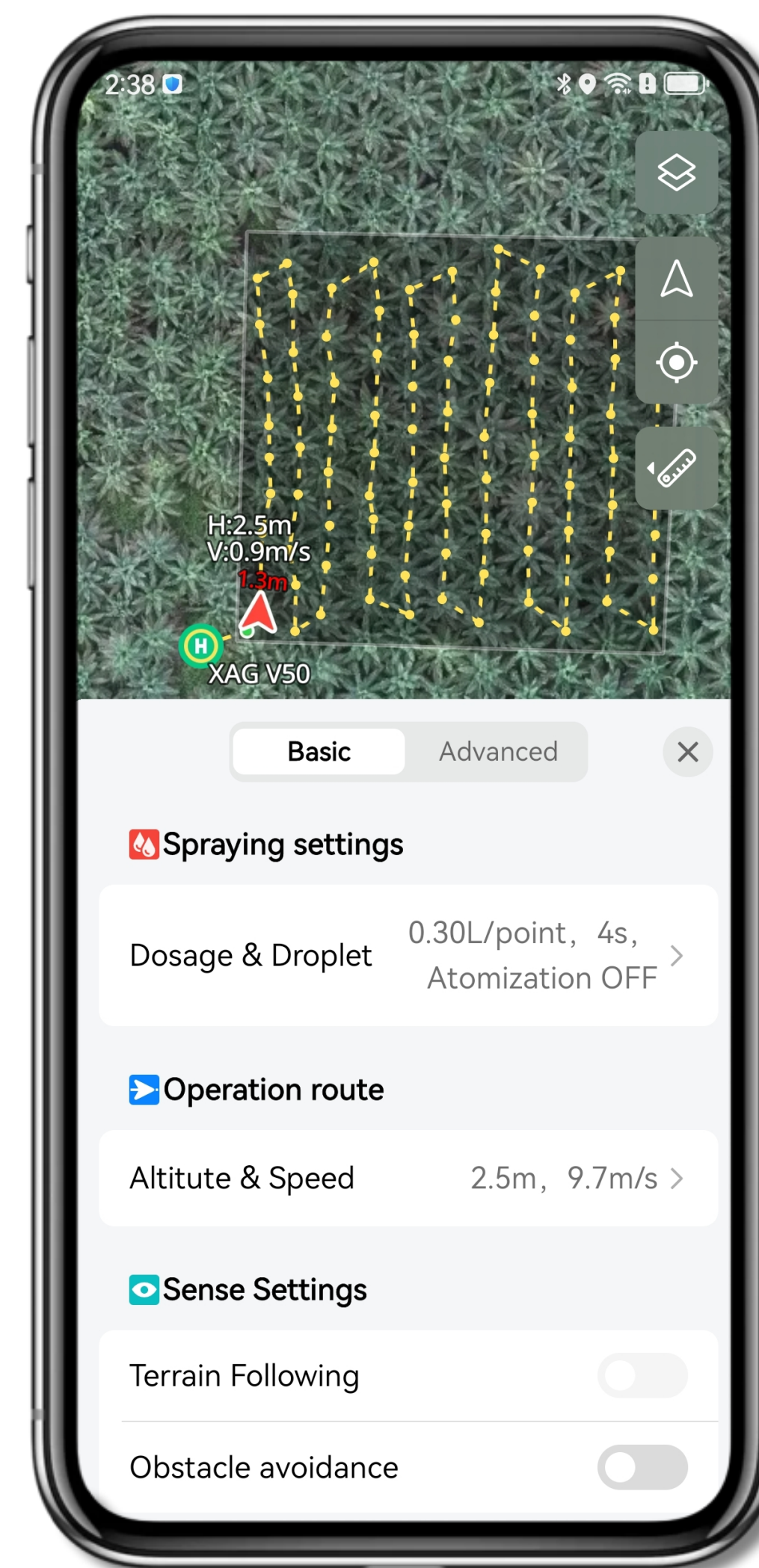
Operation Settings - Other Parameters

- Basic settings: Configure the drone's flight altitude and speed, safety clearance and access route parameters, and enable/disable terrain following, obstacle avoidance and other functions.
- Advanced parameter settings: Enable/disable Fly Only and RTH & Empty Container mode.
- After completing other parameter configurations, return to the operation execution screen to initiate the spot mode operation.

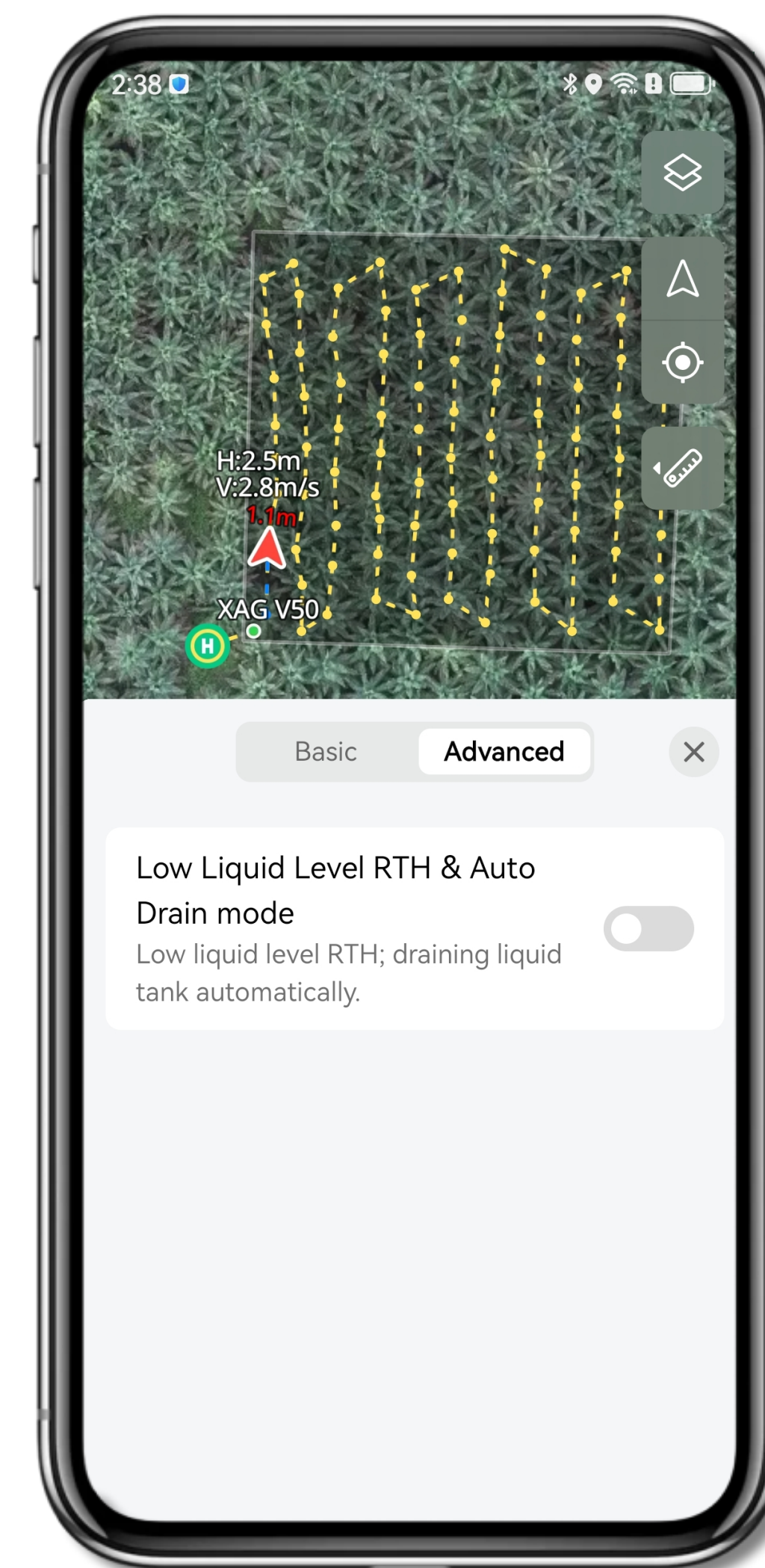


Dynamic Parameter Adjustment

- Dynamic parameter settings are supported during spot mode operation.
- Basic settings: Support dynamic adjustment of spraying settings, altitude and speed, terrain following and obstacle avoidance functions during operation.
- Advanced settings: Support dynamic adjustment of the on/off switch for RTH & Empty Container mode during operation.



Dynamic parameter adjustment - basic settings



Dynamic parameter adjustment - advanced settings

Instructions for Spot Mode Function

Supported

RealTerra-Free 3D Flight, Fly Only,
RTH & Empty Container, and
disabling Atomization

Not
currently
supported

Spot Spreading, 3D Route Operation,
Multi-Field Operation, Estimated
Breakpoint Display,
and Route Optimization for Reloading
(May be supported in the future)

Not
supported

Operation mode preposition, lane
change settings, prescription map,
autonomous operation, operation
mode, route direction and spacing
adjustment, operation area selection,
and climb on turns

THE END

