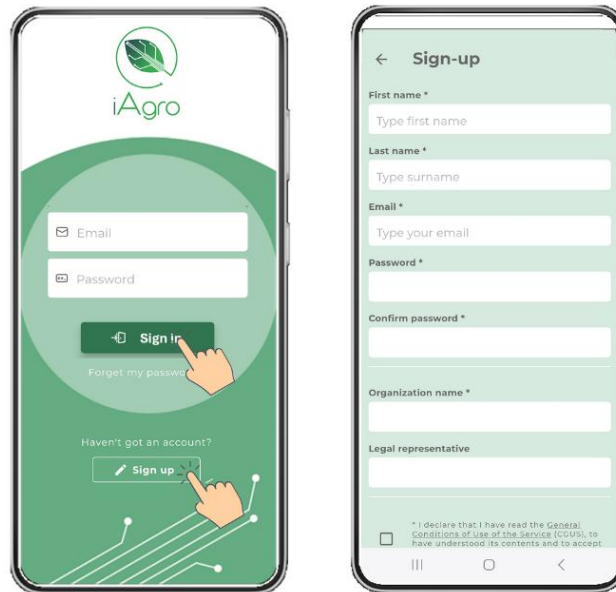


iAgro User Manual

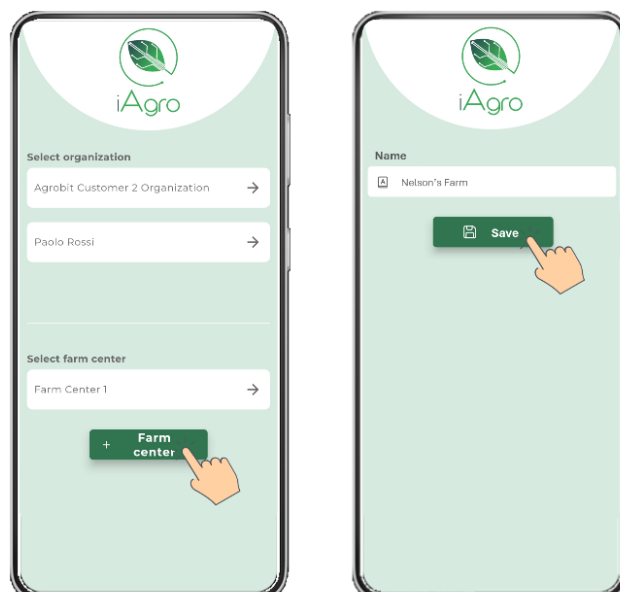
Login and Registration

To access the app, log in, if you have an account, or register by entering your private or company information. Upon completion of data entry and acceptance of the terms of services, you will receive a confirmation email for account activation.



Create a Farm Center

After logging in, firstly you need to create one or more farm centers that will then be visible in the list. Click on the **“+ Farm Center”** button and enter the required data.

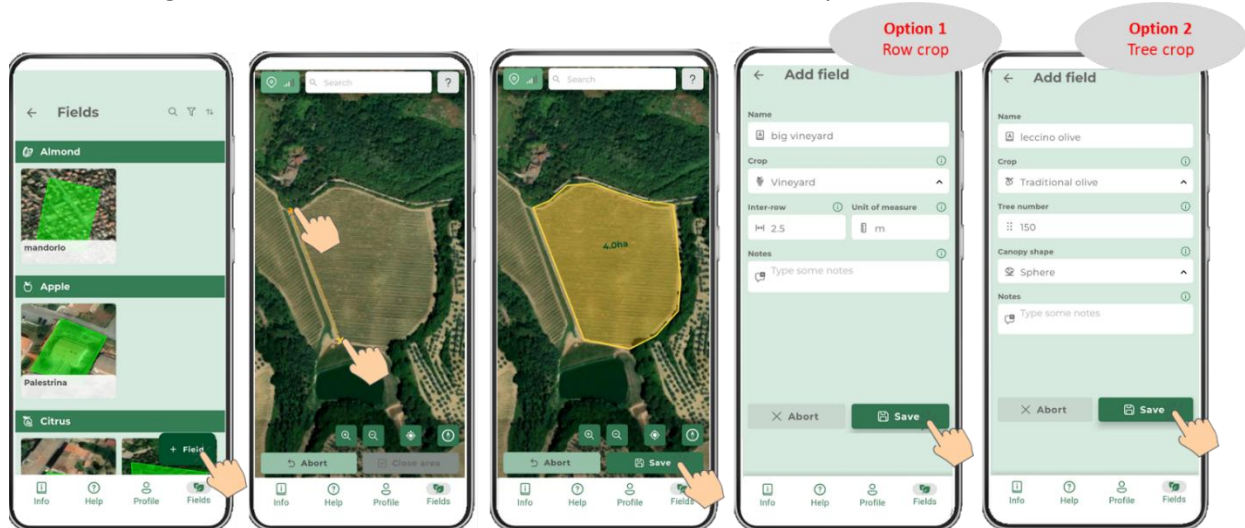


Create a Field

Once the organization and the farm center are created, the first entity that will be found is **Fields**. From the Fields panel it is possible to see the created fields with an indication of the type of crop and with an image identifying the perimeter. To create a new field, simply click on “+ Field” and draw its boundary by hand, gradually adding vertices to the polygon. Once completed, click “Save” and enter the field data (name, crop type, inter-row spacing, plant spacing, etc...).

The inter-row and plant spacing are requested only in the case of row crops (e.g., vineyards) and for super-intensive plantation (e.g., super-intensive olive groves).

For the other kind of crop types (e.g.: traditional olive groves) the total number of trees is requested. See the next figure to understand which is the correct selection for your field.



Row crops and super-intensive plantation examples – the plants are very near one to each other forming a continuous leaf wall



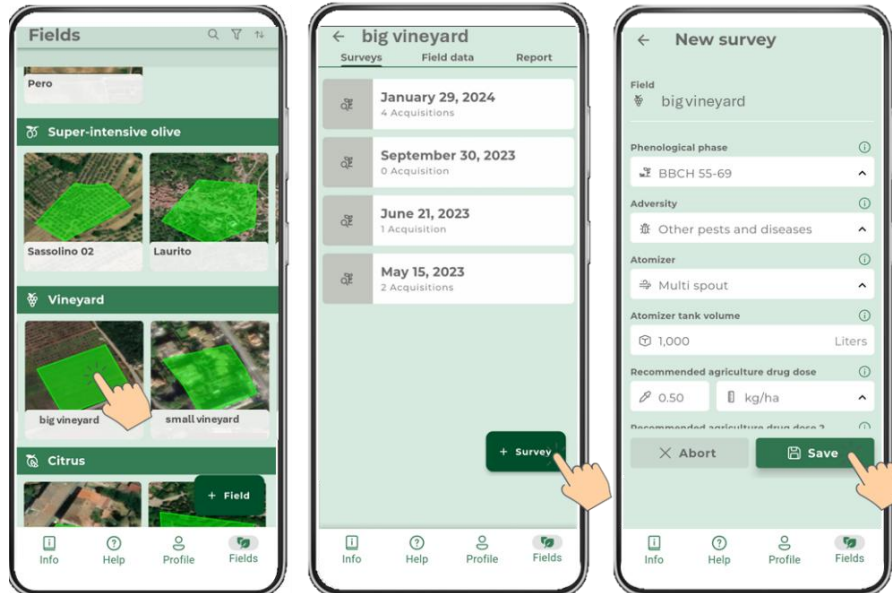
Tree crops examples – the plants are well spaced and there is enough space between one plant and another

Create a Survey

Having created the field, the second entity that will be found is **Surveys**.

To create a new Survey, go to one of the fields in the list in the Fields panel and click on **“+ Survey.”** The screen that will open allows you to enter the data for the Survey (phenological stage, disease to be fought, type of sprayer, sprayer tank volume, up to 3 recommended pesticide doses from producer label and its unit of measure).

Carefully follow the instructions in the [tutorial](#) in order to perform the survey and the acquisitions correctly.



In the following figures are reported the type of atomizers that can be selected when creating a survey.



Type of atomizer – standard



Type of atomizer - deflectors



Type of atomizer – multi-spout



Type of atomizer – vertical booms



Type of atomizer – recycling tunnel

Create an acquisition

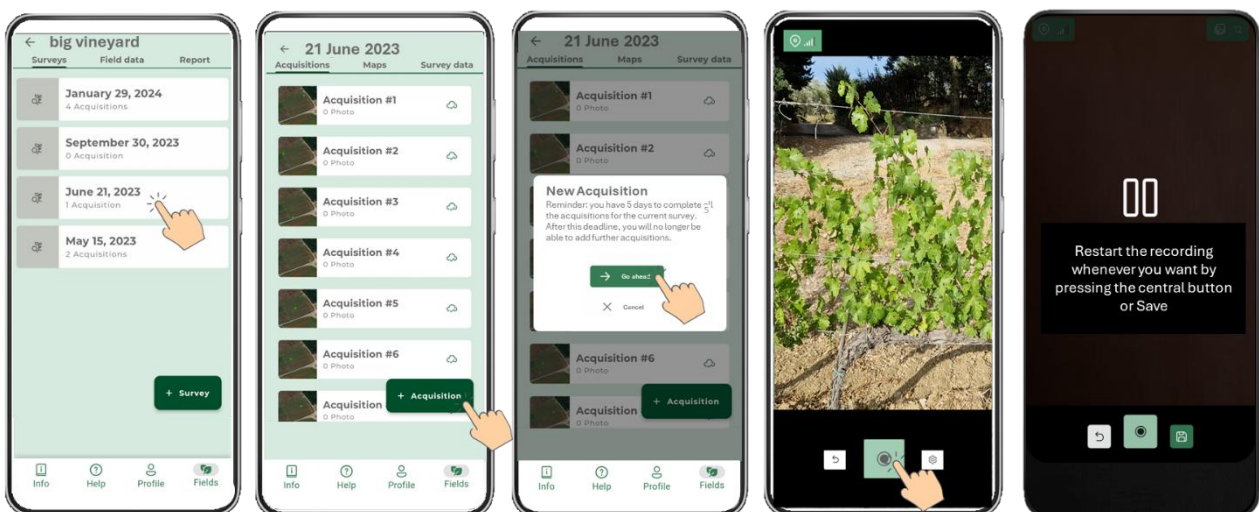
Having created the survey, the third entity that will be found is **Acquisitions**.

Once you have created the Survey and acquired the first dataset of photos, you can enter a survey from the Surveys panel. Within the selected survey, you can see a list of the photographic acquisitions made and an indication of whether or not they were uploaded to the cloud for processing or if there was any error in processing.

From the list of acquisitions, new ones can also be created by clicking on “+ Acquisition.” Going forward, an alert is displayed to warn the user that acquisitions of a single survey must necessarily be completed within 5 days of the creation of the survey in order not to mix acquisitions made at different phenological stages. Continuing on, you enter the capture screen, where the smartphone/tablet camera and GPS for geolocation will be activated. By framing the part of the row/tree to be scanned and clicking on the registration button, scanning will be started. To complete a scan you need to get to at least 50 photos in the counter at the top right of the screen before deadline saving: **carefully follow the directions in the [tutorial](#) in order to correctly perform the scan.**

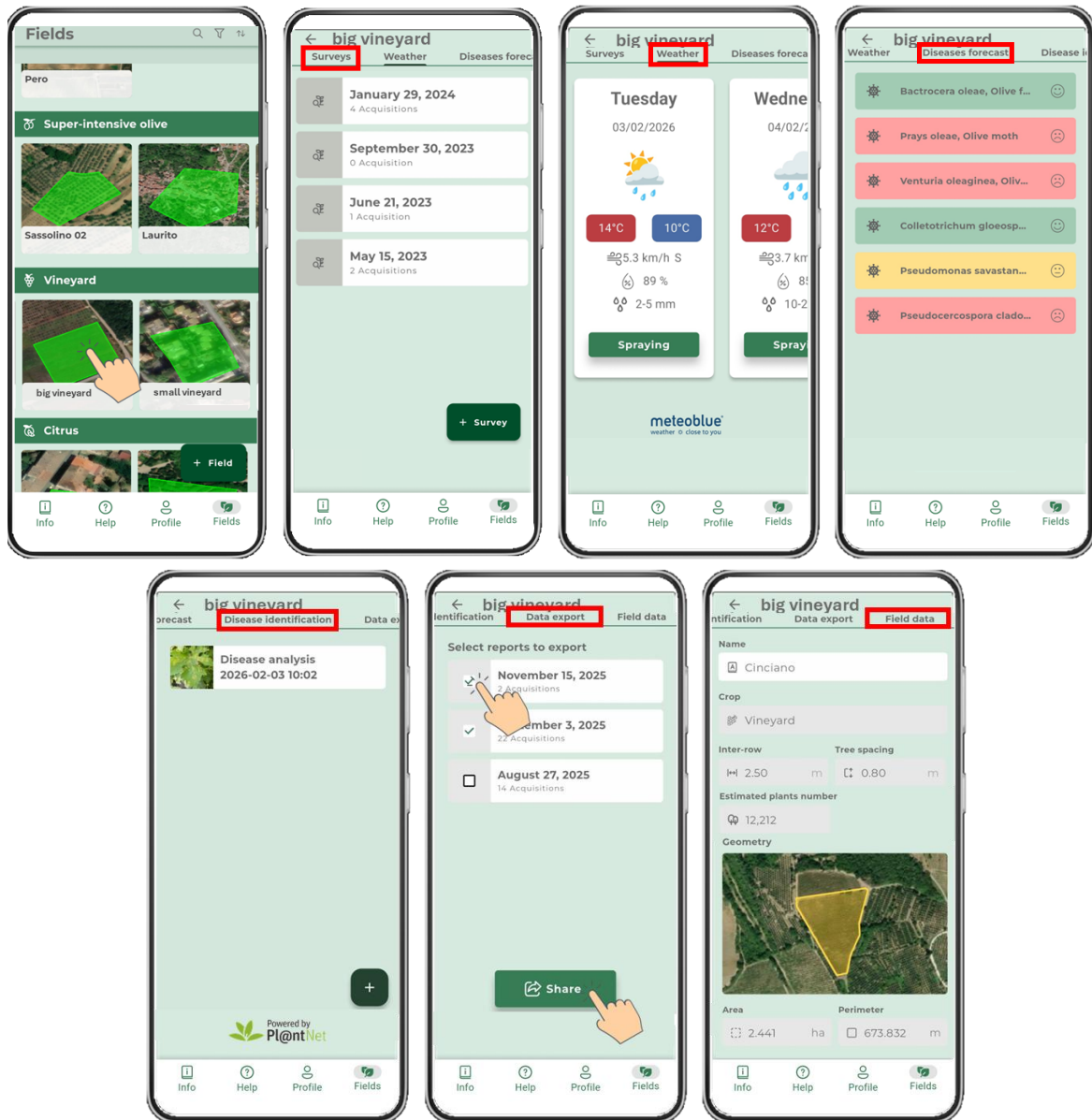
It is possible to stop the acquisition and resume it, using the central button. Once you have finished the acquisition, click on the “save” icon to save the current photos and return to the acquisitions list.

If you have iPhone Pro and Pro Max devices with iOS version 14 or higher or one of the Android devices available in [this list](#), the 3D scanning results will be available in real-time so it is not necessary to upload the photos to the cloud. The results will be automatically synched to the cloud.



Field Panel

The Field panel has 7 sections: Surveys, Weather, Disease Forecast, Disease Identification, Data Export, Report, Field Data.

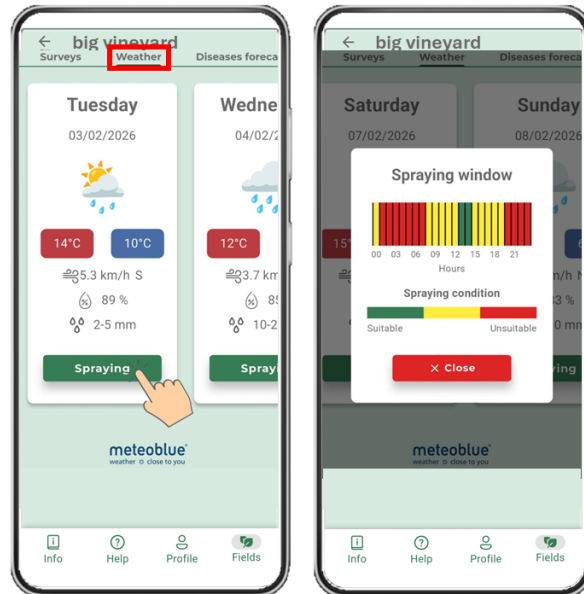


Surveys

In this section you can see the list of surveys (with date performed) and the number of acquisitions present in each single survey.

Weather

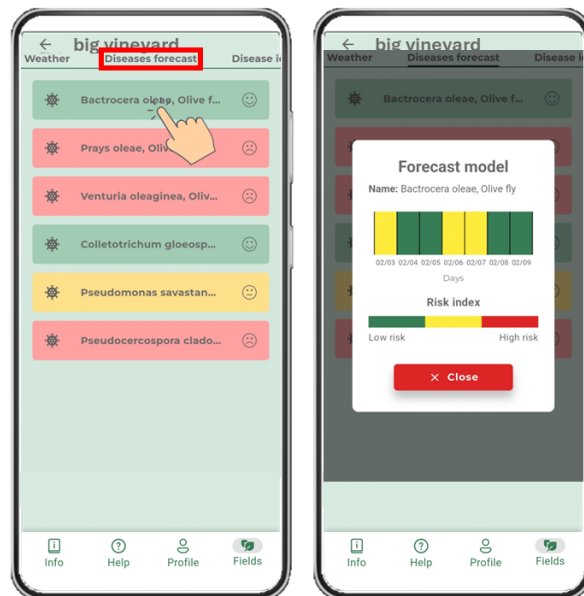
In this section you can consult 7-days weather forecast (sky conditions, min./max. temperatures, humidity, rainfall, wind speed and direction) and tri-hourly spraying conditions for phytosanitary treatments (optimal, medium, low).



Disease Forecast

In this section you can consult the current situation and 7-day forecasts for specific diseases/pests for a given crop.

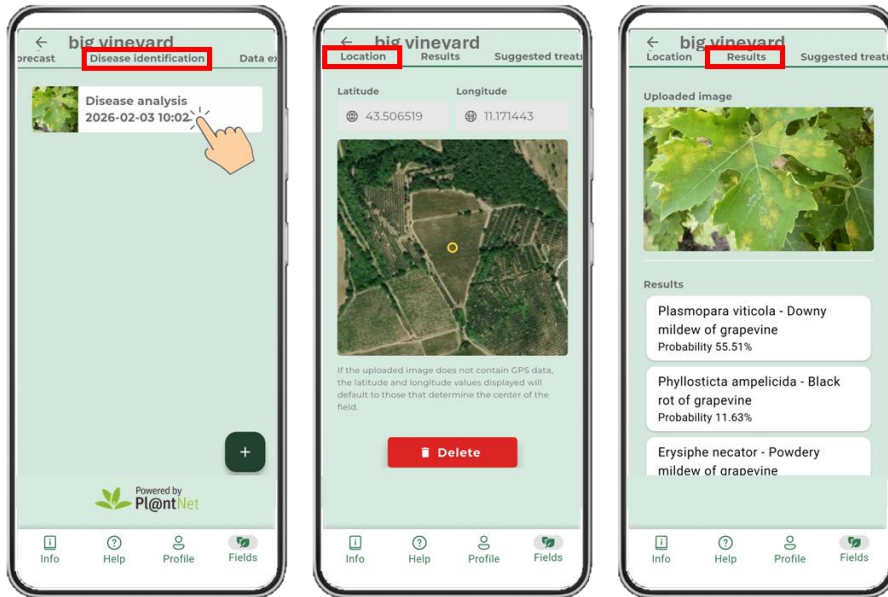
You will be able to see 3 levels of disease/pest severity: high (green), medium (yellow), low (red).



Disease Identification

In this section you can take or upload photos of leaf, trunk, branch or flowers to identify possible diseases. The algorithms will score the top 3 possible diseases and suggest possible treatments (this feature is actually in development).

If the photos are collected directly in the field, the GPS position will be taken into account.



Data Export

In this section it is possible to export in tabular format the results of the acquisitions made in all the surveys associated with the selected field. You can choose which surveys to export, based on the given date. The exported tabular sheet will have one page for each survey, and each page will contain a number of rows corresponding to the results of the acquisitions performed in that specific survey.

Report

In this section it is possible to automatically generate a pdf with a summary of the main information for the field. It is also possible to insert information about the yield/quality of the fruits.

Field data

In this section you can see the field data entered by the user when it was created, i.e., the name, the crop type, the inter-row spacing, the plants spacing, the number of trees, the field perimeter, and the field area in hectares.

Survey Panel

The Survey panel has 3 sections: Acquisitions, Maps, Survey Data.

Acquisitions

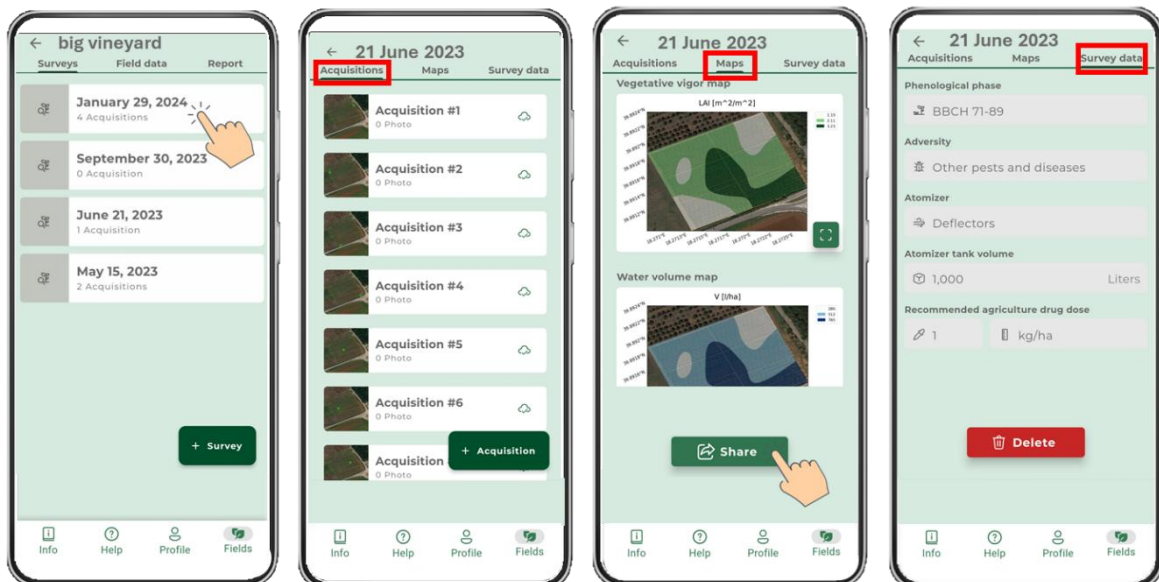
In this section, you can see the list of acquisitions performed for the selected survey, the number of photos in each single acquisition and whether the dataset has been uploaded to the cloud and processed.

Maps

In this section you can see, download and export maps of the selected survey, which will be visible only when 5 or more acquisitions are made. The map of vegetative vigor (LAI index) and the map of optimal water dose for pesticide treatments in l/ha are available for export/download. All maps are made in 3 homogeneous zones and can be exported/downloaded in .jpg, .geotiff and .shp formats.

Survey data

In this section you can see the survey data entered by the user when it was created, i.e., the phenological phase, the disease to be fought, the type of sprayer, the sprayer tank volume, the recommended label dose and the unit of measurement of the latter.



Acquisition Panel

The Acquisition panel has 3 sections: Acquisition Data, Results, 3D Model.

Acquisition Data

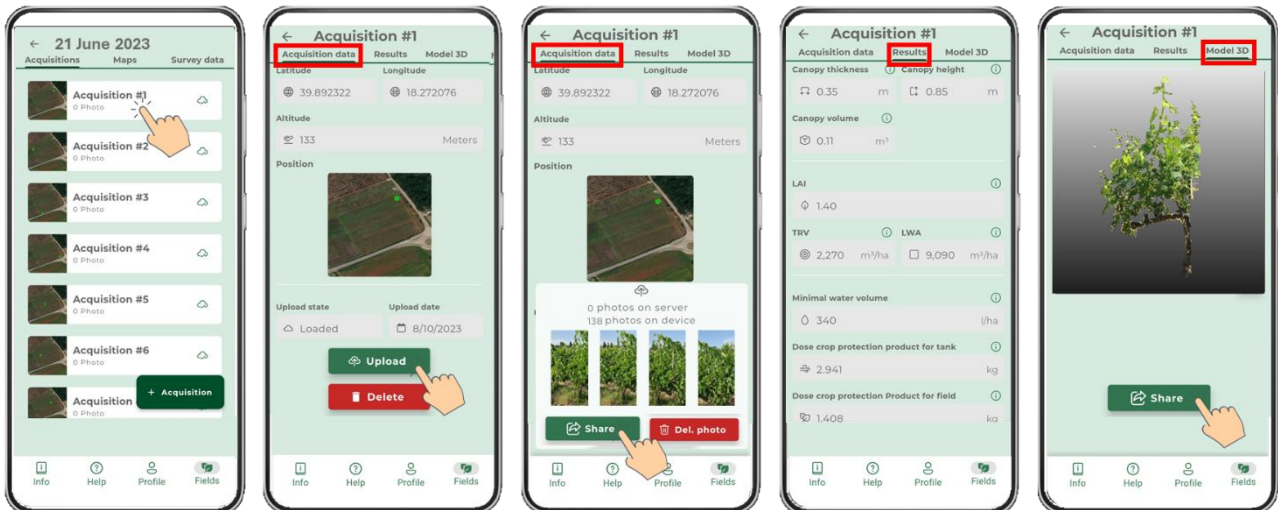
In this section you can see the geographical location of the acquisition and upload the photo dataset to the cloud. If you have iPhone Pro and Pro Max devices with iOS version 14 or higher or one of the Android devices available in [this list](#), the 3D scanning results will be available in real-time. The results will be automatically synched to the cloud. Otherwise, once the acquisition is completed, you can upload the photos to the cloud and wait few minutes for processing. In addition, it is possible to see whether the dataset has been uploaded and processed as well as export the photo dataset (via the “Share” button) or delete it (via the “Del. photos” button).

Results

In this section, it is possible to see the results of this acquisition: the thickness, height and volume of the part of the row/tree analyzed, the vigor parameters LAI (Leaf Area Index), LWA (Leaf Wall Area), TRV (Tree Row Volume) and the optimal dose of water for pesticide treatments as well as the doses of pesticide to be placed in the sprayer tank and those that will be distributed in the field.

3D Model

In this section, the 3D point cloud of the scanned row/tree can be viewed, navigated and exported.



Profile, Help and Info Panels

In the **Profile** section you can see your account information, including the organizations, the total number of fields, hectares, surveys and acquisitions performed. You can select the language, change the farm center (if 2 or more have been created), invite other users to your organization, sign out or delete the account.

In the **Help** section, you can view the tutorial, the video tutorial, the user manual and the FAQ, or contact the support directly by e-mail.

The **About** section contains information about the iAgro app, as well as links to the “Privacy Policy” and “Terms and Conditions” pages.

