

DEFENCE and MONITORING of the CITRUS GROVES

SATELLITE
IMAGERY



FORECAST
MODEL

YIELD AND QUALITY
MONITORING



FIELD
MAPPING



CROP
SCOUTING



CITRUSDSS

POWERED BY
AGRICOLUS



Increase the quality
and quantity of
citrus fruits



Reduce
management
costs



Prevent the spread
of harmful insects
and diseases



Optimize the
use of water
and inputs



Monitor the status
of citrus groves, also
remotely



FIELD MAPPING

Geolocate the field on the map and draw it. Features will be immediately hooked. You can enable the cadastral map and enter sheet and parcel information.

Use one of the following methods to create your field.



Draw on map

Locate the plot on the map and draw it manually.

✓ Select



Automatic detection

Locate the plot on the map and enable automatic detection to map the field with just one click.

✓ Select



Upload files

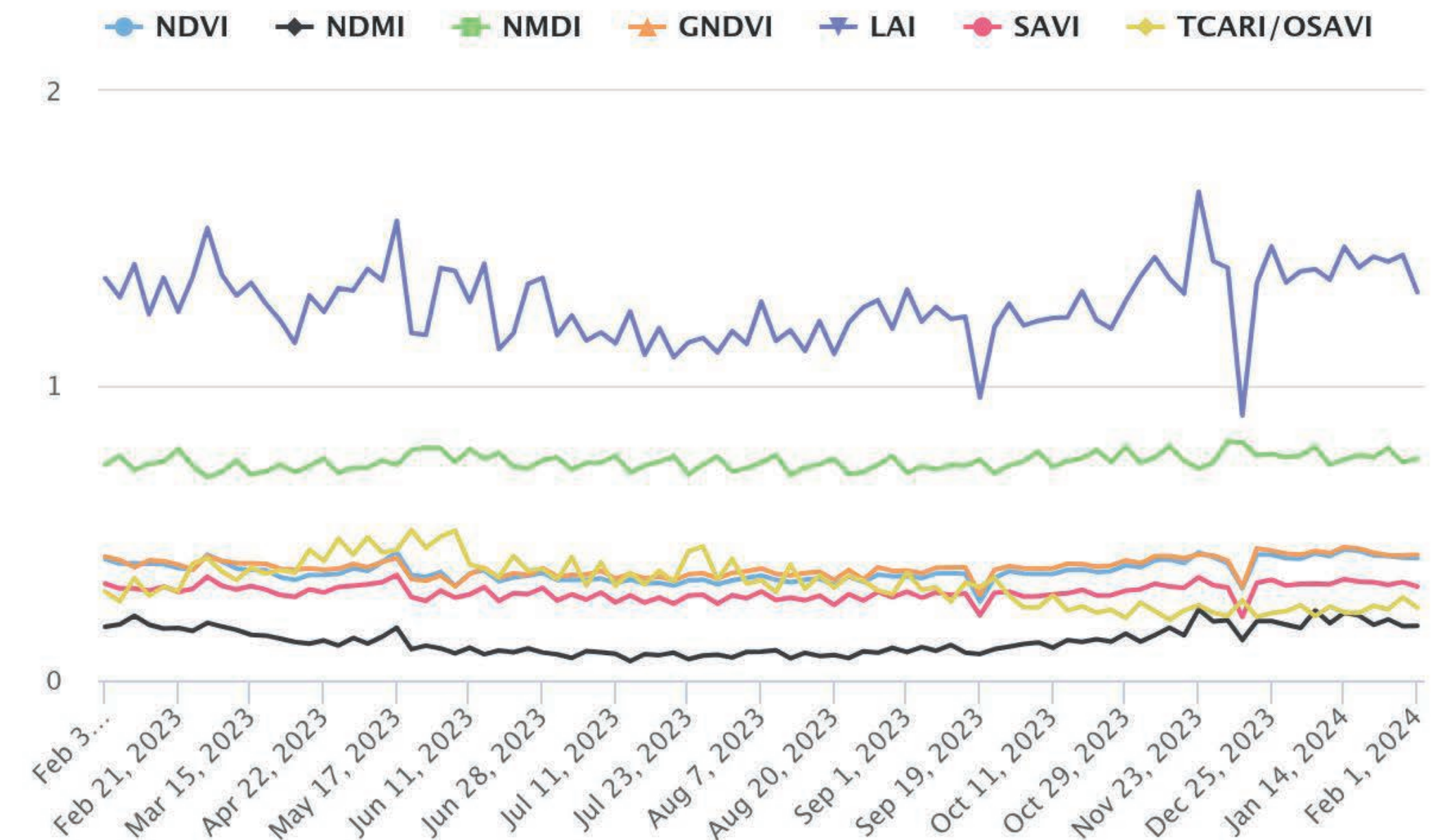
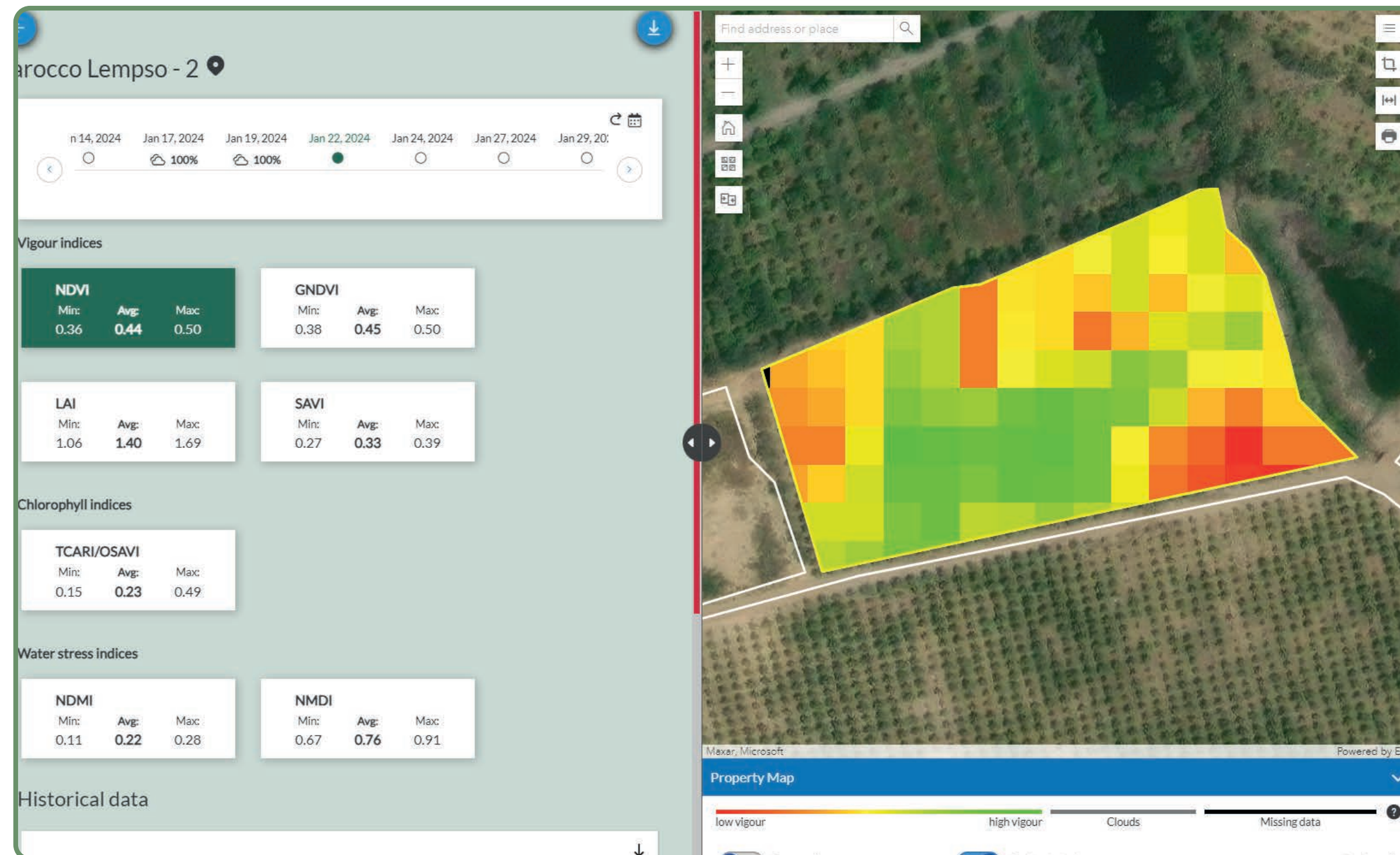
Upload a .shp or .kmz file.

✓ Select



SATELLITE IMAGERY

Consult Sentinel-2 satellite images with vigor, water stress and chlorophyll indices to assess the health of the crop and plan monitoring activities.





FORECAST MODELS



PHENOLOGY

Prediction of phenology to assess the needs of the citrus grove in each development stage.



IRRIGATION

Evaluation of water requirements to carry out irrigation when necessary with the right amount of water.



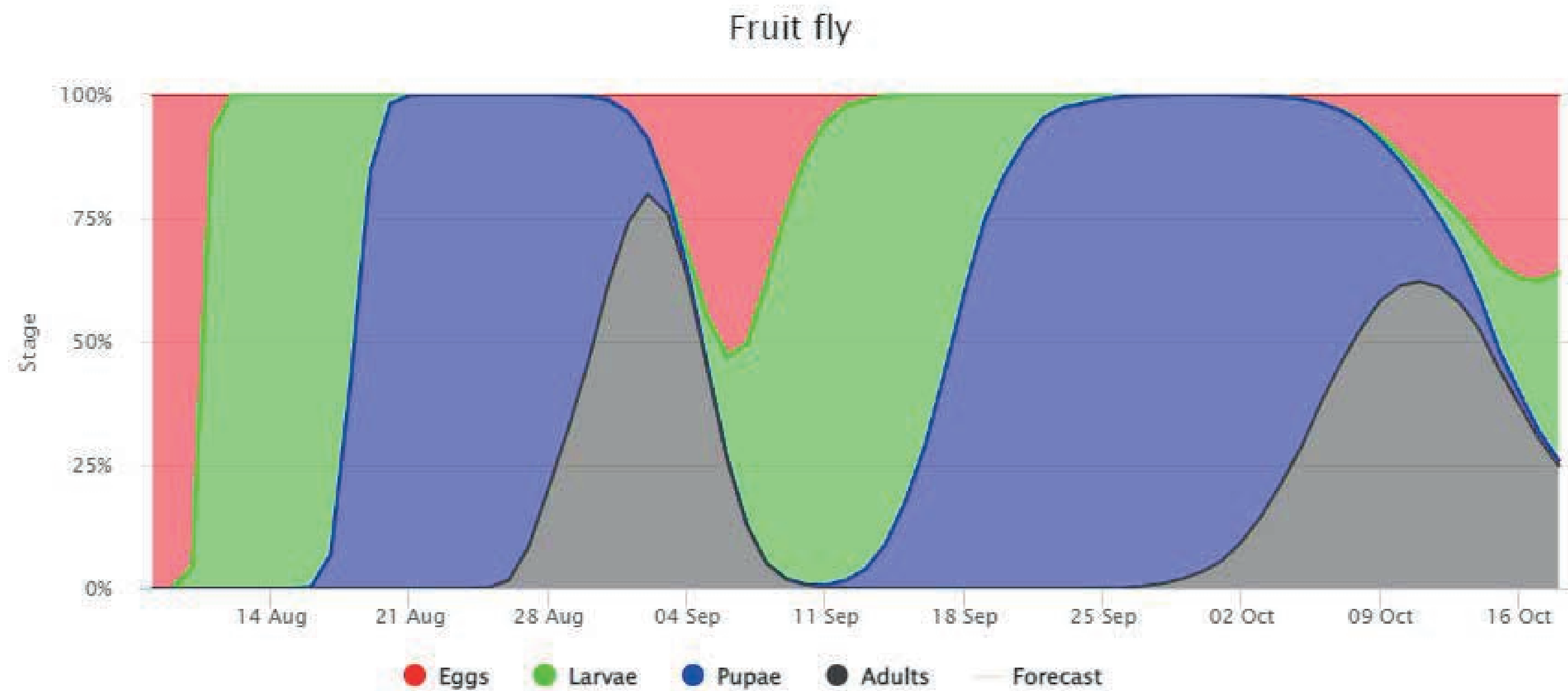
FERTILIZATION

Calculation of the total nitrogen, phosphorus and potassium needs (Kg/ha) required by the crop in order to obtain important suggestions on the doses of fertilizer to be applied.





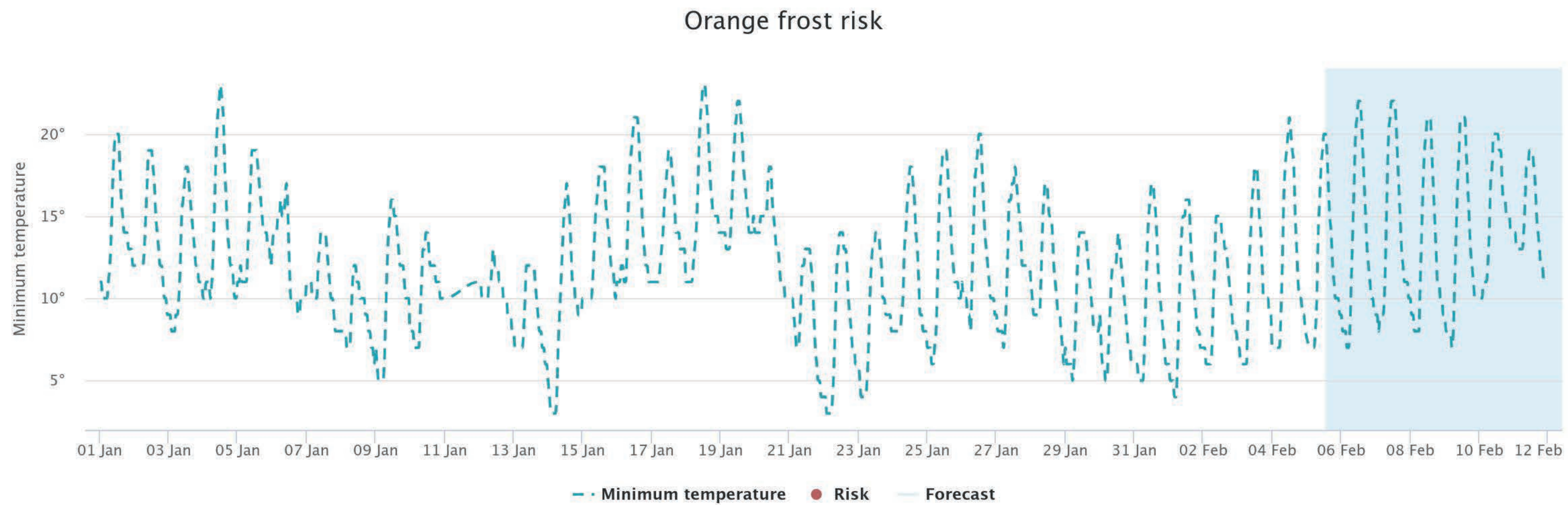
PEST AND DISEASES FORECAST MODEL



Prediction of infestation and diseases to assess the risk of pest (**Fruit fly**) and diseases (**Anthracnose**) and act promptly.



FROST FORECAST MODEL



Frost forecast to know in advance (**up to 7 days before**) the harmful climatic event and the type of risk.

FEATURES



DECISION SUPPORT

Suggest operations to be carried out based on collected data.



ALERTS FROM MODELS OF DEFENSE FOR CITRUS FRUITS

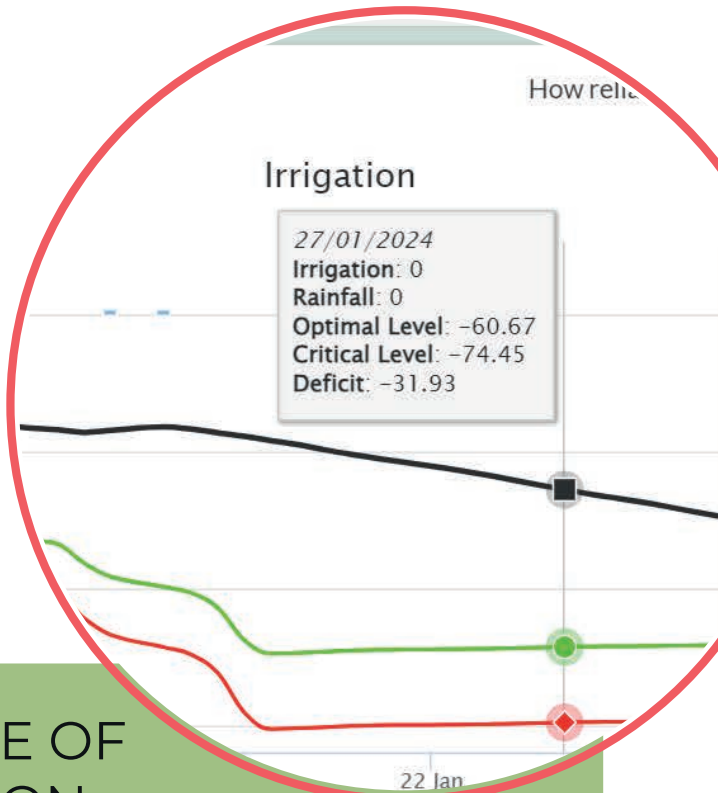
PREDICTION OF INFESTATIONS OF PLANT DISEASES AND INSECTS

Medium risk
Mediterranean fruit fly

High risk
Orange anthracnose



12-HOUR FORECAST



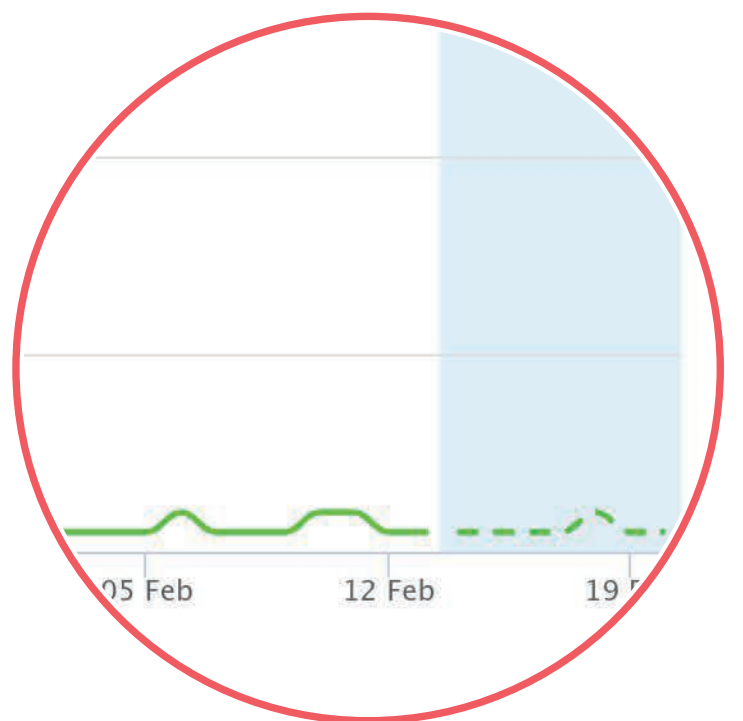
ESTIMATE OF IRRIGATION REQUIREMENTS FROM FORECAST MODEL

10 nr.
Last treatment date
Sep 20, 2023

Sprouting (BBCH 9)






FIELD ACTIVITIES ENTERED BY THE USER AND INTEGRATED INTO THE PHENOLOGY FORECAST MODEL





SUSTAINABILITY





Monitor the **economic** (yield, production) and **environmental** (water consumption, input control and farm biodiversity) **sustainability indicators** of your farm. You can set the level to be reached for each indicator and monitor how the work is going.

-  Economic 
-  Environmental 
-  Targets List 

ENVIRONMENTAL INDICATORS ENVIRONMENTAL ?

Environmental indicators focus on the impact of agricultural practices on the surrounding environment

Water

Indicator	Value	Target	Status
Total water consumption	20899.38 m ³	Less than 459781.50m ³	 
Average water consumption	7404.53 m ³ /ha	Less than 7500.00m ³ /ha	 
Water use efficiency	0 m ³ /t		

FEATURES

The screenshot displays the CitrusDSS software interface. On the left, there is a control panel with various input fields and a table. On the right, there is a large aerial map of a citrus grove with a prescription map overlaid, showing different colored zones. A smaller inset map is visible in the bottom left corner of the main map area.

Field: Citrus 1, Layer: NDVI

Feb 1, 2024, Feb 6, 2024

Fertilizer name: Phylen, Nutrient %: 17,5 %

Number of Zones (max: 5): 3, Calculation mode: Average - direct

Avg nutrient: 70 kg/ha, Variation from avg: 20 %

Zones	Area	Avg nutrient
Zone -1	0.29 ha	77,07 kg/ha
Zone 0	0.37 ha	70,06 kg/ha
Zone 1	0.04 ha	63,06 kg/ha
Total fertilizer	286.33	kg
Total area	0.82	ha
Avg nutrient	61.26	kg/ha

Use with machinery

Choose machinery

Choose machinery


Download



PRESCRIPTION MAPS

Choose the most suitable vegetation index to draw up the prescription map and carry out a variable rate fertilization.



Lot code: 001a1



Landing page

<https://web.agricolus.co>

Visit page

The QR code on the mask will allow easy access to the web page dedicated to the product traceability. In this way, all detailed product information can be consulted with great convenience



PRODUCTION LOTS

Create and assign to each crop its own production lot to improve **traceability** of operations. A **QR code** is also generated that allows you to access and share the dedicated web page where you can consult all the information on the product.



YIELD AND QUALITY MONITORING

Sugar content, Total Titratable Acidity, sugar/acid ratio, color, peel integrity, presence of damage, abnormal external humidity and foreign odor and/or taste; caliber, diameter, weight and juice yield.

Campo 1 (Bergamot)

Sample date: 12 Feb 2024

Fields: Campo 1

Sample identifier: 043-945-1

Select a point in the map

BoBujol Brix	23	°Brix
Total acidity	20	g/l
Acid sugar ratio	1.15	%
Coloration	red	
Peel integrity	No	
Damages	No	
External abnormal humidity	No	
Foreign taste and/or smell	Yes	
Note		

QUANTITY ESTIMATION

Sample identifier: 244-899-2	Sample date: Sep 1, 2023		
10 Caliber	77% Diameter	9% Weight	8% Yield juice
Field: Campo 1	Bergamot		
Sample identifier: 244-892-1	Sample date: Sep 1, 2023		
13 Caliber	33% Diameter	3% Weight	3% Yield juice
Field: Campo 1	Bergamot		

FEATURES



WORK



TASK MANAGEMENT

Create and assign tasks to be done in the farms to your collaborator in real time.



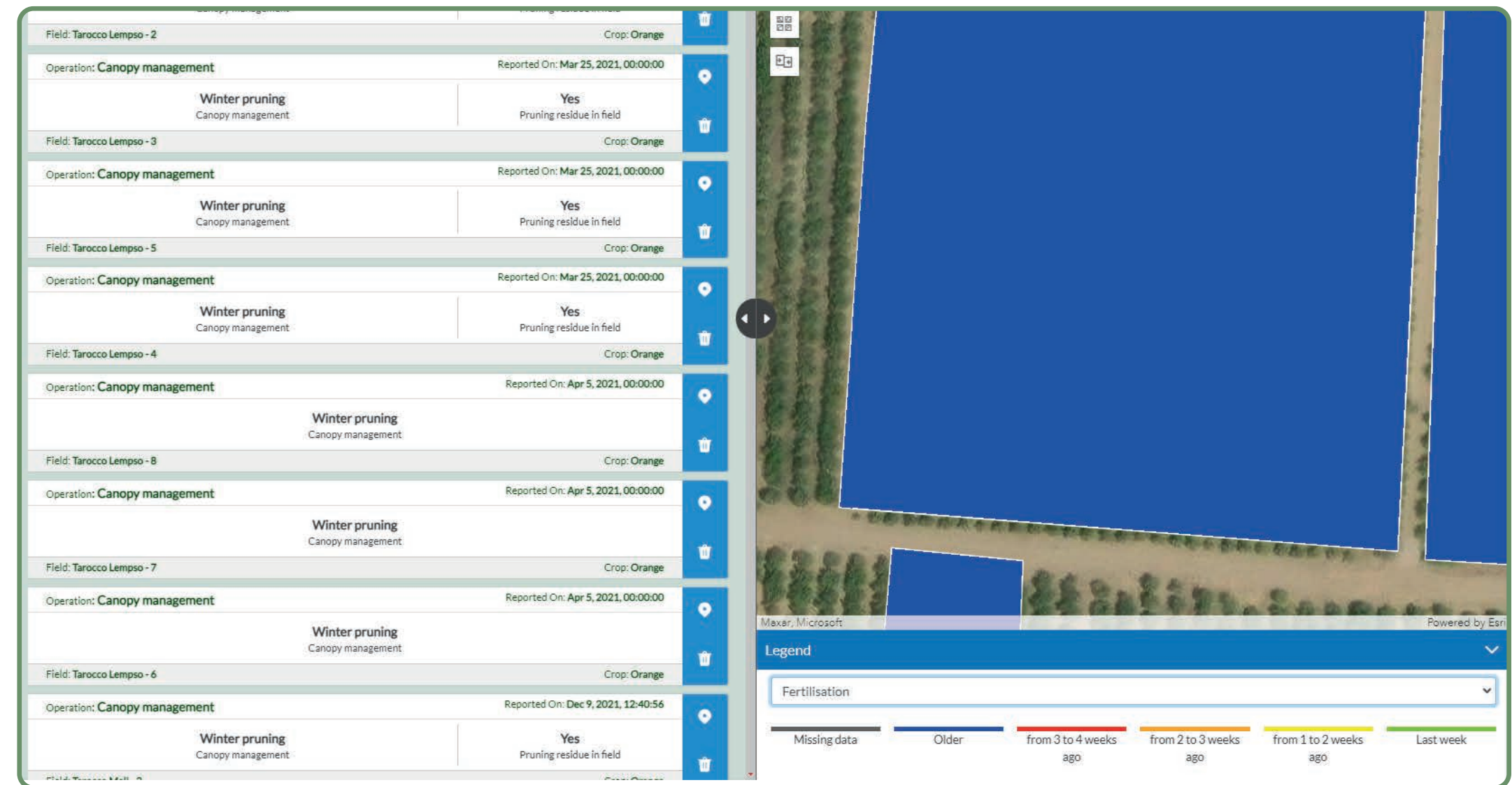
MACHINERY

Register your agricultural machinery, any problems and maintenance carried out. You can also connect them to Agricolus by using Agrirouter.



CROP OPERATIONS

Register where, how and when crop operations (treatments, fertilization, pruning, harvest) have been carried out. You can also access phytosanitary products database.





CROP SCOUTING

Geolocate and register data from crop scouting by using the **mobile App** for phytosanitary monitoring and evaluation of quality and quantity.



- ⓘ ISSUES
- ⚠ DAMAGES
- 🕒 TRAPS
- 📅 CATCHES
- 🌱 PHENOLOGY
- 🐛 PESTS AND DISEASES
- 🧪 SOIL ANALYSIS
- ★ QUALITY ESTIMATION
- ⚖ QUANTITY ESTIMATION

FEATURES



WEATHER



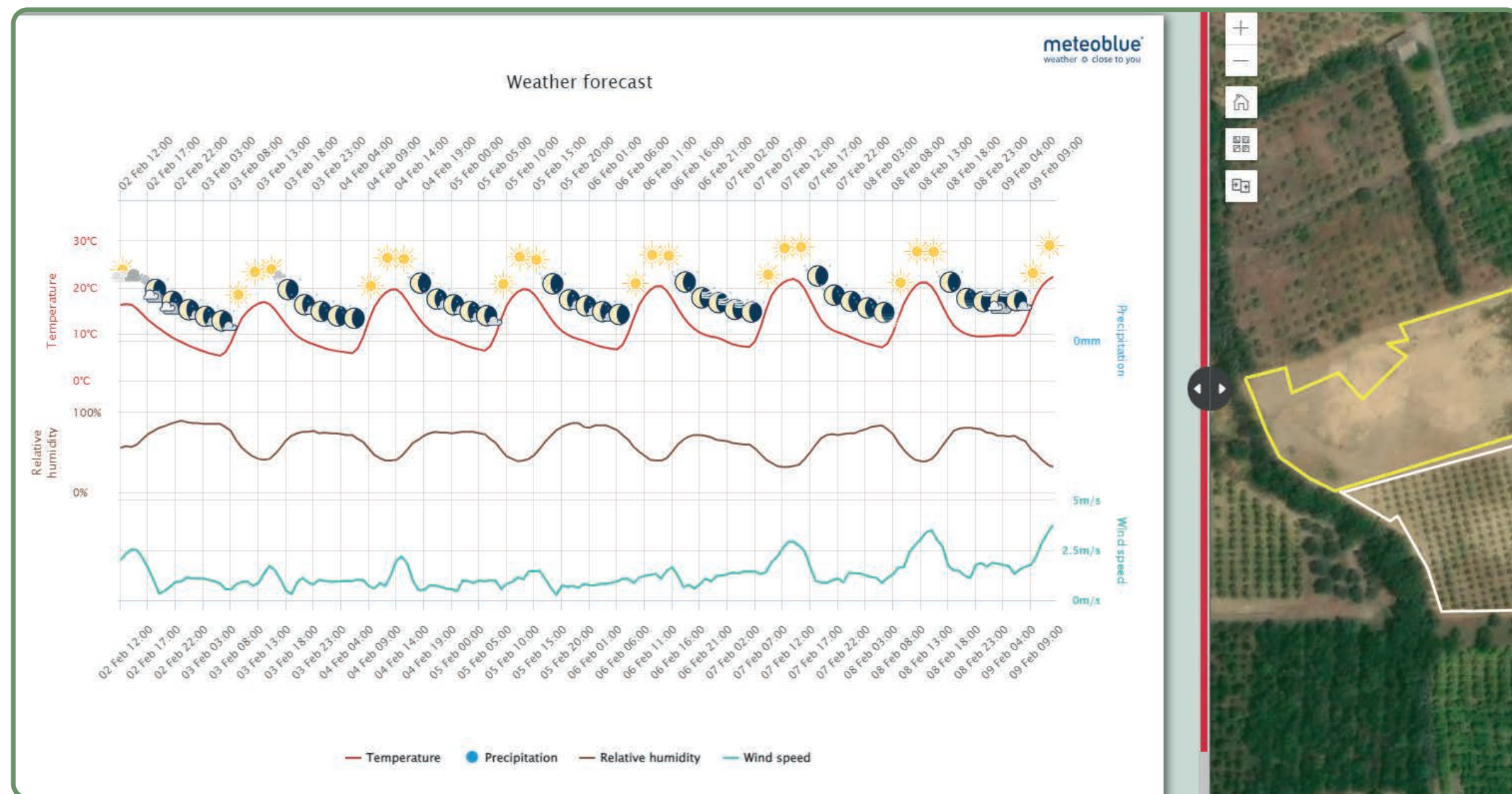
WEATHER FORECASTS

Consult professional weather forecasts up to 7 days updated every hour: temperature, humidity, wind speed, rainfall.



WEATHER STATIONS

Virtual weather station included; physical weather stations and sensors can be purchased or integrated, if already present in the company.






02 Feb 04:00									
Temperature : 5.93 °C									
Precipitation : 0 mm									
Cumulative precipitation (02 Feb 00:00–02 Feb 23:59) : 0.00 mm									
Relative humidity : 81 %									
Wind speed : 0.84 m/s									



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FIND OUT MORE  <https://www.agricolus.com/en/>