



# CITRUS DSS

DSS for citrus cultivation

# Why choose **CITRUSDSS**



## **Increase**

the quality and quantity of citrus fruits



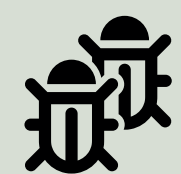
## **Monitor**

the status of citrus groves, also remotely



## **Reduce**

management costs



## **Defend**

in advance from pests and diseases



## **Intervene**

promptly in case of frost



## **Optimize**

the use of inputs (water, treatments, fertilizers)



## 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.

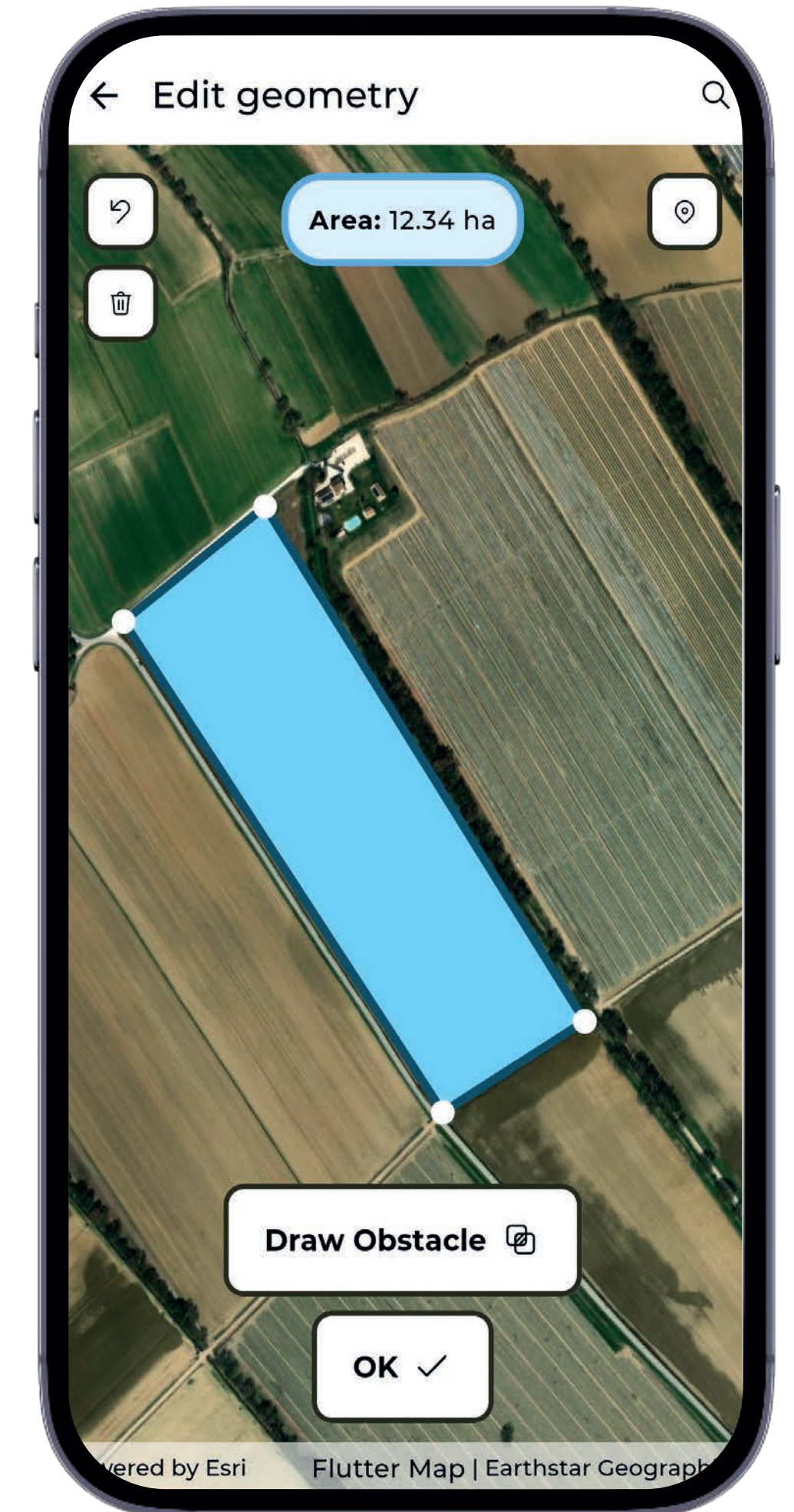
✓ Select



### Upload files

Upload a .shp or .kmz file..

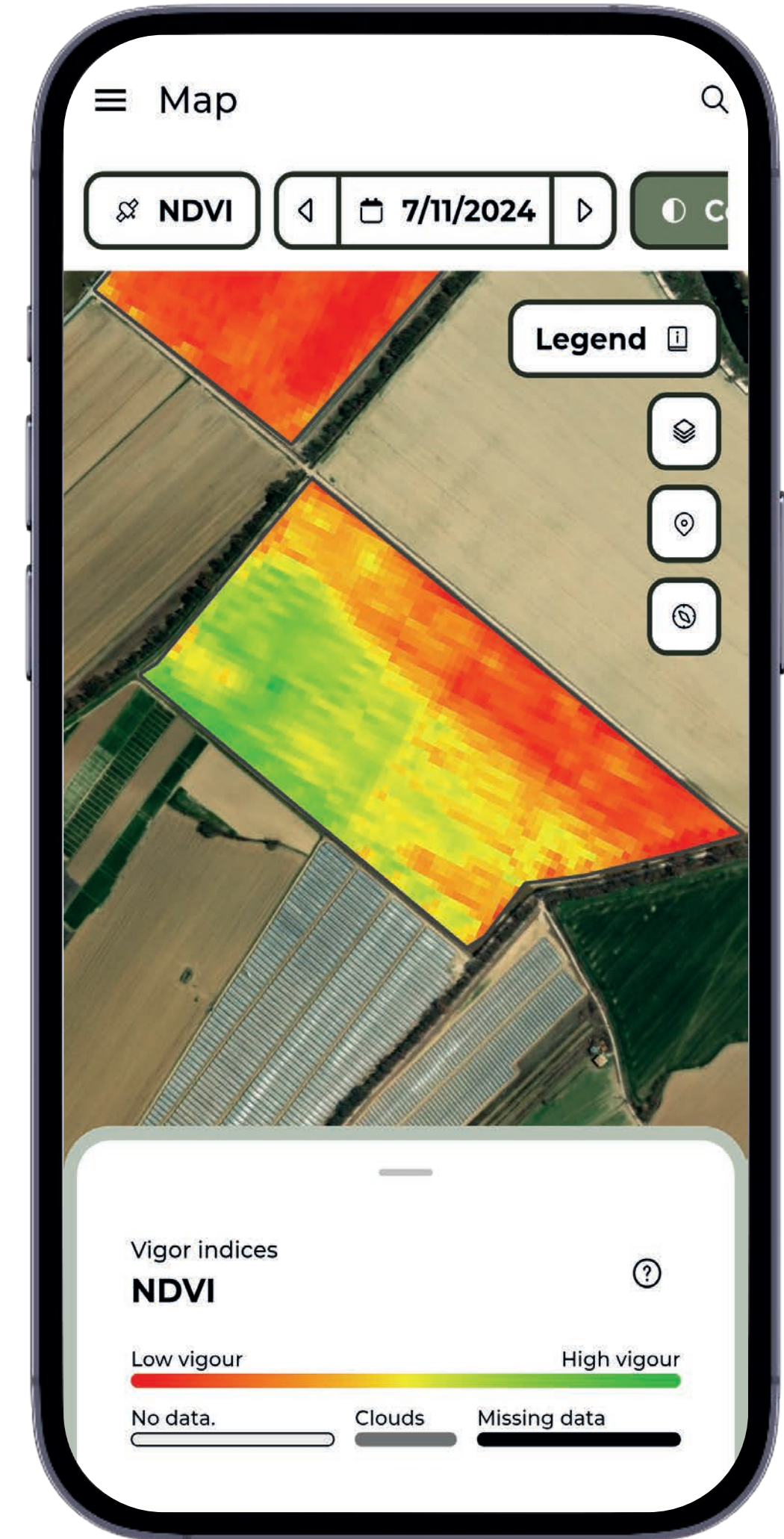
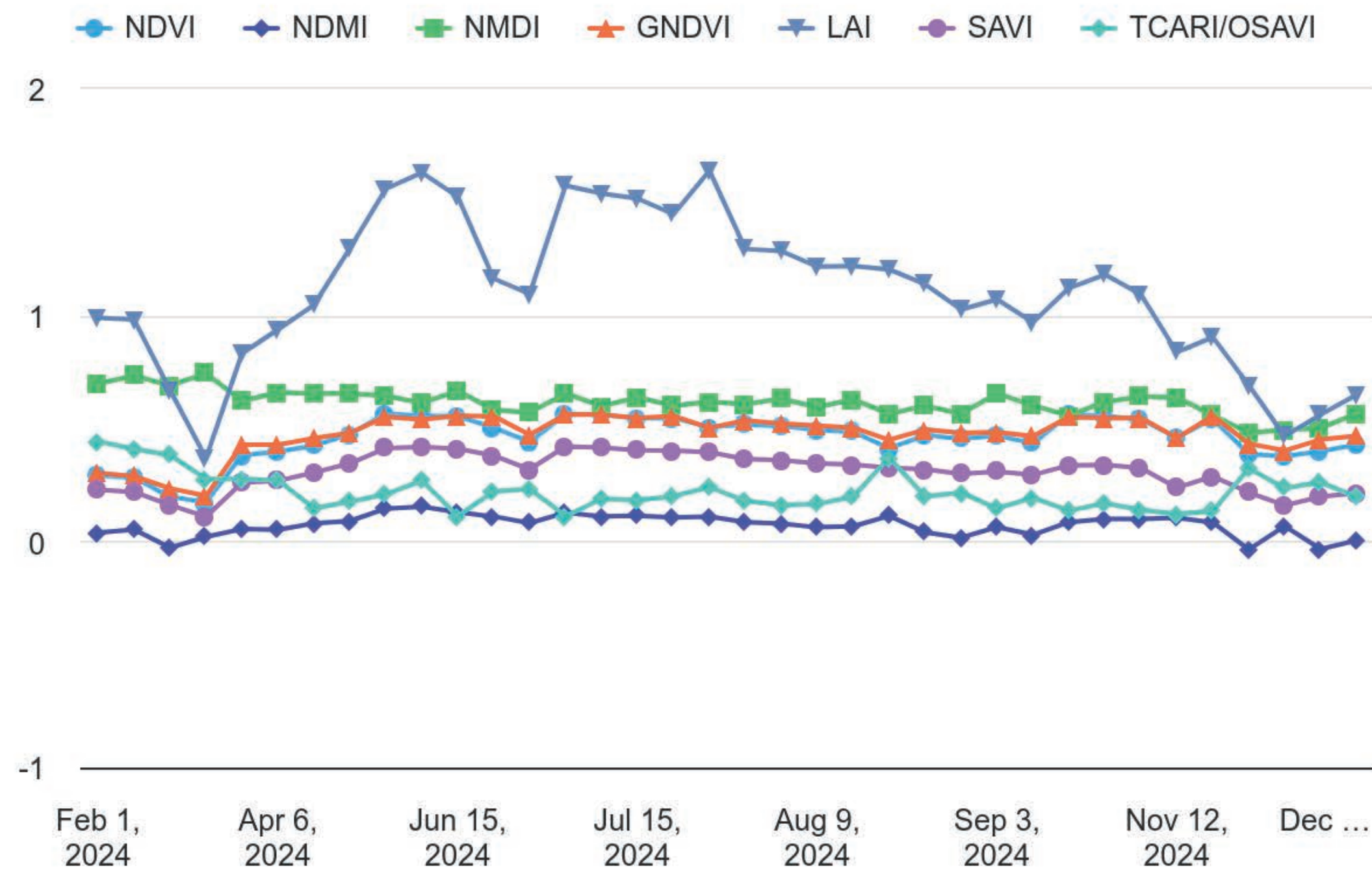
✓ Select





## SATELLITE IMAGERY

Consult Sentinel-2 satellite images with vigor, water stress and chlorophyll indices to promptly identify critical areas of the citrus fields.



# Features



## WORK



### TASK MANAGEMENT

Create and assign to your collaborators the activities to be carried out in the farm **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 such as irrigation, treatments and fertilization have been carried out.

The screenshot shows the 'CROP OPERATIONS' interface for 'Citrus 1'. It features a table of operations with columns for Operation, Fertiliser type, Quantity, N per ha, P<sub>2</sub>O<sub>5</sub> per ha, and K<sub>2</sub>O per ha. The table is divided into three sections: Fertilisation (Feb 5, 2024), Fertilisation (Mar 29, 2024), and Treatments (Jul 5, 2024). The Fertilisation section includes entries for 'Multiple' (850 kg) and 'prodigy plus (Mineral)' (450 kg/ha). The Treatments section includes an entry for 'Fungicide SYLLIT MAX' (5 qty/ha). To the right of the table is a satellite map of the field with a blue area indicating a specific operation. Below the map is a legend for 'Fertilisation' with color-coded categories: Missing data (grey), Older (blue), from 3 to 4 weeks ago (red), from 2 to 3 weeks ago (orange), and from 1 to 2 weeks ago (yellow).

Operation	Fertiliser type	Quantity	N per ha	P <sub>2</sub> O <sub>5</sub> per ha	K <sub>2</sub> O per ha
Operation: Fertilisation Reported On: Feb 5, 2024, 00:00:00					
Multiple		850 kg	106.97 kg/ha	45.23 kg/ha	79.46 kg/ha
^ Hide details					
prodigy plus (Mineral)		450 kg/ha	38.51 kg/ha	11 kg/ha	11 kg/ha
agromaster 14-7-14 (Mineral)		400 kg/ha	68.46 kg/ha	34.23 kg/ha	68.46 kg/ha
Field: Citrus 1 Crop: Orange					
Operation: Fertilisation Reported On: Mar 29, 2024, 00:00:00					
sangue di bue n12 po57 (Organic)		20 kg	2.93 kg/ha	13.94 kg/ha	0.98 kg/ha
Field: Citrus 1 Crop: Orange					
Operation: Treatments Reported On: Jul 5, 2024, 16:10:22					
Fungicide	SYLLIT MAX		Dodina 52.9% (544 g/l)	5 qty/ha	-
Product type	Commercial		Active ingredient	Quantity of product	Target
Field: Citrus 1 Crop: Orange					

Lot code: J12756



Landing page

<https://web.agricolus.com>



[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.



## 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
Total water consumption	5980.21 m <sup>3</sup>
Average water consumption	163.1 m <sup>3</sup> /ha

### Fertilizer

# Features

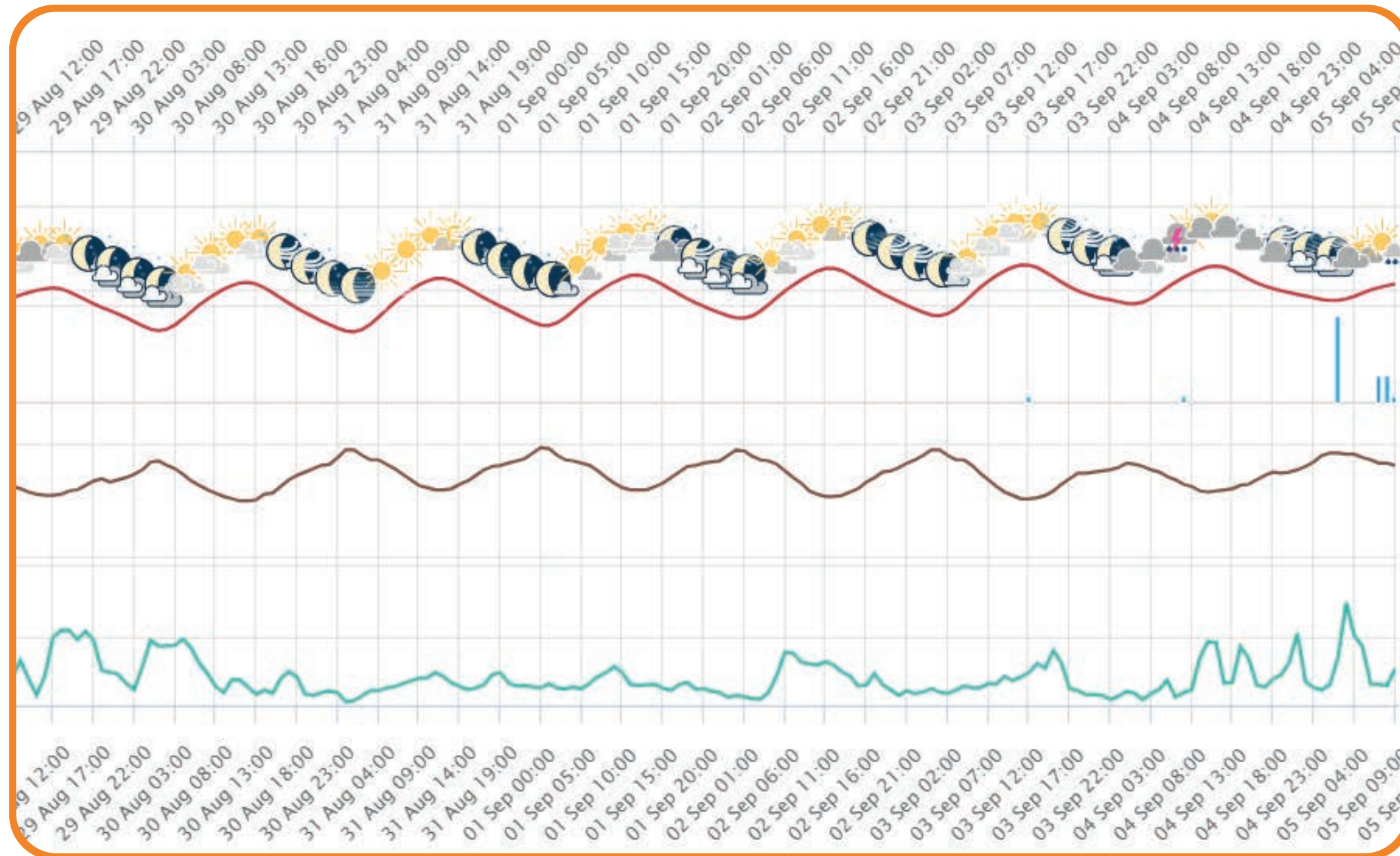


## WEATHER



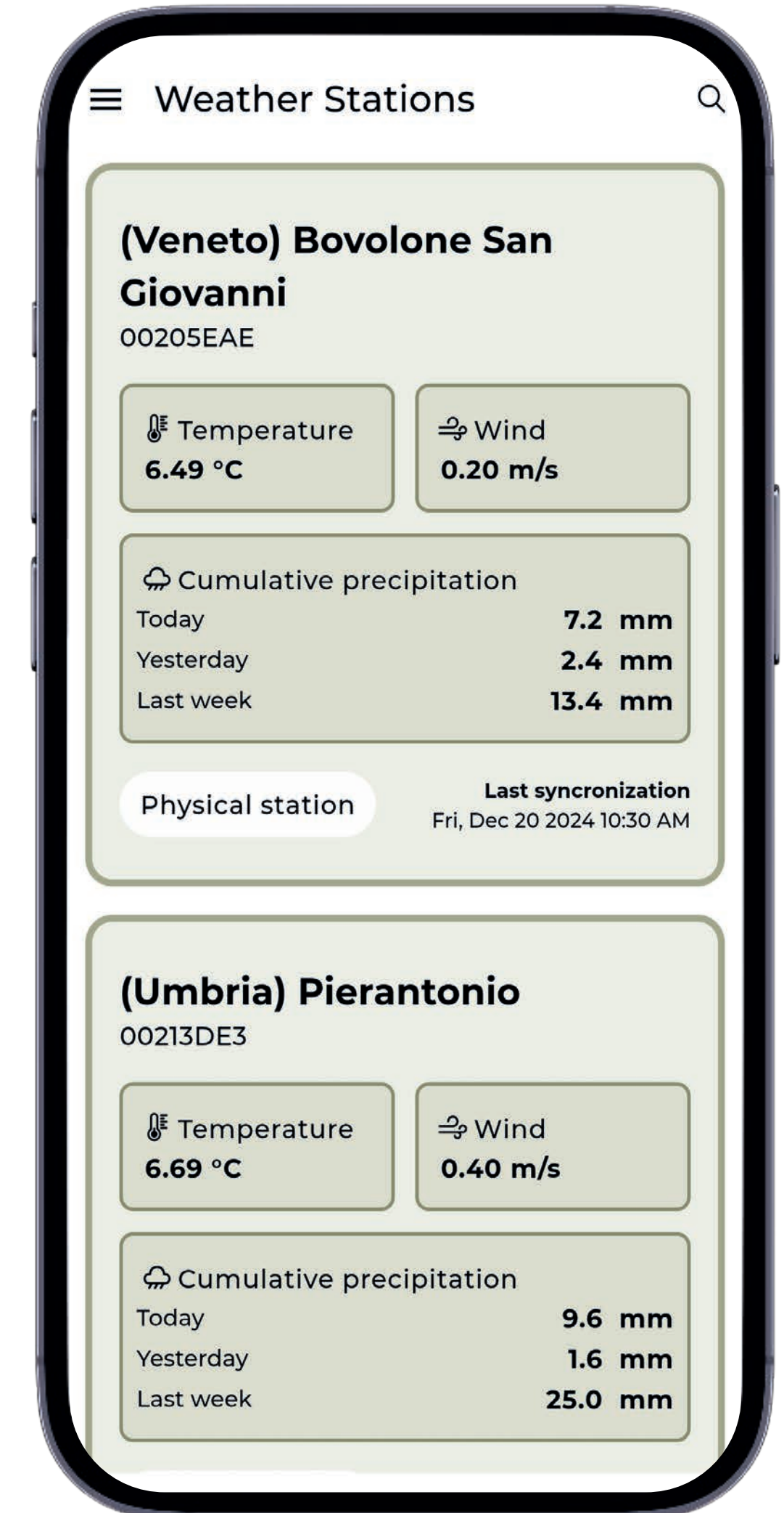
### WEATHER FORECASTS

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.







## FORECAST MODELS



## PHENOLOGY

Phenology forecasting to assess the needs of the citrus grove at each stage of development.



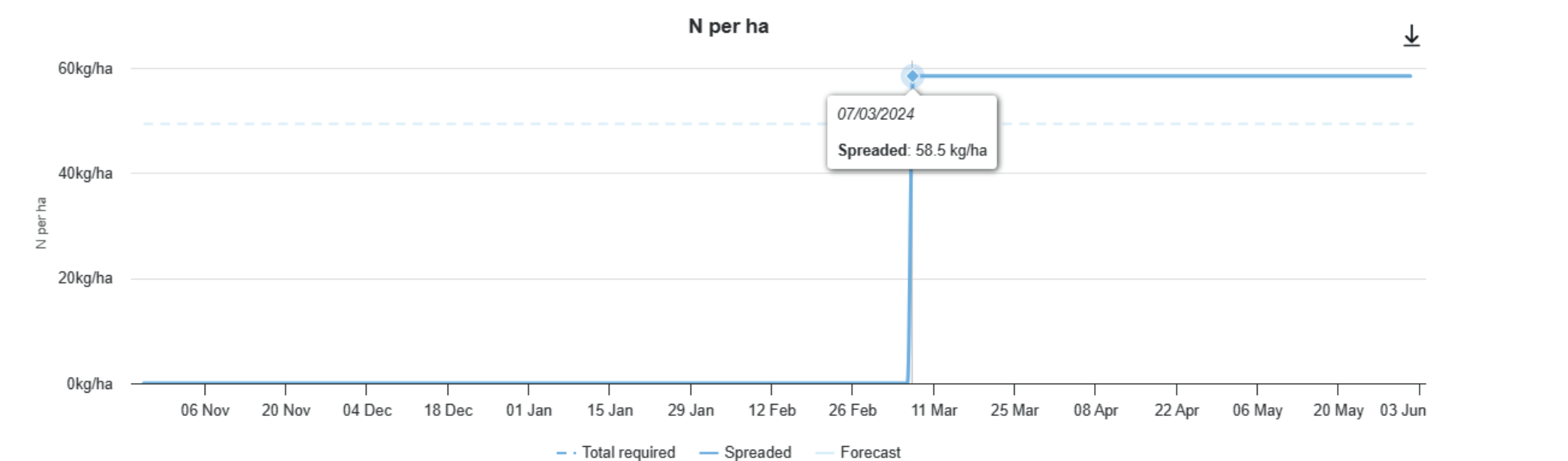
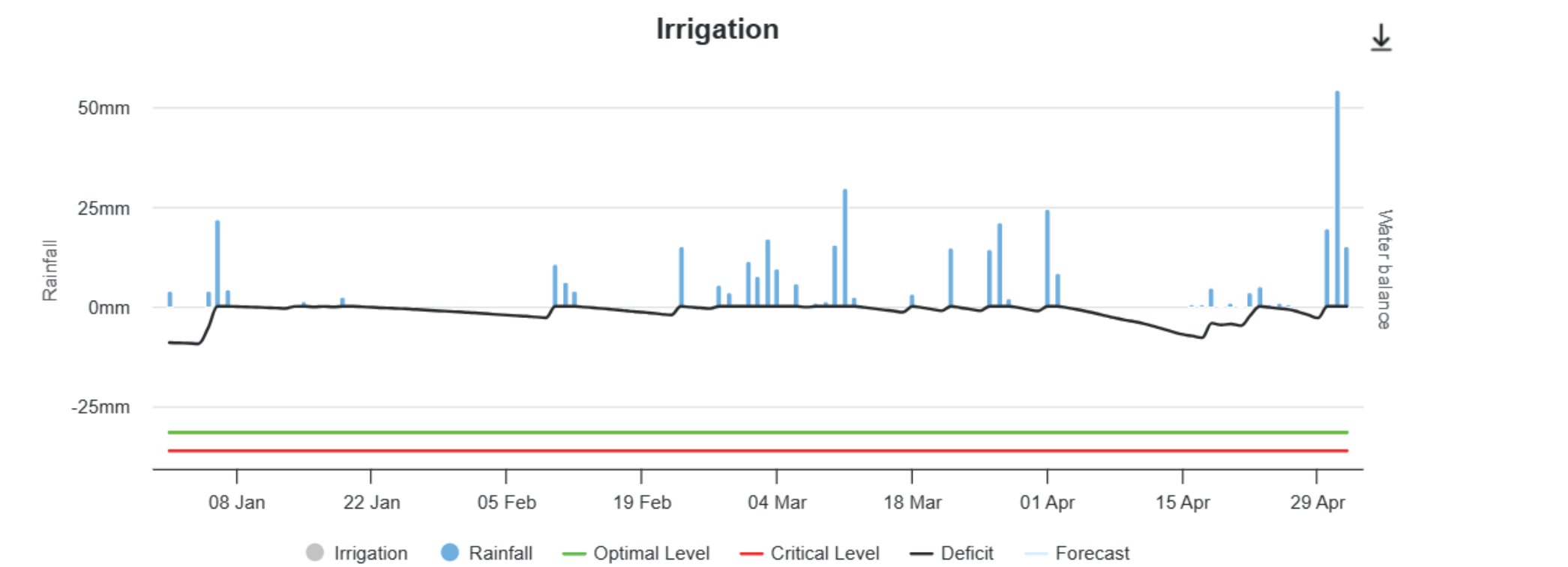
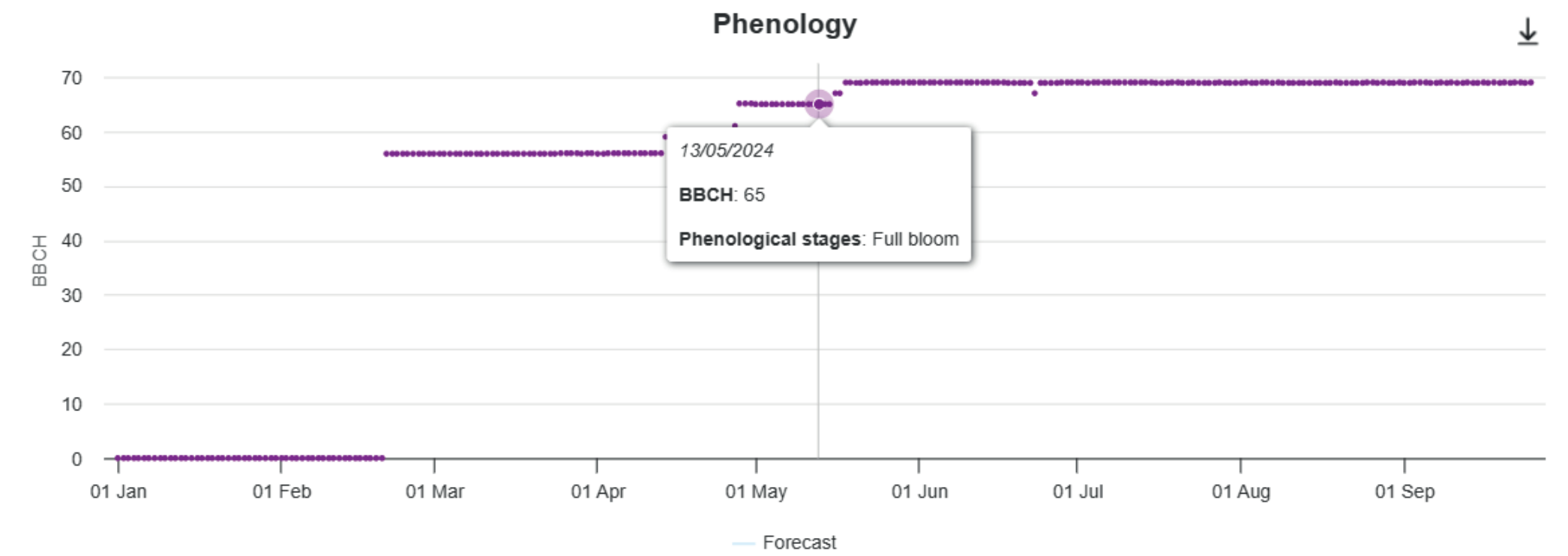
## IRRIGATION

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



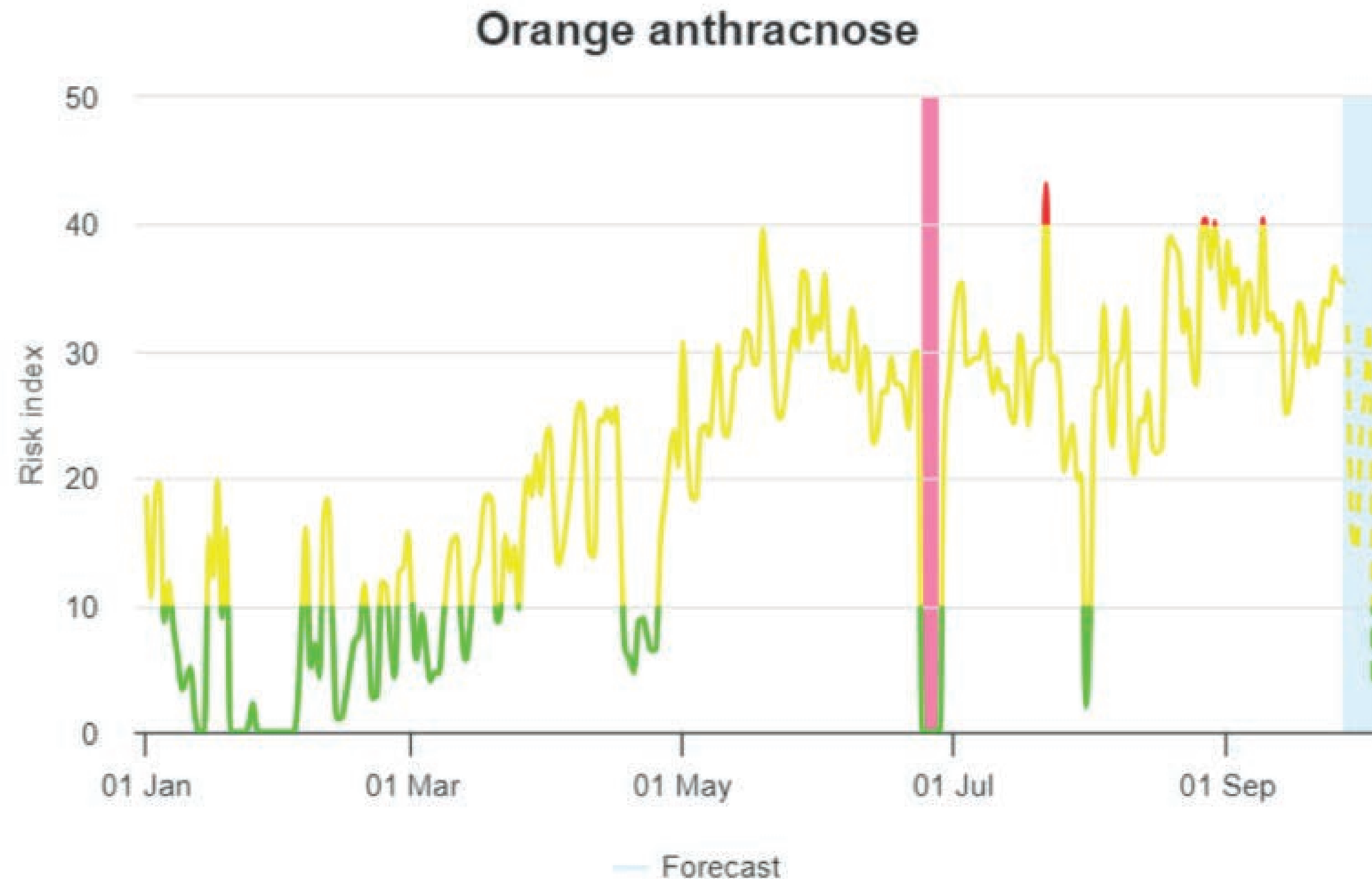
## FERTILIZATION

Calculation of the total requirement of nitrogen, phosphorus and potassium (Kg/ha) required throughout the production cycle.





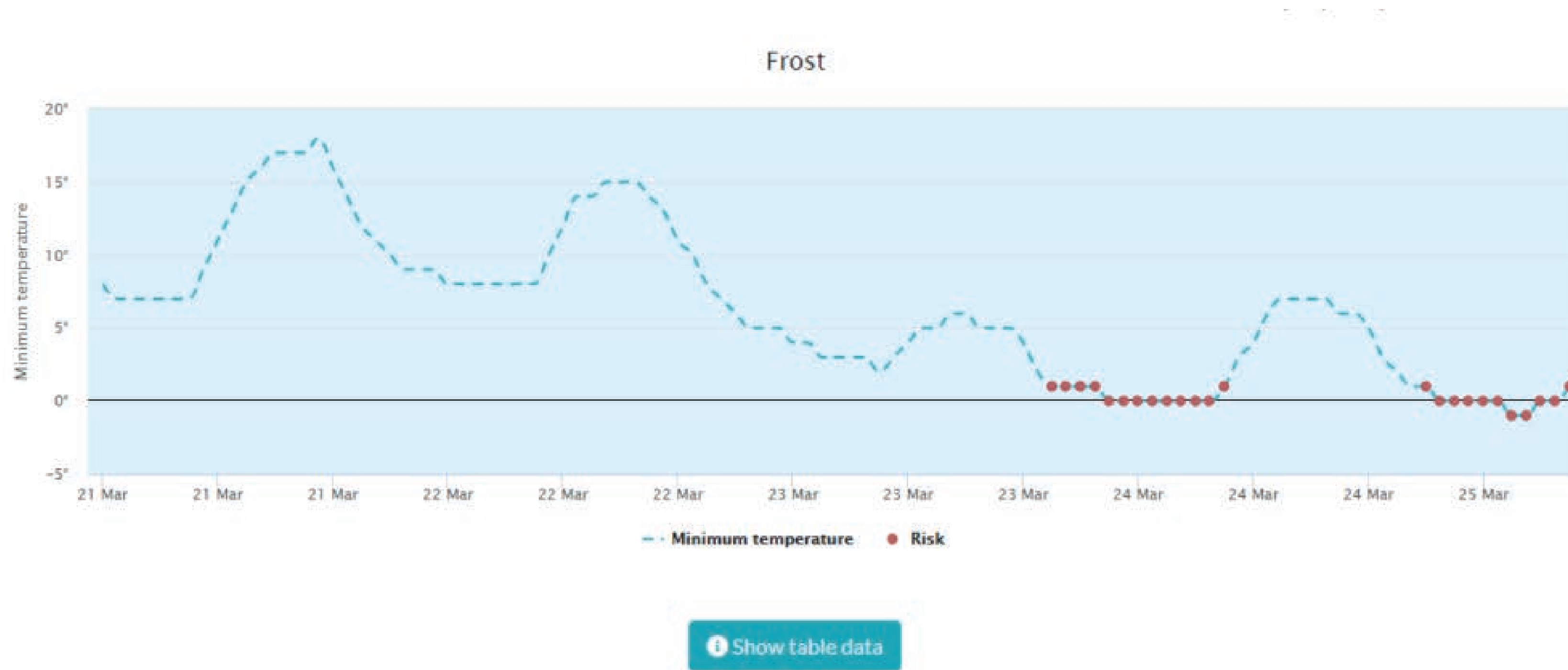
## PESTS AND DISEASE MODELS



Forecasting of pests and diseases to assess the risk of disease outbreaks (**Anthracnose**) and harmful insects (**Fruit Fly**) and intervene promptly.



## FROST MODEL



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



## 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 Arancio (Arancio)

Data del campione  
28 ago 2023

Identificativo campione  
240-586-1

Campi  
campo Arancio

Seleziona un punto in mappa

Grado Brix a 20°C (°Brix)	23	°Brix
Acidità totale	20	g/l
Rapporto zuccheri acidi	1.15	%
Colorazione	rossa	
Buccia integra	Si	
Danni	Si	
Quali tipi di danni?	Danni biotici	
Umidità esterna anormale	No	
Odore e/o sapore estranei	No	

Note

MONITORAGGIO QUANTITÀ

Identificativo campione: 235-627-1      Data del campione: 23 ago 2023

12 Calibro	143g Diametro	23g Peso	10g Resa in succo
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campo: campo Arancio      Arancio

Mostra altro

# Features



## DECISION SUPPORT

Provides information on the interventions to be carried out on the basis of the data collected.



ALERTS FROM DEFENSE MODELS FOR CITRUS

FORECASTING OF PESTS AND DISEASES

No risk

*Ceratitis*



12 HOUR WEATHER FORECAST



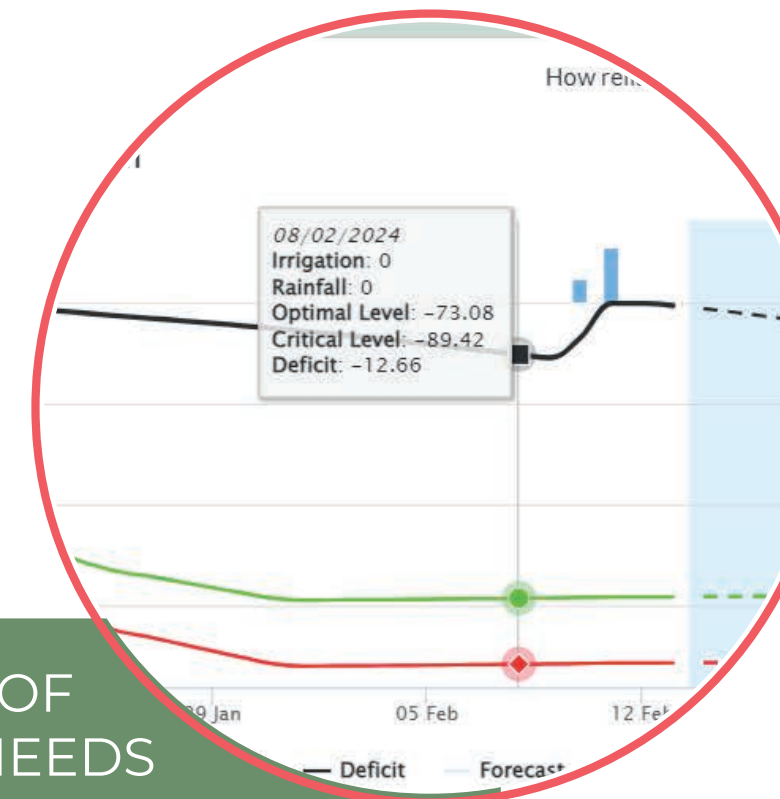
forecast for the next 12 hours

The development conditions are partially favorable, evaluate whether to do a treatment in the field

*Orange Anthracnose*



15.99mm  
water requirement



ESTIMATION OF IRRIGATION NEEDS FROM THE FORECAST MODEL

👁️ Almost all the petals have fallen (BBCH 67)



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



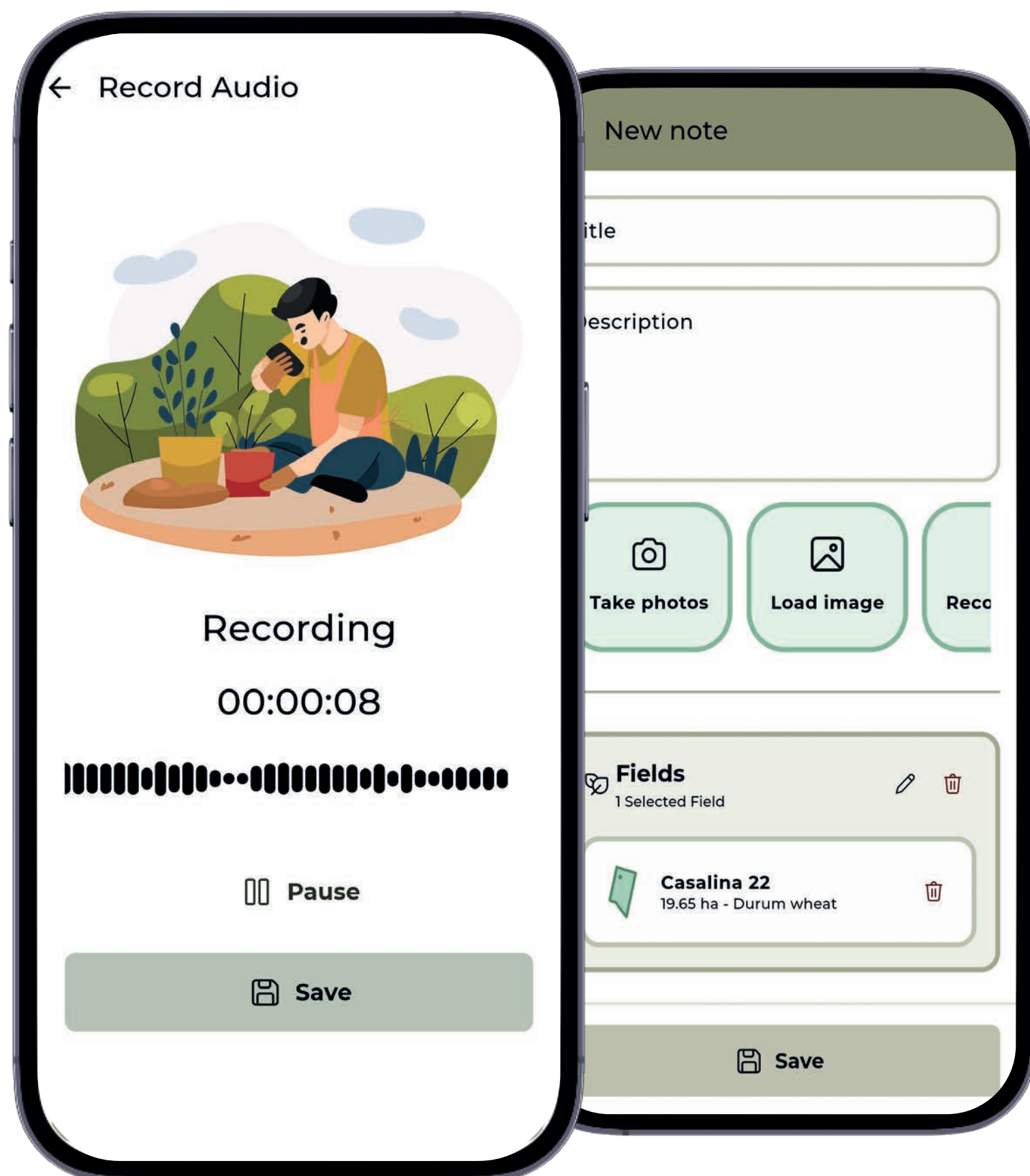
RISK LEVEL LEGEND

● High risk  
Alarm level



## CROP SCOUTING

Geolocate and register into the platform the field activities with **Agricolus's App**: phenology, pests and diseases, traps and captures, crop damage, soil analysis and issues.



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

# Features

Field: Citrus 1, Layer: NDVI

Timeline: Feb 1, 2024, Feb 6, 2024, Feb 21, 2024, Feb 26, 2024, Apr 1, 2024

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

Number of Zones (max: 5): 2, Calculation mode: Average - direct

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

Zones	Area	Avg nutrient
Zone -1	0.29 ha	78,52 kg/ha
Zone 0	0.53 ha	65,44 kg/ha
<b>Total fertilizer</b>	<b>57.26</b>	<b>kg</b>
<b>Total area</b>	<b>0.82</b>	<b>ha</b>
<b>Avg nutrient</b>	<b>70</b>	<b>kg/ha</b>



## PRESCRIPTION MAPS

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



Agricolus s.r.l.

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