OLIVIA PLATFORM

for olive sector users

OLIVE SECTOR & CLIMATE CHANGE

Olive and olive oil production is concentrated in a well-defined area around the Mediterranean Sea. This area is heavily affected by climate change, which increases the severity of extreme events, such as droughts and heatwaves. This leads to reduced water availability, affecting both traditional and new production systems (intensive and superintensive).

The changing climate poses challenges in the decision-making processes of olive growers and olive oil producers, who need to adapt their irrigation, fertilisation and pesticide application strategies. It also modifies the occurrence of crop diseases, along with their potential damage, and can favour the development of new pests. Thus, anticipating future climate conditions is key for the adaptation of the olive sector, and climate services can help in this process.

Read more on Climate Services for the Olive and Olive Oil Sector in the MED-GOLD infosheet.

OLIVIA PLATFORM FOR THE OLIVE SECTOR

The Olivia platform is a decision-making tool designed for the olive sector that provides guidance to farmers and technicians for optimal irrigation, fertilisation and pesticide application. Integrating advanced artificial intelligence, satellite data and climate information for the past, present and future, the tool helps farmers to manage their production in an easy and efficient way.

In the framework of the MED-GOLD project, the platform has been upgraded based on feedback received by engaging with olive sector users in Andalusia, Spain. You can access the Olivia platform by visiting: login.ec2ce.com/

ABOUT MED-GOLD PROJECT

MED-GOLD is a 4-year European project on "Turning climate-related information into added value for traditional MEDiterranean Grape, OLive and Durum wheat food systems". MED-GOLD aims to make European agriculture and food systems more resilient, sustainable and efficient in the face of climate change by using climate services to minimize climate-driven risks and costs.

MED-GOLD

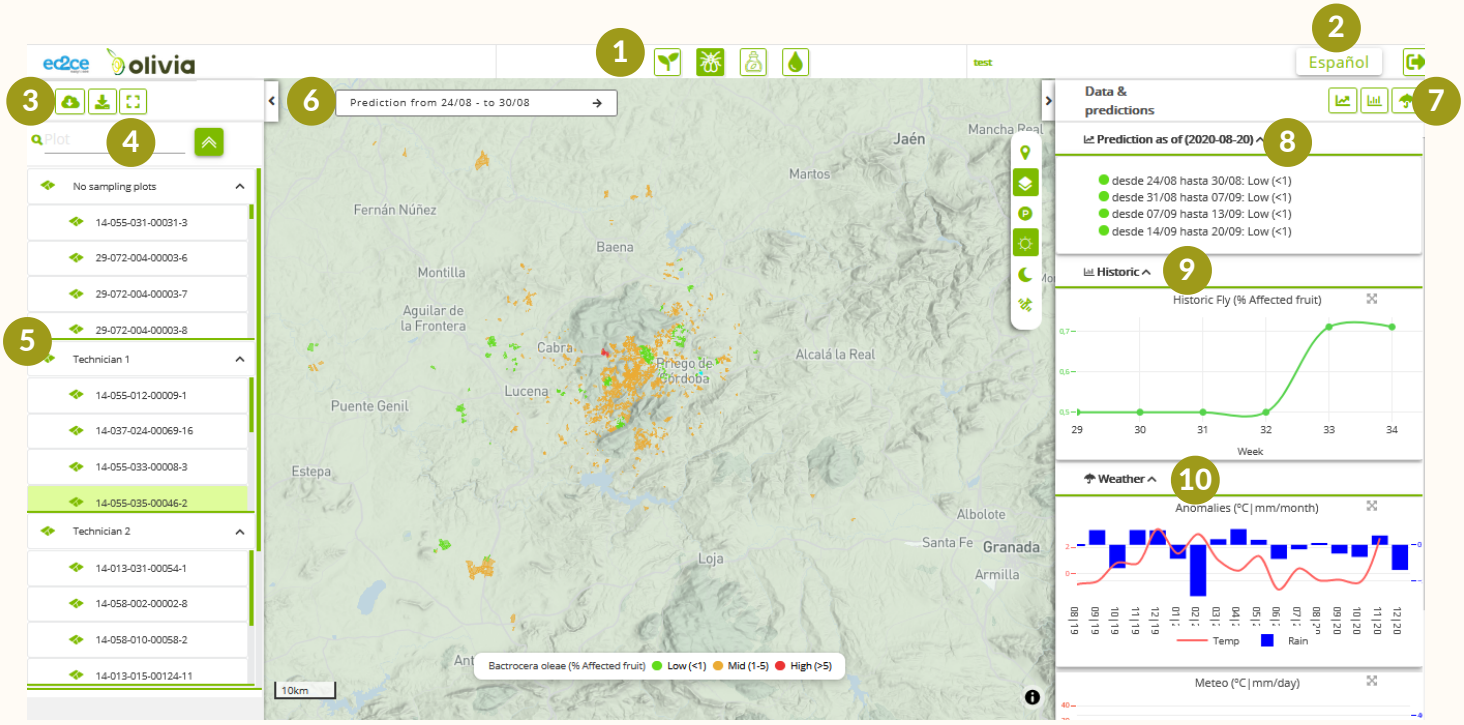
This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement No. 776467.

HOW TO USE THE OLIVIA PLATFORM

1. Select the service you are interested in
   - ***Productivity***: past information and predictions
   - ***Bactrocera oleae pest***: predictions of risk
   - ***Greasy yield***: past information and predictions
   - ***Fertigation***: past information and predictions

2. Select the preferred language (English or Spanish)

3. Download reports and data



4. Location (search by parcel)

5. List of parcels in the region

6. Forecasted week

7. Data & Predictions icons
   - Predictions
   - Monitoring data
   - Weather data

   The graphs and information displayed in these sections depend on the selected options.

8. Predictions
   e.g. level of risk, irrigation amount

9. Monitoring data
   e.g. historical data, irrigation, fertilisation

10. Weather data
    e.g. anomalies, weather station observations

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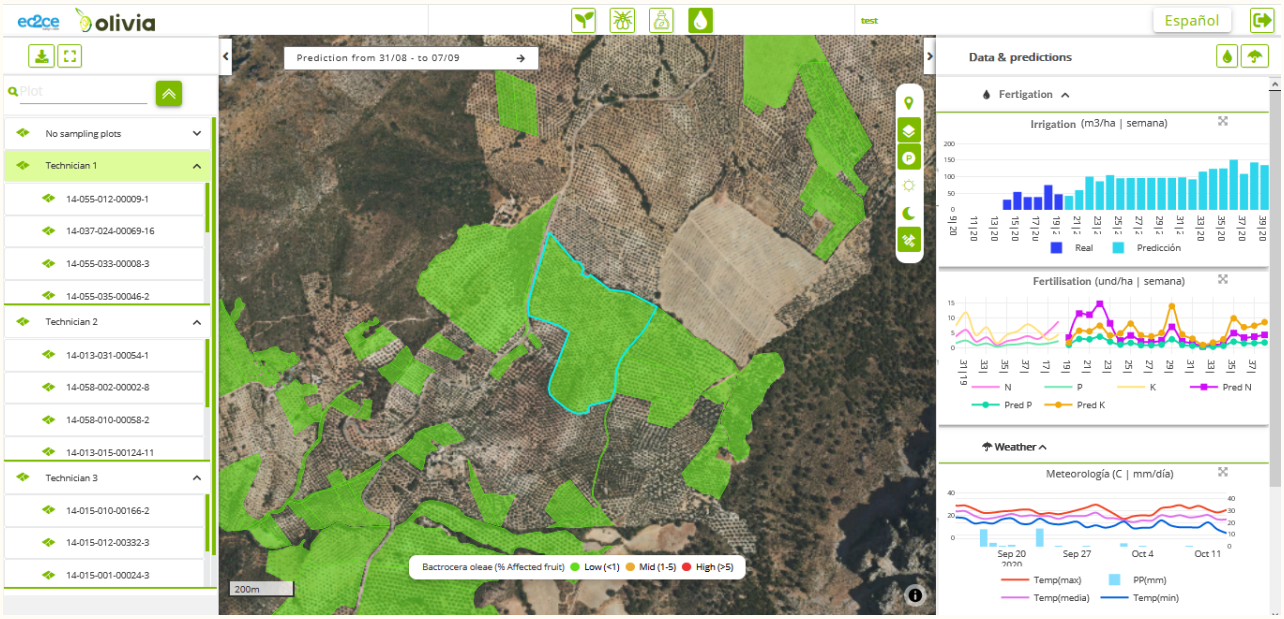
USE CASE 1

You are an agronomist working for a second degree cooperative in the olive oil sector. You need to advise the farmers in your cooperative on the optimal fertilisation and irrigation strategies, taking into account the expected climate conditions in the next months.

How can farmers maximize crop yield and minimize unnecessary losses and damage to the environment?

1. Start by selecting the fertigation icon at the top.
2. You can see all the parcels owned by farmers from your cooperative.
3. On the map, click on the parcel you are interested in to access detailed data. This opens up a panel on the right with different charts, displaying past and future information on **irrigation** and **fertilisation**.



4. First, take a look at the **irrigation** chart: You can see that the farmer has applied irrigation for the last 6 weeks (shown by the dark blue bars). In the following weeks, it is recommended to increase the irrigation amount, since longer than normal summer conditions are foreseen, which are likely to cause water stress.
5. Next, check the **fertilisation** chart: In this case, future predictions show that the trees will need less potassium but more nitrogen in the following weeks (shown by the pink line 'Pred N'), coinciding with the flowering stage. Thus, the farmer should apply more nitrogen fertiliser.

You can export the charts with the predicted irrigation and fertilisation planning for the season and share them along with the recommendations with the farmer who owns the parcel.

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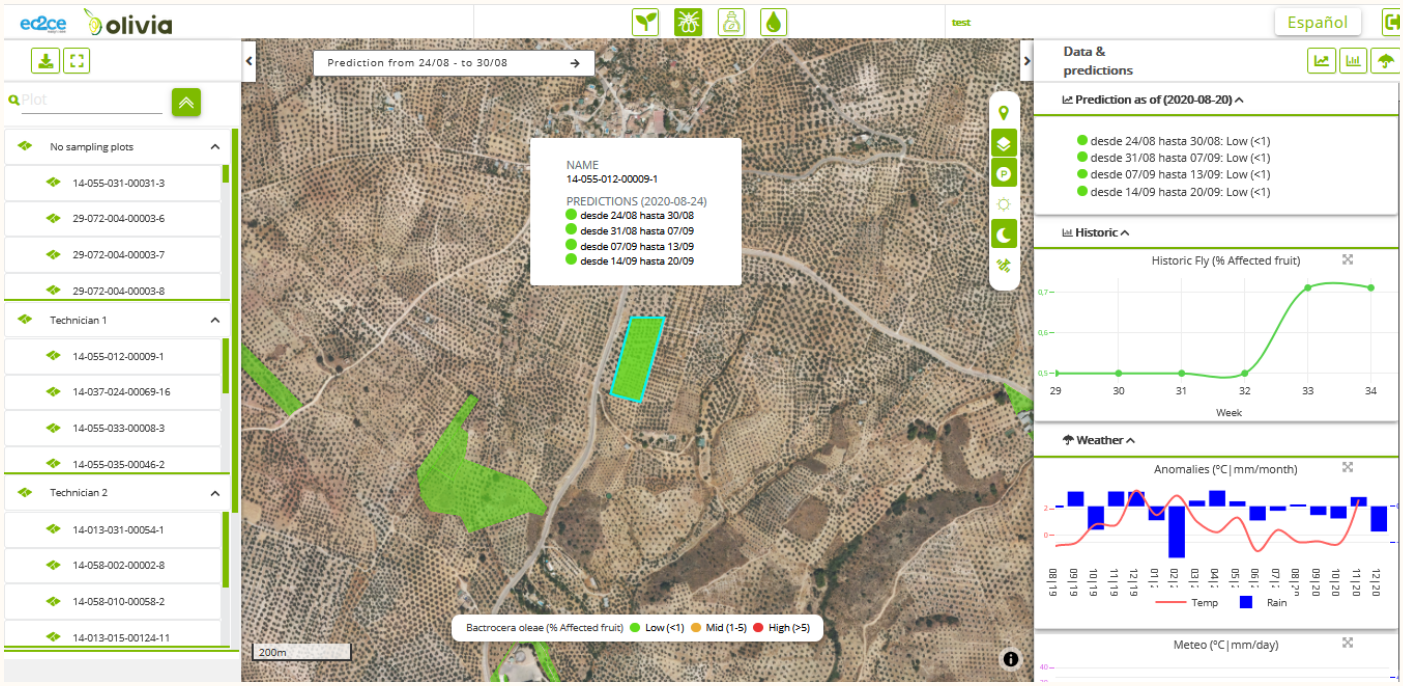
USE CASE 2

It's June. You are a local olive oil producer. In the last few years, the quality and quantity of your olive oil was affected by a higher incidence of pests, favoured by mild summer temperatures and high air humidity.

How can you efficiently manage your field to be prepared in case this situation is repeated this year? Is there a high risk of pests and diseases in the coming weeks?

1. First, select the olive fruit fly pest (*Bactrocera oleae*).
2. Next, choose your parcel from the list on the left or directly from the map.
3. This opens a panel with historical data, weather information, and predicted pest risk levels, shown as the percentage of affected fruit.



These data can help you anticipate pest outbreaks in the coming weeks and apply the necessary treatments during the early stages of the pest life cycle.

For your parcel, predictions show that the risk level is low for the next 4 weeks, so minimal or no pesticides are needed for good production.

However, as seen in the historical data plot (green line), the percentage of affected fruit has been increasing in the past 2 weeks. Next predictions beyond 4 weeks may show an increase in the risk levels, so you will need to monitor the situation closely.

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