

Agricolus Use Case

Name: ASSOPROL – Association of Olive Oil Producers

Country: Italy

Sector: Precision Farming

The Company

ASSOPROL is an Italian organization of more than 1,900 olive oil producers born in 1978. The association aims at safeguarding and preserving olive oil production, one of the most important cultural and economic resources of the country.

The Issue

Agriculture in general, and olive growing in particular, have always faced various critical issues, from production variability to necessary competitiveness. Olive groves are constantly threatened by plant pathogens that cause varying degrees of modification in olives and oil quality, without considering huge product losses and bad income for farms.

One of the most dangerous adversities for olive trees is the “olive fruit fly” (*Bactrocera oleae*), an insect that can significantly affect the size and quality of olive production. The incidence of attacks is accentuated by wetter and cooler seasons, since the fly’s lifecycle is influenced by the weather.

The Solution

Since 2015 ASSOPROL has been using the Agricolus platform: a technological solution to monitor trends in olive fruit fly populations and weather conditions so as to help farmers recognize the right time to begin treatments.

Agricolus is a web application, a Decision Support System that can help operators take action against diseases affecting olive groves. The platform allows operators to access a large amount of information so as to understand pest generation and diffusion: weather data collected from fixed stations and sensors placed in fields, adult insects captured by traps, and the count of larval phases in drupes. All this information is stored and elaborated in tables and graphs: they are geolocated and visible in maps thanks to GIS – Geographic Information System technologies.

One of the most useful feature is the forecast model of the probability (risk) of generation and diffusion of the olive fruit fly. This alert is generated by an algorithm based on weather conditions in the area. Probabilities are different in each area, depending on specific micro-climatic conditions.

ASSOPROL uses Agricolus to inform its associated farms of the appropriate time to carry out treatment against the insect. Each farm can also use Agricolus to insert data on insects, store them, compare fields or the same field over time. Thanks to the web application, associated farms can treat olive trees before pests attack them.

The Implementation Process

The first stage included the installation of weather stations in fields, supported by Agricolus' technicians. This was followed by meetings and training sessions with farmers on how to use the application and how to record important information on the platform, such as insects captured by traps and larvae count in drupes. It enabled them to take decisions on when and where to apply phytosanitary products, supported by the Decision Support System.

Results and Benefits

Thanks to Agricolus, associated farmers have been able to save products (olives and oil) from pest attacks. As a result, it increased fields productivity and assured their source of income.