

Control of combine harvesters idling in vineyards

⚠ Challenge

[Yuzhnaya](#) is one of the largest agricultural producers in the Temryuk region of the Krasnodar territory of Russia, is engaged in the cultivation and processing of grapes.

The grapes are harvested with combines and by hand. Usually, the harvesters do not work an entire shift without interruption and stop from time to time. The reasons for stopping can be different: weather conditions, technological and logistic factors, a break for the operator's rest, as well as lack of organization, negligence of workers, unauthorized smoke breaks.

The company would like to **assess the idling periods, analyze them and quickly eliminate the causes**: for example, discipline drivers, choose specific equipment that breaks less, make timely decisions to solve unexpected issues. All this was needed to improve the efficiency of harvesting operations.

✖ Solution

The Wialon partner, [Interra](#), offered the agricultural firm a unique solution. InStop consists of:

- an Android app for the driver;
- a [Galileosky](#) satellite monitoring terminal;
- a custom-designed Bluetooth module;
- an OWEN operator panel;
- the Wialon satellite monitoring platform.

The satellite terminal is installed on the harvester. Its main task is to determine whether the combine is idle or moving.

The application interacts with the terminal via Bluetooth and, if the combine stops, signals the operator to select the reason for idling. After selecting the reason, the idling counting begins. If no reason is specified, idling is automatically recorded as rest. This motivates the operator to remember to indicate the reason for the stop.

All collected data is sent to the [Wialon satellite monitoring system](#). There you can generate reports for idling reasons. They are used daily by logisticians and dispatchers for operational analysis of the situation and response. Managers use longer-term reports to identify complex problems.

🏆 Results

The developed solution with the use of telematics allows you to get a relevant picture of the work of combines and monitor idling. At the end of the season, total idling time is predicted to decrease by 10-15%. Each hour of downtime of the combine can cost from \$100 to \$1000. **After the harvesting company, the estimated savings will be tens of thousands of dollars.**

✔ Operations control

Monitoring harvesters disciplines drivers, allows to analyze working situations and respond to them quickly, makes it possible to assess the effectiveness of each vehicle and the whole fleet.

✔ Savings

The control system allows you to optimize harvesting and increase its speed, thereby reducing the costs of the harvesting company.

✔ Reduced idling

Thanks to the solution, the company uses the combine harvesters more efficiently, eliminating excessive idling.

Company profile

🏆 **IoT project of the year nomination:** Agriculture

Industry: Agriculture

Solutions

 Wialon

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