# Hecterra | SOLUTION FOR AGRIBUSINESSES

Wialon-based app

wialon

# Scope of application

It is a simple yet effective application for the agro-industry that allows controlling field works based on telematics data.

## Fields and crops

Effortless crop rotation control, detailed operation history for every field

## Special vehicles and drivers

Usage of drivers, units, and trailers created in Wialon. Calculation and control of numerous parameters for each field cultivation

## Reports and integrations

Simple generation of reports on various parameters. Import of reports to csv. API for ensuring data transfer to accounting systems

# Hecterra user profile



## DISPATCHER

- **Controls** the performance quality and workload of agricultural machinery on a daily basis

- Processes **performance reports**

## AGRONOMIST

- **Controls crops and operations** over them

- **Plans operations** in the fields and monitors the progress made

## ACCOUNTANT

- Works with **data** received through API in accounting systems

- **Keeps record** of consumables and fuel costs, the actual work performed by vehicles and drivers
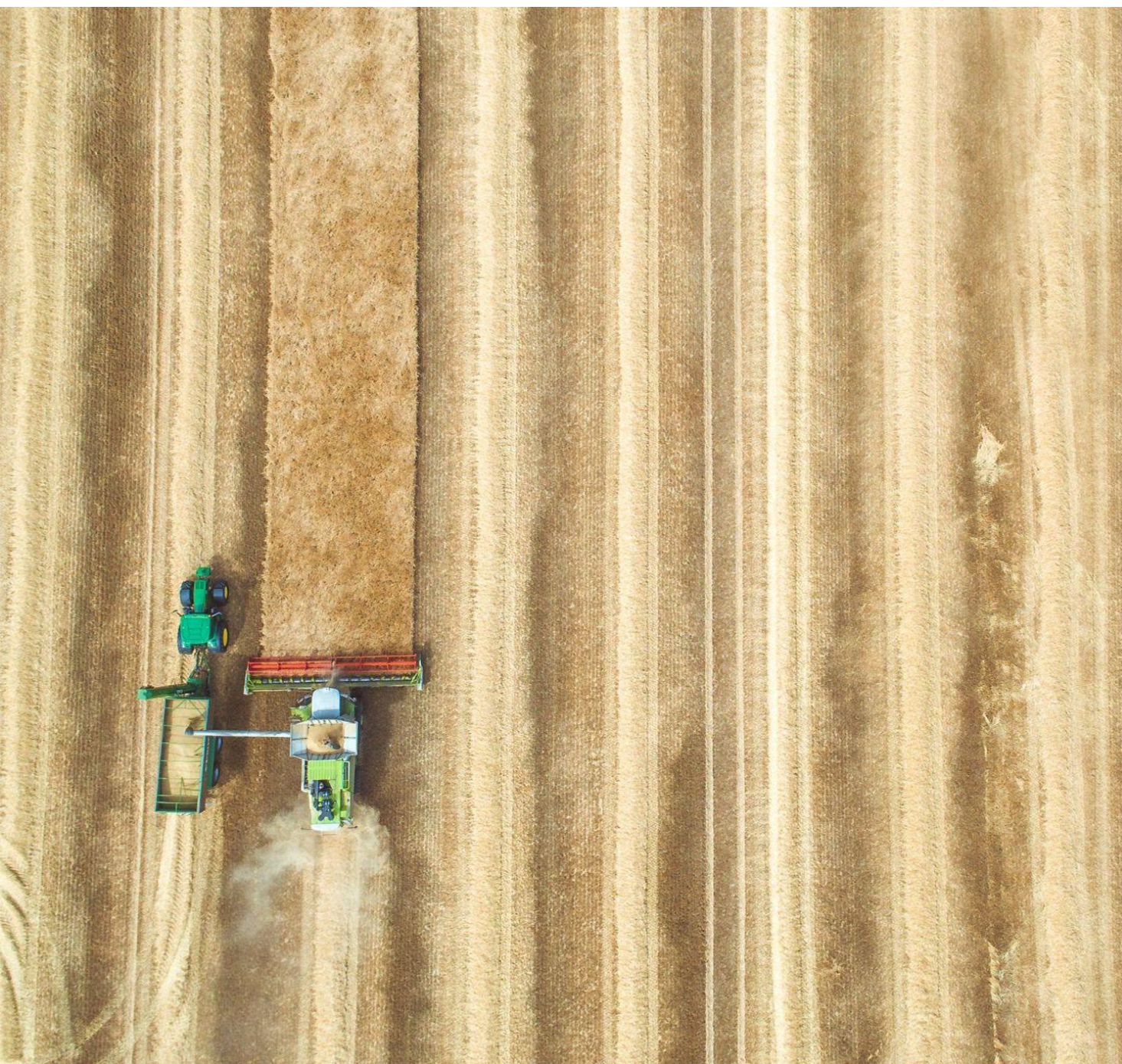
## MANAGER

- Makes **decisions** based on reliable data

- **Plans and optimizes** agribusiness processes

# How Hecterra changes business?

## Special vehicles control
Get clear data about the **quality and volume of the field operations**, as well as the actions of agricultural vehicles and vehicle operators. Monitor the performance of each employee daily.

## Reliable data
Monitor the work quality and **improve the results**. Hecterra calculates the cultivated field, including fields of complex shapes with uncultivated areas inside. The solution also detects omissions and overlaps, including the cases when several machines work together in the field.

## Automated calculations
View the **detailed information on the daily work** performed and use it in accounting and reporting. The app calculates the cultivated field area, fuel consumption, consumables, and other parameters, saving time for dispatchers and managers.
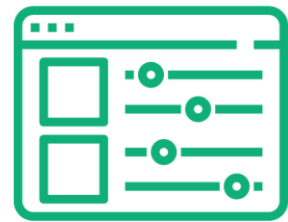
## API integration
**Transfer data** from Hecterra and employ it in any accounting systems using API. Stop practicing the time-consuming manual data transfer.

# Why use Hecterra?

**Specialized Wialon-based solution**

**Simple and user-friendly interface**

**Special vehicle and driver control**

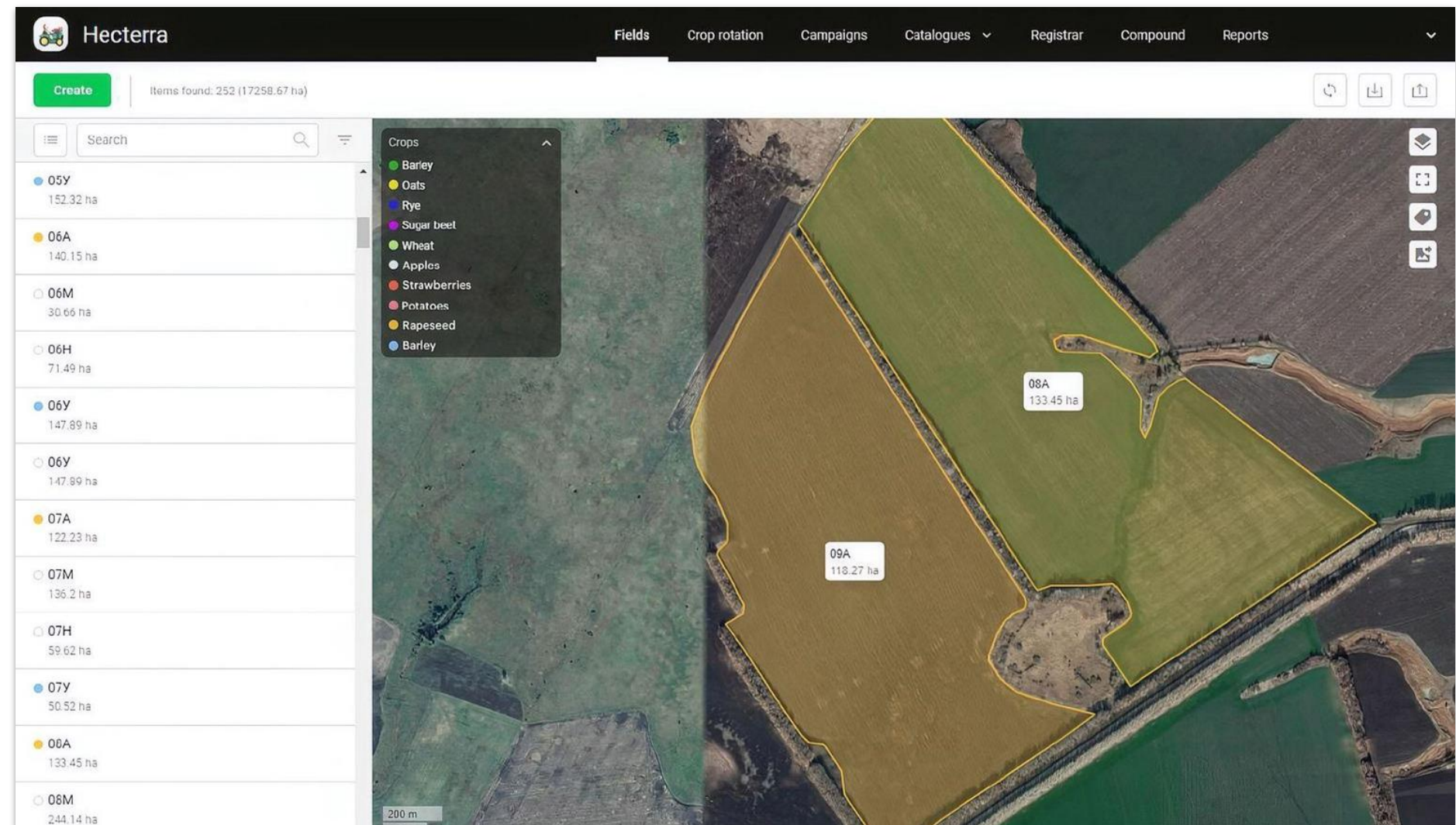**Detailed reports on operations performed**

**Full-featured API for all sorts of integrations**

**1**

• **Create fields in the app or import** them from Wialon or the KML, KMZ, SHP files. **Export** to KMZ and **save** as PNG.

• Create **crop catalogue**. The fields on the map are of different colors depending on the crops cultivated, their sowing and harvesting dates.

• Enter **crop rotation data from previous years**. Specify the crop, its sowing and harvesting dates. Plan your crop rotation for the upcoming season.

• Quickly find the required fields and **observe the dynamics** of the cultivation progress with WMS time layers.

• View a **detailed operation history** for every field in the reports.

**2**

• Finished the working day? Launch a new field cultivation search to know what your employees did today and how. Hecterra will show the list of potential cultivations.

**Potential cultivation** is the intersection of the unit's track with the field geofence that matches the cultivation criteria and the settings you specified.

• View and edit the found cultivations. Approve or reject cultivations; when approved they will get into reports. When the cultivation has been approved, it becomes possible to keep a record of data collected from the work sensors installed on the implements.

We recommend searching and approving cultivations daily.

**3**

• Use drivers, units, and trailers created in Wialon.

• Fill in the **operation catalog**. Operations are specified in the implement properties and used in cultivations and reports.

• Wialon trailers are called **implements** in Hecterra. You can specify the working width in meters and operation for each implement, for example, harrowing. Hecterra uses the working width to define where the cultivation took place and if there are missed or overlapping areas in it.

• **Drivers** are specified for each cultivation and displayed in the reports.

**Hecterra**   Fields   Crop rotation   Campaigns   **Catalogues** ⌄   Registrar   Compound   Reports

## Implements

Items found: 12

Search

| Implement | Operation | Working width | Deviation |
|-----------|-----------|---------------|-----------|
| Chisel Plow KUHN | Deep tillage 2 | 2 m | – |
| Cultivator CASE Tiger Mate | Weeds removing | 4 m | – |
| Cultivator KOH-2,8A-05 | Soil mixing | 3.4 m | – |
| Disc Harrow | Residue incorporation | 2.6 m | -0.1 m |
| Header CASE IH 3020 | Harversting | 3.2 m | – |
| Moldboard plow | Soil loosening | 3 m | -0.2 m |
| Mulcher RHINO RC 20 | Mulching | 3.4 m | – |
| Roller 4240 | Land flattening | 4.8 m | – |

# How does it work? Consumables

**4**

• **Keep track of consumables** and control cultivation costs. You can choose from three types of consumables:
- • Seeds
- • Fertilizers
- • Chemicals

• Create as many specific items as you need within the types of consumables.

• Keep track of **fuel consumed** by agricultural vehicles.

# How does it work? Campaigns

**5**

• **Create campaigns.** Use the Campaigns tab to specify the dates of works, cultivation types, and fields where the works should be performed.

• **Arrange cultivations and control the plan implementation.**

• Effortlessly **determine how much work needs to be done per day** to meet the deadline.

• Check whether your enterprise follows the schedule and take timely measures to catch up if needed.
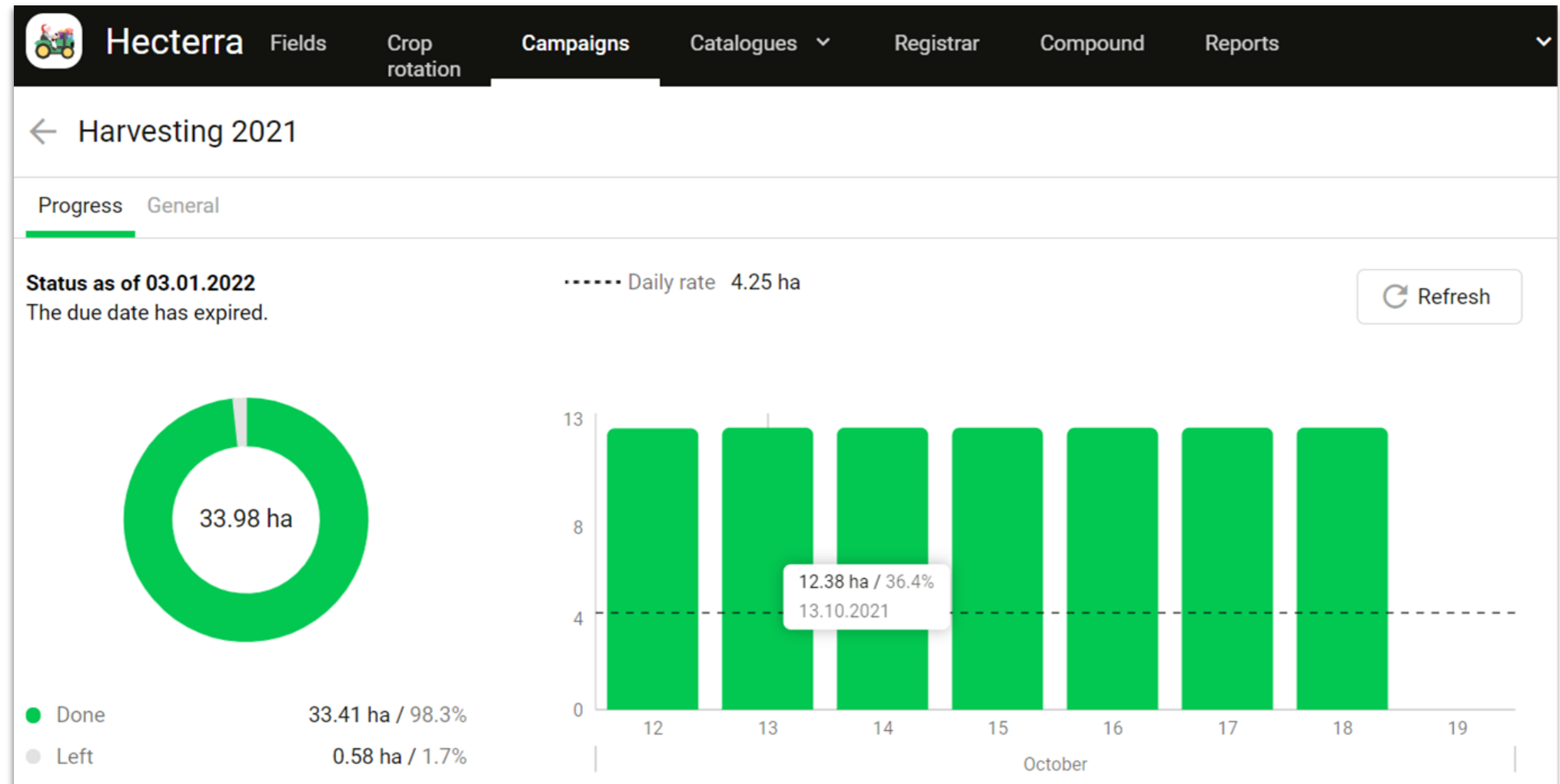
**6**

• **Build reports** on all cultivations, specific drivers, fields, operations, units, and crops.

• Reports contain all the data on cultivations: mileage, omissions, operations duration, fuel consumption, overlaps, maximum and average speed, and other parameters.

• **Import** reports to csv.
Merge individual cultivations performed by different vehicles on different days into the compound cultivation for the convenient display in reports and correct calculation of the overall cultivated area.
Group the data by several parameters.

Reports are generated based on the approved cultivations. Data on the approved cultivations is stored for 5 years, its visual elements (polygons, tracks on the map, etc.) are stored for 11 months.

**Hecterra**  Fields   Crop rotation   Campaigns   Catalogues ⌄   Registrar   Compound   **Reports**

| Interval | Report type | Item | Grouping | Shift | | |
|---|---|---|---|---|---|---|
| 12.10.2021 – 12.10.2021 | All cultivations ⌄ | Select item ⌄ | None ⌄ | All shi... ⌄ | .csv | .xlsx |

| Cultivations 22 | Duration 49 h 33 min | Mileage 371.76 km | Cultivated area 106.62 ha | Fuel spent 1 343.14 l |
|---|---|---|---|---|

| Field | Cultivated area | % cultivated | Omissions | % omissions | Overlaps |
|---|---|---|---|---|---|
| Kableshkovo 4 | 6.15 ha | 29% | 8.13 ha | 57% | 0.55 ha |
| Aleksandrovo 1 | 5.47 ha | 13% | 16.25 ha | 75% | 0.56 ha |
| Kamenar 3 | 11.69 ha | 40% | 8.35 ha | 42% | 2.38 ha |
| Laka 1 | 15.32 ha | 14% | 11.01 ha | 42% | 1.23 ha |
| Kamenar 3 | 12.17 ha | 42% | 6.89 ha | 36% | 2.07 ha |

**7**

Reports allow you to not only control all types of works but also assess their quality, and improve the agricultural processes of your enterprise.

**Example 2**
Making a financial plan? Check how much fuel your employees spent last season, and consider these numbers when allocating funds for future costs.

**Example 1**
Too many omissions or overlaps during a field cultivation? Give instructions to the driver because part of the field was left unsown or the other way around, the too dense sowing can affect the quality of seedlings.

# API for integration with enterprise software

**Hecterra** is a ready-made solution for agribusinesses that can be set up and put into use for one day. But for the solution to be able to function for literally any agricultural enterprise, we created Hecterra API within Wialon API and SDK.

Transfer fields, cultivations, operations, crops, drivers, and implements data to all sorts of accounting systems. **Use this data when creating financial, personnel, or technical reports.**

Add, edit, or delete crops, operations, cultivations, and fields through API. Give the client a **possibility to manage agricultural processes using any software** by combining Hecterra API with custom development.

Develop the agribusiness **management system of any complexity** with data received from Hecterra.

# API for integration with enterprise software

## Results:

- Agribusiness automation and digitalization

- Integration with corporate accounting systems

- Integration with any corporate software

- Ease of use, resources savings, employees and enterprise effectiveness

## API Hecterra use cases:

- Trip tickets auto-filling

- Field works billing for salary calculation

- Farming machinery lease calculation

- Interval calculation for farming machinery maintenance