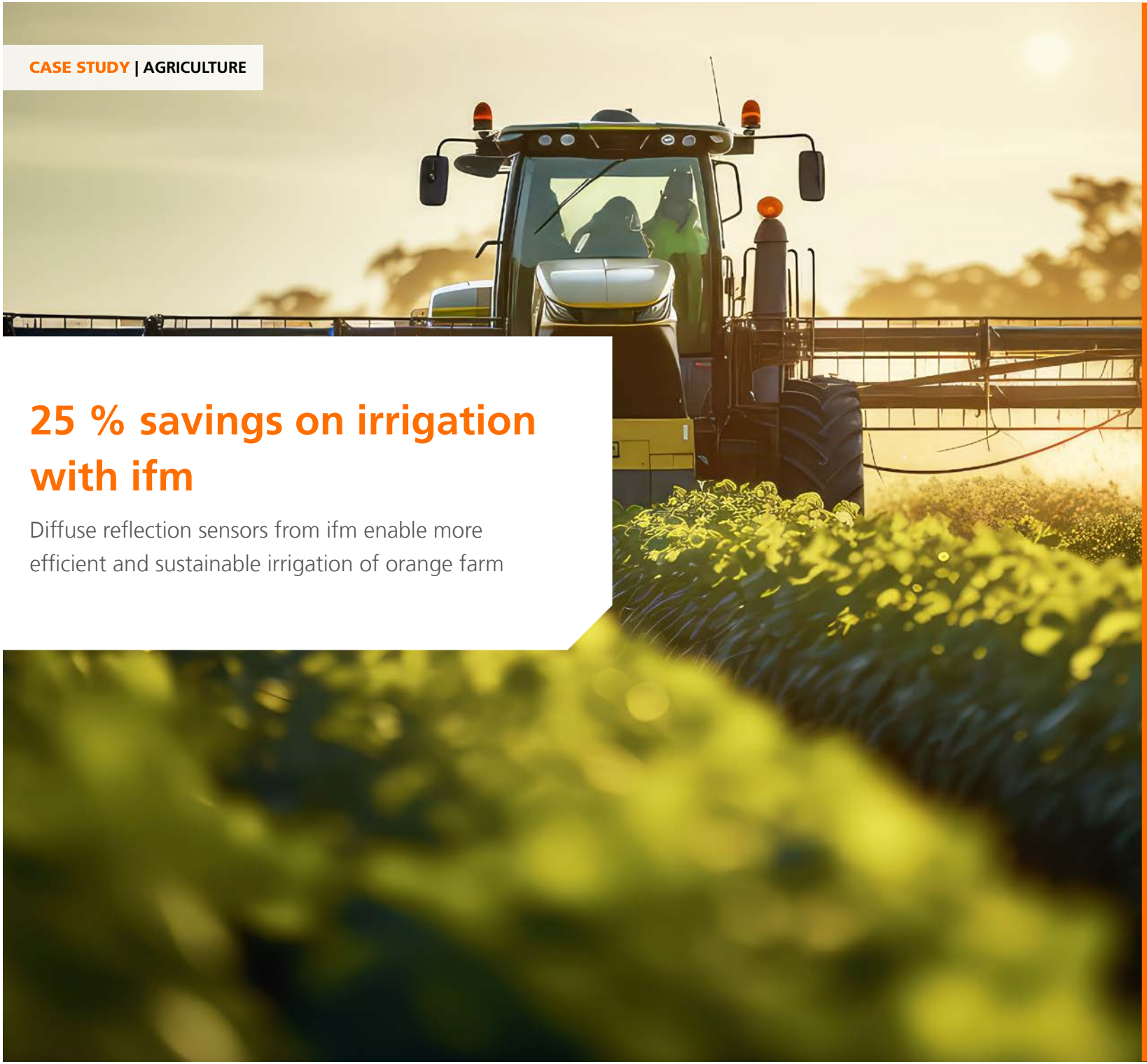

CASE STUDY | AGRICULTURE

25 % savings on irrigation with ifm

Diffuse reflection sensors from ifm enable more efficient and sustainable irrigation of orange farm

Our customer:
A global trader and processor of agricultural goods.

A freshly squeezed orange juice or a piece of the shiny citrus fruit for breakfast: oranges are a popular food.
Production mainly takes place in tropical climates such as Brazil, where our customer cultivates oranges on an area of more than 25,000 hectares. The producer has been active there for more than 30 years. In addition to the citrus groves, the company has three citrus juice processing plants and an export terminal.
From the harbour, the oranges make their way all over the world, as the company is active in over 100 countries and employs more than 15,000 people worldwide. It is therefore only logical that the company is aware of its social and ecological responsibility. This starts already with the production of the fruit: sustainable and targeted irrigation saves resources and energy, thereby reducing the carbon footprint.

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The challenge:

Agriculture accounts for 70 % of the world's water consumption and managing this scarce resource is a challenge to ensure food supplies in the future. By using water-saving technologies, farms can reduce the water consumption and operating costs for irrigation.

Drip irrigation technology, in which the required amount of water is applied at the roots of the plants, is a climate-friendly solution that contributes to the long-term stability of agriculture and enables more reliable crop planning and production.

The company identified great savings potential in the irrigation concept as part of the sustainability measures. In the past, the plantations were irrigated continuously and independently of actual water requirements. This was the reason for watering being carried out in areas of the field where there were no plants at all. The company was therefore looking for a solution for more precise irrigation and found what it was looking for in the ifm OGT series.

The solution – why ifm?

The diffuse reflection sensors of the OGT series now enable water-saving irrigation on demand. The sensors are fitted to 50 irrigation tractors and automatically recognise whether a plant is under the tractor. If the sensor detects a plant, the water is poured out - otherwise the tractor simply drives on to the next plant. The OGT sensors are characterised by their long range and intuitive sensitivity adjustment. The use of ifm sensors offers the company several advantages: targeted irrigation has reduced water consumption by 25 %. This ensures that the water tank needs to be refilled less frequently during operation. At the same time, this also reduces the time required to process a field, as time-consuming refuelling is no longer necessary. While it used to be almost impossible to completely irrigate a field within a day, this is no longer a problem with the sensors.

Optimised water use is just the beginning: by monitoring the flow quantity, water consumption will in future be offset against the filling quantity so that the routes and filling of the tanks can be planned more efficiently. The company also wants to transmit the process values to a central control room, which will enable a fleet management system to be implemented in the future.

Results:

- Water consumption reduced by 25 %
- Increase of sustainability
- More efficient and faster irrigation
- Future synergy effects thanks to a fleet management system possible

Transparency

Reduced set-up times

Increased machine availability

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