Transformative Solutions for Quality Grain Storage

Name of the Organisations Involved

- Centaur Analytics, Greece

Challenges Identified

High technology is coming to solve another problem in grain production, with an innovative solution from Greek agro-technology company Centaur Analytics that ensures high quality grain during storage and minimises losses.

Using a system of intelligent sensors that record data such as humidity, temperature, etc. and then inform any user device connected to the Internet, Centaur Analytics' solution monitors the condition of stored grain and informs the producer immediately.

Goals and Solution

Centaur Analytics' technological solution aims to simplify the process for producers to ensure the quality of their products and reap the economic benefits of their use. Developed and manufactured in Greece, Centaur's products offer solutions in the digitalization of the food supply chain. The Internet of Crops® platform encompasses products that facilitate continuous monitoring of grain conditions in post-harvest storage, precision fumigation monitoring, and complete traceability of a product's journey "from the field to the consumer's fork."

The solutions are based on two pillars: real-time measurements from smart sensors and other sources, such as weather stations, and models and algorithms to draw conclusions and make predictions. This enables the creation of a 'digital twin' for each warehouse or silo, providing a detailed picture of temperature and humidity, along with insights into quality parameters like dry matter loss, mold growth, germination capacity, etc. Predictions about the product's development can be made up to 6 months in advance.

Helping Producers Thrive with the Internet-of-Crops®

Source: https://www.centaur.ag

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Details about the technology and the beneficiaries:

In a user-friendly manner, the Centaur system empowers users to extend the safe storage period of their products, receive timely notifications of risks or tampering, and make informed decisions on product management—whether it's an opportune time to sell or consume. Users can access and share traceability data to enhance their product's competitiveness and guarantee its quality. The Internet of Crops® application is accessible from any web-enabled device (mobile phone, tablet, PC), prioritizing usability, especially for mobile devices. The application has been continuously improved over the last 5 years based on daily user interactions in over 25 countries worldwide.

Actions Taken

Centaur maintains constant contact with its strategic customers, providing a continuous flow of information regarding their day-to-day needs and the challenges they face. In this context, alongside the development and improvement of existing Centaur products, the company's team consistently creates various prototypes. These prototypes undergo on-site testing, and depending on the sector's response, they are integrated into the range of product solutions. This approach ensures flexibility and precision in product development and customer service.

Benefits and Impact

The Internet of Crops® is an inclusive IoT (Internet of Things) solution designed to scale, catering to the monitoring needs of assets of any size. This ensures that everyone can enjoy the benefits at a cost aligned with the scale of their production and/or business.

Based on previous studies conducted on behalf of the company by organizations such as Iowa State University in the USA, the minimum benefit to users of advanced grain management solutions is more than 5%. In practice, this means that the Internet of Crops® solution is the most cost-effective 'insurance' stakeholders can buy for their product, with a return on investment achievable within the first period of use. For more information, follow the link: https://www.agro24.gr/agrotika/kainotomia/tehnologia/centaur-analytics-mia-kainotomos-lysi-poy-exasfalizei-tin-poiotita

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Application Area
☒ Resources Usage   ☒ Condition of Assets

Digital Technology in the Value Chain
☒ Supply-Chain Management   ☒ Agricultural Inputs and Services

Digital Technologies
☒ IoT   ☒ Sensor Technology

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