

Smart Farms and the Digital Transformation of the Pig Sector

July's Breakfast4Inno Explores Smart Farm Innovations and Pig Sector Digitization in Lleida

Organized by Agrotecnio and Parc Agrobiotech Lleida, the latest Breakfast4Inno edition focused on emerging digital solutions for livestock farming. Keynote speakers **Lluís Miquel Pla** (Professor of Mathematics at the University of Lleida and Agrotecnio researcher) and **Josep Reixach** (Head of Genetics and R&D&i at Selecció Batallé) presented results from pilot projects implementing real-time monitoring, automation, and artificial intelligence in swine production.



Key Technical Highlights & Field Applications:

- **Digital Twins & Predictive Models:** Integration of multi-source data to optimize swine fattening management and generate high-value strategic decision-making insights.
- **Smart Farm 5.0 Sensors:** Experimental testing of RFID-enabled feeding stations, 3D vision cameras for live weight estimation, automated feed and water flow meters, ambient monitors (CO, ammonia, dust), and acoustic monitoring for respiratory early-detection.
- **Slaughterhouse Analytics:** AI-powered visual algorithms to evaluate respiratory lesions and tail necrosis, translating post-slaughter indicators into actionable farm-level welfare insights.

Expert Takeaways:

- **Prof. Lluís Miquel Pla** emphasized that transforming raw data into useful knowledge requires standardized data formats, sensor validation, and interoperable systems across a robust digital ecosystem, noting that only the most reliable AI tools will consolidate long-term.
- **Josep Reixach** highlighted how digitalization enhances operational efficiency, animal welfare, and sustainability through real-time proactive interventions, stressing the necessity of strong cross-sector collaboration between academia, industry, and public administration.

The event gathered around 30 professionals and concluded with an interactive discussion and networking session.