

# ENHANCING GRAIN AND FLOUR MILLING WITH PROFOS S 2: OPTIMIZING QUALITY, EFFICIENCY, AND FOOD SAFETY

# FOSS

**PRESENTER: VITALY KIRKPATRICK**

INDUSTRY SALES MANAGER, FEED & GRAIN

TEL: 801-372-4854 ; EMAIL: VKIRK@FOSSNA.COM



SOCIAL LINKS AND CONTACT DOWNLOAD:

<https://302.buzz/vitaly>



ANALYTICS BEYOND MEASURE



# SINCE 1956, FOSS ANALYTICAL SOLUTIONS HAVE BEEN IMPROVING THE BUSINESS OF HANDLING AND PROCESSING GRAIN

# FOSS



In 1956, Nils Foss identified the need for a portable moisture analyser

Fast, easy-to-use and dedicated, the Cera-Tester was the first FOSS innovation

Matching innovative technology to the demands of food and agricultural industries has been the foundation of FOSS ever since



1956

Cera Tester monitors moisture content in grain. The instrument is a highly popular world first.



1973

The Kjeltec 1000 paves the road for simpler, safer, less time consuming and more cost efficient Kjeldahl analysis.



1997

FOSS acquires Perscorp Analytical and improves consistency of analysis results throughout the grain industry via NIR.



2019

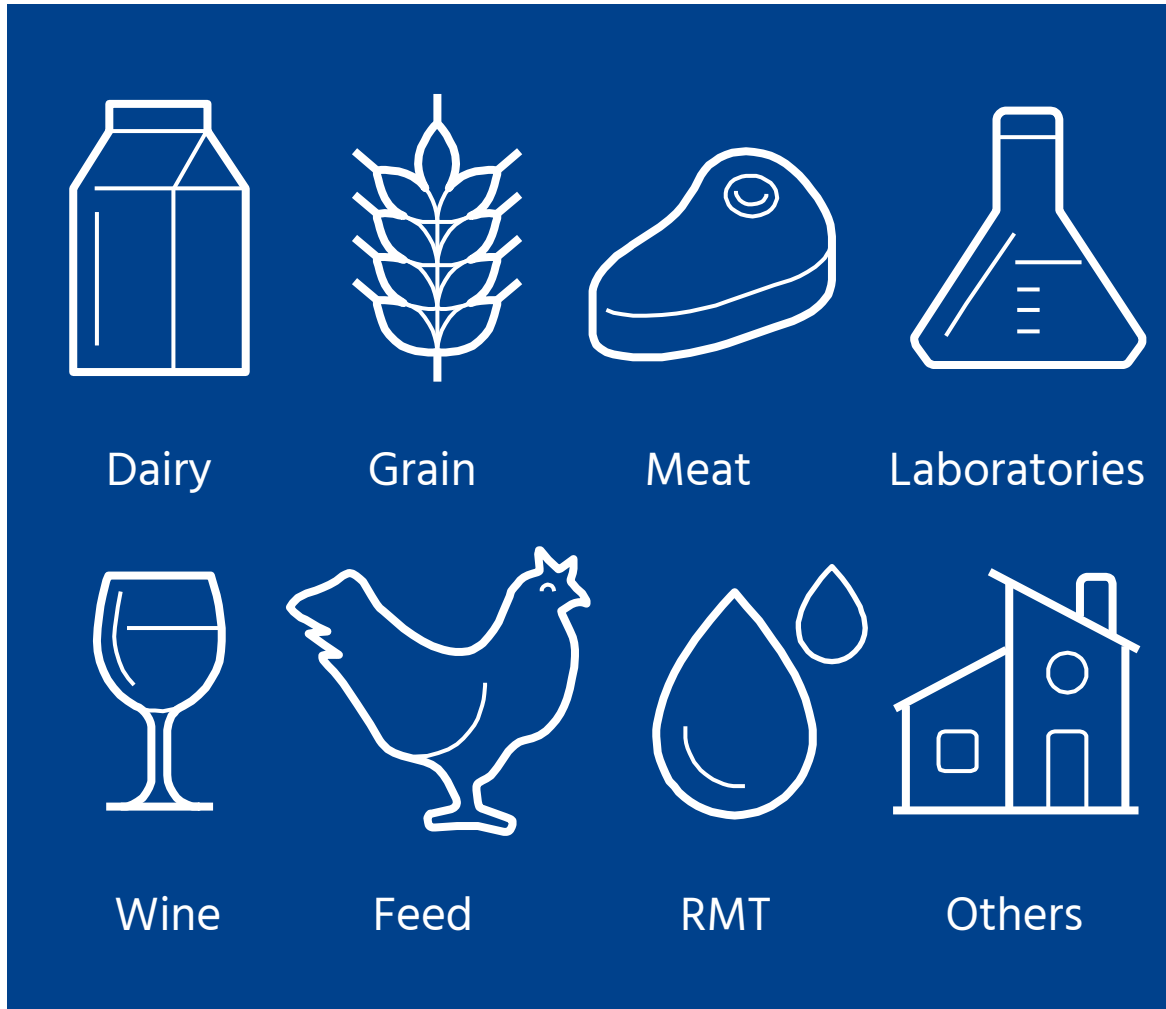
The Infratec 1241 a straight forward grain analyzer added to the Infratec family together with the Infratec 1241 Nova from 2014.

## But there's more to be done...

# FOS S : A LEGACY OF INNOVATION ACROSS S INDUSTRIES

**FOSS**

ENHANCING PROCESSES FROM RAW MATERIALS TO FINISHED GOODS



## WHERE FOSS ADDS VALUE

### RAW MATERIAL

- Ensure incoming production product meets specifications

### PROCESSING

- Control of manufacturing process by reducing variability and making a more consistent product

### FINISHED GOODS

- Ensure safe products and compliance with regulatory requirements

**FOSS**

ANALYTICS BEYOND MEASURE

PROFOS S<sub>TT</sub> 2 WHOLE GRAIN

UNLOCKING QUALITY AND EFFICIENCY

# INFRATEC<sup>TM</sup> NOVA – THE GAME-CHANGER IN GRAIN TESTING

**FOSS**

THE ONLY FGIS APPROVED GRAIN ANALYZER FOR PROTEIN TESTING  
WITH 60 YEARS OF ACCURACY AND RELIABILITY



- Tests multiple parameters (moisture, protein, oil, starch, and more) and offers unparalleled speed
- Higher uptime, adapted to your needs
- Dynamic Precision <sup>TM</sup> Uses five subsamples for low variation.
- Results exportable via history view
- Calibrations based on 50k+ samples
- Data stored on the Mosaic network for transferability
- Optional modules for STM, Flour, and Test Weight.



# EMBRACING PRECISION: THE SHIFT TO INLINE GRAIN ANALYSIS WITH PROFOS S 2

**FOSS**

ProFoss<sup>™</sup> 2 for whole grain is an in-line process analysis solution that provides continuous measurements of moisture and protein in whole grain in real-time



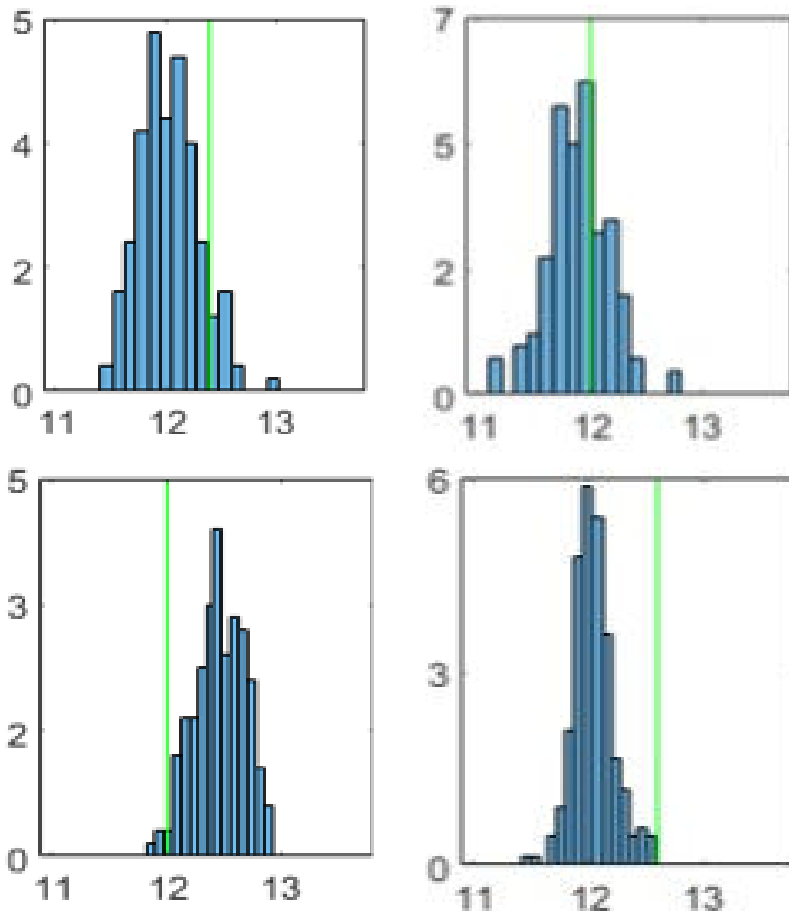
CONTINUOUS MEASUREMENT OF  
YOUR WHOLE GRAIN IN REAL TIME



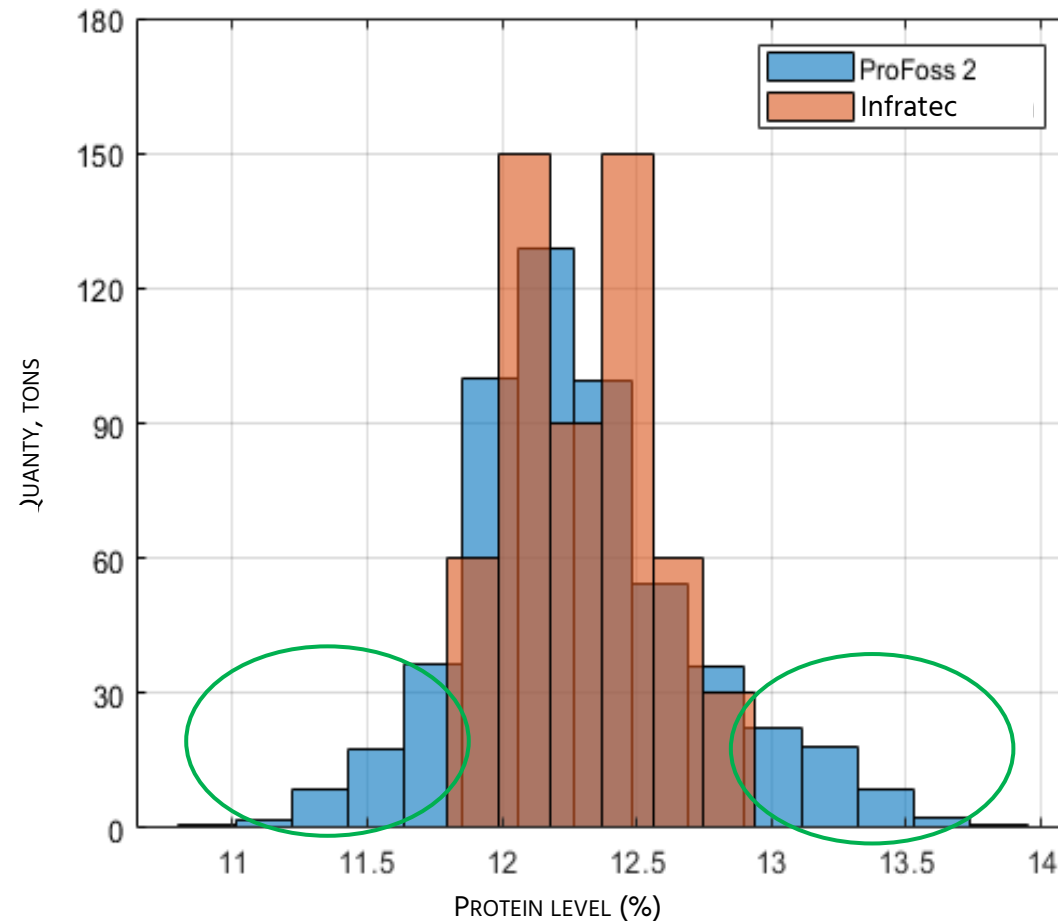
# UNLOCKING QUALITY CONTROL POTENTIAL: REALIZING THE BENEFITS OF CONTINUOUS ANALYSIS

**FOSS**

Protein level (%) per Truck Load  
(green line Infratec Measurements, blue bars ProFoss 2 Measurements)

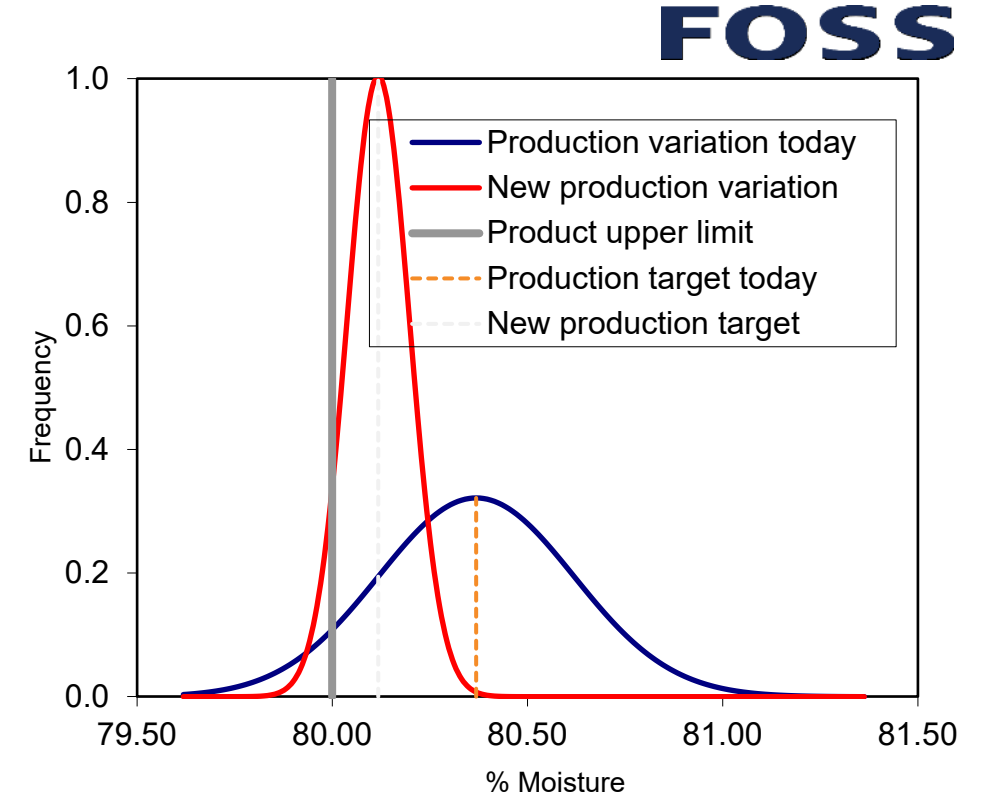


Accumulated Protein Level (%) distribution



The ProFoss 2 in-line analysis shows that we have a broader variation in protein level than the bench analysis shows – There is an opportunity to optimise your segregation and blending

# OPTIMIZING OPERATIONS, DRIVING PRODUCTION EFFICIENCY, AND ACHIEVING PROFITABILITY



ANALYTICS BEYOND MEASURE

Identify the optimal measuring points of analysis in your production to help improve your process



Detect trends and changes in the process



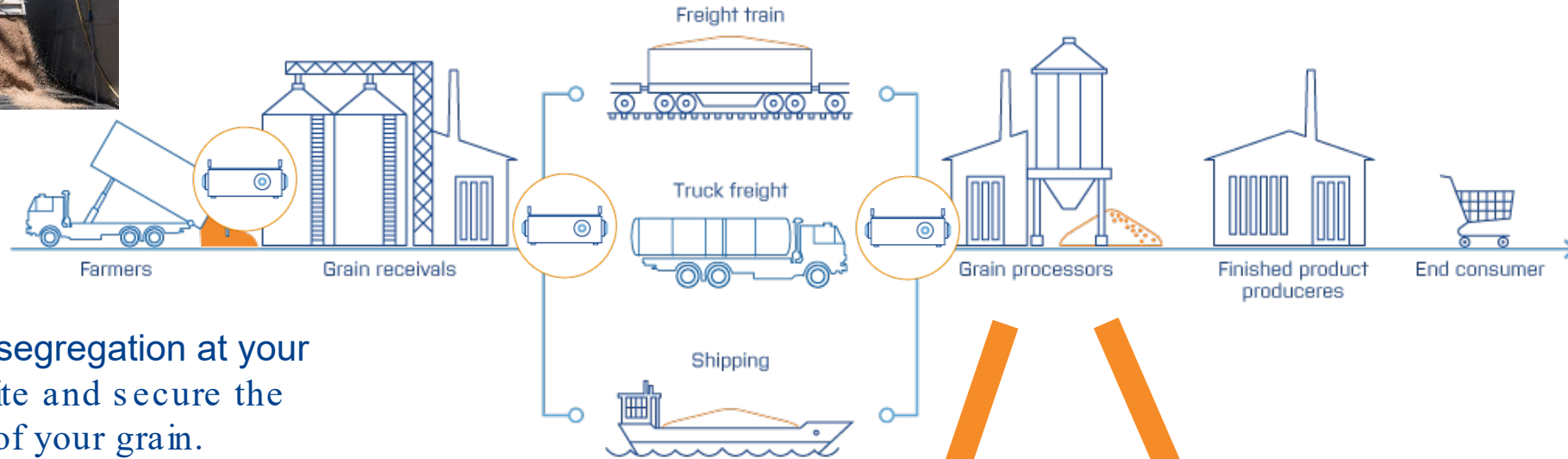
Understand, control, and limit process variations to move closer to production quality targets and stay there with uninterrupted measurements – nothing gets missed

IMPROVED YIELD, HIGHER PROFIT, AND ENHANCED QUALITY



# TRANSFORMING WHOLE GRAIN MANAGEMENT: PRECISE IN-LINE MEASUREMENTS AT CRITICAL CONTROL POINTS

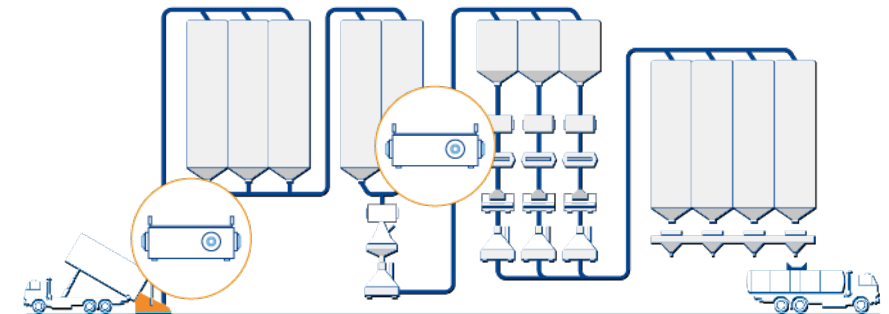
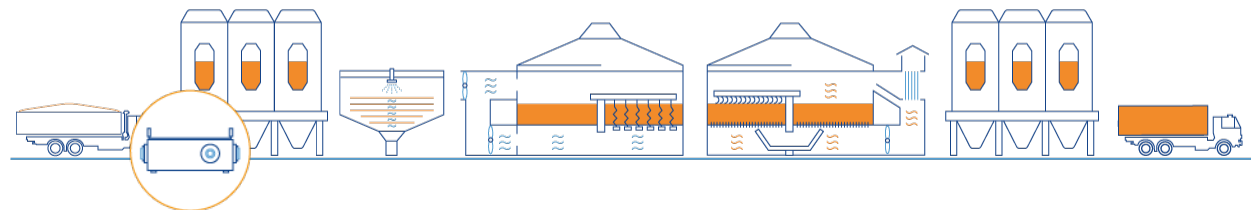
**FOSS**



Optimize segregation at your receival site and secure the best use of your grain.

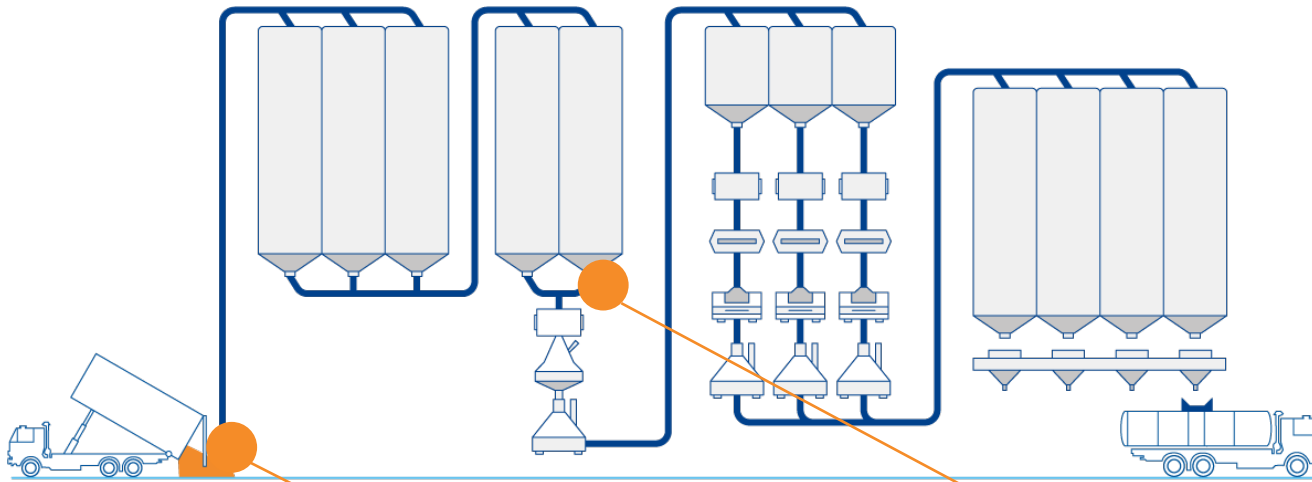
Minimize use of energy when drying your grain and secure sound grain during storage

Making a premium quality blend: Get closer to contract specification and minimize risk of dispute when exporting.



# ENHANCING FLOUR MILLING EFFICIENCY: PROFOS S 2'S IMPACT ON PROTEIN LEVELS AND SIEVE PERFORMANCE

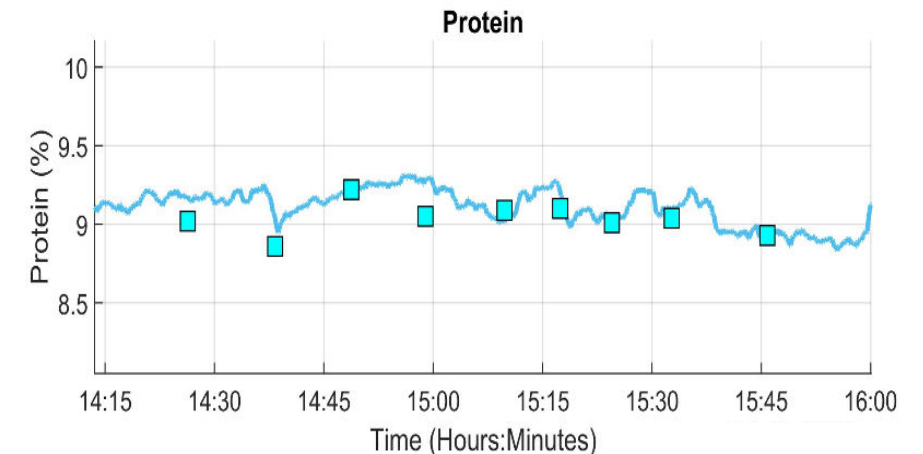
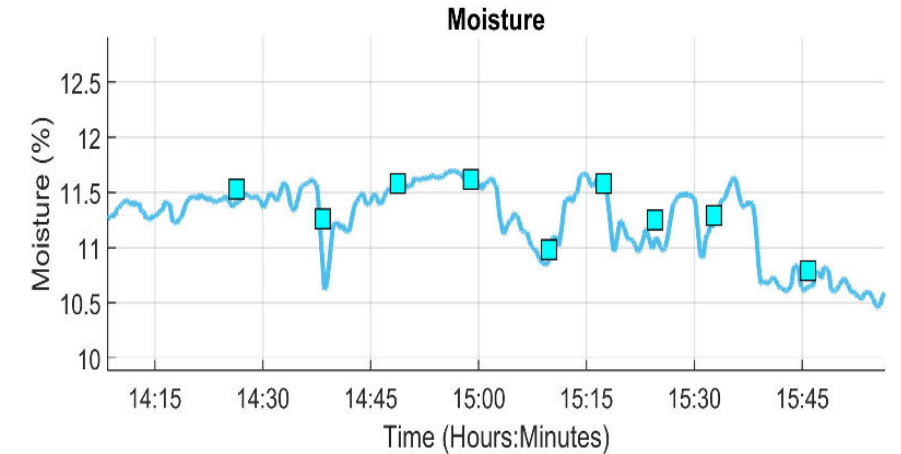
**FOSS**



Control your intake of raw material and secure, consistent quality to optimize your milling process



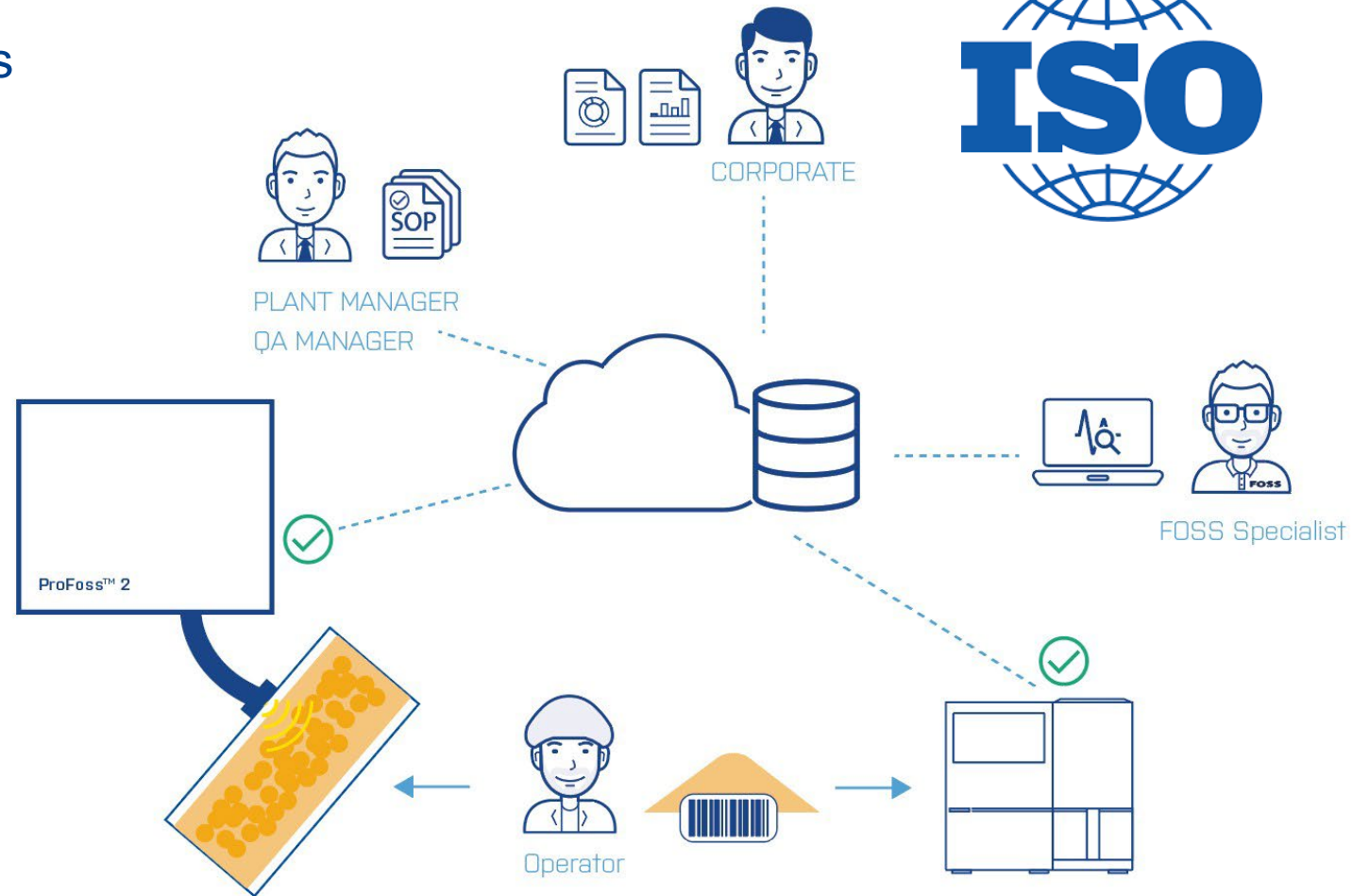
Secure the right moisture content in the tempering process and ensure optimal milling yield and sustainable water use.



# UNLOCKING DIGITAL EXCELLENCE: ELEVATE GRAIN INDUSTRY WITH FOSS MANAGER

**FOSS**

- Connectivity for efficient operations and data sharing
- Cloud-based storage, access, and analysis of testing data
- Remote data and instrument management and configuration
- Simple implementation and expert support
- Seamless integration of benchtop and in-line results
- Provides a clear overview of grain testing data

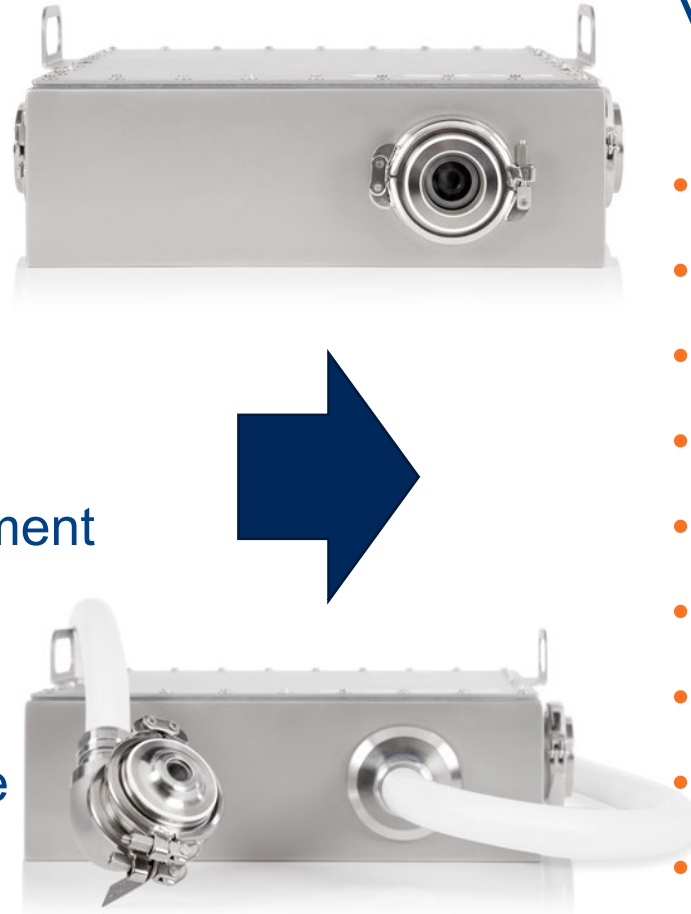


# UNLOCKING THE VALUE OF PRECISION: PROFOS S 2'S IMPACT ON QUALITY AND SAFETY

**FOSS**

## PROFOSS 2 FEATURES

- Automatic Measurements
- Advanced Technology
- Optimized Processes
- Precise Control
- Efficient Parameters Management
- High Precision & Accuracy
- Expert Implementation
- Robust Design & Performance
- Network Connectivity
- Data Analytics



## VALUE FOR FLOUR MILLERS

- Standardized Raw Materials
- Cost Efficiency & Fair Payment
- Improved Supplier Negotiations
- Waste Reduction
- Resources Efficiency & Savings
- Consistent Quality
- Process Control & Improvement
- Safe Procurement
- Informed Decisions with Data



# CASE STUDY: FLOUR MILLING - OPTIMIZING QUALITY CONTROL AND BLENDING

**FOSS**

**Challenge:** A leading flour milling facility struggled to maintain consistent product quality due to fluctuations in protein and moisture. Manual sampling and adjustments led to inefficiencies and increased rework. Previous analytical instruments had limitations.

**Solution:** ProFoss's realtime data capabilities provided a gamechanging solution. By offering accurate measurements and realtime insights into protein, moisture, and ash, ProFoss enabled instant adjustments to the production process. Results were monitored in the mill control room.

## **Impact:**

- Increased measurement frequency – from every few hours to every few seconds – more precise control over production
- Reduction in variations with every new batch – lead to consistent product quality and reduced customer claims
- Improved traceability – ProFoss provides a more comprehensive picture of quality and processes
- Enhanced control and responsiveness – real-time adjustments and problem-solving
- Competitive advantage – the ability to deliver premium-grade flour that meets discerning customer standards, including baby foods



# CASE STUDY 2: GRAIN HANDLING - SEGREGATION AND ENERGY EFFICIENCY

**FOSS**

*Challenge:* An industry-leading grain handling facility faced the challenge of achieving precise grain handling segregation to meet specific protein requirements in a 20,000-ton grain shipment targeting 10.5% protein. They also needed to optimize the usage of two wheat grades with a USD 12 price difference and recognize the impact of even a slight improvement in precision on loading the ship.

*Solution:* To address these challenges, the facility implemented ProFoss, an advanced real-time data insights system for grain analysis and segregation. The ProFoss system provided accurate and real-time protein analysis of the different wheat grades during loading. This allowed the facility to make informed decisions on wheat grade usage and ensure precise segregation.

*Impact:*

- Achieved a 15% increase in the usage of lower-grade wheat.
- Saved 15% of high-quality wheat that would have otherwise been used unnecessarily.
- Even a small improvement of 0.1% in precision resulted in cost savings of USD 36,000 due to the price difference between wheat grades.
- Was able to enhance efficiency, reduce waste, and achieve impressive savings in their operations.

THANK YOU FOR YOUR TIME

**PRESENTER: VITALY KIRKPATR**

INDUSTRY SALES MANAGER, FEED & GRAIN

TEL: 801-372-4854 ; EMAIL: VKIRK@FOSSNA.COM

Contacts : <https://302.buzz/vitaly>

For more information, visit: <https://302.buzz/flour>



**FOSS**



QUESTIONS

