

## Throughput and Quality became much Better after Implementation of Advanced Cooker Control

### CHALLENGE

A US provider of nutritional, functional and sustainable feed ingredients for animal, aquaculture and pet food products wants to implement new and innovative control methods in their persistent striving to meet the needs of their customers.

As with many organizations, operational challenges have a significant impact on quality of product, efficiency of operations and energy consumption throughout the plant. Some plants are specifically struggling with:

- Variations in the residual moisture and thus in meal quality due to large variations in the discharge temperature from the cooker.
- Process efficiency.
- Reduced throughput and capacity.
- Lower energy efficiency.

### SOLUTION

In 2018, CORE's Advanced Process Control (APC) package was installed and commissioned at a plant on a dry rendering production line. By implementing CORE APC for their cooker, the process was optimized, and a more stable production was achieved. This has allowed the company to improve their yield, quality, energy efficiency and throughput.

### RESULTS

After adding CORE APC to their operation they achieved:

- **> 10 %** increase in throughput
- **> 0.5 %** increase in residual moisture and in meal yield
- **> 90 %** daily process efficiency attained consistently
- **< 6 months** pay back period

#### Industry

- Poultry, Ingredients

#### Process optimized

- Dry Rendering
- 1 Cooker

#### Country

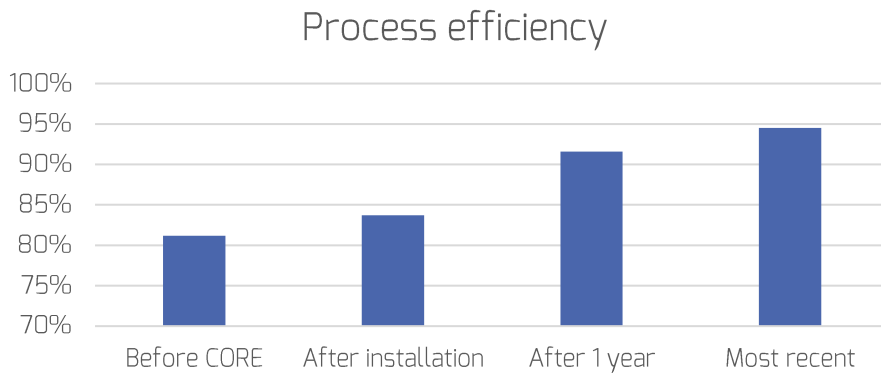
- United States

*"The CORE team has made us a better plant. CORE has a tool that will be very helpful to most of our plants."*

**- General Manager**

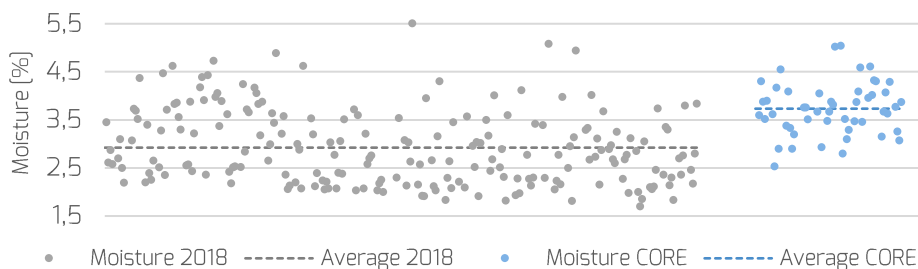
## STORY DETAILS

The figure below shows the development in process efficiency from before implementation of the CORE controllers to the efficiency obtained 2 years later. Significant stabilization in discharge temperature from the cooker allows for more consistent material being processed by the succeeding presses and to a much higher efficiency.



*Development of dry rendering process efficiency over 2 years.*

The improved temperature control provides a higher moisture in the meal and thus a higher yield. The graph below is a plot of the daily average moisture before and after implementation of the CORE cooker control. Not only has the average moisture increased but the large variations seen prior to CORE are significantly reduced as well.



*Daily average moisture in the meal.*

In summary, the cooking process has been improved with lower variations resulting in better quality and reduced quality variations, as well as higher throughput and yield.

### About CORE A/S

The DNA of CORE is about stable sustainable savings. We are focused on optimizing your energy efficiency, yield, product quality, capacity, reducing the level of your investment and increasing your profit. We deliver the world's most sophisticated advanced self-learning controllers, which within a few years have spread across the globe based on the significant savings CORE has provided, especially to the industry for animal by-products and fish processing. A partnership with Haarslev Industries was established in 2016.

**CORE A/S**  <https://www.coreas.dk/>

📍 Denmark: +45 3927 7019 USA: +1 785 312-0141 Spain: +34 69662 8665 Peru: +51 97062 0345

<https://www.linkedin.com/company/core-as/> [contact@coreas.dk](mailto:contact@coreas.dk)

## CORE BUSINESS VALUES

### Advanced Process Control

- Improved stability
- Consistent quality of the final product
- Higher throughput, capacity and yield
- Reduced energy costs
- Reduced maintenance

## CORE SERVICES AVAILABLE

### CORE's optimization package

- Remote support
- Controller monitoring
- Optimization
- Visualization
- On-site visits
- Examination reports