Measurements in production:
Improving hygiene, processing, product quality

FREE webinar - with DEMOS
23rd of June 2020

All topics shown in this webinar are available for testing at Food Pilot (near Ghent, Belgium)

FREE registration (click here)

This involves all food sectors! We give demos.

We will highlight challenges in food production including hygiene, food safety and contactless quality monitoring

We will evaluate which sensors, data and data processing offer added value for optimizing production

Webinar 23rd of June 2020

9:30 Welcome

9:45 Part 1. HYGIENE and STERILISATION

- Cleaning and disinfection: monitoring
- New *E-coli*-biosensor
- DEMO: UHT F0-value

10:45 Part 2. SPECTRAL (VISION)TECHNOLOGY

- DEMO: Pork NIR- & hyperspectral analysis
- DEMO: Pilot set-up for inline sorting

11:30 End

↓ Detailed program below

VLAANDEREN INDUSTRIE 4.0

FOOD PILOT

AGENTSCHAP INNOVEREN & ONDERNEMEN   FF FLANDERS' FOOD   Samen sterk voor groei

ILVO
Flanders research institute for agriculture, fisheries and food

DETAILED PROGRAM

START

9:30 Welcome by Karen Verstraete

PART 1: HYGIENE and STERILIZATION

9:45 Detection of microbial contamination and targeted cleaning and disinfection. Koen De Reu

Hygienic practices before and during production are important to ensure shelf life and to produce safe food. Thorough evaluations of the cleaning and disinfection and tracing of contamination sources and routes are essential.
- Guidelines for and experiences with microbiological environmental sampling are discussed practically.
- Practical examples of the use of microbiological hygiene criteria for the assessment of food are also given.

10:00 Rapid *E. coli* detection: a bio-sensor in development. Marc Heyndrickx.

A new biomimetic sensor has been developed that allows a sensitive, fast and specific quantitative detection (LOD 100 cfu/ml) of *E. coli* in a wide range of concentrations, in both buffer and food (e.g. apple juice).
- Principle based on recognition of target organism by a specific surface-imprinted polyurethane layer on a chip built into a flow cell.
- Developed by KU Leuven, in collaboration with ILVO and other research institutions. Further exploration in the Interreg "AgrEUfood" project.

10:15 Optimizing sterilization: F0 value for translation from pilot to production. Estelle De Paepe.
DEMO

The Food Pilot expanded its UHT pilot machine with intensive temperature measurement and real-life data processing. This makes it possible to determine the F0 value more accurately online, and this over the entire course of heating, holding and cooling.
- The F0 value allows to compare processes on an equivalent basis. This makes a process optimized at pilot scale more translatable to a production scale.
- Especially for "specialties", such as starchy emulsions, the heat treatment is meticulously tuned to preserve the taste, color and rheology of the product. Material properties can change during heating, especially with these products, which makes a correct determination of the F0 value all the more crucial.

10:35 – 10:45 coffee break

PART 2: SPECTRAL (VISION)TECHNOLOGY

10:45 New sensor techniques for determining the quality of meat. Bert Callens.
DEMO

Results of a small-scale measurement campaign for fast inspection of pork meat quality are shown. Correlations are studied between reference parameters (drip, intra-muscular fat, color, pH, cooking loss), NIR spectrometer data, and hyperspectral images. Live demo of a NIR sensor with meat probe (ASD Labspec 4; Inventech) and a hyperspectral camera (Specim FX10e; Spectrapartners). Study in cooperation with Ghent University (Project Vlevavlees).

11:05 Feasibility of vision inspection systems: Which camera offers a solution to my challenge? Simon Cool. **DEMO**

We start from a problem or question. "Can a camera be able to distinguish class X from Y? Which quality parameters can be estimated?". For this we work step by step. We screen the visual and near infrared spectrum with hyperspectral cameras, looking for wavelengths with useful information. Based on this, commercially available cameras suitable for the application are advised. In the demo we show various cameras, the principles of data processing, and a pilot set-up of conveyor belt with camera for inline sorting.

11:30 End