

Sustainability Oriented Innovation for Safe and Tasty Meat Products

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- I want to discuss with you the subject of today using two examples of companies that were presented at the WICaNeM Conference on Sustainability and Innovation in Chains and Networks: namely The VanDrie Group, the world leader in veal and IXL, an innovative start-up company
- At the WICaNeM Conference the European Chapter of IFAMA was launched. I want to use this opportunity to take a few minutes to tell you what this chapter wants to contribute to the global agrifood sector in the years to come

The Wageningen International Conference on Chain and Network Management (WICaNeM)

- 200 representatives of Academia, industry and government came together to discuss the latest research results in the field of sustainability and innovation and the application in industry
- Including board members of large multinational agrifood companies, such as Barilla, FrieslandCampina, Südzucker and the VanDrie Group, but also representatives of high-tech start-ups, such as Mireos



Spearheads for the European Chapter of IFAMA

- Creating sustainable agrifood supply chains and networks
- Increasing food safety, delivering delicious, nutritious and healthy food
- Building the future. Increasing the attractiveness of the agrifood industry to young professionals
- Working together with Academia and creating cross-overs with high-tech industries



Launching event

The European Chapter of
IFAMA

WICaNeM Context: Growing World Population

- In 2050 around 9 billion people
- Increasing scarcity of land, water and natural resources
- Growing demand for food and nutritious ingredients



Foodborne Diseases

- 76 million illnesses annually in the USA; 325,000 hospitalizations; 5,000 deaths
 - Bacteria most common cause, especially Salmonella
 - Also viruses, parasites, natural and manufactured chemicals, and toxins from organisms
 - Cost of top five foodborne pathogens in the USA \$6.9 billion annually
 - Medical costs
 - Productivity losses (missed work)
 - Value estimate of premature death
- Center for Food Security and Public Health, Iowa State University

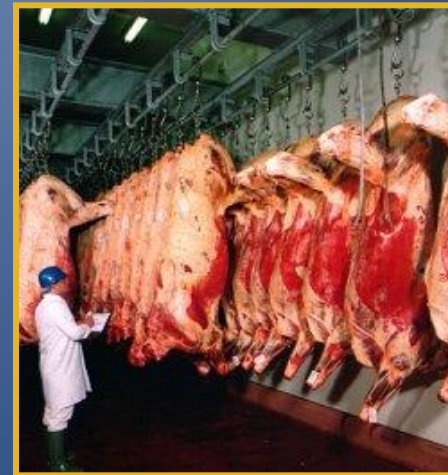
Short History

- Contaminated food, milk and water caused many foodborne illnesses → Sanitary revolution
 - Sewage and water treatment
 - Pasteurization invented in 1864, used for milk since 1908
 - Refrigeration in homes since 1913 in the USA
- Animals identified as source of foodborne pathogens
 - Improved animal care and feeding
 - Improved carcass processing



Contamination can Occur at Several Points along the Meat Supply Chain

- At the farm; at the slaughterhouse; during processing; at the point of sale; in the restaurant and in the home



The Dutch VanDrie Group



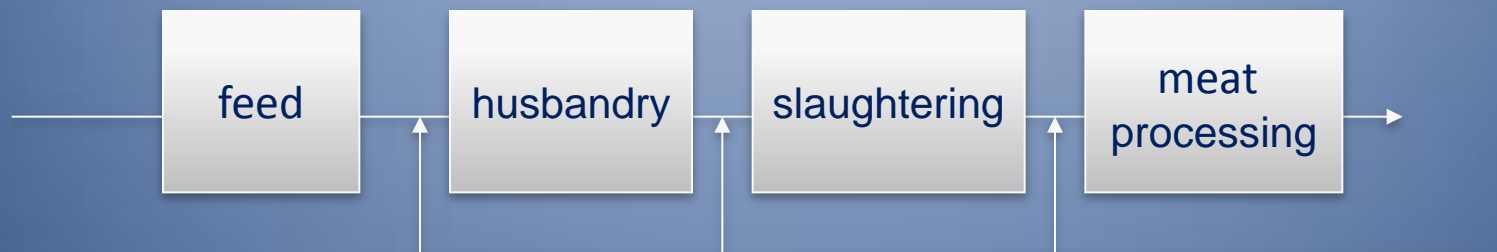
- World market leader in veal, calf skin and calf milk powder
- Bull calves are a necessary by-product of the dairy industry, so basically rest streams are valorized
- A family-owned business with 2.350 employees and an annual turnover of € 2.5 billion



Prevention and Control: Integrated RFID Based Traceability System



- Integrated chain management



- In many slaughterhouses meat can only be traced back to a certain batch that leaves the slaughterhouse
- In the VanDrie Group traces back to the level of the individual calf and the individual ingredient



Traceability System: Ingredients Tracking



Feed of the calves
Down to the individual ingredient



Per calf
What has it eaten and what is
being produced



Ultimate Products
Details of the individual calf down
to the individual ingredient

RFID-technology



- Permanent and simultaneous multiple identification
- Robust and does not require line-of-sight
- Automates handling at farm and slaughterhouse
- Provides proof of origin
- Age verification and disease control
- Storing and updating vaccination and movement data



Tasty Meat: IXL Nutri-Pulse e-Cooker

- Pulsed Electric Field (PEF). High voltage electric pulses cause structural change of cell membranes
- Used for non-thermal pasteurization of liquids
- Non-liquid food (e.g. meat): High speed slow cooking: E.g. to simmer stewed beef takes 4 minutes instead of 3 to 6 hours
- Winner of the Food Valley Award 2011



Nutri-Pulse e-Cooker



Questions?

