




From By-Product to Bestseller Circular Food Upcycling in Action

Line Ahm Mielby
Senior Consultant

Food Technology & Consumer-Driven Product
Development



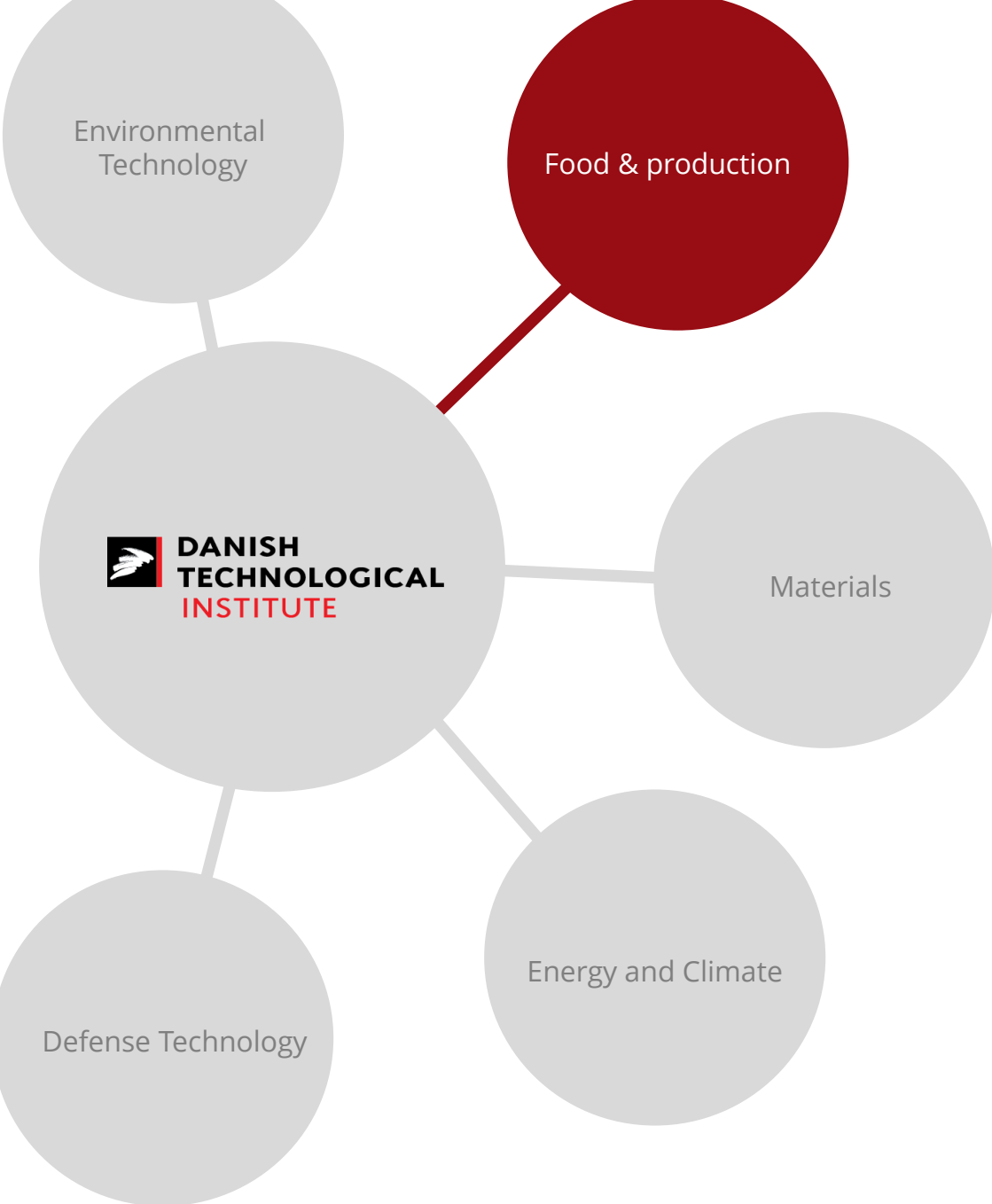
Every year, millions of tonnes of usable food and food by-products never reach a plate. The cost is paid by our climate, our farmers, and our consumers

Something must change

Upcycling is part of the answer:

Less waste - More food from what we already grow - New value across the chain

More sustainable choices for consumers



As part of Food & Production at Danish Technological Institute, we are one of the Nordic region's largest innovation centers within the fields of agriculture, food, robotics, and automation

The division possesses a range of prominent competencies as well as facilities for testing, demonstration, and development

The journey from food by-products to high-value ingredients

Identification of relevant food by-products



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- Optimization of process equipment to reduce food by-products
- Identification of potential high-value ingredients (macro- and micronutrients)

The journey from food by-products to high-value ingredients



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- Handling of food by-products to ensure they are suitable for high-value ingredients (food safety, HACCP, handling)

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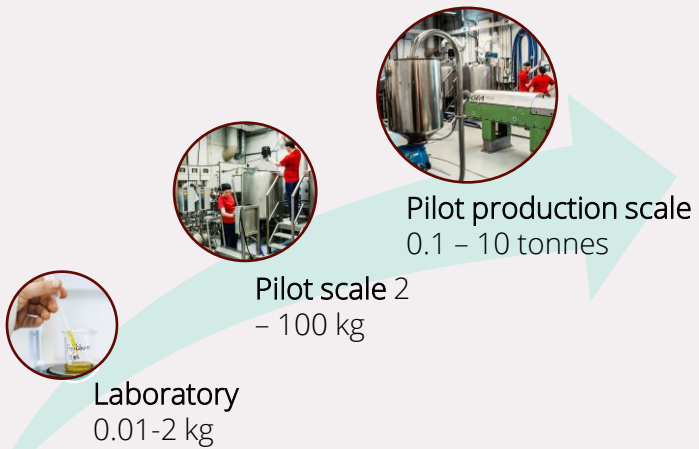
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Continuous alignment with market and consumers
(B2B and B2C)

The journey from food by-products to high-value ingredients

Technological upcycling solutions



Continuous alignment with market and consumers (B2B and B2C)



The journey from food by-products to high-value ingredients

Technological upcycling solutions

- Facilities across several sites, including:
 - Pilot plant facilities such as (but not limited to):



The journey from food by-products to high-value ingredients

Technological upcycling solutions

Facilities across several sites, including:

- Pilot plant facilities
- Biorefining and fermentation
- A broad range of processing technologies

Downstream processing

extraction, purification, drying, filtration etc.

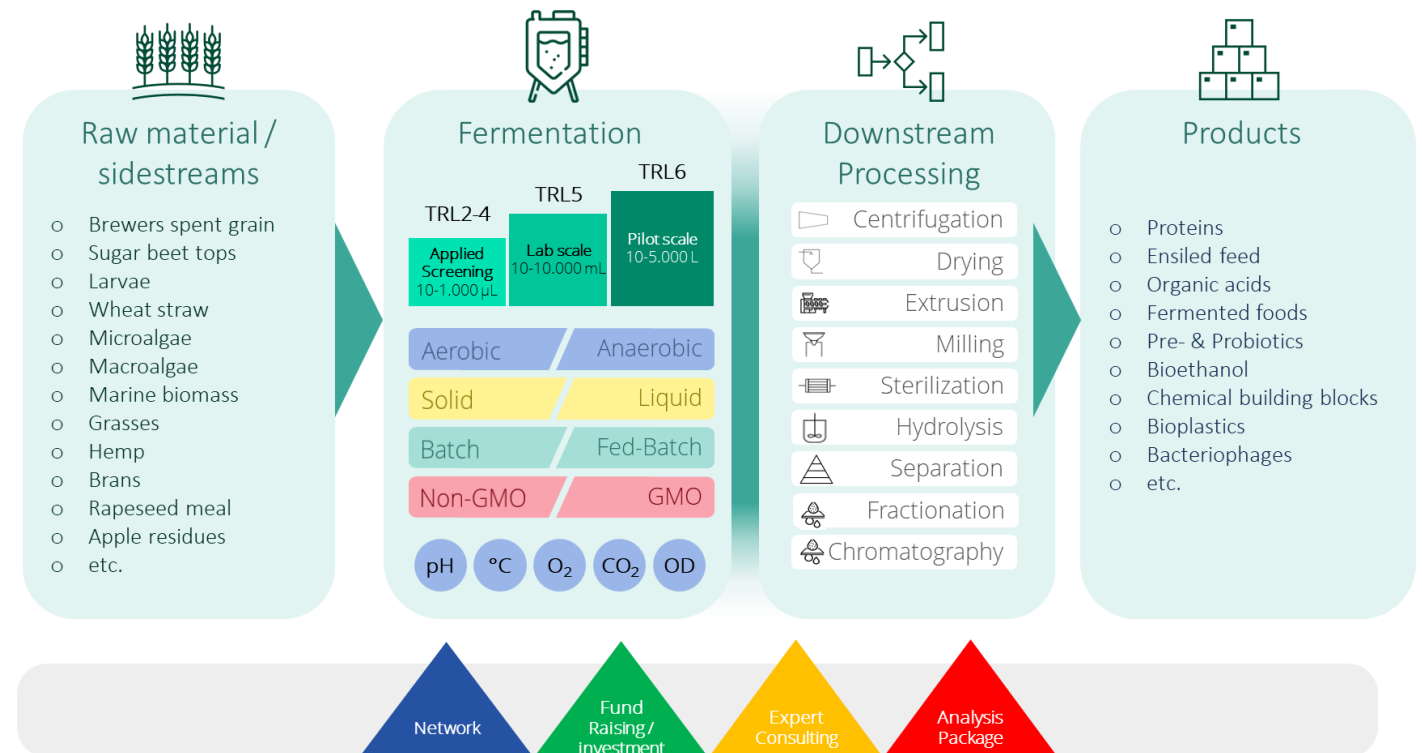
Formulation processing

stabilization, conservation, extrusion, encapsulation etc.

Some facilities are open access

Continuous alignment with market and consumers (B2B and B2C)

Examples of some of our facilities



The journey from food by-products to high-value ingredients

Technological upcycling solutions

Facilities across several sites, including:

- Appropriate analytical methods to assess and evaluate
 - microbiology including pathogenic testing
 - powder properties
 - oxidation and other physicochemical analyses



Continuous alignment with market and consumers (B2B and B2C)

The journey from food by-products to high-value ingredients



Integration of upcycling solutions

- Application testing and development of products
- Consumer testing
- Labeling and legislation

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The journey from food by-products to high-value ingredients

Integration of upcycling solutions

- Hygiene and microbiology
- Storage
- Life Cycle Assessment analysis



Continuous alignment with market and consumers (B2B and B2C)



Food Upcycling

Turning surplus into opportunities

Food Upcycling is carried out in a collaboration with

INDUSTRIENS FOND

PROJECT OFFERS

Screening for needs

Workshops

Tools & resources

Collaboration projects



Case: Texturizing plant proteins

Collaboration project — supported by Food Upcycling

Challenge: Extruders are costly — a barrier to plant protein innovation

Tested: A novel rotary dish texturizing technology

Result: Promising texture, clear path forward

Impact: A lower-cost route to plant protein texturization

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BioSustainability Design Fellowship Programme

Training future change agents for the food system

A Novo Nordisk Foundation-funded programme hosted by the Danish Technological Institute.

Focused on sustainable innovation in food waste, plant-based value chains and side-stream valorization.

Would you like to host a fellow?



Louise Krogh Johnson

Programme Director

Phone: +45 7220 3553

E-mail: lkrj@dti.dk



**TEKNOLOGISK
INSTITUT**



Key takeaways

Upcycling requires the full value chain — from by-product to consumer

DTI delivers across all four areas: identification, technology, integration, and consumer alignment

We work both commercially and in collaborative projects — meeting you wherever you are on the journey



Thank you

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Get in touch

lmie@dti.dk

