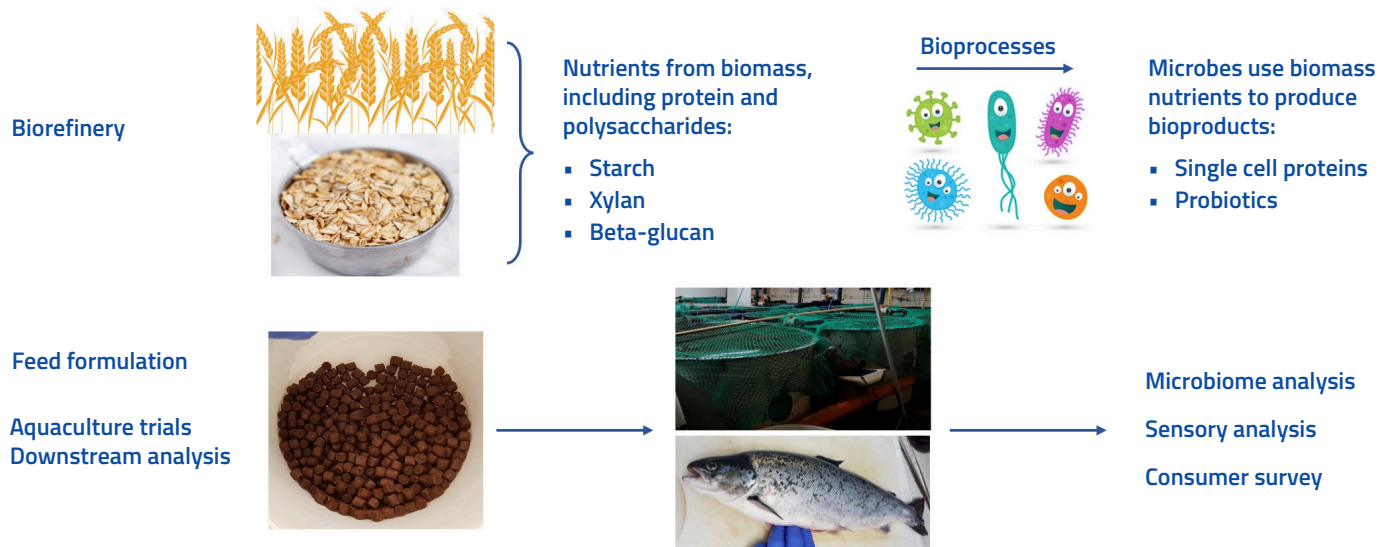


Nordic Cereals

The aim of Nordic cereals is to **valorise rest raw materials and side streams** accumulating from processing of cereal grains, utilizing protein and carbohydrate rich fractions for production of probiotic bacteria and single cell proteins (SCP) for aquaculture feed applications.

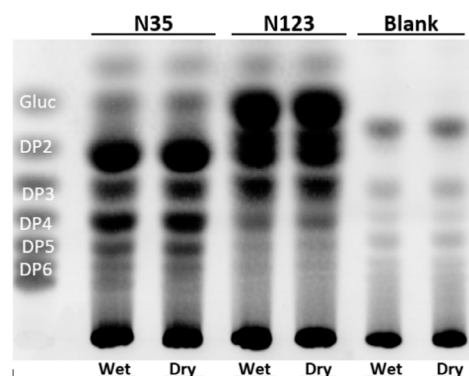
The project contributes to **sustainable aquaculture**. Production of single cell proteins from diverse side streams or rest raw materials, such as food waste through insects or lignocellulose, is considered a feasible mean to enhance available protein sources. In this project, cereal side streams, accumulating from processing of oat, will be used to make substrate for production of probiotics or single cell proteins, ideal for utilization in feed for aquaculture.

The project contributes to establishing **circular food systems** by valorisation of so far unexploited side streams with positive environmental impact, generating new improved feed with positive impact on food production.



Tasks:

- Biomass refining – optimization and scale-up of processes fractionating proteins and carbohydrates, saccharifying polysaccharides from oat side streams
- Conversion of sugars to probiotics and proteins - optimization and scale-up of processes
- Formulation of feed containing oat proteins, SCP or probiotic cultures
- Aquaculture feed trials
- Sensory analysis and consumer survey
- Life-Cycle Assessment



Saccharification of polysaccharides (starch, beta-glucan) into glucose and maltose, suitable for conversion into SCP, applying two different cocktails of industrial enzymes

Participants (EIT food):

- Lund University - Process Technology
- Matís food research company – Process Development
- University of Helsinki – Life Cycle Assessment
- Laxá feed mill – Aquaculture feed producer
- Large agricultural cooperative - Associated partner