Call text – Food and health 2025

Lantmännen Research Foundation supports research which can contribute to achieving sustainable, robust and lucrative food systems. The aim of this research area is to generate new knowledge that can be used in the development of future foods and ingredients from grains or other plant-based raw materials. The scope of the research area extends through the entire chain from raw materials to consumption. If you have a project idea, we are open to discuss the possibility of using Lantmännen's raw materials, products and other resources before you submit your application.

Health benefits of grains and legumes

Cereals and legumes are important components in Nordic diets. Health effects of a Nordic diet, as well as developing new knowledge that can support the development of good, healthy and innovative foods based on cereals or legumes, are included here.

Current research areas:

- Intake of products based on cereals and/or legumes as part of a healthy Nordic diet.
- The link between the effects of whole grains and individual components (such as dietary fibre) on health such as the metabolic syndrome, blood sugar and insulin regulation, gut health, cognition and weight loss. Where the effect of malting and fermentation is of particular interest.
- Sustainable nutrition. Focus on whole grains, public health and the nutritional content of the diet linked to climate and environmental aspects.
- Precision nutrition. How the diet can be adapted to individuals or groups for optimal health effects, with particular focus on diet-microbiota interaction and its metabolism.

Applications should, where relevant, take into account how the knowledge can be used to obtain future health claims.

Baking quality

Bread and other baked goods make up a large portion of our diets. In order to develop the area for the future, in-depth knowledge about flour and baking chemistry is needed. This research area includes knowledge of raw materials, ingredients and processing techniques used to produce bread and other baked goods, with respect to taste, right texture and sustained shelf life.

Current research areas:

- The influence of wheat flour and its constituent components on baking properties and final product. The influence of gluten quality and (also) whole grains is of particular interest. Improved taste and texture in bread with a high content of whole grains and fibre. Focus on breads based on wheat, rye or oats.
- Water distribution and redistribution in dough and bread during freezing, storage and thawing. How can this be controlled with processes and raw materials to maintain taste, volume and texture in the bread?
- Use of sourdough and yeast cultures for better taste, texture and sustained shelf life.
- Evaluation of raw materials and ingredients for better function, sensory and shelf life. An example is the best use of butter and margarine in laminated products. Optimising ingredients for shorter content lists is another area.
- New process technology solutions for improved product and storage quality, reduced waste, and improved energy utilisation.
- Packaging solutions for maintaining taste, texture and crispiness.

Ingredients of cereals and legumes in foods

The demand for different plant-based ingredients for new innovative foods is great. In order to cover the need, today's technology for milling, wet fractionation and further processing of cereals and legumes needs to be developed and made more efficient. Focus on protein, starch and fibre from oats, wheat, yellow peas and faba beans.

Current research areas:

- Knowledge about the structure and chemical composition, of both raw materials and generated fractions, and their correlation to functional properties (usability, taste, texture, nutritional content).
- The effect of processes and different technologies on the end product’s quality, as well as how the functionality of ingredients can be controlled using different process steps.
- New process methods for the production of attractive (taste, texture, nutritional) products based on cereals and legumes. Innovative whole grain products are of particular interest.
- Deeper understanding of how different food applications are influenced by starch, protein and fibre ingredients from grains and legumes. Examples of applications include dairy and meat analogues and sports products.
- Upgrading of side streams and production waste for use as food ingredients.

Applications should, where relevant, include a description of scale-up and techno-economic analysis of the process methods used. The sustainability aspect of new processes should also be considered.