

Call text – Food and packaging 2021

The aim of this research area is to contribute to knowledge that can be used in the development of food from grain or other plant-based raw materials along with packaging solutions. The scope of the research area extends all the way from raw materials to consumption. The foundation supports research that embrace sustainability, innovation and profitability, when possible. For the call autumn 2021 we are particularly interested in the specific areas listed below. If you have a project idea, we are open for a dialogue before you submit your application.



Health benefits of grains and legumes

Knowledge-generating projects that promote the development of tasty, healthy and innovative foods based on grains or legumes.

Current focus areas:

- Precision health, the role of foods, adapted to individuals or groups of individuals, to optimize health effects.
- The consumption of grain and/or legume products as part of a healthy diet, including the connection between individual components, such as fibers and whole grains, on metabolic syndrome, blood sugar and insulin regulation, bowel health and cognition.
- Positive and possible negative health effects associated with the bioavailability of proteins from plant based sources.
- Sustainable nutrition, with a strong focus on whole grains, public health and environmental aspects. The differentiation of the nutritional content in plant based food products for the establishment of healthy and environmentally sustainable diets.

Where it is relevant applications should take into consideration how gained knowledge can be used to support future health claims.

The Foundation does not finance research where children take part in the study.



Improved bread quality

Research in improved bread quality encompasses knowledge of raw materials, ingredients and processing to produce bread with good taste, right texture and long shelf life which can reduce food waste.

Current focus areas:

- The distribution and retention of water during baking, storage, freezing and thawing. How can this be controlled to retain taste and texture in the bread?
- The baking process. How do ingredients interact with each other during different processing stages, from dough formation, proofing and baking until the bread is consumed (fresh and/or during and after freezing). The functionality and properties of flour and its components.
- Breads with high contents of whole grain and fiber coupled to a positive effect on taste and texture, using a minimum of additives (improvers). Breads based on wheat, rye or oats are of interest.
- Freeze thaw stability. How thawed bread can maintain the same qualities as freshly baked bread.
- Improved storage quality. “Clean label” solutions, for both frozen and fresh bread/bakery products. Process technical solutions for improved crispiness.
- The influence of sourdough and yeast cultures on the baking process, the properties of the bread and the taste profile, together with health aspects, such as the degradation of FODMAP.
- Reducing salt, sugar or fats while retaining taste.



Fractioning of grains and legumes for new ingredients and foods

There is a big demand for different plant-based ingredients for innovative new products. To meet this need, current technology for fractioning and further processing of grains and legumes needs to be further developed and improved.

Current focus areas:

- Knowledge about raw materials and both chemical composition and structure of the generated fractions, and how these are connected to the functional properties as well as how different processing methods affect them.
- Deeper understanding of the role of starch, protein and fiber in food applications.
- Innovative processing methods for the production of attractive (taste and texture) products based on grains and legumes.
- Upscaling of processes involved in the fractioning and extraction of wheat bran, oats and peas.



Sustainable packaging

Research that can increase knowledge for making optimal choices of sustainable and/or bio-based packaging solutions, first and foremost for grain-based food. Factors such as functionality, raw material origins, mono or laminated materials, biodegradability or compostability, recycling potential, as well as micro plastics formation should be considered.

Current focus areas:

- Optimization of packaging solutions to reduce food waste in the entire food chain.
- Recyclable and environmentally sustainable packaging.
- Packaging solutions that maintain taste, texture and crispiness of the product.
- Packaging solutions for future food retailing.