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## How can rye fibre be used? Process for manufacturing a rye product with an increased proportion of fibre

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A wealth of tests demonstrates that the consumption of fibre-rich cereal products can prevent a variety of metabolic diseases.

The constituents of cereals have a preventative effect against conditions such as type 2 diabetes, coronary heart disease and colorectal cancer and they boost various healing processes.

Of all the variety of cereals, rye has the highest proportion of fibre. The fibre content in the grain is distributed variably, but is mainly found in the aleuronic layer.

However the potential of health-promoting constituents found in rye grain is not optimally exploited in Poland. Almost all rye is processed into low-fibre white flour (flour yield 60 – 65%). The proportion of wholemeal is close to zero as is the proportion of wholemeal bread and wholemeal flakes.

One trial examined the possibility of producing a rye meal product with higher fibre content. This was performed under laboratory conditions. Furthermore, during the various production phases, an analysis of the quality and quantity-related changes to the fibre components - AX, FRU and B-GLU was carried out. As part of the trial the wholemeal rye flour was repeatedly refined and graded with the aid of a ball and cylinder mill to enrich the low-fibre starchy layer on the inside of the corn with the constituents of the surrounding aleuronic layer.

In every 100 g of dry matter in the end product there was 47.2 g fibre. The composition of the constituents has a positive nutritional effect among humans. The quantitative ratio of minerals to starch and the ratio of fibre to starch have both increased ten-fold.

The applications for this milled product include supplementing rye and/or wheat baked products. It could also be conceivably used as a supplement in milk and dairy products (e.g. kefir, yoghurt) as well as soups etc.

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