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Food Legumes: Physicochemical and Nutritional Properties

Guest Editor:

Prof. Dr. Ryszard Amarowicz
Institute of Animal Reproduction
and Food Research, Polish
Academy of Sciences, Olsztyn,
Poland

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Message from the Guest Editor

Legumes are an important source of nutrients (proteins, carbohydrates, water soluble vitamins, minerals). They play important role in chronic disease prevention. The beneficial effects of legumes are attributed to the presence of legume seeds starch with a low glycemic index, dietary fiber (soluble and insoluble), several classes of phenolic compounds, and oligosaccharides. Phenolic compounds of legumes possess strong antioxidant and antimicrobial activities. Oligosaccharides, acting as prebiotics, modify intestinal microbiota.

Some of the bioactive compounds present in legumes (e.g., trypsin inhibitors, condensed tannins, lectins, phytates) also exhibit antinutritional effects—decreased protein digestibility and availability of mineral compounds. Technological processes (non-thermal and thermal processing, hydrolysis, fractionation) can modify the functional properties (emulsifying activity and stability, foaming properties, water holding capacity) of legumes and legume products, as well as modify the activity of bioactive compounds present in legume seeds.

Prof. Ryszard Amarowicz
Guest Editor



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Special Issue



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Editor-in-Chief

Prof. Dr. Arun K. Bhunia

1. Department of Food Science,
Purdue University, West
Lafayette, IN 47907, USA

2. Department of Comparative
Pathobiology, Purdue University,
West Lafayette, IN 47907, USA

Message from the Editor-in-Chief

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Foods Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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