


SOUTH AFRICAN ASSOCIATION FOR
FOOD SCIENCE & TECHNOLOGY
**CONGRESS
2021**

Welcome to SAAFoST's
24th Biennial International
Virtual Congress

20 - 22 September 2021



Review: Nutraceutical Properties of Soybean Grains and their Potential Health Benefit

Mapula Molele¹, Shonisani Eugenia Ramashia², Mpho Edward Mashau²

¹University of Venda, Thohoyandou, South Africa. ²University, Thohoyandou, South Africa

Abstract

Soybean (SB) (*Glycine max* (L) Merrill) belongs to the family *Leguminosae*. The grains are green when unripe and mature have from light-yellow to brown colour. SB is regarded as the best crop for human nutrition as it has quality protein and other nutritional properties when compared to other legumes. SB grains are considered potent nutraceutical as they provide beneficial effects on human health as well as helping in the prevention or treatment of certain diseases such as cardiovascular diseases, diabetes, digestive tract diseases, overweight, obesity, cancer, etc. SB can be processed and utilised into various products worldwide from fermented, baked, supplementary and functional products. Owing to its high amount of calcium, SB grains can be further processed and used in complementary foods to help build the bones and teeth. The grains also contain anti-nutritional compounds which may be toxic when consumed raw, but when processed and treated may play a positive role on human health. Processing techniques of SB includes soaking, steaming, fermentation, germination, roasting and extrusion. The main aim of this chapter is to describe the nutraceutical properties of soybean seeds and their impact on human health.

Keywords: soybean, nutritional properties, processing techniques, nutraceutical properties, human health.

Biography: Shonisani E. Ramshia

Dr. Shonisani E. Ramashia is the Head of the Department of Food Science and Technology. She joined the University as a contract Senior Laboratory Technician (2013-2014). She was then employed as Teaching Assistant (2015-2016). She teaches Food Microbiology, Food Commodity Processing, Product Development and Sensory Evaluation of Foods (coordinating). I am currently supervising two master's students and one PhD student. One master student completed and graduating in September 2019 graduation. I also supervised more than 20 BSc in Food Science and Technology final year (4th) research student. I worked in the Food Industry from 2008 to 2013 where I held different positions such as Quality Controller, Senior Food Microbiologist and Departmental Food Technologist. I have 10 published journal that are approved by DHET, one book chapter and two book chapters accepted. I am a project leader for WRC and ARC funded project.