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## Enhancing Food Quality and Safety in a Rural Habitat — A Holistic Perspective

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### Abstract

Food Quality and chemical safety is a growing area of global concern because of its direct bearing on human health. Hence, world over to tackle food safety issues alternative agriculture systems like organic farming, biodynamic agriculture, permaculture, pesticide free farming etc are being developed and propagated. However, due to several socio-cultural and technical reasons, diffusion and acceptance of these technology packages among the farming community in developing countries like India has been very slow. Hence, it becomes urgent and important in the transient phase that some pragmatic solution should be developed.

Food legumes form an important part of the human diet on account of their high nutritive value. Soybean is one of the most commonly consumed legumes worldwide. Present paper discusses the scientific validation of enhancing the nutritive value of soybean through simple, cost effective culinary processes which have been in use in the rural sector. Experimental data reveals that the different treatments affect the nutritional quality of the pulses studied. However, microwave cooking and germination caused smaller losses in nutrients, while ordinary cooking and pressure cooking caused considerable losses. Carbohydrate constituents (reducing sugars and total soluble sugars) showed increase on processing while the starch content showed a decreasing trend which is prominent during pressure cooking. The total protein content showed a significant increase during germination. The mineral content showed considerable variation during the processing treatments. Further R&D work on unlocking the complex food matrix i.e enhancing the bioavailability of nutrients in pesticide contaminated pulses is warranted.

**Keywords:** Bioavailability, nutrients, pesticide, processing