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R-CBSTIMSDS-Consumption of black soybean tofu improved metabolic syndromes of diabetic subjects

Fransiska Rungkat Zakaria, Reno Irwanto and Dede Adawiyah
Bogor Agricultural University, Indonesia

Normal and easy to find food item for diabetics should be available and accessible. Tofu has important role in providing perfect food for the diet of diabetics but in general made of yellow soybean. Black soybean is widely used to produce soysauce in Asian countries. Its use for tofu is still limited inspite of its excellent nutrient, prebiotic and bioactive compound but trace digestible carbohydrate content. In this research, black soybean tofu productions were optimized in the university production laboratory. The tofu product has purple color and were given in form of general simple soup containing 85 grams tofu to 15 diabetic subjects. There were 11 diabetic subjects participating in control group. The participating subjects were patients of a local neighbourhood clinic and all signed the informed consents. The tofu soup were distributed for 30 days daily while observing the subjects acceptance and general condition. Blood collections were done before and after intervention by certified nurses for analysis in the department laboratory. Consumption of black soy tofu resulted in declining of fasting glucose level ($P=0.23$), reduced HbA1c level and increase in plasma antioxidant status ($P=0.19$). SGOT/SGPT tests showed a decrement ($p<0.05$), from $14.27\pm 3.81/21.07\pm 6.73$ (U/L) to $12.73\pm 2.34/18.60\pm 4.29$ (U/L). There were no changes in blood DNA-adduct level. We concluded that consumption of black soybean tofu contribute to improvement in overall health of diabetic subjects and may serve as important preventive food.

Biography

Fransiska Rungkat Zakaria has completed his PhD from University of Lorraine, France. She is a teaching and research staff in the Department of Food Science and Technology, Bogor Agricultural University, Bogor, Indonesia. She has published several papers in reputed journals and has been serving as an Editorial Board Member of a reputed journal.

fransiskarz@gmail.com

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