

3rd International Conference and Exhibition on Food Processing & Technology

July 21-23, 2014 Hampton Inn Tropicana, Las Vegas, USA

Moderate consumption of *Lathyrus sativus* provides homoarginine enhances vascular endothelial function and does not causes neurolathyrism in human

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Lathyrus satavus is a high yielding drought resistant legume widely known as grass pea containing 31% protein, 41% carbohydrate 17% total dietary fiber. It is being cultivated and consumed in India, Nepal, Bangladesh and in many parts of Africa that are prone to recurrent droughts. It is also called lifesaver or insurance crop. Presence of homo arginine (a source of potent vasodilator i.e. nitric oxide) in grass pea can be used to explore its inherent potential to treat cardiovascular disorders associated with vascular endothelial function. Our recent survey in the area where people cultivate and consume grass pea showed 61% of households (HHs) were consuming grass pea up to 25 g/day (containing 1254.5±528.21 mg% ODAP) in the form of gravy alone or in combination with other pulses. Since there were no cases of neurolathyrism were found in the area may be due to Government of India has initiated several food security programs like ICDS preschool, mid-day meal to school children, public distribution system at rice, cereals, pulses, oils to the poor people. All these factors helped in reducing the quantity of grass pea intake thereby decreasing fresh cases of neurolathyrism. This makes *L. sativus* a valuable natural dietary source of homoarginine and hence a prized commodity as a functional food. As a 'functional food' it could have a vasodilator effect, and may prevent prehypertension from progressing to full-blown hypertension, a major risk factor for heart attacks and strokes.

Biography

Arjun L Khandare, Scientist "E" (Deputy Director) and Group Leader at Department of Food and Drug Toxicology Research Centre, National Institute of Nutrition (Indian council of Medical Research). He is also Vice-president of International Society of fluoride research. In this position he plans, develops and executes extramural and intramural research programs in fluoride toxicity evaluation and its mitigation, evaluation of food safety of Natural Food toxins like ODAP (β -N-oxalyl-L- α -diamino propionic acid) in *Lathyrus sativus* in animals and humans. Also evaluate natural food ingredients (homoarginine) efficacy in health and diseases. He has participated in ICMR taskforce projects and Published 25 research articles in national and International Journals. He supervises MSc, PhD and post-doctoral students, trained national and international trainees on natural food contaminants. He has also organized National and International conferences.

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