

Expanding Uses for Pulses in Existing Markets

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When Canadian pulses and community-focused educational institutions get together, the results are delicious and nutritious.

Dr. G. Hemalatha, Head of the Department of Food Science and Nutrition at Tamil Nadu Agricultural University (TNAU) in India received funding from Saskatchewan Pulse Growers to study the potential of adding pulses to locally produced convenience foods.

Changing lifestyles have increased the demand for convenience snacks that are often deep-fried or soaked in sugar syrup. These high calorie, lower nutrition foods are contributing to a rise in obesity, diabetes, heart disease, and other diet-related conditions. Pulses are a traditional staple in India, serving as the primary protein for 40 per cent of the population who are vegetarian. By this logic, adding pulses to convenience foods seems a natural progression, and a preliminary survey revealed an opportunity - there were very few high-protein, pulse-based, healthy food products on the market.

Dr. Hemalatha says, "The goal of this project is to develop new standards for innovative pulse-based health foods, and to use those standards to create both ready to use (convenience food mixes) or ready to eat (snack foods) products with higher nutritional values than most of the currently available convenience foods."

The researchers began with an extensive test of the nutritional and functional benefits of several pulse flours, including lentils, faba beans, peas, and chickpeas. They tested multiple pre-treatments, cooking processes, and changes in nutrition and antioxidant activity in pulses, as well as consumer approval at each process.

Several products were developed and tested. The most promising include:

- Dhokla, a fermented steam cake made of chickpeas, green gram, and lentils
- Kandhavi, seasoned rolls made of chickpeas and lentils
- Roasted faba bean and lentil snack foods
- Tofu-like product made from faba beans
- High protein cakes and biscuits from millet and lentils

- Low glycemic bread from millet and lentils
- Noodles from lentils

Consumers from local markets and food industrialists at the Confederation of Indian Industries tested the products, to positive reviews.

"Once they are accepted here in Tamil Nadu, there is potential for them to expand to other areas of the country," says Dr. Hemalatha.

This research project has increased the knowledge of the health benefits, processing options, and product development opportunities for Canadian pulses, while also offering to nutritious food products in Tamil Nadu.



Pulses show promise when added into convenience foods in India.

