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Could lupins be the new global 'super food'? - Western Cover

Lupins may finally be moving out from the shadow of more mainstream, and profitable, cereal crops as food technologists start serving up the first commercial lupin-based foods.

[Photo (left) by Brad Collis: Associate Professor Vijay Jayasena with a tray of freshly baked biscuits containing 20 per cent lupin flour.]

A range of lupin-based biscuits, pasta and 'crisps' has been developed and is in the process of being commercialised. Because of their high nutritional value the products are destined not only for the snackfood shelves, but also the higher-value health foods market.

Researchers at the School of Public Health at Curtin University of Technology have developed the range of lupin-based foods to suit western and Asian tastes. The research has been funded through the Centre for Food and Genomic Medicine and the Grain Foods CRC (which is partly funded by the GRDC).

Project leader Associate Professor Vijay Jayasena says lupin-based foods have the potential to become 'super foods'. "They are high protein, high fibre, low fat, low GI and low carbohydrate foods that contain bioactive compounds, taste good and are low cost."

So far the Perth-based team, working with food manufacturers, has developed lupin-based tempeh (a popular fermented soybean product in South Asian countries), pasta, instant noodles, biscuits and crisps.

To make the products appealing they have been given the guise of snack and convenience foods. The crisps, for example, have been an instant hit among test markets – crunchy, morish ... but with five times more protein and 10 times more dietary fibre than potato chips. Biscuits made from 80 per cent wheat flour and 20 per cent lupin flour contain 80 per cent more protein than wheat-only biscuits, and 150 per cent more dietary fibre – but far less carbohydrate.

Similarly, pasta and noodles containing 20 per cent lupin flour have double the amount of protein and three times more dietary fibre.

At the recent GRDC-sponsored International Lupin Conference in Perth, Dr Mark Sweetingham, the manager of legumes and grain food research with the Department of Agriculture and Food, Western Australia (DAFWA), said there was growing interest in lupins because of the functional food and nutraceutical opportunities that may flow from their unique protein and fibre profiles.

Sofia Sipsas, also from DAFWA, told the conference lupins could be sold to the food market as flour (kernel flour), bean sprouts, hulls, kernels, protein concentrates, protein isolates and kernel fibre, with end-uses as diverse as protein for milk and ice-cream, and extracts used in cosmetics.

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