Saskatchewan Lentils Build Better Burgers

by Delaney Seiferling

The Canadian pulse industry has adopted a market development strategy of 25 by 2025, which aims to shift 25% of Canadian pulse production to new use markets by 2025. A key part of this strategy is outreach work with food manufacturers and positioning pulses as ingredients to reformulate common food products. Thanks to strong growth in the plant-based foods trend, lentils used in plant-animal protein blends can play a part in increasing demand for lentils in North America.

A 2018 study showed that approximately one third of Americans self-identify as flexitarians, a newer term that describes an approach to eating that is quickly growing in popularity. Being flexitarian means that consumers favour plant-based meals but will also eat meat and fish.

Given the rising prominence of this segment of food consumers, the Canadian pulse industry, led by Pulse Canada and supported by Saskatchewan Pulse Growers, came together to fund research looking at exactly how Canadian pulses can help meet demand by reformulating common meat products with lentils.

The study examined the specific benefits of substituting one third of a traditional 100% U.S. beef burger patty with lentils, in terms of the environmental footprint, cost, and nutrition, and the results were favourable.

The carbon, water, and land-use footprints were reduced by approximately 33%, while the production cost for the burger was reduced about 26%. Furthermore, the addition of lentils improved the nutritional content of the burger significantly, adding three grams of fibre and reducing calories by 12%, saturated and total fats by 32%, and cholesterol by 32% (per 4 oz serving).

This type of concrete data is extremely important in communicating the value proposition of lentils in blended products to the food industry, says SPG's Director of Marketing and Communications Amber Johnson.

"We have long been promoting lentils as sustainable, healthy, and affordable but it is important to have the data and metrics to quantify those attributes when talking to companies potentially look at reformulating products," she says.

Another benefit of this study is that it uses data for lentils specifically grown in Saskatchewan, which showcases the appeal and value of formulating with Saskatchewan-grown lentils.

"The data we are sourcing will take into account the beneficial practices employed by Canadian pulse producers, such as no-till, providing a unique advantage for Canadian pulse production," says Denis Tremorin, Director, Sustainability with Pulse Canada.

"This study highlights the on-farm efficiencies of lentils grown specifically in our province, linking the benefits of reformulating to lentils grown right here at home," says Johnson. "This study will help to tell the story of why food companies should be creating products with lentils, diversifying the demand opportunities for Saskatchewan growers into a market like the United States."

Marketing to the flexitarian consumer also capitalizes on a much wider audience for lentils as food ingredients, Johnson says. "Blended products, combining plant and animal proteins, appeal to self-proclaimed meat eaters and attract a far wider segment of consumers than would a vegan or vegetarian product."

"In order to keep our growers competitive it is important to become less reliant on main export markets and diversify into new and emerging markets," Johnson says.

This study is only the beginning of this type of work, says Tremorin. Next steps will include similar studies with other food products, such as corn-based snack foods, rice noodles, pet food, and animal feed, reformulated with pulse ingredients. The overall goal is to develop a portfolio of information demonstrating the specific benefits of including Canadian-grown pulse ingredients in a variety of common food products.

Figure 1. A recent study showed that when substituting 1/3 of a traditional beef burger with lentils, there were significant environmental and nutritional benefits.