LENTILS:
JUST THE FACTS

Incorporating lentils in food products can improve their nutritional profile and sustainability impact, providing opportunities for marketing and claims related to these benefits. The following evidence-based, factual statements are designed to help communicate the value of lentils effectively to consumers and stakeholders.

NUTRITION AND HEALTH

Lentils are a high protein, low fat, complex carbohydrate-containing food with many important micronutrients. Their unique composition makes lentils a valuable food that can address a wide range of nutritional needs and offer a multitude of nutrition benefits. Lentils, along with other pulses, are included in most dietary guidelines around the world. Depending on the country, lentils may be a recommended choice as a meat alternative, as a protein-rich food, a vegetable or a carbohydrate option[1].

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PROTEIN

- Lentils are naturally high in protein, containing up to twice the amount of protein compared to cereal grains like rice, oat and wheat[1].

- Lentils have higher amounts of essential amino acids such as lysine and arginine, that are naturally low in other plant protein sources like cereal grains (e.g. rice) or nuts (e.g. almond)[2]. Adding lentils to these plant proteins can improve the overall protein quality of the product.

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- Recent studies have shown that as North Americans rely more on plant protein in their diets, they typically eat more cereal-based foods (e.g. bread, crackers) and subsequently, their diets are generally lower in protein and essential amino acids. Consuming more complementary plant protein sources like lentils can increase protein intake and provide higher amounts of essential amino acids that are low in cereal-based foods, improving the overall quality of protein in plant-based diets[3,4,5]..

FIBRE AND COMPLEX CARBOHYDRATES

- Lentils are considerably higher in fibre than whole-grain cereals like oats, rice and barley. For example, lentils contain 2 to 5 times more fibre than quinoa, barley and brown rice[1].

- At over 9 g of fibre per 100 g serving cooked, lentils substantially enhance dietary fibre levels of diets. This is particularly important in North America with most individuals consuming less than half of the recommended 25-35 g per day[1,6,7].

- Lentils are rich in two types of fibre: insoluble fibre, which supports healthy digestion, and soluble fibre, which can help lower cholesterol and maintain steady blood sugar levels after meals[8].

- Lentils also contain a range of prebiotic carbohydrates, such as oligosaccharides, sugar alcohols, and resistant starch which are fermented by beneficial bacteria in the colon and can impart health benefits to the consumer[9].

- Lentils have a low glycemic index, meaning they have less of an impact on blood sugar than other common carbohydrate sources like oatmeal, bread, rice or potatoes. Minimizing spikes in blood sugar and insulin levels is particularly important for managing diabetes[10].

VITAMINS AND MINERALS

- Lentils are a good source of important vitamins and minerals that play key roles in maintaining good health. Lentils contain more iron, phosphorous, potassium. calcium, folate and zinc than whole-grain barley, corn, rice and quinoa.[2]

POLYPHENOLIC COMPOUNDS

- Lentils, compared with other legumes, are rich in bioactive phenolic compounds. Lentils contain as many as 35 different phenolic compounds, the most common being phenolic acids, flavonols, and anthocyanins. These compounds can play an important role in disease prevention due to their antioxidant activity, and are reported to have antidiabetic, cardioprotective and anticancer activities[11]

SUSTAINABILITY

- Thanks to the modern agricultural practices of Canadian farmers, lentils grown in Canada can be considered a carbon-negative crop.[12]

- Lentils form special relationships with microbes in the soil which allow them to use nitrogen from the air to grow, instead of relying mostly on fertilizer like many crops. This process, known as “symbiotic nitrogen fixation”, greatly reduces their environmental footprint.

- In 2021, the 4.3 million acres of lentils grown in Canada reduced the equivalent of 1.7 million tonnes of carbon emissions*. That's like taking 370,000 cars off the road for an entire year.[13]

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  **Greenhouse gas emissions expressed as carbon dioxide equivalents*

- Lentils are water-efficient, typically grown without irrigation, and well adapted to grow under low moisture conditions. They can grow using less water than many other crops and access their water from a shallow depth in the soil, leaving more water in place for the following crop.

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- The environmental benefits of lentils carry on past the time they are grown. Growing lentils can improve the growth of the crop planted the next year and reduce the carbon footprint of that crop too.[14]

OTHER BENEFITS

- Lentils can be marketed as non-GMO, making them an attractive ingredient for consumers looking for this option.
- Lentils are a gluten-free food.
- Lentils are not considered a major allergen in North America or Europe.

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QUESTIONS?

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