

PUMPED on Pulses

Spilling the beans on a global opportunity



Dry edible seeds of pod plants in the legume family

Soybeans are not a true pulse, but a legume grown by many Alberta pulse farmers

WHAT ARE THEY?



Alberta grows the main **5** of the world's **11** types of pulses

- Dry peas: green and yellow
- Dry bean: black, Great Northern, pinto, small red, yellow
- Lentils: whole red, split red, green
- Chickpeas: Kabuli
- Faba bean

Unique grain crops that react with soil bacteria to convert nitrogen from the air into a form of the nutrient that plants can use



Alberta grows more than **2.4 million** acres

of pulses (13 per cent of its cropped acres)

In 2016, field peas accounted for **70%** of the value of pulse crops in the province, at **\$405 million**

- Lentils accounted for \$109 million
- Dry beans \$45 million
- Faba beans \$10 million



The Benefits



For consumers



HIGH IN...

- protein
- fibre
- folate
- iron
- potassium

LOW IN... fat and cholesterol-free



Can help manage: obesity, diabetes, cancer, celiac and cardiovascular disease

- **Versatile food** — eat whole, split, ground into flour, or separated into fractions such as protein, fibre and starch

For farmers



Reduce need to buy nitrogen

- Seeding and harvesting can be **earlier and later than most crops**
- Grow by **conventional** or **zero-till methods**, on dry or irrigated land
- Use water efficiently

Improve soil health and fight disease in fields by increasing soil microbial activity

- **Many marketing options:**
 - human consumption
 - animal feed
 - fractionation market (protein, starch and fibre used in food processing)



The Opportunities



The world's population projected to be **9.8 billion** by 2050 by UN report of 2017

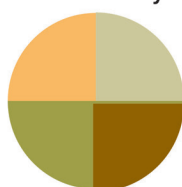


Demand for PROTEIN will



INCREASE ↑
(estimates vary from 25 to 100 per cent more)

An array of new marketing possibilities exists for pulses not yet grown widely in Alberta



- Mung bean: bean sprouts, vermicelli noodles
- Super-size kabuli chickpea
- Lupini (often a pickled snack food in Mediterranean/Latin countries)
- Winter field pea and lentil



Human consumption of **plant-based protein** expected to almost

DOUBLE by 2023



PPAA
PLANT PROTEIN ALLIANCE OF ALBERTA