

Developing Novel Pulse Foods that Deliver Health Dividends to North Americans

Presentation to the AIC
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“If a man takes no thought about what is distant, he will find sorrow near at hand.”

Confucius, *The Confucian Analects*



Canada's pulse industry will be recognized as a world leader, working together to **foster innovation and to capture the inherent health and environmental benefits** associated with pulses, leading to sustainable economic growth and profitability.

Pulse Innovation *Project*

- ✓ North American food market
 - o Size, affluence, proximity
 - o Limited awareness of pulses and their attributes
 - o Low per capita consumption with upside potential
 - o Rising demand for nutritional, functional foods

Global Expansion: of Waists!

Pulse Innovation



Good Food For Life

Pulses



good
food



good
for you



good
for our
future



A lot of little green things can add up and make a big difference.



PEAS | BEANS | CHICKPEAS | LENTILS

Nutritious Healthy Foods

PULSES

Nourishing
Healthy Choice
Nutrient Rich
Endurance Food



PEAS | BEANS | CHICKPEAS | LENTILS

Food Product Innovation

PULSES

High Fibre
Functional Protein
Low Glycemic Index
Resistant Starch
Gluten Free



PEAS | BEANS | CHICKPEAS | LENTILS

Real Natural Food

PULSES

Great Taste
Environment Friendly
Versatile
Quality Product





Heinz

ESTD 1869 ESTD

BAKED
BEANZ

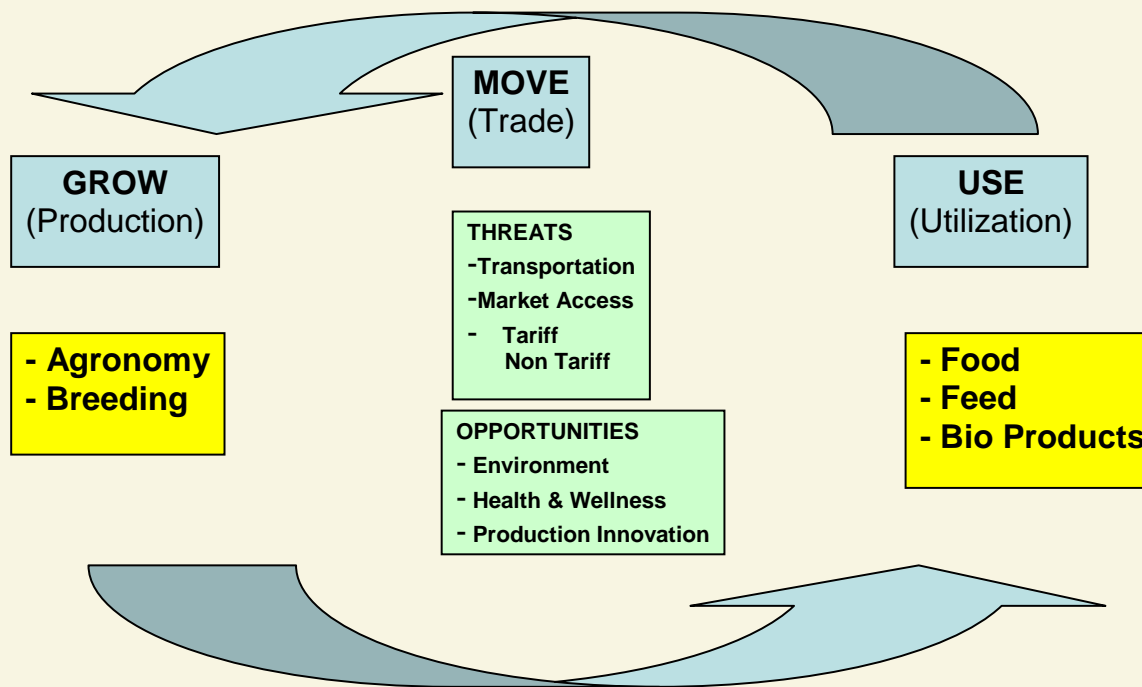
in tomato sauce

57

VARIETIES

The Plan

Pulse Innovation



PIP Participation

Pulse Innovation

Food Companies



Research Institutions



Health Organizations



Government



Strategic Alliance with **CAPI**
Pulse Canada 

Consumer Interest

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- High Fibre, Protein-rich, Low Fat Products
- Low Glycemic Index Products
- Gluten-Free Products
- Meatless Meals
- Ethnic Foods



High fibre, enhanced protein pasta
Contains Chickpea and lentil flour

Ethnic Convenience Meal-in-One



Gluten Free Baked Goods
Contains Pea starch, protein, fibre



Pulse Canada 

- High Resistant & Slowly Digestible Starch
- Prebiotic components
 - e.g. Oligosaccharides
- Proteins
 - e.g. Bioactive peptides, Enzyme inhibitors
- Phytonutrients
 - e.g. Saponins, Lectins

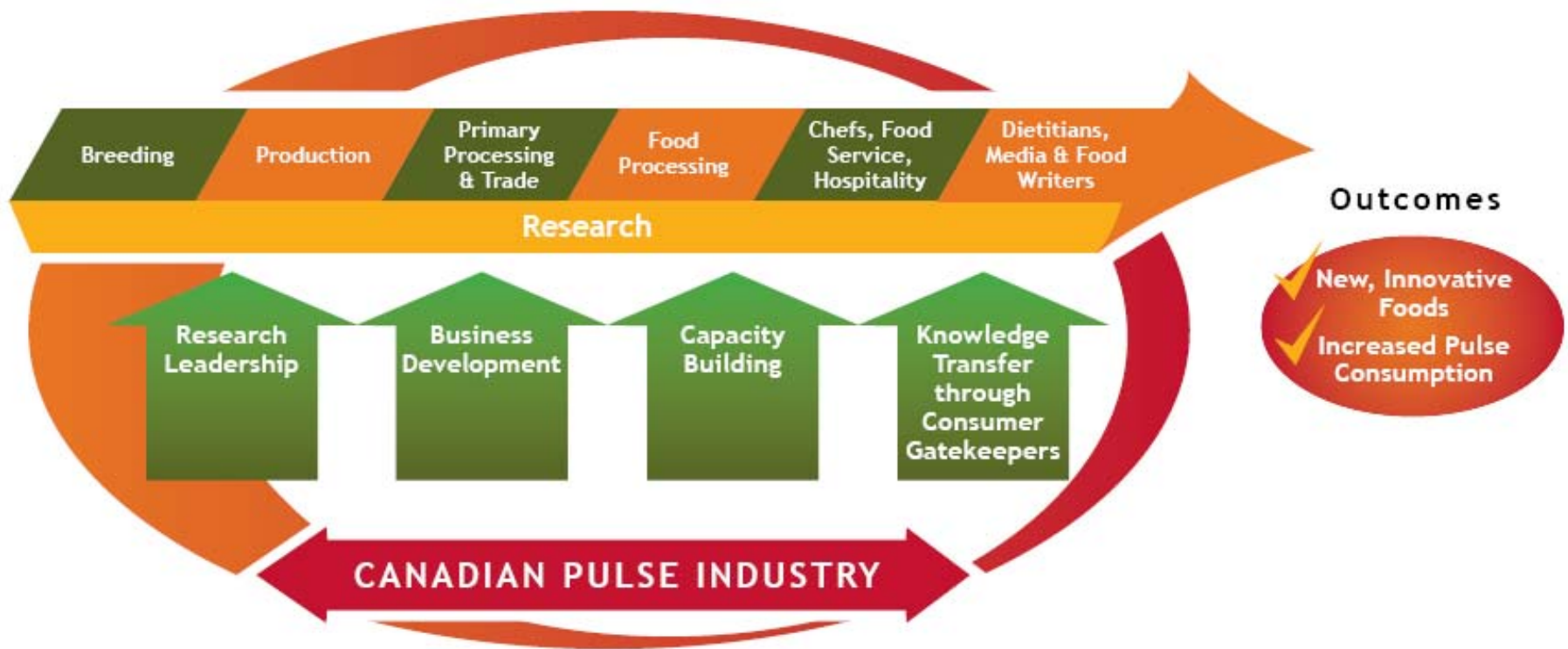


- **Obesity and Metabolic Syndrome**
 - Pulses may help regulate satiety and appetite, reduce blood lipids and improve glucose control
- **Diabetes**
 - Pulses may reduce risk of DM-2 and improve management of DM-2 as a low GI food
- **Cardiovascular Disease**
 - Pulses may lower cholesterol, lipids and reduce risk of CVD
- **Gut Health**
 - Pulses may reduce colon cancer risk, potential prebiotic effects of non-digested compounds

PIP Focus Areas

Pulse Innovation

Provide Value-Chain Leadership



Identifying Research Priorities

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Existing Research on the Nutrition and Health Aspects of Pulses (Obesity, Diabetes, CVD, etc)

Existing Research on Whole Pulses, Pulse Flours and Fractions (Protein, Starch, Fibre, Bioactives)

Evaluate Quality of Evidence According to Established Standards (Health Canada, FDA)

Competitive Analysis Based on Functionality

Identify Research Gaps

Consultations with pulse industry, health organizations, government, funding organizations, food industry

Identify Research Priorities

Health Promotion and Disease Prevention

- Obesity and Metabolic Syndrome
 - Effects on satiety, appetite
- Gut Health and Prebiotics
 - Health benefits of non-digestible components
- Type 2 Diabetes
 - Effects of pulses (not just low GI or high fibre diet) on long term blood glucose control
- CVD
 - Dose-response, effects on recent biomarkers

PIP Clinical Trial Projects

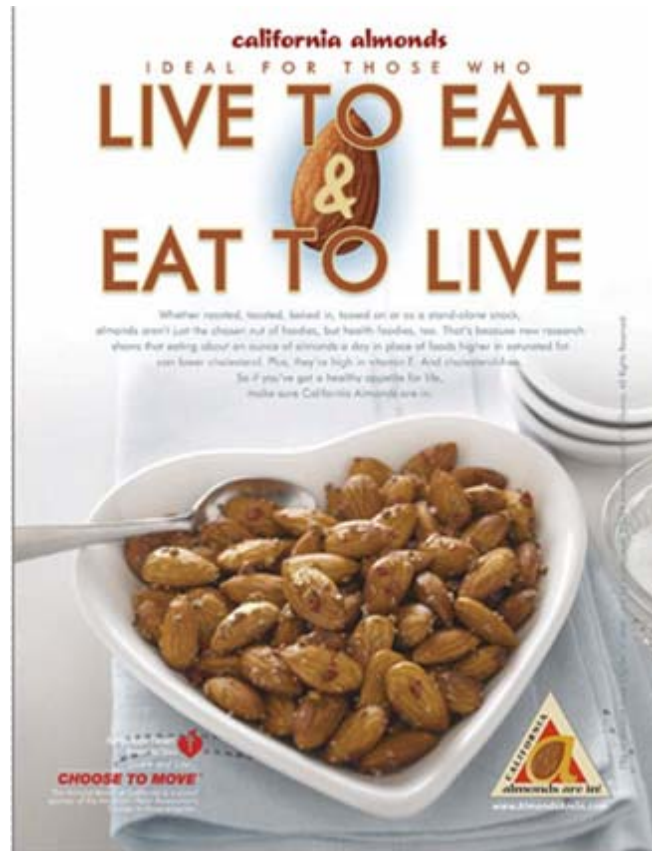
- Proposals evaluated by Scientific Review Committee and Independent Peer Reviewers;
- Seven research projects selected
 - The total funding allocation: \$1,500,000 from PIP (plus \$177,500 industry funds)

Six Projects Selected

Pulse Innovation

- Effects of pulse consumption on
 - Obesity and satiety
 - Appetite regulating hormones
 - Atherosclerosis and endothelial function
 - Energy balance
 - Oxidation
 - Lipid metabolism
 - Gut health
 - Prebiotic effects





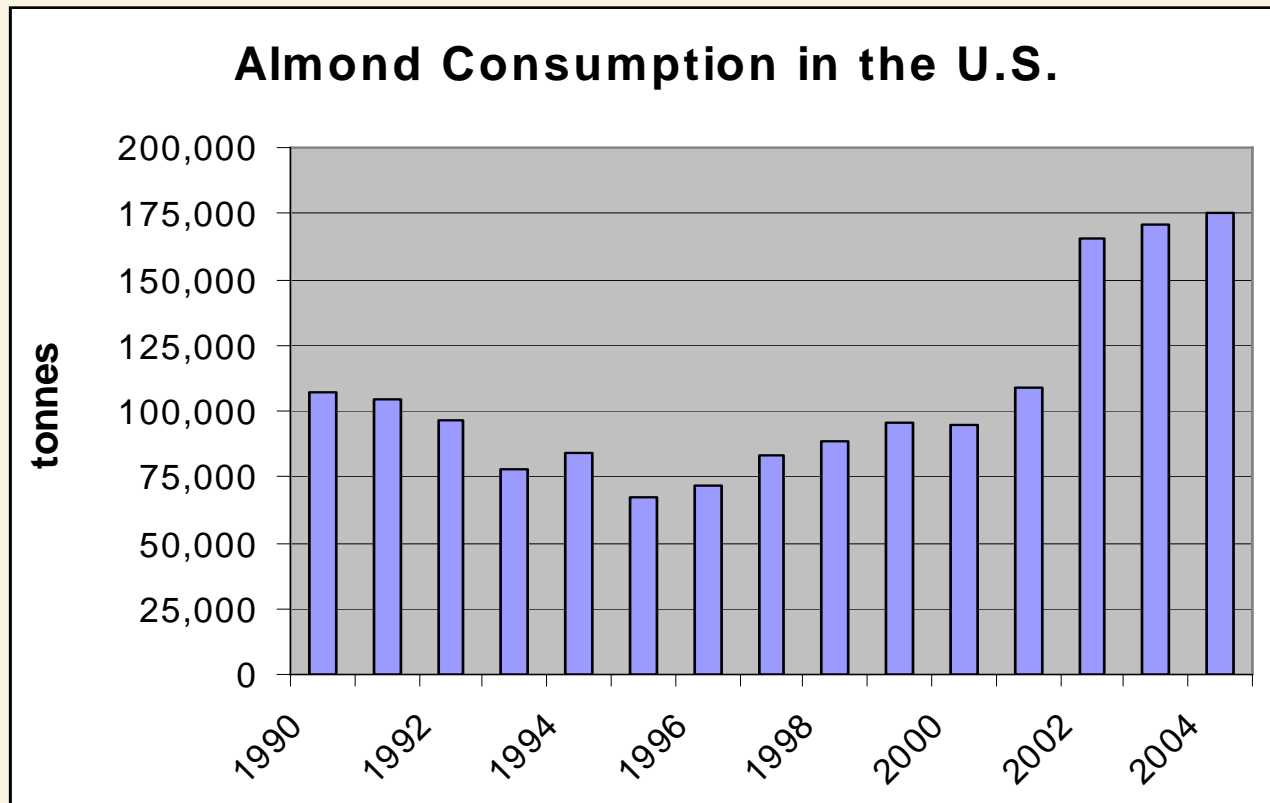
Over the last 10 years, the almond industry has spent \$10 million on nutrition research

- Human Clinical Trial studies published in 2002 and 2003:
 - Dose-dependent effects of almonds on LDL cholesterol
 - High almond diet decreased LDL cholesterol as much as pharmaceuticals
- In July 2003, FDA approved first qualified health claim

Eating 1 1/2 ounces of most nuts, including almonds, may reduce the risk of heart disease when part of a diet low in saturated fat and cholesterol.

Almond Consumption

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Almond consumption almost doubled in one year!

USDA Economic Research
Service

Pulse Canada 



...Potential for labeling and claims

- As part of a healthy diet, pulses can help maintain a healthy body weight.
- As part of a healthy diet, eating 1/2 cup pulses (beans, peas, lentils, chickpeas) every day can lower cholesterol by 7%.

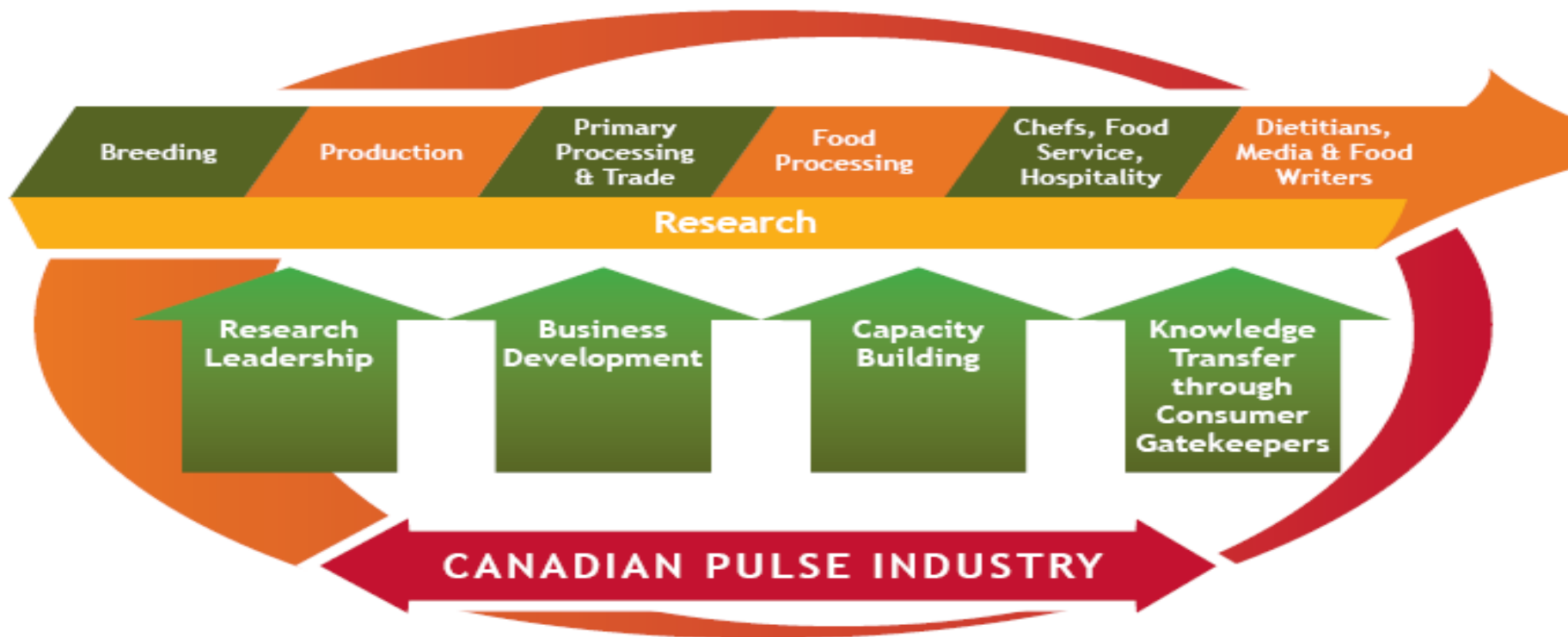
...Potential for Health Care Savings

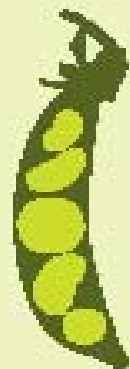
- A 7% drop in cholesterol level can lead to **\$3.2 billion** in health care savings in Canada

...Environmental Savings

PIP Focus Areas

Pulse Innovation





pulse Food Symposium



Gluten-free cookies made with pea starch, pea protein and pea fiber.
High fibre/high protein pasta made with chickpea and lentil flour

Pulse Canada 

Welcome

On-line Registration

Registration by Form

Agenda

About Pulses

Travel and Hotel

Contact Us

A conference sponsored by
Canada's pulse industry

PARTNERS:

Agriculture and Agri-Food
Canada



Bean, Chickpea, Lentil and Pea Symposium Healthy Ingredients for Better Food Products

January 30 & 31, 2008

Save
the date!

Toronto, Ontario
Marriott Bloor Yorkville

Why attend?

Learn about the superior functional and marketing advantages of bean, chickpea, lentil and pea ingredients and how to generate increased value from food products using these healthy, unique and cost competitive ingredients.

See www.pulsecanada.com for more information

The Magic of Beans; and other pulses

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