Trends in Pulse Consumption: Now and on the Horizon

Future of Pulse Production and Consumption
28 November 2016

Michelle Broom
Overview

- Patterns in pulse consumption
- Global trends driving future pulse consumption
- Beyond International Year of Pulses
Patterns in Pulse Consumption
7th Century BC
The earliest evidence of humans growing lentils, chickpeas, broad/white beans and peas dates back to this time. This evidence comes from the Fertile Crescent, a region in the Middle East also known as the Cradle of Civilization, as it was here to some of the earliest human civilizations.

6th Century BC
Wild chickpeas were grown in France.

4th Century BC
Peas were grown in the Nile Delta area of Egypt.

3rd Century BC
It is believed this is when the Punic Empire brought broad/white beans to Britain. They soon discovered that these crops grew well in Britain's cold, mild climate.

1st Century AD
By this time in history, black-eyed beans/yellow peas had spread from their native land in central Africa to the Mediterranean, Asia, and India.

11th Century AD
By the time of the Crusades, peas were growing as a staple food in the Mediterranean region.

12th Century AD
Charles the Good, count of Flanders, mentioned peas in a literary document as a staple food for the French.

15th Century AD
Phascolus beans, a form of pulse which had been grown in Mexico for thousands of years, were brought to Europe by Spanish explorers returning home after discovering America. They became Phascolus beans spread throughout the world.

17th Century AD
Green peas were introduced to the court of Louis XIV of France.

17th & 18th Century AD
For farmers in Canada and the United States, peas were a staple or their canoe adventures by peas soup made with whole yellow peas.

18th Century AD
Ground and roasted chickpeas were eaten by a German writer as a substitute for coffee in Europe.
### Top pulse-consuming countries (shares in total calories and protein intake)

<table>
<thead>
<tr>
<th>Area</th>
<th>Grand total (cal/cap/day)</th>
<th>Pulses (cal/cap/day)</th>
<th>% Share pulses</th>
<th>Total protein supply quantity (g/capita/day)</th>
<th>Pulse protein supply quantity (g/capita/day)</th>
<th>% Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>2,868</td>
<td>64</td>
<td>2.2</td>
<td>80.49</td>
<td>4.05</td>
<td>5.0</td>
</tr>
<tr>
<td>Rwanda</td>
<td>2,148</td>
<td>276</td>
<td>12.8</td>
<td>52.40</td>
<td>17.85</td>
<td>34.1</td>
</tr>
<tr>
<td>Niger</td>
<td>2,546</td>
<td>327</td>
<td>12.8</td>
<td>80.94</td>
<td>21.70</td>
<td>26.8</td>
</tr>
<tr>
<td>Haiti</td>
<td>2,097</td>
<td>181</td>
<td>8.6</td>
<td>47.41</td>
<td>11.44</td>
<td>24.1</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>2,103</td>
<td>175</td>
<td>8.3</td>
<td>61.84</td>
<td>12.20</td>
<td>19.7</td>
</tr>
<tr>
<td>Tanzania</td>
<td>2,200</td>
<td>178</td>
<td>8.1</td>
<td>56.99</td>
<td>11.17</td>
<td>19.6</td>
</tr>
<tr>
<td>Malawi</td>
<td>2,334</td>
<td>174</td>
<td>7.5</td>
<td>63.63</td>
<td>10.42</td>
<td>16.4</td>
</tr>
<tr>
<td>Cameroon</td>
<td>2,586</td>
<td>192</td>
<td>7.4</td>
<td>69.29</td>
<td>12.69</td>
<td>18.3</td>
</tr>
<tr>
<td>Kenya</td>
<td>2,170</td>
<td>160</td>
<td>7.4</td>
<td>63.27</td>
<td>10.33</td>
<td>16.3</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>2,564</td>
<td>186</td>
<td>7.3</td>
<td>67.38</td>
<td>12.13</td>
<td>18.0</td>
</tr>
<tr>
<td>UAE</td>
<td>3,215</td>
<td>231</td>
<td>7.2</td>
<td>98.23</td>
<td>14.62</td>
<td>14.9</td>
</tr>
</tbody>
</table>

Source: FAOSTAT
No major changes are foreseen in per capita consumption of pulses, with the world average remaining at around 7 kg/person/year.
### Drivers of Global Consumption

**Table 2: Trends in consumption pattern from 1972-73 to 2009-10, Rural India**

(Percentage share of items in total expenditure)

<table>
<thead>
<tr>
<th>year</th>
<th>Rice</th>
<th>Wheat</th>
<th>Cereal</th>
<th>Pulses &amp; its Product</th>
<th>Milk Product</th>
<th>Edible Oil</th>
<th>Meat, Egg &amp; Fish</th>
</tr>
</thead>
<tbody>
<tr>
<td>1972-73</td>
<td>20.7</td>
<td>9.1</td>
<td>40.6</td>
<td>4.3</td>
<td>7.3</td>
<td>3.5</td>
<td>2.5</td>
</tr>
<tr>
<td>1977-78</td>
<td>18.4</td>
<td>7.7</td>
<td>32.8</td>
<td>3.8</td>
<td>7.7</td>
<td>3.6</td>
<td>2.7</td>
</tr>
<tr>
<td>1983</td>
<td>18.7</td>
<td>7.9</td>
<td>32.3</td>
<td>3.5</td>
<td>7.5</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>1987-88</td>
<td>15.7</td>
<td>7.2</td>
<td>26.1</td>
<td>4</td>
<td>8.6</td>
<td>5.6</td>
<td>3.2</td>
</tr>
<tr>
<td>1993-94</td>
<td>15.4</td>
<td>6.5</td>
<td>24.2</td>
<td>3.8</td>
<td>9.5</td>
<td>4.4</td>
<td>3.3</td>
</tr>
<tr>
<td>1999-00</td>
<td>13.62</td>
<td>6.66</td>
<td>22.16</td>
<td>3.8</td>
<td>8.75</td>
<td>3.73</td>
<td>3.31</td>
</tr>
<tr>
<td>2004-05</td>
<td>10.98</td>
<td>5.62</td>
<td>18.01</td>
<td>3.07</td>
<td>8.46</td>
<td>4.6</td>
<td>3.32</td>
</tr>
<tr>
<td>2009-10</td>
<td>8.04</td>
<td>4.77</td>
<td>13.71</td>
<td>3.19</td>
<td>7.64</td>
<td>3.69</td>
<td>4.74</td>
</tr>
</tbody>
</table>
Pulse Intakes Developed Countries

**Canada**
- 13% of adults: 86-113g/d

**USA**
- 7.9% of adults
- ¾ consumer eat > ½ cup/day

**Greece**
- 63g/day (≥ 70 years)

The Crystal Ball: Global trends driving future pulse consumption
Global Trends

1. More from less

2. Planetary pushback

3. Silk Highway

4. Forever Young
Global Trends
‘Nourishing more people while nurturing the planet will be a monumental challenge, but it can be achieved by transforming food and agriculture systems, shifting to more sustainable and diversified consumption and production, improving governance and securing the political will to act.’

Food and Agriculture Organisation of the United Nations 2016
Global Trends

Decade of Action on Nutrition

2016-2025
‘Pulses can play an important role supporting multiple objectives of the 2030 Agenda for Sustainable Development, particularly the Sustainable Development Goal targets addressing hunger and malnutrition, the productivity and incomes of smallholders, and the sustainably of agricultural practices.’

Food and Agriculture Organisation of the United Nations 2016
Drivers of Change in Developing Countries

- Cheaper than animal sources of protein
- Effective part of a sustainable cropping system
- Improves dietary diversity in cereal-based diets
- Nutrition and health benefits → added to nutrition programs
- Greater availability of value added products making them more convenient (flours, bread, breakfast cereals)
Drivers of Change in Developing Countries
Developed Countries: Size of the Prize

Recommendation:
Half a cup at least 2 times a week

If we could increase consumption to half a cup two times a week this would increase consumption by

200,000 tonnes per year in Australia

and

3,120,000 tonnes per year in USA
Drivers of change in Developed Countries

- FLEXITARIAN
- Plant-based Protein
- The Blue Zones Solution
- Meet Pulses: The Sustainable Superfoods
- Gluten Free
Pulses – what are they?

**Maintain a Healthy Weight**

Pulses are high in protein, virtually fat-free, and have a low Glycemic Index.

**Protect Against Diseases**

Pulses help protect against type 2 diabetes, high cholesterol and certain cancers.

**Enjoy a Delicious, Nutritious Diet**

Pulses are affordable, full of fiber and rich in iron, potassium, magnesium, zinc and B vitamins.

**Help the Environment**

Pulse crops are incredibly water-efficient, and they help keep soils fertile and healthy.

2016 is the International Year of Pulses

Eat More Peas, Beans, Chickpeas and Lentils for People and the Planet!

www.pulses.org

#LovePulses

@LovePulses
Beyond 2016 International Year of Pulses
Strategies to Increase Consumption

**Research:** increased research into the nutrition and health benefits of pulses/legumes to support communications

**Government:** greater emphasis on pulses, including a quantified recommendation

**Food Manufacturers:** increased product innovation to incorporate pulse ingredients

**Public Health Bodies:** ongoing communication of the nutrition and health benefits of eating pulses

**Consumers:** incorporation of pulses or pulse-based ingredients into weekly meals more often.
IYP: Progress so Far...

• Global pulse brand launched

• **10-year pulse research strategy** developed

• Health and nutrition research database established

• **30 countries** have been engaged as advocates and investors in IYP targets

• **500 million impressions** on social media and **3.7 million engagements** (people viewing, liking, sharing, commenting, retweeting etc)
Beyond 2016 IYP

Global IYP Targets

1. Increase pulse production by 10% by 2020 (2015 baseline)

2. Increase pulse consumption by 10% by 2020 (2015 baseline)

3. Improve market access to facilitate local, national and international trade

4. Engage 30 countries as advocates and investors in targets of the IYP

5. Engage 50 private partners as advocates and investors in the IYP.
Thank You

Michelle Broom
General Manager
m.broom@glnc.org.au