



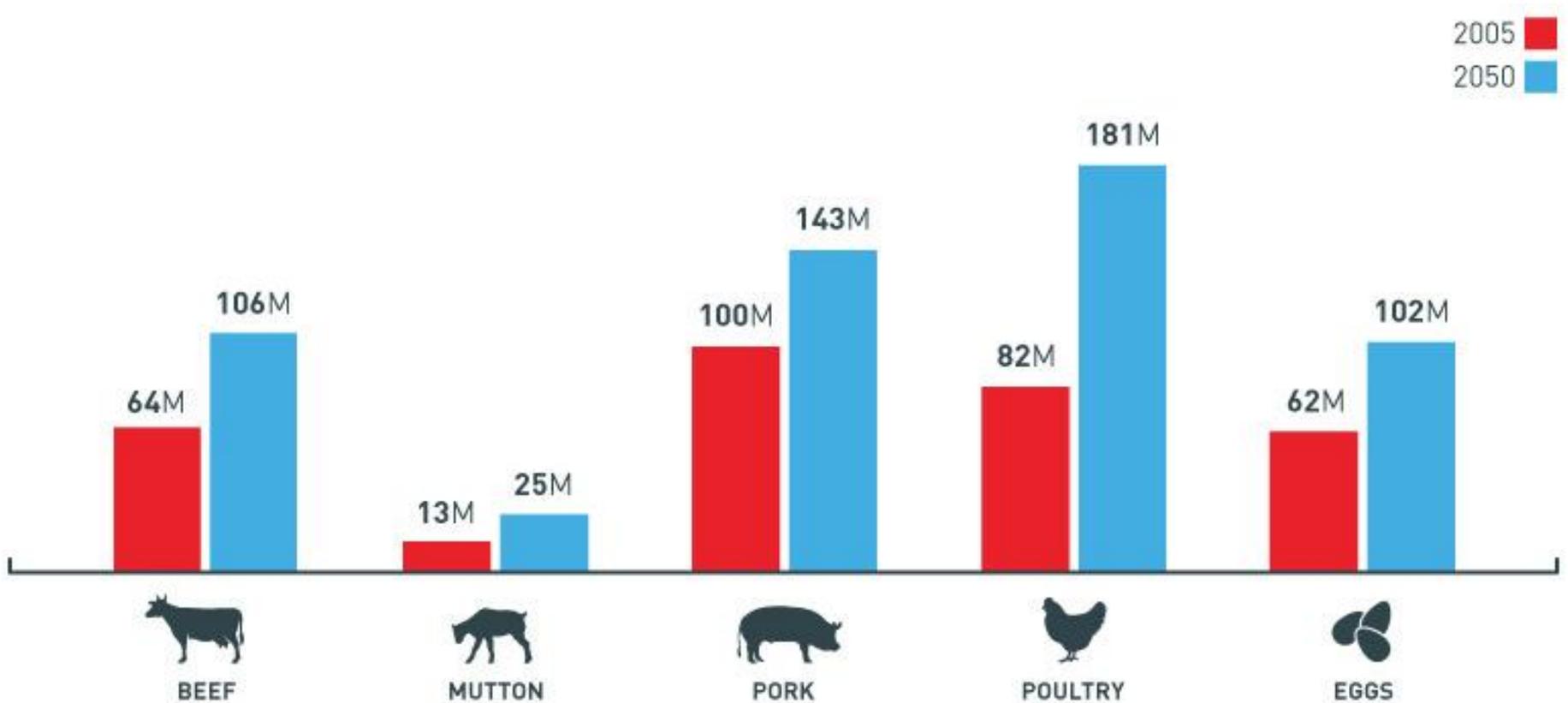
Legumes and novel legume products

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Global demand for animal based products 2005 vs 2050



Pulses have several health attributes

Table 2: Dietary attributes of pulses, effect on health and role in management of lifestyle diseases*

Dietary attribute of pulses	Effects on body metabolism	Health Benefits
Fibre Protein	<ul style="list-style-type: none">• Satiation	<ul style="list-style-type: none">• Weight management
Soluble fibre, Resistant Starch	<ul style="list-style-type: none">• Assists in lowering cholesterol, triglycerides	<ul style="list-style-type: none">• Management of Cardiovascular disease (CVD)
Soluble fibre, Resistant starch, Slowly Digestible Starch	<ul style="list-style-type: none">• Slows glucose absorption	<ul style="list-style-type: none">• Diabetes and weight management
Insoluble fibre	<ul style="list-style-type: none">• Adds bulk to stools,• increases colonic transit, promotes growth of probiotic	<ul style="list-style-type: none">• Weight management
Plant Protein	<ul style="list-style-type: none">• Diet lower in saturated fat	<ul style="list-style-type: none">• Management of CVD
Low Fat Nutrient Dense	<ul style="list-style-type: none">• Diet lower in fat• More nutrients per calorie	<ul style="list-style-type: none">• Weight management,• Disease prevention

*Source: Pulse Canada, 2012a

As the protein market evolves, the interest in plant protein grows. The global plant protein market is projected to reach a value of more than \$10 billion by 2020.²

\$10 billion

76%

76% of protein users say that protein is important to maintain a healthy diet.¹

What's driving the growth of the plant protein market?



Health & Wellness



The self-accountable consumer is seeking plant protein to meet their nutrition and wellness need.

75% of protein users perceive pea protein as nutritious.¹



Rise in Allergies



Over half of protein users report **dairy free** as the most important nutritional factor when purchasing protein products.¹



Ethics & Sustainability

62% of protein users cite sustainability as an important factor when purchasing a protein product.¹



Food Safety



Over half of protein users want **natural ingredients** in their protein product, reflecting growing consumer demand for recognizable and simpler ingredients.¹

¹Kerry Internal Analysis (n=1800)
²Mordor Intelligence 2016

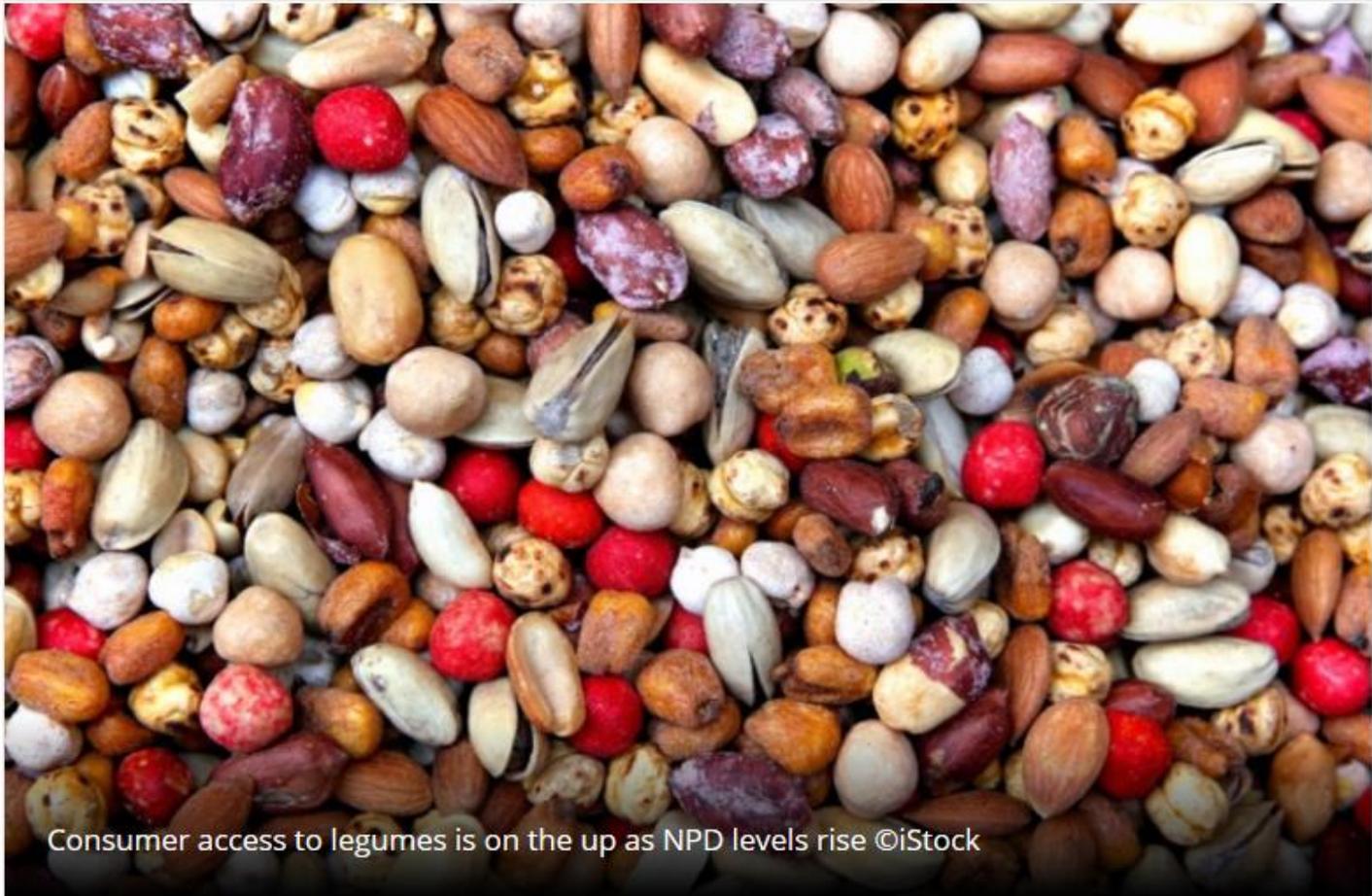
Taking the pulse: Europe leads world with surging legume innovation

By Katy Askew [↗](#)

13-Feb-2018 - Last updated on 13-Feb-2018 at 15:00 GMT



13

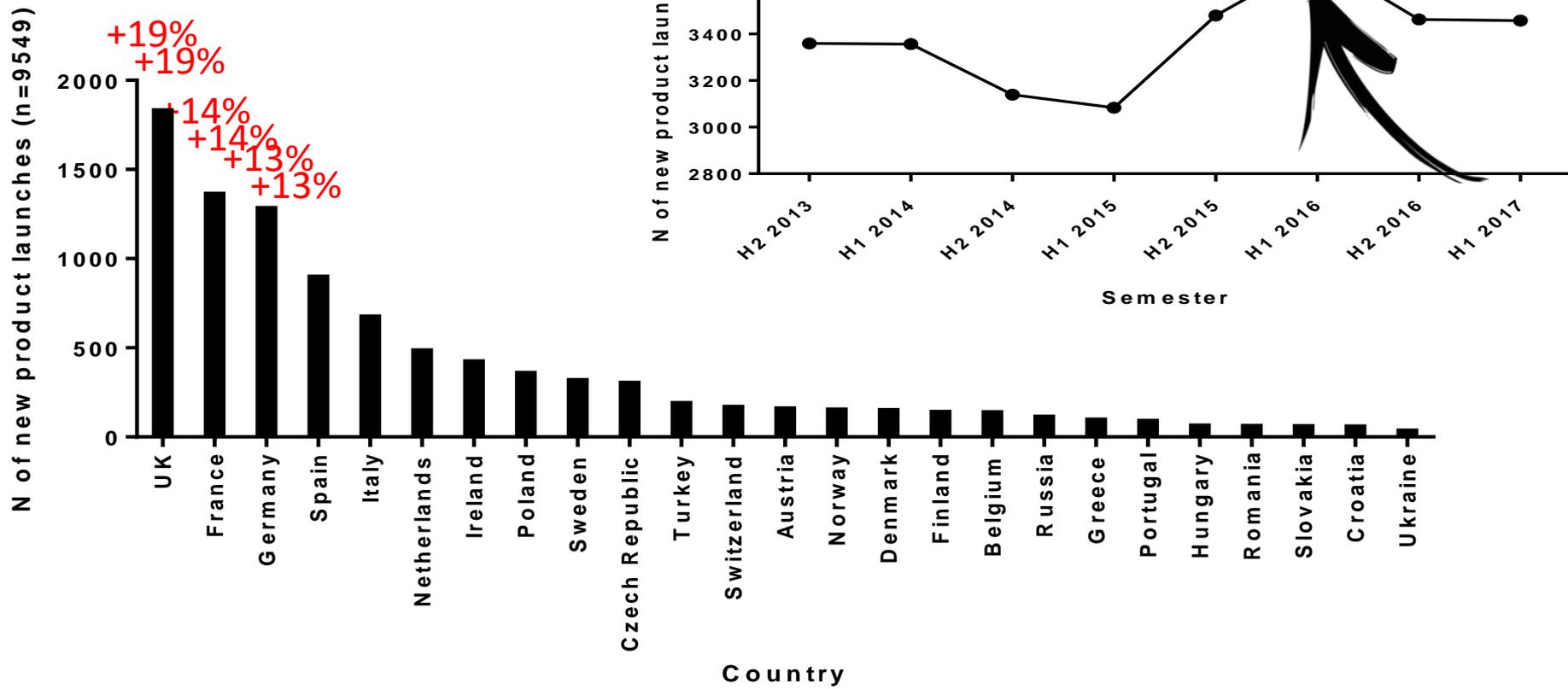


Consumer access to legumes is on the up as NPD levels rise ©iStock

<https://www.foodnavigator.com/Article/2018/02/13/Taking-the-pulse-Europe-leads-world-with-surging-legume-innovation#>

Novel legume products (2011-2017)

27 058
New pulse products **+39%**



Product development in TRUE: pasta, nuggets (IGV)



PASTA: Green peas, Yellow peas, Lentils, Fava beans

EXTRUDATES (CRISPIES, NUGGETS, FLAKES):
Green peas, Yellow peas, Fava beans



Product development in TRUE: beverages (Arbikie)



Product development in TRUE: ScoFu (UCP)

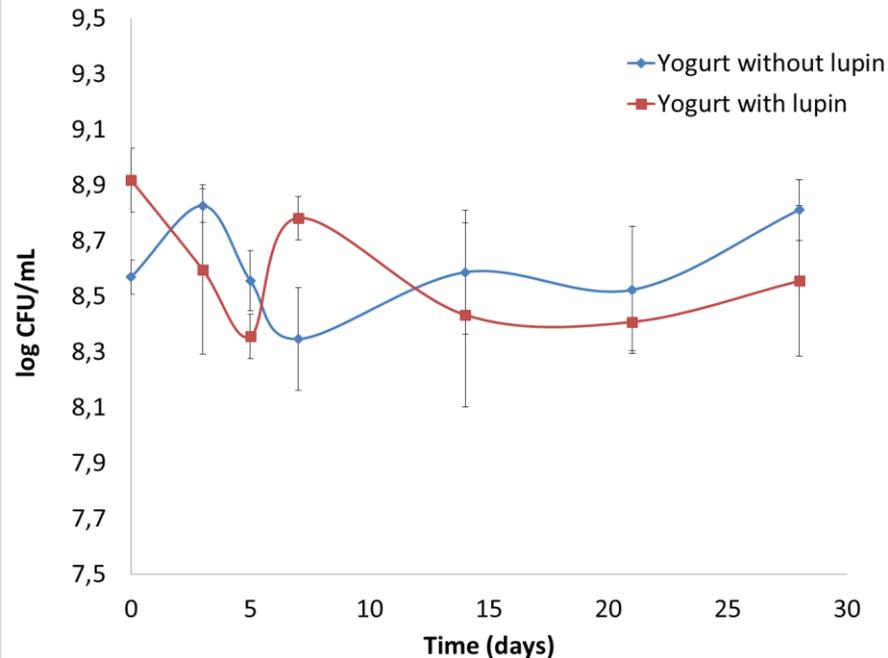


Growing Research International Limited

Bringing ideas to fruition



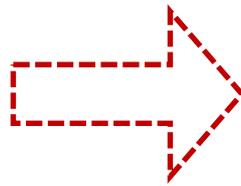
Product development in TRUE: white lupin symbiotic yogurts (UCP)



But is it enough?



1. The health benefits of pulse based diets needs **scientific evidence**



Beans

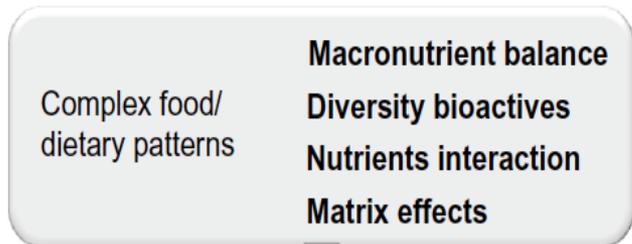
Chickpeas

Fava beans

Lentils

Peas

(...)

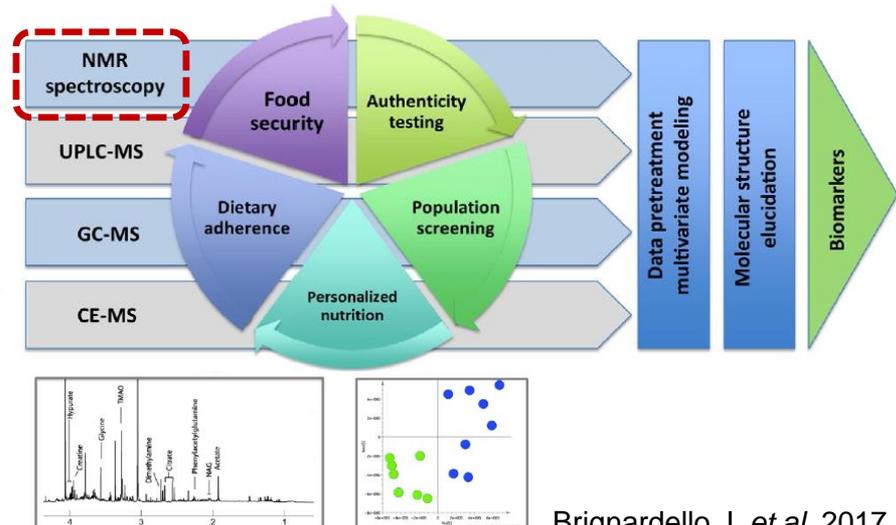


THE "OMICS APPROACHES"

Transcriptomics

Proteomics

Metabolomics



2. Legume innovation should also address **breeding**



Pythagoras to his
followers:

"Do Not Eat Beans"



**Glucose-6-phosphate
dehydrogenase
deficiency**



**Red blood cell
breakdown**

Fababeans **with low vicine-convicine** are safe to be used as food and feed ingredient!



Mol Breeding (2017) 37: 140
<https://doi.org/10.1007/s11032-017-0742-5>

SHORT COMMUNICATION

Development and validation of a robust, breeder-friendly molecular marker for the *vc⁻* locus in faba bean

Hamid Khazaei  • Randy W. Purves • Melody Song •
Robert Stonehouse • Kirstin E. Bett •
Frederick L. Stoddard • Albert Vandenberg

July 2018, Saskatoon

3. Legume innovation should be linked to sustainability



ECOTROPHELIA

EUROPE



HOME

EUROPEAN COMPETITIONS

PRIVATE

FEDERATIONS

SPONSORS

MEDIA

LOG IN

SUCCESS STORIES

CONTACT

2018 PRODUCTS



1- Bizza 🇧🇪



2- Flipsos 🇧🇪



3- Cheeselt 🇩🇪



4- Hush 🇫🇷

1st place for BeanReady, the Vegetarian “Feijoada” (UCP)



Apoio Institucional:



ECOTROPHELIA Guiding Board | Parceiros:



4. Legumes should profit from + publicity

CBC | MENU ▾

news Hollywood director James Cameron invests in Saskatchewan pea processing plant

Hollywood director James Cameron invests in Saskatchewan pea processing plant



Plant expected to be the largest organic pea protein facility in North America

The Canadian Press · Posted: Sep 18, 2017 11:54 AM CT | Last Updated: September 19, 2017



5. Legume **geography** should be used as a key attribute for legume foods in short supply chains



VS.



5. Efforts to bring **Technology** to all parts of the EU



6. And keeping up with tradition is still needed

CNN travel

The world's 50 best foods

CNN Travel staff • Updated 14th March 2018

(with legumes!)



49. Masala dosa, India



47. Paella, Spain



46. Som tam, Thailand



41. Stinky tofu, Southeast Asia



36. Hummus, Middle East



19. Bunny chow, South Africa

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Thank you for
your attention!

Transition paths to sUustainable legume-based systems in Europe (TRUE),
has received funding from the European Union's Horizon 2020 research
and innovation programme under grant agreement No. 727973

