

Facilitators and barriers for foods
containing meat co-products
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**Onwards and upwards: business
opportunities and challenges for co-
products from the meat processing chain**
Teagasc Ashtown
26th April 2018

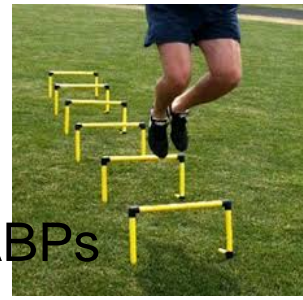


Agenda

- Consumer perspectives
- Other perspectives
- ...and the bigger picture



Context



- Meat co-products: a significant problem – 20 million tonnes of ABPs produced per annum in the EU
 - “the disposal of all animal by-products is not a realistic option as it would lead to unsustainable costs and risks for the environment” EC
- However also a potential solution to the multiple global challenges
 - Increased used of 5th quarter in the UK could reduce the C footprint of beef in the UK by 25%, increase from 38 to 48% weight of bovine animal consumed by humans between 2006 and 2012 (Eblex 2014)
 - Global demand for animal based protein to double by 2050 (Westhoek et al, 2011)
- An essential contribution to the economic sustainability of the meat industry.
- However despite being relatively abundant, they are underutilised, their use is currently not optimised and commercial success has been limited (Mullen et al, 2017; Alao, 2017; Subba, 2002)

Why?

- Consumer acceptance; will foods containing meat co-products be viewed as culturally appropriate or even edible in some contexts?
- Challenges associated with scale-up as well as technical, operational, commercial and regulatory challenges.

Consumer perspectives

- Familiarity with offal
 - “poor mans food” vs “sweet meats”
 - WWII US vs now: a novelty and source of variety rather than long-term substitute
- Neophobic/neophilic
 - Social setting in which introduced



A changing consumer landscape

Datamonitor
(2012)
**Boutique
Butchers with
traditional “fancy
meats”
Nose-to-tail
eating** in
restaurants



Rabobank (2013)
...demand will
remain in the long-
term, as consumers
demand more
innovative,
convenient and
unconventional
products.



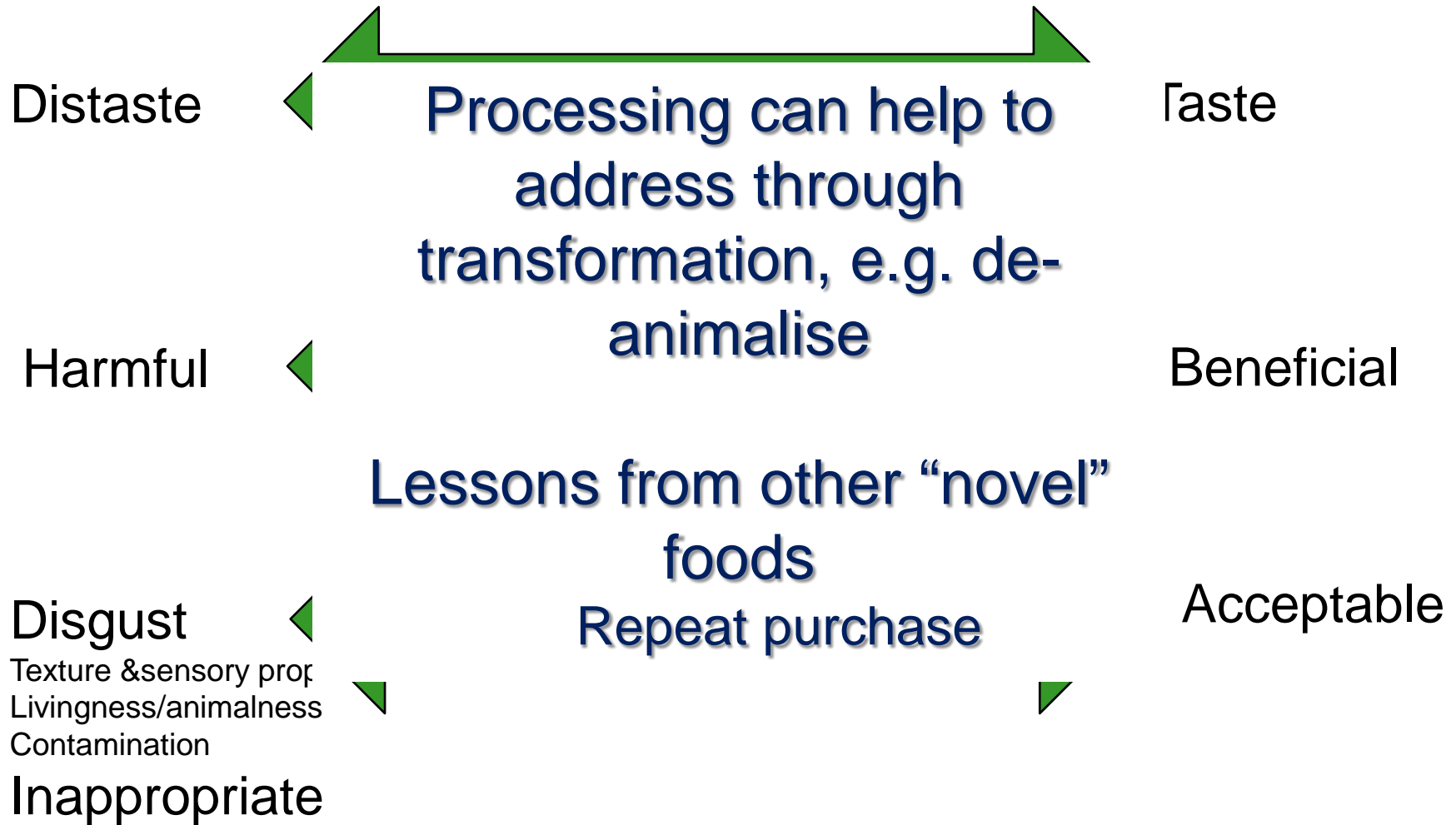
Datamonitor
(2014) “Offal is
officially in”, due
experimentation,
**consciousness of
value and
increased
availability.**



And a role for industry....

Consumers desire to try and experiment with these constituents has been attributed to offal becoming a more popular cooking ingredient in consumer households, **due to its increased availability** (Datamonitor, 2014).

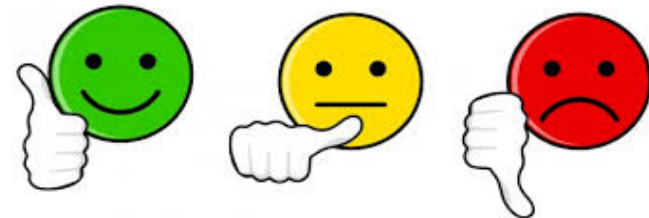
Consumer acceptance/rejection



Some other challenges



- Scale-up
 - Moving from lab scale
 - Solvents not food grade, significant CAPEX or operating cost
- Operational
 - role of good industry practice
- Commercial
 - Lack of price differentiation between Cat 1 and 3
 - Lack of infrastructure and required economics of scale
- Regulatory
 - Framing of co-products as “waste”

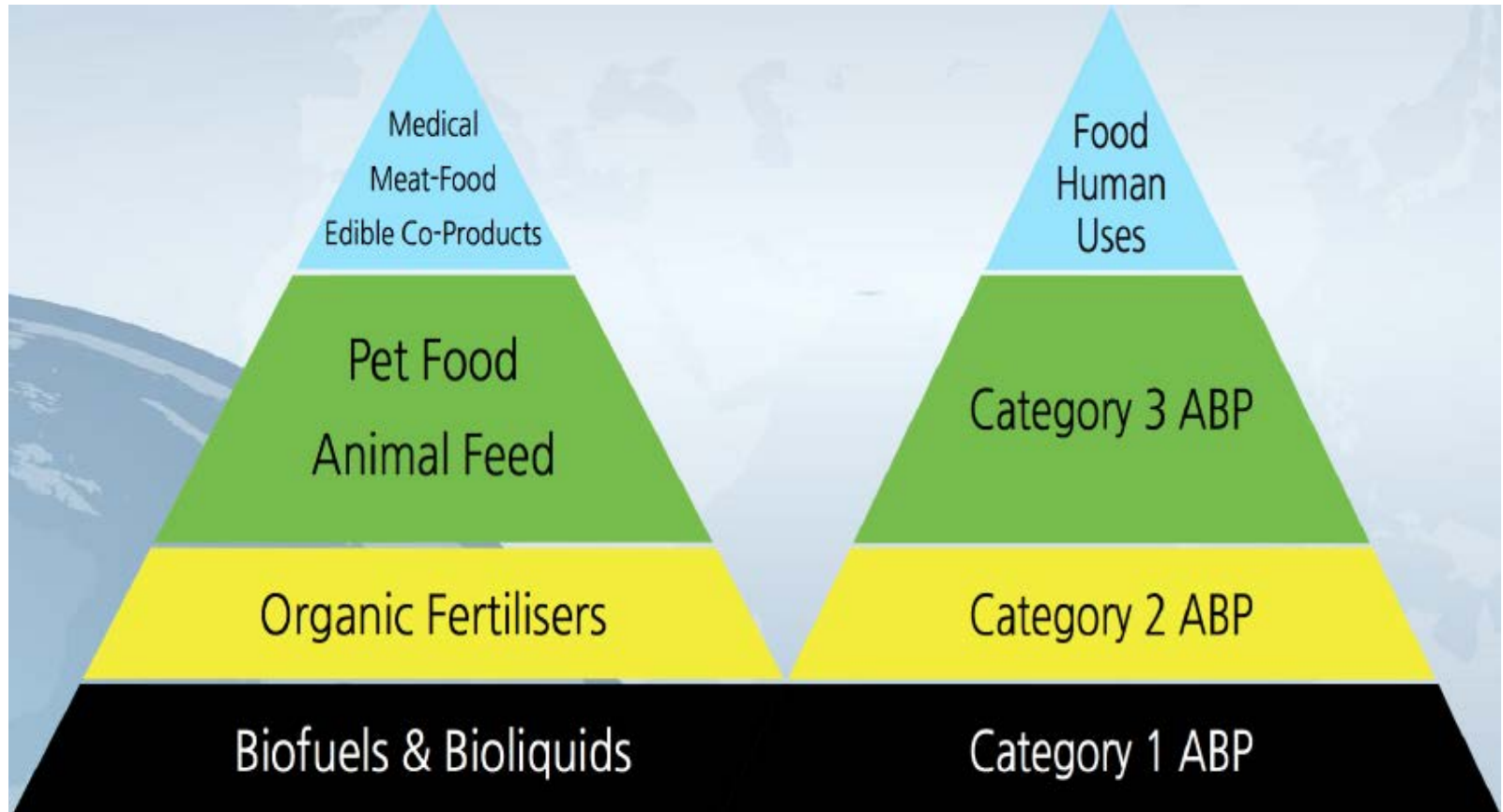


Or something else in an Irish context?



- Offal “officially on trend”
- Chinese and other market demand for offal

The Beef Fifth Quarter Hierarchy



Source: Woodgate (2013)

Role of science and technology

- Provides opportunities to use meat co-products in new ways, e.g. RVP
- Developing new products which have good sensory, functional and nutritive value
 - Product needs to be as expected
- Development of new processes that increase the range of opportunities available for valorisation of specific co-products, e.g. reclassification of blood from young ruminants and ruminants from cat 2 to 3 as a result of passing TSE tests (Mullen et al, 2015)

The iceberg effect at industry level?



- Scepticism?
- Risk avoidance?
- Willingness to collaborate to achieve critical mass?
- Roadmap?

Conclusions

- Use not optimised, limited commercial success
- Many barriers.... but also several drivers
- Some psychological, (industry) cultural, political as well as technical, commercial, operational, regulatory and consumer related
- All opportunities not evident or obvious yet, nor are the best opportunities for Ireland evident – need for a road map for Irish industry?

Questions?

Resources:

Mullen, AM, Álvarez, C., Zeugolis, D. I., Henchion, M., O'Neill, E. & Drummond, L. (2017) Alternative uses for co-products: Harnessing the potential of valuable compounds from meat processing chains, *Meat Science*, 132 (October 2017), 90-98, doi: 10.1016/j.meatsci.2017.04.243

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