



Prof. Jude Capper

@bovidiva



# Telling the sustainability story outside the industry

14<sup>th</sup> July 2022

Source: Dr. Jude L. Capper, 2022

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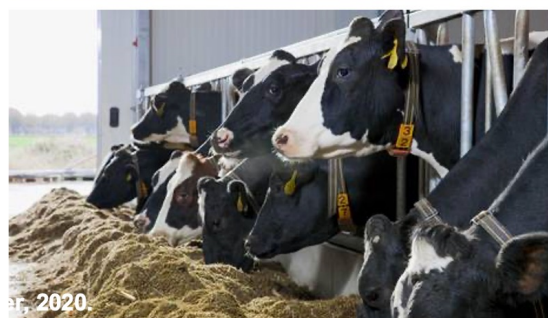
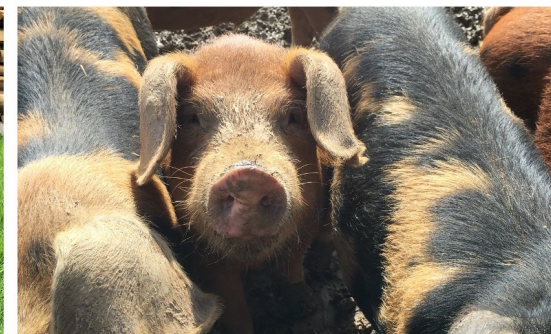
There is no definitive sustainable protein system – but every system can be sustainable

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Harper Adams University



Source: Created and photos by Dr. Jude L. Capper, 2020

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## Attractively presented misinformation can be difficult to counter

**the leading cause  
of climate change**



*So much is being emitted that life  
on Earth is collapsing!*



[get.plant.ed](https://get.plant.ed) Is animal agriculture responsible for 87% of annual greenhouse gases? A new study by [@climatehealers](https://twitter.com/climatehealers) says yes! When accounting for cumulative human-made greenhouse gas, aerosol emissions and the impact of deforestation, the scientists found that animal agriculture is responsible for more global warming than all the CO<sub>2</sub> from fossil fuel sources combined. This contradicts other reports that claim animal agriculture only causes 14.5% of greenhouse gases. Either way, the consensus is that animal agriculture is unsustainable, and switching to a plant-based diet is the most effective action you can take to help the planet

Source: Slide created by Dr. Jude L. Capper, 2021.  
Screenshot from [@get.plant.ed](https://twitter.com/get.plant.ed) on Instagram.

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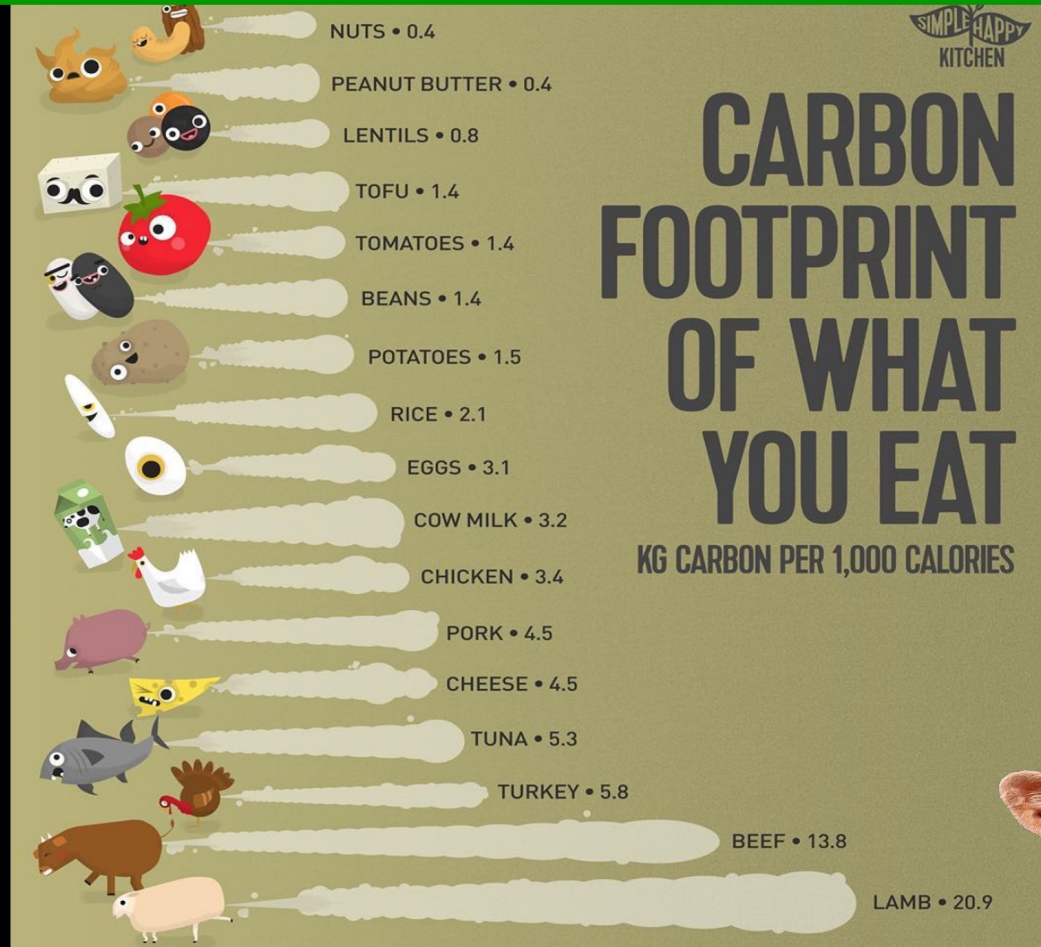
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# Global averages are meaningless

The carbon footprints of the foods we eat vary considerably – global average figures are inappropriate when food production is regional



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Source: Created by Dr. Jude L. Capper, 2020, infographic from: [https://www.instagram.com/simple\\_happy\\_kitchen/](https://www.instagram.com/simple_happy_kitchen/)

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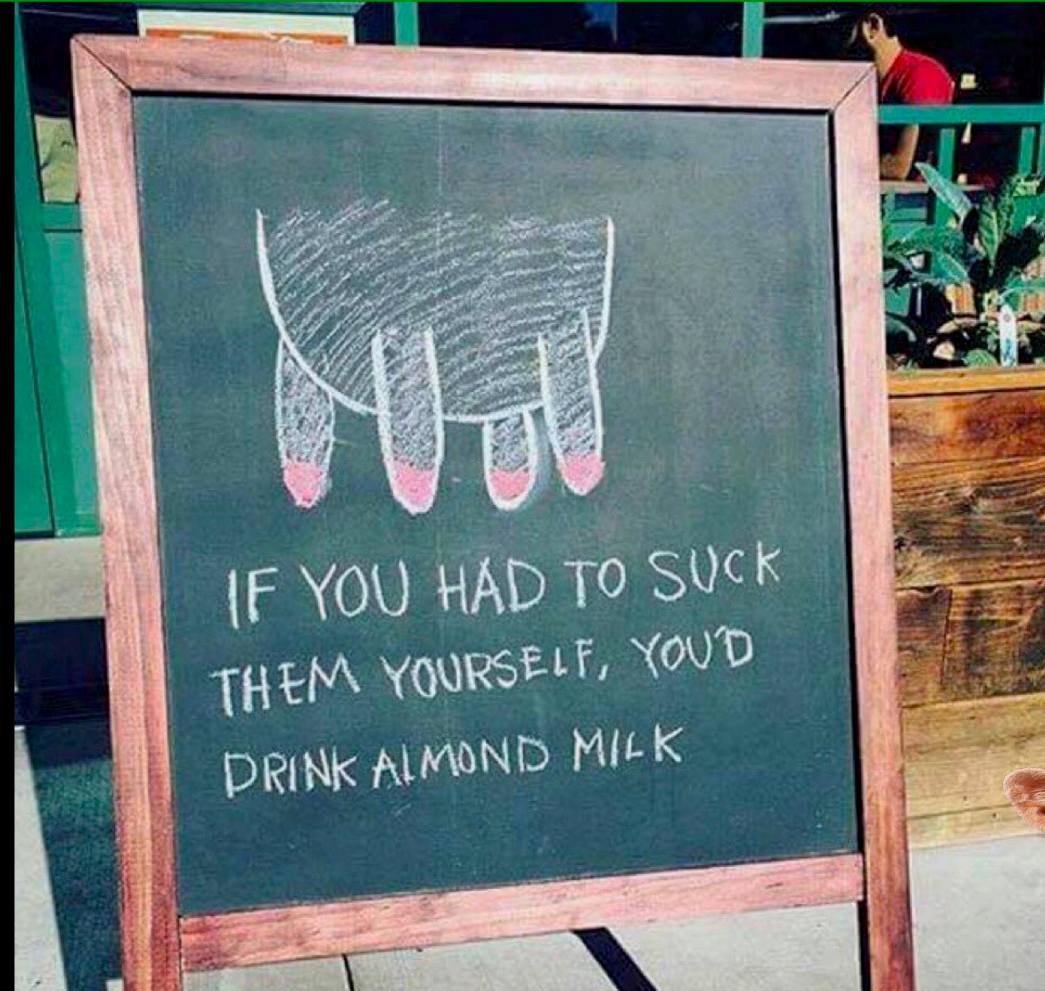




DS

# Are provocative messages influencing consumers?

**Alternative beverages are gaining market share – but does this represent a shift to vegetarian and vegan diets?**



Source: Created by Dr. Jude L. Capper, 2017. Photo from: <https://pbs.twimg.com/media/C1LXdDoUUAHV2KH.jpg>

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Do 582,538 Veganuary participants amount to more than a hill of beans?

**JOIN THE  
NEW YEAR'S  
REVOLUTION**



- Slightly smaller than the population of Sheffield
- If all participants were UK-based they would comprise <1% of the UK population
- Average of 2,787 per participating country
- 62% of participants already vegan, vegetarian or pescatarian

Source: Created by Dr. Jude L. Capper, 2021. Information from: <https://veganuary.com/>

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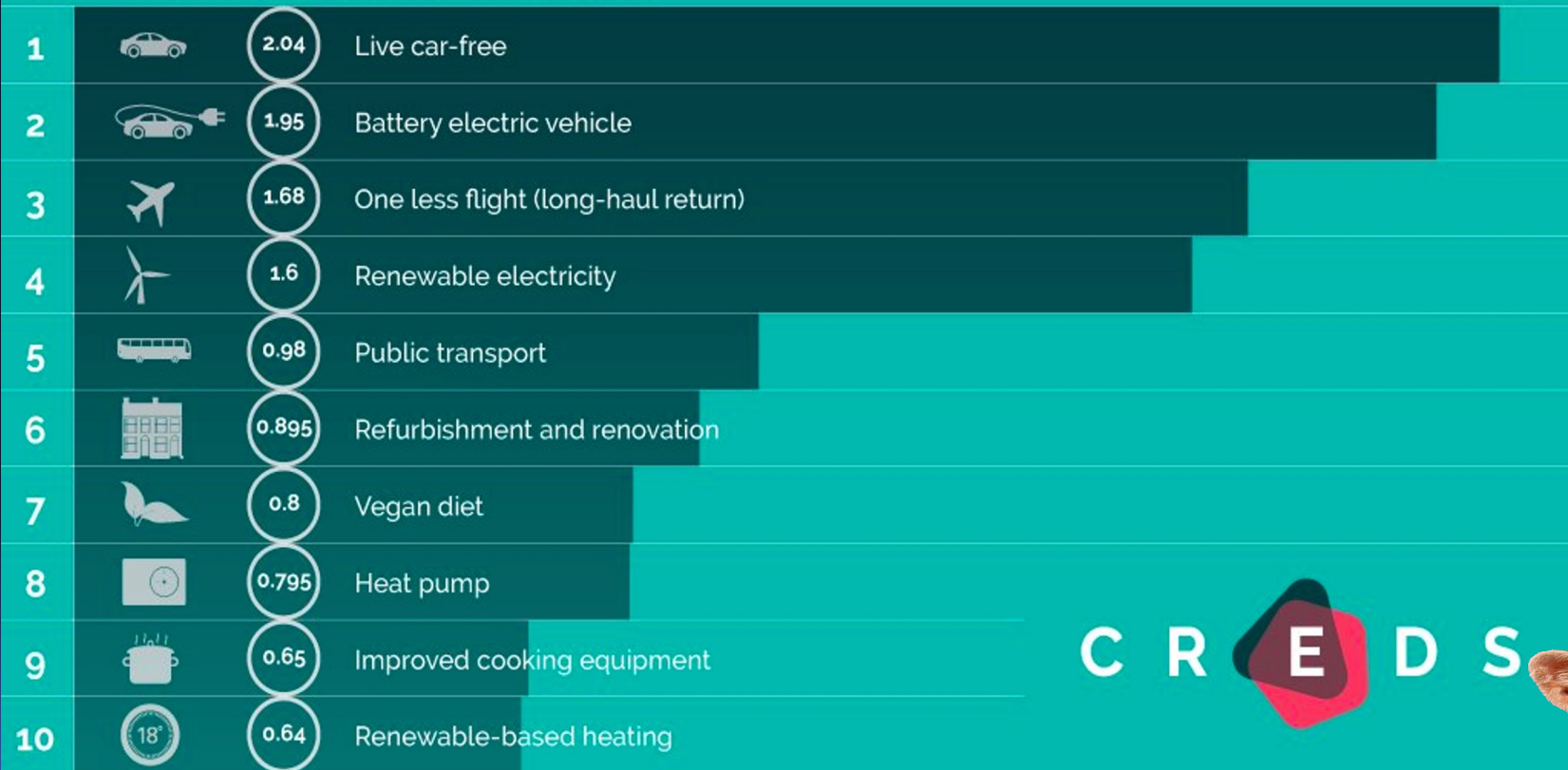




CV

# New CREDS report puts transport, energy and food choices into context

## Top 10 options for reducing your carbon footprint



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Source: Created by Dr. Jude L. Capper, 2020. . Infographic adapted from Centre for Research into Energy Demand Solutions (2020). Available at: [https://twitter.com/CREDS\\_UK/status/1262984570175176704?s=20](https://twitter.com/CREDS_UK/status/1262984570175176704?s=20)

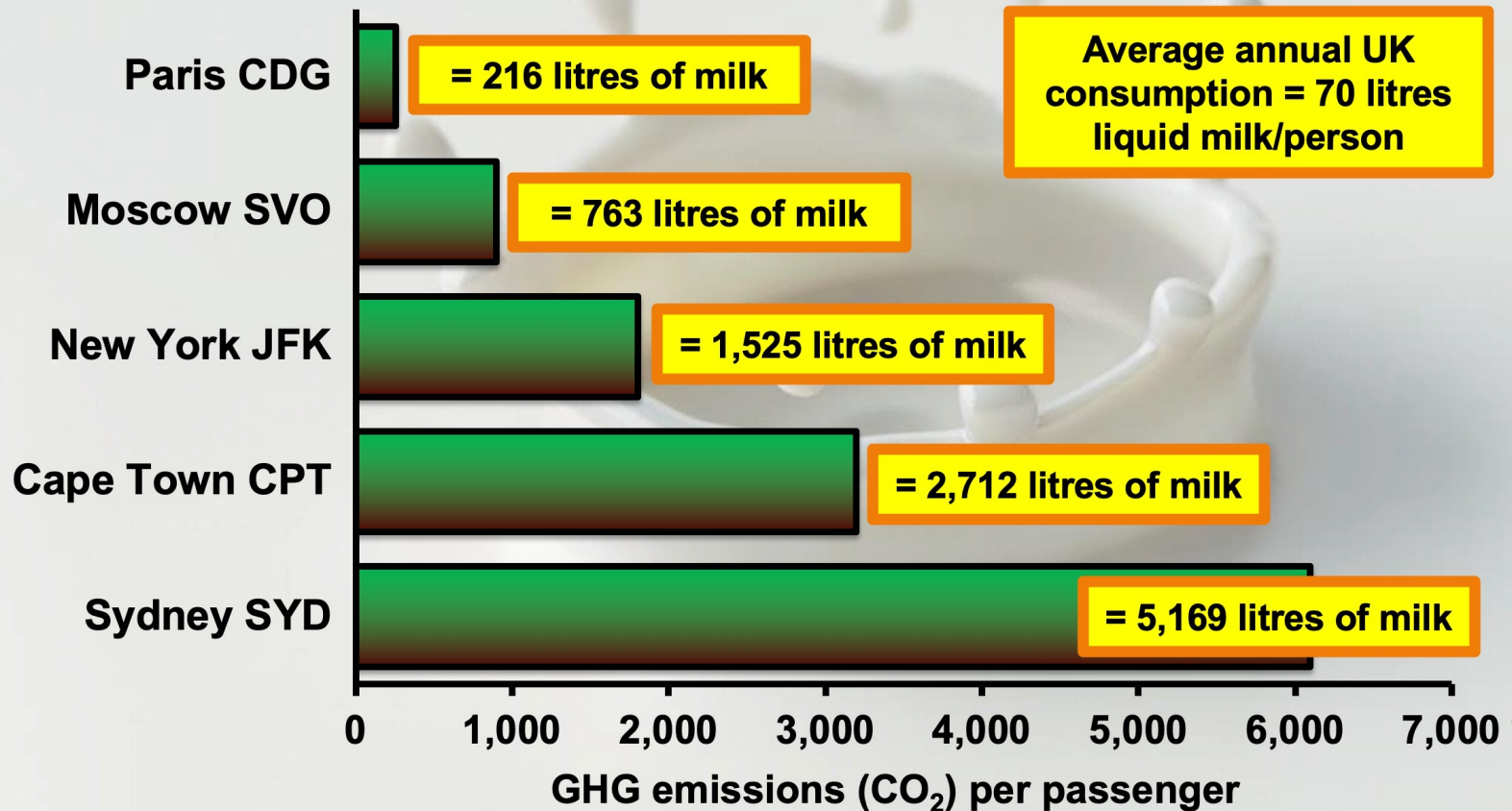
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# International flights emit considerable quantities of carbon compared to dairy production



Source: Created by Dr. Jude L. Capper, 2020. Calculations based on GHG emissions flight data from: [https://co2.myclimate.org/en/flight\\_calculators/new](https://co2.myclimate.org/en/flight_calculators/new), and on a carbon footprint per litre of milk of 1.18 kg CO<sub>2</sub>-eq (under GWP100) from AHDB: [https://dairy.ahdb.org.uk/non\\_umbraco/download.aspx?media=17338](https://dairy.ahdb.org.uk/non_umbraco/download.aspx?media=17338)

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# Guilt is a primary motivator for people considering going vegetarian or vegan

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*"I sometimes feel guilty when consuming meat and dairy products"*

**66% of meat-eaters and flexitarians thinking of giving up meat said "yes" compared to 25% of national population**

No guilt  
34%



Feel guilty  
66%

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Source: Created by Dr. Jude L. Capper, 2020. Information from: YouGov (2019) Is the future of food flexitarian? <https://yougov.co.uk/topics/resources/articles-reports/2019/03/18/future-food-flexitarian>





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# Animal welfare and human health are major concerns for people giving up animal products

Animal welfare

Healthiness

Environment

Labelling

Economic cost



Source: Created by Dr. Jude L. Capper, 2020. Information from: YouGov (2019) Is the future of food flexitarian?  
<https://yougov.co.uk/topics/resources/articles-reports/2019/03/18/future-food-flexitarian>

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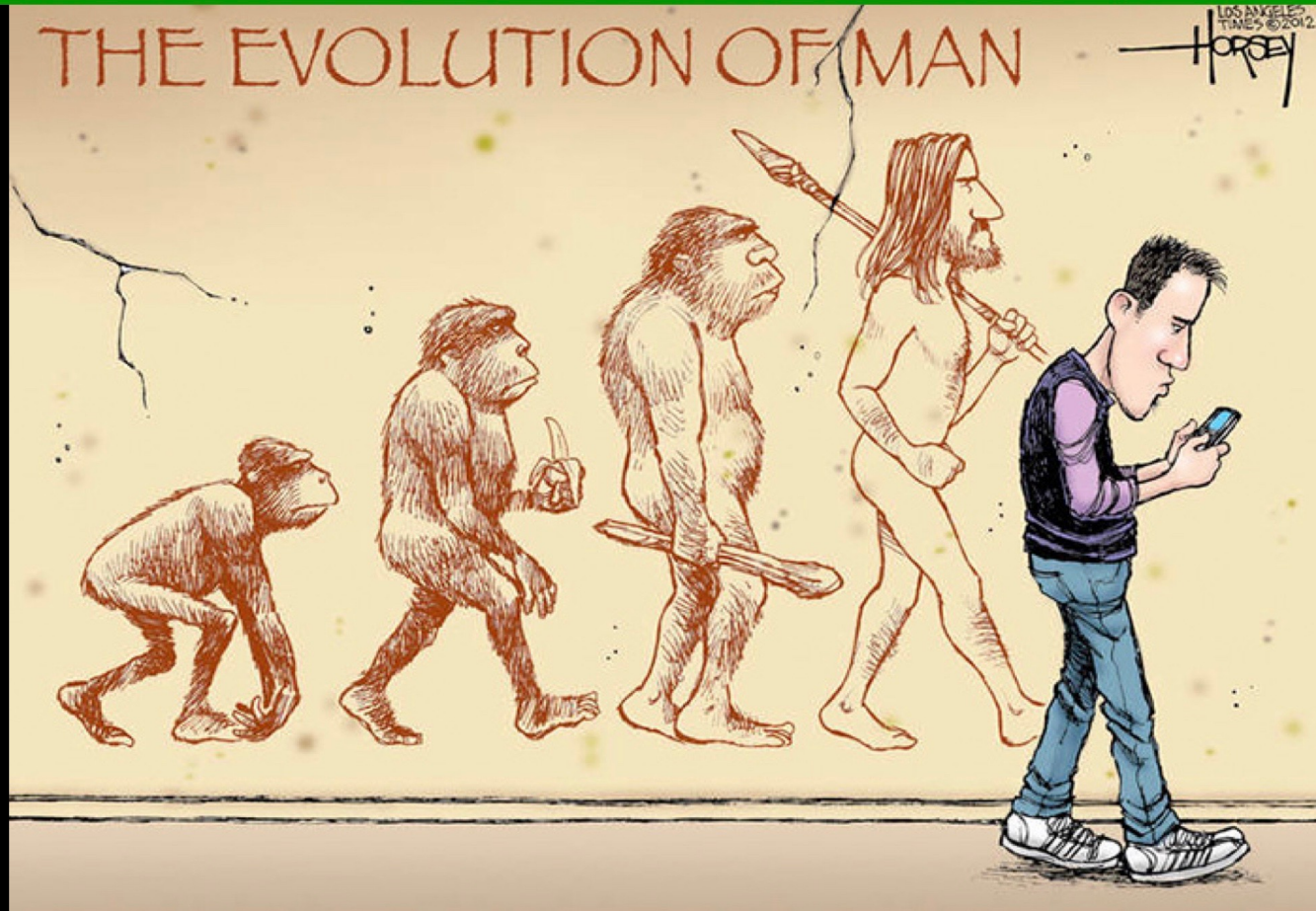
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# How have we changed over time?



Source: Created by Dr. Jude L. Capper, 2019. Cartoon from: [https://static.boredpanda.com/blog/wp-content/uploads/2016/02/funny-satirical-evolution-charles-darwin-day-251\\_700.jpg](https://static.boredpanda.com/blog/wp-content/uploads/2016/02/funny-satirical-evolution-charles-darwin-day-251_700.jpg)

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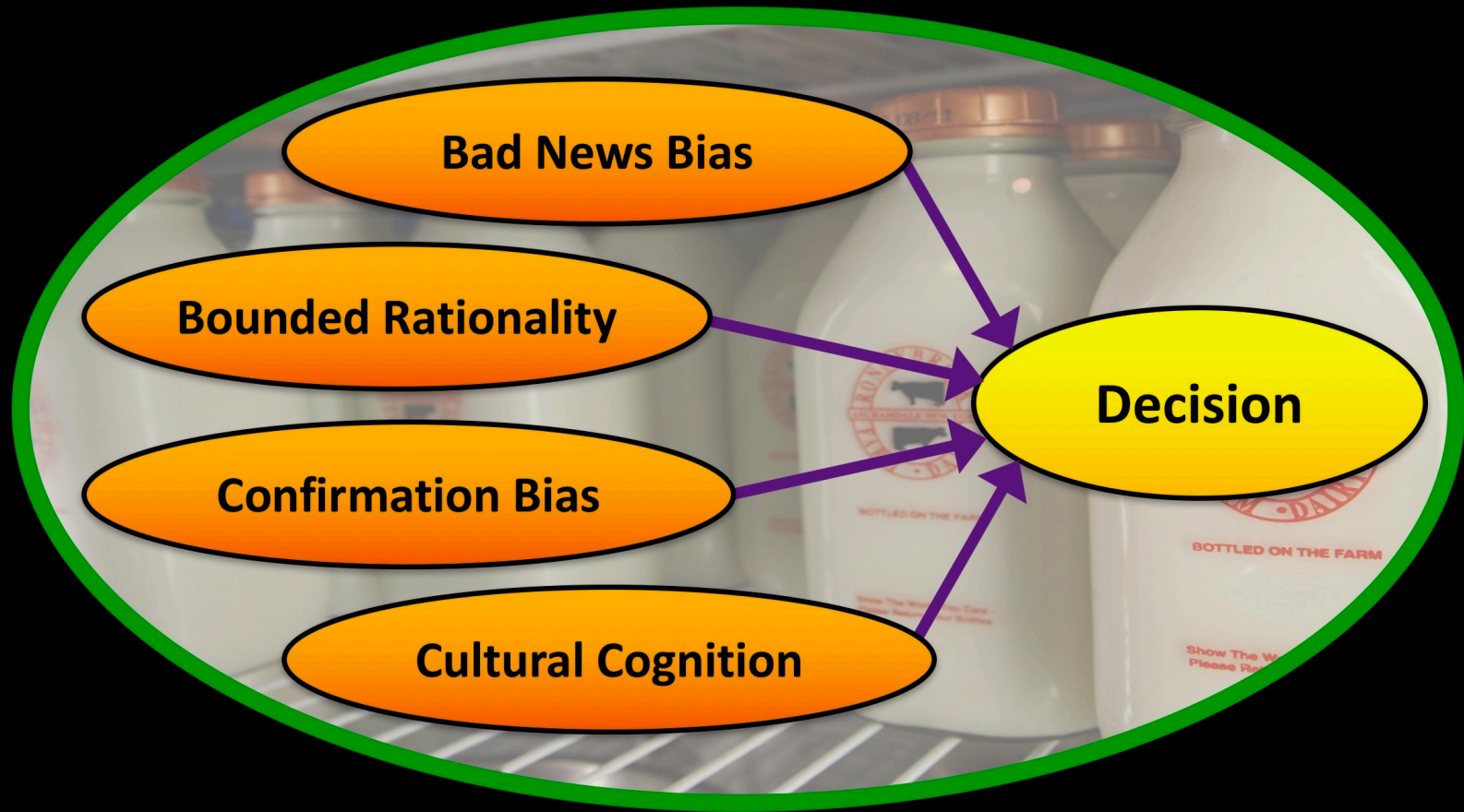


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# Four major processes influence consumer decision-making



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Source: Created by Dr. Jude L. Capper, 2017. Information from: Capper and Yancey (2015). Communicating Animal Science to the General Public. *Animal Frontiers*.

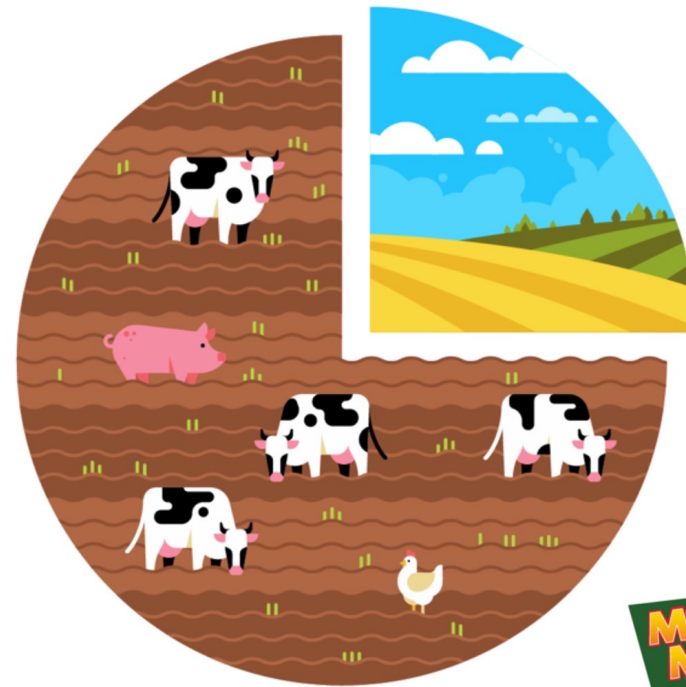


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Bad news bias – need five positive stories to cancel out each negative

We are programmed to believe bad news stories. Tidal wave of factual information needed to overcome them.

LIVESTOCK PRODUCTION USES 75% OF THE EARTH'S AGRICULTURAL LAND.



MEATLESS MONDAY

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Source: Created by Dr. Jude L. Capper, 2020. Infographic from: <https://www.pinterest.co.uk/pin/254383078939543245/>

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65% of UK land is not suitable for growing arable crops



Source: Created by Dr. Jude L. Capper, 2020. Grazing land includes temporary grass on arable land (6% of total), land used for outdoor pigs or non-agricultural purposes not shown (1.7% of total). Data from DEFRA. 2019. Farming statistics - provisional crop areas, yields and livestock populations at 1 June 2019 – United Kingdom.  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/837834/structure-jun2019prov-UK-10oct19.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/837834/structure-jun2019prov-UK-10oct19.pdf)

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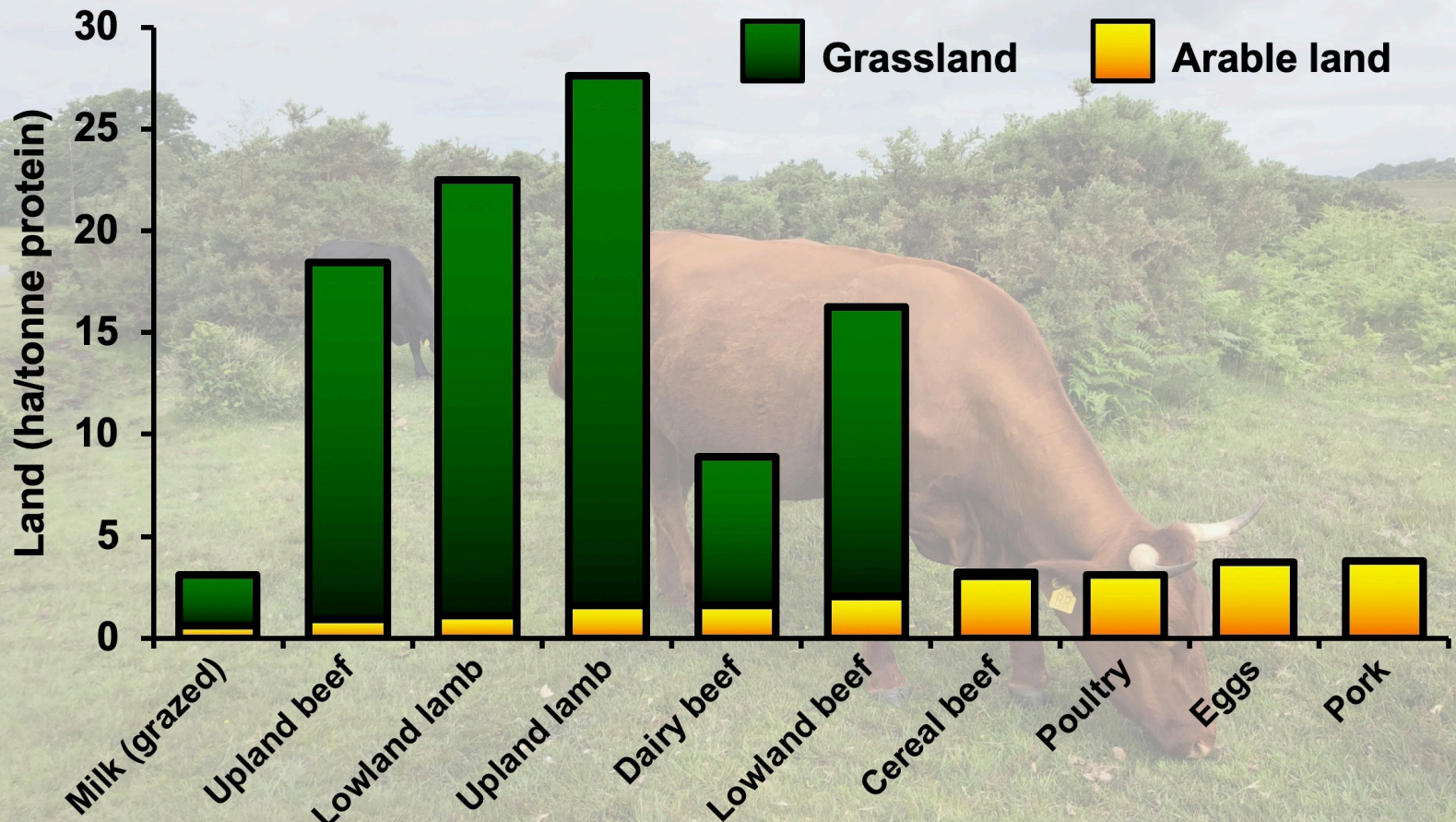
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# Livestock systems vary widely in arable and grassland use



Source: Created by Dr. Jude L. Capper, 2020; data from Wilkinson and Lee (2018) Review: Use of human-edible animal feeds by ruminant livestock. *Animal*.

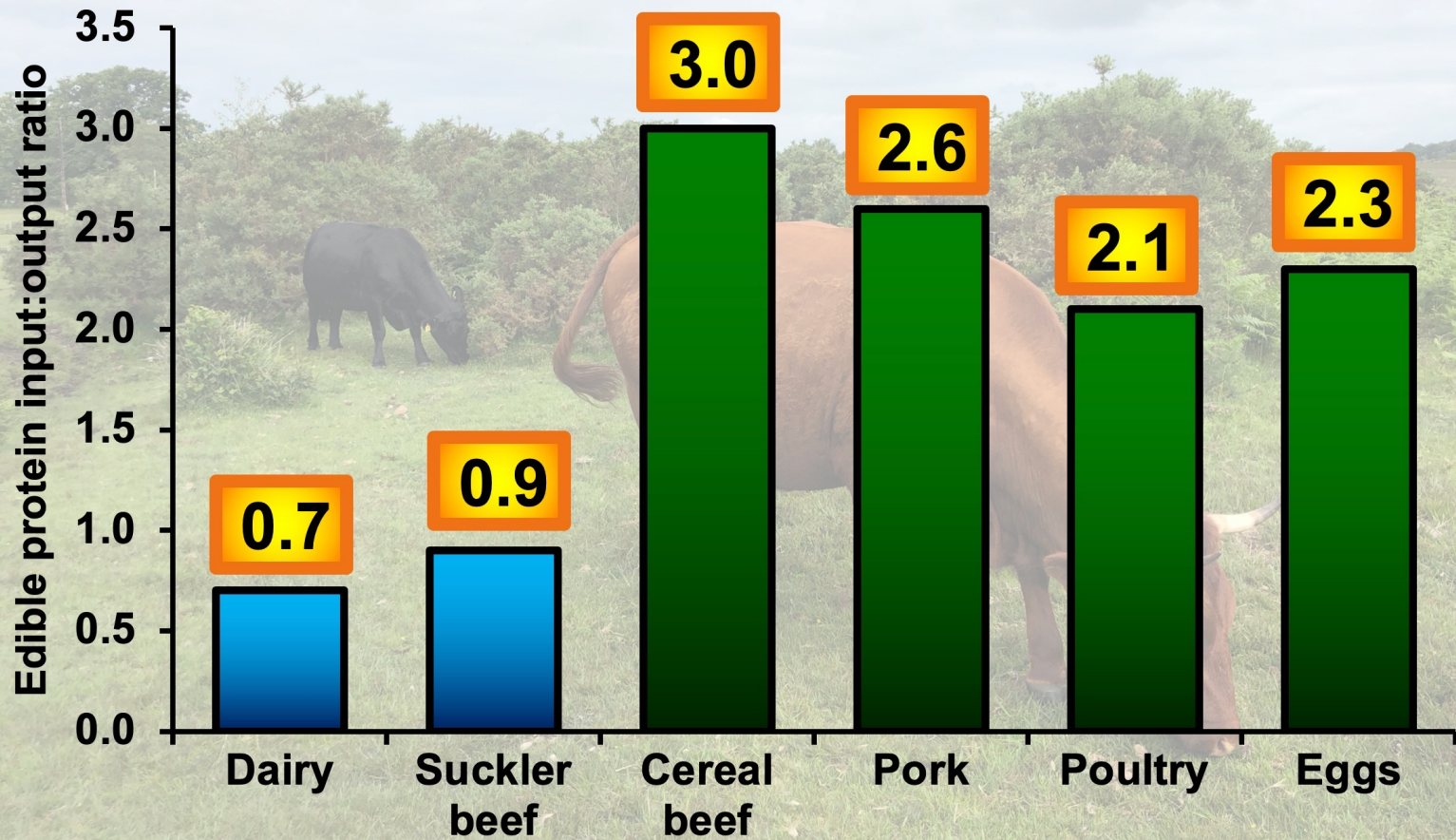
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# Grazing cattle systems produce more human-edible protein than they consume



Source: Created by Dr. Jude L. Capper, 2020; data from Wilkinson (2011) Re-defining efficiency of feed use by livestock. *Animal*.

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Bounded rationality - we don't have time to research, so need quick, simple explanations

Based on the average UK diet

30%

of our protein intake comes from red meat...

...which is vital for our body's growth, maintenance and muscle recovery!



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Source: Created by Dr. Jude L. Capper, 2020. Infographic from HCC (2020): <https://meatpromotion.wales/en/news-industry-info/download>

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## Drinks vary in nutrient density and greenhouse gas emissions

	Nutrient density	Carbon footprint g CO <sub>2</sub> /100 g drink
Whole milk	53.8	99
Orange juice	17.2	61
Soya juice	7.6	30
Oat juice	1.5	21
Red wine	1.2	204
Soda	0.0	109
Beer	0.0	101
Water	0.0	10

Source: Created by Dr. Jude L. Capper, 2020. Data from: Smedman et al. (2010). Nutrient density to climate impact (NDCI) index of beverages. Food & Nutr. Res.

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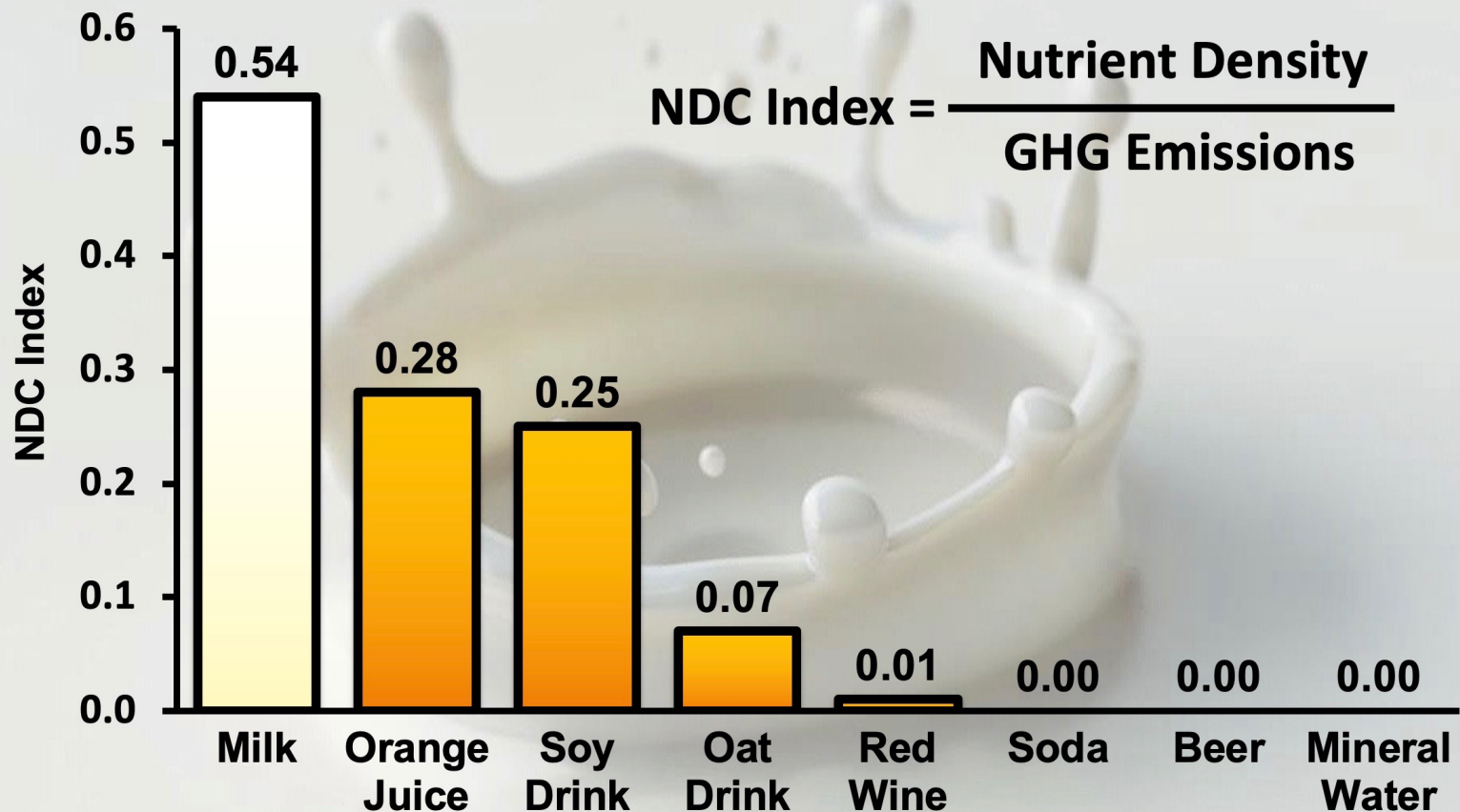
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# Nutrient density should be included when assessing carbon footprint



Source: Created by Dr. Jude L. Capper, 2020. Data from: Smedman et al. (2010). Nutrient density to climate impact (NDCI) index of beverages. Food & Nutr. Res.

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# Confirmation bias – tapping into consumers' inherent beliefs to improve trust

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Consumers may interpret bottle-feeding a calf as caring or cruel, depending on pre-conceived ideas

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Source: Created by Dr. Jude L. Capper, 2020.



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Cultural cognition – we trust people with whom we share values and wish to emulate

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England rugby player credited <3 week recovery from broken leg to drinking 2 pints of milk per day

Source: Created by Dr. Jude L. Capper, 2019. Screenshot from: <http://www.telegraph.co.uk/rugby-union/2017/02/02/england-prop-joe-marler-reveals-secret-behind-hisremarkable/>

The Telegraph

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# Sport | Rugby Union

Rugby Union | Fixtures | Results | Tables | Lions | Aviva Premiership | Brian Moore

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## England prop Joe Marler reveals the secret behind his remarkable recovery in time for Six Nations

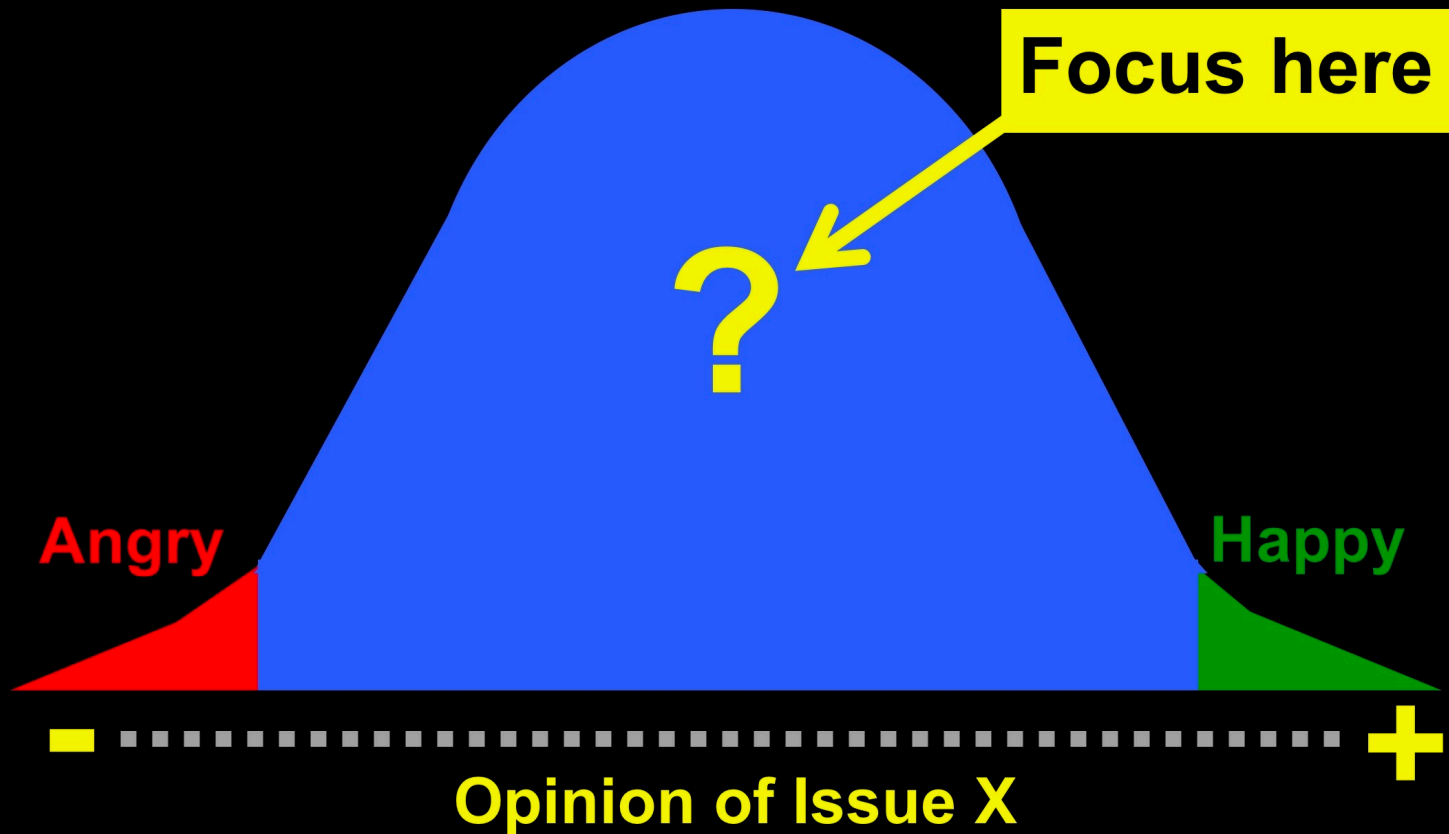


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We need to communicate with consumers who don't yet have fixed opinions of agriculture



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Source: Created by Dr. Jude L. Capper, 2017

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# Do we believe all that we read/see?



**TRACEY ALISON**  
@TRACEYALISON1

Follow



This calf is about to be killed with a bolt gun.  
Give a ██████ & go #vegan



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Source: Created by Dr. Jude L. Capper, 2019. Screenshot from Twitter.

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## 5 easy tips for positive communication

**Share your values**

**Stay positive, polite and personal**

**Keep it short, simple and see-through**

**Focus on the important**

**Know when to walk away**

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Source: Created by Dr. Jude L. Capper, 2019. Adapted from: Capper and Yancey. 2015. Communicating Animal Science to the General Public. *Animal Frontiers*.





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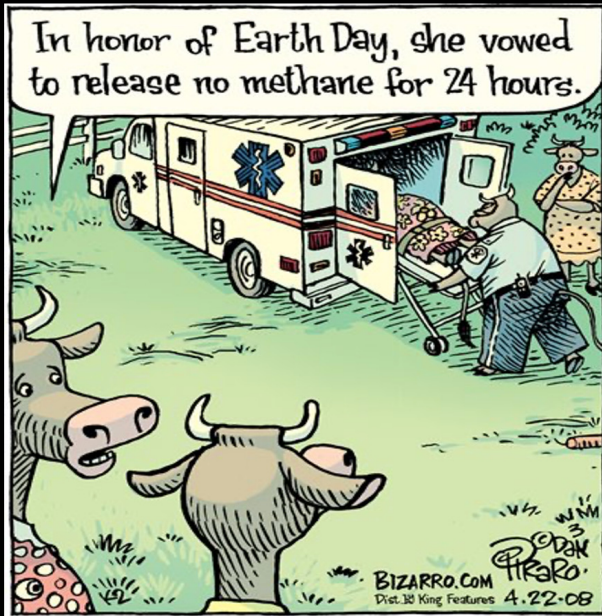
# Thank you!

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<http://bovidiva.com/presentationlinks>

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## Questions?



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Source: Created by Dr. Jude L. Capper, 2020. Cartoon from: <http://snipurl.com/methanecartoon>