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BRITISH BEEF

beef
expo

SEMINARS 2022



Sustainable Beef Sourcing, Production and Benefits for Human Health

28th May 2022

Source: Dr. Jude L. Capper, 2022



Prof. Jude Capper

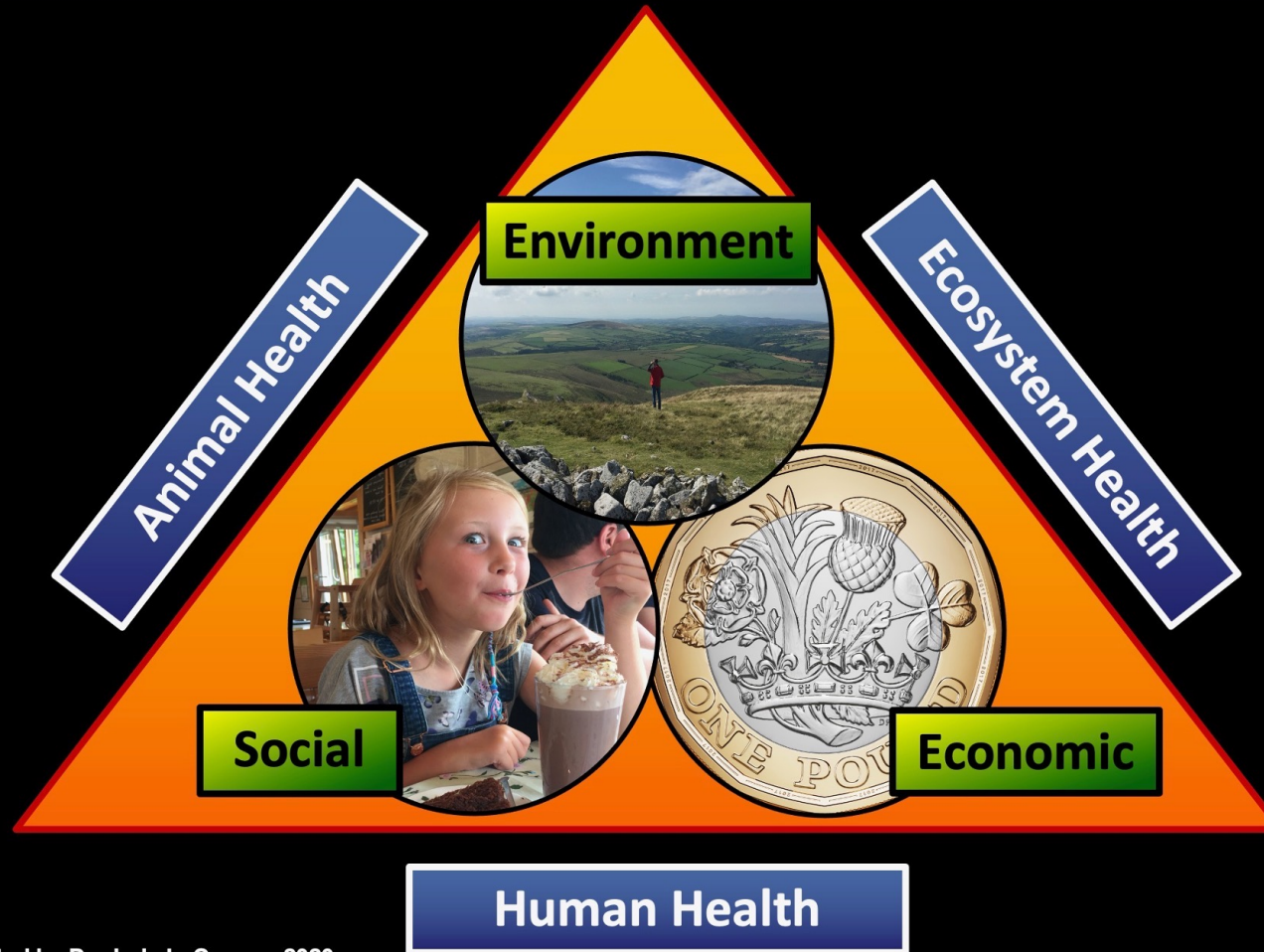
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Sustainability comprises three pillars, all under the umbrella of One Health



Prof. Jude Capper

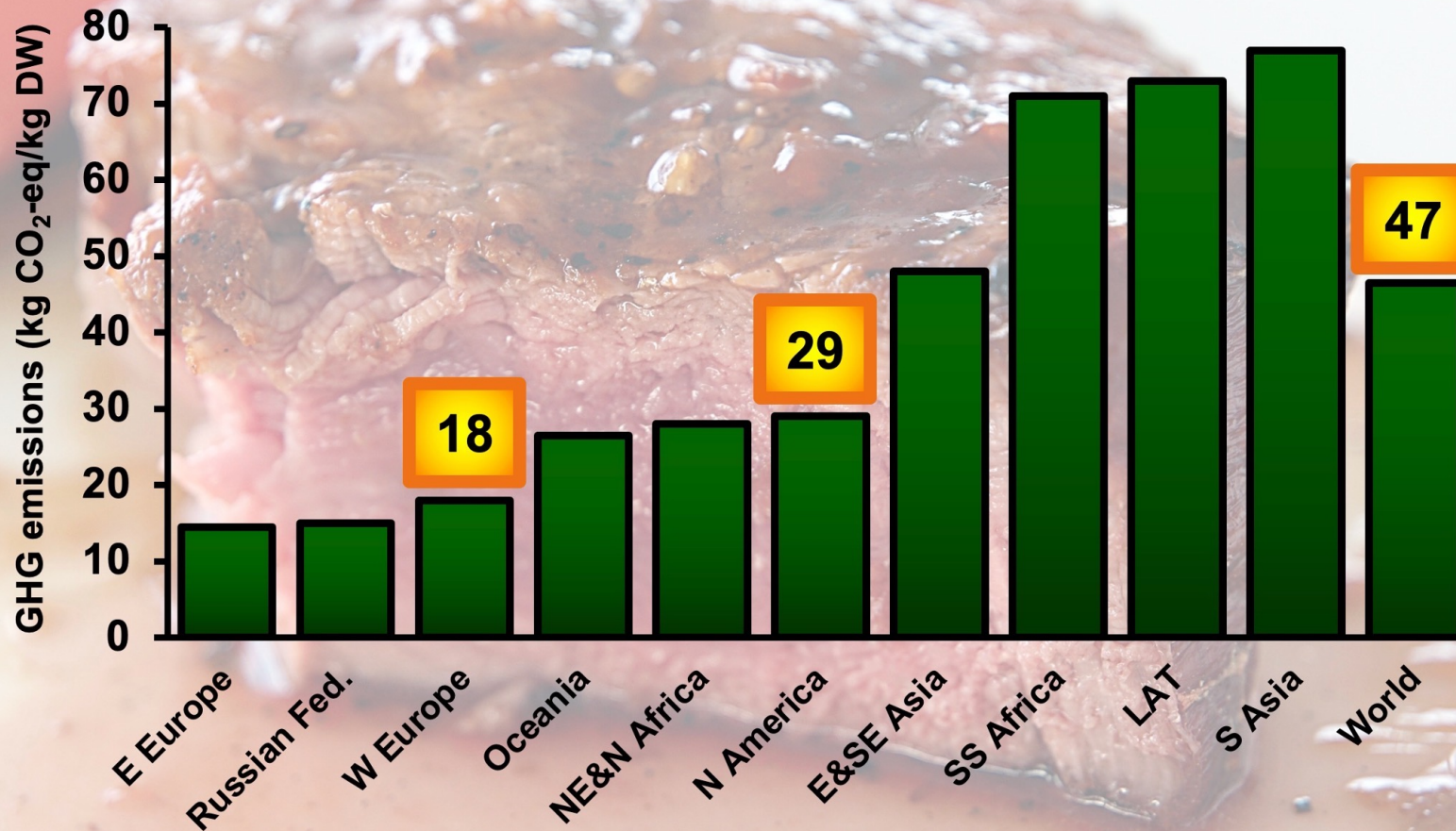
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The carbon footprint of beef production varies across the globe



Source: Created by Dr. Jude L. Capper, 2022; data from Gerber et al. (2013) Tackling climate change through livestock – A global assessment of emissions and mitigation opportunities. FAO, Rome, Italy.



Prof. Jude Capper

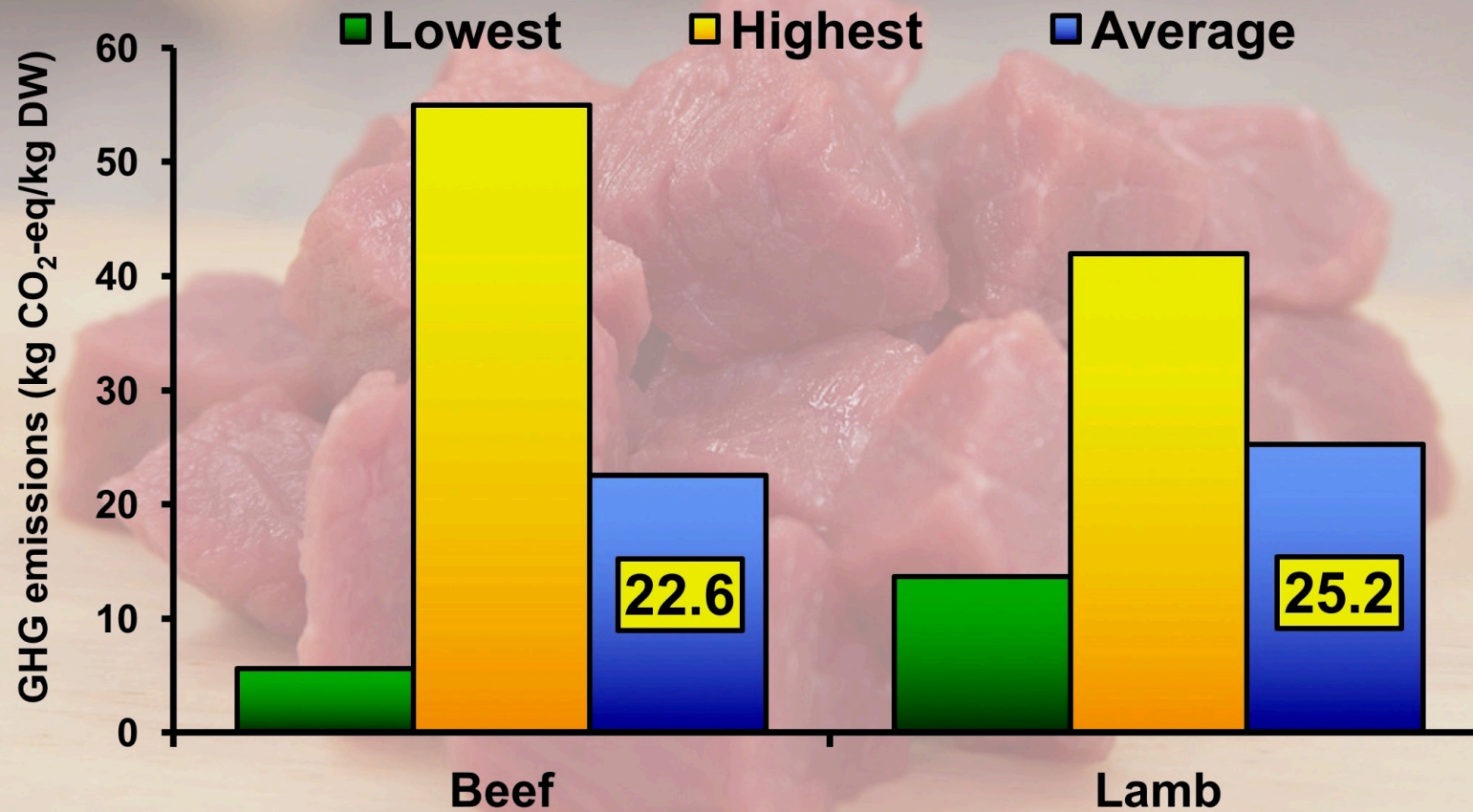
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Carbon footprints of English beef and lamb show significant variation



Source: Created by Dr. Jude L. Capper, 2016; data from 131 beef units and 57 sheep units analyzed by E-CO₂ and reported in: EBLEX (2012) Down to Earth – The Beef and Sheep Roadmap – Phase Three. AHDB, Stoneleigh, UK.



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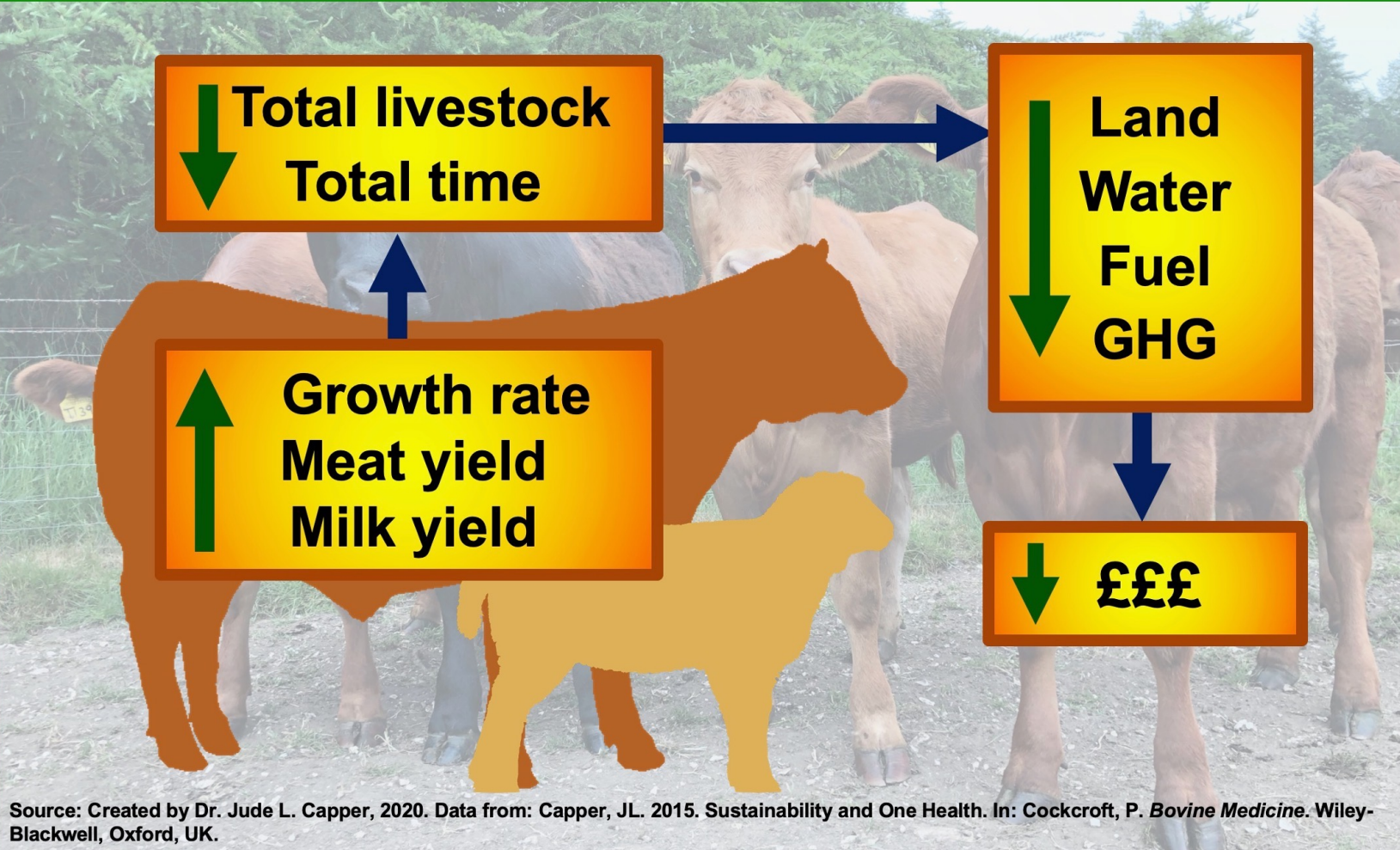
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Improving animal productivity reduces the environmental impact of milk and meat



Source: Created by Dr. Jude L. Capper, 2020. Data from: Capper, J.L. 2015. Sustainability and One Health. In: Cockcroft, P. *Bovine Medicine*. Wiley-Blackwell, Oxford, UK.



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Reducing age at slaughter has both economic and environmental benefits



Source: Created as an example by Dr. Jude L. Capper, 2021.

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Reducing age at slaughter has both economic and environmental benefits

↓
91 fewer days of
feed, land and
greenhouse gases.
Opportunity cost?



Birth weight	40 kg	40 kg
Slaughter weight	670 kg	670 kg
Total gain	630 kg	630 kg
Age at slaughter	27 months	30 months
Daily liveweight gain	0.77 kg/d	0.69 kg/d
Maintenance feed needed	821 days	912 days

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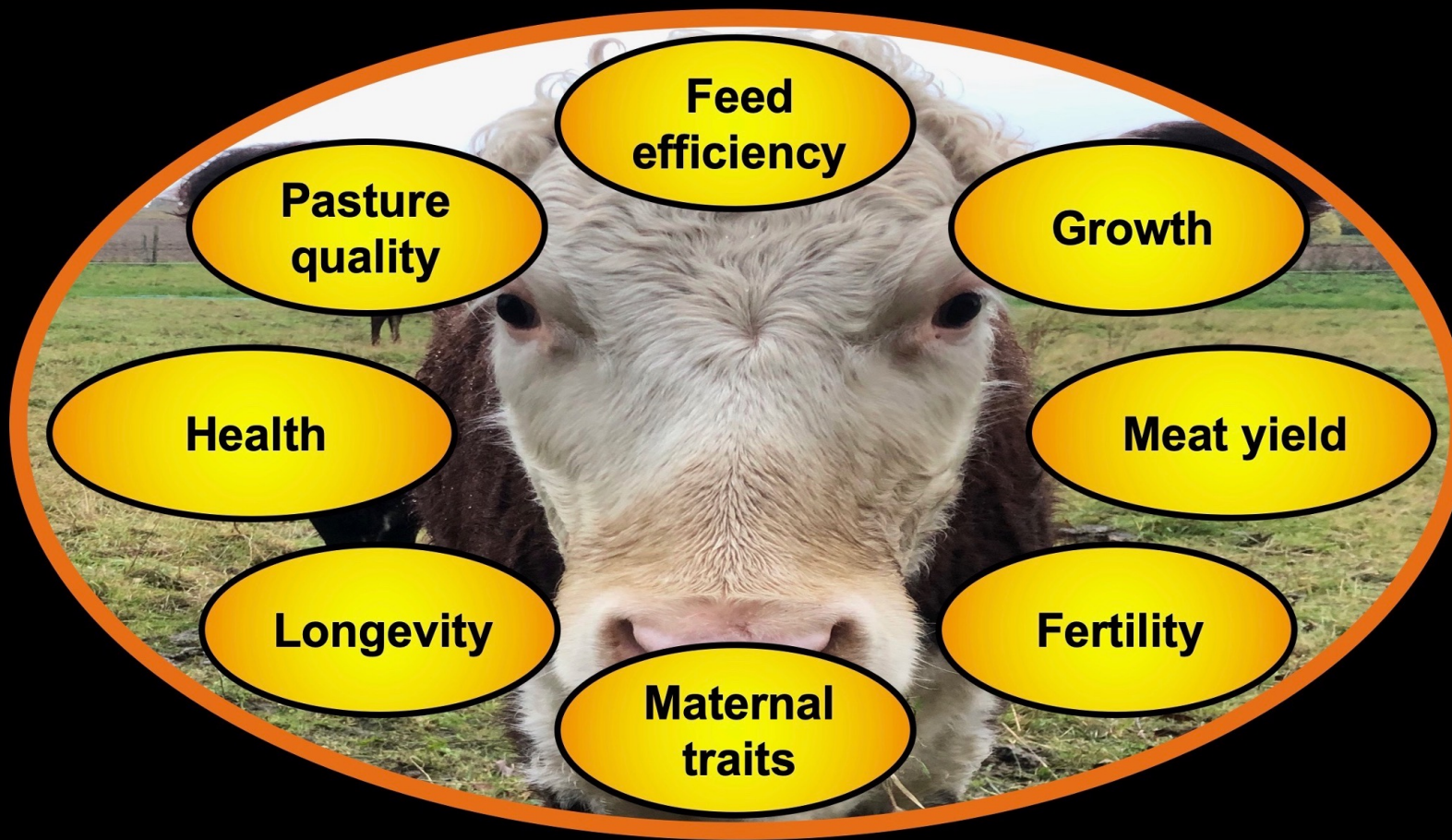
Source: Created as an example by Dr. Jude L. Capper, 2021.

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Improving key performance indicators reduces environmental impacts

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GHG benefits of dairy-beef now recognized – sucklers will need to demonstrate benefits

Annual requirements of one suckler cow:

- 3,954 kg feed DM
- 20,047 litres water
- 2,459 kg CO₂

Need to justify these impacts vs. beef from dairy.

Source: Created by Dr. Jude L. Capper, 2021. Calculation based on feed and water requirements of one Angus cow weighing 544 kg producing 7.8 kg of milk per day, with calf weaned at 207 days of age.



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Can we grow human food crops everywhere?



Source: Created by Dr. Jude L. Capper, 2021

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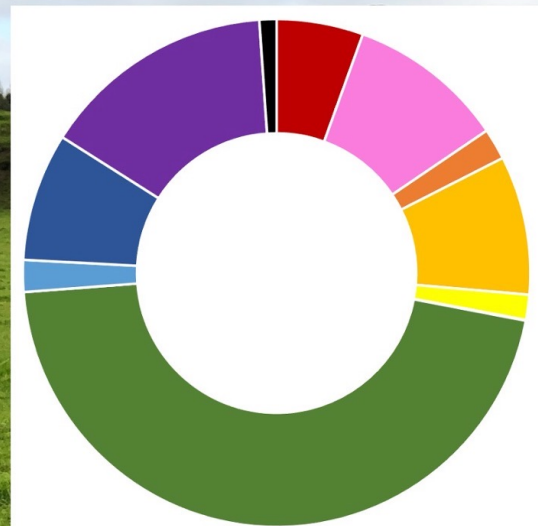
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Standard footprinting tool urgently needed across the industry



- Fuels
- Lime
- Bedding
- Carcass disposal
- Enteric fermentation
- Applied manure
- Crop residues
- Fertiliser
- Feed
- Pesticides
- Transport
- Manure storage
- Grazing manure



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Source: Created by Dr. Jude L. Capper, 2021. Example carbon footprint results based on a beef finishing farm.

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You don't have to be the biggest,
you do need to do your best



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Source: Created by Dr. Jude L. Capper, 2021.

Thank you!

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<http://bovidiva.com/presentationlinks>



Questions?



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