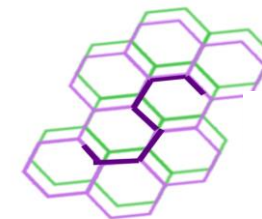
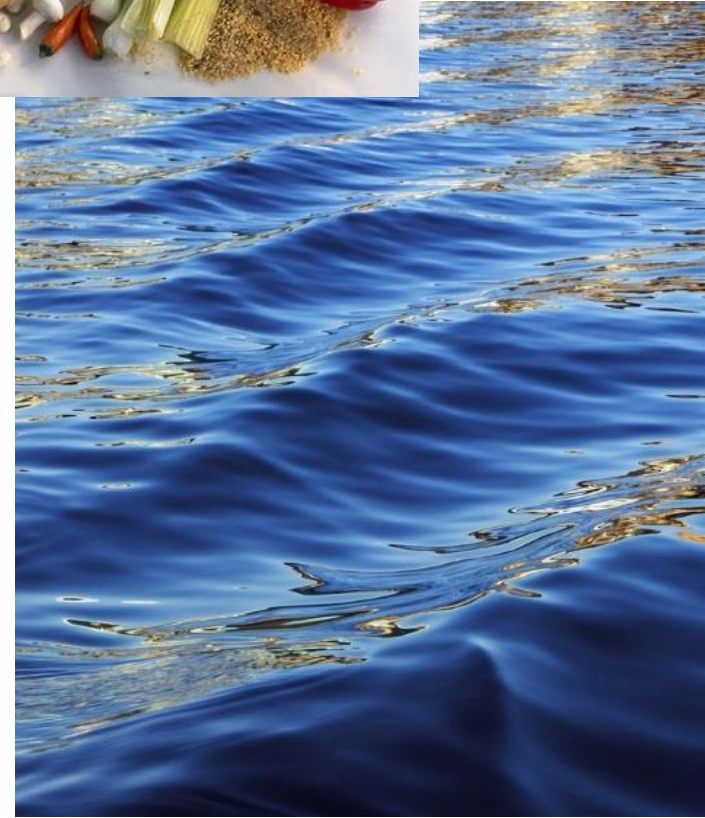




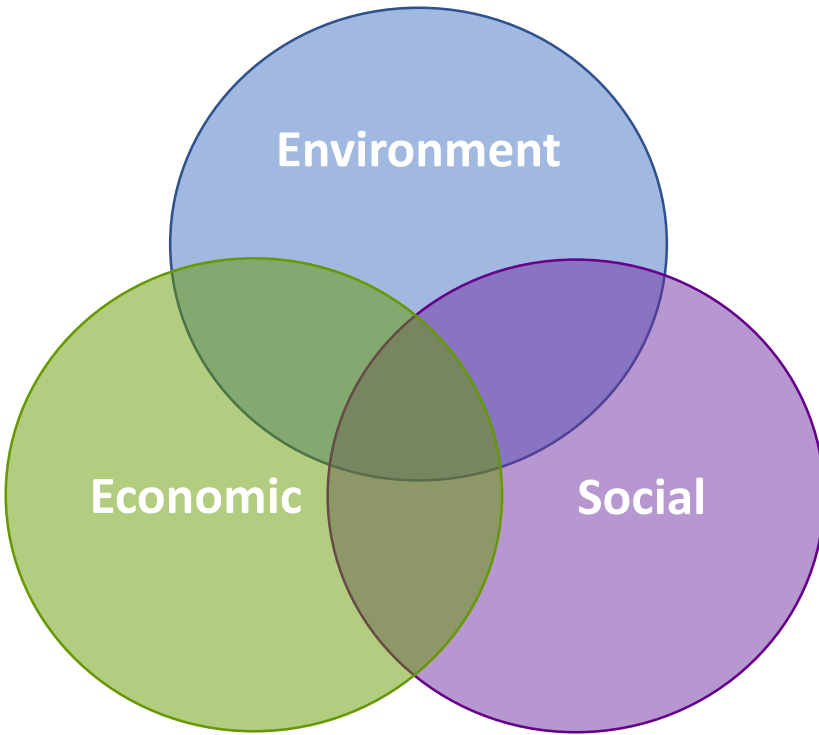
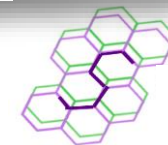
Science Perspectives on Sustainable Diets

Cindy Schweitzer, PhD
California Dairy Sustainability
Summit
November 27, 2018



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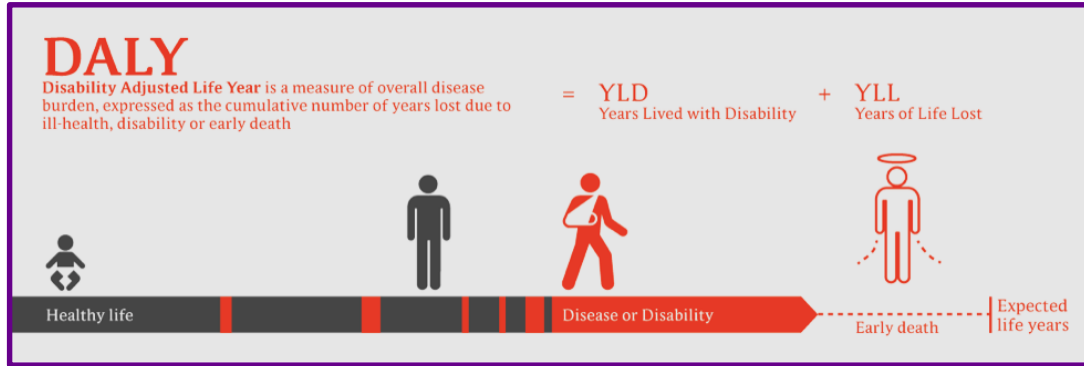
- Sustainable Diets Database

[illegible]

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What is the impact of adding 1 glass of milk to the American diet?

Proof of concept study



Disability Adjusted Life Years = damage to human health
1 DALY = 1 year of life lost

Trade-offs of milk consumption due to:

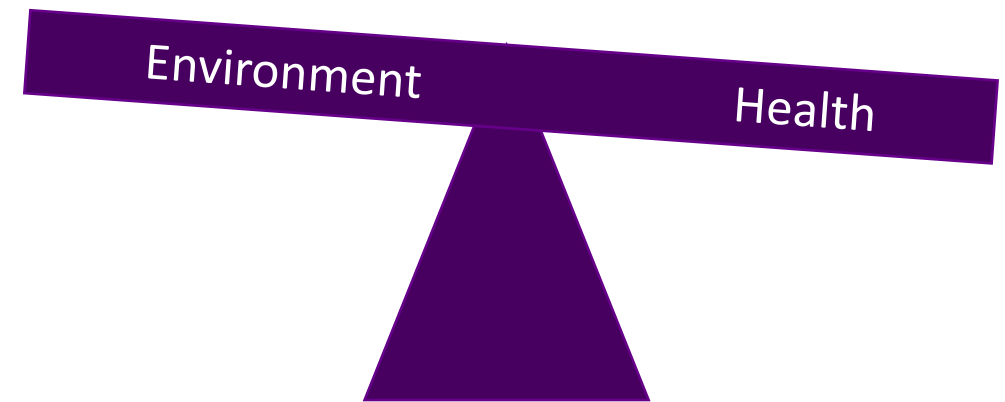
Nutrition/health

- Colorectal cancer
- Stroke
- Prostate cancer

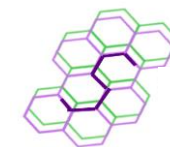
Environment

- Global warming (GHG)
- Particulate matter

Overall, milk improves healthy life!



Stylianou KS et al. Int J Life Cycle Assess 2015



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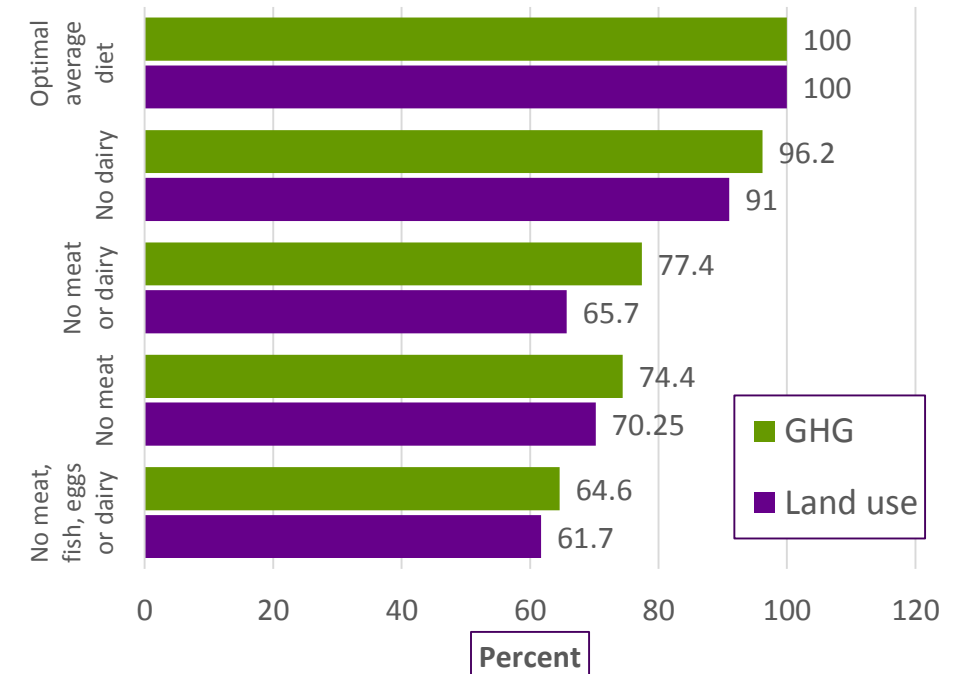
Environmentally-friendly diet must be healthy

Example from Dutch Dairy Association

Environmental impact of various Dutch diets developed by the Netherlands Nutrition Centre

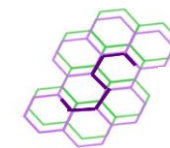


Environmental impact of limiting animal-based food groups



Perspective: “A flight from the Netherlands to Thailand releases 5.4 tons of GHG”

Peters, Stephan & Est, Lionel & Blom, Luuk. Voeding Magazine 2017



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Dairy has socio-economic benefits

Relationships between dairy development and human welfare

Dairy cow ownership or improved production significantly impacted socio-economic factors



Increased milk consumption and nutrition



Increased total income 27-600%

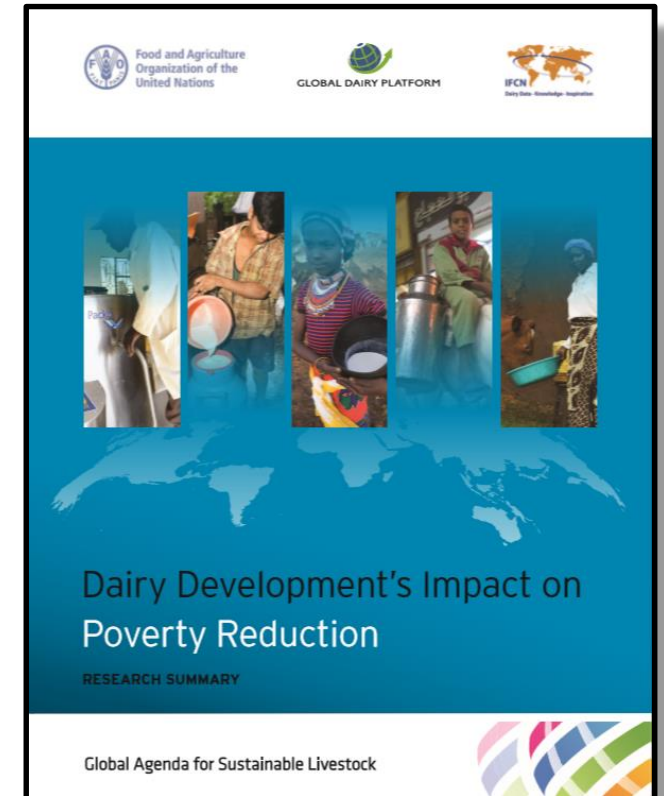


Generated employment beyond farm gate



Increased crop yields and cultivation areas

IFCN: International Farm Comparison Network



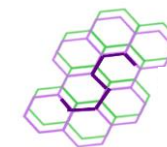
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EAT-Lancet Commission will recommend reduced dairy foods



Transforming the food system is the key to improving human health and the health of the planet.

- Unhealthy food is the leading cause of disease worldwide . . . and undernutrition
- Food production is causing stress to the planet. . . 1/3 GHG, biodiversity loss, water depletion
- To reduce GHG, need to urgently and fundamentally change the way we eat & produce food
- Lack of scientific consensus is slowing down action:
 - What is a healthy diet for all humans?
 - How must food production change to be sustainable?
 - No clear, science-based guidelines how we can provide healthy diets from a sustainable food system



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EAT-Lancet health impacts of sustainable diet modelling

- **3 dietary change strategies:**

- Environment focus - Replace animal source foods with plant foods
- Food security focus - Improve energy intake and weight levels
- Public health focus - Different types of nutritionally balanced diet patterns

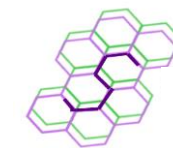
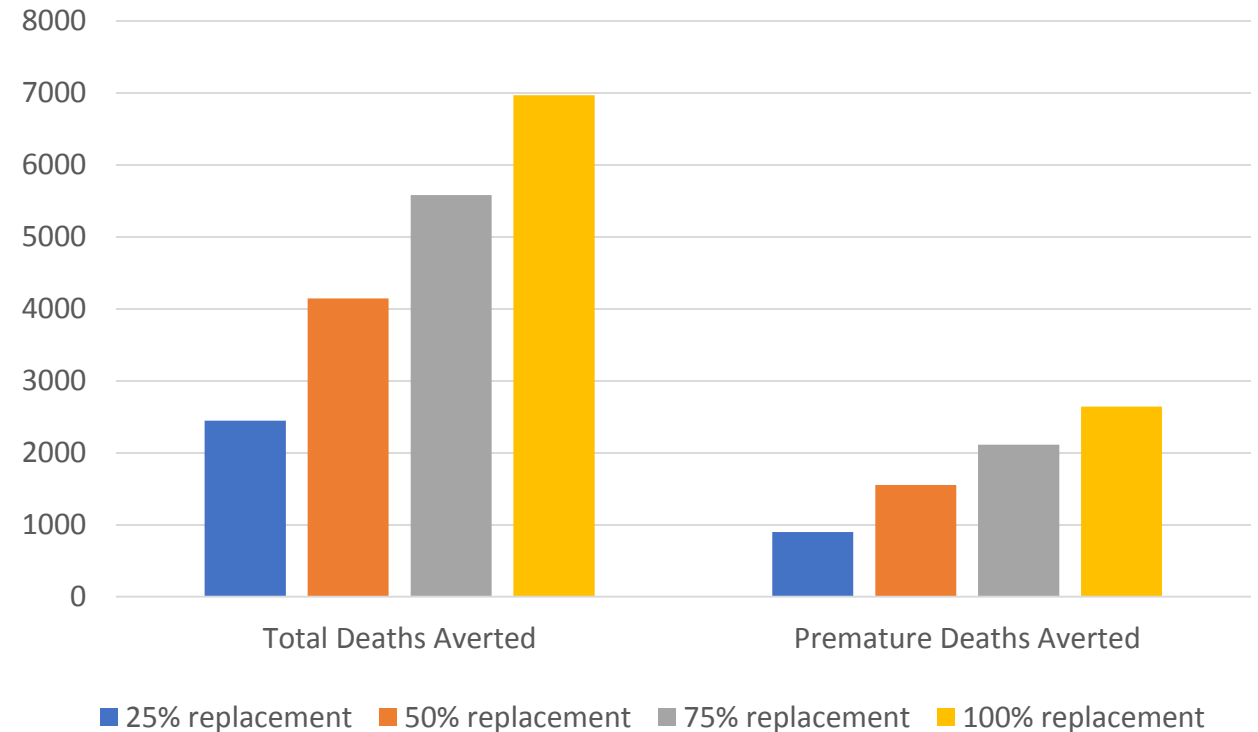
- **Impacts evaluated:**

- Nutrients
- Mortality
- Environment

- **By populations:**

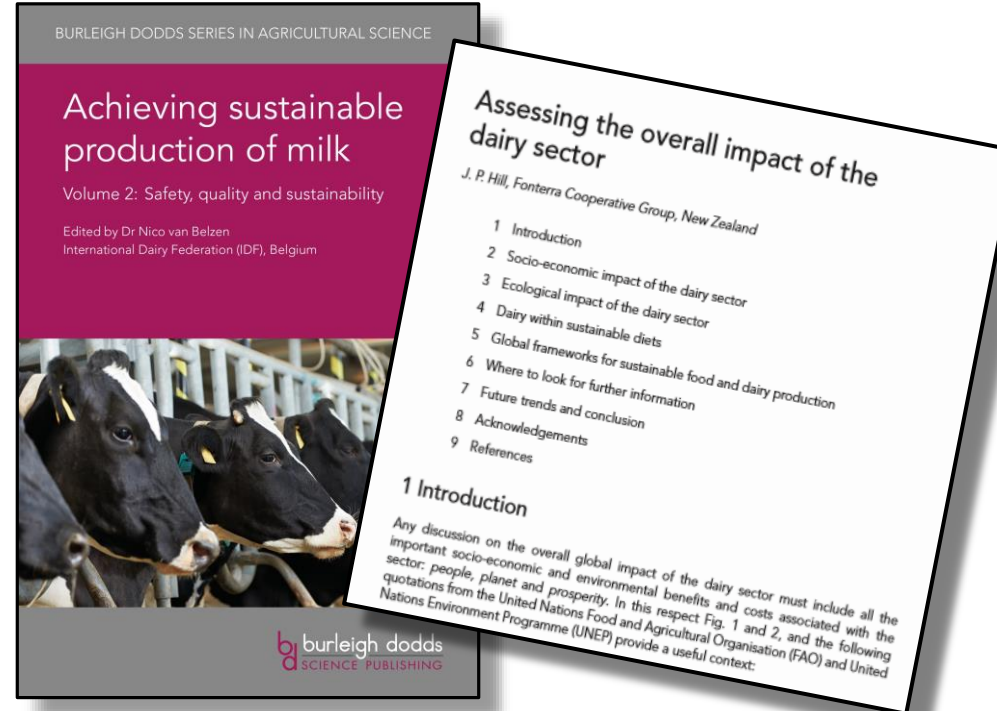
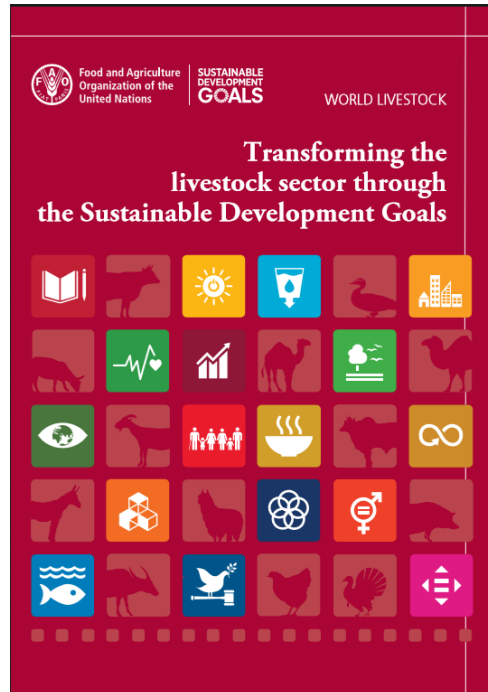
- Global
- High income
- Upper middle income
- Lower middle income
- Low income

Health Impact of Replacing Animal Foods with Plant Foods (in thousands)

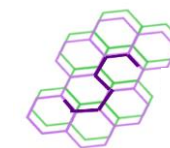


Thank you!

- Resources



Cschweitzerashton@gmail.com



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