Food Miles & Carbon Footprints

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foodmiles.com

Food Miles

Food miles are the distance calculated from production location to retailer and home where it is consumed.

Simple calculators (such as foodmiles.com) take no account of the means of transport used: airplane, truck, car, train or ship, each of which have different carbon footprints per kilometre travelled – see below.

Paradoxical example 1:

Transport emissions (gCo2) for a bottle wine consumed in New York

- Napa wine: 2651
- French wine: 1811

Paradoxical example 2:

Assuming an average car emits 170g Co2 /km, a drive to and back from the bottle shop 4 Km away will exceed the emissons of producing and getting the wine from Australia to the UK / European bottle shop.

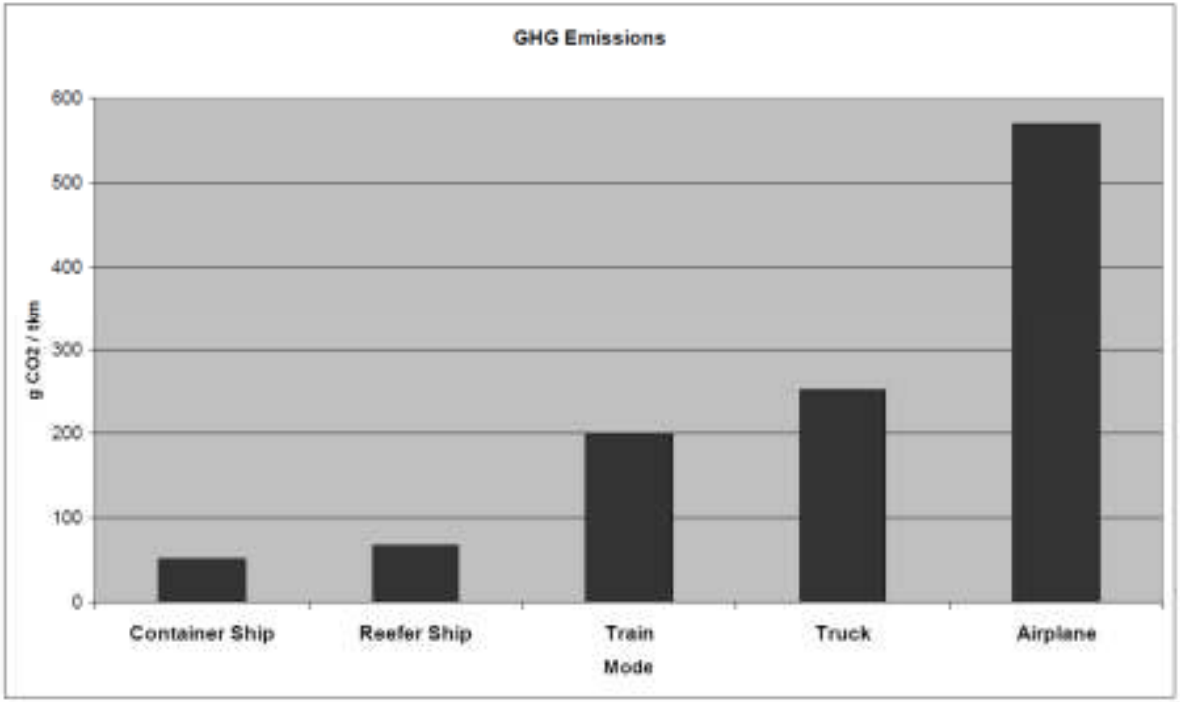
Source:

AAWE Working Paper No9

Red, White & "Green": the cost of carbon in the Global Wine Trade

Tyler Coleman & Pablo Paester, Oct 2007

Figure 1. Comparative cargo emissions



Total Food Emissions

Total food emission measurements take into account:

- Energy emissions at point of production (fertilisers, pesticides, irrigation, machinery etc., including packaging and transport of materials to the production point)
- Distance covered to retailer
- Modes of transport used
- Final delivery transport (between retailer & home)

Transport accounts for a minority component of total emissions (11%); production accounts for 83%

Final delivery transport accounts for a significant proportion of overall transport emissions (36%)

When other emissions are included (such as cooking / preparation, waste disposal etc.), the proportional impact of transportation emissions is further reduced.

Paradoxical example 3:

Co2 emissions for New Zealand lamb consumed in the UK stand at 688kg Co2/tonne = 4x lower than UK lamb (2849kg Co2/t), due to the production methods and energy sources - **Caroline Saunders and Lars-Christian Sorenson**

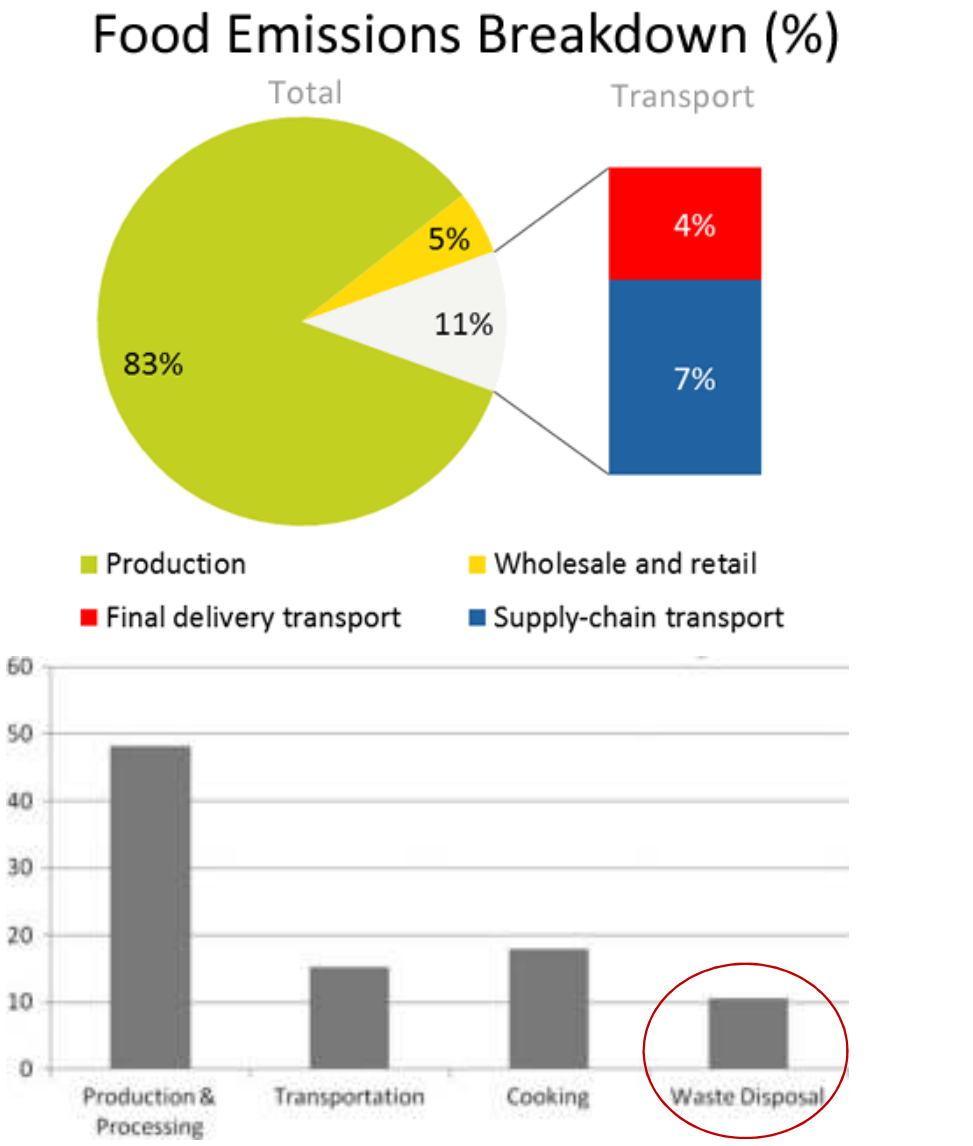


Fig. 9.8 Life cycle carbon emissions (millions of metric tones of CO 2 e) for plant-based foods

Conclusion: New World wines bought in Europe do not consistently have a higher carbon footprint than European wines; <u>in some cases the footprint is lower</u>

- **Modes of transport** are often more important than the distance travelled (eg intra-continual road trucking vs intercontinental shipment)

- **Production methods** have a greater overall effect on the carbon footprint of a bottle of wine than transport:

  - ❑ Recycling materials / water
  - ❑ Use of renewable energies: solar / wind / hydro-electric / biofuels
  - ❑ Change type and reduce quantity of pesticides / fertilisers (organic vs agrichemical)
  - ❑ Improve irrigation efficiency
  - ❑ Reduce use of oak & use it for longer

- **Contextualise your concerns**:

  - ❑ Eating beef is x7 more ecologically damaging than drinking wine (Shrink That Footprint –Lindsay Wilson 2014)
  - ❑ Think before using your car (rather than walking or taking public transport)

Sources & references

- JI Boye & Y Arcand (eds), Green Technologies in Food Production and Processing, 2012. Chapter 9: Food transportation issues and reducing carbon footprint – Wayne Wakeland, Susan Cholette, Kumar Venkat
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- Red, White & “Green”: the cost of carbon in the Global Wine Trade Tyler Coleman & Pablo Paester, AAWE Working Paper No9, Oct 2007
- Carbon Footprints, Food Miles and the Australian Wine Industry, Vicki Waye, Melbourne Journal of International Law, Vol 9, 2008
- Natural Matters – 02.08.2008
- Shrink That Footprint –Lindsay Wilson (2014)