

Food

Physics and Mathematics of Sustainable Energy

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1.
 - (a) Suppose you eat around 2 kg of red meat per week. (This is roughly the average per capita US consumption.) What is the CO₂e associated with this over the course of one year? Is this a lot or a little?
 - (b) Suppose you replace this red meat with chicken or fish every week. How much CO₂ have you prevented from being emitted?
 - (c) How much driving in an average car would emit a similar amount of CO₂?
2. Answer the following questions using Table 1 and Figure 2 from Weber and Matthews.
 - (a) How much energy does it take to ship 3 metric tons of corn from Iowa to Bar Harbor via truck?
 - (b) How many tons of carbon dioxide does this emit?
 - (c) What is the total emissions associated with 3 tons of corn?

Some useful info:

- Burning one gallon of gasoline releases 38 kWh of energy and 9 kg of CO₂.