

# Infusion Tips

The late Dick Brinckerhoff suggested the following criteria for ways to infuse societal topics into our science courses: items should be a) challenging, b) relevant, c) brief, and d) require a value judgment. Consider the following:

1. National Public Radio reported on "Morning Edition" on 19 June 2007 that two possibilities are being considered to reduce the methane generated by New Zealand sheep: 1) genetically re-engineer the microbe in sheep that produces methane; 2) alter sheep feed so that the microbes can't digest it. The reason to reduce the methane is that it is a gas which enhances global warming in the atmosphere. Which of these two ideas, if any, would you be in favor of carrying out? Why?

2. Patrice Green is a medical internist and animal rights advocate from Baltimore. The following is excerpted from an op-ed by her published in the Thursday, 19 July 2007, Baltimore Sun, headed, "Save the Planet with a Vegetarian Diet":

Animal agriculture, a major source of water pollution and deforestation, has become one of the biggest culprits in global warming. The Food and Agriculture Organization of the United Nations released a report this year showing that farmed animals are a top contributor to today's serious environmental problems, including greenhouse gases.

The report found that livestock produced 35 percent to 40 percent of all methane emissions (which have 23 times the global warming potential of carbon dioxide), 65 percent of nitrous oxide (which is 320 times as warming as carbon dioxide) and 64 percent of ammonia, which contributes to acid rain.

Nearly 30 percent of the Earth's land surface is used for grazing animals, and that number is expected to increase with the global livestock sector growing faster than any other agricultural subsector. That's because in almost every region of the world, consumption of animal products is on the rise.

This trend has another disturbing consequence. The global increase in meat consumption has caused rates of obesity, diabetes, heart disease and other diet-related illnesses to soar.

What do you think of these assertions? Do they seem valid to you? Are there any inaccuracies?

*(Editor's Note: This op-ed was brought to our attention by Priscilla Laws, Research Professor of Physics, Department of Physics and Astronomy, Dickinson College, Carlisle, PA 17013.)*