



## Energy Co2 : Climate Business

### Daisy the Cow's Methane Hoof-Print

**What is more dangerous, a wolf or cow? While a sheep might tell you one thing, for a climate expert, the question is a no-brainer: ruminant animals and the gases they produce contribute to global warming.**



Cows produce up to 500 litres of methane a day. The odorless gas is a potent greenhouse gas and causes global warming (Photo: Reuters)

Beans are famous for causing flatulence, but for ruminant animals like cows and sheep, the musical fruit is grass. As cows digest it in their complex stomachs, they produce methane, a greenhouse gas twenty-five times more potent than carbon dioxide.

Methane emissions also come from coal mines, landfills, dams, rice paddies, and wetlands, but almost half of all global methane emissions come from belching livestock. According to the UN Food and Agriculture Organization, cattle farming is responsible for almost one fifth of man-made global warming.

#### Related Articles

- The Top Five Biofuel Crops
- Carbon Dioxide
- Why Does an Insurance Company Care about Climate Change?

The Journal of Animal Science says that ruminant animals produce between 250 and 500 liters of methane gas every day. While this may not seem like much, the combined environmental effect of the world's livestock is enormous. Just consider the numbers: there are around 1.5 billion cattle on our planet - more than double the number 30 years ago. There are also over a billion sheep and some 800 million goats.

In the past fifty years, global meat consumption has increased fivefold and is still on the rise. This means more cows and more methane. A third of the land surface of the entire planet is already used to raise animals, which is about seventy percent of all agricultural land. Over a third of all cereal production is needed to feed those animals. About 6 percent of the 50 pounds of food that a cow eats every day is lost as methane.



### **Biogas (Click on the image to read more)**

Biogas plants offer farmers like Josef Pellmeyer a new source of income. What is more, they dispose of methane from cow's manure and produce renewable energy (Photo: Allianz)

The world's billion pigs are no less fond of eating, but they produce much less gas than cows. And while industrialized animal farming and meat transportation clearly have negative impacts on the environment, the biggest problem remains methane emissions from ruminant livestock.

### **Put a cork in it**

Scientists believe that methane from livestock can be reduced. Projects are underway to suppress microbes and bacteria responsible for methane emissions by changing a cow's or sheep's environment or diet. Some German researchers have experimented with pills designed to prevent cows from belching so much. It is not an issue of etiquette, but of economics.

"There are plenty of reasons to keep the cows from giving off methane," Sherwood Rowland, a Nobel Prize-winning chemist, told the Los Angeles Times. "It makes more sense to have it as weight on the cattle. If we can succeed, cows produce less methane and have more meat or milk."

Arguably, the best way to reduce methane emissions is to eat less beef and lamb, and consume less dairy products. If you cannot live without that steak or burger, there might be other ways to help. Some energy producers and dairy farmers in the United States and Germany have also started to use the methane released in cow manure to generate electricity.

All this attention on the digestive habits of cows might not make good dinner table conversation, but methane gas has been recognized as an important agent of global warming. Although not as abundant as carbon dioxide, methane is better at trapping heat in the Earth's atmosphere.

Reducing the amount of methane gas that comes roaring out both sides of cows or sheep might help. Otherwise atmospheric methane concentrations will continue to propel climate change – which is not so funny after all.

editor: Miki Yokoyama

publishing date: November 23, 2007

© Allianz 2007, All Rights Reserved