

# As true as a belching cow

Karel Knip, *NRC Handelsblad*, 10<sup>th</sup> January 2008

**Marianne Thieme reproaches Al Gore for ignoring the greenhouse effect of livestock farming in his film. While her own documentary fills that gap, it has been the target of criticism. Yet there is nothing wrong with her calculations.**

*Rotterdam, 10th January 2008.* There are Dutchmen who would rather drive an SUV or a Hummer than stick a piece of meat in their mouths. And Dutchmen who would prefer to eat half a horse than be seen in an SUV or Hummer. Recently they have become embroiled in the academic debate on the question: who makes the biggest contribution to the greenhouse effect.

This debate started on 10<sup>th</sup> December with the screening of the documentary *Meat the Truth*, which was commissioned by Marianne Thieme's Party for the Animals. In the film, Thieme discusses the disadvantages of livestock farming in front of an Amsterdam audience. The style of the film was copied from *An Inconvenient Truth*, in which Al Gore explained the dangers of the greenhouse effect. He also preached to an audience that was already converted.

Thieme reproaches Gore for leaving the most prominent greenhouse polluter unmentioned: the livestock production sector. She does not know whether he succumbed to pressure of the livestock producers or the American love of hamburgers, or that he simply 'forgot'. She, however, has turned Gore's omission into the central theme of her film. There is no other sector that (in global terms) contributes so much to the emission of greenhouse gasses as livestock farming, she contends. It is more than all forms of transport added up together.

This is a surprising approach for a party from which you would initially expect to devote attention to animal suffering and the abuse of antibiotics in the livestock sector. The most exceptional aspect of *Meat the Truth* is that it avoids all crude effects. The film lacks the demagogy and the many inaccuracies, which made Gore's film so weak. At the very most, the claim that the Netherlands requires four times its own surface area for 'consumption' can be criticised. The implication is: for food. In reality a large surface area is also required for the production of building materials and paper.

In global terms, the livestock farming industry is responsible for 18 percent of greenhouse gas emissions. That is more than the transport sector, which only reaches 13 percent. That is the central tenet of the film. The conclusion is subsequently that the climate policy should perhaps expect more from a reduction in meat consumption than car use. The consumption of less meat is urged, not total abstinence. Plant-based foods can be just as healthy as meat.

There were fast and furious reactions to the statistics used in the film. On 21<sup>st</sup> December, the Netherlands Environmental Assessment Agency (MNP) already claimed on their website that Thieme's sums were no good. The FAO report to which she referred should have arrived at a figure of 10 percent rather than 20 percent. The FAO had attributed 'nearly the complete deforestation' to the livestock industry and was, moreover, not accurate in ascribing the energy use of the entire meat processing chain of the livestock production industry. The MNP's conclusions were also taken up by the weekly news magazine *Vrij Nederland* in a malicious fashion. And the farmers themselves, represented by the agricultural organisation LTO, announced that the livestock farming industry produced 'high-quality food', which was produced from grass and crops that had first removed CO<sub>2</sub> from the atmosphere.

The FAO report *Livestock's Long Shadow*, upon which Thieme bases her argument, appeared in 2006. The German agricultural economist Henning Steinfeld is the primary author. It is an extremely thorough research into, and inventory of, all the environmental effects of livestock farming, both intensive and extensive. A separate chapter deals with the contribution to the global emissions of three greenhouse gases: CO<sub>2</sub>, methane and nitrous oxide. The most significant contribution comes from CO<sub>2</sub> emissions, which are a consequence of deforestation for the production of agricultural land. Other major items are the emission of methane from the stomachs of ungulates and the formation of nitrous oxide from manure or the ammonia that escapes from manure. Viewed in global terms, the energy use of the meat processing chain is peanuts: just one of two percent of the whole. Steinfeld could have also left it out entirely. And naturally Steinfeld did not include the CO<sub>2</sub> exhalations of the animals themselves as greenhouse gas emissions, as the LTO perhaps assumed.

The thing that weighs most heavily on the greenhouse balance is the effect of deforestation and that is also the one that is most difficult to quantify. This is why Steinfeld only made a calculation in which the whole deforestation issue was omitted. Then he reached a contribution of livestock farming to global emissions of 14 percent. However, there is certainly no question of him attributing 'nearly the entire deforestation' to livestock farming. Worldwide deforestation affects around 13 million hectares a year and Steinfeld only attributes 3 million of these to livestock production. He assumes that two-thirds of the forests felled or burned in Latin America make space for grass and soy crops. He erred on the side of caution.

In a response, the MNP acknowledged that it is indeed incorrect to call this number 20 percent. And that the FAO "did indeed attribute a much lower proportion of the hectares to deforestation". Nonetheless, the MNP chooses to use a different calculation to Steinfeld, who – once again – reaches a total of 10 percent. It would be 14 percent "if we used an estimation that was more in the direction of the FAO assumptions as a point of departure."

So is the transport sector the biggest greenhouse polluter? This week it is the contributions of this sector that have been once again quantified in Proceedings of the National Academy of Sciences. Transport now comes to a share of 16 percent, but then again many completely different substances (such as mono-nitrogen oxides (NO<sub>x</sub>), carbon monoxide and soot and sulphur) have been counted and they have also looked at the impact of the global thermoregulation. NO<sub>x</sub> contributes to the formation of ozone, which is also a greenhouse gas. The approach makes it immediately clear that a pure comparison between the two sectors is by definition impossible.

*English translation of an article published by Karel Knip, Science editor, NRC Handelsblad, 10<sup>th</sup> January 2008*