



## **Claim: Genetically Engineered Plants Fight Global Warming**

Methane lasts in the atmosphere for about 12 years before it is completely broken down into other molecules. Half of it breaks down in just 7 years. Thus, no matter how many 'cow farts' are released today, 100% of the methane will be naturally gone in 12 years. □ *TN Editor*

Methane in the atmosphere is a very potent greenhouse gas. Over a 20-year period, methane traps 84 times more heat per mass unit than carbon dioxide. There is a distinct possibility that large increases in future methane may lead to surface warming that increases nonlinearly with the methane concentration. The concentration of methane in the atmosphere has more than doubled, since the start of the Industrial Revolution, and approximately a fifth of the warming the planet has experienced can be attributed to the gas.

According to Wikipedia; Multiple independently produced instrumental datasets confirm that the 2009-2018 decade was 0.93°C warmer than

the 1850–1900 baseline period. A reasonable linear first approximation would predict that halving total atmospheric methane will reduce global average temperatures by 0.186 °C.

The biggest natural source of methane natural emissions is wetlands. Bacteria that live under low oxygen conditions in waterlogged wetland soils produce methane. Approximately 30% of atmospheric methane comes from that source.

The arctic permafrost and methane ice clathrates under the oceans contain huge amounts of methane.

Climate scientists are worried that as global air temperatures rise it will cause methane ice to vaporize, increasing the release of heat-trapping methane into the air that will in turn cause more methane ice to vaporize and release even more methane in a feedback loop that results in out of control greenhouse warming. The endpoint of that process might be a Venus syndrome scenario that destroys all life on earth but it is more likely that a new equilibrium will come about where temperatures won't exceed the hottest temperatures of the cretaceous era when dinosaurs lived in steaming hot swamps at the north pole and the equatorial regions were vast deserts. Of course, that type of climate will be disastrous for the human race since desertification will cut the food supply and make vast stretches of land too hot to live in.

Cows, pigs and other ruminants have methanogenic bacteria in their stomachs that produce methane in their burps and farts. The manure they excrete contains those same bacteria and goes on producing even more of the greenhouse gas. There are 1.4 billion cattle in the world, and billions of other methane producing ruminant animals. The United Nations report, "Livestock's Long Shadow" claimed livestock are responsible for 18% of Green House Gas emissions. Total agricultural methane releases come to 188 million tons.

Rice paddies are another big source of methane. The flooded swamp-like conditions have low oxygen levels that methane-producing bacteria thrive in. Methane from rice contributes around 1.5 percent of total global greenhouse gas emissions. It is not necessary to grow rice in

flooded fields and there is a movement to grow rice under dry conditions that drastically reduce methane but that also lowers rice yield.

As it becomes clear that the effects of global warming are causing more and more deaths and costly destruction of the world's infrastructure, some environmentalists are proposing radical solutions like restricting cattle farming and the sale of meat. However, there is work on finding feed additives that reduce the amount of methane generated by bacteria in the stomachs of ruminants.

A number of compounds from seaweed were found to reduce the amounts of methane they emit, but the bacteria mutate and adapt to the seaweed compounds and they lose their effectiveness. There are seaweed compounds in tests now that might keep their effectiveness over time, but there are no guarantees that strategy will work.

[Read full story here...](#)