

10 Minutes For The Planet**Methane: a cow's dirty secret**©

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Stressed syllables are underlined and in **bold**.*

Hello! I'm Sarah Heath and you're listening to 10 Minutes for the Planet on EnglishWaves.

Methane is a **chemical** compound, which is mostly found **underground** or under the sea floor and is the main constituent of natural gas. It is used **largely** in our homes in **ovens** and heating systems, for example, but also for electricity production when it is burned as a fuel. It has been proven to be more **efficient** than other hydrocarbons in terms of having a lower level of carbon dioxide released during combustion.

However, while increased levels of carbon **dioxide** in the earth's **atmosphere** have been proven to contribute to **global warming**, methane gas is around 86-105 times more **powerful** in terms of **trapping** heat when measured over a 20 year period which, according to the International Panel on Climate Change, has led this **odourless** gas to account for approximately 16% of global greenhouse gas emissions in 2015.

Methane is emitted into the atmosphere via various means **including** **leaks** in natural gas systems and natural **wetlands** but the raising of **livestock** for **dairy** and meat is a major contributing factor. A **feature-length** documentary, Cowsspiracy: The **Sustainability** Secret, which was executive produced by well-known actor and environmentalist, Leonardo DiCaprio, reveals that the **industry** which causes more destruction than any other, including to a large part through methane **production**, is animal agriculture.

And why is this? What is it that is producing all this methane? One answer is...cows! A single cow can produce up to 400 litres of methane a day which is enough to power a small fridge for 24 hours. And when you consider that in the United States alone, 42 million cows go through the factory-farmed system each year; that equates to enormous amounts of methane being released into the atmosphere.

largely (adv.) mainly**oven** (n.) an enclosed heated place where food is cooked**global warming** (exp.) increase in temperature of the earth**to trap** (vb.) to catch**odourless** (adj.) without smell**leak** (n.) accidental escape of sth.**wetland** (n.) area of land saturated with water**livestock** (n.) farm animals**dairy** (n.) products made from milk**feature-length** (exp.) as long as a film**sustainability** (n.) avoiding the depletion of natural resources

Some scientists blame the low-quality grain fed to **cattle** which cannot be **digested** properly, resulting in higher levels of **belching** and flatulence which produces methane gas. And cow **burps** are considerably worse than cow **farts**!

But it is not just the **expulsion** of methane from a cow's front and back end which is creating the problem: manure from this favourite source of meat plays a major role in methane emissions from this industry. **Figures** from the US, arguably the world's worst **culprit** in the factory farming of cattle, show that 500 million tons of cow **dung** are excreted each year. That equates to a farm of 2,500 cows creating the same amount of waste as a city of over 400,000 people.

Some manure is used to spread on fields as fertiliser but increasingly large quantities are left **to rot** in **slurry pits** which **encourage** the growth of bacteria that ultimately produce twice as much methane.

Atmosphere-harming gases aside, the meat and dairy industry has some **staggeringly** environmentally-irresponsible **statistics**: 2,500 litres of water are needed to produce half a kilo of beef; 1,000 litres of water for 4 litres of milk; 82% of **starving** children in the world live in countries which produce food for animals which are ultimately consumed by people in the first world, and livestock uses 45% of total land surface here on earth.

Reducing methane emissions would create tangible **benefits** almost immediately according to scientists and to combat this **ongoing** increase in methane emissions from the agriculture sector, researchers are investigating new alternatives to cattle feed, such as products made with **seaweed**, and even **genetic** engineering in an attempt to **breed** cows which are less gassy.

In India, the National Dairy Development Board has **developed** a new **software tool** which helps to balance the diet of India's 2.4 million cows with the aim of reducing methane emissions but also to increase milk **output**. And it seems to be working!

Studies **are** also **underway** to investigate the efficiency of converting **livestock waste** into biogas as a source of renewable energy. Spanish **scientists** have discovered that adding beetroots to cow manure, significantly increases methane production through anaerobic digesters generating renewable power. One farmer in Wales is using such a system so effectively that he is returning electricity back to the **grid** from energy produced from the slurry of his 300 cows – electricity which is then locally used by 80 homes.

cattle (n.) cows

belch / burp (nouns, also verbs) passing gas through the mouth

fart (n.) passing of gas through the anus

figures (n.) statistics

culprit (n.) organization/person responsible for sth bad

dung (n.) excrement of animals

to rot (vb.) to decompose

slurry pit (exp.) place where animal waste is kept on a farm

staggeringly (adv.) shockingly

starving (adj.) very hungry

ongoing (adj.) continuing

seaweed (n.) plant growing in the sea

to breed (vb.) to raise animals

software tool (n.n.) computer programme

output (n.) production

to be underway (exp.) to be in progress.

livestock waste (n.n.) animal excrement, manure

grid (n.) power network

Initiatives such as Green Monday, which encourages consumers to avoid **animal** products on this one day of the week, may also help to gradually reduce the problem and **according to** French environmentalist Yann Arthus-Bertrand it is “a personal contribution to the earth”.

according to (prep.) in the opinion of

***Tip!**

The main stress in three syllable words usually falls on the first or second syllable.

Examples of first syllable stress:

chemical, **atmosphere** **industry**, **animal**

Examples of second syllable stress:

efficient, **dioxide**, **encourage**, **developed**

More rarely it falls on the third/final syllable.

underground