CATTLE NUTRITION

# Do Cow Farts Really Cause Global Warming? The Surprising Truth Behind Cattle Feed

Do cow farts cause global warming? Learn the real science behind cow burps, dry-season veld feeding, protein supplements, and the economics of pen fattening.

By FeedSport Nutrition Team · Published 9 November 2026 · Updated 8 November 2026 · 8 min read

KEY POINTS

- About 95 percent of the methane from cattle comes out as burps, not farts.
- Dry winter veld is low in protein, so the rumen works slowly and makes more methane for less weight gain.
- A balanced protein supplement feeds the rumen microbes, so cattle digest dry grass faster and hold their condition.
- Pen fattening pays only when the value of the extra weight is more than the cost of the feed eaten.

If you have ever spent a quiet evening sitting near a cattle kraal, you know cows are not particularly shy about passing gas. They do it loudly, frequently, and without an ounce of shame.

Over the past few years, that familiar barnyard sound has become an international punchline. You might have seen news headlines or internet jokes asking: do cow farts cause global warming? Serious researchers around the world have spent millions of dollars studying livestock gas, claiming that our herds are warming up the atmosphere.

It sounds ridiculous to anyone who has herded cattle through the bush. Yet behind the jokes lies a surprising truth, along with a massive biological misunderstanding. Cows really do produce a heat-trapping gas called methane. But the gas scientists worry about is not coming out of the tail end.

Roughly 95 percent of that gas comes out when the cow burps.

## Nature's biggest fermentation pot

To understand why a cow belches so much, you have to look at what happens after it swallows a mouthful of grass.

A human being cannot survive on dry grass or maize stalks. Our single stomachs cannot break down tough plant fibre. Cattle, however, are ruminants. Inside a grown beast sits a giant fermentation chamber called the rumen, which can hold over a hundred litres of liquid and chewed grass.

Think of the rumen as an enormous traditional brewing pot. The cow does not actually digest the grass by itself. Instead, it hosts trillions of microscopic helpers: tiny living organisms that ferment the tough plant fibres into rich nutrients the animal can absorb into its bloodstream.

This internal brewing operation produces two main side products: a massive amount of energy that turns grass into meat and milk, and a steady stream of gas.

Deep inside the stomach, specialised microbes combine leftover hydrogen and carbon into methane. If that gas stayed trapped inside, the cow would bloat dangerously within hours. To relieve the pressure, the animal rhythmically forces the gas up its throat and quietly exhales or burps it into the air while chewing its cud.

Methane is a potent gas that traps more heat in the air than carbon dioxide, although it breaks down naturally after about a decade. The cow is not sick, nor is its digestive system failing. That steady burp is simply the exhaust pipe of one of nature's greatest recycling engines.

## What happens when the veld dries out?

Anyone farming in Zimbabwe knows what happens between June and October. The rains are long gone, the green pastures disappear, and the veld turns into a sea of pale, brittle straw.

During these dry winter months, the grass loses almost all its protein and becomes packed with tough, woody fibre. When a cow eats this dry pasture or chews on dry maize stalks left behind after harvest, its internal brewing pot slows right down. The microbes inside struggle to break down the hard, woody material.

Feed sits in the rumen for much longer. Because the cow has to work twice as hard to ferment every mouthful, it produces a high amount of methane gas for very little nutritional reward.

This is why an animal grazing poor-quality winter veld can spend all day eating and burping, yet still walk out of the kraal with visible ribs and a dull coat. It is burning energy just trying to grind down straw.

When cattle have access to younger, greener grass or better feed, the story changes. The rumen digests the feed much faster, the animal builds muscle, and the stomach produces less waste gas for every kilogram of food broken down.

**Cattle losing condition on dry veld?**

Tell us how many head you are running, what they are grazing and how they look. We will suggest a practical dry-season supplement and what it is likely to cost per animal.

Plan my dry-season feeding

## The power of the right nutrients

Providing the rumen with the missing nutrients changes the entire dynamic. When grazing cattle receive a balanced protein supplement, the microbes in the stomach suddenly have the nitrogen they need to multiply rapidly.

With a thriving microbial workforce, the rumen digests tough, dry grass much faster. Feed moves through the digestive tract at a healthy pace, the animal feels hungry again, and it grazes more actively. Instead of losing condition through the dry months, the animal can maintain its frame and hold onto valuable weight.

Feeding cattle well is not about using mysterious laboratory chemicals. It comes down to understanding how basic feed ingredients work inside the animal:

- **High-protein meals:** Ingredients like soybean meal provide dense, high-quality crude protein with an excellent amino acid profile, making it a gold standard for growing stock and milk production. Sunflower meal, produced from crushed sunflower seeds, is another valuable protein option that also brings a useful amount of digestible fibre to the ration, making it popular for cost-conscious herd maintenance and backgrounding. For more on using it, see sunflower meal for dairy cows.
- **Digestible fibre and energy:** Wheat bran is a staple ingredient for a reason. While lower in raw protein than oilseed meals, it offers a palatable blend of digestible fibre and moderate energy. It softens heavy grain mixes, adds safe bulk to the diet, and provides a natural source of phosphorus.
- **Energy staples:** Protein alone cannot build weight without fuel. Energy sources such as crushed maize or hominy chop provide the fermentable starches that power daily growth.
- **Essential minerals:** A cow cannot build bone, maintain fertility, or metabolise energy efficiently without the right mineral balance. Ensuring adequate calcium, phosphorus, and salt prevents hidden deficiencies that quietly stall an animal's growth, regardless of how much grass it eats.

None of these common feedstuffs are magic methane-stoppers. Adding sunflower meal or wheat bran to a ration does not chemically eliminate gas production. What balanced nutrition does achieve is far more practical: it ensures that for every puff of gas an animal produces, it actually gains weight, produces milk, or rears a healthy calf.

### Get a price on protein for your herd

Send us the number of animals and how long you plan to supplement. We will quote soybean meal, sunflower meal or wheat bran delivered to your area, and help you choose the best value for your cattle.

Get a cattle feed quote | Browse our feed ingredients

## The pen feeding puzzle: does the gain justify the bill?

As the dry season wears on, many farmers look at lean cattle on dry rangeland and ask a commercially critical question: Should I put these animals into a feeding pen for 60 to 90 days?

Pen fattening (or feedlot finishing) is one of the most intriguing aspects of commercial beef production. By taking cattle off sparse grazing and placing them on a carefully measured, high-energy finishing diet, you remove the energy drain of walking kilometres every day in search of water and dry grass.

Inside the pen, every mouthful of feed is balanced. Digestion speeds up, muscle and fat deposition accelerate, and animals can transform from lean frames into well-fleshed, high-grade beef carcasses in a relatively short window.

From an environmental standpoint, finishing cattle faster also means they spend fewer total years grazing pasture and burping methane before reaching slaughter weight.

However, pen feeding is not a guaranteed lottery ticket.

The financial logic of pen feeding hinges on a simple, unforgiving calculation: **Does the value of the extra kilograms gained exceed the total cost of the feed eaten?**

A beast in a feed pen can easily consume between 8 and 12 kilograms of dry feed every day. If feed ingredients are expensive, or if the animals have poor genetics, heavy tick burdens, or underlying health issues, their Feed Conversion Ratio (FCR), the kilograms of feed required to produce one kilogram of liveweight, will be disappointing. If the animal eats more money in feed than the abattoir pays for the added weight and grade improvement, the farmer loses out. To put a figure on it, work out your feed cost per kg of gain.

Successful pen feeding requires sharp pencil work: sourcing cost-effective ingredients, balancing protein and energy so the rumen functions without digestive upset, ensuring free-choice clean water, and monitoring daily gains closely. When done right, it can be a profitable enterprise; when done carelessly, it simply turns expensive bags of feed into manure.

### Will pen feeding pay on your farm?

Send us the number of steers, their rough weights and what the abattoir is paying. We will help you cost a finishing ration and see whether the extra weight covers the feed bill.

Cost my pen-feeding plan

## Rethinking the cow

The next time you hear someone joking about cow farts warming the globe, you can share the real story. The tail end is innocent; the burp is where the action happens.

For farmers, this opens up more interesting questions. Would a protein supplement help cattle maintain condition through winter? Could a better-balanced ration improve growth? And could finishing a few steers in a pen actually pay?

Those questions deserve more than guesswork. Understanding feed ingredients, their nutritional value and their cost is a good place to start. You can find more practical feeding guides in the FeedSport Knowledge Centre.

### Build a better ration for your herd

FeedSport Zimbabwe supplies quality feed ingredients, from high-protein meals to energy sources and bran. Talk to our team about getting the most out of every beast in your herd.

WhatsApp the team | Other ways to contact us

## Frequently asked questions

### Do cattle emit more methane from burping or flatulence?

Around 90 to 95 percent of methane from cattle is released through rhythmic burping (eructation) and normal exhalation. Flatulence represents only a tiny fraction of total emissions.

### Does feeding protein supplements directly stop methane?

No. Ordinary protein supplements like soybean meal or sunflower meal do not chemically suppress methane production. Instead, they provide essential nitrogen to rumen microbes, speeding up the digestion of fibrous grass and allowing the animal to convert dry roughage into weight gain far more efficiently.

### Is pen fattening always profitable?

Pen fattening is never automatically profitable. Its success depends entirely on the margin between the cost of the feed ration and the price received for the beef. Factors such as the animal's starting condition, breed, parasite control, feed conversion efficiency, and local ingredient costs dictate whether the venture makes financial sense.

## References

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**Need a diet checked? Send your ingredients and targets to the FeedSport nutrition team on WhatsApp +263 77 468 4534 or sales@feedsport.co.zw.**

Figures in this guide are typical values and general ranges. Confirm targets for your animals, genetics and ingredients, and check batch specifications before formulating.