

## [The Corn vs Grass Debate](#)

### **Where is the Beef? The Great Corn vs. Grass Debate**

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I grew up in the very heart of the Midwest. Back then, all you heard about was corn-fed beef – its marbling, its tenderness, its superior taste...

Now it is hard to find a marketing claim about corn-fed beef.

That is because the preponderance of evidence is telling us that grass-fed (and grass-finished) beef is superior to conventionally raised, corn-fed beef in nearly every way. Let us look at the research.

*Grass-fed beef is better for you.*

**Research shows it is lower in fat and calories.** Meat from grass-fed animals can have as much as one-third less fat when compared to a similar cut from a grain-fed animal. According to Jo Robinson — one of the industry's strongest advocates — if you eat a typical amount of beef, switching to grass-fed beef can save you nearly 18,000 calories a year!

**It provides more omega-3 fatty acids.** Omega-3 fatty acids are good for you. They have been shown to significantly reduce triglyceride levels in the blood and reduce the risk of coronary heart disease. Research suggests that people who consume a sufficient amount of omega-3s are less likely to have high blood pressure and are 50 percent less likely to have a serious heart attack. They are also less likely to be depressed, or be afflicted with schizophrenia, attention deficit disorder, or Alzheimer's disease. Meat from grass-fed animals typically contains 50 to 85 percent more omega-3s than meat from grain-fed livestock.

**It provides more conjugated linoleic acid (CLA).** CLA is another healthy fat found in the meat and dairy products of ruminants. Studies done in animals and in vitro demonstrate that CLA can inhibit cancers (especially breast cancer), reduce risk factors for cardiovascular disease, improve insulin sensitivity and produce an anti-inflammatory effect. CLA may also protect against cancer. Robinson cites a Finnish study that showed women with the highest levels of CLA in their diet had a 60 percent lower risk of breast cancer than those with the lowest levels. Another study measured CLA levels in the breast tissue of 360 French women and found that the women with the most CLA had a 74 percent lower risk of breast cancer than the women with the least CLA. Research shows that meat from grass-fed ruminants can contain 3 to 5 times more CLA than meat from grain-fed animals.

**It is higher in vitamins.** Products from grass-fed animals have also been shown to be a superior source of Vitamins A, C, D, E and beta-carotene. According to a study completed at CSU, meat from pastured cattle is four times higher in vitamin E than the meat from feedlot cattle.

**It is better for the animals.** Raising animals on pasture used to be a predominant model of food production in the U.S. However, during the 50s, new techniques were introduced to improve the efficiency of beef production, a trend that continues even as we speak. As a result, most of the meat, eggs and dairy products sold in grocery stores today come from Confined Animal Feeding Operations, (CAFOs). These operations apply the same principles of mass production we see in factories. Thousands of animals are housed together in cramped quarters, with little or no exercise. While CAFOs provide maximum production at minimum cost, they also raise serious questions about ethics, food safety, and environmental impacts.

**The diets of factory-raised animals are hard on the animals.** Ruminants (i.e., cud-chewing animals such as cattle) are built to eat and digest cellulose-based products such as grasses, plants and shrubs. When you feed

them corn, it can cause serious intestinal disorders, such as “feedlot bloat” (a condition that causes trapped gas to accumulate in the rumen, causing the rumen to press against the lungs (if left untreated, the animal can actually suffocate); and “subacute acidosis” (a condition similar to heartburn, which causes animals to pant and salivate, kick at their bellies and eat dirt). If left untreated it can lead to diarrhea, ulcers, liver abscesses and even death.

### *It is safer.*

**Do you know what factory-fed animals are eating?** As the industry continually seeks less to lower feed costs, truly astonishing materials are finding their way into our food chain. According to Sapkota, et al, (2007) “In 2003, the U.S. rendering industry produced > 8 million metric tons of rendered animal products, including meat and bone meal, poultry by-product meal, blood meal and feather meal. Most of these products were incorporated into animal feed.” Since the advent of “mad cow” disease, the U.S. has banned the feeding of protein sources from ruminants to other ruminants. However, under current law, pigs, chickens, and turkeys that have been fed rendered cattle can be rendered and fed back to cattle—a loophole that may allow mad cow agents to infect healthy cattle. Other legally permitted ingredients include rendered road kill, dead horse, euthanized dogs and cats, animal waste, antibiotics, byproducts of drug manufacture, arsenicals, copper compounds, urea, ammonium chloride and ammonium sulfate, enzymes, preservatives, nutraceuticals, and plastics.

**Factory-raised animals are given antibiotics and growth hormones.** In an effort to manage the effects of grain-based feeds in ruminants and to protect against the potential spread of disease, CAFO operators tend to administer antibiotics – including penicillin, erythromycin, and streptomycin — routinely. Robinson reports that “an estimated 70 percent of all the antibiotics used in the U.S. are now being given to healthy animals to improve their growth and performance.”. Moreover, cattle CAFO operators use growth hormones or steroids to help the animals gain the maximum amount of weight on the least amount of time; in fact, nine out of 10 U.S. calves are given growth hormones, including estrogens, progesterone, testosterone and others.

**Grain-fed animals may be promoting food-borne diseases.** Raising animals in such close quarters creates concern about the potential spread of disease (not to mention increased vulnerability to terrorist attack.) A study by Cornell University determined that grain-fed animals have approximately 300 times more E. coli than grass-fed animals. This proliferation may be because when cattle are grain fed, their digestive tracts become acidic, which promotes E. coli growth. E. coli 0157:H7, a strain first isolated in the 1980s, is now found in the intestines of most U. S. feedlot cattle. In the U.S., this bacterium is estimated to cause infection in more than 70,000 people a year. In October of 2007, it sparked the second largest food recall in the history of the U.S., when nearly 22 million pounds of frozen beef patties were recalled due to E. coli concerns. Other bacteria are also causing alarm. In a 2003 study of food-borne pathogens, Australian researchers found that campylobacter – a bacteria that can cause nausea, vomiting fever, headache, muscle pain and potentially serious long-term effects — is carried by 58 percent of cattle raised in feed lots versus only 2 percent of cattle raised and finished in pastures.

### *It is better for the environment.*

**Waste from CAFOs poses a serious threat to the environment.** The sheer population density of CAFOs creates a huge issue in terms of animal waste. The U.S. Environmental Protection Agency estimates that CAFOs account for more than 250 million tons of manure every year. In studies of CAFOs, CDC has shown that chemical and infectious compounds from animal waste are able to migrate into nearby soil and water, and the EPA has acknowledged that hog, chicken and cattle waste has polluted 35,000 miles of rivers in 22 states and contaminated groundwater in 17 states. According to the Center for Disease Control, pollutants possibly associated with manure-related discharges at CAFOs include antibiotics; pathogens; excess nutrients, such as ammonia, nitrogen, and phosphorus; pesticides and hormones; solids, such as feed and feathers; and trace elements, such as arsenic and copper, which can contaminate surface waters and possibly harm human health.