



## Why Choose **GRASS FED BEEF?**

### More Omega 3 Fatty Acids

Depending on the breed of cow, grass-fed beef contains between 2 to 5 times more omega-3s than grain-fed beef. The average ratio of omega 6 to omega 3s in grass fed beef is approximately 1.53:1. In grain fed beef, the average ratio jumps up to 7.65:1.

### More Conjugated Linoleic Acid

Grass-fed beef contains an average of 2 to 3 times more CLA than grain-fed beef. This is because grain-based diets reduce the pH of the digestive system in ruminant animals, which inhibits the growth of the bacterium that produces CLA.

### More Antioxidants, Vitamins and Minerals

Grass fed beef contains considerably more antioxidants, vitamins, and minerals. Carotenoids, such as beta-carotene, are precursors to vitamin A that are found as pigments in plants. Grain-fed beef does not contain appreciable levels of carotenoids, for the simple reason that grains don't contain them. However, cows that eat carotenoid-rich grass and forage incorporate significant amounts of these compounds into their tissues. These carotenoids make the fat from grass-fed beef more yellow than the fat from grain-fed beef.

Grass-fed beef also contains significantly more of the antioxidants vitamin E, glutathione, superoxide dismutase (SOD), and catalase than grain-fed beef as well as higher levels of zinc, iron, phosphorus, sodium, and potassium.

### Does It Matter If The Animal Is Completely Grass Fed?

Studies have shown that the last part of a cow's life is the most critical in terms of fat quality. Just 80 days of grain feeding is enough to destroy the omega-3 content of the beef. CLA content plummeted in the same amount of time. The longer an animal is fed grains, the lower the nutrient content of the meat. Feedlot cattle have the lowest amount of omega-3s, regular grain-fed cattle are slightly better, and grass fed has the highest.

### What are omega 3 fatty acids?

They are an integral part of cell membranes throughout the body and affect the function of the cell receptors on these membranes. They provide the starting point for making hormones that regulate blood clotting, contraction and relaxation of artery walls, and inflammation. They also bind to receptors in cells that regulate genetic function. Likely due to these effects, omega-3 fats have been shown to help prevent heart disease and stroke, may help control lupus, eczema, and rheumatoid arthritis, and may play protective roles in cancer and other conditions



moyerfarms6@gmail.com

816-500-1965

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### What is CLA?

Conjugated linoleic acid (CLA) is a type of polyunsaturated fatty acid that is found naturally in milk and meat products, primarily from ruminants such as cows or sheep. CLA exhibits potent antioxidant activity, and research indicates that CLA might be protective against heart disease, diabetes, and cancer. Beef is one of the best dietary sources of CLA.

### More Info on Grass Fed Beef and Omega 3s

"Grass-fed animals have a different muscle composition than grain-fed animals. The difference is mostly in the type and amount of fatty acids," says Artemis P. Simopoulos, MD, FACN, an endocrinologist; founder and president of the Center for Genetics, Nutrition and Health. "For example, animals in the wild that eat grass have more meat, less fat, less saturated fat, and more polyunsaturated fatty acids. They also have a higher amount of omega-3 fatty acids. So, during evolution, when nothing was domesticated, human beings got their omega-6 and omega-3 polyunsaturated fatty acids, particularly EPA and DHA, directly from their diet, and they were balanced almost in equal amounts."

What grazing animals ate didn't change significantly from the time humans started domesticating livestock until the past century, but as agricultural practices became more industrialized, the ratio of omega-6 to omega-3 fatty acids (EPA, DHA, and alpha-linolenic acid) in livestock began to shift. Charles Benbrook, PhD, a scientist who has studied the impact of animal rations on meat quality, says animals fed grain—mostly corn—in feedlots may grow faster, but the grain feed increases the levels of omega-6 fatty acids and reduces the level of omega-3 fatty acids in the animals.

The shift from omega-3 fatty acids to omega-6 fatty acids is significant because research has shown that omega-6 fatty acids promote a proinflammatory state in the human body, says Evelyn Tribble, MS, RD. Inflammation has been implicated as a contributor to heart disease, cancer, asthma, rheumatoid arthritis, and many other chronic health problems. Tribble says eating foods with higher levels of omega-6 fatty acids interferes with the health benefits of omega-3 fatty acids.

"Most Americans are deficient in the omega-3 fatty acids EPA and DHA to begin with, and because omega-3s and omega-6s compete with each other, if you eat too much omega-6, it creates a proinflammatory situation in the body," Tribble says. "Once they're inside the body, the omega-3 compounds and the omega-6 compounds compete for the same kinds of enzymes. Whichever compound is predominant is going to win the enzymes."

The ratio of omega-6 to omega-3 fatty acid intake by our ancestors was estimated to be 1:1. In the 1930s, the overall ratio of omega-6 fatty acids to omega-3 fatty acids in the American diet was between 3:1 and 4:1. By the early 1950s, it had grown to around 10:1, largely due to the widespread introduction of margarine, trans fats, soybean oil, and large-scale livestock operations that relied on feedlots and grain feed. The ratio is now estimated to be 20:1.

Information collected from Chris Kresser, Today's Dietician, and Dove Agency



Nathan and Erin Moyer  
12634 Hwy 13 - Richmond, MO 64085  
moyerfarms6@gmail.com - 816-500-1965  
www.moyerfarm.com  
find us on...  