Make Meat Healthy Again!

Conventional beef is extremely inflammatory in the human body; properly fermented forages produce healthier meat in shorter timelines than purely grassfed beef

BY KEN HAMILTON AND MIKE MORGAN

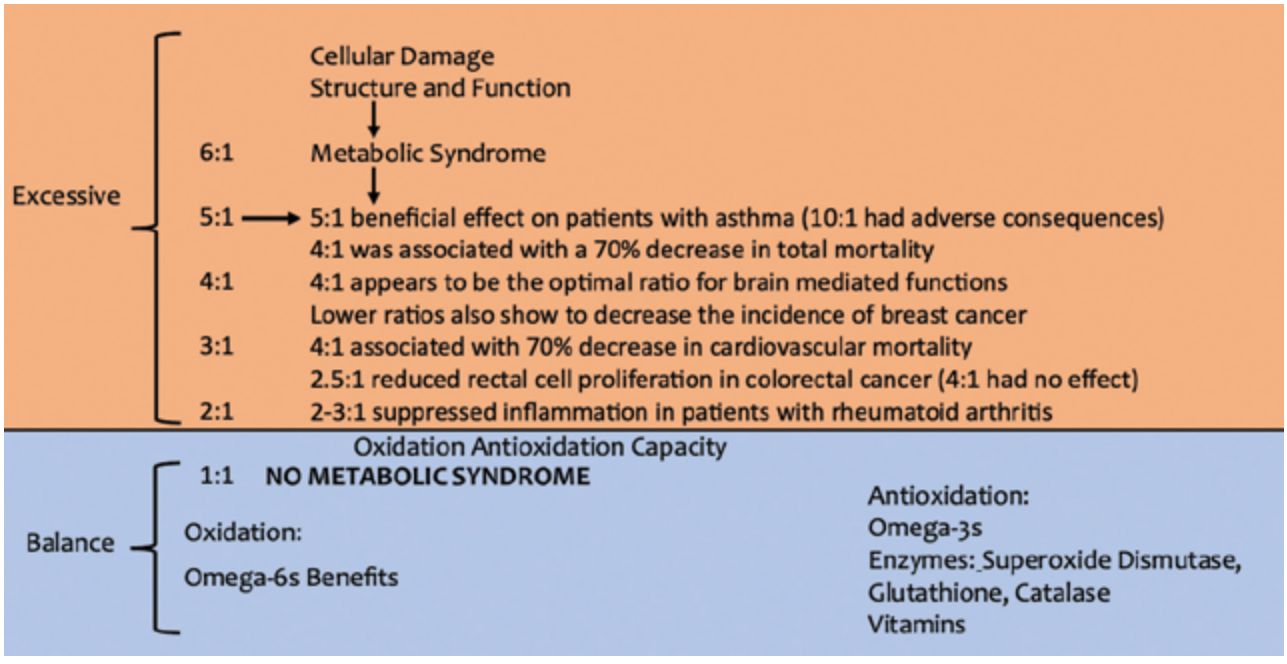

Figure 1. Effects of different Omega-6:Omega-3 ratios

For many years, the food-industrial complex has demonized natural animal fats. Beef, butter, lard, tallow and other natural fats have become scapegoats for the degenerative health problems that are actually caused by the increasing prevalence of highly processed industrial foods. Huge corporations have invested billions of dollars turning low-cost waste products or manufactured ingredients into poor nutritional substitutes for real food.

The truth is that when livestock are given the proper diet, their fat is much healthier than highly processed seed oils and hydrogenated vegetable oils. The problem is that very few animals actually receive a healthy diet.

Our bodies require very specific balances of minerals and nutrients in order to function properly and support a long and functional life. If we provide those balances naturally, our bodies respond naturally, and there is very little need for chemical intervention (the medical-industrial complex). If, on the other hand, we consume an imbalanced diet, our bodies are unable to protect and repair themselves properly, and we become dependent on external chemical intervention to stave off the negative consequences of our poor choices.

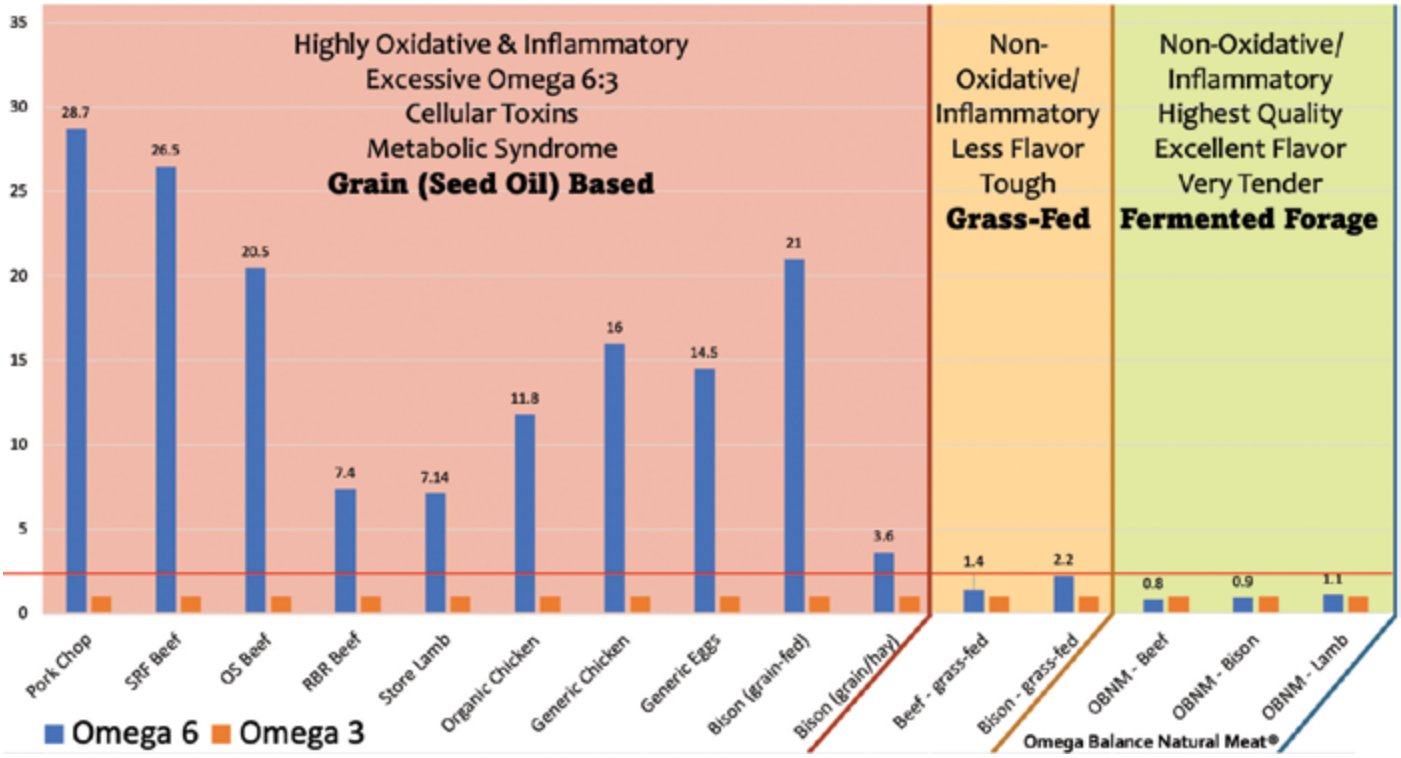

Figure 2. There is a stark difference between conventionally fed livestock and those fed only grass or fermented rations.

The Right Ratio

Living animal cells (including humans') require a balanced consumption of essential fatty acids to maintain healthy functions. Omega-6 and Omega-3 essential fatty acids are not manufactured by the body. They must be obtained through what we eat. Our cells require them in balanced amounts at a ratio of 1:1.

Omega-6s are oxidative and form an essential component of both cellular metabolism and immune system response. They trigger oxidative responses, which kill invaders and pathogens. Inflammation is part of this healing process. Omega-3s are antioxidants; they counteract Omega-6's oxidation and clean up the remains of the immune encounter. Omega-3s are the janitors — taking out the garbage and leaving the system clean and functioning properly, thereby reducing inflammation.

In order to maintain healthy metabolic systems, we must have a balanced amount of Omega-6s and

TESTS COMPLETED AT USU NUTRITION, DIETETICS & FOOD SCIENCES DEPARTMENT AND AT MICROBAC LABS

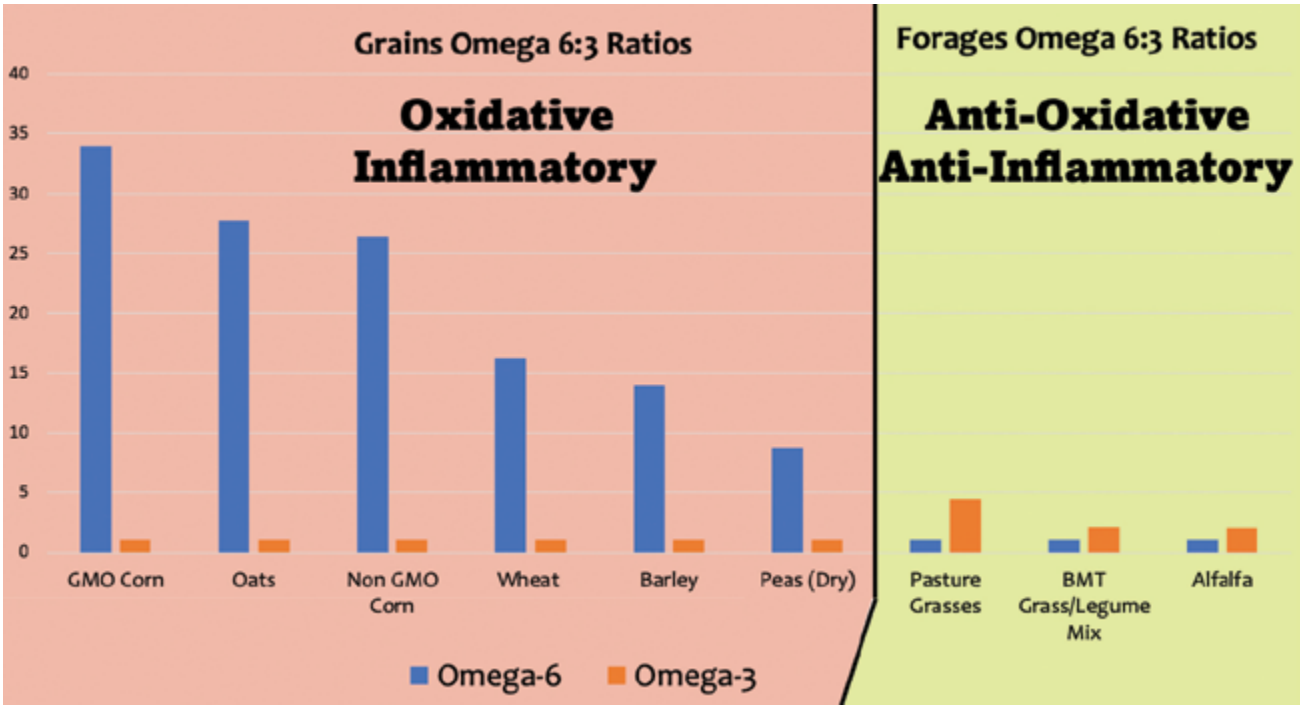

Figure 3. Omega-6:Omega-3 ratios of common livestock feeds

Omega-3s — our bodies require balance between these oxidative and anti-oxidative elements. When a diet has more than 2.5 Omega-6 fatty acids to 1 Omega-3 fatty acid, there aren't enough antioxidants to clean up the messes; excess oxidation leaves toxins and cellular waste that causes damage and promotes chronic inflammation. The effects are illustrated in Figure 1.

Many Americans today eat a diet that has an Omega-6:Omega-3 ratio of between 20:1 and 25:1. This generates excess oxidation, leading to chronic inflammation from reactive oxygen species and free radicals. This is the basis of the degenerative diseases that have become so prevalent in our Western society.

Conventional Beef Ratios

Typical cattle feeding operations load animals up on high-starch diets of corn and soy, or other grain-based byproducts, in order to promote faster growth and greater fat accumulation. However, corn, soy, oats, wheat, barley and most seeds are very high in Omega-6 fatty acids — mostly linoleic acid. Corn can have a ratio as high as 25- or 35:1.

With the high input of Omega-6s, the cells within the animal are unable to function properly, and they produce a range of toxic byproducts. These toxins are not cleared away because of a lack of Omega-3s — we end up eating those toxins!

Feeding livestock a lot of grain also causes ruminal acidosis — an overall acidic condition throughout the entire animal. This can lead to:

- Demineralization and nutritional deficiencies
- Poor conception and breed-back
- An imbalance of volatile fatty acids
- Damage to the rumen lining
- Reduced nutrient absorption
- Disruption to the microbial community
- Multiple health issues such as liver abscesses, laminitis and even death

The fatty acid ratios of conventional feedlot beef range from 7:1 to as high as 25:1, depending on the amount of corn in their diet. Not only is that ratio unhealthy for human consumption; it is unhealthy for the cattle themselves. Figure 2 shows the Omega-6:Omega-3 ratios of different commercial meats, comparing them to grassfed and fermented-forage livestock.

Cattle are designed to eat grasses and other forages. Those who grow grassfed beef understand these principles and raise their animals accordingly.

There is a strong market for grassfed animals, but there are significant challenges as well. A typical

Corn can have an Omega-6:Omega-3 ratio as high as 25- or 35:1. With the high input of Omega-6s, the cells within the animal are unable to function properly, and they produce a range of toxic byproducts. These toxins are not cleared away because of a lack of Omega-3s — we end up eating those toxins!

grain-fed animal can be brought to market in around 18-24 months; a grassfed animal typically takes 30-36 months. Grassfed beef, while healthier, are generally older, leaner, and not as tender. In spite of the massive health benefits, it is less desirable for many consumers.

Fixing the Ratio with Fermented Forages

There is a way, though, to produce beef that retains a low Omega-6:Omega-3 ratio in a shorter period of time, thus retaining the tenderness that modern eaters prefer: with specially fermented forages.

Properly fermented forages using the right microbes provide much higher nutrient availability from the same amount of forage as a grassfed diet. An animal can go from birth to market in 18 months or less (depending on desired market weight) with marbling, flavor, and tenderness that exceeds the typical grain-fed operation — all without violating the animal's natural diet.

Grasses, alfalfa and pasture blends all have an Omega-6:Omega-3 ratio of 1:2 or more — meaning more Omega-3s than 6s (see Figure 3). This translates to much healthier animals and much healthier meat. Fermented-forage meat typically tests at a balanced ratio of 1:1 or a little bit less, without any grains — only natural forage.

Fermenting grass forages, created by applying a specific blend of anaerobic microbes during the baling and wrapping process, releases nutrients that are typically inaccessible and generates fermentation metabolites to support animal growth. By predigesting and fermenting the forages, the microbes are breaking down more of the carbohydrates and releasing more energy — with enough excess energy to create fat. Since cattle are natural grazers, these grasses (and legumes) are all they need.

Livestock fed fermented forages gain weight consistently, even during hot summer months and cold winters. Cattle should also be provided free-choice trace minerals. This combination produces elevated and consistent weight gain, combined with excellent animal health. Veterinary expenses and death loss rates plummet.

Butchers will take notice of the quality of fermented-forage cattle as well. The meat will grade higher, and even the internal organs are different from conventional beef. The fat cover is white and clean, and the meat is tender, well marbled, and easy to cut.

And, as discussed above, fermented forages result in beef with an average Omega-6:Omega-3 ratio of approximately 1:1 — ideal for human health.

Fermented forages provide the cattle producer the opportunity to unplug from the conventional grain system and to produce superior-quality feed on-farm — feed that will in turn produce superior-quality, healthy beef. ACRES

Ken Hamilton is the owner of Bio Minerals Technologies, and Micheal Morgan is BMT's marketing manager. Learn more at *bmted.com*.