



# The Goodness of Beef

By: Monika Benoit

Volume 10  
Issue 112  
May 2014

FORAGE

As producers and members of industry, we spend a lot of our time very engaged in doing what we do best: raising beef animals; from balancing rations, improving grazing techniques, calving out the cow herd, keeping our records, baling hay...and this list goes on. Most beef producers eat a lot of beef themselves, but how often do we think about the great benefits of eating beef?

It's also very important to be well-versed in beef facts when talking to the consumers who are choosing to buy or not buy beef every day. A few neat facts on the Canadian Beef Industry:

- \* The average Canadian consumes 44.2lbs annually, to reach a total of 946,977 pounds of beef consumed in 2011! (June 2011, Statistics Canada).
- \* As of June 1, 2012, there are approximately 1,660,000 beef cows in the province of Alberta, which is 39.3% of the Canadian total of 4.23 million head (Source: [www.canadabeef.org](http://www.canadabeef.org)).
- \* Western Canada finishes 75% of all cattle in Canada (source: Canfax).
- \* Beef production contributed \$25.96 billion to Canada's economy in 2011 (Canfax, Statistics Canada).

When you're biting into a tasty beef burger, prime rib, a Sunday dinner roast, what is the breakdown of what you're eating? Beef is a great source of fourteen essential nutrients including protein, zinc, selenium, niacin, iron, phosphorous, riboflavin, vitamins B6 and B12, and vitamin D. To the right is a snapshot of what is in 100 grams of cooked lean Canadian beef. Beef is a part of the Canada Food Guide and a great way to take in protein and other nutrients. The process to digest beef involves the protein being broken down into amino acids which are then absorbed by our small intestine. Protein is essential for growth, immunity and the building and repair of muscle and other tissue; our bodies are built to digest and absorb beef. Protein can even help to shed extra pounds as it helps us to feel fuller longer, our bodies burn more calories while digesting protein compared to other nutrients and it helps us maintain muscle while losing more fat. In comparison to the protein found in plant protein sources, beef contains all of the essential amino acids, whereas plant sources (such as soy, nuts, and beans) do not (source: [www.beefinfo.org](http://www.beefinfo.org)).

Energy & Nutrients	Amount
Energy	213 Calories
Protein	34.6 g
Carbohydrate	<1 g
Total Fat	8.8 g
Saturates	3.6 g
Monosaturates	4.1 g
Polyunsaturates	0.40 g
Trans	0.28 g
Cholesterol	82.4 mg
Calcium	10 mg
Iron	3.3 mg
Magnesium	26 mg
Phosphorous	207 mg
Potassium	294 mg
Sodium	55 mg
Zinc	8.6 mg
Selenium	27µg
Niacin	1.4 ME
Pantothenate	1.0 mg
Riboflavin	0.32 mg
Thiamine	0.07 mg
Vitamin B6	0.27 mg
Vitamin B12	2.6µg
Vitamin D	0.79µg

\* Selenium and Vitamin D were not included in the analyses; these values are from the 2005 Canadian Nutrient File.

For more information on nutrients in beef, check out *What's in Beef?* or download *The Nutrient Value of Canadian Beef*.

<sup>1</sup> Kemp MQ et al. J Nutr, 2003; 133: 3670-77.

<sup>2</sup> Hubbard NE, et al. Cancer Lett, 2003; 190: 13-19.

**BEEF IS  
IRON KING:**  
Beef provides  
**2x more IRON**  
than chicken.

Along with being an ideal source of protein, beef is also a great natural source of iron. The iron in the foods we eat is in two different forms: heme iron and non-heme iron; heme iron is more readily digested and absorbed by our bodies. Red meats such as beef, poultry and seafood are excellent sources of heme iron. The iron found in the plant foods we eat such as spinach is non-heme iron, therefore a vegetarian would need to consume almost twice as much total iron to reach their daily requirements compared to a person eating meat (source: [www.beefinfo.org](http://www.beefinfo.org)). Eating foods rich in vitamin C will also help to increase iron absorption (source: <http://ods.od.nih.gov/factsheets/Iron-HealthProfessional>). Iron is very important because it helps to build red blood cells, boosts our body's immune system and it carries oxygen from our lungs to the rest of our body, which keeps our energy levels high. Pregnant and breastfeeding women need extra iron in their diets to facilitate the development of their baby. Iron is also important for young children as it assists in the growth and development of the brain and helps with memory, concentration and learning

(source: [www.beefinfo.org](http://www.beefinfo.org)).

Next on the list for the super nutrients of beef is zinc; it is an essential nutrient for humans. Zinc is in every cell in our bodies and is involved in metabolism and our immunity (source: Health Canada [www.hc-sc.gc.ca](http://www.hc-sc.gc.ca)). Zinc is best absorbed from meat and other animal products, such as beef and other meats. There are some foods that limit our body's ability to absorb zinc, including soy products, whole grains and lentils, so it is important to include animal protein sources with zinc that are easily absorbed such as beef in our diets. Young children and pregnant and breast feeding women have higher requirements for zinc to facilitate growth and protect against infection (source: [www.beefinfo.org](http://www.beefinfo.org)).



Eating beef is an excellent way to get our daily dose of vitamins, notably vitamin D and the B vitamins, including B<sub>6</sub>, B<sub>12</sub>, niacin, thiamine and riboflavin. Vitamin B<sub>12</sub> is especially important to consider as it is naturally in meats, poultry, fish and other animal products such as eggs. According to a fact sheet about vitamin B<sub>12</sub> put together by the Beef Information Centre, a shortage of vitamin B<sub>12</sub> can lead to weakened mental capacity in children, heart disease and stroke, osteoporosis, unhealthy pregnancies and neural tube defects, as well as Alzheimer's and dementia.

Vitamin B<sub>12</sub> is very important for healthy aging, as it contributes to maintaining a healthy nervous system and healthy bones. The good news for beef eaters is that a 100g or a 3.5 oz serving of a lean beef flank steak provides you with 125% of your daily requirements of vitamin B<sub>12</sub> (source: [www.beefinfo.org](http://www.beefinfo.org))!

Over the years, there have been many recommendations to cut back on the amount of red meat we're eating from different sources, including health care professionals. However, this is misleading and dieticians are encouraging us to eat red meat, including beef as part of a well-balanced diet. There are things we can do to help make even better choices when we're eating red meat, including choosing leaner cuts and draining the fat out of pan fried beef. Another common myth about choosing meat is that chicken and turkey are leaner meats, however, when it comes to the labelling systems for meat, the same guidelines for maximum fat content apply to all ground meats. Therefore, lean and extra lean ground beef have the exact same maximum fat content as lean and extra lean ground turkey, chicken, or pork (source: [www.beefinfo.org](http://www.beefinfo.org)). It is also important to watch the intake of processed meats, such as lunch meats, sausages and other pre-packaged meats; they generally have higher levels of fat and sodium and won't have the same nutritional qualities as unprocessed beef (source: [www.hc-sc.gc.ca/fn-an/food-guide-aliment/choix-choix/meat-viande/tips](http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/choix-choix/meat-viande/tips)).

## THE FACTS ON FAT:

**Chicken and beef have similar amounts of fat.**

75 g of skinless light chicken meat has 3.4 g fat and 75 g of trimmed, cooked sirloin has 3.9 g fat.

Image sources: [www.beefinfo.org](http://www.beefinfo.org)

## Grass Finished vs Grain Finished Beef

A recent debate going on amongst industry and consumers is the difference between grain and grass finished beef. For many years, grain finished beef has been the norm in North America due to the lower cost to put on pounds using grain versus grass and the taste, due to marbling of grain fed beef. Grass fed beef is more popular in other parts of the world, such as Australia and Brazil where they have grass available on a year-round basis. The question is: *Is grass fed beef more nutritious than grain fed beef?* According to the Canada Beef [www.beefinfo.org](http://www.beefinfo.org) website 'Eating Smart FAQ,' "All beef provides 14 essential nutrients plus energy. Preliminary studies have shown that grass fed beef has elevated levels of Omega 3 fatty acids and conjugated linoleic acid (CLA). More research is required to determine whether these increased levels are high enough to provide positive health benefits."

A recent review of research on the nutritional values of grass finished beef was included in *Meat Science* (the Journal of the American Meat Association), and the reviews concluded that more research is needed to truly understand the nutritional differences between grass and grain finished beef (reference cited on the left). The review found that there is more fat in grain finished beef compared to grass finished, however, it is at the expense of monounsaturated fatty acids, which are recognized to lower bad cholesterol and can help in the prevention of heart disease and stroke (source: [www.beefinfo.org](http://www.beefinfo.org)). The review stated that both types of beef contain omega-3 fatty acids, however neither are a significant source and eating salmon would be a better choice to boost the omega-3 levels in our diets (source: [www.healthycanadians.gc.ca/health-sante/pregnancy-grossesse/omega-3-eng.php#a1](http://www.healthycanadians.gc.ca/health-sante/pregnancy-grossesse/omega-3-eng.php#a1)). It was interesting to note that in this review, it was stated that forage variety and cattle breed had a significant impact on the nutritional profile of the beef. With consumer demand for pasture raised and grass finished beef increasing, we will likely be seeing many more studies and trials in this area over the next few years. Many people who normally aren't beef eaters have shown interest in eating grass finished beef over the past few years, and this has opened up another market for beef, which is always a positive for the business.

Reference: *Impact of grass/forage feeding versus grain finishing on beef nutrients and sensory quality: The U.S. experience*

Mary E. Van Elswyk,  
Shalene H. McNeill  
*Meat Science* 96 (2014) 535-540



### A Credible Information Source

There are many sources of information on food and nutrition available these days, but it can be hard to figure out which sources are reliable, but there is good news! There is a great resource out there for all questions related to beef. Canada Beef Inc. is a credible resource for beef producers and consumers. The Canada Beef website is accessible through [www.canadabeef.org](http://www.canadabeef.org) or [www.beefinfo.ca](http://www.beefinfo.ca), or the organization is accessible by phone at 1-888-248-BEEF (2333). Health Canada, including the Canada Food Guide, as well as local dietitians and health professionals are also great sources if you're looking for more information or have questions about including beef in your diet or answering consumer questions.

### Recipe Summary

Difficulty: Easy  
Preparation: 20 min  
Cooking: 15 min  
Makes: 4-6 servings  
Best Suited for: Pot Luck, Buffet, Kids

Recipe Source:  
[www.beefinfo.org](http://www.beefinfo.org)

## All Kinds of Beef Meatballs

The grated carrot in this recipe keeps these lean beef meatballs juicy and gets kids to eat vegetables without them even knowing it.

1 lb	Lean ground beef sirloin or lean ground beef
1	Egg, lightly beaten
1/2 cup	Dry bread crumbs
1/3 cup	EACH finely grated carrot & shredded onion
1 tbsp.	Worcestershire sauce
1/2 tsp	EACH salt & pepper

1. **Lightly** combine all ingredients; form into about thirty 1" (2.5 cm) balls.
2. **Bake** on lightly oiled foil-lined baking tray in 400°F (200°C) oven for 15 min, until digital rapid-read thermometer inserted into centre of several meatballs reads 160°F (71°C).



## EVENTS

### Don Campbell

Rancher from  
Meadow Lake, SK  
How to Get a Better  
Quality of Life, More  
Grass and More Profit  
on Your Operation  
**June 17, 18 & 19th**  
Locations will be across  
the Peace, watch for  
updates!

### Jim Gerrish

of  
American GrazingLands  
Services Improving the  
Productivity &  
Longevity of  
Grazing Land  
**July 7th**  
Warrensville Hall

### Agricultural Tour to Australia

Nov 8-22  
Call Morgan for Details  
780-835-6799

### Thank You to Our Industry Sponsors



Check out our  
Website!  
[www.peacecountrybeef.ca](http://www.peacecountrybeef.ca)

## Reminder About Growing Forward 2 Programs

Growing Forward 2 is open and accepting applications in just about every program. PCBFA is encouraging Peace Region producers to get their applications in sooner rather than later as the funding is given out on a first-come-first-served basis.

### A Few Updates

- \* The **Biosecurity** program is still open but won't be able to handle many more applications for the year due to an overwhelming number of applications received and approved to date
- \* The **Animal Welfare** program is now open, and the requirement is an Animal Welfare Assessment in your respective industry. The assessment for feedlot operators is available on the Growing Forward 2 website. The assessment for cow-calf producers is not yet available, watch the website for updates. This program looks very promising and one of the eligible projects can include updating or adding pieces to your livestock handling system.
- \* The **On-Farm Stewardship** program is accepting applications and is said to have plenty of funding available for this year. Under this program, you can apply for funding for a variety of projects including watering systems, fencing for riparian areas, windbreak fence, upgrades to fuel tanks, manure management and many more. The requirement for this program is an **Environmental Farm Plan**, which PCBFA can help you start and complete.
- \* The **On-Farm Food Safety** program opened again on April 1<sup>st</sup> and is accepting applications. The requirement for this program is the Verified Beef Production Training, which can be done online at [www.beefsafety.ca](http://www.beefsafety.ca). Eligible activities under this program include the purchase of a scale, squeeze and tag reading equipment.
- \* The **On-Farm Water Management** Program is accepting applications for projects, ranging from drilling a new well, digging dugouts, putting in aeration systems and getting tied into a multi-use water distribution system.
- \* Other programs of interest include the **Confined Feeding Operation Stewardship** program, the **On-Farm Energy Management**, the **Business Opportunity** program and the **Business Management Skills** program.
- \* You can access information and application forms on the Growing Forward website: [www.growingforward.alberta.ca](http://www.growingforward.alberta.ca).
- \* PCBFA staff members can help you put together your applications; feel free to contact us for assistance.

## Peace Country Beef Congress 2014 AGM

Sunday, May 25th

Near Woking @ Reber's Polled Hereford's

Supper 5:30 pm, Meeting 7 pm

Call Serena Reber for Directions:

780-518-2643



Akim Omokanye  
Research Coordinator  
Fairview, AB  
780-835-6799  
780-835-1112

Morgan Hobin  
Manager  
Fairview, AB  
780-835-6799  
780-835-8614

Monika Benoit  
Extension & ASB Project Coordinator  
High Prairie, AB  
780-523-4033  
780-536-7373