GEORGE MORRIS CENTRE

Food Industry Lessons from Cattle Weights?

Kevin Grier, Senior Market Analyst, George Morris Centre
July 2012

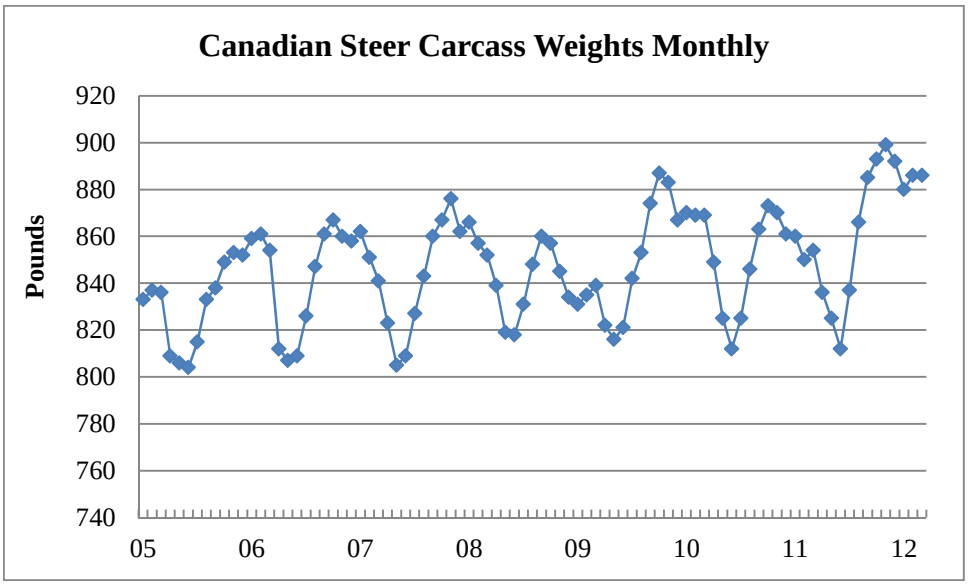
In 1909, Henry Ford reportedly said "Any customer can have a car painted any colour that he wants so long as it is black." This has often become presented in paraphrased forms, such as "People can have the Model T in any color - so long as it's black." Conformity and streamlining can have positive results in driving out costs, but Henry may have taken it a bit far. Whether it is autos or food, today consumers have endless choices of colors, sizes and quality. Just like in 1909 though, there needs to be a balance between production efficiency and consumer choice. Consumers benefit from the cost impacts of efficiency, but they also benefit from variety.

The beef industry has been struggling with finding that right balance for at least two decades, with regard to cattle weights. The production efficiencies of large carcass weights are often at odds with customer demands for smaller carcasses. The effort to find that balance is instructive to the entire food industry. This paper looks at the beef industry conflict between production and demand, how it evolved, and the message it sends to the entire food industry.

Big and Getting Bigger

Twenty five years ago in in 1987, average steer carcass weights in Canada were less than 700 pounds, according to data from Agriculture Canada's Market Information Service. Five years later (or twenty years ago) in 1992, steer carcass weights were 725 pounds. The increase in carcass weights at around that time was identified as an industry problem that needed to be addressed. Restaurants and grocers were expressing concern about large cut sizes and their impact on quality, package cost, and ultimately consumer demand. Carcass weights 20 years ago were among the major topics of unease in the Canadian and US cattle industries.

In 2011, steer carcass weights in Canada averaged nearly 860 pounds, about 160 pounds more than 25 years ago, and 135 pounds more than when the industry began to take notice in 1992. It is not uncommon to have Canadian carcass weights routinely average around 925 in some weeks in 2012, or in some plants. In the US, weight breaks for discounts at times can be as high as 1,000 pounds, and Canadian plants might start to discount at 950. Despite these developments, the topic of large carcass weights and the challenges they pose are discussed far less now than 20 years ago.



Source: Canfax

As a starting point, this discussion focuses on large carcasses that yield and grade as expected. That is, this discussion refers to heavy carcasses as intended by feeders, and as demanded by packers. The discussion does not refer to those cattle that simply got away on the feeder resulting in excess fat and poor yields. In other words this is not about feeding the animal 60 days too long resulting in excessive exterior fat. Those are unintended outliers. Instead this is about the longer term trend of average, fully representative carcasses in Canada.

The downsides of large carcasses are the same as twenty years ago, only greater. Beef cut sizes are more of a problem for restaurants, in terms of its visual profile of thickness and plate coverage. The challenge also comes to play at grocery stores in terms of thickness and package price. In both cases, in order to make the package size or menu item more appealing from a price point, the steak needs to be cut too thin. Price points on roasts become prohibitive. Consumers, who are less and less informed about beef, are not going to take that purchase step.

With that noted, the fact is that more weight makes economic sense at both feeding and packing levels.

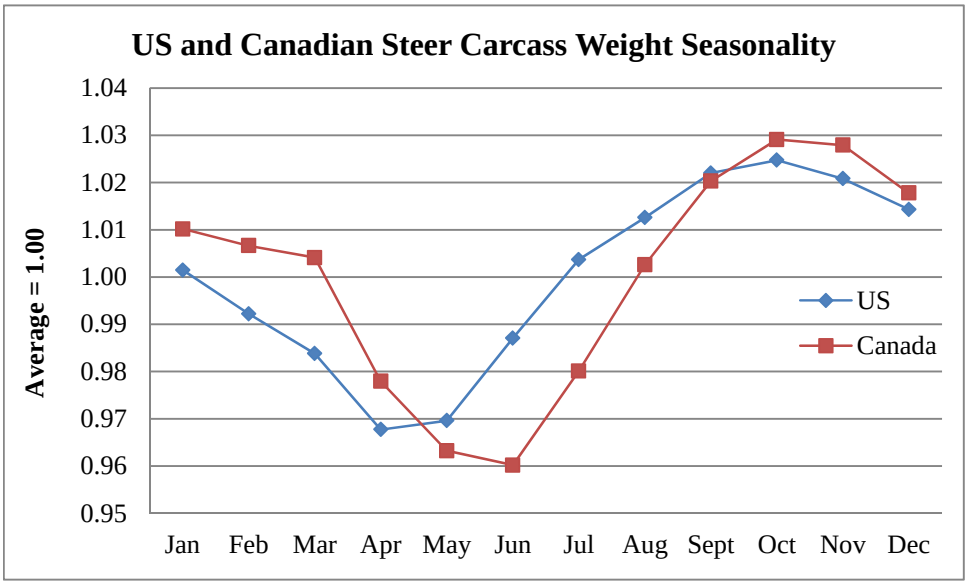
From a packers' perspective, large carcasses (800-1000 pounds) are generally not a problem, depending on marbling and market channel or destination. From a per pound production cost stand point, large is obviously better. Expenses are mainly figured on per head basis. Total expenses for the week are the same, whether they weigh 700 pounds versus 900 pounds on a carcass weight basis. Expenses on a per 100 basis are lower with larger carcasses versus smaller carcasses. In addition, any part of carcass destined for trim, size makes no difference. Trim will be at least 15% of the carcass, while there are many other cuts such as thin meats and grinds in which size is not an issue, or at least less of a concern.

Of course, some valuable cuts, especially for food service, have limitations as to weight of certain primals that customer will accept. Some premium programs (like Certified Angus Beef)

have a 1,000 pound and down specification, which restricts putting that carcass in that premium program. Some times of the year, premiums are paid for lighter cuts, like ribeye's, strips, and tenders, maybe even top butts. In the boxing process, some primals over a certain size can become an issue as to how many fit into a box. There used to be a witticism that larger cuts kept them from rattling around in the box. Now, it has gotten to the point where fewer items can fit in the box.

The degree of difficulty posed by larger carcasses also depends on time of year. It is easier to sell large pieces when there are not many on market. For example during the harvestable calf run from May through August, size is less of an issue. During the September to March period. when large carcasses are plentiful. it is far more difficult. From a packers' perspective the key to managing heavy carcasses is having the right balance in the plant.

For packers in Canada, however, finding the right balance is more of a problem than in the US. Canadian carcass weights have a greater standard deviation from the average over the year, with the light end going lighter and the high end higher than in the US.



Source: USDA NASS and Canfax

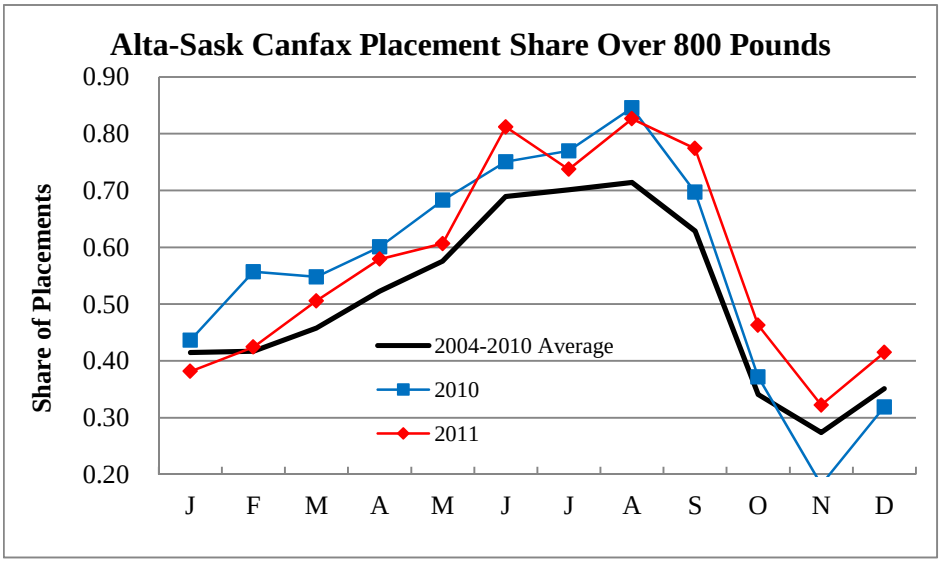
The US doesn't have as much variation within the year. This is due to the fact that in Canada, about 80% of the calves are born in March/April, while in the US the calving period varies much more widely. In the southern US, they calve in January while in the upper mid-west, they calve similar to Western Canada. This gives the US greater flexibility in finding cattle of a desirable weight to go into feedlots, compared to Canada.

Cattle Feeding Push and Pull Factors

For cattle feeders, the carcass size issue is both a push and pull draw towards larger carcasses. With regard to pull, the signals from the packer tell the feeder to feed to the max before discounts set in. In this case, if a packer is not going to discount until 950 pounds, then it does

not make sense to feed to 850. The logic of greater revenues spread over fixed costs makes that a simple decision.

Push factors also come into play. It may be counter intuitive that higher feed costs go hand in hand with larger carcasses, but they do. The cheapest gain that can be put on is either before weaning (hence size matters), or on grass as backgrounders. So far fewer weaned calves go straight into feedlots. In order to lower costs of gain, cattle may stay longer on grass or background. As such, animals going on feed are trending larger as they enter the lot.



Source: Canfax

A 900 or 1000 pound feeder entering the lot requires adequate time on feed to grade and yield, just as a 700-800 pound animal would. Nutritionists today want to see the cattle on high grain rations for a minimum of 140 days, to get 60% or better US Choice or AAA grades in Canada. The heavier they are coming off grass, the heavier they are going to be when finished because of the desire to get the premiums given on US Choice or AAA marbling. The difference of course is the size leaving the lot.

Another push factor is the relatively newer beta angonists animal health products. Market cattle become inefficient during the last month of the finishing period, because they are depositing less muscle and more fat. Beta agonists redirect energy to more protein synthesis, rather than fat synthesis, allowing the animal to be more efficient during this period *(UW Extension Wisconsi Beef Information Center © 2011)*. In other words, technology is working to allow larger carcass weights than otherwise would have been the case. This is a positive in terms of productivity and feed efficiency for the entire industry.

Of course genetics also come into play. Over the last 40 years the industry moved from a cow herd which was predominantly English breeds (Hereford mostly), to a cow herd which is a high percentage of continental breeds. Over the years, the Hereford cow got bred to a Charolais bull (initially) and then the offspring heifer got bred to a Charolais or a Simmental or a Limousin bull, a cycle that has repeated itself over many generations. It worked for the cow-calf operator,

because he got the benefit of hybrid vigor in the crossbred female and a heavier calf to sell. The average Hereford cow would weigh about 1150 to 1200 pounds, while the average breeding cow today weighs 1800 pounds.

In Canada, there is also an east-west difference. Steer carcass weights in the east are traditionally higher than in the west - even though the genetics are essentially the same. This may be attributed to two factors:

1. Cattle feeders in Ontario using more silage in the finishing ration than in the west;
2. Backgrounding gains in the west are probably not as high as in the east (with better grass).

Silent Demand Killer?

As noted earlier, the problems with large carcasses are the same now as they were 20 years ago:

1. Higher price points on the package or menu;
2. Unappealing restaurant plate profile;
3. Thinner cuts at retail and food service;
4. Larger cuts are at conflict with declining family sizes and other demographics.

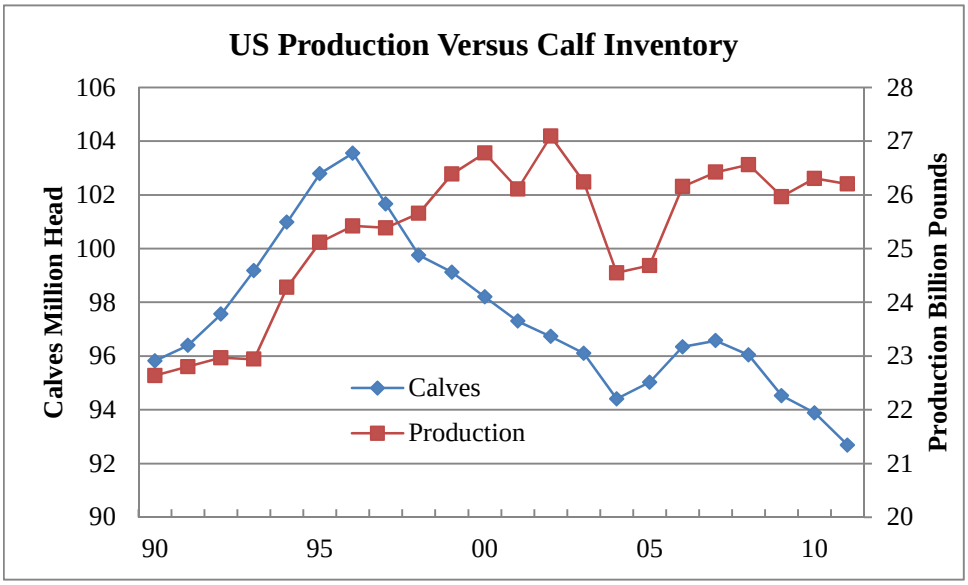
Point one is very important. Consumers care about price per pound or kilogram, but they likely care more about the total cost of the package. As proof of that, Walmart has stopped highlighting the price per pound on its meat features, and just highlights the price per package. Today's larger carcasses mean larger steaks and roasts, therefore a higher package cost. Larger cut sizes means that it is more difficult for retailers to post an attractive package price. Instead of an appealing package cost, larger cuts create sticker shock.

Unfortunately for the industry, it is not as simple as simply breaking the sub-primal cuts differently or into smaller sizes. Canada Beef, the industry marketing organization, has been working on this with some success, but ultimately, some cuts like striploins, T-Bones, ribeyes cannot be changed due to visual expectations. Some cuts like top butts are merchandised in smaller pieces, but it can be confusing. Consumers are already confused at the meat case, cutting familiar meat pieces differently is not going to help. Furthermore, making the cuts smaller would result in huge yield losses and hence, higher costs. Trimmings cut from a striploin in hopes of making it smaller makes for some pretty expensive ground meat, which is a loss for the industry.

The challenge is particularly acute at foodservice, because plate coverage is a big problem with these larger sizes, along with menu pricing. T-bones and strips and tenders can cover the entire plate and they cannot be cut differently, only thinner. Neither retail, nor foodservice, wants to make the price point lower by making the cuts thinner. That simply sacrifices the eating quality. Restaurants need cuts to be smaller due to menu constraints and pricing appeal.

Finally, while larger roasts may have been acceptable with larger family sizes thirty years ago, that is not the case anymore. An aging population is also not a good fit with larger meat servings.

These factors are important because they subtly reduce demand and purchases. A counter to that sticker shock argument, however, is that without larger carcass sizes, beef production would be much lower, and therefore prices much higher. Over the last twenty or more years, despite the sharp drop in US calf inventories, beef production has been relatively stable. This is due to carcass weights.



Source: USDA National Agricultural Statistics Service

While it is true that carcass weights increased production, and therefore kept prices lower, the argument that carcass weights benefit the industry due to its impact on supplies is tenuous at best. The easy counter would be that without higher carcass weights, the industry might have turned the corner on inventories long ago.

In any event, from a practical perspective, going forward, the industry is now at a point where carcass weights cannot be ignored. The cost and quality impacts are exacerbated by the high cattle and beef prices. Despite this, the issue is simply not being discussed in the industry. Food service buyers are important market participants, but in a world of tighter supplies their influence is lessened. Retailers simply go with the flow, and are unwilling or unable, to pay more for light or not accept heavies. It seems like buyers have given up on the topic.

The drivers to higher carcass weights are not only rational and strong, but the arguments against are not quantifiable. In other words, the benefits of larger carcasses can be calculated and understood, but the costs are hard to tabulate. Further to this point, questions that need to be addressed include:

- Are lower quality cuts being substituted in food service to lower the price point, due to carcass weights?
- Are end cuts not being purchased, due to package costs that are inflated due to carcass weights?

- Are consumers' perceptions of quality being damaged, due to steaks that must be cut too thin?
- Is Canadian beef losing market share to the US, due to lack of smaller cuts?

The cost factor at the consumer level today may make this issue more important than ever. As higher cattle prices get passed along to consumers as higher beef prices, demand is going to be tested. Couple this fact with huge package sizes and the problem is multiplied. At the very least, the questions outlined above should be addressed.

Lessons Learned?

Old Henry Ford was an automotive production genius. He led the world in the development of the assembly line technique of mass production. His introduction of the Model T revolutionized transportation and American industry in general. It is not all about production, however. His unwillingness to move to the consumer led to loss of share, and the loss of Ford's number one position to General Motors in the 1930's.

The Canadian beef industry has consistently delivered a competitively priced, high quality product. The issue of heavy carcass weights is now literally weighing on the industry, and could damage consumer demand. The balance between production and demand needs to swing more towards demand and towards lower carcass weights.

The dilema facing Canada's cattle and beef sector, with the conflicting market and technology signals to producers, processors, retailers and food service firms is not unique. Almost every segment of the food industry contains similar internal conflicting signals. The challenges to the industry in producing flavourful products but with dramatically reduced sugar, salt or fat levels in order to meet different consumer demands or regulatory requirements is one example. The need for both processors and food retailers to provide a breadth of food products in varying sizes, flavors and purposes, and yet not overwhelm food shoppers is another example. The demands for niche or specialty foods can conflict with mass market demands, if the products are successful in such markets. These and other farm and food sector challenges are similar to the internal dilemma facing the Canadian cattle and beef sector. Market forces, technology developments and genetics all play a role in attempting to meet consumer demands, yet need be adaptable enough to shift with changes in consumer demands over time.

A version of this paper first appeared in Canadian Cattle Buyer. For a free two month trial to Canadian Cattle Buyer, send an e-mail to Kevin Grier at kevin@georgemorris.org