

# 国際化によるアメリカ食肉産業の変化

Scott H. McInnes 甲 斐 諭

## Changes in the U.S. Meat Industry Due to Internationalization

Scott H. McInnes Satoshi Kai

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### Introduction

Over the past two decades the U.S. meat industry has undergone many radical changes due to the numerous influences within the global economy. Practically all aspects of the entire meat supply chain, originating from the rancher all the way to the consumer have been affected in recent years. Presently, the rate of change forced upon the industry appears to be accelerating.

Perdue University economist Dr. Michael Boehlji (Corah, 2008) described the new agriculture of the current century as having to focus on five challenges:

1. Global saturation
2. Industrialization
3. Differences in brand products
4. Precise production methods
5. Formation of food supply chains

The U.S. beef industry has a long history of following traditional methods, and observing the first fourteen years into the twenty-first century the evidence seems to confirm that many of these challenges are being met. There are, however, varying degrees of success to these challenges.

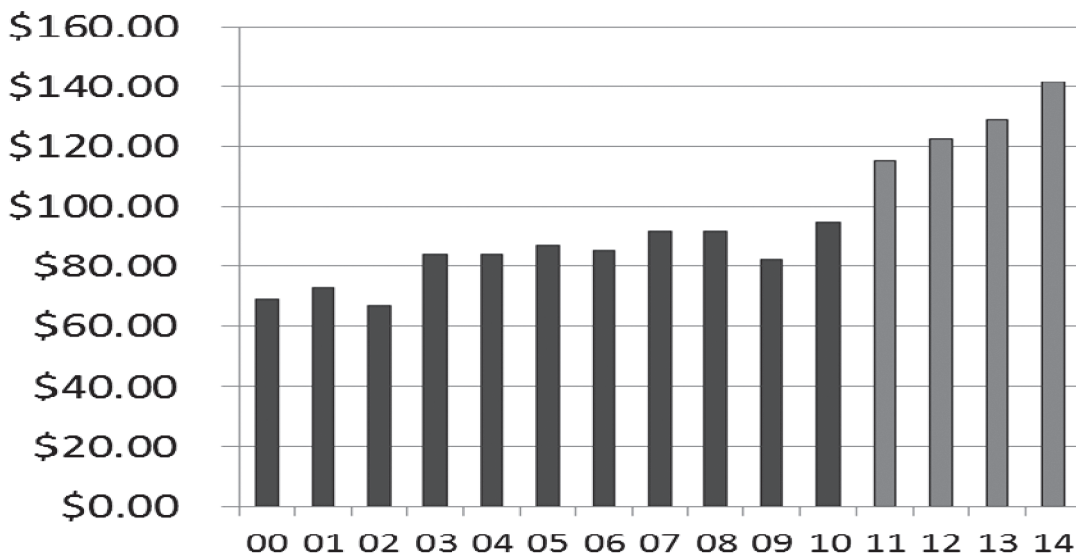
The magnitude of changes over the past decade will have a profound influence in shaping the meat industry for a long time to come. The purpose of this paper is to examine some of these key events, point out any obvious challenges that may exist, and to offer potential strategies for future improvement. Finally, the current negotiations over the TPP (Trans-Pacific Partnership) trade agreement in relation to the U.S. meat industry

will be examined, along with a comparison to the previous major agricultural treaty the U.S. entered into, NAFTA (North American Free Trade Agreement). This will hopefully provide an insight into the future of international trade in regards to the meat industry. That being stated, let's examine some of the current challenges facing the U.S. meat industry:

### Extremely high cattle prices

With the bovine spongiform encephalopathy (BSE) discovery in Canada in May 2003 (which closed the Canadian border to the U.S.), cattle prices reached record high levels, and have continued to trend upward ever since. In the last 10 years, the price for beef has almost doubled. Market analysts believe beef prices will continue to rise, up to 6% more this year and another 8-10% next year (Eller, 2014). There seems to be no end in sight to the increases. One main reason for this is because beef producers have been cutting herds to record lows to make way for the more profitable crops, such as corn. Experts still remain unsure as to the reason for the most recent price spike, though. The escalating high prices over the last year have added new excitement for cattle producers as they see strong profitability potential for the first time in years. This may signal the beginning of a major expansion in beef production. Another recent trend has been:

### Yearly Average Cattle Prices in \$U.S. (per 100 pounds weight)



#### The 20-year steady decline in demand for beef has been slowed, and shows signs of reversing.

From 1979 to 1998, demand for meat had declined 50%, mostly due to consumers shying away from beef due to health concerns, and due to the availability of more convenient and high-quality choices available. In the last decade, a new demand for beef came from a consumer-renewed interest for beef products, the continued growth of brands, and development of new heat and serve products. The development in “the frozen food” section of the U.S. supermarket has grown substantially in the last two decades. Upon visiting an American supermarket for the first time many foreign visitors to America are shocked to see just how enormous and all-encompassing the frozen food section is. Practically any type of ready-made meal can be found, often prepared in a variety of ways with numerous side dishes included. The reason ready-made meals have become so popular in America is because in many households both spouses work outside the house, and thus have little time or desire to do much cooking. Also, most households in America only visit the supermarket around once a week (while in Asia it is more common to shop several days a week). Therefore, the daily preparation of fresh food can be a challenge for many, causing people to flock to quicker

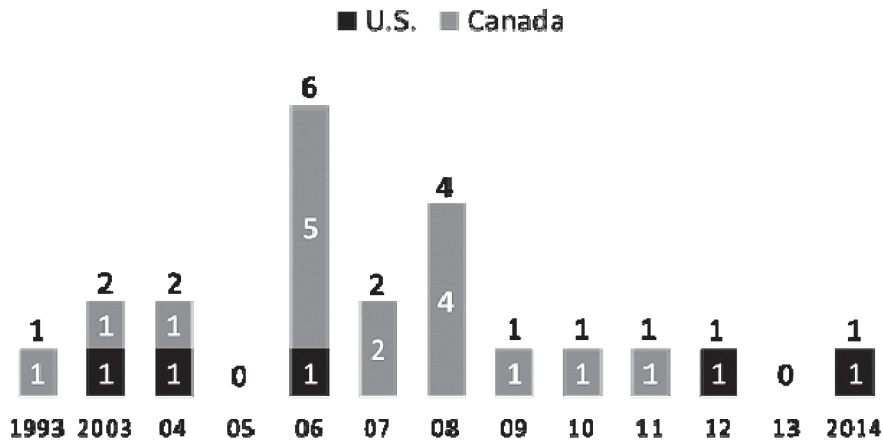
alternatives.

#### The discovery of BSE in 2003 destroyed international demand for U.S. beef

Most Americans know BSE (Bovine Spongiform Encephalopathy) by the simpler term “Mad Cow” disease. When a single Mad Cow disease incident was found in Washington in 2003, immediately many world markets were closed to U.S. beef. In that year, Japan was the top importer of U.S. beef, buying 240,000 tons valued at \$1.4 billion. After the very first discovery of BSE, Japan immediately halted all imports of US beef, banning it for two years. Other parts of the world were closed to US beef as well. A total of sixty-five countries implemented restrictions on the U.S. beef industry because of concerns that US safety testing lacked sufficient vigor. It is interesting to note that BSE had very little effect on domestic consumption. Americans continued consuming practically the same amount of meat with no noticeable change in the markets.

From the American point of view, BSE never was a serious problem, as least not deserving of all the backlash and restrictions put on the U.S. by the international community. In the U.S., five deaths occurred over the last twenty years. In the beginning, when a single case of BSE was first discovered in

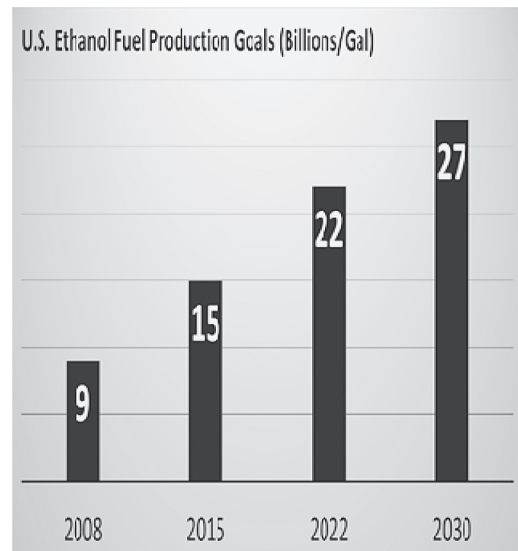
### BSE DEATHS IN NORTH AMERICA



Washington State in 2003, the American media tried to make a story out of it, but it never took hold with the American public. One of the main counter-arguments at the time was comparing the few BSE fatalities to the over forty thousand Americans that die in automobile accidents every year. As car ownership is considered to be a necessary part of life in America, beef consumption, which is a main staple of the American diet, was never in question considering the low fatality rate. Therefore, BSE was deemed to be an acceptable risk. Many experts believe the yearly deaths from BSE would have to climb to over 20 or so before Americans would begin to cut back on their beef intake. Internationally though, to this day a lot of doubts remain on the safety of U.S. beef, with a large portion of the world's nations hesitant to accept U.S. exports.

### High growth in global energy costs causes record corn prices.

Global demand for oil led to oil prices that helped to cause the development of ethanol fuel. The U.S. government has a mandate to increase U.S. production of corn-based ethanol from nine billion gallons in 2008 to fifteen billion gallons in 2015, to twenty-two billion gallons in 2022 (Schill, 2013). This push by the government to reduce the need for importing foreign oil will continue to severely drive beef prices up, since corn is the major input cost for the animals we eat. This mandate by the government to change food-to-fuel last year diverted 46% of the U.S. corn crop into fuel. It's not just corn that's affected. These food-to fuel policies of the government create a ripple effect for



all agricultural products, and increases prices on basic staples like bread, eggs, and milk. This is good news for farmers and ranchers, who will reap record profits, but bad news for consumers. The resulting higher prices for corn causes ranchers to cut back on their meat production, which ultimately results in higher prices for beef, chicken, and poultry. So consumers save money on fuel, but pay higher food prices.

However, there is great news on the horizon for the fuel problem. The U.S. is currently seeing the development of sorghum in the production of ethanol fuel. Sorghum is a crop that is grain, sugar and cellulose. Using sorghum to make ethanol would be the least evasive way to affect our current lifestyles. Sorghum can be grown on barely usable farmland, where corn and other economically impacting crops would not be profitable. Using sorghum, the economy

wouldn't be hurt in any way, yet consumers would still receive all the benefits of feed. Even its by-products are useful in the production of fertilizer. The only drawback is that some studies show that sorghum won't fatten cattle as quickly as corn will. In today's meat industry, farmers are continually looking for the fastest and cheapest way to fatten cattle, so the potential remains for some farmers to avoid using sorghum completely. However, current research on hybrid mixtures looks promising, and may ultimately provide a solution to the overuse of corn crops.

### **Differences in cattle prices according to quality**

Before 2000, beef was traded as a commodity without regard to quality grade. Since 2000, consumer demand for premium choice brands like Certified Angus Beef (CAB) and USDA Prime started to cause price differences. The CAB brand markets itself as accepting only 1.5% of beef good enough to achieve its label, requiring the meat it endorses to pass a stringent list of ten science-based specifications for quality. This is a selling point that has consumers flocking to its label. Now over 80% of all average choice beef or higher now sold is branded, and shows signs of growing even further in popularity in the future.

### **Ownership and consolidation changes continuing**

Consolidation has probably been the greatest change in the beef food chain in all areas, and a top concern in the minds of many people in the industry. The retail, foodservice distribution, packing, feeding and the cow-calf sectors, have all been consolidated into ever-increasing larger units. In recent years, many beef packing companies have changed ownership. Thirty years ago, only one of the major four companies was even in the meat industry. Also, the number of farms and ranches owning cattle has continued to decline. Over 50% of calves now come from ranches with over one hundred cows. As for retail beef, more than 80% comes from the top five retailers. Many industry watchers are concerned with this trend, fearful that a continual decrease in competition will be bad for the consumer.

The question remains whether or not it is detrimental to have consolidation, where the top retailers control over 80% of the beef industry. As the meat industry itself is quick to point out, most business sectors in the U.S. economy are fairly concentrated as well, comprising of three or four market leaders that have a 60-80% market share. The same structure has long existed in the banking and automobile industries, for example. Meat industry proponents question why the meat industry should be singled out for special criticism. Perhaps it is due to the fears over such an intimate part of what consumers consider to be a part of their identity – their food, and concerns of potentially losing individual control over it. The truth is that three out of four of the top meat producing companies have grown up from being startups, or expanded as a result of acquisition to the market share levels they have today. As seen in the technology industry, startups are often at the top of most highly admired lists of companies both in America and overseas. Yet the top meat companies with similar growth success patterns in the same time frame are distrusted and viewed with suspicion. It really all comes down to the one major difference between these two examples: government intervention. The U.S. government actively pursues and prosecutes companies that it deems to be too big (i.e. with Microsoft in the largest ever anti-trust litigation that lasted for years), while the colossal meat industry has been protected and even financially supported by the government. So the real issue here is government involvement in these industries, which ultimately affects public support.

One major issue the U.S. government has been avoiding to address in the meat industry is the active inclusion of smaller competitors. Consumer advocacy groups have been relentless in attempts to save the small farmer, which has a place in American society and deserves some protection. Take small-scale, independent slaughterhouses, for example. They generally provide safer products due to the fact that they process much lower quantities of meat and operate at a slower pace. Although consumer demand for local meats is rapidly growing, the infrastructure needed to produce and market this meat from small farms has been wiped out by the major players. Small slaughter and processing operations have been shutting down throughout the U.S.

because of industry consolidation, low profit margins, dealing with the complexities of federal regulations and the challenges of dealing with the disposal of slaughter byproducts (Starmer, 2008). An argument can be made that the meat industry, more than any other major industry, has had smaller competition directly affected through government intervention.

### **Resisting innovations dealing with information and transparency**

The U.S. beef and cattle industry is resisting market innovations, especially concerning those designed to provide more information and transparency in the marketing chain. For example, the additional traceability that is given by animal identification systems. This is a disturbing trend, as in the past the U.S. was a leader in innovation in the beef industry. Examples include achievements in cross-breeding programs, genetic engineering and integrated production practices. Also, American firms have been the beef industry innovative leaders in such areas as processing and marketing. Examples include boxed beef, animal carcass disassembly plants and meat packaging. Recently though, only production level innovations have been continuing, far surpassing all other areas. To continue economic development, it is critical to quickly adopt these new technologies and innovations, or risk losing investment and the economic activity that comes with it. Without new investment, industries will invariably stagnate and eventually die.

Why is innovation so looked down upon by the beef industry? Many of these innovations are seen by the American beef industry as adding unnecessary costs, and to create nonfactual-based trade barriers to attack US trade interests. Although eschewing innovation, the beef industry seems open to anything that can help it to cut costs. The meat industry has had direct experience with this, forced into cost cutting from the strong domestic competition from the swine and poultry industries. The meat industry realizes it must continue to look for ways to keep its product prices low to keep customers. Ways to recapture lost market share to swine and poultry include making changes in variety, convenience and product consistency. Without obvious and clearly definable transparency changes in

the domestic market, the U.S. will find it very difficult to lure international markets to accept more U.S. beef in the future. Another challenge facing the U.S. meat industry is:

### **Adopting a global standard for food quality and safety**

Global market integration forces are pressuring the U.S. to adopt a global standard for both food quality and food safety. The pressure continues to increase as the total world beef trade increases. However, significant differences among trading partners exist, including: risk assessment (being precautionary vs. using sound science-tested techniques); how much transparency and information is required (such as food-labeling and traceability disputes); how to best approach risk management; and animal and plant health standards.

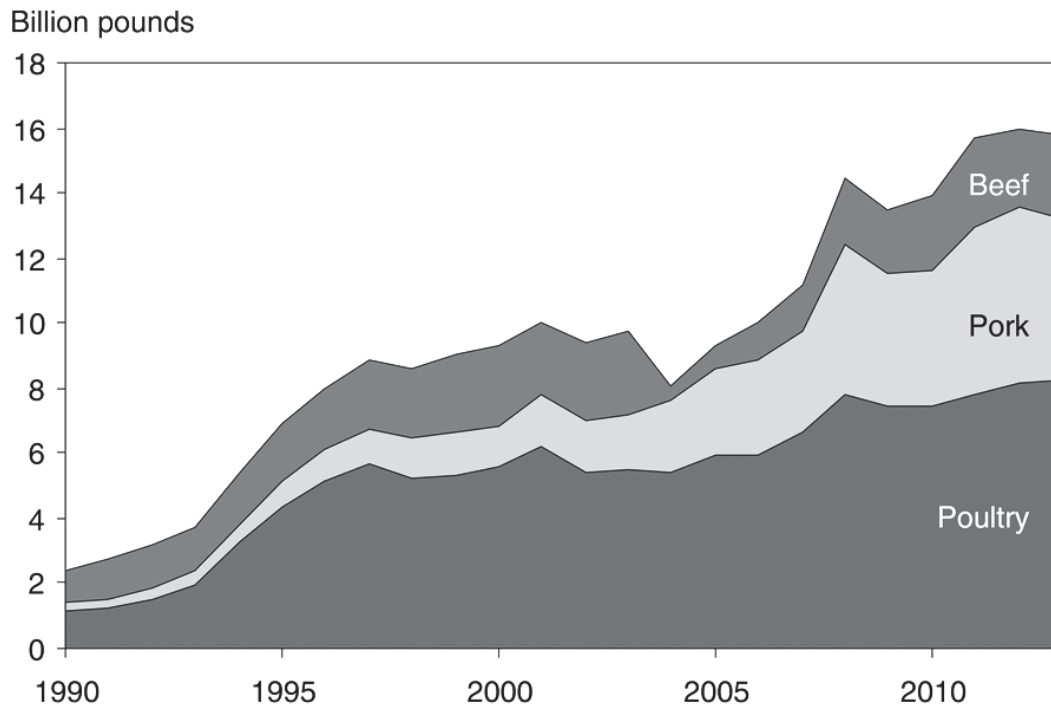
### **The recent importance of beef exports**

Only in recent years have beef exports been important to the U.S. American beef exporters have found the international beef markets to be highly unpredictable due to differences in opinion about the safety of some production practices and also animal disease. Recent examples include when the U.S. lost the entire East Asian market due to a few BSE cases, and losing the E.U. export market over disagreements about hormone-treated beef. Exports of beef have only doubled in the past twenty years, while both poultry and pork exports have increased substantially due to high international demand, and the high production capabilities of the pork and poultry industries. Meanwhile, the huge domestic appetite for beef consumes most of the output of American beef; and substantial obstacles within the beef supply chain forces limitations onto the extent of how quickly growth can occur. However, increasing beef exports remain a priority for beef producers.

### **Reducing the European Union (E.U.) ban on US hormone-treated beef.**

As far as international agricultural trade, this has been one of the most contentious issues. The E.U. is one of the world's largest markets for beef, and since BSE incidents in 1990 E.U. beef production and exports

## U.S. beef, pork, and poultry exports, 1990-2013



Source: USDA, Economic Research Service, Livestock and Meat International Trade Data.

have significantly declined, while imports have rapidly increased due to growing demand. The U.S. desperately wants to expand exports to the E.U. However to do so would mean the U.S. would have to adopt widespread assurances and certification that its beef wasn't treated with hormones. This would be too costly for U.S. beef producers to remain competitive. Also, numerous studies have shown that Europeans actually prefer non-hormone treated beef. Political support for this remains strong, which makes it even more difficult to get rid of the ban. A series of retaliatory U.S. sanctions on E.U. products have further complicated the issue. This is vital to resolve though, as trade between the U.S. and E.U. represents a third of all global trade. On a positive note, a recent step by the E.U. was to give a two-year extension of U.S. duty access to the E.U. beef market, which covers about 45,000 tons per year (Dunn, 2013). Perhaps this will act as a catalyst to help beef trade between the E.U. and the U.S. in the future.

### Animal traceability

Another trade related issue troubling the U.S. beef industry is the NAIS (National Animal Tracking System).

This tracking system provides a premises identification number (where animals are housed or handled) into a national database. It also identifies each individual animal with a unique 15-character animal identification number. The final component of the NAIS is animal tracking, which allows a report to be filed every time an animal moves to new premises, or a change in ownership occurs, or the animal is slaughtered. The ultimate goal of this system is to be able to provide a way to be able to trace backwards within 48 hours of a diseased animal's movements. Although most livestock organizations have supported this, American beef producers have remain opposed due to fears about confidentiality, potential liability, and also the cost: registration costs can run between \$1 and \$20 for each animal. Large corporate factory farms are vertically integrated, and pay a flat fee for their entire herd, but the small farmer must pay for each individual animal. The potential benefits for overseas trade are substantial if this system can be worked out. This NAIS system has the ability to make American animal products more marketable overseas. As an example, while the E.U. currently doesn't require trading partner countries to fulfill its traceability requirements, more and more

food-business operators are requesting traceability as a requirement to receive huge contracts, which serves as an added incentive for U.S. corporations.

### **Lack of sharing information within the beef marketing chain at all levels.**

Withholding vital information in the marketing chain is another challenge. For example, packers don't share info with feedlot operators about their marketing efforts to retailers, and cow/calf producers don't freely share info to feedlot operators about vaccination practices or handling. Also, retailers tend to keep quiet about their marketing practices. Finally, and most important, this withholding of information keeps transparency from consumers about where and how cattle were produced, processed and marketed. Traceability is essential for information transfer and would go a long way to improve efficiencies within the entire beef industry.

A major concern is why so much secrecy exists along with such a lack of sharing information. It goes back several generations, as the institutions in the U.S. beef marketing chain were established in reaction to one another. Creating larger markets, especially international ones, were of little concern at the time and still remain so. Political alliances were formed to keep everybody in equilibrium, so nobody got an advantage over the other. Therefore, to this day stagnation continues, and extends further when faced with the daunting task of expanding to international markets. Why should international buyers accept beef from a market that has been segmented and shrouded in secrecy?

A recent trend in the U.S. has been the emergence of cattle ranches that sell only online directly to consumers who in ever increasing numbers are demanding more traceability and accountability. These ranchers provide full disclosure about the cow's birth, slaughter, and even provide detailed pictures of the cow, its number, and the conditions of where the cow grazed and lived. A comprehensive history for each order of meat can be reviewed with the click of a mouse. Also provided to very health-conscious consumers is the option to buy guaranteed grass-fed, no-hormone beef. Despite being as much as four times the price of regular similar beef

cuts found in the supermarket, growing numbers of Americans have been flocking to these sites, willing to pay a hefty premium for traceable beef that provides full disclosure.

### **The powerful political force of the meat industry**

The American meat lobby in recent years has grown so powerful that it wields incredibly strong influence over politicians, both on the local and national level. The American Meat Institute, a trade association of meat packers and producers, is consistently one of the top contributors to politicians and to federal lobbying causes. Of importance to this meat lobbying group and others include environmental and food safety regulations. Another very powerful lobby, the National Pork Producers Council (NPPC), has recently made headlines in the TPP talks by its public outrage over Japan's attempts to maintain protection for some farmers. The Pork Council's former president has stated that if Japan's current offer of a minimum "gate entry price" on pork is allowed, it would be unprecedented in a U.S. trade agreement, and would cause U.S. farmers and ranchers to lose billions of dollars in sales. This is because Japan's high entry prices would only allow U.S. farmers to be able to sell the highest quality meat. If America accepts this, farmers worry that in the future other countries like the Philippines or China might demand similar concessions (White, 2014).

Originally, the NPPC was a huge supporter of Japan entering the TPP talks, but now it is so furious with Japan that it has started to lobby the Obama Administration to tell Japan to drop out of the TPP talks if they won't liberalize access to Japan's markets. While the Obama administration remains a strong supporter of Japan to be part of the TPP, international dissatisfaction with Japan's agricultural barriers seems to be growing, especially over the past couple of months.

Recently, immigration has also become a priority issue for the meat lobby, as the industry more and more relies on immigration for its labor force. The use of antibiotics, growth hormones and chemicals has also recently gotten the attention of the lobbyists,

but as of yet the federal government hasn't gotten involved. A good example of the power of lobbyists can be seen back in 2010 when President Obama outlined an ambitious governing agenda to establish a framework for a new rural economy. He wanted major reforms, and a new system of power in rural America, in essence, giving more power back to the small local farmer. Obama was unable to accomplish anything in this area, though. Just like when efforts failed to reign in the nation's largest banks years ago, or to stop consolidation in the airline industry, the attempt by Obama to curtail the meat industry also failed. This illustrates the immense power that groups like the American Meat Institute and the National Chicken Council have on politicians. By successfully beating back Obama's reforms, these groups have positioned themselves to be even more powerful than when Obama took office. Since Obama became President, the nation's four biggest meat companies have continually increased prices and widened their profit margins. Last year, major meat producer Tyson foods reported a record profit of \$778 million, and the evidence has proved so far that Washington is incapable of stopping this trend (Leonard, 2014).

### Going forward-strategy of the US beef industry for international markets

The U.S. has positioned itself as a high-quality (taste being paramount), high-price producer. This is its primary strategy going forward-to give the consumer a great-tasting, high quality product. Threats to this international strategy include:

- 1 . Based on taste, some consumers may switch to grass-fed beef instead of grain-fed. While most consumers still prefer grain-fed beef, giving the U.S. an export advantage, this could potentially change.
- 2 . Concerns about the environment may make consumers abandon taste preferences for grain-fed and to move to grass-fed beef.
- 3 . Competitors may introduce more grain feeding into their stocks, improving taste, something Argentina has had success with.
- 4 . Consumers may start demanding in growing numbers more credence characteristics, willing to sacrifice taste for quality assurances.

- 5 . An Inability to deal with cultural differences may erupt, whether it's about safety disputes, or differences in trade issues.

In addition, the weak points the U.S. has and seems to be ignoring now in regards to international markets are:

- 1 . Its low commitment to international marketing;
- 2 . Its continual problems with animal disease (BSE);
- 3 . A weak traceability system; and
- 4 . Ignoring credence characteristics (such as additives like hormones).

### Expanding International Trade

Currently, the Trans-Pacific Partnership (TPP) is a major trade agreement currently under negotiation. To get an idea of the implications from the American side, it may be a good idea to analyze another major trade agreement the U.S. entered into twenty years ago, the North American Free Trade Agreement (NAFTA).

#### NAFTA

The North American Free Trade Agreement came into being in January 1994. There are three countries in it, the U.S., Canada and Mexico. In terms of purchasing power, it is the largest trading bloc in the world. The purpose of the creation of NAFTA was to reduce trading costs, increase business investment, and to help North America be more competitive in the global marketplace. It is interesting to note that agriculture was the only sector of NAFTA in which the three countries were not able to agree on, thus three separate agreements had to be formed just for this. Agriculture was and remains the most controversial part of NAFTA, even today. After twenty years, just how successful has NAFTA been? It was successful for the U.S. by increasing the trade of goods and services between the other two countries from 297 billion in 1993 to 1.6 trillion today, a five-fold increase.

The results of NAFTA weren't all positive. The most glaring negative effect of NAFTA was that it cost the U.S. over 700,000 jobs, most of which moved to Mexico. As for the results in the meat industry, Mexico is now the second largest export destination of the U.S., due to tariff removals and a higher standard of living that





NAFTA brought to the Mexican people. Before NAFTA, the Mexican meat market was all but dead to American meat producers. This change didn't happen quickly. In fact, it took over ten years to get established, but now the export business to Mexico is very profitable. Exports to Mexico gained momentum in the second half of 2013 and now Mexico remains the second-largest volume market (behind Japan) for U.S. beef. It ranks third in export value, behind Japan and Canada. Overall, what NAFTA trade did is to open up Mexico, increasing the quality of life for its population, which resulted in more disposable income for Mexicans to eat meat.

On the negative side though, a portion of the Mexican population suffered. Rural Mexican farmers couldn't compete with low-cost corn and other grains that came from subsidized U.S. farm exports. NAFTA cost over 1 million Mexican farmers their jobs. The remaining Mexican farmers were forced to use more fertilizers and farm poor quality land, which resulted in more pollution and deforestation. The environmental devastation in Mexico is a major reason why environmental groups are so concerned with the TPP negotiations today.

### Trans-Pacific Partnership

The trade agreement called the Trans-Pacific Partnership (TPP) intends to enhance trade and investment among the TPP partner countries, promote innovation, economic growth and development, and support the creation and retention of jobs. The treaty is huge, and all encompassing: it has twenty-nine chapters, dealing with everything from financial services to telecommunications to sanitary standards

for food. Negotiations on TPP are currently attempting to finalize, but still an agreement seems to be far away. Though the treaty envisions dropping all tariffs, a main reason the treaty negotiations were stalled is due to the tensions which remain between the U.S. and Japan over support for both of their agricultural sectors. Why is America so hesitant to accept Japan's agricultural conditions? From the American side, one of the main reasons the U.S. is reluctant to give in to Japan's desires to protect their agricultural products is because of a precedent it could set for the future. For example, if China one day joins the TPP effort, they could demand similar massive exemptions from tariff elimination in industrial and high-tech products. This would be a very damaging outcome for a huge portion of America's commerce and agriculture, and other parts as well.

Overall though, is the TPP good for America? To be honest, it will be hard to notice at first, and it'll depend on the American. In the aggregate, it should make Americans richer: The Peterson Institute for International Economics estimates the U.S. will realize \$78 billion more per year under its assumptions about what the TPP will include, and \$267 billion annually if free trade is expanded to the rest of the Asia-Pacific region. Those gains won't be evenly distributed, though. Winners will include: investors; U.S. businesses looking for foreign investment; or a small business looking to sell stuff overseas. Losers will include huge portions of the manufacturing industry, for example those people working in the automobile and airline industries (DePillis, 2013).

How are the TPP negotiations progressing as seen from the U.S. meat industry? Recently there has been a flurry of activity from the U.S. beef lobby groups maintaining the U.S. stance to reject all compromise, even publishing highly publicized letters to President Obama, praising him in his refusal to give in to Japan's interests. The biggest problems that concern American interests groups have about the meat section within the TPP (not only Japan) include: the importation of meat that doesn't meet U.S. safety standards; accepting on faith the other countries claims on food safety without physical testing; the reduction or elimination of any standards on labeling; additives or pesticides that are higher than an agreed upon standard; and

giving further responsibilities to already overworked U.S. FDA food inspectors. In addition, the TPP could impose limits on labels providing information on where a food product comes from; potentially remove labels identifying genetically modified food (GMO's), and labels identifying how food was produced. Also, under TPP any foreign meat processing or food corporation operating within the U.S. could directly challenge any policy they think could hurt their profits, creating a huge potential for massive litigation.

Finally, will both Japan and the U.S. agree on the TPP conditions? The U.S. government has given hopeful signs for an imminent compromise to be met, but within the American meat lobby a growing anti-Japan sentiment may threaten to derail negotiations. Also, some economists feel that the differences between the two sides in the agricultural and automotive industries are too great to overcome, and what may happen is that they both sign a separate addendum agreement to the treaty-which basically is a separate pact with some minor consolidations from both sides (Yamashita, 2014). This will probably be like the added agricultural agreements the U.S. made with Mexico and Canada on the side at the conclusion of the NAFTA negotiations, which allowed for safeguards if imports suddenly jumped sharply.

## Conclusion

World trade in beef will continue to expand, even though US beef exports are still below pre-BSE levels. American beef exports have risen, although much slower than expected due to international competition. This is due to overseas competitors adopting new innovations much quicker than the US. Examples include Australia and Canada, where beef exports are much more a vital part of those countries' economies. Foreign competitors in the foreseeable future will have an edge over the U.S. to be able to increase their market share through traceability. Land grants to carry out necessary research and production practices are vital to future growth, something the U.S. still finds difficult to institute and implement. Also, competitors will continue to improve sales through taste by instituting more grain feeding. The U.S. meat industry needs to continually educate itself not only in world beef markets that will

help producers, but also in cultural differences within its major trading partners. If the U.S. beef industry continues to fight among itself instead of uniting to answer these significant issues, it will continue to lose market share.

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