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Gla-moo-rous

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HEFTY HEIFERS
may the scales be ever in your favor

GRAIN FEED DIET TIPS
THE GAINS OF GRAINS

GET YOUR SHIT TOGETHER!
how to manage your waste

FARMLAND WORLD
GRAND OPENING
NEW RECORDS
for milk production

SPECIAL OFFER!
FOLD-OUT MAP
to take on the go

TRAVEL EDITION
YOUR EXCLUSIVE GUIDE TO BEEFVILLE

Dec. 2014
your ONE & ONLY source for all COW-related gossip
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The Meat You Haven’t Met
Thesis Prep Fall 2014
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School of Architecture

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Beef comes from cattle. Yet the meat we buy rarely reminds us of the animal that lived only days before its meat was butchered and packaged into steaks or patties we usually associate with the beef we eat. This is because we don’t witness or experience many of the hidden processes of raising, producing, slaughtering, and processing beef. Generally we know cows need to be killed, but we are unconscious of an intruding architecture and infrastructure that destroys natural landscapes, symbiotic relationships, and local communities in order to support such a sizeable industry. Additionally, we are not always willing to accept the truth. Agribusinesses refuse to acknowledge the serious ramifications of their decisions that may not only contribute to the devastation of vital communities and ecologies, but also paradoxically, their own demise. Unsustainable and detrimental procedures and attitudes that permeate our daily lives are upheld and persist. As a result, animals certainly suffer, but so do humans and the environment due to immediate causes and more distant, drawn-out externalities.

Very few of the current approaches to resolve problems challenge reoccurring themes. Instead of changing the food system or the proliferation of an excessive American/western diet at a foundational level, proposed remedies treat problems like setbacks instead of crises. Modernist and productivist attitudes devoid of emotion and geared towards economy, treat animals like mechanical components or commodity outputs at the end of highly industrialized processes. They conform and react to conditions of confinement or economies of scale for profit through manipulation and technology to achieve greater control over fickle nature. Ironically, this often creates more unforeseen problems to confront.

We consume food, but in reality, we have no idea where it comes from and consequently fail to grasp the lack of sustainability behind it all. We trust labels, corporations, media, and the internet to inform us of our consumption choices. An increasingly distanced relationship with food is heightened by misleading, deceptive words and imagery in advertisements and packaging. This distorts perceptions and capitalizes on disclosure and lack of public knowledge.

Built environments and geographies also contribute to this distancing. Currently, architects really only operate at the consumption end of a food chain, designing restaurants, grocery stores, or other programs where meat has already been processed and packaged. Agendas involve drawing in more customers by offering pleasurable experiences or clean, lovely settings that shape brand/company reputation. However, the more technical and gruesome phases of production are usually designed by engineers specifically for efficiency and economy. Architects are only engaging in a small conversation that is part of a much larger discussion when there is tremendous potential for architecture to intervene and spark new ideas for alternative modes of food production and consumption. By supporting design for commercialized ventures and not participating in other phases, architects unintentionally facilitate the conventional food system.

This project asserts that architecture has the agency to expose the flaws and contradictions within the conventional, industrialized food system. However, the approach may not be what one would expect. Instead of trying to implement more sustainable practices or buildings, there is a very sarcastic and subversive tone guiding the work. The objective is to appear to continue masking or greenwashing these deplorable operations, but in fact these methods will create transparency through concealment by intervening within existing spaces.

Through a lens of contradiction, the project aims to evaluate how architecture currently contributes to a lack of transparency in beef production and the commodification of meat in order to propose how it may more effectively serve to increase transparency and create a foundation for food activism that will lead to sustainable alternative approaches.
The content of this thesis is that architecture designed for consumption currently contributes to distancing consumers from a relationship with food (specifically looking at meat) by emphasizing commodity and alienation. With increasing demands for transparency and increasing consumer awareness of production and processing phases of agriculture and food systems, there must be a new way forward for design. This thesis proposes an architecture and the development of a food system focused on improving sustainability and the health of food systems, with the primary goal being to engage the public in the chain of food production and processing. Much of the dissertation focuses on how the new food system can respond to that demand in various ways, including implementing new alternatives.

This paper examines the project of the cattle feeding lot at Duane Martin Livestock, LLC, through the lens of the original design and the project’s current state. The project’s history is presented alongside a critical analysis of the lot’s current operations and the potential solutions that could be implemented to make the cattle feeding lot a more sustainable and transparent food system. The dissertation also explores the potential impacts of these changes on the community surrounding the project.

The project has undergone two progressive phases with the goal of creating a new agricultural system that promotes sustainability and health. The first phase of the project focused on changing the current food system by addressing the challenges of producing and processing food. The second phase of the project focused on developing a new agricultural system that addressed the sustainability and health of the food system.

The current operation of the cattle feeding lot at Duane Martin Livestock, LLC, is characterized by a high level of transparency and engagement with the community. The project’s design focuses on creating a more sustainable and transparent food system, with the potential to engage the public in the chain of food production and processing. The dissertation explores the potential impacts of these changes on the community surrounding the project and the future of the food system.

The dissertation concludes that architecture can play a significant role in improving the sustainability and health of food systems, with the potential to engage the public in the chain of food production and processing. The dissertation presents a new approach to the design of agricultural systems, with the potential to improve the sustainability and health of food systems, and engage the public in the chain of food production and processing.
Having criticized and gained understanding of the ability for built environments to relay false perceptions as a means to subversively expose disputed beef production trends, the final phase takes a more optimistic approach. If design can mask, conceal, and shape opinions all the while being more transparent, there must be potential for actual transparency and sustainable alternatives. The proposals in this phase would go beyond education and raised awareness which is confronted in an unexpected way in Phase 2. It would recommend designs for sustainable alternatives through applying insight gained from the previous work. The programs may continue to be the structures or infrastructures within the beef food chain, or it may be a proposal for a program that rethinks engagement at the consumption end of the spectrum that veers away from commercialization and commodification, to use beef as a design tool, rather than a marketed design incentive.
DISCOVER THE POWER OF PROTEIN IN THE LAND OF LEAN BEEF
Gastronomic Aromatics
attract attention with powerfully pungent perfumes

Got Milk?
milk production at an all time high

Hefty Heifers
may the scales be ever in your favor

Farmland World
announcing the opening of a new kind of amusement

Illuminating Landscapes
photographic exhibition of stunning aerial shots

Waste Management
too much shit to handle? never.

Care-free Living
at the feedlot there is no need to worry

Generation Genome
calves growing up with superior DNA

Eat Your T-bones
so long veggies, beef is taking over

Bringing Home the Beef
behind the muscles of meat packing

Bon Voyage!
beef cattle have the privilege to traverse the globe

Factory Farm
Word Search

Sneak Peek: the diary of angus beef

Resources to get you thinking
attract attention with powerfully pungent perfumes
The stench can be sensed in every direction for miles and airborne toxins can travel even further up to 300 miles away.

**Chances are you will SMELL a CAFO before you ever see one.**

Despite a drive for perpetual technological and social advancement, the overall atmosphere and air quality of CAFOs and slaughterhouses is perhaps one thing that hasn’t drastically changed as notably demonstrated in the description of the characters’ first exposure on the drive to the stockyards in Upton Sinclair’s 1906 novel *The Jungle*:

“A full hour before the party reached the city they had begun to note the perplexing changes in the atmosphere. It grew darker all the time, and upon the earth the grass seemed to grow less green...the landscape hideous and bare. And along with the thickening smoke they began to notice another circumstance, a strange, pungent odor. They were not sure that it was unpleasant, this odor; some might have called it sickening, but their taste in odors was not developed, and they were only sure that it was curious...It was now no longer something far-off and faint, that you caught a in whiffs; you could literally taste it, as well as smell it-—you could take hold of it, almost, and examine it at your leisure. ... It was an elemental odor, raw and crude; it was rich, almost rancid, sensual, and strong....The new emigrants were still tasting it, lost in wonder, when suddenly the car came to a halt, and the door was flung open, and a voice shouted- “Stockyards!”’’

**Invisible AIR.**

Air pollution or contamination (in conjunction with greenhouse gas emissions contributing to global warming) is one of the most pressing issues caused by an industrialized and concentrated beef industry from one end of the food chain to the other. Although some gases give off rotten odors, air is otherwise something that goes unnoticed and is taken for granted. It is only when physical landscapes, felt climates, or personal health are noticeably altered that the impacts of invisible air become visible. There are several contributing sources:

1. **Cattle Belching and Flatulence:** Methane is produced by microbes and released through the animals’ noses and tailpipes during the enteric fermentation of ruminant digestion.

2. **Excessive Amounts of Manure:** Waste excreted by cattle on confined feedlots can not be cycled back through the system as fertilizer because it is too distant from feed production or exceeds needs. Instead manure is stored as liquid, solid, or slurry forms in lagoons, tanks, or pits. Decomposing manure emits 160 different gases with hydrogen sulfide being the most lethal and the most prevalent gases being ammonia, carbon dioxide, methane, and carbon monoxide.

3. **Transportation:** Tractor trailers, trucks, trains, and sea vessels carry feed and other inputs to factory farms, live animals to feedlots and slaughterhouses, and meat to distribution centers and/or retailers (stores and restaurants). Additionally, international imports or exports occur at a global scale.

4. **Emissions Caused By Deforestation, Overgrazing, Compaction, & Erosion of Soil:** These practices increase nitrous oxide emissions due to pressures on the land from livestock for feed production (esp. corn and soybeans) and grazing. Global livestock production is the single largest user of land on the planet; this transformation of the land removes valuable carbon sinks that would help to offset emissions.

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If you can’t
SMELL HAPPY COWS
you may need to get your nose checked.

HARRIS RANCH EXIT 337

FREEZE
YOUR BEEF
5. Widespread Overuse of Synthetic Fertilizers:
For centuries, synthetic fertilizers have been used to grow crops, which in the beef industry means growing crops for animal feeds. Half of all energy used in intensive animal production is used during the production of feed from the manufacturing of fertilizers to the planting, harvesting, processing, and transportation of that feed.

Animal agriculture is responsible for approximately 18% of total greenhouse gas emissions, but that number is on the rise. These gases contribute to global climate change. Although carbon dioxide is often blamed, other gases are much more harmful; methane has a Global Warming Potential (GWP) 23 times that of carbon dioxide and nitrous oxide has a GWP 300 times greater.

Global Warming has countless negative consequences with environmental, political, social, economic, and technological ramifications that are interconnected within the complex systems we have created to sustain our daily lives. For example, for the first time ever, drought in Australia has been scientifically linked to climate change. This impacts agriculture, which then impacts the meat industry that relies either on corn, soy, and other crops for animal feeds or the presence of healthy grasses in pastures for grazing. Beyond production, other sectors also become affected by issues like rising prices, food access and availability, or loss of jobs. This is a globalized problem that industrial economies of scale within beef production are both directly and indirectly contributing to and suffering from.

On another level, there are major impacts to human health, especially workers and residents of surrounding neighborhoods. Dangers to human health caused by contaminated air can include: respiratory problems (asthma, chronic bronchitis, acute respiratory distress syndrome), headaches, excessive coughing, and diarrhea or digestive disturbances. Mental health issues, like psychological disorders of anxiety or depression are also reportedly higher in these groups.

Furthermore, noxious and foul odors have social impacts on communal or personal identity, reduced social gatherings and enjoyment of outdoor spaces, or decreased property values. Often affected communities are low income and already have poor housing, education, infrastructure, and healthcare.

Working towards making the world a GREENER place.

Ongoing research and other technologies attempt to address and monitor air quality. For example, experiments are conducted to reduce cattle methane production such as adding garlic to their diet to attack methane-producing microbes, breeding cows that live longer with better digestive systems, or giving cows pills that trap gas in the rumen and convert it to glucose. Methane digesters/manure lagoons also try to capture some of the gases for use to generate heat and electricity. However none of these approaches fundamentally change the system or western diet foodways. They only react so that industrial production methods can continue even though the most sustainable solution would be to shift away from the current system entirely.

Overall there is poor regulation and inspections within the beef industry that need to be changed and enforced. Federal policies give CAFOs billions of taxpayer dollars to address pollution problems created by confining so many animals in small areas. If industrial beef operations actually had to pay fines or finance clean-up with their own money they wouldn’t be so successful. Factory farms are industrial facilities and should be treated as such with permits, inspections, and responsibility for monitoring, cleaning up, and disposing their waste products.

Tackling air quality is a challenge because of its inherently silent existence. More transparency would inform the public of where CAFOs or related risks are and raise local government and citizen participation. At the least, the common person has the power of consumer choice.
GOT MILK?

milk production at an all time high
For about two centuries, trying to get more milk out of a cow has been the goal. When we obtain milk from a cow, we are tricking her into thinking she is feeding a calf. That's nothing new in animal husbandry, but what is new is the use of machines and scientific technologies to maximize milk production on factory farms. Farmers didn't have the tools to realize their cows’ full milking potential until well into the 20th century. In fact, these tools led to national milk surpluses. However no one could have predicted the ramifications to come less than a century later. At the time, the application of Mendelian genetics or the chemical analysis of milk seemed to offer a promising future with greater access to milk.

Udderly Speechless.

Female cows reach sexual maturity at 15 months and are ready for milking by 24 months when they give birth to their first calf. To keep the milk flowing, dairy cows must be impregnated once during the course of the year or a 365-day lactation period. Over half a century ago, farmers would have kept most milking cows for a dozen years after their first lactation, but today most Holstein dairy cows pump out milk for only 2-4 years before they are culled for cheap hamburger meat. The cows’ services simply aren’t needed anymore as new cows are brought in even though they may be healthy and capable of producing milk for another decade.

MORE milk, LESS cows.

Fewer cows are producing more milk than ever. In 1950, there were 21 million milk cows in America producing a total 116 billion pounds of milk; in 2000, 9,000 milk cows produced 167 billion pounds of milk, a number which has steadily risen to now 190 billion pounds per year. In short, the average yield per cow is about 2.5 times greater than it was 60 years ago. Between 1950-2000, the number of U.S. farms with dairy cows also dwindled from an astounding 3.65 million to a mere 105,000, all while the average number of cows per farm increased 15-fold.

Setting the Record Book Straight:
two dairy cows raise the standard for milk production

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**GREATTEST MILK YIELD BY A COW**

**365 DAY LACTATION**

**1326-ET**

72,170 pounds of milk
(with 2,787 pounds fat + 2,142 pounds protein)

**previous record**

MURANDA OSCAR LUCINDA-ET VG-86
67,914 pounds of milk

U.S. Holstein average (2008):
23,022 pounds of milk
(with 840 pounds fat + 709 pounds protein)

**when:** February 2010  
**age:** calving at 4 years 5 months  
**owner:** Thomas Kestell  
**location:** Waldo, Wisconsin, U.S.A.

“This record wasn’t hard on her- she looks great and feels great. She just wasn’t stressed out at all, just like the rest of her family.”

**GREATEST MILK YIELD BY A COW**

**LIFETIME**

**SMURF**

478,163 pounds of milk
(216,891 kg | 217,000 litres - 11 lactations)

GUINNESS WORLD RECORDS  
previous record-holder  
Japan

Dairy Cow Lifetime average (2012): 77,160 pounds of milk

**when:** February, 2012  
**age:** 15 years  
**owner:** Gilles Patenaude  
**location:** Emburn, Ontario, CANADA

“Smurf has earned the privilege of a private box stall; she is milked there at 4 a.m., at noon and at 8 p.m. and fed the best possible ration.”

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don’t settle for standardized gallons of milk

FRESH FARMS GROCERY STORE

only what you need

$0.02 per ounce

weigh in at register

1% whole

2% whole

GlaMOorous
These impressive statistics are the result of scientific applications and industry concentration. First, is the use of selective breeding for cow types that could convert more of what they ate into milk than towards maintaining their body weight. These cows require greater calorie intake, leading to the use of ‘high energy’ feeds made with subsidized corn and soy ingredients that also stimulated milk production. Later, conventional megadairies used genetically engineered artificial growth hormone rBGH (recombinant bovine growth hormone) produced by Monsanto Company to boost milk output. The hormone was approved by the U.S. Food and Drug Administration in 1993.

Clearly the genetic manipulation has been working. However, unlike beef, where putting ‘No Growth Hormones’ on a label can be an opportunity to raise prices for consumers who are willing to pay more for hormone-free meat, this is not the case for milk which is subsidized by the government. Thus, megadairies are at a huge advantage compared to smaller farm operations which supports consolidation and concentration within the industry. Unfortunately, these economies of scale also pollute air, contaminate water and soil, and jeopardize public health like any other CAFO.

Keep the MILK flowing: it’s GOOD for us.

Additionally, cows are treated like milk machines. The well-being of the cows and their natural behaviors are practically ignored to meet demands and gain profits. Grazing for larger herd sizes requires too much expensive land, so diets of grain-feed have become the norm. These feeds are enhanced with additives and antibiotics to prevent cows from getting sick by eating food their ruminant digestive systems weren’t designed to handle. Still, many cows still suffer from acidosis and laminitis. The cows get little to no exercise and eat regulated feeds rather than grass due to the efficiency of confinement. Living in such crowded, manufactured environments is not pleasant. Often cows walk on hard ground surfaces and rubber mats instead of soft soils. Often they also stand in their own wastes. They rarely go outside and have limited access to open-air areas. Maximized milk production is also very stressful. Many cows have calcium deficiencies, lameness, and compromised immune systems leading to contraction of diseases like mastitis (inflammation of the udder). It would be a miracle if cows in such conditions even survived past their up-to-6-year pre-determined expiration dates.

Sadly, with milk costing more to produce than it is sold for, farmers have to reduce production costs and optimize yields just to stay afloat or risk losing everything. It is also cheaper to distribute milk from Californian factory farms across the country for retail, than it is for local farmers to sell to consumers, making it nearly impossible for small-scale operations to compete. They have little choice but to adopt the techniques that cause more harm than good.

The alternative- rotational grazing on pastures with small herds that are genetically diverse, no use of antibiotics, hormones, or medicines seems like a fantasy now that the dream of optimal milk production has been realized.
may the scales be ever in your favor
For nearly a century, industrial animal farmers have been supplementing feed rations with additives to promote rapid growth. This began with vitamins and nutrients that would allow producers to keep animals inside year-round. Later, with increased confinement leading to mortalities and disease outbreaks, technological developments of antibiotics were added to water and feed. Today some shocking additives may include: hydrolyzed poultry feathers, by-products of slaughtered animals, ground up wild fish, interspecies waste, antibiotic drugs, growth hormones, minerals and metals, and synthetic roughage replacements. These ‘recipe tweaks’ have been working. 75 years ago it would take 4-5 years for a cow to reach slaughter weight, now it only takes only 14-18 months. Over the last 50 years, the average market weight of a cow has increased about 300 pounds from 1,004 pounds in 1960 to well over 1300 pounds in 2010. With retail weight coming to about 40% of market/total weight, that’s an increase of over 100 pounds of meat per cow reaching grocery shelves. However, not all of these are added solely for the sake of optimized and accelerated weight gain. Other factors have played critical roles in determining what ingredients end up in cattle feeds. Ultimately, feeds are formulated to speed up growth to reach market weight and to supply essential nutrients while minimizing cost to producers.

Weight GAIN is the ultimate GOAL.

Federal subsidies on corn and soy especially encouraged the use of grain feeds because those inputs could be purchased below the cost of production for greater beef production and profits. Without these subsidies, a 1/4 pound McDonald’s hamburger could never cost $1. Feeding animals grain can reduce operating costs by 5-15%, which translates into billions of dollars and is perhaps more important to producers than gains of efficiency or sustainability. Grain feeds also happen to help animals gain weight faster. 47% of soy and 60% of corn produced in US is consumed by livestock. There has been a massive shift from food to feed. For example, in 2008, over 200 million acres were dedicated to growing feeder corn, soybeans, and alfalfa to feed animals. In comparison, the amount of land used to grow the top 10 types of U.S. produce is only about 1 million acres. All of this land used for producing grain feeds and pasturelands increases rates of soil erosion until the land won’t be fertile enough to support either system.

Agriculture also demands a lot of water resources. 60% of the world’s fresh water goes to agriculture with 33% of that going towards growing animal feed crops. Grain-fed beef production uses a disproportionate amount of water for the amount of food it produces. For every kilogram of meat produced, 100,000 liters of water are used. In comparison, soybeans use 98% less water at 2,000 liters/kg, and potatoes only 500 liters/kg. Water use is important to food access and security because currently over half of the states in the U.S. experience moderate to severe drought. The system depends on quantities of water that will not be available in the future following these trends.

faster weight gain starts with a BALANCED grain DIET.

Overall, cattle use more food supply than they provide and more resources than other food system sectors. In the U.S. 157 million tons of cereals, legumes, and vegetative proteins are fed to livestock to produce just 28million tons of animal protein in the form of meat for human consumption. The beef energy input to protein output ratio is staggering at 54:1, contributing much more than chickens or pigs to this inefficiently. If the grains fed to livestock in the U.S. were consumed directly by people, it could feed 800 million, or if exported, could boost U.S. trade balance by $80 billion per year. Tremendous amounts of resources and energy could be saved if more crops went directly towards human consumption, and if humans consumed less meat. An acre of cereal crops can produce 5 times the protein compared to an acre used for meat production. Meat consumption trends also impact society at a global level.

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Many countries that are poor often have grain surpluses but they have to export them for feed production so the affluent in other countries can consume meat. Paradoxically, these farmers support a process that in no way sustains them. Simply put, raising cattle in general depletes tremendous amounts of resources, and raising cattle on grain feeds use even more. Eventually there will come a point when these resources run out.

One of the reasons why beef production is so inefficient is that cattle eat excessive amounts of foods that their digestive systems biologically can’t handle. Cattle are ruminants, with a four-compartment stomach designed to break down roughage. As a cow chews, digestive enzymes in its saliva get mixed into the food before it is swallowed. Then the food passes down the esophagus into the reticulum and rumen where it is fermented and broken down by microbes. Some of the larger food particles are regurgitated, chewed again and re-swallowed; this is “chewing the cud.” Otherwise, digested matter flows into the omasum which further reduces particle size through water absorption. Next, digesta moves to abomasum, or true stomach, which secretes digestive enzymes that break the food down into protein, vitamins, carbohydrates, fats, and amino acids that are later absorbed in the small intestine. Indigestible matter passes to the large intestine where fecal matter is formed and expelled through the anus.

**There’s NOTHING 4 stomachs can’t handle.**

The entire process evolved through symbiotic relationships between the grass, cows, and bacteria. In fact, when calves are born on cow-calf operations, their rumens are not developed so they have to eat a fibrous diet of grass, milk, and water. When cattle are introduced to a high energy grain diet on feedlots, it has to be done slowly because the roles of the bacteria are so specific and need to be re-established so the cow can continue to eat without the microbes perishing. Therefore, it shouldn’t be a surprise that grain diets are unnatural, leading to numerous health problems.

A grain-fed rumen is acidic while grass-fed rumens are neutral. A common side effect is bloat, when copious amounts of gas given off by bacteria during rumination get trapped, inflating the rumen and pressing against the lungs. Another result of abnormal rumen pH is acidosis; cows go off their feed, pant and salivate, paw at their bellies, and eat dirt. Other side effects can include diarrhea, ulcers, abscessed livers, and weakened immune systems. In response, antibiotics are added to feeds to prevent sickness and casualties. It is estimated that 70% of all antibiotics in the U.S. are given to livestock. After all, sick or deceased cattle impede the effectiveness of production. Common antibiotics used are Rumensin, which inhibits gas production in the rumen to stop bloat and Tylosin, which reduces liver infections. These antibiotics wouldn’t be necessary if cows ate what they were evolved to eat.

But the additives don’t stop there. As if cattle weren’t growing fast enough, they are injected with growth hormones like Revlar to grow at unhealthy rates. CAFOs also have gigantic tanks that pump out liquefied fats, protein supplements, liquefied vitamins, and synthetic estrogen. All of these ‘wet ingredients’ get mixed in with the ‘dry ingredients’ like corn, soy, alfalfa, or cereals as they pass through computer-controlled feed mills. These reserves never seem to diminish as trucks arrive with new shipments every hour. However, this constant supply is necessary to keep the operation running. On average, a cow gains 2.5-4 pounds per day on about 6 pounds of dry-weight feed per pound of gain. Multiply that by tens of thousands of cows and it all adds up quickly.

These components of CAFO diets can impact human health just as much as animal health. Acidic rumens can lead to the colonization of pathogens like E. Coli or Salmonella that can withstand acidic environments, and human stomachs happen to be acidic. Normally acids would kill off viruses and microbes, but resistant pathogens conquer those defenses, risking human infection. Chemical additives and the pesticides and herbicides used on the monocrops of industrial corn/soy farms can also accumulate in animal fatty tissues and consequently humans that consume beef. In the end, humans are not only what they eat, but also what they eat, eats.

The government SUPPORTS this diet.

Even though the government plays a critical role in monitoring the food system, these toxins and pathogens can still infiltrate our food. One of the main issues is the competing interests of the USDA. They are responsible for both meat safety and increasing meat sales. The meat industry also has powerful ‘friends’ in the upper levels of the USDA, so they often win battles, such as the case of Supreme Beef vs. USDA, to hinder inspection rulemaking and food safety regulations. As a result, the meat industry is protected from liability at the expense of public health. This is particularly geared towards protecting the largest producers that dominate the highly consolidated and concentrated industry. The top 4 meat packers: Tyson, JBS, Cargill, and National Beef control over 80% of the market due to horizontal and vertical integration. The USDA also impacts the retail market by certifying various brands. The most significant market changes occurred in 1978 with the introduction of Certified Angus Beef and Coleman Natural Beef. The USDA passes the seal of approval on whether beef is organic for example, which can be a huge selling point for some consumers. They are also in charge of the grading program established in the 1920s that rates beef as standard, prime, choice, or select based on its marbling and fat content. Distinct marbling is a global aesthetic standard; more fat means better grading of the cut. Associated higher quality indicates better taste and tenderness that consumers have come to prefer. This meat isn’t healthier; in fact it is higher in saturated fats and calories on account of being fed grains verses grass. Even if the USDA showed some concern about food safety so that products aren’t recalled, they don’t care about whether the foods make us obese or give us heart disease, diabetes, high cholesterol, or high blood pressure. The government assists in keeping beef cheap, both in economic terms and regarding value related to health, society, and ecology.
BLOWING UP LIKE A BALLOON

STOP THE BLOAT.

Elanco

Rumensin®
Cactus Feeders
WE ARE EXPANDING

“benefits included.”

“all you have to do is eat and we take care of the rest.”

NOW HIRING
at all 10 of our feedlot locations in Texas + Kansas

QUALITY SO GOOD OUR BEEF SELLS ITSELF.

drive-by marketing
The grass ISN’T GREENER on the other side.

The clear alternative would be grass-fed beef. This would have many benefits. First, research has shown that grass-only diets alter fatty acid composition and improve the overall antioxidant content of beef. That means healthier beef for consumers with less bad fats, more good fats, less total calories, and more calories derived from protein than fat. The meat may be tougher since the cows actually get exercise, but people could become accustomed to that just like how they became accustomed to the taste and texture of grain-fed beef. Second, cows would be eating grass, which wouldn’t compromise their digestive systems, producing happier, healthier cows. There would be no need for antibiotics and additives that impact human health too. Third, raising cows on grass wouldn’t make as much economic sense in the short-term, but there would be less future costs related to the health of society and the environment. If people realize the offset costs, they would be willing to pay a little more per pound. However, despite the benefits posed by grass-fed beef, expanding this model to support current meat consumption would be just as unsustainable as industrial grain-fed methods.

For starters, there simply aren’t enough grasslands to sustain the 100 million head of cattle that currently reside in the U.S. 70% of the land area in the American west is used for grazing livestock, including 260 million acres of western public lands. This land is cheap because in an arid climate, it isn’t ideal for farming so it is subsidized for ranching. Even if the government supported grass-fed operations, it would take up to 250 acres of this type of land to support a single cow for one year compared to a couple of acres of pasture in the humid east. Managing cows on vast pasturelands also requires a lot of attention and work. That’s why the CAFO model can accommodate so many animals. It squeezes as many heads as possible into the smallest area. In the alternative, each cow would require more space. The other problem with using the land in this way is that it often gets overgrazed. This compacts soil, diminishes soil quality, reduces ground cover, and eliminates high quality forage. While Management-Intensive Rotational Grazing can be profitable and sustainable, it would not be effective at a large scale.

Like industrial crop agriculture, larger land allotments and scales of operation for animal agriculture would reduce biodiversity. Any livestock feed operation is often dominated by a few species and reduced gene pools, but the diversity of other species is also threatened by beef monocultures. This displaces vegetation as well as other wildlife from their natural habitats. The USDA Animal Damage Control Program established in 1931, also eradicates, suppresses, and controls wildlife considered to be detrimental to the western livestock industry. Therefore, taxpayer dollars are used to fund the killing of predator species like wolves, coyotes, or bears, all the while protecting the financial interests of ranchers who graze cattle on public lands.

Grass-fed operations would still contribute to global warming. Cattle ranching is already responsible for 80% of Amazon deforestation with the rest attributed to growing soy mostly for animal feeds. If the number of cows were to match current statistics, there would still be excessive emissions of methane, nitrous oxide, carbon dioxide, and ammonia. Plus some argue cows would gain weight slower, thus emitting more gases during a longer life span. Manure would also continue to be an issue.

Ultimately, economies of scale in beef production are not sustainable no matter what cattle are fed. The real solution may just be to eat less meat.
announcing the opening of a new kind of agricultural experience
This over-the-top hybrid experience attempts to critique the ways in which humans relate to animals and other agricultural practices.

Get ready for some Eco-tainment at this new Agro-tourist Resort!

According to the architects:

“The overlaps and mutable identities of animals and machines through technology are not just sites for crisis and detachment; they can also be the locus of unprecedented opportunity. Farmland World is a chain of agrotourist resorts sprinkled across the American Midwestern countryside. Part theme park and part working farm, guests arrive to the resort via train and stay as part of 1-day, 3-day or 5-day experience packages. Capitalizing on both recent governmental investments in high-speed rail infrastructure and the plentiful subsidies for farming, the network of resorts combine crowdsourced farm labor with eco-tainment.”

The identity of animal and machine becomes culturally blurred with the dominance of agri-businesses and our current conventional, industrialized food system. Monstrous, metal-structured, animal posers roam the landscape, executing planting, harvesting, and processing tasks to take the concept of mechanized labor and production to the extreme. The proposal is sarcastic, but ultimately aims to educate and relink humans with the natural processes that sustain us in conjunction with technology.
“plan your trip today!”

THE AGRO-TOURIST RESORT

PLANTING PATTERNS
Planting patterns on farms are in straight rows primarily out of tradition and only secondarily for efficiency. With GPS-guided tractors, any pattern is possible. With the Animal Farmhouse Hypothesis / Question, creative patterns are encouraged to provide maximum light, transforming the Midwest into a landscape of textures.

THE TRANSLATION
The form of traditional farms are no longer appropriate today. The mythical independent rural farmer has disappeared and been replaced by advanced natural / mechanical / human hybrids. Farmland World encourages the agrarian city dweller with farm foods and animals, that ultimately perform the tasks previously done by humans. Come for a stay. Anyone can be a farmer!

IMPORT
Guests and supplies arrive on the waiting morning. Train ready for their farm adventure. As the newcomers arrive, they are handed their complimentary overalls and ear tags. The overalls will protect them clothing from all the dirty work they are shown on their stay. The ear tags in their key to unlock many activities.

EXPORT
After gaining experience one of the 1-day, 3-day or 5-day stay packages. They are ready to return home. On site, they will produce enough food to last the length of their stay. Along with the processed vegetables and meat, guests toward the farm away from their time working on the farm itself. The excess is sold and is transported to market and canned home to the homes and refrigeration of America.

human/animal/m
Farmland World eco-vacation guide

Everyday is magical at FarLand World. The pastoral meets state-of-the-art resort facilities—your dream come true! As you travel by high-speed rail to our Family Farmhouse Resort, you will be greeted by our roaming Farmatures, sowing and plowing the fields. Your farm adventure begins the moment you step off the train and on to your very own front porch in the Grazing Stadium.

As you spend your days on the farm you will get to know many of our furry and feathered friends. Exploring comes first at FarLand World. From Dairytown to Beeville, Pig City to the Chicken Hut, Veggie Row to Wheat Island, the fun never stops. Maize Maze is one of our favorite Harvest Festival Activities.

Visit Farmature Elsie and her herd of 300 dairy cows. Learn the names of all the hens at the Chicken Hut, pick berries at Fruit Mountain, or safari at Pasture Place. Evenings are family time. One of our famous family-style restaurants, SuperTime, and enjoy farm-inspired dishes from world-renowned chefs. Barn dances are held every night, and a must see is the Animal Ball. We can’t wait for you to spend your vacation with us!

Fantasy Farm Experience Packages

Seed Package: One-Day Farmer Experience
Sow oats with us! Your day escape begins with an introduction to Farmature grazing in the Grazing Colosseum. Spend your morning learning the ins and outs of seeding in one of our Farmature Chickens. Wonder through the Chicken Hut and select your own farm fresh eggs or chicken. Dive in the Poultry Slam—make your own omelet or have one of our butchers assist you in processing your chicken! Spend your afternoon with your flock, sowing seeds in our Figure Hay B or Maize Maze. Your one-day seed package will plant enough food for tenfold twenty of our feathered friends! You Baked!

Cattle Drive: Three-Day Farmer Experience
Every moment will captivate you on this mind-blowing experience! You will be assigned a cow, goat or sheep Farmature of your choice which you will care for the extent of your visit—Elise the Heifer is a popular combine model! Harvesting your excitement is our goal. Visit Dairytown and milk a cow; you can make cheese, ice cream or yogurt with our tour guides. Cow-a-pong!

Farmer Fantasy: Five-Day Farmer Experience
Want to work it? Spend each day of your agri-tour perfecting the art of Farmature: horse, chicken, cow, goat, sheep—can you farm it all? Select several of our mini-classes to satisfy your cravings:

Meet Must: Carnivores Welcome!
Ever wondered how the meat gets on your table? Make your vacation worthwhile with our mini-meat science workshops. Chickens, pigs and cows, oh my!

Bee-eee Extravaganza!
This escape takes you into the hive. Learn how to set up your own bee box, extract honey, and care for bees. Tour our buzz garden and learn the art of honey making! It’s too sweet!

Wool Works!
Ewe into sweaters? So are we. Choose from any of our flax for your own: sheep, dye and knit to your heart’s content!

Machine hybrid adventure-land awaits”
ILLUMINATING LANDSCAPES

photographic exhibition of stunning feedlot aerial shots

CORONADO FEEDERS | Dalhart, TX
Works of ART.

Hundreds of publicly available satellite photographs of U.S. feedlots are compiled and seamlessly stitched together to create ultra-high definition images of industrialized landscapes that few ever see from the ground let alone the air.

Landform Sculptures.

The astounding results appear as if actual wounds, blistering, oozing, and seeping into a manufactured, regulated grid of desaturated pens. Blood red and toxic green lagoons dominate and threaten the clusters of perceptively ant-like cattle. This alarming juxtaposition exposes a contradiction. Massive waste lagoons are created by the disposal of colossal amounts of manure that economies of scale produce, which simultaneously jeopardize the industry’s future success by degrading not only the surrounding landscape, but also air, water, and land resources far removed from the immediate site. The feedlot is not immune to the negative environmental consequences it creates due to negligent waste management.

Seeing FEEDLOTS from a different angle.

Operating at the scale of industrialized cities, but tucked away out sight in the country, the feedlot may soon not be able to uphold the pastoral image of animal agriculture. The particular feedlots captured here are located in the Texas panhandle, but agriculture and feedlots are prominent throughout the Midwest, a region known for its vastness, Jeffersonian grid, and middle point of view. Ironically, these are often “fly over states” that go unnoticed. However, with increased general access to the internet and Google Earth satellite images, landscapes aren’t kept secret anymore. Negative environmental impacts are exposed and eventually certain deplorable aspects of meat production won’t remain hidden either.
WASTE MANAGEMENT

too much shit to handle?
never.
On a small-scale diversified farm, manure would be a key player within an ecological feedback loop. Symbiotic relationships support the system. Cows eat meals of grass in return for helping grasses by protecting fields from tree/shrub growth and by spreading/planting grass seeds and fertilizing them with manure. The microbes and bacteria populations in cows' rumens allow cows’ to digest roughage while being given nutrients and an ideal environment for their population growth. Cows turn roughage that humans can’t eat into proteins and amino acids for their own sustenance, but also provide humans with those key elements and energy into their diets when humans consume their meat and milk. Of course this system only functions effectively on a grass-fed diet, but nature and evolution has a way of working things out nonetheless. In this way manure can be a benign resource that turns literal waste into a valuable input that doesn’t cost a penny.

**SHIT just got Real...**

The U.S. alone is home to just under 100 million cattle and calves. Between 1-2 billion cattle inhabit the globe, whether they are used for meat, milk, or other. A gigantic population of cows translates into a lot of waste. For reference, a CAFO is identified as having 300+ animals, while a large CAFO has a head count of 1,000 or more cattle, with the largest maintaining tens of thousands head and some approaching 100,000. Due to the specialization of CAFOs that only ‘grow’ cows/cattle, the ecological benefits of manure are worthless, leaving producers with more manure than they know what to do with. In 2006, the USDA estimated more than 335 million tons of dry matter waste (liquids removed) are produced annually on farms (of all sizes) in the U.S. alone. A more recent study estimates animal factory farms produce 500 million tons of waste per year. That’s three times more than the amount of waste produced by the entire human population. Depending on the size of the operation, a single farm or factory farm can produce a range between 2,800-1.6 million tons of manure per year. And, with world meat consumption on the rise, stock piles of manure can only be expected to multiply in size.

**There are many effective DISPOSAL methods.**

Various techniques have been adopted to deal with solid, liquid, or slurry (semi-solid) manure. A common method is to create manure packs from bedding materials of straw, sand, wood shavings, recycled newspaper, and/or corn stalks. The manure packs are removed and spread onto cropland or pastureland as fertilizer. Solid manure storage generally consists of a structure with paved floors and walls on 3 sides so (preferably drier) material can be stacked and contained. Manure in liquid or slurry form is stored for at least 180 days. Pumps, transfer pipes, or channels move waste from animal housing to storage in either above ground concrete or steel tanks, or below-grade earthen or concrete tanks. Another popular method of liquid waste storage/disposal is waste lagoons that can hold up to 20 million gallons of liquefied manure. Lagoons are intended to kill viruses and bacteria through anaerobic and aerobic processes.

**MANURE is a benign RESOURCE.**

Manure is valuable for agriculture but not in excessive quantities and not when tainted with chemicals, antibiotics, disproportionate nutrients, etc. The division of beef food chain phases also inhibits the ability to use manure as fertilizer because producers don’t grow crops for animal feeds that could be fertilized with manure, or farms that could potentially use the resource are hundreds of miles away. This is why a large portion of the manure that has been treated in lagoons will get sprayed or buried nearby since there is nowhere else to put it. However, immense amounts of manure at any rate can lead to overflowing lagoons, or storage structures that leak at rates above legal limits. This can create a substantial mess and has a number of negative outcomes, especially as animal wastes are not given the same considerations as human waste which is well-managed and rather sanitary.

(continue to pg. 26)
Stored manure, especially waste lagoons, become toxic social and ecological liabilities. The absence of strict government regulation enables lackadaisical waste management or disposal. Loopholes in laws, political lobbying, and weak enforcement allow factory farms to escape pollution regulations and penalties despite the incredible transformation of landscapes and communities that their negligence can cause. Consequently, the retail price of beef doesn’t include clean-up (environmental) costs or the costs of negative human health impacts.

**We’ve got everything under CONTROL.**

CAFOs impose a techno-industrial iconography, architecture, and infrastructure on natural landscapes. Even though identifying and quantifying the presence of certain types of contaminants in soil or water requires special scientific analysis, physical or ecological changes are visible evidence that something is threatening the environment. From an aerial perspective, feedlots are easy to pick out because of the barren, desaturated, dirt pen and lake-sized lagoons that are often juxtaposed to the greenness one would expect of rural settings. An overhaul of natural resources to fuel industry starts to signify a visible loss of scenic beauty. In this way, our surroundings can be significant indicators of toxicity or imbalance. However, city dwellers or others who live their lives removed from places like the Texas panhandle remain unaware of these landscapes and never witness them unless perhaps flying overhead in a plane from one coast to the other.

Yet, many of the most prominent consequences of poor waste management and the mere scale of CAFOs are not readily perceived or directly linked. The 60-80% of nutrients, salts, pharmaceuticals, and other compounds fed to animals that are excreted as waste and remain on site in lagoons or silos that leak, break, or overflow infiltrate soil, water supplies or groundwater, air, and even the foods we eat at a microscopic level. Manure is a source of ammonia, nutrients (nitrogen and phosphorus), pathogens, salts, trace metals, antibiotics, pesticides, and hormones. These microbes impact the health of ecosystems and humans.

A disproportionate quantity of elements like phosphorus and nitrogen (two of the most important elements for plant growth and therefore used in synthetic fertilizers) can lead to nutrient over-enrichment or eutrophication (explosion of algae that robs water of oxygen and kills aquatic life, thus reducing biodiversity). Runoff pollutes water, even the water people drink, with top offenders including: nutrients, pathogens, siltation metals, oxygen-depleting substances, and suspended solids. Livestock waste has polluted 35,000 miles of river in 22 states and groundwater in 17 states. Manure sprayed onto farmland as fertilizer adds more harmful substances to soil, air, or water at those locations, but more significantly toxins and diseases can work their way into the fresh foods we eat. Research has revealed that crops grown with the use of CAFO manure exhibit traces of harmful chemicals and pathogens within the plants themselves, unlike a coating of pesticide for example that can be washed off. As a result, not only are neighborhoods and communities within proximity of feedlots or CAFOs affected, so are countless others across the state, the country, or the world. Consuming toxins, carcinogens, antibiotics, or pathogens unknowingly can’t be good for public health. (also note air quality impacts discussed in Gastronomic Aromatics pg.04)

Once again, it needs to be stressed that changes must happen at a fundamental level within a complex food system. Factory farms are industrial facilities despite their objections or the deceptive pastoral images they advertise. Therefore, factory farms should be treated like industrial facilities and should be regulated as such with permits, inspections, and responsibility for monitoring, cleaning up, and disposing their waste products. The general public can also waive power in this situation. There are happy stories of communities that have already succeeded in stopping the invasion of new CAFOs in their vicinity. Greater transparency and raised awareness is a formidable step that can lead to alternative farming practices with less crowded animals and ways to handle wastes.
WISH-WASH WATER CO.

- Fresh water from the rivers of the Texas panhandle
- Enhanced with nutrients and supplements to support a healthy body and mind
- No artificial flavors or coloring

WATER +

3-WALLED STRUCTURES

LIQUID

TANKS

WASTE LAGOONS

LIQUID | SLURRY

WASTE LAGOONS

oxygen

carbon dioxide, phosphate, ammonia

aerobic bacteria

anaerobic bacteria

sunlight

evaporation

LIQUID | SOLID | SLURRY

FERTILIZER FOR CROP/PASTURE LAND

whether your waste is solid, liquid, or slurry, there is a disposal method that will work for you

- Stack your solid waste and let it dry out in structures with three walls to contain it
- Store liquid waste in massive tanks that never leak
- Waste lagoons help to decompose your waste so you can continue filling them without fear of overflow and run-off into water supplies
- Manure is a benign resource that fertilizes cropland or pastureland to support sustainable agriculture and cattle raising

DISPOSAL METHODS

GlaMOOrous 27
CARE-FREE LIVING

no need to worry when you’re a cow
Human relationships with domesticated animals are interesting because both parties depend on each other to a certain extent. The evolution of the ruminant digestive system is important because the cow is able to obtain nourishment from roughage (grass, hay) which monogastric humans can not digest or convert into necessary nutrients, proteins, or amino acids for their own sustenance. Humans obtain those key elements and energy in their diet when they consume beef and milk. In addition to food, other byproducts humans get from cows/cattle include: leather goods, fertilizers from their manure, cosmetics, drugs, hair products, perfumes, gelatin, glues, and more in a modern age. In return, cows receive shelter, shade, water, ventilation, and medicines that human innovation can provide.

Humans NEED cows and cows NEED humans.

In a sense, humans do everything for cows; they tell them where to go, what to eat, where to sleep, when to have babies...to the point where cows barely even need to think. Cows also don’t even need to do manual labor anymore with mechanization; in fact, they aren’t even asked to exercise. Their only job is to eat, which they have to do to survive anyways. At the feedlot, feed is delivered to troughs daily using a tractor/truck or mechanical feed delivery systems. Cows are taken care of and don’t have the burdens of human anxieties like making mortgage payments, putting food on the table, etc.

However, given the severity of this management, cows don’t have freedom. Cows are intelligent, social, and emotional creatures, but industrial processes subordinate them not only as lower life forms, but as machines.

Cows are SPOILED.

On factory farms, cows are designated as numbers with no intimate connections to the owners who supposedly care about them. Cows are forced to eat feeds because there is nothing else offered. Or, if they do have the luxury of grazing in a cow-calf operation, they aren’t able to protest being whisked away from that life when they reach an acceptable weight to be finished on the feedlot. Cows are herded along by electric prods and directed to go into spaces that are unnatural or unfamiliar. A strong example is the procession leading up to the stun gun before slaughter. Cows literally can’t turn around or see anything but the animal in front of them because this is supposed to calm them down. Cows are artificially inseminated to produce calves that will be weaned from them. The list goes on.

Personal SPACE.

Once cows come to the feedlot, it’s like they’ve graduated from high school and moved on to college. Separated from their mothers, they no longer drink her milk or tag along behind; they move on to live with about 100-150 pen-mates in pens about the size of basketball courts, with thousands of neighbors living in adjacent pens. These conditions can be crowded and stressful, but the greatest efficiency is achieved when the greatest number of cows can be squeezed into the smallest spaces possible without killing them. Some go as far as comparing these conditions to concentration camps, hence the feedlot title, “Cowschwitz”, paralleling the stench and animal imprisonment to what happened to so many European Jews, gypsies, gays, disabled folks and others during WWII.

While many feedlots are comprised of open-air fenced zones, many also provide some form of housing or shelter which can vary based on topography and climate. The first type are total confinement buildings which are often naturally ventilated with apertures in the walls. Beddings of hay or corn stalks on solid floors keep cattle dry. Some have slotted floors which manure drops through into a storage container below, however it’s not common because it could impact potential foot/leg injuries. In humid climates, the ground is often paved to minimize mud while in arid climates sprinklers are used for cooling and dust control.

Although because cows are pretty tough and in regions that don’t experience frigid, snowy winters, simple shelters will suffice. These types include open sheds and lots, or open lots with windbreaks/shades. These utilize strategic orientation and shading devices for cooling or protection from the elements.

Ultimately, providing these living conditions isn’t enough. Standards of waste management and air quality should be maintained in order for cows to be more comfortable and relaxed, regardless of confinement and the sheer number of animals being cared for.
growing up with superior DNA
People love a nice medium rare cut of meat, but even more rare is the chance of beef cattle having multiple births. Against all odds, one Red Angus Beef Cow on a ranch in Minnesota owned by Keith Sistad delivered an astounding four healthy calves!

Quadruplets in beef cattle is extremely rare (compared to about 1 in 665,000 dairy cows having quadruplets). Although not unheard of, often at least one of the calves dies.

The calves were born nearly a month before expected. Sistad noticed the cow acting up and put her inside the barn for the night. He returned to find a set of twin heifers at 2:30am and then another set of twin heifers at 6:30am. The calves weighed between 36-48 pounds, about half the typical weight of a single newborn calf. All have been taken care of and are nursing, although Sistad does provide extra milk to supplement what the calves receive from their mother. Usually ranchers prefer one healthy calf to multiples because they often require extra expense and effort albeit having more profit potential. But in the end, caring for the cows is always worth it.

[With the number of cattle in the U.S. gradually decreasing, it’s nice to see a tiny, natural defiance of industrial trends towards fewer, bigger cattle producing more meat.]
tipping point
as the cow moos

will Angus ever stop cheating on Annabelle?
will the evil farmer Joe succeed in cloning Melanie before Duke can come to her rescue?
will the fragmented Marigold family ever be reunited?
will the father of Bessie's calf be revealed?

tune in weekdays at noon
for your favorite top-rated soap operas

mix | mingle | socialize | connect

MEAT & GREET
JOIN US December 31st at the GRAIN SILO
'Livestock Eugenics' reduce gene pools. Intensive breeding creates only a few parental lineages with supposedly superior DNA dominating expansive family trees. There is a rapid trajectory towards lack of biodiversity as certain varieties are specifically bred. 80% of pure-bred dairy cows are Holstein, with only four other breeds (Jerseys, Ayrshires, Guernseys, and Brown Swiss) constituting virtually all of U.S. milking herds. Beef cattle breeds remain more diverse because of varying habitats and fluctuating market demands, yet still over 60% of beef cattle are either Angus, Hereford, or Simmental. Herds are becoming homogenized.

It’s incredible to think that there wouldn’t even be cows in America at all if Christopher Columbus or the first British settlers in Jamestown hadn’t brought the animals across the Atlantic Ocean with them. Without diversity, entire herds or groups of cattle become susceptible to diseases. Cattle are bred for longer lifespans, better digestive systems, more milk per lactation, more marbling, or disease immunity, all in response to the threats created by an industrialized food system. The alternative would be to change aspects of factory farming so animal genetics don’t need to be so closely monitored in the first place.

BIOTECHNOLOGY promises a brighter future.

More recently, through biotechnology, genetic engineering or cloning are used to achieve even greater control of cattle DNA, perhaps with even larger detrimental impacts. Foreign DNA is inserted into the genome of the cells of genetically modified cattle via gene splicing techniques. Or, cattle are given growth hormones to accelerate development at unnatural rates. Cloned animals are also entering the food system; there are approximately 650 cloned animals in the U.S. with unique identities entered into a registry. In 2008, the USFDA reported that food derived from clones and/or their offspring is indistinguishable from conventionally reproduced animals and found no safety concerns. However, the introduction of animals derived from intense scientific intervention is a concern for many confused consumers.

Unfortunately, in the U.S., the approach applied to emerging food innovations is risk assessment or the basic assumption that some risk is acceptable even though threats to public health or the environment may be uncertain. In contrast, a precautionary approach is the notion that new technology is seen as risky until proven safe. In these situations, transparency becomes important. When the 'flavor-savor tomato' was stocked on grocery shelves in 1994, there were clear explanations in labels and brochures for consumers. However, consolidation, patents, and desire for even greater control has led to reduced transparency for consumers who unknowingly purchase foods with genetically modified inputs. For example, processed foods may contain corn starch produced with genetically modified corn, but the label will neglect to mention it.

Withheld information deceives consumers and protects the interests of industrial agriculture. In the case of genetically modified or cloned beef, there needs to be a consistent labeling system for if problems do arise or shipments need to be recalled. Some brands use the fact that they don’t use G.M.O.s or growth hormones as a selling point, but consumers who aren’t aware of the benefits, or who simply don’t have access, won’t be convinced. Besides, all of these catchphrases like ‘No G.M.O.s’, ‘Organic’, or ‘Natural’ can be meaningless because they do not reveal the whole production process. A cow may not have been injected with hormones, but it may still be artificially inseminated; a cow may have eaten organically grown grain, but still lived in CAFO conditions. Giving true meaning to these words and creating consensus within the beef industry can eliminate confusion, but for corporations that would mean sacrificing opportunities for revenue.
Many industrial beef producers justify their methods by claiming to feed the growing population of the world. This was pretty persuasive when everyone was convinced that mechanization and technology could solve all of the world’s problems. However, today many are skeptical and not so easily sold by this agenda as contradictions and negative long-term effects within the meat industry are exposed.

**Global scales of economy**

**FEEDING the World.**

World markets and free trade for beef have introduced cheap beef to regions of the world where it was once a rarity or delicacy. Meat consumption was a status symbol of affluence, but now people in developing countries can afford it too and are consuming more of it. Nearly 7 million tons of animal protein is produced annually in the U.S.- enough to supply every American with 75 grams of animal protein per day compared to the recommended 56 grams of total animal and plant protein. Influenced largely by world economic powers like America or the European Union, these countries are adopting excessive western diets instead of continuing traditional cuisines.

**Eat beef 3 times a day.**

The contradiction is that even as meat becomes more accessible, it isn’t feasible for every person in the world to eat beef three times a day. In reality, industrialized agriculture and meat production does not succeed in feeding the world as people still starve. If we can’t produce enough food for human consumption now how can we expect to produce enough food to feed the animals that feed us? Trends towards greater beef consumption are not sustainable and need to be reversed.

Beef becomes a commodity. A variety of consumer tastes and cultures are homogenized and satisfied by beef that meets global standards. Cheap food is de-contextualized- people really have no idea where it comes from or where been; it comes from everywhere and nowhere at the same time.
so long veggies...soon everyone will be eating beef every day
BRINGING HOME THE BEEF

behind the muscles of meatpacking
A few decades ago, meatpacking was one of the highest paid industrial jobs in the U.S.; despite dangerous, unpleasant work conditions, employees could earn a solid income. However, the meatpacking workers of today often live off of Social Security payments and struggle to make ends meet.

**Meatpackers CAN earn a decent living.**

In a relatively short time, the meatpacking industry became centralized and concentrated, with the top 4 agribusiness firms controlling 85-90% of the market today compared to only 21% in 1970. This doesn’t help the cause for fair wages. One reason is in the 1960s, companies like Iowa Beef Packers (IBP) revolutionized the industry by opening plants in rural areas. Here they could recruit and exploit immigrant workers who are often illiterate and don’t speak English. Immigrant workers usually don’t challenge authority and are powerless-viewed as perfectly cheap and disposable laborers by profit-greedy companies. Consequently, the need for skilled butchers and unions was virtually eliminated. Other companies had little choice but to adapt or go out of business, resulting in dramatic wage reductions and skyrocketing turnover rates. Though, quite frankly, how many people would be willing to do the dangerous tasks of industrial meatpacking for so little income?

**Tasks are SIMPLE, but there may be BLOOD involved.**

It’s one matter to earn a low-income, but it’s another to earn a low-income while physically risking your life. According to the Bureau of Labor Statistics, meatpacking is America’s most dangerous occupation. The plants where cattle are slaughtered are the most perilous because the animals vary in size, shape, and weight which means a lot of the work can’t be mechanized and must be done manually with razor-sharp or forceful tools. Some of the OSHA report headlines are horrifically shocking as if in the context of a horror movie:


These kinds of injuries and mortalities can happen in an instant due to simple errors and accidents. Workers feel obligated to keep pace with the relentless speed of the production line that involves heavy machinery, sharp knives, saws, or power tools, falling carcasses, slippery or unstable floors, etc. The golden rule is “The Chain Will Not Stop” because faster means cheaper means more profit. And, the production line is accelerating; in 1975, 175 cattle were slaughtered per hour compared to the current figure of 400 cattle per hour (or 7,000 calves and 130,000 cattle per day in the U.S.).

Other injuries of trauma/reoccurring pain take a longer time to develop, but involve just as much suffering. Injuries like carpal tunnel syndrome or tendinitis are caused by several hours of repetitive motions performed every day as workers become part of the machinery. This can be caused by some of the more obvious tasks like hacking at carcasses or lifting loads/boxes, but also result from less suspected tasks like cutting with scissors.

Poor environmental quality, particularly air, also leads to chronic diseases, especially respiratory diseases like bronchitis, asthma, or acute respiratory distress syndrome.

In 1999, more than 25% of 150,000 meatpacking workers suffered a job-related injury or illness, however data from injury reports is often falsified and workers are put back on the job as quickly as possible to minimize lost work days, so those numbers aren’t necessarily accurate. Slaughter/Packinghouse culture encourages hiding injuries and pain. For example, supervisors’ and foremen’s annual bonuses are tied to the injury rate of their workers, so they are discouraged to report injuries or seek out the plant nurse.

(continue to pg. 45)
the CHAIN NEVER STOPS. will you pass inspection?

conquer the hazardous realms of the meat packing industry to feed the world before everyone starves to death!

speed | blood | stun-guns | livers

SLAUGHTERHOUSE
“It is in our best interest to take care of our workers and ensure that they are protected and able to work every day,” says Janet M. Riley, a vice president of the American Meat Institute, the industry’s trade association. “We are very concerned about improving worker safety. It is absolutely to our benefit.”

Self-insured agribusinesses will do whatever possible to delay or avoid medical payments because those costs are subtracted from profits. When a worker is injured at IBP s/he has the option to sign a waiver stating s/he will not sue IBP in order to receive immediate medical care by company-approved doctors (for life). Otherwise the individual loses all medical benefits. The other option is to not sign, risk losing your job, pay your own medical bills and file a lawsuit that you may or may not win. Needless to say, most sign the waiver. But, even if a person signs, it doesn’t guarantee s/he won’t get fired; workers with disabilities lose value. Thousands of workers mistreated and discarded due to no fault of their own, having done everything ’right’. Yet most workers have little to no value in the eyes of the corporation anyways regardless of loyalty, consistency, or quality of work. The OSHA fine for the death of a worker is $70,000- a marginal sum for companies with annual revenues measured in tens of billions, and probably an amount less than what it would cost to cover most surgeries/treatments or lawsuits.

An alternative to this unfair treatment and horrific work conditions would be to let workers select their own physicians instead of having to use biased company-selected ones. Another positive change would be to not permit meatpacking companies to insure themselves as higher premiums would force them to take safety issues seriously for once. Overall, these disturbing scenarios, here not about the treatment of animals, but of humanity itself, continue due to lack of general awareness or outrage.
BON VOYAGE!

beef cattle have the privilege to traverse the globe
Just like humans, cattle have places to go and different ways of getting there. In commercial agriculture, cattle need to be moved for a number of reasons including: marketing, going from ranches to feedlots to slaughter, re-stocking, change of ownership, or relocating in times of drought for example. Typically, the animals travel by hoof, road motor vehicles, rail, and ship.

**Fasten your seatbelt and ENJOY the ride.**

Currently the multi-billion dollar live export trade is increasing, especially in Australia and New Zealand.

The most common and versatile mode of cattle transportation is by road. With the Federal-Aid Highway Act of 1956, people and goods can be distributed rather quickly and directly. Cattle and other livestock are no exception, especially when they are regarded as future commodities, packed into trucks like cargo.

**SPEEDY Interstates.**

Transportation vehicles should take the well-being of animals into consideration. First, it’s just common sense that only cattle who can endure the journey should be loaded (i.e. not sick, pregnant, or injured). Transportation should be scheduled for when temperatures are cooler in early morning or at night. The shortest and most direct route is also preferred. There should be sufficient ventilation, non-slip floor surfaces, proper drainage and waste management, and protection from sun or rain. Cattle should also be able to stand comfortably without being overcrowded. For full-grown cattle the ideal floor area per animal is 1-1.4m². If there is extra space, partitions should be added to keep animals from being thrown about. Additionally, cattle should not be tied up and require turning every 30 minutes or so. Finally, cattle should also be familiar with other animals on board so they aren’t strangers and apt to get rowdy. However, these measures are not always followed.

When producers and distributors are negligent, and even if they are careful, transportation is the most stressful and injurious stage in the food chain for cows. The effects are disturbing and numerous including: trauma, lacerations, broken bones, bruising, trampling, suffocation, dehydration, exhaustion, heart failure/stroke, heat stroke, bloat, weight loss, etc. Additionally, when cattle from different herds are confined together for long periods with poor ventilation and increased stress, it creates breeding grounds for infectious diseases, leading to viral outbreaks. It’s puzzling to think about how this cruelty persists despite carcass devaluation and thus, loss of profit.

**SMOOTH Sailing.**

Sea vessels for transportation are designed to carry 900-1600 cattle for up to as long as 5,000km.

In 2012, hundreds of cattle loaded on a freighter ship en route from America to Russia were trapped in what critics referred to as a ‘torture chamber’. The animals were lying in several inches of filth from their own manure and urine. The cargo spaces were so inadequately ventilated that hundreds of cows died from the toxic levels of their own copious ammonia emissions. Hundreds more perished shortly after docking from trauma incurred on the trip. The instance led to outrage and requests to ban international live animal trade until better safeguards could be put in place.

**Living PROOF.**

Due to the controversy of livestock transport, some could argue that dead animals should be shipped instead. However, this would demand significant changes with the current highly centralized system in which the phases of slaughter and processing/packing take place at massive scales in few locations. A more localized approach would be economically inefficient for the big names in the industry. Transporting butchered meat would also call for more refrigeration. In contrast, live animals can move with their own power which makes loading and unloading much easier and they won’t spoil (but they just might contract infectious diseases that will make the consumer sick anyways). Others still, argue that animals should never have to travel long distances at all. This would favor a more localized approach, but again would involve changing fundamental components of an industrialized food system which would take considerable time.
Around the world in 500 DAYS.

Take in the sunshine and fresh, briny sea breezes while journeying across vast oceans for thousands of miles. Traverse every continent except Antarctica, from the grassy pastures of New Zealand, to the rainforests of the Amazon, to the Great Wall of China and more.

This will be a trip you will never forget and never regret.

ON TODAY!

Just Cruisin’ Travel Agency
The Beefville, U.S.A. experience takes you through all 7 phases of beef production. Want to know more about the beef you’re eating? We’re happy to give them to you. So pack your bags for an unforgettable experience replete with lots of cows and calves, comfortable accommodations, thrilling activities, and meals your mouth should salivate over. We will only provide the best for our customers - we care about satisfying you and your families.

Deseret Cattle & Citrus
Winter Livestock & Auction

Whole Foods Markets
McDonald’s

COW-CALF OPERATION
- pasture overture
- the weaning center
- meet the herd
- match-maker
- the squeeze
- load ‘em up!

LIVE CATTLE AUCTION
- casting call
- dressing rooms
- sold!
- munchies
- wifi wanna-be

CATTLE FEEDLOT
- trough trail
- play pen
- lazy lagoon
- super-silo
- archi-manure
- tunnel tank

PACK PLAY
- the cattle
- bulls!
- upside-down
- sinewy spools
- inspection
- freeze plastic
You want to know it all? Then take a trip across America (literally) experiencing for yourself all of the top performing links in the beef food chain. The journey begins in Florida and ends with the country’s finest mouth-watering steak in Brooklyn.

**WELL DONE:**

2 weeks

This trip offers snap-shots of Lake Michigan as the bus travels down Interstate 43. Intended for the risk taker, a full day is dedicated to the packing plant, followed by a grocery store pit stop and fine city-life dining.

**DIUM:**

days

You want answers out there - prepare to be proven wrong. Delicious meat. Gorgeous panoramas, already be itching to devour await you. We importantly your appetites.

**Auction**

Cactus Feeders

JBS Beef Co.

Steakhouse Restaurants

US Dept. of Agriculture

**KING ANANT**

hute eye!

vn hanger speedway perfection tag wrap

**GROCERY STORE**

pristine clean

back-room butcher

a-maze-ing aisles

delicious displays

meat made easy

**FAST-FOOD RESTAURANT**

drive-thru

menu mania

monumental signage

order up!

cozy booths

**STEAKHOUSE RESTAURANT**

stellar cellar

be our guest!

kitchen concoctions

categorize the cut

tender tastebuds

for brochures and more info. to plan your trip go to:

www.beefvilleusa.com
Beef cattle begin their lives as calves, who require the nourishment of their mothers’ milk and pasture grasses to develop. Deseret Ranches have functioned primarily as a cattle operation for over fifty years, despite also producing citrus, which one would expect to come from Florida. The ranch specializes in producing quality calves that are sold after weaning to feeding operations around the country before they become beef. This involves moving herds into new pastures, prepping corrals and chutes, breeding, and weaning. Gaining the reputation as one of the leading cattle operations took years of effort and applying the latest health, nutrition, and handling ‘innovations’.

When the ranch was first founded, bred cattle didn’t exist in the region, so they developed a breeding program to select for traits that tolerate the heat, humidity, insects, and heavy rainfall of the climate, as well as traits for beef quality, rate of gain, reproductive capacity, and calving ease. Today, they utilize a three-way rotational breeding program that maximizes hybrid vigor. They also conduct research to grow higher quality grasses for the cattle to graze on.

Despite being in a remote area, the ranch is still close to urban centers that push for community development, placing pressures on the land, water, and transportation corridors.

The ranch intends to continue agricultural practices in harmony with natural systems and diverse wildlife. It claims to be committed to the regeneration and conservation of natural resources—especially water, and the future long-term planning of the region to preserve a Central Florida quality of life. For example, the ranch deploys a strategy called “edge effect”, positioning patchworks of woodlands and wetlands amid pastures rather than clearing off all the land for grazing. They want the public to hear this message and they have received honors/recognition for environmental stewardship.
bragging rights

Building Florida’s Legacy.
Committed to Florida’s Future.

44,000 cows total

1,300 bulls

33,000 calves per year

13 cattle management units
(> 1,000 cattle per cowboy)

highest weaning rates
in the industry

BREEDS
simbrah, braford, brangus angus

259,000 acres

160,000 acres
for pastureland

“BEST IN REGION” HONORS
from the National Cattlemen’s Beef Association for environmental stewardship & land management
MEET THE HERD

We’re all on big happy family here, and our cows are no exception.

PASTURE OVERTURE

How does one get around 259,000 acres without a horse? How about a gondola? Fly above vast pastures, wetlands, woodlands, and waterways from an aerial viewpoint.

Cows fall
Stroll the g
the computer s
bulls and p
will look lik

MAP OF THE RANCH

Atlantic Ocean
LOAD ‘EM UP!

Ramps aren’t made for slipping on. Make your ways through the gates to the final destination.

MATCH-MAKER

In love, didn’t you know? Head to the station barn and then use our system to match cows with their offspring. Check back in 9 months!

the SQUEEZE

Keep Calm and Carry on in the Hydraulic Chute. No shot, weigh-in, or check-up ever killed anyone.

the WEANING CENTER

Weaning is a natural process for calves in order from them to grow. Cows may bellow, but every child needs to become independent. Learn more about the process and conquer the separation gates.
Established in 1936, Winter Livestock is one of the oldest cattle auctions in the nation. It has five locations: Dodge City, KS, Pratt, KS, LaJunta, CO, Enid, OK, and Riverton, WY. The cattle auction has sold over 30 million head of cattle for the area’s finest cattlemen, always striving to get them top dollar for their animals. With a focus on cattle, the facilities of all the auction buildings and pens are maintained and laid out with special care for cattle needs.

The environment of the auction is quite casual; often there will be coffee or other concessions like one would expect to find at a sporting event or movie theater. Venues will facilitate not only auctions, but other social gatherings, making them hubs for cattlement to bond and converse about anything and everything to do with the industry.

Today, people don’t even need to go to the auction to participate with technologies of real-time, live stream auctions on the internet. Producers can receive constant updates on the status of the market.

Using terms like consignments or commodities when referring to heifers, cows, and steers being auctioned off, this sector is highly commodified and involves a lot of speculation. It’s all about getting the highest price, not just for large corporations making billions of dollars, but also for the small ranchers who depend on marginal prices to support their families. Many ranchers pursue other careers in addition to ranching in order to make ends meet.

This requires predicting future costs dependent on what beef consumers will be willing to pay in order to preserve and build beef demand in the industry. The challenge is not necessarily beef quantity, but beef quality as prices increase and there is incentive for less cattle with larger carcass weights which affects portion size and market costs. Beef retailers form relationships with grocery retailers or restaurant owners to minimize the impact of high unit beef prices from larger meat cuts. Premium price needs to match premium qualities of.
bragging rights

We strive for top dollar on your cattle.

over
30 million cattle SOLD

LIVE STREAM VIDEO AUCTIONS
online for your convenience and frequently updated market reports to keep you in the now so you can predict for the future markets

marbling, tenderness, flavor, nutrition, etc. In this way, certain criteria for value are established that become significant marketing pitches.

Breeding efforts in cow-calf operations become critical to controlling beef quality and anticipating market trends. This phase of production depends on the prior phase and must look ahead to ensure efficiency and profits in later phases of the food chain.
Can't have a show without some popcorn and candy to munch on.

Hoot and holler with a huge round of applause for the cattle! They are the stars in this arena so we give them the celebrity treatment.

Show sold out? No worries. Just use your mobile device or computer to tune in live any time.
CASTING CALL
It takes time to get your moment in the spotlight, but you never know who is watching from above.

DRESSING ROOMS
Get ready for your close-up! Final touches behind the curtain before the big debut.

HOLDING

CATTLE PENS

DRESSING ROOMS

CASTING CALL
Cactus Feeders may be the second largest cattle feeding operation in America, but it is the world’s largest privately-owned cattle feeding operation with 10 feedyards in the Texas Panhandle and southwestern Kansas. This region provides the climate and access to abundant grain for feeds and cattle that is a formula for success.

While feeding and rapid cattle weight gain are the top priority at the feedlot, other important considerations are executed to keep the massive operations running. These include: cattle/ feed financing, cattle performance record keeping and research to identify ideal genetics and practices, cattle marketing that responds to a dynamic beef industry market, environmental and food safety, and state-of-the-art health and nutrition programs. However, all of this is done exclusively to maximize cattle performance and enhance profitability from the cattle that are fed. Therefore, issues like animal health or environmental stewardship only happen out of necessity, not as leading principles. Relationships with grain-feed producers and pharmaceutical developers of antibiotics are also key to operation success.

The process starts and ends with the receiving/shipping area with non-slip chutes and ramps. Flow of cattle and spatial planning are critical for control, efficiency, and management. Such strategies aim to reduce the stress levels of the cattle so they remain calm and don’t get sick. The feedlot also provides hospital pens or barns for sick animals to get treatment. Feeding cattle is a highly computerized and automated process that involves formulating and mixing feed rations, distributing rations and water, weighing animals, etc. Additionally, pen layouts facilitate feed schedules as well as drainage for waste control using strategies like tanks and waste lagoons.

Again, decisions are made to promote cattle and beef as commodities with commercial value. 🌺
Let’s do business. You bring cattle, and we’ll feed them. Realize the value of your cattle with the Cactus way.

527,000 cattle capacity
Cactus Feedyard
75,000 cattle capacity

10 feedyard locations
(Texas Panhandle and Kansas)

Influencing the beef industry as the largest, privately-owned cattle feeding operation in the world

Cattle Business of the Century Award
from the National Cattlemen’s Beef Association

Revenues exceeding $750 million
500+ employees

Environmental Stewardship Award
from the Texas Cattle Feeders Association
**TANK TUNNEL**

Our waste tanks never leak and to prove it, we’ve constructed a tunnel below of the same metal and bolts for you to walk under. But you won’t feel a drop.

**LAZY LAGOON**

Our water is so fresh, we’re letting you take a dip! Relax as you float along a waste lagoon in an inflatable tube and take a moment to bask in the Texan sun.

**PLAY PEN**

Conveniently, cattle pens are about the same size as a basketball court. Shoot some hoops or play your hand at a variety of other games in one of our pens that has no cattle in it.
Cactus beef packing plant

Cactus Feeders

SITE PLAN

FEEDS are mixed and stored in silos using the latest computer technology. Our engineers have turned one of our silos into an adrenaline pumping amusement ride.

TROUGH TRAIL
Travel in a trailer hitched to the feed truck to see the cattle up close and watch them do what they do best—eat.

HI-MANURE
All around the world cow manure is used as a building material. Build an architectural masterpiece using dried manure blocks.

SUPER-SILO
Main feeds are mixed and stored in silos using the latest computer technology. Our engineers have turned one of our silos into an adrenaline pumping amusement ride.
One of the leading designers of animal handling and slaughter practices is Temple Grandin, an Autistic woman who has deep understanding for the way animals view the world. Her approaches promote animal welfare during slaughter with materials and spatial relationships that put the animals at ease as they move sequentially through our food system in conjunction with machines.

Although cattle slaughter is more challenging for standardization because cattle range in size, the processes of the slaughterhouse and packing/processing plants strive to achieve product outputs that are consistent. Technology has enabled greater automation for packaging, inspection, and speed, but at the same time, no machine is more capable of deboning and cutting meat than human laborers who endure dangerous conditions along assembly lines. This ideal output, centering on precision and efficiency for maximum profit, caters to customer values of appearance, flavor, portion size, or safety to deliver and exceed expectations. A number of brands like Swift or Certified Angus Beef are then marketed and distributed to retailers, wholesalers, and foodservice establishments. Therefore, this phase is crucial to transforming the cattle commodity into the beef commodity and is responsible for removing the blood and messiness of that process to make the consumption experience of eating convenient and pleasurable.

Looking to the future, the company strives for sustainability, as current research attempts to reduce carbon footprints, improve fuel/energy efficiency, especially regarding transporation, and create technologies to purify and conserve water. They also claim to care about employees and their communities. As a leader in the industry, these actions are being taken because of the pressure to serve as an example. Business not depends on social responsibility and natural resources so that production can continue at its current magnitude. What makes a difference is with which attitude this problem is combated.

JBS began over 50 years ago as a small family-owned beef company in Brazil and has expanded into a multi-billion dollar global corporation. Today, it is the biggest foreign meat company on US soil and the world’s biggest producer of beef. The corporation buys poorly running facilities to make them more efficient, as was the scenario when they bought the Greeley slaughterhouse previously owned by Swift in 2007. Additionally they operate at a global scale with facilities in countries like Brazil and Australia that lead the way in beef exports. This success depends on success in previous phases of the food chain to meet standards and assure customers of the quality they expect. Accordingly, JBS uses vertical integration to dominate the feeding operation sector as well.

Each phase requires precision and efficiency, but perhaps this phase requires the most. Every task is calculated and the production line moves without stopping like clockwork that would never be possible without massive built environments of mechanization and sequencing. This is done for some safety precautions, but more so for speed to reduce per-head production costs.
Our mission: to provide the best possible service, selection, and value to our customers.

5,400 cattle slaughtered per day

3,200 workers

3.3 million pounds of beef

8 beef plants in the US (CO, TX, UT, NE, WI, AZ, MI, PA)

2012 + 2013 SmartWay Excellence Award from the U.S. EPA for leadership in freight supply chain environmental performance and energy efficiency
THE CHUTE

This chute isn’t for the laundry. There’s no better way to organize cattle efficiently and keep them calm. Don’t slip!
**BULLS-EYE!**
Are you a sharp shooter? Take aim at the bull's-eye simulation.

**FREEZE TAG**
Coolers keep meat at the peak of freshness. The best way to stay warm is to stay active. Why not play a game of tag amid aisles of hanging meat?

**SINEWY SPEEDWAY**
Watch our expert beef cutters slice their way through the production line in record time by our inspectors. It’s our test to make sure our beef is safe and of quality. Test our inspectors and can pick up on the ‘bad’ meat you pass by them.

**UPSIDE-DOWN HANGER**
We can’t avoid the blood, but you can! We can’t hang the suspended freshly slaughtered cows.

**PLASTIC WRAP**
Beef is packaged to seal in freshness. Automated machines can package all of our meat. What would it feel like to be wrapped in plastic?

**FABRICATION**
Determining the best grocery stores isn’t just about making the highest profits or having the most locations. There are countless other criteria that leads to satisfied customers including: prices, quality, variety, and availability of products, cleanliness, and customer service. In addition to food, grocery stores sell a shopping experience to gain customer loyalty. Many would say the ideal grocery store should enhance shopping experience, help us to eat better, and provide one-stop-shopping, which in this case, must include beef.

Whole Foods fits this criteria and has been recognized through multiple polls as one of the top grocery stores in the U.S. mostly due to its specialization in organic and natural foods. This fact sets them apart from a lot of competitors, which is very enticing for people who want to eat better or know more about where their food is coming from. As a national food movement takes shape and critiques issues within the conventional food system, many people are becoming more concerned about the quality of their food. The success of the store reveals this trend. Whole Foods wants to provide this transparency and education about healthy eating for their buyers so they can make informed choices.

At Whole Foods, all of the beef sold has passed very rigorous standards. Farm animal and meat quality standards regarding the producer’s raising and handling practices, feed, facility design, environmental conditions, employee training, and animal welfare during raising, transportation, and processing are outlined and enforced. Cattle are never ever given antibiotics or supplemental growth hormones; there are no animal byproducts in feeds; and cattle are raised on pasture/range for at least 2/3 of their life. Such standards hold producers accountable, forcing them to work with nature, not against it. And, the butcher is always free to answer questions about beef.

Basically, Whole Foods so kindly does all of the research for shoppers, selecting only the best quality, so that they may make purchases with peace of mind. However, even this sustainable, transparent approach can be very misleading. Questions need to be asked about how stores like Whole Foods can proliferate without contradicting their core values. Conventionalization is the process through which an alternative food value chain becomes only a slightly different version of an industrial one; this is happening at Whole Foods, but goes unnoticed by customers. Organic also doesn’t necessarily save energy like advocates claim mostly due to transportation costs. Surprisingly, not all food sold is even organic or natural and there are conventionally raised options mixed in. The store puts tremendous effort into giving customers a vague sense of virtue. Because so much emphasis is placed on food ethics, customers are mislead about what they are really paying premium prices for.

A delightful, clean, seemingly uncomplicated shopping experience can be had at Whole Foods. Yet, despite not selling industrial beef, the store still operates like other grocery stores that do and falls into the same traps, which is concerning when they are supposed to be an example of the alternative.
America’s Healthiest Grocery Store.
VALUES MATTER.

384 + 10 + 9 =
U.S.A. Canada UK
403 stores

2,600 natural + organic products

1980 year first Whole Foods opened in Austin, TX

sales in 2014:
$14.2 billion

“100 BEST COMPANIES TO WORK FOR” ranked by FORTUNE magazine
17 consecutive years
Grocery stores are always spotless. Sanitary specifications rivaling a hospital assure you your meat was prepared in clean conditions and is safe for your family.
Put on a parka and chill in the back freezer room with skilled butchers who know their beef and make it look like food, not animals.

Why is the beef always at the back? What’s the longest route and how many items will make it into your cart on the way?

Now there’s some high quality, fresh beef. So many packages, all lined up in neat little rows exactly the way you expect to find them—abundant and fair-priced.

MEAT MADE EASY
Never cook a day in your life with pre-cooked meals steamy hot and ready to make an appearance at your table or one of our tables.

A-MAZE-ING AISLES
Why is the beef always at the back? What’s the longest route and how many items will make it into your cart on the way?

DELICIOUS DISPLAYS
Now there’s some high quality, fresh beef. So many packages, all lined up in neat little rows exactly the way you expect to find them—abundant and fair-priced.
McDonald’s was founded in 1948 as a self-service drive-in restaurant. The menu had only 9 items including the staple 15 cent hamburger. The second McDonald’s opened in Des Plaines, Illinois in 1955, a red and white tiled builing with Golden Arches designed by architect Stanley Meston. The golden arches have been an iconic symbol of the franchise, important to the brand recognition across the globe.

Modifications were made to the restuarants over time like the additions of indoor seating in 1962 or the first drive-thru in 1975. Both of these elements are common today and create a dining environment of quick, or on-the-go service. One can get food without leaving their vehicle in a matter of minutes after ordering. The same is true inside, where one waits in line, orders at the counter, and can find a table to sit at and enjoy their meal. The fast-food architecture is laid out to perform this kind of service. The place the food is sold is as important as the food itself because it shapes an experience of convenience and delight.

Today, the menu offers a multitude of options from wraps, to salads, to coffee, but burgers like the Big Mac continue to be the most iconic foods. In 2002, the corporation launched its dollar menu. The fact that they can have certain food items cost only a dollar, such as a hamburger is incredible, and only made possible due to the conventional food system. Clearly McDonald’s takes advantage of cheap meat, an industry which exploded in the 1960s and 1970s.

In 2006, McDonald’s added nutritional information to packaging to demonstrate the nutritional quality of their food. In the last decade, they have also been adding a variety of healthier options to balance out their menu. It is somewhat ironic that the restaurant was able to grow and expand globally because of cheap meat, but is now so successful it has ample money to invest in sustainable beef. This is important because as fast-food has always had a reputation of being unhealthy and McDonald’s in particular has been criticized for its practices by an increasingly health-conscious and ethical public. The documentary “Super Size Me” is just one example of attacks on the corporation for contributing to America’s obesity rates. Despite this, the fast-tood chain has only been growing; clearly, there are other factors at play. People are still buying the highly processed food. what is it that convinces them to do do? Nonetheless, McDonald’s must respond to demands for better quality food and increased transparency to retain the loyalty of all customers and create a better company image. Different approaches can be taken: improve the food itself, or change people’s opinions about the food. Remodeled restaurants are factors in the equation. Replacing old plastic furniture and red mansard roofs with modernized facades, colorful decor, free wi-fi and TVs, or in extreme cases added solar panels, is a drastic and expensive change that is immediately visible to consumers. Advertisements and additions to the menu also attempt to present a ‘greener’ McDonald’s, and a corporation that is cognizant of its flaws and working to improve upon them. They want to alter the minds of skeptics and prove them wrong.
bragging rights

The customer experience is at the core of all we do.

since 1955
35,000 restaurants
1,400 restaurants opened in 2013

1.9 million+ employees

119 COUNTRIES

75 hamburgers per second

1 billion pounds of beef consumed at U.S. McDonald’s each year

#6 WORLD’S MOST VALUABLE BRAND
2013 - FORBES magazine
Always at your convenience!

Enjoy a hamburger on the go when you’re in a rush wherever you are and receive the consistent service and quality you deserve.
The most iconic menu items after 60 years are still the classic hamburger and fries, but there are so many healthy options to choose from. What will you order?

With modern flair, comfy furniture, and amenities like television and music, stay a while and feel as if you are dining in the security of your own home.

Our golden arches are more recognizable than the cross. How many other fast food chain signs can you identify? We know our signs and buildings won’t be ignored.
Peter Luger Steakhouse has been around for over 125 years. The rave reviews on steaks and burgers are due to meticulous selection and preparation yielding a level of quality that is simply unmatched. The meat has a buttery, silky texture and burgers are seasoned and cooked so perfectly there’s no need for any toppings other than cheese and a bun.

Plating the perfect steak begins with a trip to the city’s wholesale markets, where meat is inspected and purchased. Identifying superior meat requires exceptional skill and this knowledge has been passed down for generations. The meat selected is only USDA Prime, which constitutes less than 2% of graded beef cattle as the most elite grade. This rare grade is scrutinized for color, marbling, and texture to provide diners with only the best. Fatty, tender meat is praised by USDA standards and supports an industrialized food system. Still, people will spend large sums for it.

The meat is purchased on the carcass. The restaurant takes part in some of the butchering as a result. The restaurant building also houses a cellar for dry aging. In this process, the meat is aged in carefully regulated temperature, humidity, and ventilation conditions. Once steaks are properly aged, they are trimmed and brought up to the kitchen to be broiled to the requested finish of the patron: rare, medium-rare, or well-done.

With meat so impeccably divine, the restaurant practically becomes a destination for steak-lovers. The experience is rooted in taste and pleasure. It is meant to be savored. Unfortunately, plates are also pretty expensive, so not all people can enjoy it. However, the restaurant does sell their aged steaks online, if you are willing to spend hundreds of dollars on them of course.

Ultimately, a lot of work on the part of the restaurant owners, butchers, chefs, and waiters goes into creating an excellent fine dining experience that is not achieved in other sectors of beef production.
Among the country’s finest.

1887 restaurant opens

USDA Prime steaks
dry aged

2 LOCATIONS
Brooklyn, New York
Great Neck New York

rated TOP STEAKHOUSE
in New York for 28 years

The New York Times (2011 review)
“The restaurant Peter Luger has been around for an astonishing 120 years. It has inspired many imitators, but no other steakhouse serves a porterhouse so breathtaking. The beef has a subtle tang, an intense mineral quality, a crazy richness and a spectrum of textures: crunchy at the edges, and tender at the bone.”
The dry-aging process is key to the quality of steak. Having a cellar for aging on-site makes a huge difference and only the top grade is meticulously selected.
BE OUR GUEST

This may not be Beauty and the Beast, but upon entrance an immediate impression sets the tone for exceptional service throughout the dining experience.

TENDER TASTEBUDS

Steak so tender you can cut it like butter and savor its silky smooth texture. This is the ultimate experience.

KITCHEN CONCOCTIONS

All of invisible labor goes on behind the scenes to get meals to your specific requests in a timely manner so all guests may eat meals together, although chances are you’ll be sharing your steaks.

CATEGORIZE THE CUT

Can you tell the difference between a porterhouse and a NY strip steak? Does it even matter?
SPOT the FEEDLOTS
how many CAFOs can you find in this landscape?

FACTORY FARM
how many differences do you see?
agribusiness
animal husbandry
artificial insemination
belching
biodiversity
breeding
bull
CAFO
calf
cattle
clone
deforestation
distributors
eutrophication
feedlot
food chain
food system
globalization
GMO
greenhouse effect
heifer
herd
industrialized agriculture
live trade
manure
meatpacking plant
overgrazing
producers
rugged
rumen
slurry
specialization
stun gun
synthetic fertilizer
USDA
waste lagoons
EATING TO BE EATEN

sneak peek into the diary of Angus Beef
MY LIFE-LONG JOURNEY of 16 months

1 COW-CALF OPERATION

MARCH 13th

I don't have a name. I'm just a number and I always will be.

OCTOBER 13th

I'm Flying!

DECEMBER 25th

time is flying by

JANUARY 4th

Driving Down the Interstate

BANK ACCOUNT

WEIGHT-WEIGHING (lbs)

December 810 lbs 880 lbs

January 950 lbs 1300 lbs

Lessons at Feedlot Prep

FEEDLOT

January 7 000 lbs

expected profit

1,000 lbs

What happens next?

IT ISN'T PRETTY.

FEEDLOT & MEAT PACKING

JUNE 13th

I'm Flying!

for more resources & information...

READ ON
FOOD FOR THOUGHT

ongoing bibliography of sources


EXTRA READING

ongoing bibliography of sources

80 glaMOOrous
INDUSTRY TRENDS

TREND 1: BIGGER CATTLE IN LESS TIME (more cheap meat)

- **Weight Gain + Grain-Feed Correlations**
  - 2.5-4 lbs gained
  - 6 lbs feed
  - 35-75 lbs feed
  - 1,000-3,200 steers

- *Graass-fed in pasture*
- 5 years
- 2 years
- 3 years
- 4 years
- 2 years
- 3 months
- *Born*
  - 6 months
  - 9 months
  - 15 months
  - 18 months
  - 21 months
  - 12 months

- MATURE (slaughter weight)
  - 500 lbs
  - 1000 lbs
  - 1500 lbs
  - 450 lbs
  - 700 lbs
  - 1006 lbs

- (Mother's) Milk & Grass-Fed in pasture

- Stockers & auction
- Weaning
- Feedlot
- Balanced grain + protein diet; fresh water

- Mature cattle are 'finished' on feedlot ranging from 4-10 months depending on initial weight, desired weight, feed quality, and feedlot conditions (from as early as 6 months old to as late as 22 months old)

- (Per steer)

- **Weight Gain + Grain-Fed Correlations**
  - 2.5-4 lbs gained
  - 6 lbs feed
  - 35-75 lbs feed
  - 1,000-3,200 steers

- **Normal Life Expectancy**
  - 20-25 years

TREND 2: FEWER & LARGER OPERATIONS WITH MORE CATTLE

- **Vertical & Horizontal Integration**
  - of cow-calf operations, specialized feedlots, and processing facilities

- **Market % of Fed Cattle**
  - 40%

- **# of Cattle per Operation**
  - 80% <100 cattle
  - 40% >1,000 cattle

- **U.S. Cattle Production Totals (in millions)**

- **Average Number of Cattle per Operation (actual)**

- **Number of U.S. Beef Cattle Operations (in millions)**

- **Transportation & Distribution**
  - Breeding & artificial insemination
  - Antibiotics, rBGH, & feed additives

- **Glamorous**

- **Graphs & Charts**

- **U.S. Cattle Production Totals (in millions)**

- **Average Number of Cattle per Operation (actual)**

- **Number of U.S. Beef Cattle Operations (in millions)**


want answers about the BEEF YOU’RE EATING?

from farm to fork

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transparency tour

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