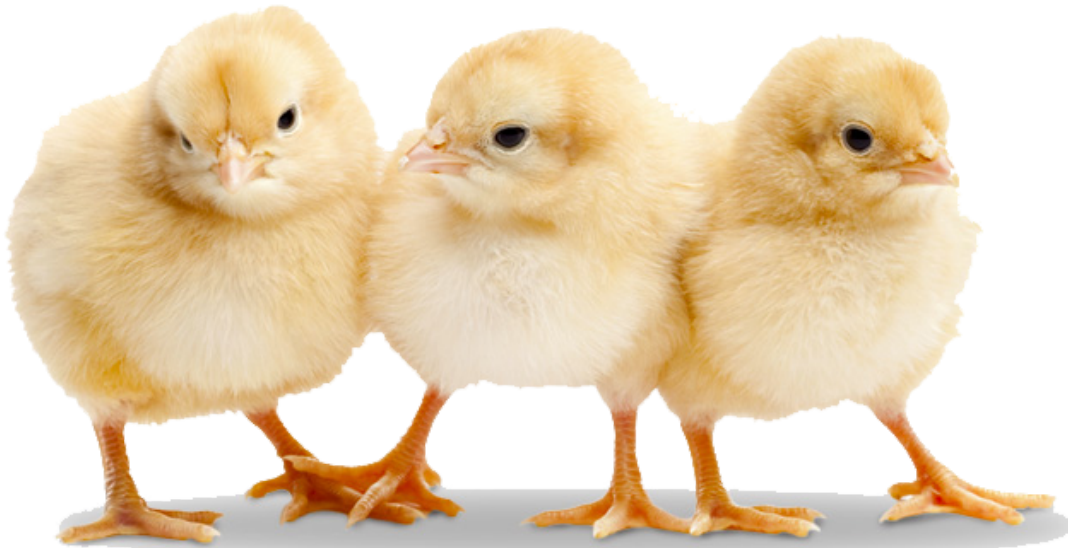


Plants over Poultry: Replacing Chicken with Plant-Based Meat



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This final report was written for the partial satisfaction of a Bachelor of Arts in Community, Environment, and Planning from the University of Washington.

Acknowledgements

I would like to give an immense thank you to my professional mentor, Christie Lagally, for giving me the support and wisdom I needed throughout the nine months I worked on this project. Additionally, I am incredibly thankful for Leah Garcés for taking time to have a conversation with me about poultry industry economics. My academic advisors, Megan Herzog, Nico Martinucci, and Dr. Christopher Campbell provided constant feedback and inspiration throughout the year, and all encouraged me during particularly stressful times. My peers in the Community, Environment, and Planning program continue to be an endless source of inspiration to me. Finally, a very big thank you to my parents and my Grandma for lending listening ears and to my dogs, Sophie, Titan, and Ozzy for many stress-relieving cuddles.

Abstract

This project assessed how plant-based meat substitutes can most effectively replace animal-based meat. I focus specifically on chicken, the most widely-produced animal in the meat industry. 9,000,000,000 chickens are killed for meat every year in the United States, dwarfing the number of all other animals used for meat combined. Chicken production is a threat to global health, because it heavily contributes to the emissions of greenhouse gases. An environmental justice issue arises as low-income communities with little political power live near chicken farms and slaughterhouses, which means they experience polluted waterways and local environments from the animal waste. One of the most promising solutions to end the factory farming practices of chickens is plant-based meat that is similar in texture and taste. The scope of the chicken industry demands that this solution account for scale of implementation and for the socioeconomic implications of a the shrinking poultry industry.

Executive Summary

The plant-based meat industry is becoming a larger part of the food system, and works in the animal agriculture. In the same ways that the emerging green energy industry has received pushback from those in the coal industry, people who work in the animal agriculture industry have been understandably upset and threatened by the growing plant-based industry. In any situation where a more sustainable, efficient, or otherwise improved alternative is foreseen to become the future of a field, therefore displacing the existing industry, it is partially the new party's responsibility to find room for those who earn their livelihoods in the current shrinking industry. This project sought to understand how a plant-based meat company could integrate current animal agriculture employees, specifically farmers, into their business model.

My findings showed that there were three main ways that this alignment between plant-based meat companies and farmers in the animal agriculture industry could be achieved: primarily, companies could work with farmers to directly replace chicken farms with ones that grow crops used for plant-based meat substitutes via farm transformation. Secondly, plant-based meat companies could fund grant programs to aid farmers who want to leave the animal agriculture industry but do not have the financial means to do so. Finally, companies could partner with sanctuaries who have support groups for former farmers, as this is often an intimidating and seemingly risky career move. One of the most prominent lessons in this project is that the answer to achieving a truly thriving plant-based industry involves collaboration, not competition, with farmers who currently raise animals.

Introduction

In recent years, veganism and plant-based food choices have been growing in popularity. Films such as *What the Health?*, *Before the Flood*, and *Cowspiracy* have encouraged people to ditch animal-based foods in favor of more health-conscious and environmentally-friendly alternatives. The overall growth of plant-based foods from 2016 to 2017 was 8.1%, while plant-based dairy products grew an impressive 20% (Simon, 2017). Beyond Meat went public in May 2019 and had the single highest initial public offering in the last twenty years (Murphy, 2019).

In the last few months alone, large fast-food chains whose empires have been built on animal products are now realizing that the vegan movement is profitable. Companies such as Qdoba, Carl's Jr., White Castle, TGI Friday's and even Burger King have added menu options that are made from meat alternatives such as Beyond Meat and Impossible Foods (Piper, 2019). Those who are not adding these options face the potential consequence of becoming irrelevant to the industry.

Large meat companies such as Tyson foods and Cargill had previously invested in Beyond Meats, but have recently divested and are now in the process of creating their own plant-based meats (Bloomberg News, 2018). Corporations are beginning to see that becoming part of the vegan movement is no longer optional if they want to stay relevant. However, to fully get on board, companies must be convinced that there is profit in their decisions (Wiener-Bonner, 2019).

Plant-based food companies such as Gardein, Beyond Meat, Impossible Foods, and hundreds of others have begun to produce “meat” alternatives that are as similar as possible to their traditionally animal-sourced counterparts. Rather than the decades-old black bean burgers that are meant to only emulate the shape and some uses of an animal-based hamburger patty, food scientists and food technology companies are revolutionizing the ways in which vegan alternatives, look, taste, and even “bleed” like real meat. These new approaches are meant to appeal to people who would typically eat animal-based protein.

The increasing ubiquity of vegan food options has been a tremendous achievement for nonhuman animals and for animal rights activists. However, when this displacement happens on people's plates, it is also happening to people's careers. The livelihoods of rural poultry farmers in the United States will be threatened as the plant-based food sector continues to grow rapidly, and these impacts are often overlooked. This emerging sector needs to consider how current poultry farmers will fit into this new industry.

For this project, I interviewed Leah Garces, a subject matter expert in the field of poultry industry economics. Additionally, I analyzed the current landscape of the current plant-based meat industry and its future growth.

Finally, I researched into the subject of farm transformation and what it would look like for current chicken farms to be utilized in a way that would benefit both the current farmers and plant-based food companies.

The current state and levels of production of the meat and animal product industry are financially inefficient, environmentally harmful, and unhealthy for our communities. For plant-based meat to realistically compete with real chicken, it must be widely available, reasonably priced, and equally nutritious, while also being socioeconomically responsible. My project aims to explain how this future may be achieved.

Research Questions

What challenges could a new plant-based company face when entering the market in rural America?

How are they overcoming these barriers to become successful in an industry currently dominated by animal-based products?

What can they do to be both successful and socially-aware?

Methodology

Interview

I interviewed Leah Garcés, founder and former Executive Director of Compassion in World Farming U.S. She has now taken the role as president of Mercy for Animals, an international nonprofit farmed animal protection organization (Mercy for Animals, 2019). She is also the author of *Grilled*, which details her journey visiting chicken farmers in rural United States and her conversations with them. This new book explores the idea of turning poultry farmers from adversaries into allies.

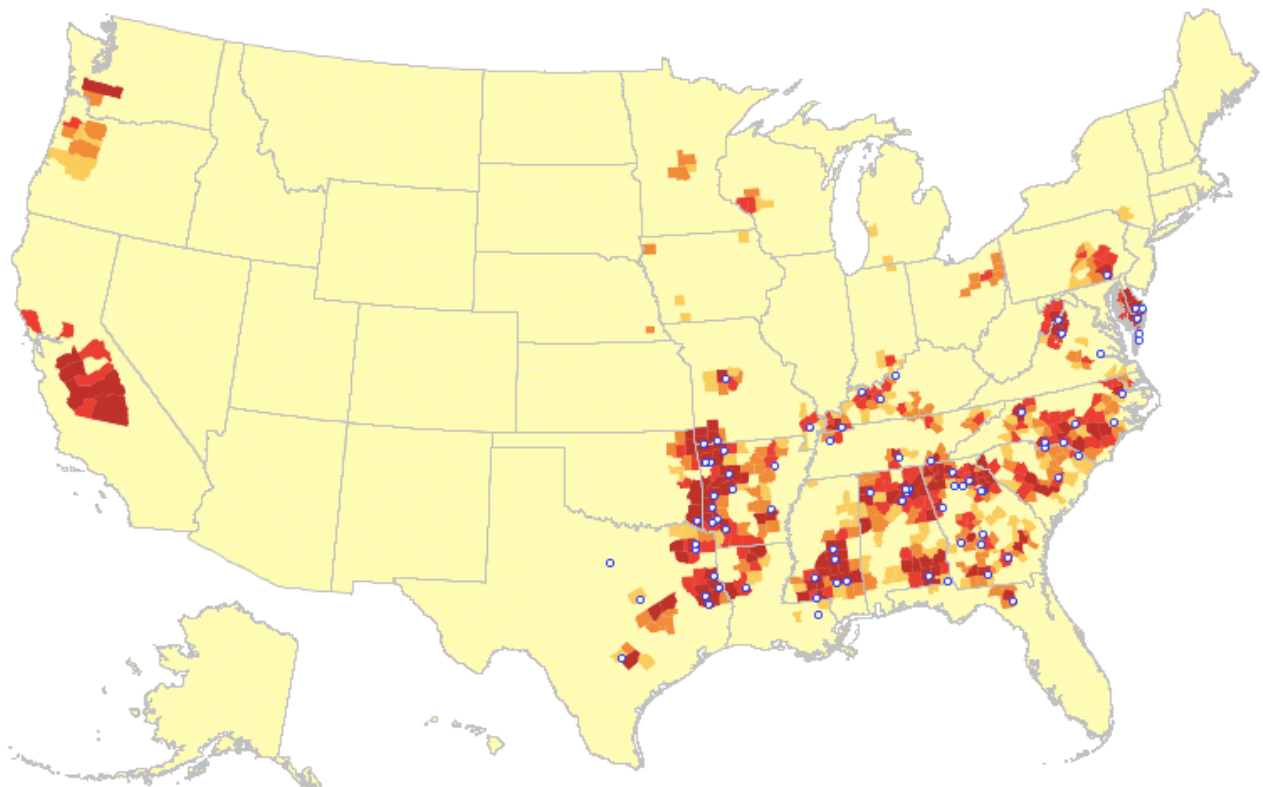
The interview was composed of the following questions:

- From your experience, what are some of the most powerful forces behind the economics of the poultry industry?
- What do you think are the most difficult human labor or socioeconomic issues for slaughterhouse workers or farmers?
- Have you identified the most convincing argument for whole communities to ditch the chicken processing industry?
- On the level of community-scale economics, it seems that many people who work in slaughterhouses are either people who are undocumented, have been convicted of a crime, have little proficiency in the English language, and/or are part of another marginalized group that makes it difficult to obtain employment in other industries. Do you see vegan “meat” as a potential substitute to solve these issues?
- Do you have any advice for economic disruption of animal agriculture? In your work in writing the book *Grilled*, what did you find to be the most impactful solution for farmers, the animals, and other stakeholders?

Research of USDA data

For this step of my research process, I analyzed the spatial relationships between where farmed animals are currently raised in the United States and where ingredients typically found in plant-based alternatives are grown across the United States.

Limitations of this step include the rapid diversification of source crops for plant-based meats. In previous years, the most popular ingredients in vegan alternatives were wheat, soy, corn, and pea protein. While many of these are still in production, newer brands of plant-based meats have ingredients derived from coconuts, bamboo, potatoes (Impossible Foods, 2019), mushrooms (Evocative Design, 2019), and dozens of other crops.



Map of chicken farms in the United States

Analysis of Current Landscape of Plant-Based Meat

This step involved reading news articles detailing the recent explosion of the plant-based industry. Research involved looking into which restaurants have recently decided to add products such as the Impossible burger and Beyond Meat onto their menus, in addition to how well these items are selling. Additionally, emerging start-up food technology companies were examined to assess their motivations for entering the industry, the innovative ingredients used to produce the plant-based meats, and how they are competing and overpowering animal-based products.

Additionally, the dairy industry's legislative and political reactions to the recent rise of plant-based milk alternatives was examined to gauge likely barriers that plant-based meat companies will face as they continue to grow in popularity.

100% PLANT PROTEIN



**Chickens are
9,000,000,000
of the
10,000,000,000
land animals killed in the
United States every year
for food.**



Literature Review

Factory farming is a fairly recent concept. Until about the 1950s, most of the animals who were raised for food lived on family-owned farms with fewer animals and more space. As the demand for meat increased, farmers were motivated to maximize their profits by fitting in the highest number of animals in the smallest amount of space (SAFE, 2018). As a result, meat production has increased dramatically in the last fifty years. Chicken production in particular has increased by 1,400% in the last several decades (Farm Aid, 2015).

These have lead to the contemporary places in which over 99% of animals raised for food spend their lives: confined animal feeding operations, or CAFOs. Animals are bred and fed to grow to the largest size in the shortest amount of time in the smallest amount of space, having extreme implications for animal welfare. For the broiler chickens who are born into this industry, they have been selectively bred and genetically modified over decades to optimize the amount of meat yielded per chicken (Compassion Over Killing, 2019).

If humans grew at the same rate as broiler chickens, a 6.6 lb. newborn baby would weigh 660 pounds by the time they were two months old (Wildeman et al., 2013).

This extreme weight gain causes respiratory problems, joint damage, and weakened legs, so much so that most cannot walk or even stand up by the time they reach six weeks of age. This is when they are killed for their meat. Their bodies are under so much pressure to keep up with these consequences of human intervention that many do not survive to eight weeks (Humane Society, 2017).

Although Asia's levels of production have grown the most rapidly, the United States leads the way in nearly all sectors of animal agriculture. Higher meat consumption is a common trend in emerging economies: as developing nations urbanize, people's incomes increase and they tend to consume more meat and animal products (Ritchie and Roser, 2017).

Why chicken?

Chickens are the most farmed land animals in the United States and in the world at large. In the United States, chickens are 9,000,000,000 of the 10,000,000,000 land animals who are slaughtered every year for food (USDA, 2018). Additionally, several of the animal welfare laws in the United States that are meant to protect farmed animals *explicitly exclude poultry from these treatments*, meaning that their suffering in this industry is even further intensified. Summaries of these laws are as follows:

Humane Slaughter Act: "The Humane Methods of Slaughter Act (HMSA) requires that humane methods of slaughtering and handling livestock in connection with slaughter be used. Livestock animals, such as cattle, calves, horses, mules, sheep, swine, and goats, must be rendered insensible to pain before being shackled, hoisted, thrown, cast, or cut. This may be achieved by electrocuting the animals, shooting them in the head with a firearm or captive bolt stunner, or gassing them with carbon dioxide gas. Which methods may be used depends on the species of animal involved. HMSA does not apply to poultry, and therefore, does not require the humane handling and slaughtering of domestic birds." (Hodges, 2010).

Animal Welfare Act: "The Congress finds that...that regulation of animals and activities as provided in this Act is necessary to prevent and eliminate burdens upon such commerce and to effectively regulate such commerce, in order-- (1) to insure that animals intended for use in research facilities or for exhibition purposes or for use as pets are provided humane care and treatment; (2) to assure the humane treatment of animals during transportation in commerce; and (3) to protect the owners of animals from the theft of their animals by preventing the sale or use of animals which have been stolen.... (the term animal) excludes...livestock or poultry, used or intended for use as food or fiber, or livestock or poultry used or intended for use for improving animal nutrition, breeding, management, or production efficiency, or for improving the quality of food or fiber." (7 USC §§ 2131 - 2159; 18 USC § 49)

28-Hour Law: "(Animals may not be confined) in a vehicle or vessel for more than 28 consecutive hours without unloading the animals for feeding, water, and rest... Chickens, who are not currently regulated under the Twenty-Eight Hour Law, also face a number of stressors in transport since birds experience food and water deprivation, social disruption, vibration, motion, and loud noise during their time on truck trailers. The way chickens are bred leads them to be particularly susceptible to long-distance transport stress." (Brindle, 2016).

The sooner plant-based industries are able to compete at a large scale with chicken, the sooner this suffering can end. While making the meat as similar as possible to animal-based meat is important, infrastructural change must also happen for industry-wide change to take place.

Environment: Community Impacts, Global Health

Aside from the ethical implications of farming animals for food, this industry also has a negative impact on the environment, on neighborhoods near the facilities in which animals are raised or killed, and on vulnerable communities such as people of color and people who earn low-incomes. The production process in the meat industry is not a pleasant sight, so nearly every stage of the poultry-raising process is outsourced to communities where the fewest people will have to experience the negative effects of their presence.

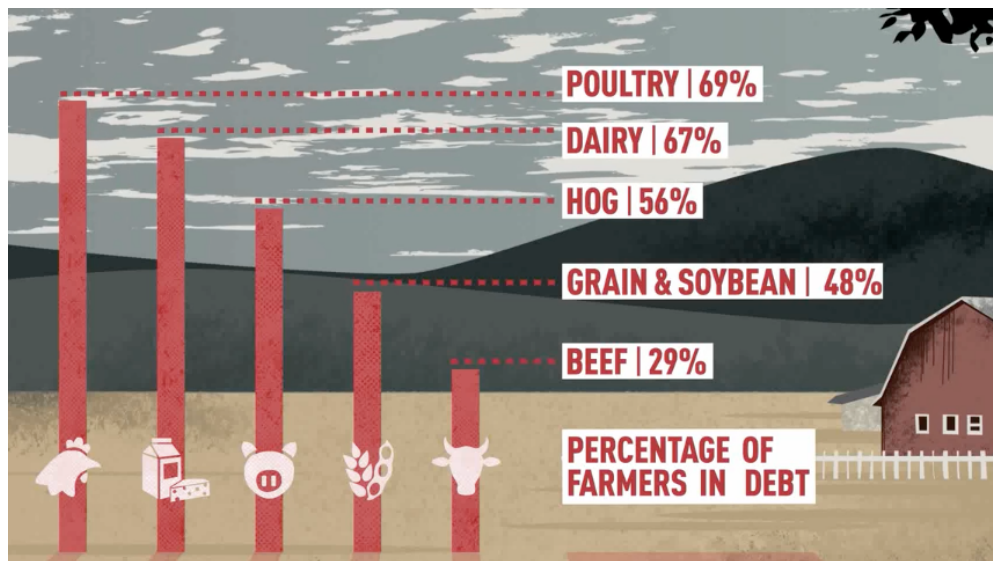
Many rural communities are aware of the problems associated with living near chicken production plants and farms and resist them (Brown, 2016): however, some communities are desperate for any hope of economic development or job opportunities. Because of this, local governments create policies that allow for large chicken processing plants to exist within one mile of suburban neighborhoods (Hellerstein and Fine, 2017). Those who live close to these facilities endure the threat chicken waste imposes on their water supply, as well as the smells of the factory. Nitrates from chicken litter and bedding leach out into the surrounding water sources, polluting the drinking water of local communities (Kasserman and Heinzen, 2018). Excessive chicken manure is also used to fertilize surround crops, but when this spills into water bodies, algae bodies bloom and absorb the water's oxygen. This process, called eutrophication, kills marine life and severely disrupts the ecosystem of the water body (Blue, 2017). In addition, chicken processing plants In an attempt to live far away from these grotesque facilities, towns sprawl, contributing to an overall decline in walkability, aesthetic appeal, and overall health. This industry is an environmental justice issue because low-income communities are being disproportionately impacted by the problems it causes.

Labor Issues

The poultry causes immense suffering in both human and nonhuman animal lives.

The Plight of Poultry Farmers

The farmers who work and live with the chickens bear the brunt of the financial burden. The meat industry is a monopoly that hurts small farmers. 75% of the industry is dominated by only four companies: Tyson, Cargill, Perdue, and Sanderson farms. Meat giant Tyson is especially notorious for their predatory treatment of contracted small farmers who raise their chickens. Even if poultry farmers wanted to operate independently, they cannot compete with the industry behemoth and have no choice but to accept a contracted job with them (Ferdman, 2014). Tyson owns the animals through every level of production, dropping chicks off to contracted independent farmers and coming back six weeks later when they are ready for slaughter. To enter into the industry, farmers have to buy the equipment needed to raise chickens (Leonard, 2014), building an expansive farm infrastructure that accommodates the feeding, heating, and other life needs for thousands of chickens to grow from one-day-old chicks to the (as previously explained) genetically-modified six-week-old chickens. This means they go into debt just to get started, and Tyson externalizes what is arguably the most difficult and risky part of the process (Leonard, 2014). Poultry farmers face the highest rates of debt in the entire animal agriculture industry, and many pay off their loans until they die or file for bankruptcy (Under Contract, 2018).



Poultry farmers have the highest rates of debt in the field of animal agriculture. Source: Under Contract (2017)

What is already an economic burden becomes an emotional one: the Sinclair hypothesis suggests that institutionalized power dynamics and desensitization to violence inherent in slaughter industry workers may lead to greater aggression outside of the workplace, causing an increase in arrest rates for violent crimes and sex offenses perpetrated against less powerful groups (Fitzgerald, Kalof, and Dietz, 2009).

These are not the only injuries slaughterhouse workers face. Many people who work in these positions are formerly incarcerated, have low English-speaking proficiency, are undocumented, or are part of an otherwise marginalized group with little political power and who have very few other options for employment. This means that they are less likely to report exploitative wages, unsafe working conditions, file lawsuits, or organize unions. Slaughterhouse workers have the highest rates of serious injuries compared to any other occupation. The line speeds have nearly tripled in the last four decades, also tripling the opportunities for serious injury. Cuts from the sharp knives are most common, as are the musculoskeletal injuries from the repetitive motions that kill hundreds of chickens a minute. When these injuries occur, company doctors and nurses underreport their severity and pressure employees to return to work in as little as a few days. Meat packing companies do everything possible to avoid compensating workers for their injuries. (Schlosser, 2001).

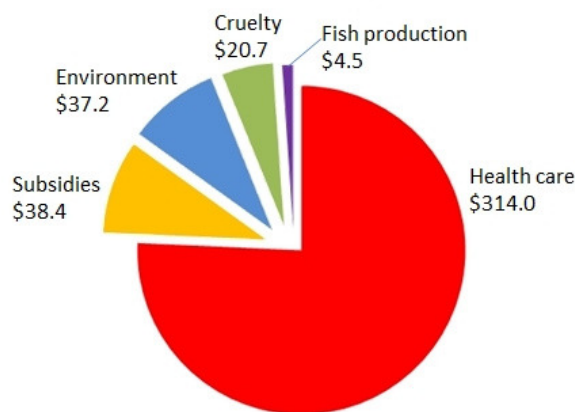
Those who live and work closely with this industry experience harmful effects physically, emotionally, and financially.

Why are animal products so ubiquitous?

One of the biggest barriers to adopting a vegan diet, especially if the diet contains plant-based meat substitutes, is the enormous difference in cost. While some companies, such as Seattle Food Tech, attempt to produce their plant-based meat substitute to scale and prioritize cost-equivalency, many companies are not at this stage yet.

Subsidies are one of the most prominent reasons why animal-based foods are so cheap compared to their plant-based counterparts. In lawyer David Robinson Simon's book *Meatonomics*, he examines how private meat monopolies partner with governments to artificially lower the price of their products through high rates of production encouraged by subsidies and increase the demand from the consumers through aggressive marketing tactics. His book analyzes how industry influence on agriculture policy negatively impacts our health, wallets, and communities (Hunt, 2017). A study from Tufts University also found that "farm policies that are designed to keep feed prices low have serious economic, social, structural, and environmental effects." Both David Robinson Simon and Dr. Markus Vinnari, an adjunct professor whose research focuses on sustainability, ecological economies, and food policy, propose that the solution to remedy the effects of government subsidies is to instead tax animal products (Vinnari, 2007). This will have implications for low-income families: a proposed solution to this is a tax credit that allow families to purchase plant-based alternatives (Robinson, 2013).

Total Externalized Costs of U.S. Animal Food Production (in Billions)



Total: \$414.8 billion yearly

Results & Recommendations



Interview Analysis

There were several common themes in the interview with Leah Garcés.

She affirmed previous research that determined one of the biggest contributors to the ubiquity of animal products are the subsidies with which they are supported. Not only is the meat from chickens heavily subsidized, but so are the two crops that make up their feed: corn and soy. Further research showed that about 80% of the world's soybean feed goes to feed livestock, especially chicken (WWF, 2016). The money from these subsidies also to toward bailing out the many chicken farmers who must file for bankruptcy.

The most significant takeaway from the conversation was that collaboration, rather than competition, with farmers was mandatory to truly achieve a plant-based industry in a way that was socially equitable. This came in response to the question regarding economic disruption of the animal agriculture industry: she replied to think of it as "co-opting" rather than disruption. Farmers must compete with one another to earn the greatest profits, so no single one can become more successful than the others. Their loans are astronomical and invested back into their means of making a living (the land and equipment used to raise chickens), so the only way to escape this debt is to keep using the land for something. After dozens of flocks are raised, it is hard to use the land for other things. For these reasons and more, poultry farmers often want to escape this industry, but they may not know how. For any stakeholder in the industry, they require a different argument to appeal to their position.

Many animal rights activists and vegans believe that anyone benefiting from the exploitation of animals is the enemy, and there is no compassion toward their loss of livelihoods as a result of plant-based industry success. They are viewed as malicious and money-hungry, when in reality, many of the people in this industry are also exploited by large corporations and have sympathy for the animals that they are farming. This further illustrates why collaboration with and support of current animal farmers may be the missing key in total animal liberation: they need motivation and social safety nets to escape the industry.

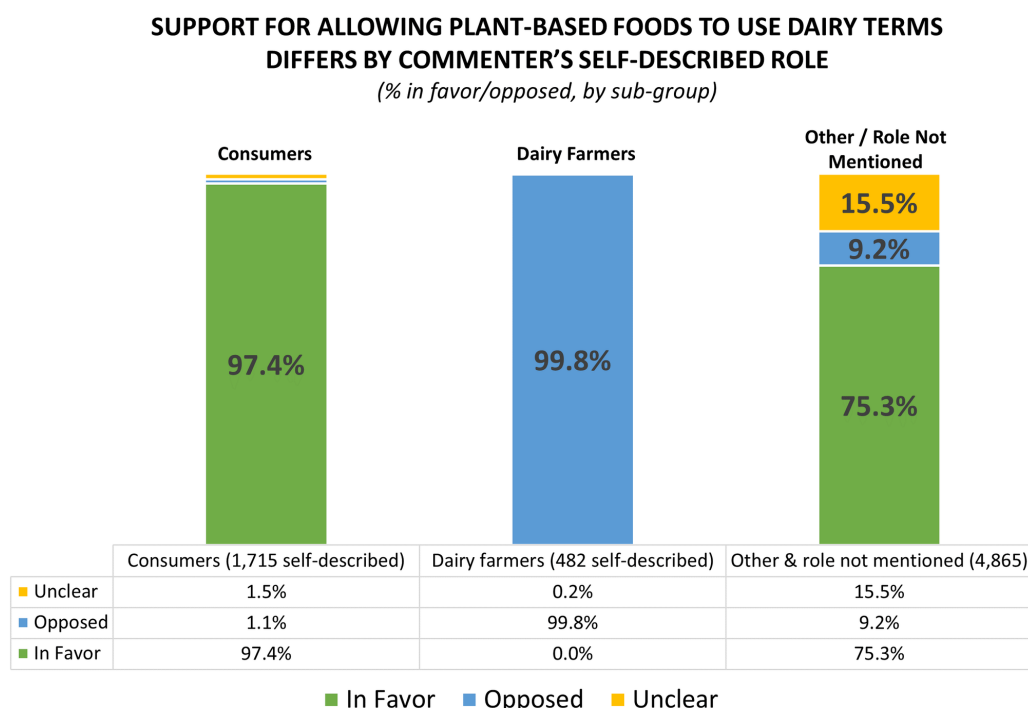
Research Questions: Answered

What challenges could a new plant-based company face when entering the market in rural America?

To answer this question, the contentious relationship between dairy milk and plant-based milks was analyzed as a case study to examine the dominant industry's reaction to the growing plant-based industries. One of the more public and controversial forms of government regulation in the animal product industry has come in the form of changing name labels. Legislative actions such as the DAIRY PRIDE act have tried to take a stand against plant-based milk alternatives calling their products "milk." The dairy industry has been campaigning to ban this, under the guise that they are concerned customers will be misled into buying a less nutritious product than expected. The dairy industry has spent millions of dollars lobbying for governmental support (O'Connor, 2017).

This year, the FDA changed the definition of milk to be "lacteal secretion, practically free from colostrum, obtained by the complete milking of one or more healthy cows" (FDA, 2018). Inconsistently, this standard has not been applied to other faux-animal products such as yogurt or cheese. This movement by the dairy industry further illustrates the threat posed by their plant-based competitors, and they are understandably afraid: Mintel, a market research firm, has estimated that between 2015-2020, the plant-based milk industry will continue to grow by 50% while the dairy industries will fall by 11% (Sonderlin, 2018). Even with this optimistic forecast, the dairy industry will still be over five times larger than the plant-based milk industry. Despite this disparity, dairy companies have preemptively attempted to pass legislation that would attempt to slow the growth of the plant-based industry.

Consumers have clearly articulated that they are not confused by the labeling of plant-based dairy alternatives (Linkage Research, 2019), showing clearly the true motivation behind the bill proposed by dairy farmers.



Source: Linkage Research & Consulting, Inc., April 2019 analysis of FDA Comments

Vegan alternatives are gaining popularity as concerns for animal welfare, the environment, and personal health become more common, but plant-based options are still dwarfed by the animal product industry (O'Connor, 2017). The threat is real: dairy farms are closing, with some farmers' advice to younger generations in the field being "sell out as fast as you can" (McCausland, 2018). Between 2017 and 2018, dairy sales dropped \$1 billion dollars (Dairy Farmers of America, 2019).

Washington State Bill 1519 is another example of potential legislative reactions from stakeholders in the animal-based industry. This bill is attempting to ban all research that is going toward cell-based meat, which is another alternative (separate from plant-based meat) to traditionally factory farmed meat (Washington State Legislature, HB-1519, 2019).

How are they overcoming these barriers to become successful in an industry currently dominated by animal-based products?

The Good Food Institute (GFI) is a not-for-profit organization that has an extensive history in successful legislative action that evens the playing field for plant-based meat. One example is a lawsuit against the FDA that demanded all records regarding the issue of the plant-based "milk" name ban (Evich, 2016). Additionally, they sued the state of Missouri when the word "meat" became illegal to put onto the labels of plant-based products (GFI, 2018). They were successful in both efforts.

Aligning with an organization such as the Good Food Institute will help plant-based food companies have a fairer chance at competing with, and eventually outperforming, animal product sales. Lobbying with consumer support, as evidenced by the chart on the previous page, is also helpful for achieving this.

Additionally, another step that plant-based meat companies can take to be successful in the food industry includes advocating for welfare reforms to increase the price of production. Many animal advocacy non-profit organizations have pushed for reforms such as bigger cages or even cage-free living situations (Humane League, 2019). This will increase the cost of production for animal-based products while their plant-based counterparts continue to decrease in price.

What can they do to be both successful and socially-aware?

This study has identified three potential solutions for plant-based companies to collaborate with farmers.

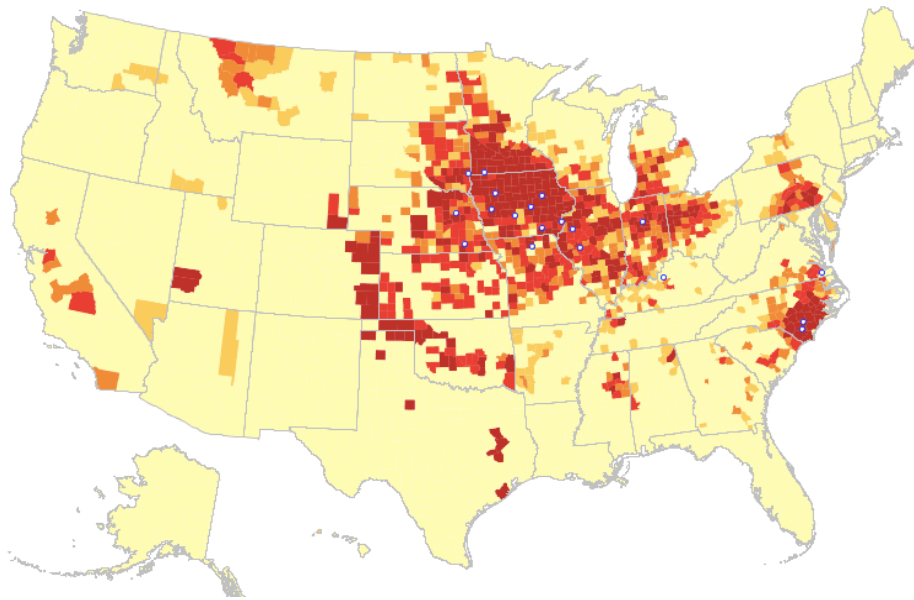
1. Farm transformation

In *Under Contract*, a documentary that details the plight of poultry farmers, farmer Craig Watts described the hardship and financial entrapment that poultry farmers often endure. He explained that in any other situation in which you are paying off a loan, if you dislike your current job, you can switch to another career and still make money to pay off that loan. However, in the poultry industry, the loans are often predatory and are directly invested back into the chicken farms, and as he claims, “You can’t do anything else with a chicken farm but raise chickens.” This comment instigated deeper exploration into the concept of directly replacing animal farms into farms that could grow ingredients that comprise plant-based meat substitutes (Under Contract, 2018).

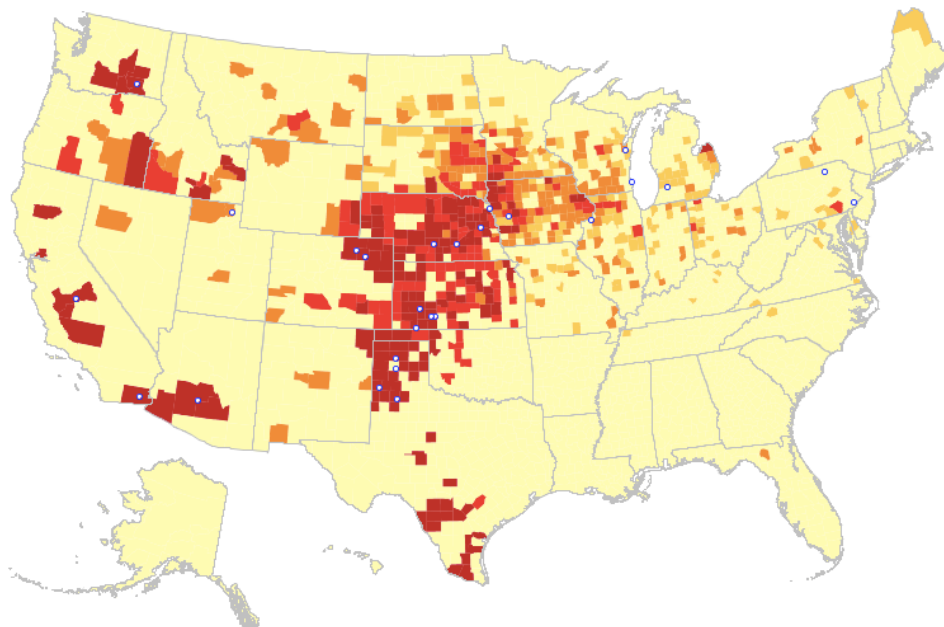
In episode 449 of *Our Hen House Podcast*, Leah Garces and hosts Mariann Sullivan and Jasmin Singer discuss a solution to this problem that is gaining traction in the vegan world (Our Hen House Episode 449, 2018). One ingredient in non-animal-based foods that is growing in popularity is mycelium, or mushrooms. Mushrooms are able to grow extremely quickly in dank, dark spaces, an environment easily fostered by the same large barns in which broiler chickens are raised. They have high amounts of protein and can take the place of animal-based meats in many dishes. With the correct preparation, mushrooms have similar textural properties to animal meat, and some food technology companies have already begun to explore fungi as an alternative (Lamb, 2019).

Additionally, there is a foundation called farm transformers that works to alleviate the harms to individual health, the global environment, and animal welfare that are perpetuated by the animal agriculture industry. They do this by directly transforming the farms where animals are grown. Individual farmers collaborate with the foundation by finding sanctuaries for their animals to live, while slowly entering into the business of growing crops that contribute to the growth of the plant-based industry (Farm Transformers, 2019).

The poultry industry faces a unique challenge in the direct farm transformation approach. If the question were about replacing beef or pork, cows and pigs are raised in the midwestern region of the United States, as shown by these maps:



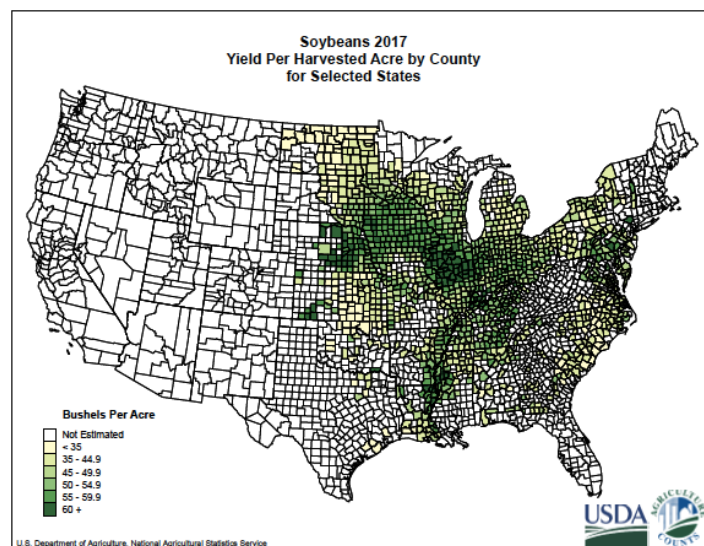
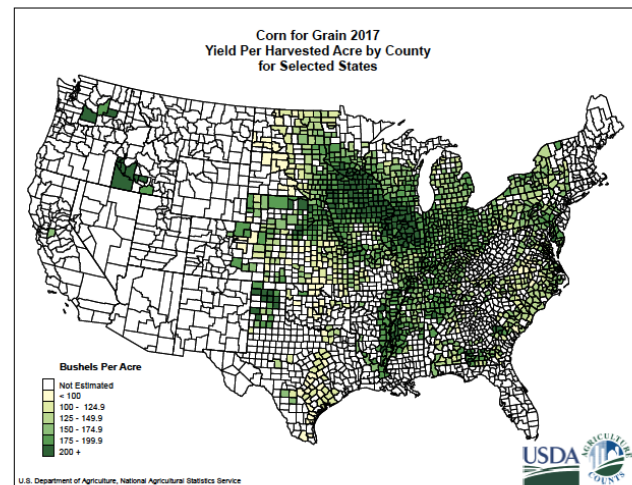
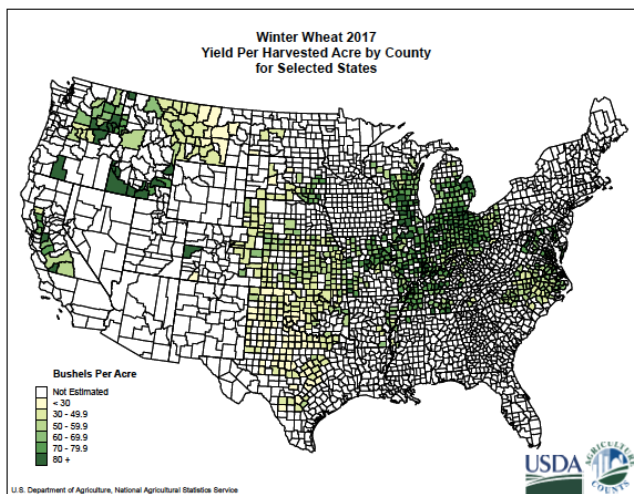
Map of Pig Farms in the United States



Map of Cow Farms in the United States

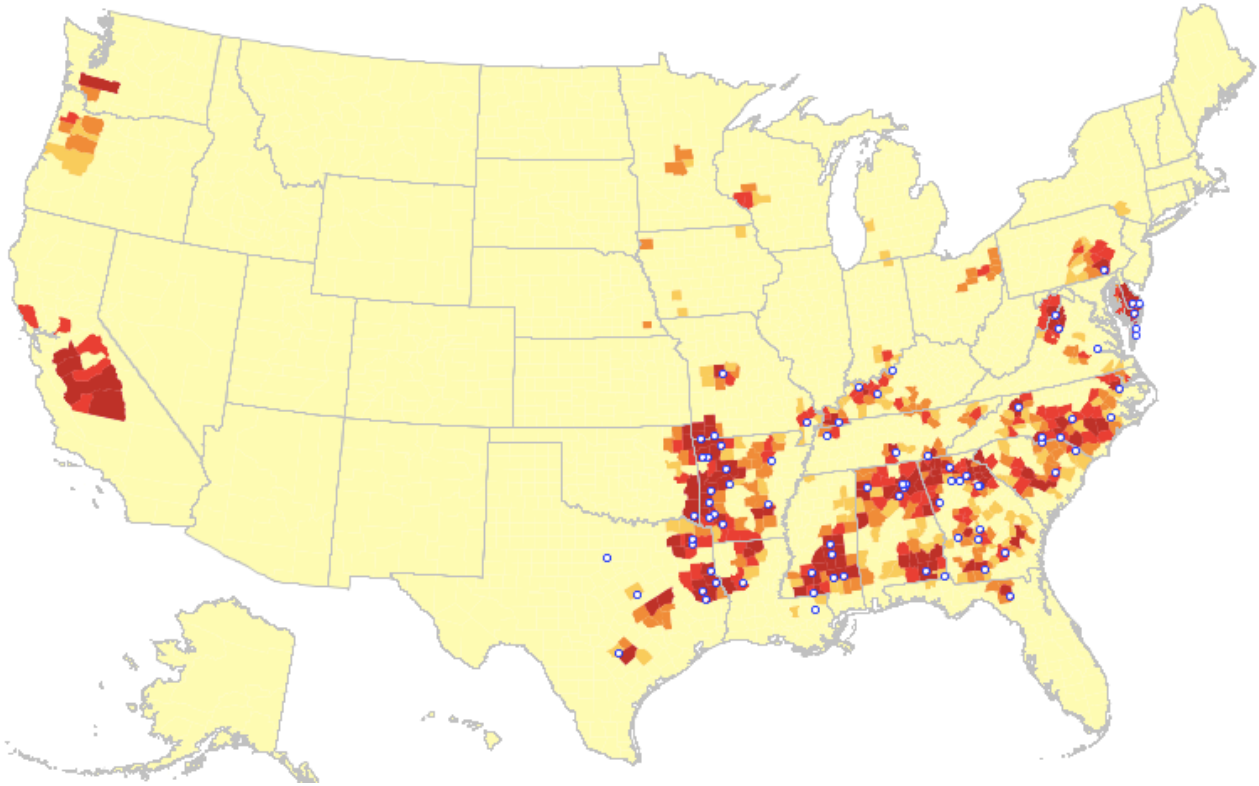
Source: USDA

Common ingredients in plant-based meat substitutes (although lately diversifying) have historically been wheat, soy, and corn. These crops are also grown in the midwest U.S.:



Source: USDA

Finally, broiler chickens are raised in the southeast region of the United States, aptly nicknamed “the broiler belt.”



Source: USDA

This is important because if we were discussing the replacement of another sector of the animal agriculture industry, direct replacement may be more feasible. The crops that typically replace plant-based meats are able to grow in the same region as chickens are farmed, but the infrastructural systems of distribution and supply may not be sufficient to support these new geographical locations.

2. Fund or create grant programs

The state of North Carolina has a funding program titled AgOptions to help farmers diversify or expand their operations into ones that are more sustainable, economically or environmentally (WNC AgOptions, 2019). Originally created for tobacco farmers, these grants help to promote the longevity of farming operations by financially aiding those who are at risk of losing their livelihoods as industries change. As anti-tobacco legislation was stacked against the tobacco industry, farmers had to find new ways to stay afloat that did not involve this formerly lucrative crop. This more easily allows farmers to “keep up with the times,” a theme analogous to the emergence of the vegan food sector. A similar program implemented in the chicken industry would grant financial resources to poultry farmers, who would otherwise be trapped by the extreme debt pervasive in this line of work.

3. Partner with Rowdy Girl Sanctuary

Located in Angleton Texas, Rowdy Girl Sanctuary is a farmed animal sanctuary founded by two former cattle ranchers who decided that they no longer wanted to contribute to the exploitation inherent in raising animals for food. They have experienced firsthand the difficulty that arises when farmers realize they want to escape the animal agriculture industry: whether the transition be for environmental, health, or ethical reasons, many experience stigma and uncertainty in their social and economic futures. Sympathetic to this plight, they have begun the Ranchers Advocacy Program that aims to provide “viable solutions or strategic partnerships for those who wish to convert their ranch so that it collaborates with the growing world trends towards a plant-based future” (Rowdy Girl Sanctuary, 2019).

Summary and Lessons Learned

Overall, the collaboration of these solutions provides a platform for farmers to escape the poultry industry and contribute their efforts to a plant-based industry instead. The concept of farm transformation is daunting and would have to be gradually implemented, and while large-scale supply chains, changes in subsidies, and other logistical challenges must continue to be configured for realistic execution, these steps may be taken on the scale of an individual farm.

The manifestation of this unjust industry is at a much more systemic level rather than an individual one, and those who are functioning within the system are not perpetrators compared to those who uphold the infrastructure of the food system reliant on animal agriculture that would not operate under the deliberate and extreme financial interventions performed by our government. Animal activists must be sympathetic to the plight of those who have little choice but to be a part of the industry. Chicken farmers are not malicious people who want to harm animals: many of them were manipulated to sign away their lives and enter into an industry that has been compared to modernized serfdom. They are exploited for their positions as a vulnerable rural American with very few opportunities for financial upward mobility, just as chickens are exploited for their misfortune of being born into a species that is the most factory farmed across every continent in the world.

It is the role of plant-based food technology companies to consider where these currently exploited groups will thrive in the new industry. Although each stakeholder requires a different motivation for ending animal exploitation, for many, the primary motivation to increase the ubiquity of plant-based meat products is to mitigate the extreme suffering experienced by farmed animals. This report serves as a guideline to contribute to these efforts, so that one day, we can celebrate the end of factory farming and the beginning of a new world for all animals.



"The solution is not to win over (farmers), but to win them over. Whenever you can find the win-win-win solutions, that is where progress gets made."

Leah Garcés

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