From Silicon Valley to the Kitchen Table: Innovative Online Agriculture & Food Start-ups and the Law

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FROM SILICON VALLEY TO THE KITCHEN TABLE: INNOVATIVE ONLINE AGRICULTURE & FOOD START-UPS AND THE LAW

Matthew A. Forcum*

I. INTRODUCTION

The internet's broad proliferation has impacted commerce, education, and many other areas of society through its decentralizing effects. The changes associated with the digital age have ushered transitions away from long settled systems of centralized hierarchical organization toward more decentralized networks.¹ Hard-fought legal battles can sometimes result when disruptive internet start-ups emerge and challenge existing business and legal frameworks, as parties seek to influence how once-settled law should be applied going forward.² As the internet decentralizes food and agricultural innovation, there is the potential for the most significant transformation the food industry has seen in decades.³ Recent growth in agriculture and food-centered internet start-up businesses will raise new legal issues as industries are disrupted in sectors largely governed by law and regulation inherited from generations past.

In recent years, innovative technology and internet start-up businesses have begun to influence and transform the agriculture and food industries.


These creative enterprises are reshaping the elements of traditional food production, processing, distribution, and retailing, otherwise known as the "food system." New internet-based companies are allowing small farmers to direct-market their meats and produce to consumers. The farmers using these services are no longer limited to either selling their goods at local farmers' markets or selling to big agriculture. There are emerging online marketplaces for users to engage in homemade food sharing along with platforms for those with culinary skills to market and rent their services to other users online through the budding sharing economy. In fact, "over the past four years at least 100 companies have sprouted up to [embrace the sharing economy concept]," which enables individuals to be both consumer and producer. These companies operate under a model that eschews centralized ownership of assets in favor of peer-to-peer sharing facilitated through online platforms. Some analysts see the recent creative application of these and other internet technologies in the fields of agriculture and food as a coming agricultural "silicon valley moment."

This Note examines the context of these emerging online businesses and their significance in respect to the food system and the laws that govern it. Part II will provide a background perspective and review of certain factors influencing the recent growth within the sector. Part III of this Note will survey several examples of internet start-up activity occurring throughout the realms of food and agriculture. Part IV will then evaluate the existing legal and regulatory framework within which the new businesses operate. Finally, this Note will argue that new laws, regulations, and policies responding to these changes in food and agriculture should strike a balance between the accommodation of new innovation and maintaining consumer safety.

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4 Id.
5 Id. (providing an example of an internet-based company offering innovative methods for farmers to market their goods to consumers).
7 Id.
The food system in today’s United States is largely centralized, and has been for a considerable amount of time.\(^9\) Centralization of the food system arose over the past century as a response, in part, to increased specialization, the development of enormous economies of scale, and the advantages offered when it comes to exporting large amounts of food and agricultural products from the United States to countries abroad.\(^10\) Not surprisingly, regulations and laws governing agriculture, food, and consumer safety have generally been geared toward application to the large centralized players in the respective industries.\(^11\) The expanding role of the internet, however, has had a decentralizing effect.\(^12\) The shift away from traditional pre-internet centralized hierarchies and organization towards decentralized interconnected networks has strongly influenced cultural and professional organization in areas including management, economics, and business.\(^13\) Power, information, and decision-making are no longer centrally concentrated, and are instead widely dispersed throughout interlinked networks of actors.\(^14\)

While much of the existing agriculture and food law grew out of the centralized past, recent developments in those areas have been mixed. The Food Safety Modernization Act (hereinafter, “FSMA”) was enacted in response to recent food safety scares and serves to further strengthen the federal government’s regulation and oversight of agriculture and food.\(^15\) One consequence of that approach is the potential for raising the barriers of compliance for smaller players with fewer resources such as small farmers and entrepreneurs.\(^16\) Some policy experimentation has taken place at the state level. Several jurisdictions have enacted cottage food acts and other special programs that allow private individuals to sell food products under

\(^10\) Id.
\(^11\) Id. at 14.
\(^12\) WILLIAMSON, supra note 1, at 2.
\(^13\) Id.
\(^14\) Id. at 3.
\(^15\) Gardiner Harris & William Neuman, Senate Passes Sweeping Law on Food Safety, N.Y. TIMES (Nov. 30, 2010), http://www.nytimes.com/2010/12/01/health/policy/01food.html?_r=0.
\(^16\) Id.
certain conditions without licensing or inspection.\textsuperscript{17} Perhaps more open-ended laws and regulation such as those adopted by some of the states are a step in the right direction with respect on how to handle the emerging marketplace, but a balance will have to be struck between encouraging start-up growth and adequate regulation for a safe food supply.

The introduction and application of new technologies can sometimes confound what seemed to be settled expectations on how the law should be applied.\textsuperscript{18} The case is no different with the recent rise of agriculture and food internet start-ups. The path food takes to get from the farm to the kitchen table is growing increasingly diverse and less predictable, while the line in the marketplace between consumers and producers is becoming less defined. As internet-based innovations democratize and decentralize the agriculture and food industries, the issue is raised as to whether existing regulation and law (originating largely from an earlier era) should adapt to more effectively fit the changing mechanics of the marketplace. Regulation and law in the United States should attempt to accommodate, not discourage, the emerging agriculture and food internet-based markets. There is a potential risk that overly strict or broad “one-size fits all” laws and regulations geared towards traditional centralized big-industry players could stifle important innovation and economic growth.

II. BACKGROUND

The increasing growth and influence of new agriculture and food internet start-up businesses will stir heightened legal controversy as interested parties work to resolve how once settled law will be applied to new models for production, processing, distribution, and retailing. The background impetus fueling the swift growth of internet agriculture and food start-ups draws from several sources.

\textsuperscript{17} See generally Colorado Cottage Foods Act, COLO. REV. STAT. ANN. § 25-4-1614 (West 2013) (exemplifying a typical cottage food statute); California Homemade Food Act, 2012 Cal. Stat. 3947 (detailing California’s recently enacted cottage food rules and regulations).

\textsuperscript{18} Lee, supra note 2 (denoting instances when technology has upset settled application of laws).
Consumers are increasingly influenced by the internet and social media on how they think about food. A recent study by the Hartman Group found that forty-three percent of Facebook users report that they regularly use social media and other digital platforms to plan meals. Consumers and producers who are interested in locally sourced and alternative foods are largely turning to the internet and small start-ups to address their needs and facilitate connections. Venture capitalists and others eager to capitalize on the economy's next breakout sector are investing significant money into agriculture technology and innovation. Internet-based start-ups centered on facilitating collaborative consumption of various goods and services are showing that decentralization can be profitable and can challenge long-established big players in the industries. The convergence of these developments has fueled the recent growth in internet start-up activity focused on novel approaches to agriculture and food production, processing, distribution, and retailing.

A. The Local Food Movement and Consumer Preferences

The “local-food movement” has become increasingly popular among wholesalers and consumers seeking locally sourced food and farmers seeking alternative markets. Many grocery shoppers will seek out “local food” that is fresher and has not been transported over a long distance. Food consumers who are behind the growing movement are motivated by factors including “supporting local economies; concerns about food safety; reactions to the globalized food system; environmental concerns; supporting local community; issues of national security; prioritizing taste; and, asserting

20 Id.
22 Geron, supra note 6.
one's right and freedom to grow food and eat how one chooses." According to a January 2013 A.T. Kearney study that surveyed 1,300 U.S. respondents, the majority of grocery shoppers are willing to pay a premium for local food.

Significantly, the local food movement has been able to use the internet to help facilitate how meat, produce, and other foods are distributed and consumed. Specifically, food consumers and farmers are utilizing online platforms and web-based retailers to connect and exchange. In fact, some commercial farmers have shifted how they operate their farms away from traditional large factory-styled organizations towards more efficient designs tailored for online commerce. Evolving consumer food preferences coupled with new internet platforms will likely continue to push more food producers away from the conventional approaches to production and distribution.

B. Significant Investment in Agriculture and Food Technology Start-ups

Investors are increasingly investing significant amounts of money and resources into agricultural technology within the food, energy, and sustainability sectors. In 2012, approximately $350 million in venture capital was invested into food based technology start-up businesses compared to $50 million in 2008. In early 2013, investment activity in the food product and agriculture technology sectors had increased by around thirty-seven percent over the prior year. Investors are attracted to the sector due to expectations that the worldwide demand for food will continue to expand and new technological applications might find ways to sustainably address that demand for the long term. The innovative

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23 Condra, supra note 23, at 282-83.
26 RUSHING & RUEHLE, supra note 24, at 4-5.
27 Heine, supra note 19.
28 Id.
29 Id.
30 Id.
31 See Bennett, supra note 8.
32 Fischer, supra note 21.
internet start-up businesses attracting some of these investments are striving to reshape the food industry by connecting restaurants with food purveyors, launching direct-to-consumer delivery services from local farms, and even inventing new types of food. New businesses are capitalizing on bringing to food and agriculture the sophisticated and well-designed online experiences that consumers have come to expect in the digital age. As increasing investment pours into the sector, these new businesses’ transformative effect on the food system will become more pronounced.

C. Online Start-ups and the “Sharing Economy”

The concept of collaborative consumption, or a “sharing economy,” has emerged in recent years and has influenced the development of popular online businesses. The sharing economy, through alternative means of consuming and transacting, “facilitates community ownership, localized production, sharing, cooperation, small scale enterprise, and the regeneration of economic and natural abundance.” Through reduced transaction costs, the internet has made the sharing of assets cheaper, easier, and more possible on a larger scale. In sectors of the economy such as hospitality and transportation, collaborative consumption based internet businesses like Airbnb and Zipcar are proving that providing platforms for these newer approaches to consumption can be profitable and challenge the traditional industry leaders. The rapid materialization and influence of innovative online enterprises centered on the sharing economy and collaborative consumption have raised distinct legal challenges. Many activities in the sharing economy are difficult to fit into the existing legal framework. The apparent successes of the collaborative consumption model for online start-ups in other sectors of the economy is beginning to

34 Wortham & Miller, supra note 31.
35 Id.
38 Geron, supra note 6.
40 Id.
draw the attention of some food and agriculture start-ups such as the online platforms, Cookisto and Kitchensurfing.\textsuperscript{41} As the collaborative consumption trend continues to move into the online food and agriculture sectors, it is primed to bring along with it the accompanying legal uncertainties of the sharing economy.

The growing prominence of innovative internet food and agriculture start-up businesses that are decentralizing the industry is being fueled in part by these background forces. The effects of changing consumer food preferences, the recent investment of significant amounts of venture capital into the sector, and the emergent sharing economy have all converged to help propel the broad influence of these transformative enterprises. As the business activity associated with these forces increasingly alters and disrupts the conventional food system, legal dilemmas are sure to occur more frequently.

\section*{III. Surveying Current Start-up Activity}

Internet start-up activity in the food and agriculture sectors aimed toward transforming how food is produced, processed, distributed, and consumed has manifested in a variety of different approaches. Several online operations have materialized with the objective of providing platforms to connect farmers and other purveyors of food directly with customers seeking out their goods.\textsuperscript{42} Other online ventures are working to bring aspects of the sharing economy into the food industry.\textsuperscript{43} Each new approach carries with it the potential for legal bewilderment as the traditional industry models change. One way to simplify surveying the many different transformative internet start-ups and the legal issues that they may raise is to categorize them broadly on what the businesses aim to achieve. The first category of start-ups is agriculture related and it is

\textsuperscript{41} See generally, About, COOKISTO, https://www.cookisto.co.uk/about (last visited Dec. 30, 2013); See also Contact Kitchensurfing, KITCHENSURFING, http://www.kitchensurfing.com/team (last visited Dec. 30, 2013).

\textsuperscript{42} Wortham \& Miller, supra note 31.

focused on using the internet to facilitate either direct-to-consumer or wholesaler marketing.

A. Agriculture Related Internet Start-ups

AgLocal is an online platform founded in 2011 that aims to allow chefs, restaurants, farmers, ranchers, and purveyors of certain meats to more easily connect in an electronic marketplace.\textsuperscript{44} Through the internet, the start-up seeks to alter the traditional way that independent and family meat farmers have connected with meat buyers and wholesale distributors.\textsuperscript{45} Co-founder Naithan Jones aimed to create an alternative way for family and independent farmers to sell their product other than at local farmers' markets or going through the traditional large corporate buyers like Monsanto or Cargill.\textsuperscript{46} AgLocal attracted $1 million in additional investment in 2012 from venture capital firms and other investors.\textsuperscript{47} In part, the new business hopes, through its decentralized model, to overcome what it says are barriers presented by existing agriculture law and regulations, in particular the subsidization of large producers.\textsuperscript{48}

Another similar business, FarmersWeb, has established an online platform that facilitates the connection of local farmers and producers with wholesale buyers, schools, country clubs, institutional kitchens, and retail stores.\textsuperscript{49} The service defines “local” as being within a 250 mile radius of a buyer’s location, and farms who utilize the platform are responsible for delivery or shipping of their products directly to the wholesaler.\textsuperscript{50} FarmersWeb’s revenue comes from charging a transaction fee to the

\textsuperscript{44} About, AGLOCAL, https://www.aglocal.com/about (last visited Dec. 30, 2013).
\textsuperscript{46} Id.
\textsuperscript{47} Id.
\textsuperscript{48} Building AgLocal: Learning from the Earth, AGLOCAL BLOG (Sep. 19, 2012), http://blog.aglocal.com/2012/09/19/building-aglocal-learning-from-the-farm/ (on file with author).
\textsuperscript{50} Id.
participating farmer for each order received.\textsuperscript{51} It is not clear if these types of online business arrangements would raise legal issues about the status of the relationship that exists between the parties involved and whether the laws that would govern a similar offline arrangement should still apply. Similar online apartment and house sharing start-up Airbnb has recently been faced with those types of legal questions as it continues to grow and ruffle the feathers of traditional industry players.\textsuperscript{52}

Recent start-up Farmigo is also attempting to tap into the internet to connect workplaces, community centers, schools, and other communities of people through its marketplace directly to a network of farms.\textsuperscript{53} Members who use the service select items through the online marketplace and have their orders delivered weekly within forty-eight hours of harvest.\textsuperscript{54} Farmigo users who utilize the service to organize “food communities” earn ten percent of the community’s weekly sales that exceed $600, and those users are provided with the tools to help manage the business.\textsuperscript{55} In Farmigo’s terms of service, the business asserts that it is only a marketplace where users transact with “merchants,” and that it is not acting as an agent of sale or an agent of any seller.\textsuperscript{56} Farmigo’s terms also seek to waive any responsibility or liability for the products and services of parties using the online platform.\textsuperscript{57} As arrangements like the one Farmigo employs gain traction in the market and influence the way food is distributed, it will need to be determined whether these terms can stand in a court of law.

San Francisco start-up Good Eggs employs a similar approach by offering an online service in select U.S. cities that enables the site’s individual users to order food directly from local farmers and food makers and have the food delivered directly to them or made available for pick up

\textsuperscript{56} Id.
at predetermined locations for a fee.\footnote{How It Works, GOOD EGGS, http://www.goodeggs.com/about (last visited Dec. 30, 2013).} Good Eggs has established a set of criteria that it requires all of the food producers offering products through the online service to meet.\footnote{Id.} Good Eggs’ guidelines include requirements of environmental sustainability and that farmers and preparers of food be “completely transparent about their practices and ingredients.”\footnote{Food, GOOD EGGS, http://www.goodeggs.com/about/food (last visited Dec. 30, 2013).} Farmers using the Good Eggs platform are relying on it for an increasing share of their business.\footnote{Terence Chea, Tech startups take local produce, food directly to consumers, POST AND COURIER (Dec. 25, 2013, 12:01 AM), http://www.postandcourier.com/article/20131225/PC1206/131229683.} New online food focused services like those being offered by Good Eggs and other start-ups have drawn the attention of some of the more conventional larger players in the industry such as Walmart and Safeway who now offer online grocery delivery.\footnote{Id. at 675.} This increased competition in the market is some evidence that innovative internet food and agriculture start-ups are helping drive change in the industry away from the more centralized food system of the past.

Growing start-ups such as Good Eggs, Farmigo, FarmersWeb, and others focused on directly connecting users with food products fresh from the farm could potentially encounter food safety regulatory issues. In \textit{Farm-To-Consumer Legal Defense Fund v. Sebelius}, a 2010 federal district court case in Iowa, buyers and sellers of raw milk brought an action against the Department of Health and Human Services challenging the validity of Food and Drug Administration regulations requiring milk sold in interstate commerce to be pasteurized.\footnote{Farm-to-Consumer Legal Def. Fund v. Sebelius, 734 F. Supp. 2d 668, 675-76 (N.D. Iowa 2010).} The plaintiffs (including the owner of a virtual farmers’ market) purchased raw milk in states where it is legal and later transported it into jurisdictions where the sale of raw milk is prohibited.\footnote{Id. at 675.} The court did not hear the case on the merits, and the broader legal issue about conflicting food laws in respect to virtual farmers markets remains unsettled.\footnote{Id.} Consequently, online businesses that serve broad geographic areas that potentially encompass multiple jurisdictions must
remain cognizant of the associated unresolved legal issues like those raised in Farm-To-Consumer Legal Defense Fund.

B. Other Food Related Start-up Activity

Several recent internet start-ups are aiming to bring aspects of the sharing economy and collaborative consumption into the food industry. Kitchensurfing.com has established an online marketplace that operates globally where chefs and others who have cooking skills are able to connect and offer their services directly with those who are seeking them.66 Services like Kitchensurfing have enabled greater micro-entrepreneurship by allowing individuals to better monetize their assets that would have otherwise gone unutilized.67

Applying concepts of collaborative consumption in the food industry even further, Greek start-up Cookisto, founded in 2013, has established an online marketplace to connect interested consumers with local homemade foods prepared by home cooks.68 The service allows users to profit from the family meals they normally prepare. The new platform presently operates only in certain Greek and UK cities, but is generating broader interest.69 Like other online businesses based on the collaboration economy, Cookisto relies upon creating trust and credibility.70 As services like Cookisto grow, this aspect of the business and how it translates to the safety of food that large numbers of people consume could create new legal uncertainty. In late 2013, over 12,000 amateur cooks had registered to use Cookisto in Greece.71 Importantly, the service does not oversee food freshness or the cleanliness of kitchens where the food is prepared.72 As it stands, the quality and safety of meals exchanged through Cookisto are self-regulated through

66 See KITCHENSURFING, supra note 43.
70 Id.
72 Id.
the responsibility of the home cooks who prepare the foods and the site's user-created meal rating system. It is not clear how income generated by individuals selling their meals would be taxed, or whether users of the service should be subject to the same laws and regulations as a conventional restaurant. As collaborative economy based internet services like Cookisto and Kitchensurfing drive further disruption of the traditional food industry, it will be imperative to settle these and other legal uncertainties. There is a risk though, that the traditional players in the industry will use this opportunity to lobby for changes to existing laws to curtail the sharing economy and for what rules governing consumer safety should be imposed.

Surveying the types of emerging internet start-up activity within the food and agriculture sectors is helpful for conceptualizing the ways in which the businesses are disruptive to the industry. Internet enterprise is connecting farms and consumers in ways that were not possible even a few years ago and transforming how food is produced, distributed, and retailed. Through online platforms that simplify collaborative economic exchange in the food sector, individuals are now able to monetize their assets and skills in ways that traditional law has difficulty encapsulating.

IV. THE EXISTING REGULATORY AND LEGAL ENVIRONMENT THAT AGRICULTURE AND FOOD TECHNOLOGY START-UPS FACE

A. The Food System in the United States is Largely Centralized

In order to better understand the current legal environment that emerging food and agriculture internet start-ups are facing and comprehend the transformative effects that their influence is generating, it is helpful to look at the context out of which the existing body of law and regulation developed. Increasing legal conflict could materialize as internet food and agriculture start-ups based on decentralized networks flood into an arena of

74 ECONOMIST, supra note 37.
the economy governed by laws that grew out of policies for administering a more centralized food system.

In the early history of the United States, the food system was decentralized and focused on local production. However, the food system in place over most of the past century in the United States has been largely centralized. U.S. government agriculture policies and incentives (such as crop subsidies) that protect the income of farmers who grow tradable, non-perishable crops have been in place for many decades. The response by farmers to such government policies has been to become more specialized in production of certain crops and to grow greater acreages, establishing profitable economies of scale. This specialization among food producers helped to provoke greater centralization within the U.S. food system.

Centralization that resulted from the presence of large economies of scale in food production also emerged in other areas of the food system, including among food wholesalers and distributors. The establishment of a large centralized food system has in part helped provide the United States with an enormous amount of cheaply available food. One potentially negative side, however, of the highly centralized food system has been the near market dominance in the sector by a small number of large companies. Per recent USDA data, “80 percent of all our beef, 70 percent of all our lamb, and 65 percent of all our pork in the United States is slaughtered, packed, and sold by only four companies.” Four retailers account for almost half of all grocery sales in the United States. Emerging internet based food and agriculture start-up businesses are entering into an industry where activity is largely consolidated and geared towards centralized organization.

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76 Hesterman, supra note 9, at 13-14.
77 Id. at 11.
78 Id. at 12.
79 Id. at 13.
80 Id.
82 Hesterman, supra note 9, at 13.
83 Id. at 13.
84 Id.
Likewise, food and agriculture regulation in the United States has been and remains largely influenced by policies rooted in a highly centralized food system. Certain effects of the centralization present throughout the industry have helped to continually perpetuate the policies that served to initially spawn it. Cheap, abundant food and the economies of scale that a centralized system of food production and distribution foster have helped make United States agricultural exports a "primary means of balancing [the nation's] trade with other countries." Accordingly, the President and lawmakers in the federal government continue to utilize agriculture and food policies based on centralized organization as a means of promoting the competitiveness of the U.S. in the globalized economy.

Another significant perpetuating feature of the centralization and concentration of the food and agriculture industry in the United States is the build-up and intensification of lobbying power exercised by the large incumbent industry players and trade groups in the field. Parties who stand to benefit from the continuation or expansion of existing food and agriculture policies have been able to utilize or pool their vast resources in an effort to influence the political process. For example, the Grocery Manufacturers Association (hereinafter, "GMA") consists of 300 leading food, beverage, and consumer product companies in the United States and abroad and serves as an advocate for its members. As a measure of the significant lobbying activity that occurs within the industry, in 2013, the total federal lobbying expenditures of GMA were in excess of $9 million. Disruptive internet food start-ups are entering an industry filled with incumbents who are eager and able to assert their interests by maintaining policies that are often more favorable to centralization.

When new industry players challenge old incumbents with competing paradigms that show profitability, as internet based food start-ups are increasingly doing, tension is certain to manifest in the policy arena.

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85 Id. at 14.
86 Id.
87 MARION NESTLE, FOOD POLITICS: HOW THE FOOD INDUSTRY INFLUENCES NUTRITION AND HEALTH 95-96 (2002).
Internet based start-ups in the industry face significantly entrenched interests often incongruent with a decentralized food system. As internet start-ups that decentralize the ways that food is produced, distributed, and retailed enter into the field and challenge incumbent industry players, legal uncertainty will likely result from the application of these more narrowly focused laws and regulations.

B. Safety Laws

One distinct feature of internet food and agriculture start-ups mostly uncommon to entrepreneurial technology ventures in other industries is that the products and services that food start-ups market and distribute are closely tied with actual consumption by end users, and thus deeply implicated in consumer safety. Food start-ups grounded in decentralization may raise compliance issues with food safety regulation as they increasingly reach a broader market of consumers. In addition, start-ups and other small food businesses can face significant barriers in attempting to comply with the complex array of federal safety rules. Recent changes in food safety regulation brought about by the enactment of the Food Safety Modernization Act have served to reinforce federal regulatory power over the area, and have raised questions regarding the burden of compliance placed on smaller actors within the industry.

Present food safety regulation in the United States is largely grounded in policies established over a century ago.90 The United States Department of Agriculture (hereinafter, “USDA”) and the Food and Drug Administration (hereinafter, “FDA”) are the two chief federal agencies that are generally responsible for regulating and insuring food safety in the United States.91 The FDA “is responsible for protecting the public health by assuring the safety, efficacy and security of human and veterinary drugs, biological products, medical devices, our nation’s food supply, cosmetics,
and products that emit radiation." The FDA's jurisdiction "encompasses most food products (other than meat and poultry)." The agency traces its origins from a 1906 statute enacted by Congress aimed at regulation of food and drugs available within the United States—the Food and Drug Act, later replaced by the Federal Food, Drug, and Cosmetic Act in 1938. Through the past century, the FDA has in some instances had to develop new food regulatory standards in response to changes in food technology. While it is possible that the changes being brought to the food and agriculture industry by internet start-ups could help eventually stimulate future changes in potentially outdated federal food regulatory law, as it stands, companies doing business today must still attempt to comply with the existing rules. This is especially true as these businesses grow past being merely limited local operations and extend their influence over increasingly broader areas that cross jurisdictional lines. Already, issues over whether compliance is necessary with respect to certain types of online food and agricultural operations have been raised. In a 2010 district court case, Farm-to-Consumer Legal Defense Fund v. Sebelius, a plaintiff operator of an online virtual farmers' market sought to challenge the constitutionality of the FDA's regulations governing the delivery of milk into interstate commerce. While this particular case was not decided on the merits of the constitutional arguments put forward, the court acknowledged that, "the plaintiffs had raised an interesting question regarding the validity of the FDA regulations." Further review by the courts will be necessary to hash out how these new forms of food and agriculture business fit into the present legal framework.

96 Farm-to-Consumer Legal Def. Fund v. Sebelius, 734 F. Supp. 2d 668, 675-76 (N.D. Iowa 2010).
97 Id. at *674-75.
Internet food start-up businesses can face significant compliance burdens. New start-ups involving food or other FDA regulated products aimed toward consumers in the U.S. market "must comply with the applicable laws and science based public health rules developed and enforced by the [agency]." Conceding that compliance with applicable food regulatory law is often complex (the regulations include over 200 federal laws spanning hundreds of pages in the Code of Federal Regulations), the FDA advises in informational material it furnishes to those in the industry that "small and start-up businesses are likely to need expert assistance." Compliance by emerging start-ups is further complicated by recent legislative developments. In response to several high-profile outbreaks of foodborne illness, the FDA's regulatory power over food safety was enhanced. The FDA Food Safety Modernization Act (hereinafter, "FSMA") was signed into law on January 4, 2011. The act provides the FDA with new enforcement authority designed to achieve greater rates of compliance with food standards, and aims to build an integrated national food safety system in partnership with state and local authorities. The FDA has been granted a broad mandate to require preventive controls for food facilities, to establish minimum standards for the safe production and harvesting of fruits and vegetables, and to establish a new mandated inspection frequency for food facilities. As a practical matter, the burden of compliance with the new rules for a small operation can be significant. According to a 2013 white paper released by the Cornucopia Institute,

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99 Id.
100 Gardiner Harris & William Neuman, Senate Passes Sweeping Law on Food Safety, N.Y. TIMES (Nov. 30, 2010), http://www.nytimes.com/2010/12/01/health/policy/01food.html?_r=0.
103 BACKGROUND ON THE FDA FOOD SAFETY MODERNIZATION ACT, supra note 101.
FDA estimates placed the approximate annual cost for compliance with then-proposed FSMA regulations between $4,700 and $13,000 for small to medium-sized operations.105 In response to immense criticism, the Tester-Hagan amendment to FSMA was adopted to exempt small farmers doing less than $500,000 in direct sales to consumers or restaurants.106 However, the agency retains broad discretionary authority to revoke the exemption, in which case, small operations, like larger non-exempt organizations, would be faced with expensive compliance requirements.107 Once an expanding operation crosses the $500,000 threshold, it must come into compliance.108 Conceivably, the effect of expensive compliance under the new law could serve as a temporary shield to larger resource rich operations from competition with smaller less-resource rich businesses like fledging online start-ups. Regardless, the new more expansive federal food safety laws add additional wrinkles to the legal landscape that growing online food based businesses must navigate.

The other key federal government regulator of food safety in the United States is the USDA. Founded under President Abraham Lincoln in 1862, the agency is responsible for ensuring the safety of the nation's commercial supply of meat, poultry, and processed egg products, among other things.109 The agency is the product of an era where over half of the nation's population lived and worked on farms.110 Under present federal law, the USDA assumes responsibility for the safety of meat and poultry products in or substantially affecting interstate commerce and “assuring that poultry products...are wholesome, not adulterated, and properly marked, labeled and packaged.”111 Within the USDA, activities with respect to maintaining food safety are carried out by the Food Safety Inspection

105 Id.
107 CORNUCOPIA INSTITUTE, supra note 104.
110 Id. at ii.
Service. Ensuring compliance with USDA food safety regulations could be complex for small businesses.

As with FDA food safety regulations, USDA compliance issues may also arise regarding food and agriculture internet start-ups that grow beyond a limited local scope. The novelty of internet commerce has allowed some food and agriculture start-ups to attempt to position themselves at a distance with respect to the regulated products. For instance, in its terms of service, the AgLocal online meat exchange platform provides no guarantee as to the quality of any of the products made available through its services and endorses none of the products. The platform has positioned the service that it offers as merely furnishing information to users about the food products. Whether efforts such as this to limit the online business's relationship with the regulated food products associated with it would withstand legal scrutiny remains uncertain, but the online platforms will likely garner further attention from competitors and consumers as the products passing through them reach a growing number of U.S. kitchen tables.

C. State Regulations – Cottage Food Acts and Other Programs

While it is not clear how law and regulation at the federal level should accommodate the emerging decentralization associated with internet based platforms in the food industry, some state governments have made attempts at addressing recent changes in the food landscape. The policy outcomes experienced in the states can influence the direction that future federal policy in respect to food and agriculture will take. Per the words of Supreme Court Justice Louis Brandeis in 1932, "[i]t is one of the happy incidents of the federal system that a single courageous state may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the country." State level policies, in addition

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114 Id.
to overarching federal laws, can therefore play a significant role in governing the agriculture and food sector.

"Cottage food" acts are one area of state level policy innovation that might have some bearing on the internet food business. Several states, including California and Colorado, have enacted laws that allow individuals to sell certain types of food products from unlicensed home kitchens where sales are generally limited to small amounts. cottage food acts generally limit the licensing exemption to foods that have been produced, processed, or packaged that are non-hazardous and do not require refrigeration. Examples of exempt foods include spices, teas, dehydrated produce, nuts, seed, honey, jams, fruit butter, and certain baked goods. Some cottage food acts, such as the one enacted in Colorado, limit the sale of foods produced to the producer's premises, a roadside stand, farmers' market or similar venue. Caps on the amount of revenue that a producer can earn while maintaining exempt status also exist. Already, legal challenges have been raised as to the validity of such exemptions and whether certain types of food operations qualify. In Stowers v. Ohio Dep't of Agriculture, the appellants operated a limited liability company out of their Ohio home that sold food and other products via telephone and email orders to its approximately one hundred members. The appellants argued in part that statutory exemptions for certain operations under the cottage food act were invalid due to their irrationality. The court held that the operation did not qualify for the exemption, the distinction between the company in question and what the legislature exempted as cottage food operations was not irrational, and that


117 See COLO. REV. STAT. § 25-4-1614 (2013).

118 Id.


122 Id. at *10.
the business was a retail food establishment subject to licensing. The mechanics of how cottage food, and similar exemptions for small producers should effectively function will continue to be incrementally worked out as the states accumulate experience with the policies. While many emerging online food platforms may not be able to significantly benefit from present state cottage food legislation with such limitations on food types and revenues, the acts do represent a step towards policy aimed at governing more individualized food production and retailing.

D. "Sharing Economy" Legal Issues

Finally, start-up platforms that operate through collaborative consumption raise their own distinct legal issues. Online food start-ups like Kitchensurfing, Cookisto, and others that function within the sharing economy will face these questions in addition to food safety issues. Jenny Kassan and Janelle Orsi presented their assertions at a 2012 University of Oregon symposium that the uncertainty often associated with applying traditional laws to sharing economy related activities arises in part because traditional laws did not foresee the emergence of collaborative relationships, did not take into account the varied motivations behind enterprises, and did not foresee more diverse forms of exchange. As a result, activities within the sharing economy cannot be easily placed into traditional legal categories. Other non-food collaborative consumption based start-ups such as Airbnb have already faced distinct legal challenges. In June 2012, a City of New York Environmental Control Board Judge found that a user of the Airbnb room-sharing platform was in effect running an illegal hotel through the service under New York ordinances. California, in an effort to address the legal conundrum raised by the sharing economy, issued a proposed ruling in 2013 to exclude ride-sharing start-ups Lyft, SideCar,

123 Id. at *2.
124 Kassan & Orsi, supra note 36, at 13-16.
125 Id. at 13.
and Uber from traditional taxi regulations.\textsuperscript{128} However, the companies would be required to obtain licenses, and exert more control over the drivers utilizing the online platform.\textsuperscript{129} State policymakers in California attempted to forge a balance between embracing a new economic reality with ensuring the safety of consumers.\textsuperscript{130} In order for sharing economy based online start-ups in the food sector to be successful, similar regulatory changes in the food and agriculture industry will probably be necessary to settle legal uncertainties. A potential risk posed by updating the rules is that incumbents will seize on the opportunity in an attempt to insulate themselves from the emerging competition.\textsuperscript{131} The difficulty of applying the existing body of law to sharing enterprises is a testament to how transformative and disruptive the new model actually is. As online start-ups endeavor to apply platforms for collaborative consumption to the food and agriculture industry, laws and regulation may have to change in order to adapt to the influential trend.

V. CONCLUSION

Tremendous transformation is occurring within the food industry.\textsuperscript{132} The decentralization that the internet has largely brought upon education, healthcare, business management, and other areas of the economy is advancing into the areas of food production, processing, distribution, and retailing. Consumer preferences have embraced local and alternative foods, venture capitalists are pouring money into emerging online food enterprises, and new businesses are capitalizing on the dawning collaborative consumption based economy. A number of online food and agriculture start-ups based on platforms that aim to disrupt business-as-usual have already launched over the past several years.

\textsuperscript{129} Id.
\textsuperscript{130} See id.
\textsuperscript{131} \textit{ECONOMIST}, \textit{supra} note 37.
\textsuperscript{132} Gould, \textit{supra} note 3.
Our regulations and laws should attempt to accommodate, not discourage, the emerging agriculture and food technology market. The transition in the sector may be especially challenging given the long-centralized nature of the food system and the underlying policies that support it in the United States. The legal and regulatory environment that present food start-ups face largely originated over a century ago from efforts to govern a centralized and industrial food industry dominated by a limited number of large businesses. There is a risk that overly broad laws and regulations geared towards governing a traditional centralized food industry could prevent and stifle important technological innovation and growth. It will, however, be imperative for policymakers to strike the proper balance between consumer safety and openness to alternative modes of business. Laws aimed squarely at increasing perceived public food safety like the FSMA can place potentially high burdens on smaller players. Policy innovation, experimentation, and experience at the state level can help guide national policymakers towards working legal and regulatory frameworks that could better accommodate online food and agriculture business while still maintaining public food safety. Policy innovation will also be necessary to address the unique legal issues posed by the sharing economy as more start-ups adopt its model.

In sum, increasing legal conflict is probable as more agriculture and food internet start-up businesses enter the mainstream and disrupt the settled food system. There is considerable opportunity for both individuals and the broader economy in taking up these emerging enterprises. An understanding of the tension behind the changes occurring within the sector can guide future policymaking toward more effective and balanced solutions.