THE STEAKS ARE HIGH: COVID-19'S IMPACT ON DIRECT-TO-CONSUMER MARKETING IN THE OKLAHOMA BEEF INDUSTRY

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Abstract: June 2020 retail beef prices were 25.1% higher than prices in June 2019 (USDA ERS, 2020).The strain of the COVID-19 pandemic has had on the beef industry encouraged some beef producers to try marketing their product directly to consumers, and for many consumers the idea of buying beef products from a local source to meet their needs is appealing (Brown, 2020). Trust is an integral part of relations between producers and consumers and impacts consumer behavior. This study explored Oklahoma beef producers' perceptions of the changes that have occurred in direct-to-consumer marketing and consumer communications in the Oklahoma beef industry during the COVID-19 pandemic using semi-structured interviews. This study consisted of 16 participants found via snowball sampling. These participants were over 18 years old, managed a beef operation located in Oklahoma, and used one or more channels of direct marketing to sell beef products directly to consumers. Findings from this study indicate consumer interest in local beef products has increased, and so have beef sales for producers marketing direct-to-consumers. Harvest dates, freezer shortages, and up-front cost of bulk beef are all limiting factors associated with COVID-19 and inhibit producers from keeping up with demand. Some producers have relied on social media to foster meaningful communications with consumers, while others rely on word-of-mouth and high-quality beef products to sell themselves. Some producers stopped marketing their beef products entirely due to their inability to keep up with demand. Consumers came to producers because of decreased availability on grocery store shelves, and have become repeat customers due to increased levels of trust and interest in the "story behind the beef". Future research could explore consumer perceptions of beef producers during the COVID-19 pandemic to compare and assess the effectiveness of the communications between these two groups. Producers should acknowledge the impact fostering relationships with new customers, whether in face-to-face interactions or online, has had on the success of their business.

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CHAPTER I

INTRODUCTION

Direct-to-consumer marketing in the agriculture industry refers to producers selling agricultural products directly to consumers instead of selling to third-party distributors and wholesalers (Low et al., 2015). Direct marketing in the food sector has a history of ups and downs, depending heavily on consumer interest in niche markets.

Marketing directly to consumers allows producers new opportunities to create more meaningful relationships with their customers and add value to their products (Low et al., 2015). Although there are increased processing costs associated with direct marketing in the beef sector, producers can make up profit by cutting out the middlemen (Brown, 2020).

The most reliable source of data on direct marketing and local food sales in the United States comes from the United States Department of Agriculture's Census of Agriculture (USDA) conducted every five years. The local food marketing practices survey report from 2020 is not available until November 2021. Most peer reviewed studies exploring local food marketing practices refer back to the 2007 census data in addition to the local food marketing practices survey report from 2015 as the most current data sets on the subject. Therefore, the local food marketing practices survey report from 2015 and the 2007 census data will be the primary references for data in this thesis.

Direct-to-consumer marketing in the beef industry has started gaining a foothold in consumer markets over the last two decades as beef has become a commodity characterized by more than just cut and marbling (Lim et al., 2018). Through the entire agricultural sector, direct sales from farmers to consumers increased 104.7% from 1997 to 2007, and the value of direct sales increased 47.6% (Vogel & Low, 2010).

Changing consumer preference and increased attention to meat production practices have led to shifts in how beef products sell and increased popularity in niche markets (Midan Marketing, 2019). In the last five years, U.S. purchasing trends have become driven by younger generations with increasingly diverse attitudes, leading to topics like grassfed beef, antibiotic- and hormone-free beef, and plant-based meat alternatives that were just emerging five years ago to be at the forefront of consumer interest (Midan Marketing, 2019). This shift in consumer interest can be seen in action as the movement to buy local has gained traction in consumer circles. U.S. consumers continued to gain interest in local foods, with sales in the U.S. growing from \$5 billion in 2008 to \$12 billion in 2014 (Packaged Foods, 2015).

The USDA 2015 Local Food Marketing Practices Survey estimated farmers sold \$8.7 billion of food commodities directly to consumers, retailers, institutions, and local food intermediaries; such as distributors and wholesalers marketing and selling locally branded products (USDA NASS, 2016). Direct market sales to consumers account for 35.0% of the local food sales total, resulting in \$3 billion of direct sales to consumers (USDA NASS, 2016). Direct sales channels to consumers include farmers markets, onsite farm stores, roadside stands, community supported agriculture (CSA) arrangements, online sales, pick-your-own operations, mobile markets, and other direct methods of sale (Katchova, 2016).

Direct-to-consumer markets include a diverse array of operations in the agricultural sector. Direct marketing from farms with gross sales less than $10,000 are responsible for 11.0% of direct market sales, farms between $10,000-$99,999 in sales account for 31.0%, farms between $100,000-$249,000 in sales account for 15.0%, and operations grossing over $250,000 are responsible for 43.0% of all sales (USDA Census of Agriculture, 2007).

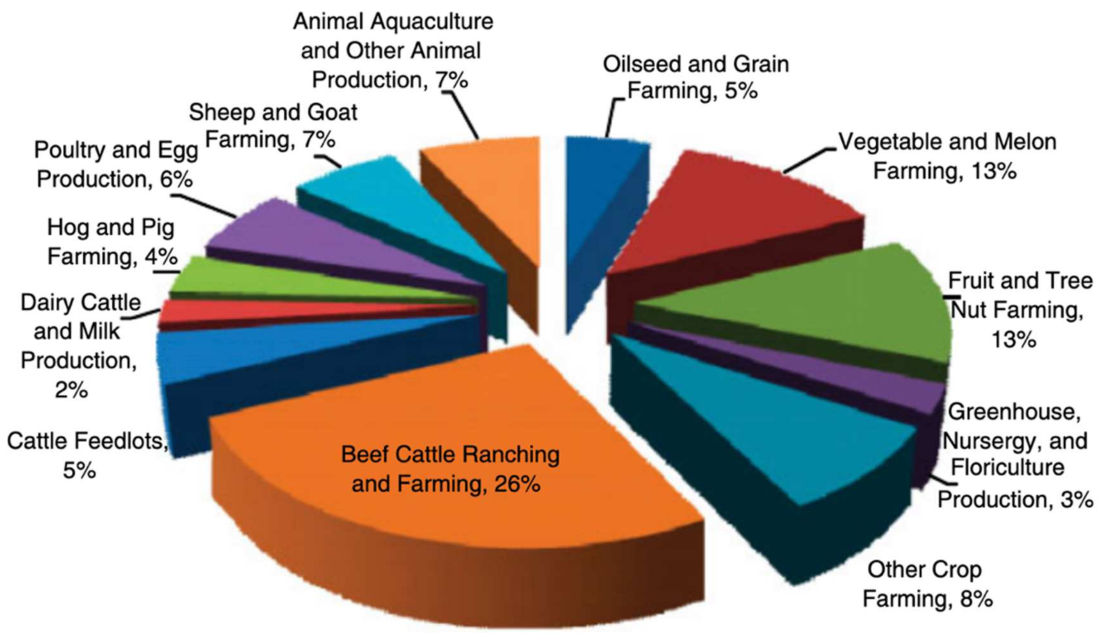
Typically farms with higher gross sales indicate a larger farm size and these statistics illustrate diversity in operation size in terms of farms participating in direct market sales (USDA Census of Agriculture, 2007). There are a larger number of small farms involved in direct markets, however, larger farms are able to make more sales, giving them significant representation (Park, et al., 2014).

Direct marketing in the livestock industry is more complex than selling produce because of more intense regulations (Goodsell et al., 2007). Establishing direct marketing strategies for livestock producers can be a rigorous process, but it is one of the best ways for operations to capitalize on production and increase revenue (Goodsell et al., 2007).

According to the USDA Census of Agriculture (2007), 58.0% of farms selling farm-direct were classified as livestock operations, even though animal product transactions are less noticeable in distribution channels than plant product transactions. Beef cattle and feedlot sales account for 31.0% of direct market sales and gross less than one-third of the value of direct produce and crop sales (USDA Census of Agriculture, 2007). Figure 1 shows a breakdown of farm types associated with direct marketing in the agricultural sector (USDA Census of Agriculture, 2007).

Figure 1

Distribution of direct marketing in the United States (USDA Census of Agriculture, 2007).

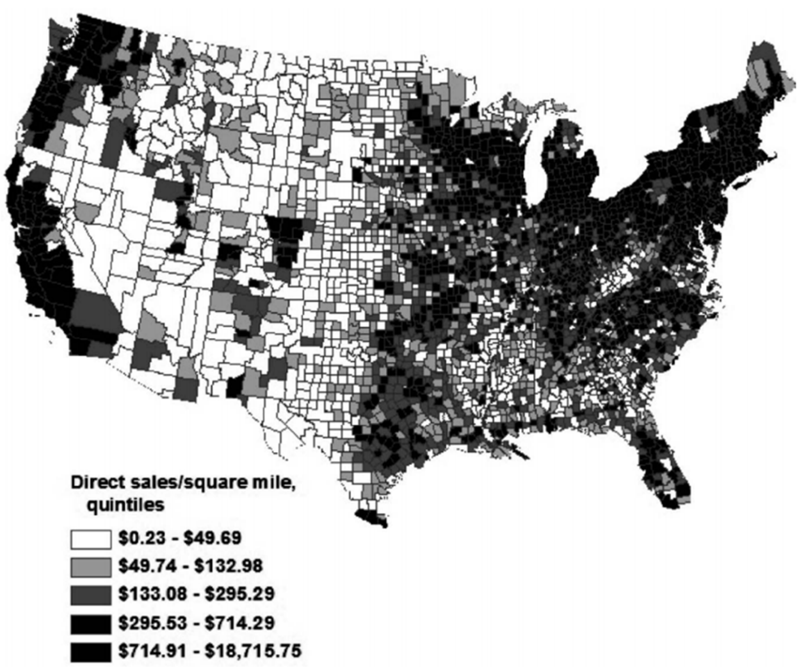


Producers selling farm products at urban centered farmers markets increase the odds of achieving a higher income (Brown et al., 2007; Govindasamy et al., 1999). "Access and proximity to urban areas reduces transportation costs associated with supplying through direct marketing activities" (Detre et al., 2011, p. 21). Eastwood et al. (2004) found direct marketing served as a method of sales used by producers in response to low farm prices, allowing farmers to cut out the middlemen and receive retail prices rather than wholesale prices for their products.

The majority of farms involved in direct marketing are located near metropolitan areas and market their product within a 100-mile radius (Detre et al., 2011). Figure 2 reveals more densely populated areas of the U.S. have a higher volume of direct sales per square mile than more rural, spread-out areas of the country (USDA, 2007).

Figure 2

Geographic distribution of direct food sales by county (USDA Census of Agriculture, 2007).



Two primary forces have led to the rise of the direct market sector adapted by farmers, the first being farmers get a better price by cutting out the middlemen allowing producers to keep more of the consumers dollar, the second being consumer desire for fresh food sources creates a strong demand for local products (Govindasamay & Nayga, 1997). Sustainability initiatives also serve as a driving force favoring direct markets as they mitigate environmental impact and carbon footprint by cutting out national and international transport (Ilbery & Maye, 2005).

A relatively new form of direct marketing has risen through online outlets and social media. Online meat sales are a recently expanding marketing channel (Lim et al., 2018). Meat sales through Amazon.com accounted for $50 million in the U.S. in 2017, and the sales volume was expected to increase with increased popularity of online grocery shopping (Digital Commerce Report, 2018). Easy access to online grocery options allows customers to shop for local products without leaving the home (Ohara & Low, 2020).

COVID-19 Pandemic's Impact on Food Consumption and Retail Beef

When the COVID-19 pandemic spread to the United States President Donald Trump declared a state of emergency on March 11, 2020, marking a dramatic lifestyle change for many Americans. Travel became restricted, business and schools closed, and the change in the average American's lifestyle had profound impacts on the food and agricultural sectors through sudden and unexpected demand shifts as "consumers altered the amount and type of food they purchased, and where they purchased it" (Weersink et al., 2020 p. 2).

COVID-19 created a drastic shift in consumption as restaurants, schools, and other public venues closed, and 60.0% of consumers altered their food consumption patterns by preparing the majority of their meals at home (International Food Information

Council, 2020). Online grocery shopping has become more common with 53.0% of consumers shifting to internet platforms to purchase groceries (International Food Information Council, 2020).

The surge in demand at gocery stores in March 2020 resulted from almost a complete shutdown of the food service industry (Peel, 2021). Demand was further exaggerated by panic buying as consumers attempted to stockpile food to prepare for social isolation (Peel, 2021). This stockpiling behavior lead to freezers being sold out all over the country (Tyko, 2020). Freezer chests and deep freezers were on back order for several months in April, with some appliance outlets selling twice the volume of freezers sold compared to April 2019 (Tyko, 2020).

The first wave of beef shortages was not due to decreased production, but bottlenecks in the supply chain inhibiting product from reaching grocery store shelves (Peel, 2021). As food service and retail grocery story supply chains were exposed as inflexible and too specialized to adapt quicky to the shift in consumption, grocery store meat shelves went bare, and beef products began to dwindle in supply (Peel, 2021).

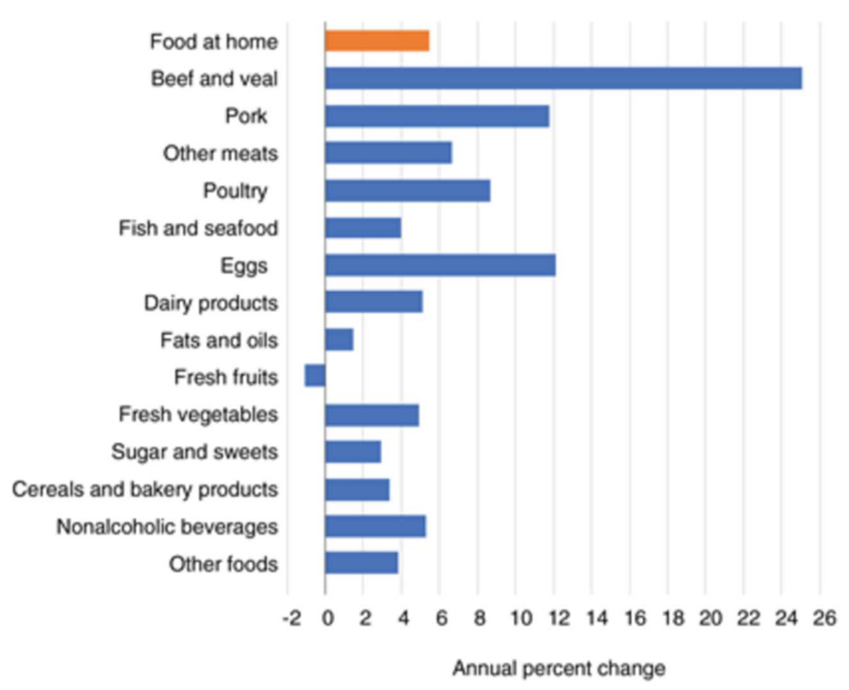
Overall, grocery store prices were 5.6% higher June 2020 compared to June 2019 (Chelius, 2020). The stark decrease in demand for industrial food production coupled with a dramatic increase in demand for grocery food production exposed bottlenecks in supply chains in many sectors of the food industry, including the beef sector (Iyer, 2020).

The beef sector experienced supply chain disruptions when decreased slaughter volumes led to a bottleneck in supply, boosting retail prices (Tonsor & Schultz, 2020). The bottleneck in the beef supply chain led to an increase in the price of retail beef. June

2020 prices were 25.1% higher than prices in June 2019. Figure 3 shows the increase in retail price for at-home food categories. Although other sectors in the food industry showed elevated retail prices, beef and veal saw the most dramatic increase in price (USDA AMS, 2020).

Figure 3

Price changes for major at-home food categories June 2019-June 2020 (USDA, Economic Research Service using U.S. Bureau of Labor Statistics Consumer Price Index, 2020)



Meat processing plants were hit particularly hard during the start of the pandemic in the U.S. as harvest and production plants' productivity became constrained due to the spread of COVID, reducing employee availability or completely shutting down plants for an extended period of time (Tonsor & Schultz, 2020). The first week in May saw the worst of constrained harvest with inspected steer and heifer volumes 41.0% lower than the same week in 2019 (USDA AMS, 2020). Subsequently, livestock prices plummeted, and grocery stores and other retail food service channels experienced reduced meat product availability, translating to elevated prices and product rationing (Tonsor & Schultz, 2020). The media highlighted just how far a steak had to travel from farm to grocery store shelves, and consumers across the U.S. began experiencing the impacts of supply chain bottlenecks first-hand as meat shelves in grocery stores were empty, beef products came with up-charges, and purchasing restrictions were placed on beef products (Tonsor & Schultz, 2020).

Statement of the Problem

The volatility of 2020 cattle markets put beef producers under pressure as the pandemic began to impact the U.S. food supply (Tonsor & Schultz, 2020). The COVID-19 pandemic exposed vulnerabilities in the current supply chains as livestock producers were stuck with a surplus of live animals and yet retail distributors faced a shortage of meat (Tonsor & Schultz, 2020). As food consumption shifted away from dining out to home-cooked meals, local food producers experienced a boom in demand for local foods due to decreased availability of certain products, like beef, at grocery stores, concern about interacting with crowds in traditional food retail spaces, and more time to prepare fresh foods (McFadden & Malone, 2020).

Although there are numerous studies centered around consumers and direct marketing techniques, there are few looking at direct marketing strategies from the producer's point of view, and fewer still involving beef producers in the direct market sector. As retail beef prices rose and product availability became scarce once the COVID-

19 pandemic began, Oklahoma Cattlemen's Association released a comprehensive list of all cattle producers in the state of Oklahoma selling beef products direct to consumers in order to give consumers a direct line of communication to producers.

Direct contact between producers and consumers adds an element of intimacy disappeared as Americans became more removed from agriculture. Though the idea of selling beef direct to customers precedes the COVID-19 pandemic, it has gained popularity during the turmoil caused by the pandemic, and producers have made changes in their production and marketing techniques to appeal directly to consumers.

Purpose

The purpose of this study was to explore Oklahoma beef producers' perceptions of the changes that have occurred in direct-to-consumer marketing and consumer communications in the Oklahoma beef industry during the COVID-19 pandemic.

Research Questions

The following research questions frame this study:

1. How has the COVID-19 pandemic impacted consumer interest in purchasing beef directly from farmers and ranchers in Oklahoma?
2. During the COVID-19 pandemic, how have producers altered promotional and marketing practices for direct purchases?
3. How has the relationship changed between producers and consumers who purchase beef directly since the start of the COVID-19 pandemic?

Significance of Study

COVID-19 has had a historic impact on the meat industry and accentuated the country's reliance on a small number of meat packers and processing plants to feed a whole nation (Tonsor & Schultz, 2020). Local food supply chains are shorter than conventional supply chains, providing a means for consumers to get closer to the production of their food, and for producers to pocket more on the dollar than they would selling at wholesale prices (McFadden & Malone, 2020).

Cattle prices have made it difficult for producers to turn a profit in recent years, and the impacts of the COVID-19 pandemic on meat processing plants only put more strain on producers, especially small operations (Brown, 2020). The strain of the COVID-19 pandemic has encouraged some beef producers to try direct marketing, and for many consumers the idea of buying something locally to meets their needs is appealing (Brown, 2020).

Scope

The scope of this study is Oklahoma beef producers using direct marketing techniques to sell beef products to consumers.

Assumptions

The following assumptions were made for this study:

1. Participants would respond honestly about their perceptions and experiences communicating with consumers and marketing beef products to consumers during the COVID-19 pandemic.

2. Direct marketing allows producers to connect more closely with consumers than traditional supply chains.

Limitations

The following limitations were identified for this study:

1. Only a select number of individuals were included in this study using the snowball sampling method so it is not representative of a larger population.
2. Zoom was used to conduct interviews, which eliminated some non-verbal communication between the researcher and participants.

CHAPTER II

REVIEW OF LITERATURE

Direct Marketing Strategies and Local Foods

Sales of local foods often occur through direct marketing strategies including farmers markets, you-pick live animal operations, consumer cooperatives, and locally branded meats (Kohls & Uhl, 1998). Several factors have led to an increase in demand for local food products. Many consumers view local foods as healthier and fresher (Govindasamy et al., 1999).

A growing concern revolving around creating a more sustainable food chain also serves as a driving factor when implementing direct marketing strategies (Ilbery & Maye, 2005). The majority of food products sold through direct marketing are not transported nationally or internationally, but instead locally sourced, meaning direct marketing can potentially reduce the “food miles” in the food supply chain (Uematsu & Mishra, 2011).

Although interest in local foods rose the past few decades, recently sales of local foods has become stagnant (USDA NASS, 2016). Growth in the area of direct-to-consumer sales has stopped in the past few years, and there has been an estimated 10.0%

decrease from 2015 to 2017 (USDA NASS, 2016). Potential factors contributing to the decline of direct-to-consumer sales in the past few years include impediments on consumer experience such as operational hours of farm stores or farmers markets, accessibility to farms in rural areas, and transaction costs (Ohara & Low, 2020). Impediments on the producer's side include marketing and distribution costs ranging from 13.0% to 62.0% of their revenue (King et al., 2010), efforts to reduce cost to the customer exacerbate costs taken on by farmers (Ohara & Low, 2020), and challenges meeting inspection regulations (Goodsell et al., 2007).

The term local can ilicit various reponses from consumers, as it is inherently a broad term when left to interpretation. Telligmen et al. (2016) studied consumer definitions of local beef and compared consumers' understanding of the term to how they associated it with beef quality and found the term "local" associated with geographic boundaries, production practices, relationships and supporting the local economy.

Consumers gain a sense of community when purchasing local beef, indicating consumers connect local beef purchases with more than just tangible products, but also positive social outcomes (Onozaka et al., 2010). Telligmen et al. (2016) also found "familiarity, trust, and knowledge interact to shape consumers' quality perceptions about local beef" (p. 49). Consumers associated local beef with reliability and access to knowledge (Telligmen et al., 2016). Consumers also felt a sense of familiarity which led to "derived trust from both real and perceived relationships to producers, places, and production practices and the knowledge that is transmitted through these ties" (Telligmen et al., 2016 p.49).

Small farms and farms using organic production methods are more likely to engage in direct marketing practices (Monson, 2008), and use of agritourism can increase an operation's income through associated on-farm stores (Govindasamy et al., 1999). Opportunities available to livestock producers to implement direct marketing strategies include classic farm stands, farm-to-retail, farmers markets, farm-to-school, farm-to-restaurant, fundraising dinners, fairs and festivals, and mail orders (Goodsell et al., 2007).

Uematsu (2011) found direct marketing through roadside stores had a significantly negative effect on gross cash farm income, but farm stores had a significantly positive effect on gross cash farm income. Farmers markets are considered the most popular direct marketing strategy, yet they are associated with negative gross income for producers (Uematsi & Mishra, 2011). Farmers markets saw a 91.0 % increase from 1998 to 2009, increasing competition among producers and potentially contributing to the negative income for producers (Martinez et al. 2010). Research in the field of direct marketing strategies relating to food systems lacks focus on producer behavior and the impact of marketing and communication practices on the financial performance of the operation (Park et al., 2014).

Overview of the Beef Industry

Per-capita beef consumption reached a record low at 54 lbs/person, marking a 20.0% decrease in a decade's time, but rebounded with a 6.0% increase in consumption per capita by 2018 (USDA Economic Research Service, 2020). Despite lower overall beef consumption, cattle remain an important part of the agricultural industry in the U.S., accounting for $66.2 billion in cash receipts and representing 18.0% of agricultural commodities in 2019 (USDA Economic Research Service, 2020).

U.S. cattle production is a cyclical process, largely due to the biological constraints, gestational periods and the time it takes to feed out an animal to reach market weight (USDA Economic Research Service, 2020). The expansion and contraction of the U.S. beef cycle affects the amount of international beef product imports and exports (USDA Economic Research Service, 2020). Cattle numbers in the U.S. increased from 88.2 million head on January 1, 2014 to 94.4 million head January 1, 2020 (USDA Economic Research Service, 2020).

Direct-to-Consumer Marketing in the Beef Industry

Three sectors make up traditional beef producers: cow-calf, stockers/growers, and feedlots (New et al., 2020). These operations work as an assembly line, cow-calf operations sell their calves at weaning to stockers, and then feedlots to finish before they go to harvest (New et al., 2020). Over time, there has been an increase in interest from cow-calf producers to retain some calves to stay on the farm and be fed out and sold as locally finished beef (New et al., 2020).

Although conventional grain-finished beef still makes up the majority of U.S. beef consumed, niche products have gained traction in the market: sales of grassfed beef, the largest niche market of retail beef, reached $480 million in 2019, showing a 15% year-over-year growth (Shanker, 2019). An overwhelming majority of grassfed producers market their beef directly to consumers, while also marketing through other retail channels (Gillepse, 2016).

Producers use animal growth and consumer demand to gauge how to market their animals (Gillepse, 2016). Most grassfed beef farmers believed they could advertise their products as hormone-free, local, natural, antibiotic-free, and tender (Gillepse, 2016). Selling beef directly to consumers allows producers to benefit from potential premiums and allows them to retain loyal customers (Gillepse, 2016).

Katchova (2016) found beef farms represented 26.3% of farms involved in direct-to-consumer marketing, and although beef and livestock farms make up the majority of farms involved in direct-to-consumer marketing, these farms “have the highest percentage of discontinuing and entry in direct marketing as compared to other farm[s]” (p. 9). Livestock farms, particularly smaller farms, did not stay committed to direct-to-consumer marketing but rather applied variable marketing techniques based on the opportunities of a given year (Katchova, 2016). These factors help explain why meat products are outshone by fruit and vegetable products in practical direct-to-consumer settings (Katchova, 2016).

Inspection Regulations

Direct marketing with meat products tends to account for less sales in the food sector than plant products because of the federal inspection regulations associated with the meat harvesting process (Goodsell et al., 2007). Accurately interpreting the statutes and regulations governing the processing and sale of meat animal products can confuse farmers due to their complexity in comparison to their fruit and vegetable counterparts (Goodsell et al., 2007).

Health pathogens can multiply rapidly on improperly handled meat products, posing a significant risk to human health (Goodsell et al., 2007). Public outcry ensued after Upton Sinclair's novel "The Jungle" highlighted unsafe work conditions and unsanitary processing practices in slaughterhouses, leading to the creation of the Federal Meat Inspection Act in 1906, requiring federal inspectors within slaughterhouses for the first time (USDA FSIS, 2012).The 1967 Wholesome Meat Act expanded the inspection mandate by requiring state inspection programs to be at least equal to federal requirements (USDA FSIS, 2012).

As highway systems rapidly grew throughout the United States and refrigerated trucks were created, meat could be shipped across the country, connecting food systems across the nation (USDA FSIS, 2012). A 1993 E. coli outbreak in a burger facility pushed inspection from relying on sight, smell, and touch to more science-based inspection regulation system with the creation of Hazard Analysis and Critical Control Points (HACCP) systems (USDA FSIS, 2012). The creation of HACCP led to more vigorous inspection practices and stricter pathogen and foodborne hazard performance standards (USDA FSIS, 2012).

The purpose of government inspection regulations of meat products are:

> "1) prevent the sale of adulterated, contaminated, or otherwise unsafe livestock products; 2) ensure the safety of consumers by establishing minimum standards for the production, slaughter, processing, and marketing of these products; and 3) create a system of licensing,

> inspection and labeling to trace a product back to its origin if a public health problem should arise" (Goodsell et al., 2007 p. 9).

The increase of regulation inadvertently gives small processors a disproportionate disadvantage due to economies of scale; validation equipment is expensive to purchase and maintain, and the smaller volume of output results in greater overhead expense per pound processed, and these costs can travel down from processors to producers (Goodsell et al., 2007). Small changes in interpretation of regulations can have damaging implications for processors and producers (Goodsell et al., 2007). These complex laws make many meat producers hesitant to participate in direct marketing of their products (Goodsell et al., 2007).

Willingness to Pay

Beef has become a complex commodity differentiated by more than just marbling and cut, with alternatives to conventional grain-finished animals gaining popularity in recent years (Lim et al., 2018). Consumers have shown interest in buzzwords like "natural" or "organic" in labeling of beef products and 5.2% of the total value of beef sold in the fourth quarter of 2017 was labeled organic or natural (Beef Checkoff, 2018).

The quality attributes associated with these differentiated products convey a positive health and environmental image to consumers which would in theory translate to a higher willingness to pay (WTP) from consumers (Lim et al., 2018). In reality, producers face challenges reaching consumers. Use of alternative supply chains can lead to specialty stores with higher margins, so producers receive a smaller net price (Gillespie et al., 2016; Gwin, 2009). There is a marketing bottleneck present in alternative beef product sales and “direct-to-consumer operations are only optimal when consumers’ WTP in these channels exceeds the additional marketing cost” (Lim et al., 2018 p.1).

Lack of knowledge about consumers’ willingness to pay “may result in lost potential revenue by choosing the conventional supply chain over outlets with better prospects. Alternatively, a producer might leap into a costly direct marketing option without a full understanding of consumer preferences” (Lim et al., 2018 p. 10). Lim et al. (2018) found consumer willingness to pay for quality attributes such as organic, grass fed, beef products was lower at farmers markets and online grocery channels compared to brick-and-mortar supermarkets.

Selling directly at farmers markets or on-farm stands was the most popular channel of direct sales, accounting for $2 billion or 67.0% of all direct-to-consumer sales (USDA NASS, 2015). Figure 4 from the United States Department of Agriculture’s 2015 Local Food Marketing Practices Survey shows the breakdown of direct-to-consumer marketing channels of food commodities.

Most grassfed producers engage in at least on direct marketing strategies, one-third participate in farmers markets and online sales and most engage in at least two direct marketing outlets (Gillespie et al., 2016). Farmers pursuing sales only through direct-to-consumer outlets had significantly lower earning when compared to other methods of marketing (Park et al., 2014). Park et al. (2014) also found marketing skills increased direct-to-consumer profits.

Figure 4

Direct sales to consumers by marketing practice and number of farms (USDA, 2015).

	Sales		No. of
	$ million	%	Farms
On-farm store	1,322	44	51,422
Farmers' market	711	23	41,156
Roadside stand away from farm	236	8	14,959
Community-supported agriculture (CSA)	226	7	7,398
Online	172	6	9,460
Other (pick-your-own, mobile market, etc.)	360	12	39,765
Total	**3,027**	**100**	**114,801***

Online Sales and Social Media

Upward momentum of online meat sales contradicts previous reluctance towards online grocery shopping, with some contributing factors being the risk of receiving low quality products, the loss of an instore shopping experience, shipping costs, and improper shipping and handling, which may lead to food safety concerns for meats purchased online because of a higher prevalence of pathogens— (Hallman et al., 2015; Huang & Oppenwal, 2006; Ramus & Asger, 2005).

If meat purchased online can not be locally delivered, shipping can add a significant expense, as it must travel long distances completely frozen or refrigerated to ensure food safety standards are met (Hallman et al., 2015). Hallman et al. (2015) found 58.0% of online websites selling meat products offered no information related to proper handling, storage, thawing, or cooking of products. This may act as a deterrent to potential customers.

When considering online meat product sales, social media is a relatively new and underutilized concept. There is a substantial amount of literature focusing on consumer use of social media when shopping, but there is a lack of research in the area of producer behaviors regarding beef product direct marketing and promotion on social media platforms.

When considering how producers use social media and online platforms to directly market their beef, it is important to consider their accessibility to reliable internet. The percentage of farms with internet access increased from 57.0% in 2007 to 75.0% in 2017 (Whitacre et al., 2014). Despite the increase in available broadband in recent years, internet speed and reliability in rural areas remains spotty, inhibiting farmers from participating in online marketplaces requiring high-speed internet (FCC, 2018; Ohara & Low, 2020).

Briggeman and Whitacre (2010) found farms adopting internet usage "can be associated with the farmer's age, education, farm size, regional location, whether they work off the farm, gender, and whether they have diversified operations" (Ohara & Low, 2020, p. 4). Reliable internet access increases the likelihood a farm participates in direct-to-consumer sales and increases the farm's level of sales (Low & Vogel, 2011; Uematsu & Mishra, 2011).

According to Pew Research Center (2019), 72% of U.S. adults use at least one social media site. The most commonly used social media sites used by adults in the U.S.

are YouTube (73%), Facebook (69%), and Instagram (37%; Pew, 2019). Social media has become a primary form of communication, creating a two-way dialogue with consumers and allowing the formation of meaningful connections instead of a one-directional channel of information (Rutasert et al., 2013).

King and Settle (2020) explored agricultural Facebook pages in Oklahoma and found the majority of pages to be connected to meat livestock operations, with 73.1% representing mainstream operations and 26.9% representing alternative operations (King & Settle, 2020). However, King & Settle (2020) also found a quarter of the pages did not post within a six-month period, showing operations were not using Facebook to broaden their audience and promote their business (Telg & Barnes, 2012; White et al., 2014).

Financial gain acts as a primary driving motivator for producers when using social media (Abrams & Sackman, 2014). Younger producers are more likely to use social media for an agricultural business (Telg & Barnes, 2012) Although resources are available to help producers establish an online presence through websites and social media accounts, the recommendations from these sources lack consistency (Pratt, 2018).

Some suggest regularly posting (Pratt, 2018), while others suggest simply creating a page (Culler, 2018). Research done on agritourism Facebook pages in Oklahoma found frequent posting had a moderate impact on page likes, but an insignificant impact on the number of reactions to the post (Bowman et al., 2020). Bowmen et al. (2020) recommended taking into consideration the different needs and goals of operations when making recommendations on effective social media use.

Ohara and Low (2020) found rural farms new to direct-to-consumer marketing and located distant from urban areas were 7.0% more likely to incorporate online marketplaces into their marketing strategies than more experienced rural farms, while new metropolitan farms were less likely to use online platforms to market their products. In 2015 online sales accounted for 6.0% of direct-to-consumer sales on U.S. farms (USDA NASS, 2016).

White et al. (2014) found a main contributing factor for agriculturalists joining social media was to combat prominent negative information about production agriculture. Farmers use social media on a personal level to share their stories, answer consumer questions, and promote their products (Baumgarten, 2012).

COVID-19 Pandemic

With start of the COVID-19 pandemic, closures of hotels, restaurants, schools, and associated institutions shifted the demand of food products through four significant ways (Weersink et al., 2020). First, before COVID-19, approximately half of American consumer food dollar was spent on meals not in the home (Saksena et al., 2018) and COVID-19 created a drastic increase in sales volumes at grocery stores (Weersink et al., 2020). Second, the increase in grocery shopping created a shift in demand in form, size, and packaging of food products (Weersink et al., 2020). For example, in milk for there are differences in the size of milk containers packaged in large bags or small creamer cups for food service and milk put into refrigerator-sized packaging for home consumption (Weersink et al., 2020). Third, consumer behavior changes affected demand, like an increase in baking which led to higher demand on baking products such as flour (Weersink et al., 2020). Finally, stockpiling drove the demand for short-term purchases, particularly for frozen foods and meat products, higher than expected (Weersink et al., 2020).

COVID-19 had a significant effect on how U.S. citizens purchase their food. Mobility restrictions, less consumer shopping, and reduced operations of food-away-from-home establishments all impacted food sales (Dong & Zeballos, 2020). According to the advance monthly sales for retail and food services released by the Bureau of the Census in September 2020, in-store food and beverage sales January through August 2020 were up 12.2 percent compared with 2019. Sales for food service sales outside the home January through August 2020 were down 20.9 percent compared with 2019 (Dong & Zeballos, 2020).

Cattle Markets and Plant Closures

Food production in the U.S. has resulted in a low-cost and efficient food system, however the stressors associated with the pandemic revealed the system cannot easily respond and adapt to crisis situations and disruptions in supply chains (Weersink et al., 2020). Processing plants required time to adapt processing and distribution methods in response to the sudden and dramatic shifts in food demand, however production at the farm level had to continue due to the biological nature of production (Weersink et al., 2020). In terms of market animals, there were instances of slaughter weight animals being euthanized due to the lack of processing options (Weersink et al., 2020).

The close working conditions of plant workers created optimal conditions for viral outbreaks and several large meat packing facilities were forced to reduce operations or temporarily close due to virus outbreaks (Weersink et al., 2020). Shutdowns lasted from mid-March through mid-June as 9.0% of U.S. meat plant workers became infected with COVID-19 (Centers for Diesease Control, 2020). These closures exposed a bottleneck in the meat supply chain, causing a ripple effect to livestock producers and food retailers (Martinez et al., 2020).

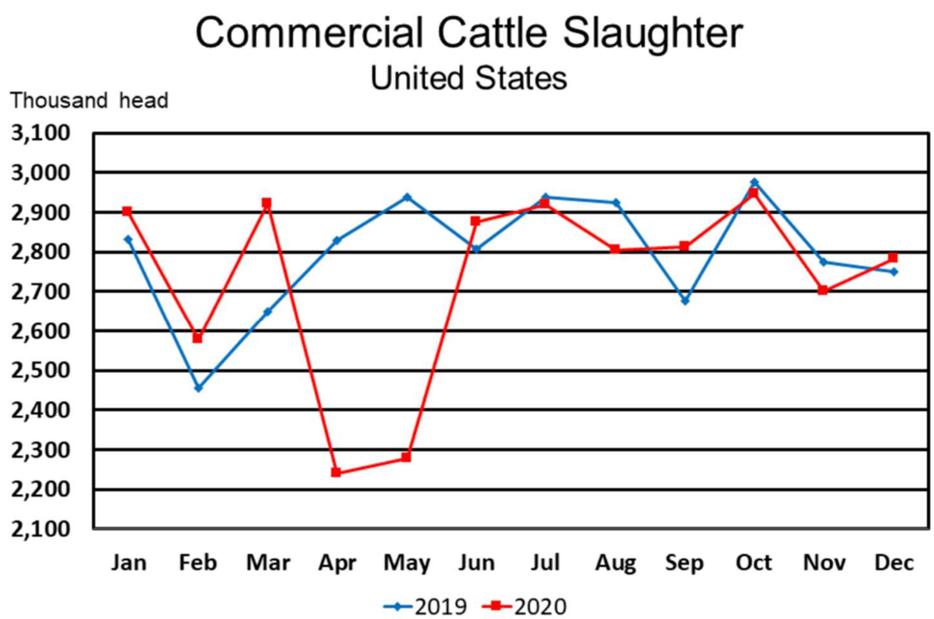
Harvest backlogs led to reduced demand for finished cattle resulting in a 30.0% lower market price than the April 2020 5-year average (Livestock Marketing Information Center, 2020). The lack of processing options led to increased input prices for cattle growers as feed prices increased due to shutdowns, and feed rations had to be adjusted to minimize weight gain until processing (Livestock Marketing Information Center, 2020). Many producers faced penalties as the finished cattle weight was 6.0% heavier than average slaughter weight (Livestock Marketing Information Center, 2020). In April U.S. beef production declined by one third (United States Department of Agriculture, Agricultural Marketing Service, 2020).

Although meat packing plant closures due to COVID-19 outbreaks have declined, residual problems remain in the processing sector such as employee wariness coming back to work, calls to re-introduce small and medium packing plants, and slower processing line speeds to due new health and safety measures (Weersink et al., 2020). COVID-19 has created an estimated $13.6 billion loss in the beef cattle industry (Peel & Raper, 2020). Damage to the Oklahoma cow-calf sector will total $298.1 million in estimated losses and implied total damages to the Oklahoma beef cattle industry are $575 million (Peel & Raper, 2020).

High retail prices and low product availability at traditional grocery stores paired with low live cattle prices have connected producers and consumers in a new way (Tonsor & Schultz, 2020). The economic impact of the supply chain bottleneck has inspired cattle growers to consider marketing methods outside of traditional retailers. Organizations like Oklahoma Cattlemen's Association have created online marketplaces where consumers can seek out producers who sell meat products direct.

Figure 5

Year-by-year comparison of commercial cattle slaughter in the United Stated 2019-2020 (USDA 2020).



Theoretical Framework

Social Network Analysis Theory

Social network analysis theory emphasizes social life in terms of relationships and the patterns formed by these relationships instead of characteristics formed by relationships (Marin & Wellman, 2010). A social network is made up of socially relevant network members connected by patterns such as people, organizations, webpages (Watts, 1999), proximity (Boase & Wellman, 2006), and more.

Laumann et al. (1983) found three approaches to identifying networks, referred to as "boundary specification." A position-based approach considers members of an organization or members who hold a formally defined position to be network members. An event-based approach considers members who attend a specific event believed to define the population. Finally, a relation-based approach begins with a small set of network members within a population of interest, and expands to include other members sharing relationships with the original members.

Once network members have been identified, the relationships between these "nodes" must be identified (Marin & Wellman, 2010). Borgatti et al. (2009) identified four categories of relations: similarities, social relations, interactions, and flows. Similarities occur when two nodes share attributes such as demographic characteristics, attitudes, locations, or group memberships. Social relations include kinships, friendships, or other commonly defined role relations based on affective ties, or network members' feelings for one another. Interactions refer to behavior-based ties such as helping, speaking with, or inviting someone into one's home, usually occurring in the context of social relations. Flows are based on exchanges or transfers between nodes such as resources, information, or influence through networks, and often occurr in the context of social relations (Marin & Wellman, 2010).

In terms of interactions, "an important aspect of the network concept is that ties between nodes are not treated in isolation. Rather, they link up to form paths, thereby providing a mechanism through which nodes may affect one another indirectly" (Borgatti & Ofem, 2010 p. 20). These paths formed by the interactions of networks serve as pipes through which members can share and receive resources and information (Borgatti & Ofem, 2010). The structure of nodes determines the opportunities and constraints it will encounter, some nodes may receive more flows than others, others may have more control over flows (Borgatti & Ofem, 2010).

Social network analysis seeks to explain the motivations, consequences, and structure of relationship, and understand how relationships form (Grunspan et al., 2014). In terms of this study, a relations-based approach served as a framework to explore the relationship of two networks, beef farmers marketing directly to consumers in Oklahoma and consumers interested in buying local beef products. Social network analysis also served as a framework when evaluating interactions between these two networks, and exploring the flow of resources and information between these two nodes.

Trust

Trust is an integral part of relations between producers and consumers. Although researchers agree trust is an essential element of effective interpersonal relationships, historically there has been dissention between researchers relating to the defining constructs of trust (Tschannen-Moran & Hoy, 2011). Common terms related to trust include goodwill, vulnerability, reliability, and predictability (Bhattacharya et al., 1998; Mayer et al., 1995; Rousseau et al., 1998).

Dutton’s (2006) definition of trust serves as framework for this study, describing a “confident expectation” or a firm belief in the reliability of a person or object, and the assurance of truthful statements without examination. Dutton’s definition was chosen for this study because he described the subconstructs of trust based on how people trust in the internet age and incorporated the idea of cybertrust, which is especially important when considering communications during the COVID-19 pandemic.

Consumer trust has become a point of interest in agriculture as consumers have begun questioning food production methods, which translates to consumer purchasing behaviour (Howard, 2005). The mass-production and complex technology now associated with food production have created an extensive gap between producers and consumers, which leads to distrust of the unknown (Meijboom et al., 2006).

Consumers’ primary sources of information related to questions about food production comes from the internet (Center for Food Integrity, 2015). Social media allows information and misinformation about agriculture to be spread rapidly to an extensive audience, and individuals have the ability to confirm their current beliefs without checking the reliability of the information (Ruth et al., 2018).

This selective perception can widen the information gap between producers and consumers, and consequently have a detrimental impact on trust (Meijboom et al., 2006). Rumble and Irani (2016) found communicating about agriculture with higher perceived communicative transparency increased positive attitudes from the audience. In order to strengthen trust, communicators should shift focus from educating to establishing connection with consumers (Ewehard et al., 2019).

When exploring trust in the context of mass-produced food products, Richards et al., (2011) found three strategies to help manufacture trusting relationships with consumers:

> (i) reputational enhancement through the institution of "behind the scenes," business-to-business private standards; (ii) direct quality claims via private standard certification badges on food products; and (iii) discursive claimsmaking through symbolic representations of "authenticity" and "tradition" (Richards et al., 2011 p. 29).

In the past, the agricultural industry's tactic has been to educate, assuming consumers will understand, and form conclusions based on data, however consumer questions are generally based on values, not scientific data (Brandon, 2015). Shifting focus to establish meaningful connections with consumers based on shared values can strengethen trust between producers and consumers (Arnot et al., 2016).

Trust serves as another framework in this study to explore the intricacies of the formations of the relationships between the two networks of beef farmers marketing directly to consumers in Oklahoma and consumers interested in buying local beef products. As social network analysis explores how these relationships are formed and how resources flow between the two networks, trust serves as an underlying factor influencing the formation and flow of these relationships.

CHAPTER III

METHODS

The purpose of this study was to explore the changes that have occurred in direct-to-consumer marketing and consumer communications in the Oklahoma beef industry during the COVID-19 pandemic from the perspective of Oklahoma beef producers.

The following research questions frame this study:

1. How has the COVID-19 pandemic impacted consumer interest in purchasing beef directly from farmers and ranchers in Oklahoma?

2. During the COVID-19 pandemic how have producers altered promotional and marketing practices for direct purchases?

3. How has the relationship changed between producers and consumers who purchase beef directly since the start of the COVID-19 pandemic?

To address these research questions, a thorough understanding of Oklahoma beef producers selling products direct-to-consumers was necessary. Chapter III describes the methods used to conduct this study, including the research design, qualitative research, semi-structured interviews, the participant selection process, data collection, data analysis, measures of trustworthiness, and researcher subjectivity.

Research Design

Qualitative Research

Qualitative research refers to "observing without numbers" or analyzing direct observations without statistics (Dooley, 2001 p. 248). Qualitative researchers seek to understand interpretations of reality in a certain context (Merriam, 2002). Addressing how individuals experience and interact with their social network and the significance behind these interactions is considered an interpretive qualitative method (Merriam, 2002). This research approach is specifically relevant when studying social relations (Flick, 2009).

Qulaitative research has several characteristics setting it apart from quantitavive research and they are as follows:

- Exploring a problem and developing a detailed understanding of a central phenomenon
- Having literature review play a minor rule but justify the problem
- Stating the purpose and research questions in a general and broad way so that the participants views are obtained
- Analyzing data for description and themes using text analysis and interpreting larger meaning of the findings
- Writing the report using flexible, emerging structures and evaluative criteria, and including the researchers' subbective reflexivity and bias (Creswell, 2018 p.19).

Qualitative research, allows the researcher to choose from a variety of approaches and gather rich data in an attempt to understand a certain phenomenon (Flick, 2009). A qualitative approach was fitting for this study to explore perspectives of Oklahoma beef producers selling direct to consumers because it allowed me to gain a more comprehensive understanding of the perspective of these producers. Data yielded from qualitative research methods provide more detailed and specific results, providing the researcher with a deeper understanding of the observed subject (Flick, 2009).

Interviews

This study used semi-structured interviews to collect data one-on-one with participants via Zoom, due to COVID-19 social distancing protocols. Interviews revolved around open-ended questions to allow participants to share their experiences uninhibited by the researcher's perspectives (Creswell, 2018). Semi-structured interviews have attracted interest "linked to the expectation that the interviewed subjects' viewpoints are more likely to be expressed in an openly designed interview situation than in a standardized interview or questionnaire" (Flick, 2009, p. 150). The interview guide used in this study asked open-ended questions to allow respondents to elaborate on their interactions with consumers and use of marketing techniques since the start of the COVID-19 pandemic to enhance the richness of the data collected (Flick, 2009).

Subjective theory refers to interviewees having "a complex stock of knowledge about the topic under study" (Flick, 2009 p. 156). Semi-structured interviews attempt to access that stock of knowledge with open-ended questions while complementing the interview with a "structure laying technique" (Flick, 2009 p. 156). This allows some structure to be applied to the interviewees' statements while follow-up questions can lead to more detailed responses connected to the main questions (Flick, 2009). Semi-structured interviews allowed questions on the interview guide to be asked in a flexible manner for each interviewee to elaborate certain points based on the interviewees individual production experiences.

Methods

Population and Sample

The population sample for this study was beef producers over 18 years old in the state of Oklahoma who market their beef products directly to consumers. Direct marketing included sale of the animal, sale of halves, wholes, and quarters, retail through farmers markets, and other private retail distribution methods such as social media, websites, on-farm stores, or delivery service. Table 1 provides a description of participants.

A purposeful sampling technique was used to achieve my goal of 15 to 20 interviews to ensure data saturation. Snowball sampling led to a total of 16 complete interviews. One interview was not completed due to internet complications, and the results from that interview were not included in the findings of this study.

Purposive sampling describes when a researcher intentionally selects individuals to understand a certain phenomenon (Creswell, 2018) to choose "information rich" (Patton, 1990, p. 169) participants. Snowball sampling proceeds after a study begins, when the researcher asks participants to refer other individuals for sampling (Creswell, 2018). Snowball sampling is commonly used when research conditions are less than ideal and other methodologies cannot be applied (Cohen & Arieli, 2011).

Table 1

Description of Participants

Pseudonym	Description of Participant
Jim	Central Oklahoma, raises show cattle and stocker cattle, marketing DTC for 20 years, sales radius is approximately 50 miles.
Sam	Northeast Oklahoma, raises show cattle and stocker cattle, marketing DTC for 35 years, sales radius is approximately 70 miles.
Denise	Central Oklahoma, marketing DTC for one year, sales radius is approximately 50 miles.
Paul	Central Oklahoma, marketing DTC for three years, sales radius encompasses all of Oklahoma.
Charles	Northeast Oklahoma, marketing DTC for 16 years, sales radius is nationwide.
Alice	South central Oklahoma, marketing DTC for two years, sales radius is nationwide.
Lauren	Southwest Oklahoma, raises stocker cattle, marketing DTC for 10-15 years, sales radius is approximately 30 miles.
Emily	Western Oklahoma, regenerative farming operation, marketing DTC for one year, sales radius encompasses all of Oklahoma and parts of Texas.
Georgia	Northeast Oklahoma, cow-calf operation, marketing DTC for 30+ years, sales radius approximately 70 miles.
Matt	North central Oklahoma, raises stocker cattle, marketing DTC for eight years, sales radius encompasses all of Oklahoma.
Brenda	Central Oklahoma, marketing DTC for one year, sales radius is nationwide.
Joe	Central Oklahoma, cow-calf and butcher operation, marketing DTC for two years, sales radius encompasses all of Oklahoma.
Steve	Western Oklahoma, cow-calf and commercial operation, marketing DTC for 15 years, sales radius encompasses is approximately 75 miles.
Mike	Central Oklahoma, cow-calf and commercial operation, marketing DTC for three years, sales radius is mostly local.
Tim	Central Oklahoma, marketing DTC for 10-12 years, sales radius encompasses is approximately 40 miles.
Cooper	Western Oklahoma, cow-calf and commercial operation, marketing DTC for 22 years, sales radius encompasses is nationwide.

Interview Guide

I reviewed current literature focusing on direct-to-consumer marketing in the agricultural sector and the impact the COVID-19 pandemic has had on the beef industry to structure the interview guide used in this study. Interview questions were reviewed by Dwayne Cartmell, chair of my thesis committee, and Audrey E. H. King, a doctoral student at Oklahoma State University.

The interview guide can be viewed in Appendix A. Each interview began with my personal introduction and a statement of the purpose of the study. Questions were asked about production practices, sales, marketing techniques, social media usage, online presence, urban and rural consumer interest, and communications with consumers during the COVID-19 pandemic.

Based on how participants answered, I would ask questions to further investigate how producers use different social media platforms, how new customers found producers, other aspects of their business models may have changed such as adding delivery options, expanding their business from primarily halves and wholes to retail cuts, and adding farmers markets and on-farm stores. I asked participants how producer communications with consumers have changed and how interest in buying beef directly from the farmer has changed since the start of COVID-19.

Data Collection

Permission to collect data was obtained through the Institutional Review Board (IRB) before participants were contacted. A copy of IRB approval can be viewed in Appendix B. Social media posts and email correspondence with staff members of

Oklahoma State University's Robert M. Kerr Food and Agricultural Products Center program were used to find initial participants. A copy of the initial recruitment email and social media posts can be viewed in Appendix C. Email addresses and social media contact information were obtained for producers fitting the participant parameters. These participants needed to be over 18-years-old, beef farmers or ranchers with operations in the state of Oklahoma, using one or multiple direct marketing channel to sell beef products directly to consumers. Prior to the interviews, participants provided an electronically signed consent form.

All interviews were conducted via Zoom to adhere to COVID-19 safety protocols. Reliable internet was established for the me; however, rural internet became unreliable for some producers. One interview was not completed due to internet complications and the results from that interview were not included in the findings of this study.

Interviews began November 2, 2020, and ended December 17, 2020. All interviews were recorded on the my professional Zoom account for consistency, and the audio files and transcripts were downloaded on my password-protected computer.

Data Analysis

Glaser's Constant Comparative Method (Glaser, 1965) guided this study's data analysis along with thematic analysis (Braun & Clark, 2006). Constant comparative analysis combines methods of coding and analyzing data with methods used to generate theory through emerging themes (Glaser, 1965). Thematic coding involves analyzing data "in a comparative way for certain topics after case studies, [like an interview]" (Flick, 2009, p. 474).

Constant comparative analysis combines joint coding and analysis “to generate theory more systematically” (p. 437) than allowed by traditional emergent theme analysis. This method does not completely relying on coding, “which is designed for provisional testing, not discovering, of hypotheses” (Glaser, 1965, p.437). Constant comparative analysis does not allow interpretation of the data to be separated from the collection or sampling, but rather uses interpretation as an “anchoring point” for deciding how data integrates into the analysis (Flick, 2009 p. 306).

Thematic analysis seeks to find patterns or themes in order to describe the data in detail (Braun & Clark, 2006). Braun and Clark (2006) stated “a theme captures something important about the data in relation to the research question and represents some level of patterned response or meaning within the data set” (p. 82).

The analysis process began while conducting interviews, and notes were taken while conversing with interviewees. Transcriptions of these meetings were automatically created from the Zoom audio files. These files were listened to and cleaned up for accuracy. After interviews were conducted, each interviewee was assigned a pseudonym, and all identifiable information was removed to ensure confidentiality. I then sent transcription documents to participants as a member check to ensure consistency.

After ensuring transcripts were accurate, semantic codes (“expressed verbally”) and latent codes (“underlying meanings”) were applied to the data to sort, label, and compare data (Flick, 2018, p.475). Some statements included overlapping codes fitting into multiple themes. Incidents in each interview were coded and compared with incidents found in other interviews (Glaser 1965) and sorted into themes using

MAXQDA coding software. This program served as a useful tool in organizing data and increasing efficiency as I assigned codes; however, it did not analyze data (Kuckartz & Radiker, 2019).

Measures of Trustworthiness

Lincoln and Guba (1985) stated trustworthiness poses as an essential element when evaluating a research study's worth. Trustworthiness can be ensured by establishing credibility, transferability, dependability, and confirmability.

Credibility refers to a level of confidence in the accuracy of a study's findings (Lincoln & Guba, 1985). Triangulation can be used to enhance the veracity of the study by enhancing the researcher's understanding of a topic by assembling information from a variety of reliable sources (Creswell, 2018). Dwayne Cartmell, chair of the thesis committee, and Audrey E. H. King, a doctoral student at Oklahoma State University, reviewed the interview guides to help ensure credibility. Once transcripts were checked for accuracy, they were sent to participants as a member check (Creswell, 2018).

Transferability refers to the applicability of the study's finding in other contexts (Lincoln & Guba, 1985). This study included a detailed description of data collection methods and analysis so future researchers are able to repeat this study. Detailed accounts of methodology and research protocols help future researchers determine the applicability of the study (Lincoln & Guba, 1985).

Dependability shows the results of the study are consistent and repeatable (Lincoln & Guba, 1985). Auditing processes are followed to check dependability by creating trails to document the research process (Flick, 2009). The researcher took detailed notes during interviews while recording audio files from the Zoom meetings to create an audit trail that was reviewed by Audrey E. H. King to confirm results of this study were representative of the interviewees' responses and not the researcher's bias.

Confirmability refers to neutrality of the data, or the extent to which the findings are shaped by the interviewees and not the researcher's bias or motivation (Lincoln & Guba, 1985). I used MAXQDA software to help me organize and maintain the quality of my data.

Researcher Subjectivity

I have been involved in the agricultural industry since I started college at University of Wisconsin-Madison where I received my undergraduate degree in animal science. I worked extensively in the field of meat science through college classes, the meat animal evaluation team at UW-Madison, and my four years working at the meat and muscle biology laboratory. Throguh the meat lab I was involved with harvesting, cutting, processing, and selling meat products, as well as doing research and development with international companies. My involvement in the meat industry for the past five years has shown me how impactful a direct relationship between producers and consumers can be when marketing and selling beef products, which is something I found to be lacking in the regular supply chain. I do not have any direct affiliation with a beef operation selling directly to consumers, but watching the struggle of local farmers around me inspired me to explore COVID-19's impacts on the beef industry in Oklahoma.

CHAPTER IV

FINDINGS

The results of the study were reported based on the study's three research questions:

1. How has the COVID-19 pandemic impacted consumer interest in purchasing beef directly from farmers and ranchers in Oklahoma?
2. During the COVID-19 pandemic how have producers altered promotional and marketing practices for direct purchases?
3. How has the relationship changed between producers and consumers who purchase beef directly since the start of the COVID-19 pandemic?

The findings were divided between the research questions and then into themes and subthemes.

RQ 1: How has the COVID-19 pandemic impacted consumer interest in purchasing beef directly from farmers and ranchers in Oklahoma?

To understand how the COVID-19 pandemic has impacted consumer interest in direct-to-consumer purchasing from ranchers in Oklahoma, producers were asked if their sales increased and if beef product demand has increased through their channels of distribution. The following themes were generated from participant responses: beef product sales have increased, consumer interest in local beef has increased, delayed harvest dates have impacted product output, and up-front cost of beef carcass purchases act as a barrier for potential new customers.

Beef product sales have increased

When participants were asked how their beef product sales were affected by the COVID-19 pandemic they mentioned sales have increased since beef product availability at traditional grocery stores was limited. When asked about COVID-19's impact on beef products sales, Sam said "This year we've marketed about 25-27 [cattle] and next year we're planning on 30-32 [cattle] so it's really increased."

As Matt explained his product output for 2020, he said "This year we're going to sell about 30 for butcher and next year, we're looking at about 45, looking at 2022 about 60."

Steve also runs a commercial herd, and in terms of 2020 sales, he said:

> We run about 700 cows and this last year, um, I'm looking to direct sell maybe 60 head. So, so it's grown from five head a year to last year I did 40 something this year I'm going to probably do 60 something.

Matt's sales decreased in 2019, making the increase from 2020 demand even more drastic. He said:

> As far as what 2019 was and then what 2020 will be, we probably [increased] three-fold for that one-year change but like I said before our highest sales was like probably 17 beef a year and then we're going to do 30 this year.

Denise saw an ebb and flow in terms of demand as retail grocery stores ran out of supply and consumers turned to other outlets of sale after stimulus checks arrived. She said:

> When the stimulus checks came out, I mean, it was a huge boom, and I'm sure you probably saw all of the activity that was going on during that time of everybody trying to find animals to get in to have harvested and everything just because of the number of people just started approaching them for it, and that has died down so it's more of a roller coaster right now than what it has been in years past.

Before the pandemic, Paul primarily sold his beef products through farmers markets, however he implemented a delivery service through his website in response to COVID-19 that took off when social distancing started. Paul said, “I would definitely say direct to consumer sales have most likely increased during the pandemic.”

Alice saw an uptick in demand across the nation as consumers from coast to coast started reaching out to their operation. She said, “I shipped to South Carolina, Washington, California, New York, Oklahoma, Texas, New Mexico and Arizona. I mean, [demand] is definitely nationwide, and not to jump ahead, but COVID-19 has definitely increased [sales], especially in metropolitan areas on the coast.”

Consumer interest in local beef has increased

When participants were asked how they viewed the effects of the COVID-19 pandemic on consumer interest in buying beef direct, they mentioned an increase in consumer desire for local foods and knowledge of where their beef is coming from.

Tim saw an increase in consumer demand for local foods, since the start of COVID-19 pandemic. She said, “people want to know where their food comes from and they act more willing to support local grown is the biggest impact [from COVID-19] I've seen.” Most of Tim’s sales occur through farmers markets, he went on to say,

> Demand is up. They're wanting to buy more local. They want to know where their meat comes from for the most part, the people buying at farmer's markets. That, and the fact that they, they had a shortage, you know, to begin with when COVID first came in, you know, the meat shelves at the grocery stores were empty and that really scared a lot of people. And so, they want to, they're trying to reach out to me as a, as a main stay from now on, you know, they said we want to find a local producer to keep us supplied in our beef.

Joe also experienced an increase in consumers interest regarding local food sources and learning where their beef products come from. He said,

> So, a lot of people are wanting to buy strictly local. They want to buy farm to table. So, they know exactly what they're getting, exactly what they're eating. And it's just like going to the grocery store, you know, you can pick up a pack of burgers and it might say “USA” or whatever on it, but do you actually know that's where it came from? Whenever you buy from a local producer, you can go to their ranch. And like here at our ranch, we've had people walk through the pen and they can pick their own beef before we go to butcher. So, they know exactly where that animal and the beef is coming from.

Brenda experienced increase in rural consumer interest in particular as an established DTC producer. Community members rallied to support local producers in the area in the middle of COVID. Brenda said,

> I do think we have seen a lot of people just trying to buy more local and support their community in that way…. We have several people in our community that are reaching out for local shares and, um, just wanting that local beef. So that's really what made us do it.

Lauren realized local beef production may not be able to keep up with nationwide demand, but the market for DTC food products is necessary, and COVID-19 has made it more accessible to consumers. She said:

> It's not probably a huge, huge impact, but there's definitely, um, a need for direct farm to consumer. And we were able to, you know, COVID has actually helped to be able to direct that need and we can do those things. Will we ever be able to feed the world that way? No. Um, you're always going to need those others, uh, factory farms and feed lots and things like that. But I do think that on a local scale, it is your local meat markets, your local farmer's markets, even our local dairies…we now have a little bit better avenue to sell those products that we're keeping and take it to finish.

Steve found consumer interest was tied to the local nature of the product and not the buzzwords often associated with beef like organic and grassfed. He said,

> It's very rare that I'll get [a customer asking] "is a grassfed?" Uh, they don't seem to care. They don't ask if it's organic, they don't ask if it's all natural. Um, they just, it's almost more like they're buying it from me more than buying it because

the buzzwords. So probably me being a fourth-generation rancher means more to them than that organic word would.

Delayed harvest dates have made it difficult for producers to keep up with demand

When participants were asked about consumer demand since the start of the COVID-19 pandemic they mentioned the sharp increase in demand was challenging and, in some cases, impossible to meet due to the time it takes to finish cattle and the difficulty in getting harvest and processing dates.

Matt mentioned his operation has had to adapt by planning a year in advance. He said,

> [We] could have done a lot more. If we would have the forethought to have more processing dates…. We always booked way out in advance. We've been doing it long enough to kind of know the game as far as that goes, but then even that went tenfold. As soon as COVID started so I called in April and picked up all the dates I could for 2021 more or less. And that's where I've got, I've already got dates locked in for 2021. We used to have to plan, you know, 6,7,8 months in advance at the most you know now, people were totally booked for 2021 back in like June, so you know you're 18 months out versus six or eight so that's been the biggest issue.

Joe has processing dates almost two years in advance. He said,

> [Usually] I can book butcher dates, uh, 60 days from today. Usually. Uh, right now, I was there two days ago, and their next open butcher date is April of 2022. Yeah, so like right now, it's to the point to where having butcher dates is just as important as having beef. So, we actually have butcher dates from now until

> December of 2021. So, all of 2021, we have butcher dates for, and the crazy thing is like, some of those calves aren't even alive yet.

Brenda's operation sells retail cuts nationwide that must be inspected at USDA processing facilities and she experienced limited access to USDA processing facilities in central Oklahoma. She said,

> One thing that really limits us in Oklahoma is our USDA processing facilities. There's just really not very many. We actually have to take ours all the way to Amarillo. Um, that's the closest…USDA facility to us. Um, and I know several other direct beef direct to consumer beef companies that travel three and a half hours one way. And that's just what you have to do.

Brenda also struggled to get processing dates at USDA facilities. She also talked about the struggle to put the appropriate amount of cattle on feed to meet demand. She said,

> [Getting butcher dates], that's been the hardest part, um, to try to keep up because like I said, it's not like a shirt you can order, you've got to plan almost a year in advance. I mean, we have butcher dates all the way out until the end of 2021, and we've had those for six months. So you really have to plan ahead and make sure you have enough head on feed and you're not getting too much and you're not selling it, or if you are selling too fast, do you put more on feed? Do you up your butcher dates, but then the butcher's full

Further, Brenda's processing fees increased due to COVID, which caused a trickle-down effect to her prices to even out her operation's profit margins. Brenda said, “[our butcher] took a price increase, um, so we had to take a price increase and that was right in the middle of COVID, because of COVID.”

Sam found a few factors acting as roadblocks when discussing how he was meeting consumer demand, the first being harvest dates. He said,

> You know a lot of people would like to buy more or let me back up a lot of more people would like to buy direct from the farmer. But two things are actually three things were being held up. Number one is obviously the packing houses are backed up for two years.

Steve also had to increase prices through COVID-19 to keep up with increased processing fees. He said,

> I went up on price some through this, and I have to tell people that it wasn't because my cattle were worth more. It was because of my slot to getting processed was worth more. So, my planning ahead and getting them the slots to get them in was worth more…that price went up more than the cattle did. And since then I have, I have increased my price. I increased it to try to slow [demand] down, uh, so far it hasn’t slowed it down. So, after January 1, I'm going to go up just a little bit more.

Up-front cost of beef carcass purchases act as a barrier for potential new customers

When participants were asked about consumer demand, they noted one deterrent for new consumers was up-front cost of buying beef products in bulk and large freezers, and the shortage of freezers during the height of the beef shortage in 2020.

Steve found when talking to new clients especially from urban areas, they had no idea of the up-front cost of buying bulk beef. He said,

> [Consumers asked] how we do it, how we pay for it, how in the world that we had to cut it up, how much, uh, how much freezer space am I going to need? What, what's a half of beef going to look like in my freezer? And, uh, that's another funny thing for this summer. Nobody could get a freezer.

Georgia has been marketing DTC for over 30 years, knows cost can be a main deterrent of DTC beef, but remained optimistic COVID-19 has encouraged many consumers to take the leap. She said,

> Oh, absolutely. I think [demand] has increased tremendously. Um, I wish it would stay that way. Um, I know that money-wise, sometimes it's not feasible for people to buy a half a beef or a quarter of a beef, but I think they definitely can taste the difference and the quality of product is there. So, um, I really think that, or I really hope that it's going to stay on the upward trend.

Emily noted although the freezer shortage delayed beef sales, that delay allowed her operation to feed out more cattle to keep up with demand. She said,

> A big deal that mess things up is nobody could get freezers. Everybody was in a panic to find those big, deep freezers. And they were saying, well, it's going to be six months for Lowe's can get another of freezer. But the good, convenient thing for us was sort of like, well, in six months, when you get a freezer, we'll be able to have a beef for you.

Cooper delivers beef nationwide and recalled his difficulties helping a client find a freezer when delivering beef to California. He said,

> In [county name], California, every freezer in every Home Depot, Lowe's was sold out except for one. I got there last one and I was able to put my beef in there

> while I was waiting to distribute it. But the people there were, they were concerned about where their food sources come from, came from. And they wanted to make sure that they had food security and that they had food to feed their family.

Sam mentioned three deterring factors, the first being harvest dates. The second and third factors barring customers from buying directly from producers were price and freezer space. He said,

> A lot of people can't come up with $1,000-1,500 at one setting for a steer. And then the other thing is freezer room, you know… they don't have freezer room, they don't live in a position where they can have a freezer.

Similarly, Jim found freezer space and up-front cost to be a limiting factor when finding new clients. He said,

> The thing is when, when you do a half a beef, you're looking at about $1,500 plus to get into that thing. That's not counting the freezer. So, a lot of them families probably don't have a freezer to put it in nor the space to park a freezer nor the disposable income to do it now. And you price it out per pound, and you thought, think about the steaks costing the same as your hamburger on an average. And that's what hamburger costs at Walmart. Oh, it's a no brainer, but the problem is coming up with that big sum of disposable income. And that's why it's not probably near as popular as what you think it should be because you've got to have space to put a freezer. And you've got to have the ability to write that check when it's ready. And, you know, there's a lot of families that just aren't in that

situation. So, you know, you, you start eliminating some market you can sell to because of that.

RQ 2: During the COVID-19 pandemic how have producers altered promotional and marketing practices for direct purchases?

To understand how the COVID-19 pandemic has impacted how producers market their beef products, keep up with demand, and adapt their business practices to the strain of the pandemic, participants were asked about their social media usage and other marketing techniques used to promote their beef, any other promotional practices implemented during COVID-19 pandemic, and any major production or structural business changes made in response to the pandemic. The following themes were generated from participant responses: Social media has brought in new customers, word of mouth continues to bring loyal customers, high-quality beef products lead to repeat customers, and producers aren't advertising because they can't keep up with demand.

Social media has brought in new customers

When asked about social media usage, the majority of respondents noted Facebook and Instagram as methods of reaching new consumers during COVID-19.

Sam has always relied on Facebook for advertising beef products. He said,

> Our primary [marketing] is actually Facebook…we've got a website where we're trying to really get up to par and stuff but, in my opinion, you don't see people Googling for beef as much as you see people on Facebook, you know, trying to get into those groups or whatever that recommend a local person that's going to be selling up….we use a lot of the Facebook paid advertising. Facebook seems to be

restrictive. Like, we've got a decent amount of followers but from what I understand, even if even if you've got a good amount of followers, if you don't pay for advertising, they kind of restrict the views that that that you'll get. So we do the Facebook targeted advertising and we, oh, I don't know how often we do, but we pay for a post every, you know, two or three months, and we will try to make a big push on the sales in that time.

When elaborating on how COVID-19 has changed his use of social media to promote beef products, Sam said,

> My philosophy on the Facebook deal has always been kind of if ad pays for itself then you keep going. As long as, you know, if you do put money out there and you sell enough beef from that one ad that you're three times, what you invested…you know, as long as you're getting an [return on investment] on it to an extent, keep putting money out there. And so obviously with the demand that we've had…the ROI is way better per dollars invested, just because the demand so much higher, but I would say that we are you know actively trying to acquire customers more now because of the demand and because of COVID-19 and so I haven't looked at what we've actually spent this year versus last year on advertising, but I would think it'd be at least you know two or three, maybe four-fold.

Charles found consumers on his operation's Facebook page very responsive when beef products were promoted. He said,

> We also have online the Facebook page that we have covers both the cattle end of it and also our feed store. So, we advertise on there what we have when we do

have beef for sale, we'll advertise on there. So online stuff we haven't ever done on Craigslist or the Facebook groups for that just because we actually don't have a problem selling the beef….The sales of beef have gone up because a lot of consumers are wanting beef that they know where it's coming from, quality beef. And so, I think the sales have gone up there…. we get a lot of response to having beef for sale.

Mike saw his business grow after COVID-19 began through the use of Facebook. He said their biggest expansion was "probably Facebook. There was more people looking. I was already out there, but there was more people looking on the Facebook where I was advertising."

Alice found her operation growing through Facebook and Instagram. Alice worked to establish connections with new followers, forming trust, which often lead to repeat customers. She said,

> In our two years, we've gone from zero followers [on Instagram] to a little over six thousand followers. And every day we show a little bit about what we're doing on the ranch or about cooking beef or, you know, just anything that relates to it. And that's where we found most of our customers.

Brenda uses Facebook and Instagram to promote beef products and expressed surprise at the new interactions on Facebook. She said,

> I use Facebook. I'm not the best at it. Um, basically I just linked my Instagram to Facebook and if I post there, it posts on Facebook, but I've been shocked because I'm more of an Instagram geared person, but, um, you know, my mom's generation is more Facebook, and I've been shocked at the, um, I guess the

> interaction we've had there. I kind of thought that might be like stagnant or whatever, but it's almost sometimes more than it is on Instagram. So that's been really nice.

Word of mouth continues to bring loyal customers

When asked about marketing practices, many producers noted word-of-mouth continues to bring loyal, repeat customers. Joe promotes his beef products on social media but has had the most interest through word-of-mouth channels of marketing. He said "so we have a Facebook page, I guess we can share on Instagram, and really right now it's word of mouth. And then a lot of repeat customers."

Steve uses social media to market beef products but found Facebook guidelines to be restrictive when promoting animal products, locking him out of his account. He found word-of-mouth to be the most successful marketing method. Steve said, "uh, word of mouth is number one. Um, two's probably Facebook. I hate that because I got put in Facebook jail this morning."

Georgia, who has been selling DTC for more than 30 years, was hesitant to market their product online due to the complex nature of beef sale regulations. She said,

> Um, we try not to market it too much just for legal reasons or something like that. But, um, I would say probably just word of mouth people come to us… I hate saying we don't really market it. We kind of, I want to say we let our meat speak for itself due to, we don't try to reach out to a bunch of strangers and do that. So, um, basically our marketing strategy is word of mouth from other buyers.

Sam has continued promoting his beef through word-of-mouth, as he has done for the past 35 years. He has seen the quality of his beef brings enough repeat business to keep his operation busy. He said,

> Really, word of mouth and quality of the product sells itself if anybody ever eats one of our steaks, they're hooked. It's like a drug. And we've got some customers I can think of right now that we've had for about 30 years. They buy one every year.

Jim also continued marketing strictly through word-of-mouth channels letting the quality of his product speak for itself and bring back repeat customers. He noted some consumers are hesitant to buy from local producers because of bad experiences buying from unreliable sources in the past. He said,

> I think the only way to get, basically get around that is word of mouth advertising, you know, just, that is my experience over the years, getting anything marketed, word of mouth is always your best marketing tool. And we, we've just, you know, we've always tried to work on that the best we can.

High-quality beef products lead to repeat customers

When asked about promoting local beef products, many producers believe the difference in quality from grocery store retail meats will lead to long-term customers, even after the effects of COVID-19 on the beef industry have died down. Respondents also use the quality of their product as a marketing tactic.

Matt experienced a surge of new customers who had considered buying beef shares before, but never pulled the trigger until COVID-19, and his operation already has new repeat customers. He said,

> I think people are hopefully buying beef this way. I think you're getting a lot of, or at least I am, already getting repeat customers next year because they just never bit the bullet and bought beef this way and once they did, you know, COVID kind of pushed them into that and then now that they've done it, they realized that it's actually cheaper in a way, and way better products. So, I think that a lot of people did buy beef that, you know, have never thought about it or done it. And I think you're going to see a lot of people sticking with it, just because they realize how much better it is.

Charles also found through his interactions with consumers since the start of COVID-19 people are more concerned about high-quality product and learningabout how their food is being produced. He said,

> I think everybody is starting to learn that when you're going to the grocery stores and you're going to, you know, even like…your Sam's, your Costco, is you're not sure what you're getting there….and I think a lot of people nowadays are getting more to where they want to know what they're [getting]. I mean, they don't want to eat all their meat full of, you know, drugs, basically, and they want to know that they're getting a quality product, and that's where I think the local ranchers and farmers are going to benefit from that because I think it's going to continue that way down the road.

Denise expanded her DTC business by adding retail cuts just a couple months before the COVID-19 pandemic started. She said “people kind of learn where it’s at and how much better it is. They have been continuing to come out.”

When asked if there was a consumer shift on preference in terms of lack beef products, Steve said,

> Mid-summer, late summer, I'm sitting here thinking, uh, we may have saw fad. Uh, it was the buzzword, it was the cool thing to do. Everybody's home with nothing else to do. So, let's talk about it now. Uh, I feel like maybe there was a little consumer shift too. This opened(?) my eye to be prepared, to, to have the freezer stocked, to plan ahead. And, but one of the cool things about it is once they, once they get our beef and they get a taste of it, they're like, "Oh, this is so much better."

Sam lets his product do the advertising for him. He said, "We've never really had any trouble selling the [beef] that we've had…quality speaks for itself."

Producers aren't advertising because they can't keep up with demand.

Tim primarily sells his beef products at his feedstore and farmers markets. His operation has a Facebook page where they promote their products, but during COVID-19 their use of social media promotions have decreased. He said,

> I haven't been advertising much at all on beef this year, not even putting it on Facebook when we'll have it available because we can't keep it in stock. You know, we'll get a beef processed and offer it for sale in a couple of markets and we're out again. We just put on Facebook that we have be processed and we have T-bones or rib-eyes or roast available, whatever we're long on. That's what we'll tell them we have.

Brenda began their DTC operation right before COVID-19 hit, and the impacts on their operation were substantial. She said, We started last December and, you know, not knowing if we were going to sell one ribeye, you know, brand new company, we're like, let's just like dip our toes in the water enough to like, not get in over our heads, kind of see where this is going before we, you know, go butcher 30 beefs for the following year and we just were not ready for March. And when March hit, every time we restocked from March to May, which we tried to do once or twice a month, we would sell out in two days. Completely, like completely could not ship anymore….So, what we actually had to do, which was a really hard decision…so COVID-19 started in March and we decided in May to take a break and we stopped. Um, we basically just like put everything out of stock on our website. And we spent the entire summer like ramping up our operation and being able to, um, get more supply.

Brenda went on to describe their focus on quality, even as demand skyrocketed. Their time off was used to expand the business in order to accommodate the sharp influx in demand from COVID-19. She said,

It's not like a boutique where you can just order a hundred more shirts that are going to be here tomorrow. You know, we didn't want to cut corners? I know there's a lot of people out there that did that. We didn't want to cut corners. We wanted to make sure that our beef was still, like, on feed 160 days before we sent them to butcher. We just didn't want to, didn't want to sacrifice quality for customer demand. So that was really hard our first year, not knowing like, because we were afraid if we were to say we were out of stock, they would just go somewhere else and find a new direct to consumer to go to. Um, but thankfully we, so we came back like really heavy, like the most we have ever had. [We invested] kind of scary amount of money, um, [we] bought a new freezer. Um, so that was a month ago. So, we took a break from May to November because of COVID, I mean, honestly, that's, that's why. And, um, it has gone wonderful. So, we are so excited. We've had the best shipping days that we ever had in the, in the past month. So yes, COVID has absolutely taken a toll in a good way. We just weren't ready for it, which no one was. Even though we were a new company, I don't think you could have ever been ready for it. So how did you prepare for something like that?

When asked if any new promotional or marketing practices were implemented on his operation since the start of COVID-19, Sam said,

> No, [I'm] scared to because [I] don't have enough…this weekend we'll be weaning calves for butcher cattle for next year. So, you know, the only thing that this is probably done is, I think we may start doing them twice a year, instead of harvesting one time a year, which means that I'll have butcher cattle year-round, that I'm taking care of.

RQ 3: How has the relationship changed between producers and consumers who purchase beef directly since the start of the COVID-19 pandemic?

To understand how the COVID-19 pandemic has impacted relations and communications between beef producers and consumers, participants were asked how they perceive urban and rural consumer interest in local beef products to have changed since the start of the COVID-19 pandemic and how their communications have changed with consumers. The following themes were generated from participant responses:

consumers are more aware of where their food comes from, consumers are reaching out due to decreased availability in traditional grocery stores, and producers are focusing on educating consumers on public platforms.

Consumers are more aware of where their food comes from

When participants were asked how they believed consumer attitudes towards DTC beef has changed since the start of COVID, many respondents mentioned consumers are more aware of where their food is coming from or wanting to learn the "story behind the beef."

Alice found developing connections with new followers through social media established a kind of trust that has so far translated into a loyal customer base. She said,

> And most people that I find that I talked to on Instagram or Facebook or whatever. They want to trust farmers and ranchers. They want to know where their food comes from. And so, I would say that developing that trust is a huge factor. They feel like they know us and where it comes from. And so, I would say through social media and then definitely through developing my email list so that we can connect with them directly, because you can't always depend on the algorithms of Facebook and Instagram.

Brenda also saw a desire from more urban consumers to learn about where and how their beef products are grown and raised. She said,

> You can buy a prime choice or select [at the store] as well, but you just don't know where it comes from. And that's the benefit that we can guarantee you. Um, we can even tell you sometimes the mama cow that…it's from, or the pasture that

it was from. So, um, I do think we have seen a lot of people just trying to buy more local and support their community in that way.

Emily runs a regenerative farming operation and saw an increase in consumer interest and also noted skepticism from consumers regarding beef products found in traditional grocery stores. She said,

> I think people care more. I think that they're realizing that not everything they buy on the shelf is really good for you. And I think people are being concious, especially for grassfed, you know, like they're really pushing the carbon footprint and as regenerative farmers, we can be a part of the solution, not the problem. So, I do think that there are people becoming more aware that local fresh is better.

As availability became scarce in stores, Mike saw an increase in demand in his operation. He said,

> With the shortage in the stores and then the price increases in the stores, I don't know, um, made people aware of the systems that are in place and made them aware that they can go directly to the farm.

Sam found consumers are more interested in learning about beef production since the start of COVID-19. He said,

> I think it's helped our beef industry because people are wanting to know where their beef comes from they do want to know…I think home grown beef is here to stay, especially from producers that are in it for the long haul.

Consumers are reaching out due to decreased availability in traditional grocery stores

In terms of availability, Denise saw an influx of new customers when grocery store shelves were empty. Denise said,

> You know, for a while there was not a whole lot of beef on the shelves at the supermarkets and that cause of concern for a lot of people that I think it kind of drove them to the local rancher to get their meat just because they figured out there could be a break in the supply line somewhere and I better have an alternative.

When asked about the decreased availability in grocery stores, Denise noted many of her new customers reached out due to limited availability at traditional shopping places. Denise said,

> People are just kind of realizing that, you know, something can happen that they may not be able to get out and go get whatever they need... I'm hoping it's reassuring that you know the farmers or ranchers are still here, they're still working, they're still doing what they're doing. So, you know, regardless of what's going on. I think that's still going to continue, and I think it helps the consumers to know that.

When asked about interactions with new customers, Mike said,

> [COVID made consumers] come to terms with where stuff actually comes from a little more, um, when there wasn't things available to purchase at the store and kind of made them do a little research there and, and learn some things about where stuff actually comes from.

Lauren also had an increase in interest in her operation when beef products became scarce and prices rose. She said, “I do think, you know, when they couldn't get things from the store that was an eye-opening experience. A lot of people were trying to find different avenues as to where they could get [beef].”

Cooper noted convenience as another factor when considering buying shares of beef. He said,

> [The grocery store] is very convenient. But when they went during COVID and there was no meat at the grocery store, then they had to wait, or they just didn't have any. So, the convenience kind of went away. And I think I, I hope that with them buying the freezers and someone like me that delivers it straight to their house, that convenience is now they just walk out into the garage and pull up, pull up stakes out of the freezer to cook that night or that morning, let it all out all day and look at that night when they come home. That's pretty convenient. That's a lot more convenient than running by the grocery store.

Cooper also brought up food security as a reason for the increased interest in local beef products during COVID. He said,

> People, they were concerned about where their food sources come from, came from. And they wanted to make sure that they had food security and that they had food to feed their family. So, by buying a quarter or a half a beef, half a beef will last a family of five all year long. And so there they will have a relatively a secure [protein source].

Alice had the opportunity to talk about her operation and the nationwide beef shortage on a news channel, which sparked consumer interest nationwide in terms of DTC sales. She said,

> I would say that COVID definitely has shifted the interest on the agricultural industry. On a nationwide level, you know, before that, you're not, nobody's coming down to interview the farmer and rancher, but when they can't find meat

> on the shelves, it becomes an issue. And so, I think that COVID has highlighted some of these bottlenecks, like what I talked about in processing, are highlighted now. When you when you take out. Workers who are harvesting a product or you take out in our case, you know, one of the big federal processing plants in Amarillo had to close because so many of their employees got COVID, then that, you know, made getting meat difficult…I think that COVID really has highlighted problems that we've had in the agriculture industry [for a long time]. It's also highlighted how necessary people in agriculture are not just beef, but everything…you know, we take our food supply for granted until something like this happens.

Producers are focusing on educating consumers on public platforms

When asked how participants used their social media for promotions and marketing, many participants mentioned educating consumer on day-to-day farm activities, how to cook beef products, recipes, and more.

Denise began selling DTC to educate the public and open her farm to the public and COVID-19 has had a positive impact on her interactions with consumers. She said,

> We kind of started doing this was to, you know, let the people come and see how things are done, ask questions and, you know, just kind of give it a little bit more positive base than what people say just online. You know there's differences between the actual and what you see in videos.

Paul primarily sells his beef products at farmers markets and through local deliveries. Paul has seen interest from consumers on both ends of his business in learning more about the production behind beef. He said,

> I want to see a better product overall compared to what they can find at a grocery store because they're able to relate with the producer on a different level and they're able to actually ask questions based on where it was, where was it farmed, what were the feeding practices, they're able to actually ask the producer, all of these different questions that you're not able to find in a supermarket. So that's what I would call like story beef.

Joe's operation shares information about different cuts of beef, the processing process and life on the farm on social media. He said,

> The consumer is actually, they're realizing that like, uh, a beef isn't all ribeye, you know, every person always thinks, oh, you know, we just want 500 pounds of ribeyes. Well, you have to kill a lot of animals to get that, that many ribeyes.

Alice uses social media to show consumers the day-to-day happenings on the ranch but has noticed a significant consumer engagement when she shares recipes or tips on how to cook beef products. She said,

> I also find that that I've spent a lot of time educating people on how to cook the beef…So, I've spent a lot of time, you know, just saying, okay, here's how you can make an easy roast. When you process a 1,400-pound steer, you're going to get half of it in ground beef and the rest as other cuts. And you've got to be able to sell all the cuts. And so, educating people on, okay, well, this is what you can do with a flat iron or this is what you can do with round steak or just letting them know how versatile beef is.

In response to the consumer interest, Alice began shipping variety packs, the “all beef experience,” which gave consumers 20 pounds of various beef cuts and comes with instructions. She also helps followers pick the best beef cut for their meals. She said,

> So, yeah, so I just for example, I have a customer that I keep their credit card on file. She has four kids. She'll text me what she needs, and I ship it. And like this week, she texted me and said, I want to try to make beef stroganoff. What do I need for that? And even though she has the recipe there, I was like, okay, we've got some sirloin tips that I'll send you. I mean, do you see what I mean? They want to experiment but aren't really sure where to start.

Steve has also been educating new customers by walking them through the DTC process. He said,

> It really surprised me that [their questions] never were about quality or price. It was, about how do I do this? Um, how do you process it?...how we pay for it, how in the world do we have it cut up, how much freezer space am I going to need?

Brenda uses social media to reach new customers and educate her followers on the versatility of beef products. She said,

> I do a lot of, um, recipes on our marketing and on our Instagram as well, just to help people. That's something that I didn't realize, is we have all these cuts of beef that I have grown up with my whole life and know how to cook. But a lot of people don't know how to cook a back strap or don't know how to cook a roast…and so I think, um, if we give them the tools to be able to cook that cut of meat really well, that's where we're winning. So, I've been trying to give recipes out, um, and really that target audience is that urban mom consumer. So, I think

> they're really willing to buy. We just got to get the word out that we're there. I think they're the ones the most interested to learn about the farm life and all of that, is what I've seen. Um, they're the ones reaching out with questions and things like that. So, I've really enjoyed that.

Cooper also shares with his customers nationwide, old and new, information on the beef industry and production. He said,

> Whenever someone in California has a dinner and they invite friends over and they're cooking a steak, they tell a story of where the state came from. They say this is home raised and came from this ranch in Oklahoma. And it's a story. So it's not only the beef I'm selling, I'm selling also the story of home raise family farm from the gate to the plate.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

RQ 1: How has the COVID-19 pandemic changed consumers' interest in purchasing beef directly from farmers and ranchers in Oklahoma?

The COVID-19 pandemic had an impact on consumer interest in buying beef products directly from producers. Based on themes that emerged from research question one, beef product sales have increased, consumer interest in local beef has increased, delayed harvest dates have impacted product output, and up-front cost of beef carcass purchases act as a barrier for potential new customers.

Respondents in this study mentioned sales have increased since the start of the COVID-19 pandemic. Mass-production and technology associated with food production have created an extensive gap between producers and consumers, which leads to distrust of the unknown (Meijboom et al., 2006). Telligman et al. (2016) found familiarity, trust, and knowledge interact to shape consumers' quality perceptions about local beef, which often translates into purchasing decisions. COVID-19 shifted the flow of resources and information between the Oklahoma beef producers marketing direct-to-consumer and their customers.

Since stay-at-home orders were put in place due to COVID-19, American households have been preparing more meals at home, leading to a significant changes in consumption (Dong & Zeballos, 2021). Due to the pandemic "grocery store food prices increased by 3.5 percent, on average, from 2019 to 2020. For context, the 20-year historical level of retail food price inflation is 2 percent per year—meaning the 2020 increase was 75 percent above average" (Chelius & MacLachlan, 2020, para. 1).

The most dramatic increase in grocery store prices was seen in the meat aisle, particularly in the beef section with June 2020 retail beef prices 25.1% higher than June 2019 prices (USDA, ERS 2020). Some participants in this study noted even with high retail prices, they felt the high upfront cost of buying local beef in bulk still hindered new customers from buying from producers. Ohara & Low (2020) found transaction costs to be one deterrent for consumers when considering buying directly from producers. Other producers found with the steep increase in grocery store prices combined with stimulus checks, consumers that may not have taken the leap into buying local beef in bulk before the COVID-19 pandemic were encouraged to buy freezers and stock up. Onozaka et al. (2010) found consumers gained a sense of community when purchasing local beef and associated buying local beef products with positive social outcomes.

Grassfed beef has been the fastest growing niche market in the beef industry and the majority of grassfed producers participant in some kind of direct-to-consumer sales (Gillepse, 2016). Lim et al. (2018) saw consumer willingness to pay for quality attributes like grassfed and organic was lower at farmers markets and online purchasing channels. Respondents in this study stated the increase in interest and willingness to pay for bulk beef from producers was not tied to labels like organic or grassfed but tied to the term "local" and the fact consumers could buy beef directly from a fourth-generation farmer. Based on the results of this study, this willingness to pay could be because consumers are able to form connections through direct marketing channels they cannot form at grocery stores, shifting the importance off these buzzwords and onto their trust bond with producers when purchasing beef products.

The "story behind the beef" has translated to a higher willingness to pay through online purchasing channels and farmers markets than common buzzwords used in marketing and labeling according the the participants of this study. Telligmen et al. (2016) found consumers associated local beef with reliability and access to knowledge, and also felt a sense of familiarity led to a sense of trust derived from both real and perceived relationships to producers.

Every respondent in this study mentioned difficulties securing harvest dates for their animals and how that impacted producers' ability to keep up with the increase in demand. Meat plants were shutting down or reducing capacity due to COVID-19 outbreaks among workers, and at the peak of COVID's impact on the beef industry, production declined by one third (USDA-AMS, 2020). The shutdowns caused retail beef prices to peak and availability to drop, leading consumers to local producers selling direct, but also led to struggles keeping up with demand for small-scale producers, according to respondents. Most respondents in this study mentioned harvest dates as the foremost roadblock in keeping up with heightened demand for local beef. One of Richards et al. (2011) strategies to help manufacture trusting relationships with consuers was maintaining private standard certification badges on food products. Access to USDA certified processing plants is essential for maintaining consumer trust.

RQ 2: During the COVID-19 pandemic how have producers altered promotional and marketing practices for direct purchases?

The COVID-19 pandemic impacted operations differently when considering the marketing and promotional practices of Oklahoma beef producers. Based on themes that emerged from research question two, social media has brought in new customers, word of mouth continues to bring loyal customers, high-quality beef products lead to repeat customers, and producers are not advertising because they can not keep up with demand.

As Wilson (2016) found, most beef operations relied on Facebook for marketing their product. King and Settle (2020) also found most agricultural Facebook pages in Oklahoma did not post within a six-month period. Some participants in this study noted they had moved away from promoting on Facebook due to the challenges they were having keeping up with the dramatic increase in demand for local beef products. Others indicated more use of social media since the start of the COVID-19 pandemic due to decreased opportunity for face-to-face interaction with customers at farmers markets and other in-person sales channels.

Two of the three most used social media platforms by U.S. adults are Facebook and Instagram (Pew, 2019). Most respondents used Facebook in some form to promote and sell beef products. Some respondents in this study also used Instagram to reach new customers. Research has shown consumers ignore information disseminated through a one-way channel and instead turn to online interactive platforms for information sources, and social media allows increased interaction with audiences (Rutasert et. al, 2013).

Rural farms new to direct-to-consumer marketing located far away from urban centers are more likely to incorporate online markets (Ohara & Low, 2020). Respondents in this study tended to relate word-of-mouth referrals back to rural consumers and online sales to more distant urban consumers. A USDA survey (2015) found the majority of farmers selling agricultural products directly to consumers sold at farm stores and farmers markets, which contradicts the majority of participants in this study who acknowledge using online sales and delivery or pick-up options for consumers to distribute their product. This contradiction likely stems from the social distancing protocols associated with the COVID-19 pandemic. Online meat sales are a recently expanding marketing channel (Lim et al., 2018), and previous studies highlighting consumer wariness when buying meat products online may indicate consumer trust in online meat marketing channels has newly shifted.

The confusing nature of meat processing and sale regulations acts as a deterrent for many ranchers when considering selling meat products directly to consumers (Goodsell et al., 2007). Several respondents in this study metioned difficulties starting their direct marketing operations including trouble navigation regulations when implementing retail cuts in their sales, difficulty transporting cattle to certified plants, and high start-up costs associated with direct-marketing operations. One respondent in this study stated the reason they did not use any marketing strategy besides word-of-mouth was for legal reasons due to the ambiguity and changing nature of sales regulations for meat products.

Ranchers with knowledge of marketing skills and techniques tend to have higher profits through DTC sales channels (Part et al., 2012). Respondents in this study were not asked specific numbers relating to their sales and profits, but some respondents found they had to stop all marketing due to the technical challenges in keeping up with the sudden decrease in demand, which cut down on these producers potential earnings.

RQ 3: How has the relationship changed between producers and consumers who purchase beef directly since the start of the COVID-19 pandemic?

As consumers more actively sought out local beef producers, the relationship and communications between producers has strengthened. Based on themes that emerged from research question three, consumers are more aware of where their food comes from, consumers are reaching out due to decreased availability in traditional grocery stores, and producers are focusing on educating consumers on public platforms.

COVID-19 exposed a bottleneck in the beef industry and led to high beef retail prices and low product availability at traditional retail food centers, leading many consumers straight to farmers and ranchers (Tonsor & Schultz, 2020). Respondents in this study found decreased availability to be the main driving force for new customers reaching out and establishing communications with farmers and ranchers. Many respondents noted the majority of this increase in new customers came from urban consumers.

White et al. (2014) found a main contributing factor for agriculturalists joining social media to be to combat prominent negative information about production agriculture. Farmers use social media on a personal level to share their stories, answer consumer questions, and promote their products (Baumgarten, 2012). Respondents in this study who used social media regularly mentioned using different platforms to educate consumer on the day-to-day activity on their operations. Participants also use interactive tools such as Facebook or Instagram lives and polls on stories to establish a two-way channel of communication between consumers and producers. Social media has allowed this two-way dialogue between the farm and the table and helped foster more meaningful connections (Rutasert et al., 2013).

Before COVID, roughly half of the American consumer food dollar was spent on meals outside of the home (Weersink et al., 2020) and when dining out was no longer an option, many consumers expanded their cooking repertoire. An educational aspect of consumer communications multiple participants in this study mentioned revolved around sharing recipes, how to cook different beef cuts, and the process of buying beef in bulk. These participants noted many new consumers lacked the knowledge on how to prepare meals with a half or quarter of beef, because not every cut is a ribeye.

Communicating about agriculture with transparency and authenticity increases positive response (Rumble & Irani, 2016). Trust is strengthened when communicators shift focus from educating to establishing connections with consumers (Ewehard et al., 2019). The participants in this study found transparency got customers through the door, and once a base level of trust was established, educational content on farm life and beef products were well received.

Discussion

Direct-to-consumer marketing in the beef industry has seen a shift since the beginning of the COVID-19 pandemic. COVID-19 created a shock to the beef supply chain no one was prepared for, from the large meat processing facilities all the way down to small-scale processors. During the height of the beef shortage, demand from farmers selling direct-to-consumer increased so much it was impossible to keep up with demand. As mass-produced beef products became scarce, consumer trust in local farmers sent them to direct marketing operations. Facility shutdowns, freezer shortages, and difficulty booking harvest dates created more obstacles for producers selling directly to consumers during COVID-19.

Plant closures and challenges getting into processing facilities have forced producers to plan their beef product sales as much as two years in advance, booking and selling animals who have not even been born yet. For some producers, the high upfront cost of freezer beef lost them new potential customers, while other producers saw an uptick in sales after stimulus checks were sent out. Trust between producers and consumers relies partially on producers ability to get certified beef products from an inspected facility.

Marketing techniques used by Oklahoma beef producers varied across the board. Almost all producers continued to rely on word-of-mouth as the most trusted form of marketing. New customers found through word-of-mouth coupled with high-quality beef products often led to repeat customers. Producers found the difference in quality between homegrown beef and grocery store beef noticeable enough new customers have commented and continued buying directly from producers. Repeatedly high-quality local beef products led to consumer trust. The challenges producers faced keeping up with demand due to COVID-19 led to many decreasing marketing efforts or even completely stopping the promotion of their products because they simply did not have enough meat to sell. The abundance of demand and sales indicates marketing skills have not always been the path to higher profits during COVID-19, contradicting studies done on direct marketing strategies before COVID-19.

Many producers noted they did not want to take shortcuts when finishing beef for consumers because at the end of the day, COVID-19 or not, the quality of the product gets life-long customers. Social media played a large role in marketing the option of buying directly from a local producer during COVID-19. Social media platforms like Instagram and Facebook allowed new customers to seek out beef cattle operations and establish a line of communication and develop a relationship with producers, often leading to beef sales.

Communications between producers and consumers seem more open from many producers' perspectives. COVID-19 exposed cracks in the supply chain and empty shelves at the grocery store forced many consumers to confront where their food comes from and how it is produced. Producers felt strongly about opening their gates allowing on-farm visits, virtual farm tours through social media, and other forms of education to help open communications between new customers and their local ranchers. Producers saw COVID-19 as a wake-up call for consumers to question the distance food travels from farm to plate through conventional supply chains. The two-way channel of communication allowed consumers to interact with consumers, increasing trust between the two networks.

As more consumers began reaching out to producers inquiring about local beef products, producers found part of what kept these consumers engaged customers was the story behind the beef. COVID-19's effects on the beef industry encouraged new customers to seek out ranchers directly, and the act of picking a finished steer, talking to the rancher directly, and learning about processing methods created an educational experience for consumers tied to a quality beef product.

Recommendations for Future Research

This study expands on a limited field of research relating to beef producers' perceptions of direct-to-consumer marketing tactics and their communications with consumers. COVID-19 adds a novel aspect to frame the results of this study as the pandemic had significant impacts on the beef industry in the U.S.

Future research should be conducted to evaluate consumer perspectives of Oklahoma beef producers' response to the pandemic. A comparison of producer perspectives from this study and consumer perspectives could reveal how effective current channels of communications between the two parties are at transmitting information and establishing relationships.

Research on direct-to-consumer beef operations in Oklahoma could focus on perceived trust from the consumer standpoint after the start of the COVID-19 pandemic to assess how the pandemic has affected consumer perceptions of beef production. Looking at trust from the consumer perspective in addition to the results from producers in this study would help create a holistic picture of the full impact the COVID-19 pandemic has had on producer-consumer relations.

Future research should also explore more in-depth direct-to-consumer beef producers who began using social media platforms to promote their beef products after the start of COVID-19, more specifically how they used these platforms, the features they used on each platform, and how social media use impacted their customer base and consumer communications. Another line of inquiry related to this topic would be a survery asking how consumers heard about direct-to-consumer operations. These two research products could illustrate how effective producer efforts to reach new consumers since COVID-19 have been. Social media in relation to direct-to-consumer beef operations is a relatively untapped area of research, and the impact COVID-19 had on beef producers would provide an interesting perspective as many of them had to rely more on the internet to reach consumers during lockdowns.

Exploring producer demographics such as gender, age, educational level, and how long the operation has been in business could provide interesting data to compare marketing techniques and producer-consumer relations. This data could shed light on how different operations market and communicate with consumers and allow communications practitioners to better understand how to communicate with these producers.

A few years down the line, future research can look at marketing and communications practices implemented as a result of the COVID-19 pandemic and how long-lasting the effects of COVID-19 have been on the local beef industry. Demand for local beef products skyrocketed and many producers had to shift their marketing and communications habits in response to COVID-19. This research could shed light on any major shifts in how producers sell products and communicate with their customers. This research could also gauge if consumer interest in local beef significantly shifted and remains higher than before COVID-19 or if demand was temporarily high due to panic.

Future research could also be done investigating potential solutions to the backlog experienced at harvest facilities during the height of the COVID-19 pandemic. Some potential areas of study include the impact implementing mobile harvesting facilities and incentivizing small-scale processing facilities could have on small-scale producers. Mobile processing facilities and more local processors could help small-scale producers who currently have to haul cattle three hours to the nearest USDA processing facility cut transportation costs and reduce their carbon footprints. This research could be used by state beef associations to better advocate for producers. Another potential line of inquiry to this research could involve how state beef associations could implement an educational program for producers to teach about inspections regulations, up-front costs associated with direct marketing operations, and marketing methods associated with direct-to-consumer marketing. The findings from these research projects could be used to strengthen the trust between state beef associations and producers by better equipping porducers to establish trust with consumers.

Finally, a nationwide survey of producers would be interesting to assess how direct-to-consumer beef differs throughout the nation. Multiple participants from this study mentioned shipping and even personally delivering bulk orders all across the country. Findings from this study could shed light on how direct-to-consumer beef producers interact with one another across state lines, and how theyinteract with consumers across state lines.

Practical Implications

Findings from this study indicate producers are excited about the future of the direct-to-consumer beef. The COVID-19 pandemic forced consumers to face the topic of food availability head-on and explore alternative options to traditional grocery stores for beef products. Based on the results of this study, producers should be prepared for the longevity of this interest in local foods and plan accordingly when feeding out cattle and booking harvest dates. COVID-19 created a volatile market, and much of the demand came in the form of a peak, but as sales for direct-to-consumer beef sales begin to level out, prospects for future sales still look higher than pre-COVID-19 sales.

Communications practitioners can use results of this study to better communicate with beef producers marketing direct-to-consumers. The triumphs and struggles producers described in the results of this study can be used by professional communicators to assess producer needs in the realm of marketing. Although there are resources out there on the how-to of social media, some producers could use additional guidance on where to go to learn how create and manage social media accounts. Other producers may need ways to more effectively manage and engage new follwers.

Youtube is the second most popular social media cite among adults. Producers could branch out from Facebook and Instagram to create Youtube channels about their operations and meat sales. Video content and vlogs can show consumers a more in-depth look at certain aspects of beef production that can't be done in a social media post.

Communicators can also advocate for producers through state beef associations. State beef associations and communicators could work together in creating a comprehensive guide to traversing the ambiguous laws and regulations associated with direct sales of beef products. Grants for freezers could help producers grow their operations. Guidance in the legal side of direct-to-consumer marketing as well as general start-up information of the operation would be beneficial to producers.

Many producers described the last year as an ebb and flow of business, and producers can optimize their reach and potential sales by maintaining presence on their communications platforms during the slower business months to maintain a more consistent stream of customers. This study found a large increase in interest and new customers for the majority of producers interviewed. Producers should capitalize on this new interest in local beef and maintain contact with their new customer base whether through social media, website updates, or email newsletters.

Word-of-mouth promotion continues to be a reliable way for all producers to promote their direct marketing operations. Whether word is passed through face-to-face interaction or online communities, selling high-quality beef products earned producers new customers before COVID-19, and continues to do so during the pandemic. A willingness to engage with customers and high-quality beef products lead to repeat customers.

Producers found once new customers began showing up, their interest in beef production and learning how their food was produced lead to increased interest and satisfaction after purchasing beef products. Producers can capitalize on this interest and awareness of where beef products come from to by drawing consumers in and show them the day-to-day on the farm and let the beef tell a story. Producers are not only selling a quality product, but a whole experience. Producers should maintain and encourage the new lines of communications opened since the COVID-19 pandemic began to further promote local beef as an alternative to traditional retail products.

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APPENDICES

APPENDIX A

Interview Protocol

How COVID-19 has Changed Direct-to-Consumer Marketing in the Oklahoma Beef Industry

The purpose of this study is to explore the changes that have occurred in direct-to-consumer marketing in the Oklahoma beef industry during the COVID-19.

Questions:

1. Tell me a little bit about your operation.

    Notes:

2. How long have you been marketing direct to consumers?

    a. Is direct-to-consumer marketing your primary form of sales?

    Notes:

3. What part of Oklahoma is your operation in?

    Notes:

4. What is an estimated sales radius to your clients?

Notes:

5. Have direct-to-consumer sales increased during the COVID-19 pandemic?

Notes:

6. Can you describe your primary marketing techniques used to market your beef products?

Notes:

If social media, what platform(s)?

Has this changed in response to the COVID-19 pandemic?

Notes:

7. Can you describe how COVID-19 has impacted production practices on your operation?

Notes:

8. Can you describe how COVID-19 has impacted marketing practices to consumers?

Notes:

9. Have you seen any notable change in consumer interest regarding buying beef products directly from local producers? Please explain.

Notes:

10. In your experience, have relationships between producers and consumers changed during the COVID-19 pandemic? Please explain.

Notes:

11. Have you implemented any new promotional practices in response to the COVID-19 pandemic? If so, please explain.

Notes:

12. How has your communications with clients changed during the COVID-19 pandemic?

Notes:

13. How do you think rural consumer interest has changed in regard to buying direct from producers?

Notes:

14. How do you think urban consumer interest has changed in regard to buying direct from producers?

Notes:

15. Is there anything else you would like to add regarding how COVID-19 has affected your promotional practices or interactions with consumers?

Notes:

*member check

APPENDIX B

IRB Approval

Oklahoma State University Institutional Review Board

Date:	10/08/2020
Application Number:	IRB-20-449
Proposal Title:	How COVID-19 has impacted direct-to-consumer marketing in the Oklahoma beef industry
Principal Investigator:	Linnea Langusch
Co-Investigator(s):	
Faculty Adviser:	DWAYNE CARTMELL
Project Coordinator:	
Research Assistant(s):	
Processed as:	Exempt
Exempt Category:	

Status Recommended by Reviewer(s): Approved

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in 45CFR46.

This study meets criteria in the Revised Common Rule, as well as, one or more of the circumstances for which continuing review is not required. As Principal Investigator of this research, you will be required to submit a status report to the IRB triennially.

The final versions of any recruitment, consent and assent documents bearing the IRB approval stamp are available for download from IRBManager. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be approved by the IRB. Protocol modifications requiring approval may include changes to the title, PI, adviser, other research personnel, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms.
2. Submit a request for continuation if the study extends beyond the approval period. This continuation must receive IRB review and approval before the research can continue.
3. Report any unanticipated and/or adverse events to the IRB Office promptly.
4. Notify the IRB office when your research project is complete or when you are no longer affiliated with Oklahoma State University.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact the IRB Office at 405-744-3377 or irb@okstate.edu.

Sincerely,
Oklahoma State University IRB

APPENDIX C

Participant Recruitment

Email: Linnea.langusch@okstate.edu

Subject: Study on the impact COVID-19 has had on direct-to-consumer marketing in the Oklahoma beef industry

Hello,

I'm a graduate student at Oklahoma State University and I am currently working on research for my thesis. I will be interviewing cattle ranchers in the state of Oklahoma who market beef directly to consumers to explore how the COVID-19 pandemic has impacted direct-to-consumer marketing in the Oklahoma beef industry.

I'm conducting interviews on Zoom to minimize risk to all potential participants. If this study is something you would be willing to participate in, I would be happy to give you more information and schedule a virtual meeting. Let me know if you have any questions, I look forward to hearing from you.

Thank you, have a wonderful day!

Social media posts on my personal accounts:

If any of my friends on here are cattle ranchers who market beef directly to consumers in the state of Oklahoma or know someone who does and would be interested in participating in a research study please shoot me a message. Thank you!

VITA

Linnea Langusch

Candidate for the Degree of

Master of Science

Thesis: THE STEAKS ARE HIGH: COVID-19'S IMPACT ON DIRECT-TO-CONSUMER MARKETING IN THE OKLAHOMA BEEF INDUSTRY

Major Field: Agricultural Communications

Biographical:

Education:

Completed the requirements for the Master of Science in Agricultural Communications at Oklahoma State University, Stillwater, Oklahoma in May, 2021.

Completed the requirements for the Bachelor of Science in Animal Science at University of Wisconsin-Madison, Madison, Wisconsin in 2017.

Experience:

Employed as a graduate teaching and research assistant in the Ferguson College of Agriculture from August 2019 to May 2021.