Iowa Cattlemen's

Association

Written Testimony of the Iowa Cattlemen's Association

With assistance and consultation from
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Submitted to the U.S. Senate Judiciary Committee

"Beefing up Competition: Examining America's Food Supply Chain"

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Introduction

Chairman Durbin, Ranking Member Grassley, and members of the Senate Judiciary Committee—thank you for the opportunity to testify on behalf of our nation's cattle producers.

My name is Jon Schaben. I live in Dunlap, Iowa with my wife, Julie. We have four children, of which two are actively involved in agriculture.

I'm a 1987 animal science graduate of Iowa State University, where I was a member of the meats and meat animal evaluation teams and president of the Block & Bridle Club. My wife and I actively support Iowa State University; in 2016, we were recognized as Cy's Favorite Alum by the Iowa State Athletic Department. I'm also a 1993 graduate of the Missouri Auction School and was selected as the 2003 World Champion Livestock Auctioneer.

I co-own and operate the Dunlap Livestock Auction in Dunlap, Iowa and West Point Livestock in West Point, Neb. with my brothers Jay and Jim Jr. We are the second generation to run Dunlap Livestock, which was started by my parents in 1950. Additionally, I operate a commercial cow-calf herd and my family background and feed out steers and heifers annually.

I've been a member of the Iowa Cattlemen's Association since the 1980s and currently serve on the Beef Product Labeling Task Force. I also serve on the Government and Industry Affairs Committee for the Livestock Marketing Association. As you can see, I am passionate about the livestock industry and its people. I believe in the importance of a strong rural economy as it is the lifeblood to keep communities thriving in rural America. A strong, competitive and independent beef sector is a vital tool for these agricultural areas.

Today, I am here to represent the Iowa Cattlemen's Association (ICA). ICA, headquartered in Ames, Iowa, is a grassroots organization representing nearly 8,000 cattle producers and industry affiliates. As the voice of Iowa's beef business, it is ICA's responsibility to carry the messages of their members forward to key decision makers. Our hope is that my testimony in this hearing will encourage meaningful change to benefit *all* independent cattle producers.

Cattle producers in Iowa, and across the nation, have expressed grave concern regarding the severe lack of cash trade, limited price discovery, and imbalance in leverage between those who raise cattle and those who process them into the beef we consume. With an increasing prevalence of extreme market shifts and limited ability of producers to mitigate market risk in the cattle industry, it is imperative that we uplift the concerns of those in the production sector for this Senate Judiciary Committee hearing. Simply put—the beef supply chain begins with, and relies upon, thousands of dedicated cattle producers.

Cattle Production 101: Sustainable from Pasture to Plate

Cattle producers take great pride in stewarding the land and natural resources. Sustainability is the heart of cattle production, both from a producer management standpoint and how cattle naturally function. The vast majority of what cattle eat cannot be consumed by humans. Their ruminant digestive system allows them to process grass, forages, and byproducts into a high-quality, nutritious protein source for humans. This act is referred to as 'upcycling.' One example of a byproduct digested by cattle would be distillers grain from the ethanol industry.

The cattle production cycle begins with the cow-calf producer. Cow-calf producers maintain herds of cows that birth calves once a year. The gestation period for a calf is nine months. For the first few months of life, calves nurse milk and graze alongside their mothers in pasture.

When a calf reaches 450 to 700 pounds (typically between 6 and 10 months of age), they are weaned off of their mother's milk. At this time, calves are capable of receiving their nutrition from other sources. Weaning also takes unnecessary stress off of cows by allowing them to utilize nutrients previously dedicated for milk in preparation for their next calf.

After weaning, calves may be sent to a stocker/backgrounder to further develop, or be sold at a livestock auction market. Once matured, these cattle are sent to feedyards for finishing.

Cattle spend anywhere from four to six months at the feedyard. The goal during this stage of production is to reach market weight, which averages approximately 1,400 pounds. Fed cattle are usually ready for harvest around 15 to 20 months of age.

The final step in the cattle production cycle is harvesting at a locker or meatpacking facility. This is where cattle are humanely processed into wholesome, nutritious beef. Further processing takes place before beef is purchased by consumers.

To learn definitions and terminology used to describe cattle, see Appendix A.

Iowa Cattle Industry Overview

Iowa's cattle industry is an economic boon to the state, generating more than $6.8 billion in business activity and supporting more than 33,000 jobs.[1] .

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[1] Department of Economics, Iowa State University.

More than 25,000 cattle operations in Iowa raise 3.65 million head, including 890,000 beef cows.[2] In 2020 alone, more than 1.7 million head of fed cattle were marketed by Iowa cattle producers.

Iowa is fourth in the nation for cattle and calves on feed, totaling nearly 1.2 million head.[3] While greater volumes of cattle come from our neighbors in the beef belt, Iowa is best known for leading the nation in the sheer number of family farms finishing beef cattle for market.

Cattle Procurement Methods

There are two main procurement methods utilized for fed cattle: 1) commission firms; and 2) direct exchange between packer and producer. Most cattle are sold directly to the packer by negotiated trade or by use of alternative marketing arrangements (AMAs).

There are four purchase types used by packers to procure cattle from producers: 1) negotiated cash; 2) negotiated grid; 3) formula marketing arrangements; and 4) forward contracts (see Appendix B for definitions).

Livestock Mandatory Reporting (LMR)

The U.S. Department of Agriculture (USDA) Agricultural Marketing Service (AMS) monitors marketing of cattle. In 1999, Congress passed the Livestock Mandatory Reporting (LMR) Act in response to producer concerns regarding concentration and price manipulation (primarily in the swine industry). According to USDA, the Act created the LMR program to provide livestock marketing information to producers; improve USDA's price and supply services; and encourage competition in the marketplace for livestock and livestock products.[4]

To meet the requirements of the law, USDA AMS established reporting regions and provides several daily and weekly reports. The USDA AMS '5-Area' includes the following major cattle feeding regions: Iowa/Minnesota, Nebraska, Kansas, Colorado, and Texas/New Mexico/Oklahoma (see Appendix C for map). Cattle sourced from states outside of the five regions are reported in a comprehensive national report and by origin in USDA reports.

Federally-inspected meatpackers that slaughter more than 125,000 head of cattle per year are required to report prices and quantities of cattle to USDA. Reports from regions include purchase

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[2] U.S. Department of Agriculture. *State Agriculture Overview,* 2020. https://www.nass.usda.gov/Quick_Stats/Ag_Overview/stateOverview.php?state=IOWA. Accessed 20 July 2021.
[3] Ibid.
[4] *Livestock Mandatory Reporting Background*. U.S. Department of Agriculture - Agricultural Marketing Service, www.ams.usda.gov/sites/default/files/media/LivestockMandatoryReportingBackground.pdf. Accessed 20 July 2021.

types, descriptions (e.g. quality grade, weights, etc.), and more. If there is enough packer competition within a reporting region to meet the USDA AMS 3/70/20 Confidentiality Guideline, then this information can be publicly reported.[5] As of October 2020, 34 plants report cattle information under LMR to USDA, which accounts for approximately 92 percent of all cattle purchases nationwide.[6]

Regional Variation Across the Beef Belt

There is significant variance in cattle marketing methodology between reporting regions, which highlights concerns related to price discovery and market vulnerabilities. Over the course of two decades, we've witnessed a shift in how cattle are bought and sold. The use of formula marketing arrangements has grown to a majority in every feeding region except Iowa/Minnesota (see Appendix D for historical LMR data).

In the Iowa/Minnesota region, 50 percent or more of fed cattle are sold via the cash, or spot, market. Conversely, 10 percent or less of the trades in Texas/New Mexico/Oklahoma are negotiated. While declines in the cash market have occurred across the entire beef belt, strong regional disparity is evident based on market reporting data.

Primary Challenges in the Cattle Industry

1. <u>Lack of Price Discovery and Transparency</u>

Price discovery provided by the cash fed cattle market also impacts prices of feeder cattle, beef, and futures markets. Without this important signal, producers are challenged with determining the true value of their cattle.

Currently, price discovery occurs more robustly among independent cattle feeders in the Midwest. At the same time, southern cattle feeders greatly benefit from price discovery taking place outside their regions, as base prices may be derived from the transparent, negotiated prices established in Iowa/Minnesota and Nebraska. Many large and/or corporate feeders are rewarded for the quantity of cattle they sell, which provides efficiency to cattle buyers as they procure cattle for meatpackers. These cattle may bring 20 to 40+ dollars per head more than negotiated cash cattle, even though cattle in Iowa and the upper Midwest generally grade much higher in terms of quality.

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[5] Presentation by Taylor Cox. *3/70/20 Confidentiality Guideline.* https://www.ams.usda.gov/sites/default/files/LMRConfidentialityGuidelinePresentation.pdf. Accessed 17 July 2021.

[6] *User's Guide to USDA LMR Cattle Price Reports*. U.S. Department of Agriculture - Agricultural Marketing Service, Oct. 2020, www.ams.usda.gov/sites/default/files/media/LMRCattleUserGuide.pdf. Accessed 20 July 2021.

Finally, while the intent of LMR is to provide more transparency to cattle marketing, it's clear there are barriers that impede access to information. Negotiated cattle purchases are reported with actual prices during a specific time period. However, data from AMAs, to include the base price, net price, and any premiums or discounts, remain undisclosed to the public.

2. Meatpacking Concentration and Competition

For more than a century, the meatpacking industry has been scrutinized for concentration and the potential for use of anticompetitive practices. These concerns led to the passage of the Packers and Stockyards Act of 1921, which was intended to protect producers and consumers.

In 1980, the four largest meatpackers accounted for 36 percent of steer and heifer slaughter. According to the most recent USDA AMS Packers and Stockyards Division report, Cargill, JBS, National Beef, and Tyson control approximately 85 percent of all fed cattle slaughter in the U.S.[7] Fed cattle slaughter is more concentrated than hogs, sheep and lambs, broilers, and turkeys.

In Iowa, we've witnessed loss of beef packing capacity firsthand. Since the 1980s, we've lost major packing facilities in Des Moines, Fort Dodge, Oakland, and Spencer.[8] These plant closures hit home, often costing hundreds of locals their jobs and triggering economic disaster response plans.[9] In 2015, Tyson closed a plant in Denison, just 18 miles from my hometown of Dunlap, Iowa.

3. Captive Supply

Captive supply is defined by the following: formula marketing arrangements, forward contracts, and/or packer-owned cattle. Captive cattle are procured, or committed, months in advance with no negotiation.

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[7] *Packers and Stockyards Division Annual Report 2019*. U.S. Department of Agriculture - Agricultural Marketing Service, 2019, www.ams.usda.gov/sites/default/files/media/PSDAnnualReport2019.pdf. Accessed 19 July 2021.

[8] *Economic Importance of Iowa's Beef Industry*. Iowa State University Extension and Outreach - Iowa Beef Center, May 2018, www.iabeef.org/Media/IABeef/Docs/ibc0127bexecutivesummarypressquality050218.pdf. Accessed 16 July 2021.

[9] Wolf, Gordon, and Scott Stewart. "Closing of Historic Denison Beef Plant Triggers Economic Disaster Response." *The Daily Nonpareil - Council Bluffs, Iowa*, 14 Aug. 2015, nonpareilonline.com/news/local/closing-of-historic-denison-beef-plant-triggers-economic-disaster-response/article_128184c6-abff-53a1-8d8f-b367a69f8082.html.

The chief concern for independent cattlemen is that ample captive supply allows meatpackers to meet their demand without participating in the cash market. As a result, independent cattle feeders find themselves as residual suppliers for meatpackers. Despite raising some of the highest-quality cattle in the nation, they are on the 'short end of the stick' because of their operating capacity. This predatory practice is widely utilized by four main meatpackers, justified by 'efficiency.'

When the market is disrupted, whether unexpectedly or coordinated, meatpackers find themselves well-leveraged for purchasing in the cash market. And if they have all or most of their cattle committed, they might even remove themselves from the market. Iowa cattle producers have weathered several market disruptions by taking whatever bid they could get or feeding market-ready cattle for many weeks beyond what is necessary because they have nowhere to sell.

4. <u>Price Manipulation: An Exercise of Market Power</u>

In the span of just two years, the cattle industry has suffered multiple extreme market disruptions, often referred to as 'black swan events.' These disruptions are unpredictable, such as the Tyson plant fire in Holcomb, Kan., or the supply chain disruption caused by the COVID-19 pandemic, and are often accompanied by a ripple effect directly or indirectly affecting the cattle industry for an extended period of time.

Every market disruption comes with a significant price—some more than others. The cattle industry is particularly vulnerable due to a few buyers in the market. The concentration of processing power between Cargill, JBS, National Beef, and Tyson has created a severe bottleneck in the beef supply chain during black swan events and has also opened the door for market manipulation. These market disruptions highlight the oligopsony within the meatpacking sector.

Tyson Plant Fire
On August 9, 2019, a single plant fire in Holcomb, Kan., created extreme volatility in the cattle markets. This plant, owned and operated by Tyson Foods, accounts for nearly six percent of the nation's cattle slaughter capacity.

In the weeks following the fire, Iowa State University estimated a return for a 1,300-lb. steer to be negative \$234.47.[10] Most producers did not see positive returns until December 2019. The price spread between dressed fed cattle and boxed beef cutout values grew to a record high. We expected to see a market disruption, however, we did not expect the number of fed cattle

[10] Department of Economics, Iowa State University.

slaughtered post-fire to exceed normal conditions.[11] Higher boxed beef prices and low fed cattle prices created an incentive for meatpackers to increase production, thus driving their profits.

COVID-19 Pandemic

Cattle producers were sucker-punched again with the onset of the COVID-19 pandemic. In March 2020, the estimated return on a market-ready steer for an Iowa cattle producer was negative $86.22 per head.[12] By April, the estimated return dropped to negative $244.44 per head.[13] Over the course of an entire year, most cattle producers found themselves 'in the red' 75 percent of the time.

The greatest spread between dressed fed cattle and boxed beef cutout values during the pandemic exceeded $279/cwt.[14] Between early April 2020 and the second week of May, the price spread grew by 323 percent.[15]

At the height of the COVID-19 pandemic, many Iowa cattle feeders found themselves shut out of the market for several weeks, receiving no bids for cattle. If they did get a bid, they couldn't negotiate and had to take what they could get. Throughput at processing facilities was slowed due to a compromised labor force, causing a significant backlog of cattle across the country. Meatpackers had no incentive to fill their shackles with cash cattle. The pandemic disproportionately affected cattle producers that participate in the cash market.

Spring 2021

This spring, cattle producers weathered poor market conditions. ICA wrote to U.S. Attorney General Merrick Garland and U.S. Agriculture Secretary Tom Vilsack to elevate the concerns of Iowa cattlemen by calling for concurrent investigations examining whether regulated meatpackers violated the Packers and Stockyards Act through price manipulation, collusion, restrictions of competition, or other unfair practices.

Demand for beef remained high throughout the COVID-19 pandemic. The value of beef exports reached record highs in March 2021, with 124,808 metric tons of beef equalling $801.9 million

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[11] *Boxed Beef and Fed Cattle Price Spread Investigation Report*. U.S. Department of Agriculture - Agricultural Marketing Service, 22 July 2020, www.ams.usda.gov/sites/default/files/media/CattleandBeefPriceMarginReport.pdf. Accessed 18 July 2021.

[12] *Finishing Yearling Steers*. Iowa State University Extension and Outreach, www2.econ.iastate.edu/estimated-returns/. Accessed 16 July 2021.

[13] Ibid.

[14] *Boxed Beef and Fed Cattle Price Spread Investigation Report*. U.S. Department of Agriculture - Agricultural Marketing Service.

[15] Ibid.

purchased outside of the U.S.[16] In addition, daily cattle slaughter reports from the USDA AMS reflected healthy demand for beef and the ability to process the cattle necessary to fulfill purchase requests.

On May 10, 2021, the choice boxed beef cutout was valued at more than $309/cwt (approximately $2,822/head). At the same time, cattle producers received average bids of approximately $118/cwt (approximately $1,711/head). The gross packer margin, on an average steer weighing approximately 1,450 lbs. with a 63 percent dressing percentage, exceeded $1,000 per head. This alone would not be cause for concern, however, thousands of cattle producers in Iowa and across the nation have struggled to break even. On average, estimated returns for cattle producers were below cost of production.

In concert with extremely irregular disparity between fed cattle demand and beef product demand, fed cattle delivery times have consistently been pushed several weeks following purchase. To further exacerbate the issue, most of those cattle were purchased using lucrative formula contracts, with details undisclosed to the public. We recently witnessed the impact of captive supply in Iowa, as one of the major meatpackers announced they would not be active in the market for an entire week. While cattle producers waited for their purchased cattle to be harvested, they were expected to cover the cost of care, feed, and yardage for livestock they no longer owned. At that time, corn exceeded $7.00 per bushel. This left cattle producers hemorrhaging thousands of dollars.

Ransomware Attack on JBS

Most recently, JBS experienced a ransomware attack that shuttered cattle slaughter at several packing plants. To mitigate the problem, JBS paid $11 million to cybercriminals. USDA recognized the significance of this disruption, and released the following statement:

> As noted earlier today by the White House, USDA is aware of the ransomware attack against JBS, which is affecting the company's operations, including its facilities in the United States. USDA continues to work closely with the White House, Department of Homeland Security, JBS USA and others to monitor this situation closely and offer help and assistance to mitigate any potential supply or price issues. As part of that effort, USDA has reached out to several major meat processors in the United States to ensure

[16] *Record-Breaking Performance for U.S. Beef and Pork Exports in March*. U.S. Meat Export Federation, 5 May 2021, www.usmef.org/news-statistics/press-releases/record-breaking-performance-for-u-s-beef-and-pork-exports-in-march/. Accessed 20 July 2021.

> they are aware of the situation, encouraging them to accommodate additional capacity where possible, and to stress the importance of keeping supply moving.
>
> USDA has also been in contact with several food, agriculture and retail organizations to underscore the importance of maintaining close communication and working together to ensure a stable, plentiful food supply. USDA will continue to encourage food and agriculture companies with operations in the United States to take necessary steps to protect their IT and supply chain infrastructure so that it is more durable, distributed and better able to withstand modern challenges, including cybersecurity threats and disruptions.[17]

Please take note of the highlighted sections above. With the level of concentration we have in the meatpacking sector, how exactly would USDA 'mitigate any potential or supply issues?'

Proposed Solutions

First and foremost, we ask that the DOJ provide an update regarding their antitrust investigation of Cargill, JBS, National Beef, and Tyson. More than a year has passed since civil investigative demands were issued following complaints from cattle producers across the nation.

We understand the purview of the Judiciary Committee, but we'd be remiss to not recognize the value of legislation as a pathway forward to address the aforementioned issues. However, we cannot solely count on Congress to legislate their way out of this mess. Thorough oversight of antitrust law and competition policy by the Department of Justice (DOJ) must accompany any legislative proposal.

Two legislative proposals (S. 949 and S.543) have been introduced in the Senate this year to restore price discovery and transparency in the cattle market. ICA supports the use of a federal mandate to require meatpackers to consistently participate in the cash market. We believe this is wholly necessary, especially due to the market power of the four main meatpackers.

In June 2021, Sens. Charles Grassley (R-Iowa), Mike Rounds (R-S.D.), and Jon Tester (D-Mont.) introduced legislation (S. 2036) to address anticompetitive practices in the meat and

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[17] *Statement from the U.S. Department of Agriculture on JBS USA Ransomware Attack*. U.S. Department of Agriculture, 1 June 2021, www.usda.gov/media/press-releases/2021/06/01/statement-us-department-agriculture-jbs-usa-ransomware-attack. Accessed 16 July 2021.

poultry industries that threaten our nation's food supply and national security. ICA supports the establishment of the Office of the Special Investigator for Competition Matters, as it would provide additional oversight of the meatpacking industry.

Additionally, it's worth noting that President Joe Biden and Secretary Vilsack have recognized the importance of a fair and competitive marketplace. In his most recent executive order dated July 9, 2021, President Biden emphasized a 'whole-of-government' approach to address anticompetitive conduct. ICA urges the USDA Packers and Stockyards Division to promulgate rules to promote robust competition in the beef meatpacking industry, including protections for new competitors.

Conclusion

Cattle producers work hard to manage inputs, mitigate risk, and raise cattle that ultimately provide the high-quality beef demanded by meatpackers, retailers, and consumers. We do our best to align production with seasonal consumer demand patterns to maximize market opportunities. Despite all of this, most are unable to better position themselves in the market due to the exploitative actions of the meatpacking industry.

High concentration in the meatpacking industry does not guarantee unjust exercise of market power, but it does provide ample opportunity to do so. Although there have been several allegations of unjust, anticompetitive, and predatory practices by the meatpacking industry, USDA and the DOJ have largely been unable to provide results. We must not ignore the obvious—we have a clear oligopsony in the beef meatpacking industry that exacerbates vulnerabilities in our beef supply chain.

The greatest fear of independent cattle producers is to lose their livelihoods for the sake of meatpacking efficiency, i.e. vertical integration. We've witnessed vertical integration firsthand with the swine and poultry industries. The cattle industry is not transforming in the same manner other industries have due to the necessity of forage land for the cow-calf sector. However, meatpackers are changing the way we conduct business through their exercise of market power. The combination of limited competition, captive supply, and formula contracting has not only suppressed live cattle prices, but has also placed an exorbitant financial burden on the shoulders of cattle producers. This is and will continue to lead to the decline of independent cattle producers in Iowa and across the country.

The lifeblood of our rural communities is agriculture. Independent cattle producers are the men and women who volunteer at the local food bank, serve on the school board, and lead various community initiatives. They spend money in their local communities, and their taxes provide public goods. And, they are the best possible caretakers of the land and natural resources in rural

America. We must do all we can to ensure they survive to continue providing high-quality, sustainably produced, and nutritious beef for consumers.

Cattle producers deserve a level playing field. We're asking for a transparent and competitive marketplace to strengthen the beef supply chain. Failure to take swift action leaves the Congress, USDA, and the DOJ culpable for the countless cattle producers that will inevitably be starved out of the industry by four meatpackers. Since 1978, Iowa has lost more than 45,000 family farms that sold cattle.[18] How many more family farmers and ranchers do we need to lose before we recognize the negative impacts of a highly concentrated meatpacking industry on our beef supply chain and our rural communities?

[18] U.S. Census of Agriculture

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Appendix A

Industry Definitions[19]	
Auction market/auction barn	A facility to which cattle producers bring cattle to be sold via auction. This is the most common method of marketing cattle. Auction markets primarily host live sales of cattle on the premises, while some auction markets also host video sales.
Backgrounding/stocking	A growing program where feeder cattle graze or are fed harvested feed from the time they are weaned as calves until they are on a finishing ration in the feedlot.
Bull	A mature (approximately 24 months of age or older) uncastrated, male bovine.
Boxed beef	Cuts of beef put in boxes for shipping from a packing plant to retailers. These primal (rounds, loins, ribs, chucks, etc.) and subprimal cuts are intermediate cuts between the carcass and retail cuts.
Boxed beef cutout	Represents the estimated gross value of a beef carcass, based on prices paid for individual beef items derived from the carcass.
Calf	A young male or female bovine animal under one year of age.
Cow	A sexually mature female bovine animal that has usually produced a calf.
Cow-calf operation	A management unit that maintains a breeding herd and produces weaned calves.
Cull cow	A cow that is removed from the main breeding herd for one or more reasons (i.e. poor production, physical ailment, poor disposition, genetic selection, etc.) and is generally sold for slaughter and not destined to be a replacement.
CWT	Abbreviation for hundredweight and the unit in which most prices are quoted ($/cwt).
Dressing percentage/yield	The percentage of the live animal weight that becomes the carcass weight at slaughter. It is determined by dividing the carcass weight by the live weight then multiplying by 100. Also referred to as yield.
Fat/fed/finished cattle; live cattle	Steers and heifers that have been fed a nutrient-dense

[19] Griffith, Andrew P. *Cattle and Beef Market Definitions*. University of Tennessee, extension.tennessee.edu/publications/Documents/W801.pdf.

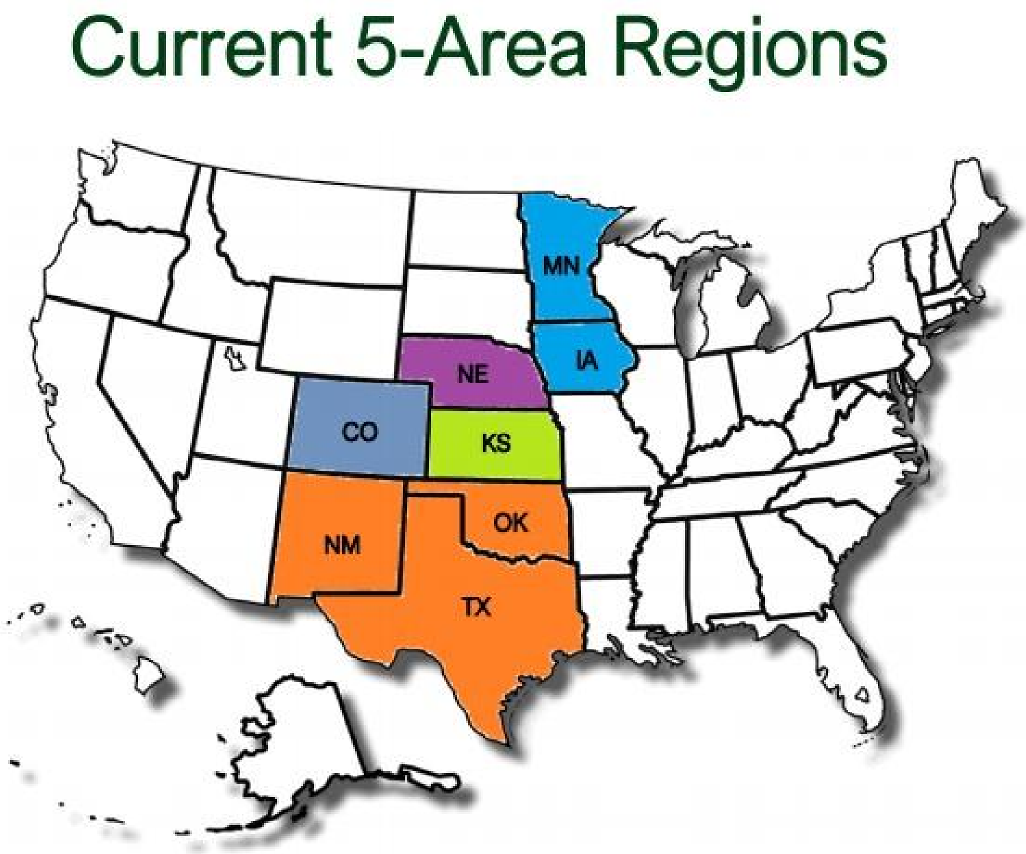
	ration for the purpose of growing the animals, usually for 90 to 180 days in a feedlot or until they reach a desired slaughter weight and are ready for slaughter.
Feedlot/feed yard	An animal feeding operation used to intensively feed and grow cattle for finishing.
Feeder cattle	Steers or heifers mature enough to enter a feedlot.
Heifer	A female bovine animal that has not produced offspring.
Heiferettes	Heifers placed in the feedlot after losing a calf or determined open after the breeding season.
Seedstock	Breeding cattle typically registered with a breed association (Angus, Charolais, Hereford, etc.)
Steer	A castrated male bovine animal.
Quality grade	An evaluation of the degree of marbling (intramuscular fat) and degree of maturity affecting the tenderness, juiciness and flavor of beef. (USDA grades: Prime, Choice, Select, Standard, etc.)
Yearling	Calves between one and two years of age.
Yield grade	USDA grades identifying differences in cutability: the boneless, fat-trimmed retail cuts from the round, loin, rib and chuck. (Yield grade 1-5 with yield grade 1 carcasses having the highest cutability.)

Appendix B

Purchase Types[20]	
Negotiated cash	The term “negotiated purchase” means a cash or spot market purchase by a packer of livestock from a producer under which the base price for the livestock is determined by seller-buyer interaction and agreement on a delivery day. The livestock are scheduled for delivery to the packer not more than 14 days after the date on which the livestock are committed to the packer.
Negotiated grid	The term “negotiated grid purchase” in reference to cattle means the negotiation of a base price, from which premiums are added and discounts are subtracted, determined by seller-buyer interaction and agreement on a delivery day. The livestock are scheduled for delivery to the packer not more than 14 days after the date on which the livestock are committed to the packer.
Formula marketing arrangement	When used in reference to live cattle, the term “formula marketing arrangement” means the advance commitment of cattle for slaughter by any means other than through a negotiated purchase or a forward contract, using a method for calculating price in which the price is determined at a future date.
Forward contract	When used in reference to live cattle, the term “forward contract” means an agreement for the purchase of cattle, executed in advance of slaughter, under which the base price is established by reference to prices quoted on the Chicago Mercantile Exchange, or other comparable publicly available prices.

[20] Livestock Mandatory Reporting, 7 CFR § 59.30.

Appendix C
USDA AMS 5-Area Regions [21]



[21] Presentation by Taylor Cox. *2018 LMR Negotiated Cattle Market.* https://www.ams.usda.gov/sites/default/files/media/2018LivestockMandatoryReportingNegotiatedCattleMarketReviewPresentation.pdf. Accessed 17 July 2021.

Appendix D
LMR Purchase Type Breakdown by Region[22]

NATIONAL (%)															
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cash	52.1	49.4	47.3	42.6	38.8	37.4	32.6	26.0	23.1	23.1	21.3	25.6	25.7	25.5	20.9	23.4
Formula	33.2	34.3	37.4	39.1	43.7	43.1	47.4	54.8	59.8	56.8	57.0	57.6	57.2	61.1	64.8	62.7
Forward Contract	4.8	7.2	6.8	11.2	9.5	11.9	13.2	12.0	10.8	15.8	17.5	12.7	13.0	9.6	11.0	8.9
Negotiated Grid	9.9	9.0	8.5	7.1	8.0	7.6	6.7	7.2	6.3	4.3	4.2	4.1	4.1	3.8	3.3	5.0

5-AREA (%)																
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cash	55.8	52.0	49.8	45.3	43.2	42.4	36.8	27.8	24.1	24.0	21.3	26.3	26.8	26.1	20.5	23.3
Formula	31.9	33.3	35.9	38.1	42.3	42.2	46.5	56.2	61.8	58.7	58.8	59.4	59.5	64.2	69.6	67.0
Forward Contract	4.6	7.1	6.8	10.4	8.1	9.9	10.9	10.0	8.6	13.7	16.7	11.2	10.8	7.0	7.6	5.4
Negotiated Grid	7.7	7.7	7.5	6.3	6.4	5.5	5.7	5.9	5.4	3.6	3.2	3.1	2.9	2.7	2.3	4.3

TEXAS -OKLAHOMA-NEW MEXICO																
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 **	2020
Cash	47.2	42.5	36.7	31.5	26.4	21.5	17.0	10.2	6.1	3.0	2.6	6.4	9.3	6.2	5.4	10.1
Formula	42.2	42.2	48.4	53.3	60.4	66.9	72.7	76.0	83.0	84.6	85.9	82.4	81.8	86.2	87.9	84.2
Forward Contract	3.1	5.0	4.4	5.8	5.4	4.9	4.4	5.4	4.0	7.4	9.3	7.0	6.2	4.9	5.3	4.3
Negotiated Grid	7.5	10.3	10.5	9.3	7.8	6.7	5.9	8.4	6.9	5.1	2.1	4.2	2.6	2.7	1.6	1.4
															**Q 1-Q3	

KANSAS (%)																
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cash	50.6	47.3	44.8	41.7	39.9	41.0	36.9	27.4	21.0	15.6	12.5	23.0	21.9	19.3	16.2	18.2

[22] U.S. Department of Agriculture - Agricultural Marketing Service Livestock, Poultry & Grain Market News

Formula	44.8	46.0	48.5	48.0	52.1	51.6	54.1	63.6	68.5	69.5	64.8	67.3	70.7	76.4	81.6	76.7
Forward Contract	2.8	5.4	5.4	7.8	7.0	6.3	7.1	5.7	6.5	14.3	22.2	9.3	7.0	3.9	1.7	1.4
Negotiated Grid	1.8	1.3	1.3	2.4	1.0	1.0	2.0	3.4	4.0	0.7	0.6	0.4	0.4	0.4	0.5	3.7

NEBRASKA (%)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cash	64.6	63.7	64.7	61.0	60.4	55.8	48.3	38.9	36.4	38.3	32.6	42.1	41.3	43.0	32.9	36.1
Formula	18.3	16.8	17.8	17.8	22.6	23.4	28.7	41.0	48.4	42.6	44.4	42.0	41.0	45.2	52.4	54.0
Forward Contract	5.8	9.7	7.8	14.7	9.0	14.0	15.6	14.8	10.2	14.7	17.7	12.7	13.5	8.5	11.7	4.6
Negotiated Grid	11.3	9.8	9.6	6.5	8.0	6.7	7.4	5.3	5.0	4.4	5.3	3.2	4.2	3.3	3.0	5.3

COLORADO

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018 JAN-JUN	2019	2020
Cash	51.8	40.7	39.6	28.5	28.8	19.7	17.9	12.5	10.6	11.2	8.3	13.8	16.0	13.5	N/A	N/A
Formula	30.1	46.7	46.3	54.5	57.9	64.0	64.1	69.1	71.4	64.1	70.8	73.4	69.4	74.5	N/A	N/A
Forward Contract	8.6	7.3	7.5	13.3	10.5	14.4	16.0	16.8	16.8	24.1	20.3	12.2	14.1	10.9	N/A	N/A
Negotiated Grid	9.5	5.3	6.6	3.8	2.7	1.9	2.0	1.6	1.2	0.6	0.6	0.6	0.5	1.1	N/A	N/A

IOWA/MINNESOTA

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cash	73.9	68.8	68.8	66.7	63.9	65.6	61.8	56.4	54.6	57.0	56.7	50.9	51.0	57.1	50.0	51.2
Formula	7.2	8.4	8.2	9.0	10.3	11.2	10.9	20.5	23.2	20.3	20.2	21.1	21.3	22.3	25.3	24.7
Forward Contract	7.1	10.2	13.3	16.7	13.2	13.9	17.1	13.2	13.8	17.1	16.1	20.1	19.8	13.6	17.8	15.6
Negotiated Grid	11.8	12.6	9.7	7.6	12.6	9.3	10.2	9.9	8.4	5.7	7.0	7.9	7.9	7.0	6.9	8.5