Exhibit 50

Corrected Dimofte Expert Report

R-CALF v. USDA

Case No. 1:20-cv-02552-RDM

UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF COLUMBIA

RANCHERS-CATTLEMEN ACTION LEGAL FUND,
UNITED STOCKGROWERS OF AMERICA,
PO Box 30715 Billings, MT 59107

Plaintiff,

v.

UNITED STATES DEPARTMENT OF AGRICULTURE,
1400 Independence Ave., SW
Washington, DC 20250, and

SONNY PERDUE, in his official capacity as Secretary of the United States Department of Agriculture,
1400 Independence Ave., SW
Washington, DC 20250,

Defendants.

Case No. 20-2552

EXPERT REPORT OF CLAUDIU V. DIMOFTE, PH.D.

December 22, 2023

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I. INTRODUCTION

1. I understand that the Plaintiff in this matter, the Ranchers-Cattlemen Action Legal Fund, United States Stockgrowers of America (R-CALF), alleges that the United States Department of Agriculture (USDA) and Sonny Perdue in his official capacity of Secretary of the USDA, as managers of the Beef Checkoff subsidy program, control "expenditures by state beef councils [that] are frequently used to promote the type of speech to which R-CALF objects, including speech that promotes corporate consolidation in the beef industry and advertisements that make no effort to distinguish domestic beef from other beef."[1]
2. Specifically, Plaintiffs allege that "R-CALF's members' livelihoods as independent, domestic producers are threatened by [USDA] speech that promotes consolidation, treats all beef as equal and/or that fails to distinguish between where and how beef is produced."[2]
3. Furthermore, R-CALF alleges that, but for USDA's undifferentiated and consolidation-minded advertising, "consumers should and would prefer domestic beef produced in compliance with the United States' rigorous standards over other beef that is not, if they were empowered to make that distinction."[3]
4. I was asked by The Public Justice Food Project, representing the Plaintiff, to provide an expert report in the above matter in order to assess the extent to which specific alleged USDA practices[4] are indeed detrimental to the Plaintiff in how they influence the purchase behavior of the relevant consumer population.
5. In particular, this research looks at advertisements paid-for and approved as part of USDA's Beef Checkoff program (particularly those funded by state beef councils operating under a Memorandum of Understanding with the USDA) and their effect on consumer perceptions of beef market differentiation, consumer purchase intent, and consumer willingness-to-pay.

[1] First Amended Complaint, *Ranchers-Cattlemen Action Legal Fund, United Stockgrowers of America v. United States Department of Agriculture and Sony Perdue in his official capacity as Secretary of the United States Department of Agriculture*, Case No. 20-2552, United States District Court for the District of Columbia ("Complaint"), ¶¶ 30.
[2] Complaint, ¶¶ 37.
[3] Complaint, ¶¶ 37.
[4] Complaint, ¶¶ 37.

A. Qualifications

6. I am a tenured Professor of Marketing in the Fowler College of Business at San Diego State University and a Research Fellow at its Centre for Integrated Marketing Communications. I hold a doctoral degree in Marketing with a psychology minor from the Foster School of Business at the University of Washington in Seattle. My research interests span various areas of consumer psychology, with a focus on consumer response to marketing stimuli and its measurement via appropriate marketing metrics. My research has appeared in leading scholarly journals in the fields of marketing, consumer psychology, and management science.

7. I have co-chaired major academic conferences in the marketing field and been a keynote speaker at practitioner/industry conferences. I have given invited research talks at numerous academic institutions across several continents and have served on the Editorial Boards of three of the leading academic journals in business: the *Journal of Consumer Psychology* (since 2012), the *Journal of the Academy of Marketing Science* (since 2017), and the *Journal of International Marketing* (since 2019).

8. My consulting work has involved clients ranging from start-ups to non-profits and Fortune 500 companies, as well as expert witness research, reporting, deposition, and testimony in consumer-related litigation.

9. Over almost two decades of academic and consulting research I have been involved in hundreds of research projects and I am well equipped to perform scholarly and applied work from both theoretical and methodological perspectives.

10. My curriculum vitae, which provides more details about my background as well as a detailed list of my professional publications for at least the past ten years, is attached hereto as Appendix A. A list of cases where I provided expert deposition or testimony in the preceding five years is attached hereto as Appendix B.

11. I was paid a flat fee as compensation for this assignment, in the amount of $37,000 (thirty-seven thousand USD, inclusive of data cost). Given the associated time commitment, my compensation rate averages $750 (seven hundred and fifty USD) per hour. The compensation is not contingent upon the outcome of the research or the case.

B. Background

12. The federal Beef Checkoff program, managed by USDA, requires independent ranchers to pay assessments that subsidize the speech[5] of both the federal government[6] (a practice that the U.S. Supreme Court has deemed constitutional[7]) and state-based entities (i.e., "qualified state beef councils" – QSBCs) that are often private rather than established by federal or state statute.[8]

13. As the largest cattle trade association that represents independent U.S. cattle producers,[9] R-CALF has long advocated for Beef Checkoff program funds to be administered in a manner that benefits independent, domestic beef producers.[10]

14. In particular, R-CALF alleges that QSBCs have frequently used speech (e.g., advertising) "which favors corporate consolidation in the beef industry that harms independent cattle producers."[11]

15. The Plaintiff also alleges that these advertisements "make no effort to distinguish domestic beef from other beef, which harms domestic producers that produce a superior product [which] consumers would favor."[12] This is a significant problem, given that previous research has shown that American consumers find beef origin to be a desirable product attribute for which they are willing to pay more. For example, Mennecke et al. (2007) found that country of origin was the most important out of a series of attributes describing beef products, a result later replicated by Gao and Schroeder (2009). Furthermore, research by Loureiro and Umberger (2007) identified a significant price premium that U.S. consumers placed on country-of-origin labeling, driven by their preference for domestic beef. More recently, Lim and colleagues (2013) reinforced the finding that American consumers have a strong preference for domestic beef compared to imports, given their willingness to pay more for it.

16. To address the issue of QSBC speech not qualifying as government speech, the USDA amended

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[5] The specific type of speech relevant to this case consists of what is typically labeled "generic advertising." This entails marketing campaigns that promote an overall product category (e.g., milk, beef, prunes, orange juice, etc.) rather than individual sellers in the category. Some have argued that generic advertising simply means advertising that "promotes the consumption of commodity goods" (Chakravarti and Janiszewski, 2004, p. 487).

[6] Complaint, ¶¶ 1.

[7] Complaint, ¶¶ 5.

[8] Complaint, ¶¶ 6. These state beef councils operate under Memoranda of Understanding with the USDA, which provide it with certain controls over the speech funded by these councils.

[9] Complaint, ¶¶ 2.

[10] Complaint, ¶¶ 3.

[11] Complaint, ¶¶ 6.

[12] Complaint, ¶¶ 6. In other words, these advertisements portray beef as a commodity product (i.e., part of a homogeneous category, wherein consumers do not distinguish between the offerings of the firms comprising the industry – see Fouraker, 1956).

the Beef Checkoff program be entering into Memoranda of Understanding (MOUs) with all qualified state beef councils.[13]

17. MOUs require that the USDA "pre-approve the state beef councils' speech before the speech is disseminated."[14] This USDA control renders the speech of QSBCs "government speech" and thus in line with the First Amendment.
18. However, Plaintiffs allege that the "USDA failed to utilize the notice-and-comment procedures required by the Administrative Procedure Act ("APA"), 5 U.S.C. § 553,"[15] which deprived R-CALF of the ability to advance alternative and/or additional reforms to the Beef Checkoff program.
19. In conclusion, Plaintiff alleges that the Beef Checkoff program funds speech (e.g., advertising) that harms the interests of R-CALF and its members.

C. Assignment

20. I was asked by Public Justice, representing the Plaintiff, to provide an expert report that assesses whether the USDA managed, Beef Checkoff funded speech (i.e., advertising) impacts the perceptions and purchase behavior of the relevant consumer population in a manner that is indeed detrimental to R-CALF and its members, as alleged.
21. To achieve this objective, I performed six studies as described below.
22. First, I designed, coded, conducted, and analyzed a national consumer survey to determine whether the speech funded by the Beef Checkoff program[16] has harmful effects on domestic cattle producers within the relevant national consumer population, as alleged. This *National Consumer Perceptions Study* is discussed in Section II below.
23. Second, I also designed, coded, conducted, and analyzed five state-level consumer surveys to determine whether the speech funded by the Beef Checkoff program[17] has harmful effects on domestic cattle producers within the relevant state-level consumer population, as alleged. These *State-Level Consumer Perceptions Studies* are discussed in Section III below.

[13] Complaint, ¶¶ 10.
[14] Complaint, ¶¶ 12.
[15] Complaint, ¶¶ 17.
[16] Complaint, ¶¶ 1, 21.
[17] Complaint, ¶¶ 1, 21.

24. I conducted the six studies in a manner consistent with the scientific standards of my profession. In particular, such studies should adhere to the factors cited in the Federal Judicial Center's *Manual for Complex Litigation*: choosing and defining the appropriate population while using a sample representative thereof, asking clear and not leading questions, gathering, analyzing, and reporting the data accurately and according to accepted statistical principles, conducting the survey by qualified persons following proper procedures, and conducting the entire process in an objective manner.[18]
25. The methodology employed in designing, coding, conducting, and analyzing the six studies conducted for this case is reliable, valid, and representative of those used in marketing research science and practice. The results of these studies can be relied upon to draw conclusions about the issues under consideration.
26. In designing, coding, conducting, and analyzing the six studies and formulating my related opinions, I drew from my on expertise and considered the items cited in the footnotes to this report as well as other relevant scholarly literature. All sources are listed in Appendix C.

D. Summary of Conclusions

27. Across six studies performed according to the field's best practices, this report finds that the speech (i.e., advertising) funded by the Beef Checkoff program has harmful effects on domestic cattle producers, as alleged. These effects are reliable and consistent at national and state levels.
28. The findings also show that alternative (but very similar) forms of speech (i.e., advertising) that provide consumers with minimal information regarding domestic beef producers (even without explicitly promoting them) may be able to avoid and reverse the harmful effects of current Beef Checkoff campaigns on R-CALF members.

II. NATIONAL CONSUMER PERCEPTIONS STUDY

29. The National Consumer Perceptions Study was conducted in order to assess the extent to which the alleged USDA practices[19] are indeed detrimental to the Plaintiff by affecting the purchase behavior of the relevant consumer population in a way that may harm R-CALF members.

[18] *Manual for Complex Litigation*, Federal Judicial Center, Fourth Edition, 2004, p. 103.
[19] Complaint, ¶¶ 37.

30. Using established and validated principles of survey design and administration, the study finds that consumer perceptions are significantly influenced by Beef Checkoff program advertising. The design, administration, and data analyses associated with the study are presented below.

A. Study Design

31. The following sections review the study design, including the target population, stimuli, and strategies employed to ensure the collection of valid and reliable data. They demonstrate how the methodological approach employed adheres to best practices, both generally for marketing research and for research conducted for the purpose of litigation.[20]

i. Survey Methodology

32. Much of the applied social research enterprise employs survey research for the measurement of respondent perceptions, attitudes, and behaviors. Survey research in general involves any measurement procedures that entail asking questions of respondents.

33. In particular, my National Consumer Perception survey research employed a questionnaire developed, administered, and analyzed with careful and objective consideration of appropriate targeting, question formulation and data analysis procedures and techniques,[21] as detailed below.

ii. Target Population and Sample

34. The appropriate target population for the study is actual or potential U.S. purchasers of beef products from meat retailers. In line with this classification, respondents were recruited to participate in the National Consumer Perceptions Study if they either (i) had purchased in the previous year or beef meat products at retail or (ii) were planning to purchase such products in the next year.

35. To remove individuals with specialized knowledge, expertise, or potential bias, consumers were screened out of the sample if they had ever worked themselves or had family members who had ever worked in the following industries: advertising or market research, animal care or veterinarian services, legal services, meat production, distribution, or sales, or retail grocery.

[20] This research follows the standards established by the Federal Judicial Center in the "Reference Guide on Survey Research" and in the "Manual for Complex Litigation" for designing and conducting valid and reliable studies used in litigation. *See* Diamond, Shari S., "Reference Guide on Survey Research," in *Reference Manual on Scientific Evidence*, Third Edition, National Academies Press, 2011, pp. 359-423 ("Diamond"); *also see* "Manual for Complex Litigation."

[21] *Manual for Complex Litigation*, p. 103.

36. The survey employed start quotas based on the U.S. census for consumer age, gender, income, and geographical region. By restricting survey starts such that potential respondents match the U.S. population, a sampling group was obtained that was nationally representative of consumers who purchased or are planning to purchase beef products at retail.

37. To ensure that all potential study respondents had the opportunity to participate, the study was made available to panel participants over multiple days across the country, at competitive pay rates. This is an important consideration in order to avoid *non-response bias*[22] – the possibility that non-respondents are different from respondents, thus undermining the representativeness of the sample. To assess this, I analyzed the demographic profiles of the respondents who were screened out during two different stages in the survey. The results suggest that the profile of the respondents remained relatively stable across screening instances and in line with the targeting,[23] producing a final sample that represents the adult U.S. consumer very well.

iii. Reliability and Validity Considerations

38. *Demand effects*. To avoid "demand effects" (i.e., instances wherein the survey "suggests" to respondents that they should provide a particular response that is "demanded" or desired by the researcher), the study was pretested, employed a "blind" approach, asked questions in a double-sided manner, randomized item exposure and answer options when appropriate, and did not give any indication that the survey was related to litigation involving beef advertising.

39. *Pretesting*. This is common practice methodology that aims to confirm that all questions in a survey are understood by respondents from the same target population (i.e., individuals who would be eligible to take the actual survey).[24] Upon fielding the National Consumer Perceptions Study, pretesting was pursued in order to ensure the reliability of the survey. Thirty-two pretests of the main questionnaire were conducted with respondents from the same target population.[25] The comprehension questions used in the pretest were in accordance with best research practices to explore respondent understanding of the measures of interest.

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[22] Diamond, p. 383.

[23] It would be problematic, for example, if a specific type of respondent were consistently dropped and not properly represented in the final sample.

[24] Diamond, pp. 388-389.

[25] Prior to fielding the online survey, a version of it that included six comprehension prompts was administered to a subsample of blind-to-the-purpose respondents recruited from the same target population. The same screening was employed, leading to 29 completed pretests. On a scale anchored at 1 = *very easy* and 7 = *very difficult*, respondents' mean scores on the six comprehension check items (of the form "How easy or difficult to understand was the question about…?) ranged from 1.24 to 1.90, in each case significantly different from the middle of the scale (i.e., 4) at $p < .001$. This is strong evidence that respondents found the study questions easy to comprehend.

40. *Blind methodology*. Respondents were at no time aware of the sponsor or purpose of the study, nor was this information identified to them at any time before, during or after their completion of their study.[26] This ensured that respondents would not craft their responses in line with what they perceived the survey sponsors wanted. Additionally, since the study was administered online by a computer program, it was not possible for the survey administrator to provide any cues indicating the sponsor or purpose of the study. Finally, the anonymous nature of the study ensured that respondents could feel at ease and provided truthful and valid responses.
41. *Double-sided questions*. In providing response options to the survey questions, "balanced and explicit emphasis to the neutral as well as affirmative and negative positions"[27] was placed, while a "Do not know/No opinion" or "Cannot remember" option was included when appropriate in order to reduce guessing.[28]
42. *Randomization.* The "Reference Guide on Survey Research" recommends that "the order of the questions and the order of the response choices in a survey should be rotated."[29] In line with this recommendation and best practices, the order in which answer options were presented to respondents was randomized for relevant questions. Appendix F describes the survey coding logic.
43. *Follow-up items to assess litigation awareness*. The "Reference Guide on Survey Research," argues that standard practice is for both the interviewer and the respondent to be blind to the sponsor of the survey and its purpose.[30] At the end of the survey, all respondents were asked whether they were aware of any pending litigation involving beef advertising and, if so, to describe the extent and details of their related knowledge. The results of these follow-up questions were used to confirm that none of the survey results were driven by respondents' being potentially aware of the current litigation.

[26] Diamond, pp. 410-411.
[27] Jacoby, Jacob, "Are Closed-Ended Questions Leading Questions?" in *Trademark and Deceptive Advertising Surveys: Law, Science, and Design*, Shari S. Diamond and Jerre B. Swann, eds., American Bar Association, 2012, p. 275.
[28] Diamond, p. 390.
[29] Diamond, p. 396.
[30] Diamond, pp. 410-411.

B. Study Administration

44. The National Consumer Perceptions survey was administered online via the market-leading Qualtrics platform, using Precision Sample[31] and PureSpectrum[32] integrated survey panels.[33] The survey administration consisted of the following steps:

i. Screening Section

43. *Invitation and device check*. Potential respondents were invited to participate via multiple channels and were provided competitive participation incentives depending on recruitment method and demographic group in order to optimize response rates.[34] The requested sample was representative of the U.S. adult population with respect to demographics (*see* Appendix E). Respondents who were not taking the survey on a desktop, laptop, or tablet were screened out of the study in order to ensure that everyone in the final sample could view the presented information and stimuli properly and data quality was not negatively affected.[35]

44. *Representative population*. The survey began with a screening section wherein potential respondents were asked to provide their age, gender, ethnicity, marital and parenthood status, education level, employment status, annual household income, and state of residence. Next, respondents were terminated if they themselves or a household member might have specialized knowledge of the advertising/market research, animal care/veterinary services, legal services, meat production, distribution or sales, or retail grocery industries.[36]

45. *Beef purchase history or intent*. Respondents were then screened for purchases of beef products at retail (i.e., grocery store or restaurant) within the past year, and allowed to proceed if they indicated they had made such purchase.[37] Respondents who did not report having purchased

[31] Precision Sample owns and operates proprietary online, mobile, and social respondent panels exceeding 8 million participants in 20 countries across the world. The company employs a proprietary 20-step panel validation, vetting and security process that ensures engaged and high quality samples.

[32] PureSpectrum consolidates respondent panels that number millions of participants in 60 countries around the world. The company developed the industry's first respondent-level scoring system to create a new standard of data quality.

[33] The survey was in the field between December 2 and 5, 2022.

[34] The specific recruiting message was as follows: *"Hello {panel member}, There's a study that we have matched to your profile called {external non-revealing study name}. Please use the following link to participate! {link} This study is worth x points if you complete it, or x*10^-1000 points if you do not end up qualifying for the study. Thank you for your continued participation in our panel!"*

[35] Struminskaya, Bella, Kai Weyandt, and Michael Bosnjak. "The effects of questionnaire completion using mobile devices on data quality. Evidence from a probability-based general population panel." *methods, data, analyses, 9* (2), 2015, 261-292.

[36] *See* Appendix F for specific phrasing of the respective items.

[37] Respondents were asked, "In the past year, did you purchase…?" Several product options were presented in randomized order. *See* Appendix F.

beef were then screened for whether they would consider doing so in next year, and allowed to proceed if they respondent affirmatively.[38] Respondents who did not indicate that they had either purchased beef at retail in the past year or would consider doing so in the next year were terminated.

46. *Initial attention checks*. The screening questions also ensured that respondents were involved in the study at the outset. First, one of the products that respondents were asked about having purchased in the previous year was French Mirabelle plums from their local grocery store. These fruits are of protected origin designation (they originate from Lorraine, France) and their import to the U.S. is restricted,[39] making them unavailable for purchase in any local store. Any respondent who reported having bought them in the past year was dropped from the survey. Respondents were also asked to report their ownership status relative to a few items presented in alphabetical order: a bicycle, a boat, a car, a dog, a graduate degree, a TV set, a smartphone, a telegraph, and a toothbrush. Only respondents who provided credible answers were permitted to continue to the main questionnaire section.[40]

ii. Main Questionnaire Section

47. *Establishing the research domain*. Qualified respondents who met all selection criteria were instructed to view several static (i.e., image-based) product advertisements in a manner similar to their normal ad viewing habits in a print or digital media context. Three ads (all from real marketing campaigns) were presented. In the *control* condition, none of the advertisements involved beef. Instead, they featured brands in the body soap, smartphone, and department store categories, respectively. In the *current* beef ad condition, the middle stimulus was an actual U.S.

[38] Respondents were asked, "In the next year, do you plan to purchase…?" The same product options were presented in randomized order. *See* Appendix F.

[39] *See* https://www.bonappetit.com/trends/article/11-weird-food-bans-from-blood-to-bottled-water.

[40] The response options to the ownership questions were: (1) "Do not have one and do not intend to get one in the near future," (2) "Do not have one but intend to get one in the near future," (3) "Have at least one," and (4) "Not sure." Respondents who answered (4) to any of the items, as well as those who answered (2) or (3) to the telegraph item or (1) or (2) to the toothbrush item were terminated. *See* Appendix F.

Beef Checkoff ad,[41] while in the *adjusted* beef ad condition the same U.S. Beef Checkoff ad featured an extra statement regarding domestic beef (see Appendix F).[42]

48. *Key attention check.* After ad exposure, respondents' attention was tested again by asking them to identify which (if any) of three listed brands had not been featured in any of the previous advertisements.[43] Two of the listed brands had been in fact presented (i.e., the body soap and the department store) and one was a decoy (i.e., a sports shoes brand, not actually presented). All respondents who did not select the decoy option exclusively were not allowed to continue.
49. *Introduction to evaluative items*. Respondents who passed the attention check were then told, "You have been selected to answer questions about the following industry: meat, advertising, distribution, or sales." The purpose of this statement was to have respondents believe that the specific industry was randomly selected among all products to which they had been previously exposed. This ensured that respondents would not adapt their responses to what they perceived the survey sponsors wanted (i.e., it prevented the emergence of demand effects).
50. *Willingness-to-pay*. Respondents were asked to report how much they would be willing to pay for a pound of beef steak, on average, at a grocery store (1 = *under $5/lb*, 2 = *between $5 and $6.99/lb*, 3 = *between $7 and $8.99/lb*, 4 = *between $9 and $10.99/lb*, 5 = *$11/lb or more*, 6 = *do not know / no opinion*).[44]
51. *Purchase intent*. The next item assessed respondents' interest in purchasing beef for consumption in the next two days (1 = *very unlikely* … 7 = *very likely*, 8 = I do not eat beef).[45]
52. *Perceptions of beef marketplace differentiation.* Three items were presented next, in order to assess the extent to which respondents felt that the source of their beef mattered (1 = *definitely not* … 7 = *definitely yes*, 8 = *do not know / no opinion*), how different they felt beef sellers in the U.S. market were depending on origin (1 = *not very different: beef suppliers are generally the same regardless of origin*, 2 = *very different: domestic beef suppliers are generally of higher*

[41] The current ads employed in this research (across all six studies) were selected based on my professional opinion regarding relevance and appropriateness from a set of available Beef Checkoff marketing messages. Furthermore, as mentioned below, respondents were asked directly about their perceptions of ad typicality. Across the samples, consumers perceived these ads to be on average similar to other beef ads they had seen.

[42] The extra statement was "Beef that is produced domestically uses high quality feed, advanced standards of care, and a limited carbon footprint." The statement was purely informational and not directly suggestive of domestic beef purchase.

[43] The study only used forward moving buttons throughout and the survey software disabled the browser's back button.

[44] According to the U.S. Bureau of Labor Statistics, the national average retail price of beef steak at survey time was $9.54.

[45] The final response option of this item was meant to ensure that prior filtering was accurate in only retaining meat eaters. No respondent selected this option, confirming the sample's external validity.

quality than imported ones, 3 = *do not know / no opinion*), and the extent to which they felt several marketplace products (including beef) matched the provided definition of a commodity[46] (1 = *not at all* … 7 = *perfectly*, 8 = *do not know / no opinion*).

53. *Susceptibility to marketing influence*. Respondents were asked to report whether beef advertising had an impact on their meat purchases (1 = *definitely not* … 7 = *definitely yes*, 8 = *do not know / no opinion*).
54. *Beef attribute importance*. The next item assessed the importance that respondents placed on several beef product attributes: animal treatment, brand, healthfulness, national origin, price, quality, safety, and taste (1 = *extremely unimportant* … 7 = *extremely important*, 8 = *do not know / no opinion*).
55. *Explicit comparisons.* Respondents were subsequently asked to report their level of agreement with two specific statements: (a) that domestic beef products are worth paying more for than imported ones and (b) that smaller batch, specialty beef products are worth paying more for than industrially produced ones (in each case: 1 = *completely disagree* … 7 = *completely agree*, 8 = *do not know / no opinion*).
56. *Openness to domestic producer claims*. Respondents were informed about the fact that domestic beef producers believe that their products are superior to imported ones and were asked whether receiving more details on those beliefs would impact their likelihood to select domestic beef (0 = *would definitely not buy domestic* … 10 = *would definitely buy domestic*) or pay more for it (0 = *would definitely not pay more for domestic* … 10 = *would definitely pay more for domestic*).
57. *Perceived price effect of generic beef advertising*. The next item asked respondents to assess the effect that generic beef advertising (i.e., which makes no distinction in terms of meat origin) has on their willingness to pay (1 = *generic ads make me want to pay much less* … 5 = *generic ads make me want to pay much more*, 6 = *do not know / no opinion*).

iii. Final Section

58. *Ad typicality*. To ensure that none of the potentially emerging effects are due to any peculiarity associated with the particular beef advertisements employed, an item explicitly asked respondents (except those in the control condition) how typical the beef ad previously

[46] The provided definition was: "A commodity is an economic good that the market treats as equivalent regardless of who produced it."

previewed was (where typicality was defined as similarity to other beef ads in the marketplace: 1 = *completely atypical* … 7 = *completely typical*).

59. *Meat eating habits*. Respondents were asked to select the descriptor that best applied to their food consumption category, among the following options: omnivore, carnivore, pollotarian, pescatarian, vegetarian, vegan, or halal/kosher/other.

60. *Household shopper status*. As a proxy for their category shopping expertise, respondents self-reported how often they bought groceries/food for their household (1 = *never* … 7 = *always*).

61. *General lawsuit awareness and follow-up*. Close to the end of the survey, all respondents were asked: "Are you aware of any current litigation involving beef producers?" and provided with two answer options: No and Yes. Those answering affirmatively were asked an additional question: "Please briefly describe your knowledge about the litigation involving beef producers." In this question, respondents were provided with an option to type in their response or select "Cannot remember."

62. The full questionnaire and its flow logic are presented in Appendix F.

C. Data Analysis and Results

i. Respondent Statistics

63. A total of 304 consumers out of 680 eligible respondents completed the Consumer Perceptions survey and comprised the study's final analytical sample. A complete description of response and completion rates for the National Consumer Perceptions Study is provided in Appendix D. The data in Appendix E presents demographic comparisons across dropped and retained respondents to demonstrate that the final sample was unbiased and largely in line with the desired targeting.

ii. Findings[47]

64. *Willingness-to-pay*. A one-way analysis of variance (ANOVA)[48] with the response condition (i.e., control, current, or adjusted advertisement, respectively) as predictive factor uncovered no

[47] Appendix G provides the response distributions for all quantitative survey items.

[48] ANOVA is a statistical procedure that assesses the extent to which the means of several groups (three, in this case) differ from each other in terms of a specific variable. In this case, it looks at whether the willingness-to-pay of consumers exposed to three different types of ads are identical. Even if the overall test statistic (i.e., the *F-ratio*) is not statistically significant, it is possible for paired contrasts between specific conditions to uncover statistically significant differences.

significant effects ($F(2, 292) = .51$, *ns*, $M_{ctrl} = 2.65$, $M_{curr} = 2.63$, $M_{adj} = 2.79$).[49] Across the board, respondents displayed relatively low willingness-to-pay for beef (around $7.38/lb) and exposure to Beef Checkoff messaging (either current or adjusted) did not alter their relatively high baseline price sensitivity.[50] Given that the control condition can be conceptually construed as the default marketplace state resulting from historical Beef Checkoff ad campaigns, it can be argued that the effect of the Beef Checkoff program over time has been to place downward pressure on consumer willingness-to-pay and therefore on beef prices in the U.S.

65. *Purchase intent*. A one-way ANOVA with the response condition (i.e., control, current, or adjusted advertisement, respectively) as predictive factor was significant ($F(2, 301) = 3.56$, $p < .03$, $M_{ctrl} = 5.23$, $M_{curr} = 5.70$, $M_{adj} = 5.84$**).** Relative to the absence of beef marketing messaging, each of the two Beef Checkoff ads used in this study produced significantly higher desire to purchase and consume beef (at $p < .05$ and $p < .02$, respectively for the two contrasts against control). Thus, Beef Checkoff campaigns render beef more salient (i.e., they engender strong reminder effects) and therefore have positive impact on category consumption levels. Altering current Beef Checkoff advertising by including information regarding domestic beef does not attenuate the positive effect of beef advertising on consumer demand.

66. *Perceptions of beef marketplace differentiation.* A one-way ANOVA with the response condition (i.e., control, current, or adjusted advertisement, respectively) as factor predicting respondent beliefs that the source of the beef they buy matters uncovered no significant effects ($F(2, 298) = .31$, *ns*, $M_{ctrl} = 5.91$, $M_{curr} = 6.05$, $M_{adj} = 5.99$). This appears to be largely due to a ceiling effect, given that even in the control condition the perceived importance of beef source was very high and there was effectively not much more room for these beliefs to improve after the Beef Checkoff ads.

67. In terms of respondent perceptions of the extent to which beef suppliers in the U.S. market are different, a Chi-square analysis of proportions[51] uncovered that they differed based on condition ($\chi^2(2) = 6.85$, $p < .04$). In short, although the overall sample generally perceived that

[49] The degrees of freedom vary for the statistical tests involving items that featured a "do not know/no opinion" option. Respondents who selected that option were removed from analyses.

[50] The average willingness-to-pay was significantly lower than the middle of the scale ($t(294) = -4.59$, $p < .001$).

[51] The Chi-square test of independence is a statistical procedure that assesses the extent to which two sets of categorical variables are related to each other (here, three types of ad exposure and two opinions on perceived market differences). A statistically significant test suggests that the proportion of respondents who have different perceptions regarding beef market differentiation varies depending on the type of ad viewed.

the market does feature some differentiation, this perception was significantly more pronounced after exposure to the adjusted Beef Checkoff advertisement (61.43% vs. 68.67% vs. 80.49% across conditions, respectively, believed that domestic beef suppliers are generally of higher quality than imported ones). Thus, the adjusted Beef Checkoff message enhanced respondent perceptions of domestic-imported beef market differentiation.[52]

68. A one-way ANOVA on the beef-as-commodity item with the response condition (i.e., control, current, or adjusted advertisement, respectively) as predictive factor was significant ($F(2, 294) = 3.51$, $p < .04$, $M_{ctrl} = 5.23$, $M_{curr} = 4.85$, $M_{adj} = 4.52$). The adjusted Beef Checkoff ad produced beef commoditization perceptions that were significantly different ($p < .01$) from those held by consumers unexposed to beef marketing messaging. However, consumer perceptions after the current Beef Checkoff ad were no different from those of respondents unexposed to beef marketing messaging. In short, beef meat was seen to be less of a commodity after the messaging highlighting the differentiating characteristics of domestic producers,[53] suggesting that after such ads consumers could be more inclined to seek differentiating beef attributes.

69. *Susceptibility to marketing influence*. Respondents reported a general ambivalence in terms of whether beef advertising had an impact on their meat purchases ($M = 3.88$, $t(297) = -1.18$, *ns* in contrast against the middle of the scale). However, a one-way ANOVA on this item with the response condition (i.e., control, current, or adjusted advertisement, respectively) as predictive factor was marginally significant ($F(2, 295) = 2.50$, $p = .08$, $M_{ctrl} = 3.77$, $M_{curr} = 3.66$, $M_{adj} = 4.20$). The contrast between the two types of Beef Checkoff ads was statistically significant ($p < .04$), suggesting that respondents perceived the adjusted ad to be more consequential than the current ad, likely due to its enhanced informativeness.

70. *Beef attribute importance*. The weight that respondents placed on beef product attributes did not vary by condition, except for national origin. A one-way ANOVA on this item with the response condition (i.e., control, current, or adjusted advertisement, respectively) as predictive factor was significant ($F(2, 290) = 3.33$, $p < .04$, $M_{ctrl} = 4.48$, $M_{curr} = 4.44$, $M_{adj} = 4.97$). The contrasts between the adjusted Beef Checkoff ad and the other two conditions were statistically significant ($p < .04$ and $p < .02$, respectively), suggesting that upon exposure to the extra

[52] This validates the messaging manipulation in this study by demonstrating that the extra information about domestic beef producers presented in the adjusted Beef Checkoff advertisement was attended to and processed by respondents.
[53] Supporting the validity of the data, none of the other products' commodity status perceptions varied with condition.

information regarding domestic beef producers respondents saw the national origin of the beef they buy as more important, in line with the similar effect on perceived market commoditization.

71. *Explicit comparisons.* Across the board, respondents largely agreed with the statements that domestic beef and small batch, specialty beef are worth paying more for than imported beef and industrially produced beef, respectively ($M = 5.24$, $t(294) = 14.46$, $p < .001$ and $M = 5.22$, $t(292) = 14.82$, $p < .001$, respectively in contrasts against the middle of the scale). These effects did not vary by condition.
72. *Openness to domestic producer claims*. Across the board, respondents largely agreed that if presented with more information about domestic independent cattle ranchers' claims regarding their beef they would be more likely to select and pay more for domestic beef, respectively ($M = 7.81$, $t(303) = 29.73$, $p < .001$ and $M = 7.39$, $t(303) = 22.57$, $p < .001$, respectively in contrasts against the middle of the scale). These effects did not vary by condition.
73. *Perceived price effect of generic beef advertising*. Across the board, respondents largely felt that generic beef advertising made them want to pay less for beef ($M = 2.86$, $t(238) = -2.76$, $p < .01$ in contrast against the middle of the scale). This effect did not vary by condition and supports the earlier finding of a downward pressure on retail prices associated with generic beef advertising.
74. *Ad typicality*. Both Beef Checkoff ads employed in the study were deemed as largely typical by respondents ($M = 5.34$, $t(108) = 9.53$, $p < .001$ and $M = 5.47$, $t(98) = 10.69$, $p < .001$, respectively in contrasts against the middle of the scale), suggesting that none of the observed effects are due to idiosyncrasies associated with the employed stimuli and thus supporting the study's external validity.
75. *Meat eating habits*. In line with expectations and in support of the sample's external validity, all respondents selected options that allowed for the consumption of animal meat or byproducts (e.g., no respondent reported a "vegan" diet option).
76. *Household shopper status*. In line with expectations and in support of the sample's external validity, all respondents selected options that supported their purchase of household groceries (e.g., no respondent selected the "I never buy groceries/food for the household" option).
77. Only 3% of respondents reported any awareness of beef litigation, though upon follow-up just one respondent reported any specific information, which did not directly refer to the present case.

iii. Summary of National Consumer Perceptions Study Results

78. The main findings of the National Consumer Perceptions Study can be summarized as follows:

(a) the current Beef Checkoff advertising has created consumer perceptions of homogeneity (i.e., lack of differentiation) in the marketplace;[54]

(b) the current Beef Checkoff advertising has placed downward pressure on retail prices in the category;[55]

(c) the relevant consumer population places a relatively high weight on the origin of their beef, particularly if that attribute is made salient;

(d) the relevant consumer population would be more likely to choose domestic beef if presented with more information that highlights the differentiating characteristics of domestic beef products;

(e) the relevant consumer population would be more likely to pay higher prices for domestic beef if presented with more information that highlights the differentiating characteristics of domestic beef products.

D. Conclusions

79. The results of the National Consumer Perceptions Study show that the Beef Checkoff program advertising is a USDA practice[56] that is indeed detrimental to R-CALF members' welfare. This type of speech impacts both the willingness-to-pay and the purchase behavior of the relevant consumer population in a manner that negatively affects domestic beef producers.[57]

80. The results also show that U.S. consumers may indeed "prefer domestic beef […] if they were empowered to make that distinction."[58]

III. STATE-LEVEL CONSUMER PERCEPTIONS STUDIES

81. Five states featuring a significant number of R-CALF members (i.e., Nebraska, Oklahoma, South Dakota, Texas, and Wisconsin) were selected as locations where the National Study was replicated.

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[54] In selecting a positioning strategy in the marketplace, firms generally choose between competing as an undifferentiated, low-cost provider and a differentiated one of typically higher price. To enhance margins and avoid competing on price, firms typically select specific differentiation strategies (i.e., differentiation lowers price competition) .

[55] Given that higher quality beef is generally more expensive, this suggests that in relative terms the downward pressure on prices was stronger for higher quality producers.

[56] Complaint, ¶¶ 37.

[57] An important consideration is that, in large part due to the generic Beef Checkoff advertising campaigns, the U.S. beef market is not perceived as segmented by consumers. Due to this perceived homogeneity (Johnson et al., 1989; Fanatico and Rinehart, 2012), differentiated beef producers are in direct competition with undifferentiated ones for consumer favor.

[58] Complaint, ¶¶ 37.

82. The underlying motivation was to assess the reliability of the overall effects uncovered and to enhance the external validity of the research by evaluating consumer perceptions upon exposure to locally-relevant stimuli. To that end, all presented ads involved Beef Checkoff marketing messaging recently used by each state's Beef Council (see Appendix H).
83. Beyond the use of local, state-specific beef marketing stimuli and the description of the study as involving respondents from the respective state, each state-level study was identical in structure and content to the National Study.

A. Nebraska Study – Results and Conclusions

84. The Nebraska study (N = 154 respondents)[59] was performed with the same concern with procedural appropriateness and objectivity[60] as the National Study. Results for the key variables of interest are presented below.
85. *Willingness-to-pay*. A one-way ANOVA with the response condition (i.e., control, current, or adjusted ad, respectively) as predictive factor uncovered no significant effects ($F(2, 147) = 1.12$, *ns*, $M_{ctrl} = 2.42$, $M_{curr} = 2.28$, $M_{adj} = 2.62$). Across the board, respondents displayed low willingness-to-pay for beef steak (around $6.86/lb, significantly below the middle of the scale) and exposure to Beef Checkoff messaging (current or adjusted) did not alter their relatively high baseline price sensitivity. Directionally, results were consistent with those of the National Study.
86. *Purchase intent*. A one-way ANOVA with the response condition (i.e., control, current, or adjusted advertisement, respectively) as predictive factor uncovered no significant effects ($F(2, 151) = .46$, *ns*, $M_{ctrl} = 5.76$, $M_{curr} = 5.91$, $M_{adj} = 6.09$). Directionally, the results were consistent with those of the National Study.
87. *Perceptions of beef marketplace differentiation.* A one-way ANOVA on the beef-as-commodity item with the response condition (i.e., control, current, or adjusted advertisement, respectively) as predictive factor uncovered no significant effects ($F(2, 142) = 1.97$, *ns*, $M_{ctrl} = 5.50$, $M_{curr} = 5.35$, $M_{adj} = 4.77$). The adjusted Beef Checkoff ad produced beef commoditization perceptions that were marginally different ($p = .06$) from those held by consumers unexposed to beef

[59] The study was in the field between December 9 and 18, 2022 and was sourced from the same online panels as the National Survey. Appendix I provides full sample demographics. Out of the 298 total initial respondents, 142 were dropped after screening and attention checks and 154 remained in the analytical sample. Both Beef Checkoff ads employed in the study were deemed as largely typical by respondents ($p < .001$ and $p < .005$, respectively in contrasts against the middle of the scale).

[60] *Manual for Complex Litigation*, Federal Judicial Center, Fourth Edition, 2004, p. 103.

marketing messaging. However, consumer perceptions after the current Beef Checkoff ad were no different from those of respondents unexposed to beef marketing messaging. Directionally, the results were consistent with those of the National Study.

88. *Openness to domestic producer claims*. Across the board, respondents largely agreed that if presented with more information regarding domestic independent cattle ranchers' claims of beef superiority they would be more likely to select and pay more for domestic beef, respectively ($M = 8.22$, $t(153) = 23.27$, $p < .001$ and $M = 7.68$, $t(153) = 16.25$, $p < .001$, respectively in contrasts against the middle of the scale). These effects did not vary by condition and were largely consistent with those of the National Study.

89. In conclusion, the results of the Nebraska Study are remarkably consistent with those of the National Study. They show that the default consumer expectation in the category is for low differentiation and low prices, although consumers appear receptive to learning more about the differentiation strategies of domestic beef ranchers.

B. Oklahoma Study – Results and Conclusions

90. The Oklahoma study (N = 141 respondents)[61] was performed with the same concern with procedural appropriateness and objectivity[62] as the National Study. Results for the key variables of interest are presented below.

91. *Willingness-to-pay*. A one-way ANOVA with the response condition (i.e., control, current, or adjusted advertisement, respectively) as predictive factor uncovered no significant effects ($F(2, 131) = .78$, *ns*, $M_{ctrl} = 2.57$, $M_{curr} = 2.75$, $M_{adj} = 2.88$). Across the board, respondents displayed low willingness-to-pay for beef steak (around $7.46/lb, significantly below the middle of the scale) and exposure to Beef Checkoff messaging (current or adjusted) did not alter their relatively high baseline price sensitivity. Directionally, results were consistent with those of the National Study.

92. *Purchase intent*. A one-way ANOVA with the response condition (i.e., control, current, or adjusted advertisement, respectively) as predictive factor was significant ($F(2, 138) = 5.48$, $p < 01$, $M_{ctrl} = 5.37$, $M_{curr} = 6.29$, $M_{adj} = 6.27$). Relative to the absence of beef marketing

[61] The study was in the field between December 8 and 22, 2022 and was sourced from the same online panels as the National Survey. Appendix I provides full sample demographics. Out of the 313 total initial respondents, 172 were dropped after screening and attention checks and 141 remained in the analytical sample. Both Beef Checkoff ads employed in the study were deemed as largely typical by respondents ($p < .001$ and $p < .005$, respectively in contrasts against the middle of the scale).

[62] *Manual for Complex Litigation*, Federal Judicial Center, Fourth Edition, 2004, p. 103.

messaging, each of the two Beef Checkoff ads produced significantly higher desire to purchase and consume beef (at $p < .005$ and $p < .01$, respectively for the two contrasts against control). This replicates the findings of the National Study.

93. *Perceptions of beef marketplace differentiation.* A one-way ANOVA on the beef-as-commodity item with the response condition (i.e., control, current, or adjusted advertisement, respectively) as predictive factor uncovered no significant effects ($F(2, 134) = .75$, *ns*, $M_{ctrl} = 5.08$, $M_{curr} = 5.21$, $M_{adj} = 4.73$. Directionally, the results were consistent with those of the National Study.

94. *Openness to domestic producer claims*. Across the board, respondents largely agreed that if presented with more information regarding domestic independent cattle ranchers' claims of beef superiority they would be more likely to select and pay more for domestic beef, respectively ($M = 8.04$, $t(140) = 19.66$, $p < .001$ and $M = 7.52$, $t(140) = 14.77$, $p < .001$, respectively in contrasts against the middle of the scale). In each case, respondents exposed to the adjusted Beef Checkoff ad (but not those exposed to the current one) were significantly more likely ($p < .05$ and $p < .01$, respectively) to select and pay more for domestic beef.

95. In conclusion, the results of the Oklahoma Study are remarkably consistent with those of the National Study. They show that the default consumer expectation in the category is for low differentiation and low prices, although consumers appear receptive to learning more about the differentiation strategies of domestic beef ranchers.

C. South Dakota Study – Results and Conclusions

96. The South Dakota study ($N = 155$ respondents)[63] was performed with the same concern with procedural appropriateness and objectivity[64] as the National Study. Results for the key variables of interest are presented below.

97. *Willingness-to-pay*. A one-way ANOVA with the response condition (i.e., control, current, or adjusted advertisement, respectively) as predictive factor was marginally significant ($F(2, 147) = 2.59$, $p < .08$, $M_{ctrl} = 2.76$, $M_{curr} = 2.43$, $M_{adj} = 2.98$). Across the board, respondents displayed low willingness-to-pay for beef steak (around $7.44/lb, significantly below the middle of the scale)

[63] The study was in the field between December 8 and 20, 2022 and was sourced from the same online panels as the National Survey. Appendix I provides full sample demographics. Out of the 244 total initial respondents, 89 were dropped after screening and attention checks and 155 remained in the analytical sample. Both Beef Checkoff ads employed in the study were deemed as largely typical by respondents ($p < .005$ and $p < .004$, respectively in contrasts against the middle of the scale).

[64] *Manual for Complex Litigation*, Federal Judicial Center, Fourth Edition, 2004, p. 103.

and exposure to Beef Checkoff messaging (current or adjusted) did not alter their relatively high baseline price sensitivity. However, the altered Beef Checkoff ad produced significantly higher levels of willingness-to-pay ($p < .03$) than the current Beef Checkoff ad. Directionally, results were consistent with those of the National Study.

98. *Purchase intent*. A one-way ANOVA with the response condition (i.e., control, current, or adjusted advertisement, respectively) as predictive factor uncovered no significant effects ($F(2, 155) = 1.80$, *ns*, $M_{ctrl} = 5.54$, $M_{curr} = 5.92$, $M_{adj} = 6.09$). Directionally, the results were consistent with those of the National Study.

99. *Perceptions of beef marketplace differentiation.* A one-way ANOVA on the beef-as-commodity item with the response condition (i.e., control, current, or adjusted advertisement, respectively) as predictive factor was marginally significant ($F(2, 147) = 2.41$, $p = .09$, $M_{ctrl} = 5.71$, $M_{curr} = 5.16$, $M_{adj} = 4.96$). The adjusted Beef Checkoff ad produced beef commoditization perceptions that were significantly lower ($p < .04$) from those held by consumers unexposed to beef marketing messaging. However, consumer perceptions after the current Beef Checkoff ad were no different from those of respondents unexposed to beef marketing messaging. Directionally, the results were consistent with those of the National Study.

100. *Openness to domestic producer claims*. Across the board, respondents largely agreed that if presented with more information regarding domestic independent cattle ranchers' claims of beef superiority they would be more likely to select and pay more for domestic beef, respectively ($M = 7.63$, $t(154) = 17.09$, $p < .001$ and $M = 7.36$, $t(154) = 14.90$, $p < .001$, respectively in contrasts against the middle of the scale). These effects did not vary by condition and were largely consistent with those of the National Study.

101. In conclusion, the results of the South Dakota Study are remarkably consistent with those of the National Study. They show that the default consumer expectation in the category is for low differentiation and low prices, although consumers appear receptive to learning more about the differentiation strategies of domestic beef ranchers.

D. Texas Study – Results and Conclusions

102. The Texas study ($N = 156$ respondents)[65] was performed with the same concern with procedural appropriateness and objectivity[66] as the National Study. Results for the key variables of interest are presented below.

103. *Willingness-to-pay*. A one-way ANOVA with the response condition (i.e., control, current, or adjusted advertisement, respectively) as predictive factor uncovered no significant effects ($F(2, 145) = .90$, *ns*, $M_{ctrl} = 2.55$, $M_{curr} = 2.70$, $M_{adj} = 2.85$). Across the board, respondents displayed low willingness-to-pay for beef steak (around $7.40/lb, significantly below the middle of the scale) and exposure to Beef Checkoff messaging (current or adjusted) did not alter their relatively high baseline price sensitivity. Directionally, results were consistent with those of the National Study.

104. *Purchase intent*. A one-way ANOVA with the response condition (i.e., control, current, or adjusted advertisement, respectively) as predictive factor uncovered no significant effects ($F(2, 153) = 1.50$, *ns*, $M_{ctrl} = 5.37$, $M_{curr} = 5.73$, $M_{adj} = 5.93$). Directionally, the results were consistent with those of the National Study.

105. *Perceptions of beef marketplace differentiation.* A one-way ANOVA on the beef-as-commodity item with the response condition (i.e., control, current, or adjusted advertisement, respectively) as predictive factor uncovered no significant effects ($F(2, 143) = 1.04$, *ns*, $M_{ctrl} = 5.38$, $M_{curr} = 5.06$, $M_{adj} = 4.87$). Consumer perceptions after either of the Beef Checkoff ads were no different from those of respondents unexposed to beef marketing messaging. Directionally, the results were consistent with those of the National Study.

106. *Openness to domestic producer claims*. Across the board, respondents largely agreed that if presented with more information regarding domestic independent cattle ranchers' claims of beef superiority they would be more likely to select and pay more for domestic beef, respectively ($M = 7.96$, $t(154) = 19.51$, $p < .001$ and $M = 7.54$, $t(154) = 14.89$, $p < .001$, respectively in contrasts against the middle of the scale). These effects did not vary by condition and were largely consistent with those of the National Study.

[65] The study was in the field between December 6 and 12, 2022 and was sourced from the same online panels as the National Survey. Appendix I provides full sample demographics. Out of the 419 total initial respondents, 263 were dropped after screening and attention checks and 156 remained in the analytical sample. Both Beef Checkoff ads employed in the study were deemed as largely typical by respondents ($p < .001$ and $p < .001$, respectively in contrasts against the middle of the scale).

[66] *Manual for Complex Litigation*, Federal Judicial Center, Fourth Edition, 2004, p. 103.

107. In conclusion, the results of the Texas Study are remarkably consistent with those of the National Study. They show that the default consumer expectation in the category is for low differentiation and low prices, although consumers appear receptive to learning more about the differentiation strategies of domestic beef ranchers.

E. Wisconsin Study – Results and Conclusions

108. The Wisconsin study (N = 157 respondents)[67] was performed with the same concern with procedural appropriateness and objectivity[68] as the National Study. Results for the key variables of interest are presented below.

109. *Willingness-to-pay*. A one-way ANOVA with the response condition (i.e., control, current, or adjusted advertisement, respectively) as predictive factor uncovered no significant effects ($F(2, 152) = .38$, *ns*, $M_{ctrl} = 2.47$, $M_{curr} = 2.40$, $M_{adj} = 2.60$). Across the board, respondents displayed low willingness-to-pay for beef steak (around $6.98/lb, significantly below the middle of the scale) and exposure to Beef Checkoff messaging (current or adjusted) did not alter their relatively high baseline price sensitivity. Directionally, results were consistent with those of the National Study.

110. *Purchase intent*. A one-way ANOVA with the response condition (i.e., control, current, or adjusted advertisement, respectively) as predictive factor uncovered no significant effects ($F(2, 154) = .35$, *ns*, $M_{ctrl} = 5.25$, $M_{curr} = 5.50$, $M_{adj} = 5.51$). Directionally, the results were consistent with those of the National Study.

111. *Perceptions of beef marketplace differentiation.* A one-way ANOVA on the beef-as-commodity item with the response condition (i.e., control, current, or adjusted advertisement, respectively) as predictive factor was significant ($F(2, 148) = 4.53$, $p < .02$, $M_{ctrl} = 5.02$, $M_{curr} = 5.43$, $M_{adj} = 4.34$). The adjusted Beef Checkoff ad produced beef commoditization perceptions that were marginally different ($p = .06$) from those held by consumers unexposed to beef marketing messaging and significantly different ($p < .01$) from those exposed to the current Beef Checkoff ad. However, consumer perceptions after the current Beef Checkoff ad were no different from those of respondents unexposed to beef marketing messaging.

[67] The study was in the field between December 8 and 12, 2022 and was sourced from the same online panels as the National Survey. Appendix I provides full sample demographics. Out of the 307 total initial respondents, 150 were dropped after screening and attention checks and 157 remained in the analytical sample. Both Beef Checkoff ads employed in the study were deemed as neither typical nor atypical by respondents (the respective contrasts against the middle of the scale were not statistically significant).

[68] *Manual for Complex Litigation*, Federal Judicial Center, Fourth Edition, 2004, p. 103.

112. *Openness to domestic producer claims*. Across the board, respondents largely agreed that if presented with more information regarding domestic independent cattle ranchers' claims of beef superiority they would be more likely to select and pay more for domestic beef, respectively ($M = 7.65$, $t(153) = 16.37$, $p < .001$ and $M = 7.18$, $t(153) = 12.39$, $p < .001$, respectively in contrasts against the middle of the scale). These effects did not vary by condition and were largely consistent with those of the National Study.

113. In conclusion, the results of the Wisconsin Study are consistent with those of the National Study. They show that the default consumer expectation in the category is for low differentiation and low prices, although consumers appear receptive to learning more about the differentiation strategies of domestic beef ranchers.

IV. META-ANALYSIS OF CONSUMER PERCEPTION STUDIES

114. Meta-analysis is a statistical technique that allows for the aggregation of results from multiple studies addressing the same variables and the comparison of the results patterns across different studies. Given that any particular study has a certain degree of measurement error, combining the analytical effects from multiple studies allows for more precise overall estimates that more closely approximate the overall population effects. The meta-analytic approach is particularly applicable in this case, as the six performed studies are identical in terms of variables of interest.

115. The brief meta-analysis performed here employed the SPSS (Statistical Package for the Social Sciences) 29 software package and focused on the two key variables emerging from the six performed studies: the effect of Beef Checkoff advertising on (a) consumer willingness to pay for beef, (b) related behavioral intent (i.e., self-reported likelihood of beef consumption), and (c) perceptions of beef differentiation (i.e., beef-as-commodity).[69]

116. A meta-analysis of the effects of Beef Checkoff advertising on consumer willingness-to-pay across the six studies performed in this report found that the current, generic Beef Checkoff ads did not improve willingness-to-pay relative to lack of beef advertising (*Cohen's d* = -.03, $Z = -.45$, *ns*), whereas the adjusted Beef Checkoff ads significantly improved willingness-to-pay relative to both lack of beef advertising (*Cohen's d* = .18, $Z = 2.32$, $p < .02$) and the current Beef Checkoff ads (*Cohen's d* = .21, $Z = 2.68$, $p < .01$).

[69] Appendix J presents the inputs for the analyses.

117. A meta-analysis of the effects of Beef Checkoff advertising on consumer purchase intent across the six studies performed in this report found that both the current, generic Beef Checkoff ads and the adjusted Beef Checkoff ones significantly improved consumer desire to purchase beef relative to lack of beef advertising (*Cohen's d* = .24, $Z = 3.23$, $p < .001$ and *Cohen's d* = .32, $Z = 4.23$, $p < .001$, respectively). The two types of Beef Checkoff ads did not differ significantly in terms of their impact of consumer purchase intent.

118. A meta-analysis of the effects of Beef Checkoff advertising on consumer perceptions of beef as a commodity across the six studies performed in this report found that the adjusted Beef Checkoff ads significantly lowered consumer perceptions of beef as a commodity relative to both the lack of beef advertising and the current, generic Beef Checkoff ads (*Cohen's d* = -.35, $Z = -4.53$, $p < .001$ and *Cohen's d* = -.25, $Z = -3.21$, $p < .001$, respectively). The beef differentiation perceptions of consumers exposed to current, generic Beef Checkoff ads were no different from those of consumers unexposed to beef marketing.[70]

V. OVERALL CONCLUSIONS

119. In conclusion, as stated and detailed above and based on the studies I conducted in this case, I have formed the following opinions:

(a) The current, generic Beef Checkoff program advertising tested here has created consumer perceptions of low market differentiation that renders beef akin to a commodity product (i.e., one perceived as the same regardless of seller) in consumers' mind. This finding is in line with prior scholarly research that has found generic advertising to diminish perceptions of product differentiation.[71] In particular, a review on the effects of generic beef advertising by Ferrier et al. (2007) "suggests that generic advertising may inhibit the ability of producers to differentiate […]" (p. 90). Furthermore, work by Isariyawongse et al. (2007) shows that in markets where this generic advertising effect occurs, lower quality producers are helped (and conversely, higher quality producers are hurt) by the consumer perceived market homogeneity: "generic advertising is likely to benefit the low quality firm more

[70] They were unexposed to beef marketing in this study, although they were likely exposed to it in the marketplace on prior occasions (i.e., the control, baseline condition is itself the result of sustained generic Beef Checkoff advertising).

[71] This is important because beyond generic advertising's primary goal of enhancing category demand, a secondary goal is doing so in an equitable manner. If undifferentiated sellers (e.g., lower quality ones) benefit more from the advertising than differentiated sellers (e.g., higher quality ones), industry positive effects are not allocated equitably.

than the high quality firm when generic advertising lowers product differentiation […]" (p.13). Similarly, Crespi and Marette (2002) argue that "a producer with a differentiated product may very well be harmed by an increase in generic advertising" (p. 694). However, this report finds that providing U.S. consumers with information that highlights the differentiating characteristics of domestic beef products (as done in the adjusted Beef Checkoff ads) renders their beef market homogeneity perceptions relatively less pronounced. This suggests that altering the Beef Checkoff ads from a purely reminder function to a more informative one enhances the salience of the presented information and makes consumers more likely to employ it in their subsequent product search.

(b) The current, generic Beef Checkoff program advertising tested here has also placed downward pressure on beef prices and induced a low consumer willingness-to-pay in general. Given that all products are seen as similar, there is no reason for consumers to consider any product attribute beyond price, (i.e., consumers are encouraged to purchase the lowest priced beef). In other words, competitors that differentiate in a market that consumers perceive as homogeneous (e.g., because generic advertising implies it) suffer by facing more competitive pressure than they would have had consumers been aware of their differentiating attribute(s).[72] Indeed, scholarly research has argued that generic advertising that decreases access to information about non-advertised attributes (e.g., quality) results in an increase importance of price (Chakravarti and Janiszewski, 2004). However, this report finds that providing U.S. consumers with information that highlights the differentiating characteristics of domestic beef products (as done in the adjusted Beef Checkoff ads) renders them less price sensitive. This finding confirms prior scholarly research on the topic, which has shown that generic advertisements that discuss a differentiating attribute produces an increase in the importance of that differentiating attribute (Chakravarti and Janiszewski, 2004). Material

(c) The current, generic Beef Checkoff program advertising has been successful at increasing primary consumer demand for beef. In line with previous scholarly work, this effect is likely

[72] In particular, generic Beef Checkoff marketing campaigns force domestic beef producers to compete with imported beef sellers in a manner that hides their differentiating attribute and therefore puts them at a relative disadvantage. Trade data and other market findings support the claim that beef imports are a material concern to domestic producers' financial welfare, given that the U.S. imports beef and cattle into the domestic market in significant volumes and that as imports increase beef prices often decrease (see Appendix K).

not to have benefitted all producers equally, given that "as generic advertising increases the size of the pie, the [relative] sizes of the slices are also changing" (Crespi and Marette, 2002, p. 700). Along the same lines, Chakravarti and Janiszewski (2004) have argued that "Generic advertising is designed to increase primary demand, or the 'size of the pie,' without affecting selective demand, or the 'share of the pie.' We find evidence to the contrary" (p. 487). This report finds that providing U.S. consumers with information that highlights the differentiating characteristics of domestic beef products (as done in the adjusted Beef Checkoff ads) retains the positive effect on primary demand, while potentially addressing the selective demand issue associated with perceived higher quality domestic beef producers (i.e., avoiding the harm that generic ad campaigns, which do not mention quality as a differentiating attribute, inflict on producers of perceived high quality beef). In this context, consumers are more likely to use the presented information as a differentiating attribute and search for products scoring high on that attribute at retail. This type of *pull* marketing entails products reaching consumers due to their specific demand at retail (e.g., caused by advertising campaigns that highlight the products' differentiating attributes), as opposed to a *push* marketing strategy wherein products reach consumers due to sellers "pushing" the product through the channel with the assistance of intermediaries; see Brocato, 2010). Thus, if consumers learn from advertising that a particular attribute (e.g., quality, origin, etc.) is a differentiating one, they are more inclined to seek products perceived as high on that attribute (Kotler and Keller, 2016), which in turn incentivizes sellers to pursue differentiation efforts along the respective attribute. This is relevant consideration, given that prior literature has stated that the USDA has an information problem when it comes to incentivizing production of high quality beef (e.g., Ferrier and Lamb, 2007).

120. My findings and opinions are subject to supplementation, revision, clarification, or correction as appropriate, should additional information come to light.

121. I declare under penalty of perjury that the foregoing is true and correct.

Executed on: December 22, 2023

Claudiu V. Dimofte, PhD

Appendix A

CLAUDIU V. DIMOFTE

Fowler College of Business
San Diego State University
5500 Campanile Drive
San Diego, CA 92182

Department of Marketing
619.594.0209
cdimofte@sdsu.edu
dimofte.sdsu.edu

EDUCATION

University of Washington – Philosophiae Doctor (Marketing) — Seattle, WA (2004)
University of South Carolina – Master of Business Administration (Intl. Business) — Columbia, SC (1998)
West University – Bachelor of Science (Economics) — Timisoara, Romania (1996)

ACADEMIC POSITIONS

San Diego State University – Professor of Marketing — San Diego, CA (2011-present)
Université Paris-Dauphine – Visiting Professor of Marketing — Paris, France (2016-present)
Rutgers University – Visiting Professor of Marketing — Camden, NJ (2016-2017)
Georgetown University – Assistant Professor of Marketing — Washington, DC (2004-2011)

RESEARCH

Books and Book Chapters

Dimofte, Claudiu V. (2024), "Advertising Threats to Consumer Self-Esteem." In Ruvio, Ayalla and Russell W. Belk (Eds.), *Handbook of Identity and Consumption*. New York, NY: Routledge.

Dimofte, Claudiu V. (2023), "Countering False Marketplace Information." In Florack, Arnd (Ed.), *Handbook of Social Cognition and Communication*. New York, NY: Routledge.

Dimofte, Claudiu V., Curtis P. Haugtvedt, and Richard F. Yalch (2015), *Consumer Psychology in a Social Media World*. New York, NY: Routledge.

Dimofte, Claudiu V. (2015), "Unconscious Cognition Effects in Consumer Research." In Jansson-Boyd, Cathrine, and Magdalena Zawisza (Eds.), *International Handbook of Consumer Psychology*. Abingdon, OX: Taylor & Francis.

Dimofte, Claudiu V. (2010), "Consumer Aspects of International Marketing." In Bagozzi, Richard P. and Ayalla Ruvio (Eds.), *Consumer Behavior*. New York, NY: Wiley & Sons.

Dimofte, Claudiu V. and Richard F. Yalch (2007), "The Use and Abuse of Polysemy." In Lowrey, Tina M. (Ed.), *Psycholinguistic Phenomena in Marketing Communications*. Mahwah, NJ: Erlbaum.

Dimofte, Claudiu V. and Richard F. Yalch (2005), "Consumer Disbelief and Attitudes: An Implicit Memory Explanation for Why Believability Is Not Necessary for Persuasion." In Kardes, Frank R., Paul M. Herr, Jaques Nantel. (Eds.), *Applying Social Cognition to Consumer-Focused Strategy*. Mahwah, NJ: Erlbaum.

Refereed Journal Articles and Proceedings

Dimofte, Claudiu V. (2022), "Subjective Scales Can Enhance Consumer Expectations and Lower Product Evaluations," *Advances in Consumer Research* (ABS category 2 – "well regarded"), 49.

Stone, Matthew D., Claudiu V. Dimofte, David R. Strong, Kim Pulvers, Noe Crespo, and John P. Pierce (2022), "Evaluating US Smokers Willingness-to-Pay for Different Cigarette Packaging Designs Before and After Real-world Exposure in a Randomized Trial," *Tobacco Control* (Q1 SJR, ranked 8th out of 530 journals in Public Health, Impact Factor: 6.221).

Dimofte, Claudiu V. (2021), "Assessing the Relationship between Product Scarcity and Consumer Utility," *Advances in Consumer Research* (ABS category 2 – "well regarded"), 48.

Andriuzzi, Andria, Géraldine Michel, and Claudiu V. Dimofte (2020), "How Brand Conversations on Social Media Prompt Jealousy in Brand Relationships," *Advances in Consumer Research* (ABS category 2 – "well regarded"), 47.

Pierce, John P., David R. Strong, Stone, Matthew D., Adriana Villaseñor, Claudiu V. Dimofte, Leas, Eric, Oratowski, Jesica, Elizabeth Brighton, Samantha Hurst, Kim Pulvers, Sheila Kealey, Ruifeng Chen, and Karen Messer (2020), "Real-World Exposure to Graphic Warning Labels on Cigarette Packs in U.S. Smokers: The CASA Randomized Trial Protocol," *Contemporary Clinical Trials* (Q1 SJR, Impact Factor: 2.480), 98, 106152.

Stone, Matthew D., Claudiu V. Dimofte, David R. Strong, Adriana Villaseñor, Kim Pulvers, Karren Messer, and John P. Pierce (2020), "A Tool to Assess Appeal-Aversion Response to Graphic Warning Labels on Cigarette Packs among United States Smokers," *Tobacco Control* (Q1 SJR, ranked 8th out of 530 journals in Public Health, Impact Factor: 6.221), 30 (3), 312-319.

Dimofte, Claudiu V. (2019), "American Conservatives: Anti-Globalist Global Brand Consumers," *Advances in Consumer Research* (ABS category 2 – "well regarded"), 46.

Leas, Eric C., John P. Pierce, Claudiu V. Dimofte, Dennis Trinidad, and David R. Strong (2018), "Standardized Cigarette Packaging May Decrease the Implied Safety of Natural American Spirit Cigarettes," *Tobacco Control* (Q1 SJR, ranked 8th out of 530 journals in Public Health, Impact Factor: 6.221), 27 (2), 118-123.

Latifi Kasani, Negin, and Claudiu V. Dimofte (2017), "The Dissimilarity Magnifying Bias," *Advances in Consumer Research* (ABS category 2 – "well regarded"), 44.

Leas, Eric C., Claudiu V. Dimofte, and David R. Strong (2017), "Standardized Packaging May reduce the Perception that American Spirit Cigarettes Are Less Harmful," *Annals of Behavioral Medicine* (Q1 SJR, ranked 17th out of 137 journals in Psychology/Multidisciplinary, Impact Factor: 3.575), 51, S856-S857.

Leas, Eric C., John P. Pierce, Claudiu V. Dimofte, Adriana Villaseñor, and David R. Strong (2016), "US Adult Smokers' Perceptions of Australia's Cigarette Warning Labels: Variance by Warning Content and Consistency across Socio-Demographic Sub-Segments," *Tobacco Control* (Q1 SJR, ranked 8th out of 530 journals in Public Health, Impact Factor: 6.221), 25 (6), 485-496.

Dimofte, Claudiu V., and Negin Latifi Kasani (2016), "When Celebrity Ad Placements Backfire," *Advances in Consumer Research* (ABS category 2 – "well regarded"), 43.

Dimofte, Claudiu V., Ronald C. Goodstein, and Anne M. Brumbaugh (2015), "A Social Identity Perspective on Aspirational Advertising: Implicit Threats to Collective Self-Esteem and Strategies to Overcome Them," *Journal of Consumer Psychology* (Q1 SJR, ABS category 4* – "world leading," listed among Financial Times' Top 50 Journals in Business Schools, Impact Factor: 3.385), 25 (3), 416-430.

Ivanic, Arti, Claudiu V. Dimofte, Rastislav Ivanic, and Maros Ivanic (2015), "The GroupSolver Method for Quantifying Qualitative Research," *Advances in Consumer Research* (ABS category 2 – "well regarded"), 42.

Dimofte, Claudiu V., Kyra Wiggin, and Richard F. Yalch (2014), "To Wait or Not? Why Creating Curiosity May Increase Patience," *Advances in Consumer Research* (ABS category 2 – "well regarded"), 41.

Dimofte, Claudiu V., and Katharina Zeugner-Roth (2013), "The Effects of Consumer Ethnocentrism and Cosmopolitanism on Consumers' Global/Local Brand Choice," *Advances in Consumer Research*, 40.

Dimofte, Claudiu V., and Chris Janiszewski (2013), "The Illusion of Lie Effect: The Suspicious Fluency of Round Numbers," *Advances in Consumer Research* (ABS category 2 – "well regarded"), 40.

Johansson, Johny K., Claudiu V. Dimofte, and Sanal Mazvancheryl (2012), "The Performance of Global Brands in the 2008 Financial Crisis: A Test of Two Brand Value Measures," *International Journal of Research in Marketing* (Q1 SJR, ABS category 4 – "top journal," Impact Factor: 2.593), 29 (4), 235-245.

Ülkü, Sezer, Claudiu V. Dimofte, and Glen M. Schmidt (2012), "Consumer Valuation of Modularly Upgradeable Products," *Management Science* (Q1 SJR, ABS category 4* – "world leading," listed among Financial Times' Top 50 Journals in Business Schools, Impact Factor: 4.219), 58 (9), 1761-1776.

Florack, Arnd, Claudiu V. Dimofte, Karin Rossler, and Susanne Leder (2012), "Brand-Related Background Music and Consumer Choice," *Advances in Consumer Research* (ABS category 2 – "well regarded"), 39.

Cassab, Harold, and Claudiu V. Dimofte (2012), "Everyday Objects of Desire: Dimensions of Design Innovation and the Centrality of Product Aesthetics," *Advances in Consumer Research* (ABS category 2 – "well regarded"), 39.

Dimofte, Claudiu V., Richard F. Yalch, and Kyra Wiggin (2012), "False but Persuasive Information: The Automatic Success of Infomercials," *Advances in Consumer Research* (ABS category 2 – "well regarded"), 39.

Dimofte, Claudiu V. and Richard F. Yalch (2011), "The Mere Association Effect and Brand Evaluations," *Journal of Consumer Psychology* (Q1 SJR, ABS category 4* – "world leading," listed among Financial Times' Top 50 Journals in Business Schools, Impact Factor: 3.385), 21 (1), 24-37.

Dimofte, Claudiu V., Ronald C. Goodstein, and Ajay Kalra (2011), "Context-Sensitive Advertising: A Fitting Story," *Advances in Consumer Research* (ABS category 2 – "well regarded"), 38.

Dimofte, Claudiu V. and Richard F. Yalch (2010), "The Role of Frequency of Experience with a Product Category and Temporal Orientation in Self-Referent Advertising," *Journal of Consumer Psychology* (Q1 SJR, ABS category 4* – "world leading," listed among Financial Times' Top 50 Journals in Business Schools, Impact Factor: 3.385), 20 (3), 343-354.

Dimofte, Claudiu V., Johny K. Johansson, and Richard P. Bagozzi (2010), "Global Brands in America: How Consumer Ethnicity Mediates the Global Brand Effect," *Journal of International Marketing* (Q1 SJR, ABS category 3 – "highly regarded," Impact Factor: 3.375), 18 (3), 82-106.

Dimofte, Claudiu V. (2010), "Implicit Measures of Consumer Cognition: A Review," *Psychology & Marketing* (Q1 SJR, ABS category 3 – "high quality," Impact Factor: 2.023), 27 (10), 921-937 (invited article).

Dimofte, Claudiu V. and Richard F. Yalch (2010), "Consumer Processing of Irrelevant Brand Associations," *Advances in Consumer Research* (ABS category 2 – "well regarded"), 37.

Dimofte, Claudiu V. and Johny K. Johansson (2009), "Scale-Dependent Automatic Shifts in Brand Evaluation Standards," *Journal of Consumer Psychology* (Q1 SJR, ABS category 4* – "world leading," listed among Financial Times' Top 50 Journals in Business Schools, Impact Factor: 3.385), 19 (2), 158-170.

Dimofte, Claudiu V. and Johny K. Johansson (2009), "Consumer Expectations and The Automatic Shifting of Standards in Brand Evaluations," *Advances in Consumer Research* (ABS category 2 – "well regarded"), 36.

Dimofte, Claudiu V., Johny K. Johansson, and Ilkka Ronkainen (2008), "Cognitive and Affective Reactions of American Consumers to Global Brands," *Journal of International Marketing* (Q1 SJR, ABS category 3 – "highly regarded," Impact Factor: 3.375), 16 (4), 115-137.

Dimofte, Claudiu V., Johny K. Johansson, and Ilkka Ronkainen (2008), "Spanning the Globe," *Marketing Management*, 17 (5), 40-43.

Dimofte, Claudiu V. and Richard F. Yalch (2008), "The Role of Product Category Familiarity in Self-Referent Advertising," *Advances in Consumer Research* (ABS category 2 – "well regarded"), 35.

Dimofte, Claudiu V. and Richard F. Yalch (2007), "Consumer Response to Polysemous Brand Slogans," *Journal of Consumer Research* (Q1 SJR, ABS category 4* – "world leading," listed among Financial Times' Top 50 Journals in Business Schools, Impact Factor: 3.800), 33 (4), 515-522.

Dimofte, Claudiu V. and Richard F. Yalch (2007), "The SMAART Scale: A Measure of Individuals' Automatic Access to Secondary Meanings in Polysemous Statements," *Journal of Consumer Psychology* (Q1 SJR, ABS category 4* – "world leading," listed among Financial Times' Top 50 Journals in Business Schools, Impact Factor: 3.385), 17 (1), 49-58.

Dimofte, Claudiu V., Richard F. Yalch, and Anthony G. Greenwald (2006), "Brand Names and Transitive Implicit Associations," *European Advances in Consumer Research*, 7.

Dimofte, Claudiu V. and Richard F. Yalch (2005), "The SMAART Scale: Measure Development and Validation," *Advances in Consumer Research* (ABS category 2 – "well regarded"), 32.

Dimofte, Claudiu V., Mark R. Forehand, and Rohit Deshpandé (2004), "Ad Schema Incongruity as Elicitor of Ethnic Self-Awareness and Differential Advertising Response," *Journal of Advertising* (Q1 SJR, ABS category 3 – "highly regarded," Impact Factor: 3.518), 32 (4), 7-18.

Manuscripts Under Review

Andriuzzi, Andria, Géraldine Michel, and Claudiu V. Dimofte, "How Brand Conversations on Social Media Prompt Jealousy in Brand Relationships," *Journal of the Academy of Marketing Science* (Q1 SJR, ABS category 4* – "world leading," listed among Financial Times' Top 50 Journals in Business Schools, Impact Factor: 5.888).

Zeugner-Roth, Katharina, Claudiu V. Dimofte, and Fabian Bartsch, "Consumer Cosmopolitanism: a Meta-Analysis and New Applications." *Journal of International Business Studies* (Q1 SJR, ABS category 4* – "world leading," listed among Financial Times' Top 50 Journals in Business Schools, Impact Factor: 11.380).

Conference Presentations

Dimofte, Claudiu V., "Subjective Scales Can Enhance Consumer Expectations and Lower Product Evaluations," ACR Conference in Denver, 2022.

Zeugner-Roth, Katharina, Claudiu V. Dimofte, and Fabian Bartsch, "*The Brand Choices of Cosmopolitan Globetrotting Consumers*." SCP Conference in Singapore, 2022.

Braymiller, Jessica. L., Matthew D. Stone, Reid C. Whaley., Yi Zhang, David R Strong, Claudiu V. Dimofte, & Jessica L. Barrington-Trimis. *Relative importance of e-cigarette characteristics among young adults who vape: Findings from a novel maximum difference choice task*. Annual Meeting of the Society for Research on Nicotine and Tobacco, 2021.

Ngo Christie, Cwalina S.N., Yi Zhang, Matthew D. Stone, David R. Strong, Claudiu V. Dimofte, and Jessica L. Barrington-Trimis. *Comparison of Five Online Data Collection Platforms for Recruitment of Young Adult Vapers.* 27th Annual Meeting of the Society for Research on Nicotine and Tobacco, 2021.

Dimofte, Claudiu V., "Assessing the Relationship between Product Scarcity and Consumer Utility," ACR Conference in Seattle, 2021.

Whaley, Reid C., Cwalina, S.N., E.A. Kreuger, Jessica L. Braymiller, Matthew D. Stone, Christie Ngo, David R. Strong, Claudiu V. Dimofte, and Jessica L. Barrington-Trimis. *The importance of e-cigarette device and e-liquid product characteristics among young adults who vape.* Society for Research on Nicotine and Tobacco Annual Meeting, 2021.

Andriuzzi, Andria, Géraldine Michel, and Claudiu V. Dimofte, "How Brand Conversations on Social Media Prompt Jealousy in Brand Relationships," ACR Conference in Paris, 2020.

Dimofte, Claudiu V., "American Conservatives: Anti-Globalist Global Brand Consumers," ACR Conference in Atlanta, 2019.

Dimofte, Claudiu V., "When Anti-Globalization Stance and Global Brand Preference Coexist: The Curious Case of Conservative-Leaning U.S. Consumers," AMA Global Marketing SIG Conference in Buenos Aires, 2019.

Dimofte, Claudiu V., "Affective Debriefing in Experimental Consumer Psychology Research Employing Deception," ICPS Conference in Paris, 2019.

Dimofte, Claudiu V., "Dissimilarities Loom Larger than Similarities in Social Perception," SCP Conference in Savannah, 2019.

Dimofte, Claudiu V., "Affective Debriefing in Experimental Consumer Psychology Research Employing Deception," SCP Conference in Savannah, 2019.

Stone, Matthew, Claudiu V. Dimofte, Adrianna Villasenor, Jessica Oratowski, Eliza Jeong, John P. Pierce, David R. Strong. "The Effect of Graphic Warning Labels on the Sensitivity to Cigarettes Pack Prices," Annual Conference of the Society for Research on Nicotine and Tobacco in San Francisco, 2019.

Zeugner-Roth, Katharina, Claudiu V. Dimofte, and Fabian Bartsch, "The Role of Consumer Nationality and Product Country-of-Origin for Brand Choice in Countries of Low Product Ethnicity," AMA Global Marketing SIG Conference in Santorini, 2018.

Dimofte, Claudiu V. and Chris Janiszewski, "Round Numbers Produce Unwarranted Skepticism," La Londe Consumer Behavior Conference in La Londe Les Maures, 2017.

Dimofte, Claudiu V. and Richard F. Yalch, "Developing Effective Counter Messages to False Marketplace Information," Consumer Behavior Conference in La Londe Les Maures, 2017.

Dimofte, Claudiu V., and Negin Latifi Kasani, "When Celebrity Ad Placements Backfire," ACR Conference in Berlin, 2016.

Strong, David R., Claudiu V. Dimofte, Eric Leas, Samantha Hurst, Adrianna Villasenor, Jessica Oratowski, Eliza Jeong, John P. Pierce, *Appeal of Tobacco Product Packaging: Influences of Removing Brand Imagery.* Annual Conference of the Society for Research on Nicotine and Tobacco in Chicago, 2016.

Ivanic, Arti, Claudiu V. Dimofte, Rastislav Ivanic, and Maros Ivanic, "The GroupSolver Method for Quantifying Qualitative Research," ACR Conference in New Orleans, 2015.

Dimofte, Claudiu V., Richard F. Yalch, and Kyra Wiggin, "To Wait or Not? Why Creating Curiosity May Increase Patience," ACR Conference in Baltimore, 2014.

Zeugner-Roth, Katharina, and Claudiu V. Dimofte, "Consumers' Global vs. Local Brand Choice in Foreign Contexts," EMAC Conference in Valencia, 2014.

Dimofte, Claudiu V, and Arnd Florack, "The Effect of Background Music on Consumer Response," EMAC Conference in Valencia, 2014.

Dimofte, Claudiu V., and Katharina Zeugner-Roth, "The Effects of Consumer Ethnocentrism and Cosmo-politanism on Consumers' Global vs. Local Brand Choice," ACR Conference in Chicago, 2013.

Dimofte, Claudiu V, and Chris Janiszewski, "The Illusion of Lie Effect: The Suspicious Fluency of Round Numbers," ACR Conference in Chicago, 2013.

Dimofte, Claudiu V, Ronald C. Goodstein, and Ajay Kalra, "Context-Sensitive Advertising: A Fitting Story," SCP Conference in San Antonio, 2013.

Dimofte, Claudiu V., Richard F. Yalch, and Kyra Wiggin, "False but Persuasive Information: The Automatic Success of Infomercials," ACR Conference in Vancouver, 2012.

Florack, Arnd, Claudiu V. Dimofte, Karin Rossler, and Susanne Leder, "Brand-Related Background Music and Consumer Choice," ACR Conference in Vancouver, 2012.

Cassab, Harold, and Claudiu V. Dimofte, "Everyday Objects of Desire: Dimensions of Design Innovation and the Centrality of Product Aesthetics," ACR Conference in Vancouver, 2012.

Florack, Arnd, Susanne Leder, and Claudiu V, Dimofte, "Brand-Related Background Music and Consumer Choice," EIRASS Conference in Vienna, 2012.

Florack, Arnd, Susanne Leder, and Claudiu V, Dimofte, "Brand-Related Background Music and Consumer Choice," AMA/ACRA Conference in Seattle, 2012.

Florack, Arnd, Susanne Leder, and Claudiu V, Dimofte, "Brand-Related Background Music and Consumer Choice," SCP Conference in Las Vegas, 2012.

Dimofte, Claudiu V, Ronald C. Goodstein, and Ajay Kalra, "Context-Sensitive Advertising: A Fitting Story," ACR Conference in St. Louis, 2011.

Johansson, Johny K. and Claudiu V. Dimofte, "Brand Value Effects on Stock Market Performance," Global Branding Conference in Istanbul, 2010.

Johansson, Johny K. and Claudiu V. Dimofte, "Brand Value Effects on Stock Market Performance," AIB Conference in Rio de Janeiro, 2010.

Dimofte, Claudiu V., Johny Johansson, and Katharina Zeugner-Roth, "Global and Local Brands in the Beer Market: A Dual-Nation Analysis," Global Branding Conference in Istanbul, 2010.

Dimofte, Claudiu V., Anne Brumbaugh, and Ronald C. Goodstein, "Consumer Comparison to the Product User Prototype Affects Brand Attitudes," SCP Conference in St. Petersburg, 2010.

Dimofte, Claudiu V. and Richard F. Yalch, "Consumer Processing of Irrelevant Brand Associations," ACR Conference in Pittsburgh, 2009.

Dimofte, Claudiu V. and Johny K. Johansson, "The Automatic Shifting of Standards in Brand Evaluations," ACR Conference in San Francisco, 2008 and the La Londe Consumer Behavior Conference in La Londe Les Maures, 2009.

Dimofte, Claudiu V. and Richard F. Yalch, "Brand Rumors: Cognitive Mechanisms for Acceptance and Strategies for Quelling," SCP Conference in Las Vegas, 2007.

Dimofte, Claudiu V. and Richard F. Yalch, "The Role of Consumer Familiarity with the Product Category in Self-Referent Persuasion," ACR Conference in Memphis, 2007.

Dimofte, Claudiu V., Richard F. Yalch, and Anthony G. Greenwald, "Brand Names as Sources and Targets of Tangential Implicit Associations," APA Conference in New Orleans, 2006.

Dimofte, Claudiu V., Johny K. Johansson, and Ilkka Ronkainen, "Measuring Brand Globality," AIB Conference in Beijing, 2006.

Dimofte, Claudiu V. and Ronald C. Goodstein: "Explaining the Negative Spillover Effect in Target Marketing," ACR Conference in San Antonio, 2006.

Dimofte, Claudiu V. and Johny K. Johansson, "Brand Stereotypes and Consumer Judgments: The Automatic Shifting of Standards in Brand Evaluations," EMAC Conference in Athens, 2006.

Dimofte, Claudiu V. and Johny K. Johansson, "Brand Stereotypes and Consumer Judgments: The Automatic Shifting of Standards in Brand Evaluations," ACR Conference in San Antonio, 2006.

Dimofte, Claudiu V. "Brand Names and Transitive Implicit Associations," European ACR Conference in Göteborg, 2005.

Dimofte, Claudiu V. and Richard F. Yalch, "The SMAART Scale: Measure Development and Validation," ACR Conference in Portland, 2004.

Dimofte, Claudiu V. and Richard F. Yalch, "Consumer Disbelief and Attitudes: Implicit Memory Explanations for Why Believability Is Not Necessary for Persuasion," SCP Conference in Montréal, 2004.

Dimofte, Claudiu V., Richard F. Yalch, and Anthony G. Greenwald, "Brand Names as Sources and Targets of Tangential Implicit Associations," ACR Conference in Toronto, 2003.

Dimofte, Claudiu V. and Richard F. Yalch, "The Role of Advertisement Copy in Prompting Consumer Access to Slogan Meaning," ACR Conference in Atlanta, 2002.

Invited Research Presentations

Berlin School of Economics and Law, Germany
Indiana University
George Mason University
Georgetown University
Rutgers University
San Diego State University
University of British Columbia
University of Central Florida
University of San Diego
University of South Carolina
University of Washington
ESSEC Paris, France
HEC *Paris*, France
IÉSEG School of Management Lille, France
IÉSEG School of Management Paris, France
Sorbonne Business School Paris, France
Technische Universität *Dortmund, Germany*
Universidad Católica Portuguesa Lisbon, Portugal
Université Paris-Dauphine Paris, France
University of Auckland, New Zealand
University of Basel, Switzerland
University of Vienna, Austria
Zeppelin University, Germany

Scholarly Awards and Funded Research Grants

Society for Consumer Psychology:	Best Working Paper Award, Annual Conference (2019)
Erasmus+ Grant:	Berlin School of Economics and Law (2016)
National Institutes of Health:	Tobacco Packaging Research Grant (with UCSD researchers, 2015)
San Diego State University:	Fowler College of Business Research Grant (2013, 2015, 2020)
	Most Influential MBA Marketing Faculty Award (2014)
	Outstanding Faculty Award: Research, Teaching, Service (2014)
Society for Consumer Psychology:	Nominee, C.W. Park Award for Outstanding Contribution to JCP
National Institutes of Health:	Tobacco Packaging Research Grant (with UCSD researchers, 2015)
Academy of International Business:	Best International Mktg. Paper Award, Annual Conference (2010)
American Marketing Association:	Student Fellow, Sheth Doctoral Consortium (2004)
	Nominee, Howard Award (2005)
	Faculty Fellow, Sheth Doctoral Consortium (2012)
San Diego State University:	University Research Grant (2011)
	Fowler College of Business Graduate Fee Grant (2012, 2017, 2021)
	University Mid-Career Research Grant (2020)
Georgetown University:	University Competitive Grant (2005)
	University Research Infrastructure Award (2005)

	International Collaborative Research Grant (2007)
	MSB Capital Markets Research Center Grant (2008)
University of Washington:	Boeing Fellowship for Academic Excellence (2002)
	Dean's Award for Outstanding Academic Achievement (2002)
	Evert McCabe Endowed Fellowship (2003)
	CIBER Research Award (2004)
	Magna Cum Laude PhD (2004)
University of South Carolina:	Graduate Fellowship Grant (1996 – 1998)
	Magna Cum Laude MBA (1998)
West University:	National Merit Scholarship (1991 – 1996)
	Summa Cum Laude BS (1996)
University of Auckland:	Research Development Program Award (with H. Cassab, 2007)
University of Basel:	Research Award (with A. Florack, 2008)
Vlerick Leuven Management School:	Research Award (with K. Zeugner-Roth, 2010)

TEACHING

Interests: Marketing Management, Consumer Behavior, Marketing Strategy, Marketing Research

Evaluations: *Georgetown University* (7 years)

- Principles of Marketing (MARK 220): 4.14 out of 5 (vs. 3.67 for the area)
- Consumer Behavior (MARK 222): 4.39 out of 5 (vs. 3.75 for the area)

San Diego State University (11 years)

- Marketing Management (BA 627): 4.60 out of 5 (vs. 4.30 for the area)

SDSU Outstanding Faculty Award – Most Influential MBA Professor (2014, 2021)

Fowler College of Business Teaching Excellence Award (2019)

SERVICE

Chair – Marketing Department Rank, Tenure, and Promotion Committee		(since 2017)
Chair – San Diego Marketing Camp		(since 2012)
Member – Fowler College of Business Faculty Development Committee		(since 2013)
Member – Fowler College of Business Rank, Tenure, and Promotion Committee		(since 2022)
Graduate Student Advisor for Marketing Area		(since 2013)
Member – University Senate		(2012-2018)
Editorial Board member for:	*Journal of Consumer Psychology* (ABS 4*, world leading)	(since 2012)
	Journal of the Academy of Marketing Science (ABS 4*, world leading)	(since 2017)
	Journal of International Marketing (ABS 3, highly regarded)	(since 2019)
Committee Member, *Journal of Consumer Psychology Young Contributor Award*		(since 2018)
Committee Member, *American Marketing Association Dissertation Award*		(since 2022)

Conference Co-Chair, *SCP Advertising and Consumer Psychology Conference – San Diego, 2013*

Working Paper Track Co-Chair, *Association for Consumer Research Conference – New Orleans, 2015*

Consumer Behavior Track Co-Chair, *Academy of Marketing Science Conference – Baltimore, 2009*

Media Coverage : *Newsweek, KPBS, Wallethub.com, Prnewswire.com, Newneuromarketing.com*

Appendix B

Claudiu V. Dimofte, PhD – Expert Depositions / Testimony Provided Since 2017

- UNITED STATES DISTRICT COURT
  NORTHERN DISTRICT OF CALIFORNIA
  LAURA MARKS, GAYLIA PICKLES and DONNA VANDIVER individually and on behalf of all others similarly situated
  Plaintiffs,
  v.
  KATE SPADE AND COMPANY, A DELAWARE CORPORATION; and DOES 1-50, INCLUSIVE,
  Defendants.
  Case No. 4:15-CV-05329-VC

- SUPERIOR COURT OF THE STATE OF CALIFORNIA
  COUNTY OF ORANGE
  CHELSEA VANCLEVE, CHELSEA VESELY, and ROSITA SHOUSE
  Plaintiffs,
  v.
  CHIEN ET CHAT. INC. d/b/a BARKWORKS PET STORES, and DOES 1-10, INCLUSIVE,
  Defendants.
  Case No. 30-2014-00747275-CU-BT-CJC

- UNITED STATES DISTRICT COURT
  SOUTHERN DISTRICT OF FLORIDA
  JOSHUA WASSER, ILA GOLD, and ROBERTO ISRAEL J. BARAJAS-RAMOS, on behalf of themselves and all others similarly situated,
  Plaintiffs,
  v.
  ALL MARKET INC.,
  Defendant.
  Case No. 1:16-CV-21238- Scola/Otazo-Reyes

- SUPERIOR COURT FOR THE DISTRICT OF COLUMBIA
  ANIMAL LEGAL DEFENSE FUND
  On behalf of the general public,
  Plaintiff,
  v.
  HORMEL FOODS CORPORATION,
  Defendant.
  Case No. 2016CA-004744

- SUPERIOR COURT OF THE STATE OF ARIZONA
  COUNTY OF MARICOPA
  DEBORAH BRITT, MELISSA CHRISTIAN, WARREN DUNN, MARTIN GARCIA, KELLIE LANGER, ERICA MARXMANN, WALTER SHIFFLETT, RICKY TUCKER, JAQUELINE VILLEGAS, MELISSA WAGSTAFF; and DOES I-X,
  Plaintiffs,
  v.
  PUPPIES.COM, LLC, an Arizona Limited Liability Company d/b/a PUPPYFIND.COM; JOHN and JANE DOES I-X; BLACK and WHITE CORPORATIONS I-X,
  Defendants.
  Case No. CV2016-016116

- UNITED STATES DISTRICT COURT
  FOR THE NORTHERN DISTRICT OF CALIFORNIA
  FRIENDS OF THE EARTH and CENTER FOR FOOD SAFETY
  Plaintiffs,
  v.
  SANDERSON FARMS, INC., a Mississippi corporation,
  Defendant.
  Case No. 3:17-CV-03592-RS

- UNITED STATES DISTRICT COURT
  FOR THE CENTRAL DISTRICT OF CALIFORNIA
  FARID KHAN, an individual, on behalf of himself and all others similarly situated,
  Plaintiff,
  v.
  BOOHOO.COM USA, INC., a Delaware corporation, BOOHOO.COM UK LIMITED, a United Kingdom private limited company, BOOHOO GROUP PLC, a Jersey public limited company, and DOES 1-10, inclusive.
  Defendants.
  Case No. 2:20-cv-03332-GW-JEM

- UNITED STATES DISTRICT COURT
  FOR THE CENTRAL DISTRICT OF CALIFORNIA
  AUDIO-TECHNICA CORPORATION and AUDIO-TECHNICA U.S., INC.
  Plaintiffs,
  v.
  MUSIC TRIBE COMMERCIAL MY SDN. BHD
  Defendant.
  Case No. 2:21-cv-09009-ODW-AS

Appendix C

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Appendix D

National Consumer Perceptions Study – Response Statistics

	N	%
Full Prospective Sample [1]	**680**	**100**
Screened out of Survey	**264**	**39**
At item *device* [2]	36	5
At item *employment* [3]	103	15
At item *history* [4]	107	16
At item *did.plums* [5]	18	3
At item *will.beef* [6]	0	0
Incomplete Data [8]	**17**	**2**
Dropped for Failed Key Attention Filter	**95**	**14**
At item *check_att1* [9]	84	12
At item *check_att3* [10]	81	12
Completed Survey	**304**	**45**
Final Analytical Sample [11]	**304**	**45**

[1] Respondents who started the survey.

[2] Respondents who reported taking the survey on something other than a computer, laptop, or tablet.

[3] Respondents who reported having been employed (themselves or their family members) in one of the following industries: Advertising or marketing research; Animal care or veterinarian services; Legal services; Meat production, distribution, or sales; Retail grocery.

[4] Respondents who answered "Not sure" to having any of the presented items (*bicycle, boat, car, dog, graduate degree, TV set, smartphone, telegraph,* and *toothbrush*), answered "Do not have one but intend to get one in the near future" to the items *telegraph* and *toothbrush*, answered "Have at least one" to the item *telegraph*, or answered "Do not have one and do not intend to get one in the near future" to the item *toothbrush*.

[5] Respondents who reported having purchased French Mirabelle plums from their local grocery store in the last year.

[6] Respondents who reported not having bought beef products in the last year and not planning to buy in the next year, either.

[7] Respondents who stopped responding to the survey before finishing.

[8] Respondents who reported not recognizing Dove body soap despite being exposed to its ad.

[9] Respondents who reported not recognizing Target delivery service despite being exposed to its ad.

[10] Data used in the analyses.

Appendix E

National Consumer Perceptions Study – Sample Demographics by Retention Status

Sample	Dropped ineligible[1]	Dropped eligible[2]	Completed retained[3]
Sample Size	**264**	**95**	**304**
Gender			
Male	44.6%	29.5%	32.6%
Female	51.9%	70.5%	67.1%
Other	.4%	0%	0.3%
Prefer not to respond	0%	0%	0%
Mean Age	39.54	42.65	43.44
Ethnicity			
Asian	5.8%	5.3%	5.6%
Black	14.3%	13.7%	10.9%
Hispanic	8.5%	10.5%	6.6%
Native American	2.7%	2.1%	1.6%
Pacific Islander	1.2%	1.1%	0%
White	68.2%	77.9%	78.3%
Other	1.2%	2.1%	1.3%
Marital Status			
Single (not in a relationship)	40.0%	37.9%	41.4%
In a relationship (not married)	16.0%	20.0%	15.8%
Married	41.6%	38.9%	38.8%
Other	2.4%	3.2%	3.9%
Children			
No	41.2%	42.1%	51.6%
Yes	58.8%	57.9%	48.4%
Education			
High-school or less	13.2%	20.0%	11.8%
Some college/technical school	25.6%	28.4%	23.4%
2-year college	10.8%	14.7%	12.2%
4-year college	28.0%	24.2%	31.3%
Graduate school degree	22.4%	12.6%	21.4%
Employment Status			
Student (full-time)	6.8%	8.4%	5.6%
Unemployed (not a student)	12.0%	20.0%	14.8%
Employed part-time	13.2%	13.7%	13.8%
Employed full-time	58.8%	48.4%	53.3%
Other	9.2%	9.5%	12.5%
Median Annual Household Income	$55,000	$59,000	$62,500

[1] Respondents who started the survey, did not qualify, or failed the early attention filters (at items *history*, *did.plums*).
[2] Respondents who started the main part of the questionnaire and failed the key attention filter or did not finish.
[3] Respondents in the final analytical sample.

Appendix F

National Consumer Perceptions Survey Items and Logical Flow

Start of Block: Start

intro Thank you for your interest in this research study that addresses some of your personal perceptions. It should only take a few minutes to complete. In responding to the questions, please pay attention and read the information carefully before selecting the response that best reflects your thoughts and feelings. There are no right or wrong answers and your responses are completely anonymous.
Please read the questions carefully as failure to pay attention will result in your being removed from the study without pay. We ask that you take this survey on a computer, laptop, or tablet rather than a smartphone or similar mobile device. Please click below to begin.

${e://Field/transaction_id}

Page Break

vision Do you normally wear glasses or contact lenses when you read?

- ○ Yes (1)
- ○ No (2)

Display This Question:

If Do you normally wear glasses or contact lenses when you read? = Yes

puton If you normally wear glasses or contact lenses when you read, please use them while completing this survey. Thank you.

End of Block: Start

Start of Block: Screening

device What type of device are you using to answer these questions?

- ○ Desktop or Laptop (1)
- ○ Tablet (2)
- ○ Smartphone (3)
- ○ Other (4) _____

Skip To: End of Block If What type of device are you using to answer these questions? = Smartphone

Skip To: End of Block If What type of device are you using to answer these questions? = Other

Page Break

gender What is your gender?

- ○ Male (1)
- ○ Female (2)
- ○ Other (3)
- ○ Prefer not to answer (4)

*

age What is your age?
(please enter number below)

_____

Page Break

ethnicity What is your ethnicity? (please check all that apply)

- ☐ Asian (1)
- ☐ Black (2)
- ☐ Hispanic (3)
- ☐ Native American (4)
- ☐ Pacific Islander (5)
- ☐ White (6)
- ☐ Other (7) _____

Page Break

marital What is your marital status?

- ○ Single (not in a relationship) (1)
- ○ In a relationship (not married) (2)
- ○ Married (3)
- ○ Other (4) _____

kids Do you have children?

- ○ No (1)
- ○ Yes (2)

Page Break

edu What is your highest completed education level?

- ○ High school or less (1)
- ○ Some college/technical school (2)
- ○ 2-yr college degree (3)
- ○ 4-yr college degree (4)
- ○ Graduate school degree (5)

Page Break

employ What best describes your current employment status?

- ○ Student (full-time) (1)
- ○ Unemployed (not a student) (2)
- ○ Employed part-time (3)
- ○ Employed full-time (4)
- ○ Other (5) _____

Page Break

*

income What is your total annual household (i.e., not personal) income, before taxes?
(in U.S. dollars, please insert numbers only)

_____

Page Break

state Where do you currently reside?

▼ I do not reside in the United States (53) ... Wyoming (52)

Skip To: End of Block If 50 States, D.C. and Puerto Rico = I do not reside in the United States

Page Break

work Have you or any member of your household ever worked in the following industries?

(please check all that apply)

- ☐ Advertising or market research (1)
- ☐ Animal care or veterinarian services (2)
- ☐ Book publishing, distribution, or sales (3)
- ☐ Clothing / shoe manufacturing, distribution, or sales (4)
- ☐ Consumer electronics manufacturing, distribution, or sales (5)
- ☐ Entertainment content production, distribution, or sales (6)
- ☐ Food/beverage manufacturing, distribution, or sales (7)
- ☐ Legal services (8)
- ☐ Newspaper / magazine publishing, distribution, or sales (9)
- ☐ Meat production, distribution, or sales (10)
- ☐ Pet breeding, grooming, advertising, distribution, or sales (11)
- ☐ Retail grocery (12)
- ☐ Travel, tourism, or hospitality (13)
- ☐ Website design, hosting, or e-commerce (14)
- ☐ ⊗ None of the above (15)

Skip To: End of Block If Have you or any member of your household ever worked in the following industries? (please check... = Advertising or market research

Skip To: End of Block If Have you or any member of your household ever worked in the following industries? (please check... = Animal care or veterinarian services

Skip To: End of Block If Have you or any member of your household ever worked in the following industries? (please check... = Legal services

Skip To: End of Block If Have you or any member of your household ever worked in the following industries? (please check... = Meat production, distribution, or sales

Skip To: End of Block If Have you or any member of your household ever worked in the following industries? (please check... = Pet breeding, grooming, advertising, distribution, or sales

Skip To: End of Block If Have you or any member of your household ever worked in the following industries? (please check... = Retail grocery

Page Break

history Please select the option that best describes your status relative to each of the following items:

	Do not have one and do not intend to get one in the near future (1)	Do not have one but intend to get one in the near future (2)	Have at least one (3)	Not sure (4)
Bicycle (1)	○	○	○	○
Boat (2)	○	○	○	○
Car (3)	○	○	○	○
Dog (4)	○	○	○	○
Graduate degree (5)	○	○	○	○
TV set (6)	○	○	○	○
Smartphone (7)	○	○	○	○
Telegraph (8)	○	○	○	○
Toothbrush (9)	○	○	○	○

Skip To: End of Block If Please select the option that best describes your status relative to each of the following items: = Bicycle [Not sure]

Skip To: End of Block If Please select the option that best describes your status relative to each of the following items: = Boat [Not sure]

Skip To: End of Block If Please select the option that best describes your status relative to each of the following items: = Car [Not sure]

Skip To: End of Block If Please select the option that best describes your status relative to each of the following items: = Dog [Not sure]

Skip To: End of Block If Please select the option that best describes your status relative to each of the following items: = Graduate degree [Not sure]

Skip To: End of Block If Please select the option that best describes your status relative to each of the following items: = TV set [Not sure]

Skip To: End of Block If Please select the option that best describes your status relative to each of the following items: = Smartphone [Not sure]

Skip To: End of Block If Please select the option that best describes your status relative to each of the following items: = Telegraph [Do not have one but intend to get one in the near future]

Skip To: End of Block If Please select the option that best describes your status relative to each of the following items: = Telegraph [Have at least one]

Skip To: End of Block If Please select the option that best describes your status relative to each of the following items: = Telegraph [Not sure]

Skip To: End of Block If Please select the option that best describes your status relative to each of the following items: = Toothbrush [Do not have one and do not intend to get one in the near future]

Skip To: End of Block If Please select the option that best describes your status relative to each of the following items: = Toothbrush [Do not have one but intend to get one in the near future]

Skip To: End of Block If Please select the option that best describes your status relative to each of the following items: = Toothbrush [Not sure]

Page Break

did.car In the last year, did you purchase or lease a new vehicle from a car dealership?

- ○ No (1)
- ○ Yes (2)

Page Break

did.tv In the last year, did you purchase a high definition television set from a consumer electronics store?

- ○ No (1)
- ○ Yes (2)

Page Break

did.plums In the last year, did you purchase French Mirabelle plums from a local grocery store?

- ○ No (1)
- ○ Yes (2)

Skip To: End of Block If In the last year, did you purchase French Mirabelle plums from a local grocery store? = Yes

Page Break

did.shoes In the last year, did you purchase a pair of athletic shoes from a brick-and-mortar sports apparel retailer?

- ○ No (1)
- ○ Yes (2)

Page Break

did.beef
In the last year, did you purchase beef products (for example steak, ribs, sausage, burgers, hot dogs, ground beef, corned beef, jerky, etc.) from a grocery store or restaurant?

- ○ No (1)
- ○ Yes (2)

Page Break

Display This Question:

If In the last year, did you purchase beef products (for example steak, ribs, sausage, burger... = No

will.beef In the next year, do you plan to purchase beef products (for example steak, ribs, sausage, burgers, hot dogs, ground beef, corned beef, jerky, etc.) from a grocery store or restaurant?

- ○ No (1)
- ○ Yes (2)

Skip To: End of Block If In the next year, do you plan to purchase beef products (for example steak, ribs, sausage,... = No

Page Break

will.car In the next year, do you plan to purchase or lease a new vehicle from a car dealership?

- ○ No (1)
- ○ Yes (2)

Page Break

will.tv In the next year, do you plan to purchase a high definition television set from a consumer electronics store?

- ○ No (1)
- ○ Yes (2)

Page Break

will.shoes In the next year, do you plan to purchase a pair of athletic shoes from a brick-and-mortar sports apparel retailer?

- ○ No (1)
- ○ Yes (2)

Page Break

will.plums In the next year, do you plan to purchase French Mirabelle plums from a local grocery store?

- ○ No (1)
- ○ Yes (2)

Page Break

End of Block: Screening

Start of Block: Ineligible

ineligible Unfortunately, you are not eligible to participate in this research. Thank you nonetheless for your interest in this survey.

Please click below to continue.

Skip To: End of Block If Unfortunately, you are not eligible to participate in this research. Thank you nonetheless for yo... Is Displayed

End of Block: Ineligible

Start of Block: Eligible

eligible You are eligible to participate in this research – thank you for your interest in this survey.
You are one of many people across the U.S. taking this survey. Once again, there are no right or wrong answers but we do ask that you be truthful and pay attention in order to be retained in the study and paid.
Please click below to continue.

End of Block: Eligible

Start of Block: Pre-Ad

prior Please imagine that you are browsing a print magazine, a website, or any social or digital media. Besides the editorial content that you are looking for, you are also exposed to various advertisements. You will next be shown several such advertisements. Please browse them as you would in the context described above, and be ready to answer a few subsequent questions about them.
Please click below to continue.

Page Break

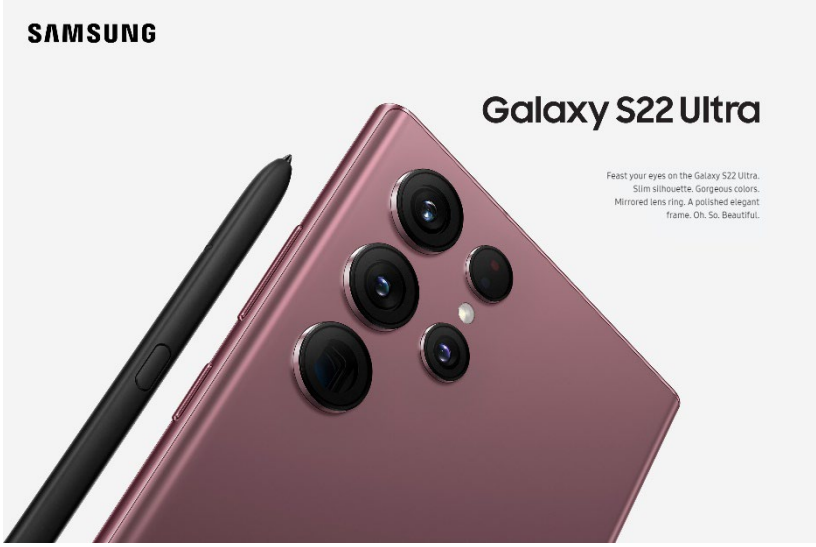
End of Block: Pre-Ad

Start of Block: NoBeef

c1

Page Break

c2



Page Break

c3

End of Block: NoBeef

Start of Block: BeefGen

bg1

Page Break

bg2

Page Break

bg3

End of Block: BeefGen

Start of Block: BeefUS

us1

Page Break

us2

Page Break

us3

End of Block: BeefUS

Start of Block: Attention filter

check.att To check your attention, please recall from the previous set of ads which product / service was NOT advertised:
(please check all that apply)

- ☐ Dove body soap (1)
- ☐ Nike athletic shoes (2)
- ☐ Target delivery service (5)

Skip To: End of Block If To check your attention, please recall from the previous set of ads which product / service was N... = Dove body soap

Skip To: End of Block If To check your attention, please recall from the previous set of ads which product / service was N... = Target delivery service

End of Block: Attention filter

Start of Block: Failed filter

failedf Unfortunately, you did not pass the attention filter and are therefore not eligible to continue in this research.
Please click below.

Skip To: End of Block If Unfortunately, you did not pass the attention filter and are therefore not eligible to continue i... Is Displayed

End of Block: Failed filter

Start of Block: AboutBeef

its.beef You have been assigned to answer questions about your meat product purchases.
Please click below to proceed.

Page Break

wtp How much would you be willing to pay for a pound of beef steak at a retail grocer on average?

- Under $5.00 / lb (1)
- Between $5.00 and $6.99 / lb (2)
- Between $7.00 and $8.99 / lb (3)
- Between $9.00 and $10.99 / lb (4)
- $11.00 / lb or more (5)
- Do not know / no opinion (6)

Page Break

act How likely are you to buy and have beef for one of your meals in the next couple of days?

- Very unlikely (1)
- Unlikely (2)
- Somewhat unlikely (3)
- Neither likely nor unlikely (4)
- Somewhat likely (5)
- Likely (6)
- Very likely (7)
- I do not eat beef (8)

Skip To: End of Block If How likely are you to buy and have beef for one of your meals in the next couple of days? = I do not eat beef

Page Break

X→

source Do you believe that the source of the beef you buy matters?

- Definitely not (1)
- Probably not (2)
- Possibly not (3)
- Neither yes or no (4)
- Possibly yes (5)
- Probably yes (6)
- Definitely yes (7)
- Do not know / no opinion (8)

Page Break

X→

diff How different do you think the beef sellers in the U.S. market are from each other?

- Not very different: beef suppliers are generally the same quality regardless of origin (1)
- Very different: domestic beef suppliers are generally higher quality than imported ones (2)
- Do not know / no opinion (3)

Page Break

commodity A commodity is an economic good that the market treats as equivalent regardless of who produced it.
In your opinion, how much do each of the following products fit the definition of a commodity?

	Not at all (1)	(2)	(3)	Somewhat (4)	(5)	(6)	Perfectly (7)	Do not know / No opinion (8)
Wood (1)	○	○	○	○	○	○	○	○
Corn (2)	○	○	○	○	○	○	○	○
Beef meat (3)	○	○	○	○	○	○	○	○
Gasoline (4)	○	○	○	○	○	○	○	○
Select 'somewhat' here (5)	○	○	○	○	○	○	○	○
Automobiles (6)	○	○	○	○	○	○	○	○
Milk (7)	○	○	○	○	○	○	○	○
Sugar (8)	○	○	○	○	○	○	○	○
Beer (9)	○	○	○	○	○	○	○	○

Page Break

ad.infl Would you say that beef advertising influences your meat purchasing behavior?

- Definitely not (1)
- Probably not (2)
- Possibly not (3)
- Neither yes or no (4)
- Possibly yes (5)
- Probably yes (6)
- Definitely yes (7)
- Do not know / no opinion (8)

End of Block: AboutBeef

Start of Block: Food attributes

food.i There are many considerations that may impact consumers' meat product choices. They include basic things like price and branding, but also more complex ones like healthfulness and traceability (that is the ability to trace a product from the store to the farm of origin where the animals were born and raised).

How important are each of the following attributes when you purchase meat products (in particular, beef)?

	Extremely unimportant (1)	(2)	(3)	(4)	(5)	(6)	Extremely important (7)	No opinion (8)
Price (1)	○	○	○	○	○	○	○	○
Quality (2)	○	○	○	○	○	○	○	○
Healthfulness (3)	○	○	○	○	○	○	○	○
Taste (4)	○	○	○	○	○	○	○	○
Brand (5)	○	○	○	○	○	○	○	○
National origin (6)	○	○	○	○	○	○	○	○
Animal treatment (7)	○	○	○	○	○	○	○	○
Safety (8)	○	○	○	○	○	○	○	○

End of Block: Food attributes

Start of Block: BuyChance

domestimp To what extent do you agree that domestic beef products are worth paying more for than imported ones?

- ○ Completely disagree (1)
- ○ Mostly disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Mostly agree (6)
- ○ Completely agree (7)
- ○ Do not know / No opinion (8)

Page Break

qualcost To what extent do you agree that smaller batch, specialty beef products are worth paying more for than industrially produced ones?

- ○ Completely disagree (1)
- ○ Mostly disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Mostly agree (6)
- ○ Completely agree (7)
- ○ Do not know / No opinion (8)

Page Break

buy.domestic Domestic independent cattle ranchers believe that there are important ways in which their beef is superior to imported beef. If you had more information on that, how likely would you be to buy domestic beef products rather than imported ones?

(please use the following scale: 0 = would definitely not buy domestic, 5 = indifferent, 10 = would definitely buy domestic)

0 1 2 3 4 5 6 7 8 9 10

()

Page Break

pay.domestic Domestic independent cattle ranchers believe that there are important ways in which their beef is superior to imported beef. If you had more information on that, how likely would you be to pay more for domestic beef products than for imported ones?

(please use the following scale: 0 = would definitely not pay more for domestic, 5 = indifferent, 10 = would definitely pay more for domestic)

0 1 2 3 4 5 6 7 8 9 10

()

Page Break

explicit How do generic ads that encourage beef consumption without regard to meat origin influence your willingness to pay for beef products?

- Generic beef ads make me want to pay much less (1)
- Generic beef ads make me want to pay somewhat less (2)
- Generic beef ads do not influence my willingness to pay (3)
- Generic beef ads make me want to pay somewhat more (4)
- Generic beef ads make me want to pay much more (5)
- Do not know / No opinion (6)

End of Block: BuyChance

Start of Block: Finals

Display This Question:

If bg2 Is Displayed

Or us2 Is Displayed

typical Earlier in this study you were exposed to an advertisement for beef. How typical would you say this advertisement was (i.e., how similar to other beef ads you have seen)?

- Completely atypical (i.e., unlike any other beef ad I have seen) (1)
- Atypical (i.e., unlike most other beef ads I have seen) (2)
- Somewhat atypical (i.e., unlike some other beef ads I have seen) (3)
- Neither atypical nor typical (4)
- Somewhat typical (i.e., like some other beef ads I have seen) (5)
- Typical (i.e., like most other beef ads I have seen) (6)
- Completely typical (i.e., like any other beef ad I have seen) (7)

Page Break

eater Which of the following best describes you as an eater?

- ○ Omnivore (eat everything) (1)
- ○ Carnivore (eat a diet dominated by red meats) (2)
- ○ Pollotarian (eat a diet dominated by poultry) (3)
- ○ Pescatarian (eat a diet dominated by fish / seafood) (4)
- ○ Vegetarian (eat a diet of plant-based food and some animal by-products) (5)
- ○ Vegan (eat a diet of strictly plant-based food) (6)
- ○ Hallal / Kosher / other religious-based diet (7)

Page Break

shopper Which of the following best describes you when it comes to grocery/food shopping in your household?

- ○ I never buy groceries or food for the household (1)
- ○ I rarely buy groceries or food for the household (2)
- ○ I sometimes buy groceries or food for the household (3)
- ○ I often buy groceries or food for the household (4)
- ○ I always buy groceries or food for the household (5)

Page Break

aware1 Are you aware of any current litigation involving beef producers?

- ○ No (1)
- ○ Yes (2)

Page Break

Display This Question:

If Are you aware of any current litigation involving beef producers? = Yes

what1 Please briefly describe your knowledge about the litigation involving beef producers.

- (1) _____
- Cannot remember (2)

End of Block: Finals

Start of Block: End

thx Thank you for your participation.

Please click below to submit your data.

End of Block: End

EmbeddedData
sidValue will be set from Panel or URL.
widValue will be set from Panel or URL.
assignment_idValue will be set from Panel or URL.
idValue will be set from Panel or URL.
panelValue will be set from Panel or URL.
transaction_idValue will be set from Panel or URL.

Block: Start (3 Questions)
Standard: Screening (22 Questions)

Branch: New Branch
If
If Please select the option that best describes your status relative to each of the following items: Bicycle - Not sure Is Selected
Or Please select the option that best describes your status relative to each of the following items: Boat - Not sure Is Selected
Or Please select the option that best describes your status relative to each of the following items: Car - Not sure Is Selected
Or Please select the option that best describes your status relative to each of the following items: Dog - Not sure Is Selected
Or Please select the option that best describes your status relative to each of the following items: Graduate degree - Not sure Is Selected
Or Please select the option that best describes your status relative to each of the following items: TV set - Not sure Is Selected
Or Please select the option that best describes your status relative to each of the following items: Telegraph - Do not have one but intend to get one in the near future Is Selected
Or Please select the option that best describes your status relative to each of the following items: Telegraph - Have at least one Is Selected
Or Please select the option that best describes your status relative to each of the following items: Telegraph - Not sure Is Selected
Or Please select the option that best describes your status relative to each of the following items: Smartphone - Not sure Is Selected
Or Please select the option that best describes your status relative to each of the following items: Toothbrush - Do not have one and do not intend to get one in the near future Is Selected
Or Please select the option that best describes your status relative to each of the following items: Toothbrush - Do not have one but intend to get one in the near future Is Selected
Or Please select the option that best describes your status relative to each of the following items: Toothbrush - Not sure Is Selected
Or What type of device are you using to answer these questions? Smartphone Is Selected
Or What type of device are you using to answer these questions? Other Is Selected
Or What is your age? (please enter number below) Text Response Is Less Than 18

Or What is your age? (please enter number below) Text Response Is Greater Than 75
Or In the next year, do you plan to purchase beef products (for example steak, ribs, sausage,... No Is Selected
Or Have you or any member of your household ever worked in the following industries? (please check... Advertising or market research Is Selected
Or Have you or any member of your household ever worked in the following industries? (please check... Animal care or veterinarian services Is Selected
Or Have you or any member of your household ever worked in the following industries? (please check... Legal services Is Selected
Or Have you or any member of your household ever worked in the following industries? (please check... Meat production, distribution, or sales Is Selected
Or Have you or any member of your household ever worked in the following industries? (please check... Retail grocery Is Selected
Or 50 States, D.C. and Puerto Rico I do not reside in the United States Is Selected
Or In the last year, did you purchase French Mirabelle plums from a local grocery store? Yes Is Selected
Or In the next year, do you plan to purchase beef products (for example steak, ribs, sausage,... No Is Selected

Standard: Ineligible (1 Question)

EmbeddedData
termination = 1

EndSurvey: Advanced

Standard: Eligible (1 Question)
Block: Pre-Ad (2 Questions)

BlockRandomizer: 1 - Evenly Present Elements

Block: NoBeef (6 Questions)
Block: BeefGen (6 Questions)
Block: BeefUS (6 Questions)

Standard: Attention filter (1 Question)

Branch: New Branch
If
If To check your attention, please recall from the previous set of ads which product / service was N... Dove body soap Is Selected
Or To check your attention, please recall from the previous set of ads which product / service was N... Target delivery service Is Selected

Block: Failed filter (1 Question)

EmbeddedData
termination = 1

EndSurvey: Advanced

Block: AboutBeef (7 Questions)
Block: Food attributes (1 Question)
Block: BuyChance (5 Questions)
Block: Finals (7 Questions)
Standard: End (1 Question)

EndSurvey: Advanced

Page Break

Appendix G

National Consumer Perception Survey: Response Distributions for Quantitative Items

How much would you be willing to pay for a pound of beef steak at a retail grocer on average?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under $5.00 / lb	50	16.4	16.4	16.4
	Between $5.00 and $6.99 / lb	89	29.3	29.3	45.7
	Between $7.00 and $8.99 / lb	81	26.6	26.6	72.4
	Between $9.00 and $10.99 / lb	53	17.4	17.4	89.8
	$11.00 / lb or more	22	7.2	7.2	97.0
	Do not know / no opinion	9	3.0	3.0	100.0
	Total	304	100.0	100.0	

How likely are you to buy and have beef for one of your meals in the next couple of days?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very unlikely	17	5.6	5.6	5.6
	Unlikely	6	2.0	2.0	7.6
	Somewhat unlikely	15	4.9	4.9	12.5
	Neither likely nor unlikely	19	6.3	6.3	18.8
	Somewhat likely	54	17.8	17.8	36.5
	Likely	70	23.0	23.0	59.5
	Very likely	123	40.5	40.5	100.0
	Total	304	100.0	100.0	

Do you believe that the source of the beef you buy matters?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Probably not	7	2.3	2.3	2.3
	Possibly not	5	1.6	1.6	3.9
	Neither yes or no	19	6.3	6.3	10.2
	Possibly yes	53	17.4	17.4	27.6
	Probably yes	87	28.6	28.6	56.3
	Definitely yes	130	42.8	42.8	99.0
	Do not know / no opinion	3	1.0	1.0	100.0
	Total	304	100.0	100.0	

How different do you think the beef sellers in the U.S. market are from each other?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not very different: beef suppliers are generally the same quality regardless of origin	69	22.7	22.7	22.7
	Very different: domestic beef suppliers are generally higher quality than imported ones	166	54.6	54.6	77.3
	Do not know / no opinion	69	22.7	22.7	100.0
	Total	304	100.0	100.0	

A commodity is an economic good that the market treats as equivalent regardless of who produced it. In your opinion, how much do each of the following products fit the definition of a commodity? - Wood

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Not at all	26	8.6	8.7	8.7
	2	5	1.6	1.7	10.3
	3	12	3.9	4.0	14.3
	4 Somewhat	60	19.7	20.0	34.3
	5	41	13.5	13.7	48.0
	6	50	16.4	16.7	64.7
	7 Perfectly	84	27.6	28.0	92.7
	8 Do not know / no opinion	22	7.2	7.3	100.0
	Total	300	98.7	100.0	
Missing	System	4	1.3		
Total		304	100.0		

In your opinion, how much do each of the following products fit the definition of a commodity? - Corn

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Not at all	12	3.9	4.0	4.0
	2	9	3.0	3.0	7.0
	3	22	7.2	7.3	14.2
	4 Somewhat	49	16.1	16.2	30.5
	5	43	14.1	14.2	44.7

	6	64	21.1	21.2	65.9
	7 Perfectly	92	30.3	30.5	96.4
	8 Do not know / no opinion	11	3.6	3.6	100.0
	Total	302	99.3	100.0	
Missing	System	2	.7		
Total		304	100.0		

In your opinion, how much do each of the following products fit the definition of a commodity? - Beef meat

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Not at all	19	6.3	6.3	6.3
	2	25	8.2	8.3	14.5
	3	19	6.3	6.3	20.8
	4 Somewhat	60	19.7	19.8	40.6
	5	43	14.1	14.2	54.8
	6	55	18.1	18.2	72.9
	7 Perfectly	76	25.0	25.1	98.0
	8 Do not know / no opinion	6	2.0	2.0	100.0
	Total	303	99.7	100.0	
Missing	System	1	.3		
Total		304	100.0		

In your opinion, how much do each of the following products fit the definition of a commodity? - Gasoline

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Not at all	8	2.6	2.7	2.7
	2	8	2.6	2.7	5.3
	3	21	6.9	7.0	12.3
	4 Somewhat	41	13.5	13.7	26.0
	5	33	10.9	11.0	37.0
	6	58	19.1	19.3	56.3
	7 Perfectly	119	39.1	39.7	96.0
	8 Do not know / no opinion	12	3.9	4.0	100.0
	Total	300	98.7	100.0	
Missing	System	4	1.3		
Total		304	100.0		

In your opinion, how much do each of the following products fit the definition of a commodity? - Automobiles

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Not at all	59	19.4	19.4	19.4
	2	46	15.1	15.1	34.5
	3	41	13.5	13.5	48.0
	4 Somewhat	30	9.9	9.9	57.9
	5	25	8.2	8.2	66.1
	6	29	9.5	9.5	75.7
	7 Perfectly	62	20.4	20.4	96.1
	8 Do not know / no opinion	12	3.9	3.9	100.0
	Total	304	100.0	100.0	

In your opinion, how much do each of the following products fit the definition of a commodity? - Milk

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Not at all	13	4.3	4.3	4.3
	2	16	5.3	5.3	9.5
	3	25	8.2	8.2	17.8
	4 Somewhat	41	13.5	13.5	31.3
	5	50	16.4	16.4	47.7
	6	63	20.7	20.7	68.4
	7 Perfectly	86	28.3	28.3	96.7
	8 Do not know / no opinion	10	3.3	3.3	100.0
	Total	304	100.0	100.0	

In your opinion, how much do each of the following products fit the definition of a commodity? - Sugar

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Not at all	6	2.0	2.0	2.0
	2	12	3.9	4.0	5.9
	3	17	5.6	5.6	11.6
	4 Somewhat	37	12.2	12.2	23.8
	5	31	10.2	10.2	34.0
	6	58	19.1	19.1	53.1
	7 Perfectly	133	43.8	43.9	97.0
	8 Do not know / no opinion	9	3.0	3.0	100.0
	Total	303	99.7	100.0	

Missing	System	1	.3		
Total		304	100.0		

In your opinion, how much do each of the following products fit the definition of a commodity? - Beer

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Not at all	45	14.8	14.8	14.8
	2	29	9.5	9.5	24.3
	3	39	12.8	12.8	37.2
	4 Somewhat	45	14.8	14.8	52.0
	5	39	12.8	12.8	64.8
	6	32	10.5	10.5	75.3
	7 Perfectly	58	19.1	19.1	94.4
	8 Do not know / no opinion	17	5.6	5.6	100.0
	Total	304	100.0	100.0	

Would you say that beef advertising influences your meat purchasing behavior?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Definitely not	35	11.5	11.5	11.5
	Probably not	54	17.8	17.8	29.3
	Possibly not	31	10.2	10.2	39.5
	Neither yes or no	55	18.1	18.1	57.6
	Possibly yes	64	21.1	21.1	78.6
	Probably yes	34	11.2	11.2	89.8
	Definitely yes	25	8.2	8.2	98.0
	Do not know / no opinion	6	2.0	2.0	100.0
	Total	304	100.0	100.0	

There are many considerations that may impact consumers' meat product choices. They include basic things like price and branding, but also more complex ones like healthfulness and traceability (that is the ability to trace a product from the store to the farm of origin where the animals were born and raised).
How important are each of the following attributes when you purchase meat products (in particular, beef)? - Price

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Extremely unimportant	3	1.0	1.0	1.0
	2	5	1.6	1.6	2.6

	3	1	.3	.3	3.0
	4	11	3.6	3.6	6.6
	5	47	15.5	15.5	22.0
	6	73	24.0	24.0	46.1
	7 Extremely important	161	53.0	53.0	99.0
	8 Do not know / no opinion	3	1.0	1.0	100.0
	Total	304	100.0	100.0	

How important are each of the following attributes when you purchase meat products (in particular, beef)? - Quality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Extremely unimportant	4	1.3	1.3	1.3
	2	2	.7	.7	2.0
	4	5	1.6	1.6	3.6
	5	17	5.6	5.6	9.2
	6	60	19.7	19.7	28.9
	7 Extremely important	213	70.1	70.1	99.0
	8 Do not know / no opinion	3	1.0	1.0	100.0
	Total	304	100.0	100.0	

How important are each of the following attributes when you purchase meat products (in particular, beef)? - Healthfulness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Extremely unimportant	4	1.3	1.3	1.3
	2	6	2.0	2.0	3.3
	3	6	2.0	2.0	5.3
	4	26	8.6	8.6	13.8
	5	39	12.8	12.8	26.6
	6	84	27.6	27.6	54.3
	7 Extremely important	129	42.4	42.4	96.7
	8 Do not know / no opinion	10	3.3	3.3	100.0
	Total	304	100.0	100.0	

How important are each of the following attributes when you purchase meat products (in particular, beef)? - Taste

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Extremely unimportant	4	1.3	1.3	1.3
	2	1	.3	.3	1.7
	3	1	.3	.3	2.0
	4	6	2.0	2.0	4.0
	5	16	5.3	5.3	9.2
	6	64	21.1	21.1	30.4
	7 Extremely important	208	68.4	68.6	99.0
	8 Do not know / no opinion	3	1.0	1.0	100.0
	Total	303	99.7	100.0	
Missing	System	1	.3		
Total		304	100.0		

How important are each of the following attributes when you purchase meat products (in particular, beef)? - National origin

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Extremely unimportant	12	3.9	3.9	3.9
	2	21	6.9	6.9	10.9
	3	23	7.6	7.6	18.4
	4	55	18.1	18.1	36.5
	5	61	20.1	20.1	56.6
	6	50	16.4	16.4	73.0
	7 Extremely important	66	21.7	21.7	94.7
	8 Do not know / no opinion	16	5.3	5.3	100.0
	Total	304	100.0	100.0	

How important are each of the following attributes when you purchase meat products (in particular, beef)? - Brand

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Extremely unimportant	11	3.6	3.6	3.6
	2	23	7.6	7.6	11.2
	3	31	10.2	10.2	21.4
	4	70	23.0	23.0	44.4
	5	63	20.7	20.7	65.1
	6	56	18.4	18.4	83.6
	7 Extremely important	39	12.8	12.8	96.4
	8 Do not know / no opinion	11	3.6	3.6	100.0
	Total	304	100.0	100.0	

How important are each of the following attributes when you purchase meat products (in particular, beef)? - Animal treatment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Extremely unimportant	11	3.6	3.6	3.6
	2	7	2.3	2.3	6.0
	3	13	4.3	4.3	10.3
	4	37	12.2	12.3	22.5
	5	47	15.5	15.6	38.1
	6	73	24.0	24.2	62.3
	7 Extremely important	101	33.2	33.4	95.7
	8 Do not know / no opinion	13	4.3	4.3	100.0
	Total	302	99.3	100.0	
Missing	System	2	.7		
Total		304	100.0		

How important are each of the following attributes when you purchase meat products (in particular, beef)? - Safety

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Extremely unimportant	6	2.0	2.0	2.0
	2	1	.3	.3	2.3
	4	16	5.3	5.3	7.6
	5	29	9.5	9.5	17.1
	6	50	16.4	16.4	33.6
	7 Extremely important	197	64.8	64.8	98.4
	8 Do not know / no opinion	5	1.6	1.6	100.0
	Total	304	100.0	100.0	

To what extent do you agree that domestic beef products are worth paying more for than imported ones?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Completely disagree	7	2.3	2.3	2.3
	Mostly disagree	10	3.3	3.3	5.6
	Somewhat disagree	15	4.9	5.0	10.6
	Neither agree nor disagree	54	17.8	17.8	28.4
	Somewhat agree	60	19.7	19.8	48.2
	Mostly agree	84	27.6	27.7	75.9
	Completely agree	65	21.4	21.5	97.4

	Do not know / no opinion	8	2.6	2.6	100.0
	Total	303	99.7	100.0	
Missing	System	1	.3		
Total		304	100.0		

To what extent do you agree that smaller batch, specialty beef products are worth paying more for than industrially produced ones?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Completely disagree	6	2.0	2.0	2.0
	Mostly disagree	7	2.3	2.3	4.3
	Somewhat disagree	14	4.6	4.6	8.9
	Neither agree nor disagree	58	19.1	19.1	28.0
	Somewhat agree	75	24.7	24.7	52.6
	Mostly agree	72	23.7	23.7	76.3
	Completely agree	61	20.1	20.1	96.4
	Do not know / no opinion	11	3.6	3.6	100.0
	Total	304	100.0	100.0	

Domestic independent cattle ranchers believe that there are important ways in which their beef is superior to imported beef. If you had more information on that, how likely would you be to buy domestic beef products rather than imported ones?
(please use the following scale: 0 = would definitely not buy domestic, 5 = indifferent, 10 = would definitely buy domestic)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	1	.3	.3	.3
	3.00	1	.3	.3	.7
	4.00	3	1.0	1.0	1.6
	5.00	30	9.9	9.9	11.5
	6.00	29	9.5	9.5	21.1
	7.00	59	19.4	19.4	40.5
	8.00	62	20.4	20.4	60.9
	9.00	65	21.4	21.4	82.2
	10.00	54	17.8	17.8	100.0
	Total	304	100.0	100.0	

Domestic independent cattle ranchers believe that there are important ways in which their beef is superior to imported beef. If you had more information on that, how likely would you be to pay more for domestic beef products than for imported ones?
(please use the following scale: 0 = would definitely not pay more for domestic, 5 = indifferent, 10 = would definitely pay more for domestic)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0.00	1	.3	.3	.3
	1.00	2	.7	.7	1.0
	2.00	2	.7	.7	1.6
	3.00	5	1.6	1.6	3.3
	4.00	9	3.0	3.0	6.3
	5.00	23	7.6	7.6	13.8
	6.00	44	14.5	14.5	28.3
	7.00	58	19.1	19.1	47.4
	8.00	74	24.3	24.3	71.7
	9.00	47	15.5	15.5	87.2
	10.00	39	12.8	12.8	100.0
	Total	304	100.0	100.0	

How do generic ads that encourage beef consumption without regard to meat origin influence your willingness to pay for beef products?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Generic beef ads make me want to pay much less	18	5.9	5.9	5.9
	Generic beef ads make me want to pay somewhat less	30	9.9	9.9	15.8
	Generic beef ads do not influence my willingness to pay	164	53.9	53.9	69.7
	Generic beef ads make me want to pay somewhat more	21	6.9	6.9	76.6
	Generic beef ads make me want to pay much more	6	2.0	2.0	78.6
	Do not know / no opinion	65	21.4	21.4	100.0
	Total	304	100.0	100.0	

Earlier in this study you were exposed to an advertisement for beef. How typical would you say this advertisement was (i.e., how similar to other beef ads you have seen)?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Completely atypical (i.e., unlike any other beef ad I have seen)	3	1.0	1.4	1.4
	Atypical (i.e., unlike most other beef ads I have seen)	9	3.0	4.3	5.8
	Somewhat atypical (i.e., unlike some other beef ads I have seen)	11	3.6	5.3	11.1
	Neither atypical nor typical	18	5.9	8.7	19.7
	Somewhat typical (i.e., like some other beef ads I have seen)	53	17.4	25.5	45.2
	Typical (i.e., like most other beef ads I have seen)	65	21.4	31.3	76.4
	Completely typical (i.e., like any other beef ad I have seen)	49	16.1	23.6	100.0
	Total	208	68.4	100.0	
Missing	System	96	31.6		
Total		304	100.0		

Which of the following best describes you as an eater?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Omnivore (eat everything)	250	82.2	82.2	82.2
	Carnivore (eat a diet dominated by red meats)	25	8.2	8.2	90.5
	Pollotarian (eat a diet dominated by poultry)	22	7.2	7.2	97.7
	Pescatarian (eat a diet dominated by fish / seafood)	2	.7	.7	98.4
	Vegetarian (eat a diet of plant-based food and some animal by-products)	2	.7	.7	99.0
	Hallal / Kosher / other religious-based diet	3	1.0	1.0	100.0
	Total	304	100.0	100.0	

Which of the following best describes you when it comes to grocery/food shopping in your household?

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	I rarely buy groceries or food for the household	1	.3	.3	.3
	I sometimes buy groceries or food for the household	8	2.6	2.6	3.0
	I often buy groceries or food for the household	43	14.1	14.1	17.1
	I always buy groceries or food for the household	252	82.9	82.9	100.0
	Total	304	100.0	100.0	

Are you aware of any current litigation involving beef producers?

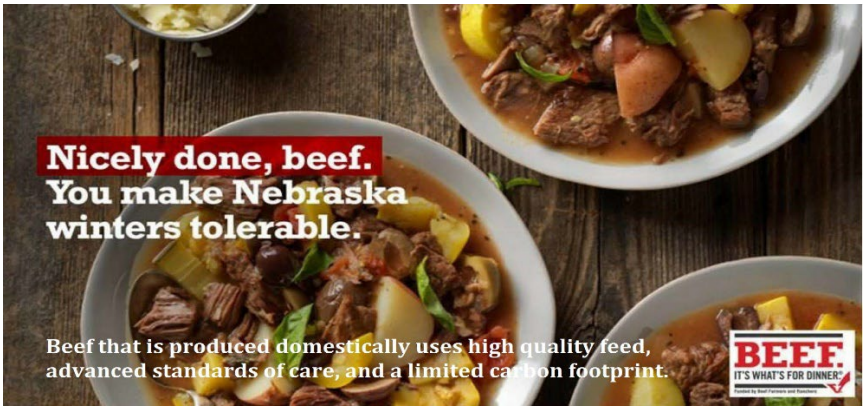
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	295	97.0	97.0	97.0
	Yes	9	3.0	3.0	100.0
	Total	304	100.0	100.0	

Please briefly describe your knowledge about the litigation involving beef producers. - Selected Choice

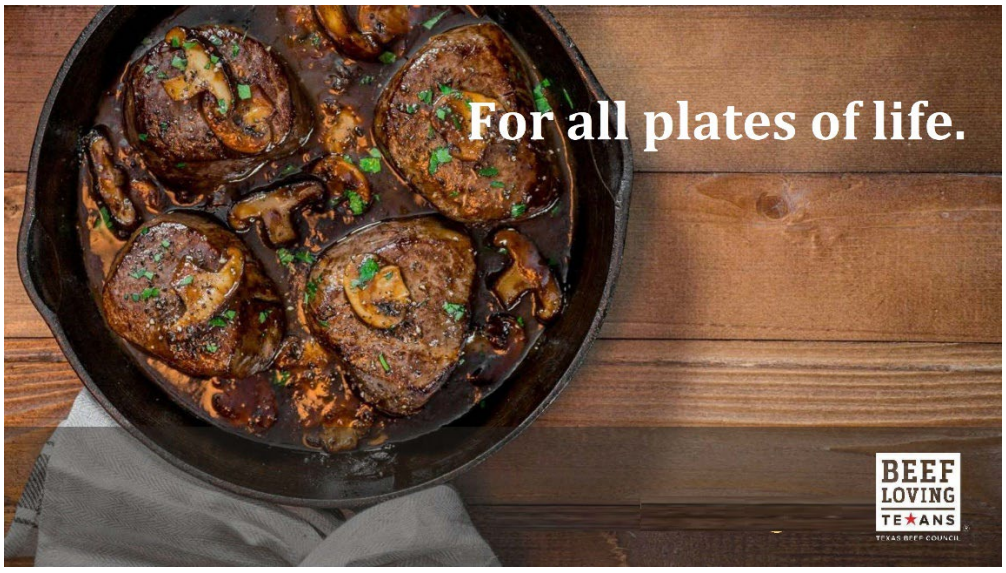
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	11.1	11.1
	Cannot remember	8	2.6	88.9	100.0
	Total	9	3.0	100.0	
Missing	System	295	97.0		
Total		304	100.0		

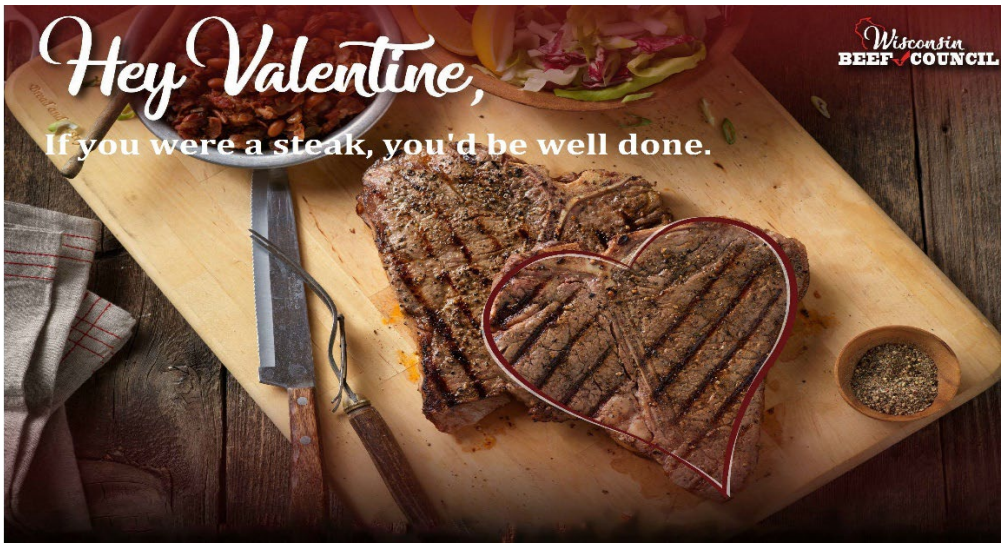
Appendix H

State-Level Survey Stimuli [73]



[73] These are the advertisements used in the *current* beef ad condition. As described in the report, the *adjusted* beef ad condition featured the same ad plus an extra statement: "Beef that is produced domestically uses high quality feed, advanced standards of care, and a limited carbon footprint" (see the Nebraska example; other states are not included for brevity).





Appendix I

State-Levels Studies – Respondent Demographics for Analytical Samples

Sample	NE	OK	SD	TX	WI
Sample Size	**154**	**141**	**155**	**156**	**157**
Gender					
Male	32.5%	34.0%	29.1%	26.9%	28.7%
Female	67.5%	66.0%	70.9%	72.4%	71.3%
Other	.0%	.0%	.0%	.0%	.0%
Prefer not to respond	.0%	.0%	.6%	.6%	.0%
Mean Age	47.21	44.26	46.50	43.72	49.71
Ethnicity					
Asian	4.5%	2.1%	1.9%	5.8%	1.9%
Black	5.2%	10.6%	5.1%	7.1%	5.1%
Hispanic	4.5%	5.0%	6.3%	25.0%	1.3%
Native American	3.2%	14.2 %	6.3%	1.3%	1.9%
Pacific Islander	.0%	.0%	.0%	.0%	.0%
White	86.4%	79.4%	88.6%	65.7%	91.1%
Other	.6%	.7%	.0%	1.9%	.6%
Marital Status					
Single (not in a relationship)	48.1%	30.5%	42.4%	42.3%	40.1%
In a relationship (not married)	12.3%	19.1%	10.8%	11.5%	10.2%
Married	33.1%	46.8%	45.6%	43.6%	42.7%
Other	6.5%	3.5%	1.3%	2.6%	7.0%
Children					
No	40.9%	40.4%	43.0%	43.6%	42.0%
Yes	59.1%	59.6%	57.0%	56.4%	58.0%
Education					
High-school or less	9.7%	17.0%	15.8%	14.1%	19.1%
Some college/technical school	35.1%	33.3%	24.7%	28.2%	29.9%
2-year college	12.3%	9.2%	15.2%	13.5%	13.4%
4-year college	30.5%	25.5%	31.0%	30.1%	25.5%
Graduate school degree	12.3%	14.9%	13.3%	14.1%	12.1%
Employment Status					
Student (full-time)	4.5%	7.1%	3.2%	6.4%	2.5%
Unemployed (not a student)	16.9%	17.7%	19.0%	19.9%	15.9%
Employed part-time	9.1%	7.1%	12.7%	11.5%	12.1%
Employed full-time	48.1%	59.6%	51.9%	48.1%	49.0%
Other	21.4%	8.5%	13.3%	14.1%	20.4%
Median Annual Household	$50,000	$50,000	$50,000	$60,000	$55,000

Appendix J

Input Variables for Meta-Analysis

Beef Willingness-to-Pay

	Control			Current Ad			Adjusted Ad		
Study	*Mean*	*SD*	*N*	*Mean*	*SD*	*N*	*Mean*	*SD*	*N*
US	2.65	1.12	93	2.63	1.20	104	2.79	1.19	98
NE	2.42	1.11	52	2.28	1.15	53	2.62	1.10	45
OK	2.57	1.19	47	2.75	1.22	44	2.88	1.12	43
SD	2.76	1.21	51	2.43	1.12	51	2.98	1.30	48
TX	2.55	0.89	49	2.70	1.16	47	2.85	1.23	52
WI	2.47	1.16	51	2.40	1.11	52	2.60	1.16	52

Beef Purchase Intent

	Control			Current Ad			Adjusted Ad		
Study	*Mean*	*SD*	*N*	*Mean*	*SD*	*N*	*Mean*	*SD*	*N*
US	5.23	2.01	96	5.70	1.47	109	5.84	1.50	99
NE	5.76	1.91	54	5.91	1.83	54	6.09	1.26	46
OK	5.37	2.03	51	6.29	1.12	45	6.27	1.30	45
SD	5.54	1.65	52	5.92	1.60	51	6.09	1.35	55
TX	5.37	1.88	51	5.73	1.69	51	5.93	1.37	54
WI	5.25	2.08	52	5.50	1.73	52	5.51	1.53	53

Beef Commodity Perceptions

	Control			Current Ad			Adjusted Ad		
Study	*Mean*	*SD*	*N*	*Mean*	*SD*	*N*	*Mean*	*SD*	*N*
US	5.23	1.80	93	4.85	1.78	106	4.52	1.93	98
NE	5.50	1.74	50	5.35	1.93	51	4.77	1.92	44
OK	5.08	1.77	50	5.21	1.96	43	4.73	1.98	44
SD	5.71	1.58	49	5.16	1.81	49	4.96	1.91	52
TX	5.38	1.76	47	5.06	1.93	47	4.87	1.68	52
WI	5.02	2.02	52	5.43	1.86	49	4.34	1.53	50

Appendix K

• USDA Economic Research Service, Cattle: annual and cumulative year-to-date U.S. trade (head) (Dec. 7, 2022), https://www.ers.usda.gov/data-products/livestock-and-meat-international-trade-data/.
• USDA Economic Research Service, Beef and veal: annual and cumulative year-to-date U.S. trade (carcass weight, 1,000 pounds) (Dec. 7, 2022), https://www.ers.usda.gov/data-products/livestock-and-meat-international-trade-data/.
• USDA Economic Research Service, U.S. beef trade shaped by production events (Apr. 19, 2021), https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=100966.
• Michael J. McConnell et. al., US red meat production from foreign-born animals, 3 A*gricultural Sciences* 201-207 (2012).
• Letter from Senator Rounds, et. al., to Merrick Garland, Attorney General, U.S. Department of Justice (June 1, 2021), Chart 2, https://www.rounds.senate.gov/imo/media/doc/060121%20June%201%202021%20Rounds-Smith%20et%20al.%20to%20Attorney%20General%20Garland.pdf.
• R-CALF USA, Relationship Between World Monthly Beef & Veal Imports and Fed Cattle Prices.
• R-CALF, Label Our Beef, https://www.r-calfusa.com/label-our-beef/ (depicting chart with cattle prices from January 2010 to May 2021).
• R-CALF USA, Volume-Based U.S. Trade Balance with Rest of World in Cattle, Beef, Beef Variety Meat and Processed Beef.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Cattle: Annual and cumulative year-to-date U.S. trade (head)															
2	Import/export, geography code and name 1/ 2/			1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
3	Cattle imports, total	2010	Mexico	873,550	1,261,204	1,034,245	982,038	1,296,609	1,072,126	1,653,408	456,246	669,409	720,439	959,840	1,222,569	1,130,168
4		1220	Canada	584,732	873,791	904,688	1,273,226	1,202,271	1,010,299	1,132,691	1,509,136	1,376,814	1,313,476	985,395	964,522	1,306,185
5		7550	Gabon	444												
6		5880	Japan			42		48	36	54	25	111	72			
7		4120	United Kingdom	303				74								
8		4039	Norway													350
9		7140	Morocco	235												
10		6021	Australia					1	1	3	1	4	22	21	15	12
11		7870	Mozambique							89						
12		4350	Former Czechoslovakia			78										
13		4272	Monaco	70												
14		4280	Germany, Fed. Republic				1				29	14				
15		2430	Turks and Caicos Islands					43								
16		4351	Czech Republic						42							
17		5170	Saudi Arabia	40												
18		4752	Vatican City	39												
19		6141	New Zealand													
20		4231	Belgium								10					
21		4010	Sweden		5											
22		4190	Ireland	2												
23		2050	Guatemala													
24		4759	Italy			1										
25		2250	Panama								1					
26			**Total**	**1,459,415**	**2,135,000**	**1,939,054**	**2,255,265**	**2,499,046**	**2,082,504**	**2,786,245**	**1,965,448**	**2,046,352**	**2,034,009**	**1,945,256**	**2,187,106**	**2,436,715**
27	Cattle imports, cattle for immediate slaughter	1220	Canada													
28		2010	Mexico													
29			**Total**													
30	Cattle imports, cattle and calves for feeding	2010	Mexico													
31		1220	Canada													
32			**Total**													
33	Cattle imports, cattle for breeding	1220	Canada													
34		2010	Mexico													
35		6021	Australia													
36			**Total**													
37	Cattle exports, total	1220	Canada	23,650	34,586	88,148	56,571	67,530	92,365	67,442	40,722	41,189	116,762	223,035	349,732	297,622
38		2010	Mexico	124,937	64,226	210,075	251,506	76,854	128,636	14,641	115,249	235,121	160,474	100,658	126,873	144,021
39		4621	Russia					103			6					
40		4890	Turkey	69						3,882	9,610	64			30	224

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Cattle: Annual and cumulative year-to-date U.S. trade (head)															
2	Import/export, geography code and name 1/ 2/			1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
41		5520	Vietnam									104				304
42		5880	Japan	5,259	2,976	2,813	2,598	896	556	1,191	1,791	649	296	470	998	376
43		5170	Saudi Arabia	180	120		585	185	1,617	538		646	1,152	884		
44		3510	Brazil	3,424	3,759	1,060	1,192	1,226	1,132	1,575	256	1,107	354	493	437	340
45		5180	Qatar													
46		7290	Egypt		525	1,213	599				2,221		1,340			
47		5490	Thailand	1,155	325	1,502	1,938	1,364	411	498	233	57	54			4
48		4634	Kazakhstan													
49		5800	South Korea	482	1,016	2,663	789	1,029	1,806	1,428	496	389	1	315	434	857
50		3010	Colombia	1,178	172	121	690	1,174	534	1,264	872	394	236	277	178	1,105
51		5350	Pakistan											11		
52		6021	Australia	84	9,234	240		513	464	75	393	13	119	81	171	12
53		3070	Venezuela	2,891	62	345	1,592	253	72	109	411	212	629	473	334	500
54		7321	Sudan													
55		5110	Jordan				100									
56		5600	Indonesia	800												
57		5040	Lebanon									755	1,794	2,228	905	1,877
58		2470	Dominican Republic	787	183	55	263	520	434	342	117	36	218	14	267	306
59		5830	Taiwan	43		908	836	682	937	123		4	2		101	14
60		3310	Ecuador	56	168	66	34	154	112	849	170	509	870	120	5	4
61		2250	Panama			3	16	10	67	4	17	12	22	17	53	91
62		7620	Angola													
63		5650	Philippines	51	13			80	400		1,396	652			1	
64		5700	China			21						255	229	84	146	529
65		7140	Morocco			503			26							
66		3570	Argentina	725	155	49	346	70	576	14	38	85	139	14	38	18
67		4644	Uzbekistan													
68		2150	Honduras	120	20	50	157	121	13	3	18	2	23		10	2
69		7230	Tunisia	1,494										37		
70		2190	Nicaragua				56		27	74	84		32		766	279
71		7910	Republic of South Africa	198	111	250	13	69	44	161			93		28	4
72		2390	Cuba													
73		4210	Netherlands	242						35		2		238		18
74		4700	Spain	900	93			19				33		4	4	1
75		2740	Trinidad and Tobago			11	599					7				
76		5230	Oman													
77		2230	Costa Rica	26	59	15	10	110	12		5		76		17	14
78		2720	Barbados													

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Cattle: Annual and cumulative year-to-date U.S. trade (head)															
2	Import/export, geography code and name 1/ 2/			1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
79		2050	Guatemala	2	21	6		42	115	115				23		
80		4120	United Kingdom		220	27		37		6	60		75	27	85	
81		4370	Hungary		542		103						28			
82		4280	Germany, Fed. Republic		50	20	137			34		17			4	148
83		3330	Peru		152		41									
84		2440	Cayman Islands				58	42	15							
85		5200	United Arab Emirates						236							
86		4623	Ukraine				567									
87		5820	Hong Kong								35	16	69		6	
88		3370	Chile	10	2	20	2	112		2	4		34			
89		4279	France	102	307						11					
90		5330	India													
91		4350	Former Czechoslovakia			274	131									
92		7210	Algeria			251										
93		6141	New Zealand		288		8		20				46	12		2
94		2410	Jamaica													
95		3120	Guyana						19							
96		7530	Nigeria													
97		3150	Suriname	35												
98		2320	Bermuda		21											
99		4231	Belgium				193		29					95		
100		5130	Kuwait													
101		4635	Kyrgyzstan													
102		4190	Ireland		180	99										
103		2080	Belize		173											
104		5070	Iran													
105		2360	Bahamas			123		40				6				
106		3550	Uruguay		5		18	9		9	47	4	28	7		4
107		2771	Netherlands Antilles			3	11		26	42				4		
108		4759	Italy	67	37				22	3				4		
109		4099	Denmark	40		5					45		9			
110		4419	Switzerland	56		4	24		24	11						1
111		5590	Singapore											9		
112		2482	British Virgin Islands	4					2	78						
113		2486	Dominica			8		58								
114		4850	Romania					90								
115		5570	Malaysia						30							
116		4610	Former USSR	20	54											

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Cattle: Annual and cumulative year-to-date U.S. trade (head)															
2	Import/export, geography code and name 1/ 2/			1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
117		4550	Poland		8			24					2			13
118		2110	El Salvador	25										34		
119		5250	Bahrain													
120		4359	Slovakia													
121		4330	Austria		10	10										
122		4791	Croatia													
123		4710	Portugal											33	11	
124		5050	Iraq													
125		5380	Bangladesh													
126		4010	Sweden												36	
127		2450	Haiti	17												
128		2777	Curaçao													
129		3350	Bolivia				5		12							
130		2483	St. Kitts-Nevis		32											
131		2839	Martinique	10	9		2									
132		5081	Israel													
133		4050	Finland													
134		4039	Norway													
135		2779	Aruba													
136		2774	Sint Maarten													
137		7960	Zimbabwe									4				5
138		7630	Congo (Brazzaville)													
139		2430	Turks and Caicos Islands													
140		3530	Paraguay	1		1							3			
141		4840	Greece													
142		4351	Czech Republic													
143		2487	St. Lucia													
144		6414	French Polynesia													
145		5310	Afghanistan													
146		4510	Lithuania													
147			**Total**	**169,140**	**119,914**	**310,962**	**321,790**	**153,416**	**230,791**	**94,548**	**174,307**	**282,344**	**285,209**	**329,524**	**481,670**	**448,695**
148	1/ Geographies are ranked by the sum of their trade for all months shown.															
149	2/ Blank cells represent a zero value. For meat, zero values represent a rounded value less than 0.5 thousand pounds.															
150	Source: USDA, Economic Research Service calculations using data from U.S. Department of Commerce, Bureau of the Census.															
151	*Date run: 12/6/2022 11:46:29 AM*															

	A	B	C	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
1	Cattle: Annual and cumulative year-to-date U.S. trade (h															
2	Import/export, geography code and name 1/ 2/			2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
3	Cattle imports, total	2010	Mexico	816,460	1,239,531	1,370,476	1,256,404	1,256,973	1,090,094	702,661	940,869	1,221,111	1,421,189	1,468,189	989,406	1,115,855
4		1220	Canada	1,686,508	512,353	135	559,134	1,031,870	1,404,871	1,581,303	1,061,005	1,062,774	686,114	814,599	1,043,717	1,242,512
5		7550	Gabon													
6		5880	Japan													
7		4120	United Kingdom													
8		4039	Norway													
9		7140	Morocco													
10		6021	Australia	4						29						
11		7870	Mozambique													
12		4350	Former Czechoslovakia													
13		4272	Monaco													
14		4280	Germany, Fed. Republic													
15		2430	Turks and Caicos Islands													
16		4351	Czech Republic													
17		5170	Saudi Arabia													
18		4752	Vatican City													
19		6141	New Zealand		12											
20		4231	Belgium													
21		4010	Sweden													
22		4190	Ireland													
23		2050	Guatemala	1												
24		4759	Italy													
25		2250	Panama													
26			**Total**	**2,502,973**	**1,751,896**	**1,370,611**	**1,815,538**	**2,288,843**	**2,494,965**	**2,283,993**	**2,001,874**	**2,283,885**	**2,107,303**	**2,282,788**	**2,033,123**	**2,358,367**
27	Cattle imports, cattle for immediate slaughter	1220	Canada											639,101	674,867	724,645
28		2010	Mexico											3,127	935	1,886
29			**Total**											**642,228**	**675,802**	**726,531**
30	Cattle imports, cattle and calves for feeding	2010	Mexico											1,465,010	988,447	1,113,856
31		1220	Canada											167,942	357,428	492,982
32			**Total**											**1,632,952**	**1,345,875**	**1,606,838**
33	Cattle imports, cattle for breeding	1220	Canada											7,556	11,422	24,885
34		2010	Mexico											52	24	113
35		6021	Australia													
36			**Total**											**7,608**	**11,446**	**24,998**
37	Cattle exports, total	1220	Canada	134,220	68,394	14,246	19,406	36,918	44,098	38,032	27,145	41,726	75,560	60,492	47,615	49,744
38		2010	Mexico	106,019	22,437	1,365	1,003	727	13,779	49,203	18,351	20,698	12,840	5,842	32,631	27,697
39		4621	Russia							7,667	8,771	4,053	37,542	89,044	56,414	15,257
40		4890	Turkey		533				1,593	1,819	2,005	21,607	62,169	25,312	16,245	3,503

	A	B	C	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
1	Cattle: Annual and cumulative year-to-date U.S. trade (h															
2	Import/export, geography code and name 1/ 2/			2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
41		5520	Vietnam													
42		5880	Japan	275	808	19	51		22			2	18	1	135	
43		5170	Saudi Arabia		531			3,537	4,159	5,110	110	132	134	14		
44		3510	Brazil	134	410	16	309	104		506	6				2	
45		5180	Qatar							6						24
46		7290	Egypt						2	1,909		2	4	3,135	1,386	
47		5490	Thailand	121				765	2,250						24	198
48		4634	Kazakhstan							253		1,989	5,065	2,833	891	1,986
49		5800	South Korea	173	2,217			2	2		5	1	3	1		84
50		3010	Colombia	2,363	900							28				
51		5350	Pakistan													
52		6021	Australia		23						33	15				
53		3070	Venezuela	237	12		30	70		15						
54		7321	Sudan													3,801
55		5110	Jordan							22					3,785	4,160
56		5600	Indonesia					7,148					10			
57		5040	Lebanon										6			
58		2470	Dominican Republic	268	127					127		18	10			94
59		5830	Taiwan	7					21	80			3			
60		3310	Ecuador		85						1					
61		2250	Panama	59	482				12	236	389	80	271	442	283	241
62		7620	Angola											2,928		
63		5650	Philippines											4		
64		5700	China	256	1,022			183			23			9		
65		7140	Morocco							2,052						
66		3570	Argentina	11	148											
67		4644	Uzbekistan													
68		2150	Honduras	51					176	31	211	73	42	59	83	11
69		7230	Tunisia													
70		2190	Nicaragua						1	4	38	56			5	16
71		7910	Republic of South Africa		99							12				
72		2390	Cuba	3	410	22	708									
73		4210	Netherlands	11				8			31	3				517
74		4700	Spain													
75		2740	Trinidad and Tobago	2					1		31				174	37
76		5230	Oman									200		385	295	
77		2230	Costa Rica	19	36				4	128	18	52	41	7	36	36
78		2720	Barbados						2	15	15	10	19	5	21	37

	A	B	C	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
1	Cattle: Annual and cumulative year-to-date U.S. trade (h															
2	Import/export, geography code and name 1/ 2/			2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
79		2050	Guatemala	26				93	50	44		9		17	52	37
80		4120	United Kingdom	11		18	22	1			5	12		4	4	
81		4370	Hungary		34											
82		4280	Germany, Fed. Republic		19					12	79		2			17
83		3330	Peru							14				74		
84		2440	Cayman Islands					58		7	214					
85		5200	United Arab Emirates							52	37	31	84	30		
86		4623	Ukraine													
87		5820	Hong Kong						44		234	24				17
88		3370	Chile							35		192				49
89		4279	France													
90		5330	India										8			
91		4350	Former Czechoslovakia													
92		7210	Algeria													
93		6141	New Zealand													
94		2410	Jamaica	2		2			79	14		19			10	
95		3120	Guyana						37					161	67	42
96		7530	Nigeria													
97		3150	Suriname	45	87	3	33				11	7			16	17
98		2320	Bermuda					62	49		27		31	8	112	
99		4231	Belgium									2			1	
100		5130	Kuwait							58	31					
101		4635	Kyrgyzstan												296	
102		4190	Ireland								13					
103		2080	Belize	27							35				40	
104		5070	Iran											48	7	27
105		2360	Bahamas			30				6						
106		3550	Uruguay													
107		2771	Netherlands Antilles							34	32	3				
108		4759	Italy													
109		4099	Denmark											6		
110		4419	Switzerland													
111		5590	Singapore		4							1				
112		2482	British Virgin Islands											5	5	20
113		2486	Dominica	8										18		
114		4850	Romania													
115		5570	Malaysia	7							16					
116		4610	Former USSR													

	A	B	C	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
1	Cattle: Annual and cumulative year-to-date U.S. trade (h															
2	Import/export, geography code and name 1/ 2/			2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
117		4550	Poland	26												
118		2110	El Salvador													
119		5250	Bahrain								17	21	21			
120		4359	Slovakia								52					
121		4330	Austria					2		1	25					
122		4791	Croatia				45									
123		4710	Portugal													
124		5050	Iraq												43	
125		5380	Bangladesh													
126		4010	Sweden													
127		2450	Haiti													
128		2777	Curaçao										25			
129		3350	Bolivia													15
130		2483	St. Kitts-Nevis													
131		2839	Martinique													
132		5081	Israel	13												
133		4050	Finland													
134		4039	Norway								12					
135		2779	Aruba									10				
136		2774	Sint Maarten													
137		7960	Zimbabwe													
138		7630	Congo (Brazzaville)													
139		2430	Turks and Caicos Islands													
140		3530	Paraguay													
141		4840	Greece													
142		4351	Czech Republic									2				
143		2487	St. Lucia													
144		6414	French Polynesia						2							
145		5310	Afghanistan													
146		4510	Lithuania													
147			**Total**	**244,394**	**98,818**	**15,721**	**21,607**	**49,678**	**66,383**	**107,492**	**58,023**	**91,090**	**193,908**	**190,884**	**160,678**	**107,684**
148	1/ Geographies are ranked by the sum of their trade for															
149	2/ Blank cells represent a zero value. For meat, zero val															
150	Source: USDA, Economic Research Service calculations															
151	*Date run: 12/6/2022 11:46:29 AM*															

	A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK	AL
1	Cattle: Annual and cumulative year-to-date U.S. trade (h											
2	Import/export, geography code and name 1/ 2/			2015	2016	2017	2018	2019	2020	2021	Jan-Oct 21	Jan-Oct 22
3	Cattle imports, total	2010	Mexico	1,154,421	943,043	1,164,045	1,268,224	1,319,939	1,441,038	1,128,344	894,915	639,621
4		1220	Canada	829,968	764,971	642,494	630,736	722,808	673,029	646,777	511,013	630,168
5		7550	Gabon									
6		5880	Japan									
7		4120	United Kingdom									
8		4039	Norway									
9		7140	Morocco									
10		6021	Australia				1					
11		7870	Mozambique									
12		4350	Former Czechoslovakia									
13		4272	Monaco									
14		4280	Germany, Fed. Republic									
15		2430	Turks and Caicos Islands									
16		4351	Czech Republic									
17		5170	Saudi Arabia									
18		4752	Vatican City									
19		6141	New Zealand									
20		4231	Belgium									
21		4010	Sweden									
22		4190	Ireland									
23		2050	Guatemala									
24		4759	Italy									
25		2250	Panama									
26			**Total**	**1,984,389**	**1,708,014**	**1,806,539**	**1,898,961**	**2,042,747**	**2,114,067**	**1,775,121**	**1,405,928**	**1,269,789**
27	Cattle imports, cattle for immediate slaughter	1220	Canada	470,941	546,320	489,344	414,812	520,757	528,419	484,467	393,222	436,605
28		2010	Mexico	3,695	2,095	1,789	2,184	1,992	4,006	2,159	1,735	831
29			**Total**	**474,636**	**548,415**	**491,133**	**416,996**	**522,749**	**532,425**	**486,626**	**394,957**	**437,436**
30	Cattle imports, cattle and calves for feeding	2010	Mexico	1,150,644	940,755	1,161,982	1,265,754	1,317,801	1,436,934	1,126,126	893,124	638,730
31		1220	Canada	341,802	203,176	141,026	205,329	191,800	134,029	152,499	110,326	182,218
32			**Total**	**1,492,446**	**1,143,931**	**1,303,008**	**1,471,083**	**1,509,601**	**1,570,963**	**1,278,625**	**1,003,450**	**820,948**
33	Cattle imports, cattle for breeding	1220	Canada	17,225	15,475	12,124	10,595	10,251	10,581	9,811	7,465	11,345
34		2010	Mexico	82	193	274	286	146	98	59	56	60
35		6021	Australia				1					
36			**Total**	**17,307**	**15,668**	**12,398**	**10,882**	**10,397**	**10,679**	**9,870**	**7,521**	**11,405**
37	Cattle exports, total	1220	Canada	38,588	36,615	145,364	197,622	274,543	270,235	393,977	356,129	232,067
38		2010	Mexico	20,271	28,643	29,719	21,916	22,233	32,528	92,265	67,079	90,411
39		4621	Russia	3,436		1,131	6,866	2,628		141	81	
40		4890	Turkey	5,433		5,603			1,415	4,148	2,392	2

	A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK	AL
1	Cattle: Annual and cumulative year-to-date U.S. trade (h											
2	Import/export, geography code and name 1/ 2/			2015	2016	2017	2018	2019	2020	2021	Jan-Oct 21	Jan-Oct 22
41		5520	Vietnam	1,553	25	5,128	1,850	1,676	6,432	7,329	5,593	1,817
42		5880	Japan		2	102	69	3	2	19	19	5
43		5170	Saudi Arabia	5				57				
44		3510	Brazil		81	5	21	17	98	283	264	177
45		5180	Qatar			2,876	11,655		2,870	235	235	
46		7290	Egypt					2,003	2,738			
47		5490	Thailand	491	828	394	498	340	1,347	2,015	1,891	700
48		4634	Kazakhstan	541				1,193				
49		5800	South Korea	40		149	98		172	2		334
50		3010	Colombia	112	91	144	142	225		28	14	
51		5350	Pakistan		273		209	1,754		9,304	6,111	2,589
52		6021	Australia		3	3		3				
53		3070	Venezuela		25	189						
54		7321	Sudan	1,351		1,500	1,800					
55		5110	Jordan									
56		5600	Indonesia			4						
57		5040	Lebanon				2					
58		2470	Dominican Republic	14	388	108	59	45	83	186	186	108
59		5830	Taiwan		1		14					
60		3310	Ecuador	242								12
61		2250	Panama	70	55	113	140	21	26	15	15	9
62		7620	Angola									
63		5650	Philippines	82	36	8	34		10	91	91	41
64		5700	China		2	30	1	5	5			
65		7140	Morocco									
66		3570	Argentina			2						
67		4644	Uzbekistan						2,306			
68		2150	Honduras		377	33	55	17	10			
69		7230	Tunisia									
70		2190	Nicaragua		18	2		12				
71		7910	Republic of South Africa			84			73			
72		2390	Cuba				24					
73		4210	Netherlands		10		6		5			7
74		4700	Spain	1								
75		2740	Trinidad and Tobago	78			11			43	43	
76		5230	Oman			11						3
77		2230	Costa Rica	55	1	9	63					22
78		2720	Barbados	60	350	45	27		159			

	A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK	AL
1	Cattle: Annual and cumulative year-to-date U.S. trade (h											
2	Import/export, geography code and name 1/ 2/			2015	2016	2017	2018	2019	2020	2021	Jan-Oct 21	Jan-Oct 22
79		2050	Guatemala			68		11		12	12	42
80		4120	United Kingdom		6	53	33	1		3	1	
81		4370	Hungary									
82		4280	Germany, Fed. Republic		56	83			15	2	2	
83		3330	Peru				47	48	156	140	140	14
84		2440	Cayman Islands		152	1		118				44
85		5200	United Arab Emirates	25	63	11	1			8	8	12
86		4623	Ukraine					9				
87		5820	Hong Kong	2		2			40			
88		3370	Chile		3	1		2				
89		4279	France	1		3		2				2
90		5330	India		333	7		21	26	20	20	15
91		4350	Former Czechoslovakia									
92		7210	Algeria		142							
93		6141	New Zealand									
94		2410	Jamaica				238					
95		3120	Guyana			7				12	12	41
96		7530	Nigeria			21				319	318	17
97		3150	Suriname	38				12	8	24	24	10
98		2320	Bermuda	6						13	13	54
99		4231	Belgium									39
100		5130	Kuwait		4			203				
101		4635	Kyrgyzstan									
102		4190	Ireland									
103		2080	Belize									68
104		5070	Iran	51	47	19	38	7				15
105		2360	Bahamas				13					
106		3550	Uruguay					74				
107		2771	Netherlands Antilles									
108		4759	Italy	1				1				7
109		4099	Denmark							27	27	
110		4419	Switzerland			1	8			1	1	
111		5590	Singapore		98	2	8		1	2	2	5
112		2482	British Virgin Islands									
113		2486	Dominica									
114		4850	Romania									
115		5570	Malaysia		18	1	10	1	2			2
116		4610	Former USSR									

	A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK	AL
1	Cattle: Annual and cumulative year-to-date U.S. trade (h											
2	Import/export, geography code and name 1/ 2/			2015	2016	2017	2018	2019	2020	2021	Jan-Oct 21	Jan-Oct 22
117		4550	Poland		1							7
118		2110	El Salvador	12								
119		5250	Bahrain				1					
120		4359	Slovakia									
121		4330	Austria			2						
122		4791	Croatia									
123		4710	Portugal									
124		5050	Iraq									
125		5380	Bangladesh							41	24	86
126		4010	Sweden		1			2		1	1	
127		2450	Haiti							21	21	
128		2777	Curaçao		7					1		
129		3350	Bolivia									
130		2483	St. Kitts-Nevis									
131		2839	Martinique									
132		5081	Israel			2		1	1			10
133		4050	Finland		1	1	6	8				
134		4039	Norway									
135		2779	Aruba									
136		2774	Sint Maarten			9						
137		7960	Zimbabwe									
138		7630	Congo (Brazzaville)			7						
139		2430	Turks and Caicos Islands					6				
140		3530	Paraguay									
141		4840	Greece		4							
142		4351	Czech Republic					1				
143		2487	St. Lucia							3	1	
144		6414	French Polynesia									
145		5310	Afghanistan			1						
146		4510	Lithuania				1					
147			**Total**	**72,559**	**68,760**	**193,058**	**243,586**	**307,303**	**320,763**	**510,731**	**440,770**	**330,471**
148	1/ Geographies are ranked by the sum of their trade for											
149	2/ Blank cells represent a zero value. For meat, zero val											
150	Source: USDA, Economic Research Service calculation											
151	*Date run: 12/6/2022 11:46:29 AM*											

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	Beef and veal: Annual and cumulative year-to-date U.S. trade (carcass weight, 1,000 pounds)																						
2	Import/export, geography code and name 1/ 2/			1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
3	Beef and veal	6021	Australia	818,412	1,084,352	1,048,431	1,011,506	905,801	876,361	670,450	545,123	639,426	855,260	865,807	1,025,327	1,151,858	1,136,758	1,128,589	1,118,439	900,016	887,612	887,650	663,009
4	imports	1220	Canada	239,269	222,373	223,093	331,124	407,422	462,558	445,695	586,107	712,077	823,073	947,275	919,068	987,073	1,090,894	740,065	1,062,420	1,092,348	843,943	789,464	841,241
5		6141	New Zealand	658,351	577,876	636,283	639,048	561,947	527,883	579,453	503,727	576,697	593,101	560,984	639,334	637,372	603,931	644,607	645,414	603,211	563,553	507,661	527,332
6		2010	Mexico	211	3,466	1,684	877	3,221	4,143	5,747	10,672	8,989	9,142	10,482	10,890	12,166	16,707	15,883	19,495	26,720	40,760	49,788	43,783
7		3510	Brazil	78,477	43,890	8,520	80,687	110,116	126,231	67,509	86,902	94,766	135,055	202,100	173,584	163,556	200,785	206,227	219,393	214,355	273,209	280,819	212,907
8		3550	Uruguay	8,712	19,529	24,274	23,541	13,812	10,522	9,236	70,691	68,178	50,237	65,926	62,237	41,109	14,095	103,372	402,898	557,051	305,403	355,224	65,549
9		3570	Argentina	189,568	209,307	260,908	194,637	161,809	141,146	172,221	153,398	146,658	124,191	156,034	130,806	99,708	85,349	87,890	116,606	110,356	85,798	69,264	56,052
10		2190	Nicaragua				18,960	59,479	60,369	51,348	35,810	40,159	21,290	22,681	31,985	37,831	42,466	48,620	65,397	63,402	62,590	88,357	99,326
11		2230	Costa Rica	59,043	56,571	64,172	45,005	68,378	65,256	58,516	54,358	36,734	27,725	38,348	37,425	30,472	25,176	30,272	23,632	25,719	19,377	17,950	19,239
12		2150	Honduras	26,910	31,786	35,364	47,773	47,487	47,706	17,664	18,124	15,270	2,739	1,362	823	1,800	682	225	4,962	4,696	1,544	457	6,603
13		2050	Guatemala	48,043	57,161	38,981	20,316	28,076	16,957	10,378	2,075	427											
14		2470	Dominican Republic	35,352	38,553	48,634	18,116	20,067	16,037	6,606	739	664	39						63				
15		4190	Ireland							4				3	3								
16		4010	Sweden	2,702	4,301	9,215	4,333	9,367	4,798	643	26	13	0	0	0								
17		4210	Netherlands	379	54	85	105	255	774	474	650	794	26	28	28	178	241	21	15	4	66	130	58
18		3370	Chile											11	12						239	3,451	2,397
19		5880	Japan	51	162	596	25	14	71	19	17	28	42	46	7	0				0	543	1,679	450
20		4099	Denmark	5,638	2,155	2,762	2,755	1,352	1,149	1,172	970	843	17	50			3	2	50			228	
21		4791	Croatia				325	485	2,861	2,462	2,371	1,789	823	1,246	248	18	21	18	39	40	21	16	14
22		4050	Finland	147	94	2,825	598	2,234	3,388	284	0												
23		2110	El Salvador	3,697	2,234						0	0											
24		4790	Former Yugoslavia	1,688	1,204	1,203	473																
25		4120	United Kingdom	80	0	101	0	0	2	0	0	112	0	84	0	0							
26		4370	Hungary	679	686	209			948	234	83												
27		4850	Romania						1,467	853	427												
28		3530	Paraguay						204	2,108		205				0							
29		4279	France	20	22	28	13	16	10	15	12	9	15	17	9	6	10	4	2	5	4	5	6
30		4759	Italy	183	373	182	108	123	193	126	165	9	50	158	321	15	1		58			11	
31		7920	Namibia						54	51													
32		4231	Belgium	851	2	1	0	0				1	2	0			0	0					166
33		5682	Bhutan														384			580			
34		4419	Switzerland	83	50	32	39	94	57	45	45	53	49	63	121	4			42				
35		4550	Poland	28	12			0			4	20	102	31	10	17	9	9	6	7	4	2	1
36		4330	Austria	0	0	0	58		70			42	1			94	5		64				
37		6144	Niue	226				107															
38		4280	Germany, Fed. Republic	6	59	18	1	0	15	62	66	16	21	50	0	1		12					
39		4510	Lithuania																				
40		5330	India						58		15	1							225				
41		5490	Thailand	0	0	2	0	0	0			0	107		67								
42		5200	United Arab Emirates								21			147									
43		3070	Venezuela			2	4	14	1	4		133											
44		5700	China	4		0		0	0		1	0	1	71	0							7	
45		5683	Maldives	27							114												
46		4351	Czech Republic						137					0									
47		5740	Mongolia	117																			
48		2080	Belize				52		49														
49		4700	Spain							37	0	48			1	0					0	0	2
50		7510	Niger							99													
51		5820	Hong Kong	78									0			0	6		0				
52		7780	Uganda				81																
53		4039	Norway	0	7	0	0	0	0		0	0	0	0	0	0							
54		4890	Turkey														71						
55		7600	Burkina Faso													69							
56		5420	Sri Lanka															68					
57		6863	Fiji												66								
58		3310	Ecuador		0								0	64									

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	Beef and veal: Annual and cumulative year-to-date U.S. trade (carcass weight, 1,000 pounds)																						
2	Import/export, geography code and name 1/ 2/			1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
59		4623	Ukraine							43						5		5	11		1		
60		4000	Iceland	44					19	1													
61		2440	Cayman Islands									62											
62		4840	Greece							62													
63		6142	Cook Islands	60																			
64		5360	Nepal						57														
65		6412	New Caledonia							54													
66		6040	Papua New Guinea						54														
67		6022	Norfolk Island			53																	
68		6862	Nauru		51																		
69		4031	Svalbard and Jan Mayen Islan					41															
70		5650	Philippines	31							0					4							
71		4621	Russia						12									21					
72		5020	Syria							10	13												
73		5081	Israel	13																			
74		5520	Vietnam																				11
75		7905	French Southern & Antarctic Lands	5																			
76		5350	Pakistan						5														
77		5830	Taiwan	0	0													4					
78		2410	Jamaica												3								
79		2487	St. Lucia																				
80		5800	South Korea		1	0	1	0			0	0								0	0	0	0
81		5600	Indonesia	0	0	0	0	0	0	0		1											
82		7490	Ghana	1																			
83		3010	Colombia					0	0		0	0											
84		7910	Republic of South Africa							0													
85		7290	Egypt	0																			
86		4794	Macedonia (Skopje)																0				
87		5570	Malaysia								0		0										
88		3350	Bolivia																0				
89		3330	Peru							0	0					0	0						
90		2720	Barbados						0														
91		4710	Portugal	0		0	0	0	0	0													
92		7480	Ivory Coast						0														
93		7530	Nigeria		0																		
94		5590	Singapore						0														
95		5550	Cambodia																				
96				**2,179,187**	**2,356,333**	**2,407,655**	**2,440,563**	**2,401,718**	**2,371,622**	**2,103,686**	**2,072,729**	**2,344,225**	**2,643,105**	**2,873,069**	**3,032,373**	**3,163,356**	**3,217,599**	**3,005,910**	**3,679,232**	**3,598,509**	**3,084,666**	**3,052,164**	**2,538,146**
97	Beef and veal	5880	Japan	821,121	574,446	534,123	629,127	719,768	832,429	1,004,451	1,015,779	1,053,553	1,118,488	1,095,309	1,112,417	1,004,062	771,074	918,014	11,609	17,496	51,639	159,411	231,070
98	exports	2010	Mexico	74,700	72,922	172,755	194,896	120,016	223,021	92,302	172,246	312,583	418,855	465,988	516,355	531,972	629,252	586,390	333,454	464,024	660,454	586,434	758,534
99		5800	South Korea	57,747	97,742	149,849	164,524	116,162	177,287	272,176	203,796	261,673	153,808	307,847	384,888	345,518	597,301	586,617	648	1,077	1,283	77,919	152,095
100		1220	Canada	98,152	191,065	258,916	249,415	243,548	285,715	311,982	295,424	282,725	261,211	249,629	253,759	233,291	240,550	226,681	56,457	105,895	238,556	339,106	389,250
101		5820	Hong Kong	9,233	10,815	12,534	16,861	13,903	14,066	14,108	36,182	28,565	36,374	32,146	37,309	34,340	57,994	45,385	1,477	2,034	12,624	32,223	32,363
102		5830	Taiwan	22,437	6,594	8,551	10,281	10,832	15,393	22,777	26,098	30,100	20,342	31,612	33,769	32,299	40,597	48,891	154	22,394	67,364	70,684	85,397
103		5520	Vietnam						1	20	9	11	32		2	73	70	53	1,013	11,058	10,383	41,869	121,925
104		5700	China	97	38	1	56	315	2,024	823	1,240	3,485	5,327	8,491	10,123	10,476	18,179	9,443	50	4,882	8,047	10,074	3,685
105		4621	Russia				446	2,124	13,183	39,191	59,022	77,150	52,464	97,299	25,839	7,400	17,388	10,626	975	1,441	142	114	47,725
106		4210	Netherlands	4,486	1,116	663	1,174	2,075	2,592	6,076	3,083	4,499	4,956	3,652	5,421	1,018	971	460	722	802	2,410	13,011	34,674
107		7290	Egypt	251	55	131	4,814	481	563	246	461	2,034	6,866	20,586	5,446	5,383	9,833	6,751	5	474	334	204	5,688
108		5650	Philippines	716	690	666	920	1,191	1,790	1,912	2,122	3,671	1,297	1,253	1,832	1,471	1,901	2,367	2,207	2,309	5,522	8,957	11,988
109		3370	Chile	2	52	65	40	113	127	47	37	382	170	148	69	187	116	182	56	69	234	452	831
110		2360	Bahamas	9,986	9,878	9,129	2,843	1,931	2,087	2,112	2,755	2,210	3,198	3,422	5,465	11,591	9,635	10,016	11,408	9,514	12,732	9,799	8,539
111		5600	Indonesia	838	1,311	1,411	1,172	1,300	1,813	1,204	2,577	3,461	626	2,235	1,736	3,610	2,110	4,854	4,546	8,980	9	3	811
112		2470	Dominican Republic	203	58	119	115	144	65	212	386	550	3,638	11,443	2,258	1,920	2,451	2,885	1,019	3,117	7,053	9,243	9,388
113		5200	United Arab Emirates	460	847	1,405	857	556	600	947	1,714	1,794	1,791	2,137	1,440	1,775	4,203	3,396	874	1,881	6,032	8,785	11,639
114		2050	Guatemala	81	10	10	315	1,150	720	1,283	614	1,796	2,895	4,662	3,643	2,507	2,833	3,320	1,096	1,833	2,769	3,882	3,705

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	Beef and veal: Annual and cumulative year-to-date U.S. trade (carcass weight, 1,000 pounds)																						
2	Import/export, geography code and name 1/ 2/			1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
115		4759	Italy	113	304	63	699	251	143	125	104	336	908	604	1,098	326	108	90	493	308	721	3,011	3,488
116		5130	Kuwait	1,163	685	513	921	891	1,158	1,058	1,160	1,647	2,198	1,677	879	1,602	1,081	14,111	1,396	3,008	5,493	5,237	5,427
117		5590	Singapore	3,344	2,050	3,219	3,244	3,717	3,151	3,264	2,037	2,127	2,054	2,009	2,196	2,041	2,256	2,479	63	147	2,356	2,348	2,989
118		4280	Germany, Fed. Republic	260	1,447	685	1,937	1,316	2,217	1,491	2,238	1,826	1,893	3,652	2,163	1,999	1,344	1,192	2,094	1,820	2,277	2,335	5,542
119		5170	Saudi Arabia	2,995	4,501	5,304	4,083	3,156	2,374	2,994	3,471	3,129	2,520	1,536	1,205	2,132	3,084	6,230	1,939	1,679	5,427	4,058	7,015
120		3010	Colombia	160	167	100	52	637	517	6,636	7,275	2,081	2,856	2,498	348	176	475	1,372	560	42	15	65	392
121		2320	Bermuda	3,237	3,201	3,034	3,288	3,251	3,185	2,910	2,450	2,293	2,291	2,690	3,099	2,490	2,578	2,622	2,790	2,915	4,716	5,525	4,410
122		2410	Jamaica	406	643	849	290	859	407	279	508	894	951	1,250	806	1,762	3,184	1,708	122	2,215	4,264	5,819	6,473
123		2440	Cayman Islands	3,578	4,397	2,763	1,271	1,015	1,458	821	962	1,931	5,939	4,674	4,950	465	967	901	845	1,417	1,723	2,728	2,665
124		2250	Panama	500	248	102	286	582	249	793	2,132	1,169	2,145	1,595	2,597	1,988	1,544	993	476	462	356	335	706
125		2230	Costa Rica	171	61	54	8	186	244	337	445	392	426	823	1,771	2,256	1,898	2,574	130	585	1,822	888	739
126		4419	Switzerland	2,044	2,712	2,230	2,269	2,215	2,464	2,611	2,368	2,692	3,054	1,855	2,191	3,321	2,642	2,588	2,315	1,288	1,275	2,241	1,707
127		3330	Peru	24	170	46	416	1,006	240	437	1,575	1,814	1,618	1,713	842	213	285	90	13		239	322	825
128		2740	Trinidad and Tobago	345	741	158	275	163	348	657	188	255	539	736	752	374	312	359	1,051	930	2,658	2,375	2,678
129		5180	Qatar	82	163	208	112	248	105	119	106	94	202	262	108	247	805	469	216	486	19	127	851
130		2779	Aruba	1,014	1,289	1,453	1,334	2,090	1,081	870	797	956	726	583	339	371	433	553	827	798	1,619	1,283	1,725
131		2150	Honduras	12	12	67	38	120	317	392	526	440	861	1,651	1,552	571	394	612	1,080	765	1,395	1,123	672
132		4120	United Kingdom	51	310	89	2,579	1,445	279	1,819	4,331	2,985	4,256	4,910	1,647	13	72	114	137	407	732	832	676
133		5490	Thailand	523	473	1,375	1,951	1,496	482	807	586	1,651	680	925	452	746	930	891	13		510	913	552
134		2720	Barbados	374	529	581	284	473	632	806	928	593	1,170	2,847	1,720	389	421	452	344	735	1,748	1,888	1,829
135		2771	Netherlands Antilles	2,170	1,782	1,942	1,319	1,405	1,390	1,585	1,810	1,647	1,119	1,379	1,228	1,076	1,109	716	1,437	700	927	1,001	2,385
136		3510	Brazil	2	3	154	27	26	984	626	3,897	6,113	8,662	1,610	582	283	903	302	10	113	403	271	219
137		2110	El Salvador			9	17	105	196	122	124	133	965	592	255	475	285	452	205	482	411	302	291
138		4231	Belgium	176	73	64	59	77	74	463	295	785	427	811	1,168	941	754	549	159	128	283	1,138	2,805
139		5250	Bahrain	146	361	444	215	258	250	225	173	97	135	409	241	1,804	1,000	270	213	350	772	994	1,408
140		6021	Australia	109	150	96	314	37	669	985	386	600	58	5,631	4,793	164	250	18	40	100		2	104
141		5110	Jordan	240	65	14	25	173	152	130	542	465	45	384	216	47	32	416		22	390	584	1,075
142		7620	Angola	301	873	242	39	26	28	55	171	10	48	30	54	50	17	15		37	1,257	1,149	2,570
143		4700	Spain	406	389	206	362	279	262	361	522	892	527	968	801	277	296	563	246	268	351	1,615	858
144		2777	Curaçao																				
145		4490	Latvia					1	55	13	331		5,631	1,496	15,449	431		108	278				
146		2430	Turks and Caicos Islands	155	196	287	475	316	111	331	269	110	92	389	147	134	323	552	451	396	602	482	732
147		2774	Sint Maarten																				
148		4099	Denmark	560	544	513	1,068	609	1,369	1,250	613	1,141	1,036	968	569	298	300	470	532	458	816	1,197	1,389
149		2080	Belize	491	731	679	714	685	272	255	93	225	180	128	140	85	25	78	252	310	432	459	345
150		4870	Bulgaria						283	942	239	135		293		3	4	436	2	2,800	1,752	0	10,662
151		5081	Israel	220	308	158			359	573	71	115	752	296	545	136	67	21	0	3	3	137	264
152		3070	Venezuela	3		15	4,279	344	8	570	633	588	2,554	1,571	1,074	2,263	2,198	93	13	159	109	42	5
153		6810	Marshall Islands	1,328	826	860	975	1,133	729	771	413	421	493	718	1,047	528	769	620	233	136	236	210	253
154		2484	Antigua & Barbuda	200	211	159	379	259	109	207	215	169	578	326	150	667	531	191	1,131	377	626	733	705
155		2487	St. Lucia	259	316	238	302	267	261	379	300	228	134	179	237	306	83	228	739	1,192	325	196	652
156		4550	Poland	37	62	95	15	35	277	1,015	774	7,083	1,294	1,830	197	42	381	31	762	800			1
157		5040	Lebanon	19		56	15	80	3	337	216	456	304	655	281	96	74	138		276	614	265	201
158		4010	Sweden	2,243	1,609	925	2,994	1,606	1,896	618	271	359	394	64	20	33	26	63	36	7	166	76	11
159		5570	Malaysia	411	581	1,200	1,005	981	1,044	613	509	608	820	365	549	1,042	677	641	74	7	102	232	151
160		6830	Palau	332	176	318	275	120	151	94	251	457	385	480	675	491	437	524	179	205	249	430	347
161		5550	Cambodia								19	11	10	30	75	16	22	29		53	61	104	285
162		6141	New Zealand	175	59	131	210	186	517	296	536	281	166	230	193	181	316	160	185	90	66	248	180
163		6820	Micronesia, Federated States	451	613	495	456	228	167	154	205	428	321	194	474	294	631	181	86	92	119	115	169
164		4840	Greece	9	19	68	362	182	266	1,198	344	787	3,085	1,033	173	236	52	28	116	1,297	398	167	9
165		2482	British Virgin Islands	165	877	46	10	25	11	70	122	114	102	6	15	5	7	12	19	88	67	51	225
166		3550	Uruguay	28		17		2		3	301	632	108	446	483	898	121	181	28	454	99	545	696
167		7910	Republic of South Africa		26		1		432	1,124	71	917	1,209	96	178	6	40	117	52	2	7	11	13
168		3570	Argentina	19	103	10	861	912	450	787	1,199	822	742	961	437	853	362	33	36	49	93	53	146
169		4330	Austria	1,563	1,235	1,456	1,633	1,813	887	115	72	90	4	3		32	48	0					
170		2450	Haiti	236	104	222	7	100	14	858	886	695	414	448	96	221	594	132	443	380	673	338	207

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	Beef and veal: Annual and cumulative year-to-date U.S. trade (carcass weight, 1,000 pounds)																						
2	Import/export, geography code and name 1/ 2/			1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
171		5230	Oman	37	64	88	81	68	130	61	80	136	50	20	9	34		44			1	30	124
172		4279	France	245	635	112	159	217	248	69	136	651	359	261	255	277	353	213	86	94	353	641	522
173		2190	Nicaragua			0	67	133		61	5	37	166	269	218	66	475	396	146	37	303	290	285
174		3150	Suriname	12	6	14	13	12	1	44	75	8	5	12	2	4	40	91	163	86	104	181	420
175		3310	Ecuador	1		6	4	365	85	456	109	167	202	41	117	48	447	127	34	52	19	27	462
176		4050	Finland	14	165	106	231	150	415	496	268	539	1,549	2,040	35	33	68	30		19		56	262
177		5660	Macao (Macau)								8	13						1		206	1,419	804	
178		4850	Romania					45	16	46		960	852	98	11	28	469	96	1,715	2,308	7		
179		6414	French Polynesia	81	132	269	134	113	75	124	96	91	105	617	521	99	208	215	210	83	6	55	59
180		4623	Ukraine					63	15		39	14	1	332	26						1	797	
181		4633	Georgia									489	909	242	49	263		216	13	64	51	20	27
182		2483	St. Kitts-Nevis	33	58	67	24	40	48	89	63	96	101	87	46	78	52	87	252	150	324	68	477
183		7480	Ivory Coast	53	78	4		106	8	8	40	1,099	1,438	805	292		145	29	25	85			19
184		4272	Monaco								7	42	65	69		9							53
185		4039	Norway	7		0	76	73	11	180	268	163	23	3,664				8	9	71	93	12	0
186		2488	St. Vincent and The Grenadines	45	141	115	43	62	83	114	103	50	79	203	57	152	208	192	559	266	167	168	175
187		4890	Turkey				5	33		0	312	157	612	32	103	10	18	235	202	1	2	109	33
188		2489	Grenada	63	10	24	19	9	73	26	21	9	5	8	272	267	24	48	434	22	46	62	90
189		7380	Equatorial Guinea				12					23				7	89	266	184	81	603	152	99
190		4239	Luxembourg								45							54			154	592	342
191		4610	Former USSR	7	236	2,521	356																
192		7490	Ghana	398	284	368	280	222	67	140	94	121	30	3	26	15	3	18		2		14	313
193		4634	Kazakhstan							21	0		33						344				67
194		7530	Nigeria		2	11						14	18	12	24	45	43	11	82	65	434	349	189
195		7250	Libya																				
196		7550	Gabon				3	0				74	103		34	299	114	24	195	107	8	4	0
197		3120	Guyana		5		10	72	630	27	62	34	17	176		27	37	2	8	4	7	18	41
198		4710	Portugal	18	8	3		3	62	3	1	208	140	223	104	114	7	35	5	18	110	17	720
199		4470	Estonia						6	71	49	1,908	272		2								
200		6864	Tonga	4	11	63	72	3	63	164	216	286	54	40	88	3	153	203	174	125	54		79
201		4510	Lithuania						0				105										55
202		4810	Albania											116	75					32	108	16	3
203		2486	Dominica	46	58	0	6	2			1	43	14	17	73	38	66	8	614		18	105	16
204		2481	Anguilla	13	10			9	2					2	3	16	20	6	32	4	13	3	21
205		5350	Pakistan	7	21	2	85			19	5	19	42				1	231	138		204	49	67
206		2390	Cuba															21	483			12	12
207		6150	Western Samoa	26	32	64	46	8	69	7	51	27	20	144	37	12	38				10		3
208		4031	Svalbard and Jan Mayen Islands																127	1,304	202	4	
209		5310	Afghanistan							36		42								47	75		132
210		7500	The Gambia																			0	
211		5380	Bangladesh			59					0				1	1	0	45	1,271		11	9	
212		7460	Guinea	160	105	67	101	87	270	42	39	48	11		5	10	15	10			9	24	84
213		4730	Malta and Gozo	20						39			34	279	369	135	113	78	44	6			
214		7905	French Southern & Antarctic Lands				2	3															29
215		5330	India				6		9	17	74	235	20		18	0	50					26	174
216		5050	Iraq				225													1	19	40	
217		2831	Guadeloupe	79	47	2	16		24	9	31	124	105	230	208	3	9		1	10	18	6	4
218		7440	Senegal													28	12			45		97	48
219		4190	Ireland	0	0	0	0			0	42	11	5		30				2		2		
220		4000	Iceland				16	27		2	21		120	2		3		7	11		9	4	5
221		4752	Vatican City																	462	406		
222		6863	Fiji	97			8		6		17	17	0		1								
223		4803	Kosovo																				
224		7920	Namibia													107	93	49					93
225		7630	Congo (Brazzaville)							2					29			8			41		54
226		4370	Hungary							18			148		52	28	11						

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	Beef and veal: Annual and cumulative year-to-date U.S. trade (carcass weight, 1,000 pounds)																						
2	Import/export, geography code and name 1/ 2/			1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
227		7800	Seychelles							42	105	170								17		42	82
228		5420	Sri Lanka				5	6	11	49	2	42	23	1	1	0					8	11	
229		4793	Bosnia-Herzegovina							17	81	55										138	217
230		4631	Armenia					6			41				7		70		10				
231		7880	Madagascar (Malagasy)						29														59
232		2839	Martinique	113	11		17			25	129	13	19	33	46	27	8	4			20	13	
233		4792	Slovenia					1			364				16			6					
234		5460	Myanmar (Burma)																				
235		7850	Mauritius			48					16											57	
236		4799	Serbia and Montenegrc								73	84	223										
237		5210	Yemen (Sana)	25	4	6	21	18	45	15	4					18		21	29	27		39	36
238		7470	Sierra Leone					26										1	7		12		
239		4794	Macedonia (Skopje)							13						52					23		17
240		7881	Mayotte																				
241		6226	Kiribati	42								5	2										
242		4910	Cyprus		71							2							2		2	5	37
243		7140	Morocco								19	88	29	45		54							
244		4790	Former Yugoslavia	116	52	67																	
245		4804	Montenegro																				58
246		7870	Mozambique																	73			
247		4791	Croatia							4	207					0							
248		3530	Paraguay					7	11	6	4	16	3	3									
249		6862	Nauru																				
250		2485	Montserrat	4	6	41	4	6	12	1			0	1	0	16						2	
251		4751	San Marino														6						5
252		5530	Laos													54	113						
253		4635	Kyrgyzstan															10			26		
254		7510	Niger							5										2			
255		7643	Cape Verde												53							2	
256		4632	Azerbaijan								0	18	22										0
257		4271	Andorra								69						58						
258		7230	Tunisia	2															12	14			
259		7650	Liberia				1															1	2
260		7210	Algeria	2	6						97												
261		4644	Uzbekistan					0									1			28			
262		7749	Ethiopia																				
263		7960	Zimbabwe																			1	
264		6412	New Caledonia	7		2		0	3	2		32	1										
265		7940	Zambia																			14	54
266		7790	Kenya								15				52	3	1	2			6		
267		3350	Bolivia		0							26	1		3			3					
268		4801	Serbia																				
269		4411	Liechtenstein	51		23																	
270		7600	Burkina Faso																				
271		7660	Congo (Kinshasa)		10											1						6	42
272		5610	Brunei	6	2			17	32		13												
273		4351	Czech Republic					0								0	0						
274		6225	Pitcairn Island													8	56	2					
275		6144	Niue										65										
276		7642	Guinea-Bissau																4				
277		7770	Djibouti																				
278		4720	Gibraltar			22	33																
279		6023	Cocos (Keeling) Islands		40																		
280		5740	Mongolia																				
281		7700	Somalia																				
282		1010	Greenland					7	34														

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	Beef and veal: Annual and cumulative year-to-date U.S. trade (carcass weight, 1,000 pounds)																						
2	Import/export, geography code and name 1/ 2/			1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
283		7990	Lesotho																40				
284		6040	Papua New Guinea											38		0							
285		4359	Slovakia																	11			
286		6142	Cook Islands			4	1										8						
287		6413	Wallis and Futuna																				
288		5683	Maldives																				
289		7950	Swaziland						2	19													
290		7610	Benin										21										
291		5082	Gaza Strip									12											
292		7540	Central African Republic																5				
293		5790	North Korea																				
294		6223	Solomon Islands																				
295		3720	Falkland Islands																				
296		6227	Tuvalu																5				
297		7420	Cameroon																	7			
298		5020	Syria			5										1							
299		6022	Norfolk Island																				
300		7780	Uganda																				
301		7320	Sudan																		3		
302		7580	St Helena																2				
303		6224	Vanuatu																				
304		7644	Sao Tome and Principe																				
305		7810	British Indian Ocean Territory																				
306		7520	Togo																	2			
307		6024	Christmas Island (Indian Ocean																				
308		6029	Heard and McDonald Islands																			2	
309		4641	Moldova																				
310		4643	Turkmenistan																				
311		3170	French Guiana												0								
312		7560	Chad																			0	
313				**1,135,197**	**1,006,344**	**1,188,521**	**1,323,787**	**1,275,014**	**1,610,798**	**1,820,812**	**1,878,216**	**2,135,680**	**2,170,642**	**2,411,533**	**2,468,400**	**2,269,283**	**2,447,704**	**2,518,249**	**460,314**	**697,158**	**1,144,875**	**1,433,964**	**1,996,299**
315	1/ Geographies are ranked by the sum of their trade for all months shown.																						
316	2/ Blank cells represent a zero value. For meat, zero values represent a rounded value less than 0.5 thousand pounds.																						
317	Source: USDA, Economic Research Service calculations using data from U.S. Department of Commerce, Bureau of the Census.																						
319	*Date run: 12/6/2022 11:45:08 AM*																						

	A	B	C	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL
1	Beef and veal: Annual and cumulative year-to-date U.S. trade (ca																	
2	Import/export, geography code and name 1/ 2/			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Jan-Oct 21	Jan-Oct 22
3	Beef and veal	6021	Australia	791,799	566,491	452,043	654,523	623,889	1,082,676	1,258,200	767,122	694,929	673,009	716,619	662,895	413,404	342,298	337,292
4	imports	1220	Canada	812,412	860,822	689,081	537,499	538,065	602,157	628,448	717,777	741,246	791,757	847,796	825,376	942,050	797,651	804,362
5		6141	New Zealand	517,357	472,974	456,795	495,329	526,046	597,115	661,687	612,549	556,965	572,536	400,991	515,553	502,883	449,511	348,828
6		2010	Mexico	65,863	107,329	154,911	242,289	251,563	310,155	391,937	493,421	573,541	508,185	579,958	651,324	674,628	557,974	626,569
7		3510	Brazil	198,482	60,271	43,427	75,595	97,202	81,463	149,580	152,703	137,639	141,017	163,269	221,047	368,956	277,671	436,356
8		3550	Uruguay	76,237	54,200	51,854	72,141	82,584	91,859	136,949	120,704	120,476	114,510	118,873	145,011	133,796	111,858	119,530
9		3570	Argentina	43,772	43,014	41,933	2,209	4,307	1,930	1,290			103	4,922	62,311	62,513	41,761	52,805
10		2190	Nicaragua	88,963	100,135	125,283	100,622	91,413	138,972	103,834	111,244	133,338	156,781	182,773	189,351	193,358	152,514	143,303
11		2230	Costa Rica	23,014	23,603	19,645	20,132	21,310	28,859	27,580	27,505	24,268	23,652	23,018	28,855	22,805	19,543	12,681
12		2150	Honduras	4,731	4,511	18,389	19,018	12,243	9,033	3,356	66	1,987	5,653	3,647	4,355	65	65	117
13		2050	Guatemala					57										
14		2470	Dominican Republic															
15		4190	Ireland							3,108	5,146	4,350	3,751	9,496	25,783	18,683	15,954	6,160
16		4010	Sweden															
17		4210	Netherlands	9							364	2,274	3,364	3,337	3,482	5,292	3,999	8,226
18		3370	Chile	2,245	4,181	3,149	234	6	594	1,658	1,778	667	56	2	364	663	587	
19		5880	Japan	434	126		101	777	1,984	627	1,013	1,069	3,061	2,690	1,591	3,595	3,054	2,707
20		4099	Denmark				73	132		25	25	28		0				
21		4791	Croatia	14	20	16	13	17	21	15	18	6	17	13	21	24	22	17
22		4050	Finland															
23		2110	El Salvador															
24		4790	Former Yugoslavia															
25		4120	United Kingdom	558	242											2,434	1,375	2,527
26		4370	Hungary															
27		4850	Romania															
28		3530	Paraguay															
29		4279	France	7	5							99	340	415	249	1,132	902	838
30		4759	Italy	185						1								
31		7920	Namibia											3	1,651			
32		4231	Belgium	64							72				56			
33		5682	Bhutan															
34		4419	Switzerland															
35		4550	Poland	0						8	41	42	40	37	31	28	28	
36		4330	Austria															
37		6144	Niue															
38		4280	Germany, Fed. Republic				5											
39		4510	Lithuania								140	49	60	33	21	4	3	19
40		5330	India															
41		5490	Thailand					0	0		24		46			0	0	
42		5200	United Arab Emirates															
43		3070	Venezuela															
44		5700	China						63	1	2							
45		5683	Maldives															
46		4351	Czech Republic															
47		5740	Mongolia															
48		2080	Belize									11						
49		4700	Spain	8	1								1		4	5	3	1
50		7510	Niger															
51		5820	Hong Kong											0				
52		7780	Uganda															
53		4039	Norway					66										
54		4890	Turkey															165
55		7600	Burkina Faso															
56		5420	Sri Lanka															
57		6863	Fiji	2														
58		3310	Ecuador															

	A	B	C	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL
1	Beef and veal: Annual and cumulative year-to-date U.S. trade (ca																	
2	Import/export, geography code and name 1/ 2/			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Jan-Oct 21	Jan-Oct 22
59		4623	Ukraine															
60		4000	Iceland															
61		2440	Cayman Islands															
62		4840	Greece															
63		6142	Cook Islands															
64		5360	Nepal															
65		6412	New Caledonia															
66		6040	Papua New Guinea															
67		6022	Norfolk Island															
68		6862	Nauru															
69		4031	Svalbard and Jan Mayen Islan															
70		5650	Philippines								3							
71		4621	Russia															
72		5020	Syria															
73		5081	Israel											1				
74		5520	Vietnam				0						0	0	0			0
75		7905	French Southern & Antarctic Lands															
76		5350	Pakistan															
77		5830	Taiwan															
78		2410	Jamaica															
79		2487	St. Lucia						2		1							
80		5800	South Korea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81		5600	Indonesia															
82		7490	Ghana															
83		3010	Colombia		0													
84		7910	Republic of South Africa															
85		7290	Egypt															
86		4794	Macedonia (Skopje)															
87		5570	Malaysia															
88		3350	Bolivia															
89		3330	Peru															
90		2720	Barbados															
91		4710	Portugal															
92		7480	Ivory Coast															
93		7530	Nigeria															
94		5590	Singapore															
95		5550	Cambodia		0													
96				**2,626,157**	**2,297,923**	**2,056,525**	**2,219,784**	**2,249,677**	**2,946,883**	**3,368,305**	**3,011,718**	**2,992,981**	**2,997,940**	**3,057,891**	**3,339,329**	**3,346,318**	**2,776,772**	**2,902,506**
97	Beef and veal	5880	Japan	274,341	350,986	456,373	449,281	671,101	663,245	539,575	655,401	826,003	885,562	799,227	827,441	819,647	689,208	683,446
98	exports	2010	Mexico	628,464	500,302	488,166	351,735	403,233	434,719	362,721	394,952	419,349	448,734	424,455	319,763	315,983	259,432	227,456
99		5800	South Korea	140,693	277,103	379,705	305,049	252,855	301,368	318,968	459,201	472,729	638,032	683,789	666,548	778,901	657,286	674,388
100		1220	Canada	363,189	390,509	500,248	467,098	466,810	364,021	323,609	307,855	308,741	299,800	267,998	286,080	279,074	225,639	227,983
101		5820	Hong Kong	82,226	133,392	162,949	209,917	358,452	416,102	315,821	293,813	335,742	306,510	231,942	220,955	124,760	109,677	66,790
102		5830	Taiwan	84,399	122,851	110,423	59,570	100,248	104,560	108,789	136,881	137,808	185,148	197,843	197,609	194,819	158,749	173,321
103		5520	Vietnam	148,332	114,250	121,438	113,928	10,933	8,640	12,202	18,607	30,206	37,224	37,783	31,900	18,572	16,048	25,512
104		5700	China	5,149	9,062	4,717	13,909	16,760	8,415	1,681	1	9,381	21,994	32,098	119,066	540,436	441,329	555,735
105		4621	Russia	13,435	79,926	145,369	151,075	159	26									
106		4210	Netherlands	23,851	35,913	44,931	33,690	36,011	36,462	38,889	35,450	38,660	32,673	30,162	29,868	26,944	21,406	32,678
107		7290	Egypt	42,951	86,267	102,100	96,824	52,187	3,091	3,143	1,088	694	662	864	455	1,052	871	813
108		5650	Philippines	12,860	14,628	21,160	19,825	23,459	28,064	32,652	24,569	30,317	40,968	45,729	34,009	35,294	31,906	52,395
109		3370	Chile	1,500	4,676	12,093	26,335	31,694	27,764	25,391	26,430	32,784	28,684	29,635	21,027	26,761	22,704	14,119
110		2360	Bahamas	10,637	12,316	11,308	10,613	9,362	9,957	10,181	10,181	9,339	10,042	10,324	7,763	8,567	6,965	7,740
111		5600	Indonesia	1,620	10,702	15,360	3,089	5,977	7,774	4,673	17,060	19,125	22,642	33,734	33,598	44,479	39,695	39,895
112		2470	Dominican Republic	9,951	11,312	12,647	11,137	11,905	19,266	21,337	17,986	18,508	18,783	19,590	10,705	20,979	16,509	20,696
113		5200	United Arab Emirates	11,702	17,809	22,796	14,347	14,556	14,092	15,404	17,092	17,017	16,828	16,526	11,461	16,009	12,043	17,119
114		2050	Guatemala	3,900	4,561	8,315	6,863	6,425	10,713	10,228	12,984	15,939	16,485	17,369	18,634	25,201	20,019	22,201

	A	B	C	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL
1	Beef and veal: Annual and cumulative year-to-date U.S. trade (ca																	
2	Import/export, geography code and name 1/ 2/			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Jan-Oct 21	Jan-Oct 22
115		4759	Italy	3,569	12,414	19,320	15,936	17,637	18,934	17,289	14,599	15,566	13,126	11,299	5,808	7,918	6,502	7,627
116		5130	Kuwait	4,734	7,596	11,541	6,063	7,881	8,283	9,388	7,038	8,205	8,395	7,594	7,220	10,251	7,773	9,755
117		5590	Singapore	2,508	7,261	9,088	3,883	4,526	4,728	7,240	5,705	9,726	9,227	10,572	9,963	11,884	10,385	10,887
118		4280	Germany, Fed. Republic	2,790	7,046	11,955	9,696	11,472	10,109	9,080	6,226	7,649	8,025	5,792	3,807	2,452	1,504	3,431
119		5170	Saudi Arabia	5,838	11,839	15,348	4,743	169	215	78	49	455	3,689	4,602	3,443	3,282	2,798	5,252
120		3010	Colombia	121	714	2,608	1,015	3,724	4,439	3,374	7,048	7,192	9,842	12,288	8,801	20,235	12,761	16,657
121		2320	Bermuda	3,577	3,199	3,376	2,493	2,310	2,779	2,488	2,614	3,394	3,108	2,575	2,155	2,225	1,817	1,942
122		2410	Jamaica	5,014	6,171	6,047	5,415	4,711	4,985	4,821	5,130	4,950	6,591	5,370	1,829	4,109	3,325	5,135
123		2440	Cayman Islands	3,022	3,443	3,309	3,111	3,089	3,473	3,269	3,399	3,653	3,873	3,667	3,393	3,353	2,643	2,731
124		2250	Panama	1,535	2,024	2,242	2,535	3,883	6,176	5,497	6,709	4,474	5,087	6,498	5,251	7,087	5,583	6,526
125		2230	Costa Rica	895	1,664	1,408	1,176	1,951	2,764	4,868	5,420	5,811	7,523	7,704	7,139	13,589	10,906	11,211
126		4419	Switzerland	1,528	1,630	3,115	2,613	2,415	3,010	2,239	3,946	2,309	2,065	1,870	2,044	2,275	1,921	2,244
127		3330	Peru	987	1,993	2,947	5,528	4,499	4,315	4,488	4,193	4,469	4,277	5,049	3,584	4,993	3,763	4,281
128		2740	Trinidad and Tobago	2,110	3,125	3,095	3,031	3,226	2,839	3,876	3,282	2,690	2,749	3,054	3,418	3,069	2,460	4,622
129		5180	Qatar	2,720	4,365	7,509	2,500	3,700	3,562	3,422	2,851	4,274	3,370	3,313	3,441	4,379	3,507	6,171
130		2779	Aruba	2,154	1,806	1,703	2,005	1,591	1,710	1,850	3,569	4,090	3,785	3,356	2,315	3,550	2,912	3,246
131		2150	Honduras	517	697	2,142	2,076	2,960	1,795	1,731	2,925	2,911	3,001	3,686	2,862	5,518	4,329	4,125
132		4120	United Kingdom	241	307	477	382	503	914	3,621	3,745	2,496	1,439	916	1,559	1,042	846	2,523
133		5490	Thailand	288	594	588	688	749	1,001	694	1,373	2,017	2,999	4,655	4,692	4,190	3,674	4,034
134		2720	Barbados	1,911	1,989	2,093	1,337	1,275	1,372	1,772	1,616	1,890	1,702	1,824	1,175	1,278	969	1,897
135		2771	Netherlands Antilles	3,976	5,202	1,731												
136		3510	Brazil	28	2,288	1,136	28	328	159	296	118	2,829	4,260	1,216	361	672	617	582
137		2110	El Salvador	448	508	637	786	1,351	1,540	3,933	3,601	3,664	3,480	3,548	2,678	3,674	3,194	3,661
138		4231	Belgium	4,564	1,305	1,092	1,324	1,488	1,394	1,433	909	2,192	3,058	710	215	3,016	2,457	612
139		5250	Bahrain	1,405	2,242	2,253	1,557	1,906	1,222	1,581	1,892	2,034	2,022	1,939	1,711	1,964	1,641	2,422
140		6021	Australia	225	132	633	1,143	1,634	774	1,930	5,971	2,829	1,023	555	509	720	619	861
141		5110	Jordan	1,350	2,747	3,780	1,985	1,627	1,454	1,535	1,827	2,590	2,186	2,251	1,851	2,077	1,655	1,466
142		7620	Angola	764	1,379	7,698	1,006	3,598	2,668	1,519	990	739	551	463	244	94	94	382
143		4700	Spain	551	1,599	3,042	1,366	954	1,353	1,133	2,119	1,283	2,020	2,121	280	292	238	1,924
144		2777	Curaçao			1,357	2,104	2,409	2,379	1,864	2,391	2,480	2,445	2,576	2,005	1,901	1,524	1,720
145		4490	Latvia			18												
146		2430	Turks and Caicos Islands	1,040	1,071	1,436	1,220	933	889	1,074	1,472	1,251	1,504	1,312	1,159	1,975	1,523	1,400
147		2774	Sint Maarten			1,369	1,882	1,941	2,198	2,359	2,258	1,933	1,595	2,716	1,885	1,960	1,507	1,670
148		4099	Denmark	619	932	538	100	423	156	738	368	223	243	598	33	8	8	144
149		2080	Belize	364	469	644	754	861	886	988	1,038	1,013	1,044	1,525	1,537	1,590	1,274	1,959
150		4870	Bulgaria	899					2					54				
151		5081	Israel	320	352	476	297	198	70	126	109	925	2,016	4,251	2,571	2,748	2,014	3,753
152		3070	Venezuela	1	23	516	672	243	142		6	13	13	73	172	15	14	2
153		6810	Marshall Islands	175	353	319	330	413	343	371	520	444	441	435	430	544	490	274
154		2484	Antigua & Barbuda	734	809	711	528	524	650	632	557	749	929	1,012	661	1,238	916	1,006
155		2487	St. Lucia	794	1,334	1,083	737	746	751	844	807	852	804	826	360	648	526	879
156		4550	Poland		8	2										0	0	7
157		5040	Lebanon	455	2,300	2,105	745	551	551	737	747	781	777	579	127	70	56	57
158		4010	Sweden	39	55	18	78	28	13	20	101	206	249	263	3	50	50	40
159		5570	Malaysia	60	300	211	206	51	33	68	59	315	203	141	106	310	202	412
160		6830	Palau	335	237	206	197	218	196	361	429	689	967	925	927	741	635	737
161		5550	Cambodia	104	376	185	356	493	609	509	861	1,105	1,519	2,352	1,876	1,457	1,122	2,622
162		6141	New Zealand	77	16	3,169	420	553	315	327	325	252	247	336	1,204	159	154	186
163		6820	Micronesia, Federated States	291	489	449	460	382	450	350	300	365	391	367	399	554	456	322
164		4840	Greece	27	34	150	64	116	79	26	108	60	43	79	6	276	276	107
165		2482	British Virgin Islands	375	575	951	1,021	615	744	742	755	669	586	670	484	586	453	522
166		3550	Uruguay	511	618	631	563	615	497	310	546	259	590	125	265	42		79
167		7910	Republic of South Africa	12	61	3	5	18	285	106	201	601	4,158	82	42	524	481	237
168		3570	Argentina	13	384	803	0		3	1		18	54	13	3	133	84	171
169		4330	Austria		371	380	200	104				28		10		1	0	16
170		2450	Haiti	155	245	204	160	275	468	139	143	162	134	250	162	239	224	240

	A	B	C	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL
1	Beef and veal: Annual and cumulative year-to-date U.S. trade (ca																	
2	Import/export, geography code and name 1/ 2/			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Jan-Oct 21	Jan-Oct 22
171		5230	Oman	61	3	3,535	319	238	134	209	113	370	401	760	722	689	530	702
172		4279	France	310	359	152	180	109	102	74	86	93	164	365	212	164	93	96
173		2190	Nicaragua	697	295	340	122	141	257	290	348	377	399	344	320	405	335	289
174		3150	Suriname	580	532	880	631	394	262	76	190	411	301	449	612	473	410	492
175		3310	Ecuador	57	191	89	144	156	75	799	405	192	339	330	594	900	588	535
176		4050	Finland	387	41					12			63		2			2
177		5660	Macao (Macau)		2,402	1,842	83							114	4	0	0	3
178		4850	Romania			3		6	10									
179		6414	French Polynesia	92	63	175	232	192	196	218	273	155	199	218	151	211	108	293
180		4623	Ukraine	182	1,431	499	223	180	145	61	60	147	193	307	326	628	537	16
181		4633	Georgia	107	387	565	1,232	348	306	249	19	6	17	1	25	49	35	37
182		2483	St. Kitts-Nevis	185	267	219	246	160	167	227	163	260	278	396	315	266	186	381
183		7480	Ivory Coast	167	65	436		179	7	20	3	185	1	33	15			
184		4272	Monaco	2,506	2,369					55	44							33
185		4039	Norway	76	46	3	30	35		47	7	1	5	62				43
186		2488	St. Vincent and The Grenadines	185	239	257	175	131	161	118	120	80	71	91	64	182	120	151
187		4890	Turkey	96	478	487	302	428	268		63	393	61	14		77	77	288
188		2489	Grenada	180	166	156	167	178	217	269	228	319	251	308	134	226	178	303
189		7380	Equatorial Guinea	144	403	317	419	296	242	204	188	143	13	60	48	38	38	38
190		4239	Luxembourg	312	323	857	276	98	254	134	183	71			42	53	33	98
191		4610	Former USSR															
192		7490	Ghana		147	85		41	16	32	49	58	51	114	30	12	12	
193		4634	Kazakhstan	36	452	330	1,132	13	34	31	28	80	77	97	35	60	36	53
194		7530	Nigeria	267	158	94	399	84	57	164	71	19	31	125	26	6	6	4
195		7250	Libya		1	14		2,564	21	9	6							12
196		7550	Gabon	2	43	81	77	33	11	71	136	69	394	407	259	55	55	
197		3120	Guyana	27	34	25	83	41	63	88	84	138	102	267	210	187	144	368
198		4710	Portugal	17	57	39	62	8		107	23	43	135	192	11	4	4	19
199		4470	Estonia											87				
200		6864	Tonga	9	15	24	40	35	22	24	165	54	57	62	10	10	10	
201		4510	Lithuania		767	156	1,079						0	48				
202		4810	Albania	517	392	486	94	118					58	54	51			
203		2486	Dominica	11	38	216	51	65	97	72	84	79	49	79	76	80	59	66
204		2481	Anguilla	10	9	67	92	145	201	182	148	142	181	311	189	288	218	274
205		5350	Pakistan		198	499	21	287	36	37	13	6			1	11	2	
206		2390	Cuba	292	358	194	397								3	0		13
207		6150	Western Samoa	22	33	95	28	26	6	55	191	244	262	116	22	50	47	35
208		4031	Svalbard and Jan Mayen Island			1												40
209		5310	Afghanistan	353	314	83	29	6	108	149	23	18	47	12	75	13	13	
210		7500	The Gambia	19	69	457	225	651				6	3	5				
211		5380	Bangladesh	3	3	8	3	2		0	1					11		
212		7460	Guinea	23	1	27	5				12	32	134	43				
213		4730	Malta and Gozo	5	0					58				7		48	48	92
214		7905	French Southern & Antarctic Lands	74	53	2		1	234	172	96	119	78	68	73	191	182	30
215		5330	India	19					2	14	51	43	54	120	27	201	201	24
216		5050	Iraq	8	6	4			61	89	59		146	174	155	94	81	241
217		2831	Guadeloupe			3		10		13	7	3	24	6	10	32	16	27
218		7440	Senegal	66	94	345		39	35	9	9	21		4	127			4
219		4190	Ireland		36	53	38	9		220	213	6	100	152	39			74
220		4000	Iceland	2	22	29	26	28	38	35	57	123	132	95	20	109	96	229
221		4752	Vatican City															
222		6863	Fiji	1	8			44		5	175	263	198	4				
223		4803	Kosovo	220		287	302											
224		7920	Namibia	37	24	175	144	3				2						
225		7630	Congo (Brazzaville)				12	11	545	17								78
226		4370	Hungary	4				377							1			

	A	B	C	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL
1	Beef and veal: Annual and cumulative year-to-date U.S. trade (ca																	
2	Import/export, geography code and name 1/ 2/			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Jan-Oct 21	Jan-Oct 22
227		7800	Seychelles			25	3	13	13	34	17	8	17	16				11
228		5420	Sri Lanka						1	3	19	75	45	49	222			2
229		4793	Bosnia-Herzegovina	46			1											
230		4631	Armenia	18		180	210								6			
231		7880	Madagascar (Malagasy)		436													
232		2839	Martinique		4	6	6											1
233		4792	Slovenia				4	55						8		2	2	
234		5460	Myanmar (Burma)							20	50	27	71	154	88			
235		7850	Mauritius	57	39				2	0		173			1			
236		4799	Serbia and Montenegrc															
237		5210	Yemen (Sana)	32	30													
238		7470	Sierra Leone		3			47	119	34	34	13	8	10	12	14	8	
239		4794	Macedonia (Skopje)		30										158			
240		7881	Mayotte			58	111	109										
241		6226	Kiribati				2		177				8	12	9	2	2	
242		4910	Cyprus	23	5	14	17		7	2	2			30	6	20	14	8
243		7140	Morocco													7	7	18
244		4790	Former Yugoslavia															
245		4804	Montenegro	25	73		76				0							
246		7870	Mozambique	19			8	90	23			0						
247		4791	Croatia															
248		3530	Paraguay			3	13		17	22	17	28	41	13	3	2	2	5
249		6862	Nauru		36		14					11	24	59	16	36	36	18
250		2485	Montserrat	9	14		2	2		4	57			4	3	7	7	2
251		4751	San Marino	64	95	4	8											
252		5530	Laos															
253		4635	Kyrgyzstan		74			33										
254		7510	Niger											135				
255		7643	Cape Verde						3	7		74						
256		4632	Azerbaijan	18	40	13		17	2	2	3			2	2			
257		4271	Andorra	11														
258		7230	Tunisia	13										15	49	15	15	
259		7650	Liberia		4	17	15	14	16	18		11	4	15				
260		7210	Algeria						2	2								
261		4644	Uzbekistan						5	5	6		4	7	16	29	22	17
262		7749	Ethiopia											15	9	73	73	19
263		7960	Zimbabwe				7	82										
264		6412	New Caledonia							1	28		2	8				
265		7940	Zambia		16													
266		7790	Kenya							0	0	0			1			9
267		3350	Bolivia			0	8	1	1		14	1	17	2	3	1	1	1
268		4801	Serbia				73											
269		4411	Liechtenstein															
270		7600	Burkina Faso	66					7									
271		7660	Congo (Kinshasa)			12												
272		5610	Brunei															
273		4351	Czech Republic			3										62	62	
274		6225	Pitcairn Island															
275		6144	Niue															
276		7642	Guinea-Bissau		57													
277		7770	Djibouti							13	6	15	7	4		14	14	7
278		4720	Gibraltar															
279		6023	Cocos (Keeling) Islands								10							
280		5740	Mongolia	1		43				2						1	1	42
281		7700	Somalia										8	35				15
282		1010	Greenland															

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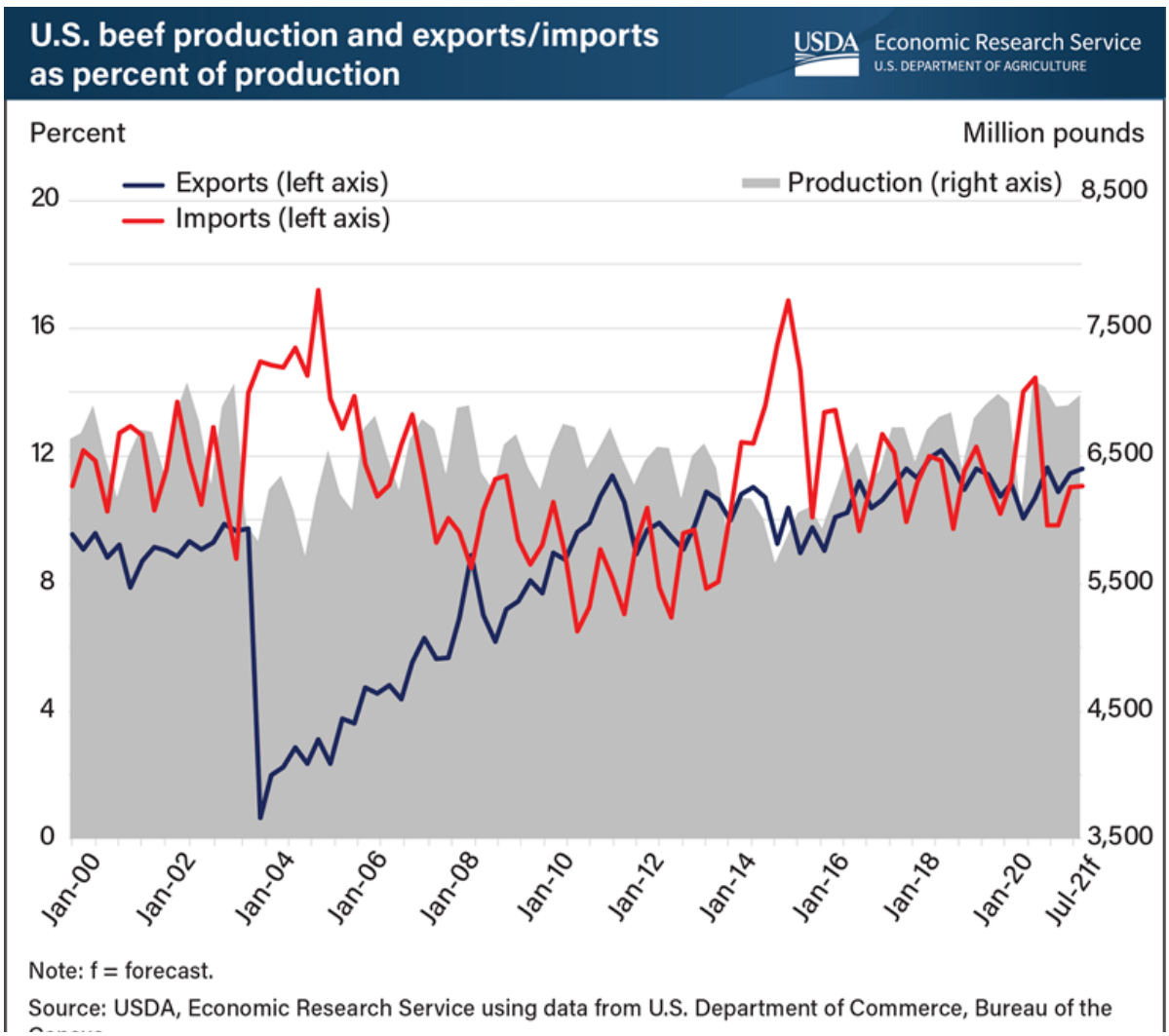
2	Import/export, geography code and name 1/ 2/			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Jan-Oct 21	Jan-Oct 22
283		7990	Lesotho															
284		6040	Papua New Guinea															
285		4359	Slovakia	24														
286		6142	Cook Islands					0	2	3	5		4	2	4	1	1	4
287		6413	Wallis and Futuna			32		2										
288		5683	Maldives			2		0								23	10	26
289		7950	Swaziland															
290		7610	Benin	0														
291		5082	Gaza Strip															366
292		7540	Central African Republic						7									
293		5790	North Korea			8												
294		6223	Solomon Islands						6							2	2	
295		3720	Falkland Islands		0			8										
296		6227	Tuvalu											2				
297		7420	Cameroon															
298		5020	Syria															
299		6022	Norfolk Island								5							
300		7780	Uganda		2											2	2	
301		7320	Sudan															
302		7580	St Helena			1												
303		6224	Vanuatu		3		0											
304		7644	Sao Tome and Principe													3	3	
305		7810	British Indian Ocean Territory				2											0
306		7520	Togo															
307		6024	Christmas Island (Indian Ocean													2	1	
308		6029	Heard and McDonald Islands															
309		4641	Moldova		1													
310		4643	Turkmenistan								1							
311		3170	French Guiana															
312		7560	Chad															
313				**1,934,759**	**2,299,607**	**2,785,059**	**2,452,499**	**2,588,379**	**2,573,754**	**2,267,287**	**2,556,982**	**2,859,328**	**3,159,525**	**3,026,227**	**2,950,686**	**3,430,576**	**2,849,147**	**2,993,107**
315	1/ Geographies are ranked by the sum of their trade for all months																	
316	2/ Blank cells represent a zero value. For meat, zero values repre																	
317	Source: USDA, Economic Research Service calculations using da																	
319	*Date run: 12/6/2022 11:45:08 AM*																	

U.S. beef trade shaped by production events



Census.

Since 2000, U.S. imports of beef have represented about 11 percent of U.S. production and exports about 9 percent. U.S. beef trade is largely dependent on domestic production, and shocks to production can lead to a boost in import demand and a reduction in supplies available for export. The 2003 discovery of bovine spongiform encephalopathy (BSE) in Canada and then in the United States disrupted beef trade in North America. As a result, U.S. imports of beef rose to record levels in 2004 and 2005. U.S. beef exports, however, plummeted as trading partners banned U.S. beef. Consequently, as trade barriers were resolved, U.S. beef exports steadily grew. In the late 2000s, drought conditions caused reductions in the U.S. cattle herd. The herd shrank to its smallest size since 1952, lowering beef production in 2014–15 to levels not seen in 20 years. In the second quarter of 2020, weekly beef production fell as much as 34 percent, compared with the same period in 2019, at facilities where operations temporarily closed or shifts were reduced as COVID-19 spread through their labor forces. In 2021, U.S. beef exports are expected to grow as a percent of production, while imports are expected to fall. This chart is based on data released in the USDA, Economic Research Service's Livestock, Dairy, and Poultry Outlook (https://www.ers.usda.gov/publications/pub-details/?pubid=100720), April 2021.

Embed this chart (/developer/embed-chart-widget/?chartId=100966)

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Agricultural Sciences

US red meat production from foreign-born animals*

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ABSTRACT

The North American Free Trade Agreement (NAFTA) propelled the integration of livestock markets among the United States, Mexico, and Canada. Along with vertical integration within the respective industries, different sectors of the cattle and hog industries have shifted their production locations based on resource efficiencies. Imports of live cattle and hogs, as well as beef and pork, in the United States have been steadily increasing since the implementation of NAFTA, except during the restrictions on cattle and beef imports from Canada due to bovine spongiform encephalopathy (bse) discoveries there in 2003. There are limited empirical sources that relate the importation of livestock to the domestic US production of meats. This paper introduces a methodology to estimate the amount of US beef and pork production that can be attributed to foreign-born cattle and hogs. The procedure uses official US trade data to quantify livestock imported at various weights and stages of production and projects the final production date and weight using existing data and literature.

Keywords: Beef; Livestock; Pork; Trade

1. INTRODUCTION

In 2010, the United States imported 1.04 billion kg of beef and veal from foreign sources, about 7.8 percent of total US beef supplies, and 0.39 billion kg of pork, 3.6 percent of total US pork supplies. While it is easy to track the amount of meat and the number of individual animals that enter the United States, there are few estimates for the amount of meat produced in the United States from animals which originated from outside the country [1]. This requires quantifying the number of animals which are imported at each stage of the production process, projecting the production of that animal, and comparing it to the total domestic production. The purpose of this report is to describe a method by which the proportion of domestic beef and pork that is produced from imported cattle and hogs can be estimated.

The implementation of the North American Free Trade Agreement (NAFTA), starting in 1993, has facilitated increased trade in the animal product complex, across products and species [2]. NAFTA reduced trade barriers and fostered integration between the United States, Canadian, and Mexican markets, particularly in the beef and pork complexes. Since 1993, there has been an increase in imports of live animals and beef[1] from Mexico and Canada and pork from Canada. As a result, there has been a vertical integration between the industries in all three countries; especially between the United States and Canada who have very similar production systems and markets.

Meat production generally consists of breeding, feeding, and slaughtering processes, regardless of the species. Markets exist for animals at each of these production stages. The integration of the North American market has increased the volume of trade in each of these stages. Increasing trade in livestock and meat has coincided with an increased customer and policy awareness of tracking and labeling the country in which the product was produced.

2. PATTERNS OF TRADE

2.1. Hogs

Although some breeding stock is imported from other countries, nearly all hogs imported into the United States originate from Canada. The Canadian herd is approximately one-quarter the size of the herd in the United States. Likewise, Canadian pork production has averaged 1.7 billion kg per year from 2000 to 2010, compared to 9.5 billion kg in the United States. Canada also relies more heavily on export markets than the United States, exporting approximately 51 percent of the production

*The views expressed here are those of the author(s), and may not be attributed to the Economic Research Service or the US Department of Agriculture.

[1]Cattle and beef imports were interrupted after the first cases of bse were discovered in both the Canadian and United States' herds in 2003 Restrictions placed on the movement of cattle in both countries have gradually been lifted.

compared to 12 percent in the United States [3].

While production systems in the United States and Canada are very similar, structural changes have led to a more consolidated, vertically integrated North American industry. To minimize feed costs, hog feeders have concentrated near the production centers of feed inputs over the past 15 years—namely soybeans and corn. In turn, packing houses have concentrated near feeders. As a result, the hog industry has concentrated in the Corn Belt of the United States, where corn and soybeans are grown; in particular, in the state of Iowa [4]. This change has led to an increase in the number of feeder hogs imported into the United States and decreased the number of hogs imported for immediate slaughter.

As a result of the structural changes to the market, live hogs from Canada are increasingly imported for feeding purposes as opposed to immediate slaughter. Over 80 percent of imported hogs in 2010 were feeder hogs, compared to less than 32 percent in 1994. Increasingly, these hogs are mostly destined for major feed-grain-producing states in the Midwest, particularly Iowa [4]. Hogs are generally weaned after 1 month and then fed for 5 to 6 additional months before slaughter [5]. According to government trade figures, most feeder hogs are imported at less than 3.2 kg. Hogs destined for immediate slaughter are generally greater than 49.9 kg.

2.2. Cattle

The United States imports live cattle for immediate slaughter, feeding, breeding, and dairy purposes. Cattle imports originate, almost exclusively, from Mexico and Canada. While trade in live cattle exists with other countries, it is generally reserved to a small number of animals for breeding stock due to the high costs of meeting quarantine requirements and transporting them by airplane or ship.

Like pork production systems, beef production systems in the United States and Canada are similar [2]. Both countries produce high-quality, grain-fed beef for their domestic consumers, as well as the export market. Heifers that are not retained as breeding animals and steers are taken off pasture about 12 to 14 months after birth. After coming off pasture, they are generally placed in a feedlot and intensively fed a grain-based diet for approximately 5 to 6 months [5]. After they reach the desired finishing weight, they are sent to slaughter houses and processed into beef.

Cattle in all observed weight categories are imported from Canada into the United States. Most Canadian cattle imports are slaughter-weight fed steers and heifers, but slaughter cows and bulls are also imported for immediate slaughter. Large numbers of imported feeder cattle are placed directly in feedlots, with some lighter-weight cattle placed in backgrounding programs. Finally, breeding stock and dairy animals are imported into the United States. Most of these animals will also enter the beef production system as cull animals at some point after importation. The implementation of NAFTA and the similarities in production systems have allowed the Canadian and US markets to become increasingly integrated. Imports of cattle have been primarily determined by relative prices of feeder and slaughter cattle, feed costs, and exchange rates of the two countries.

The discovery of bovine spongiform encephalopathy (bse) in the North American[2] herd disrupted the normal trade flows between the United States and Canada [6]. Imports of cattle from Canada were banned in June, 2003. Despite a brief resumption in trade by the end of the year, subsequent discoveries kept the ban in place until July 2005, and even then imports were restricted to cattle under 30 months of age. This restriction effectively banned all cull cows and bulls and included a moratorium on beef from animals over 30 months of age. In November, 2007, restriction on cattle over 30 months were relaxed and imports of Canadian cows and bulls resumed.

Additionally, the discovery of bse in the United States and Canada affected criteria for US and Canadian products other countries would accept. The loss of exports decreased the cut-out value for packing houses, and subsequently affected the values of live animals all the way back through the supply chain. Relative prices, which determine the directions and extent of trade, shifted, and, as a result, the volume of live cattle trade between Canada and the United States was affected.

In Mexico, there are two distinct cattle markets: one north and one south [7-9]. Cattle in the northern part of the Mexico are almost exclusively raised for export to US feedlots. Cattle in the Gulf and southern parts of the country are typically dual-purpose cattle (dairy and meat production) and kept on pasture or finished with supplemental forages. While some cattle feeding occurs in Mexico, the cost of grains in Mexico makes feedlot systems in which cattle reach a high level of finishing less economically feasible than other systems. Cattle that are intensively fed in Mexico are generally finished using grass-based forages or other feeds like byproducts from other agricultural production processes, such as citrus, sugar, or tortilla production. The demand for highly-marbled beef in Mexico is lower than in the United States or Canada, although shifts have begun to take place recently. The feeding regime in Mexico reflects this demand.

The United States imports primarily lightweight feeder cattle from Mexico. Generally, these cattle are raised in the northern states of Mexico and graze on pastures that

[2]The first native-born case of bse was discovered on May 20, 2003 in Canada. The first bse case found in the United States was discovered on December 23, 2003 in a cow imported from Canada.

are similar to those found in the southwestern states in the United States. Once they cross the US border, they are placed in feedlots or stockered on pasture typically in the southwestern part of the United States [2,9]. Trade is primarily driven by weather and pasture conditions in Mexico and the price of feeder cattle in the US markets. Imports of cattle from Mexico declined after NAFTA was enacted due to a weakening peso as the agreement was implemented, but gradually increased, particularly when restrictions place on Canadian cattle due to bse were imposed from 2003 to 2005.

3. DATA SOURCES

The United States typically imports about 2 million head of cattle (**Table 1**). However, the contribution to the total US supply of beef from these animals is not known. While others have attempted to estimate these quantities [2], data were not available by which to construct estimates of the quantity of meat represented by these imported animals before 1989. Since 1989, data have been available for imported livestock by weight category that, when combined with a set of assumptions about the growth patterns of these imported animals (**Table 2**), can be used to estimate production and timing of production from imported animals. By knowing animal weights at importation, average daily gain at each stage of growth (weight), and weights at slaughter, it is possible to determine the time animals would have been in the United States before being slaughtered. By knowing or assuming dressed weights at slaughter, the total quantity of beef or pork produced in any month from imported animals can be estimated. These estimated contributions can then be subtracted from the total and combined with imports of meat into the United States to gain a better idea of the share of meat consumption in the United States that is due to foreign livestock and the share attributable to US breeding livestock.

Import data for both hogs and cattle were collected from the Census Bureau's trade figures. Quantities were collected and aggregated by the 10-digit Harmonized Schedule (HS) code level, which presents imported numbers by weight category. Data include 12 categories of cattle (4 weight categories for steers, the same 4 for heifers, and 4 categories of cattle imported for immediate slaughter (steers, heifers, cows, and bulls)) and 5 categories for hogs (4 weight categories plus a separate category in the 50-plus-kg category for hogs imported for immediate slaughter). Specific weights for each weight category are outlined in column 1 of **Table 2**. Definitions for each code (not included here) were from the Harmonized Tariff Schedule, published by the International Trade Commission. HS data is available starting in 1989.

Canadian and US cattle and hog feeding technologies are very similar and differences have to do with the slight differences in body size of Canadian cattle and hogs. As a result, it was assumed that cattle and hogs imported from Canada and fed in the United States would perform similarly in either country. Live weights of cattle imported from Canada and slaughtered in the United States were proxied with Nebraska live weights of cattle slaughtered [10]. Further, it was assumed that Canadian dressed weights would be a good proxy for dressed weights of Canadian animals grown, fed, and slaughtered in the United States. Monthly average dressed weights of

Table 1. Numbers and values for live cattle imported into the united states from Canada and Mexico.

	Canada		Mexico		Total	
	1000 Head	Billion dollars	1000 Head	Billion dollars	1000 Head	Billion dollars
2000	968	752	1223	0.41	2191	1157
2001	1309	1055	1130	0.41	2439	1464
2002	16,894	1148	816	0.30	2505	1448
2003	513	397	1240	0.47	1753	867
2004	0.1	0.06	1370	0.54	1371	543
2005	563	526	1256	0.52	1819	1042
2006	1045	1033	1257	0.52	2302	1557
2007	1426	1421	1090	0.48	2516	1897
2008	1611	1489	703	0.30	2314	1788
2009	1087	944	941	0.38	2028	1325
2010	1087	1082	1221	0.52	2308	1605

Source: US Census Bureau and US Department of Agriculture, Economic Research Service.

Table 2. Growth assumptions for foreign born cattle and hogs.

HS category	Assumptions				
	Assumed average import weight (kg·head^{-1})	Average daily gain (kg·day^{-1}) to slaughter	Days from import to slaughter	Months from import to slaughter	Total gain (kg·head^{-1})
			Canadian Cattle		
Less than 90 kg	80	1.1	485.98	16	537.3
90 - 199 kg	182	1.1	384.66	13	435.0
200 - 319 kg	260	1.3	273.05	9	365.8
Over 320 kg	352	1.5	176.38	6	264.5
			Mexican Cattle		
Less than 90 kg	80	0.8	636.05	21	495.0
90 - 199 kg	182	0.9	428.16	14	392.7
200 - 319 kg	260	1.1	288.79	10	314.5
Over 320 kg	329	1.3	195.96	7	245.0
			Canadian Hogs		
Less than 90 kg	6	0.3	143.15	5	121.8
90 - 199 kg	15	0.7	128.45	4	112.8
200 - 319 kg	36.6	1.0	102.74	3	91.2
Over 320 kg	88.9	0.9	44.28	1	38.9

Source: Compiled by US Department of Agriculture, Economic Research Service based on information from Peel, Mathews, and Johnson (2009) [9] and Ensminger and Park (1984 [16]).

both Canadian hogs and cattle slaughtered in Canada were provided by AgCanada [11,12]. These data were from 1995 through 2008 for hogs and 1999 through 2010 for cattle. Number of head slaughtered in the United States and total US beef and pork production data were taken from *Livestock Slaughter* publications [13].

Due to differences in production systems, slaughter weights in Mexico were not seen as accurately characterizing dressed weights for feeder cattle imported from Mexico and fed and slaughtered in the United States. Since most Mexican feeder cattle are placed in feedlots located in the Southern Plains and Southwestern United States, it was assumed that AMS weights reported for the Southern Plains [14] would reflect the slaughter weights of Mexican cattle fed in that area and, therefore, serve as a useful proxy for the performance of Mexican cattle imported into and fed in the United States. Data collected by the Agricultural Marketing Service on fed steer weights in Texas, Oklahoma, and New Mexico [14] going back to 1993 were used as a proxy. However, this series had a gap from March 2001 to November 2002. To address this gap, a regression using data from the Hoelscher cattle feeding survey—which also contains final weight data from a subset of Southern Plains cattle feeders [14]—was developed.

3.1. Feeding Assumptions

Not all animals imported into the United States are slaughtered immediately. Lighter-weight animals that are imported for feeding are slaughtered several months after they enter the United States. These slaughter lags vary by species and depend on the weight and age of animals when they are imported. In general, the smaller an animal is when imported, the lower will be its average daily gain for its total tenure in the United States and the longer it will be in the United States (**Table 2**). For feeder cattle and hogs, weight categories defined within the HS categories were combined with assumptions about length of feeding periods and gains and used to project dates at which imported animals were slaughtered. Projections were based on imported weight, average daily gain calculations, and final slaughter weights (**Table 2**). For example, it was assumed that less-than-90-kg steers (or heifers) would weigh an average of 80 kg, would gain 0.8 kg·day^{-1} for 636.05 days (**Table 2**).

3.1.1. Canadian and Mexican Cattle

Assumptions about the performance of feeder cattle imported from Canada were based on a slaughter weight of 615.5 kg, the Nebraska 2007 annual weighted average direct slaughter weight for steers, all grades (USDA/

AMS, LM_CT175[10]) (**Table 2**). Cattle were assumed to enter the feedlot at 351.5 kg. Prior to entering a feedlot, cattle were assumed to grow on pasture to placement weight, with the rate of gain varying according to the weight of the animal at the time of importation. Cattle were assumed to gain 1.5 kg·day^{-1} in feedlots. Using Canadian dressed-weight data for steers, heifers, cows, and bulls and the assumptions about the amount of time the animals were in the United States before reaching slaughter weight, the monthly Census trade data were adjusted to reflect this beef production from imported cattle.

Assumptions about the performance of feeder cattle imported from Mexico were derived similarly to those for Canadian cattle, based on an average slaughter weight of 573.3 kg, the 2007 Texas/Oklahoma/New Mexico annual weighted average direct slaughter steers, all grades (USDA/AMS, LM_CT173[14]). Mexican cattle assumptions were based on slightly lower placement weights, pasture gains, and feed lot average daily gains (Peel, personal communication).

The series used as a proxy for Mexican fed cattle was not continuous. Data from March 2001 to December 2002 were missing. As a result, steer and heifer finishing weights were estimated by regressing steer and heifer finishing weights on final weights from the Holscher data series and a lagged dependent variable. Separate regressions were run for steers and heifers. The equation for this regression was the following:

$$FedWeight_{it} = \beta_{i0} + \beta_{i1} HolFedWeight_{it} + \beta_{i2} FedWeight_{it-1} + \varepsilon_{it} \quad (1)$$

With $FedWeight_{it}$ being the final weight of fed cattle from the AMS series [14]; $HolFedWeight_{it}$ being the weight reported by the Hoelscher series [15]; $FedWeight_{it-1}$ being the reported AMS weight lagged on month, I = {steers, heifers}, and t = time. The equation fit the data well (R-squares of 0.87 (steer equation) and 0.82 (heifer equation)) (**Table 3**). Estimates for the missing time period were simulated using **Eq.1**, substituting the model results for the lagged weight variable.

3.1.2. Canadian Hogs

Feeding periods for hogs only take into account the intensive feeding period, since hogs are not put on pasture. Otherwise, the feeding periods for Canadian hogs were calculated similarly to cattle (**Table 2**). Assumptions for hog gains were based on a 2007 slaughter weight of 127 kg [12]. Average daily gains for hogs in each imported weight category, ranging from 0.3 kg·day^{-1} for pigs under 7 kilograms to 1.0 kg·day^{-1} for those over 50 kilograms, were based on information from [16]. The adjustment from import month to production month was made accordingly.

Table 3. Estimated parameters for regression of monthly steer and heifer live weight sb.

Variable	Steers	Heifers
Intercept	8.87455 (43.06218)[a]	85.96368 (43.27988)
Live weight reported by Hoelscher	0.18554 (0.04187)	0.11018 (0.03881)
Lagged dependent variable	0.80811 (0.04234)	0.81421 (0.04537)
R-squared	0.8682	0.8203

[a]Standard errors in parenthesis.

3.2. Import Assumptions

3.2.1. Cattle

The United States also imports breeding animals and dairy heifers, almost entirely from Canada, most breeding animals and dairy heifers also enter the US beef production system, but were not accounted for in our calculations because of the difficulty in estimating when they are slaughtered at the end of their productive periods in the United States. They also represent a much smaller proportion of cattle imported into the United States; thus, it was assumed that their contribution to the production system is negligible (**Table 2**).

3.2.2. Hogs

Similar to Cattle imports, the United States imports breeding hogs from Canada. Again, most of these animals will be slaughtered for pork production at some point, but it is difficult to estimate how long they will be used for productive purposes before being culled. As a result, imported hogs used for breeding are excluded, assuming that their contribution to production is negligible (**Table 4**).

The Harmonized Tariff Schedule's codes changed during the period analyzed, which required adjustment to hog feeding periods. Prior to July 2000, there were three import codes: one for purebred, one for hogs less than 50 kg and one for hogs greater than 50 kg. Beginning in July 2000, hogs over 50 kg were broken into hogs for immediate slaughter and not for immediate slaughter. Beginning in July, 2003, hogs less than 50 kg were further disaggregated into separate weight categories: under 7 kg, between 7 and 23 kg, and between 23 and 50 kg. Finally, in January 2005, hogs greater than 50 kg not for immediate slaughter were disaggregated into animals for breeding[3] and for other purposes.

To address hogs greater than 50 kg, the proportion of each category of hogs was estimated and used to distribute the aggregated group of hog imports. Based on regression analysis (not reported here), there were no sig-

[3]Prior, designation for breeding animals was only used for purebred hogs.

Table 4. Numbers and values for live hogs imported into the United States from Canada.

	Canada	
	Head	Million dollars
2000	4,356,835	290.94
2001	5,337,688	349.14
2002	5,740,073	300.83
2003	7,438,063	391.25
2004	8,504,972	530.32
2005	8,190,467	598.20
2006	8,763,378	579.44
2007	10,004,317	653.15
2008	9,347,951	482.27
2009	6,364,553	295.22
2010	5,747,827	363.32

Source: US Census Bureau and US Department of Agriculture, Foreign Agricultural Service, Global Agricultural Trade System.

nificant time trends or seasonal patterns observed. Nearly all hogs over 50 kg were for immediate slaughter. Adjusting for a shift in slaughter hogs after a change in HS codes in 2005, aggregated hogs were adjusted so that 91.53 percent of hogs imported over 50 kg were used for immediate slaughter. Since the bulk of hogs imported over 50 kg were for immediate slaughter and given the problems associated with transporting hogs in latter stages of feeding/finishing, the rest of the imported over −50 kg hogs were assumed to be breeding pigs.

4. RESULTS

4.1. Cattle

The results of the procedure show that on average, foreign-born cattle account for 8.1 percent of monthly production (**Table 5**). There is a seasonal pattern, where foreign-born animals account for the highest percentage of US beef production in September. Most beef production from foreign-born animals takes place in the first quarter because of the large numbers of feeder cattle imported and placed on feed in the fall. The percentage has been trending upward since 1999. The highest proportion reached thus far has been 13.6 percent in February of 2006, while the lowest has been 2.9 percent in June of 2003[4].

By weight, production attributed to foreign cattle averages over 79.8 million kg per month. The highest monthly total was in September 2008, at 133.4 million kgs, while the lowest was in June 2003, at 31.8 million kgs, the month after bse was confirmed in Canada.

[4]As a result of the first case of bse in North America on May 20, 2003, subsequent trade bans and restrictions were placed on Canadian cattle imported into the United States.

Table 5. Statistics for imports of foreign livestock into the United States.

	Mean	St. Dev.	Maximum	Minimum
Canadian cattle Production	66	33	138	0
Proportion	0.028	0.016	0.061	0
Mexican cattle Production	114	37	198	20
Proportion	0.053	0.019	0.106	0.008
Canadian hogs Production	93	46	207	15
Proportion	0.055	0.024	0.098	0.011

Source: US Census Bureau and US Department of Agriculture, Foreign Agricultural Service, Global Agricultural Trade System.

In 2003, the discovery of bse in Canada and the subsequent trade bans led to a temporary decline in production attributed to Canadian cattle, leaving only production from cattle imported from Mexico. Production from Mexican animals trended upward from 2003 to 2006, as live cattle imports increased during the ban of Canadian cattle. However, as Canadian cattle less than 30 months of age were again allowed to be imported into the United States in 2005—extended to cattle over 30 months of age in 2007, production from Canadian cattle increased. As production from Canadian cattle increased post-bse, production from Mexican cattle declined.

Canadian cattle have accounted for 2.8 percent of monthly beef production during 1999-2010, inclusive of the seven months following bse when no production was attributed to Canadian cattle. However, during this period, cattle already in the United States continued through the production process.

4.2. Hogs

Pork production attributed to Canadian-born hogs averaged 5.5 percent of total US production since 1995, or just over 42.2 million kg per month (**Table 5**). Total pork production trended upward throughout the period analyzed. The percentage of production attributed to hogs of Canadian-born hogs also increased.

The pork series is smoother than the beef series, primarily attributed to the fact that there were no trade bans due to sanitary-phytosanitary issues or animal disease events. Additionally, there was only one major exporter of live hogs to the United States. The highest percentage of US production that was accounted for by Canadian-born pigs was 9.8 percent in July of 2007. The smallest was 1.1 percent in February of 1995, the second point in

the dataset. By weight, the largest month was January of 2008, at 94 million kg. The smallest was also February 1995 at 6.8 million kg.

5. CONCLUSIONS

Since the implementation of NAFTA, there has been increased integration among the North American livestock markets. International trade now plays a significant role in all stages of meat production, from breeding and raising animals to production and fabrication of meat products. The result has been shifts of production centers to their most efficient locations. These locations have primarily been in the United States, in particular for intensive feeding and slaughter of hogs and cattle.

US imports of hogs and cattle have increased since 1989, except the declines attributable to animal-disease related trade restrictions. Using existing data and literature, estimates were made in order to determine how much domestic meat production can be attributed to foreign-born animals. The proportion of domestic production attributed to foreign-born animals has trended upwards for both beef and pork. While beef production from foreign born animals decreased dramatically from restrictions on Canadian cattle due to bse concerns, the upward trend continued shortly after the shock. Pork production has consistently trended upward, without any major shocks. Over the last decade, imports of meat into the United States and meat produced in the United States from foreign livestock have accounted for roughly 18 percent (beef) and 10 percent (pork) of US beef and pork supplies.

Market integration between the NAFTA countries is expected to continue. There are already data sources for the trade of live animals and meat products individually. However, there is an increasing need to understand the relationship between imported livestock and their contribution to US domestic production. This paper has presented a method of estimating meat produced from foreign-born cattle and hogs that facilitates understanding of the share of US beef production attributable to foreign sources and points out the relative importance of foreign sources for US meat supplies. These estimates provide a basis for further and future analysis of that relationship as well as for assessing production parameters related to economic and production efficiencies.

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Congress of the United States
Washington, DC 20515

June 1, 2021

The Honorable Merrick Garland
Attorney General
U.S. Department of Justice
950 Pennsylvania Avenue, NW
Washington, DC 20530

Dear Attorney General Garland,

The time has come for the government to determine whether the stranglehold large meatpackers have over the beef processing market violate our antitrust laws and principles of fair competition.

For over 100 years, the purpose of antitrust laws in our country has been to preserve the process of fair competition for the benefit of consumers. Too much market power often yields less competition and is ripe for market abuse. Yet as you know, four large meat packing companies control over 80% of the processing market in today's economy and are seemingly able to control prices at their will, or even defy expectations of market fundamentals.

In the last several years, the price of live cattle in the United States market has plummeted, while the price of boxed beef has significantly increased, raising consumer prices at the grocery store. Concurrently, the major packing companies realized significant profits, while both U.S. beef consumers and independent cattle producers paid the price. These large price disparities are leading independent cattle producers to go broke and causing consumers to pay an unnecessary, over-inflated premium on beef.

These difficulties faced by consumers and producers are not experienced by meatpackers. For example, in the past decade, there have been repeated instances in the market which demonstrates a disconnection between the price of live cattle purchased by meatpackers and the value of choice beef cutout sold by meatpackers (see chart 1; the gap between these two values is isolated and displayed in chart 3). These persistent irregularities reveal an unfairness in the producer-meatpacker relationship and possibly anticompetitive behavior in the beef industry.

One potential explanation for this disparity may be the ability of meatpackers to import beef from foreign countries, either through external sources or their own vertically integrated sources. Based on data from the United States Department of Agriculture (USDA) Global Agricultural Trade System (GATS), as the price increases for live cattle, there is a subsequent and consistent increase experienced in beef importation (see chart 2). Furthermore, the initiation of plummeting prices in the live cattle market appears to correspond almost exactly with the repeal of Mandatory Country of Origin Labeling, which demonstrates the negative impact of imports on domestic beef prices (also chart 2).These trends indicate a potential existence of collaborative price-fixing activity or other anticompetitive behavior on behalf of the largest beef meatpacking companies in the United States. These issues deserve meaningful investigation, especially given the unprecedented consolidation of this industry.

The U.S. meatpacking industry is more consolidated today, than it was in 1921 when the Packers and Stockyards Act was enacted. Four companies operate 18 of the top 20 beef slaughter facilities in the country, which constitutes 94% of this capacity. Ironically, two of the four giant domestic processors are foreign owned. In our opinion, that concentration has caused a market disconnect, resulting in tangible market manipulation that has economically disadvantaged American ranchers and ultimately, American consumers who want to buy U.S. beef at an affordable price.

As stated by Congress, the purpose of the Packers and Stockyards Act is, "*to assure fair competition and fair trade practices, to safeguard farmers and ranchers...to protect consumers...and to protect members of the livestock, meat, and poultry industries from unfair, deceptive, unjustly discriminatory and monopolistic practices....*" It is truly unfortunate that exactly 100 years later, the problem is actually worse.

In the last 30 years, there has been no major expansion of beef packing capacity in the United States. Beef packers continue to bring foreign beef into their facilities and place “Product of the U.S.A.” on the final product. This is, at the very least, highly misleading and undermines the price and quality of U.S. beef. Without mandatory country of origin labeling for beef – packers are provided a federal sanction to undercut American producers and dupe American consumers.

U.S. meatpackers also take advantage of their vast resources to hold what is known in the industry as a captive supply. Through forward contracting and formula based sales, packers, collectively, can easily predict their needs many months in advance. These captive supply practices allow meatpackers to exert more control, limit competition and depress sales in the live cash market.

Additionally, legalizing the sale of state inspected meat in interstate commerce has been thwarted, forcing local producers to bottleneck their beef processing at major U.S. meat packing facilities to get the federal stamp of approval.

Arguably, every piece of beef legislation introduced before Congress is the direct result of our attempts to put a band-aid on the real issue: packer concentration.

Exactly 100 years ago, the United States saw fit to break up the packing industry because of concentration and market manipulation. Since that time, packer concentration and foreign influence has significantly grown and until the question of whether consolidation of power in the meatpacking industry has amounted to violations of our antitrust laws is fully answered, this market will continue to suffer for both the consumer and the producer.

From our perspective, the anticompetitive practices occurring in the industry today are unambiguous and either our antitrust laws are not being enforced or they are not capable of addressing the apparent oligopoly that so plainly exists. This is where we need to work together. In the past 18 months, the Department of Justice has received multiple letters raising these concerns, and collectively, we urge your department to take decisive action.

President Biden prioritizes “Buy American” policies that would benefit both consumers and producers and we believe our requests outlined here today support that mission. Unfortunately, the current situation involves multi-national meatpacking companies that continue to get fat off of the high price they impose on retailers and consumers, and the low price they set for producers.

This needs to change.

Our American ranchers work hard every day to produce the best beef in the world. They battle the wind, the rain, the snow and the sun. They shouldn’t have to battle a problem their government has an obligation to fix. If we do not take action, current U.S. policies will be identified as the cause for the demise of the American rancher and American consumers will be forced to pay a higher price for a much lower quality product. The time has come to either enforce or examine our antitrust laws to restore fairness to the marketplace. American producers and consumers depend on us.

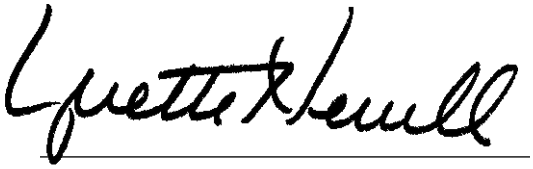
We look forward to your response.

Sincerely,

M. Michael Rounds
United States Senator

Tina Smith
United States Senator

Warren Davidson
Member of Congress



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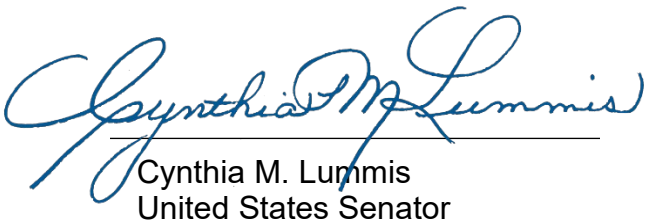
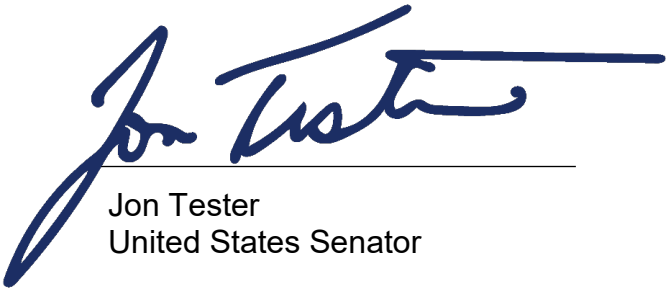


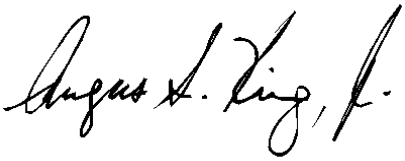
Cynthia M. Lummis
United States Senator



Jon Tester
United States Senator

Louie Gohmert
Member of Congress

Josh Hawley
United States Senator



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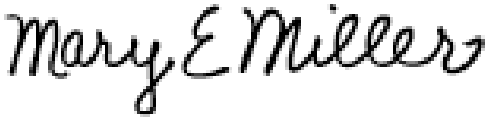
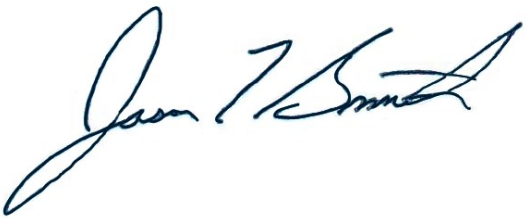
United States Senator

Neal P. Dunn, M.D.
Member of Congress

Cindy Hyde-Smith
United States Senator



Mary E. Miller
Member of Congress



Jason Smith
Member of Congress

Charles E. Grassley
United States Senator

Ron Wyden
United States Senator

Bob Good
Member of Congress

Ro Khanna
Member of Congress

Roger F. Wicker
United States Senator

Joni K. Ernst
United States Senator

Mike Braun
United States Senator

Mark Pocan
Member of Congress

Mark Kelly
United States Senator

Catherine Cortez Masto
United States Senator

CC: President Biden, Secretary Vilsack

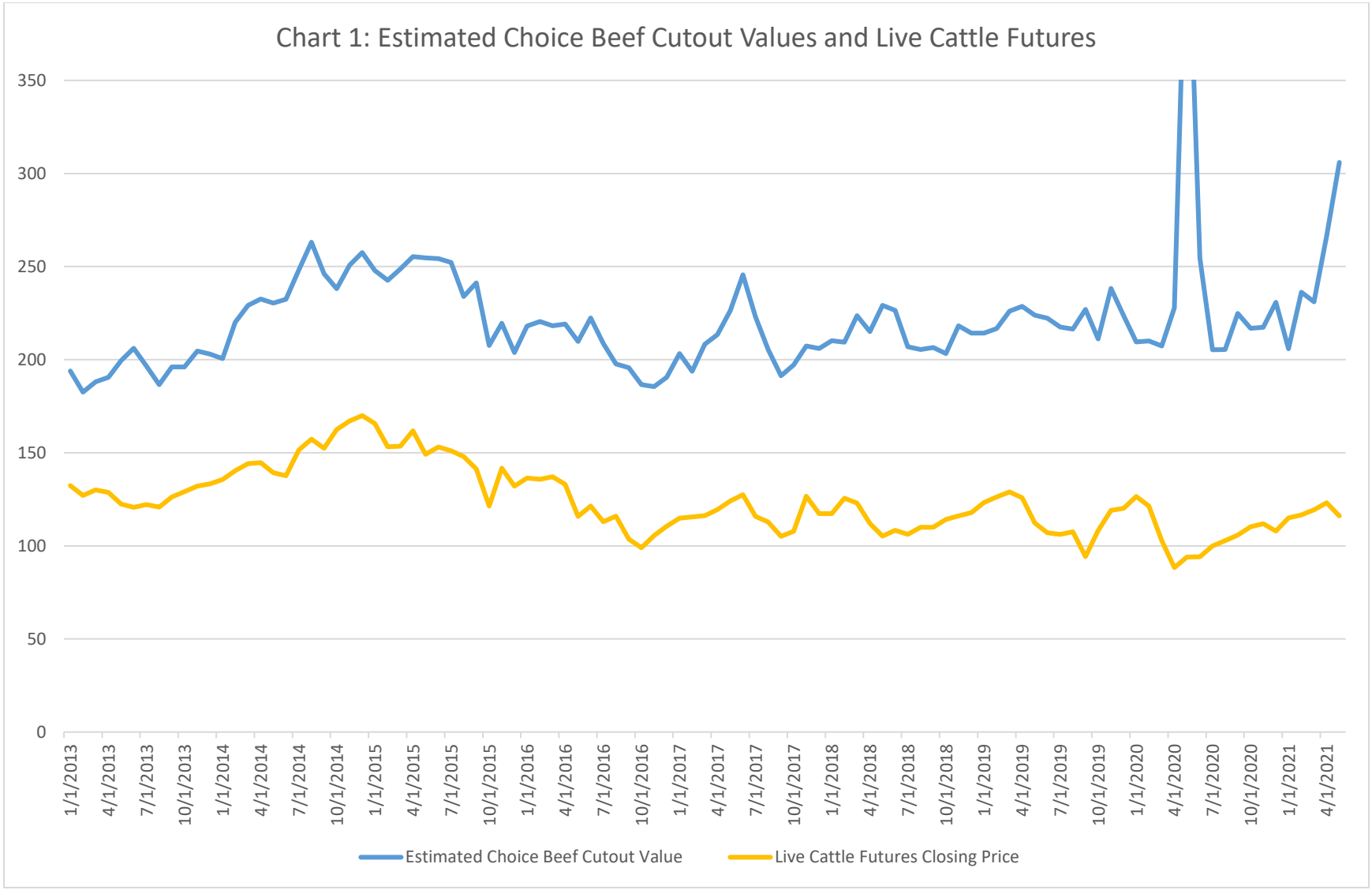


Chart 1 shows the price of live cattle futures as reported by the USDA Agricultural Marketing Service (AMS) alongside the estimated cutout values for choice beef from January 2013 to the present day.

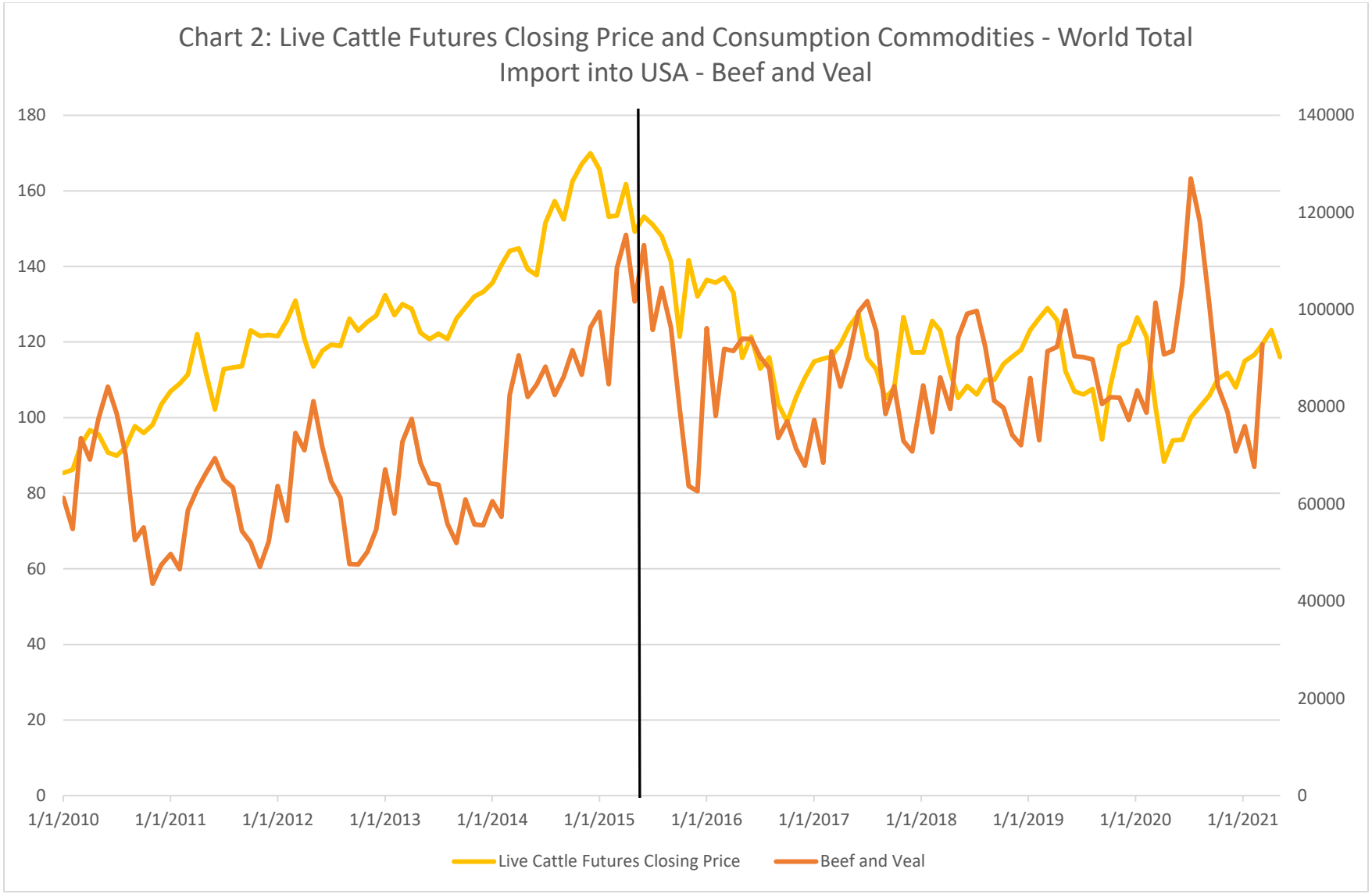


Chart 2 shows live cattle prices as reported by AMS and World Total beef and veal imports by the USA as reported by GATS
*Vertical Line represents the WTO ruling that ended Country of Origin Labelling for livestock in May of 2015

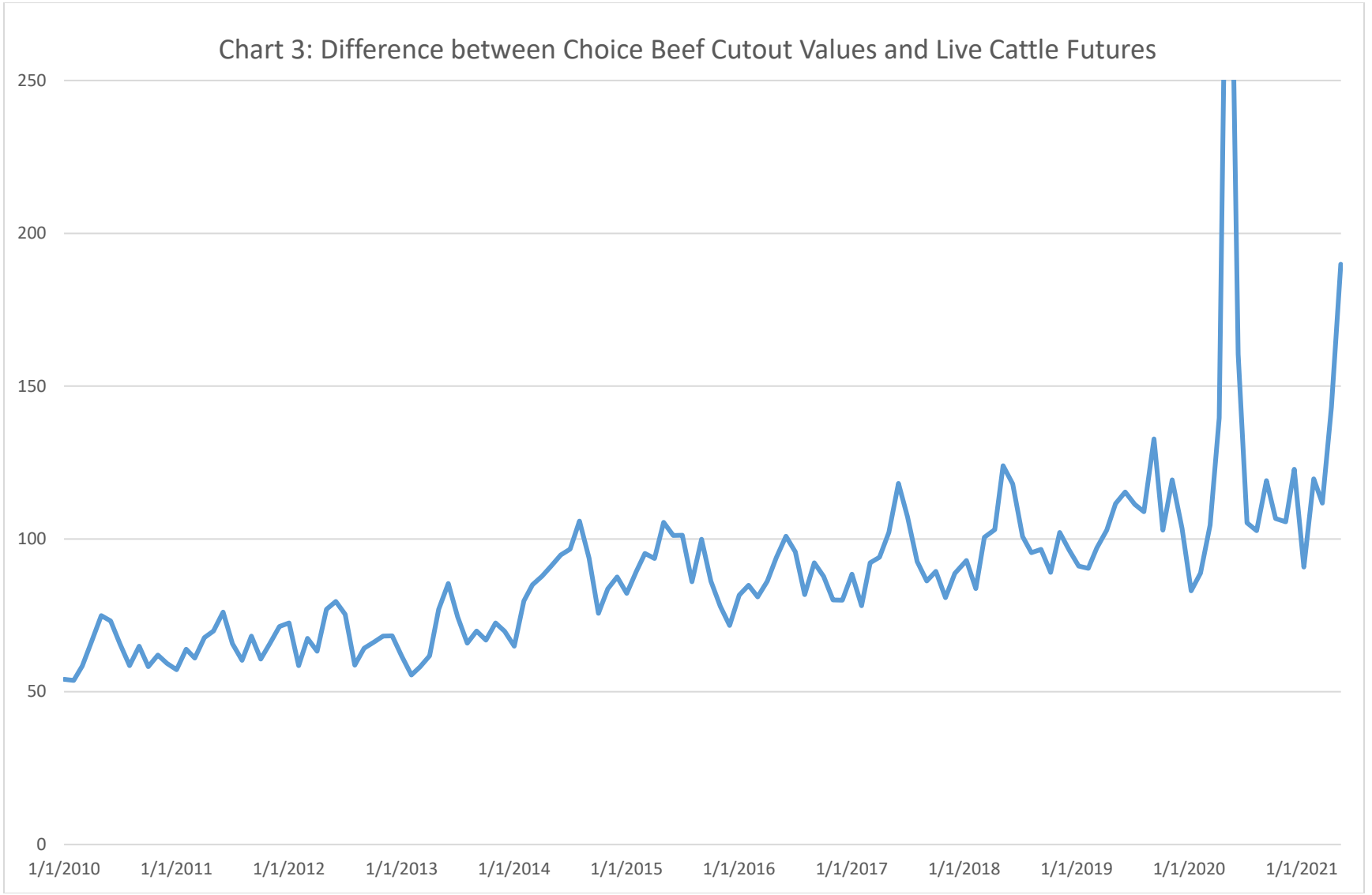
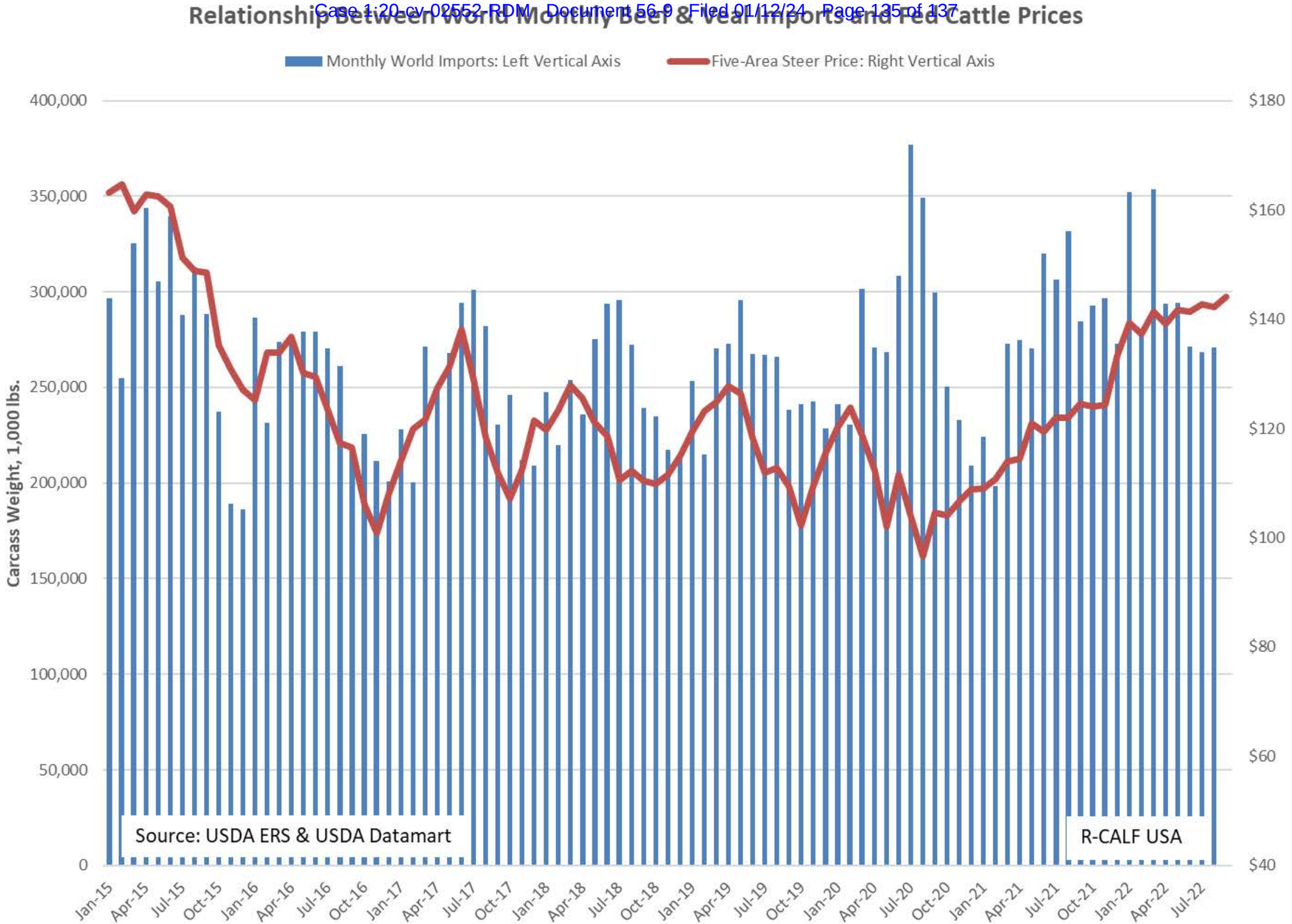
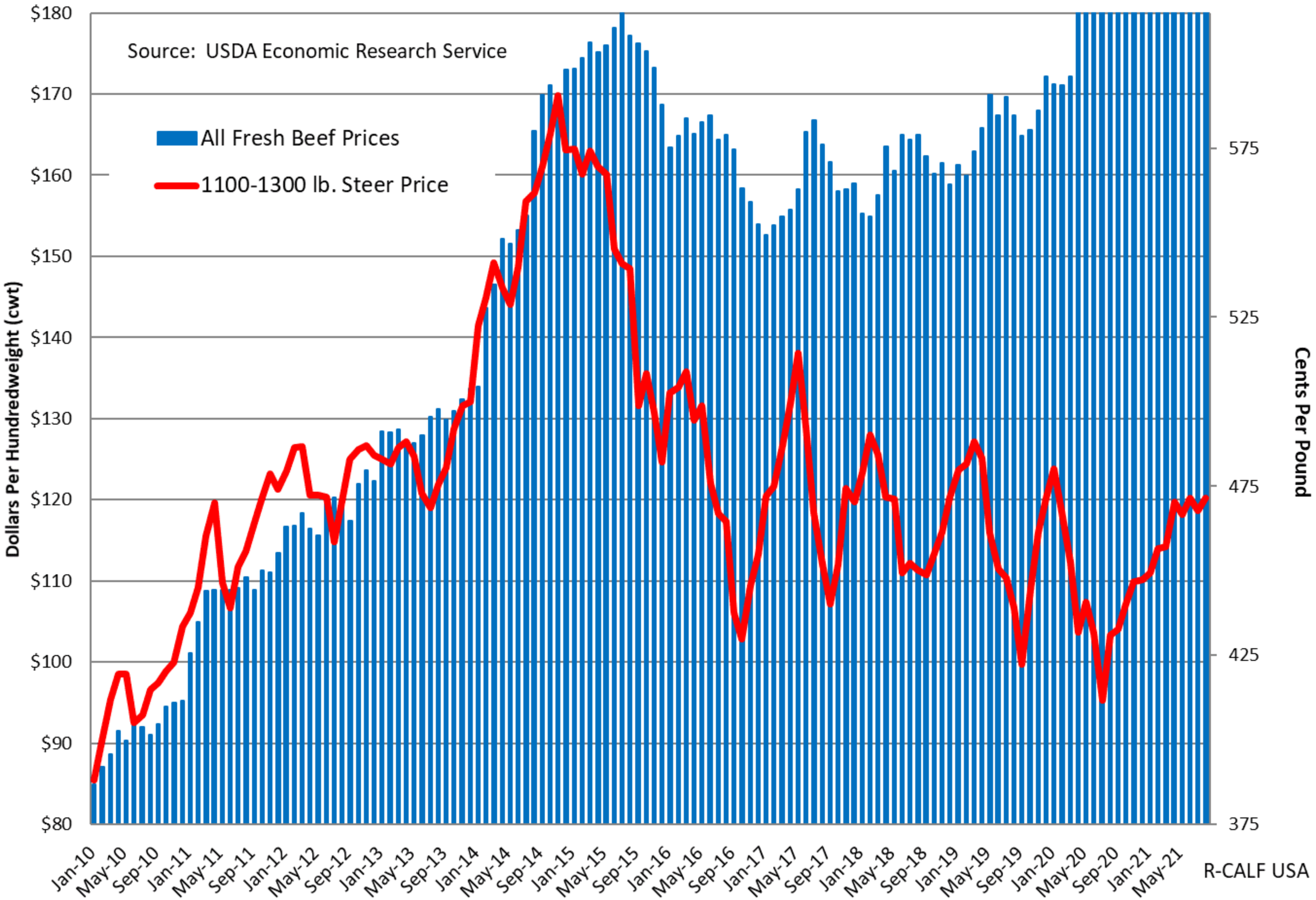


Chart 3 shows the difference between the price of live cattle futures and estimated cutout values for choice beef (as illustrated in Chart 1) from January 2010 to the present day, as reported by AMS


Relationship Between World Monthly Beef & Veal Imports and Fed Cattle Prices
Monthly World Imports: Left Vertical Axis
Five-Area Steer Price: Right Vertical Axis
Carcass Weight, 1,000 lbs.
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
$180
$160
$140
$120
$100
$80
$60
$40
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Apr-17
Jul-17
Oct-17
Jan-18
Apr-18
Jul-18
Oct-18
Jan-19
Apr-19
Jul-19
Oct-19
Jan-20
Apr-20
Jul-20
Oct-20
Jan-21
Apr-21
Jul-21
Oct-21
Jan-22
Apr-22
Jul-22
Source: USDA ERS & USDA Datamart
R-CALF USA

Cattle Prices Crash While Consumers Pay Record Beef Prices



Volume-Based World Trade Balance In Cattle, Beef, Beef Variety Meat and Processed Beef (30-yr Cumulative Balance: -20.1 Million MT)