

## **TRANSCRIPT: CHALLENGES IN SETTING CREDIBLE STANDARDS FOR FOOD LABELING AND SAFETY**

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I am not a lawyer, I am a scientist. I direct the Consumer Safety and Sustainability group at Consumer Reports. Consumer Reports has a slightly different approach to both testing products—approaching studies from a real scientific perspective—and leveraging our findings to get the change consumers need and want. Consumer Reports is a group of scientists that test products and report in our magazine *Consumer Reports*; we have a national survey center so we can do national polls at a moment's notice; we also have a statistics department that analyzes tons of data—both our own and the government's—and we try to leverage this information to get policy change. While I cover everything from green claims on toilet bowl cleaners to food safety issues, my passion is food safety and the intersection of food safety and sustainability.

The President's cancer report for 2011 illustrates growing, unchecked public health concerns in this country.<sup>1</sup> The report actually came out of the George W. Bush administration's appointments. According to the report, cancer rates due to environmental exposures are grossly underestimated.<sup>2</sup> We as a society need to do more to both understand this dilemma and get policies in place that better protect consumers.

Where is the proof that one carcinogen in ten is going to cause you a certain type of cancer? There is no definitive proof most of the time. Often the only clear evidence that a toxin causes cancer is numerous people getting cancer, followed by epidemiological studies that link the epidemic to a particular cause. We do not have to wait for all that injury to have documented proof of harm.

We are a country that is proof of harm. We do not take precautionary, progressive steps to prevent illness. Some countries do. European countries and Japan for instance frame public policy around precaution. We need to become more precautionary in setting consumer protection policy. My goal is to present enough evidence to demonstrate that it is time to take action

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1. Suzanne H. Reuben, *Reducing Environmental Cancer Risk*, 2008-2009 PRESIDENT'S CANCER PANEL ANN. REP. 5, 16, 26 (commenting that "research on environmental causes of cancer has been limited by low priority and inadequate funding"), available at [http://deainfo.nci.nih.gov/advisory/pcp/annualReports/pcp08-09rpt/PCP\\_Report\\_08-09\\_508.pdf](http://deainfo.nci.nih.gov/advisory/pcp/annualReports/pcp08-09rpt/PCP_Report_08-09_508.pdf).

2. *Id.* at 2.

now. Unfortunately, there are myriad disconnects between how policies get set and what we know based on science.

In terms of public health and sustainable food systems, most consumers are not interested in sustainable food because they perceive that conventional food systems harm the environment. People do not buy organic food or “more natural” personal care products because they think it is good for the environment. Consumers purchase organic food and natural products because they think there is a health benefit. As an environmental health student, when I was in school, smoking was the major public health issue. Not so anymore. Pesticides in the environment and bits of carcinogens everywhere: These are the public health issues of today. Many of the green, sustainable production practices are starting to get at those issues. The public health intersection is going to catalyze consumer demand for policy change.

Currently, there are 80,000 chemicals on the market, most of which have not been tested for safety or efficacy.<sup>3</sup> What is more, there are other chemicals that we know are toxic and yet we still allow nearly unfettered exposure to those chemicals.<sup>4</sup> Take heavy metals for instance. Lead has been a public health problem for a long time. However, we as a society took several steps to mitigate the lead exposure—especially to children—in food and drinking water. The safe lead limit keeps getting lower and lower every year;<sup>5</sup> in fact all the science points out that there is no safe limit for lead.<sup>6</sup> Indeed, the Centers for Disease Control (CDC) halved the actionable lead limit for kids this past year.<sup>7</sup> CDC’s action will have policy ramifications

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3. Lori O’Keefe, *Academy Calls for Improved Regulation of Chemicals, Safety Standards*, AAP NEWS, Apr. 25, 2011, <http://aapnews.aappublications.org/content/early/2011/04/25/aapnews.20110425-1.full.pdf+html>.

4. See REUBEN, *supra* note 1, at 16 (criticizing the reactionary approach to regulating toxic chemicals in the United States); see also Council on Envtl. Health, Am. Acad. of Pediatrics, *Policy Statement—Chemical-Management Policy: Prioritizing Children’s Health*, 127 PEDIATRICS 983, 983–84 (2011), available at <http://pediatrics.aappublications.org/content/early/2011/04/25/peds.2011-0523.full.pdf+html> (noting the inadequacy of the Toxic Substances Control Act in preventing the flood of toxic chemicals into the market).

5. ADVISORY COMM. ON CHILDHOOD LEAD POISONING PREVENTION, CDC, LOW LEVEL LEAD EXPOSURE HARMS CHILDREN: A RENEWED CALL FOR PRIMARY PREVENTION 3 (2012), available at [http://www.cdc.gov/nceh/lead/ACCLPP/Final\\_Document\\_030712.pdf](http://www.cdc.gov/nceh/lead/ACCLPP/Final_Document_030712.pdf) [hereinafter ACCLPP]; see also Mary Jean Brown & Stephen Margolis, CDC, *Lead in Drinking Water and Human Blood Lead Levels in the United States*, 61 MORBIDITY AND MORTALITY WKLY. REP. 7 (Supp. 2012), available at <http://www.cdc.gov/mmwr/pdf/other/su6104.pdf> (indicating the need to continue lowering lead exposures because scientific studies have yet to prove a safe blood lead level).

6. See Brown & Margolis, *supra* note 5, at 7 (stating there is no safe blood lead threshold for children); see also ACCLPP, *supra* note 5, at ix.

7. CDC, CDC RESPONSE TO ADVISORY COMMITTEE ON CHILDHOOD LEAD POISONING PREVENTION RECOMMENDATION IN “LOW LEVEL LEAD EXPOSURE HARMS CHILDREN: A RENEWED

because there is no safe amount of lead to eat. This no-risk philosophy is not exclusive to lead; every heavy metal carries the same risk if consumed. Mercury is another example. Pregnant women should never eat tuna because of the exposure to mercury. You can get your omega-3s without mercury! Yet the Food and Drug Administration (FDA) and other agencies have difficulty conveying this concept to the public.

For example, the FDA is supposed to restrict the sale of any fish above the one-part-per-million action level of mercury before the fish can be sold.<sup>8</sup> Yet, FDA has never taken action. So we have all the data, but the landscape is so perverse that nothing gets done to protect consumers. Perhaps the cause is a resource issue; nevertheless, the regulatory environment is skewed toward complacency.

Consumer Reports just released a report about arsenic in rice.<sup>9</sup> That followed a report on arsenic in apple juice published in January. Arsenic is a very potent carcinogen. The World Health Organization classifies inorganic arsenic as known to cause skin, lung, and bladder cancer.<sup>10</sup> Governments around the world have been setting limits on arsenic in water for quite some time. We understand how potent arsenic is. When kids consume apple juice their exposure to arsenic is higher per pound because youths way less than adults.

Standards ought to be set, but there are no standards for food. This is a puzzling question for the FDA. The common argument from the rice industry and apple juice industry is that everything contains arsenic, so why regulate? The industry's argument is wrong. For one thing, not all foods take up arsenic the same way. Farmers plant many of these foods in soils with already high levels of arsenic and then apply arsenic laden pesticides. Regardless of the source, arsenic is still unsafe once it gets into food.

A person can ingest at least half the amount of arsenic from rice than she can from drinking a maximum amount of water in a day at the maximum contamination limit.<sup>11</sup> These are neither trace nor trivial amounts. But there are no arsenic standards for rice. We know these foods have

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CALL OF PRIMARY PREVENTION" § 2 (2012), available at [http://www.cdc.gov/nceh/lead/ACCLPP/CDC\\_Response\\_Lead\\_Exposure\\_Recs.pdf](http://www.cdc.gov/nceh/lead/ACCLPP/CDC_Response_Lead_Exposure_Recs.pdf).

8. FDA, COMPLIANCE POLICY GUIDANCE MANUAL § 540.600 (2007), available at <http://www.fda.gov/ICECI/ComplianceManuals/CompliancePolicyGuidanceManual/ucm074510.htm>.

9. *Arsenic in Your Food: Our Findings Show a Real Need for Federal Standards for this Toxin*, CONSUMER REP., Nov. 2012, at 22, available at <http://www.consumerreports.org/cro/magazine/2012/11/arsenic-in-your-food/index.htm>.

10. *Arsenic*, WORLD HEALTH ORG. (Dec. 2012), <http://www.who.int/mediacentre/factsheets/fs372/en/index.html>.

11. CONSUMER REP., *supra* note 9.

arsenic. We further know that arsenic is highly dangerous. Yet, the government fails to regulate arsenic in foods or even set action levels.

Another issue is a misunderstanding of the interconnection between various public health issues. For instance, the more we clean the water, the dirtier the sewage sludge becomes. Then we take that sludge and fertilize crops with it. Fixing one problem, but exacerbating another is not a solution. We have to look at the broader landscape and solve problems as part of an interconnected system.

As for arsenic, we actually feed animals arsenic drugs much like antibiotics. The toxin pigments the meat pink. Farmers feed it to healthy animals to help prevent disease. Producers do this every day. Poultry, pigs, and other animals eat it every day. About 70-80% of the arsenic passes through the animal, goes into their manure, and then we use the manure to fertilize crops.<sup>12</sup> Producers take some of that manure and re-feed it back to animals because they think that is actually a nutritive source of protein. We are doing things to deliberately cycle arsenic through our food supply. We also use arsenic pesticides on cotton, on golf courses, on rights-of-ways, and on freeways. We are contributing to this problem, not solving it. Although Consumer Report's last study focused on arsenic in rice, the report is more about a poster crop for a much larger problem. That is, food safety policies still allow these carcinogens to be cycled in our food supply. Until we address these problems as a system, standards will only get us so far.

In addition, a consistent misuse and misinterpretation of science contributes to public health problems and inhibits progressive policy change. For example, a recent Stanford study claimed that there is no benefit to eating organic food.<sup>13</sup> This seems preposterous. First of all, the study was a "meta-analysis;" it did not contribute anything new.<sup>14</sup> The problem was that the authors left studies out and distorted already available literature. The authors distorted the studies so much that the only conclusion they could have come up with is that there is no health benefit to organic food. When consumers and scientists see these studies in the media, the first questions they should ask are: (1) Did the study really prove that?

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12. Lotfi El Bahri & Samir Ben Romdane., *Arsenic Poisoning in Livestock*, 33 VETERINARY AND HUMAN TOXICOLOGY 259, 262 (1991); C.A. Kan & G.A.L. Meijer, *The Risk of Contamination of Food with Toxic Substances Present in Animal Feed*, 133 ANIMAL FEED SCI. AND TECH. 84, 97-98 (2007); Yan-xia Li & Tong-bin Chen, Center for Env'tl. Remediation, *Concentrations of Additive Arsenic in Beijing Pig Feeds and the Residues in Pig Manure*, 45 RESOURCES, CONSERVATION & RECYCLING 356, 360, 365 (2005) (determining that pigs that consumed feed containing up to 0.25mg/kg arsenic excreted up to 119.0 mg/kg arsenic in manure)..

13. Crystal Smith-Spangler et al., *Are Organic Foods Safer or Healthier than Conventional Alternatives?: A Systematic Review*, 157 ANNALS OF INTERNAL MED. 348, 357 (2012).

14. *Id.* at 348.

and, (2) how did the study prove that? Consumer Reports spends significant amounts of time scrutinizing these claims and debunking the analysis.

Simply put, the Stanford study failed to ask the right questions. The Stanford researchers concluded that organic foods have no health benefit. One question they asked was: “Is organic food less allergenic?”<sup>15</sup> (Who is buying organic food because it is going to cause them less allergies!?) No answer to that question logically leads to the conclusion that organic food has no clinical benefit. On the other hand, one study showed that children who drink organic milk might have less eczema.<sup>16</sup> That evidence tends to show a benefit to consuming organic food.

Even so, organic farmers never initially intended to make a more nutritious food or provide clinical health benefits for people. That was never the point. In several cases, farmers who worked in places with a lot of pesticides did not want to expose their workers to toxins anymore. The farmers were concerned with the health of the farm and the farm workers, in addition to creating a more sustainable production system. These changes might have had inadvertent human health benefits. Moreover, organic food might have a nutritive benefit due to certain aspects of the production process, such as fixing nitrogen in the soil.

In any event, the Stanford study found mixed results on nutritive benefit, not “no benefit.”<sup>17</sup> The study actually showed less pesticide on organic foods, but the authors failed to find the resulting clinical benefit.<sup>18</sup> Clearly, they did not follow children who have been documented to have fewer pesticides in their diets from eating organic produce and juice.<sup>19</sup> Cancer occurs over a long period of time. Just because scientists do not have all the answers does not mean we cannot predict what those answers might be, and what actions we need to take right now in order to get to the right outcomes in the future.

By extension, in many cases food labels provide inadequate and deceptive information to consumers. Ensuring the accuracy and truthfulness of food labels requires time and vigilance. I can make up any label I want, stick it on any product, and sell it. What is more, I can claim any health

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15. *Id.* at 348, 358.

16. *Id.* at 350.

17. *Id.* at 353.

18. *Id.* at 354, 358.

19. Joel Forman et al., *Organic Foods: Health and Environmental Advantages and Disadvantages*, 130 PEDIATRICS e1406, e1411 (2012), available at <http://pediatrics.aappublications.org/content/early/2012/10/15/peds.2012-2579.full.pdf+html> (“[T]he primary form of exposure to pesticides in children is through dietary intake. Organic produce consistently has lower levels of pesticide residues than does conventionally grown produce . . . .”).

benefit so long as some study shows the benefit.<sup>20</sup> This ability has led to a very confusing marketplace for consumers. Playing it fast and loose with food labels has led to a marketplace that is misleading and deceptive. Some pose the question: “To regulate or not to regulate?” Unfortunately, agencies have found a way to do both. Agencies place consumers in the most dangerous position of all when they do both at the same time.

The “free range” label illustrates this problem. A “free range” label should mean something, right? All “free range” means is that the animals go outside for an undetermined period of time. Producers can take anything from that animal product and label it as free range and that is okay, that is legal. If a consumer objects because she paid more for the product and was deceived, she has no recourse.

“Hypoallergenic” is another example: It means nothing. FDA regulates that product category, but it does not regulate pre-market approval. The government only regulates the label if a consumer files a complaint. So, if a consumer has an allergic reaction to a product labeled “hypoallergenic,” that consumer has no recourse. There is no standard behind the label “hypoallergenic.” Allergic for one person is not allergic for another. It does not make sense to even have that label in the first place.

Yet, because the FDA and the United States Department of Agriculture (USDA) have one foot in the door on these labels where they provide over simplistic or limited definitions that defy consumer expectations, the deception can continue. Consumer Reports has filed complaints about misleading labeling that stems from fractured oversight or limited guidance from a federal agency like FDA or USDA with the Federal Trade Commission (FTC), and filed them under Section 5 as misleading and deceptive business practices.<sup>21</sup> The FTC responded with the excuse that FDA and USDA already regulate. Apparently, federal agency jurisdictions can seemingly subsume FTC’s ability to enforce the Federal Trade Commission Act.

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20. 21 U.S.C. § 343(r)(2)(G)(ii) (2006) (allowing health claims based on “a balanced representation of the scientific literature relating to the nutrient level to which the [label] claim refers”); 21 C.F.R. § 101.14(c)–(d) (2012) (validity requirements). 21 C.F.R. pt. 101, subpt. E (specific authorizations); *see also* Steven B. Steinborn & Kyra A. Todd, *The End of Paternalism: A New Approach to Food Labeling*, 54 FOOD & DRUG L.J. 401, 403 (1999) (describing the permissive nature of the Dietary Supplement Health and Education Act of 1994 and the Food, Drug, and Cosmetic Act). *But see* Clement Dimitri Pappas, *Maintaining A Level Playing Field: The Need for A Uniform Standard to Evaluate Health Claims for Foods and Dietary Supplements*, 57 FOOD & DRUG L.J. 25, 27 (2002) (characterizing FDA as hostile toward any health claims on food products).

21. Federal Trade Commission Act § 5, 15 U.S.C. § 45 (2006).

There are so many examples of so many problems. Sewage sludge used as fertilizers is illegal in organic production.<sup>22</sup> Sludge has loads of contaminants in it including triclosan, silver, and heavy metals at high levels. Despite organic standards prohibiting these contaminants, the entire industry markets their products as organic. And there was a big debacle in San Francisco where the municipality was giving free “organic” compost to anyone, including community gardens and school gardens.<sup>23</sup> As a result, all these people running organic gardens collected sewage sludge unknowingly. Consumers did not know that the sludge failed to meet the organic standard because the USDA—which regulates the organic program—on one hand says the labeling issue is not within their scope, and on the other hand the FTC says USDA already regulates the label. Therein lies the crack where we allow deceptive uses and, in this particular case, a legitimate claim goes unresolved.

Just as regulators allow false labeling, they fail to require labeling for dangerous food additives. Carbon monoxide is a food additive. Carbon monoxide is hosed into ground meat to keep it red and make it look fresher. Meat doused with carbon monoxide can have more spoilage organisms.<sup>24</sup> Adding carbon monoxide to meat is particularly bad for consumers because they cannot tell if the meat is spoiled. Carbon monoxide binds to the meat and becomes part of the food.<sup>25</sup> If a substance imparts some organoleptic change to the food, then it is considered an additive and must be labeled accordingly.<sup>26</sup> Hence, if a producer irradiates meat, then she must label it “irradiated.” Yet, if a producer binds carbon monoxide to meat—essentially asphyxiating the meat to make it look red—that does not constitute an organoleptic change, and the carbon monoxide is thus not an additive. Hence, organic labels and carbon monoxide additives exemplify the perverse ways agencies interpret these regulations to allow producers to withhold information from consumers.

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22. 7 C.F.R. § 205.203(e)(2) (2012).

23. Josh Harkinson, *A Backlash After San Francisco Labels Sewage Sludge “Organic”*, MOTHERJONES (Mar. 4, 2010, 3:45), <http://www.motherjones.com/blue-marble/2010/03/backlash-after-san-francisco-labels-sewage-sludge-organic>; *Organic Fertilizer or Toxic Sludge*, ORGANIC CONSUMERS ASS’N, <http://www.organicconsumers.org/sludge.cfm> (last visited Apr. 13, 2013).

24. DAREN CORNFORTH & MELVIN HUNT, LOW-OXYGEN PACKAGING OF FRESH MEAT WITH CARBON MONOXIDE: MEAT QUALITY, MICROBIOLOGY, AND SAFETY 3, 6 (2008), available at <http://www.aamp.com/documents/CarbonMonoxidePackaging-AMSAWhitePaper.pdf>; see also Marian Burros, *Which Cut is Older? (It’s a Trick Question)*, N.Y. Times, [http://www.nytimes.com/2006/02/21/national/21meat.html?\\_r=0](http://www.nytimes.com/2006/02/21/national/21meat.html?_r=0) (summarizing the argument that use of carbon monoxide in meat deceives consumers into thinking the meat is fresh).

25. CORNFORTH, *supra* note 24, at 7.

26. 21 U.S.C. § 348(c)(1)(A) (2006) (requiring labeling of food additives); 21 C.F.R. § 170.3(e)(1) (2012).

Similarly, more than 90% of people want farmers to label foods containing genetically modified organisms (GMOs).<sup>27</sup> They also want producers to label foods derived from cloned animals, but our government does not allow it.<sup>28</sup> The majority of people want producers to test meat for mad cow and label meat that has been tested for mad cow.<sup>29</sup> The USDA, however, denied a manufacturer the ability to test their product for mad cow or make that claim on its product because the label would somehow indicate that its meat was better than traditionally produced meat.<sup>30</sup>

“Natural” is probably the most egregious term on the market. It has no standards; it has no verification. Consumers still think it means *more* than organic. It is one of the most painful public education campaigns Consumer Reports does. Producers can add high fructose corn syrup and partially hydrogenated oils to products and still label the products as “natural.”

“Grass fed,” which is a good story, is regulated by the USDA. The Food Safety Inspection Service (FSIS) has to check a box every time someone claims “grass fed” on her meat. All the producer has to do is submit paperwork to FSIS. The agency surprisingly has no discernible process for determining whether the meat is actually grass fed. Nevertheless, FSIS continues to certify meat as “grass fed.” Then the Agriculture Marketing Service (AMS) in 2002 went to all the trouble to propose rules defining “grass fed.”<sup>31</sup> And the rules were terrible. For example, the rules allowed 80% grass fed steers to be labeled as “grass fed.” This means that every steer in this country could be labeled “grass fed.”<sup>32</sup> The nutritive benefits of grass feeding are void at 80%; you have to

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27. *Label Genetically Engineered Food: Polls on GMO Labeling*, Center for Food Safety, <http://www.centerforfoodsafety.org/issues/976/ge-food-labeling/us-polls-on-ge-food-labeling> (last visited Apr. 13, 2013).

28. CONSUMER REP. NAT’L RESEARCH CTR., FOOD-LABELING POLL 2008, at 13 (2008), available at <http://www.greenerchoices.org/pdf/foodpoll2008.pdf>; Sarah A. Nonis et al., *Should We Label Products from Clones? An Exploratory Study of Beliefs, Attitudes and Food Safety Information on Consumer Purchase Intentions*, 5 J. OF MARKETING DEV. AND COMPETITIVENESS 95, 97 (2010), available at <http://www.na-businesspress.com/JMDC/NonisWeb.pdf>; Press Release, FDA, FDA Issues Documents on the Safety of Food from Animal Clones: Agency Concludes that Meat and Milk from Clones of Cattle, Swine, and Goats, and the Offspring of All Clones, Are as Safe to Eat as Food from Conventionally Bred Animals (Jan. 15, 2008), available at <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/2008/ucm116836.htm>.

29. CONSUMER REP. NAT’L RESEARCH CTR., *supra* note 28.

30. Creekstone Farms Premium Beef v. Dep’t of Agriculture, 539 F.3d 492, 503 (D.C. Cir. 2008) (allowing the USDA to deny producer’s request to purchase rapid BSE test kit).

31. United States Standards for Livestock and Meat Marketing Claims, 67 Fed. Reg. 79552-02, 79555 (proposed Dec. 30, 2002) (to be codified at 7 C.F.R. Pt. 54).

32. *Id.*

feed at 100% grass to get demonstrative nutrient benefits.<sup>33</sup> What is more, there are myriad other health benefits to animals eating grass—it is after all what they eat. For example, one study suggests that if you grass feed you can keep E. Coli O157 lower in the gut because the grass keeps the pH low, so the environment remains non-conducive to bacterium growth.<sup>34</sup>

Accordingly, AMS, after six years of working non-stop with many other groups, finally got the 100% grass fed standard. What a great use of taxpayer money: Consumers now have a decent standard. A year later, I inquired at the USDA as to how many people were using that label. The answer: Not one. It turns out the FSIS trumps AMS, and producers can still go to FSIS and get a label for “grass fed” without having to comply with the standard set by the AMS. Today we still allow that. We have this great standard in place, but we have an agency subverting itself. The result is that consumers are deprived of a credible label. Buy products with the American Grass Fed Association’s label because at least that is something bona fide.

“Corn sugar” is another example of deceptive labeling. Not long ago, corn refiners petitioned the FDA to change the name of high fructose corn syrup. While many people questioned the safety of such a label, Consumer Reports argued that the refiners simply do not extract sugar from corn. Dextrose, a starch, comes out of corn.<sup>35</sup> Refiners have to process dextrose into high fructose corn syrup. There is nothing natural about it. Unequivocally, high fructose corn syrup is not corn sugar. Now the FDA has told the refiners to stop labeling these products as such,<sup>36</sup> but it is just another example of how perverse a society we live in of renaming, relabeling, and not labeling. We need a level playing field. And that is something all of us can participate in.

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33. Karin Nuernberg et al., *Effect of a Grass-based and a Concentrate Feeding System on Meat Quality Characteristics and Fatty Acid Composition of Longissimus Muscle in Different Cattle Breeds*, 94 LIVESTOCK PRODUCTION SCI. 137, 138, 144 (2005) (finding that feeding cattle 100% grass increased total n-3 fatty acids as well as the vitamin E content of the resulting beef); M. Enser et al., *Fatty Acid Content and Composition of UK Beef and Lamb Muscle in Relation to Production Systems and Implications for Human Nutrition*, 49 MEAT SCI. 329, 331, 339 (1998) (observing that 100% grass-fed beef and lamb contained lower n-6 : n-3 fatty acid ratios than concentrate fed beef and lamb).

34. Indira T. Kudva et al., *Evaluation of Dietary Influences on Escherichia coli O157:H7 Shedding in Sheep*, 63 APPLIED AND ENVTL. MICROBIOLOGY 3878, 3884–85 (1997); see also Luke J. Grauke et al., *Gastrointestinal Tract Location of Escherichia coli O157:H7 in Ruminants*, 68 APPLIED AND ENVTL. MICROBIOLOGY 2269, 2275 (2002) (finding that E. coli resides primarily lower in the gastrointestinal tract of ruminants fed with hay). E. Coli o157 is a strain of E. Coli bacteria responsible for causing intestinal disease.

35. MICHAEL M. LANDA, FDA, RESPONSE TO PETITION FROM CORN REFINERS ASSOCIATION TO AUTHORIZE “CORN SUGAR” AS AN ALTERNATIVE COMMON OR USUAL NAME FOR HIGH FRUCTOSE CORN SYRUP (HFCS) (2012), available at <http://www.fda.gov/AboutFDA/CentersOffices/OfficeofFoods/CFSAN/CFSANFOIAElectronicReadingRoom/ucm305226.htm>.

36. *Id.*