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Agricultural and Food Law—Food Labeling and Biotechnology—The Food Fight Over Labeling Genetically Engineered Foods and a Natural Solution to Protect Agricultural Biotechnology in the Natural State

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AGRICULTURAL AND FOOD LAW—FOOD LABELING AND BIOTECHNOLOGY—THE FOOD FIGHT OVER LABELING GENETICALLY ENGINEERED FOODS AND A NATURAL SOLUTION TO PROTECT AGRICULTURAL BIOTECHNOLOGY IN THE NATURAL STATE.

I. INTRODUCTION

American consumers have access to a food supply that is unparalleled elsewhere, with a variety of items that are safe, affordable, and abundant.[1] About 70–80% of the food consumed in the United States is genetically modified.[2] Genetic modification, also referred to as genetic engineering, is the modification of an organism by introducing the gene(s) of a different species into that organism.[3] For decades, farmers have used genetically engineered (GE) crops, which offer advantages such as resisting insects and viruses, tolerating herbicides,[4] requiring fewer pesticides and less water, and keeping production costs down.[5] As a result of this increasingly efficient crop production, consumers have reaped the benefits by enjoying a larger, more affordable food supply.[6]

Notable experts affirm that GE foods are safe,[7] but critics claim that there is no scientific consensus on the safety of such products.[8] This denial

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1. *See Food Transparency*, HOUSE COMM. ON AGRIC., http://agriculture.house.gov/issues/issue/?IssueID=14887 (last visited June 13, 2017); *see also Opening Statements*, HOUSE COMM. ON AGRIC., (Nov. 4, 2015) http://agriculture.house.gov/news/documentsingle.aspx?DocumentID=3005 ("America has the safest, most affordable, most abundant food supply in the history of the world, and that is not by accident – it is by design. Sound agricultural policy has been an integral piece of our ability to feed and clothe not only our nation, but the world. Agriculture is the backbone of the economy, and throughout history America has been able to not only survive, but thrive because our agricultural safety net helps farmers weather the bad times. We must never forget that there is no food without the farmer.").

2. The Grocery Mfr. Ass'n, *Grocery Manufacturers Association Position on GMOs*, FACTS ABOUT GMOs, http://factsaboutgmos.org/disclosure-statement (last visited June 13, 2017) [hereinafter Grocery Mfrs.].

3. Margaret Rosso Grossman, *Genetic Technology and Food Security*, 62 AM. J. COMP. L. 273, 273 (2014).

4. *Id.*

5. Grocery Mfrs., *supra* note 2.

6. *Id.*

7. *Frequently Asked Questions on Genetically Modified Foods*, WORLD HEALTH ORG., (May 2014), http://www.who.int/foodsafety/areas_work/food-technology/Frequently_asked_questions_on_gm_foods.pdf?ua=1 [hereinafter WHO, *FAQs*]; s*ee also* Am. Med. Ass'n, *Report of the Council on Science and Public Health*, THE FACTS ABOUT GMOs (2012) http://factsaboutgmos.org/sites/default/files/AMA%20Report.pdf [hereinafter Am. Med. Ass'n, *Report*] (stating that "there is no scientific justification for special labeling of genetically modified foods"); INST. OF MED. AND NAT'L RESEARCH COUNCIL, SAFETY OF

of GE food safety has stirred some states to enact or work towards enacting laws that mandate the labeling of GE foods,[9] while the majority of states do not require GE foods to be labeled.[10] Noting this split between an affirmative result and a non-conclusive result on the safety of GE foods, critics of GE food safety also push for mandatory labeling laws for the sake of consumers' right to know whether or not genetically modified organisms (GMOs) are in the foods they purchase.[11]

This patchwork of state laws that requires mandatory labeling of GE foods will lead to consumer confusion. Studies show that the average consumer will likely perceive newly labeled GE foods to be of inferior value to unlabeled non-GE products.[12] This misperception has the potential to ultimately drive GE foods out of the American food supply.[13] The real motive

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GENETICALLY ENGINEERED FOODS 180 (The National Academies Press 2004), http://www.nap.edu/read/10977/chapter/9#180 [hereinafter INST. OF MED., SAFETY OF GE FOODS] (stating that there have been no adverse health effects due to genetic engineering); Alessandro Nicolia et al., *An Overview of the Last 10 Years of Genetically Engineered Crop Safety Research*, 34 CRITICAL REVS. BIOTECHNOLOGY 77 (2014), https://geneticliteracyproject.org/wp-content/uploads/2013/10/Nicolia-20131.pdf (concluding that the scientific research and literature produced over the ten years before this article "has not detected any significant hazard directly connected with the use of GM crops"); *Statement by the AAAS Board of Directors On Labeling of Genetically Modified Foods*, AM. ASS'N FOR THE ADVANCEMENT OF SCI. (Oct. 20, 2012), http://www.aaas.org/sites/default/files/AAAS_GM_statement.pdf [hereinafter AAAS, *Statement*].

8. Angelika Hilbeck et al., *No Scientific Consensus on GMO Safety*, 27 ENVTL. SCI. EUR. 4 (2015), http://www.enveurope.com/content/pdf/s12302-014-0034-1.pdf.

9. *See* VT. STAT. ANN. tit. 9, §§ 3041–3048 (2016); s*ee also* Act of May 8, 2014, H. 112, 2014 Vt. Legis. Serv. No. 120 (West) (codified at VT. STAT. ANN. tit. 9, §§ 3041–3048 (2016)).

10. Mary Clair Jalonick, *House Passes Bill to Prevent Mandatory GMO Food Labeling*, PBS NEWSHOUR (July 23, 2015, 3:22 PM), http://www.pbs.org/newshour/rundown/house-passes-bill-prevent-mandatory-gmo-food-labeling/.

11. *Why Label?*, JUST LABEL IT!, http://www.justlabelit.org/right-to-know-center/right-to-know/ (last visited June 13, 2017).

12. Abebayehu Tegene et al., *The Effects of Information on Consumer Demand for Biotech Foods: Evidence from Experimental Auctions,* U.S. DEP'T AGRIC. ECON. RESEARCH SERV., (Apr. 4, 2003), https://www.ers.usda.gov/publications/pub-details/?pubid=47428.

13**.** *See* Ronnie Cummins, *GMOs: Ban Them or Label Them?*, ORGANIC CONSUMERS ASS'N (Mar. 6, 2014), https://www.organicconsumers.org/essays/gmos-ban-them-or-label-them [hereinafter Cummins, *GMOs*] ("Once GMOs foods are labeled, informed consumers will move to protect themselves and their families by not buying them. Once enough consumers shun GMO-tainted and labeled foods, stores will stop selling them and food manufacturers will stop putting GMO food ingredients in their products."); Ronnie Cummins, Organic Consumers Ass'n, *GMO and "Natural" Food Fight: Treacherous Terrain*, (Jan. 7, 2014), http://www.truth-out.org/news/item/21064-gmo-and-natural-food-fight-treacherous-terrain [hereinafter Cummins, *Treacherous Terrain*] ("GMO labeling laws are the cornerstone of the anti-GMO movement. But consumers are also expanding the fight by demanding outright bans on the growing of GMO crops."). GMO Inside (@GMOInside), TWITTER (Jan. 13, 2014, 5:15 PM), https://twitter.com/GMOInside/status/422899828449103872 ("We are determined

behind mandatory GE food labeling is not about labeling at all; the motive is to ban the biotechnology altogether.[14]

The Safe and Accurate Food Labeling Act of 2015 (Act) strives to promote labeling uniformity by providing a federal standard that preempts states from mandating GE food labeling.[15] However, the Act allows for voluntary labeling of non-genetically engineered foods for producers who choose to do so.[16]

Inevitably, requiring GE foods to be labeled would necessitate additional costs.[17] In the United States, a family of four spends anywhere from $130.10 to $296.50 on groceries per week.[18] If GE foods must be labeled as such, it is estimated that this family of four would have an increased grocery cost of $800 per year as a result.[19] The Act would prevent these costs from being forced onto consumers.

The Act should be passed to promote labeling uniformity amongst states and allow grocery costs to remain affordable. Noting that mandatory GE food labeling is a means to an end to ban the use of GMOs altogether, Arkansas should proactively pass legislation that protects this biotechnology from being banned. This note examines the Act and suggests proactive legislation that Arkansas legislators need to enact to protect the use of this agricultural biotechnology. Part II provides a general and developmental background of GE foods on local, state, and national platforms.[20] Part III ad-

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to get #GMOs out of our food supply."); Michele R Simon JD MPH (@MicheleRSimon), TWITTER (Mar. 10, 2014, 10:05 AM), https://twitter.com/MicheleRSimon/status/443070129895530496 ("Labeling #GMO food is not enough. We must keep new GE crops out of food supply to begin with take action @TrueFoodNow.").

14. *See* Cummins, *GMOs, supra* note 13; GMO Inside, *supra* note 13; Simon, *supra* note 13; Cummins, *Treacherous Terrain, supra* note 13.

15. Safe and Accurate Food Labeling Act of 2015, H.R. 1599, 114th Cong. (1st Sess. 2015). Notably, before the publication of this note, 7 U.S.C. § 1639 (2016) was enacted, which created a national disclosure standard for bioengineered foods and eliminated any state laws that required GMO labeling. Courtney Begley, *"So Close, Yet So Far": The United States Follows the Lead of the European Union in Mandating GMO Labeling. But Did It Go Far Enough?*, 40 FORDHAM INT'L. L. J. 625, 703–04 (2017). Thus, while the Act is no longer viable, this note still presents a cohesive proposal of the necessity of uniform labeling, and a solution to protecting agricultural biotechnology in Arkansas.

16. Safe and Accurate Food Labeling Act of 2015, H.R. 1599, 114th Cong. § 203 (1st Sess. 2015); s*ee also supra* text accompanying note 15.

17. Tamara Tabo, *Food Fight: Eating the Costs of Not Eating GMO Food*, ABOVE THE LAW (May 9, 2014, 11:41 AM), http://abovethelaw.com/2014/05/food-fight-eating-the-costs-of-not-eating-gmo-food/?rf=1.

18. U.S. Dep't of Agric., *Official USA Food Plans: Cost of Food at Home at Four Levels, U.S. Average, July 2015* (Aug. 2015), http://www.cnpp.usda.gov/sites/default/files/CostofFoodJul2015.pdf.

19. WILLIAM LESSER, COSTS OF LABELING GENETICALLY MODIFIED FOOD PRODUCTS IN N.Y. STATE 4 (2014), http://publications.dyson.cornell.edu/docs/LabelingNY.pdf.

20. *See infra* Part II.

dresses why the Act should pass and proposes legislation that would protect the use of biotechnology from being prohibited in Arkansas.[21]

II. BACKGROUND

This section first addresses the importance of GE foods[22] and provides the structure for agency responsibility in the field of agricultural biotechnology and food labeling.[23] Then, this section discusses the local, state, and federal development of regulation surrounding GE food labeling.[24] Lastly, this section reviews local regulations banning GE crops and international regulations on GE foods.[25]

A. Why Are GE Foods Important?

The Food and Agriculture Organization (FAO) estimates that 780 million people were undernourished during 2014–2016,[26] and agricultural production will need to increase by 60% to meet global demands in 2050.[27] More conventional yield-enhancing technologies, including improved seed varieties, are valuable options for improving agricultural productivity to increase food availability and improve food security and nutrition.[28] Further, considering climate change impacts, agricultural biotechnology could stand for victory in the face of drought and flooding.[29]

In Africa and Asia, millions of people die every year from vitamin A deficiency, a condition that makes individuals susceptible to life-threatening diseases.[30] Vitamin A precursor beta-carotene is "a powerful nutrient found in fruits and vegetables such as carrots, sweet potatoes, and spinach that strengthens the immune system, protects and improves vision and dental

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21. *See infra* Part III.
22. *See infra* Part II.A.
23. *See infra* Part II.B.
24. *See infra* Part II.C.
25. *See infra* Part II.D–E.
26. FOOD & AGRIC. ORG. OF THE UNITED NATIONS, INT'L FUND FOR AGRIC. DEV. & WORLD FOOD PROGRAMME, THE STATE OF FOOD INSECURITY IN THE WORLD 9 (2015), http://www.fao.org/3/a-i4646e.pdf [hereinafter FAO].
27. Nikos Alexandratos & Jelle Bruinsma, *World Agriculture Towards 2030/2050: The 2012 Revision* 17 (Food and Agric. Org. of the United Nations, ESA Working Paper No. 12-03, 2012), http://www.fao.org/docrep/016/ap106e/ap106e.pdf.
28. FAO, *supra* note 26, at 31.
29. Martha Marrapese & Keith A. Matthews, *The Importance of Agricultural Biotechnology in the Response to the Effects of Climate Change*, 29 NAT. RESOURCES & ENV'T 39, 44 (2014).
30. Susan Johnson, Feature, *Genetically Modified Food: A Golden Opportunity?,* 13 SUSTAINABLE DEV. L. & POL'Y 34 (2014).

health, and delivers cancer-fighting antioxidants."[31] To combat the struggle against malnutrition, "Golden Rice" was created,[32] which is rice that is fortified with beta-carotene in an attempt to enhance Vitamin A levels.[33] Golden Rice is given its name because the beta-carotene fortification makes it golden in color.[34]

The inventors of Golden Rice wanted to donate their biotechnology to farmers who lacked resources in developing countries, which led to the inventors partnering with Syngenta.[35] Syngenta further developed the Golden Rice biotechnology to increase the beta-carotene levels,[36] and ultimately developed a second Golden Rice that had substantially more amounts of beta-carotene than the first.[37] While the development of Golden Rice is still ongoing, developers are making plans for delivery of Golden Rice to the Philippines, Bangladesh, and Indonesia and will use those experiences to deliver the crop to other countries.[38]

B. Who's in Charge Here?

The Coordinated Framework for Regulation of Biotechnology was established in 1986 and sets forth the formal policy regarding the review of biotechnology by certain federal agencies.[39] Specifically, the federal agencies responsible for this review are the Animal and Plant Health Inspection Service (APHIS) (which is under the United States Department of Agriculture (USDA)), the Environmental Protection Agency (EPA), and the Department of Health and Human Services' Food and Drug Administration (FDA).[40] Because the APHIS is charged with protecting agriculture from pests and diseases, it oversees biotechnology that could impact agriculture in these areas.[41] The EPA is responsible for protecting health and the environ-

31. *Id.*
32. *The Project*, INT'L RICE RESEARCH INST., http://irri.org/golden-rice/the-project (last visited Oct. 11, 2017).
33. *What is Golden Rice?*, INT'L RICE RESEARCH INST., http://irri.org/golden-rice/faqs/what-is-golden-rice (last visited Oct. 11, 2017).
34. *The Project*, INT'L RICE RESEARCH INST., http://irri.org/golden-rice/the-project (last visited June 8, 2017).
35. *Id.*
36. *Id.*
37. *Id.*
38. *Id.* (follow "Our work" hyperlink).
39. Coordinated Framework for Regulation of Biotechnology, 51 Fed. Reg. 23,302 (June 26, 1986).
40. *How the Federal Government Regulates Biotech Plants*, U.S. DEP'T OF AGRIC., https://www.aphis.usda.gov/aphis/ourfocus/biotechnology/sa_regulations/ct_agency_framework_roles (last modified Jan. 27, 2017).
41. *Id.*

ment by regulating pesticides.[42] The Federal Food, Drug, and Cosmetic Act (FDCA)[43] and the Fair Packaging and Labeling Act authorize the FDA to regulate food labeling requirements.[44]

The FDCA prohibits food from being misbranded,[45] which means food labels cannot consist of false or misleading information.[46] Specifically, the FDCA provides:

> If an article is alleged to be misbranded because the labeling or advertising is misleading, then in determining whether the labeling or advertising is misleading there shall be taken into account (among other things) not only representations made or suggested by statement, word, design, device, or any combination thereof, but also the extent to which the labeling or advertising fails to reveal facts material in the light of such representations or material with respect to consequences which may result from the use of the article to which the labeling or advertising relates under the conditions of use prescribed in the labeling or advertising thereof or under such conditions of use as are customary or usual.[47]

The Nutrition Labeling and Education Act amended the FDCA and preempted state requirements regarding food standards and nutrition labeling.[48]

Congress established the Federal Trade Commission (FTC)[49] and tasked the FTC with preventing the unlawful use of unfair or deceptive practices related to commerce.[50] The unfair and deceptive practices that the FTC seeks to prevent include acts that "cause or are likely to cause reasonably foreseeable injury within the United States or involve material conduct occurring within the United States."[51]

The Organic Foods Production Act of 1990 established the National Organic Program (NOP).[52] Currently, the USDA operates the NOP, which "develops the rules & regulations for the production, handling, labeling, and enforcement of all USDA organic products."[53] To be certified as USDA

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42. *Id.*
43. *See* Federal Food, Drug, and Cosmetic Act, 21 U.S.C. §§ 301–399h (2012).
44. *See* Fair Packaging and Labeling Act, 15 U.S.C. §§ 1451–1461 (2012).
45. *See* 21 U.S.C. § 331 (2012).
46. *See* 21 U.S.C. §§ 321, 343 (2012).
47. *Id.* § 321(n).
48. *Id.* § 343-1.
49. 15 U.S.C. § 41 (2012).
50. *Id.* § 45.
51. *Id.*
52. 7 U.S.C. §§ 6501–6532 (2012).
53. *Organic Regulations*, U.S. DEP'T OF AGRIC., http://www.ams.usda.gov/rules-regulations/organic (last visited June 25, 2017).

Organic, the NOP prohibits producers from using any GMOs during their product's farming process.[54]

C. Development of Local, State, and Federal Laws Regarding GE Labeling

Local, state, and federal regulations on GE labeling have been on the rise.[55] Consumer interest has been a driving factor in many local initiatives, but voters have mostly been unsupportive of these local regulations at the polls.[56] A handful of states have passed legislation requiring GE labeling, with the first of these laws taking effect during the summer of 2016.[57] Notably, these labeling requirements are being challenged as unconstitutional.[58] Nationally, lawmakers are attempting to regulate GE labeling in a way that creates a uniform labeling standard amongst all states.[59]

1. Ballot Proposals

A number of states have placed GE labeling initiatives on the ballot to allow voters to decide whether or not they want GE foods to be labeled.[60] In 2002, Oregon presented Measure No. 27 to voters, which would require the labeling of GE foods "in order to create and enforce the fundamental right of people in Oregon to know if they are buying or eating genetically engineered food . . . ."[61] Seventy percent of voters voted against the measure.[62] In 2012, approximately 51% of California voters voted against Proposition 37,[63] which would have deemed GE foods as misbranded if they did not disclose that they were produced with genetic engineering.[64] In 2013, just

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54. *Can GMOs Be Used in Organic Products?,* U.S. DEP'T OF AGRIC., AGRIC., http://www.ams.usda.gov/sites/default/files/media/Can%20GMOs%20be%20Used.pdf (last visited June 25, 2017) [hereinafter *GMOs in Organic Products*].

55. *See infra* Part II.C.1–3.

56. *See infra* Part II.C.1.

57. *See infra* Part II.C.2.

58. *See infra* Part II.C.2.

59. *See infra* Part II.C.3.

60. *See infra* notes 61, 63, 66, 67, 69.

61. OR. SEC'Y OF STATE, VOTERS' PAMPHLET: 2002 VOTER OUTREACH CAMPAIGN 116 (2002), http://library.state.or.us/repository/2010/201003011350161/S-8V94-2-2002-1-MEASURES.pdf.

62. *November 5, 2002, General Election Abstract of Votes*, ST. LIBR. OF OR., http://library.state.or.us/repository/2013/201307051444405/2002.pdf.

63. *Statement of Vote Summary Pages*, CAL. SEC'Y OF ST. 13, http://elections.cdn.sos.ca.gov/sov/2012-general/06-sov-summary.pdf (last visited Sept. 11, 2017).

64. *Text of Proposed Laws*, CAL. SEC'Y OF ST. 111, http://vig.cdn.sos.ca.gov/2012/general/pdf/text-proposed-laws-v2.pdf#nameddest=prop37.

over 51% of Washington voters rejected Initiative 522,[65] which closely resembled California's Proposition 37.[66] Colorado's Proposition 105 would have required genetically engineered foods to be labeled,[67] but over 65% of voters voted against it in 2014.[68] In 2014, Oregon Measure 92, which would require food manufacturers and retailers to label GE foods, also failed by a slim margin.[69]

2. Current State Law

Connecticut lawmakers, in 2013, enacted a mandatory labeling law for food, seed, or seed stock that is genetically modified.[70] However, this law contains two prerequisites that must be met before the law is effective: (1) four other states must enact mandatory labeling laws, including one state that borders Connecticut, and (2) the aggregate population of eight specific states in the northeastern region of the US that have enacted mandatory labeling laws for GE foods exceed twenty million per the 2010 census.[71]

In 2014, the Maine legislature passed a law similar to Connecticut's mandatory labeling law for genetically modified food.[72] Maine's law also sets a bordering-state prerequisite before it can go into effect; five contiguous states, including Maine, must enact mandatory labeling requirements for genetically engineered foods.[73] Further, the law will be repealed as of January 1, 2018 if this prerequisite remains unsatisfied.[74]

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65. *Initiative to the Legislature: 522 Concerns Labeling of Genetically-Engineered Foods*, WASH. SEC'Y OF ST., http://results.vote.wa.gov/results/20131105/State-Measures-Initiative-to-the-Legislature-522-Concerns-labeling-of-genetically-engineered-foods.html (last updated Nov. 26, 2013).

66. *Compare supra* note 65, *with Initiative Measure No. 522*, WASH. SEC'Y OF ST. (June 29, 2012), http://sos.wa.gov/_assets/elections/initiatives/FinalText_285.pdf.

67. *See 2014 State Ballot Information Booklet*, COLO. GEN. ASSEMBLY LEGIS. COUNCIL 27–33 (2014), https://www.colorado.gov/pacific/sites/default/files/2014Blue%20Book%20for%20Internet,0.pdf.

68. *Official Results: November 4, 2014 General Election*, COLO. ELECTION RESULTS, (last updated Dec. 4, 2014, 2:14 PM), http://results.enr.clarityelections.com/CO/53335/149718/Web01/en/summary.html.

69. *November 4, 2014, General Election, Official Abstract of Votes*, OR. SEC'Y OF ST. (2014), http://sos.oregon.gov/elections/Documents/results/results-2014-general-election.pdf; s*ee also Oregon Mandatory Labeling of GMOs Initiative, Measure 92 (2014)*, BALLOTPEDIA, http://ballotpedia.org/Oregon_Mandatory_Labeling_of_GMOs_Initiative,_Measure_92_%282014%29 (last visited June 16, 2017).

70. CONN. GEN. STAT. § 21a-92c(a) (2015).

71. *Id.*

72. ME. STAT. tit. 22, § 2593 (2004).

73. *Id.*

74. *Id.*

Also in 2014, Vermont passed legislation mandating GE labeling, with the legislation set to take effect in summer 2016.[75] A group of food industry trade associations challenged Vermont's statute requiring the labeling of GE foods.[76] The district court held that the statutory disclosure requirements were not expressly preempted by mandatory labeling requirements of the FDCA, nor did they reflect viewpoint discrimination violative of the First Amendment.[77] The case is being appealed.[78]

3. Federal Legislation

Congress introduced the Safe and Accurate Food Labeling Act of 2014, but it failed to make it out of the House Committee on Energy and Commerce.[79] In the committee's hearing on the Act, both Democratic and Republican members of the committee recognized the safety of GE foods and concurred with the FDA that GE foods are not materially different than their non-GM counterparts.[80] Further, the Democratic Committee Ranking Member indicated his lack of support for mandatory GE labeling, despite his support of states that legislate the issue on their own.[81] The Genetically Engineered Food Right-to-Know Act, which would require GE foods to be labeled, has been introduced in Congress multiple times, but has failed to make it out of committee.[82]

D. Development of Laws Banning GE Foods

A handful of counties have banned GE foods altogether. In 2014, Jackson County, Oregon passed Measure 15-119 to ban genetically engineered plants.[83] In California, the counties of Marin, Mendocino, Santa Cruz, and

75. VT. STAT. ANN. tit. 9, § 3043 (2016).

76. Grocery Mfrs. Ass'n v. Sorrell, 102 F.Supp. 3d 583 (D. Vt. 2015).

77. *Id.* at 614–15.

78. *Id.* at 626.

79. H.R. 4432, 113th Cong. (2nd Sess. 2014), https://www.congress.gov/113/bills/hr4432/BILLS-113hr4432ih.pdf.

80. Sarah L. Brew & Bradley A. McKinney, *House Committee Hearing Debates "GMO" Labeling Bill*, FAEGRE BAKER DANIELS (Dec. 11, 2014), http://www.faegrebd.com/22329; *see generally Examining FDA's Role in the Regulation of Genetically Modified Food Ingredients: Hearing on H.R. 4432 Before the H. Comm. on Energy & Commerce,* 113th Cong. (2014).

81. Brew & McKinney, *supra* note 80.

82. S. 809, 113th Cong. (1st Sess. 2013), https://www.gpo.gov/fdsys/pkg/BILLS-113s809is/pdf/BILLS-113s809is.pdf.

83. *Primary Election – May 20, 2014*, JACKSON CTY. CLERK (May 20, 2014), http://jacksoncountyor.org/clerk/Elections/Election-Archives/ArtMID/5094/ArticleID/1135/Primary-Election-May-20-2014.

Trinity banned the cultivation of genetically engineered crops.[84] In Hawaii, Hawai'i County prohibits cultivation of genetically engineered crops or plants, but exempts GE papaya.[85] San Juan County, in Washington, also made it unlawful to cultivate GMOs.[86]

Some efforts to ban GE crops are motivated by farmers who fear contamination of their crop and potential liability from patent infringement.[87] When farmers purchase patented seed from an agricultural biotechnology corporation, like Monsanto, they agree to a contract that says they will not save the seeds produced from the original crop to replant later.[88] So, violating this agreement would lead to liability.[89] However, Monsanto has never sued a farmer when patented seed has accidentally ended up on the farmer's property.[90] Monsanto says that while they strive to enforce patents, a main component of this enforcement is from farmers calling in regarding other farmers who are illegally saving seed to replant.[91]

E. International Laws on Genetically Engineered Foods

The following discussion highlights laws related to GE foods in other countries, but is not exhaustive of all international law on the topic. In Can-

84. MARIN COUNTY, CAL., CODE OF ORDINANCES ch. 6.92 (Supp. 2016), https://www.municode.com/library/ca/marin_county/codes/code_of_ordinances?nodeId=TIT6PUPESAMO_CH6.92PRGRGEMOOR; MENDOCINO COUNTY, CAL., CODE OF ORDINANCES ch. 10A.15 (Supp. 2017), https://www.municode.com/library/ca/mendocino_county/codes/code_of_ordinances?nodeId=MECOCO_TIT10AAG_CH10A.15PRPRCURAGRGEMOORMECO; SANTA CRUZ COUNTY, CAL., CODE ch. 7.31 (2006), http://www.codepublishing.com/CA/SantaCruzCounty/ (click Title 7, then 7.31); TRINITY COUNTY, CAL., CODE OF ORDINANCES ch. 8.25 (Supp. 2016), https://www.municode.com/library/ca/trinity_county/codes/code_of_ordinances?nodeId=TIT8HESA_CH8.25GEENOR.

85. HAWAI'I COUNTY, HAW., CODE ch. 14 §§ 14-130–14-131 (2016), http://www.hawaiicounty.gov/lb-file-review/files/county-code/chapter14.pdf.

86. SAN JUAN COUNTY, WASH., CODE ch. 8.26 (2012), http://www.codepublishing.com/WA/SanJuanCounty/html/SanJuanCounty08/SanJuanCounty0826.html#8.26.010.

87. *See GMO Facts*, NON GMO PROJECT, http://www.nongmoproject.org/learn-more/ (last visited June 16, 2017).

88. *Why Does Monsanto Sue Farmers Who Save Seeds?*, MONSANTO (Apr. 11, 2017), https://monsanto.com/company/media/statements/saving-seeds/.

89. *See* Monsanto Canada Inc. *v.* Schmeiser, [2004] 1 S.C.R. 902 (Can.), http://scc-csc.lexum.com/scc-csc/scc-csc/en/2147/1/document.do (although Schmeiser claimed biotech crops were in his field by accident, the Canadian Supreme Court ultimately found for Monsanto, noting that Schmeiser could not explain how 95–98% of his field tested for Roundup Ready canola); s*ee also Percy Schmeiser,* MONSANTO (Apr. 11, 2017), http://www.monsanto.com/newsviews/pages/percy-schmeiser.aspx.

90. *Myth: Monsanto Sues Farmers When GMOs or GM Seed is Accidentally in Their Fields*, MONSANTO (Apr. 11, 2017), http://www.monsanto.com/newsviews/pages/gm-seed-accidentally-in-farmers-fields.aspx.

91. *Saved Seed and Farmer Lawsuits*, MONSANTO (Apr. 11, 2017), http://www.monsanto.com/newsviews/pages/saved-seed-farmer-lawsuits.aspx.

ada, GMOs must be approved before entering the marketplace, and labeling products as genetically modified remains voluntary unless a health concern exists.[92] While China has not passed a national law regulating GMOs, it does regulate agricultural GMOs including crops, animals, microorganisms, and their products.[93] GMO foods must be labeled as such; unlabeled GM products cannot be sold.[94] GMOs may be grown and sold in England, but remain subject to an intensive authorization process.[95] Strict labeling requirements mandate that GM foods be labeled as such.[96]

Because of the negative view of GMOs by the Japanese public, Japan banned commercial growth of GMOs.[97] However, a person may obtain permission to grow GMOs by following certain procedures.[98] GM foods must be labeled unless the use of genetic modification cannot be detected after processing, in which case those products may voluntarily be labeled as non-GM.[99] Food products developed without recombinant DNA techniques cannot be labeled as non-GM because consumers would believe a GM version of that product exists on the market.[100] In Mexico, laws on regulating GMOs relate to commercialization, exportation, and importation of GMOs and seek to minimize potential risks involved therein.[101] GM products must only be labeled when used for agricultural production.[102] Laws currently in place in South Africa restrict GMO research, production, and marketing.[103] South Africa also requires "foodstuffs obtained through certain genetic modification techniques be labeled as such before being offered for sale in the marketplace."[104]

III. ARGUMENT

The Act should pass to provide a uniform standard amongst GE food labeling and keep groceries affordable.[105] Although the Act faces potential

92. GLOB. LEGAL RESEARCH CTR., THE LAW LIBRARY OF CONG., RESTRICTIONS ON GENETICALLY MODIFIED ORGANISMS 39 (Mar. 2014) http://www.loc.gov/law/help/restrictions-on-gmos/restrictions-on-gmos.pdf. [hereinafter RESTRICTIONS ON GMOs].

93. *Id.* at 44.

94. *Id.* at 48.

95. *Id.* at 55.

96. *Id.* at 61.

97. *Id.* at 114.

98. RESTRICTIONS ON GMOS, *supra* note 92, at 114.

99. *Id.* at 122.

100. *Id.*

101. *Id.* at 126.

102. *Id.* at 128.

103. *Id.* at 175.

104. RESTRICTIONS ON GMOS, *supra* note 92, at 175.

105. *See infra* Part III.A.

constitutional issues, the Act passes muster to keep these issues at bay.[106] Further, Arkansas lawmakers need to enact legislation protecting the use of biotechnology in the Natural State.[107]

A. Protecting Consumers

Protecting consumers from exposure to misleading labels remains a primary goal of the FDCA.[108] However, consumers become confused when presented with non-uniform labeling.[109] The Act seeks to protect consumers against this confusion by establishing a uniform labeling standard.[110] As a result of a patchwork of state labeling laws, producers and processors would have to accommodate each law by establishing new labeling and processing methods for each individual area, resulting in new costs that would be passed onto consumers.[111] The Act protects consumers from incurring these costs by preempting state laws from establishing their own regulations on labeling GE foods.[112]

1. Uniformity

Everyone has done it; every consumer has gone to the pantry to grab a canned good when the date stamped on top catches his or her eye. The stamp reads, "Best before [insert date]." The consumer recalls the current date and figures out that this canned good would have been "best before" last month. The consumer wonders if he or she should eat the canned item anyway, mentally waging the risk versus the reward. Often the consumer discards the can for fear that the risk of potential harm from consuming expired food is greater than the reward of consuming the food. Sometimes the canned good stamp reads, "Sell by [insert date]." In those situations, consumers do not even know what date to hinge their risk-reward balancing test on, and they usually end up taking the same action of throwing the item out.

Americans waste 160 billion pounds of food each year.[113] It would follow that confusion is a key factor in this number, and the lack of uniformity

106. *See infra* Part III.B.

107. *See infra* Part III.C.

108. *See* FDCA, 21 U.S.C. § 343 (2012).

109. EMILY BROAD LEIB ET AL., THE DATING GAME: HOW CONFUSING FOOD DATE LABELS LEAD TO FOOD WASTE IN AMERICA 5 (Harvard Food Law and Policy Clinic & Natural Resources Defense Council 2013), https://www.nrdc.org/sites/default/files/dating-game-report.pdf.

110. *See infra* Part III.A.1.

111. *See infra* Part III.A.2.

112. Safe and Accurate Food Labeling Act of 2015, H.R. 1599, 114th Cong. § 113 (1st Sess. 2015).

113. Leib et al., *supra* note 109, at 5.

is at fault for this confusion.[114] Perhaps with a uniform labeling standard, consumers would all be on the same page as to what, exactly, those labels mean.

Not only would a patchwork of state laws create consumer confusion via non-uniform labeling,[115] but exemptions from the mandatory labeling of GE foods would also further potential consumer confusion. For example, under Vermont's law, processed foods that contain less than 0.9% GE materials of the total weight do not have to be labeled as GE.[116] To be clear, this exemption allows certain GE foods to go unlabeled.[117] Additionally, food served in restaurants and medical foods that contain GE materials do not have to be labeled.[118]

Consumer confusion contradicts a primary goal of the FDCA: to prevent foods from being labeled in a misleading way.[119] One barrier to providing a uniform labeling standard is the concern for safety.[120] However, no scientific support exists to warrant labeling GE foods for safety reasons.[121]

Vermont's exemption for medical food shows that safety is not a true concern.[122] This medical food exemption supports the fact that GE materials

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114. *Id.*

115. Hunt v. Wash. State Apple Advert. Comm'n, 432 U.S. 333, 349 (1977) (agreeing with the District Court that multiple inconsistent state grading labeling systems posed national dangers of deception and confusion).

116. VT. STAT. ANN. tit. 9, § 3044(5) (2016).

117. *See id.*

118. *Id.* §§ 3044(7)(B), 3044(8).

119. Federal Food, Drug, and Cosmetic Act, 21 U.S.C. § 341 (2012) ("Whenever in the judgment of the Secretary such action will promote honesty and fair dealing in the interest of consumers, he shall promulgate regulations fixing and establishing for any food, under its common or usual name so far as practicable, a reasonable definition and standard of identity, a reasonable standard of quality, or reasonable standards of fill of container."); *see id.* § 343(a) ("A food shall be deemed to be misbranded . . . [i]f . . . its labeling is false or misleading in any particular . . . "); *see also id.* § 321(n) ("If an article is alleged to be misbranded because the labeling or advertising is misleading, then in determining whether the labeling or advertising is misleading there shall be taken into account (among other things) not only representations made or suggested by statement, word, design, device, or any combination thereof, but also the extent to which the labeling or advertising fails to reveal facts material in the light of such representations or material with respect to consequences which may result from the use of the article to which the labeling or advertising relates under the conditions of use prescribed in the labeling or advertising thereof or under such conditions of use as are customary or usual.").

120. Hilbeck et al., *supra* note 8.

121. *See* WHO, *FAQs, supra* note 7; Am. Med. Ass'n, *Report, supra* note 7; INST. OF MED., SAFETY OF GE FOODS, *supra* note 7; Nicolia et al., *supra* note 7; AAAS, *Statement, supra* note 7.

122. VT. STAT. ANN. tit. 9, § 3044(8) (2016); *see* Federal Food, Drug, and Cosmetic Act, 21 U.S.C. § 360ee ("The term 'medical food' means a food which is formulated to be consumed or administered enterally under the supervision of a physician and which is intended for the specific dietary management of a disease or condition for which distinctive nutritional

help meet nutritional requirements based on recognized scientific principles.[123] Likewise, the Hawaiian regulation that bans the cultivation of GMOs, but exempts GMO papaya,[124] demonstrates that GMOs bring value to the table that even critics are embracing. By allowing GMO papaya, counties that ban all other GMOs are willing to accept GMO benefits when crops otherwise could not survive.[125] Thus, the value of being able to produce papaya outweighs the desire to ban GMOs. From an environmental safety standpoint, GE foods actually require fewer pesticides and provide environmental benefits.[126]

The Act tries to clarify the use of the term "natural" by tasking the FDA with providing a consistent definition for the term to be used on products for human consumption.[127] The Act provides that this consistency will include use of the terms "natural," "100% natural," "naturally grown," "all natural," and "made with natural ingredients."[128]

The Act establishes a voluntary certification program for any producer who chooses to label their product as non-GMO or GMO.[129] This provision allows producers to utilize strategic marketing as they desire for their product.[130] Because producers will have to meet certain requirements showing no GMO products in their foodstuffs,[131] this program will likely mimic that of the current USDA National Organic Program,[132] which requires producers to show no use of GMOs throughout the production process for their product to be certified as USDA Organic.[133]

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requirements, based on recognized scientific principles, are established by medical evaluation.").

123. *See* Federal Food, Drug, and Cosmetic Act, 21 U.S.C. § 360ee (2012).

124. HAWAI'I COUNTY, HAW., CODE ch. 14 §§ 14-130–14-131 (2016).

125. *See* Andrew Pollack, *Unease in Hawaii's Cornfields*, N.Y. TIMES (Oct. 7, 2013), http://www.nytimes.com/2013/10/08/business/fight-over-genetically-altered-crops-flares-in-hawaii.html ("[M]ost of the island's papayas are genetically engineered to resist a virus that almost wiped out the crop in the 1990s.").

126. Grocery Mfrs., *supra* note 2.

127. Safe and Accurate Food Labeling Act of 2015, H.R. 1599, 114th Cong. § 301 (1st Sess. 2015).

128. *Id.*

129. *Id.* § 291A(a).

130. *See id.*

131. *See id.* § 291B.

132. *See* 7 U.S.C. §§ 6501–6524 (2012).

133. *See GMOs in Organic Products, supra* note 54.

2. Keeping Groceries Affordable

Supporters of mandatory GE food labeling point to studies that suggest minimal or no cost increases associated with the requirement.[134] However, these studies do not account for the cost of compliance, which could be millions of dollars.[135] Labeling GE foods would require producers and processors to accommodate for each state's unique law, which would certainly increase costs,[136] and these costs would be passed on to consumers.[137]

Because consumers have limited knowledge on the scientific safety and benefits of GMOs, labeling GE foods would provide minimal relevant clarity.[138] It is possible that the resulting confused consumers would demand the removal of GMO ingredients from the food supply,[139] causing manufacturers to substitute expensive non-GMO ingredients for the GMO ingredients.[140] Costs resulting from this substitution could reach as much as $723 per household in the first year of implementation.[141]

In a different scenario, where production includes both non-GMO and GMO products and thus products need to be segregated during production, grocery costs could increase as much as $800 per year for a family of four.[142] While Vermont consumers may desire GMO labeling, the associated costs would be passed on to consumers nationwide.[143] The Act preempts state laws requiring GE food labeling,[144] so producers would not be forced to incur increased costs, and consumers would not be stuck paying an expensive grocery bill.

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134. JOANNA M. SHEPHERD-BAILEY, ECONOMIC ASSESSMENT OF WASHINGTON INITIATIVE 522 13 (All. for Nat. Health U.S. 2013), https://assets.documentcloud.org/documents/802491/economic-assessment-of-522-hires.pdf.

135. WASH. STATE ACAD. OF SCI., WHITE PAPER ON WASHINGTON STATE INITIATIVE 522 (I-522) 15–17 (2013), http://www.washacad.org/wp-content/uploads/2016/12/WSAS_i522_WHITEPAPER_100913.pdf.

136. *See* Hunt v. Wash. State Apple Advert. Comm'n, 432 U.S. 333, 347 (1977) (noting that increased costs would be incurred by Washington state for sending apples to North Carolina, which had different labeling standards).

137. Tabo, *supra* note 17.

138. JOHN DUNHAM, COST IMPACT OF VERMONT'S GMO LABELING LAW ON CONSUMERS NATIONWIDE 13 (2016), http://corn.org/wp-content/uploads/2016/02/Cost-Impact-of-Vermont%E2%80%99s-GMO-Labeling-Law-on-Consumers-Nationwide.pdf.

139. *Id.* at 9.

140. *Id.* at 9 n.19, 13.

141. *Id.* at 13.

142. LESSER, *supra* note 19, at 7.

143. DUNHAM, *supra* note 138 at 11.

144. Safe and Accurate Food Labeling Act of 2015, H.R. 1599, 114th Cong. § 113 (1st Sess. 2015).

B. Constitutional Issues the Act Faces

Under the Constitution, Congress has designated powers, and States have designated powers.[145] Under the Commerce Clause, Congress can regulate certain kinds of commerce.[146] States can regulate areas where no federal regulation exists.[147] Both federal and state laws must comply with the Constitution.[148]

1. Federal Power Under the Commerce Clause

The Commerce Clause of the Constitution gives Congress the power to regulate interstate commerce, which is commerce among the states.[149] Congress can regulate three categories of activity: the use of channels of interstate commerce, the use of instrumentalities of interstate commerce, and any activities that substantially affect interstate commerce.[150] For example, in *Wickard v. Filburn*, in an effort to regulate wheat prices, the government limited the amount of wheat that wheat farmers could produce.[151] One wheat farmer produced more than the allotted amount, but claimed the excess was for his personal use and consumption.[152] The Supreme Court of the United States held that, although the farmer's actions were personal, if all farmers took the same action of keeping some crop for personal use, then the aggregate impact would substantially affect interstate commerce.[153]

In *Wickard*, one farmer was deemed to have a potentially substantial effect on interstate commerce, so the Court enforced the federal regulation to prevent that potential effect.[154] Here, one state law requiring GE labeling would substantially affect interstate commerce, so the Act needs to pass to prevent that. Further, the burden of various labeling requirements from multiple states would also substantially affect interstate commerce.[155] Outside

145. *See infra* Part III.B.1–2.
146. *See infra* Part III.B.1.
147. *See infra* Part III.B.2.
148. *See infra* Part III.B.3.
149. U.S. CONST. art. I, § 8, cl. 3.
150. United States v. Lopez, 514 U.S. 549, 558–59 (1995).
151. Wickard v. Filburn, 317 U.S. 111, 115 (1942).
152. *Id.* at 114.
153. *Id.* at 128–29.
154. *See id.* at 127–28 ("The effect of the statute before us is to restrict the amount which may be produced for market and the extent as well to which one may forestall resort to the market by producing to meet his own needs. That appellee's own contribution to the demand for wheat may be trivial by itself is not enough to remove him from the scope of federal regulation where, as here, his contribution, taken together with that of many others similarly situated, is far from trivial.").
155. *See* Laura Murphy, Jillian Bernstein, & Adam Fryska, *More Than Curiosity: The Constitutionality of State Labeling Requirements for Genetically Engineered Foods*, 38 VT.

states would not only have new labels to enforce, but would also have to implement and maintain new compliance and distribution methods, and the free flow of commerce amongst states would be hindered. Thus, without the Act, interstate commerce would be substantially affected, and the Act is warranted to regulate such activity.

2. State Authority Under the Dormant Commerce Clause

States can regulate areas that are not preempted either expressly or impliedly by federal law.[156] A state law is invalid if it interferes with, or is contrary to, a federal law.[157] Congressional intent to preempt state law in a certain area may be express or implied.[158] Implied preemption may occur when (1) the federal regulation's scope is so pervasive that it can be reasonably inferred that Congress left no room for the state to legislate; (2) the state and federal law conflict; (3) it is physically impossible to comply with the state and federal law; or (4) the state law presents difficulty in fulfilling Congress's goals.[159] A state law that burdens interstate commerce discriminates against interstate commerce.[160] When a state law discriminates against interstate commerce, the law must pass strict scrutiny to be upheld.[161] To satisfy strict scrutiny, the state must show that it has a legitimate local purpose for the discriminatory law and that the law represents the least restrictive means available to preserve the local interest(s).[162]

In *Hunt v. Washington State Apple Advertising Commission*, the Supreme Court of the United States struck down a North Carolina regulation requiring all boxes of apples shipped into the state to be labeled as USDA grade or not to be labeled at all.[163] The state of Washington enforced strict grading standards beyond that required by the USDA and labeled Washington apples to reflect these grades.[164] The Washington State Apple Advertising Commission sued North Carolina, claiming the North Carolina statute was unconstitutional because it violated the Commerce Clause.[165] The

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L. REV. 477, 539 (2013) ("[A] state labeling scheme would require all genetically engineered food products, including those produced out-of-state, to disclose that information on labels, and would therefore affect interstate commerce.").

156. Nef v. Ag Servs. of Am., Inc., 79 Ark. App. 100, 110, 86 S.W.3d 4, 11 (2002). *See also* U.S. CONST. art. VI, cl. 2.

157. *Id.* at 110, 86 S.W.3d at 11; s*ee also* U.S. CONST. art. VI, cl. 2.

158. *Id.* at 110, 86 S.W.3d at 11.

159. *Id.* at 110, 86 S.W.3d at 11.

160. Hughes v. State of Okla., 441 U.S. 322, 337 (1979).

161. *Id.*

162. *Id.*

163. Hunt v. Wash. State Apple Advert. Comm'n, 432 U.S. 333, 335 (1977).

164. *Id.* at 336.

165. *Id* at 339.

Unites States District Court for the Eastern District of North Carolina held that the North Carolina statute was unconstitutional because it discriminated against the interstate shipment of Washington apples.[166]

The Supreme Court of the United States affirmed and held that the North Carolina statute had the practical effect of burdening the interstate sale of Washington apples in North Carolina and that discriminating against Washington apple growers by consequently increasing the costs to sell their apples in North Carolina would lessen the competitive advantage for Washington apple growers.[167] The Court further held that the statute would remove economic and competitive advantages that Washington apple growers attained by building a stringent grading method[168] and that the leveling effect of the statute would be more advantageous to North Carolina apple growers because it would "deprive Washington sellers of the market premium that such apples would otherwise command."[169]

The Court also stated that despite the statute's declared purpose of protecting consumers from fraud and deception and the statute's facial neutrality, the underlying intended purpose of the statute was to discriminate against interstate commerce.[170] Further, although North Carolina had a substantial interest in protecting consumers from deceptive and confusing information related to foodstuff marketing, the statute did not further this interest since the regulation focused mostly toward purchasers of closed-box apples rather than the consumer population as a whole.[171] Lastly, the Court held that nondiscriminatory alternatives existed other than banning Washington's apple grades.[172]

Like the North Carolina statute, the state laws requiring GE labeling would discriminate against states that do not wish to label GE foods. For example, in Vermont, the practical effect of mandatory labeling would burden the interstate sale of other states' products in Vermont.[173] The discrimination would be evidenced by outside states having to pay more to meet Vermont labeling rules, and they would lose competitive advantages from marketing their products a certain way.[174] Also, the voluntary certification program would be an alternative marketing strategy, like Washington's stringent grading system.[175] If producers want to market their product strate-

166. *Id.* at 340.
167. *Id.* at 350–51.
168. *Id.* at 351.
169. Hunt v. Wash. State Apple Advert. Comm'n, 432 U.S. 333, 352 (1977).
170. *Id.*
171. *Id.* at 353.
172. *Id.* at 354.
173. *See supra* text accompanying notes 166–70.
174. *Id.*
175. *See supra* text accompanying note 164.

gically as GMO or non-GMO, they can do that.[176] This voluntary certification would create a different patchwork of labeling, but this provision of the legislation provides a bipartisan compromise that still allows strategic marketing for producers.

Notably, not every state statutory burden on interstate commerce is void.[177] In *Maine v. Taylor,* the Supreme Court of the United States upheld a Maine statute prohibiting importation of non-native baitfish because Maine had a legitimate interest in preserving their native baitfish, and no available nondiscriminatory alternative would prevent the native baitfish from being jeopardized.[178] Contrarily, in *Hughes v. State of Oklahoma,* the Supreme Court of the United States struck down an Oklahoma statute that prohibited transporting or shipping natural minnows outside the state for sale[179] in an effort to conserve and protect wildlife within the state.[180] The Court held that the statute violated the Commerce Clause because, even though there was a legitimate state interest, alternative less restrictive means were available to achieve the state's conservation and protection interests.[181]

Applying the strict scrutiny analysis, the Vermont mandatory labeling law does not stand. The law lists its purposes as:

> (1) Public health and food safety. Establish a system by which persons may make informed decisions regarding the potential health effects of the food they purchase and consume and by which, if they choose, persons may avoid potential health risks of food produced from genetic engineering.
>
> (2) Environmental impacts. Inform the purchasing decisions of consumers who are concerned about the potential environmental effects of the production of food from genetic engineering.
>
> (3) Consumer confusion and deception. Reduce and prevent consumer confusion and deception by prohibiting the labeling of products produced from genetic engineering as "natural" and by promoting the disclosure of factual information on food labels to allow consumers to make informed decisions.

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176. Safe and Accurate Food Labeling Act of 2015, H.R. 1599, 114th Cong. § 291A(a) (1st Sess. 2015).

177. *Hunt*, 432 U.S. at 349.

178. Maine v. Taylor, 477 U.S. 131, 151 (1986).

179. Hughes v. State of Okla., 441 U.S. 322, 322 (1979).

180. *Id.* at 337.

181. *Id*. at 337–38 (explaining that other less restrictive means existed that would promote the state interests, including limiting the number of natural minnows that certified dealers could take out of the state and regulating the disposition of natural minnows within the state).

> (4) Protecting religious practices. Provide consumers with data from which they may make informed decisions for religious reasons.[182]

Assuming that Vermont's stated interests are legitimate,[183] alternative less-restrictive means exist for consumers to make informed decisions regarding GMOs.[184] Consumers already have access to non-GMO labeled products, so if consumers prefer non-GMO items, they can purchase those products.[185]

3. Consumer Interest and Commercial Speech

Proponents of mandatory GE labeling contend that consumers have the right to know what is in food items so they can make an informed decision on what to buy.[186] However, the FDA can only consider consumer opinions once materiality has been established in determining whether or not a product should be labeled to disclose such materiality.[187] Notably, the FDA has generally recognized transferred genetic material as safe.[188] To be generally recognized as safe, a product must be supported by technical evidence of safety, and the evidence must be generally known and accepted in the scientific community.[189]

In *Alliance for Bio-Integrity v. Shalala*, a coalition brought suit challenging the FDA's policy on GE foods.[190] The United States District Court for the District of Columbia noted that "[t]he FDA's exclusion of consumer interests from the factors which determine whether a change is 'material' constituted a reasonable interpretation" of the FDCA.[191] Further, the court noted that "the determination that a product differs materially from the type of product it purports to be is a factual predicate to the requirement of label-

182. VT. STAT. ANN. tit. 9, § 3041 (2016).

183. *See Hughes*, 441 U.S. at 337 (public health and safety is an important local purpose); Ezell v. City of Chi., 70 F. Supp.3d 871, 888 (N.D. Ill. 2014) (environmental concern is an important local purpose); Federal Food, Drug, and Cosmetic Act, 21 U.S.C. § 343 (2012) (preventing consumer confusion and deception is a valid local and federal interest).

184. *See* All. for Bio-Integrity v. Shalala, 116 F.Supp. 2d 166, 181 (D.D.C. 2000) (the lack of labeling for genetically modified foods does not substantially burden an individual's religious beliefs because that person is free to choose their food from any source).

185. *See id.* (stating that religious beliefs were not substantially burdened from not labeling GE foods because the individual was free to choose the source of their food).

186. Ross H. Pifer, *Mandatory Labeling Laws: What Do Recent State Enactments Portend for the Future of GMOs?*, 118 PA. ST. L. REV. 789, 810 (2014).

187. *All. for Bio-Integrity,* 116 F.Supp. 2d at 179.

188. Statement of Policy, 57 Fed. Reg. 22984-01, 22990 (May 29, 1992) [hereinafter Statement of Policy].

189. *All. for Bio-Integrity*, 116 F.Supp. 2d at 177.

190. *Id.* at 170.

191. *Id.* at 179.

ing,"[192] and labeling a product that is not materially different from what it purports to be would be misbranding.[193]

The Supreme Court of the United States has held that "[t]he government may ban forms of communication more likely to deceive the public than to inform it."[194] To uphold this government ban, the state must demonstrate a substantial interest in regulating the commercial speech, and the method of regulation must be proportionate to that interest.[195] Specifically, the Court has stated:

> At the outset, we must determine whether the expression is protected by the First Amendment. For commercial speech to come within that provision, it at least must concern lawful activity and not be misleading. Next, we ask whether the asserted governmental interest is substantial. If both inquiries yield positive answers, we must determine whether the regulation directly advances the governmental interest asserted, and whether it is not more extensive than is necessary to serve that interest.[196]

In *International Dairy Foods Ass'n v. Amestoy*, because the FDA recognized a hormone given to cows as safe, the FDA did not require milk producers who used the hormone to label their milk to reflect that.[197] Subsequently, Vermont required milk producers using the hormone to label their milk accordingly.[198] The International Dairy Foods Association filed suit, claiming the statute was unconstitutional because the statute violated its First Amendment rights.[199] The court held that the statute was unconstitutional because it violated the plaintiff's right not to speak,[200] and Vermont could not show a substantial interest to justify the regulation.[201] Particularly, the United States Court of Appeals for the Second Circuit held that "consumer curiosity alone is not a strong enough state interest to sustain the compulsion of even an accurate, factual statement . . . in a commercial context."[202]

More recent case law holds that content-based regulations are presumed to be unconstitutional and are subject to a different, but equally tough strict scrutiny, where the state must show it has a compelling interest and the

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192. *Id.*
193. *Id.*
194. Cent. Hudson Gas & Elec. Corp. v. Pub. Serv. Comm'n of N.Y., 447 U.S. 557, 563 (1980).
195. *Id.* at 564.
196. *Id.* at 566.
197. Int'l Dairy Foods Ass'n v. Amestoy, 92 F.3d 67, 70 (2d Cir. 1996).
198. *Id.*
199. *Id.*
200. *Id.* at 71.
201. *Id.* at 73.
202. *Id.* at 74.

interest is achieved by narrowly tailored means.[203] In *Reed v. Town of Gilbert, Arizona,* the Court noted that restrictions are content-based if they facially define regulated speech by subject matter or by function or purpose.[204] Regulations are also content-based and thus subject to strict scrutiny if they are facially neutral but cannot be "justified without reference to the content of the regulated speech."[205] Mandatory GE labeling laws are content-based because they facially define a subject matter—GE foods—to be regulated.[206] Under mandatory labeling laws, not all foods would require a new label—only foods that have been genetically engineered. It could be argued that the mandatory labeling laws are not facially content-based, but even so, the laws cannot be justified without reference to the content of the label—that the product has been genetically engineered.

Under this analysis, the Vermont mandatory labeling law fails because the stated government interests are debatably compelling and the interests are not achieved by narrowly tailored means. The underlying interest of the Vermont labeling law is to inform customers so they can make informed decisions on whether or not they want to purchase GE foods in regards to health and safety, environmental impacts, preventing consumer confusion, and religious practices.[207] While public health and safety have been deemed important local purposes,[208] no health risks are associated with consuming GE foods,[209] so labeling them would not place consumers in any better position to achieve better health or safety. Even if there were scientifically proven health and safety risks associated with GMOs, the legislation does not serve this purpose as evidenced by the exemptions that effectively allow some GE foods to go unlabeled.[210]

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203. *See* Reed v. Town of Gilbert, Ariz., 135 S. Ct. 2218, 2226 (2015).

204. *Id.* at 2227.

205. *Id.*

206. *See* Complaint for Declaratory and Injunctive Relief at 13, Grocery Mfrs. Ass'n v. Sorrell, No. 5:14-CV-00117 (D. Vt. June 12, 2014) (explaining how Vermont's mandatory GE labeling law is content based, stating, "Act 120 compels manufacturers to use their labels to convey an opinion with which they disagree, namely, that consumers should assign significance to the fact that a product contains an ingredient derived from a genetically engineered plant. The Act requires the disclosure of the presence of GE ingredients but does not require the disclosure of their absence. Nor does the Act mandate speech from the many firms and individuals selling products that are statutorily exempt, despite the presence of ingredients derived from GE plants in some of their products. The Act's labeling requirement thus imposes a burden on protected speech based upon its content, and the identity and viewpoint of the speaker. As such, 'heightened judicial scrutiny is warranted.' *Sorrell v. IMS Health, Inc.*, 131 S. Ct. 2653, 2664 (2011)."). *See infra* text accompanying notes 222–27.

207. VT. STAT. ANN. tit. 9, § 3041 (2016).

208. Hughes v. State of Okla., 441 U.S. 322, 337 (1979).

209. *See* Statement of Policy, *supra* note 188.

210. *See* VT. STAT. ANN. tit. 9, § 3044(7)(B) (allowing food not packaged for retail that is sold in restaurants to go unlabeled).

Likewise, evidence suggests that GE crops actually provide environmental benefits,[211] so labeling GE foods will not allow consumers to make a decision that will lessen environmental impacts. Preventing consumer deception and confusion is a valid local and federal interest,[212] but exemptions that allow some GE foods to go unlabeled would actually further consumer deception and confusion since consumers would be buying GE foods unknowingly.[213] Regarding the protection of religious practices, a lower federal court has held that the lack of labeling for genetically modified foods does not "substantially burden" an individual's religious beliefs because that person is free to choose their food from any source.[214] Further, the legislation would not serve the purpose of protecting religious practices because of the exemptions that allow consumers to purchase GE foods unsuspectingly.[215]

Each of the proposed purposes has the underlying goal of informing the consumer. However, based on consumer interest, information must not be disclosed without a material difference that warrants disclosure, and labeling a product with no material difference would be misbranding.[216] So, while the validity of Vermont's stated government interests is debatable, labeling GE foods does not allow the consumer to make an informed decision since labeling non-materially different products as different is misbranding, [217] and making a decision based off a misbranded product would not be an informed decision. Thus, labeling GE foods is not a narrowly tailored means to achieve the stated government interests.

As set forth by Professor Jonathan H. Adler, multiple reasons demonstrate why the consumer's right-to-know is insufficient to compel such commercial speech.[218] For one thing, the consumer's right-to-know justification is essentially limitless.[219] The government has a substantial interest in disclosure of ingredients to avoid food allergens, for example, and thus, compelled commercial speech is appropriate because the consumer is being protected from the harm that would otherwise occur.[220] But the same substantial interest does not exist for a consumer to find out a product contains

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211. Yanhui Lu et al., *Widespread Adoption of Bt Cotton and Insecticide Decrease Promotes Biocontrol Services*, 487 NATURE 362, 362–65 (2012); *see also* Damian Carrington, *GM Crops Good for Environment, Study Finds*, THE GUARDIAN (June 13, 2012, 1:00 PM), http://www.theguardian.com/environment/2012/jun/13/gm-crops-environment-study.

212. *See* Federal Food, Drug, and Cosmetic Act, 21 U.S.C. § 343 (2012).

213. *See supra* notes 115–18 and accompanying text.

214. All. for Bio-Integrity v. Shalala, 116 F.Supp.2d 166, 181 (D.D.C. 2000).

215. *See supra* notes 115–18 and accompanying text.

216. Stauber v. Shalala, 895 F.Supp. 1178, 1193 (W.D. Wis. 1995).

217. *Id.*

218. Jonathan H. Adler, *Compelled Commercial Speech and the Consumer "Right to Know,"* 58 ARIZ. L. REV. 421, 444 (2016).

219. *Id*.

220. *Id.* at 443.

materials that they do not like or agree with.[221] There are vast potential interests of a consumer—some consumers may want to know if a product was produced locally or domestically, while others may want to know the political agenda of the company officials.[222] If consumer interest is deemed a substantial government interest, the resulting labeling coercion could have a chilling effect on the company's freedom of speech.[223]

Secondly, because a consumer's right-to-know is founded on subjective beliefs, the resulting regulation would not be content-neutral, but rather content-based.[224] This is an issue because "[c]ontent-based laws—those that target speech based on its communicative content—are presumptively unconstitutional."[225] Requiring the disclosure of a specific characteristic is deeming that characteristic as important, and highlighting the characteristic sends a warning message to consumers that there is a reason they need to know about such characteristics.[226] Requiring producers to label GE foods communicates to consumers that this characteristic is something they should care about—that this characteristic relates to consumer welfare.[227] Thus, the producer must communicate that the GE food is meaningfully different than another product that does not contain GMOs, regardless of whether they agree with that message.[228] Depending on what disclosure is being mandated, producers would be required to provide an avenue for politically charged messages.[229]

It follows that another issue resulting from labeling GE foods based on the consumer's right to know is that the government would be afforded grounds to stand amidst underlying political debates.[230] By forcing producers to be the voice for politically charged messages, the government would be orchestrating the demand of political discourse.[231] But the Court has stated, "Were the government freely able to compel corporate speakers to propound political messages with which they disagree, this protection would be empty, for the government could require speakers to affirm in one breath that which they deny in the next."[232]

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221. *Id.*
222. *Id.* at 444.
223. *Id.* at 446.
224. Adler, *supra* note 218 at 446–48.
225. Reed v. Town of Gilbert, Ariz., 135 S. Ct. 2218, 2226 (2015).
226. Adler, *supra* note 218, at 447.
227. *Id.*
228. *Id.* at 448.
229. *Id.* at 450.
230. *Id.*
231. *Id.* at 451.
232. Adler, *supra* note 218, at 451; Pac. Gas and Elec. Co. v. Pub. Utils. Comm'n of Cal., 475 U.S. 1, 16 (1986).

C. Protecting Biotechnology in Arkansas

Because of the importance of agriculture and biotechnology in Arkansas,[233] the legislature needs to pass a law protecting biotechnology from being banned. Ideally, and consistent with the sweeping theme of uniformity presented, there would be a national law protecting agricultural biotechnology from being banned in any state. However, providing such protection to agricultural biotechnology in Arkansas remains important considering the Natural State's strong agricultural presence and dependence on biotechnology.[234]

In 2015, 3.2 million acres of soybeans were planted in Arkansas,[235] and 97% of those soybeans were genetically engineered using biotechnology.[236] In 2015, 210,000 acres of cotton were planted in Arkansas,[237] and 99% of that cotton was genetically engineered using biotechnology.[238] In 2015, 460,000 acres of corn were grown in Arkansas, and it is estimated that 92% of that corn was genetically engineered using biotechnology.[239] With over seven million total acres of row crops planted in Arkansas in 2015,[240] the numbers above show that over half of row crops in Arkansas are genetically

233. *Economy|Jobs*, ARK. FOUND. FOR AGRIC., http://www.growingarkansas.org/economy-jobs (last visited June 28, 2017) ("Agriculture is Arkansas' largest industry, adding around $16 billion to the state's economy every year."). *See infra* text accompanying notes 235–41.

234. *Economy|Jobs*, ARK. FOUND. FOR AGRIC., http://www.growingarkansas.org/economy-jobs (last visited June 28, 2017) ("Agriculture is Arkansas' largest industry, adding around $16 billion to the state's economy every year."). *See infra* text accompanying notes 235–41.

235. Nat'l Agric. Statistics Serv., *Quick Stats*, U.S. DEP'T OF AGRIC., http://quickstats.nass.usda.gov/results/0DF1D39F-192F-38B4-91E9-D1023F5CCC14 (last visited June 28, 2017).

236. Nat'l Agric. Statistics Serv., *Quick Stats*, U.S. DEP'T OF AGRIC., http://quickstats.nass.usda.gov/results/93DD8D59-6C45-3F59-8AD2-B05CBF0EA491 (last visited June 28, 2017).

237. Nat'l Agric. Statistics Serv., *Quick Stats,* U.S. DEP'T OF AGRIC., http://quickstats.nass.usda.gov/results/88E0B873-59C9-3AF0-974D-36359DBA4440 (last visited June 28, 2017).

238. Nat'l Agric. Statistics Serv., *Quick Stats,* U.S. DEP'T OF AGRIC., http://quickstats.nass.usda.gov/results/F8F6F9B6-0691-377D-A3BC-C5D131DB39AF (last visited June 28, 2017).

239. Nat'l Agric. Statistics Serv., *Quick Stats,* U.S. DEP'T OF AGRIC., http://quickstats.nass.usda.gov/results/0E710F44-4DCB-3D13-AE37-18E577677001 (last visited June 28, 2017); Nat'l Agric. Statistics Serv., *Quick Stats,* U.S. DEP'T OF AGRIC., http://quickstats.nass.usda.gov/results/4E39D5C9-8973-39C1-8519-388A8BEB935B (last visited June 28, 2017) (using the U.S. percentage of biotech corn grown is a reasonable estimate for Arkansas).

240. Nat'l Agric. Statistics Serv., *Quick Stats,* U.S. DEP'T OF AGRIC. http://quickstats.nass.usda.gov/results/8A929A2C-4B14-396B-8FE4-B54B40BCEFC6 (last visited June 28, 2017).

engineered using biotechnology. Comparatively, Arkansas had just over 15,000 acres of organic crops, including pasture and rangeland, in 2011.[241]

Broilers are the most valuable economic commodity in Arkansas,[242] and soybeans and corn both rank in the top five agricultural commodities in Arkansas as well.[243] Corn and soybeans are the most plentiful and lowest cost diet for poultry.[244] Perhaps that is why corn and soybeans make up approximately 80% of the poultry diet.[245] Considering that GMO seeds yield significantly more bushels per acre than non-GM seeds,[246] shifting this poultry feed source to non-GMO feed would mean providing feed from a less available supply. Basic economics says that when there is less supply and higher demand, prices will increase.[247]

State law regarding the regulation of biotechnology is neither expressly nor impliedly preempted, and the Court has afforded legal protections to biotechnological inventions.[248] Many states have laws that prohibit local regulation of seeds, including seeds produced using biotechnology.[249] In

241. *State Fact Sheets: Arkansas*, U.S. DEP'T OF AGRIC. ECON. RES. SERV., http://www.ers.usda.gov/data-products/state-fact-sheets/state-data.aspx?StateFIPS=05&StateName=Arkansas (last visited June 28, 2017) [hereinafter *State Facts Sheets: Arkansas*].

242. "Broilers" is a term that refers to chickens specifically raised for meat production. *U.S. Broiler Industry Structure,* U.S. DEP'T OF AGRIC. NAT'L AGRIC. STATISTICS SERVICE 1, (Nov. 27, 2002) http://usda.mannlib.cornell.edu/usda/nass/industry-structure/specpo02.pdf.

243. *State Fact Sheets: Arkansas, supra* note 241.

244. LEE I. CHIBA, ANIMAL NUTRITION HANDBOOK 411 (3rd rev. 2014), http://www.ag.auburn.edu/~chibale/an12poultryfeeding.pdf.

245. *Id.* at 415.

246. *See* GRAHAM BROOKES & PETER BARFOOT, GM CROPS: GLOBAL SOCIO-ECONOMIC AND ENVIRONMENTAL IMPACTS 1996-2007 12 (PG Economics Ltd. 2009), www.pgeconomics.co.uk/pdf/2009globalimpactstudy.pdf; *see also* FOCUS ON YIELDS, BIOTECH CROPS: EVIDENCE, OUTCOMES, AND IMPACTS 1996-2007 2 (2009) https://monsanto.com/app/uploads/2017/05/biotech_crops_yields.pdf (stating that biotech soybeans increased yields by approximately 30%, biotech cotton increased yields by approximately 20%, and biotech corn increased yields by approximately 8%); JORGE FERNANDEZ-CORNEJO ET AL., GENETICALLY ENGINEERED CROPS IN THE UNITED STATES (U.S. Dep't of Agric. 2014), https://www.ers.usda.gov/webdocs/publications/45179/43668_err162.pdf?v=41690 ("The adoption of Bt crops increases yields by mitigating yield losses from insects . . . Generally, stacked seeds (seeds with more than one GE trait) tend to have higher yields than conventional seeds or than seeds with only one GE trait.").

247. *See* Allison Waldrip Bragg, *Preventative v. Punitive: How Genetically Modified Rice Litigation Shaped Regulation and Remedy for Genetically Engineered Crops*, 10 J. FOOD L. & POL'Y 157, 170 (2014) ("[A]n overly restrictive regulatory system can add expense and negatively affect agribusinesses that are forced to comply with extensive, and expensive, certification requirements or other burdensome measures," regarding new certification requirements farmers had to meet after contamination of non-GE seeds with GE seed).

248. Diamond v. Chakrabarty, 447 U.S. 303, 310 (1980).

249. *See* ARIZ. REV. STAT. ANN. § 3-243 (2016) ("The regulation and use of seeds are of statewide concern. The regulation of seeds pursuant to this article and their use is not subject to further regulation by a county, city, town or other political subdivision of this state."); GA.

general, these laws state that local ordinances or regulations of any political subdivision may not prohibit or regulate the use of seeds.[250]

Oregon passed similar legislation in 2013, which acknowledged substantial economic benefits that the production and use of agricultural seed brings to the state and noted the adverse effect that would occur if this industry were "subject to a patchwork of local regulations."[251] Accordingly, the law prohibited local government regulation on agricultural, flower, nursery, and vegetable seeds.[252] However, the law did not apply to local measures that were proposed on or before January 2013 and were passed by vote in May 2014.[253] Jackson County, Oregon passed an ordinance prior to this date,[254] so the law effectively exempted Jackson County from prohibited regulation of genetically modified crops. Josephine County, Oregon passed a similar ban on GMOs, but the measure is preempted by the state law, and thus, unenforceable.[255]

By proactively preempting local bans on the use of biotechnology with similar language to other state laws provided above, the Arkansas legislature would be protecting the heart of agriculture in Arkansas.

CODE ANN. § 2-11-35(a) (2003) ("No county, municipal corporation, consolidated government, or other political subdivision of this state shall adopt or continue in effect any ordinance, rule, regulation, or resolution regulating the labeling, packaging, sale, storage, transportation, distribution, notification of use, or use of seeds."); IDAHO CODE § 22-413 (2005); IND. CODE § 15-15-1-43 (2008); IOWA CODE § 199.13A (2012); KAN. STAT. ANN. § 2-1450 (2008); N.J. STAT. ANN. § 40:8C-2 (2016); OKLA. STAT. tit. 2, § 8-26.1 (2012); OR. REV. STAT. § 633.738 (2011); 3 PA. CONS. STAT. § 7120 (2008); UTAH CODE ANN. § 63G-19-103 (2016); W. VA. CODE § 19-16-4a (2002) ("No political subdivision may regulate the registration, packaging, labeling, sale, storage, distribution, transportation or any other use of seeds. No political subdivision may adopt or continue in effect any local laws, ordinances or regulations relating to the regulating, registration, packaging, labeling, sale, storage, distribution, transportation or any other use of seeds. Local laws, ordinances or regulations in violation of this section are void and unenforceable.").

250. *See* sources cited *supra* note 249.

251. OR. REV. STAT. § 633.733(2) (2011).

252. *Id.* § 633.738 ("The prohibition imposed by this subsection includes, but is not limited to, any local laws or measures for regulating the display, distribution, growing, harvesting, labeling, marketing, mixing, notification of use, planting, possession, processing, registration, storage, transportation or use of agricultural seed, flower seed, nursery seed or vegetable seed or products of agricultural seed, flower seed, nursery seed or vegetable seed.").

253. S. 863, 77th Leg. Assemb., Spec. Sess. (Or. 2013), https://olis.leg.state.or.us/liz/2013S1/Downloads/MeasureDocument/SB863/Enrolled.

254. JACKSON CTY. CLERK, *supra* note 83.

255. *See* Jacy Marmaduke, *Jackson County's GMO Ban Taking Effect: What Happens Next?,* THE OREGONIAN/OREGONLIVE (Dec. 7, 2015, 12:04 PM), http://www.oregonlive.com/politics/index.ssf/2015/06/jackson_countys_gmo_ban_taking.html.

IV. CONCLUSION

Despite alternate contentions, foods that have been genetically engineered using biotechnology are safe for human consumption.[256] A patchwork of state laws requiring GE food labeling would promote confusion amongst consumers,[257] as would the numerous exemptions from these state laws that would not require some GE foods to be labeled.[258] The estimated costs associated with mandatory GE labeling vary,[259] but it is unlikely that producers and processors will absorb these costs, meaning they will ultimately be passed on to consumers.[260] The Safe and Accurate Food Labeling Act of 2015 would prohibit states from requiring GE foods to be labeled and instead would offer a voluntary certification program for producers who choose to market their product with a GE or non-GE label.[261]

The Act should be passed to provide a uniform standard of labeling amongst GE foods, which would protect consumers from confusion and would keep groceries affordable. Further, in light of numerous local actions in other states to ban GE crops,[262] Arkansas lawmakers should pass legislation that protects the use of biotechnology from being prohibited. This law could mirror a number of other state laws that have already passed to provide such protections for agricultural biotechnology.[263]

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256. *See* WHO, *FAQs*, *supra* note 7; Am. Med. Ass'n, *Report*, *supra* note 7; INST. OF MED., SAFETY OF GE FOODS, *supra* note 7; Nicolia, *supra* note 7; AAAS, *Statement*, *supra* note 7.

257. Hunt v. Wash. State Apple Advert. Comm'n, 432 U.S. 333, 348 (1977) (agreeing with the District Court that multiple inconsistent state grading labeling systems posed national dangers of deception and confusion).

258. *See* VT. STAT. ANN. tit. 9, § 3044(5) (2016) (providing that certain GE foods would go unlabeled).

259. *See Hunt*, 432 U.S. at 347 (noting that increased costs would be incurred by Washington state for sending apples to North Carolina, which had different labeling standards). *See also* Tabo, *supra* note 17. *But see* SHEPHERD-BAILEY, *supra* note 134.

260. Tabo, *supra* note 17.

261. Safe and Accurate Food Labeling Act of 2015, H.R. 1599, 114th Cong. § 291A(a) (1st Sess. 2015).

262. *See supra* Part II.D.

263. *See* sources cited *supra* note 249.

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