LIABILITY PREVENTION FOR AGRICULTURAL BIOTECHNOLOGY

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I. INTRODUCTION

This article will discuss the history and potential future pathway for seed company liability for biotech crops. Agricultural biotechnology, including new forms of plant breeding that use "genetic editing" could lead to U.S. environmental releases and export of traits lacking import approval in major markets overseas. There will be unique challenges in preventing liability, primarily due to emerging theories of environmental liability that allow recovery of economic damages outside of the economic loss doctrine. The pending decisions in the MDL case involving disruption of U.S. corn exports to China, *In re Syngenta AG MIR 162 Corn Litigation*,[1] may be expanding nuisance law to encompass novel claims for economic loss in product liability. This case could impose a duty of care on the applicable biotech seed company and impose negligence liability for failing to foresee the emergence of a major market and get approval there before marketing a new biotech crop. This would apply even for crops that are fully approved in the U.S. and which leading U.S. grower associations want the company to sell.

The product liability risks for the release of products of these technologies can be massive in scope, with both environmental remediation and food recalls potentially triggered by a release that has yet to be authorized for export to a major market.[2] Fortunately, these risks are also amenable to management through proactive assessment and management of known and knowable hazards.[3] The 20th century had a long list of product lines that failed to address their environmental and economic liability risks—such as the use and disposal of toxic substances, from asbestos to various chemicals.[4] The costs associated with the trillion dollar hazardous waste liability were primarily economic costs associated with restoring property to a pristine state, as opposed to harm to human health.[5] A similar emphasis on economic costs of property damage is evident in the liability associated with the release of biotech crops.[6]

While the 20th Century saw billions, perhaps trillions, of dollars paid out in personal injury settlements and judgments for hazardous waste and toxic substances like asbestos,[7] the vast majority of payments making up the trillion-dollar liability was not due entirely to

1. *In re* Syngenta AG MIR 162 Corn Litig., 131 F. Supp. 3d 1177, 1192 (D. Kan. 2015).

2. Richard Y. Boadi, *Managing Liability Associated with Genetically Modified Crops*, *in* INTELLECTUAL PROPERTY MANAGEMENT IN HEALTH AND AGRICULTURAL INNOVATION: A HANDBOOK OF BEST PRACTICES 1385, 1386 (A. Krattiger, R.T. Mahoney, L. Nelsen, et. al. eds., 2007).

3. Dhan Pralvash et al., *Risks and Precautions of Genetically Modified Organisms*, ISRN ECOLOGY, Sept. 18, 2011, at 1, 4.

4. STEPHEN BREYER, BREAKING THE VICIOUS CIRCLE TOWARD EFFECTIVE RISK REGULATION 10 (1993).

5. *See id.* at 20.

6. Boadi, *supra* note 2, at 1386.

7. BREYER, *supra* note 4, at 13.

injuries but to the need to remove from property the perceived threat posed by traces of such compounds.[8] This was damage to property, however, and not lost profits.

The expansion of nuisance and negligence law to compensate growers of biotech crops is a development worth examining as a novel expansion of tort law. With the steady expansion of tort law occurring over the past twenty years, the duty of due care to avoid such negligence in managing export-related risks of biotech crops has also expanded to stretch the boundaries of reasonable expectation. This requires an expanded understanding of risk management in order to prevent such liability.

II. LIABILITY PREVENTION—VOLUNTARY STEWARDSHIP FOR EXPORT MARKETS

Four organizations involved in promoting U.S. soy exports, the American Soybean Association, the United Soybean Board, the U.S. Soybean Export Council, and the National Oilseed Processors Association (collectively, U.S. soybean organizations), have developed an "eleven-point plan" to manage the potential liability risks posed by unapproved-in-EU soybeans.[9] The development of this standard has been in place since 1999, when Aventis Crop Sciences USA (Aventis) obtained U.S. regulatory approval for its LibertyLink® Soybean (LL Soybean).[10] In 1998, Aventis entered into lengthy confidential negotiations with the American Soybean Association (ASA) that lasted for months and almost reached neutral mediation. The negotiation ended when Aventis' corporate counsel was persuaded that ASA had demonstrated the potential for liability and for regulatory standards to evolve and penalize the marketing of an unapproved-in-EU soybean.[11]

One key element of the eleven-point plan is third party certification by qualified bodies of the process used.[12] State affiliates of the American Organization of Seed Certifying Agencies (AOSCA),[13] such as the Illinois Crop Improvement Association, apply AOSCA seed standards to certify seed using identity preservation methods[14] and agronomic practices for removing unwanted plants. Such soybeans are grown within a closed-loop production

8. *Id*. at 18-19.

9. Thomas P. Redick & Michael J. Adrian, *Do European Non-Tariff Barriers Create Economic Nuisances in the United States*?, 1 J. FOOD L. & POL'Y 87, 121 (2005).

10. *Id*. at 120.

11. *Id*.

12. *Id*. at 121.

13. *Home*, ASS'N OF OFFICIAL SEED CERTIFYING AGENCIES, http://www.aosca.org/page/home.aspx (last visited Apr. 27, 2017) (AOSCA sets minimum standards for genetic purity and identity and recommends minimum standards for seed quality for the classes of certified seed, working through 42 affiliated entities in the various states of the United States).

14. For example, isolation distances from fields of the same crop and the use of buffer rows.

system established by the seed company that meets the ASA/USB/NOPA's eleven-point plan.[15]

These organizations have expertise in ensuring that growers meet tolerance levels for genetic purity, and seed companies have accepted the necessity for stewardship that ensures major market approval. For example, while there are currently no pest-resistant soybeans in commercial use in the United States, Monsanto has developed a B.t. soybean (incorporating a commonly used protein from a Bacillus thuringiensis bacterium that resists insects) and has sold that for several years in South America. Under its stewardship commitment, this pest-resistant soybean was grown commercially in the Southern U.S. but only marketed to South American farmers for harvest and export after receiving approval in major export markets. As of this writing, the Bt soybean and stacks are using it in combination with other traits in nearly all major markets for soybeans,[16] which is also expected from grower organizations in South America.[17]

The soybean production system in the United States may provide a model for other nations to follow in assuring thriving organic and non-GMO production, while still reaping the benefits to the environmental, health and economic condition of farmers. The U.S. soybean industry also goes beyond regulatory requirements in its approach to food safety. The prevailing risk management process follows international standards for detecting allergenicity of protein molecules resultant from genes used in the crop. Companies using this scientifically sound allergen-detection methodology can prevent liability from accidental introduction of allergens at the early stages of production. An example of corporate precaution without regulatory intervention can be found in Pioneer's decision not to market its high-methionine soybean, which led to a published study (funded by Pioneer) by leading allergy researchers at the University of Nebraska.[18] While regulators would have allowed feed-only sales, Pioneer was concerned that it could not completely prevent commingling of the chicken feed-destined soymeal with food products.[19]

Pioneer Hi Bred (now a division of Dupont) also was an early mover in avoiding commingling that could disrupt exports.[20] It proved its commitment to stewardship when

15. Redick & Adrian, *supra* note 9, at 121.

16. *Event Name: MON87701*, INT'L SERV. FOR THE ACQUISITION OF AGRI-BIOTECH APPLICATIONS, http://www.isaaa.org/gmapprovaldatabase/event/default.asp?EventID=175 (last visited Apr. 25, 2017).

17. MARK A. POLLACK & GREGORY C. SHAFFER, WHEN COOPERATION FAILS: THE INTERNATIONAL LAW AND POLITICS OF GENETICALLY MODIFIED FOODS 296 (Oxford Univ. Press 2009) (Citing the "'mirror policy' in which Argentina would not approve a GM variety until it was approved in Argentina's major export markets—mainly the EU").

18. *See generally* Rakhi Panda, Soybean Allergy: Effect of Genetic Modification (GM), Heat and Enzymatic Treatment on Overall Allergenicity 15 (Nov. 15, 2012) (unpublished Ph.D. dissertation, University of Nebraska), http://digitalcommons.unl.edu/foodscidiss/28/.

19. Warren E. Leary, *Genetic Engineering of Crops Can Spread Allergies, Study Shows*, N.Y. TIMES (Mar. 14, 1996), www.nytimes.com/1996/03/14/us/genetic-engineering-of-crops-can-spread-allergies-study-shows.html.

20. *See* Steve Butzen, *Management of Pioneer® Brand Plenish® High Oleic Soybean*,

it kept the commercial launch of the Plenish™ High Oleic Soybean contained within a closed-loop production system using the ASA/USB/NOPA "eleven-point plan" (steps in preventing commingling with export-bound crops) to manage the potential liability risks.[21] DuPont is marketing a new "stack" of Plenish with the off-patent generic Roundup Ready trait in 2017, with EU approval still pending.[22] ASA will expect this trait to stay in a closed-loop production system if it still lacks EU approval in the 2017 planting season (e.g., April-May).[23]

> In order to:
>
> Prevent [] disruption of grain shipments, [] grain buyers in the [U.S.] have imposed a contractual compliance mandate upon growers and biotech seed companies. All seed sold to growers in export-oriented production settings must be approved in all "major" overseas markets. To meet this demand for major market approval, growers conduct "identity preservation" in a uniform, coordinated manner using terms specified in seed company contracts with commercial growers. Dedicated grain elevators and transport vehicles may be used to process grain and [thereby convey] to domestic use any grain that does not have major [overseas] market approval.[24]

Going forward, there is a clear need to establish reasonable tolerances for genetic purity, that allow small amounts of grain bearing other genes to hitchhike in seed or commodity shipments at levels that are near the limits of detection.[25] Most nations have zero tolerance for unapproved varieties (this is how China rejected U.S. corn bearing very low levels of Viptera).[26] Some nations (e.g., Korea, Vietnam, the EU from 2004 to 2007

DUPONT PIONEER, https://www.pioneer.com/home/site/us/agronomy/library/plenish-high-oleic-soybean-mgmt/ (last visited Apr. 25, 2017).

21. *Id*.; Thomas P. Redick, *Liability Prevention and Biotechnology: A Brief History of Successful Industrial Stewardship*, *in* AGRICULTURAL BIOTECHNOLOGY: BEYOND FOOD AND ENERGY TO HEALTH AND THE ENVIRONMENT 175, 182 (Eaglesham et al. eds., 2005).

22. Butzen, *supra* note 20.

23. *Id*.

24. Thomas P. Redick, *Transportation and Traceability of Biotech Crops*, NAT. RESOURCES & ENV'T, Fall 2006, at 39, 43 [hereinafter *Transportation and Traceability*].

25. *See* GARY E. MARCHANT ET AL., THWARTING CONSUMER CHOICE: THE CASE AGAINST MANDATORY LABELING FOR GENETICALLY MODIFIED FOODS 59 (2010,*but see* 7 U.S.C. § 1561(a)(24) (2012) (defining a seed certifying agency as having the duty to "assure the genetic purity and identity of the seed certified . . . ."); 7 U.S.C. § 1562 (2012) (stating, labeling, etc., may be false unless a seed certifying agency determines the seed conforms to genetic purity standards).

26. MAX FISHER, NAT'L GRAIN & FEED ASS'N, LACK OF CHINESE APPROVAL FOR IMPORT OF U.S. AGRICULTURAL PRODUCTS CONTAINING AGRISURE VIPETERA™ MIR 162: A CASE STUDY ON ECONOMIC IMPACTS IN MARKETING YEAR 2013/14, at 2 (2014),

under its Traceability Directive) are using a tolerance of 0.5 percent for unapproved varieties.[27] However, this is only for feed uses, to prevent trade disruption, since that low level of commingling does not pose a health threat to animals. This is a "reasonable science-based approach to feed safety,"[28] and no animal health effects have arisen from these policies.

III. PRODUCT LIABILITY IN AGRICULTURAL BIOTECHNOLOGY

In managing the risks of emerging technologies, the trillion-dollar historical liability from asbestos and Superfund that the 20th Century left behind will present the 21st Century with lessons to be learned—including risks that are barely foreseeable today that may nevertheless become serious liability problems in the future. The recent history of agricultural biotechnology illustrates how history can repeat itself as Starlink® corn gives rise to Liberty Link® rice and leads to Syngenta's China litigation.

The scope of liability for biotech crops seems to have been determined in three stages over the past fifteen years. After Starlink® corn recognized a claim for nuisance and negligence arising from a physical injury and regulatory violation that led to a U.S. recall, Liberty Link® rice trials awarded damages based on that precedent for disruption of major markets overseas (mainly the EU).[29] Syngenta's China case would impose liability for failing to foresee the emergence of a major market and get approval there.[30]

A. Starlink's "Physical Injury" & Economic liability

The Starlink corn precedent took the first step towards creating biotech seed company liability for failing to foresee the emergence of a major market and get approval there.[31] Court decisions and settlements arising from the sale of Starlink corn by Aventis Crop Sciences USA's predecessor, AgrEvo USA, established economic injuries, including grower's lost profits, could be recovered after the commingling of corn was deemed a "physical injury" to property.[32] Since the EPA revoked approval for this crop and declared

http://www.ngfa.org/wp-content/uploads/Agrisure-Viptera-MIR-162-Case-Study-An-Economic-Impact-Analysis.pdf [hereinafter FISHER, LACK OF CHINESE APPROVAL].

27. Thomas P. Redick, *Handling, Transport, Packaging, and Information*, *in* LEGAL ASPECTS OF IMPLEMENTING THE CARTAGENA PROTOCOL ON BIOSAFETY 89, 96 (Marie-Claire Cordonier Segger et al. eds., 2013) [hereinafter *Handling, Transport, Packaging, and Information*].

28. *Id*. at 92.

29. A. Bryan Endres & Nicholas R. Johnson, *$750 Million Settlement in GM Rice Contamination*, FARMDOC DAILY (July 8, 2011), http://farmdocdaily.illinois.edu/2011/07/750-million-settlement-in-gm-r.html.

30. *See Bunge Refuses Syngenta Agrisure Viptera*, IOWA PUB. TELEVISION (Aug. 26, 2011), http://site.iptv.org/mtom/story/11109/bunge-refuses-syngenta-agrisure-viptera.

31. *See In re* Starlink Corn Prods. Liab. Litig., 212 F. Supp. 2d 828, 835 (N.D. Ill 2002).

32. *See id*. at 842-43.

Starlink corn a potential health risk, it was subject to a nationwide and international recalls, with significant disruption of trade.[33]

Starlink corn set the stage for biotech seed company liability by recognizing claims for nuisance and negligence arising from a company's failure to obtain regulatory approval in overseas markets.[34] Damages paid in settlement were calculated based on the price impacts to commodity corn on the Chicago Board of Trade.

B. LL Rice® & the Billion Dollar Payout

This liability risk was expanded to include economic impact from lack of overseas approval in the LL Rice cases. In December 2011, Bayer AG (the German parent company of Bayer CropScience) announced that enough growers had signed its proposed $750 million settlement with U.S. rice farmers to confirm that it will compensate them for loss of export rice markets.[35] The decision in *Genetically Modified Rice Litigation* established that negligence could apply to crops the U.S. had eventually approved—but the EU and other major markets had not.[36] This finding of potential "contamination" from economic impacts was reinforced by language used in a 2010 Supreme Court decision, as is discussed in more detail below at Section II.F.[37]

Bayer failed to prove that farmers should have simply avoided the brief dip in rice prices and suffered no harm. Bayer also lost its argument that prompt U.S. planting approval after years of unauthorized release (commingling across six states in the rice seed supply) would allow Bayer to bar claims for nuisance or negligence using a federal preemption defense.[38] The ground-breaking court decision, *In re Genetically Modified Rice Litigation*,[39] is the first decision in the U.S. to follow *Starlink*[40] and allows mass tort plaintiffs to recover their "economic loss" from the "physical injury" that occurs from commingling a biotech crop (or other crop, like treated seed), where the crop's only flaw—or material fact, for consumer fraud claims—is that it was not approved for export to major markets overseas.[41] The settlements Bayer entered into in *LL601 Rice* exceeded $1.2 billion, which is more than the amount reportedly paid in Starlink corn settlements by Bayer's corporate

33. *Id*. at 834-35.

34. *Id*. at 852.

35. Bloomberg News, *Bayer Settles with Farmers Over Modified Rice Seeds*, N.Y. TIMES (July 1, 2011), www.nytimes.com/2011/07/02/business/02rice.html.

36. *In re* Genetically Modified Rice Litig., 666 F. Supp. 2d 1004, 1014-15 (E.D. Mo. 2009).

37. Monsanto Co. v. Geertson Seed Farms, 561 U.S. 139, 154-55 (2010).

38. *See In re Genetically Modified Rice Litig.*, 666 F. Supp. 2d at 1022.

39. *Id*. at 1016.

40. *See In re* Starlink Corn Prods. Liab. Litig., 212 F. Supp. 2d 828, 842-43 (N.D. Ill 2002).

41. *See* TADLOCK COWAN, CONG. RESEARCH SERV., RL32809, AGRICULTURAL BIOTECHNOLOGY: BACKGROUND AND RECENT ISSUES 19-21 (2011).

predecessor Aventis.[42] More recent "bellwether" trials raise risks of liability approaching $1.5 billion in the litigation against Bayer Cropscience USA and its parent, Bayer AG, which deemed to be the legal successor to Aventis (despite the efforts of corporate attorneys to structure the sale of Aventis to Bayer as a sale of assets only, leaving liabilities behind).[43] Bayer is still reporting settlements made in its 2016 annual report.[44]

Commentators have warned that growers may also be liable for disrupting trade if the law evolves in that direction:

> This negligence-based liability, however, may not stop only with the large biotechnology firm. Farmers or other operators within the broader agricultural supply chain could face similar claims if they were to be found negligent in any future crop commingling litigation. Therefore, basic precautionary strategies, such as following crop planting or marketing restrictions, should be followed and documented, especially if growing a new biotech variety.[45]

C. Monsanto Wheat Woes

Monsanto has led the way in the seed industry in obtaining major market approval for its soybean genetic events. It has also managed to conduct field trials without widespread commingling and regulatory violations like the one that has led to billion-dollar liability for Bayer. In 2003, Monsanto won a case filed by growers seeking economic loss for corn trade disruption with the EU.[46]

In May 2013, however, a wheat grower in Oregon reported finding Monsanto's glyphosate-tolerant wheat inexplicably growing in his field[47] after he sprayed glyphosate while pre-planting. Lawsuits were filed in various courts (e.g., in Kansas and Washington), seeking recovery for price impacts nationwide,[48] and Monsanto paid settlements of approximately $2.4 million to U.S. wheat growers.[49]

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42. *See* Kevin O'Hanlon, *StarLink Corn Settlement also to Include Interest*, USA TODAY (Aug. 23, 2004), https://usatoday30.usatoday.com/tech/news/techpolicy/business/2004-08-23-starlink-snafu_x.htm.

43. *In re Genetically Modified Rice Litig.*, 666 F. Supp. 2d at 1026.

44. *See Annual Report 2016*, BAYER, www.annualreport2016.bayer.com (last updated Mar. 15, 2017).

45. Endres & Johnson, *supra* note 29.

46. Sample v. Monsanto Co., 283 F. Supp. 2d 1088, 1094 (E.D. Mo. 2003) (summary judgment granted on economic loss defense).

47. *See* Shannon Dininny, *Washington Farmers Sue Monsanto Over GMO Wheat*, DALLES CHRON. (June 6, 2013), http://www.thedalleschronicle.com/news/2013/jun/06/washington-farmers-sue-monsanto-over-gmo-wheat/.

48. *Id.*

49. Jan Omega, *Monsanto Loses, Will Pay $350K to Settle More GM Lawsuit*, INQUISITR (Mar. 21, 2015), http://www.inquisitr.com/1942875/monsanto-loses-will-pay-350k-to-settle-

The discovery of yet another release of Monsanto wheat in 2016,[50] by the U.S. Department of Agriculture's (USDA) Animal Plant Health and Inspection Service (APHIS) said it has "'confirmed the discovery of 22 genetically engineered wheat plants' in a field in the state of Washington."[51] Fortunately, following wheat export disruption to Japan and South Korea in 2016, both Japanese and Korean authorities (i.e., major markets for US wheat exports) and the USDA confirmed that this isolated incident left behind "no evidence of GE wheat in commerce."[52]

D. Commingling Incidents Involving Plant-Made Pharmaceuticals

The unauthorized releases of Prodigene's PMP corn in 2002, illustrates the risks of commingling that have made the food industry leery of the use of food crops to make pharmaceuticals and caused USDA to revamp its regulations.[53]

In Nebraska in 2002, APHIS inspectors discovered "pharmaceutical" volunteer corn growing in a soybean field, having resurfaced from the previous year in which Prodigene was field testing its pharma corn to produce a swine vaccine.[54] No one removed the 2001 corn-plant volunteers despite a regulatory inspection and order to remove them before the corn commingled with the soybeans being grown there.[55] With this corn commingling, the soybeans were harvested and mixed with another 500,000 bushels of soybeans.[56] These were quarantined and destroyed.[57]

In another unauthorized release, USDA made Prodigene burn 155 acres of conventional corn after it cross-pollinated with some of the company's pharmaceutical plants, before it could be harvested.[58] In both cases, Prodigene failed to follow permit protocols so it was fined $250,000 and "required to pay approximately $3 million for the cleanup costs and disposal of contaminated corn and soybeans."[59]

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more-gm-wheat-lawsuits/.

50. Nick Weber, *Monsanto Statement on Discovery of Glyphosate-tolerant Wheat Plants in Washington State*, MONSANTO BLOG (Aug. 5, 2016), http://monsantoblog.com/2016/07/29/monsanto-statement-on-discovery-of-glyphosate-tolerant-wheat-plants-in-washington-state.

51. *Id*.

52. *Id*.

53. Gregory Graff & GianCarlo Moschini, *Pharmaceuticals and Industrial Products in Crops: Economic Prospects and Impacts on Agriculture*, 10 IOWA AG. REV., no. 4, Fall 2004, at 4, http://www.card.iastate.edu/iowa_ag_review/fall_04/IAR.pdf.

54. *Id*.

55. *Id*.

56. Justin Gills, *Biotech Firm Mishandled Corn in Iowa*, WASH. POST (Nov. 14, 2002), https://www.washingtonpost.com/archive/business/2002/11/14/biotech-firm-mishandled-corn-in-iowa/eba672e1-5a42-42c6-a1da-70d00d2fa5ba/?utm_term=.a54e91c3a376.

57. Graff & Moschini, *supra* note 53, at 5.

58. Gills, *supra* note 56.

59. Aziz Elbehri, *Biopharming and the Food System: Examining the Potential Benefits*

In 2003, responding to public pressures, APHIS imposed stricter field test siting regulations for PMPs and PMIPs, and provided mandatory perimeter conditions (with special consideration for pharmaceutical corn).[60] The USDA required outdoor pharma crops be planted one mile from other food crops and be inspected at least seven times before being harvested using dedicated equipment (i.e., a combine not shared with other fields).[61]

These measures, if followed to the letter, were meant to prevent inadvertent commingling and inadvertent harvesting of food or animal feed with the threat that poses of costly food recalls.[62] In addition to planting distances, APHIS required the dedication of farm equipment and facilities to the production of such crops, not to others.[63] These include requiring cleaning of tractors and tillage attachments under APHIS rules.[64] After use, all equipment and regulated articles must be stored in dedicated facilities for the duration of the field trial.[65] Careful examination of fields for the fallow year after the field trial is required to eliminate any volunteer PMIP or PMP crops that grow in the field.[66]

E. Past Episodes of EU Trade Disruption in Corn

In 2006, Herculex™ maize (DAS 59122-7 Herculex™ Rootworm) was planted on approximately 1 percent of the U.S. corn acreage without import approval from the EU.[67] To avoid trade disruption, U.S. biotech seed companies, farmer trade groups (e.g., the NCGA), corn processors and EU importers jointly worked trying to keep EU maize and maize gluten feed imports free of the unapproved Herculex™ event;[68] delivering Herculex™ to dedicated storage facilities and testing any barges with U.S. corn destined for export markets for this biotech genetic event before shipping. Barges that tested

and Risks, 8 AGBIOFORUM, no. 3, 2005, at 18, 23, http://www.agbioforum.org/v8n1/v8n1a03-elbehri.pdf.

60. *See* USDA – APHIS BIOTECHNOLOGY REGULATORY SERVS., PERMIT USER'S GUIDE WITH SPECIAL GUIDANCE FOR EPERMITS 3 (2012), https://www.aphis.usda.gov/brs/pdf/Pharma_Guidance.pdf [hereinafter PERMIT USER'S GUIDE].

61. *Id*.

62. *Id*.

63. *Id*.

64. *Id*.

65. *Id*. at 4-5.

66. *Id*. at 5.

67. NICHOLAS KALAITZANDONAKES, INT'L FOOD & TRADE POL'Y COUNCIL, THE ECONOMIC IMPACTS OF ASYNCHRONUS AUTHORIZATIONS AND LOW LEVEL PRESENCE: AN OVERVIEW 12 (2011), http://www.agritrade.org/Publications/documents/LLPOverview.pdf.

68. *See Trait Table*, NAT'L CORN GROWERS ASS'N, https://www.ncga.com/for-farmers/know-before-you-grow/trait-table (last visited Apr. 26, 2017).

positive were to be diverted to the domestic market or other export markets where that Herculex™ event was approved.[69]

Despite these efforts at preventing commingling of these unapproved-in-EU traits in corn exports, the EU found traces of Herculex™ in U.S. corn gluten feed throughout the 2005-2009 period (with a zero tolerance applying after April 18, 2007), and exports of U.S. maize gluten feed abruptly declined, since the *ex post facto* stewardship did not prevent commingling.[70] While corn exports restarted briefly following the EU approval of Herculex™ in September 2007, this was short-lived.[71] Trade was disrupted again in late 2007, after harvest of a "new crop that included two new unauthorized biotech events—MIR 604 and MON88017"—that were planted without EU approval in the U.S. in early 2007.[72]

Similar issues of trade disruption resulted from Syngenta's seed impurity problem with Bt 10 corn.[73] This was one of the experimental events contained in laboratories, greenhouses, or field trials that were found unexpectedly in the commercial food/feed supply chain (in addition to the ones already discussed - Bt 10 corn, Prodigene corn, and Liberty Link rice, there were issues with Dow Agrosciences Event 32 maize, China's Bt rice, and Canada's FP 967 "Triffid" flax).[74] Typically, such events have not yet received regulatory approval in any country, and they certainly did not trigger billion-dollar class actions.

No class actions were brought for this trade disruption, and the NCGA policy of allowing new biotech genetic events without EU approval continued. Claims relating to disruption were reportedly settled quietly and confidentially. Based on this history, Syngenta might have felt that trade disruption in corn exports was somehow different than what was happening with LL rice, where Bayer was fighting trade disruption claims involving comparable economic impacts.

F. Supreme Court Recognizes Economic "Contamination"

This section discusses the role of the U.S. federal courts, including circuit courts of appeal, in recognizing the boundaries of biotech liability. The Supreme Court recognized the economic impacts of biotech crops (including those relating to exports) as worthy of regulatory protection under the National Environmental Policy Act (NEPA).[75] In *Geertson*,

69. KALAITZANDONAKES, *supra* note 67, at 12.

70. *Id*.

71. *Id*.

72. *Id*.

73. Michael S. Rosenwald, *Syngenta Says It Sold Wrong Biotech Corn*, WASH. POST (Mar. 23, 2005), http://www.washingtonpost.com/wp-dyn/articles/A58449-2005Mar22.html.

74. *See* Ralf Reiting, *Real-time PCR Methods for the Detection of DNA Constructs with the NPTII Gene for the Detection of Genetically Modified Plants in Food, Feed and Seed*, 5 J. CONSUMER PROTECTION & FOOD SAFETY 377, 379 (2010).

75. *See* Monsanto Co. v. Geertson Seed Farms, 561 U.S. 139, 139 (2010); *see also* Ctr. for Food Safety v. Vilsack, No. C 08-00484 JSW, 2009 WL 3047227, at *1 (N.D. Cal. Sept.

the Supreme Court upheld a ruling that Roundup Ready® (RR) Alfalfa (RR alfalfa) could "contaminate" other crops causing undesirable economic impacts, including loss of export markets for alfalfa (even with the tiny percentages—around 1 percent of U.S. alfalfa acreage—that were headed for exports).[76] The Supreme Court affirmed a lower court's "vacatur" order sending USDA back to the regulatory drawing board but rejecting the nationwide injunction against planting the RR alfalfa the lower court had imposed.[77] Monsanto correctly called this a victory insofar as the injunction was lifted.

This decision is notable in several ways. First, the economic impacts of trade disruption, including both non-GMO economic loss and the loss of export markets, were found to be "interrelated" with environmental impacts. Second, USDA accordingly had a duty to impose management standards to prevent such impacts to prevent this "contamination" before economic losses mounted. Moreover, the decision could impact insurance for growers. One can only hope that this use of the word "contamination" does not lead to a loss of insurance coverage, under pollution exclusions, for any cross-pollination to another crop causing economic loss. Common usage of words and court interpretations carry significant weight in insurance interpretation.

The *Geertson* case was not the last word from NEPA plaintiffs. In 2009, another California court enjoined planting of Monsanto's Roundup Ready® Sugar Beets (RR Sugar Beets) nationwide, after anti-biotech activists and organic growers successfully used the National Environmental Policy Act (NEPA) again to vacate the United States Department of Agriculture's (USDA) approval.[78] The USDA was conducting less rigorous environmental assessments (EA), rather than the more extensive environmental impact statement (EIS).[79]

After this order led to uprooting beets in some locations, U.S. sugar beet growers (over 90 percent of whom were planting RR Sugar Beets) went "on the offense" and sued to challenge this court decision and confirm USDA's subsequent "partial deregulation" order pending completion of the court-ordered environmental impact statement (EIS). Soon thereafter, the USDA issued a nationwide approval, making all pending litigation over RR Sugar Beets utterly moot.[80]

In its proposed rule for RR Sugar Beets (before issuing nationwide approval), the USDA seriously considered granting "partial approval" that would have segregated these beets. After hearing from Congress and growers and other stakeholders, however, it decided to allow RR Sugar Beets to be planted nationwide. This shows USDA as being

21, 2009).

76. *Geertson Seed Farms*, 561 U.S. at 142.

77. *Id*.

78. *Ctr. for Food Safety*, 2009 WL 3047227, at *9.

79. *Id*.

80. USDA approved the Monsanto sugar beet without any restrictions on planting. *See generally* ANIMAL & PLANT HEALTH INSPECTION SERV., USDA, GLYPHOSATE-TOLERANT H7-1 SUGAR BEET: REQUEST FOR NONREGULATED STATUS (2012), http://www.aphis.usda.gov/brs/aphisdocs/03_32301p_feis_std.pdf [hereinafter GLYPHOSATE-TOLERANT H7-1 SUGAR BEET].

willing to defer to states for segregation and not dictate regional segregation from a federal regulation. To avoid further problems, however, Monsanto decided to have a regionally limited launch after all (e.g. only particular regions, avoiding seed production in the Pacific Northwest).[81]

Commentators, including Professor Alison Peck, have published ideas that interpreting this *Geertson* decision as opening the door to common law compensation or regulatory protection for non-GMO growers.[82] Peck suggested that "APHIS will have to begin giving a harder look at permitting or deregulating the planting of GE varieties and their potential to contaminate conventional and organic crops,"[83] and that APHIS could, in some cases, "shift some of the burden of segregation for coexistence—and potentially more liability for contamination—onto those growers of GE varieties."[84]

Professor Peck further suggests that NEPA litigation may signal the end of "fencing out" biotech crops (where organic or non-GMO growers plant buffers to prevent pollination) around the U.S.[85] Exploring possible legal rationales for imposing a duty to "fence in" on a grower of biotech crops, she first suggests that the *Geertson* decision may have eliminated a "presumption in favor of the 'fence out rule'" which would enable the USDA to require containment of biotech crops it had already approved.[86]

Peck acknowledges that *Geertson* does not expressly require APHIS to "fence in" biotech crops, but suggests:

> *Geertson* does, however, require that APHIS make determinations supporting the reasonableness of whatever coexistence standard it relies upon–whether it be a "fence out" rule placing the burden on growers of non-GE crops, a "fence in" rule placing the burden on growers or developers of GE varieties, or some combination.[87]

In other words, the *Geertson* case could set the stage for segregation – make biotech growers "fence in" their USDA-approved biotech crops in order to protect the economic interests of their non-GMO neighbors.[88] While this decision has led to another decision in a federal court that vacated USDA approval and required it to assess environmental impacts

81. Esther E. McGinnis et al., *Sweet and Sour: A Scientific and Legal Look at Herbicide Tolerant Sugar Beet*, 22 PLANT CELL 1653, 1653 (2010).

82. *See* ALISON E. PECK, THE NAT'L AGRIC. LAW CTR., PLANT BIOTECHNOLOGY LAW AFTER GEERTSON SEED FARMS: POTENTIAL IMPACTS ON REGULATION, LIABILITY, AND COEXISTENCE MEASURES 11 (2008), http://nationalaglawcenter.org/wp-content/uploads/assets/articles/peck_aftergeertson.pdf.

83. *Id*. at 3.

84. *Id*. at 11.

85. *Id*. at 9.

86. *Id*. at 12.

87. *Id*. at 9.

88. *See generally id*.

that are "interrelated" with economic impacts, there has not been a run on biotech growers from the non-GMO corner in the United States.[89]

Indeed, the only case in any common law jurisdiction worldwide is the *Marsh v. Baxter* case in Australia, where the court sided with the biotech grower and told the organic grower who claimed economic loss that the problem lay with the unreasonable "zero tolerance" for GM content standard imposed in Australia for organic certification.[90] There, the biotech grower won on appeal and the organic grower was left to sue his certifier for being so unreasonable.[91]

> It also seems reasonably clear that the practical implications of imposing any such duty, state or federal, to prevent migration from biotech crops lacks a compelling ethical case for any such state or federal action. Fairness is a concept that runs both ways between two growers, and the biotech grower can make a convincing fairness argument of his own if he does not get any payment for steps taken—like a one-mile buffer—to preserve the purity of his neighbor's crop.[92]

In reaction to NEPA cases, APHIS and USDA held discussions about coexistence and how to address supposed impacts to the Non-GMO and organic sectors in the U.S. Toward that end, the United States Department of Agriculture's Advisory Committee on Biotechnology and 21st Century Agriculture (AC21) met in 2011[93] (and recently reconvened) to work on coexistence between biotech and organic agricultural production methods.[94] The AC 21 report stated: the legal boundaries of common law are necessarily vague and adaptable to meet new situations, while the USDA's legal authority derives from statute and operates in a federal system that generally leaves land use, nuisance, and contract law to the fifty states. Although pesticide drift may sometimes trigger liability, there seems to be no recorded instance of pollen drift from an U.S. approved biotech crop causing compensable injury in U.S. agriculture. As a result, there appears to be little to no

89. *See* Ctr. for Food Safety v. Vilsack, No. C 08-00484 JSW, 2009 WL 3047227, at *8 (N.D. Cal. Sept. 21, 2009).

90. *See Marsh v Baxter (WA)* [2014] 187 WASC 1, 145 (Austl.).

91. *See* Rachael Oxborrow, *GM Case Prompts Calls for Co-Existence*, FARM WKLY. (Sept. 3, 2015, 1:27 PM), www.farmweekly.com.au/news/agriculture/cropping/general-news/gm-case-prompts-calls-for-coexistence/2742324.aspx.

92. Thomas P. Redick, *Coexistence of Biotech and Non-GMO or Organic Crops*, 19 DRAKE J. AGRIC. L. 39, 60 (2014) [hereinafter Redick, *Coexistence of Biotech*].

93. ADVISORY COMM. ON BIOTECHNOLOGY & 21ST CENTURY AGRIC., USDA, MEETING TRANSCRIPT 1 (2011), https://www.usda.gov/wps/portal/usda/usdahome?navid=BIOTECH_AC21&navtype=RT&parentnav=BIOTECH (follow "Meeting Transcript, August 30" hyperlink) [hereinafter ADVISORY COMM. ON BIOTECH MEETING TRANS.].

94. *Id*. at 42.

room in the current legal system for the USDA to create a compensation fund for non-GM or organic growers.[95]

USDA considered putting a figurative "fence" around approved biotech crops, but Secretary Vilsack was supportive of coexistence methods.[96] This means the first legal assertion above—the possibility of a new presumption to "fence in" certain biotech crops—appears to have little room to maneuver under the current regulatory framework. Indeed, given the Ninth Circuit's decision affirming the recent decision to grant nationwide approval of RR alfalfa, it appears clear that the USDA does not see its current legal authority as allowing it to eliminate the existing "presumption" that non-GM and organic growers have to avoid biotech crops (under the "fence out" rule).[97]

In 2013, to avoid similar NEPA litigation, the United States Department of Agriculture's Animal and Plant Health Inspection Service told Monsanto and the public that USDA would conduct full environmental impact statements for dicamba-tolerant Roundup Ready 2 Xtend® ("RR2X") soybean and Bollgard II XtendFlex® cotton technologies.[98] In doing so, the USDA may have provided a path to liability avoidance for biotech seed companies who hope to avoid either NEPA injunctions (as occurred with RR Alfalfa and RR Sugar Beets)[99] or the nuisance-negligence theories of recovery that led to the Bayer rice settlement discussed supra.[100]

Accordingly, both organic and conventional growers, as well as biotech seed companies, need to develop and implement coexistence strategies that prevent unwanted commingling to avoid negligence-based nuisance liability.[101] This includes farmers or grain handlers who could face similar claims if they were to be found negligent in causing future crop commingling.

G. Syngenta Class Action Could Extend Boundaries of Negligence/Nuisance

The pending lawsuit against Syngenta by growers and grain traders alleges various claims, including negligence, nuisance, and consumer fraud, for having disrupted trade

95. Redick, *Coexistence of Biotech*, *supra* note 92, at 60.

96. A. Bryan Endres, *An Evolutionary Approach to Agricultural Biotechnology: Litigation Challenges to the Regulatory & Common Law Regimes for Genetically Engineered Plants*, 4 NE. U. L.J. 59, 65-66 (2012).

97. *See Roundup Ready Alfalfa History*, USDA, http://www.aphis.usda.gov/aphis/ourfocus/biotechnology/brs-news-and-information/ct_alfalfa_history (last modified Jan. 26, 2016).

98. *Environmental Statements Could Hold Back Dicamba, 2, 4-D Tolerant Crops*, FARMFUTURES (May 10, 2013), www.farmfutures.com/story-environmental-statements-hold-back-dicamba-24-d-tolerant-crops-8-98083.

99. *See* COWAN, *supra* note 41, at 15-18.

100. *See id.* at 19-21.

101. *See generally* ADVISORY COMM. ON BIOTECHNOLOGY & 21ST CENTURY AGRIC., USDA, ENHANCING COEXISTENCE: A REPORT OF THE AC21 TO THE SECRETARY OF AGRICULTURE 9-15 (2012) (discussing the impact of compensation mechanisms on each sector of agriculture) [hereinafter REPORT OF THE AC21 TO SEC. OF AGRIC.].

with China, an alleged "major market" for U.S. corn exports.[102] This case could extend the boundaries of "due care" and major market approval to markets that are not major at first sale but become major years later thereby requiring a company to somehow recall or maintain containment that keeps it out of export stream to those markets. If such a duty were imposed, the cost of maintaining overseas approvals and of keeping the biotech—including genetically-edited—crop contained pending such approvals would increase significantly.

In 2011, Syngenta sold a biotech corn trait, Agrisure Viptera MIR162 (Viptera) that disrupted U.S. corn exports to China beginning in November 2013, until the trait was approved in December 2014.[103] Allegedly, Syngenta failed to fulfill a commitment to follow industry standards for stewardship to keep Viptera out of exports and falsely told growers that China would approve the trait soon.[104] Despite the allegations surrounding Syngenta's sale of Viptera prior to obtaining approval from China, Syngenta released, sold, and distributed the second generation of the Agrisure line of corn, Agrisure Duracade (Duracade) for planting in 2014, allegedly without using adequate stewardship (i.e., identity-preserved production to ensure domestic use) to protect against the loss of major export markets like China.[105]

In retaliation, in 2014 and 2015, growers and grain traders sued Syngenta seeking compensation for lost export markets and impacts to corn prices.[106] The federal cases were consolidated in the U.S. District Court for the District of Kansas in Kansas City.[107] The growers brought public nuisance, negligence, and fraud claims, while the grain traders brought claims under consumer protection statutes in addition to negligence claims, but did not bring nuisance claims.[108]

Syngenta will likely argue that they sell seed to willing growers who decide for themselves which buyer will get their corn; Syngenta owed no duty to the grain traders to wait for approval from China. Syngenta will likely also argue, to defeat the public nuisance claims, that the benefits of getting corn traits into production outweigh the alleged adverse economic impacts. Its experts will also claim the year-long lower corn prices were not caused by loss of the Chinese market, but dropped due to high U.S. corn production. It will cite the policies of the National Corn Growers Association (NCGA) and the Biotechnology Industry Association (BIO), which Syngenta has signed up to follow, that

102. *See* Class Action Complaint at 4, 113-15, 117-92, *In re* Syngenta AG M1R 162 Corn Litig., No. 2:14-md-02591-JWL-JPO (D. Kan. Jan. 11, 2016).

103. A. Bryan Endres & Lisa Schlessinger, *Illinois Professors Analyze Judge's Ruling on Syngenta Lawsuit*, AG PRO. (Sept. 29, 2015, 7:02 AM), www.agprofessional.com/news/illinois-professors-analyzes-judge's-ruling-syngenta-lawsuit.

104. Class Action Complaint, *supra* note 102, at 36-46.

105. *Id*. at 190.

106. *Id*. at 131.

107. Transfer Order at 2, *In re* Syngenta AG MIR162 Corn Litig., No. 2:14-md-02591-JWL-JPO (J.P.M.L. Dec. 22, 2014).

108. *See* Non-Producer Plaintiffs' Third Amended Master Complaint at 93-108, *In re* Syngenta Corn Litig., No. 2:14-md-02591-JWL-JPO (D. Kan. Sept. 19, 2016).

only require approval from Japan and perhaps other markets with functioning regulatory systems.[109]

When an entire sector of the agricultural economy sets its own standards for identity preservation, as the soybean complex (the ASA) and the grain trade have done since approximately 1998,[110] there may be a standard of care that emerges which could be tested in courts. However, no such standard has ever emerged for biotech corn.

Grower plaintiffs may argue that Syngenta had a duty to seek major market approval as soon as Bunge North America (Bunge) told Syngenta and corn growers in 2011, that it would not buy corn lacking Chinese approval.[111] Syngenta may have breached that duty and caused economic harm to growers through declines in commodity corn prices, creating a public nuisance in the grain trade,[112] as the company's conduct harmed growers who had none of the benefit of these Syngenta traits but suffered contamination that rendered their corn unfit for the commodity trade. Additionally, growers will argue that programs, such as NCGA's "Know Before You Grow" or BIO's "Excellence Through Stewardship," did not shift the risk of failure of stewardship to growers, given the false promises of prompt approval that Syngenta made.[113] Growers will assert that these false promises meet the criteria for fraud, while the grain traders will further assert that the false promises violated consumer protection statutes.[114]

Syngenta launched Viptera without knowing that Chinese approval would become important in the near future. China had only bought around 0.03 percent of U.S. corn in 2010, and not a lot more in 2011.[115] When Syngenta was selling Viptera in late 2011, for planting in early 2012, China's purchases of distiller's dried grains with solubles (DDGS)

109. *See Viptera Corn Lawsuits Frequently Asked Farmer Questions*, NAT'L CORN GROWERS ASS'N (May 2015), http://www.ncga.com/upload/files/documents/pdf/biotechnology/FAQ-Syngenta-Lawsuit-5-8-15.pdf.

110. *See ASA Announces International Conference for Identity Preserved Agricultural Commodities*, AM. SOYBEAN ASS'N (Dec. 7, 1999), https://soygrowers.com/asa-announces-international-conference-for-identity-preserved-agricultural-commodities/; Am. Soybean Assn. Res. tit. II, § 2.4.2.04, at 20 (Mar. 4, 2017), https://soygrowers.com/wp-content/uploads/2013/01/Final-Resolution-Doc-2017.pdf (stating, "ASA supports expansion of controlled identity preserved systems that meet ASA's Identity Preserved guidelines for internationally unapproved biotech and specialty varieties . . . .").

111. *See* Sygenta Seeds, Inc. v. Bunge N. Am., Inc., 733 F.3d 58, 60 (8th Cir. 2014).

112. *See id.* at 61.

113. *See Know Before You Grow*, NAT'L CORN GROWERS ASSN., http://www.ncga.com/for-farmers/know-before-you-grow (last visited Apr. 25, 2017); EXCELLENCE THROUGH STEWARDSHIP, http://www.excellencethroughstewardship.org/? (last visited Apr. 25, 2017).

114. *See In re* Syngenta AG MIR 162 Corn Litig., 131 F. Supp. 3d 1177, 1187 (D. Kan. 2015).

115. FISHER, LACK OF CHINESE APPROVAL, *supra* note 26, at 5.

had dipped to under 200,000 metric tons (MT),[116] and corn market signals for Chinese corn purchases were also minimal. China had not made any signaling buys for U.S. corn as of spring 2011, when nationwide planting of Viptera began in the United States.[117]

Nevertheless, the grain trading company, Bunge, began refusing to accept deliveries of Viptera corn in 2011, because it lacked import approval from China, and the company had predicted that China would soon become a major market for U.S. corn and DDGS. To make its position clear, Bunge erected signs and posted online warnings about selling its corn not approved in China.[118]

Syngenta sued Bunge in late 2011, but they lost a motion for preliminary injunction, as the court determined, "Syngenta [had] no likelihood of success on the merits of its [breach of contract] claims."[119] After a Bunge's motion for summary judgment was granted, Syngenta appealed, and on appeal, the case was remanded for further proceedings per a decision on the interpretation of the Lanham Act, provided by the U.S. Supreme Court while the matter was pending.[120] By October 2014, however, Syngenta decided to dismiss its case, citing the impending Chinese approval of Viptera.[121]

Ultimately Bunge's prediction of China becoming a major market proved correct. China's demand for DDGS surged to over 200,000 MT in late 2012, and by May 2013, China was on its way to becoming the largest market for U.S. DDGS (over 600,000 MT).[122] China was also sending market signals around this time regarding its increased need for U.S. corn in mid-2013.[123] While the seed had been approved by the United States, China had not approved the seed by the 2013 planting season.[124] Despite pressure, Syngenta made little effort in 2013 to conduct stewardship programs to protect China as a major export market.[125]

116. *Id*. at 6.

117. *Id*. at 5.

118. *Bunge Refuses Syngenta Agrisure Viptera*, *supra* note 30.

119. Syngenta Seeds, Inc. v. Bunge N. Am., Inc., 820 F. Supp. 2d 953, 992 (N.D. Iowa 2011).

120. Syngenta Seeds, Inc. v. Bunge N. Am., Inc., 773 F.3d 58, 60, 61, 64-65 (8th Cir. 2014).

121. Tom Polansek, *Syngenta Drops Lawsuit against Bunge over Biotech Viptera Corn*, REUTERS (Dec. 17, 2014, 12:08 PM), http://www.reuters.com/article/syngenta-ag-bunge-lawsuit-idUSL1N0U101I20141217.

122. IOWA FARM BUREAU, U.S. DDGS EXPORTS, (2016), https://www.iowafarmbureau.com/Article/File/get?path=Files%2Farticle-88895%2FDDGS%20Exports%2009292016.pdf.

123. *Id*.

124. *Home*, VIPTERA® CHINA FACTS, vipterachinafacts.com/default.aspx (last visited Apr. 25, 2017 [hereinafter *China Facts*].

125. Kristine A. Tidgren, *Syngenta Litigation Still Pending Despite China's Viptera Approval*, IOWA ST. U. (Dec. 27, 2014), https://www.calt.iastate.edu/article/syngenta-litigation-still-pending-despite-chinas-viptera-approval.

Around this time, Syngenta dropped its plan to have cultivation approval in China, which Cargill had suggested was slowing down the food-feed approval process.[126] Syngenta also implemented the "Right to Grow" program, in partnership with the grain trader Gavilon, to keep Duracade out of export channels.[127] Grain traders cite China's zero tolerance policy as a reason why any stewardship plan would be inadequate as this low percentage for commingling simply cannot be managed in the modern marketplace.[128]

In November 2013, China stopped importing U.S. corn when it detected traces of Viptera in U.S. corn shipments.[129] The U.S. exports only around 15 percent of its domestic corn production to other countries, which provides around 60 percent of the world's corn imports.[130] China's share of U.S. corn exports rose steadily to become a major market for U.S. corn by 2013.[131]

In late 2014, China approved Viptera for food, feed, and processing but not for cultivation.[132] Viptera has also been approved for import into Australia/New Zealand, Belarus, the European Union, Indonesia, Japan, Kazakhstan, Korea, Mexico, Philippines, Russia, South Africa, Taiwan, and Vietnam since submitting it in March 2010.[133]

While there are over 700 lawsuits pending, the federal courts have consolidated all of the federal cases in the U.S. District Court for the District of Kansas in Kansas City.[134]

126. Dan Alexander, *Faster Food: Inside Cargill's Plan to Make the World's Biggest Food Business Even Bigger*, FORBES (Nov. 5, 2014, 6:00 AM), https://www.forbes.com/sites/danalexander/2014/11/05/faster-food-inside-cargills-plan-to-make-the-worlds-biggest-food-business-even-bigger/#4bd7af743fa5.

127. *See Syngenta Agrisure Duracade 'Right to Grow' Program on Track*, AGRONEWS (Apr. 24, 2014), http://news.agropages.com/News/NewsDetail—-12089.htm [hereinafter *'Right to Grow' Program on Track*].

128. *See Agrisure Duracade Stewardship Frequently Asked Questions*, U.S. GRAINS COUNCIL, https://www.grains.org/sites/default/files/Duracade%20Stewardship%20Harvest%20FAQs.pdf (last visited Apr. 25, 2017).

129. *See* Randy Gordon, *U.S. Industry Delegation Headed to China Following Shipment Disruptions Triggered by Alleged Presences of Unauthorized Syngenta Biotech Corn Trait*, NAT'L GRAIN & FEED ASS'N (Dec. 13, 2013), https://www.ngfa.org/news/biotechnology/u-s-industry-delegation-headed-to-china-following-shipment-disruptions-triggered-by-alleged-presence-of-unauthorized-syngenta-biotech-corn-trait/.

130. *Trade*, USDA, http://www.ers.usda.gov/topics/crops/corn/trade.aspx (last updated Feb. 14, 2017) (stating, the share of world corn exports averaged during 2003/04-2007/08 international trade year).

131. *See id.*

132. Lisa Venters Martin, *Agrisure Viptera Approved for Import in China*, SYNGENTA: THRIVE, http://www.syngenta-us.com/thrive/product/agrisure-viptera-china-approval.html (last visited Apr. 25, 2017).

133. *Syngenta Receives Chinese Import Approval for Agrisure Viptera® Corn Trait*, SYNGENTA GLOBAL (Dec. 22, 2014), http://www4.syngenta.com/media/media-releases/yr-2014/22-12-2014 [hereinafter *Syngenta Receives Chinese Import Approval*].

134. Transfer Order, *supra* note 107, at 2.

However, there are many other state lawsuits, like the Louisiana suit brought by Archer Daniels (ADM), that cannot be readily coordinated.[135]

i. Negligence for Failing to Foresee China Becoming a Major Market

This negligence discussion will analyze the grower case filed in Central Illinois and ADM's case in Louisiana as examples of the specific arguments alleged in these two types of cases.[136]

Syngenta has been a member of BIO's "Excellence Through Stewardship" program since 2008, which requires companies to engage in analyses of market acceptance.[137] Growers argue that Syngenta's duty to export-oriented growers and grain traders, with whom it had no contracts, arises from its negligence in failure to implement stewardship that it knew how to perform.[138]

Syngenta has responded by narrowly focusing on its relationship with its own seed buyers, stating: "[F]armers don't have any exposure whatsoever to Chinese corn rejection. . . . they sell their corn into an elevator, the elevator then sells it on to a grain trader . . . ."[139] Under this viewpoint, any financial exposure from a rejection overseas is an issue solely between the importer and the exporter of corn.[140] Syngenta has thus denied any duty to indemnify export-bound growers or grain traders "because the farmer doesn't have any exposure."[141] Syngenta failed to recognize how the vast majority of U.S. corn growers were depending upon Syngenta to exercise due care in managing its stewardship program for protecting export markets. It allegedly had a duty to continue the stewardship under these industry standards like the BIO ETS program.[142]

There is no industry consensus on the standard of care for "major market approval" applicable to biotech corn traits produced in the U.S., in contrast to the soybean complex which maintains a strict requirement of closed loop production if no major market approval

135. Brandon Lowrey, *Archer Daniels Pops Syngenta with GMO Corn Suit*, L. 360 (Nov. 19, 2014, 7:57 PM), https://www.law360.com/articles/597878/archer-daniels-pops-syngenta-with-gmo-corn-suit.

136. *See id.*; Plaintiff's Class Action Complaint for Damages and Injunctive Relief, Hadden Farms, Inc. v. Syngenta Corp., No. 3:14-cv-03302-SEM-TSH (C.D. Ill. Oct. 3, 2014) [hereinafter Hadden Farms Class Action Complaint].

137. *See* Press Release, BIO, Biotech Industry Showcases Stewardship Through ETS Program (June 17, 2008), https://www.bio.org/media/press-release/biotech-industry-showcases-stewardship-through-ets-program (listing David Nevill, Syngenta Seeds, Inc. to the Excellence Through Stewardship Board of Directors) [hereinafter BIO Press Release].

138. *See id.*

139. JENNIFER GOUGH ET AL., SYNGENTA, FIRST QUARTER 2014 SALES TRANSCRIPT 28 (2014), www4.syngenta.com/~/Media/Files/S/Syngenta/events-and-presentations/q1-2014-transcript-syngenta.pdf (quoting Mike Mack, CEO of Syngenta).

140. *Id.*

141. *Id.*

142. BIO Press Release, *supra* note 137.

is obtained.[143] As noted above, the ASA initiated major market approval requirements, with the grain trade adopting and extending it to one year before planting in the United States, with 17 to 20 "major" markets listed on a varying basis depending on the semi-annual decision-making of ASA's Biotech Working Group meetings. Other nations have similar approaches; for example, Argentina used to have a "mirror" policy requiring major market approval before planting, but it has recently backed away from that policy in favor of a regional approach with other Mercosur nations to predict market signals and not necessarily require EU approval where that approval is unreasonably delayed.[144]

ii. Fraud and Negligent Misrepresentation

Plaintiffs alleged that Syngenta negligently stated that approval from China was imminent in late 2013 and that Syngenta had a document on its website that purported to be an approval of Viptera from the Chinese government.[145] These misrepresentations led growers and corn seed buyers to believe that China had finally approved Viptera when actually it had not.[146] China did not approve this event until late 2014.[147] Growers, who relied on these representations in 2013, purchased and planted seed without realizing the risk it posed to export markets.[148]

> The Plaintiffs further alleged that,
>
> > Syngenta's decision to bring Viptera to the market crippled the 2013/[20]14 corn export market to China and caused damage to Plaintiff and other Class members. Syngenta knew, or should have known, that releasing Viptera would lead to the contamination of U.S. corn shipments and prevent U.S. corn from being sold to export markets such as China, which had not granted regulatory approval of Viptera MIR162.[149]

143. Thomas Redick, *Coexistence, North American Style: Regulation and Litigation*, 3 GM CROPS & FOOD 60, 68 (2012), https://www.tandfonline.com/doi/pdf/10.4161/gmcr.19474?needAccess=true ("Major market approval comes up as a contested issue in the setting of regulatory comments.").

144. *Argentina Planting Seeds Annual Report (USDA – FAS GAIN Report)*, GRAINNET (Apr. 23, 2004), http://www.grainnet.com/articles/argentina_planting_seeds_annual_report__usda___fas_gain_report_-22323.html [*Argentina Planting Seeds Annual Report*].

145. Hadden Farms Class Action Complaint, *supra* note 136, at 14, 18, 33.

146. *Id*. at 33.

147. Niu Shuping & Fayen Wong, *Syngenta Confirms it has Received Chinese Approval for MIR162 Corn Imports*, ST. LOUIS POST-DISPATCH (Dec. 22, 2014), http://www.stltoday.com/business/local/syngenta-confirms-it-has-recieved-chinese-approval-for-mir-corn/article_9b2F300e-4d2f-5804-a671-d88893aed014.html.

148. *In re* Syngenta AG MIR 162 Corn Litig., 131 F. Supp. 3d 1177, 1186 (D. Kan. 2015).

149. Hadden Farms Class Action Complaint, *supra* note 136, at 3.

iii. Did Syngenta Cause a Nuisance?

"[P]ublic nuisance is an interference with the common right of the general public or an indefinite number of persons; an unreasonable interference with the health, safety, peace, or comfort of the community."[150] Nuisance law has evolved to address new forms of economic harm, including the loss of export markets.[151] These nuisance claims, combined with the negligence of biotech seed companies, have allowed awards and settlements in excess of $1 billion paid by the seed company and its successor, like Aventis and Bayer Cropscience.[152]

Syngenta will argue, to defeat public nuisance, that the benefits of getting corn traits into production outweigh the alleged adverse economic impacts, which are not legally recoverable under any theory. Its experts will claim that the lower corn prices were not impacted much, if at all, by loss of the Chinese market for around a year, during a time of high U.S. corn production. It will cite the NCGA's policy of only requiring approval from Japan and other markets with functioning regulatory systems and BIO's policy of only requiring approval from Japan and Canada.[153]

Syngenta can also argue that U.S. courts generally have been leery of expanding public nuisance law because the "boundary between the well-developed body of product liability law and the public nuisance law" would be lost.[154] In *Camden County Board of Chosen Freeholders v. Beretta U.S.A. Corp.,* state attorney generals sued gun manufacturers under public nuisance theory for the alleged foreseeable end user misuse of their products.[155] Courts have reasoned that negligence and other product liability claims provide an adequate avenue for determining the liability of product manufacturers/producers and, therefore, warn that if adapted to products liability cases, nuisance law "would become a monster that would devour in one gulp the entire law of tort."[156] The courts should not, therefore, extend public nuisance to encompass the grain export supply system.

150. *Nuisance*, TECH. L. J., http://www.techlawjournal.com/glossary/legal/nuisance.htm (last visited Apr. 25, 2017).

151. Thomas P. Redick, Megan R. Galey & Theodore A. Feitshans, *Litigation and Regulatory Challenges to Innovation in Biotech Crops*, 20 DRAKE J. AGRIC. L. 71, 75, 79 (2015).

152. *See generally* LEWIS BASS & THOMAS PARKER REDICK, PRODUCTS LIABILITY: DESIGN AND MANUFACTURING DEFECTS § 24:3 (2d ed. 2016) (stating Aventis sold StarLink corn and conducted field trials of LibertyLink rice that was neither approved nor marketed, but commingled with foundation rice seed at Louisiana State University, a seed "producer" that was held responsible for the commingling.).

153. *See Know Before You Grow, Supra* Note 113; *Biotechnology Industry Approves Product Launch Stewardship Policy*, BIO (May 21, 2007), https://www.bio.org/media/press-release/biotechnology-industry-approves-product-launch-stewardship-policy.

154. Camden Cty. Bd. of Chosen Freeholders v. Beretta U.S.A. Corp., 273 F.3d 536, 540 (3d Cir. 2001).

155. *Id*. at 538.

156. *Id*. at 540; Tioga Pub. Sch. Dist. v. U.S. Gypsum Co., 984 F.2d 915, 921 (8th Cir. 1993).

Syngenta may also claim that the nuisance from Viptera was resolved by approval for export to China in late 2014.[157] There is a continuing nuisance in the marketing of Duracade, however, which also lacks approval.[158] As a result, the public nuisance claim remains viable, and cannot be resolved entirely through a monetary payment.

In sum, the growers and grain traders have raised novel questions of law involving nuisance, negligence, and consumer fraud that will require the courts to apply common law principles in new ways. The court certified a class action on September 26, 2016, stating that "certification of one nationwide class and eight statewide classes is appropriate under Fed. R. Civ. P. 23"[159] such that all corn producers in the United States priced their corn for sale after November 18, 2013, "excluding Court personnel, Syngenta personnel, and government entities."[160]

The class notice from the federal court in Kansas gave growers until April 1, 2017, to opt out.[161] This class covers several hundred thousand U.S. growers, excluding only growers who opted out or who filed suit in pending separate state actions (e.g., in Minnesota and Illinois). The first test case in federal court will be tried in June 2017.[162] Syngenta has narrowed the claims through pretrial motions, but was denied dismissal of key defenses.[163] Syngenta faces trial on the core negligence and nuisance claims and remains potentially liable for negligently and perhaps recklessly causing damage to growers and grain traders who were exporting U.S. corn to China. Syngenta's appeal of the class certification, which was denied, estimated the damages being sought at over $5 billion, with potentially more if some plaintiffs win punitive damages awards. Farmers and grain traders in contingent fee cases typically get 60 percent of amounts paid.

Parallel actions in state court are also going to trial in 2017. A Minnesota class action case will also allow punitive damages under a recent ruling, with a jury trial for one Nebraska farmer starting April 24, 2017 (a verdict is expected in May), and another test trial for class plaintiffs set for August 14, 2017.[164] Non-class cases are also pending – some

157. *See China Facts*, *supra* note 124.

158. MAX FISHER, NAT'L GRAIN & FEED ASS'N., POTENTIAL FORECASTED ECONOMIC IMPACT OF COMMERCIALIZING AGRISURE DURACADE 5307 IN U.S. CORN PRIOR TO CHINESE IMPORT APPROVAL 1 (2014), https://www.ngfa.org/wp-content/uploads/Agrisure-Duracade-5307-Economic-Impact-Analysis.pdf [hereinafter FISHER, POTENTIAL FORECASTED ECONOMIC IMPACT].

159. Memorandum and Order at 1, *In re* Syngenta AG MIR 162 Corn Litig., No. 14-md-2591-JWL (D. Kan. Sept. 29, 2016).

160. *Id*. at 31.

161. Peggy Kirk Hall, *Farmers Have One Month to Decide Whether to Stay in Syngenta Litigation*, OHIO ST. U. (Mar. 1, 2017), https://aglaw.osu.edu/blog-tags/syngenta-opt-out.

162. *See e.g.*, Memorandum and Order re: Notice of Class Action Lawsuit at 1, *In re* Syngenta AG MIR 162 Corn Litig., No. 14-md-2591-JWL (D. Kan. Nov. 23, 2016).

163. Memorandum and Order re: Summary Judgement Motions at 1, *In re* Syngenta AG MIR 162 Corn Litig., No. 14-md-2591-JWL (D. Kan. Apr. 5, 2017).

164. *See* Ray Scherer, *GMO Corn Lawsuit Advancing*, NEWS-PRESSNOW.COM (Apr 15, 2017) http://www.newspressnow.com/news/local_news/gmo-corn-lawsuit-

growers opted out of the class, perhaps remembering resentment of the "gift card" settlements in the Starlink corn[165] litigation.

After trial of test cases in state and federal court, attorneys will have a better idea of the potential liability in the class actions, but the efforts to settle may wait for final approval of the sale of Syngenta to ChemChina. This sale has cleared the EU's competition scrutiny,[166] and ChinaChem's tender offer for Syngenta shares closes May 4, 2017.[167] Even if Syngenta succeeds in winning the defense verdicts in the first test trials, Syngenta may choose to wait for various statutes of limitations in key corn belt states to expire to reach a global settlement.[168] This process could take several years, perhaps over a decade, to reach final resolution.

IV. CLAIMS MADE IN ANTICIPATORY NUISANCE FOR UNAPPROVED BIOTECH CROPS

The same growers and grain traders suing Syngenta for billions could have possibly sued in 2011 seeking an injunction against the sale, citing the NGFA's study in support. This section will review the literature and cases allowing an anticipatory nuisance.

The seminal article on anticipatory nuisance law in agricultural biotechnology is Margaret Grossman's article, *Anticipatory Nuisance and the Prevention of Environmental Harm and Economic Loss from GMOs in the United States*.[169] One of the cases cited by Professor Grossman, *Hoffman & Beaudoin v. Monsanto Canada*, involved a claim for anticipatory nuisance against biotech (canola that was unapproved in the European Union.[170]

advancing/article_021571ef-9e6b-5f4a-a3cc-6de527d407a2.html.

165. *The Deadline to Opt Out of the Syngenta Class Action is April 1, 2017: Learn the Hard Facts without the Hard Sell*, KOESTER & BRADLEY (2017), http://www.koesterlawllp.com/syngenta-corn-litigation/ (last visited Apr. 25, 2017); Just Saying, Comment to *My Syngenta Lawsuit Hat*, AGTALK, (Feb. 3, 2017, 10:06 AM), https://talk.newagtalk.com/forums/thread-view.asp?tid=685317&mid=5813853 (commenting in reply to comment #5813686 by stating, "I would concur, The lawyers will get the gravy from this and the farmers will get the free hat. As I recall it didn't take long to spent the big gift card we got for the Starlink settlement.").

166. William Dotinga, *EU Clears ChemChina's Takeover of Pesticide Giant Syngenta*, COURTHOUSE NEWS SERV. (Apr. 5, 2017), https://www.courthousenews.com/eu-clears-chemchinas-takeover-pesticide-giant-syngenta/.

167. *ChemChina Announces End of Public Tender Offers for Syngenta on May 4, 2017*, SYNGENTA GLOBAL (Apr. 13, 2017), http://www4.syngenta.com/media/media-releases/yr-2017/13-04-2017.

168. Mikal Watts, *When Will the GMO Corn Lawsuites Against Syngenta Be Settled?* WATTS GUERRA LLP (July 16, 2015), http://cornsuits.com/when-will-the-gmo-corn-lawsuits-against-syngenta-be-settled/.

169. Margaret Rosso Grossman, *Anticipatory Nuisance and the Prevention of Environmental Harm and Economic Loss from GMOs in the United States,* 18 J. ENVTL L. & PRAC. 107, 107 (2008).

170. Hoffman v. Monsanto Canada, Inc., [2005] 264 Sask. R. 1 (Can. Sask. C.A.).

In *Hoffman,* both Bayer Crop Sciences and Monsanto Canada won an important partial victory early in the litigation; the court rejected the idea that defendants substantially contributed to a nuisance when they dropped export-oriented identity preservation and failed to safeguard canola exports to the EU with their voluntary identity-preservation program.[171] In a long, very scholarly decision, the *Hoffman* court cited U.S. case law in support of its decision.[172] Canadian courts are the only ones to address a claim for anticipatory nuisance against biotech seed companies for failure to implement identity preservation for unapproved-in-EU varieties of biotech crops.[173] Since the Grossman article was written, however, to this author's knowledge, no other claim for anticipatory nuisance has been filed to stop the commercial launch of a biotech crop.

A. Negligence

As Professor Grossman discusses in her ground-breaking article:

> A claim of negligence usually requires the plaintiff to prove that the defendant had a duty to conform to a specific standard of conduct (normally, to exercise reasonable care under the circumstances), that the defendant breached that duty, that the plaintiff suffered harm, and that the defendant's breach of duty was the proximate cause of plaintiff's injury.[174]

A biotech seed company could be liable in negligence for violating a standard of care.[175] Every biotech seed company has dutifully followed the standard of care set in 1997 by the ASA, which was confirmed and supported by grain trade associations, requiring regulatory approval in major overseas markets before commercial launch of a biotech soybean in the U.S.[176] This "major overseas market approval" policy required approval in key soybean export markets, including China, prior to commercialization of a new biotech soybean variety.[177] It was understood that companies who disrupt trade could be held liable in

171. *Id*.

172. *Id*.

173. *See id*.

174. Grossman, *supra* note 169, at 110.

175. DREW L. KERSHEN, NAT'L AGRIC. LAW CTR., LEGAL LIABILITY ISSUES IN AGRICULTURAL BIOTECHNOLOGY 11 (2002), http://nationalaglawcenter.org/wp-content/uploads/assets/articles/kershen_biotech.pdf.

176. *Handling, Transport, Packaging, and Information*, *supra* note 27, at 108.

177. Thomas P. Redick, *Coexistence of Biotech and Organic Crops, at Home and Abroad*, AGRIC. MGMT. COMMITTEE NEWSL. (ABA Agric. Mgmt. Committee & Int'l Envtl. L. Committee), Jan. 2012, at 3, 5, http://www.americanbar.org/content/dam/aba/publications/nr_newsletters/am/201201_am.authcheckdam.pdf [hereinafter *Coexistence of Biotech & Organic Crops*].

negligence for failing to arrange the necessary elements of stewardship to prevent that disruption of trade.[178]

There is recent history for quietly invoking this ancient legal doctrine to restrain negligent launches of biotech crops.[179] The threat of injunctive relief against biotech seed companies with inadequate stewardship was used to restrain the sale of Liberty Link™ soybeans from AgrEvo USA (predecessor to Aventis) in 1998.[180] The legal basis for the ASA's threat of injunctive relief prior to sale was the ancient and rarely invoked doctrine of "anticipatory nuisance," along with ASA's more credible warning of a massive compensatory damages lawsuit (the latter threat was validated by the billion dollar debacles that the same company, Aventis, later saw in the Liberty Link™ Soybean's sister crops, Starlink™ corn and Liberty Link™ rice).[181]

B. Fraud and Negligent Misrepresentation

In addition to potential negligence and nuisance claims, fraud claims could arise from any misrepresentations—e.g., promises of overseas approval before harvest that lacked a factual basis, or marketing materials with factual misstatements.[182]

Given the added element of inadequate disclosure to farmers that may be present, the consumer fraud statutes of many states might also be invoked. Where no adequate consumer fraud statute is on the books, the law of nuisance can adapt to stop a fraud in progress (if it occurs against a large enough group) on grounds that it constitutes a foreseeable public nuisance.

i. Syngenta's Alleged Fraud

As stated earlier in the pending Syngenta case, plaintiffs allege that Syngenta negligently claimed the approval from China was imminent in late 2013 and that Syngenta had a document on its website that purported to be an approval of Viptera™ from the Chinese government.[183] These misrepresentations led growers and corn seed buyers to believe that China had finally approved Viptera™ when did not approve this event until late 2014.[184] Growers, who relied on these representations in 2013, purchased and planted

178. *See id*.

179. *See id*. at 3.

180. Thomas P. Redick, *Biopharming, Biosafety, and Billion Dollar Debacles: Preventing Liability from Biotech Crops,* 8 DRAKE J. AGRIC. L. 115, 139 (2003) [hereinafter Redick, *Biopharming*].

181. *See id*. at 117, 136; Thomas P. Redick, *Engineering Legal Risk Management into Agricultural Biotechnology,* 19 WASH. LEGAL FOUND., Jan. 16, 2004, at 1, 3, www.wlf.org/upload/1-16-04-reddick.pdf [hereinafter *Engineering Legal Risk Management*].

182. *See Fraudulent Misrepresentation,* CORNELL U. L. SCH., https://www.law.cornell.edu/wex/fraudulent_misrepresentation (last visited Apr. 25, 2017).

183. *In re* Syngenta AG MIR 162 Corn Litig., 131 F. Supp. 3d 1177, 1186, 1227 (D. Kan. 2015).

184. *Id*. at 1186.

seed without realizing the risk it could pose to U.S. commodity corn trade to major export markets.[185]

Plaintiffs alleged that Syngenta's decision to bring Viptera™ to the market crippled the 2013/2014 corn export market to China and caused damage to plaintiffs.[186] Syngenta knew, or should have known, that releasing Viptera™ would lead to the contamination of U.S. commodity corn shipments and prevent U.S. corn from being sold to export markets such as China, which had not granted regulatory approval of Viptera™.[187] Syngenta's CEO should not have told growers and grain traders that regulatory approval was imminent in 2012 when other employees had stated that regulatory approval was 2013 at the earliest, given Syngenta's failure to file the correct field trial data.[188]

According to plaintiffs' allegations, Syngenta's CEO at the time, Mike Mack, allegedly told the investing and seed-buying public in 2012 that he expected approval in China "within days," in plenty of time for the coming harvest.[189] This representation may not hold up factually, since regulatory compliance employees had reported that approval could not be obtained before 2013, due to a 2011 rejection of field trial data.[190] If the CEO does not have his facts straight, fraud liability can ensue.

ii. Monsanto's Online Statements

In addition, complications and misrepresentations can arise from the use of form contracts and online representations. Sometimes a seed advertisement (and seed contract) may caution growers about the lack of overseas approval.[191] This excerpt from a Monsanto ad from early 2016 (before the late July 2016 approval of RR2 Xtend soybean) illustrates how companies warn growers of trade disruption risk:

> The single events in [Roundup Ready 2 Xtend® soybeans] have been approved for import in the EU. As of February 2, 2016, E.U. stack approval [for Roundup Ready 2 Xtend soybeans] is in the final stage of approval and is expected but not guaranteed to be received in the near future. . .It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted. Growers should talk to their grain handler or product purchaser to confirm their buying position for this product. Growers should refer to www.biotradestatus.com for any updated information on import

185. *See id.*

186. Hadden Farms Class Action Complaint, *supra* note 136, at 3.

187. *In re Syngenta AG MIR 162 Corn Litig.*, 131 F. Supp. 3d at 1218.

188. *Id.* at 1225.

189. *Id.*

190. Non-Producer Plaintiffs' Third Amended Master Complaint, *supra* note 108, at 57.

191. *Minimize Weeds, Maximize Yields*, AG ANYTIME, http://www.aganytime.com/asgrow/weed-mgt/Pages/Roundup-Ready-Xtend-System.aspx (last visited Apr. 25, 2017).

country approvals.[192]

Potentially fraudulent complications can arise when the grower refers to the Croplife International Biotradestatus Database and Monsanto has not updated its information.[193] At the time this ad was being marketed, Monsanto had not updated the Croplife database to make sure it was consistent with the marketing materials selling RR2X soybeans—the database inaccurately listed the RR2X soybean stack as "not commercialized" in the United States and other markets.[194] The Monsanto section of this website listed four Monsanto soybeans that had import approval in various nations.[195] While the database accurately stated the lack of EU approval, it was not correct in stating that the RR2X variety is "not commercialized"—in fact, Monsanto had sold around one million acres of this unapproved-in-EU RR2X soybean, most of which was presumably planted and not stored.[196]

If a grain buyer at home or abroad were to rely on this misrepresentation of non-commercial status to their detriment and shipped U.S. soybeans assuming no RR2X were present, they could have suffered economic harm from RR2X-related trade disruption (the detrimental reliance required for a fraud claim). If they seek compensation from Monsanto for their reasonable reliance on the Croplife database (as well as Monsanto's list of commercialized biotech soybean events, where it would not see RR2X listed)[197] these online representations could be alleged to support a claim for fraud.

iii. Contractual Liability Disclaimers

In its defense, Monsanto would reference the disclaimer on the Croplife database.[198] While there are disclaimers of liability on both this Croplife database and Monsanto seed marketing materials, some courts refuse to enforce disclaimers if they consider them "unconscionable" in shifting risk unfairly to consumers.[199]

192. *Id*.

193. *See generally Biotradestatus*, CROPLIFE INT'L, https://croplife.org/plant-biotechnology/regulatory-2/biotradestatus/ (last visited Apr. 21, 2017).

194. *See generally Minimize Weeds, Maximize Yields*, *supra* note 182.

195. *See generally id*.

196. *See generally Biotradestatus*, *supra* note 193 (stating, Monsanto's four listed events and stacks in the Croplife database are: (1) Roundup Ready Soybeans (40-3-2); (2) Genuity Roundup Ready 2 Yield (MON 89788); (3) INTACTA RR2 PRO Soybeans (MON 87701 X MON 89788); and (4) Roundup Ready 2 Xtend Soybeans (MON 87708 X MON 89788). Of these four soybeans, only the last one (RR2 Xtend) lacked EU approval but was also fully commercialized in 2016. It should be noted that most biotech seed companies, including Monsanto, are members of Croplife International.).

197. *See Soybean Seeds,* MONSANTO, www.monsanto.com/products/pages/soybean-seeds.aspx (last visited Apr. 25, 2017) (listing Roundup Ready 2 Yield® soybeans, INTACTA RR2 PRO® soybeans and Vistive® Gold soybeans).

198. *Biotradestatus*, *supra* note 193.

199. Oldham's Farm Sausage Co. v. Salco, Inc., 633 S.W.2d 177, 182-83 (Mo. Ct. App. 1982).

In *Oldham's Farm Sausage Co. v. Salco, Inc.*, the court upheld the trial court's refusal to enforce a limitation of liability in connection with the sale of a machine – it was "unconscionable" under Missouri statute section 400.2-719(3), as the limitation clause was in fine print on the back of the signature page of a lengthy contract.[200] In a different case, the Missouri Supreme Court raised issues of unconscionability in a Monsanto herbicide contract, in a decision explaining the basis for remanding the case to the trial court to consider denying enforcement of the disclaimer under Missouri law.[201]

If the courts enforce seed company disclaimers in future liability cases—involving disruption of trade from an unapproved variety—then the net effect of these efforts, to shift risk, could impose a duty on growers to avoid disruption of export markets. If no measures to prevent export disruption are undertaken, both Monsanto and its soybean producer could be liable for negligence. This would help to fulfill the prediction made by Endres and Johnson of potential grower liability.[202]

C. Nuisance

Public and private nuisance are creatures of state and federal common law. Both forms of nuisance require unreasonable behavior, and either negligence or international conduct will usually suffice. This can include negligent misrepresentations about compliance with federal law that causes widespread trade disruption, as the court in LLRICE firmly established.[203] In its 2009 order, awarding partial summary judgment to defendants, the LLRICE court rejected public nuisance but allowed private nuisance given factual disputes regarding "whether contamination of plaintiffs' crops by LLRICE may interfere with their enjoyment of their land."[204]

V. ANTICIPATORY NUISANCE AND THE MEDIATION MODEL FOR INDUCING STEWARDSHIP

Anticipatory nuisance could have been used in past liability debacles to stop a billion-dollar lawsuit before trade disruption occurred.[205] Indeed, where companies have heeded warnings of potential liability and sought major market approval before marketing a new event (as has occurred with soybeans in North and South America), this tool need not be invoked.[206] Where persuasion fails, however, litigation may be needed. These tools may

200. *Id*.

201. Bracey v. Monsanto, 823 S.W.2d 946, 948-51, 955 (Mo. 1992) (Rendlen, J., dissenting) (stating, "the consequential damages disclaimer is unconscionable . . . .").

202. *See* Endres & Johnson, *supra* note 29.

203. *See In re* Genetically Modified Rice Litig., 666 F. Supp. 2d 1004, 1018 (E.D. Mo. 2009).

204. *See id*. at 1019; Wallace v. Grasso, 119 S.W.3d 567, 580 (Mo. Ct. App. 2003).

205. *See* Grossman, *supra* note 169, at 145-46.

206. *Id*. at 146.

include injunctions under anticipatory nuisance laws which seek to stop the commercial launch of a biotech crop in a location that might cause undue harm to neighboring farmers.[207]

A. Review of Selected State Laws on Anticipatory Nuisance

As Professor Grossman discusses in her landmark article, Illinois is noteworthy for having recent claims allowing anticipatory nuisance injunctions against agricultural operations (concentrated animal feeding operations, CAFOs).[208] Citing decisions involving nuisances threatened by livestock facilities, she found courts in many jurisdictions would enjoin an anticipatory nuisance claim if its harm is "reasonably certain or highly probable" from defendant's action.[209] This is discussed in more detail, updating her research, below. Anticipatory nuisance actions enjoining CAFOs, even if approved by the Illinois Department of Agriculture (IDOA), are allowed under Illinois law, given *Nickels v. Burnett.*[210]

Nuisances can be either *per se* or *per accidens,* and courts are more likely to grant an injunction against a nuisance that is *per se* (i.e., it is a nuisance no matter where it is located) and less likely to grant an injunction against a lawful activity that is causing neighbors concern due to its location, circumstances, and other particular facts of its operation.

The following states also recognize claims for anticipatory nuisance, with varying levels of proof required:

- Alabama: *Hall v. North Montgomery Materials, LLC,* 39 So. 3d 159 (Al. Civ. App. 2008);
- Florida: *Central Theatres, Inc. v. Florida,* 161 So. 2d 558, 565 (Fla. Dist. Ct. App. 1964) (White, J., Concurring);
- Georgia: *Southern States-Bartow County., Inc. v. Riverwood Farm Prop. Owners Ass'n.,* 769 S.E.2d 823 (Ga. Ct. App. 2015);
- Iowa: *Simpson v. Kollasch,* 749 N.W.2d 671 (Iowa 2008) (denying injunctive relief for an alleged anticipatory nuisance when the petitioners could not show to a certainty that a nuisance would result from plans to develop a hog confinement facility);
- Louisiana: *Olsen v. City of Baton Rouge*, 247 So. 2d 889, 894 (La. Ct. App. 1971), application denied, 252 So. 2d 454 (La. 1971) (emphasizing the "general rule" of not granting injunctions for anticipatory nuisances);
- Maryland: *Adams v. Michael*, 1873 Md. LEXIS 40 (1873) (recognizing the doctrine) and *City of Bowie v. Board of County Commissioners*, 271 A.2d 657, 660 (1970) (applying it);
- Michigan: *City of Jackson v. Thompson-McCully Co.,* 608 N.W. 2d 531, 537 (Mich. Ct. App. 2000);

207. *Id*. at 141.
208. *Id*. at 138.
209. *Id*. at 145.
210. *See* Nickles v. Burnett, 798 N.E.2d 817, 826 (Ill. App. Ct. 2003).

- New Mexico: *State ex rel. Village of Los Ranchos de Albuquerque v. City of Albuquerque*, 889 P.2d 185, 200 (N.M. 1994) (stating, "[t]he general rule is that anticipatory nuisance is a valid cause of action" but "that the anticipated nuisance must be proven so as to make any argument that it is not a nuisance highly improbable. . .");
- Ohio: *Gustafson v. Cotco Enterprises, Inc.* 328 N.E.2d 409, 311 (1974) (adopting "clear and convincing" evidence standard);
- Oklahoma: *Sharp v. 251st St. Landfill*, 925 P.2d 546, 552 (1996);
- West Virginia: *Duff v. Morgantown Energy Associates*, 421 S.E.2d 253, 258 (W. Va. 1992) (anticipatory nuisance recognized but injunction at trial court reversed on appeal, must have proof of threat "beyond all ground of fair questioning").

Some states have no recorded cases recognizing anticipatory nuisance. For example, nuisance law in Minnesota operates under statute, and the doctrine of anticipatory nuisance is not precluded, but no Minnesota case appears to have recognized a claim for anticipatory nuisance.[211]

It is worth noting, however, the recent case of *Johnson v. Paynesville Farmers Union Co-op. Oil Co.*, where the court denied an organic grower's claim for pesticide drift but in so doing, recognized a claim for trespass via airborne particulate could exist..[212] This may indicate a willingness in Minnesota to allow injunctive relief in an anticipatory nuisance action.

While a more comprehensive review of this issue might be necessary, the only state that appears to have found that, *denied* any claim for anticipatory nuisance (i.e., plaintiffs cannot even state a claim) - North Dakota.[213] Given the variation in state approaches to anticipatory nuisance, a practitioner considering a claim in a particular jurisdiction should ascertain the status of the law in their state.

B. Federal Law of Anticipatory Nuisance

Because the federal common law of public nuisance allows a claim for anticipatory nuisance, a federal court may be a preferred location for filing a claim for anticipatory nuisance, with jurisdiction imparted via a federal question (i.e. common law nuisance) even without diversity of citizenship.[214]

The U.S. "federal courts have developed a federal common law of anticipatory nuisance and, in the rare instances when they are called on to resolve [such] cause of action, [with an injunction,] have done so more consistently than state courts" for the past 120 years.[215] This history starts with the Supreme Court's decision in *Mugler v. Kansas,* where

211. *See* MINN. STAT. ANN. § 561.01 (West 2016).

212. Johnson v. Paynesville Farmers Union Coop. Oil Co., 817 N.W.2d 693, 696-97 (Minn. 2012).

213. *See* Tibert v. Slominski, 692 N.W.2d 133, 137 (N.D. 2005).

214. *See* Andrew H. Sharp, *An Ounce of Prevention: Rehabilitating the Anticipatory Nuisance Doctrine*, 15 B.C. ENVTL. AFF. L. REV. 627, 632 (1988).

215. George P. Smith, II, *Re-validating the Doctrine of Anticipatory Nuisance*, 29 VT. L.

the court held, to prevent "irreparable mischief," a threat of nuisance could be enjoined.[216] This decision was followed in *Coosaw Mining Co. v. South Carolina*, where the Court upheld an anticipatory nuisance injunction prohibiting the mining of phosphate from the Coosaw River.[217] If a grower group were seeking to contain an unapproved variety in several states where it may be planted, the federal courts are the logical forum for getting the injunction needed under the anticipatory nuisance doctrine.

However, particular federal jurisdictions have not granted such injunctions for over 100 years.[218] For example, the last time a federal court in Missouri had an anticipatory nuisance claim, the U.S. Supreme Court reversed a motion to dismiss, granted against Missouri's claim for anticipatory nuisance; noting, "that it is settled that an injunction to restrain a nuisance will issue only in cases where the fact of nuisance is made out upon determinate and satisfactory evidence."[219] Since then, only a few federal courts have granted anticipatory nuisance injunctions.

The Eighth Circuit Court of Appeals has more recently recognized a claim for anticipatory nuisance in a CAFO case. In *Rutter v. Carroll's Foods of Midwest, Inc.,* residents asserted claims for anticipatory nuisance and anticipatory trespass to allow an injunction prohibiting construction of a swine containment facility.[220] The court held that they stated valid claims for anticipatory nuisance and anticipatory trespass to enjoin construction.[221]

Various other federal circuit courts have addressed this issue over the past fifty years finding the facts inadequate for establishing purely economic forms of harm. For example, in *California Tahoe Regional Planning Agency v. Jennings,* California sought to enjoin the construction of four hotel-casinos claiming that the added vehicle and human traffic would create a nuisance and "harm the environment" of the region.[222] Distinguishing its facts from those in *Missouri v. Illinois* and *Texas v. Pankey*, the Ninth Circuit disregarded California's claim stating, "[N]ot every injury to the environment is a nuisance . . . ."[223] It refused to equate the economic impacts from building high-rise hotels with the environmental impact that come with spills of "untreated sewage, noxious gases, and poisonous pesticides."[224] Such environmental impacts were present in other cases.[225] Applying the "determinate and satisfactory evidence" test, the court found that California had failed to establish that the

REV. 687, 700 n.96 (2005).

216. Mugler v. Kansas, 123 U.S. 623, 673 (1887).

217. Coosaw Mining Co. v. South Carolina, 144 U.S. 550, 567 (1892).

218. *See* Missouri v. Illinois, 180 U.S. 208, 248 (1901).

219. *Id*.

220. Rutter v. Carroll's Foods of Midwest, Inc., 50 F. Supp. 2d 876, 878 (N.D. Iowa 1999).

221. *Id*. at 888.

222. Cal. Tahoe Reg'l Planning Agency v. Jennings, 594 F.2d 181, 194 (9th Cir. 1979).

223. *Id*.

224. *Id*.

225. *See* Texas v. Pankey, 441 F.2d 236, 242 (10th Cir. 1971).

danger of nuisance was "real and immediate," while generally affirming the viability of federal anticipatory nuisance doctrine.[226]

Since only a "few anticipatory nuisance cases [have] reach[ed] federal courts, it is difficult to draw sweeping conclusions from federal courts' treatment of anticipatory nuisance."[227] As a result, even a federal claim for anticipatory nuisance should be analyzed against applicable law before filing. Given the relatively recent decisions in *Rutter* and *In re Genetically Modified Rice Litigation*, however, a credible claim for anticipatory nuisance could be filed.[228]

C. Setting Up Mediation to Establish Stewardship for Exports

Given the research outlined above, a federal court would probably recognize and possibly support a claim for an injunction under public anticipatory nuisance law to avoid a billion-dollar trade disruption nuisance case.[229] The threat of an impending billion-dollar disruption of trade should be sufficient to state a claim. If a seed company ignores major market approval at planting time, only a few months remain before harvest in the southern United States. As a result, a plaintiff in such a case may see significant time pressure in achieving this outcome and getting necessary groups prepared in advance to file seems recommended. To sell this concept to reluctant plaintiffs (e.g., a grower or grain group) it may help to explain that such a case would seek confidential mediation through the early neutral evaluation process prevailing in federal courts.

The legal basis for a claim for anticipatory nuisance, if it only seeks to establish mediation, need only meet the lowest standard applicable to scrutiny of complaints.[230] If challenged after mediation fails, such a claim need only be able to survive a motion to dismiss[231] and meet the standards for preliminary injunction.

The plaintiffs filing such a case of anticipatory nuisance does not need to be growers or grain traders concerned with the loss of key export markets. Given the magnitude of the economic harm caused by an unapproved-in-overseas-markets variety of soybean, the attorney general in a farming state could seek to apply public nuisance law via persuading a sympathetic state or federal court judge to declare the sale of an unapproved-in-EU biotech seed to be a public nuisance. It is clear that grain traders or growers could convene a mediation (or arbitration, if the biotech seed company agrees to be bound by the outcome) with any biotech seed company that they think has failed to implement adequate stewardship to protect export markets from commingling an unapproved variety into the U.S. commodity soybean export stream.

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226. *Jennings*, 594 F.2d at 193-94.

227. Sharp, *supra* note 214, at 635.

228. Rutter v. Carroll's Foods of Midwest, Inc., 50 F. Supp. 2d 876, 888 (N.D. Iowa 1999); *In re* Genetically Modified Rice Litig., 666 F. Supp. 2d 1004, 1019 (E.D. Mo. 2009).

229. *See Rutter*, 50 F. Supp. 2d at 888; *In re Genetically Modified Rice Litig.*, 666 F. Supp. 2d at 1019.

230. *See generally* FED. R. CIV. P. 11(c).

231. *See* FED. R. CIV. P. 12(b)(6).

If plaintiffs use this court filing to seek documents about the biotech seed company's list of growers and any information regarding its stewardship program, the biotech seed company might seek a protective order, arguing that grower identities are confidential information. The court would likely still order production of the list, possibly limiting such disclosure to counsel if it is particularly sensitive, because knowing the identity of growers will be a necessary step in evaluating the seed company's stewardship for the unapproved variety.

Due to court filings being public record,[232] however, attorneys and their clients should not rule out coverage of the filing by the press, even where protective orders are in place for confidential information.

VI. CONCLUSION

In sum, the threat of billions of dollars in liability should spur active industry efforts to manage export-related liability risks. The test will be whether companies not using these industry guidelines extract themselves from costly litigation. Syngenta's pending case will answer that question.

In hindsight, much of the billion-dollar liability that has occurred in biotech crop litigation could have been prevented through mediation of stewardship issues before commercial launch. If the filing of a claim for anticipatory nuisance (or the threat of such a filing) can help maintain biotech seed company's bottom line and prevent disclosing billion dollar mistakes to shareholders, the entire industry would benefit, and all the benefits of biotech crops could be reaped.

232. *See Home*, PACER, https://www.pacer.gov/ (last visited Apr. 25, 2017).