

Preventative v. Punitive: How Genetically Modified Rice Litigation Shaped Regulation and Remedy for Genetically Engineered Crops

Allison Waldrip Bragg
University of Arkansas, Fayetteville

Follow this and additional works at: <https://scholarworks.uark.edu/jflp>



Part of the [Agribusiness Commons](#), [Agriculture Law Commons](#), [Food and Drug Law Commons](#), and the [Litigation Commons](#)

Recommended Citation

Bragg, A. W. (2020). Preventative v. Punitive: How Genetically Modified Rice Litigation Shaped Regulation and Remedy for Genetically Engineered Crops. *Journal of Food Law & Policy*, 10(2). Retrieved from <https://scholarworks.uark.edu/jflp/vol10/iss2/5>

This Article is brought to you for free and open access by ScholarWorks@UARK. It has been accepted for inclusion in *Journal of Food Law & Policy* by an authorized editor of ScholarWorks@UARK. For more information, please contact ccmiddle@uark.edu.

PREVENTATIVE V. PUNITIVE: HOW GENETICALLY MODIFIED
RICE LITIGATION SHAPED REGULATION AND REMEDY
FOR GENETICALLY ENGINEERED CROPS

*Allison Waldrip Bragg**

I. INTRODUCTION.....	157
II. LIBERTY LINK LITIGATION.....	158
III. ANALYSIS.....	164
A. <i>Preventing Infiltration: Regulating Genetically Engineered Crops</i>	164
B. <i>Remedying Infiltration: Nuisance Law</i>	167
C. <i>Prevention or Punishment</i>	168
IV. CONCLUSION.....	169

I. INTRODUCTION

As agricultural technology develops, new issues emerge. While genetically engineered crops can increase yields and productivity, they can also increase new legal concerns that had not previously existed. One such concern is the comingling of non-engineered crops with genetically engineered varieties. The corruption of plants that are not engineered is a problem not only because of the loss of that original plant itself if the entire plant population were to become comingled, but also because of the inability to sell a crop that has been intended as a non-engineered crop when it is infiltrated by genetically engineered material.

The infiltration of LLRICE601, a genetically engineered variety of rice, into the U.S. rice supply is an example of the problems that can occur when a regulated genetically engineered product is introduced into the non-engineered supply.¹ This piece will explore the events that gave rise to the resulting litigation, the regulations that are in place to prevent such events, and the remedies available when such an event occurs.

* B.A., University of Arkansas Honors College (2007), J.D., University of Arkansas School of Law (2010), LL.M., University of Arkansas School of Law Program in Agricultural & Food Law (2014).

1. Press Release, USDA, Statement by Agriculture Secretary Mike Johanns Regarding Genetically Engineered Rice, USDA Release No. 0307.06 (Aug. 18, 2006), available at <http://www.usda.gov>.

II. LIBERTY LINK LITIGATION

In January 2006, Riceland Foods, Inc., the largest miller and marketer of rice in the world based in Stuttgart, Arkansas, discovered genetically engineered material in some of its rice.² Although the United States produces corn, soybeans, canola, and cotton with a genetically engineered herbicide resistance trait, there is no domestic commercial production of genetically engineered rice.³ Accordingly, Riceland hypothesized that the genetically engineered material could be residual fragments transferred from the other genetically engineered crops that were transported in the same containers or vehicles.⁴ Riceland collected rice samples from various locations for testing, and the results indicated that several samples tested positive for the herbicide resistance trait genetically engineered by Bayer CropScience.⁵

Bayer CropScience describes itself as “an innovation-driven company with a long tradition in research and development.”⁶ Bayer developed many genetically engineered products for herbicide tolerance, and the engineered protein in those products was called Liberty Link.⁷ Three of those products were rice, and one of those rice varieties was LLRICE601, the regulated line of genetically engineered rice found in the samples provided by Riceland.⁸

“Regulated” articles are defined as organisms that have been altered or created by genetic engineering and can be considered “plant pests.”⁹ The Animal and Plant Health Inspection Service (“APHIS”), which is responsible for protecting domestic agriculture from pests and diseases, makes the determination of whether an article is regulated.¹⁰ Additionally, an organism can become deregulated after a petition process and approval

2. Bill J. Reed, Statement Regarding Genetically Engineered Material in Rice (Aug. 18, 2006); see also Andrew Pollack, *Unapproved Rice Strain Found in Wide Area*, N.Y. TIMES (Aug. 22, 2006), available at http://www.nytimes.com/2006/08/22/business/22rice.html?fta=y&_r=0.

3. *Id.*

4. *Id.*

5. *Id.*

6. *Bayer: Science for a Better Life*, BAYER CROPSCIENCE, <http://www.cropscience.bayer.com/en/Company/Our-Mission.aspx> (last updated Nov. 6, 2013).

7. Press Release, USDA, Statement by Agriculture Secretary Mike Johanns Regarding Genetically Engineered Rice, USDA Release No. 0307.06 (Aug. 28, 2006), available at <http://www.usda.gov>.

8. *Id.*

9. 7 C.F.R. § 340.1 (2014).

10. U.S. DEP'T OF AGRIC., *Biotechnology Frequently Asked Questions*, USDA.GOV, http://www.usda.gov/wps/portal/usda/usdahome?navid=BIOTECH_FAQ&navtype=RT&parentnav=BIOTECH (last visited Sep. 28, 2014).

from APHIS.¹¹ APHIS regulates genetically engineered organisms that could threaten plant health through its Biotechnology Regulatory Services program.¹²

APHIS conducts two analyses in order to determine whether a regulated article can be deregulated.¹³ First, APHIS considers whether the organism is a “plant pest,” which is defined in the Plant Protection Act (“PPA”)¹⁴ as anything that can “injure or damage plants or plant products.”¹⁵ Second, if the organism is not a plant pest, then APHIS will move forward with deregulation, which includes evaluating potential environmental impacts.¹⁶

Of Bayer’s three genetically engineered rice products, none had been commercialized, but two were deemed safe for consumption and deregulated under the APHIS guidelines, LLRICE62 and LLRICE06.¹⁷ LLRICE601, the genetically engineered rice found in Riceland’s supply, was regulated.¹⁸

On August 17, 2006, Bayer filed a petition with the U.S. Department of Agriculture (“USDA”) to deregulate LLRICE601, which would remove liability for contamination.¹⁹ The petition asserted that “[a]gronomic evaluation has demonstrated that there were no morphological, beneficial organism, disease susceptibility or pest susceptibility differences observed when comparing the events to cultivated rice.”²⁰ The following day, the

11. U.S. DEP’T OF AGRIC., ANIMAL & PLANT HEALTH INSPECTION SERVICE, *Permits, Notifications, & Petitions*, APHIS.USDA.GOV, <http://www.aphis.usda.gov> (last visited Sept. 28, 2014).

12. U.S. DEP’T OF AGRIC., ANIMAL AND PLANT HEALTH INSPECTION SERVICE, *Biotechnology*, APHIS.USDA.GOV, <http://www.aphis.usda.gov/wps/portal/aphis/ourfocus/biotechnology> (last visited Sept. 28, 2014).

13. Press Release, USDA Animal and Plant Health Inspection Service, USDA Seeks Public Review and Comment on Draft Environmental Impact Statement for Herbicide-Resistant Corn and Soybeans (Jan. 3, 2014), *available at* <http://www.usda.gov>.

14. Plant Protection Act, 7 U.S.C. § 7701 (2012) (gives the Secretary of the Department of Agriculture the authority to issue regulations that prevent plant pests from being introduced into or disseminated within the United States).

15. Press Release, USDA Animal and Plant Health Inspection Service, USDA Seeks Public Review and Comment on Draft Environmental Impact Statement for Herbicide-Resistant Corn and Soybeans (Jan. 3, 2014), *available at* <http://www.usda.gov>.

16. *Id.*

17. Press Release, USDA, Statement by Agriculture Secretary Mike Johanns Regarding Genetically Engineered Rice, USDA Release No. 0307.06 (Aug. 18, 2006), *available at* <http://www.usda.gov>.

18. *Id.*

19. Petition of Bayer CropScience, LLRICE601 USDA Extension Petition, at 3 (Aug. 17, 2006).

20. *Id.*

USDA announced that unapproved genetically engineered rice was detected in commercial long grain rice.²¹

The USDA's release stated that both the USDA and the Food and Drug Administration ("FDA") "reviewed the available scientific data and concluded that there [were] no human health, food safety, or environmental concerns associated with this [genetically engineered] rice."²²

The international backlash began two days later, when Japan banned long grain rice from being imported from the United States ("U.S.").²³ The European Union ("EU") followed, and while the EU did not issue a long grain rice import ban like Japan, it did require imported American long grain rice to be certified as free from LLRICE601.²⁴ The certification required rice to be tested at an accredited laboratory using validated testing methods and a certificate issued guaranteeing the absence of the genetically engineered rice.²⁵ Rice futures plummeted, eventually costing U.S. rice farmers \$150 million in lost profits.²⁶

Rice producers across the country began filing lawsuits against Bayer.²⁷ LLRICE601 was detected at levels of six grains per 10,000 in Cheniere rice, a popular long grain rice in the country.²⁸ On November 14, 2006, the Arkansas State Plant Board Seed Committee²⁹ unanimously voted to recommend that Arkansas ban Cheniere rice from planting in 2007.³⁰ Ten days later, the USDA deregulated LLRICE601, issuing a "Finding of No

21. Press Release, USDA, Statement by Agriculture Secretary Mike Johanns Regarding Genetically Engineered Rice, USDA Release No. 0307.06 (Aug. 18, 2006), available at <http://www.usda.gov>.

22. *Id.*

23. *Japan bans 'contaminated' US rice*, BBCNEWS.COM, <http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/5271384.stm> (Aug. 21, 2006).

24. Press Release, Commission requires certification of US rice exports to stop unauthorized GMO entering the EU (Aug. 23, 2006), available at <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/06/1120>.

25. *Id.*

26. Joe Whittington & Andrew M. Harris, *Bayer Must Pay Farmers for Contaminated Rice Crop*, BLOOMBERG.COM (Dec. 4, 2009), <http://www.bloomberg.com/apps/news?pid=21070001&sid=a8VxRrYyH6Ls>.

27. *Lawsuit filed over genetically modified rice*, ARKANSASNEWS.COM (Aug. 29, 2006, 11:00 PM), <http://archives.arkansasnews.com/2006/08/29/lawsuit-filed-over-genetically-modified-rice/>.

28. David Bennett, *No CL 131 rice in Arkansas in 2007*, DELTA FARM PRESS (Mar. 5, 2007), <http://deltafarmpress.com/no-cl-131-rice-arkansas-2007>.

29. In the interest of full disclosure, the author's father was the chairman of this committee at the time of this vote.

30. David Bennett, *No easy answers in clean-up of GM rice situation*, DELTA FARM PRESS (Nov. 21, 2006), <http://deltafarmpress.com/no-easy-answers-clean-gm-rice-situation>.

Significant Impact” stating Bayer’s petition for nonregulated status was granted because deregulation “[would] not have a significant impact on the quality of the human environment.”³¹

Despite the deregulation of LLRICE601, the litigation had already begun. And all rice-related cases against Bayer CropScience were ordered to be consolidated.³² Plaintiffs in an action in the Eastern District of Arkansas requested that the litigation be centered in that district, but the Judicial Panel on Multidistrict Litigation³³ decided the action should be located in the United States District Court for the Eastern District of Missouri due to the locations of other plaintiffs.³⁴

At the time of consolidation, those actions consisted of seven cases in the Eastern District of Arkansas, four in the Western District of Louisiana, and two in the Eastern District of Missouri.³⁵ The Judicial Panel on Multidistrict Litigation consolidated the cases and stated that the actions, “several of which are brought on behalf of nationwide, multistate or statewide classes of rice farmers, allege negligence on the part of Bayer for causing the contamination of commercial rice stocks with LLRICE601, a variety of genetically modified rice.”³⁶

Judge Catherine D. Perry of the Eastern District of Missouri issued an order titling the case *In re Genetically Modified Rice Litigation* and set forth schedules requiring class representatives to complete Plaintiff Fact Sheets and serve initial disclosures.³⁷

31. U.S. DEP’T OF AGRIC., ANIMAL AND PLANT HEALTH INSPECTION SERVICE, FINDING OF NO SIGNIFICANT IMPACT: EXTENSION OF NONREGULATED STATUS TO RICE LINE LLRICE601 (Nov. 24, 2006).

32. Transfer Order, *In re* LLRICE 601 Contamination Litig., 466 F.Supp.2d 1351, 1352 (J.P.M.L. 2006).

33. The Judicial Panel on Multidistrict Litigation is authorized by 28 U.S.C. § 1407 to transfer civil actions involving common questions of fact to any district for consolidated pretrial proceedings. The statute authorizes the panel to choose the district that is convenient for parties and witnesses “and will promote the just and efficient conduct of such actions.” Upon the panel’s request, a judge may be assigned temporarily and can exercise the powers of a district judge in any district in order to consolidate the pretrial proceedings. The statute provides two methods for transfer to be initiated: the judicial panel can do so on its own initiative, or a party in any action who is seeking to consolidate the proceedings may file a motion to do so in the district court where its own action is pending. *See generally* 28 U.S.C. § 1407 (2014).

34. Transfer Order, *In re* LLRICE 601 Contamination Litig., 466 F. Supp. 2d 1351-52 (J.P.M.L. 2006).

35. *Id.*

36. *Id.* at 1352.

37. Case Management Order No. 1, *In re* Genetically Modified Rice Litigation, No. 4:06 MD 1811 CDP (E.D. Mo. Apr. 18, 2007).

Plaintiffs filed their Class Action Complaint on May 17, 2007.³⁸ In the Complaint, Plaintiffs made numerous factual allegations, including that Bayer knew LLRICE could contaminate the U.S. rice supply because Bayer did the same thing with the U.S. corn supply in the past.³⁹ Plaintiffs also alleged that Bayer contaminated the U.S. Rice Supply with LLRICE601,⁴⁰ specifically the nationally popular Cheniere variety,⁴¹ and that the contamination caused significant and continuing harm.⁴² Specifically, Plaintiffs alleged that “U.S. rice export partners—including the EU, Japan, Korea, Canada, Russia, and many other countries—[had] prohibited or otherwise refused shipments of U.S. long-grain rice” as a result.⁴³ Additionally, restrictions imposed by those jurisdictions caused the price to plummet in other jurisdictions.⁴⁴ Plaintiffs also stated that the price of rice futures dropped approximately fourteen percent upon the news of contamination, consequential bans, and new testing requirements, and trend analysis conducted by the U.S. Rice Producers Association indicated that as a result of the contamination, the decline in prices in only two days cost American rice producers roughly \$150 million.⁴⁵

The Complaint described the Defendants as “members of a single business enterprise (“SBE”) known generally as ‘Bayer CropScience,’ which is organized and operated to achieve a common business purpose.”⁴⁶ Bayer CropScience and its collective Bayer defendants answered the Complaint on June 21, 2007.⁴⁷ The Answer responded to the majority of the Complaint’s allegations by stating that the Bayer defendants were “without knowledge or information sufficient to form a belief as to the truth of the allegations . . . and therefore deny the same.”⁴⁸

38. Master Consolidated Class Action Complaint, *In re* Genetically Modified Rice Litigation, No. 4:06 MD 1811 CDP (E.D. Mo. May 17, 2007).

39. *Id.* at 17.

40. *Id.* at 19.

41. *Id.* at 27.

42. *Id.* at 32.

43. Plaintiffs’ Second Amended Complaint, *In re* Genetically Modified Rice Litigation, No. 4:06 MD 1811 CDP at 11 (E.D. Mo. May 13, 2010).

44. *Id.*

45. *Id.* at 14.

46. *Id.* at 4.

47. Answer and Defenses of Bayer CropScience LP, Bayer CropScience Holding Inc., Bayer CropScience LLC, Bayer CropScience Inc., and Bayer Corporation to Plaintiffs’ Master Consolidated Class Action Complaint, *In re* Genetically Modified Rice Litigation, No. 4:06 MD 1811 CDP (E.D. Mo. June 21, 2007).

48. *Id.* at 2-6.

The litigation lasted for two more years before the first verdict was reached.⁴⁹ On December 4, 2009, a jury awarded almost \$2 million in compensatory damages to two Missouri farmers.⁵⁰ The farmers' attorneys had requested punitive damages, stating that an \$80 million punitive judgment was "not too much to send a message," but the jury rejected that request.⁵¹ The following February, a federal jury ordered Bayer to pay \$1.5 million in compensatory damages to farmers in Arkansas and Mississippi, again declining to award punitive damages.⁵²

Judge Perry ruled that plaintiffs were not allowed to seek damages for emotional distress, pointing out that they made no claim for physical injuries, they did not specifically request emotional distress damages, and they only stated they would seek damages for emotional distress at the final pretrial conference four days before trial, citing lack of notice under Rule 9⁵³ as the basis for her decision.⁵⁴

The first award of punitive damages occurred on March 8, 2010, when Bayer was ordered to pay \$532,643 in compensatory damages and \$500,000 in punitive damages to an Arkansas farmer.⁵⁵ From there, punitive awards increased dramatically; for example, the following month twelve Arkansas farmers were awarded \$5.9 million in compensatory damages and \$42 million in punitive damages.⁵⁶ In July 2010, a Louisiana farmer was awarded

49. Joe Whittington & Andrew M. Harris, *Bayer Must Pay Farmers for Contaminated Rice Crop*, BLOOMBERG.COM (Dec. 4, 2009), <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=adGubJZ21Uzo>.

50. *Id.*

51. *Id.*

52. *Bayer Crop Science loses another case in genetic rice dispute*, WRALTECHWIRE.COM, http://wraltechwire.com/business/tech_wire/news/blogpost/6981094/ (last updated Feb. 7, 2010, 2:25 PM).

53. Federal Rule of Civil Procedure 9(g) states, "If an item of special damage is claimed, it must be specifically stated."

54. Memorandum and Order, *In re Genetically Modified Rice Litigation*, No. 4:06 MD 1811 CDP (E.D. Mo. Jan. 8, 2010).

55. Alison Sider, *Bayer Ordered to Pay Farmer \$1 Million in Tab for Modified Rice*, ARK. DEMOCRAT-GAZETTE (Mar. 10, 2010), <http://www.saynotogmos.org/ud2010/umar10b.php>.

56. Jan Cottingham, *Update: Riceland Awarded \$136.8 Million In Suit Against Bayer Cropscience*, ARKANSAS BUSINESS (March 19, 2011, 3:15 am), available at <http://www.arkansasbusiness.com/article/34865/update-riceland-awarded-1368-million-in-suit-against-bayer-cropscience>. Bayer CropScience LP et al. v. Schafer, 2011 Ark. 518, 385 S.W.3d 822 (affirming the jury's verdict and the amount of damages awarded).

\$500,248 in damages, and in August 2010, six Arkansas farmers were awarded \$940,000 in damages.⁵⁷

Bayer settled for the first time in October 2010, agreeing to pay three Texas farmers \$290,000 and avoid going to trial.⁵⁸ At this time, a jury has yet to find in favor of Bayer CropScience.

III. ANALYSIS

In reviewing the facts leading up to the LLRICE601 infiltration into the U.S. rice supply and the subsequent litigation, two primary questions arise. First, how can infiltration be prevented? Second, what is the appropriate remedy when infiltration occurs? This analysis will evaluate prevention through regulation of genetically engineered crops and consider remedy through available nuisance law causes of action.

A. Preventing Infiltration: Regulating Genetically Engineered Crops

According to the USDA, the Coordinated Framework for Regulation of Biotechnology, established as formal policy in 1986, “describes the Federal system for evaluating products developed using modern biotechnology.”⁵⁹ The Coordinated Framework synthesizes the existing laws that apply to biotechnology (“biotech”) related products.⁶⁰ Those laws and regulations come from the APHIS, FDA, and Environmental Protection Agency (“EPA”).⁶¹

In the Framework are numerous regulations, and in the LLRICE601 situation, the most applicable is found at Title 7, Part 340 of the Code of Federal Regulations and is titled, “Introduction of Organisms and Products

57. Margaret Cronin Fisk & Joe Whittington, *Bayer Loses Fifth Straight Trial Over U.S. Rice Crops*, BLOOMBERG BUSINESSWEEK (July 14, 2010), available at <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=axmCsYIz4h1c>.
Stephanie K. Jones, *\$750M Settlement Reached with U.S. Farmers over Genetically Modified Rice*, INSURANCE JOURNAL (July 7, 2011), available at <http://www.insurancejournal.com/news/national/2011/07/07/205488.htm>.

58. Alison Frankel, *Bayer Agrees to ‘Watershed’ Settlement in 7,000-Case Rice Crop Contamination Litigation*, THE AMERICAN LAWYER (Oct. 21, 2010), <http://www.theamericanlawyer.com>.

59. U.S. DEP’T OF AGRIC., ANIMAL AND PLANT HEALTH INSPECTION SERVICE, *Regulations: Coordinated Framework for the Regulation of Biotechnology*, http://www.aphis.usda.gov/wps/portal/aphis/ourfocus/biotechnology?1dmy&urle=wc m%3apath%3a%2FAPHIS_Content_Library%2FSA_Our_Focus%2FSA_Biotechnolo gy%2FSA_Regulations%2F (last modified Jan. 30, 2014).

60. *Id.*

61. *Id.*

Altered or Produced Through Genetic Engineering Which Are Plant Pests or Which There Is Reason to Believe Are Plant Pests”,⁶² this particular provision in the Code of Federal Regulations was introduced in 1987.⁶³ It was revised in 1993, when a provision was added for a notification process for the introduction of certain plants with which APHIS had experience. The 1993 revision also added a petition process to allow certain plants to be deregulated.⁶⁴ In 1997, it was again revised when amendments were added to allow regulated articles to be introduced under notification procedure and enable APHIS to extend nonregulated status to regulated articles if closely related to an organism that was already determined as nonregulated.⁶⁵ The 1997 revisions also simplified procedures for introduction of genetically engineered organisms, requirements for nonregulated status, and procedures for reporting of field tests.⁶⁶ The provision was revised most recently in 2001, when the regulation changed to reflect the enactment of the Plant Protection Act and removed references to plant protection and quarantine statutes that no longer existed as a result of the PPA.⁶⁷ The statute was the subject of proposed amendments in 2009,⁶⁸ arguably as a result of the LLRICE601 litigation. However, after an open comment period and a public meeting held by APHIS for feedback on the proposed amendments, those amendments did not come into effect.⁶⁹ Over four thousand comments were submitted, many of them consistent with one comment that states, “the current proposed rule does little to close the loopholes in the regulations the

62. 7 C.F.R. pt. 340 (1987).

63. *Id.*

64. Genetically Engineered Organisms and Products; Notification Procedures for the Introduction of Certain Regulated Articles; and Petition for Nonregulated Status, 58 Fed. Reg. 17044-01 (Mar. 31, 1993) (to be codified at 7 C.F.R. pt. 340).

65. Genetically Engineered Organisms and Products; Simplification of Requirements and Procedures for Genetically Engineered Organisms, 62 Fed. Reg. 23945-01 (May 2, 1997) (to be codified at 7 C.F.R. pt. 340).

66. *Id.*

67. Plant Protection Act; Revisions to Authority Citations, 66 Fed. Reg. 21049 (Apr. 27, 2001).

68. Keller & Heckman LLP, *USDA APHIS Proposes Amendments to Regulations Regarding Genetically Engineered Organisms*, KELLER AND HECKMAN ALERT (July 14, 2009), available at <http://www.khlaw.com/3092>.

69. *Id.*; Plant Protection Act; Revisions to Authority Citations; Technical Amendment, 69 Fed. Reg. 12,265 (Mar. 16, 2004) (to be codified at 7 C.F.R. pt. 330).

rule is designed to replace and it creates more gaps than it fills.”⁷⁰ The regulation stands as last amended in 2001.⁷¹

The regulations in 7 C.F.R. pt. 340 can be circumvented by petitioning APHIS to grant “nonregulated status” to a genetically engineered organism.⁷² Comingling an approved or “deregulated” genetically engineered crop with another crop does not create risks for health or the environment.⁷³ Because the deregulated crop itself has been approved by a regulatory system, for example, APHIS, the deregulated crop has been determined to be safe.⁷⁴ It follows that the safe deregulated crop comingled with a non-engineered crop would also be safe; however, the same assurance cannot be applied to a regulated crop. If a regulated crop is comingled with a non-engineered crop, potential economic, health, and environmental concerns may arise.⁷⁵

While health and environmental risks are addressed by federal regulations and approval procedures, economic impact of biotech crops is an emerging issue with fewer established guidelines.⁷⁶ The LLRICE601 litigation provides the early framework for eventual economic parameters that will control future biotech comingling issues.

Many authors who encountered this topic before the litigation’s resolution forecast such a result. In their article “Litigating the Economic Impacts of Biotech Crops,” Thomas P. Redick and A. Bryan Endres predicted that the “economic loss doctrine” might foreclose tort recovery for rice farmers who purchased, albeit unknowingly, seed that was already contaminated because they could have required a contract provision assuring that the seed was not genetically engineered.⁷⁷ In another piece,

70. Angela Robinson, *Comment on the APHIS Proposed Rule*, REGULATIONS.GOV (May 11, 2009), <http://www.regulations.gov/#!documentDetail;D=APHIS-2008-0023-5374>.

71. Plant Protection Act; Revisions to Authority Citations; Technical Amendment, 69 Fed. Reg. 12,265 (Mar. 16, 2004) (to be codified at 7 C.F.R. pt. 330).

72. Keller & Heckman LLP, *USDA APHIS Proposes Amendments to Regulations Regarding Genetically Engineered Organisms*, KELLER AND HECKMAN ALERT (July 14, 2009), available at <http://www.khlaw.com/3092>.

73. Thomas P. Redick & Donald L. Uchtman, *Coexistence Through Contracts: Export-Oriented Stewardship in Agricultural Biotechnology vs. California’s Precautionary Containment*, 13 DRAKE J. AGRIC. L. 207, 210 (2008).

74. See Drew L. Kershen, *Legal Liability Issues in Agricultural Biotechnology*, NAT’L AGRIC. L. CTR., Nov. 2002, at 7, available at http://www.nationalaglawcenter.org/assets/articles/kershen_biotech.pdf.

75. D. L. Uchtman, *StarLink™ - A Case Study of Agricultural Biotechnology Regulation*, 7 DRAKE J. AGRIC. L. 159, 198 (2002).

76. Thomas P. Redick & A. Bryan Endres, *Litigating the Economic Impacts of Biotech Crops*, 22 NAT. RES. & ENV’T 24, 24 (2008).

77. *Id.*

“Coexistence Through Contracts: Export-Oriented Stewardship in Agricultural Biotechnology vs. California’s Precautionary Containment,” Redick identified the conflict between the defendant’s argument that the experimental contaminant was later deregulated and the plaintiff’s argument that the economic harm was already incurred despite LLRICE601 later being approved.⁷⁸ To elaborate, the plaintiff’s position that the harm was already incurred is the result of financial harm that was sustained before the plant was deregulated; subsequent deregulation would not have changed the fact that when the crop was initially contaminated, it instantly failed to meet the standards of other countries that regulate the genetically modified crops imported from the United States.⁷⁹ Countries responded by demanding an expensive certification processes or halting importation altogether, both of which caused rice revenue to drop dramatically.⁸⁰ Therefore it follows that deregulating the contaminating matter after the fact would have no effect on the economic losses that was already.

Prevention can be improved through review of the pertinent regulations, negotiation of particular seed contracts, and voluntary effort on the part of producers of genetically engineered seed, as well as those who cultivate it. With stronger attention paid to prevention, remedy may be less frequently necessary.

B. *Remedying Infiltration: Nuisance Law*

The LLRICE601 litigation is an example of how the current regulations do not always prevent the harm of comingling. Although Bayer was subject to 7 C.F.R. pt. 340, LLRICE601 still made its way into the food supply. Accordingly, if regulating genetically engineered crops is the best method to prevent comingling, nuisance laws and regulations may be an alternative to address harm once it has already happened. It is here that the law may be able to strike a balance between preventing prospective harm versus a remedy for actual harm.

Importantly, not every plaintiff will be able to recover under a nuisance claim. In *Sample v. Monsanto Co.*, a biotech crop that was approved for use in the U.S., but not in the European Union, infiltrated the supply.⁸¹ Plaintiffs’ claims were for lost revenue because the EU boycotted American soybeans and corn after the contamination; however, the plaintiffs own property was

78. Thomas P. Redick & Donald L. Uchtmann, *Coexistence Through Contracts: Export-Oriented Stewardship in Agricultural Biotechnology vs. California’s Precautionary Containment*, 13 DRAKE J. AGRIC. L. 207, 212 (2008).

79. See generally *id.*

80. See generally *id.*

81. *Sample v. Monsanto Co.*, 283 F. Supp. 2d 1088, 1091 (E.D. Mo. 2003).

not contaminated or injured.⁸² Accordingly, the economic loss doctrine precluded a nuisance claim.⁸³ A grower whose non-engineered crop is affected may have to demonstrate a physical injury in order to meet nuisance law standards.⁸⁴

However, the economic loss doctrine differs from state to state. For example, Arkansas does not have the economic loss rule.⁸⁵ The Arkansas Supreme Court held that pure economic losses are covered by strict tort liability.⁸⁶ Interpreting Arkansas law, federal courts have upheld the approach that recovery under strict liability is permitted by Arkansas law “even when the only damages sustained are to the defective product itself.”⁸⁷ Since many of the plaintiffs in the LLRICE601 litigation were Arkansas farmers, this important distinction shaped the recovery not only in this litigation, but also in future application of these precedents.

C. Prevention or Punishment

While punitive damages might deter companies like Bayer CropScience from future unintended comingling, it is unclear how effective punitive damages are at curbing future incidents. How much money in punitive damages is enough to change Bayer’s future behavior? Bayer CropScience reports its 2013 annual net income as €3.2 billion, which is an increase of 32.7% over their previous annual net income for 2012.⁸⁸ At an exchange rate of 1 Dollar to 1.37 Euro, Bayer’s 2013 annual net income is approximately \$4.39 billion.

In the first award of punitive damages resulting from LLRICE601 litigation, Bayer was ordered to pay \$500,000,⁸⁹ which is .0114 percent of Bayer’s annual net income. To put that in context, if Bayer operates a 40-hour workweek for 52 weeks a year, it takes the company just under 15

82. *Id.*

83. *Id.*

84. Thomas P. Redick & Donald L. Uchtmann, *Coexistence Through Contracts: Export-Oriented Stewardship in Agricultural Biotechnology vs. California’s Precautionary Containment*, 13 DRAKE J. AGRIC. L. 207, 220 (2008).

85. Glenn S. Ritter, *Economic Loss Rule in Arkansas: Everyone Else Has It, Why Don’t We?*, 64 ARK. L. REV. 455, 456 (2011).

86. *Blagg v. Fred Hunt Co.*, 612 S.W.2d 321, 323-24 (Ark. 1981).

87. *Alaskan Oil, Inc. v. Cent. Flying Serv., Inc.*, 975 F.2d 553, 555 (8th Cir. 1992).

88. *Continuous Growth in Bayer’s Anniversary Year*, BAYERCROPSCIENCE.COM, <http://www.annualreport2013.bayer.com/en/overview.aspx> (last visited May 14, 2014).

89. Alison Sider, *Bayer Ordered to Pay Farmer \$1 Million Is Tab for Modified Rice*, ARK. DEMOCRAT-GAZETTE (Mar. 10, 2010), <http://www.gpplaw.com/settlements.html>.

minutes to make \$500,000.⁹⁰ This amount did not persuade Bayer to settle its remaining cases, as it proceeded to trial on the next case, in which twelve farmers were awarded punitive damages of \$42 million,⁹¹ amounting to .96 percent of Bayer's annual net income. Bayer then began to settle, offering \$290,000 to avoid trial.⁹²

The question of punitive damage significance has been addressed with large companies before. Courts have handled "pain and suffering" damages that functioned more like punitive damages against the pharmaceutical company Janssen.⁹³ Similarly, Ford Motor Co. was ordered to pay \$52 million in punitive damages for "punishment and deterrence."⁹⁴ The question remains whether these awards are more than a mere slap on the wrist or actually cause large corporations to reevaluate their approaches. The Supreme Court has stated punitive damages are often "wholly unpredictable amounts bearing no necessary relation to the actual harm caused."⁹⁵

IV. CONCLUSION

The commingling of genetically engineered crops with non-engineered crops can be addressed by two different approaches: prevention and punishment. Prevention is most likely to manifest itself in the form of regulations, while punishment is best meted out by the imposition of punitive damages. Ideally, an effective regulatory scheme would lead to adequate prevention and make punishment the exception, rather than the rule. However, in those cases where preventative methods have failed, a standard of punishment should be in place to deter similar conduct in the future. These two methods can work in tandem to reduce the risk of commingling.

A regulatory framework, whether a new scheme or the current regulations that are in effect, may be bolstered by strict consequences for those who fail to adhere. It is important that regulations not create an undue burden on the very entities they are designed to protect. As demonstrated by

90. Calculated by 40 hours per week, multiplied by 52 weeks per year, then divide \$4.39 billion per year by that amount, which comes to \$2,110,576.92 per hour; divide \$500,000 by that amount & multiply that by 60 minutes to determine that it takes Bayer 14.214 minutes to generate \$500,000.

91. Alison Frankel, *Bayer Agrees to 'Watershed' Settlement in 7,000-Case Rice Crop Contamination Litigation*, THE AMERICAN LAWYER (Oct. 19, 2010), available at <http://www.theamericanlawyer.com>.

92. *Id.*

93. Victor E. Schwartz & Leah Lorber, *Twisting the Purpose of Pain and Suffering Awards: Turning Compensation into "Punishment,"* 54 S.C. L. REV. 47, 65-6 (2002).

94. *\$52 Million Punitives Needed for 'Punishment and Deterrence,' Plaintiffs Say*, 25 No. 19 Andrews Automotive Litig. Rep. 3 at 2 (2006).

95. *Gertz v. Robert Welch, Inc.*, 418 U.S. 323, 350 (1974).

the Liberty Link contamination, an overly restrictive regulatory system can add expense and negatively affect agribusinesses that are forced to comply with extensive, and expensive, certification requirements or other burdensome measures. Rather than create extra regulations that impose upon those who have not yet transgressed, a minimally restrictive regulatory framework should provide protection through prevention and rely on significant punishment to motivate compliance.

This means that punitive damages must go beyond a mere slap on the wrist. Punitive damages in these accidental contamination cases must be severe enough that companies are compelled to take more care and avoid commingling. In the litigation surrounding Liberty Link rice, the first two judgments did not include punitive damages.⁹⁶ While the compensatory damages were high at \$2 million for two farmers in Missouri and \$1.5 million for three farmers in Arkansas and one in Mississippi, the damages made up for the farmers' losses, but did not impose any type of punishment on Bayer CropScience.⁹⁷ It was not until punitive damages were awarded that Bayer began making settlement offers.⁹⁸ Even then, the first award of punitive damages was for \$500,000, which takes Bayer less than 15 minutes to generate.⁹⁹ While those are technically punitive damages, they are not of the severity that would cause Bayer to adjust its behavior to prevent future incidents.

Substantial prevention through knowledge of potential punishment can only be effectuated by high punitive damages. While punitive damages can vary and sometimes have little relationship to the value of compensatory damages, genetically engineered crop contamination is one example of a type of case in which a direct relationship to economic loss should be a secondary consideration. Rather than focusing on the loss of the plaintiff, punitive damages should be implemented with the purpose of deterring not only that specific defendant, but also future potential defendants from making the same costly errors.

Not every defendant should be punished with crippling punitive damages, and it does no good to annihilate an otherwise viable business by forcing it to pay exorbitant punitive damages. However, the damages are not punitive if they can be generated in 15 minutes of company time. The later verdict of \$42 million in punitive damages awarded to Arkansas farmers with

96. Whittington & Harris, *supra* note 49.

97. Thomas P. Redick & A. Bryan Endres, *Jury Verdict Against Bayer for Liberty Link Rice Breaks New Ground in Biotech Liability*, 26 AGRIC. LAW UPDATE 2, 2 (2009).

98. Frankel, *supra* note 91.

99. See calculations in footnote 90.

\$5.9 million in compensatory damages illustrates a better solution for the type of punishment that will lead to future prevention.¹⁰⁰

The litigation surrounding LLRICE601 provides an unprecedented opportunity to evaluate both preventative and punitive measures to ensure that non-engineered crops are protected while genetically engineered crops are experimentally developed. With the proper preventative regulations, coupled with appropriate punitive responses, both types of crops can continue to coexist in a marketplace that has increasing demand for each.

100. Cottingham, *supra* note 56.

