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Genetically Modified Nuisance: Your Right to Recovery is Barred, if You Catch My Drift

INTRODUCTION

For seventeen years, Susan and Mark Fitzgerald have been growing organic corn on the black soil prairie of Minnesota, a place "where the wind likes to blow."¹ Together, they take every precaution in ensuring the purity of their crop, but no matter how much care they exercise, nothing can prevent the inevitable.² This couple set up barriers of trees, shrubs, and bushes; they planted their corn in the right place; they even scrutinized the quality of their seed. However, they could not keep out the invisible threat that was creeping into their farm.³ When their harvest came, to their dismay, they discovered that they too, like so many other farmers, had fallen victim to pollen drift.⁴ The problem is not hypothetical; the Fitzgerald family is one of the many families who suffer from this phenomenon on a regular basis.

The Fitzgeralds' story highlights an all-too-common problem that farmers frequently face: pollen drift. Pollen drift is the process in which pollen particles from neighboring farmland will genetically contaminate a farmer's crops.⁵ When crops become contaminated, the farmers, through no fault of their own, become exposed to extreme financial and legal liability.⁶ To make matters worse, a farmer cannot sue to recover any damage to his land because that farmer will be faced with a mountain of procedural and statutory bars that preclude any legal recovery.⁷

Due to the various hindrances to recovery that farmers face in the court system, an alternative mechanism to seek damages for harm caused by pollen drift is necessary. The most efficient and logical way to resolve this pollen drift issue is to create a new legal mechanism for plaintiff farmers to file their claims and recover against their neighbors. The best way to achieve this goal is to model pollen drift disputes after Louisiana medical

3. *Id*.

4. *Id*.

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^{1.} Anthony Shadid, *Genetic Drift Affects More than Biology - US Farmers Stand to Lose Millions*, ORGANIC CONSUMERS ASSOCIATION (Apr. 8, 2001), https://perma.cc/2Z5K-8AQK.

^{2.} *Id*.

^{5.} See Mike Gray, Pollen Drift and Refuge-Management Considerations for Transgenic Hybrids, BULLETIN (Apr. 17, 2003), https://perma.cc/R8JS-3LRV.

^{6.} See Carie-Megan Flood, Pollen Drift and Potential Causes of Action, 28 IOWA J. CORP. L. 473, 474 (2003). Farmers who have fallen victim to pollen drift suffer financial harm due to the lost value to their crops. Additionally, these farmers become inadvertent patent infringers due to the incidence of patented crops invading their organic farmland.

^{7.} Id. at 476.

malpractice law and establish a specialized Agricultural Review Panel. In essence, the plaintiff farmer will file his pollen drift claim to an Agricultural Review Panel consisting of experts that will determine liability and damages. The plaintiff and defendant will pay a fee to a compensation fund that will cover any additional damages beyond the limited liability of the defendant.

Part I of this paper will examine the science, policy, and issues associated with Genetically Modified Organism (GMO) agriculture and pollen drift. Part II will discuss the current state of legal recovery for non-GMO farmers in Louisiana, with an emphasis on the shortcomings of the traditional tort system when applied to pollen drift disputes. Part III will provide a detailed solution to the issue by proposing new legislation that allows non-GMO farmers to circumvent the traditional tort system by creating an entirely new mechanism for recovery.

I. BACKGROUND

A. GMO Agriculture: History and Regulation

The genetic manipulation of staple crops is by no means a novel or unusual agricultural practice. Following Gregor Johann Mendel's discovery of heredity in 1865, advances in genetics have greatly developed the ability for humans "to achieve desired characteristics in plants with more consistency and predictability than originally achieved through natural selection."⁸ Genetic modification allows DNA combinations that are not possible in nature to be developed and expressed in crops.⁹ GMOs are the result of extensive human manipulation of the natural reproduction process of plants.¹⁰ Genetically modified organisms are species of plants that have been altered using genetic engineering techniques to increase the agricultural yield of that crop.¹¹ In addition to having a higher nutrient yield, GMO crops are more resistant to drought than non-engineered crops.¹² Due partly to these practical benefits, the business of GMO agriculture is

Richard A. Repp, Biotech Pollution: Assessing Liability for Genetically Modified Crop Production and Genetic Drift, 36 IDAHO L. REV. 585, 588 (2000).
 Id.

^{10.} Frequently Asked Questions on Genetically Modified Foods, WORLD HEALTH ORG. (May 2014), https://perma.cc/V5MT-MSLE.

^{11.} *Id*.

^{12.} See Sara M. Dunn, From Flav'r Sav'r to Environmental Saver? Biotechnology and the Future of Agriculture, International Trade, and the Environment, 9 COLO. J. INT'L ENVTL. L. & POL'Y 145, 154-55 (1998).

booming.¹³ Over the past fifteen years, genetically engineered crops have been planted on over a billion acres across the world.¹⁴ The use of GMO crop technology has been adopted faster than any other form of agricultural technology in human history.¹⁵

The United States is the world's largest producer of GMO crops, planting over 54.6 million hectares¹⁶ within its borders, while the rest of the world produces far less and more strictly regulates GMO agricultural practices.¹⁷ The reason for relaxed GMO agricultural regulation in the U.S. is largely political.¹⁸ The United States Department of Agriculture (USDA), the Food and Drug Administration (FDA), and the Environmental Protection Agency (EPA) regulate domestic GMO production.¹⁹ This regulatory framework is ineffective because the members of the GMO industry improperly influence the agencies that are charged with oversight of the GMO agriculture.²⁰ These external pressures have caused the federal agencies to create policies and procedures "that promote industry interests over legitimate public health, safety, and environmental concerns."²¹ To make matters worse, the GMO industry has sought to undo any local regulation over GMO production, both through the courts and through industry lobbying of state legislatures.²² Although many state legislatures have welcomed the agricultural biotech industry and its large contribution to state revenues, opponents of the practice resist the growing deregulation due to human health, environmental, and economic concerns²³

14. *Id.*

15. *Id*.

16. A unit of area equal to 10,000 square meters. *Hectare*, MERRIAM-WEBSTER DICTIONARY (2017).

17. See generally CANADIAN BIOTECHNOLOGY ACTION NETWORK, WHERE IN THE WORLD ARE GM CROPS AND FOODS? (2015), https://gmoinquiry.ca/wp-content/uploads/2015/03/where-in-the-world-gm-crops-foods.pdf.

18. Rita Barnett-Rose, *Judicially Modified Democracy: Court and State Preemption of Local GMO Regulation in Hawaii and Beyond*, 26 DUKE ENVTL. L. & POL'Y F. 71, 71 (2015) ("local GMO regulations face significant challenges by the GMO industry, which has sought to undo local regulatory authority both through the courts and through industry lobbying of state legislators to expressly pre-empt local regulation.").

19. Id. at 84.

20. Id.

21. Id.

22. See Matthew Porter, State Pre-emption Law: The Battle for Local Control of Democracy, 33 PESTICIDES & YOU 13, 15 (2013).

23. Daylin-Rose Gibson, Remembering the "Big Five": Hawai'i's Constitutional Obligation to Regulate the Genetic Engineering Industry, 15 ASIAN-PAC. L. & POL'Y J. 213, 215 (2014).

^{13.} See, e.g., B. M. Chassy, The History and Future of GMOs in Food and Agriculture, 52 CEREAL FOODS WORLD 169, 170 (2007).

B. The Risks of GMO Crops and the Return on Non-GMO Agriculture

The combination of the prevalence of GMO farming in the U.S. and the growing deregulation over the industry brings serious risks associated with the practice that are often overlooked. GMO farming practices create a number of health risks, including increased levels of allergic reactions, antibiotic resistance, immunosuppression, cancer, and loss of nutrition.²⁴ In addition to these human health concerns, the practice causes serious harm to the environment.²⁵ GMO farming is creating a global loss of biodiversity that is occurring at a very rapid pace.²⁶ In its report, the Institute for Energy and Environmental Research²⁷ indicates that the frequent use of GMO agriculture disrupts the natural evolution of most crops.²⁸ The economic impact of GMO agriculture is also severe due to pollen drift and subsequent liability of non-GMO farmers therefrom.

With the growing public awareness of the potential risks caused by GMO agriculture, the public interest in non-GMO farming practices has been rapidly increasing.²⁹ This increased interest in GMO-free food has led the non-GMO agricultural industry to make a recent and significant comeback.³⁰ Since 2008, there has been a 314% increase in the demand for non-GMO crops and products within the U.S.³¹ This boost in demand can be attributable to the more natural pedigree of non-GMO crops.³² As a result of the increasing popularity of GMO-free food, the individual farmers who grow these genetically natural crops are able to sell them at a

28. Marc Kaufman, *Alter Genes, Risk An Ecosystem*?, WASH. POST, June 4, 2001, at A7 (discussing report's concern that genome-ecosystem interactions are not being taken into account in the creation of new organisms).

30. *See id.*

^{24.} *GE Food and Your Health*, CENTER FOR FOOD SAFETY, https://perma.cc /Y228-8Q6C (last visited Jan. 2, 2018).

^{25.} See infra notes 26-28.

^{26.} Klaus Ammann, Effects of Biotechnology on Biodiversity: Herbicide-Tolerant and Insect-Resistant GM Crops, 23 TRENDS IN BIOTECHNOLOGY 388 (2005).

^{27.} The Institute for Energy and Environmental Research (IÉER) is a periodical that provides activists, policy-makers, journalists, and the public with understandable and accurate scientific and technical information on energy and environmental issues.

^{29.} See Andrea Rock, *Where GMOs Hide in Your Food*, CONSUMER REPORTS (2014), https://perma.cc/WN7T-Y8S5. According to a survey of 1,000 American adults, over 70% of participants claim to not want any genetically modified organisms in their food.

^{31.} Errol Schweizer, Exec. Global Grocery Coordinator, Whole Foods Market, Organic and Non GMO Market Growth 2015 at the USDA Stakeholder Workshop on Coexistence (Mar. 12, 2015).

^{32.} *Id*.

higher price than their genetically modified counterparts.³³ These non-GMO crops run the risk of being contaminated by nearby GMO crops, however, which pollute adjacent land through the natural phenomenon of pollen drift.

C. The Pollen Drift Phenomenon

Pollen drift occurs naturally in all agriculturally produced plants.³⁴ Pollen drift is the process in which the pollen of certain crops in one farmer's field is carried, primarily by wind and insects, onto the land of his or her neighbor.³⁵ When pollen comes to rest on another tract of farmland, the invading pollen will fertilize neighboring crops, thus altering the genetic makeup of the now contaminated crops.³⁶ For any species of plants, including crops, natural pollen drift has severe biological effects on similar plants growing nearby. Freely drifting pollen that will eventually settle on adjacent crops alters the genetic makeup of those crops via the process of cross-fertilization.³⁷ When pollen from one unique crop drifts onto another farm and fertilizes an entirely different type of planted crop, those planted crops produce offspring that have an entirely different genetic profile.³⁸ Altering the genetic profile of a crop causes the offspring to exhibit different physical characteristics from their original parent crops.³⁹

To illustrate this pollen drift problem with staple crops, take corn as an example. Over a three week period, one corn plant can release anywhere from two million to five million pollen grains depending on soil conditions, as well as the temperature and humidity of the atmosphere in which the crop sits.⁴⁰ During the flowering season, the wind can carry corn pollen substantial distances.⁴¹ Although most corn pollen settles within fifty feet of the parent plant, studies show that the remaining pollen in the air can travel distances up to 370 feet on average and, under extreme

39. *Id*.

41. *Id*.

^{33.} A. Bryan Endres & Lisa Schlessinger, *Pollen Drift: Reframing the Biotechnology Liability Debate*, 118 PENN ST. L. REV. 815, 817-18 (2014).

^{34.} See Gray, supra note 5.

^{35.} Id.

^{36.} Id.

^{37.} Tim Van Pelt, Is Changing Patent Infringement Liability the Appropriate Mechanism for Allocating the Cost of Pollen Drift, 31 J. CORP. L. 567, 572 (2006).

^{38.} *Id.*

^{40.} KENT BRITTAN, METHODS TO ENABLE THE COEXISTENCE OF DIVERSE CORN PRODUCTION SYSTEMS, AGRIC. BIOTECHNOLOGY IN CAL. SERIES 1 (2006), https://perma.cc/WJP3-E39A.

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conditions, can travel for miles.⁴² This floating corn pollen has the potential to cross-pollinate with other corn crops on dozens of nearby farms.⁴³ This phenomenon becomes particularly problematic for the non-GMO farmer whose neighbors plant GMO crops in their adjacent fields.

The naturally occurring pollen drift that originates from GMO farmland significantly impacts the practice of non-GMO agriculture and the non-GMO industry as a whole. Pollen from genetically engineered crops can travel for miles and cross-pollinate non-GMO crops that are nearby, resulting in a genetic contamination of the pure non-GMO crops.⁴⁴ When non-GMO crops are contaminated by GMO pollen, the "GMO-free" status of these crops is lost. The result of this genetic contamination causes non-GMO crops to become unfit for sale.⁴⁵ GMO pollen "can quite literally 'seek out' and destroy the competition– a harm not well tolerated in most markets."⁴⁶ The inadequate regulation of the GMO farming industry exacerbates the pollen drift issue. Many scholars and commentators have criticized the current regulatory framework for not adequately addressing the problems that accompany GMO farming, especially the issue of the cross-contamination of non-GMO crops.⁴⁷ After the non-GMO farmer has fallen victim to pollen drift, he could suffer substantial financial harm.

D. Pollen Drift and the Resulting Damage

When pollen drift occurs and contaminates non-GMO farmland, that individual non-GMO farmer becomes exposed to two major types of harm: (a) lost value to crops and farmland and (b) liability for patent infringement. Both of these harms create serious financial consequences that can ruin any responsible and prudent farmer.

1. Lost Value to Crops and Farmland

The first harm is largely financial because a non-GMO farmer will suffer lost value to his land. Ordinarily, non-GMO crops are more expensive

^{42.} *Id*.

^{43.} *Id.*

^{44.} Sabrina Wilson, Induced Nuisance: Holding Patent Owners Liable for GMO Cross-Contamination, 69 EMORY L.J. 169, 172-73 (2014).

^{45.} *Id.* at 173.

^{46.} *Id.*

^{47.} See generally Paul J. Heald & James Charles Smith, *The Problem of Social Cost in a Genetically Modified Age*, 58 HASTINGS L.J. 87, 88 (2006) (analyzing the weaknesses of the current regulatory framework as applied to GMO farming and noting the framework is especially ineffective at preventing cross contamination and the introduction of "superweeds").

COMMENT

than their genetically engineered counterparts; therefore, the farmers who grow these pure crops enjoy premium prices for the products that they sell.48 Most non-GMO farmers receive FDA certification that verifies the genetic purity of their crop.⁴⁹ When these crops are contaminated by pollen drift, their purity is destroyed, and the farmer can no longer sell them as premium non-GMO crops, suffering lost value to the harvest.⁵⁰ In effect, these farmers ultimately lose their FDA certification through no fault of their own.⁵¹ This loss of certification causes the individual farmer to suffer a serious financial loss.

To illustrate the economic loss that pollen drift inflicts against the American farmer, reconsider the Fitzgerald family:

Susan Fitzgerald and her husband operate a 1,300-acre farm outside Hancock, Minnesota. [In 2006], Fitzgerald's 100 acres of organic corn showed evidence of genetic contamination, as did her neighbor's organic corn crop. The pollen had traveled more than 120 feet from another neighbor's farm. Instead of selling her organic corn for approximately \$4 a bushel, she had to sell her crop on the open market for \$1.67.52

What happened to the Fitzgerald family is not an isolated event. In fact, as part of an investigation conducted by the Wall Street Journal, twenty-two different food products that were labeled as "GMO-free" were tested, revealing that genetically modified genes had contaminated sixteen of those products.⁵³ One of the companies that tested positive for GMO contamination was Nature's Path Foods, the largest organic cereal company in the world.⁵⁴ The non-GMO food industry, as a whole, is struggling to ensure the genetic purity and integrity of their products.⁵⁵

There is an astronomical demand for GMO-free crops within the U.S.⁵⁶ as a result of a stern resistance to genetically modified foods in the U.S., Europe, and Asia.⁵⁷ In the U.S., as the demand for more organic, non-

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^{48.} Endres & Schlessinger, *supra* note 33.49. Michelle T. Friedland, *You Call That Organic? - The USDA's Misleading* Food Regulations, 13 N.Y.U. ENVTL. L.J. 379, 382-83 (2005).

^{50.} *See* Flood, *supra* note 6.

^{51.} Friedland, supra note 49, at 395.

^{52.} Ben Lilliston, Farmers Fight to Save Organic Crops, PROGRESSIVE (July 16, 2007), https://perma.cc/ZR8L-G5CU.

^{53.} *Îd*.

^{54.} Id.

^{55.} Id.

^{56.} See supra note 17.

^{57.} See Neil E. Harl, Professor of Econ., Iowa St. Univ., Opportunities & Problems in Agricultural Biotechnology at the Int'l Value-Enhanced Grains Conf.

GMO food increases, pollen drift will become an increasingly important and controversial issue.

2. Patent Infringement Liability

In addition to lost crop value, the non-GMO farmer is exposed to a second major type of harm. Unbeknownst to the farmer, if GMO pollen contaminates his crops, he may suffer liability for patent infringement claims. Genetically modified plants are granted intellectual property protections.⁵⁸ In 1970, the Plant Variety Protection Act (PVPA) created a PVPA Plant Certificate, which granted the owner of a plant some intellectual property rights but less protection than a true utility patent.⁵⁹ Shortly after the rise of the GMO industry in the 1980s, however, the United States Patent and Trademark Office (PTO) Board of Patent Appeals and Interferences decided in the 1985 case *Ex parte Hibberd* that true utility patents can be issued for all sexually reproducing plants,⁶⁰ including issuing patent protection for staple crops.⁶¹

Genetically modified (GM) seed patents in the U.S. contain licensing agreements between the owners, typically seed manufacturing companies, and their licensees, individual GMO farmers.⁶² These contractual arrangements allow for causes of action against unlicensed farmers for patent infringement, even if such infringement was caused by pollen drift.⁶³ When a patented crop releases pollen, that crop can also be found growing on adjacent land, planted there by pollen drift.⁶⁴ Genetically modified

[&]amp; Trade Show, 1 (July 23, 2001), https://perma.cc/2DT3-2C7F (reporting that an ABC News poll in June of 2001 revealed that 93% of Americans favored labeling of foods containing genetically modified ingredients and 52% believed that genetically modified foods were unhealthy).

^{58.} Elizabeth Rowe, *Patents, Genetically Modified Food, and IP Overreaching*, 64 S.M.U. L. REV. 859, 864 (2011).

^{59. 7} U.S.C. § 2402(a) (2006) (extending protection to sexually reproduced plants, which are often the largest commodity crops in the United States, such as corn, wheat, and rice).

^{60.} Plant reproduction is the process by which plants generate new individuals, or offspring. Reproduction is either sexual or asexual. Sexual reproduction is the formation of offspring by the fusion of gametes. Asexual reproduction is the formation of offspring without the fusion of gametes. Sexual reproduction results in offspring genetically different from the parents. Asexual offspring are genetically identical except for mutation. Hans Lambers, *Plant Reproductive System*, ENCYCLOPEDIA BRITANNICA, https://perma.cc/3VQB-U8A9 (last updated Nov. 17, 2017).

^{61. 227} U.S.P.Q. (BNA) 443, 443-48 (Bd. Pat. App. & Interf. 1985) (rejecting the argument that Congress intended to exclude sexually reproducing plants from 35 U.S.C. § 101).

^{62.} *See*, *e.g.*, Monsanto Co. v. Bowman, 657 F.3d 1341, 1347-48 (Fed. Cir. 2011). 63. *Id*.

^{64.} See supra text accompanying notes 26-28.

crops are basically patented art.⁶⁵ When these crops are found on the land of an unauthorized farmer, the patent owner can sue the farmer for infringement, regardless of whether the use of those patented crops was intentional.⁶⁶ The non-GMO farmer who is not paying a licensing fee to the patent holder of the GM crop is liable for patent infringement if the GM crop is found growing on his land, whether or not the infringing farmer's actions caused that seed to be growing on his land in the first place.

In these types of infringement claims, the fact that pollen drift caused the GMO plants to grow on unauthorized land is not a defense.⁶⁷ Patent infringement is a strict liability offense, meaning that the intent, negligence, or fault on the part of the infringer is irrelevant.⁶⁸ Additionally, courts have not found it relevant to these infringement claims that the GM contamination actually causes financial and legal harm to the alleged infringer by contaminating his or her conventional crop and trespassing onto his or her land.⁶⁹ Traditional infringement claims, though, allege that the patent owner-not the infringer-suffers financial harm. The language of the Patent Act of 1793, authored by Thomas Jefferson, "defined patentable subject matter as 'any new and useful art, machine, manufacture or composition of matter."⁷⁰ In these situations, the patent infringer is punished despite the lack of an intentional action to infringe, which seems contradictory to the "traditional notions of the Patent Act."71

Patent owner corporations like Monsanto frequently monitor and sue farmers using their patented crops, including non-GMO farmers who have fallen victim to their neighbor's genetic pollution or pollen drift.⁷² Between 1997 and 2010, Monsanto filed over 144 lawsuits for alleged

^{65.} Patented Art or Prior Art is everything publicly known before the invention, as shown in earlier patents and other published material. It is a barrier to obtaining a patent.

^{66.} See, e.g., Monsanto Can., Inc. v. Schmeiser, 1 S.C.R. 902, 936 (2004).

^{67.} See supra text accompanying notes 60-63.
68. 35 U.S.C. § 271(a) (2006) (omitting intent or fault as elements of patent infringement); see also Jason A. Rantanen, An Objective View of Fault in Patent Infringement, 60 AM. U. L. REV. 1575, 1590 (2011) (describing the strict liability nature of patent infringement).

^{69.} See, e.g., Organic Seed Growers & Trade Ass'n v. Monsanto Co., 851 F. Supp. 2d 544, 555 (S.D.N.Y. 2012); Schmeiser, 1 S.C.R. at 904 (ignoring any harm to the farmer in holding him liable for patent infringement).

^{70.} Jessica Lynd, Gone with the Wind: Why Even Utility Patents Cannot Fence In Self-Replicating Technologies, 62 AM. U. L. REV. 663, 668 (2013).

^{71.} Id.; see Diamond v. Chakrabarty, 447 U.S. 303, 308 (1980) (referencing Jefferson's contribution to the 1793 Act).

^{72.} Drew L. Kershen, Of Straving Crops and Patent Rights, 43 WASHBURN L.J. 575, 582-83 (2004).

patent infringement or breach of license for its seeds.⁷³ In addition to these lawsuits, over 700 infringement disputes with Monsanto have been settled outside of court.⁷⁴ Monsanto is not the only company that polices farmland in order to find infringers, regardless of intent or fault.⁷⁵ The precedent set by these patent owners and their ruthless enforcement of their intellectual property rights exposes the non-GMO farmers to additional unwanted liability. Pollen drift does not merely hurt the land and crop value of these farmers; it also creates a cause of action against them. A plethora of legal issues arises out of the pollen drift dispute.

II. ISSUE

For the farmer whose land has been contaminated, the best form of recourse may be to sue his GMO-planting neighbor for indemnity. But for the actions of his neighbor, pollen would have never polluted his land in the first place. Unfortunately for the farmer, the traditional tort regimes that control claims covering pollen drift contamination, such as trespass, nuisance, negligence, and strict liability, are often too antiquated and simple for the complex modern issue of genetic pollution and pollen drift.⁷⁶

A. Shortcomings in Tort Recovery Theories

When a neighbor has caused damage to farmland, the first course of action is to sue him for indemnity. Unfortunately, seeking recovery in court is not an easy task for the non-GMO plaintiff. Tort law typically controls land disputes between neighbors, specifically through theories of trespass, nuisance, negligence, and strict liability.⁷⁷ Examination of the requirements of each theory and application of the facts of a pollen drift claim to each theory reveals that tort law is an inefficient mechanism of recovery for the non-GMO plaintiff.

^{73.} *See* First Amended Complaint at 1-2, 46-47, Organic Seed Growers & Trade Ass'n. v. Monsanto Co., 851 F. Supp. 2d 544 (S.D.N.Y. 2012), https://perma.cc/35UY-AX5Y (seeking a declaratory judgment to prevent Monsanto's use of its aggressive patent-enforcement tactics against farmers who never intended to use patented seeds).

^{74.} See E. Freeman, Settling the Matter - Part 5, MONSANTO (Nov. 11, 2008), https://perma.cc/6EKN-E2SW (citing a Monsanto employee who stated that most farmers are willing to settle infringement claims before trial because it is more economical than fighting the allegations).

^{75.} Kershen *supra* note 72, at 583.

^{76.} Flood, supra note 6, at 476.

^{77.} Id.

1. Trespass

A trespass traditionally consists of a voluntary, intentional, or negligent act of unauthorized entry onto someone's land; it can also be the entrance of an object onto another's land.⁷⁸ A trespass can occur when a defendant did not intend the object to enter the land of another but knew that it was substantially certain to occur.⁷⁹ In Louisiana, the tort of trespass is defined as the "unlawful physical invasion of the property or possession of another."⁸⁰ Modern constructions of this theory reduce the claim to three elements: invasion or entry, causation, and harm.⁸¹ Specifically, in order to satisfy a *prima facie* trespass claim, there must be a) an invasion of the plaintiff's property; b) caused by an act of the defendant; and c) resulting damages to the plaintiff.⁸²

When applying the theory of trespass to a pollen drift dispute, there are various obstacles that a non-GMO plaintiff must surpass. One hurdle that non-GMO plaintiffs must overcome in pollen drift cases is establishing the invasion by the trespasser.⁸³ In applying the theory of trespass to pollen drift lawsuits, the plaintiff must prove that GMO pollen physically invaded his property.⁸⁴ Pollen is virtually invisible to the naked eye and easily travels long distances with just one gust of wind.⁸⁵ Because pollen is so small and impossible to contain, the non-GMO plaintiff will have a difficult time establishing fault on the part of his neighbor.⁸⁶ There are recent decisions, however, in which courts have held that a defendant who causes "small particles" or gases, no matter how small, to enter the plaintiff's property has committed a trespass, as long as actual harm has

- 81. Endres & Schlessinger, *supra* note 33, at 831.
- 82. Repp, *supra* note 8, at 600.
- 83. Endres & Schlessinger, supra note 33, at 831.

84. Repp, *supra* note 8, at 600.

- 85. Id.
- 86. Id.

^{78.} See Hoffman v. Monsanto Canada Inc., 2005 SKQB 225 (Can.), para. 127. It must be noted here that the analogy between pollen drifts and stray bulls was rejected by the Canadian court. The court argues that "these are not trespasses cases. The imposition of strict liability for the consequences of stray bulls is clearly a policy decision intended to place a heavy onus on the owners and possessors of bulls to keep these animals confined and under control." *Id.* at 132.

^{79.} Julie A. Davies & Lawrence C. Levine, *Biotechnology's Challenge to the Law of Torts*, 32 MCGEORGE L. REV. 221, 223-24 (2000) ("In the biotechnology context, if the defendant knows that it is substantially certain that seeds from her pesticide-resistant plants will find their way on to the plaintiff's property, she can be liable for trespass to land.").

^{80.} Phillips v. Town of Many, 538 So. 2d 745, 746 (La. Ct. App. 1989) (quoting Patin v. Stockstill, 315 So. 2d 868, 873 (La. Ct. App. 1975)).

occurred.⁸⁷ For the non-GMO plaintiff, this hurdle is not too difficult to overcome because that farmer will likely be able to prove that pollen has in fact entered his land due to the presence of GM crops on his land. Thus, he suffered harm as a result.⁸⁸

Proving the causation element, however, is a much more arduous task than proving invasion by the trespasser. In typical pollen drift cases, the plaintiff must prove that the GM pollen came from a particular farm, which is a difficult burden to overcome.⁸⁹ Multiple GMO farms could surround the non-GMO farm, which is usually the case. With multiple GMO farming neighbors, the plaintiff must rely on circumstantial evidence to prove causation.⁹⁰ This circumstantial evidence primarily consists of "testimony from expert witnesses who are able to show the potential drift range of GMOs; evidence of the likely drift pattern in the given atmospheric conditions; and evidence of a defendant's growing practices⁹¹ Because of the complexity of the subject matter, using expert testimony is ineffective in convincing a finder of fact that the specific defendant's crops caused the pollen drift.⁹² Ultimately, it is almost impossible to prove causation when there are dozens of surrounding farms. When the plaintiff wants to sue a particular farm, the scientific complexities of the trial increase greatly, having an onerous effect on the jury who must hear such evidence.93

If a non-GMO plaintiff can miraculously prove both the invasion and causation elements, he still must prove the actual damage element to complete a trespass claim. Perhaps the best way for a non-GMO or organic farmer to assert that he has suffered harm is through evidence of lost "non-GMO" certification of his land. If a farmer has a "GMO-free certification" of his farm, pollen drift can destroy that certification because his land is inspected annually by the USDA. The farmer then suffers, not only from the lost value to the land, but also the premium value of his non-GMO crops that were planted.⁹⁴ The actual damage element is less difficult to

- 88. Flood, supra note 6, at 485.
- 89. Repp, *supra* note 8, at 603.
- 90. Id.
- 91. Id. at 603-604.
- 92. Flood, supra note 6, at 485.
- 93. Id.
- 94. See Heald & Smith, supra note 47, at 129.

^{87.} See, e.g., Ream v. Keen, 838 P.2d 1073 (Or. 1992) (holding that smoke drifting onto the plaintiff's property constituted trespass); Martin v. Reynolds Metal Co., 342 P.2d 790 (Or. 1959) (holding that invisible fluoride particles from the defendant's aluminum plant constituted trespass); Bradley v. Am. Smelting & Ref. Co., 709 P.2d 782 (Wash. 1985) (this includes issues certified to the Washington Supreme Court such as the holding that the intentional deposit of minute arsenic and cadmium particles could constitute trespass; however, proof of actual and substantial damages is required).

prove, as long as the plaintiff can demonstrate that the pollen drift hurt the pecuniary value of his crops or land. Even so, most pollen drift trespass claims will still fail the causation element.⁹⁵

Due to the strict requirements of the causation element, as well as the scientific and factual complexities surrounding pollen drift cases, proving the causation and invasion elements of trespass can be very difficult for plaintiffs. This tort theory is insufficient to support recovery for a non-GMO plaintiff.

2. Nuisance

When the trespass theory becomes impracticable for the non-GMO plaintiff, he may try to recover under a nuisance theory. When analyzing a nuisance tort, it is important to make the distinction between a private and public nuisance. A public nuisance is a nuisance that has become so widespread and indiscriminate in its effects that it would not be reasonable to expect one person to put a stop to it; rather, the community as a whole should address the nuisance.⁹⁶ Private individuals may maintain a public nuisance claim only if they "have suffered harm of a kind different from that suffered by other members of the public"⁹⁷ Courts generally limit public nuisance claims to "unreasonable conduct that (a) significantly interferes with public health, safety, peace, or comfort; (b) is illegal; or (c) is of a continuing nature that has a significant, long-lasting effect upon the public."⁹⁸ It is unlikely that a non-GMO plaintiff will be able to recover under a public nuisance theory in a simple cross-pollination scenario between neighboring farms, since the general public does not suffer an unreasonable interference.⁹⁹ The harm in this case is confined to the farmer with the contaminated crops; thus, the doctrine of public nuisance is not applicable.100

Recovery under a private nuisance theory is largely ineffective as well. A private nuisance is a "civil wrong, based on the disturbance of rights in land," specifically the unreasonable interference with the individual's use

^{95.} See supra text accompanying notes 76-77.

^{96.} John Wightman, Nuisance – The Environmental Tort? Hunter v. Canary Wharf in the House of Lords, 61 MOD. L. REV. 870, 884 (1998); see also Restatement (Second) of Torts § 821C(2) (1979).

^{97.} A. Bryan Endres, "GMO:" Genetically Modified Organism or Gigantic Monetary Obligation? The Liability Schemes for GMO Damage in the United States and the European Union, 22 LOY. L.A. INT'L & COMP. L. REV. 453, 492 (2000) (quoting Restatement (Second) of Torts § 821C(1) (1965)).

^{98.} Endres & Schlessinger, supra note 33, at 835.

^{99.} See supra text accompanying notes 93-95.

^{100.} Endres & Schlessinger, supra note 33, at 835.

and enjoyment of his or her property.¹⁰¹ A private nuisance is an unreasonable risk of harm to the plaintiff's property.¹⁰² Private nuisance specifically refers to a condition created by the defendant, where, unlike trespass, there is no need to prove an invasion or causation element.¹⁰³ While trespass requires an act, nuisance requires an "unreasonable condition" created by the defendant.¹⁰⁴ The "unreasonableness" element of nuisance that the plaintiff must prove relates to the interference of property rights, not the conduct of the defendant.¹⁰⁵ Unreasonableness is determined by a utility balancing test in which the court will balance the magnitude of the harm of the defendant's conduct with the utility to society.¹⁰⁶

When applying the private nuisance theory to pollen drift cases, recovery is nearly impossible for a non-GMO plaintiff. In *Hoffman Canada Inc. v. Monsanto*, a Canadian case, several non-GMO farmers brought a private nuisance claim against Monsanto for alleged pollen drift harm caused by genetically engineered canola.¹⁰⁷ The court held the plaintiffs "cannot succeed in showing that the damage or interference they have alleged constitutes a legal nuisance."¹⁰⁸ Although the Canadian common law, as illustrated in *Hoffman*, has a slightly different approach to nuisance, the underlying condition giving rise to a nuisance is similar to the U.S. standards.¹⁰⁹ Jurisprudential precedent sets a large obstacle for

102. Id.

106. See Restatement (Second) of Torts §§ 826-831 (1979). Pursuant to the Restatement (Second) of Torts, the following criteria are taken into account in determining the utility of the defendant's land use: (a) the social value that the law attaches to the primary purpose of the defendant's conduct, (b) the suitability of the conduct to the character of the locality, and (c) the impracticability of preventing or avoiding the invasion. *Id.* § 828. The criteria relating to the appraisal of the harm are defined as follows: (a) the extent of the harm involved, (b) the character of the locality and (c) the social value that the law attaches to the type of use or enjoyment invaded, (d) the suitability of the use or enjoyment invaded to the character of the locality, and (e) the burden on the person harmed of avoiding the harm. *Id.* § 827.

107. See generally Hoffman Canada Inc. v. Monsanto, 2005 SKQB 225 (Can.), para. 110.

108. Id.

109. Jane Matthews Glenn, *Footloose: Civil Responsibility for GMO Gene Wandering in Canada*, 43 WASHBURN L.J. 547, 554-55 (2004) (describing nuisance in Canada as "an unreasonable interference with the use or enjoyment of

^{101.} Restatement (Second) of Torts § 821D (1979).

^{103.} See supra text accompanying note 95.

^{104.} See supra text accompanying notes 84-85.

^{105.} J.D. LEE & BARRY A. LINDAHL, MODERN TORT LAW: LIABILITY & LITIGATION § 35:9 (2d ed. 2008) (stating test from Restatement (Second) of Torts § 826 for balancing gravity of harm with defendant's utility when considering liability for intentional nuisance).

non-GMO plaintiffs to surpass when seeking a nuisance claim for a pollen drift dispute.¹¹⁰

In addition to jurisprudential barriers, the "locality test" that is present in private nuisance disputes also bars recovery for the plaintiff.¹¹¹ In pollen drift cases, the nuisance claim can only be brought in relation to interference with land use, based upon the defendant's use of the land and the character of the locality of the land in which the dispute arose.¹¹² The "locality test" is based on the "predominant land use in the geographical area concerned."¹¹³ Courts will first look to the nature of the land and then look to the defendant's use or activity on that land.¹¹⁴ If the defendant is using the land in a way that is not well suited to the "locality," then a private nuisance claim may be actionable.¹¹⁵ The issue that arises under this test is that GMO farming practices are almost always "well suited" to the locality in which these farms are located.¹¹⁶ It is very unlikely that a court will find that a GMO farm that releases pollen is not "well suited" to the land in which it sits because such land is typically found in rural, agricultural areas. Applying the locality test and the utility balancing test, no court will find that the mere practice of agriculture constitutes a nuisance.

Like a trespass claim, it is extremely difficult for a non-GMO plaintiff to establish that his GMO neighbor is engaging in a nuisance. Due to jurisprudential, statutory, and procedural hurdles, non-GMO plaintiffs are faced with an insurmountable burden in proving that they ought to recover under these traditional tort theories.

3. Strict Liability

Trespass and nuisance claims are not viable causes of action for seeking indemnity from GMO farming neighbors. Furthermore, when seeking to recover under a strict liability theory, the non-GMO plaintiff is no better off. Strict liability is a theory surrounding abnormally dangerous

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land, causing either physical damage to the land or injury to the health, comfort, or convenience of the occupier").

^{110.} Although Canadian court rulings are not "binding law" in the U.S., they are often very influential for similar U.S. cases which haven't been previously litigated.

^{111.} Endres & Schlessinger, *supra* note 33, at 839.

^{112.} *Id*.

^{113.} Id.

^{114.} *Id*.

^{115.} Restatement (Second) of Torts § 827, cmt. g (1979).

^{116.} Christopher P. Rodgers, *Liability for the Release of GMOs into the Environment: Exploring the Boundaries of Nuisance*, 62 CAMBRIDGE L.J. 371, 391 (2003).

activities.¹¹⁷ When a defendant engages in an activity of this type, the defendant is strictly liable for any harm that results, regardless of proof of fault.¹¹⁸ Some examples of abnormally dangerous activities include "storing and using explosives, spraying pesticides, spilling toxic substances, allowing the escape of sewage, and allowing the escape of noxious or poisonous gases, fumes or vapors."¹¹⁹ The underlying justification for holding a defendant strictly liable, regardless of any fault, for engaging in an abnormally hazardous activity "is that there are certain undertakings that are so inherently dangerous that fairness dictates that those engaging in them should bear the costs of harms that ensue."¹²⁰

This cause of action for the non-GMO plaintiff appears, on its face, to be a much more viable option for seeking indemnity from neighbors who are causing pollen drift. Pollen drift may be deemed an unusually dangerous hazard, such that a court may label it an abnormally dangerous activity and hold a GMO farmer strictly liable for the damage that the pollen causes.¹²¹ The Restatement (Second) of Torts provides six factors for courts to consider in assessing whether an activity is abnormally dangerous:

(a) Existence of a high degree of risk of some harm to the person, land or chattels of others; (b) likelihood that the harm that results from it will be great; (c) inability to eliminate the risk by the exercise of reasonable care; (d) extent to which the activity is not a matter of common usage; (e) inappropriateness of the activity to the place where it is carried on; and (f) extent to which its value to the community is outweighed by its dangerous attributes.¹²²

No single factor is determinative, nor do all six factors need to be present to establish that an activity is abnormally dangerous.¹²³

Very little judicial precedent involving pollen drift exists, so to illustrate the application of these strict liability factors to a pollen drift claim, the best case to analogize to is *Langan v. Valicopters*, a spray drift pesticide case.¹²⁴ In *Langan*, organic farmers sued to recover for crop damage allegedly resulting from the defendant's spraying of pesticide.¹²⁵

^{117.} Restatement (Second) of Torts § 520(a)-(f) (1965).

^{118.} Endres, *supra* note 97, at 488.

^{119.} Flood, supra note 6, at 487-88 (quoting Repp, supra note 8, at 616).

^{120.} Davies & Levine, *supra* note 79, at 226.

^{121.} Id.

^{122.} See supra text accompanying note 115.

^{123.} Restatement (Second) of Torts § 520, cmt. f (1965).

^{124.} Langan v. Valicopters, 567 P.2d 218 (Wash. 1977).

^{125.} Id. at 219.

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The plaintiff farmers pursued a strict liability cause of action, alleging that the defendant's pesticide use was an abnormally dangerous activity.¹²⁶ The court held that "it is economically damaging for an organic farmer . . . to apply nonorganic materials to his crops because he would lose [organic] certification."¹²⁷ The plaintiffs ultimately prevailed when the Washington Supreme Court applied the factors and held that the spraying of pesticides was an abnormally dangerous activity.¹²⁸

This precedent may give hope to the non-GMO plaintiff who wishes to pursue a strict liability claim by asserting that pollen drift is an abnormally dangerous activity. Although the non-GMO plaintiff could use this case to make strong arguments as to why pollen drift is an abnormally dangerous activity, there are two issues with which a non-GMO plaintiff will be faced when pursuing his strict liability claim. First, since the Langan decision, nearly thirty years ago, few courts have addressed the issue of pesticide drift as an abnormally dangerous activity.¹²⁹ In reality, the Langan decision has not "spurred a significant increase of strict liability holdings against Pesticide Drift makers and has captured only lukewarm precedential interest in other courts."¹³⁰ The second issue that a non-GMO plaintiff will be faced with is the current debate over whether GM crops are considered "living organisms" or manufactured products.¹³¹ Under Langan, "if the judge views the [GMO pollen] as a pesticide [i.e. a manufactured chemical] then the person using it will be responsible and strictly liable for its movement [onto] the property."¹³² On the other hand, if the GMO pollen is considered to be a living organism, "then the fact the GMO crop expressed itself all over the neighbor's field may not result in liability."¹³³ Pollen would likely be classified as a living thing—not as a manufactured chemical-by most courts, creating no liability under a strict liability claim.134

Based on the application of the three theories of trespass, nuisance, and strict liability, recovery after pollen drift disputes for the non-GMO

130. Id. at 405.

131. Flood, supra note 6, at 494.

132. Neil D. Hamilton, Legal Issues Shaping Society's Acceptance of Biotechnology and Genetically Modified Organisms, 6 DRAKE J. AGRIC. L. 81, 105 (2001).

133. *Id*.

134. Id.

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^{126.} *Id*.

^{127.} Id. at 222.

^{128.} Id. at 221.

^{129.} Robert F. Blomquist, *Applying Pesticides: Toward Reconceptualizing Liability to Neighbors for Crop, Livestock and Personal Damages from Agricultural Chemical Drift*, 48 OKLA. L. REV. 393, 403-408 (1995) (discussing the continued scarcity of strict liability rulings).

plaintiff in tort looks doubtful. The legal and procedural obstacles that a non-GMO farmer will face are numerous and becoming increasingly complex. For the individual farmer, it may be more economical not to sue for damages, due to the intricacy of pollen drift lawsuits. The complexities surrounding this issue have grown too large and onerous to fit within the traditional boundaries of a simple tort cause of action.¹³⁵ The non-GMO farmers are sustaining harm due to the actions of their neighbors, but when they seek a legal remedy through tort, the law falls short. To make matters worse, there are statutory barriers that make recovery for the non-GMO plaintiff even further out of reach.¹³⁶

B. The Statutory Obstacle: "Right to Farm" Laws

To exacerbate the obstacles that non-GMO farmers face when seeking indemnity for pollen drift damages, many states, including Louisiana, have passed "Right-to-Farm" laws that essentially insulate all farmers from tortious liability.¹³⁷ In Louisiana, a farmer will be protected by the "Right-to-Farm" law as long as that farmer is acting within "generally accepted agricultural practices^{"138} Right-to-Farm laws make most tort claims difficult to sustain against a farming operation¹³⁹ because it is extremely unlikely that a court will find that a farmer is acting outside "generally accepted agricultural practices" solely on the basis that his crop is emanating GMO pollen.¹⁴⁰

There are essentially two types of Right-to-Farm laws. The first type protects an agricultural operation only if it "predated the 'nuisance' or change in the nature of the surrounding area, and if it complied with any state or federal requirements (e.g., permits)."¹⁴¹ The other type of Right-to-Farm statute "is designed to prevent local and county governments from enacting regulations or ordinances that impose restrictions on normal agricultural practices."¹⁴² This type of Right-to-Farm law ensures that local governments cannot pass local laws that alter the requirements for

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^{135.} Endres & Schlessinger, *supra* note 33, at 848.

^{136.} See supra text accompanying notes 132-135; infra text accompanying notes 137-141.

^{137.} See id.

^{138.} LA. REV. STAT. ANN. § 3:3603(a) (2008).

^{139.} Endres & Schlessinger, *supra* note 33, at 840.

^{140.} *Id*.

^{141.} Id. at 839.

^{142.} Neil E. Harl, Professor of Econ., Iowa St. Univ., Biotechnology Policy: Global Economic and Legal Issues at a conference sponsored by the Lundberg Family Farms, 12 (Jan. 28, 2004), http://www.econ.iastate.edu/~harl/BiotecnologyPolicy California.pdf.

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agricultural enterprises.¹⁴³ Attempting to claim nuisance for pollen drift may be especially difficult. Pollen drifting, after all, is an entirely natural and expected process.¹⁴⁴ No unreasonable action by the farmer causes it, and it will happen even if farmers "follow all ordinances and regulations currently imposed."¹⁴⁵ This second type of Right-to-Farm statute would make it difficult to enact local legislation that would define pollen drift as a nuisance in the future.¹⁴⁶

In addition to the complexities surrounding pollen drift liability and tort recovery, statutory bars to tortious liability for agriculture worsen the likelihood of a non-GMO plaintiff being able to recover from damage caused by pollen drift.

C. No Cause of Action, No Relief

The legal and procedural hurdles that the non-GMO plaintiff must overcome are insurmountable when suing a GMO farming neighbor for pollen drift liability. The legal framework that the plaintiff must adhere to under traditional tort theories will rarely accommodate the complex nature of pollen drift disputes. It is very unlikely that a farmer will be able to recover from his neighbors through tort law because of the limitations of those theories. In addition to the insufficiencies in the tort system, there are statutory Right-to-Farm laws that further impair the non-GMO farmer's ability to recover from his neighbor. Due to all of these obstacles, filing a lawsuit in court is not a viable option for the individual farmer. There must be a better way for a farmer to recover for the damage that pollen drift has inflicted on his farmland.

III. AN IMPROVED RECOVERY MECHANISM

Recovery for pollen drift damages through the court system is nearly impossible. One solution to this issue in Louisiana is to transcend the traditional tort recovery system. If pollen drift claims were treated similarly to medical malpractice claims in Louisiana, the individual farmer would not have to file his claims in court. To illustrate this new concept, it is important to recognize the maneuverings of Louisiana medical malpractice law.

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^{143.} Endres & Schlessinger, *supra* note 33, at 839.

^{144.} Id. at 840.

^{145.} *Id*.

^{146.} Id.

A. The Unique Treatment of Louisiana Medical Malpractice Claims

In the early 1970s, there was a sharp increase in the frequency of medical malpractice claims, which gave rise to the "medical malpractice crisis."¹⁴⁷ This flood of malpractice claims placed a heavy burden on the court system to consistently render judgments for plaintiffs.¹⁴⁸ This caused many local health insurance providers to leave the state because it was "difficult if not impossible to predict future liability verdicts and thus to assess appropriate premiums that would allow a reasonable profit."¹⁴⁹ With very few remaining Louisiana insurance companies in the state, local insurance premiums soared to rates as high as 300% by 1975.¹⁵⁰ The overabundance and complex nature of these claims created judicial inefficiency in properly adjudicating medical malpractice lawsuits in Louisiana¹⁵¹

In response to this crisis, the Louisiana Legislature created a mechanism by which a health care provider can qualify for limited liability.¹⁵² The Medical Malpractice Act (MMA) established a Medical Review Panel to hear all medical malpractice claims before they are filed in court.¹⁵³ If a private health care provider qualifies under the MMA, that healthcare provider is entitled to special benefits that include limitation of liability and mandatory pre-suit review by a medical panel.¹⁵⁴ In order for a private healthcare professional to qualify for the benefits of the Medical Review Panel, he must provide an "occurrence" medical malpractice insurance policy in the amount of \$100,000 and pay a surcharge to the

- 152. LA. REV. STAT. § 40:1231.1 (2015).
 153. LA. REV. STAT. § 40:1237.1(E)(1) (2017).
- 154. Wallman v. Akin, 856 So. 2d 1217 (La. Ct. App. 2003).

^{147.} Robin S. Shapiro et al., A Survey of Sued and Nonsued Physicians and Suing Patients, 149 JAMA INTERNAL MED. 2190 (1989) (Nationally, "80% of all medical malpractice lawsuits between 1935 and 1975 were filed after 1970").

^{148.} Supplemental Memorandum in Support of Defendant's Motions for Summary Judgment at 7, Butler v. Flint Goodrich Hosp., 607 So. 2d 517 (La. 1992). In Louisiana, for those insured by St. Paul Insurance Co., payment for malpractice claims doubled from 1973 to 1974 and doubled again in 1975. The frequency of claims increased from 84 claims in 1968 to 384 claims in 1974. In 1968, there was one claim for every 20 doctors while in 1974, there was one claim for every 6 doctors. The average payout per claim increased from \$4,883. in 1968 to \$10,137. in 1974.

^{149.} FRANK M. MCCLELLAN, MEDICAL MALPRACTICE: LAW, TACTICS, & ETHICS. 79-80 (1994).

^{150.} Supplemental Memorandum in Support of Defendant's Motions for Summary Judgment at 7, Butler, 607 So. 2d 517.

^{151.} See supra text accompanying notes 122-125.

Patient's Compensation Fund.¹⁵⁵ After a healthcare professional has bought-in to the MMA and has been granted the benefits of the Medical Review Panel, his liability is limited to \$100,000, and the Patient's Compensation Fund will cover any additional damages.¹⁵⁶

The Medical Review Panel consists of three medical experts and an attorney chair to oversee procedural matters.¹⁵⁷ All medical malpractice claims are submitted to this panel before being filed in court.¹⁵⁸ The panel considers each medical malpractice claim individually and determines the standard of care that the health care provider was bound to meet.¹⁵⁹ Additionally, the panel makes a bearing on the liability of the defendant health care provider.¹⁶⁰ If the qualified healthcare provider has not met the standard of care that they owed to the plaintiff, then the Medical Review Panel assesses the liability of that provider.¹⁶¹ The Medical Review Panel operates outside of the court system to determine if a health care provider is liable for the plaintiff's harm.

B. An Alternative Form of Relief: The Agricultural Review Panel

The issues that gave rise to the medical malpractice crisis are nearly identical to those surrounding pollen drift. Local courts are not equipped to efficiently hear such issues and cannot render fair judgments for either party. The scientific and factual complexities in genetics and physics that exist in pollen drift disputes are too intricate for the average jury.¹⁶² If pollen drift is treated like medical malpractice in Louisiana, then relief for plaintiffs becomes accessible. To fix liability issues surrounding pollen drift, the Louisiana Legislature can establish an Agricultural Review Panel, just as they established the Medical Review Panel.

This new panel would operate similarly to the Medical Review Panel in the adjudication of pollen drift claims. The panel will operate like an administrative agency, settling pollen drift disputes outside of the court system. After the panel's adjudication process is exhausted, dissatisfied

^{155.} FRANK L. MARAIST & THOMAS C. GALLIGAN, JR., LOUISIANA TORT LAW § 21.03 (1996).

^{156.} See generally Randall B. Keiser, "Does This Hurt?": Constitutional Challenges of Damage Caps and the Review Panel Process in Medical Malpractice Actions in Louisiana, 51 LA. L. REV. 1233 (1991).

^{157.} LA. REV. STAT. § 40:1299.39.1(C) (2012); LA. REV. STAT. § 40:1299.47(C) (2012).

^{158.} *Id*.

^{159.} LA. REV. STAT. § 40:1299.39.1(G) (2012); LA. REV. STAT. § 40:1299.47(G) (2012).

^{160.} *Id*.

^{161.} See supra text accompanying notes 129-131.

^{162.} See supra text accompanying notes 88-89.

parties can appeal to the courts. The panel will consist of an attorney chair to handle procedural matters, as well as three experts who are equipped to analyze pollen drift claims. It will hear each pollen drift dispute on a caseby-case basis to determine the necessary facts and render any liability in favor of the non-GMO plaintiff. The panel of experts will look to see if the defendant's pollen has contaminated the plaintiff's crops and will also determine the magnitude of harm suffered by the plaintiff. The panel will make a bearing on the liability of the defendant by determining damages, if any, owed to the plaintiff due to the pollen drift caused by his defendant neighbor. This panel is unique because it operates entirely outside of the court system to solve a complex issue. It is efficient in that plaintiffs will not be restricted by narrow tort recovery theories that are not well suited to address pollen drift lawsuits.

To make this "Agricultural Review Panel" a reality, there must be a costshifting mechanism, similar to the one that exists in Louisiana medical malpractice.¹⁶³ Like qualified health care providers, farmers can buy-in to the benefits of the panel by purchasing insurance that caps liability caused by their pollen drift. The non-GMO farmers will also pay a tax to a compensation fund that is used to pay out judgments to non-GMO plaintiffs. The defendant farmers, if the panel finds them liable, will only pay a capped amount of damages to their neighbor. The Compensation Fund will cover any additional liability owed to the non-GMO plaintiff.

This mechanism has already been proven to work in Louisiana through medical malpractice suits. Staying outside of the court system is a far simpler and far less adversarial method in seeking recovery for pollen drift damages. This system will be a more efficient and effective way to address these pollen drift issues while avoiding costly trial.

CONCLUSION

As the practice of non-GMO agriculture becomes increasingly more popular within the U.S., pollen drift will become a far more frequently litigated issue. GMO agriculture and pollen drift will affect more and more plaintiffs from those farms. The traditional methods of recovery for these plaintiffs are insufficiently equipped to handle these types of cases. The plaintiffs are faced with numerous procedural and statutory bars that preclude recovery. In order to promote the practice of non-GMO agriculture, it is essential that an alternate method of recovery is created for non-GMO plaintiffs. The Agricultural Review Panel will efficiently and justly adjudicate

^{163.} See supra text accompanying notes 129-131.

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these claims as they become more frequent. If your neighbor causes harm to your land, there must be relief.

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