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Paul J. Heald

University of Georgia School of Law, heald@uga.edu

James C. Smith

University of Georgia School of Law, jim@uga.edu

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Pollen Drift

and the bystanding farmer:

Harmonizing patent law and common law on the technological frontier



By Paul J. Heald, Post Professor of Law,
and James Charles Smith, Martin Chair of Law

Farmers who do not want to plant genetically modified crops in the United States have two serious problems. First, windblown genetically modified pollen from the fields of neighboring farmers often contaminates their fields.

For example, a genetically modified corn variety named “StarLink” was planted in approximately one percent of cornfields in Iowa in 1998. By the year 2000, more than half of the fields in that state showed some signs of genetic contamination.

Because this variety was only approved by the FDA for animal consumption, products meant for humans containing the StarLink genetic material had to be recalled. Two biotech companies eventually settled one of the related StarLink suits for more than \$110 million.

Neither of the authors of this article are organic food nuts but, as commercial lawyers, we are concerned by the situation facing farmers in the United States who want to grow non-genetically modified (non-GMO) crops for buyers in jurisdictions that heavily regulate or forbid the sale of genetically modified food products, like the European Union or Japan, or who sell to purveyors of organic food products in the United States or elsewhere.

The market for non-GMO crops overseas is enormous, but it is very substantial in the United States as well. Most supermarkets have an organic section now, and major suppliers such as Gerber baby food and Frito-Lay corn chips buy only non-GMO raw materials.

Not surprisingly, non-GMO food stuffs often command a premium price. Recent studies show grocery store premiums for organic vegetables are 120 percent higher and Japanese students are willing to pay at least 33 percent more for organic soybean oil. Additionally, one recent check of the commodities market showed non-GMO corn selling for \$4 per bushel while GMO corn sold for \$1.67 per bushel.

Non-GMO farmers, however, run the constant risk of their crops being contaminated by pollen from patented genetically modified plants. If a farmer has a forward contract for non-GMO corn for sale in Europe, and her corn fields are pollinated by a neighbor’s genetically modified crop, then the farmer will have to breach her contract with the European buyer and possibly have to pay damages. At best, the anticipated premium from selling the non-GMO crop will be lost.

More importantly, the non-GMO farmer may find herself unable to sell the contaminated crop at all, because if her plants are found to contain patented cell structures claimed by the patentee of the GMO corn, then the farmer is arguably a patent infringer and selling her crop without the patentee’s permission will be fraught with risk.

This is the second problem that concerns us – the possibility that a patent on a GMO seed or pollen can be used to render bystanding non-GMO farmers liable for patent infringement when their crops are contaminated.

Although the factual problem of contamination through pollen drift is very real for non-GMO farmers, the danger posed by patent law seems far-fetched to some, given that in most areas of the law innocent bystanders have a complete defense.

Patent Law Liability

Patent law, however, is based on the concept of strict liability. If a department store sells an infringing product, for example, the store is liable whether it knew the product was infringing or not. A scientist working in her lab is guilty of patent infringement even if she has no idea the new compound she has just synthesized happens to read on the claims of an existing patent.

Although the Canadian Supreme Court ducked the innocence issue in the famous *Monsanto Canada Inc. v. Schmeiser* case¹, the court did find that a bystanding farmer could be liable for patent infringement stemming from windblown GMO pollen.

Monsanto, the world’s leading agricultural biotech corporation, providing over 90 percent of the technology for the world’s GMO crops, has been particularly active in using patent law to police anyone it finds to be growing its patented plants.

In fact, Monsanto’s lead in its industry is certainly due in part to its use of forceful investigations and prosecutions against those it suspects of patent infringement, regardless of whether such infringers are willful or are even aware of their alleged infringement.

In short, Monsanto is in the unique position of being able to take a problem that it created – the contamination of non-GMO plants by pollen drift from GMO plants – and use it to its advantage by prosecuting those bystanding farmers whose crops become contaminated.

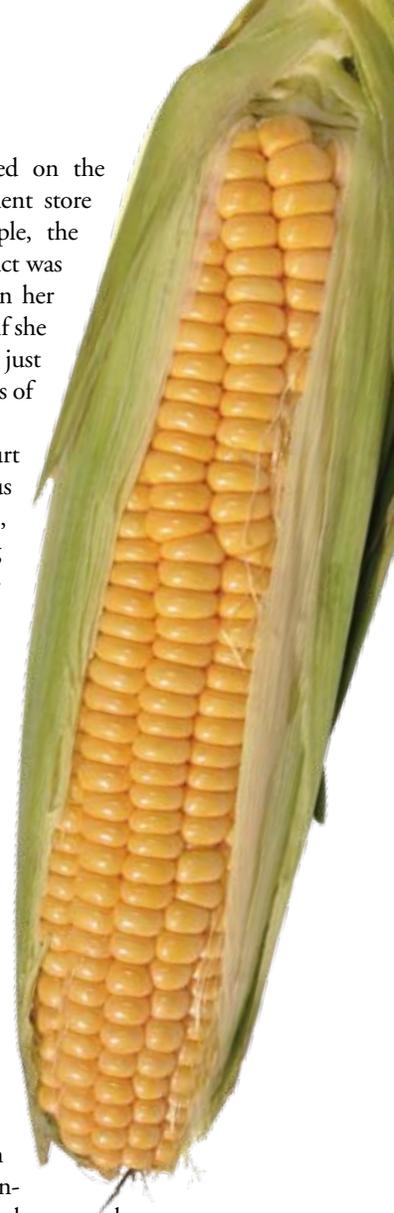
Monsanto devotes a large amount of its resources to pursuing patent infringers – the company has 75 full-time employees and \$10 million per year devoted to the prosecutions and investigations.

It is believed that actions and investigations by Monsanto against farmers number into the thousands, with most settling outside of court in confidential agreements. Generally, the company initiates between 500 and 600 new investigations each year, many of which are the result of tips called in to the company’s toll-free hotline.

There have been approximately 90 actual lawsuits filed by Monsanto involving 147 farmers and 39 farm companies in 25 different states. While Monsanto has taken the lead in plant patent litigation, farmers can be sure that other biotech companies will soon follow suit.

It is helpful to consider an actual Monsanto patent. U.S. Patent No. 6,114,610 “relates to the seeds of inbred corn line ASG27, to the plants of inbred corn line ASG27 and to methods for producing a corn plant produced by crossing the inbred line ASG27 with itself or another corn line [and] to hybrid corn seeds and plants produced by crossing the inbred line ASG27 with another corn line.”

In addition to claiming the plant, its seeds, hybrid plants and



hybrid seeds, the patent covers the pollen of the plant, the method for cross-breeding a hybrid and various gene conversions of the patented plant.

Given the broad scope of Monsanto's claims, it is relatively easy to see how a bystanding farmer might unwittingly violate the patentee's exclusive statutory rights to use, make and sell the patented invention.

If the wind blows the patented pollen onto a bystanding farmer's corn plants and those plants are pollinated, then the farmer has arguably used the pollen in violation of the Monsanto patent.

The pollinated plants would then produce hybrid seeds in potential violation of Monsanto's method patent for hybridization and its product patent for hybrid seeds.

If the plants are harvested and the hybrid seed sold, a further violation of Monsanto's right to sell the patented seeds may occur.

And, finally, if hybrid seeds are saved and replanted, a further infringing use could be alleged.

We propose two legal solutions to the plight of the bystanding farmer. The first is defensive: Identifying possible defenses to patent infringement under federal law. The second is offensive: Identifying possible causes of action against genetic polluters under state law.

Defensive Legal Solutions

The most promising defenses for the bystanding farmer are the doctrine of unclean hands, patent misuse and the ancient defense of *volenti non fit injuria*.

The unclean hands doctrine provides a defense when the alleged victim of the infringement (here the patentee) also took part in the wrongdoing (allowing the unwanted spread of patented genetic material).

As Judge Richard A. Posner of the U.S. Court of Appeals for the Seventh Circuit asserted in *Smithkline Beechum Corp. v. Apotex Corp.*: "I believe that as a matter of fundamental principle it must be an equitable defense to a charge of patent infringement that the patentee caused the infringement."²

Since the alleged wrong committed by the bystanding farmer is directly traceable to the patentee's actions, the unclean hands defense may be available.

The patent misuse defense punishes patentees who try to extend their patent beyond its lawful scope. Take, for example, the patent on "Round-Up Ready" seeds. This invention allows the farmer to plant seeds and then spray the herbicide Round-Up on the growing plants to kill weeds without harming the young crops.

One can argue that the subject of the monopoly inherent in the patent grant on Round-Up Ready seed products is farmers who want to spray Round-Up on their crops.

An organic farmer who uses no herbicides is not in the market for such seeds. It may be an act of patent misuse to attempt to extend the

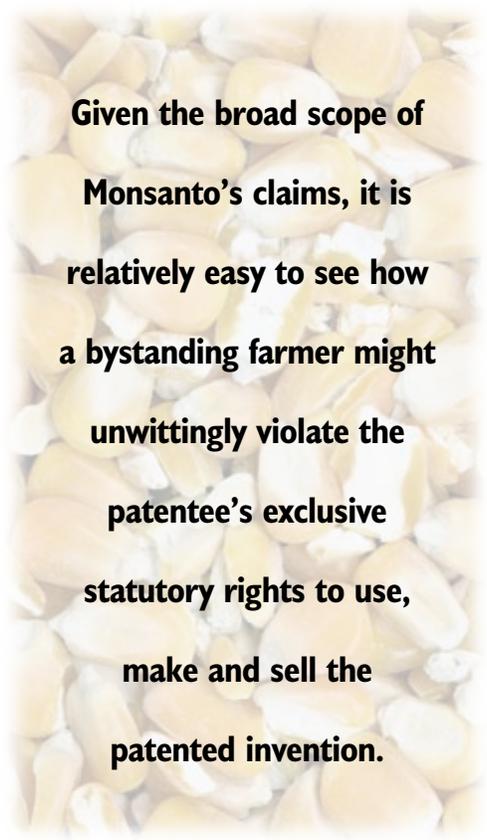
patent monopoly by suing a farmer whose organic fields have been contaminated with Round-Up Ready pollen.

Lastly, the ancient equitable defense of *volenti non fit injuria*, roughly translated as "he who suffers damage through his own fault has no right to complain of it,"³ could potentially be invoked. The doctrine denies relief to those responsible for harming their own interests.

In the case of pollen drift, a strong argument can be made that the patented genetic material has literally been cast to the winds by the patentee and its licensed distributors.

Would it not be inequitable for them to claim to be damaged by the fully anticipated natural distribution of their patented invention?

This defense has not yet been applied in a patent infringement suit, but the unique facts of the pollen drift scenario may make its application appropriate.



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Offensive Legal Solutions

State tort law is likely to grant significant protection to bystanding farmers who suffer harm when their crops are pollinated from GMO crops.

The action for private nuisance provides the most fertile ground for analysis, along with strict liability, which in this context may be viewed as a species of nuisance or as a freestanding tort.

Other tort theories having some plausibility consist of trespass to land, public nuisance, negligence and interference with personal property (trespass to goods or conversion).

Nuisance is often said to be a relative concept. It balances the gravity of the injury to the plaintiff against the utility of the defendant's conduct to arrive at a judgment as to whether a nuisance has taken place.

The defendant's conduct is found to be a nuisance if it is said to be unreasonable, considering all the facts and circumstances,

including the plaintiff's position.

Nuisance, however, has two other zones, lying on opposite sides of the balancing core. Both of these zones give us bright-line rules.

The first zone is what we might call *nuisance immunity*. Certain landowner activities are regarded as sufficiently beneficial or benign that courts virtually never castigate them as nuisances.

Second, there is the nuisance *per se* doctrine. Certain conduct, perceived as generally undesirable or high risk, is always wrongful. Nuisance *per se* is properly seen as a species of strict liability, even though many courts choose not to discuss it in those terms.

Nuisance immunity shelters different types of landowner activities, including putting up a building that blocks a neighbor's view or access to air and light or that is ugly, causing "aesthetic harm."

A line of old noxious weed cases approaches our problem of GMO pollen drift. These cases immunized owners of weed-infested properties from nuisance liability when the weeds germinated and



Martin Chair Jim Smith (left) discusses some legal issues regarding the growth of genetically modified crops with Post Professor Paul Heald. Photo by Terry Allen.

“polluted” nearby crops. In a representative case, *Harndon v. Stultz*, an Iowa court held that a farmer whose lands were “greatly damaged” by a cocklebur infestation had no cause of action.⁴

At first blush, the noxious plant cases might support immunizing the GMO crop defendants from liability. Both fact patterns involve an invasion by reproductive parts of plants: seeds and pollen.

There are, however, two critical distinctions. First, most courts that have excused the weed grower emphasized that the plants grew naturally or accidentally on the defendant’s land. The defendant did not purposely plant them. With respect to the bystander farmer, the prototypical defendant has intentionally planted the GMO crops.

Second, in the noxious plant cases, as in standard pollution cases, the defendant polluter does not assert an ownership interest in the emitted material. The polluter owned the substances prior to their escape, but abandoned them when they left the polluter’s land.

Standard pollutants like weed seeds and pollen, leaves, dirt or smoke have no value, but if a victim of pollution can “harvest the pollution,” she is free to keep the substance.

Suppose a landowner’s operations propitiously emit gold dust through the air or water, a neighbor who captures the dust will own it.

Conversely, retained ownership of a thing that enters a neighbor’s tract generally makes the owner liable for damages. This is why owners of domesticated animals are usually strictly liable when they stray

and why, in contrast, landowners are not liable if unconstrained wild animals exit their land and damage a neighbor’s land.

In the GMO pollination situation, the defendant who holds a valid patent is like the owner of straying domestic animals.

In nuisance’s large middle zone, courts and fact finders balance a number of factors to determine which party has a property entitlement.

In the 19th century, American courts departed from a view of nuisance that held a defendant liable for all substantial harms caused by its invasions. With the rise of industrialization, judges became reluctant to assess damages against emerging commercial enterprises.

The modern approach is reflected by the Restatement of Torts (Second), which calls for an evaluation of a total of eight factors bearing on the gravity of the plaintiff’s harm and the utility of the defendant’s conduct.

The restatement approach may have the virtue of being flexible and adaptable, but it does not compel any particular result in any imaginable nuisance dispute.

Such legal indeterminacy has one highly important consequence for GMO nuisance litigation. In almost every case of alleged GMO pollen damage, fact finding will be necessary. Cases will survive motions for summary judgment and proceed to the jury (or to the court as fact finder if there is no jury).



“We conclude that bystanding farmers ought to fare well in litigation with GMO patent holders and persons engaged in GMO agriculture. The ultimate goal of patent law is diversity.”

- Post Professor Paul Heald and
Martin Chair Jim Smith

Bystanding farmers are likely to assert strict liability claims against GMO defendants.

Under modern tort law, the issue turns on whether the production and use of GMO goods would constitute an “inherently dangerous” or “ultra hazardous” activity.

Pesticide drift cases provide an analogy. Two of the leading cases, one from Washington and the other from Wisconsin, reached opposite conclusions.

In the Washington case, *Langan v. Valicopters*⁵, pesticides applied by helicopter drifted across a farm boundary, falling on the plaintiff’s organic crops. The plaintiff recovered damages for the market value of the crops based on strict liability. The court emphasized that pesticide drift is unpredictable, cannot be fully controlled by the exercise of reasonable care and will cause significant harm if it contacts organic crops.

In the Wisconsin case, *Bennett v. Larsen Co.*⁶, a corn farmer sprayed his fields with pesticides to combat corn borers and earworms. The plaintiffs were beekeepers, with some of their hives located near the cornfields. The pesticide labels indicated that the product might kill honeybees in substantial numbers. This happened, but the court rejected strict liability, requiring that the beekeepers prove negligence.

Those jurisdictions that impose strict liability on pesticide applicators, like Washington, would be more likely to hold GMO producers strictly liable than those jurisdictions, like Wisconsin, that refuse to do so.

One explanation for the divergence between Washington and

Wisconsin lies in the way they view the consideration of the “common usage” factor – an activity is not “abnormally dangerous” so as to give rise to strict liability if it is “a matter of common usage.”⁷

The Wisconsin court asked whether applying pesticides is a common practice among agriculturalists in the community, but the Washington court asked whether crop dusting is a common practice among the general population in the community (like driving a car). Such jurisdictions might also diverge in their views of whether GMO farming constitutes a common practice.



Conclusion

We conclude that bystanding farmers ought to fare well in litigation with GMO patent holders and persons engaged in GMO agriculture. The ultimate goal of patent law is diversity.

As consumers, we hope to have more products to choose from because of the incentives that patent law provides.

It is not surprising, therefore, that patent law provides an impressive laundry list of defenses available to farmers who are the victims of unwanted pollen drift.

The common law here works hand-in-hand with patent law to ensure that a farmer’s choices are respected.

Strong arguments can be made that positive economic relief should be afforded to farmers who can show the value of their crop has been diminished due to pollen drift.

GMO pollen drift is a new, high-tech problem, but well-established principles of federal and state law appear prepared to offer viable low-tech solutions.

Endnotes

¹ *Monsanto Canada Inc. v. Schmeiser*, 2004 SCC 34, D.L.R. (4th) 271, 320 N.R. 201, 1 S.C.R. 902 (2004).

² *Smithkline Beechum Corp. v. Apotex Corp.*, 247 F. Supp.2d 1011, 1043 (N.D. Ill. 2003).

³ Terrence Ingman, A History of the Defence of *Volenti Non Fit Injuria*, 26 Jurid. Rev. 1, 1 (1981).

⁴ *Harndon v. Stultz*, 100 N.W. 851 (Iowa 1904).

⁵ *Langan v. Valicopters*, 567 P.2d 218 (Wash. 1977).

⁶ *Bennett v. Larsen Co.*, 348 N.W.2d 540 (Wis. 1984).

⁷ Restatement (Second) of Torts § 520(d) (1979).