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Message From the Chair

By S. Lee Johnson



Welcome to an exciting new year for the Environmental Law Section.

As chair of the Section for 2014-2015, I invite each and every member of our Section to become involved in Environmental Law Section activities, if you have not already done so. Why should you, you ask? The ELS provides many outstanding opportunities for you to get to know your colleagues in the environmental bar, learn about the latest developments, share your own ideas and information, and participate in the development of our profession.

Already this year, the Air Quality Committee has co-hosted with the Air & Waste Management Association (East & West Michigan Chapters) a very successful day-long conference on air and waste management topics at the Lansing Community College West Campus on October 28, 2014. About 150 attorneys, engineers, regulators, and students convened for panel discussions and to hear speakers from Michigan and other states discussing current events in air and waste management.

If you missed that conference, that is unfortunate, but in the coming months there will be many more events that you may enjoy, some large and some small. In fact, you may be just the right person to help plan and organize a webinar, conference, or social event. It does not have to be a large commitment of your time, but your participation is vital to the continuing success of the ELS.

The best way to get involved is through our excellent committees. Collectively, our committees cover virtually every area of interest in Michigan environmental law, including:

- Air Quality
- Environmental Litigation & Administrative Practice
- Great Lakes & Inland Waters
- Hazardous Substances & Brownfields
- Natural Resources, Energy, & Sustainability

In addition to these subject-matter committees, we have several standing committees that support our Section, including:

- Deskbook
- *Michigan Environmental Law Journal*
- Membership
- Programs
- Technology

If you have never previously been involved in any of these committees, now is the perfect time. I have called upon each and every committee to announce a conference-call meeting that is open to all members of the Section between now and December 15. Look for meeting announcements through the ELS listserv and Linked-In. If you are not already on the listserv (and if you are receiving this copy of the *Michigan Environmental Law Journal* by e-mail, you probably are on the listserv), contact ELS Administrator, Brian Figot at (248) 594-5950 or by e-mail to brian@attorneywordsmith.com for assistance.

With your help, this could be an amazing year. I am looking forward to meeting and learning from you.

SLJ

Message From the Editor



What does it mean to be “responsible for an activity causing a release”? When that term was incorporated in Part 201 of NREPA, we were told that Michigan’s analog of the federal Superfund statute now imposed cleanup liability on an owner of contaminated land only if the owner had *caused* the release of hazardous substances. The words “responsible for” always struck me as not the best choice of words to express the concept of causation. “Responsible for” might be interpreted to include a broader set of possible connections between the landowner and the activity that contaminated the land. In this issue, Jim Enright informs us about a recent decision by the Michigan Court of Appeals adopting a broad view of this key term, and advises us to watch what the Michigan Supreme Court may have to say about it.

To complement Jim’s article, we have the first and second place prize winning essays from the Section’s annual law student writing competition. Coincidentally, they both deal with food, which is important in a major agricultural state such as Michigan.

Joel Quick, our first place winner, explains how farmers who grow organic crops may be injured when pollen from patented genetically engineered crops on nearby fields drifts onto neighboring organic crops, and the organic farmer’s crop no longer qualifies as organic. The organic farmer cannot even plant seeds from his own crop without the likelihood of being sued for patent infringement by the owner of the patent for the genetically engineered crop, thanks to a 2013 decision by the U.S. Supreme Court. These results seem unfair, considering that the organic farmer in this scenario takes no active steps to infringe the patent, but passively

receives pollen blown by the wind. Joel explores the possibility that such farmers may be able to sue the patent owner for common law trespass. (By the way, this situation was the subject of the October 5, 2014, episode of CBS's *The Good Wife*, in which Alicia's firm represents a large agri-science company against a farmer who infringes the company's patent by intentionally replanting seeds from his own crop without paying tribute to the agri-science company. Watch that episode if you can; it contains some hilarious scenes that depict the differences between litigation and arbitration.)

Marya Torrez, our second place winner, thoughtfully analyzes federal laws and regulations that promote the use of ethanol, biodiesel, and other "renewable fuels" to improve energy independence and reduce greenhouse gas emissions. She questions whether these laws achieve their goals, whether they result in food shortages, and whether the entire American food system, which produces huge amounts of grain largely to feed cattle to satiate our craving for meat, is sustainable. Read her article the next time you are tempted to drive your Ford Flex to MacDonald's for a burger.

We would like to print at least two or three articles like Jim Enright's in each issue of the *Journal* and would warmly welcome an article by you. Your article doesn't have to be long; our readers prefer articles that are concise and of practical value. If you have an idea you'd like to write about, contact me at cdunsky@comcast.net or at (313) 418-0913.

Christopher J. Dunsky
Editor, *Michigan Environmental Law Journal*

Better Late than Never?—The Michigan Court of Appeals Interprets "Responsible for an Activity Causing a Release" in Part 201

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Amazingly, for 19 years after its adoption, the key liability provision of Michigan's environmental cleanup statute escaped appellate interpretation—until July 29, 2014, when the Michigan Court of Appeals issued its unpublished opinion in *Department of Natural Resources & Environment v. Strefling Oil Co.*¹ This article analyzes the Court of Appeals' decision, particularly as to issues that the Supreme Court may be called to review.²

I. From MERA to the 1994 Amendments of Part 201

In 1990, the Legislature comprehensively revised Michigan's environmental cleanup statute,

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¹ Docket number [314336](#) (Jul 29, 2014). The majority and dissenting opinions also are available on the State Bar of Michigan [website](#).

² The *Strefling Oil* court also decided issues of statute of limitations, recovery of attorney fees, and payment of administrative penalties that are not covered in this article. Application for leave to appeal has been filed and is [pending](#).

commonly referred to as Act 307 or the Michigan Environmental Response Act (MERA).³ A key MERA provision identified the classes of persons liable to pay the costs of investigating and cleaning up environmental contamination. Among these were owners and operators of a facility⁴ who were any of the following:

- (a) The owner or operator of the facility.
- (b) The owner or operator of the facility at the time of disposal of a hazardous substance.
- (c) The owner or operator of the facility since the time of disposal of a hazardous substance not included in subdivision (a) or (b).⁵

Thus, these liable persons included those at the time of the disposal of a hazardous substance and all subsequent owners or operators of the same property, regardless of their acts or omissions, and subject only to certain defenses. Michigan environmental lawyers practicing while that liability scheme was in effect will recall its negative effect on commerce and the perception by landowners who had never handled the substances involved that the law unfairly held them liable.

In time, MERA became Part 201,⁶ retaining the same liability scheme, and soon after, Part 201 was substantially amended.⁷ Describing that amendment of the liability scheme, the Michigan Environmental Law Deskbook explains:

Part 201 moved the liability line: if a person is responsible for "an activity causing a release," then that person is liable. If a person is not responsible for an activity causing a release, and the person acquired the property before June 5, 1995, then the person is not liable. . . . In other words, Part 201 generally imposes status-based liability—liability irrespective of causation—on owners and operators who become an owner or operator after June 5, 1995, without conducting a BEA; *it imposes causation-based liability on other categories of owners and operators.*⁸

Specifically, the Part 201 amendment in 1995 tied liability of the owner or operator of a facility to being "responsible for an activity causing a release or threat of release."⁹

Until the *Strefling Oil* decision, no Michigan appellate court had examined how much the liability line had moved.

³ Michigan adopted its original Environmental Response Act in 1982, P.A. 307, and substantially amended it in 1990 P.A. 233 (eff. Jul 1, 1991), codified at former [MCL 299.601](#) *et seq.* (repealed by P.A. 1994, No. 451, eff Mar 30, 1995). Here, "MERA" means the statute resulting from the 1990 amendment.

⁴ MERA defined "facility" as "any area, place, or property where a hazardous substance has been released, deposited, stored, disposed of, or otherwise comes to be located." Former MCL 299.603(m).

⁵ Former MCL 299.612(1)(a)–(c).

⁶ The 1994 recodification of Michigan's environmental and resource statutes into the Natural Resources and Environmental Protection Act (NREPA, [1994 P.A. 451](#)) repealed MERA (former MCL 299.601 *et seq.*) and in its place enacted NREPA Part 201, titled "Environmental Remediation" ([MCL 324.20101](#) *et seq.*).

⁷ 1995 P.A. 71, effective Jun 5, 1995.

⁸ Michigan Environmental Law Deskbook (the Deskbook), [sec. 5.3](#) (emphasis added).

⁹ MCL 324.20126(1)(a) and (b).

II. The *Strefling Oil* Ruling Generally

Strefling Oil concerned the liability of multiple related owners and operators of underground storage tanks (USTs) at three locations that leaked petroleum substances.¹⁰ As of 1986 or before, Strefling Oil Co. owned and used the USTs. Strefling Real Estate, Inc. owned two of the three real properties involved and, as of 1990, David Strefling owned the third real property.¹¹ Over the period 1994–2001, the USTs released or leaked petroleum products, and Strefling Oil reported these to the state. The state was not satisfied with the response activity and sued Strefling Oil and the two property owners in 2011, winning summary disposition in the trial court.¹²

On appeal, the Court of Appeals affirmed. As to the UST owner/operator, the Court of Appeals held that Strefling Oil’s ownership, operation, filling, and use of the USTs made it responsible for an activity causing a release of petroleum product, and therefore, liable under MCL 324.20126 for releases at the facilities.¹³ As to the real property owners, the Court of Appeals held that their knowledge of the operation of the USTs on their properties (due to the property owners’ extensive involvement in the oil business) was sufficient to make them accountable for activities related to the tanks, such that their knowledge and their power to control tank usage rendered them responsible under the statute.

Michigan environmental lawyers can well imagine that the liability stemmed from an all too typical situation in which the UST operators or owners filled and operated leaking tanks, either without adequately monitoring for leaks or ignoring the monitoring results, and that the property owners knew of those activities and either directed or benefitted from them, or at least decided not to stop them. But that’s not what the opinion of the two-judge majority in *Strefling Oil* described.

III. The Majority’s Reasoning

The majority set about interpreting “responsible for an activity causing a release” by first determining that these words are unambiguous and, therefore, may be interpreted without reliance on non-binding authorities. In pointing out that “our Legislature did not limit NREPA liability to owners or operators who caused a release or threat of release,” the majority simply assured that the statute’s words—“responsible for an activity . . .”—are not ignored. The majority also stated: “nor did our Legislature limit liability to owners or operators who were responsible for *the* activity that caused *the* release at issue” (emphasis in original), which simply recognized that the words of the statute are “*an* activity” and “*a* release” (emphasis added). Next, however, the majority’s logic made an unanticipated leap.

¹⁰ To clarify, NREPA’s Part 213 (MCL (324.21301-324.21334) governs response to leaking USTs. At times, it has used the same liability test as Part 201, including directly referring to the Part 201 standard or using essentially the same words. Thus, the *Strefling Oil* court ruled on Part 213 liability using the liability test stated in Part 201. Accordingly, the *Strefling Oil* decision is germane to liability under both Parts 201 and 213. One difference between Parts 201 and 213 is that Part 213 liability includes an additional group of liable parties, *i.e.*, persons owning the UST involved (such as Strefling Oil Co.), in addition to Part 201’s coverage of persons owning land or operating there.

¹¹ *Strefling Oil Co*, *supra*, n.1, at p 1.

¹² *Id.* at pp 1-2.

¹³ *Id.* p 5.

Strefling Oil Company had argued that the government failed to establish that Strefling Oil's activities caused a release, specifically, that "it is equally likely that a prior owner, or operator of the USTs on one of the properties caused the release of the hazardous substances." In response, the majority wrote:

This statement misconstrues plaintiff's burden. As previously discussed in this opinion, plaintiff was not required to prove that a specific activity caused the releases at issue in this case. To hold Strefling Oil liable, plaintiff was required to present undisputed facts that Strefling Oil was responsible for *an* activity that caused *a* release or threat of release. Plaintiff fulfilled this burden. Strefling Oil does not dispute that it filled and used the tanks at each site. The use of the tanks rendered Strefling Oil responsible for the tanks and responsible for releases of petroleum products from the tanks."¹⁴

Thus, even if the release at issue occurred due to some prior owner's activities of filling and using the tanks, the fact that Strefling Oil later conducted the same activities, with or without causing a release, rendered Strefling Oil liable. Here, the majority overtly de-coupled "responsible for an activity" from "an activity causing a release"—that is, even if someone else's activity caused the release, Strefling Oil was liable if it was responsible for the same kind of activity at a later date. Under this interpretation, Strefling Oil could be liable even if its activities did not cause the release; therefore, in reference to the Deskbook, the Part 201 liability line has probably not moved as far as "causation-based liability."¹⁵

The majority went on to analyze whether the real property owners were liable under Part 201. The majority found that the record established that the owners "had sufficient knowledge of the operation of underground storage tanks on their properties to render them accountable for activities related to those tanks," deriving from their "extensive involvement . . . in the oil business," which the court then detailed. When the property owners argued that imposing such liability on the basis of knowledge was akin to imposing strict liability, the majority responded that the owners were not "isolated real property owners" but instead were "familiar" with the fuel business, the purpose of USTs and their contents, and had control over when and how the operator's employees entered the property to operate the tanks. The majority concluded that:

This power, control, and knowledge renders them responsible under the statute. The activities for which Ronald Strefling and Frieda Strefling were responsible include activities causing a threat of release. In other words, the use of underground storage

¹⁴ *Id.*, p 5 (emphasis in original).

¹⁵ A plausible alternative interpretation of the express wording of the liability provision is that liability falls on owners and operators, perhaps on numerous owners and operators, who may have been responsible for any of a variety of activities, each of which caused a release at the property at issue. That would be consistent with a legislative intent to replace MERA's strict status-based liability for owners and operators with an actual causation requirement but, in recognition of the large and complex multi-defendant landfill cleanups and industrial site cleanups that were still a significant component of the Part 201 program in 1995, it made clear that liability could arise from numerous possible activities having a causal relationship to a release. It further provided a sort of legal backstop for asserting that multiple defendants engaged in multiple activities could have joint and several liability for a combined release. Such an interpretation would not, however, allow liability to extend to a defendant whose responsibility for an activity was decoupled from causation of a release.

tanks on their property may reasonably have been anticipated to have caused a release of petroleum products into the soil. Accordingly, the record supports the imposition of liability”¹⁶

Curiously, the majority did not mention whether the owners knew that the tanks leaked or had a specific reason to suspect they did, or that the owners failed to measure the tank contents to detect leakage or perhaps knew that the contents were not being measured. Further, the majority did not mention any information about whether USTs have a propensity to leak or whether the USTs at issue were known or suspected to be leaking before the releases were reported. Without their saying so, the majority’s conclusion appears to rely on a presumption that USTs leak or, at least, that knowledgeable people in the fuel business are charged with knowing that, as to any UST, there is an actionable risk that it leaks.¹⁷

In summary, after the Court of Appeals decision in *Strefling Oil*, the practitioner who wants to know whether a facility owner or operator, or UST owner/operator, is “responsible for an activity causing a release or threat of release” would:

- (a) Review the definition of “release” at [MCL 324.20101\(mm\)](#);
- (b) Evaluate whether the owner or operator conducted an activity that caused a release or threat of release, or was the same as an activity that, when conducted by someone else, caused a release or threat of release; and
- (c) If a UST is involved, review whether the UST owner or operator had knowledge or industry experience and may reasonably anticipate that the UST would have a release.

IV. The *Strefling Oil* Concurrence and Dissent

The third judge on the panel issued a separate opinion that concurred in part and dissented in part, specifically, concurring in all but the part of the decision holding the property owners liable. The heart of the dissent was that “a landowner’s mere allowance of the normal operation of underground storage tanks on his property is insufficient by itself to impose liability under Part 213 of the NREPA.”¹⁸ In detail, the dissent disagreed with the majority in that (1) the knowledge and familiarity relied on by the majority do not constitute an “activity” giving rise to liability, and (2) merely permitting the tanks on the property did not cause a release or threat of release, while operation of the tanks did. The dissenter viewed the majority’s ruling as “equivalent to saying that just because one knows how underground storage tanks operate, one is responsible for any release from underground storage tanks on one’s property—even if one did not operate the tanks.”¹⁹ Further, the dissent states that:

[T]his means that the *only* way [the landowners] could avoid liability for a potential release was to outright prohibit the operation of the underground storage tanks on their land And, since it is clear from the statute’s plain language that a causation rather

¹⁶ *Strefling Oil Co, supra*, n.1, at p 6.

¹⁷ Use of a presumption in favor of the state would appear to run afoul of another Part 201 provision, that “In establishing liability under this section, the department bears the burden of proof.” MCL [324.20126\(6\)](#).

¹⁸ *Strefling Oil Co, supra*, n.1 (Murray, P.J., concurring in part, dissenting in part) at p 1.

¹⁹ *Id.* at 2.

than strict liability standard governs, the majority's interpretation runs afoul of the very canon of statutory construction it purports to apply.²⁰

In so many words, the dissenter recognized that the majority's position amounted to a presumption that USTs leak. Then the dissenter stated that "one final point is in order":

[A]lthough Part 201's unambiguous language renders recourse to legislative history unnecessary, it bears emphasis that the language at issue . . . amended the prior strict or status based liability standard of [MERA]. The prior standard, known as the 'polluter's [sic] pay' law, provided in pertinent part that an owner of a facility was liable 'if there is a release or threatened release from a facility that causes the incurrence of response activity costs The status-based liability which this plain language imposed was clear, and under *that* framework landowners like Ronald Strefling and SREI would have been strictly liable for the release or threat of release at issue. The applicable language of Part 201 simply does not admit to this interpretation.²¹

One has to wonder why the dissenter included his final point, including his express "emphasis" on legislative history, if not out of concern that the majority opinion might have come too close to reviving strict liability under Part 201.

V. Onward and Upward

The defendants sought leave to appeal to the Michigan Supreme Court. If leave is granted, perhaps the Supreme Court's review will turn on whether there was a dispute of some material fact that made summary disposition improper, or on an aspect of the Court of Appeals' decision not covered in this article, such as the statute of limitations issue. Perhaps the Supreme Court will decide that the lower courts reached the right result and will approve the reasoning of the Court of Appeals' majority. Or perhaps the Supreme Court will respond to the 19-year absence of appellate rulings before *Strefling Oil* and to the division within the Court of Appeals panel by making its own thorough examination of Part 201's liability text—without, or perhaps with, extrinsic evidence of the Legislature's intent.

²⁰ *Id.* at p 2 (emphasis in original) (footnote & citations omitted).

²¹ *Id.* at p 3.

Does *Bowman v. Monsanto* Provide a Basis for Common-Law Trespass Suits Against Genetically Engineered Crop Producers for Organic Crop Contamination?

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Introduction

In 2013, the U.S. Supreme Court decided *Bowman v. Monsanto Co.* (*Bowman*), a case involving a dispute between a farmer and a genetically engineered (GE) seed company.¹ The farmer had purchased soybeans from a grain elevator and after planting them, rather than consuming them, took advantage of the patented GE seed technology that the seeds exhibited.² The Court held that replanted seeds with the patented technology are reproduced inventions and subject to patent protection.³ The argument presented here is that this narrow holding could lead to the liability of GE crop producers for the negligent trespass of their patented products onto organic farms. The focus is on organic farmers because, as explored further below, they are injured by the presence of GE crops on their property.

Organic farmers are in the business of growing and selling crops that are grown with natural and traditional techniques.⁴ Conventional farming in the U.S. and around the world increasingly involves the use of genetically engineered crops that are often bred to accompany certain herbicides.⁵ Organic farmers, on the other hand, are required by consumer demand and regulation to avoid the use of GE crops.⁶ In deciding *Monsanto Co. v. Geertson Seed Farms* (*Geertson*), the U.S. Supreme Court explicitly recognized that organic seed purveyors were harmed when organic crops were contaminated through cross-pollination with GE crops.⁷ The Court also recognized that this is a harm that they “will suffer even if their crops are not actually infected” due to expenses caused by the danger of contamination.⁸ At present, the organic food industry has received no relief for this harm from federal regulatory agencies.⁹ Organic farmers might find relief in state courts through common law suits for negligent trespass against GE crop producing companies that continue to retain complete control over the propagation of their patented products. This means of relief is superior to some others because it is relatively immediate and narrowly tailored.

The analysis below will be split into three sections, two of which are structured around elements of negligent trespass set forth in the Restatement (Second) of Torts § 165. For these

¹ *Bowman v. Monsanto*, 133 S. Ct. 1761; 185 L. Ed. 2d 931; reh den 134 S. Ct. 24 (2013).

² *Bowman*, 133 S. Ct. at 1765.

³ *Id.* at 1769.

⁴ United States Department of Agriculture (USDA), [National Organic Program](#) (accessed on Jun 21, 2014).

⁵ Clive James, Chair, ISAAA Board of Directors, Executive Summary, Global Status of Commercialized Biotech/GM Crops: 2012, ISAAA Brief 44-2012, ISAAA (2012).

⁶ [7 CFR § 205.2](#), (definition of “Excluded methods”).

⁷ *Monsanto v. Geertson Seed Farms*, 561 U.S. 139, 152–54; 130 S. Ct. 2743, 2754–55; 177 L. Ed. 2d 461 (2010).

⁸ *Id.* at 2754-2755.

⁹ Lisa J. Bunin, Ph.D., [USDA Policy Fails to Address GMO Contamination of Organic Crops](#), Center for Food Safety (Feb 24, 2014) (accessed Jun 21, 2014).

purposes, the elements are (1) harm to the property or something on the property of another (2) caused by something you own (3) that entered the other person's property through your negligence.¹⁰ The first section describes the harms that crop contamination causes organic farmers by building on injuries recognized in *Geertson*,¹¹ then briefly covers why other legal remedies are either unlikely to emerge or less immediate. The second section explains how, based on *Bowman*, producers of GE crops negligently cause their property or property under their control to enter the land of organic farmers.¹² The third section explores negligent trespass in this new context as a potential means of relief for organic farmers.

I. Harms to Organic Farmers through Crop Contamination

Organic farmers and their allies have, in recent years, filed suit against GE crop producers and the regulators who certify the use of GE crops.¹³ The specific harms claimed in these cases relate to contamination of organic crops by GE crop genes through cross-pollination. At some level of contamination, whether intentional or inadvertent, an organic crop with modified genes becomes what in common parlance is called a genetically modified organism or a GMO. As the Supreme Court recognized in *Geertson*, it is certain that the seeds of plants with any level of GE crop contamination are of no use to organic farmers because these are certain to produce GMO crops.¹⁴ There is an open question as to whether an accidentally contaminated crop is in fact organic, and another question as to whether it is a GMO. The United States Department of Agriculture (USDA), the federal agency in charge of organic certification, has stated that organic crops contaminated through no fault of the organic farmer are still considered organic.¹⁵ The European Union (EU) concedes that this rule is acceptable up to a certain level of contamination (0.9%).¹⁶ This is not the end of the inquiry, however, because many organic food consumers do not want to purchase GMO food. As a result, the organic industry has developed third-party tests for GMO content and accompanying "Non-GMO" labels.¹⁷ This "Non-GMO" testing method uses the same threshold as the EU standard.¹⁸ While this testing for contamination benefits consumers who can purchase what they choose to eat, the results are potentially devastating for organic farmers who, through no fault of their own, could find themselves with no market for their product. Further, the genes in these GMO crops

¹⁰ Restatement Torts, 2d, § 165 "One who recklessly or negligently, or as a result of an abnormally dangerous activity, enters land in the possession of another or causes a thing or third person so to enter is subject to liability to the possessor if, but only if, his presence or the presence of the thing or the third person upon the land causes harm to the land, to the possessor, or to a thing or a third person in whose security the possessor has a legally protected interest."

¹¹ *Geertson*, *supra* note 7, 561 U.S. at 152-154.

¹² *Bowman*, *supra* note 1, 133 S. Ct. at 1764.

¹³ See [Organic Seed Growers and Trade Ass'n. v. Monsanto](#), 718 F.3d 1350 (Fed Cir, 2013) cert den 134 S. Ct. 901 (2014); [Center for Food Safety v. Vilsack](#), 718 F.3d 829 (9th Cir, 2013); *Geertson*, 561 U.S. 139.

¹⁴ *Geertson*, 561 U.S. at 152-54.

¹⁵ Miles McEvoy, Deputy Administrator, USDA, [Policy Memorandum](#), Apr 15, 2011 (accessed Jun 21, 2014).

¹⁶ European Union, [Press Release, Organic Food: New Regulation to foster the further development of Europe's organic food sector](#), Jun 12, 2007 (accessed Jun 21, 2014).

¹⁷ Non GMO Project, [The "Non-GMO Project Verified" Seal](#) (accessed Jun 21, 2014).

¹⁸ *Geertson*, *supra* note 7, 561 U.S. at 152-54.

are patented, which has caused organic farmers to openly question their rightful ownership of crops after contamination.¹⁹

The harms to organic farmers can be summed up in a few sentences. If organic farmers plant seeds with even trace amounts of GE content then their product is not organic.²⁰ Organic farmers are unlikely to save money by replanting their own seeds unless they can test them for GMO content because of the danger of contamination. The process of obtaining pure “Non-GMO” seeds is a recognized expense of organic farmers and organic seed purveyors.²¹ In fact, the more market the GE crop producers capture and the more GE crop types they produce, the more difficult and expensive non-contaminated seeds may become. Organic seed purveyors must pay to screen their cautiously-sourced seeds to assure that no crossbreeding with GE crops has occurred in order to access organic markets.²² Any harvested crop with GE content may no longer be marketable as “organic,” depending on the market it enters, especially if it is contaminated beyond 0.9%. If a third-party testing facility screening organic food as “Non-GMO” for secondary food processors discovers GMO content, the previously unaware farmers could lose entire crops and experience damage to their business reputation. Finally, if the production of a crop type becomes too expensive, the contamination may destroy the entire market for a product that would otherwise meet consumer demand.

While resorting to a common law remedy to address these harms may seem administratively inefficient, federal regulation has not provided relief for organic farmers experiencing crop contamination. The legal literature relating to organic crop contamination either focuses on the inadequacy of the current regulatory scheme,²³ or assumes such inadequacy and proposes

¹⁹ *Organic Seed Growers*, *supra* note 13, 718 F.3d at 1360.

²⁰ Policy Memorandum, *supra* note 15.

²¹ *Geertson*, *supra* note 7, 561 U.S. at 152–154.

²² *Id.*

²³ The following list is not meant to be comprehensive but is, rather, representative of recent law journal literature written about inadequate GE crop regulation and proposing regulatory changes: Laurie J. Beyranevand, [Forging Toward Coexistence](#), 91 Neb L Rev 767 (2013) (Arguing that the USDA appointed AC21 needs to accomplish its goal of setting out a means toward coexistence between organic farmers and GE crop growers); Rebecca M. Bratspies, Conference on Agriculture and Food Systems: September 28, 2012: Is Anyone Regulating? The Curious. State of GMO Governance in the United States, 37 Vt L Rev 923 (2013) (Arguing for a comprehensive and transparent regulatory system for GE crops); Margaret Sova McCabe, Superweeds and suspect seeds: Does the Genetically-Engineered Crop Deregulation Process put American Agriculture at Risk? 1 U. Balt J Land & Dev 109 (2012) (Argues for an increase in scrutiny through a regulatory science approach to GE crop deregulation); Debra M. Strauss, The Role of Courts, Agencies, and Congress in GMOs: A Multilateral Approach to Ensuring the Safety of the Food Supply, 48 Idaho L Rev 267 (2012) (Argues for a national comprehensive overhaul of the GE crop regulatory process that involves people in the industry); Maria R. Lee-Muramoto, Reforming the “Uncoordinated” Framework for Regulation of Biotechnology, 17 Drake J Agric L 311 (2012) (Argues for increased scientific scrutiny of biotechnology and increasing on-market monitoring and coordination between regulatory agencies); Comment, [Turning Over a New Sprout](#): Promoting Agricultural Health by Fostering the Coexistence of Organic and Genetically Modified Crops in the Wake of *Monsanto Co. v. Geertson Seed Farms and the Deregulation of Modified Alfalfa*, 61 Emory LJ 1241, 1273–1285 (2012) (Recommends an overhaul of APHIS to give it more regulatory authority and the ability to adjudicate disputes and an overhaul of the Plant Protection Act); Emily Montgomery, [Genetically Modified Plants and Regulatory Loopholes and Weaknesses Under the Plant Protection Act](#), 37 Vt L Rev 351 (2012) (Arguing for an expansion of the power of APHIS to fill in gaps in regulation); Debra M. Strauss, Spring 2011 Food

specific legal corrections to, or a supplementing of, the federal regulatory regime.²⁴ Scholarly arguments have been made for specific corrections, including agency coordination and comprehensive overhaul of the regulatory system through new legislation.²⁵ Some authors suggest thorough and regular testing of GE crops, and increased scientific rigor in the deregulation process.²⁶ A committee set up by the USDA, the AC21, recommended in 2012 that organic farmers buy “crop insurance” in the event that GE crops contaminate their organic crops, showing that the USDA has no immediate plans to address GE crop gene spread.²⁷ The crop insurance solution to the problem has been criticized as misguided and unfair in placing the burden for crop contamination on the innocent party.²⁸

This regulatory failure is how common law challenges to organic crop contamination become a viable option,²⁹ but there is still a question of which common law cause of action could best

and Agricultural Law Symposium: Achieving the Food Safety Mandate: Bringing the USDA to the Table, 33 Hamline J Pub L & Pol'y 1 (2011) (Proposes comprehensive government action and ultimately strengthening the USDA so it can achieve its food safety mandate); Katharine Van Tassell, The Introduction of Biotech Foods to the Tort System: Creating a New Duty to Identify, 72 U Cin L Rev 1645 (2004) (One of many articles arguing that GE crops should be labeled for consumers in the U.S.).

²⁴ The following list is not meant to be comprehensive but is, rather, representative of the recent law journal literature discussing GE crop containment strategies outside of the federal regulatory system: Maria Gabriela Balboa, Legal Framework to Secure the Benefits while Controlling the Risks of Genetically Modified Foods: A Comparison of the Cartagena Protocol and Three National Approaches, 31 Temp J Sci Tech & Envtl L 255 (2012) (Looks at the international Cartagena Protocol as a regulatory system and relates this to the laws of the US, Canada, and Argentina); Note, [Statutory Stones and Regulatory Mortar](#): Using Negligence Per Se to Mend the Wall Between Farmers Growing Genetically Engineered Crops and Their Neighbors, 67 Wash & Lee L Rev 653, 676–677 (2010) (Uses Negligence Per Se as a solution to organic crops being contaminated); Doug Farquhar & Liz Meyer, [State Authority to Regulate Biotechnology Under the Federal Coordinated Framework](#), 12 Drake J Agric L 439 (2007) (Addresses what powers states may have to regulate agriculture given recent cases declaring federal preemption); A. Bryan Endres, Coexistence Strategies in a Biotech World: Exploring Statutory Grower Protections, 13 Mo Envtl L & Pol'y Rev 206 (2006) (Looks at potential statutory language that may be able to protect organic farmers); Note, [Legal Liability in the Wake of Starlink](#): Who Pays in the End?, 7 Drake J Agric L 241, 264 (2002) (Recommending holding GE crop producers strictly liable for their products).

²⁵ Strauss, The Role of Courts, Agencies, and Congress in GMOs, *supra* note 23 (Argues for a national comprehensive overhaul of the GE crop regulatory process that involves people in the industry); Lee-Muramoto, *supra* note 23 (Argues for increased scientific scrutiny of biotechnology and increasing on-market monitoring and coordination between regulatory agencies); Strauss, Achieving the Food Safety Mandate: Bringing the USDA to the Table, *supra* note 23 (Proposes comprehensive government action and ultimately strengthening the USDA so it can achieve its food safety mandate).

²⁶ Bratspies, *supra* note 23 (Arguing for a comprehensive and transparent regulatory system for GE crops); McCabe, *supra* note 23 (Argues for an increase in scrutiny through a “regulatory science” approach GE crop deregulation but less strict than the “precautionary principle” that the EU uses); Comment, *supra* note 23 (Suggestions include continuing the monitoring of plants by APHIS, the creation of an APHIS adjudicative arm, and revising the Plant Protection Act to account for economic damages).

²⁷ USDA, Enhancing Coexistence: A Report of the AC21 to the Secretary of Agriculture (2012) (As of Jun 21, 2014 the official “Coexistence Rule” had not been released by the USDA).

²⁸ Bunin, *supra* note 9; National Organic Coalition, [Press Release](#), National Organic Coalition Condemns Misguided USDA Advisory Committee's Biotechnology Report and Recommendations (accessed on Jun 21, 2014).

²⁹ While there are other potential options besides federal regulation and common law suits (see generally, *supra* note 24), many require federal or state legislation and all are beyond the scope of this paper. Local measures such

provide a remedy. Some legal scholars have considered lawsuits for nuisance or trespass against neighboring conventional farmers that use GE crops.³⁰ This remedy is unlikely to succeed due to social pressures against suing neighbors and causation problems in determining the field from which the pollen arrived.³¹ Many common law actions against GE crop producers, such as public nuisance, are undercut by the position of the USDA that GE crops are safe to grow.³² While some authors have suggested strict product liability as an option,³³ others have noted that asking a court to hold GE crop producers strictly liable for agency-approved, widely consumed products is unlikely to succeed.³⁴ Even private nuisance causes of action created by noxious weed statutes are limited by the USDA's determination that GE crops are safe for planting and therefore not "noxious."³⁵ Also, while private nuisance suits against GE crop producers have been upheld for escape of *unapproved* GE crops,³⁶ suits against GE crop producers for *approved* crops might be limited by contracts with the neighboring farmer.³⁷ The reason that a trespass action would not also be limited by contract is due to the nature of the patent protection granted in *Bowman*.

II. Trespass by GE Crop Producers

The U.S. Constitution grants Congress the power to give patent holders an exclusive right to their inventions for a limited time.³⁸ Patent holders of self-replicating GE crops,³⁹ such as

as bans on GE crops are unlikely to be nationally viable given the support of the USDA and many scientists for these crops).

³⁰ The following list is not meant to be comprehensive, but, rather, is a representation of articles discussing the liability of neighbors who grow GE crops: Paul J. Heald & James Charles Smith, *The Problem of Social Cost in a Genetically Modified Age*, 58 *Hastings LJ* 87, 126–134 (2006) (Recommending a nuisance action against neighboring farmers growing GE crops as the solution based on the Coase theorem); Stephen M. Scanlon, *Should Missouri Farmers of Genetically Modified Crops be held liable for Genetic Drift and Cross Pollination?*, 10 *Mo Env'tl L & Pol'y Rev* 1, 6–8 (2003) (Determining that trespass is unlikely because intangible nature of pollen); Adam W. Jones, *What Liability of Growing Genetically Engineered Crops?*, 7 *Drake J Agric L* 621, 636 (2002) (Assuming trespass action would be against neighbor would likely rely on the spread of pollen); Comment, *Biotech Pollution: Assessing Liability for Genetically Modified Crop Production and Genetic Drift*, 36 *Idaho L Rev* 585 (2000) (Looks at the potential liability theories for GE crop growers regarding their neighbors).

³¹ Gregory N. Mandel, *The Future of Biotechnology Litigation and Adjudication*, 23 *Pace Env'tl L Rev* 83, 100, n 87 (Winter 2005–2006) (Asserting that traditional trespass is unlikely to succeed given the nature of pollen).

³² *Enhancing Coexistence*, *supra* note 25, at 15.

³³ (These articles are not meant to be a complete list, they generally describe legal theories related to strict liability for growing GE crops) Michael Faurea & Andri Wibisana, *Liability for Damage Caused by GMOs: an Economic Perspective*, 23 *Geo Int'l Env'tl L Rev* (2010) (Economic analysis of product liability for GMO's as genetic contaminants that includes GMO producers and farmers); Roger A. McEowen, *Legal Issues Related to the Use and Ownership of Genetically Modified Organisms*, 43 *Washburn LJ* 611, 624–25 (2004) (Covers a range of contract and common law issues surrounding GE crop use, the cited section specifically looks at strict liability).

³⁴ Paul J. Heald & James Charles Smith, *supra* note 30, at 624–625; Note: [Pollen Drift and Potential Causes of Action](#), 28 *Iowa J Corp L* 473, 496 (2003) (Discussing how strict liability is unlikely to be granted by the court).

³⁵ *Center for Food Safety*, *supra* note 13, 718 F.3d at 840–841; McEowen, *supra* note 33 at 618–619.

³⁶ *In re StarLink Corn Products Liab. Litig.*, 212 F. Supp. 2d 828 (N.D. Ill., 2002) ("Residue from a product drifting across property lines presents a typical nuisance claim. All parties who substantially contribute . . . are liable").

³⁷ Thomas P. Redick & Christina G. Bernstein, *Nuisance Law and the Prevention of "Genetic Pollution": Declining a Dinner Date with Damocles*, 30 *ELR* 10328, 10330 (2000).

³⁸ [U.S. Const., art I, § 8, cl 8](#).

Monsanto Co., have vigorously defended their patents in court against uncompensated use.⁴⁰ *Bowman* is, in some ways, the culmination of many cases filed to stop conventional farmers from using GE crop technology outside of a license agreement.⁴¹ The reason that federal courts had to scrutinize this particular topic at all is because of the unique nature of agriculture in American law, specifically the legal protections afforded to creators of new kinds of agricultural crops. Before the advent of modern genetic engineering, plant patents were based on the Plant Variety Protection Act of 1970 (PVPA),⁴² which had an exemption that allowed farmers to replant and even resell some seeds, should they so choose.⁴³ This rule, however, does not apply to plants that are protected by GE crop “utility” patents.⁴⁴ The details of this utility patent protection for GE crops needs further exploration to see how the *Bowman* decision could give GE crop producers responsibility for crop contamination on organic farms.

In *Monsanto v. McFarling*, Monsanto, a producer of GE crops, argued that its licenses applied to second-generation crops as part of the “field of use” of the first generation of crops.⁴⁵ The Federal Circuit rejected this argument but held that second generation crops were basically identical to first generation crops,⁴⁶ and that there was no need to consider an extension of the patent because “the . . . patent would read on all generations of soybeans produced.”⁴⁷ This argument was similar to the argument accepted in *Bowman*, that the farmer had not “used” the product, but had “reproduced” the patented invention.⁴⁸ The Supreme Court held that the patents of GE crop producers were not exhausted by resale or replanting.⁴⁹ The Court also rejected the argument that the mere possibility of natural replication without human assistance could limit the reach of the patent.⁵⁰ While the holding in *Bowman* is narrow, the holding does give GE crop producers full-control over GE crop propagation.

³⁹ While it is possible to genetically engineer agricultural crops that do not self-replicate the technology is not in commercial use. See Monsanto, [Myth: Monsanto Sells Terminator Seeds](#) (accessed on Jun 21, 2014).

⁴⁰ A few examples of these types of suits are: *Bowman*, *supra* note 1, 133 S. Ct. 1761; [NC Farmers' Assistance Fund v. Monsanto](#), 740 F. Supp. 2d 694 (M.D.N.C., 2010) (Lawsuit over replanting of seeds with Monsanto's patented technology in them, held to be a patent violation); [Monsanto v. David](#), 516 F.3d 1009 (Fed. Cir, 2008) (Lawsuit over replanting of seeds with Monsanto's patented technology in them, determined to be a patent violation); [Monsanto v. McFarling](#), 363 F.3d 1336 (Fed Cir, 2004) subsequent app den 488 F.3d at 973 (Fed Cir, 2007), cert den 128 S. Ct. 871 (2008) (Farmer replanted seeds with Monsanto's patented technology in them, the subsequent appeal was due to a change in the patent, but held that the action was still a patent violation) [Monsanto v. Scruggs](#), 459 F.3d 1328 (Fed. Cir., 2006) (Farmer who never signed license agreement and saved seeds was in violation of Monsanto's patents).

⁴¹ See *Id.*

⁴² [7 U.S.C. 2321 et seq.](#)

⁴³ [Asgrow Seed v. Winterboer](#), 513 U.S. 179, 185–86; 115 S. Ct. 788, 792; 130 L. Ed. 2d 682 (1995) (Discussion of the PVPA); [7 USC 2543](#) (Right-to-save-seed provision).

⁴⁴ [J.E.M. Ag Supply v. Pioneer Hi-Bred Int'l](#), 534 U.S. 124, 143; 122 S. Ct. 593, 604–605; 151 L. Ed. 2d 508 (2001).

⁴⁵ *McFarling*, *supra* note 40, 363 F.3d at 1342 (Farmer saved and replanted patented seeds).

⁴⁶ *Id.* at 1338.

⁴⁷ *Id.* at 1343.

⁴⁸ *Bowman*, *supra* note 1, 133 S. Ct. at 1766–1767.

⁴⁹ *Id.*

⁵⁰ *Id.* at 1768-1769.

Shortly after *Bowman* was decided, the Federal Circuit, in *Organic Seed Growers and Trade Ass'n. v. Monsanto (Organic Seed Growers)*, conducted a *de novo* review of a request for a declaratory judgment that Monsanto could not sue organic farmers for an unintentional patent violation.⁵¹ Monsanto had disclaimed ever filing a suit for “inadvertent infringement” of its patents, but did not disclaim ownership of minimally contaminated crops.⁵² The organic farmers requested that the Federal Circuit answer a question that the *Bowman* Court had declined to address, specifically whether inadvertent contamination constituted a patent violation.⁵³ The Federal Circuit assumed, without deciding, that “using or selling windblown seeds would infringe any patents covering those seeds, regardless of whether the alleged infringer intended to benefit from the patented technology.”⁵⁴ The Federal Circuit, however, took the fears of litigiousness brought by the organic farmers seriously and hinged case dismissal on the fact that Monsanto was estopped from suing for trace amounts of contamination (1.0% or less) due to the binding nature of Monsanto’s own statements in court.⁵⁵ However unlikely such a suit from a GE crop producer may be, Federal Circuit case law pointed to no limit on patent protection for inadvertent or *de minimis* infringement.⁵⁶

A few legal scholars have analyzed the possibility of organic farmers bringing trespass actions for GE pollen drift or crop contamination.⁵⁷ In fact, a class action suit was brought in Canada on behalf of all organic farmers alleging, among other things, trespass of GE crops.⁵⁸ One Canadian scholar argued that the court wrongly decided that the GE crop producers were too indirectly related to be liable for trespass, noting that “natural and inevitable” consequences are part of common law trespass.⁵⁹ On the other hand, as the author noted, the generalized nature of the complaint was problematic in a way that a particularized trespass would not be.⁶⁰

The question then is, whether *Bowman* indicates sufficient control and ownership over GE crops to make GE crop producers liable. The Supreme Court found that GE crop producers properly set the terms and conditions for use of their products, regardless of where they are located.⁶¹ The Court also found that Monsanto had a patent on both the plants and their

⁵¹ *Organic Seed Growers*, *supra* note 13, 718 F.3d at 1353.

⁵² *Id.* at 1358.

⁵³ *Bowman*, *supra* note 1, 133 S. Ct. at 1769.

⁵⁴ *Organic Seed Growers*, *supra* note 13, 718 F.3d at 1356.

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ Jeremy de Beer, *Biotrespass*, 27 Bull Sci Tech & Soc’y 287 (2007); McEowen, *supra* note 33 at 618–21; Note, *supra* note 36 at 497; Note, *Legal Liability*, *supra* note 24 at 257–58; see Mandel, *supra* note 31 at 95–96 (Asserting that trespass to chattels may become a viable source of litigation); Shené Mitchell, *Organic Crops, Genetic Drift, and Commingling: Theories of Remedy and Defense*, 18 Drake J Agric L 313, 323 (2013) (Stating that genetic contamination could lead to a trespass action); Christian B. Miller, [Honey Get My Gun](#), the Transgenic Seeds are in the Field Again, 11 J Marshall Rev Intell Prop L 439, 454 (2011) (Asserting that a trespass action for unwanted GMOs on property is possible for organic farmers).

⁵⁸ *Hoffman v. Monsanto Canada*, [2005] 7 WWR 665, at 98–133 (Discussing trespass and nuisance and determining that trespass is not sufficient because Monsanto solely marketed and sold the product).

⁵⁹ de Beer, *supra* note 57, at 292.

⁶⁰ *Id.* at 290.

⁶¹ *Bowman*, *supra* note 1, 133 S. Ct. at 1767–1768.

progeny.⁶² It can fairly be said that GE crop producers have categorically withheld the privilege to further propagate plants bearing the patented gene technology without a license.⁶³ Monsanto, for example, holds patents on everything from the genes to cells to the entire body of the plant, a scope that arguably includes the pollen.⁶⁴ Therefore, if GE crop producers, and not neighboring farmers, control the plant propagation, the GE crop producers should be the negligently trespassing party. To understand why a GE crop producer, of necessity, cannot disclaim control or ownership of crop propagation through a contract with a conventional farmer requires only a look at the similarities between what the farmer in *Bowman* did and what an organic farmer with contaminated crops does. Both harvest crops that may hold patented material, both discover that the crops do have patented material in them, and both are beholden to buy new seeds rather than reusing seeds to grow new crops. The difference is that Mr. Bowman schemed for the crops to be present on his farm, while the organic farmer is being burdened with the presence of crops on his/her property.⁶⁵

III. The Legal Basis for Negligent Trespass Claims

Negligent trespass is, among other things, causing something to enter land in possession of another, if the presence of the thing causes harm to the land or to something on the land in which the possessor holds an interest.⁶⁶ There are two common law formats for negligent trespass that relate to the organic farmers' situation. One has to do with the trespass of pollen or seeds travelling across a property boundary, which could also be framed as nuisance.⁶⁷ The other covers things like cattle trespass, and relates to the certainty or likelihood of the invasion of property by the property of another.⁶⁸ The doctrine of cattle trespass includes laws of "trespass to chattels," which, in this context, would be damage to property in which the landowner has an interest that is on, but separate from, the land.

GE crop producers not only know that their crops spread their patented genes, but they also acknowledge that they will continue to do so in certain circumstances.⁶⁹ The argument that "cattle trespass" should be actionable for GE crop escape has been made based on Canadian law,⁷⁰ but it is a stronger argument under American law. This is because the U.S. Supreme Court has affirmed plant utility patent holders' ownership of the entire plant, its subparts and its progeny, whereas the Canadian Supreme Court only recognized the patent on the genes within

⁶² *Id.* at 1767.

⁶³ *Id.*

⁶⁴ [Monsanto v. Bowman](#), 657 F.3d 1341, 1344 (Fed Cir, 2011).

⁶⁵ *Geertson*, *supra* note 7, 561 U.S. at 154.

⁶⁶ Restatement Torts, 2d, § 165; [Rockwell Int'l v. Wilhite](#), 143 S.W.3d 604, 620 (Ky Ct App, 2003) (Company's PCB contamination into stream and thereby onto plaintiff's property was negligent trespass).

⁶⁷ Heald & Smith, *supra* note 36, at 134–138.

⁶⁸ de Beer, *supra* note 57, at 290, 295; see [King v. Blue Mountain Forest Ass'n](#), 100 N.H. 212, 216–217; 123 A.2d 151, 154–55 (1956) (Explaining that cattle trespass is the exception to negligent trespass in New Hampshire).

⁶⁹ *Organic Seed Growers*, *supra* note 13, 718 F.3d 1350, 1357.

⁷⁰ Katie Black & James Wishart, Containing the GMO Genie: Cattle Trespass and the Rights and Responsibilities of Biotechnology Owners, 46 Osgoode Hall LJ 397 (2008).

the plant.⁷¹ The U.S. Supreme Court has also already recognized the harms to the organic industry from GE crop gene contamination.⁷² The action for trespass, equivalent to cattle or tree trespass,⁷³ would be based on cases recognizing that contamination is a known effect of producing GE crops,⁷⁴ that contamination creates legally-cognizable harms to organic farmers,⁷⁵ and that GE crop producers, and not conventional farmers, have control over crop propagation and own any crops or crop parts with their technology in them that they can then license the use of to farmers.⁷⁶

State law in the United States relating to “cattle trespass” is split between common law and open-range doctrines.⁷⁷ Generally speaking, open-range states require that adjoining farmers fence-out cattle, whereas common-law states require that the owners fence-in their cattle or be held strictly liable.⁷⁸ Open range states do hold a person liable for a likely trespass of cattle onto fenced land, as the U.S. Supreme Court stated “[t]he ordinary rule that a man is bound to contemplate the natural and probable consequences of his own act would [still] apply.”⁷⁹ Michigan follows the common law rule and finds strict liability for cattle trespass regardless of negligence on the part of the cattle owner.⁸⁰ GE crop escape would clearly not fall under state statutes covering “cattle trespass,” but the trespass is similar in nature.⁸¹ The analogy of cattle trespass to GE crop trespass goes beyond the fact of owned property predictably causing property damage to the type of property damage. A specific damage often caused by cattle trespass is the loss of a pure breed due to an escaped bull inseminating a neighbor’s livestock, leading to a lowering in the value of the cattle themselves, their offspring, or both.⁸² This damage is similar to the damage caused by contamination of organic crops, a corruption of the landowner’s property by the property of another. Further, the contaminated crops could potentially contaminate another generation of plants if they remain on the land. State courts

⁷¹ *Bowman*, *supra* note 1, 133 S. Ct. at 1767–68; *J.E.M. Ag Supply*, *supra* note 44, 534 U.S. at 141–144; *cf.* *Monsanto Canada v. Schmeiser*, [2004] 1 SCR 902, at para.17 (“Monsanto did not claim protection for the genetically modified plant itself, but rather for the genes and the modified cells that make up the plant.”).

⁷² *Geertson*, *supra* note 7, 130 S. Ct. at 2755–2756.

⁷³ *de Beer*, *supra* note 57, at 295.

⁷⁴ *Geertson*, *supra* note 7, 561 U.S. at 154–55.

⁷⁵ *Id.*

⁷⁶ *Bowman*, *supra* note 1, 133 S. Ct. at 1766.

⁷⁷ *Madrid v. Zenchiku Land & Livestock*, 310 Mont. 491, 494–495; 51 P.3d 1137, 1139–1140 (2002) (Explaining at length, the statutory schemes for cattle trespass in different jurisdictions).

⁷⁸ *Id.*

⁷⁹ *Lazarus v. Phelps*, 152 U.S. 81, 85–86; 14 S. Ct. 477, 478; 38 L. Ed. 363 (1894) (Affirming that an adjoining property owner who overstocked his land was required to pay for the pasture on the neighboring land used by his cattle).

⁸⁰ *Johnson v. Robinson*, 11 Mich. App. 707, 709; 162 N.W.2d 161, 162 (1968).

⁸¹ See *Snow v. City of Columbia*, 305 S.C. 544, 552–545; 409 S.E.2d 797, 801–803 (S.C. Ct. App. 1991) (Stating that just because a trespass doesn’t fall under the cattle trespass statutes of the state does not mean it is not a trespass).

⁸² See *Fuchser v. Jacobson*, 205 Neb. 786, 790–791; 290 N.W.2d 449, 452 (1980) (trespassing bull ruined breed leading to damages); *Hall v. Umiker*, 87 S.D. 362, 364–365; 209 N.W.2d 361, 362–63 (1973) (same); *Madison v. Hood*, 207 Iowa 495, 499–500; 223 N.W. 178, 179–180 (1929) (same); *Fringer v. Venema*, 26 Wis. 2d 366, 376–376a; 132 N.W.2d 565, 571–572; reh’g den 133 N.W.2d 809 (1965) (same).

have also long recognized that growing crops can be chattels or *fructus industrials*, and not part of the land itself.⁸³ The Michigan Supreme Court, for example, found that a contract for a crop preceded a sale of land, that the crop was personal property or chattel and not part of the real estate that passed to the new owner (even though the deed made no mention of the contract), and that the owner of the wheat could lawfully enter the property and collect the crop.⁸⁴

The contamination of another person's chattels brings us, in turn, to the question of who owns the chattel or crops after such contamination and to another format for claiming negligent trespass. Based on *Bowman*, a plant containing patented material is the property of the GE crop producers for them to license the use of to conventional farmers.⁸⁵ Therefore, the contaminated crops are arguably the property the GE crop producers. If an organic farmer planted a seed with no patented genes and harvested a plant with patented genes, then the harvested plant could be seen as trespassing property. In *Organic Seed Growers*, Monsanto's own statement clearly implied that any seeds with "trace amounts of our traits" were their property.⁸⁶ Further, it would be difficult for Monsanto to deny ownership of any second-generation crop with their patented genes given that it just won a Supreme Court case declaring that eight generations of plants with their patented genes in them were their property.⁸⁷ If *Bowman* were an isolated case it might be distinguishable, but Monsanto has had 144 cases and 700 settlements arguing that succeeding generations are their property.⁸⁸ In addition, an attempt by any GE crop producer to refuse to claim plants with *de minimis* genes could cause potential problems for the larger patent system.⁸⁹ Finally, GE crop producers may not want a "pollination" loophole in their patent protection, given the legal expense they have undertaken to close loopholes used by farmers who tried to use this argument to forego paying for their seeds.⁹⁰

The two formats for claiming trespass in this context are now clear: either the contaminated crop is the rightful property of a GE crop producer that is trespassing on an organic farm and posing a threat to future crops, or pollen containing patented gene technology is trespassing and causing damage to organic crops. Pollen spread is critical to plant propagation and falls under the umbrella of activities over which GE crop producers have retained control. In either case, GE crop producers cannot easily say they have no control over the situation or don't own the crops, and they likely would not want to.

⁸³ See *Blough v. Steffens*, 349 Mich.365, 374; 84 N.W.2d 854, 858 (1957) (corn sold by oral agreement separate from sold land); *Brittain v. McKay*, 23 NC 265, 268 (1840) (growing corn is chattel and not part of the land); *Cannon v. Mathews*, 75 Ark. 336, 337; 87 SW 428, 429 (1905) (same, regarding strawberries); *Bjornson v. Rostad*, 30 SD 40, 47-49; 137 NW 567, 567-68 (1912) (same regarding crops generally); *Davis v. McFarlane*, 37 Cal 634, 636-37 (Cal, 1869)(same); *Carson v. Browder*, 70 Tenn 701, 702 (1879) (same).

⁸⁴ *Kroh v. Dobson*, 324 Mich. 384, 388; 37 N.W.2d 144, 145-146 (1949).

⁸⁵ *Bowman*, *supra* note 1, 133 S. Ct. at 1765.

⁸⁶ *Organic Seed Growers*, *supra* note 13, 718 F.3d at 1358.

⁸⁷ *Bowman*, *supra* note 1, 133 S. Ct. at 1765.

⁸⁸ *Organic Seed Growers*, *supra* note 13, 718 F.3d at 1353.

⁸⁹ *Id.* at 1356.

⁹⁰ *Bowman*, *supra* note 1, 133 S. Ct. at 1767-68.

The question remains, though, of whether organic farmers would bring a trespass suit against GE crop producers. Contaminated organic crops leave organic farmers with a hard choice between informing their customers who expect Non-GMO food that they have none, and risking their business reputation by selling their produce as “organic” to consumers or food processors that assume that organic food is Non-GMO food. The option of receiving damages for contamination gives these farmers both a just remedy and the ability to maintain their integrity as businesspeople. Further, contaminated organic crops may still be salable as conventional crops at a lower price, which could offset some damages. The organic farmers who joined in *Organic Seed Growers* seem to fear a patent lawsuit for owning crops with trace amounts of patented genes.⁹¹ Such a countersuit, which GE crop producers have disavowed, is unlikely and irrational for any GE crop producers who wish for a wider embrace in the global marketplace. If a GE crop producer claimed an organic farmer’s accidentally contaminated product was infringing on its patent, it could lead to a sea change in public opinion against GE crop producers worldwide. The idea that, due to GE crop contamination, companies could lay claim to backyard vegetables would also cause quite a stir in the United States. The reaction by other nations, already hesitant to adopt this technology, could be a complete ban on such crops. The much more likely reason that Monsanto refused to provide a covenant to never file suit for inadvertently present trace amounts of their patented genes is because it did not want any kind of loophole regarding second-generation GE crops.⁹² This adherence by GE crop producers to absolute control over their crops only strengthens claims of trespass. Finally, if GE crop producers do, in fact, intend to lay claim to crops incidentally contaminated through pollen spread, then their clear articulation of this fact in court should be made so the public can ask for legislative relief.

If GE crop producers are liable to organic farmers for negligent trespass, there is still an issue regarding what remedy organic farmers can expect. The remedy for trespass will likely be determined on a case-by-case basis. Ideally, the relief could include an injunction against the GE crop producer in the case of repeated or widespread contamination; but it will likely be limited to damages based on the severity and extent of the harm to the organic farmer. Michigan courts have used a market value or diminution in value test to determine the remedy for property damage.⁹³ Some damages might be small, such as the costs of sourcing seeds internationally instead of sourcing them locally or saving seeds. Other damages could be large, such as the costs of being precluded from selling in certain countries or to certain food processors. In some cases, the loss may be the costs of an entire crop, or the value of an entire business, lost due to crop contamination. In order to win a case like this, organic farmers would have to show that the seeds planted were pure; but the standard testing practices for GE content already in use should suffice for this proof. There is little incentive for people to misuse this relief given the hurdles to become organically certified and the fact that it would only be available after the harm has occurred. There is also the chance that contamination cases might settle quickly or be worked out in alternative dispute resolution. A long series of lawsuits

⁹¹ *Organic Seed Growers*, *supra* note 13, 718 F.3d at 1359.

⁹² *Id.* at 1357 (noting that Monsanto Co. did not give a covenant not to sue).

⁹³ [Price v. High Pointe Oil](#), 493 Mich. 238, 244-245, 828 N.W.2d 660, 664 (2013).

fighting against an easily-proven externality of a product could be expensive for GE crop producers and further damage the brand reputation of companies with products that are already unwelcome in some areas.

Conclusion

The courts may soon decide if organic farmers can obtain relief for crop contamination. GE crop producers have the advantage of selling both seeds and the herbicides that accompany them, but protecting this market advantage may soon cause them to bear some of the costs that their products are currently shifting to organic farmers. Organic farmers may recognize this potential avenue of relief in the wake of the *Bowman* decision. While there is still no potential remedy for expenses due to the possibility of crop contamination, there may be relief for proven contamination of organic crops. Given the inadequacies of federal regulation to fairly facilitate the coexistence of organic and GE crops, the administration of disputes arising from failures in this federal policy could be shifted to state courts to be decided on the basis on centuries-old trespass laws.

Hungry for Fuel: Do U.S. Laws Governing Biofuels Ensure a Sustainable Food System?

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Introduction

At the end of the twentieth century and in the early years of the twenty-first century, world policymakers and advocates touted liquid biofuels as an alternative to fossil fuels that would address climate change and promote domestic energy independence.¹ However, much of the hype diminished when concerns about the environmental and social justice impacts of liquid biofuel production came to light.² Some biofuels, including corn ethanol, the most ubiquitous biofuel produced in Michigan and throughout the United States, may emit even more greenhouse gas (GHG) emissions than traditional fossil fuels over their lifecycle.³ Moreover, production of food crops for biofuels has the potential to compete with food supplies, both directly when products such as corn, soy and sugarcane are used for fuel instead of food, and indirectly when farmers use agricultural land to grow crops for fuel production rather than for

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¹ See, e.g., Worldwatch Institute, *Biofuels for Transportation: Global Potential and Implications for Sustainable Agriculture and Energy in the 21st Century*, Extended Summary of Report for the German Federal Ministry of Food Agriculture and Consumer Protection (Washington, DC 2006); Rabago, *Review of Barriers to Biofuel Market Development in the United States*, A, 2 *Envtl Energy Pol J* 211, 214-15 (2007).

² See, e.g., Endres, *Clearing the air: the meta-standard approach to ensuring biofuels environmental and social sustainability*, 28 *Va Env'tl L J* 73 (2010).

³ See Searchinger *et al.*, *Use of U.S. Croplands for biofuels increases greenhouse gases through emissions from land-use change*, 319 *Science* 1238 (2008); Hertel *et al.*, *Effects of U.S. maize ethanol on global land use and greenhouse gas emissions: estimating market-mediated responses*, 60 *BioScience* 223 (2010); Wang, Wu & Huo, *Life-cycle energy and greenhouse gas emission impacts of different corn ethanol plant types*, 2 *Env'tl Res Lett* 1 (2007).

any array of food products.⁴ These concerns led the public, policymakers and non-governmental organizations to raise concerns about the growing push for biofuel production and to urge a move toward alternatives that would increase food security.⁵

While numerous commentators have questioned the use of corn for fuel, implying that the same corn would otherwise be used for food, few have truly examined the wider use of corn and whether the food system itself is sustainable. Since most corn not used for ethanol is used to feed animals who are then turned into food—a use that raises its own environmental and food justice problems—the failure to look at the food system more holistically ignores the true issue. This essay examines how the U.S. Congress has attempted to ensure food security in laws governing biofuels and how government agencies have implemented those laws. This essay also questions whether existing law does enough to ensure a sustainable biofuel system and to limit the impact on food security. Part I explores the history of the conflict between these objectives in the United States. Part II looks at some of the laws governing biofuel use and production and how those laws have attempted to move the United States toward more sustainable biofuel options and to minimize the impact on food security. Part III explores how regulators and administrators have implemented those laws and discusses whether the efforts to limit fuel/food conflicts have been successful. Finally, Part IV looks at our food system more broadly and asks whether the use of food for fuel is the real issue, or whether the debate is a symptom of a larger issue of food sustainability in the United States.

I. Turning Corn into Fuel: Biofuel Production in the United States and Food Security

The term biofuel can refer to any biological matter that is used as fuel. Worldwide, people have used biofuels for cooking and other purposes for centuries.⁶ For this reason, the United Nations Food and Agriculture Organization (FAO) has suggested that liquid biofuels made from cultivated agricultural products such as corn should be called agrofuels.⁷ This paper, nevertheless, refers to them as biofuels, or liquid biofuels as they are commonly known. The two most common types of liquid biofuel are ethanol, which is alcohol made from plant sugars, and biodiesel, which is a liquid fuel produced from plant oils.⁸ Worldwide, most biofuel production takes place in the United States, Brazil, and Europe.⁹ Brazil has been very successful in replacing fossil fuels with ethanol made from sugarcane.¹⁰ Many European countries use plant oils to create biodiesel.¹¹ As noted above, the most common form of biofuel in the United States is ethanol made from corn, which accounts for more than ninety percent of U.S. biofuel

⁴ See, e.g., Hartman, *The Renewable fuel standard: food versus fuel?*, 65 Me L R 525 (2013); Lamb, Rogers & L. Geyer, *Adding biofuel to the fire: a sustainability perspective on energy policy in the 2008 food, conservation, and energy act*, 9 Sustain Dev L Pol 36 (2008); Msangi & Ewing, *Food, feed, or fuel: examining linkages between biofuels and agricultural market economies*, 9 Geo J Intl Aff 17 (2008).

⁵ See, e.g., Endres, *supra* note 2, at 75-76.

⁶ See FAO Right to Food Team, [Right to Food and Bioenergy](#) (2007) (accessed Jun 10, 2014).

⁷ *Id.*

⁸ Worldwatch Institute, *supra* note 1, at 4.

⁹ *Id.* at 5-6.

¹⁰ United Nations Environment Programme, *Towards Sustainable Production and Use of Resources: Assessing Biofuels 15* (Nairobi: 2009) [hereinafter UNEP].

¹¹ *Id.*

production.¹² About forty percent of corn grown in the United States is turned into fuel.¹³ In Michigan, producers use twenty-eight percent of the corn grown to make ethanol.¹⁴ Michigan currently has five operational corn ethanol facilities and six more that are in various stages of permitting and/or construction.¹⁵

Concerns about food crops being used for fuel and the potential impact on food availability and cost became particularly acute after the global food shortages of 2007-2008.¹⁶ According to FAO, “liquid biofuel production has indeed contributed and is in the near future likely to continue to weaken the access to adequate food or to the resources by which vulnerable people can feed themselves.”¹⁷ The U.S. Environmental Protection Agency (EPA) has similarly concluded that, as farmers divert land from other food crops to produce biofuel crops, and as more soy and corn are used to produce biofuel and less for animal feed, food prices will increase approximately \$10 per person per year by 2022.¹⁸ Climate change is likely to exacerbate these issues. The United Nations Environment Programme notes that climate change has already led to decreased crop yields throughout the world.¹⁹

Whether and to what extent biofuel production impacts food prices is a matter of debate, and various studies have reached different results.²⁰ Additionally, despite its potentially negative impact on food availability, liquid biofuel production also has the potential to improve the livelihoods of low-income farmers by increasing food and crop prices.²¹ Nevertheless, policymakers have become increasingly aware of the “food versus fuel” conflict.

In recent years, the search for alternative fuels has turned to so-called advanced or second-generation biofuels produced from non-food sources and food production waste. Most promising are cellulosic biofuels made from “prairie grasses and fast-growing woody crops such as hybrid poplar and willow trees, as well as waste biomass materials (logging residues, wood processing mill residues, urban wood wastes, and selected agricultural residues such as sugar cane bagasse and rice straw).”²² Some “cellulosic feedstock, such as native prairie grasses (*e.g.*, switchgrass), appear to offer environmental benefits over corn-based ethanol because they

¹² USDA Economic Research Service, [U.S. Bioenergy Statistics](#) (accessed Apr 24, 2014); Farber, [Indirect Land Use Change, Uncertainty, and Biofuels, Policy](#), U Ill L R 381 (2011) (accessed Nov 30, 2014).

¹³ USDA Economic Research, *supra* note 12 (Feedstocks: Table 5 - Corn supply, disappearance and share of corn used for ethanol).

¹⁴ See Michigan Corn, [FAQ](#), (accessed Jun 9, 2014).

¹⁵ See Michigan Department of Agriculture and Rural Development, [The New Bio Economy: Corn-Based Ethanol Plants](#), (accessed Jun 10, 2014).

¹⁶ See, *e.g.*, Stubbs, Cong. Research Serv., RL 31340, Renewable Energy Programs in the 2008 Farm Bill (2010).

¹⁷ Asbjørn Eide, Food and Agriculture Organization of the United Nations, *The Right to Food and the Impact of Liquid Biofuels (Agrofuels) 4* (Rome: 2008).

¹⁸ EPA, “Renewable Fuel Standard Program (RFS2) Regulatory Impact Analysis,” Assessment and Standards Division, Office of Transportation and Air Quality, EPA-420-R-10-006, February 2010, 881-886, 888.

¹⁹ UNEP, *supra* note 10, at 16.

²⁰ See, *e.g.*, Hartman, *supra* note 4, at 527-528.

²¹ See, *e.g.*, Worldwatch Institute, *supra* note 1, at 14.

²² Stubbs, *supra* note 16, at 3.

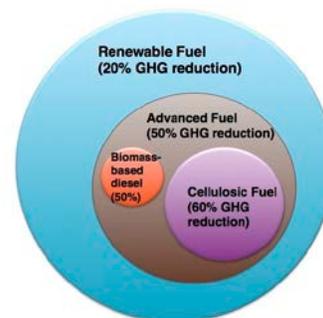
thrive on marginal lands (as well as on prime cropland) and need little water and no fertilizer.”²³ The next section examines federal efforts to move toward these alternatives.

II. U.S. Biofuel Laws and the Food-Fuel Conflict

Congress enacted the Energy Policy Act in 2005.²⁴ Among numerous other provisions, this statute amended the federal Clean Air Act by establishing incentives for biofuel production and use.²⁵ Through its renewable fuel standard (RFS), the law required that gasoline sold in the United States contain a specified fraction of renewable fuel.²⁶ “The initial RFS . . . mandated that a minimum of 4 billion gallons of renewable fuel be used in the nation’s gasoline supply in 2006, and that this minimum usage volume rise to 7.5 billion gallons by 2012.”²⁷ Recognizing the potential problems of relying solely or primarily on corn to meet biofuel requirements, the law required that a percentage of renewable fuels be produced from advanced biofuels, including cellulosic biofuel.²⁸

In 2007, Congress passed the Energy Independence and Security Act (EISA), which extended the RFS through 2022 and expanded the amount of biofuel required to be blended with traditional fossil fuel to ultimately reach 36 billion gallons a year.²⁹ Under EISA, the total requirement is subdivided into “four separate but nested categories . . . each with its own volume requirement or standard.”³⁰ Advanced biofuels make up a portion of total biofuel requirements, and cellulosic biofuels make up a portion of advanced biofuels, as shown in Figure 1.³¹ The law limits the amount of corn ethanol that fuel producers can use to meet the volume requirement to fifteen billion gallons annually, a target that producers will likely meet in 2015.³² Consequently, the majority of biofuel produced is ultimately intended to come from alternative biofuels. EISA establishes a standard that by 2022, seventy-five percent of advanced biofuel sold in the United States must be produced from cellulosic sources.³³ The law also provides additional production credits toward the overall requirements for producers and suppliers of advanced biofuels for the same volume of fuel compared to corn ethanol, the so-

Figure 1



²³ *Id.*

²⁴ Energy Policy Act of 2005, PL 109-58, 119 Stat 594 (2005).

²⁵ *Id.* at § 1501

²⁶ *Id.*

²⁷ Schnept & Yacobucci, Cong. Research Serv., R 40155, Renewable Fuel Standard (RFS): Overview and Issues 1 (2013).

²⁸ [119 Stat. at 1070](#).

²⁹ Energy Independence and Security Act of 2007, PL 110-140, [121 Stat 1492](#) (2007)

³⁰ Schnept and Yacobucci, *supra* note 27, at 2.

³¹ TransportPolicy.net, [US: Fuels: Renewable Fuel Standard](#) (accessed Apr 24, 2014).

³² Hartman, *supra* note 4, at 527.

³³ [42 USC 7545\(o\)\(2\)\(B\)\(i\)\(III\)](#).

called “equivalence values.”³⁴ Additionally, “biofuels qualifying under each nested . . . category must achieve certain minimum thresholds of lifecycle [GHG] . . . emission performance.”³⁵ By including alternative biofuels obligations in the overall requirements, EISA addresses both climate change and food security concerns.

However, other commentators have noted that incentives for alternative biofuel production sources are unlikely to “offset the substantial subsidies and tax credits that corn ethanol producers and corn growers already receive.”³⁶ Additionally, ethanol facilities that began construction prior to enactment of the law are exempt from the minimum GHG emissions requirements.³⁷ EPA has extended the exemption to all facilities that began construction prior to December, 2009 if they are run with natural gas, biomass or any combination of these fuels.³⁸ Therefore, the vast majority of existing plants need not meet the GHG emissions standards. Moreover, “EPA explored the possibility of phasing out the exemption . . . within fifteen years. . . . This phase-out would have limited the grandfathering effects . . . and perhaps created a broader opening for other, more beneficial biofuels to gain a greater share of the market. EPA’s final rule, however, rejected the phase-out.”³⁹

Other incentives for cellulosic biofuels have been built into the Farm Bill beginning in 2008.⁴⁰ The 2008 farm bill energy title provides \$1 billion in financial incentives and support to encourage the production of advanced (mainly cellulosic) biofuels. Grants and loan guarantees leverage industry investments in new technologies and the production of cellulosic feedstocks. For instance, the Biomass Crop Assistance Program (BCAP) supports the production of dedicated crop and forest cellulosic feedstocks and provides incentives for harvest and post-production storage and transport. Advanced biofuels refinery capacity construction is assisted under the Biorefinery Assistance program through grants and loans for the development, construction, and retrofitting of commercial-scale refineries to produce advanced biofuels.⁴¹

The 2014 Farm Bill approved earlier this year continues a number of these biofuel programs, including an extension of the BCAP program through 2018.⁴²

The Farm Bill is a massive piece of legislation that Congress approves every five to seven years, originally in 1933. The bill deals with numerous aspects of the U.S. agricultural system, including crop subsidies for farmers, incentives for organic and local food production, benefits for low

³⁴ See Regulation of Fuels and Fuel Additives: Changes to Renewable Fuel Standard Program, 75 Fed. Reg. 14,670, 14,869 (Mar. 26, 2010).

³⁵ Schnept and Yacobucci, *supra* note 27, at 2.

³⁶ Powers, [King Corn: Will the Renewable Fuel Standard Eventually End Corn Ethanol’s Reign](#), 11 Vt J Envtl L 667, 693 (2009).

³⁷ [42 USC 7545\(o\)\(2\)\(A\)\(i\)](#)

³⁸ [75 Fed. Reg. at 14,688-14,689](#).

³⁹ Powers, *supra* note 36, at 672.

⁴⁰ Food, Conservation, and Energy Act of 2008, PL 110-246, [122 Stat. 1651](#) (2008).

⁴¹ Stubbs, *supra* note 16, at 3 (internal citations omitted)

⁴² Agricultural Act of 2014, [PL 113-79](#), § 9011 (2014).

income families such as food stamps, and much more.⁴³ The Farm Bill “occupies the unique position of generating active policies for energy production incentives and reactionary policies which must account for higher food costs and negative environmental impacts associated with biofuel.”⁴⁴

Unfortunately, the 2014 Farm Bill is a recent example of an inadequate approach to addressing the food security issues that biofuel production and incentives create. FAO has noted that, in order to ensure that biofuel production is sustainable, “[s]afety nets are urgently needed to protect the world’s poorest and most vulnerable people and to ensure their access to adequate food.”⁴⁵ However, the 2014 Farm Bill does the opposite by cutting significant funding for one of the most widely-used programs to alleviate poverty, the supplemental nutrition assistance program (SNAP), commonly known as food stamps, by \$8 billion.⁴⁶ SNAP provides food assistance to low-income families in the United States. In recent years, a record number of people have enrolled in SNAP due to rising food and fuel prices.⁴⁷ Policy decisions like those in the 2014 Farm Bill have the potential to undermine whatever efforts are made toward ensuring a sustainable biofuel system.

Additionally, both EISA and the Farm Bill define advanced biofuels as all biofuels that are not produced from corn.⁴⁸ Consequently, while the laws encourage a move away from corn ethanol, they do not necessarily require the most sustainable alternatives. Moreover, inconsistent implementation of these laws has led to other significant issues which the next section will explore.

III. Implementation of the Laws by EPA and USDA

EPA is responsible for interpreting and enforcing the RFS obligations. EISA includes a provision that allows the Administrator of the EPA to waive the RFS production requirements if the requesting party can show that complying with the RFS will “severely harm the economy or environment of a State, a region, or the United States.”⁴⁹ Texas was the first state to request a waiver during the 2007-2008 food shortages. Texas argued that the RFS imposed an economic burden on the state’s animal agriculture industry by causing a spike in animal feed prices, since most corn grown in the United States is used to feed animals.⁵⁰ EPA denied the request. EPA’s current interpretation of EISA indicates that it is unlikely that EPA will ever grant a waiver.⁵¹ EPA required Texas to show that the RFS was the exclusive cause of the spikes in corn prices, a

⁴³ Chite, Cong. Research Serv., R43076, *The 2014 Farm Bill* (P.L. 113-79): Summary and Side-by-Side (2014).

⁴⁴ Lamb, Rogers, and Geyer, *supra* note 4, at 37.

⁴⁵ See Food and Agriculture Organization of the United Nations, *Biofuels: Prospects, Risks and Opportunities* 8 (Rome: 2008).

⁴⁶ See Chite, *supra* note 42, at 10; Lee Fang, *Farm Bill Cuts \$8 Billion in Food Stamps, Preserves Handouts to Koch Industries*, *The Nation*, Feb. 5, 2014.

⁴⁷ See Lamb, Rogers, and Geyer, *supra* note 4, at 36.

⁴⁸ [7 USC 8101\(3\)](#); [42 USC 7545\(o\)\(1\)\(B\)\(ii\)](#); see also Chite, *supra* note 43; Schnept and Yacobucci, *supra* note 27, at 23; Arnold Reitze Jr, [Biofuels—Snake Oil for the Twenty-First Century](#), 87 *Or L R* 1183, 1203 (2008).

⁴⁹ 42 USC 7545(o)(A)

⁵⁰ See Stubbs, *supra* note 16, at 2.

⁵¹ See Powers, *supra* note 36, at 691.

nearly impossible task.⁵² Additionally, EPA required Texas to show that the resulting harm would be severe.⁵³ “Despite EPA’s calculations that waiving the RFS mandates could potentially decrease feed costs in Texas by anywhere from \$53 million to \$207 million—and even perhaps as much as \$919 million—EPA denied Texas’s request for a waiver.”⁵⁴ In 2012, the governors of Arkansas and North Carolina similarly requested waivers based on the impact of the RFS on animal feed prices.⁵⁵ They were joined by governors of a number of other states, twenty-six U.S. Senators and 156 U.S. House members.⁵⁶ Based on the criteria that it established in the Texas matter, EPA, not surprisingly, also denied those waiver requests.⁵⁷

Commercial producers of liquid biofuels have also been slow to develop the technology necessary to create cellulosic biofuels. As a result, current legal standards and production requirements have been and likely will continue to go unmet. According to a 2011 National Academies of Science report, “[A]lthough the United States can likely produce adequate cellulosic feedstock to be converted into biofuels to meet the 16 billion-gallon-consumption mandate in 2022, there are currently no commercially viable biorefineries to convert such plant matter into fuel.”⁵⁸ While several U.S. refineries are currently operational, actual cellulosic fuel production is almost nonexistent as plants face production difficulties.⁵⁹ Plans for a cellulosic biofuel facility in Michigan evaporated in 2013.⁶⁰ As a result of this lack of nationwide production capacity, EPA has continually reduced the production requirements, recognizing that they will not be met.⁶¹ “In a January, 2012 Final Rule . . . , EPA projected that 8.65 million gallons of cellulosic biofuel . . . would be produced in 2012, well short of the 500 million ethanol-equivalent gallons mandated by the Act for that year.”⁶²

While EPA had reduced the requirements significantly from what is statutorily required, the American Petroleum Institute (API) sued the agency arguing that the requirements were nevertheless too high.⁶³ A panel of the D.C. Circuit agreed, finding that EPA’s method of setting the requirements was not based on technological realities but was aimed at kick-starting the

⁵² Notice of Decision Regarding the State of Texas Request for a Waiver of a Portion of the Renewable Fuel Standard, [73 Fed. Reg. 47,168](#), 47,182 (Aug. 13, 2008).

⁵³ *Id.*

⁵⁴ Powers, *supra* note 36 at 691 (internal citations omitted).

⁵⁵ Yacobucci, Cong. Res. Serv. RS 22870, Waiver Authority Under the Renewable Fuel Standard (RFS) 1 (2014).

⁵⁶ See *id.* at 1; Kent Theisse, [EPA Denies RFS Waiver](#), *Corn + Soybean Digest*, C + S Focus on Ag Digest, (Nov 20, 2012) (accessed Jun 9, 2014).

⁵⁷ Notice of Decision Regarding Requests for a Waiver of the Renewable Fuel Standard, [77 Fed. Reg. 70,752](#); see also Hartman, *supra* note 4, at 529.

⁵⁸ National Research Council, *Renewable Fuel Standard: Potential Economic and Environmental Effects of U.S. Biofuel Policy* (Washington, DC: The National Academies Press, 2011).

⁵⁹ See Renewable Fuels Association, [Biorefinery Locations](#) (accessed Apr 24, 2014).

⁶⁰ Andy McGlashen, [As Key Partner Departs, Future Dims for Michigan Cellulosic Biofuel Plant](#), *Midwest Energy News* (Aug 6, 2013) (accessed Jun 9, 2014).

⁶¹ See Schnepf and Yacobucci, *supra* note 18, at 11.

⁶² *American Petroleum Inst v. E.P.A.*, 706 F.3d 474, 476 (D.C. Cir. 2013); see also Regulation of Fuels and Fuel Additives: 2012 Renewable Fuel Standards, 77 Fed. Reg. 1320, 1323 (Jan 9, 2012).

⁶³ 706 F.3d at 476.

cellulosic biofuel industry.⁶⁴ EPA has since reduced the requirements to zero for the years 2010-2013.⁶⁵

Even more problematic in some respects, in the same litigation the petroleum industry challenged EPA's decision not to reduce the overall advanced biofuel requirements.⁶⁶ EPA defended its decision, arguing that the amount not met through cellulosic biofuel could be made up primarily through sugar-based ethanol and soy-based biodiesel.⁶⁷ The D.C. Circuit found EPA's actions permissible.⁶⁸ Partially as a result of this decision, the U.S. is moving to other food-based biofuels which raise the same food security concerns as corn, rather than moving from corn ethanol to cellulosic biofuels.⁶⁹ According to a 2013 National Academies of Science report, "the window of opportunity for realizing the benefits of a biofuel industry based on perennial bioenergy crops, rather than corn ethanol and soy biodiesel, may be closing" in the corn-producing states in the western United States.⁷⁰

Additionally, EPA has interpreted RFS requirements which exclude certain lands from cultivation to allow farmers to use Conservation Reserve Program (CRP) lands for biofuel production.⁷¹ Congress has included the CRP program in the Farm Bill since 1985.⁷² "Historically, the U.S. Department of Agriculture has paid farmers to set aside and restore or protect environmentally sensitive lands through the CRP program."⁷³ Environmentally sensitive land includes cropland that is highly erodible, marginal pasture land, and grasslands that, among other requirements, could provide animal and plant habitat.⁷⁴ "Demand for corn ethanol has already caused many farmers to leave the CRP program and to place these sensitive lands back into cultivation."⁷⁵

Allowing former CRP lands to be used for biofuel production is partially an attempt to address the food-fuel conflict, but the policy does little to address issues related to improving the overall health of agricultural lands. Moreover, the 2014 Farm Bill reduces the amount of cropland eligible for the CRP from 32 million to 24 million acres.⁷⁶ According to other commentators, most parties "claiming RFS credit will [not] be required to prove its biomass

⁶⁴ *Id.* at 479.

⁶⁵ See Schnepf and Yacobucci, *supra* note 18, at 12.

⁶⁶ 706 F.3d at 480.

⁶⁷ *Id.* at 481.

⁶⁸ *Id.*

⁶⁹ See, e.g., Hartman, *supra* note 4, at 532-33.

⁷⁰ Wright & Wimberly, Recent land Use Change in the Western Corn Belt Threatens Grasslands and Wetlands, 110 Proc Natl Acad Sci 4134, 4134 (2013).

⁷¹ 75 Fed. Reg. at 14,692.

⁷² Huang, Khanna & Yang, [Cost of Maintaining CRP in Presence of Biofuels](#) 3 (2011) (accessed Sep 22, 2014).

⁷³ Powers, *supra* note 36, at 701.

⁷⁴ See [16 USC 3831\(b\)](#).

⁷⁵ Powers, *supra* note 36, 701; see also Huang, Khanna & Yang, *supra* note 72, at 3; Daniel R. Hellerstein & Scott A. Malcolm, USDA Economic Research Service, [The Influence of Rising Commodity Prices on the Conservation Reserve Program](#) (Washington, DC: 2011) (accessed Sep 22, 2014).

⁷⁶ [PL 113-79](#), § 2001(d); see also Chite, *supra* note 43, at 8.

derived from eligible lands. This approach does not consider the value of environmentally sensitive lands converted into corn production that has been displaced by other forms of biomass, nor does it acknowledge the weakness in relying on the USDA's dismal record in preventing native grasslands conversion.”⁷⁷

Issues have also arisen regarding USDA's implementation of the BCAP program,⁷⁸ especially issues related to “eligibility, sustainability, and funding.”⁷⁹ Through the BCAP program, USDA awards payments to farmers who utilize their land for biofuel crops.⁸⁰ Contracts between producers and USDA under the BCAP program are required to include terms covering compliance with highly erodible land and wetland conservation laws and the implementation of a conservation or forest stewardship plan.⁸¹ “It is unclear, however, how the USDA is applying criteria or designing conservation plans.”⁸² It is also unclear how an overall approach to sustainability is being implemented by the Obama Administration. “The Secretaries of Energy and Agriculture released the ‘National Biofuels Action Plan’ in October 2008, promising to issue a set of sustainability criteria and indicators to evaluate environmental, economic and social performance, and to establish [a] Sustainability Interagency Group. No criteria or indicators have issued, however.”⁸³ In 2009, President Obama announced the creation of the *Biofuels Interagency Working Group*.⁸⁴ Little appears to have happened since the announcement, even though an update to the National Biofuels Action Plan was scheduled to be released in 2012.⁸⁵ While the development of truly sustainably biofuels remains a possibility under existing law, the actual production of such energy alternatives has not materialized and is unlikely to occur in the near future. In the meantime, biofuel production in Michigan and throughout the United States remains focused almost entirely on corn, raising all of the issues detailed above as well as broader issues around the sustainability of the U.S. food system as a whole. The next section will discuss this broader food sustainability issue.

IV. Missing the Corn Field for the Cob?

Ultimately, attempts to ensure that biofuels are sustainable and to address the issues discussed above seem to miss the larger picture. Inherent in many of these discussions is a belief that there were no problems in our food system until we began using corn to make ethanol. But beginning in the 1970s and especially after Earl Butz was appointed as Secretary of Agriculture in 1971, the United States moved away from policies designed to ensure that agricultural land

⁷⁷ Endres, [Legitimacy, Innovation, and Harmonization: Precursors to Operationalizing Biofuels Sustainability Standards](#), 37 Ill U L J 1, 5 (2012).

⁷⁸ Stubbs, Cong. Research Serv., R41296, Biomass Crop Assistance Program (BCAP): Status and Issues (2010).

⁷⁹ *Id.*

⁸⁰ See [7 USC 8111](#).

⁸¹ 7 USC 8111(c)(3)(B); 7 CFR 1450.207; see also Endres, *supra* note 77, at 7.

⁸² *Id.*

⁸³ Endres, *supra* note 2, at 104; see also Biomass Research and Dev. Bd., [National Biofuels Action Plan](#) 4 (2008) (accessed Jun 10, 2014).

⁸⁴ Press Release, The White House, [President Obama Announces Steps to Support Sustainable Energy Options](#) (May 5, 2009) (accessed Apr 10, 2014).

⁸⁵ See Alicia Lindauer, Biomass Research and Development Board, [National Biofuels Action Plan Update](#), Technical Advisory Committee Meeting (Mar 1, 2012) (accessed Jun 10, 2014).

remained productive and to discourage farmers from producing a larger food crop than the country could consume.⁸⁶ Farm subsidies and policies built into the Farm Bill for decades have helped to develop a food system that encourages farmers to grow vast quantities of only a few crops, one of which is corn.⁸⁷ Corn ethanol was one of a number of products originally created, not solely because of concerns about climate change and energy independence, but because of the glut of corn and the desire to develop products that would utilize this corn.⁸⁸ The industry also created high fructose corn syrup primarily due to an overabundance of corn.

As more corn flooded the marketplace, producers developed new uses for the cheap commodity, one of which was ethanol. Once ethanol producers convinced politicians that ethanol could serve as a substitute for foreign oil, politicians increased the already significant incentives for ethanol production by creating new subsidies and tax credits for corn and corn ethanol.⁸⁹

Even when corn is not processed into fuel, most corn that is commercially grown is relatively useless as a human food product. Most of the corn that we see growing is made up of specific varieties of the plant that have been bred to be best suitable for significant processing into non-food uses such as fuel, animal feed, and corn syrup. As sustainable food expert Michael Pollen notes in the documentary, *King Corn*, “If you're standing in a field in Iowa, there's an immense amount of food being grown, none of it edible.”⁹⁰

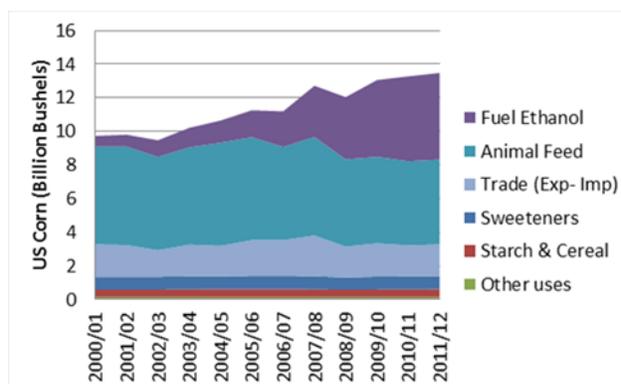


Figure 2

The vast majority of corn not used for fuel is fed to animals who are then eaten by people, as can be seen in Figure 2.⁹¹ In Michigan, twenty-two percent of corn grown is fed to animals.⁹² The concern about raising food prices, therefore, is not about the price of corn, but about the price of products that utilize corn in their production such as meat, dairy, and eggs.⁹³ As noted above, when Texas and other states requested waivers from the RFS requirements due to the impact on food prices, the states were concerned about the impact on their animal agriculture industry, not direct costs to consumer food prices.

⁸⁶ See Eubanks, *A Rotten System: Subsidizing Environmental Degradation and Poor Public Health Wins Our Nation's Tax Dollars*, 28 *Stan Envtl LJ* 213, 223-25 (2009).

⁸⁷ *Id.* at 227.

⁸⁸ See Powers, n 36 *supra*.

⁸⁹ *Id.* at 677 (internal citations omitted).

⁹⁰ Aaron Woolf, *King Corn* (2009).

⁹¹ Doug Boucher, [Will the 2012 U.S. Drought Burst the Farmland Property Bubble?](#), Union of Concerned Scientists' *The Equation* (Aug. 1, 2012) (accessed Jun 10, 2014).

⁹² Corn Marketing Program of Michigan, FAQ, *supra* note 14.

⁹³ Reitze Jr, *supra* note 48, at 1213; Lamb, Rogers, and Geyer, *supra* note 4, at 37; Corinne Alexander and Chris Hurt, *Biofuels and Their Impact on Food Prices*, Purdue University *BioEnergy* (2007); Schnepf and Yacobucci, *supra* note 27.

As the author and many other commentators have argued, however, meat production is itself unsustainable.⁹⁴

The average Iowa cornfield has the potential to deliver more than 15 million calories per acre each year (enough to sustain 14 people per acre, with a 3,000 calorie-per-day diet, if we ate all of the corn ourselves), but with the current allocation of corn to ethanol and animal production, we end up with an estimated 3 million calories of food per acre per year, mainly as dairy and meat products, enough to sustain only three people per acre.⁹⁵

Turning animals into meat requires an enormous amount of grain and water and creates significant environmental problems for surrounding communities.⁹⁶ Moreover, FAO and other experts have determined that animal agriculture is a significant contributor to global climate change.⁹⁷ Also, one of the reasons that the GHG emissions of ethanol tend to be so high over the production lifecycle is because of the industrial agricultural practices used to grow the corn, issues that remain regardless of the purpose of growing the corn.⁹⁸

Those concerned about fuel competing with food, at least in the United States, seem to ignore these issues. It is, therefore, imperative that critics of biofuels' impact on food security focus not solely on biofuels, but also on the sustainability of our food system as a whole. If the United States transitions to alternative biofuels but remains reliant on corn and meat to feed our population, we will fail to solve the overall problems of food sustainability. Moreover, it is important to address these issues together because reducing the amount of land used to produce food for animals could increase available land for biofuel production. As an example of a policy that might achieve both objectives, some researchers have noted that a "tax-induced decrease in the consumption of animal food would . . . decrease the area of land used. This could facilitate an increase in bioenergy production and thus contribute to additional reductions in GHG emissions."⁹⁹

Addressing these issues will require a paradigm shift in the way that our food system operates and in our relationship to it. The existing food system is heavily entrenched, and numerous

⁹⁴ See, e.g., Ripple *et al.*, Ruminants, Climate Change and Climate Policy, 4 Nat Clim Change 2 (2014); Wirsenius, Hedenus & Mohlin, Greenhouse Gas Taxes on Animal Food Products: Rationale, Tax Scheme and Climate Mitigation Effects, 108 Clim Change 159 (2010); Mekonnen & Hoekstra, The Green, Blue and Grey Water Footprint of Farm Animals and Animal Products (Delft: UNESCO-IHE, 2010); Henning, Steinfield *et al.*, Livestock's Long Shadow: Environmental Issues and Options (Rome: 2006); Marya Torrez, Meatless Monday: Simple Public Health Suggestion or Extremist Plot?, 28 J. Envtl L & Litig 515 (2013).

⁹⁵ Jonathan Foley, It's Time to Rethink America's Corn System, Scientific American, Mar 5, 2013.

⁹⁶ See, e.g., Pew Commission on Industrial Farm Animal Production, [Putting Meat on the Table: Industrial Farm Animal Production in America](#) 25, 27 (2008) (accessed Jun 10, 2014).

⁹⁷ See Steinfield *et al.*, *supra* note 94; Robert Goodland and Jeff Anhang, [Livestock and Climate Change: What If the Key Actors in Climate Change are ... Cows, Pigs, and Chickens?](#), World Watch Magazine (Nov/Dec 2009) (accessed Jun 10, 2014).

⁹⁸ See Wang, Wu, and Huo, *supra* note 3, at 3-6.

⁹⁹ Wirsenius, Hedenus, and Mohlin, *supra* note 94 at 160.

stakeholders benefit from the way it currently operates. At the same time, there is a growing focus on the importance of our agricultural system and food sustainability, particularly in light of climate change and its significant threat to our food security.¹⁰⁰ Congress extensively debated crop subsidies, which strongly influence what is grown in the country, during deliberation over the 2014 Farm Bill, and there were some moves to begin to eliminate them.¹⁰¹ Given the current economic climate, eliminating or reorganizing the corporate subsidy system makes sense because there is significant political pressure on both the left and the right to reduce unnecessary government spending. Providing subsidies that encourage unsustainable farming practices to already wealthy corporations should easily fit within the definition of “unnecessary government spending.” Nevertheless, significant policy changes and strong political will be necessary to ensure a truly sustainable food system and to include liquid biofuels in the food/fuel framework.

Conclusion

Policymakers and advocates initially touted biofuel production for its enormous potential to replace traditional fossil fuels with cleaner, renewable, domestically produced energy alternatives. More recently, however, there have been increasing concerns over the impact of biofuel production on the world’s food supply. In the United States, those concerns primarily revolve around the use of corn for ethanol. Congress responded to these concerns by passing laws that encourage a shift away from corn ethanol to more sustainable alternatives. Nevertheless, weaknesses within the laws that regulate biofuel production remain and administrative agencies are often faced with conflicting agendas. These issues, as well as the technological limitations in developing viable alternatives ensure that corn ethanol will remain the preeminent biofuel in the near future and that concerns about the conflict between food and fuel will remain.

At the same time, most biofuel advocates and lawmakers raising these concerns seem to ignore the fact that corn production in the United States was already unsustainable and that biofuel production is a symptom of larger problems within the food system. Attempts to ensure that biofuel production is sustainable must address the food system as a whole, especially the manner in which corn is grown and the dominant position it holds in the current agro-business industry. A failure to do so will ensure that the pursuit of a sustainable food system is not achieved.

¹⁰⁰ See, e.g., Intergovernmental Panel on Climate Change, [Climate Change 2014: Mitigation of Climate Change](#) (2014) (accessed Jun 10, 2014).

¹⁰¹ Ron Nixon, Farm Bill Compromise Will Change Programs and Reduce Spending, NY Times, Jan. 27, 2014; Chite *supra* note 43.