
Note

Making Pesticides Public: A Disclosure-Based Approach to Regulating Pesticide Use

*Brian Jacobson**

The last straw for Nick Messer, the owner of a small family farm in Todd County, Minnesota, came when a gust of wind blew a pesticide cloud straight toward his house, possibly exposing his daughter Whitney to serious health effects.¹ Mr. Messer, who raises horses and dogs on his small farm, lost several animals to chemical-related illnesses after pesticides were carelessly sprayed on adjacent fields, and sometimes even within his own pasture.² When his daughter was put at risk, Mr. Messer and his family doctor stepped up their efforts to obtain records of the circumstances surrounding the application of pesticides on neighboring lands, but their repeated requests for information from the Minnesota Department of Agriculture were denied.³ Mr. Messer discovered that the records concerning pesticide application were classified as private under Minnesota law and protected from the public, thus frustrating his desire to protect his family's health and hold someone accountable for the irresponsible spraying of chemicals.⁴

Pesticide-application records are presumptively unavailable to the public because they are classified as private or non-

* J.D. Candidate 2012, University of Minnesota Law School; B.A. 2007, St. Olaf College. Thanks to University of Minnesota Law School Professor Alexandra Klass and to Paul Liemandt for inspiration, key ideas, and helpful feedback. Special thanks to *Minnesota Law Review* Editors Laura Arneson and Jeremy Harrell for their encouragement and invaluable advice through many revisions. Finally, thanks to my parents, Rolf and Virginia Jacobson, and to my sister, Katie Jacobson, for all of their constant love and support. Copyright © 2012 by Brian Jacobson.

1. Dan Gunderson, *Pesticide Records Are Protected*, MINN. PUB. RADIO, (Feb. 17, 2003), http://news.minnesota.publicradio.org/features/2003/02/18_gundersond_fivepesticide/.

2. *Id.*

3. *Id.*

4. *Id.*

public data under Minnesota Statutes section 18B.37.⁵ As a result, absent a medical emergency, farmers and other landowners adjacent to fields where pesticides are applied have no means of ensuring that chemicals are being applied safely and in a way that minimizes the risk of damage to their families and their livelihoods.⁶ This lack of access to information persists at a time when pesticide application, and the concomitant risk of misuse, is steadily increasing.⁷

Pesticide-registration and labeling-requirements are governed largely by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), which does not provide for a private cause of action.⁸ However, in *Bates v. Dow Agrosciences LLC*, the Supreme Court indicated a willingness to allow state common-law damage remedies by ruling that FIFRA did not preempt common-law claims that were not competing requirements for labeling.⁹ And yet a lack of data about the circumstances in which pesticides were applied can make an individual lawsuit expensive, risky, and often difficult or unsuccessful.¹⁰ With individual citizens unable to access the data to protect themselves, the task of regulating pesticide application falls to

5. MINN. STAT. § 18B.37, subdiv. 5 (2010).

6. *Id.* subdiv. 6. Even with this provision, however, it can be difficult for a person who suspects she has been exposed to pesticides to ascertain what kind of chemical was used and how it was applied, as evidenced by the case of Nick Messer. See Gunderson, *supra* note 1.

7. See John H. Davidson, *The Federal Farm Bill and the Environment*, 18 NAT. RESOURCES & ENV'T, Summer 2003, at 3 (describing how the 750 million tons of pesticides that farmers apply to their crops each year contribute to agricultural runoff). Compare ARNOLD L. ASPELIN, U.S. ENVTL. PROT. AGENCY, PESTICIDES INDUSTRY SALES AND USAGE: 1994 AND 1995 MARKET ESTIMATES 14 (1997) (4.4 billion total pounds of pesticides used in 1994), with ARTHUR GRUBE ET AL., U.S. ENVTL. PROT. AGENCY, PESTICIDES INDUSTRY SALES AND USAGE: 2006 AND 2007 MARKET ESTIMATES 10 (2011) (5.1 billion total pounds of pesticides used in 2007).

8. See *No Spray Coal. Inc. v. City of N.Y.*, 351 F.3d 602, 605 (2d Cir. 2003) (noting that in enacting FIFRA, Congress did not provide that its provisions might be enforced through a citizen suit, though it had done so in other environmental protection statutes).

9. 544 U.S. 431, 443–44 (2005).

10. See Alexandra B. Klass, *Pesticides, Children's Health Policy, and Common Law Tort Claims*, 7 MINN. J.L. SCI. & TECH. 89, 110 (2005).

state departments of agriculture,¹¹ which for lack of funding or resources cannot always carry out complete investigations.¹²

This Note argues that making pesticide-application records available to the public would provide harmed individuals with the information to hold negligent applicators accountable and, through the threat of litigation, provide an incentive for applicators to act responsibly in using pesticides, even before harm is caused. Part I explores the classification of pesticide-application records as nonpublic or private under the Minnesota Data Practices Act. Part II provides an overview of the theory and effectiveness of regulation by making information public and accessible in environmental law. Part III discusses the new availability of state common-law damages claims in pesticide cases, and contends that such private enforcement could effectuate another type of regulation by information. This Note concludes by arguing that making data surrounding pesticide application available to the public is both an efficient and equitable means to aid in the prevention of irresponsible pesticide use, and that states should adopt pesticide-use disclosure programs to achieve this end. An increased receptivity to state common-law claims for pesticide damages suggests that private litigation represents a new opportunity to further strengthen the regulatory influence of information disclosure.

I. DATA PRACTICES: PUBLIC AND PRIVATE INFORMATION

In 1966, Congress enacted the Freedom of Information Act (FOIA), allowing the general public to obtain access to all federal agency records, subject to nine specifically enumerated exceptions.¹³ FOIA completely reformed government data practices, and reflected the growing importance placed on openness and transparency in government.¹⁴ Upon signing the bill into law, President Lyndon Johnson declared,

11. See, e.g., *Pesticides: Overview*, MINN. DEPT OF HEALTH, <http://www.health.state.mn.us/divs/eh/pesticide/overview.html> (last visited Jan. 2, 2012); *Pesticide Enforcement Program*, N.D. DEPT OF AGRIC., <http://www.nd.gov/ndda/program/pesticide-enforcement-program> (last visited Jan. 2, 2012).

12. See Gunderson, *supra* note 1 (noting that the MDA in certain circumstances just sends an advisory notice to sprayers who have broken the law, and that warnings are more common than fines).

13. 5 U.S.C. § 552(a)(3), (b) (2006).

14. See Fred H. Cate et al., *The Right to Privacy and the Public's Right to Know: The "Central Purpose" of the Freedom of Information Act*, 46 ADMIN. L.

[t]his legislation springs from one of our most essential principles: A democracy works best when the people have all the information that the security of the Nation permits. No one should be able to pull curtains of secrecy around decisions which can be revealed without injury to the public interest.¹⁵

This commitment to openness and making information accessible has been taken up by the states as well, and today all fifty states have some type of open records statute, many of which are modeled on the federal FOIA.¹⁶

Despite this emphasis on transparency and the availability of government data, in many states pesticide-application data collected by a government agency is treated differently. An informal survey conducted by the Association of American Pesticide Control Officers (AAPCO) indicated that the majority of states have significant barriers to public access to pesticide-application data.¹⁷ Many states, such as Minnesota, have chosen to classify such data as private or nonpublic,¹⁸ and even when states lack such an affirmative protection the investigating public often faces other obstacles to accessing chemical use information.¹⁹ A look at data practices for pesticide-application records in Minnesota shows how critical pesticide information is often shielded from the public, and demonstrates the insufficiency of current federal and state reporting requirements for ensuring responsible pesticide use. This Part provides an overview of the field of information regulation and suggests that a similar approach might be effective in regulating pesticide application. Finally, the new receptivity to state common-law claims indicated by the Supreme Court's decision in *Bates v.*

REV. 41, 42 (1994) ("FOIA is intended to provide the citizenry with the knowledge necessary to govern.").

15. Statement by the President Upon Signing the "Freedom of Information Act," 2 PUB. PAPERS 699 (July 4, 1966).

16. Daniel J. Solove, *Access and Aggregation: Public Records, Privacy, and the Constitution*, 86 MINN. L. REV. 1137, 1161 (2002).

17. E-mails from Respondents to Association of American Pesticide Control Officers Survey, Question to State Lead Agencies: Privacy of Pesticide Application Records, to Paul Liemandt, Minn. Dep't of Agric. (various dates in 2007) (on file with author).

18. *See id.*

19. In response to the AAPCO survey, several states indicated that although pesticide records were not addressed in data practices law, and thus were not explicitly protected, as a practical matter public access to information was very restricted. The Nebraska Department of Agriculture, for example, responded that since pesticide information was not addressed by statute, it would be up to the applicators to provide access to such records, and "the likelihood of that is nil." *Id.*

Dow Agrosciences LLC suggests that litigation presents a powerful new approach to complement the traditional regulatory influences of information disclosure.²⁰

A. MINNESOTA GOVERNMENT DATA PRACTICES ACT

In 1974, shortly after Congress passed the federal Freedom of Information Act, the Minnesota Legislature enacted the Government Data Practices Act in response to the revelations of government intrusion during the administration of President Richard M. Nixon.²¹ The Act, set out in chapter 13 of the Minnesota Statutes, establishes a presumption that all government data in Minnesota is available to the public.²² Its provisions apply to information in any form²³ held by state agencies, Minnesota State Colleges and Universities, political subdivisions, statewide systems, and corporations and nonprofit social service agencies under contract with a government entity.²⁴ This presumption notwithstanding, the Act goes on to classify certain types of data as private or otherwise nonpublic, thus restricting access to data.²⁵ Data that is classified by statute as other than public falls into one of four categories: private data, confidential data, nonpublic, and protected nonpublic.²⁶ Minnesota Statutes section 18B.37 governs pesticide-application information and recordkeeping requirements, and subdivision 5 makes clear that “the information in the records in this section is private or nonpublic.”²⁷

Thus, despite the presumptive commitment to making government-collected data available to the public, Minnesota has chosen to impose a high barrier to public access to pesticide-application records.²⁸ But even though the public lacks access, federal and state statutes requiring applicators to keep accurate records ensure that the records still exist.²⁹ This means

20. 544 U.S. 431, 443–44 (2005).

21. Gary A. Weissman & Donald A. Gemberling, *Access to Court Records in Minnesota*, BENCH & B. MINN., Apr. 2008, at 30.

22. MINN. STAT. § 13.03, subdiv. 1 (2010).

23. *Id.* subdiv. 7.

24. MATT GEHRING, MINN. H. RESEARCH DEPT., MINNESOTA GOVERNMENT DATA PRACTICES ACT: AN OVERVIEW 2 (2010).

25. *Id.*

26. *Id.* at 3.

27. MINN. STAT. § 18B.37, subdiv. 5.

28. *Id.*

29. *See, e.g.*, 7 U.S.C. § 136i-1 (2006).

that the hard data needed to monitor pesticide use already exists—it is just not in the right hands.

B. PESTICIDE APPLICATOR RECORDKEEPING

Though the information is often hard to get at, federal and state statutes mandate that pesticide applicators keep track of the types of pesticides they use and the conditions in which the pesticides are applied. The Federal Food, Agriculture, Conservation and Trade Act (FACT) of 1990 requires certified pesticide applicators to maintain detailed records regarding the use of restricted-use pesticides.³⁰ The Pesticide Records Branch, established by the USDA to administer the recordkeeping provisions of FACT, monitors various agricultural industries to ensure that pesticide applicators maintain records in compliance with federal regulations or recognized state regulations.³¹ This oversight is carried out by state and USDA officials through cooperative and interagency agreements.³² Among other things, a typical application record requires the name of the product, the total amount applied, and the date and location of the application.³³ FACT requires that the application information be recorded within thirty days of application, and that the record be kept for a minimum of two years after each application.³⁴

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) provides for the classification of different types of pesticides subject to recordkeeping requirements, and distinguishes between certain types of applicators.³⁵ A pesticide is classified as “restricted use” when the EPA has determined either that the pesticide presents a hazard to the applicator due to its “acute dermal or inhalation toxicity,” or that “its use without additional regulatory restriction may cause unreasonable adverse effects on the environment.”³⁶ Restricted-use pesti-

30. *Id.*

31. U.S. DEPT OF AGRIC., AGRIC. MKTG. SERV., FEDERAL PESTICIDE RECORDKEEPING PROGRAM HIGHLIGHTS 1 (2009). When a state maintains comparable recordkeeping regulations, the Pesticide Record Branch “allows applicators in those States to comply with the State pesticide regulations, thus eliminating the burden of maintaining duplicate [restricted-use pesticide] records.” *Id.*

32. *Id.* at 3.

33. *Id.* at 2.

34. 7 U.S.C. § 136i-1(a).

35. *Id.* §§ 136–136y.

36. *Id.* § 136a(d)(1)(C).

cides may only be applied by certified applicators, while general use pesticides can be applied by anyone.³⁷

Within the realm of restricted pesticide use, FIFRA further distinguishes between private applicators and commercial applicators.³⁸ A private applicator is one who uses, or supervises the use of, restricted pesticides for agricultural commodity production on property owned or leased by himself or his employer, while a commercial applicator is one who is hired to apply restricted-use pesticides.³⁹ Both are required to meet certain procedures and rules established by the EPA for qualifying for certification, but commercial applicators are held to much more stringent standards.⁴⁰ Both certified private and commercial applicators must maintain records pursuant to the requirements set out in FACT, as well as any additional state-level recordkeeping requirements.⁴¹

In Minnesota, statutory pesticide-application recordkeeping requirements likewise apply to both commercial and non-commercial applicators.⁴² The information required by those statutes closely resembles the requirements of FACT and includes important data such as the date and time of the application, the location of the application, and the temperature, wind direction, and wind speed at the time of the application.⁴³ Copies of the application record must be kept for a period of five years after the date of the treatment in Minnesota, three years longer than the time period required by FACT.⁴⁴ Furthermore, Minnesota Statutes section 18B.064 mandates that the Minnesota Department of Agriculture (MDA) monitor urban and rural pesticide use, and collect pesticide-use information on a biennial basis.⁴⁵ Specifically, the application data is to be collected and automated consistent with the state's land-

37. MICHAEL T. OLEXA, LAWS GOVERNING USE AND IMPACT OF AGRICULTURAL CHEMICALS: REGISTRATION, LABELING, AND THE USE OF PESTICIDES 1 (Fla. Coop. Extension Serv., Inst. of Food & Agric. Scis., Fact Sheet FRE-71, 1995).

38. 7 U.S.C. § 136(e)(2)–(3).

39. *Id.*

40. *See* OLEXA, *supra* note 37, at 2.

41. 7 U.S.C. § 136i-1(a).

42. MINN. STAT. § 18B.37, subdiv. 2 (2010).

43. Compare the requirements in FACT, 7 U.S.C. § 136i-1(a), with the Minnesota requirements, MINN. STAT. § 18B.37, subdiv. 2.

44. *Compare* 7 U.S.C. § 136i-1(a) (two-year requirement), *with* MINN. STAT. § 18B.37, subdiv. 2(e) (five-year requirement).

45. MINN. STAT. § 18B.064.

management information system, which means that “the legislature directed the MDA to gather information enabling it to know how much of what types of pesticides are used where in the state.”⁴⁶

C. SHORTCOMINGS OF FIFRA REGULATION AND RECORDKEEPING

Despite all the recordkeeping requirements and pesticide-registration standards detailed in FIFRA and Minnesota Statutes section 18B, these regulatory schemes have little effect on ensuring responsible pesticide use.⁴⁷ In large part, the problem stems from the fact that these statutes clearly require pesticide applicators to maintain records, but impose no requirements to report those records to anyone.⁴⁸ As some commentators have observed, certified applicators must comply with both federal and state recordkeeping requirements, “but they need not report the applications to anyone unless a federal agency . . . , state agency . . . , or health professional administering medical treatment so requests or state law requires regular disclosure.”⁴⁹ Since there is no comprehensive reporting or disclosure requirement at the federal level, it is up to states to collect or require disclosure of pesticide-application data.⁵⁰ But as noted above, Minnesota has indicated that such records are considered private or nonpublic.⁵¹ Instead, FIFRA primarily regulates pesticide-registration standards and labeling requirements, which are the basis for its enforcement provisions.⁵²

46. ROBERT M. ELEFF, MINN. CTR. FOR ENVTL. ADVOCACY, INACTION SPEAKS LOUDER THAN WORDS: THE MINNESOTA DEPARTMENT OF AGRICULTURE’S FAILURE TO PROTECT MINNESOTA FROM PESTICIDE CONTAMINATION 49 (2001).

47. See J.B. Ruhl, *Farms, Their Environmental Harms, and Environmental Law*, 27 *ECOLOGICAL L.Q.* 263, 310 (2000) (“Direct regulation of farms . . . is not a main concern of FIFRA; the statute does little more than require that pesticides be applied by certified persons and consistent with their label instructions.”).

48. OLEXA, *supra* note 37, at 6 (“Certified applicators have no reporting requirements under FACT . . .”). Minnesota law, however, does require that commercial applicators provide a copy of the pesticide-application record to the customer. MINN. STAT. § 18B.37, subdiv. 2(d).

49. Ruhl, *supra* note 47, at 311.

50. *Id.* (“Although some states regulate pesticide applications more aggressively than does FIFRA, it is fair to say that the nation has no comprehensive regulatory framework governing farm use of pesticides.”).

51. MINN. STAT. § 18B.37, subdiv. 5.

52. See OLEXA, *supra* note 37, at 1–3.

In Minnesota, the MDA has a statutory mandate to collect pesticide-use data, and it can inspect and make copies of the data as part of an investigation or enforcement action.⁵³ Also, when pesticide exposure is suspected of playing a role in a serious medical condition, a treating physician or veterinarian can request such records for purposes of the diagnosis, care, or treatment of a patient.⁵⁴ Obviously, having access to application information is crucial to ensuring responsible pesticide use and protecting Minnesota's people and natural resources.⁵⁵ Practical and financial concerns, however, often make it difficult—if not impossible—for a state agency like the MDA to effectively fulfill its role in collecting such information.⁵⁶ A study by the Minnesota Center for Environmental Advocacy indicated that the MDA's pesticide-use data collection efforts have been incomplete and inconsistent, and as a result the agency is largely ignorant about the patterns and trends of actual pesticide use in the state.⁵⁷ And although the MDA is authorized to inspect records as part of an official investigation if it has reason to suspect a violation, some sources suggest that violations are rarely aggressively investigated and will often go unpunished.⁵⁸ As the case of Nick Messer demonstrates, even when pesticide exposure implicates human health, application records can be difficult to obtain.⁵⁹

Given the obstacles associated with agency limitations and other barriers to accessing pesticide-application information, it makes sense to take a new approach to the use of such data.

53. MINN. STAT. § 18B.064; *id.* § 18B.37, subdiv. 5 (“The commissioner may enter a commercial, noncommercial, or structural pest control applicator’s business and inspect the records required in this section at any reasonable time and may make copies of the records.”).

54. *Id.* § 18B.37, subdiv. 6.

55. ELEFF, *supra* note 46 (“Few would argue that in order for the MDA to effectively protect Minnesota’s resources against pesticide contamination, it needs to know some basic information about how pesticides are actually used in the state.”).

56. *See, e.g., id.* (“MDA has failed to effectively meet its statutory obligation to collect pesticide use data. It collects virtually no data on urban use and very little on rural use.”).

57. *See id.* at 49–50.

58. *See* Dan Gunderson, *Clouds of Doubt: Questions About Enforcement of Pesticide Laws*, MINN. PUB. RADIO, (Feb. 17, 2003), http://news.minnesota.publicradio.org/features/2003/02/18_gundersond_onepesticide/ (describing findings of an MPR investigation showing that “violations of the law are often unpunished, and sometimes ignored,” and that “in some cases, even when the law is clearly broken, the department takes no action”).

59. *See supra* text accompanying notes 1–4.

The field of information regulation suggests that implementing data disclosure requirements can be a powerful alternative to direct agency regulation.

D. INFORMATION REGULATION THEORY

Traditional government regulation, as carried out by various agencies, takes the form of a top-down, or command-and-control, approach.⁶⁰ In such a system, statutes and implementing rules tend to create direct restrictions on regulated parties, often by way of establishing output performance standards or requiring certain procedural characteristics.⁶¹ The relationship between the agency responsible for regulation and the regulated party is usually direct, in the sense that both the regulatory standards and enforcement actions are imposed directly on the regulated party by the agency.⁶² While such top-down, direct government regulation has long been entrenched as a central feature of the American regulatory system,⁶³ its shortcomings have created a growing appreciation for a less costly, more efficient approach to regulation.⁶⁴ Direct command-and-control regulation may be particularly poorly suited for the agricultural sector, and so a different regulatory strategy seems appropriate in the context of farms and pesticide application.⁶⁵

60. See, e.g., Bruce A. Ackerman & Richard B. Stewart, *Reforming Environmental Law*, 37 STAN. L. REV. 1333, 1339 (1985) (describing the “serious inefficiency of traditional forms of command-and-control regulation,” and arguing that a market-based approach could help cure some of the existing deficiencies).

61. Paul R. Kleindorfer & Eric W. Orts, *Informational Regulation of Environmental Risks*, 18 RISK ANALYSIS 155, 156 (1998).

62. *Id.* at 157 fig.1.

63. See Ackerman & Stewart, *supra* note 60, at 1334 (“The congressional committees, government bureaucracies, and industry and environmental groups that have helped to shape the present system want to see it perpetuated. . . . [T]he current system is also bolstered by an often inarticulate sense that, however cumbersome, it ‘works,’ and that complexity and limited information make major improvements infeasible.”).

64. See William F. Pedersen, *Regulation and Information Disclosure: Parallel Universes and Beyond*, 25 HARV. ENVTL. L. REV. 151, 151 (2001) (“Although controlling social costs has long been a basic government function, direct government commands currently stand in low regard as a means of controlling them.”); Cass R. Sunstein, *Informational Regulation and Informational Standing: Akins and Beyond*, 147 U. PA. L. REV. 613, 618–19 (1999) (describing the surge in information regulation as a relatively recent phenomenon tied to the rights movement of the 1960s and 1970s).

65. Margot J. Pollans, Note, *Bundling Public and Private Goods: The Market for Sustainable Organics*, 85 N.Y.U. L. REV. 621, 622 (2010) (“The

Information regulation, by contrast, has been defined as “any regulation which provides to third parties information on company operations.”⁶⁶ In practice, information regulation can take different forms, but generally requires that a regulated entity disclose certain information regarding its performance or procedure to the public with the hope of improving the entity’s behavior or ensuring that it meets specified regulatory standards.⁶⁷ Information regulation takes advantage of the influence third parties can have on regulated entities by way of “supply[ing] ‘regulatory’ pressure through market dynamics, private litigation, or moral persuasion.”⁶⁸ Supporters of information regulation cite its flexibility, potential for influence, and relatively minimal intrusion into the affairs of private entities as reasons to extend the use of information-based regulatory strategies.⁶⁹ A disclosure-based approach to addressing social costs can also “empower communities and citizen groups to address the problems disclosure reveals without the inefficiencies and the overriding of local preferences that inevitably attend national regulation.”⁷⁰ And finally, implementing disclosure requirements helps avoid the burdens and high informational costs associated with traditional agency promulgation of guidelines and rules, since “[i]nformation is the outcome of the program and is collected, not by an agency, but by the regulated entity itself.”⁷¹

An additional powerful, if slightly more controversial, tool often facilitated by information regulation is the regulatory pressure exerted by private litigation. Lawsuits brought by individual citizens have often played an important role in ensuring regulatory compliance.⁷² Until recently, however, courts had

command-and-control environmental regulations that apply to most other American industries do not apply to farming.”)

66. See Kleindorfer & Orts, *supra* note 61.

67. See Sunstein, *supra* note 64, at 619 (“Some of these [disclosure requirements] are designed to assist consumers in making informed choices; such statutes are meant to be market-enhancing. By contrast, others are designed to trigger political, rather than market, safeguards; such statutes are meant to enhance democratic processes.”).

68. Kleindorfer & Orts, *supra* note 61, at 157.

69. See Pollans, *supra* note 65, at 634.

70. Pedersen, *supra* note 64.

71. Warren A. Braunig, Note, *Reflexive Law Solutions for Factory Farm Pollution*, 80 N.Y.U. L. REV. 1505, 1524–25 (2005).

72. See, e.g., Wendy Wagner, *When All Else Fails: Regulating Risky Products Through Tort Litigation*, 95 GEO. L.J. 693, 712–13 (2007) (describing the success of tort litigation in regulating many dangerous or toxic products in

interpreted federal law pertaining to pesticide-labeling requirements as preempting state common-law tort claims, minimizing the potential of private litigation in pesticide regulation. The Supreme Court's recent decision in *Bates v. Dow Agrosciences LLC* overturned the presumption of preemption, and indicated a new willingness to consider state common law claims in pesticide-related actions.⁷³

E. EXPANDED POTENTIAL FOR TORT LITIGATION CREATED BY *BATES*

Though the threat of litigation frequently plays an important role in ensuring regulatory compliance, federal preemption has long frustrated state common-law claims for damages in the context of pesticide-related harms. Until recently, the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) had posed a serious barrier to private recovery for an individual who has suffered damages related to irresponsible pesticide application.⁷⁴ FIFRA contains a specific preemption clause in a section covering uniformity, which states, “[s]uch State shall not impose or continue in effect any requirements for labeling or packaging in addition to or different from those required under this Act.”⁷⁵ While on its face this provision does not appear to automatically preempt state-law tort claims, it had been held to have that practical effect because successful state common-law actions might force pesticide manufacturers to change their labeling or packaging.⁷⁶ Thus, a successful state-law tort claim for damages had the practical effect of imposing additional or different labeling requirements, and, argu-

situations where firm operators misrepresented or withheld critical pollution information).

73. 544 U.S. 431, 440–43 (2005).

74. See Sherrie M. Flynn, *FIFRA's Puzzling Failure-To-Warn Preemption: Pesticide Use and the Right-To-Know*, 13 SAN JOAQUIN AGRIC. L. REV. 173, 176 (2003) (“[T]he overwhelming majority of courts that have addressed the issue of whether failure-to-warn claims are preempted by FIFRA, including eight federal circuit courts of appeal, have determined that they are.”); Klass, *supra* note 10, at 118–19 (“Although some early cases had interpreted FIFRA preemption narrowly to retain a significant role for common law tort claims, they were quickly followed by decisions in nearly every federal circuit applying FIFRA preemption broadly to prevent plaintiffs from using the tort law system to obtain compensation for pesticide-related harm and shape corporate behavior.”).

75. 7 U.S.C. § 136v(b) (2006).

76. Flynn, *supra* note 74, at 182.

ably, was preempted by section 136v(b) of FIFRA.⁷⁷ Prior to 2005, the debate over the proper interpretation of this preemptive provision was shaped by the Supreme Court's decision in *Cipollone v. Liggett Group, Inc.*, in which the Court examined the preemptive effect of the 1969 Cigarette Act.⁷⁸ The language of the Cigarette Act closely resembles the language of FIFRA in that it forbids states from imposing any requirement or prohibition based on smoking and health "with respect to the advertising or promotion of any cigarettes the packages of which are labeled in conformity with the provisions of this chapter."⁷⁹ In holding that the state-law failure-to-warn claim was preempted, the *Cipollone* Court indicated that "[t]he phrase 'no requirement or prohibition' sweeps broadly and suggests no distinction between positive enactments and common law."⁸⁰

The preemptive effect of FIFRA's provisions narrowed significantly with the Supreme Court's 2005 decision in *Bates v. Dow Agrosciences LLC*.⁸¹ In *Bates*, the Supreme Court considered a Fifth Circuit Court of Appeals decision that a plaintiff's state-law claims for crop damages caused by the herbicide "Strongarm" were preempted by FIFRA because recovery under those claims would impose a labeling requirement in addition to or different from those outlined in FIFRA.⁸² The Supreme Court rejected this effects-based approach to interpreting preemption, instead adopting an analysis that considered whether the state-law claim would impose any requirements that were more burdensome than those of FIFRA.⁸³ Noting that allowing certain private state-law claims "would seem to aid, rather than hinder, the functioning of FIFRA," the Court held that "nothing in § 136v(b) precludes States from providing such a remedy."⁸⁴ Following the Supreme Court's decision in *Bates*, state legislatures and courts are able to "create statutory and common law damage remedies for violations of federal labeling requirements."⁸⁵

77. *Id.*

78. 505 U.S. 504, 504–05 (1992).

79. 15 U.S.C. § 1334(b) (2006).

80. *Cipollone*, 505 U.S. at 521.

81. 544 U.S. 431, 443–44 (2005).

82. *Id.* at 436.

83. *Id.* at 447.

84. *Id.* at 448.

85. Klass, *supra* note 10, at 124.

The Supreme Court's new receptivity to common-law tort claims in pesticide exposure cases adds the possibility of a new tool in information regulation. Though traditional information disclosure systems have operated through the influence of public opinion and external monitoring pressures, the threat of a tort lawsuit represents perhaps an even more powerful incentive for responsible use by pesticide applicators. An analysis of existing information disclosure systems combined with the potential threat of tort litigation will show that public disclosure of pesticide-application information can play a powerful regulatory role.

II. REGULATION BY DISCLOSURE AND THE POTENTIAL OF LITIGATION

The idea of public information serving a regulatory function is far from new; disclosure requirements and information dissemination assume a central role in regulatory strategies adopted in other fields. The strategy is found most conspicuously in the work of the Securities and Exchange Commission and the public disclosure requirements throughout the federal securities laws.⁸⁶ Other well-known examples of information regulation include the required disclosure of serious health risks by the tobacco industry, the hazard communication programs adopted by employers under OSHA, and the Food and Drug Administration's disclosure requirements through nutritional labeling.⁸⁷ Only recently, however, has information regulation received much attention in an environmental context.⁸⁸ This Part analyzes the approach of information disclosure in an environmental context generally, identifying the factors that have led to its largely successful implementation and arguing that those same factors would translate to effective regulation in the field of pesticide application. It then examines the evolution of pesticide-use reporting requirements in California, and suggests that many of the initial burdens of adopting reporting re-

86. See Sunstein, *supra* note 64, at 618 (noting the surge in agency regulation in the New Deal era and explaining that "disclosure of information became a pervasive regulatory strategy, most obviously through the work of the Securities and Exchange Commission").

87. *Id.* at 619–20.

88. David W. Case, *The Law and Economics of Environmental Information as Regulation*, 31 ENVTL. L. REP. NEWS & ANALYSIS 10,773, 10,773 (2001) ("Since 1970, 'command-and-control' has been the predominant form of regulation used to implement environmental protection policy in the United States.").

quirements will be avoided by learning from the lessons of its reporting system. Finally, this Part responds to many of the traditional criticisms of using litigation as a regulatory tool, and argues that the newly created potential for common-law damage claims will make disclosure requirements even more effective.

A. SUCCESS OF DISCLOSURE IN AN ENVIRONMENTAL CONTEXT

In the last quarter of the twentieth century, informational regulation of environmental risks has grown in prominence.⁸⁹ One of the most prominent examples of largely successful information regulation in an environmental context is the use of disclosure requirements implemented by the Toxic Release Inventory (TRI) program. The success of this disclosure system in raising public awareness of the dangers of toxic chemicals, and spurring voluntary reductions in their release, provides a blueprint for pesticide-use disclosure programs.

The Emergency Planning and Community Right-to-Know Act (EPCRA) established a Toxic Release Inventory in 1986 to address the rapidly increasing use of toxic chemicals and their release into the environment.⁹⁰ The EPCRA gives the public the right to know about toxic chemicals being released into the environment, and requires facilities in industries that manufacture, process, or otherwise use significant amounts of toxic chemicals to file an annual report on their releases of these chemicals.⁹¹ Businesses or industries that make use of chemicals considered toxic file a toxic-release chemical form with the Environmental Protection Agency (EPA) that describes the general use of the chemical, estimates the amount of the chemical on hand, reports the amount released into the environment, and identifies waste treatment or disposal methods.⁹² The statute identifies a list of chemicals to be included in the

89. See Kleindorfer & Orts, *supra* note 61, at 155 (discussing various examples of information regulation programs that emerged towards the end of the twentieth century, such as the use of eco-labels, the disclosure requirements of the Clean Air Act Amendments, and the consumer confidence reports under the Safe Drinking Water Act Amendments).

90. 42 U.S.C. §§ 11001–50 (2006).

91. U.S. ENVTL. PROT. AGENCY, TOXICS RELEASE INVENTORY PROGRAM FACT SHEET (2011), available at http://www.epa.gov/tri/triprogram/tri_program_fact_sheet.htm.

92. 42 U.S.C. § 11023; see also Kleindorfer & Orts, *supra* note 61, at 155 n.3 (summarizing reporting requirements under EPCRA).

chemical report,⁹³ and provides for the EPA to make additions upon determining that a chemical can reasonably be expected to cause significant adverse human health effects.⁹⁴ The statute also requires the EPA to use the data obtained in these reports to establish a national toxic chemical inventory in a computer database, and to make that information accessible to the public.⁹⁵

TRI was widely regarded as resoundingly successful in bringing about voluntary toxic emissions reductions from the facilities and industries it covers.⁹⁶ From 1988 to 1999, TRI data on the consistently reported core industrial chemicals shows that total toxic releases decreased by 45.5%, or 1.46 billion pounds.⁹⁷ Commentators credit several different features of the TRI system with its overall effectiveness,⁹⁸ and its success has generated a great deal of academic interest and critical analysis.⁹⁹ Understanding the mechanism by which information disclosure systems like TRI operate is of paramount importance to replicating their success.¹⁰⁰ Before assuming that the success of

93. 42 U.S.C. § 11023(c) (noting that the reporting requirements apply to about 300 chemicals listed in S. REP. NO. 99-169 (1986)).

94. *Id.* § 11023(d)(2).

95. *Id.* § 11023(j).

96. David W. Case, *Corporate Environmental Reporting as Informational Regulation: A Law and Economics Perspective*, 76 U. COLO. L. REV. 379, 385–86 (2005) (“[C]onsensus is widespread that TRI disclosure has induced significant voluntary reductions in covered releases well below levels otherwise required by existing command-and-control regulation.”); Mark A. Cohen, *Information as a Policy Instrument in Protecting the Environment: What Have We Learned?*, 31 ENVTL. L. REP. NEWS & ANALYSIS 10,425, 10,425 (2001) (“[T]he TRI program led to significant voluntary decrease in the total amount of TRI chemicals released into the United States, beyond any mandated levels.”); Sunstein, *supra* note 64, at 622 (“[The EPCRA] has been an exceptional success story, one that has well exceeded the expectations at the time of the statute’s enactment.”).

97. Lynn R. Goldman, *Preventing Pollution? U.S. Toxic Chemicals and Pesticides Policies and Sustainable Development*, 32 ENVTL. L. REP. NEWS & ANALYSIS 11,018, 11,029 (2002).

98. See, e.g., Bradley C. Karkkainen, *Information as Environmental Regulation: TRI and Performance Benchmarking, Precursor to a New Paradigm?* 89 GEO. L.J. 257, 261–63 (2001) (noting that the interplay of various aspects of TRI led to its success).

99. See Case, *supra* note 88, at 10,775 (“Although numerous examples of informational regulatory approaches exist in the environmental arena, § 313 of the [EPCRA] is perhaps the most widely analyzed example of this approach.”).

100. See Cohen, *supra* note 96, at 10,426–28 (discussing the need to understand the mechanism by which information disclosure programs exert their influence over covered industries and businesses); Archon Fung & Dara O’Rourke, *Reinventing Environmental Regulation from the Grassroots Up: Ex-*

information disclosure in one area will equate to similar results in another context, it is important to understand how disclosure requirements achieve their outcome.¹⁰¹

For example, not only did TRI require the reporting of toxic-release information and provide it to the public, but it also actively disseminated that information through media outlets and well-recognized internet sources such as Environmental Defense's "Scorecard" website.¹⁰² This active dissemination of information helped to ensure public involvement, and allowed citizens to engage in monitoring and oversight.¹⁰³ The influence exerted by public opinion has played a heavy role in shaping firms' behavior.¹⁰⁴ While traditional command-and-control style regulation can mandate minimum standards that must be met by firms, exposing toxic-release information to the public provides an incentive for firms to achieve even lower levels of toxic chemical release.¹⁰⁵ In response to negative attention from toxic-release information, some covered firms began voluntarily publishing reports disclosing positive information about their

plaining and Expanding the Success of the Toxics Release Inventory, 25 ENVTL. MGMT. 115, 115 (2000) ("By properly understanding the mechanisms that drive TRI's accomplishments, more intentional public policy designs can expand the system of populist maxi-min regulation and achieve even more rapid toxics reduction.").

101. Cohen, *supra* note 96, at 10,426 ("[W]e cannot assume the success of one program is transferable to another program unless we understand the mechanism by which the first program succeeded.").

102. Case, *supra* note 88, at 10,775; *see also* Cohen, *supra* note 96 (contending that part of TRI's unique success is due to "new information technologies (both hardware and software) that facilitate the dissemination of environmental information in a meaningful way").

103. *See* Fung & O'Rourke, *supra* note 100, at 118 ("TRI data are now used regularly by individuals, community-based organizations, environmental groups, industry managers, state and federal agencies, lawyers, investment advisors, and the media. Uses vary from educating and mobilizing affected communities to assisting corporate environmental planning, from supporting efforts to strengthen regulations to promoting voluntaristic environmental initiatives.").

104. *See* Cohen, *supra* note 96, at 10,426 ("[T]here is empirical evidence that informal community pressure and social norms may play an important role in emissions and/or compliance.").

105. *See* Fung & O'Rourke, *supra* note 100, at 119 ("The TRI catalyzes the involvement of ordinary people in the determination of toxics emissions standards by changing the effective limit that is publicly acceptable rather than legally allowable, whereas command-and-control policies leave discussions of toxics to 'experts' in environmental agencies, industry, and sometimes environmental groups. Ordinary people, it seems, demand lower levels of toxics than government regulators.").

environmental operation and performance.¹⁰⁶ Some commentators have theorized that voluntary pollution reduction efforts and positive reporting occur because TRI provides corporate managers with information that they may not have had prior to conducting TRI reporting.¹⁰⁷ An early report from a chemical industry participant confirmed these impressions, acknowledging that “[b]eing responsive to citizen concerns and communicating to make the public feel comfortable has changed the way manufacturers do business.”¹⁰⁸

Another source of TRI’s success lies in its adoption of data reporting in standardized units that allows for the easy comparison and analysis of toxic-release information across different categories and industries.¹⁰⁹ Whereas data reporting under more conventional regulatory methods often elicited the minimum amount of data needed to verify compliance, mandatory TRI reporting created an entire inventory of standardized statistics for use in comparison between firms and against historical performance.¹¹⁰ The use of standardized data reporting also makes it easier for the EPA to maintain an intelligible database of this information in a way that is straightforward and accessible to the public.¹¹¹

B. FINDING GUIDANCE IN ADOPTING REPORTING REQUIREMENTS FOR PESTICIDES

Though information disclosure through TRI represents somewhat of a singular success, the effectiveness of information reporting requirements has given analysts hope that similar results could be achieved in other environmental contexts.¹¹² In-

106. Case, *supra* note 96, at 386.

107. Fung & O’Rourke, *supra* note 100, at 119.

108. Elizabeth A. Fisher, *An Industry Perspective on Reporting Releases of Toxic Chemicals*, in INTERNATIONAL CONFERENCE ON REPORTING RELEASES OF TOXIC CHEMICALS: NOVEMBER 13–15, 1991, at 33, 34 (1991).

109. *Id.* at 33–34.

110. See Karkkainen, *supra* note 98, at 261 (“Because TRI data are reported in standard units, they can be aggregated to produce profiles and performance comparisons at the level of the facility, firm, industrial sector, community, metropolitan region, state, watershed or other critical ecosystem, and the nation as a whole.”).

111. *Id.*

112. See Case, *supra* note 88, at 10,775–76 (“The perceived success of the TRI in effecting ‘voluntary’ performance improvements by regulated entities has generated significant optimism among scholars and policymakers regarding the potential public policy benefits of expanding the use of informational regulation as an environmental protection tool.”).

formation disclosure in the context of pesticide use presents a different challenge than the regulation of toxic releases since the object is not to eliminate pesticides but rather ensure their responsible use.¹¹³ Unlike toxic chemical releases, which are undesirable side-effects of industrial practices, with pesticide use the product itself is designed to be toxic.¹¹⁴ In pursuing disclosure regulation strategies, then, policy makers must bear in mind that pesticide applicators' incentives differ significantly from those of corporate managers dealing with toxic waste.¹¹⁵

Fortunately several states have already implemented some kind of reporting system for certain types of pesticide application, providing some guidance for future disclosure strategies.¹¹⁶ California,¹¹⁷ New York,¹¹⁸ and Oregon¹¹⁹ were among the first states to adopt extensive pesticide reporting systems. Since then a few other states have followed suit and implemented their own pesticide reporting requirements.¹²⁰ Generally these

113. See Tom Tietenberg & David Wheeler, Empowering the Community: Information Strategies for Pollution Control 5–6 (October 23–25, 1998) (working paper for Frontiers of Env'tl. Econ. Conf.), available at <http://www.p2pays.org/ref/07/06539.pdf>.

114. *Id.*

115. See *id.* (discussing the difference between pollution that is produced as the byproduct of a process and pollution that arises from the use of a product).

116. SUSAN KEGLEY ET AL., HOOKED ON POISON: PESTICIDE USE IN CALIFORNIA: 1991–1998, at 16 (2000) (“California has a unique pesticide use reporting (PUR) system that other states in the U.S. are only beginning to emulate.”).

117. *Id.* at 15–16 (“Full use reporting for agricultural and commercial applications of pesticides has been in place since 1990 in the form of the California Pesticide Use Reporting (PUR) system.”).

118. *The Pesticide Reporting Law*, N.Y. ST. DEPT. OF ENVTL. CONSERVATION, <http://www.dec.ny.gov/chemical/27506.html> (last visited Jan. 2, 2012) (“The Pesticide Reporting Law (PRL) (Environmental Conservation Law Article 33, Title 12) was enacted on July 8, 1996. The New York State Department of Environmental Conservation (NYSDEC) is responsible for implementing the data collection portion of this law.”).

119. OR. DEP'T OF AGRIC., OREGON PESTICIDE USE REPORTING SYSTEM: ANALYTICAL REVIEW 7 (2000), available at <http://library.state.or.us/repository/2010/201007011250354/index.pdf> (“New legislation (HB3602) directs the Oregon Department of Agriculture (ODA) to establish a pesticide use reporting system to provide government agencies, researchers, policy makers and the public a comprehensive, reliable and cost effective system for collecting and organizing information on all categories of pesticide use in Oregon, with the goal of ensuring public health and safety, and protecting Oregon's water and environment.”).

120. *Id.* at 8 (noting that Arizona, New Hampshire, New Jersey, Wisconsin, and Massachusetts all have, or are in the process of adopting, pesticide-use reporting requirements).

programs have generated a positive response,¹²¹ but there is still much room for improvement in data-collecting methods and implementation.¹²² California, with its vast agricultural systems and full-use pesticide reporting has been a leader in tackling pesticide data collection.¹²³ Therefore, an analysis of its system will prove helpful. Though the initial adoption of its reporting system posed some challenges,¹²⁴ California's reporting system has evolved to address many of those shortcomings, and now serves as a model for states to follow in implementing disclosure systems.

The State of California has utilized some form of limited pesticide-use reporting since at least 1950, when the California Department of Food and Agriculture indicated that the county agricultural commissioners required agricultural pest control operators to submit monthly reports on their work.¹²⁵ In 1990, in response to demands for more comprehensive application reporting, California became the first state to require full reporting of agricultural pesticide use.¹²⁶ Currently pesticide-use data in California is collected by the state's Department of Pesticide Regulation (DPR), which analyzes the data through a number of different metrics to assess dangers and identify patterns.¹²⁷ Copies of annual reports are made readily available on the DPR website, and each report contains guidance as to how to access and understand the data.¹²⁸

121. See, e.g., Keith Cunningham-Parmeter, *A Poisoned Field: Farmworkers, Pesticide Exposure, and Tort Recovery in an Era of Regulatory Failure*, 28 N.Y.U. REV. L. & SOC. CHANGE 431, 455 (2003) (arguing that a program like California's pesticide-use reporting system, if incorporated on a national scale, would prove invaluable to farmworkers who suffered from pesticide exposure poisoning incidents); *Pesticide Use Reporting*, CAL. DEP'T OF PESTICIDE REG., <http://www.cdpr.ca.gov/docs/pur/purmain.htm> (last visited Jan. 2, 2012) ("California's pesticide use reporting program is recognized as the most comprehensive in the world.").

122. See KEGLEY ET AL., *supra* note 116 (detailing some of the initial limitations of the California Pesticide Use Reporting System and recommending improvements).

123. Cunningham-Parmeter, *supra* note 121, at 446 n.100 ("California is a leader among the states because of its fairly detailed reporting system.").

124. KEGLEY ET AL., *supra* note 116, at 45–46.

125. CAL. DEP'T OF PESTICIDE REGULATION, REGULATING PESTICIDES: THE CALIFORNIA STORY 69 (Veda Federighi, ed., 2001), available at <http://www.cdpr.ca.gov/docs/pressrls/dprguide/dprguide.pdf>.

126. *Pesticide Use Reporting*, *supra* note 121.

127. *Id.*

128. See, e.g., CAL. DEP'T OF PESTICIDE REGULATION, SUMMARY OF PESTICIDE USE REPORT DATA 2009, at 2–9 (2010), available at <http://www.cdpr.ca>

California's pesticide-use reporting system represents the largest undertaking of its kind, and serves as a model for future pesticide disclosure programs.¹²⁹ Notwithstanding the overall success of requiring full pesticide-use reporting, several commentators have noted that improvements to the reporting system would help connect the required disclosure with actual progress towards reduction of irresponsible use.¹³⁰ When the program was first implemented, delays in reporting, errors in data collection, and increased agency workload often limited the effectiveness of the data in achieving actual reductions in irresponsible pesticide use.¹³¹ The sheer amount of full-use pesticide reporting data in California placed a heavy burden on the state's Department of Pesticide Regulation, and similar concerns exist about disclosure systems in other states.¹³² Once application data is collected in a single system, the influence of public perception and the threat of litigation help to minimize the agency burden by encouraging the prevention of irresponsible application as opposed to correcting misapplication after the fact.¹³³

C. REGULATORY INFLUENCE OF THE THREAT OF LITIGATION

In the wake of the Supreme Court's decision in *Bates v. Dow Agrosciences LLC*,¹³⁴ the public gained another tool in the fight to ensure responsible pesticide use: the threat of tort liti-

.gov/docs/pur/pur09rep/comrpt09.pdf (explaining how pesticide data is used, as well as commenting on and clarifying summaries of the data).

129. *California Pesticide Use Reporting Data*, PESTICIDE ACTION NETWORK PESTICIDE DATABASE, http://www.pesticideinfo.org/Docs/ref_PURCA.html#Missing (last visited Jan. 2, 2012) (explaining that California's pesticide-use reporting system is one of the most comprehensive in the world).

130. See, e.g., CAL. DEP'T OF PESTICIDE REGULATION, AN OVERVIEW OF CALIFORNIA'S UNIQUE FULL REPORTING SYSTEM 10 (2000), available at <http://www.cdpr.ca.gov/docs/pur/purovrvw/ovr52000.pdf> ("Because full use reporting was a major program that no other state had undertaken, it was inevitable that there were problems to be worked out.").

131. See KEGLEY ET AL., *supra* note 116, at 45–46 (detailing several of the problems with California's pesticide-use reporting system and making recommendations to improve its practical effects).

132. See CAL. DEP'T OF PESTICIDE REGULATION, *supra* note 130, at 7 ("This increased workload [from full-use pesticide-application reporting] impacted both DPR and the counties, and prompted DPR to analyze its operations and evaluates ways to address the problem.").

133. See KEGLEY ET AL., *supra* note 116, at 45 ("An ounce of prevention is worth a pound of cure, and the surest approach to risk reduction is continual reductions in both the amount and intensity of pesticide use . . .").

134. 544 U.S. 431 (2005).

gation.¹³⁵ In fact, in deciding *Bates*, the Supreme Court specifically contemplated the role of tort litigation against irresponsible handlers of poisonous substances.¹³⁶ Echoing the rationale behind public disclosure systems like TRI, the Court also recognized that allowing common-law tort suits could incentivize chemical manufacturers and applicators to “gain more information about their products’ performance in diverse settings.”¹³⁷ The Court clearly viewed common-law tort claims as not only a means by which wrongly injured parties could receive compensation, but also as a tool for encouraging responsible and informed pesticide-use decisions: “By encouraging plaintiffs to bring suit for injuries not previously recognized as traceable to pesticides such as [the pesticide there at issue], a state tort action of the kind under review may aid in the exposure of new dangers associated with pesticides.”¹³⁸

Although the idea of private litigation playing a role in effective regulation is controversial, several commentators insist that litigation can have an important supplementary function as a regulatory tool.¹³⁹ In the area of pesticide-use regulation, where agency oversight is often found lacking in effectiveness, the threat of litigation supplies a powerful incentive to pesticide applicators to comply with government regulations.¹⁴⁰ Furthermore, given the limitations on agency resources to pursue thorough investigations of pesticide misuse, often times an injured party’s only recourse is through a state-law tort claim for damages.¹⁴¹

135. Klass, *supra* note 10, at 124 (“[D]evelopments in FIFRA preemption and the common law as a result of *Bates* makes common law tort claims a more promising approach today than it was prior to the Court’s decision.”).

136. *Bates*, 544 U.S. at 432–33 (“The long history of tort litigation against manufacturers of poisonous substances adds force to the presumption against pre-emption, for Congress surely would have expressed its intention more clearly if it had meant to deprive injured parties of a long available form of compensation.”).

137. *Id.* at 451.

138. *Id.* (citing *Ferebee v. Chevron Chem. Co.*, 736 F.2d 1529, 1541–42 (D.C. Cir. 1984)).

139. See, e.g., Wagner, *supra* note 72, at 695 (“[I]n addition to its critical role in compensating victims, the tort system plays an indispensable role in supplementing agency regulation of risky products and activities.”).

140. See Sunstein, *supra* note 64, at 629–30 (discussing the role of citizens suits as an ex ante deterrent and an ex post corrective on regulated party behavior).

141. Cunningham-Parmeter, *supra* note 121, at 471 (“[F]armworkers must rely on common law tort theories in order to obtain recovery for their injuries.”).

One of the traditional criticisms of regulation through litigation involves the high costs of gaining access to crucial information through the judicial process.¹⁴² This complaint rings particularly true for parties who have been injured through pesticide exposure, because in many states the only way to access that information is by initiating a risky and expensive lawsuit.¹⁴³ Even though state government agencies typically have the authority to access pesticide-use information,¹⁴⁴ laws that confer protected status on such data often impose high practical impediments for a party that suspects misuse has occurred.¹⁴⁵

One of the biggest barriers facing a potential litigant who has suffered harm from pesticide exposure is the need to show the causal link between the misapplication of chemicals and the damage done.¹⁴⁶ Just as in any other toxic tort case, a plaintiff in a pesticide tort action “must prove by a preponderance of the evidence that the pesticide exposure caused her injury or was at least a substantial contributing factor to the injury.”¹⁴⁷ Establishing causation in the face of a dearth of information surrounding the circumstances of the suspected misapplication means that the litigant is confronted with at best an immensely costly information-gathering process, and at worst an insurmountable barrier to recovery.¹⁴⁸

Given the new potential for the role of litigation in insuring responsible pesticide use, state laws frustrating that possibility

142. See Wagner, *supra* note 72, at 697 (“When manufacturers conceal information about product risks, they insulate themselves from accountability for the harms they might be causing to society. This privately held information can constitute a costly barrier—sometimes an insurmountable one—to regulating product and related industrial risks.”).

143. See Klass, *supra* note 10 (explaining that because pesticide data is not available to individuals when the harm occurs, such lawsuits are costly and difficult).

144. See MINN. STAT. § 18B.37 (2010).

145. See Wagner, *supra* note 72, at 698 (“While in theory the legislative and executive branches should be able to access a great deal of private information, the political nature of the process imposes real and often quite stark limits on the nature and extent to which regulation-relevant information is actually accessed and made more generally available to the public.”).

146. See Cunningham-Parmeter, *supra* note 121, at 482 (“Regardless of what theory of recovery plaintiffs assert in pesticide cases, the primary difficulty for most farmworkers will be establishing a causative link between the pesticide exposure and the resultant injury.”).

147. *Id.* at 483.

148. See *id.* at 490–97 (discussing the various burdens a farmworker faces in establishing causation in a pesticide tort case).

by shielding application data should be repealed. Instead, states should move toward adopting comprehensive, full-use pesticide reporting systems, such as the program implemented in California.

III. TRENDING TOWARD DISCLOSURE

Pesticide reporting systems that make chemical application data presumptively available to the public will dramatically lower the costs of pesticide tort litigation by providing easy access to the very evidence needed to show that pesticide misuse occurred. With the removal of one of the principal barriers to a successful tort suit for pesticide-related damages, the threat of liability for irresponsible pesticide use becomes too big for applicators to ignore.¹⁴⁹ Furthermore, the chilling effect of the threat of litigation, as well as public-image concerns, will mitigate some of the commonly criticized high costs associated with disclosure systems and the use of litigation as a regulatory tool. States should shift away from laws that protect pesticide-use information and move towards disclosure systems like California's to create an environment that pressures pesticide applicators to make certain of responsible use or face the threat of litigation. Minnesota should lead the way by repealing subdivision 5 of section 18B.37 so that chemical use data becomes presumptively available to the public, and by adopting a reporting system to make pesticide information easily accessible. The burden of implementing such a system is relatively small, given that much of the data is already being recorded, and the cost is justified by the equitable concern of allowing victims of irresponsible pesticide use a viable remedy.

A. INCENTIVES FOR RESPONSIBLE USE CREATED BY PUBLIC DISCLOSURE

While the initial change in disclosing such information may result in costly lawsuits, having access to the correct information will increase an injured party's chances of just compensation, and will eventually lead to changes in applicator behavior.¹⁵⁰ The principal effect of pesticide-use information

149. *See id.* at 471 (“[P]esticide applicators—who typically work on a contract basis for growers—may be liable for a host of injuries resulting from the misapplication of pesticides and field drift.”).

150. *See id.* at 505 (“[T]ort actions can raise the price of maintaining the status quo for growers and manufacturers. By providing agribusiness with an

disclosure will be to bring about behavior modification in the form of responsible pesticide use in response to the threat of litigation. The traditional influences of information disclosure—public opinion, external monitoring, and third-party involvement—will also play a prominent role as tort lawsuits put the public spotlight on irresponsible pesticide practices.¹⁵¹ The pressures created by public knowledge of pesticide-application practices gives applicators a powerful incentive to use utmost care when using toxic chemicals.

Though the threat of litigation provides the rhetorical stick, data disclosure systems also offer pesticide users a carrot. Just as the information that came to light under the Toxic Release Inventory resulted in favorable public reviews from conscientious, toxic-release-reducing firms, large farms and agribusinesses stand to gain significant positive publicity by touting their responsible pesticide-use record. Even smaller farms lacking a public profile have a great deal to gain through the disclosure of their responsible chemical practices. Since the great majority of pesticide application occurs in rural farming areas, strong ties of community often exist to bind neighbors and provide incentives to cooperate and insure the health of the community.¹⁵² Some instances of rural community negotiations have led to “good neighbor” agreements where farmers have voluntarily agreed to reduce the amount of pesticides applied in sensitive areas such as near homes or schools.¹⁵³ If mandatory disclosure of toxic chemical releases motivated large industrial operations to reduce emissions to avoid being seen as a bad neighbor,¹⁵⁴ such programs would be even more effective in rural farming areas with strong community ties.

incentive to reform its ways, litigation brought by farmworkers may compensate only a few, but catalyze changes that benefit many.”).

151. See, e.g., Fung & O'Rourke, *supra* note 100, at 118.

152. See *California Pesticide Use Reporting Data*, *supra* note 129 (“[K]nowledge of typical pesticide applications by a particular grower has led to negotiations between farmers and community members in an attempt to reduce pesticide use near homes, schools, and parks.”).

153. *Id.*

154. See Mary Jane Angelo, *Corn, Carbon, and Conservation: Rethinking U.S. Agricultural Policy in a Changing Global Environment*, 17 GEO. MASON L. REV. 593, 645 (2010) (“Experience with the TRI has shown that simply requiring industrial operations to report to the public the types and amount of toxic releases from industrial facilities results in significant reductions of toxic releases, in part because industry will voluntarily reduce its admissions to avoid being seen as a ‘bad neighbor’ . . .”).

Furthermore, although some information reporting and disclosure systems are criticized on the grounds of the prohibitive cost,¹⁵⁵ pesticide-application information avoids this complication since most of the data needed to establish a reporting system is already compiled by users and applicators.¹⁵⁶ As discussed above, the Federal Pesticide Record Keeping Program requires private and commercial applicators to maintain fairly detailed records regarding the circumstances surrounding each application.¹⁵⁷ Since most of the data needed to establish a database is already on-hand with pesticide applicators, there is a much lower initial cost to creating a publicly accessible system of pesticide-use information. Thus a pesticide-use reporting system represents a relatively low-cost and effective way to ensure lawful and responsible pesticide application. And even though some initial costs related to implementing public disclosure and allowing private lawsuits are inevitable, the evidence suggests that the huge benefits to the public of responsible pesticide use likely outweighs those costs.¹⁵⁸

B. DISCLOSURE IS AN EQUITABLE SOLUTION

Beyond the argument that pesticide-use disclosure leads to an efficient way of regulating pesticide applicators, making such information available to the public is also an equitable measure. Toxic chemicals such as restricted-use pesticides present an extreme hazard to humans and animals residing in an area where they are regularly applied.¹⁵⁹ People who are at risk of pesticide exposure have a right to know when, where, and how pesticides are applied so that they can take the appropriate measures to protect themselves.¹⁶⁰ This concern is already reflected in the labeling and registration requirements intend-

155. See Sunstein, *supra* note 64, at 626–27 (suggesting that information disclosure systems implemented by the FDA or under OSHA are extremely expensive due to the cost of obtaining information); ELEFF, *supra* note 46, at 54 (“An objection sometimes made against [a pesticide-use data collecting] system is the alleged record-keeping burden it places on applicators.”).

156. ELEFF, *supra* note 46, at 54 (“[A] significant proportion of applicators already are required to keep records of their pesticide use.”).

157. See *supra* notes 25–29, and accompanying discussion.

158. See, e.g., Wagner, *supra* note 72, at 711.

159. See, e.g., Cunningham-Parmeter, *supra* note 121, at 438–39 (“Ingested and absorbed every day through the field worker’s nose, mouth, and skin, pesticides are toxic substances designed to kill living organisms.”).

160. See KEGLEY ET AL., *supra* note 116, at 45 (arguing that growers, farmers, and consumers have a right to know about the hazards associated with the potential adverse health effects of pesticide exposure).

ed to protect persons who are applying pesticides. Federal law imposes a high level of scrutiny before a toxic chemical can be registered for use as a pesticide.¹⁶¹ The same care should be taken to use pesticide-application data in protecting parties who risk exposure even though they are not themselves utilizing chemicals.

The costs of pesticide application are unequally distributed across society. Although consumers benefit from the advantages of pesticides in agriculture just as surely as agricultural producers and pesticide applicators, persons who reside in rural areas with a high risk of exposure to these chemicals bear a disproportionate share of the burden.¹⁶² By making application data available to the general public, a semblance of balance is restored. Traditionally disadvantaged parties, such as farmworkers or rural residents, gain a means to protect themselves when they have access to the information about pesticide application in their area. The increased viability of litigation after critical facts are made available provides victims of irresponsible pesticide use with a just remedy. Making pesticide-application information available to the public is the first step in re-establishing a fair distribution of the costs of pesticide use.

CONCLUSION

Based on the ascendancy of information regulation theory and the success of pesticide reporting programs in those areas that have adopted them, other states should implement a similar reporting requirement that would make pesticide-application data available to the public. Although information disclosure programs in the environmental context have typically operated through market mechanisms, public opinion and other social pressures, the increased availability of state tort claims will exert an even more effective pressure on pesticide applicators to use chemicals in a responsible manner. Though litigation as a regulatory tool has been criticized as expensive and inefficient, much of this criticism is based on the high cost

161. See OFFICE OF PESTICIDE PROGRAMS, U.S. EPA, REGULATORY IMPACT ANALYSIS: DATA REQUIREMENTS FOR REGISTERING PESTICIDES UNDER THE FEDERAL INSECTICIDE, FUNGICIDE AND RODENTICIDE ACT 27 (1982).

162. See Cunningham-Parmeter, *supra* note 121, at 447 (“While pesticide producers, users, and consumers benefit from the use of pesticides . . . costs are distributed disproportionately throughout the population (in terms of acute and chronic toxic effects such as cancer).” (alteration in original) (emphasis omitted) (quoting OFFICE OF PESTICIDE PROGRAMS, U.S. EPA, *supra* note 159)).

of obtaining information needed to proceed with a lawsuit. This barrier to litigation, however, vanishes when pesticide-application information is made easily accessible through a public pesticide-use reporting system. The knowledge that pesticide-use data, and thus any evidence of misuse, is readily available to the public incentivizes pesticide applicators to ensure that their use is responsible and in compliance with labeling requirements and regulations. Pesticide-use reporting and public disclosure thus provides a powerful supplement to traditional regulatory methods, and helps encourage lawful and safe pesticide application.