



Assigning liability for pesticide spray drift



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ABSTRACT

Conflicts over the use of pesticides causing damages to neighboring non-target crops led the United States Environmental Protection Agency (EPA) to propose a statement addressing pesticide spray drift. EPA is attempting to set out language that would clarify responsibilities for spray drift to offer protection to persons and properties harmed and minimize damages. Pesticide applicators expressed concern that a 2009 statement advanced a zero-risk, strict liability standard that would markedly increase liability for damages. EPA issued a revised statement in 2012 that provides a negligence standard of liability. From an investigation of liability rules employed to assign damages in pesticide drift cases, EPA's labeling statements are analyzed to discern their efficiency. The two alternative proposals present the opportunity for delineating a preferred liability rule that would enhance long-term economic performance of the agricultural production system by optimally addressing the externality between pesticide applicators and neighboring farms.

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Introduction

Increasing demands for food production (Tschamntke et al., 2012), consumer support for organic food (Zander and Hamm, 2010), and outbreaks of diseases being carried by mosquitoes (Tedesco et al., 2010) have been accompanied by controversies involving the use of pesticides and spray drift (Centner, 2012). Spray drift is the physical movement of pesticide particles through the air from a target site to a non-target site and includes dust drift (EPA, 2009a). The spray drift issue is whether a pesticide applicator should incur liability when an application is accompanied by drift being carried onto neighboring property that causes damages to non-target crops. For example, spray drift can result in financial losses when an organic crop is disqualified from being marketed under an organic certification program and the producer's land must be withdrawn from organic production. Concerns about damages from pesticide spray drift have led interest groups to advocate that the U.S. Environmental Protection Agency (EPA) adopt guidance on minimizing drift that would offer further protection from adverse effects for people, non-target organisms, and the environment (EPA, 2009b).

For agricultural users of pesticides, spray drift is seen as a byproduct of their crop production activities that has been considered by the EPA in the pesticide's registration process. All pesticides used in the United States are registered under the Federal

Insecticide, Fungicide, and Rodenticide Act (FIFRA) (U.S. Code, 2006). Each registered pesticide undergoes a risk assessment with a designation on how it can be used. Pesticide applicators complete training and are certified before they may use the most dangerous pesticides, known as restricted use pesticides. Agricultural producers maintain that FIFRA's "no unreasonable adverse effect" standard means some drift is inherently inevitable (U.S. House Committee on Agriculture, 2010). An EPA workgroup acknowledged that some tolerance for diminutive exposure should exist (EPA, 2007). Yet, treating spray drift as inevitable fails to fully consider the externalities involved (i.e., the costs borne by the pesticide applicator do not reflect the total social cost of the action). Spray drift may be associated with external costs to property, human health, or the environment. When spray drift intrudes on neighboring properties and causes harm to crops, people, or ecosystems, it creates an unfair situation by imposing a cost on parties not subject to the pesticide application decision. The registration of a pesticide under FIFRA does not grant applicators the right to harm others with impunity. Furthermore, failure to internalize the costs of the externality is not socially optimal and thus warrants government intervention to correct the market failure.

In 2009, EPA issued a draft Pesticide Registration Notice 2009–X (PRN 2009–X) to provide guidance on EPA's policies with regard to the prevention of pesticide drift (EPA, 2009a,b). The objectives of the notice were "to improve communication of drift management requirements to pesticide applicators and as a result, to improve protection of people and other non-target organisms and sites from potential adverse effects that may be caused by off-target pesticide drift" (EPA, 2009b). The drift statement would be incorporated

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into labeling for new products (EPA, 2009a). While PRN 2009-X sought to protect organisms and the environment, its precautionary approach was viewed by some as establishing a zero-risk standard that would replace FIFRA's risk-benefit standard (U.S. House Committee on Agriculture, 2010). Thus, it generated considerable opposition, leading EPA to informally alter its approach through a revised proposal (Keigwin and Jordan, 2010; Bloom, 2011).

As interest groups and the EPA discuss options for responding to problems created by spray drift, liability for damages from spray drift continues to be governed by FIFRA's labeling provisions and corresponding state law. Drawing from the LEXIS-NEXIS case-law database, four causes of action have been used as liability rules for seeking recompense for spray drift damages. Two of these liability rules (strict liability and negligence) are embedded in the alternative PRN 2009-X notices suggested by EPA. The liability rules that would apply under each alternative are important to agricultural producers as well as those persons adversely affected by spray drift.

This paper connects the alternative PRN 2009-X statements to liability claims for spray drift damages and relates them to their economic consequences. Initially a regulatory analysis coordinates the federal legal requirements with the liability rules of individual US states. The examination of EPA's alternative PRN 2009-X proposals identifies negligence and strict liability as liability rules for assigning pesticide drift liability. Employing these findings, the two liability rules are analyzed using a two-agent model to discern which offers a superior response to the competing economic interests. This analysis seeks to recommend a liability rule that would support the use of pesticides in a manner that would enhance overall long-term economic performance of the agricultural production system by optimally addressing the externality between pesticide applicators and neighboring farms.

Labeling under FIFRA

Congress enacted FIFRA to serve the agricultural community by regulating the registration of beneficial pesticides to control pests (U.S. Code, 2006, § 136(u)). However, subsequent amendments show FIFRA as being intended to protect public health interests and the environment (Klass, 2005; Brar, 2010). With definitive provisions on labeling and misbranding, FIFRA establishes federal controls over the usage of all pesticides. Yet, as noted by the U.S. Supreme Court, FIFRA authorizes a decentralized scheme that preserves a broad role for state regulation (Bates vs. Dow Agrosciences LLC, 2005). The rights of pesticide applicators vis-à-vis neighboring property owners concerning damages from spray drift are based on state law. Thus, both federal and state law need to be evaluated to determine the rights and responsibilities of pesticide applicators with respect to damages from spray drift.

Since all pesticides are registered under FIFRA, liability for damages from spray drift requires compliance with the provisions of this federal law. Prior to registration, EPA performs a comprehensive health and environmental risk assessment to determine the pesticide's expected impact on the surrounding environment. A pesticide may only be registered if the EPA determines that the pesticide is efficacious and will not cause unreasonable adverse effects on humans and the environment (U.S. Code, 2006, § 136a). For each registered pesticide, a label must comply with FIFRA's prohibition on misbranding. A pesticide is misbranded if

it does not contain directions for use which are necessary for effecting the purpose for which the product is intended and if complied with . . . are adequate to protect health and the environment; [or] the label does not contain a warning or caution statement which may be necessary and if complied with . . . is adequate to protect health and the environment. . . (U.S. Code, 2006, § 136).

Pesticide registration regulations set forth requirements for information evaluating pesticide spray drift including a table of spray drift data requirements. This information is used to evaluate the labeling necessary for a pesticide (U.S. C.F.R., 2011, §§ 158.130, 158.1100). With the submitted data, EPA develops appropriate wording for precautionary labels that minimize the potential adverse effect to non-target organisms (U.S. C.F.R., 2011, § 158.130).

Every registered pesticide must bear an approved product label setting forth directions for use of the product (U.S. Code, 2006, § 136a). The standards for the tests and data used to develop label information are set forth in Pesticide Assessment Guidelines maintained by the U.S. Department of Commerce (U.S. C.F.R., 2011, § 161.20). PRN 2009-X would be added to the spray drift labeling information for new pesticide products. Since FIFRA imposes on applicators a requirement that they follow all label directions and that applications of pesticides be in a manner consistent with the labeling, they would need to apply pesticides consistent with the drift statement of PRN 2009-X (U.S. Code, 2006, § 136j).

FIFRA's requirements mean that spray drift is considered before the registration of a pesticide. However, the registration of a pesticide does not address the issue of when an applicator may incur liability for spray drift damages. Rather, as noted by the U.S. Supreme Court, FIFRA recognizes a role for states to act in developing consistent labeling requirements (Bates vs. Dow Agrosciences LLC, 2005). Established jurisprudence shows state law governing claims for damages from spray drift (Anderson vs. Department of Natural Resources, 2005). Although FIFRA offers a defense against certain claims based on state law, the defense does not imply that the registration of a pesticide precludes liability for damages from spray drift.

The registration of a pesticide under FIFRA is limited to pesticides that will perform their intended functions "without unreasonable adverse effects on the environment" (U.S. Code, 2006, § 136a). The term "unreasonable adverse effects on the environment" is defined as "any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide" (U.S. Code, 2006, § 136). Agricultural interest groups contend that FIFRA already incorporates a risk-benefit standard that applies to spray drift so nothing further is needed (U.S. House Committee on Agriculture, 2010). Yet, upon closer inspection, the risk-benefit standard employed in registering a pesticide addressing broad effects that a pesticide has on the general environment is not the same as liability based on precautionary measures for spray drift from a specific incident (Calcott and Hutton, 2004). Therefore, the registration of a pesticide is inapposite for addressing drift liability. Instead, liability for spray drift is determined by state law.

A defense against claims

Applicators who follow labeling requirements have a defense against claims based on inadequate labeling (Netland vs. Hess & Clark, Inc., 2002). Conversely, applicators who fail to comply with a label by allowing drift onto non-target areas can incur liability (Olson vs. California Department of Pesticide Regulation, 2009). Furthermore, to maintain national uniformity in the regulation of pesticide use, FIFRA precludes any requirements that are "in addition to or different from" federal labeling requirements (U.S. Code, 2006, § 136v). This provision preempts any state or local law that attempts to create additional liability for injuries from pesticide use. While state law is preempted, FIFRA allows consistent state-law labeling requirements to meet special local needs (Bates vs. Dow Agrosciences LLC, 2005). These are permitted due to the fact that the federal requirements do not consider the unique effects of pesticide application to a particular area (Headwaters, Inc. vs. Oregon Natural Resources Council Action, 2000).

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