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Pesticide Drift

Overview

Introduction

The Department of Pesticide Regulation (DPR) defines pesticide drift as the pesticide that moves through the air and is not deposited on the target area at the time of application. DPR does NOT include in its definition, the movement of pesticide and associated degradation compounds off the target area after the application, such as by translocation, volatilization, evaporation, or the movement of pesticide dusts or pesticide residues on soil particles that are windblown after the application.

Background

Depending on the pesticide in use, drift can pose a range of problems to public health and the environment. As California's population continues to grow, the number of people who live and work near agricultural operations increases. This interface between California's urban and rural communities has resulted in an increase in pesticide drift incidents. In addition, pesticides that drift to non-target crops can cause serious complications due to illegal residues and crop damage. Recognizing this, DPR has proposed several strategies to minimize incidents of pesticide drift. While pesticide drift may never be eliminated, it may be reduced.

Spray Drift Task Force

In response to a directive from the United States Environmental Protection Agency (U.S. EPA), a consortium of 38 chemical companies that manufacture pesticides in the United States formed the Spray Drift Task Force (SDTF). Between 1992 and 1995, the SDTF conducted a series of field and laboratory studies that provides the basis for spray deposition and downwind drift predictions. It is anticipated that this information will be used by U.S. EPA, and possibly by DPR, to develop application specifications and improved labeling requirements that are intended to minimize spray drift.

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Why is drift an issue? Drift incidents can result in pesticide exposure to fieldworkers, school children, persons traveling on public roads, and residential neighborhoods. In addition, pesticide drift may cause contamination or damage to crops in neighboring fields and may contaminate waterways and wildlife habitat.

In 1998, DPR's Pesticide Illness Surveillance Program indicated that of the 998 cases identified as definite, probable, or possibly related to pesticides, 302 cases involved individuals who were exposed to pesticides as a result of pesticide drift. Of the 302 illnesses, 134 were attributed to pesticide drift as the source of exposure to fieldworkers.

DPR's Enforcement Initiative: Program needs and recommended actions

When regulatory terms and requirements are unclear, it is difficult for the regulated community to comply. In addition, unclear rules hamper the ability of regulators to exercise enforcement actions. To clarify ambiguous terms, DPR plans to initiate a thorough review of current laws and regulations pertaining to pesticide drift.

Under current laws and regulations concerning prevention of substantial pesticide drift to nontarget areas, the county agricultural commissioners (commissioners) must show the drift was "substantial" by showing that the applicator failed to exercise due care. Some stakeholders have difficulty understanding the complexities facing the commissioners when enforcing this provision.

DPR has issued a policy regarding the enforcement of pesticide drift laws to ensure incidents or reports of pesticide drift are investigated and enforcement action is taken when evidence shows a violation occurred.¹ In addition, DPR plans to propose changes in pesticide regulations pertaining to drift to improve the enforceability of drift minimization requirements.

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¹ In September 2000, the *Pesticide Drift Incident Response Policy* was revised and issued through the cooperative effort between DPR and the California Agricultural Commissioners and Sealers Association.

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Pesticide product labeling

In October 1998, the National Coalition on Drift Minimization formed a work group to develop an effective approach to pesticide product labeling to minimize drift and address current label inconsistencies. The work group's objective was to develop clear, concise, and technically correct label language and avoid lengthy, complex language that would hinder an applicator's ability to comply.

In 1999, the work group circulated a draft plan for review and comment, which generated a considerable amount of discussion. Labeling language for drift minimization is pending a final determination by the U.S. EPA.

Future product labels will most likely contain mandatory statements that include a requirement to minimize drift; a general section containing requirements for equipment setup, application methods, and meteorological restrictions; and product-specific requirements to describe buffer zones and additional application methods.

Intended results

Minimizing pesticide drift through best management practices will help reduce incidents of pesticide exposure to farmworkers and the public. Many pesticide applicators have already adopted drift minimization methods and techniques; therefore, potential changes will have little impact on their operations. However, it is possible that improved pesticide application standards may have a greater impact on other applicators.

Future activities

The first phase of DPR's long-range plan for minimizing pesticide drift involves revising current "drift control" regulations and adopting drift minimization requirements. Phase two will most likely involve additional regulatory changes and development of outreach activities and materials.
