

US EPA ARCHIVE DOCUMENT

U.S. EPA Environmental Technology Verification Program
Environmental and Sustainable Technology Evaluations (ESTE):
Verification of Pesticide Drift Reduction Technologies

Impact Statement

Addressing human health and environmental risks posed by pesticide spray drift is a significant priority for EPA's Office of Pesticide Programs (OPP) in carrying out its pesticide licensing responsibilities. OPP routinely considers potential exposures and risks from spray drift in each pesticide risk assessment and management decision, and imposes restrictions on pesticide applicators to minimize the amount of drift to protect sensitive environmental areas and nearby people. Nevertheless, incidents from drift remain a significant environmental problem for EPA, state regulatory/ enforcement agencies, pesticide applicators, land owners, and the public, especially at the expanding interface of new residential areas and farmland. To address this challenge, EPA's Office of Research and Development, in collaboration with OPP and various stakeholders, is constructing a research program to determine the feasibility of establishing a drift reduction technology (DRT) process that will (1) verify performance of DRTs, (2) incorporate incentives for using verified DRTs as drift mitigation, and (3) ultimately increase the use of these verified DRTs in the U.S. to reduce spray drift and the associated inadvertent pesticide exposures and risks.

Background

By their very nature, many pesticides are potentially hazardous. They also help to provide Americans with an abundant food supply. EPA's Office of Pesticide Programs is responsible for balancing the benefits that pesticides provide with risks that may result from their use. An example of the application of this difficult balancing act is the off-target drift of pesticides, commonly referred to as spray drift. Since it is not possible to completely eliminate drift, OPP faces the challenge of finding ways to minimize spray drift so that pesticides can be applied without resulting in unreasonable exposure risk to people or the environment. EPA has spent considerable time and resources reviewing the best available science to better understand and estimate drift and its potential adverse effects. The information gained through these reviews has informed decisions on product labeling, use directions and restrictions.

The Environmental Technology Verification (ETV) Program was established by EPA to develop testing protocols and verify the performance of innovative technologies that have the potential to improve protection of human health and the environment. The ETV Program has operated as a public-private partnership through cooperative agreements between EPA and private nonprofit testing and evaluation organizations. These ETV verification organizations work with EPA technology experts to create efficient and quality-assured testing procedures that verify the performance of innovative technologies. In 2005 a new element of ETV was initiated, called

“Environmental and Sustainable Technology Evaluations” (ESTE), in which the most important technology categories for meeting Agency mandatory and voluntary program needs are verified under contract with verification organizations.

The DRT ESTE project brings together OPP and EPA’s Office of Research and Development (ORD), along with experts in industry, academia, and government who have experience in pesticide spray drift studies and application technologies to help determine which technologies exist, how well they work, and how best to disseminate information on their use. As a first step, EPA has formed a technical panel including representatives from government, pesticide and application equipment industries, pesticide applicators, growers, environmental interests and researchers. The panel is working with EPA to develop a test protocol to verify the potential effectiveness of technologies such as improved sprayer designs, low drift nozzles, and drift retardant chemicals to reduce spray drift.

Status

Two meetings of the technical panel were held in January and July 2006. A draft test protocol has been reviewed by the technical panel and other experts and has been approved by EPA for use. Validation testing of this protocol in low- and high-speed wind tunnels is scheduled for late 2007. EPA will issue Fed Biz Ops solicitation of vendors of equipment for use in ground or aerial spraying interested in participating in validation testing of the protocol.

Project Resources

For more information, progress, and updates on the DRT program, access <http://www.epa.gov/etv/este.html>.

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