

SFIREG Issue Paper: Mosquito Control Mist Blower Use in Residential Settings (~~3-29-22-4-7-~~
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Background:

Pesticide applications to manage mosquitos have been occurring in many states throughout the U.S. for decades or longer. Many of these applications are made under the direction or guidance of state or local public health agencies attempting to reduce populations of disease carrying mosquitos. Most of these pesticide applications are conducted on a community-wide or area-wide basis, are intended to protect or benefit the public at large, and are subject to public oversight and accountability.

By contrast, commercial for-hire pesticide applications made to individual residential properties to reduce the incidence of biting mosquitos for the property owner is a more recent practice. This for-hire service is increasingly being provided by structural pest management professionals, lawn and landscape applicators, and newer commercial businesses that focus solely on residential mosquito management. While there may be some ancillary public health benefits to the community by applying pesticides for mosquito management on individual private residential properties, the primary beneficiary of such services is the property owner. The commercial applicators are accountable almost exclusively to the property owners that hire them.

Issues Identification:

As pesticide applications for mosquito control in residential neighborhoods have become much more common over the last decade, so have associated complaints filed with pesticide state lead agencies (SLAs). Complaints from the public are often filed by residential neighbors concerned about drift from the target site to their adjacent non-target property. Concerns include potential direct and indirect exposures to family and pets and to managed and visiting pollinators. Complaints also include concerns about protection against chemical trespass and protection of personal property rights. More specifically, neighbors complain that any unauthorized exposure to their property or families, regardless of how "safe" the exposure, should be prohibited, especially if such applications are not being mandated as part of a coordinated public health program.

In responding to and investigating complaints of alleged pesticide misuse or off-target drift, SLAs have struggled with determining whether the pesticides are being used legally or whether the resulting off-target exposures are creating a human or environmental risk. Although many insecticides, primarily synthetic pyrethroids, now have mosquitos listed on their labels as an intended target pest, the use directions and restrictions for mosquito control are confusing, minimal, or completely nonexistent.

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Some of the labels that do have mosquito control use directions, i.e. Suspend SC (EPA Reg. No. 432-763), Talstar P (EPA Reg. No. 279-3206), and CSI Lambda 9.7 CS (EPA Reg. No. 53883-261) have scattered language that directs users to: 1) “apply as a coarse low pressure (do not exceed 50 psi at nozzle tip)”; 2) “high volume applications using power sprayers”; 3) “treat with spray or mist”; 4) “apply as a general spray”; 5) “apply with hand held and back pack sprayers or mist blowers, ground sprayers, power sprayers, truck mounted hydraulic sprayers, or mist blowers”.

Most of the applications of most insecticides currently being used for adult mosquito control are being applied through power mist blowers <https://www.pctonline.com/article/backpack-mist-blowers-for-mosquito-control/>. According to product specifications, these two-cycle gasoline powered mist blowers can deliver up to 1.2 gal/min, of 52-70 micron spray droplets, at 230 mph, producing 805 CFM, up to 39 feet horizontally and 32 feet vertically https://www.misterduster.com/mistblower_duster_p/868.htm?gclid=CjwKCAjwuYWSBhByEiwAKd_n_mZLFEqx8HCmclxwzHY4ABq_K8fULD5ZMuil8kjDmfx5CcA_JvObhoCnLEQAvD_BwE. It is unclear to most SLA investigators how those application specifications might relate to maximum psi spray pressures listed on some of these mosquito labels. However, at least one power blower/mister web site claims that up to 300 psi is generated by this application equipment. It is also unclear from reviewing the EPA Registration Eligibility Decisions for many of these products, whether resulting non-target drift exposures created by directing these powerful blowers toward the neighbors’ property have been considered as part of the registration risk assessment. Numerous complainants have shared with SLAs video of drifting spray particles visibly blasting through property-line vegetation considerable distances onto their property.

In addition to potential human exposure, concerns have also been raised with SLAs about the common practice of making most of these pesticide applications during daylight hours. Daylight applications and drift incidents are a concern for two reasons. First, adult mosquitos are less active during the day, so they are less susceptible to the effects of the pesticides. Secondly, most pollinators are more active and foraging during the day, so they are more susceptible to the direct application and off-target drift.

In consideration of the preceding, and in consideration of the allowance under FIFRA Sec. 2(ee) for “employing any method of application not prohibited by the labeling,” the challenges to SLAs in evaluating safe and legal pesticide use are obviously significant.

Proposed Resolutions or Remedies:

1. SFIREG urges EPA to clarify for registrants, applicators, the public, and SLAs whether the mosquito adulticide product registration risk assessments included nontarget risks from drift exposures.

2. If risk assessments were performed to account for drift exposures, SFIREG urges EPA to clarify specifically whether the drift exposure models included evaluation of drift resulting from application with the power mist blowers currently being used by most of the commercial applicators making adulticide applications to residential properties.

3. If the referenced risk assessments and/or drift evaluations for this application methodology have not been adequately addressed to date through the EPA registration process, SFIREG urges EPA to identify a plan for addressing these issues in future registration actions.

4. If EPA believes the referenced risk assessments and/or drift evaluations for this application methodology and these products have been adequately addressed to date, SFIREG urges EPA to develop a statement to address the issues raised in this issue paper and to provide reassurances or guidance about the safe and legal use of these products and application methodologies.

5. If EPA is concerned about associated risks to pollinators from non-public health control directed applications to private property, SFIREG urges EPA to consider label restrictions to address the application methodologies and timing that may contribute most to pollinator exposures.

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