



Overview of Current Regulatory Direction of EPA for Conventional and UAS Spray Applications

CERSA Workshop

EPA Presentation – Office of Pesticide Programs

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Office of Pesticide Programs

Potential Benefits & Opportunities

Potential reduction in worker exposure, targeted applications, reduce environmental loading

- Potentially less worker exposure to pesticides particularly in areas where hand application is needed
- Control invasive weeds and target applications in tough and difficult conditions (e.g., cliff sides) – potential increased pilot safety
- Spot or partial field applications may become more viable
- Potentially reduce environmental loading through:
 - GPS-initiated applications
 - Applications can be made closer to crop canopy, reducing spray drift



Challenges & Potential Issues of UASs

Safety, implementation, regulatory compliance

- Agency policies/decisions?
- FIFRA-labeling compliance issues?
- Does “aerial application” incorporate UASs?
- Data needs and requirements?
- Drift/safety?
- Uncertainties in modeling and assessments?
- Change in technology impacts and assessments?



EPA Ongoing Efforts

- Continue to understand scope of products and use patterns that may benefit from UAS applications.
- Continue to identify current data gaps and uncertainties posed by UASs in risk assessments and FIFRA decision making.
- This is done through outreach with stakeholders, workgroups, public meetings



Association of American Pesticide Control Officials (AAPCO) Survey

- Sent survey to AAPCO members to understand the scope of UAV/UAS use in United States and aid in developing priorities for the AAPCO Technology Workgroup.
- Survey sent in January 2020 and contained 12 questions. Survey closed in February 2020
- Received 46 responses with 38 completing all questions.

AAPCO Survey Main Highlights

- **74%** indicated their state has received requests to apply pesticides using UAV/UAS – while inquiries, no application have been made.
- **61%** indicated their state currently has applicator(s) that are certified/licensed to make pesticide applications with UAV/UAS
- Applicators are requesting information on many types of pesticides and sites:
 - Herbicides, Insecticide-crops, Vector control, Fungicides
 - Sites – Agricultural Crops, Rights of Way, Forestry, Public Health Control, Aquatic Pests
- Main part of labels applicators found difficult to interpret was Application Method (e.g., non-descriptive aerial)



Potential UAS Information Needs - Off-site Drift

- EPA currently evaluates spray drift in ecological and drinking water risk assessments using two models:
 - AgDRIFT v 2.1.1 (2011)
 - Based on Spray Drift Taskforce data and AGDISP model (aerial)
 - Generate spray drift fraction adjacent to applied field for ground and aerial applications
 - AGDISP v 8.26 (2011)
 - US Forest Service model for aerial applications
 - Used for aduicide applications in OPP

Off-Site Drift — How Do UASs Compare?

- Evaluate “equivalence” or not to current application aerial methods
- Evaluate how UASs compare to ground application methods
 - For example, backpack sprayers, chemigation, boom applications
- Inform whether or not current modeling assumptions (using spray drift models such as AgDRIFT) are appropriate

Understanding this may be a combination of developing new data (e.g., field trials) and understanding what is in the current literature and through outreach with stakeholders

Other Areas of Ongoing Efforts

- Continue to develop agency policy outlining acceptable UAS use patterns that covers:
 - labeling,
 - regulatory clarity,
 - safety, and
 - enforcement issues.
- **Ultimately, develop OPP policy and strategy that coincides with the evolution of UAS technology working in partnership with multiple stakeholders.**
 - How should EPA obtain a greater understanding of how the use of emerging technologies leads to reduced or increased risks that differ from those resulting from current methods?
 - What changes to EPA's approach to labels, if any, are needed to accommodate emerging technologies?



Thank You!

