

Emerging Application Technologies

Pesticide Regulatory Programs

- Overarching goals to protect human health, the environment and ensure the availability of pesticides;
- Welcome new and emerging technologies into our programmatic portfolios, however, requires consideration and in some cases, revisions of current laws, regulation, policies and/or procedures;
- Given the government's public process, technology tends to be ahead of regulatory authorities and implementation/adoption may be delayed; and
- Regulatory programs may proceed at different paces in the adoption of technologies given their respective public processes as well as the status of their current programs, for example, human and financial resources; other priorities, etc.

Regulating Unmanned Aerial Vehicles (UAV)

- In general, pesticide applications using UAVs are new to State/Territorial (State) Regulatory Programs:
 - Technology introduced first on the west coast, for example, Washington and Oregon;
 - Migrating eastward and now being considered in, for example, North Carolina and Virginia.
- Learning curve for both regulators and the regulated industry.
- Implications to pesticide regulatory programs:
 - Certification of pesticide applicators;
 - Pesticide labels;
 - Risk assessment;
 - Ag & Non-Ag Uses;
 - Amending laws and regulations.
- Other “legacy” issues have implications as well including consistency across States.*

UAVs & Pesticide Regulatory Programs

-Applicator Certification-

- All states require commercial pesticide applicators and private applicators (applying restricted use pesticides) to be certified;
 - Core competencies; and
 - Category specific competencies.
- Considerations:
 - *Who is the applicator?*
 - *What is the appropriate category for certification?*
 - *Existing or New?*
 - *Do training manuals and exams include UAVs?*
- For example,
 - Person 1 - mixing and loading pesticide;
 - Person 2 - operating the UAV controls;
 - Person 3 - serving as the “Remote Pilot in Command” and having final authority on all decisions/actions in the operation);
 - Person 4 - second controller who manipulates only the application equipment (other person only controls aircraft itself); and
 - Person 5 - observer who radios in advisory information.

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-Pesticide Labels-

- Label is the Law:
 - Legal agreement between end user, registrant, EPA and regulatory authority;
 - Mitigates the risk of use of the pesticide;
 - Failure to follow the label is a violation of both federal and state law; and
 - Violations may result in an enforcement action.
- Current labels:
 - *Assuming all requirements can be met, do “aerial” applications include UAVs?*
 - If yes, are boom length to rotor/wingspan ratio requirements applicable?
 - *If silent on aerial applications, but not prohibited, can UAVs be used to make an application?*
 - *PPE, for example, gloves, may hinder piloting. Assuming pilot is considered an applicator, but does not contact pesticides, are they required?*
 - *When the Worker Protection Standard applies, who is the handler(s)?*

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-Risk Assessment-

- In general, States rely on EPA's risk assessment process;
- Risk assessments have not included the use of UAVs;
 - Exposure (applicator & bystanders)
 - Drift
- Implications for future use of the product.

-Ag & Non-Ag Uses-

- UAVs currently focusing on Ag Use;
- Potential exists for introduction to Non-Ag Uses, for example, lawn & landscape.
- Consideration in risk assessment and ultimately impact future use.

UAVs & Pesticide Regulatory Programs

-Laws, Regulations, Policies & Procedures-

- Do current governing documents adequately address or incorporate UAVs?
- If not, What amendments may be necessary? Is there a need to put something new in place to specifically address UAVs?
- What is the process to amend or put into place laws, regulations, policies & procedures?
 - How long will it take?
 - In the interim?
- *Informing and educating regulated industry and stakeholders regarding state specific requirements.