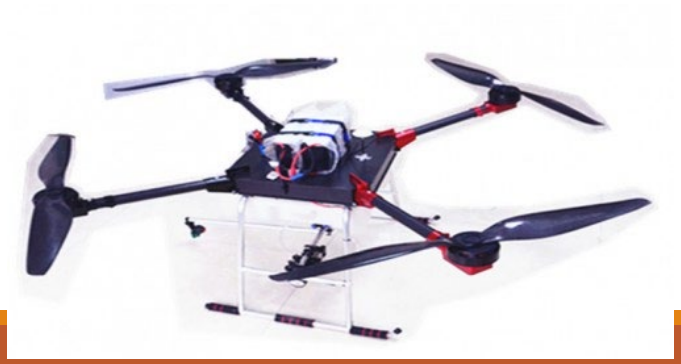
UAVs

U.S. EPA

PESTICIDE PROGRAM DIALOGUE COMMITTEE

MAY 8-9, 2019

Pesticide Application By Unmanned Aerial Vehicles (UAVs)



not an endorsement

EPA's Office of Pesticide Programs Involvement in UAVs

EPA receives questions requesting Agency's position on using UAVs to apply pesticides in compliance with product labels to ensure label compliance

- UAV companies: seeking regulatory approval in coordination with FAA
- Chemical companies: need guidance to incorporate UAVs for product aerial application
- States and Regions: seeking regulatory guidance on acceptability

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

Emerging technology uncertainties: safety, implementation, regulatory compliance

Potential Benefits/Opportunities

Precision agriculture

- Ability to control invasive weeds and target applications in tough-to-reach areas (such as the side of a cliff)
- Reduce environmental loading through GPS-initiated applications

Potential to be faster and less expensive than traditional aerial applications

Potentially less worker exposure to pesticides particularly in areas where hand application is needed

Potential increase in safety for pilots in difficult terrain areas

Applications can be made closer to crop canopy reducing spray drift

Spot or partial field applications become more viable

Night time application can feasibly occur

EPA Challenges/Issues

"Aerial application" incorporate UAVs?

FIFRA-labeling compliance issues with UAV applications?

Uncertainties in modeling/assessment?

Data needs/required?

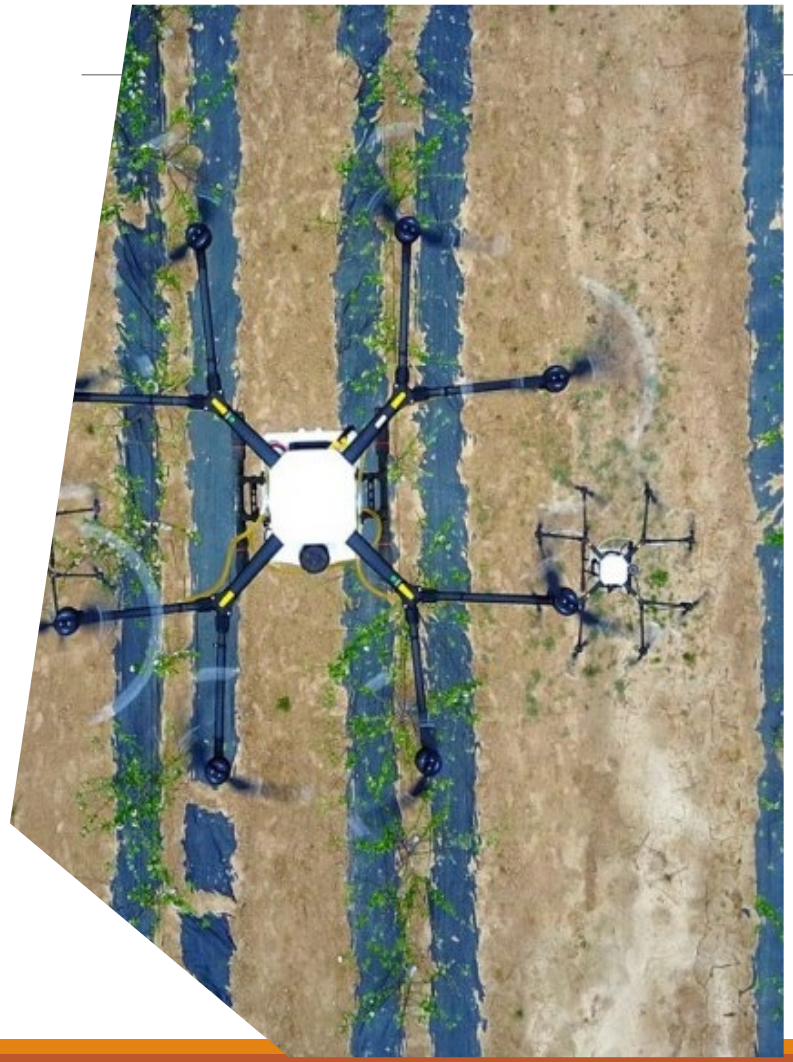
Agency policies/decisions needed?

Operator?

Drift/Safety?

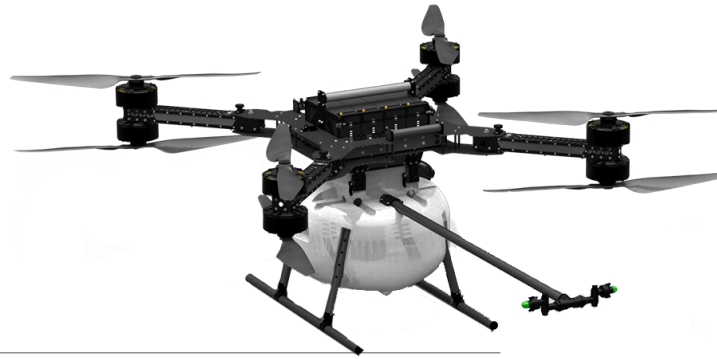
Change in technology impacts and assessments?

EPA Communications to Date



- Fact finding meeting with states, FAA, regions, and OPP revealed opportunities to collaborate in August 2017.
- Conversations/Presentations:
  - PPDC (10/31/2018),
  - SFIREG (04/09/2018), and
  - AAPCO.
- Regions and States have sought clarification about labeling requirements of pesticide products potentially applied by UAV.

Potential Next Steps



- Develop official EPA position on UAVs equivalence to “aerial” application
- Address label interpretation concerns from stakeholders (i.e. boom length to rotor specifications, fixed wing and helicopter application methods)
- Identify data gaps and uncertainties posed by UAVs in regards to OPP risk assessments and FIFRA decision making
- Understand scope of products and use patterns which may benefit from UAV applications
- Develop regulatory structure in parallel with FAA which aligns with any Agency-wide drone policies
- Create an OPP strategy that coincides with the evolution of UAV technology (opposed to hindering it)
- Issue Agency-policy outlining acceptable UAV use patterns that covers labeling, regulatory, safety, and enforcement issues
- Suggestions?

Questions for the PPDC

- In view of the PPDC, what are the important trends and developments regarding UAV technology that EPA needs to understand?
- What does the PPDC believe are the most viable ways for EPA to both account for (in terms of chemical exposures and risk assessments) and also support (in terms of serving user needs) adoption of UAV technology?
- What data sources are PPDC members aware of that can assist EPA in developing appropriate risk assessments and regulatory positions for UAV technology?