

A stylized graphic of a flower with a light blue upper half and a light green lower half, with green leaves extending from the bottom left. The flower is partially cut off by the left edge of the slide.

Emerging Agricultural Technologies Workgroup – EPA Response

Pesticide Program Dialogue Committee Meeting
May 31, 2023

PPDC – Emerging Technology Workgroup

Revised Charge Questions: February 2022

- **Revised Charge Questions:**

- Is there information on availability and affordability of emerging technology for all communities?

- **To account for emerging technologies, how should EPA OPP establish a process for:**

- Determining what additional information / data is needed
- Updating risk assessment practices / SOPs
- Updating label language

Using these examples:

- a) Manned Aerial
- b) UAV: off-site movement (including benchmark UAV type & spray system), BMPs / use conditions



- How should EPA OPP continue to establish a ‘digital mindset’ for its program and staff?

- Use UAV example to start

ETWG Response to Charge Questions (in report)

Is there information on availability and affordability of emerging technology for all communities?

➤ ETWG Conclusion

- ETWG believes many of the emerging technologies that are driving toward precision and digital agriculture have the potential to be accessed by prospective user communities in the United States.

➤ EPA response:

- EPA currently engaged on ET and will continue with industry (both pesticide and ET manufactures), grower/user groups, applicators, States, other federal partners, NGOs, academia, other stakeholders
- Areas of continued interest by EPA:
 - Where they would be used (regionally, use site, seasonally)
 - Adoption rates (or potential challenges to adoption (cost, infrastructure, access), and
 - How this ET could reduce potential exposure (human and ecological) both on and off the use site and by how much

ETWG Most Important Recommendations (in report)

To account for emerging technologies, how should the EPA establish a process for: Determining what additional data and/or information is needed, Updating risk assessment practices and/or SOPs, Updating Label Language

➤ ETWG

- Development of digital infrastructure, 'paper-based' approach no longer suitable
- Development and adoption of digital labels / use instructions / label and labeling requirements that can be read, directly delivered to digital devices and/or delivered to and acted on by autonomous machines

➤ EPA Response:

- Working on initiatives to move to a more digital process/transformation, including labels
- Some of these initiatives will be addressed/explored under PRIA 5
- Suggestions for PPDC members to consider later in this meeting

ETWG Most Important Recommendations (in report)

- **Develop and Implement Site-Specific Exposure and Risk Assessment Methodology:** EPA OPP should initiate a case study that leverages existing tools
- **Adjust Exposure Estimates in Risk Assessments:** EPA conduct a LEAN analysis towards adapting methods that are representative of use conditions including manned/UAVs/targeted for environmental/ecological risk assessments
- **EPA Response:**
 - Ongoing FIFRA and ESA initiatives to protect non-listed and listed non-target taxa (e.g., IEM, EPA ESA workplan, new AIs), EPA is developing/recommending mitigation options, including those that are intended to provide users with site-specific options and flexibility, to give “credit” for reducing on and off-site exposure.
 - EPA seeks comments on these mitigations as well seeks input on any additional mitigations to potentially provide even more site-specific flexibility.
 - EPA is working with manned aircraft stakeholders on aerial modeling efforts
 - Once have a good understanding of potential tools, then can make decisions on which tools/use conditions to more fully incorporate into risk assessments (both qualitatively and quantitatively) and determine if case study/LEAN analysis is needed.