

## Aerial Application Research Updates and Smartphone App Demonstration

For More Information Contact:

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**Abstract:** The USDA-ARS-Aerial Application Technology research group is responsible for conducting application research that addresses immediate needs within the application community, as well as, planning and conducting research projects that address future issues and regulations that may impact the aerial application industry. Many of the specific projects that provide applicators with information that they can incorporate into their daily operations are reported on by AAT researchers as part of other presentations at the NAAA/ASABE session. This presentation will focus on future research projects, such as:

- Drift reduction technologies,
- Remote sensing,
- Variable-rate technologies, and
- Changing cropping production and protection systems.

The Application group would like to encourage applicators to stop by the AAT group's booth to discuss these projects and as well as any additional problems that they are seeing in their operation that could be addressed through directed research.

Additionally, the new Smartphone apps that have been released on the Apple and Android app stores will be presented. These apps are a mobile solution that allows aerial applicators to predict the droplet size produced by their particular operational setup in the field independent of a computer or internet connection. The droplet size data allows applicators to ensure that they are compliant with any product label requirements. The results, along with the initial operational parameters, are time and date stamped and can be saved to the user's device and/or emailed.



Android App will be coming soon.

Conclusion:

- We really want to be doing the research that will address your needs so PLEASE let us know if we are not addressing your needs.
- Please call (979.260.9351), email, or come by our booth

Website Information:

[Apmru.usda.gov/aerial](http://Apmru.usda.gov/aerial)



Goal Statement

We are dedicated to developing and implementing new and improved aerial application equipment for safe, efficient, and sustainable crop production and protection.

Project Summary

Aerial application of crop production and protection materials is a crucial component of high-productivity American agriculture. This project is focused on optimizing efficacy and minimizing off-target movement of these materials. Project objectives will be accomplished through focus on three main research areas: 1) improving existing aerial application technologies to maximize application efficiency and biological efficacy with minimal spray drift, 2) integration of remote sensing and variable rate systems to enhance and optimize applications of crop production and protection products; and 3) developing decision support systems that provide application equipment selection and operational guidance for optimum biological efficacy. This project combines engineering and entomological expertise to create a research program that defines how sprayed materials move from the aircraft to the target and how efficacy of the applied product is affected and can be optimized by changing deposition characteristics. Results of project research are intended to provide aerial applicators, crop management consultants, extension agents, and agricultural producers with the appropriate scientific knowledge to make the best treatments possible and to be in full compliance with all State and Federal regulations related to the application of agricultural materials.