

TECH BEAT:

Neat Stuff Observed at NAAA 2K11

What was new and cool in terms of technologies on display at the 2011 NAAA Convention & Exposition? Here are three things that caught our roving reporters' eyes.



Spray Nozzle Models? Yeah, There's an App for That

With more and more aerial applicators embracing the use of smartphones, it's only fitting that they have an app of their own, and now that the Aerial Application Technology Group (AAT) has released a set of mobile device applications for Apple iOS and Android based devices, they do. In Las Vegas, AAT touted the release of two applications, or "apps," that incorporate the USDA-ARS Spray Nozzle models into a PC-free user interface. Once downloaded, the apps do not require a wireless or mobile data connection for use, which means pilots can calculate relevant droplet size data instantly in the palm of their hand from a mobile device.

According to NAAA's 2011 Communications Services Survey, 58% of respondents use a smartphone as their primary mobile device. This includes an even split between iPhone and Android users at 23% each. The AAT apps are available on the Apple iTunes App Store and the

Android Market using "Aerial Sprays" as the keyword search.

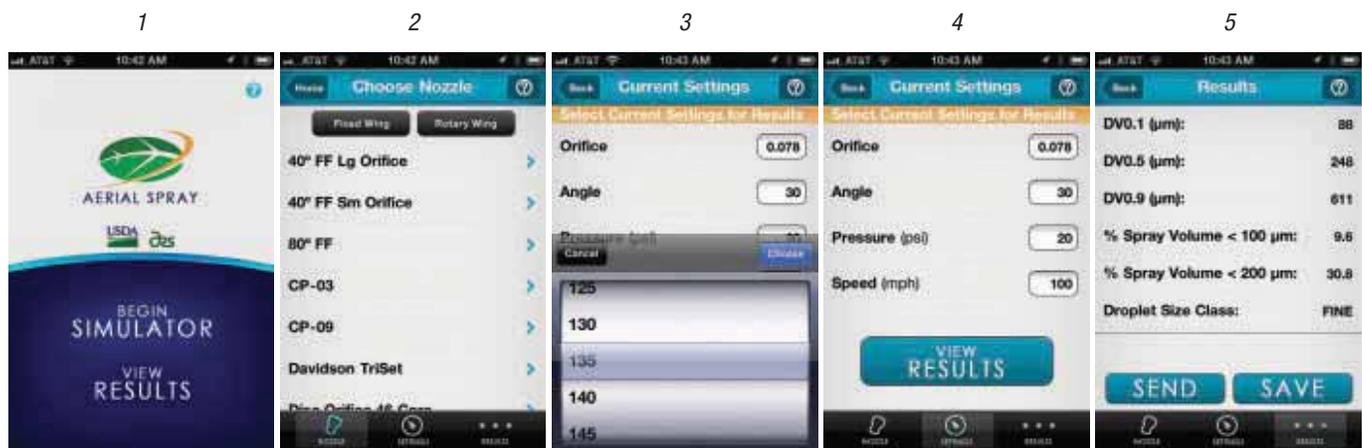
In the Aerial Sprays app, users are walked through a series of screens and prompted to select nozzle type and operational conditions (i.e., orifice size, spray pressure, nozzle orientation and airspeed). The resulting droplet size data is shown along with buttons allowing the user to email the specifications to any address or save it to the mobile device for later reference. Each interface page has a help screen that provides users with guidance on the information requested or presented on that particular page.

A second app (Vector Sprays) was designed for users of hand-held, truck-mounted, thermal and ULV sprayers targeting mosquitos and other insects that vector human and animal diseases. Users can select their specific sprayer, input their operational parameters and spray material and determine what size of spray droplets are being released from the sprayer. This app was

developed jointly by the USDA Agricultural Research Service (ARS) and the Department of Defense's Navy Entomology Center of Excellence in Jacksonville, Fla.

The help screen available on the startup page for both apps contains links to the Aerial Application Technology Group's website and its group email. Please direct comments, suggestions or questions to aerialapplication@gmail.com. AAT is actively seeking comments and feedback from users of the apps to learn from their experiences.

"We anticipate that as you begin to use these there will be a need for additional and improved user interface as well as requests for additional functionality," said Brad Fritz, agricultural engineer with the Aerial Application Technology Group. "We plan to continue to support and upgrade these apps over the coming years, but ask for your patience as these updates will likely be on an annual or biannual affair given the costs associated with further development."



These screenshots illustrate the user interface of the Aerial Application Technology Group's new "Aerial Sprays" spray nozzle app. The apps are available on the Apple iTunes App Store and the Android Market by searching "Aerial Sprays." 1) App homepage, where a new set of spray nozzle data can be generated or saved results can be viewed. 2) Nozzle Selection page: Users select either Fixed or Rotary Wing, followed by the nozzle of their choice. 3) Parameter-setting screen with airspeed selection wheel visible. User's select the orifice, angle, pressure and airspeed. 4) Parameter-setting screen with selections made for each of the nozzle parameters. 5) Results page with nozzle droplet size results. Users can save their results or email them.