



2026-2027 PAASS Program Summary

Analysis of Recent Ag Aviation Accidents

30 min

The program will begin with a review of agricultural aviation accidents from the 2026 season and an analysis of accident trends over the previous 10 years. Factors such as aircraft type and pilot experience level will be examined alongside causal factors as determined by the National Transportation Safety Board (NTSB). Studying various types of agricultural aviation accidents will allow participants to understand how to avoid similar accidents while conducting aerial applications.

A select group of recent accidents classified by NTSB as mechanical (e.g. power loss, structural failure) will be scrutinized for their deeper human factors causes as a reminder that maintaining agricultural aircraft requires the same diligence and attention to detail as flying them.

Single Pilot Task Management (SPTM)

90 min

The human factors segment of PAASS covers information on how to reduce agricultural aviation accidents caused by human error. This year, the concept of Single Pilot Task Management (SPTM) will be introduced as an agricultural-aviation-specific variant of Crew Resource Management (CRM). Where CRM is focused on synergy in multi-person flight crews, SPTM is about managing both onboard and outside resources available to a pilot before and during a flight to help ensure a safe and successful outcome. Within SPTM, special attention will be given to comprehensive mission planning and continuous evaluation of potential aircraft, systems and pilot risk factors. In-depth discussion on select recent accidents will provide a basis for identifying deficiencies in task management. Industry-specific demonstrations of effectively managing tasks and developing a flow will provide attendees with ready-to-use tools to combat situational blindness and become better agricultural aviation task managers.

Making an aerial application, especially in a field with numerous obstacles, involves dealing with multiple distractions. Communications with the office, monitoring the sky for other agricultural aircraft and drones, tracking wires and other obstacles, ensuring drift is mitigated, and making sure no bystanders enter the application area are only some of the things that can divert attention during an aerial application. SPTM can help ag aviators avoid letting these distractions lead to an accident. Special emphasis will be placed on how SPTM can reduce the risk of having a wire strike and other Controlled Flight into Terrain (CFIT) accidents. CFIT accidents continue to be the most common type of agricultural aviation accident. Recorded cockpit and aircraft footage will show how an ag pilot uses SPTM to work through all phases of an application in order to manage tasks and distractions.

Nozzle Wear, Nozzle Alignment, Winglets, and Dissection of a Drift Incident

60 min

Maintaining aerial spray systems is understood as an integral component in making effective and uniform applications. This segment of PAASS will begin by quantifying the impact of nozzle wear on pressure, flow and ultimately droplet size. The importance of nozzle alignment will then be discussed, with emphasis on quantifying the effects of minor misalignment on droplet size and drift potential. Wind tunnel atomization testing conducted by USDA will be followed by real-world examples and methods developed by operators to routinely maintain alignment.



Results from pattern testing documenting the impact winglets have on the swath width will also be covered. Winglets have been used to increase the effective swath width, improve spray pattern uniformity, and reduce the potential from drift associated with spray droplets entrained in the wing tip vortices.

This segment of PAASS will conclude with the review of a recent aerial application drift incident. Discussing real life drift incidents helps attendees understand how application factors and decisions about those factors can lead to a drift incident. In many cases potential issues such as wind speed and adjacent sensitive crops are ignored, and an application is made when it shouldn't have been. Understanding how pressure to get work done leads to making applications that shouldn't be made or should be made when weather conditions are more favorable can help aerial applicators avoid making the same mistake.

Emerging Topics & Operation Security

40 min

Miscellaneous and emerging topics will be presented in an abbreviated format as industry trends dictate. There are several on deck for this year, but more may be added. Examples of application streaking will be presented alongside causal factors and mitigation methods. A summary of mid-air near miss polling of participants at a recent program will be discussed. A refresher on pesticide storage and site security will be provided. A senior aviation medical examiner (AME) will talk about how fatigue can impact a pilot's reaction time and pilot's decision-making process, factors that impact the potential for both an accident and a misapplication. How to manage fatigue to maintain alertness will also be covered by the AME. The security segment will discuss a break in at an operation and the damage done by the perpetrator.

Knowledge & Skills: Review Quiz

20 min

The program will conclude with a series of scored polling questions and associated discussion to build comprehension and ensure retention of the material presented.

Total Program Duration

4 hours

For more information on how PAASS provides core competency education and its suitability for use as a continuing education (CE) training for aerial pesticide applicators, see [PAASS – CE Information](#).