



Agricultural Aviation Security

Background

The National Agricultural Aviation Association (NAAA) and its membership have aggressively promoted the enhanced security procedures developed in the wake of the 9/11 attacks. The agricultural aviation industry has had security measures in place before the tragic events of 9/11. Security measures by operators have always been proactive, rapid and widespread.

Our industry continues to work closely with local, state and federal officials to ensure that the equipment used in our business is not a threat to homeland security.

Many security experts in government and in the private sector are in agreement with the NAAA position that ag aviation aircraft represent a poor option as potential vehicles for terrorist attacks.

United States Senator Bill Frist, M.D. (R-TN) wrote the following in his book *When Every Moment Counts: What You Need to Know about Bio-terrorism from the Senate's Only Doctor*:

“...the government grounded crop dusters for several days in the wake of the September 11 attacks after it was determined that the terrorist had asked questions of a Florida operator. We know that Iraq tested crop-dusting equipment to spray anthrax before the Persian Gulf War, but the effort was unsuccessful. Major modifications would be required to retrofit a plane's sprayer nozzles to spread anthrax in the extremely small, dry particles that would do the most harm.”

“Again, it would require considerable technical expertise to do this. Dosage and dispersal would be affected by atmospheric conditions, wind, terrain, sun and other environmental factors.”

Dr. Amy Smithson, a bio-terrorism expert at the Center for Strategic and International Studies states:

“...anyone trying to commandeer a crop duster for this purpose would have to understand a multitude of factors in order to execute a chemical weapons attack. First, they would have to know how to load the spreader. Second, they would have to be able to actually take-off in a loaded crop duster, a difficult task given that the heavy weight of the loaded spreading apparatus makes take-off in a crop duster quite challenging...Someone with limited piloting experience in light aircraft would be considerably challenged to translate those basic skills into an ability

Importance of Aerial Application

Aerial application accounts for almost 25% of crop protection applications and nearly 100% of forest protection applications. Aerial application is often the safest, fastest, most efficient, and most economical way to get the job done.

Ag aviation assists in providing a safe, affordable and abundant supply of food and fiber for the world's growing population. It is also vital in protecting our natural resources and combating pests that threaten public health, such as West Nile Virus carrying mosquitoes.

Aircraft help in treating wet fields and spraying when crop canopies (i.e. - orchards) are too thick for ground rigs.

When pests or disease threaten a crop, time is critical. An airplane or helicopter can accomplish more in one hour than ground equipment can in one day. This means less fuel used, less air pollution and no soil compaction.

to get a loaded crop duster successfully off the ground.”

“Chemical agents...are very susceptible to the wind. Once in the air, the pilot would have to know how to operate the spreader and understand the meteorological patterns in the intended target area. The pilot would have to know the correct altitude over the target area to fly in order to disperse the agent effectively. In cities, where meteorological conditions can vary from block to block, with wind whipping in currents between and around tall buildings, spreading the agent in a manner that would achieve a lethal dose would not be a simple task.”

“To infect the human lung, the required particle size of a biological warfare agent is 1 to 10 microns, ideally 1 to 5. Yet, the sprayers on the average crop duster aim to disperse in 100 micron particle sizes or greater, a heavier weight that improves the chances of the materials settling on the target area. These sprayers cannot be “dialed down,” so to speak, to consistently disperse the payload in the necessary micron size”

“Anyone hijacking a crop duster with the intent of spreading bio-warfare agents would have to reconfigure the spraying apparatus to achieve the small particle size. Put another way, the nozzles would have to be changed. This changeover is, of course, technically possible, but it rules out a grab-the-plane-and-go scenario...”

Security Talking Points

Aerial applicators are well-trained professionals who take very seriously their responsibility to protect the safety of their neighbors, employees, the public and the environment.

The ag aviation industry has been recognized by federal, state and local law enforcement and security agencies for its cooperation with government officials in safeguarding homeland security.

Never in the history of ag aviation has a spray plane been involved in any terrorist activity. From excessive weight to tail-configured steering, an ag plane is a unique aircraft to fly. The complexity and sophistication of aerial application aircraft, combined with the level of skill required to operate these planes make it unlikely that they could be used in attacks by terrorists.

NAAA educates member and non-member aerial applicators year-round about security issues in the Professional Aerial Application Support System (PAASS) program. PAASS’ goals are to educate pilots on security issues, drift minimization and aviation safety. Operators and pilots continue to remain vigilant on security issues.

Security measures include:

- Storing aircraft and crop protection products in locked hangars with electronic security systems when not in use. Also installing outdoor security lighting around hangars and operations.
- Parking and disabling loader trucks, forklifts, or other heavy equipment to block aircraft.
- In cases where the aircraft must be left outdoors, using propeller locks, propeller chains or tie-downs on aircraft.
- Removing batteries from planes and disassembling engines from unused aircraft.
- Installing hidden security switches to prevent unauthorized startup of the aircraft.
- Securely storing and monitoring crop protection products in buildings with steel doors and electronic security systems with tampering tape.
- Heightened vigilance at ag aviation operations, that often have people living on site at the operations, along with being located in rural areas with strong neighborhood watch efforts, make it extremely difficult to penetrate such operations.

- Establishing contact with federal and local law enforcement agencies to coordinate responses to security breaches at ag aviation facilities.
- Report suspicious activity to the TSA hotline, 1-866-GA-SECURE.

Use these talking point ONLY if asked questions regarding the ability for someone to deliver biological materials via aerial application.

Living organisms (i.e. bacteria) can be destroyed with the high pressures required to generate small droplets.

Access to materials is a very difficult and dangerous proposition;

Weather and disbursement – micro-climate weather in large cities make the spread of any small micron agent extremely difficult. Disbursement through a typical sprayer would fall to the ground rather than stay in the air, as is necessary for a biological attack.

Ag aircraft sprayers are built to disperse relatively large particles compared to what is necessary for a terrorist attack, and not easily modified, rendering useless an immediate theft and attack. Wet biological agents would foul nozzles, making dispersal difficult.