Subject: Safety in Part 137 Agricultural Aircraft Operations

Purpose: This InFO reminds pilots of the proper use of safety equipment in flight to minimize injury in the event of an accident or incident.

Background: Agricultural aircraft accident investigations have revealed evidence of pilots striking the instrument panel due to improper use of shoulder harnesses and/or safety belts.

Discussion: Agricultural operations are unique in that they typically involve flight at very low altitudes. While agricultural pilots understand the risks involved with these operations and take steps to mitigate them, unlit towers or unmarked wires are sometimes constructed near the areas where agricultural flights take place with little or no notice.

Studies of agricultural accidents have shown the proper use of shoulder harnesses, in addition to safety belts, would significantly reduce injuries and fatalities. Title 14 of the Code of Federal Regulations (14 CFR) part 137 § 137.42 requires the use of shoulder harnesses during flight, but allows the pilot to operate without the harness secured in order to perform required duties. Being in a hurry or removing the seat belt and shoulder harness while on the ground can lead to a seat belt and shoulder harness remaining unfastened during takeoff. Agricultural pilots should develop standard operating procedures (SOP) and checklists to ensure that the shoulder harness is fastened at all times when it will not conflict with required duties, especially during critical phases of flight and when dispensing at low altitudes.

Agricultural aircraft instrument panels are sometimes designed to minimize pilot injury by using padding and curved sheet metal surfaces. Some manufacturers have developed instrument panels that crush and absorb impact energy in an accident. Aircraft certification rules require that occupants be protected from sharp objects and other equipment within range of the head and chest when secured in safety restraints. However, improper placement of aftermarket equipment on instrument panels may diminish the effectiveness of these requirements by reducing the protected space.

Advances in aircraft performance and higher operating airspeeds may increase the risk of serious head injuries in the event of an accident. Wearing a DOT-approved helmet with the straps properly secured can
help minimize this risk and may also improve communications by reducing outside noise and improving clarity of radio communications. Some manufacturers are now mandating helmet use by including it as a limitation in the approved Airplane Flight Manual.

**Recommended Actions:** Part 137 operators, chief supervisors, and pilots should review the regulatory requirements of § 137.42 and develop SOPs and/or checklists to emphasize the use of shoulder harnesses. Additionally, operators should carefully consider the location of aftermarket installations in the cockpit and encourage use of DOT-approved safety helmets.

**Contact:** Questions or comments regarding this InFO should be directed to the General Aviation Commercial Operations Branch, AFS-820 at (202) 385-9600.