

SAFETY RECOMMENDATIONS: sUAS & AGRICULTURAL AIRCRAFT

Updated: July 1, 2014

Safety recommendations for sUAS flight operations in precision agriculture beyond the UAS Test Sites

sUAS Operations

1. sUAS support vehicle equipped with white/clear strobe light that is activated when sUAS is operating
2. sUAS operator attending/monitoring sUAS at all times and attentive to surroundings (no headphones, etc.)
3. sUAS will not operate above 400 feet AGL
4. sUAS operator is equipped with handheld aviation radio set to the frequency of 123.45
5. sUAS operator knows location of sUAS operation(s) by township name and section number
6. sUAS operator procedure if agricultural aircraft within two miles:
 - a. Immediately ground sUAS
 - b. UAS operator communicates via radio to agricultural aircraft pilot using frequency of 123.45
 - c. If radio communication is successful, UAS operator & ag pilot determine plan
 - d. If radio communication is not successful, sUAS remains grounded until ag aircraft is two miles away.
7. For safety procedures enhancements/changes: please document interactions with agricultural aircraft and report to *Doug McDonald, ND AUVSI Chapter President (all information will be confidential – contact info below)

Agricultural Aircraft Operations

1. Agricultural pilots will comply with FAA, ND Department of Agriculture and ND Aeronautics Commission regulations
2. Agricultural aircraft pilot will initiate communication with sUAS on 123.45 if sUAS support vehicle is observed in area and no communication is received (if ag aircraft is equipped with aviation radio)
3. For safety procedures enhancements/changes: please document interactions with sUAS and report to *Doug McDonald, ND AUVSI Chapter President (all information will be confidential – contact info. below)

Additional Recommendations to Promote Safety for UAS and Agricultural Aviation Operations

sUAS Operator:

1. sUAS operator has a Communication Plan and Platform: operator notifies agricultural spraying operations located in the sUAS flight area with either a call, group email or agreed upon method
 - a. A listing of registered agricultural spraying operations is available from the North Dakota Aeronautics Commission: e-mail: ndaero@nd.gov telephone: 701-328-9650
2. sUAS operator is a commercial pilot or has similar training and can demonstrate knowledge of aviation safety and communication procedures (similar to FAA private pilot written exam)
3. sUAS operator demonstrates proficiency at operating UAS (similar to pilot check ride)
4. sUAS operator maintains “pilot in command” flight log and aircraft log
5. sUAS operator maintains line-of-site operations (operates from a location that minimizes the furthest distance UAS is from operator)
6. sUAS observer is present and able to communicate with operator (observing from a location that minimizes furthest distance sUAS is from observer)

sUAS Aircraft

1. Proven to be airworthy and operate autonomously without software glitches
2. Equipped with redundant controls / systems
3. Painted a color that is highly visible
4. Equipped with strobe lights
5. “ADS-B out” equipped (which would require agricultural aircraft to also be ADS-B equipped) or require software that would emit a signal that could be picked up by a smartphone, computer or device with similar capabilities (develop an APP)

General

1. Liability insurance is required for sUAS operations
2. Consideration should be given to the weight of the sUAS – 10# to 15# or less

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Note: *The Great Plains Chapter of AUVSI neither condones or opposes any proposed regulation on Unmanned Aerial Systems, but is supportive of efforts to collect relevant data as it relates to the safe operation of unmanned systems in integrated airspace.*