PURDUE
UNIVERSITY

Flight operations and procedures manual

The PIC should go through each bullet when considering an operation.

Cautions

- Pesticides can pose serious risk to safety and should be handled carefully.
- Residue on the equipment caused by splashes or spills when pouring and mixing can cause exposure to skin. Ensure proper Personal Protective Equipment (PPE) is correctly worn and regular cleaning of equipment is performed.
- Do not fly in locations where obstacles are difficult to avoid or where hazards conditions may exist.

Pre-Mission

- Petitioner will file NOTAM for each flight not more than 72 hours in advance, but not less than 24 hours prior to the operation.
- All necessary permissions by state and local requirements for the operational areas must be granted prior to operations and in accordance with permission timeframe
- Pre-mission briefing by the pilot in command (PIC) should inform team members of their roles in the mission, special safety rules or notes, and mission details.
- Plan the operation flight using one of the planning flight planning functions designated by the aircraft manufacturer.
- UA system shall be programmed so the aircraft returns to takeoff site if loss of communication occurs.
- Ensure remote controller and aircraft batteries are fully charged.
- Ensure all parts are in good condition before flight.
- Check that landing gear and spray tank are firmly in place.
- Propellers and frame arms are unfolded and arm locks are firmly tightened and that nothing is obstructing the motors or propellers.
- Check that the spraying system is not blocked and works properly.

- Complete Pre-flight checklist to ensure the operating system is in good working order prior to flight.
- Stay clear of rotating propellers and motors.
- Takeoff and landing locations will be very near the PIC and VO.

During Mission

- Make sure to fly within the maximum takeoff weight of the aircraft specified by the aircraft manufacturer.
- Do not use the Combination Stick Command or other methods to stop the motors when the aircraft is airborne unless in an emergency situation.
- Avoid unnecessary distractions such as phone calls, text messages, or personal conversations during operations.
- Pause the operation and land the aircraft if low battery warning is initiated.
- If the radar module is unable to work properly in the operating environment, the aircraft will be unable to avoid obstacles during Return to Home (RTH) function while the PIC will need to adjust flight speed and altitude manually.
- Must keep aircraft below 400 feet above ground level, while generally flying much lower (less than 50 feet) except to avoid obstacles.
- Operate aircraft within visual line of site (VLOS) of the PIC and visual observers (VO).
- Operated only during daylight hours between morning civil twilight and evening civil twilight.
- PIC should be current with all required certifications and licenses with the FAA, Office of Indiana State Chemist (OISC), and any other local or regional certification and licenses including but not limited to: FAA Part 107, FAA Part 137, OISC Category 11.
- All flights will remain clear of manned operations, and mission will be terminated or suspended if manned aircraft is identified in the vicinity.
- Flight will not be operated less than 500 feet below or less than 2,000 feet horizontally from a cloud or when visibility is less than 3 statute miles for the PIC.
- All pertinent documents, records, and certifications will be accessible to the PIC during operations and will be retained for at least 2 years unless specific documentation is required for longer than 2 years.
- Aircraft will not be operated directly over any person except authorized or are consenting personnel required for operations.

- Flight will be aborted if unanticipated obstacles or emergencies occur during operations.

Post-Mission

- Ensure aircraft is turned off prior to turning off remote, or aircraft may initiate return to home function.
- Record information required for documentation.
- Clean equipment of any product residues to reduce the chance of exposure from the applied product after application.
- Recharge batteries to a level where they can be stored and maintained.
- Follow maintenance protocol as outlined in the maintenance log/manual.
- Store aircraft equipment in cool, dry environment.