



Using Drones for Aerial Application

What to consider, including UAS insurance options

By Casey DeLanghe, on behalf of the NAAA Insurance Committee

Many organizations are considering what unmanned aircraft systems (UAS or drones) can do to enhance their offerings to customers. My insurance company is working with a variety of organizations, including traditional aerial applicators, farmers, cooperatives and even non-aviation individuals, on utilizing drones for aerial application. Many different uses are being considered, from squaring up a field to optimize spraying by aircraft, applications on smaller odd-shaped fields, or simply trying to get started in the aerial application business.

When considering using drones for aerial application, there are several factors to weigh. Especially for individuals or organizations that may not be familiar with this sector of the aviation industry, we encourage everyone to first look at the regulatory requirements to see if it even makes sense to proceed. For starters, three licenses and certifications are needed before you can even begin to apply products with a drone:

1. Remote Pilot Certificate from the FAA, Part 107 certificate.
2. Agricultural Aircraft Operator certificate from the FAA, Part 137 certificate.
3. Chemical license from the state(s) you're operating in.

UAS weighing more than 55 pounds also require an FAA Section 44807 weight exemption, and the pilot in command of the 55-pound-plus drone must hold at least an FAA second-class medical certificate.

Many readers will have much of this in place already and simply need to do an add-on to their pilot certificate for Part 107. However, some new operators are unaware of the timelines or costs for this required certification. We encourage them to start this process well before the season, as it could take some time to get the necessary approvals. In addition to these licensing credentials, insurance is the next thing to look at. We're going to dive into this area as there are many nuances.

Only a subset of insurance underwriters will insure drones doing aerial application. Some will work with start-up operators, while others will only consider drones if they're an add-on to an established aerial applicator. Of the available insurance policies, there are differences in coverages that need to be considered. Be sure to weigh not only the cost but the coverages that the policy provides. Also, to comply with the requirements set forth in all the drone aerial application insurance policies I've read, you must have the proper certifications discussed above.

Many underwriters use the same aviation insurance policies for drone aerial applications as they do for traditional manned aerial applicators but may have unique endorsements for drones. Others have totally different policies for UAS aerial applications. As with all insurance policies, be certain that you have a clear understanding of what's covered and more importantly what isn't.

When looking at what insurance would be needed for your aerial application operations, there are three main areas of coverage to consider:

1. Hull Physical Damage
2. Chemical Liability
3. Non-Chemical Liability

Hull coverage is insuring against damage to the actual drone. It would be utilized to repair the drone. Deductibles for this coverage are common and may vary for in-motion versus not-in-motion claims. You can also look at excluding spreader systems or other items to minimize the amount of coverage you need.

Chemical liability limits may vary from traditional policies as well. Most underwriters are reluctant to offer higher aggregate limits due to the inexperience of many drone aerial applicators. However, higher limits may be available for operators with several

years of experience. Some common chemical liability limits are:

- 1/3/1:
 - Bodily Injury \$100,000 Each Person / \$300,000 Each Occurrence / \$300,000 Aggregate
 - Property Damage \$100,000 Each Occurrence / \$100,000 Aggregate
- \$300,000 Combined Single Limit:
 - Bodily Injury \$300,000 Each Person / \$300,000 Each Occurrence / \$300,000 Aggregate
 - Property Damage \$300,000 Each Occurrence / \$300,000 Aggregate

Due to the remote operations of drone aerial applications, we see less risk of hurting someone (bodily injury). A more typical claim would be due to drift or misapplication of chemical (property damage). Having coverage with a Combined Single Limit provides for the full insured amount to be utilized as needed for either bodily injury or property damage. This coverage will cost more but also provides better coverage for the operator.

With Chemical liability, there are also different coverages that vary in terms of how restrictive they are regarding what chemicals can be applied. Some policies will automatically include coverage for "Comprehensive Chemical," which is the least restrictive. Comprehensive chemical coverage allows for application of most chemicals. More restrictive coverages are likely to be automatically added and would be "Restricted Chemical" or "Excluding Chemical." Terminology and coverage may vary depending on the policy, but these chemical policy provisions typically allow for application of the following:

- **Restricted Chemical (RC):** Fungicide and Insecticide, plus all things covered under XC.
- **Comprehensive Chemical (CC):** Herbicides and all things covered under RC and XC.

- **Excluding Chemical (XC):** Seeds and Fertilizers.

Please note that even with CC coverage, there are still some exclusions on what can be applied, such as Picloram, which typically requires an additional endorsement. Check your policy carefully to ensure you're insuring for what you're applying. Policies will vary with the different underwriting companies.

Non-chemical limits may follow the same chemical liability limits, but often higher limits are available. It's not uncommon to have an option for up to a \$1 million aggregate limit. This is to cover any bodily injury or property damage that is not caused by chemical application. Work with your insurance broker to obtain the appropriate limits and coverages for your operations.

As with any insurance, you'll need to complete an application and provide pilot information. You will be asked for your total UAS flight hours as well as the specific make/model hours in addition to confirming that the pilot named has the remote pilot certificate mentioned previously. This basic information is required even when operating UAS weighing less than 55 pounds. Training is worthwhile and respected, so be sure to include all relevant information.

Partnering with a knowledgeable insurance broker can help you navigate what is needed and avoid potential pitfalls when seeking insurance for UAS applications. Having a good plan and understanding of what you need will streamline the ability to employ this new technology in this critical aviation sector. ■

Is there an insurance matter you would like to learn more about or think would interest Agricultural Aviation's readers? The NAAA Insurance Committee welcomes your suggestions. Please send insurance article ideas to information@agaviation.org.