

Using Drones for Pesticide Application

June 2024

In recent years, the use of Remotely Piloted Aircraft Systems (RPAS) or drones, for agricultural purposes has seen significant advancements, offering promising solutions for precision farming and pesticide application. The use of drones requires careful planning and compliance to ensure it is safe for people and the environment.

Current Status

Saskatchewan does not yet offer a specific pesticide applicator licence for drones. Efforts are underway within the province to establish a licence category tailored to drone operations, alongside creating a thorough training program. Presently, aerial applicator licenses are only applicable to airplanes and helicopters. Recognizing the unique operational dynamics of drones, distinct safety protocols are necessary to mitigate potential risks.

Safety Precautions

The way drones move and the air currents they create, especially the downwash effect, makes it hard to accurately apply pesticides. This can lead to difficulty in controlling where the spray goes and in covering the crop evenly. Additionally, considerations such as drift, bystander exposure, collisions, signal losses and maintenance issues underscore the necessity for meticulous safety precautions. There are ongoing studies to evaluate occupational and bystander exposure when using a drone and ensure the regulatory frameworks aligns with evolving safety standards. Currently, drone operators must undergo specialized training and certification mandated by Transport Canada, particularly for drones exceeding 25 kilograms. Additionally, any drone tasked with pesticide application may acquire additional certification from Transport Canada, further emphasizing the commitment to safety and regulatory compliance. More information can be found at [Drone safety \(canada.ca\)](https://drone.safety.canada.ca).



Approved Pesticides for Drones

The list of approved pesticides for drone application is limited. To ensure compliance and safety, it is crucial to verify pesticide labels for explicit mentions of "Remotely Piloted Aircraft Systems" or "RPAS." Products lacking these designations are not authorized for drone-based application under *The Pest Control Products Act*. A comprehensive list of registered products suitable for drone application can be accessed through [Pesticide Label Search - Health Canada \(hc-sc.gc.ca\)](https://hc-sc.gc.ca).

Legal Implications

It is important to highlight the legal consequences associated with the improper use of pesticides via drones in Saskatchewan. Any misuse or non-compliance with regulatory standards, both at the provincial and federal levels, constitutes a serious offense. Individuals or entities found contravening provincial and federal laws regarding pesticide application through drones may face penalties. The integration of drones into pesticide application practices signals a new era of precision and efficiency in Saskatchewan's agricultural sector. However, this shift requires strict compliance with safety measures and regulations. Saskatchewan is actively participating in developing specialized training programs and licensing to maximize the benefits of drone technology while ensuring safety and sustainability.



If you have additional questions about using drones for pesticide spraying, contact the Agriculture Knowledge Centre at 1-866-457-2377.