

POSITION STATEMENT

REGULATORY REQUIREMENTS FOR THE USE OF DRONES IN AERIAL APPLICATION OF AGRICULTURAL REMEDIES

Version 1, 7 March 2019

DISCLAIMER

This position statement is based on CropLife SA's interpretation of promulgated acts and regulations and is not a legal opinion. CropLife SA, its members and staff shall not be held liable for any damages to any parties as a result of their actions of interpretation of this position statement. The statement was drafted in the interest of CropLife SA's members, our members' intellectual property rights in terms of registered agricultural remedies and the lawful use thereof, and producers who may require the service of professional pest control operators.

EXECUTIVE SUMMARY

Requirements for the use of drones for the aerial application of pesticides are embedded in Act No. 36 of 1947 and Act No.13 of 2009.

Any person doing aerial application of pesticides for financial gain must be-

- a. registered as a pest control operator for aerial application under Act No. 36 of 1947;
- b. this registration can only be applied for if the person complies with all the requirements of Act No.13 of 2009;
- c. be licensed to operate a drone (remotely controlled aircraft) under Act No. 13 of 2009;
- d. be registered under Act No. 13 of 2009;
- e. be in possession of a remotely piloted aircraft operators certificate issued under Act No. 13 of 2009;
- f. be in possession of certificate of competency to operate a radio communications system;
- g. be in possession of a system for radio communications.

These requirements are not different to those applicable to commercial pilots operating fixed winged aircraft or helicopters for aerial application of pesticides; these are, however, specific to persons operating drones for aerial application of pesticides.

CropLife SA has confirmed that, at the publication date of this position statement, the Civil Aviation Authority has not issued an operator's certificate to any drone operator in South Africa to dispense pesticides by air, hence there is no legally compliant drone operator who may offer aerial application of pesticides as a paid-for service to any parties.

CropLife SA urges any drone operator who wishes to offer services as an aerial applicator to undergo the necessary training, certification and licensing in terms of both acts before commencing aerial application of agricultural remedies. Drones may become useful in agriculture in the future but CropLife SA will only accept drones as valid methods of aerial application if the drones and pilots meet all requirements of the South African legislation.

REGULATORY REQUIREMENTS

1. Introduction. Agricultural remedies (hereafter referred to as “pesticides”) as defined in Section 1 of the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act No. 36 of 1947) include insecticides, herbicides, fungicides, avicides, rodenticides, miticides, nematocides, algaecides, plant growth regulants, adjuvants and other related products of chemical or biological origin. Such pesticides may only be applied for purposes and in manners as directed by label instructions according to Regulation No. R1716 of 26 July 1992 of Act No. 36 of 1947.

2. Requirements for aerial application of pesticides in terms Act No. 36 of 1947.

a. If aerial application of pesticides is executed by a pilot that do it in the course of business, the pilot must comply with Section 7 (2) (a) (ii) of the Act (quoted *verbatim* from the Act):

“(2) (a) No person shall for reward or in the course of any industry, trade or business-

(ii) use any agricultural remedy unless he is a pest control operator registered in terms of this Act or otherwise than in the presence and under the supervision of a pest control operator so registered.”

b. This means that a pilot offering aerial application of pesticides by aircraft for commercial gain must conform to the following requirements:

i. be registered (licensed) as a pest control operator under Act No. 36 of 1947, meaning the pilot shall have a registration certificate with a P-number issued by the Registrar of Act No. 36 of 1947;

1. registration as a pest control operator is subject to the pilot of an aircraft undergoing training as an aerial applicator, qualifying according to certain standards as specified in the Pest Control Operators Regulations No. R98 of 18 February 2011 and completing an internship under supervision of a pest control operator that is registered for aerial application of pesticides before being eligible to submit an application for registration as an aerial application pest control operator;

ii. the pilot shall first comply with all the conditions of the South African Civil Aviation Authority.

3. Requirements for aerial application of pesticides by drone in terms of the Civil Aviation Act, 2009 (Act No. 13 of 2009).

Definitions

a. The Civil Aviation Act, 2009 (Act No. 13 of 2009) defines an aircraft as (quoted *verbatim* from the Act):

“aircraft” means a machine that can derive support in the atmosphere from the reactions of the air, other than the reactions of the air against the surface of the earth”

- b. The Amendments to the Civil Aviation Regulations, 2011 defines a remotely piloted aircraft as (quoted *verbatim* from the 8th Amendment No. R444 of 27 May 2015 to the Civil Aviation Regulations 2011) as -

‘remotely piloted aircraft’ means an unmanned aircraft which is piloted from a remote pilot station, excluding model aircraft and toy aircraft,
(*remotely piloted aircraft* is abbreviated as RPA)

therefore, classifies drones as a remotely piloted aircraft, unless such drones are toys or model aircraft, and -

- c. a person operating a drone is therefore defined by the 8th Amendment as (quoted *verbatim* from the 8th Amendment):

‘remote pilot’ (RP) means the person who manipulates the flight controls or manages the flight command instructions of an RPA during flight time,

- d. ‘remotely piloted aircraft system’ (RPAS) means a set of configurable elements consisting of a remotely piloted aircraft, its associated remote pilot stations(s), the required command and control links and any other elements as may be required at any point during flight operation (quoted *verbatim* from the 8th Amendment).

Restrictions and requirements as listed in the 8th Amendment

- e. Part 101.02.4 of the 8th Amendment:
(1) No RPA shall be operated within the Republic, unless such RPA has been issued with a certificate of registration by the Director.
- f. Part 101.03.1 of the 8th Amendment:
(1) No person shall act as a remote pilot, except when undergoing a skill test or receiving flight instruction, unless he or she is in possession of a valid remote pilot licence (RPL) in the relevant category.

(2) A remote pilot licence may be issued for the following categories:
(a) RPL (A): Remote Pilot Licence (Aeroplane);
(b) RPL (H): Remote Pilot Licence (Helicopter);
(c) RPL (MR): Remote Pilot Licence (Multi-rotor) *meaning a drone* (our interpretation).
- g. Part 101.04.1 of the 8th Amendment:
(1) No person shall operate an RPAS in terms of this Part unless such person is the holder of –

- (a) in the case of commercial, corporate and non-profit operations, a valid ROC (RPAS operators' certificate) including the operations specifications attached thereto; and
 - (b) in the case of commercial operations, an air services licence issued in terms of the Air Services Licensing Act, 1990 (Act No. 115 of 1990).
- h. Part 101.05.4 of the 8th Amendment:
No object or substance shall be released, dispensed, dropped, delivered or deployed from an RPA except by the holder of a ROC and as approved by the Director in the operators' operations manual.
- i. Part 101.05.10 of the 8th Amendment:
(1) No person shall operate an RPA unless they have in their possession –
- (a) a valid RPA Pilot Licence;
 - (b) a copy of the ROC and associated OpSpec. (operational specifications)
 - (c) the certificate of registration for each RPA in operation;
 - (d) a copy of the RLA (RPA letter of approval); and
 - (e) user manual for the RPA and the remote pilot station.
- j. Part 101.05.16 of the 8th Amendment:
(1) Except for R-VLOS (restricted visual line of sight) operations, no RPAS shall be operated unless the pilot has a functioning air-band radio in his possession, tuned to the frequency or frequencies applicable to the ATSU providing services or controlling such area or airspace or to aircraft in such area or airspace.
- k. Part 101.09.1 of the 8th Amendment:
(1) (of the 8th Amendment): No RPAS shall be operated with the Republic, unless such RPAS has been issued with a letter of approval from the Director.

The requirements of the Civil Aviation Act, 2009 (Act No. 13 of 2009), the Civil Aviation Regulations of 2011 and the 8th Amendment to the regulations of 2015 in summary are as follows for a pilot operating a remotely piloted aircraft (= drone):

- a. Be licensed to pilot remotely licensed aircraft for multirotor devices (RPL (MR));
- b. Be certified as proficient in the use of aeronautical radiotelephony;
- c. Have in his possession a functional air band radio;
- d. Have a valid RPAS operator's certificate (ROC);
- e. Have certificates of registration for each RPA in his possession (RLA);
- f. Have a copy of the letter of approval (RLA);
- g. Be licensed as a pest control operator (aerial application) in terms of Act No. 36 of 1947 which is subject to the pilot *first* meeting all the requirements of the Civil Aviation Authority.

CropLife SA has been in contact with the Civil Aviation Authority (CAA) and according to the CAA no drone operator in South Africa is currently compliant with the requirements of Act No. 13 of 2009, the Civil Aviation Regulations 2011 and the 8th Amendment of 2015. No ROC has been awarded to any drone operator for delivering or dispensing substances from an RPA.

Given the clause in the pest Control Operators Regulations of 2011 that an applicant who wishes to offer service as an aerial applicator of pesticides (agricultural remedies) by RPA or

RPAS under Section 7 (2) (a) (ii) of Act No. 36 of 1947, has to first comply with the requirements of the Civil Aviation Authority, no currently registered pest control operator can be awarded an aerial applicators pest control certificate.

It is therefore a contravention of both Act No. 36 of 1947 and Act No. 13 of 2009 at this stage to apply agricultural remedies by drone in the course of business. It is also unlawful of an end user such as a farmer or drone operator to acquire agricultural remedies for application by drone.

CropLife SA urges any drone operator who wishes to offer services as an aerial applicator to undergo the necessary training, certification and licensing in terms of both acts before commencing aerial application of agricultural remedies. Drones may become useful in agriculture in the future but CropLife SA will only accept drones as valid methods of aerial application if the drones and pilots meet all requirements of the South African legislation.