

Aerial Application of Pesticides

The purpose of this Regulatory Directive is to inform registrants and other interested groups and agencies of revisions to the regulatory position on the aerial application of pesticides. These changes are intended to assist farmers and aerial applicators by clearly defining proper aerial uses and application instructions, as well as situations that are not suitable for aerial application.

Currently all existing Commercial class products that do not carry a contraindication on the label may be applied by air if the uses do not entail an unsafe condition. Aerial application of pesticides to forests, bodies of water or residential areas is a Restricted use. Specific instructions for aerial application of Restricted class products must appear on the label. Starting January 1, 2000, only products with use instructions for aerial application may be applied by air and only for the uses indicated on the label. Existing product labels that are silent on aerial application must be amended before December 31, 1999 to specify use instructions or contraindication regarding aerial application.

This Regulatory Directive replaces Trade Memorandum T-1-213, *Aerial Application of Pesticides*, dated April 1, 1981 and Pro93-02, *Aerial Application of Pesticides*, dated June 15, 1993.

(publié aussi en français)

October 11, 1996

This document is published by the Submission Management and Information Division, Pest Management Regulatory Agency. For further information, please contact:

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1.0 Introduction

Over the years, pesticide application by air has raised a variety of concerns relating to health protection, environmental impact and effective pest control. This Regulatory Directive, based on Regulatory Proposal Pro93-02, *Aerial Application of Pesticides*, and related public, provincial and stakeholder comments, outlines the labelling requirements and registration process for the application of pest control products by air.

The *Pest Control Products Act and Regulations* provide the basis for requirements that registered pest control products be labelled with directions for use. This requirement is designed to support safe and effective use of pest control products when used as directed.

Aerial application of pesticides is an important and essential crop protection tool in Canadian agriculture and forestry. It is estimated that aerial application accounts for ten percent of all pesticide applications in the prairie provinces. It is often the preferred and may be the only practical means of application when the fields are too soft and wet or the terrain is too difficult for ground machinery; for crop desiccation; for pest outbreaks in the latter stages of crop growth; and for forest areas that are inaccessible by ground or so large, that ground application is neither practical nor economical.

Aerial applicators are referred to the appropriate provincial or territorial agency that delivers pesticide education and certification programs. These programs are based on the *Standard for Pesticide Education, Training and Certification in Canada*, developed through the Canadian Association of Pesticide Control Officials (CAPCO) to improve the consistency of training across the country and to improve the competency of pesticide applicators.

2.0 Data Requirements and Use Instructions

These requirements will vary depending on the nature and registration status of the product. While guidelines concerning spray drift and buffer zones are under development, registrants are advised to discuss specific data requirements for their product(s) with the PMRA before making a submission for aerial application.

2.1 New Products and/or New Uses

All new Agricultural, Commercial and Restricted class products, excluding products for which there is no possibility of being applied by air, e.g., wood preservatives and antimicrobials, will have to include either instructions, e.g., rates, water volumes and nozzle types, or contraindications regarding aerial application on the label. Registrants must provide data to support claims for aerial use. Data from the United States or other countries may be useful in supporting an aerial

registration. Aerial application will only be allowed for those uses specified on the label. Additional data requirements for aerial application may fall into three major categories:

- a) Efficacy data: Please refer Regulatory Directive Dir93-07a, *Guidelines for Efficacy Assessment of Chemical Pesticides*, Sections 2.1.8, Aerial Applications, and 2.1.15, Comparability Tests;
- b) Environmental data: The required environmental fate and environmental toxicology data are evaluated by the Environmental Assessment Division (EAD), PMRA. Additional data specific to the determination of pesticide drift and deposit are required. In many cases, these data are expected to be generic in nature. In some cases, however, empirical droplet size spectrum data and field data may be required. Please contact the EAD for specific details; and
- c) Occupational exposure data: Exposure data guidelines are being developed. Please contact the Health Evaluation Division, PMRA for details on requirements.

2.2 Currently Registered Products

All currently registered Agricultural, Commercial and Restricted class products, excluding products for which there is no possibility of being applied by air, will have to include either instructions for aerial application, or contraindications on the label. Product labels may be subject to contraindication if an environmental or health concern has been identified. The need for data to support label amendments will be determined on a case-by-case basis.

Appendix I outlines the process for upgrading silent label products for aerial application. It is not likely that drift or occupational exposure data will be requested to support the addition of aerial application instructions to currently registered products with silent labels, unless the product is under an official re-evaluation or special review, or if an environmental or health concern has been raised. Efficacy data and/or a rationale will be required if rates or frequency of application are to be changed on the label.

Starting January 1, 2000, only products with use instructions for aerial application may be applied by air. These products may only be applied aerially for those uses that have specific aerial instructions. Registrants wishing to continue to make their silent label products available for aerial application should submit their application for amendment to include directions for aerial use as soon as possible. For those products that the registrants do not want applied by air, and for products which are not acceptable for aerial application, the product labels should be amended to add the label contraindication "Do not apply by air"; this can be done at the next printing of the label. All label amendments must be completed by December 31, 1999.

2.3 Generic Aerial Application Label Instructions

All pest control products registered for aerial application must have appropriate use instructions on the product label. Appendix II provides generic aerial application label instructions that must be added to the label.

3.0 Restricted Uses

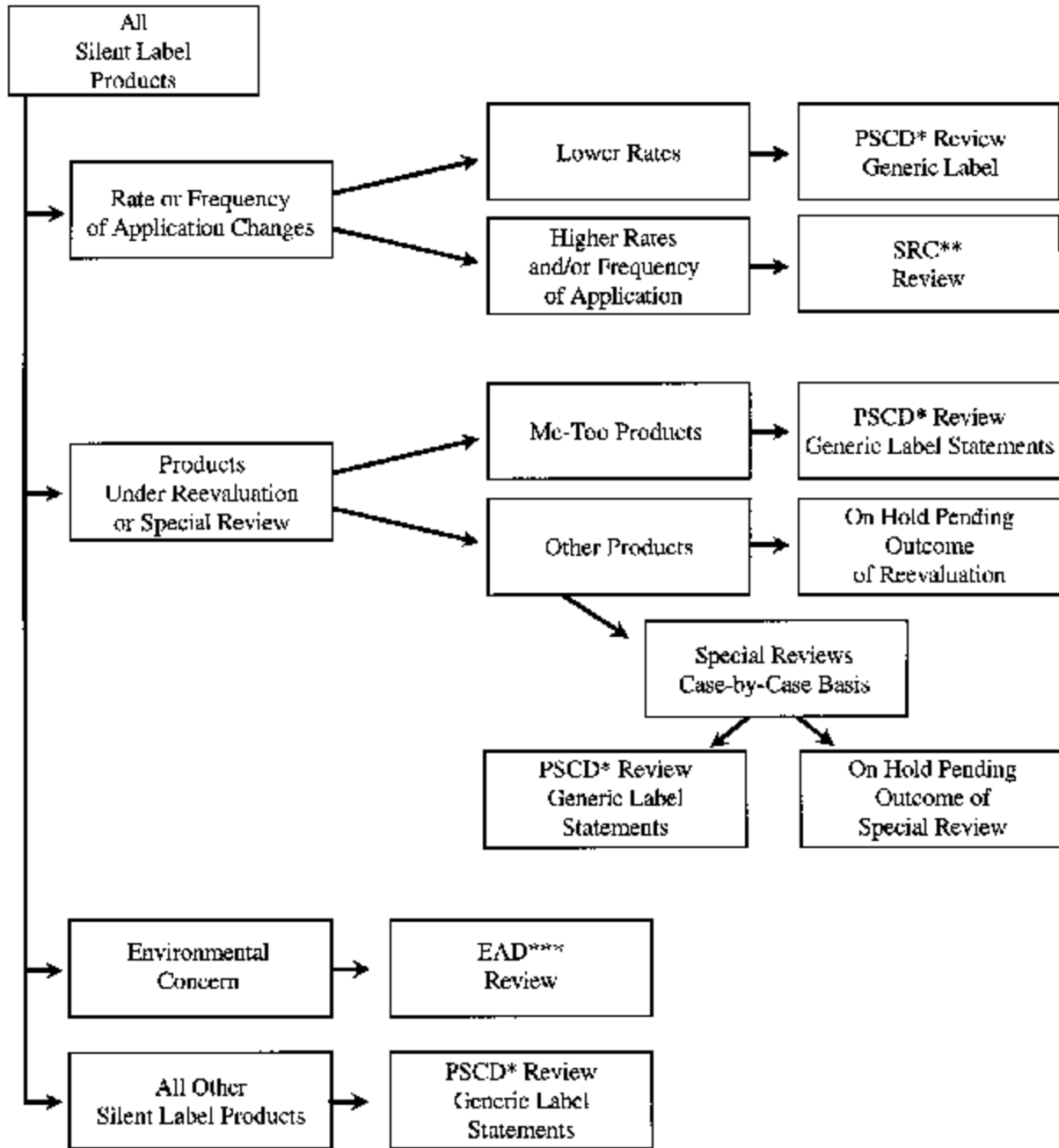
- 3.1 Aerial application of pesticides to forest management or woodlands management sites, residential areas and aquatic situations is a Restricted use. Products must not be applied by air unless aerial application is specified for these use areas on the label and the application is consistent with label instructions, rates and precautions.
- 3.2 Establishment of setbacks or buffer zones may be required around sensitive areas, such as water, sensitive terrestrial and aquatic habitats and urban/residential areas. Such zones may be established on the label at the time of registration on a case-by-case basis. All provinces may establish such zones to protect sensitive areas.

4.0 Definitions

For the purpose of this Regulatory Directive, the following definitions apply:

- a) Forest Management and Woodlands Management Sites: Refer to Regulatory Directive Dir93-10, *Pesticides for Use in Forest and Woodlands Management*.
- b) Aquatic Application: Refer to Regulatory Directive Dir93-12, *Pesticides for Aquatic Applications*.
- c) Residential Area: Any single permanent structure or continuous area of permanent structures for human habitation, plus a minimum radius of land of 30 m, or to the edge of the property line, whichever is the shortest distance for each individual property. Please note that the final determination of what constitutes a residential/urban area rests with provincial authorities, who may increase the minimum area if they deem appropriate.

Process for Updating Silent Label Products for Aerial Application



*PSCD = Product Sustainability and Coordination Division
 **SRC = Science Review Committee (Health Evaluation, Environmental Assessment, Product Sustainability and Coordination, Alternatives)
 ***EAD = Environmental Assessment Division

Generic Aerial Application Label Instructions

Directions for Use

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.

Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Use Precautions

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the *Basic Knowledge Requirements for Pesticide Education in Canada: Applicator Core and Aerial Module*, developed by CAPCO.

Do not apply to any body of water. Avoid drifting of spray onto any body of water or other non-target areas. Specified buffer zones should be observed.

Coarse sprays are less likely to drift, therefore, avoid combinations of pressure and nozzle type that will result in fine particles (mist). Do not apply during periods of dead calm or when wind velocity and direction pose a risk of spray drift. Do not spray when the wind is blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as shelter-belt) or aquatic habitat.

Operator Precautions

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted.

It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

Product Specific Precautions

Read and understand the entire label before opening this product. If you have questions, call the manufacturer at (XXX)YYY-ZZZZ or obtain technical advice from the distributor or your provincial agricultural representative. Application of this specific product must meet and/or conform to the following:

Volume: Apply the recommended rate in a minimum spray volume of X litres per hectare.

Other precautions specific to aerial uses should be included in this area, e.g., buffer zones around field edges or aquatic habitat, etc.