

PREFACE

The aerial application industry provides an important service to many areas of pest control. Aircraft have proven to be economical and efficient compared with ground pesticide applications for treating large areas quickly and for reaching remote locations inaccessible by ground equipment.

The variety of work performed by aircraft has increased over the years. Originally aircraft were used primarily for insect control. Their use has expanded to include weed and brush control, fungicide and fertilizer application, defoliation, desiccation, seeding and frost damage prevention. Aerial application has been used extensively in agriculture and forestry, and to a lesser extent, in right-of-way vegetation management and mosquito management. Individuals involved in aerial application of pesticides may work in a number of provinces and/or territories across Canada. To ensure consistency of training offered to aerial pesticide applicators as well as to increase flexibility in obtaining aerial pesticide certification/licensing, a *National Aerial Pesticide Application Manual* has been developed.

The *National Aerial Pesticide Application Manual* provides information that pertains to most types of aerial application across Canada, including agriculture, forestry, industrial vegetation management, and mosquito control, using fixed-wing and rotary-wing aircraft.

This manual, the *National Aerial Pesticide Application Manual*, in conjunction with a provincial Applicator Core Manual are to be used as training and reference manuals for individuals wishing to become certified for aerial pesticide application. Applicators wishing to obtain a Pesticide Applicator's Certificate for aerial pesticide application must be aware of the information in both manuals in order to pass an aerial examination. Check with your provincial pesticide regulatory agency for specific information on the provincial Applicator Core Manual and pesticide certification/licensing requirements.

Completion of training using this manual does not guarantee automatic certification/licensing in other provinces and/or territories across Canada. Jurisdictions in Canada may require the completion of additional training programs before aerial certification/licensing is granted. It is advised that, prior to conducting aerial application of pesticides in other jurisdictions, you check with provincial pesticide regulatory agencies for this information.

The *National Aerial Pesticide Application Manual* provides information that pertains to most types of aerial application across Canada, including agriculture, forestry, industrial vegetation management and mosquito control, using fixed-wing and rotary-wing aircraft. The following general topics are covered:

- ! Regulations
- ! Labelling
- ! Human Health
- ! Pesticide Safety
- ! Environmental Protection
- ! Pest Management

- ! Application Technology
- ! Emergency Response.

Information is provided on both fixed-wing and rotary-wing aircraft. Aerial applicators are only expected to learn information specific to the type of aircraft they use. Complete aerial applicator training requires knowledge of the ground support operations, as well as flying operations, included in this manual. The information contained in this manual is applicable across Canada; however, there may be information unique to individual provinces. Be sure to review the information found in the Province Specific Information section. Note that, for each province, this information may vary; always check with provincial regulatory agencies for this information.

The contents of this manual are based on the Aerial module of the Standard for Pesticide Education, Training and Certification in Canada, published by Health Canada (1995) and endorsed by the Canadian Aerial Applicator Association (CAAA).

Aerial application can be a hazardous occupation. Knowing these hazards and safe operating guidelines is essential to reduce the risks. This knowledge, however, must be accompanied by caution and good judgement.

The expanding role of aerial application, along with increasing concerns for environmental protection, has required ongoing research and education about aerial application techniques, pest management effectiveness and environmental effects. In response, the industry has matured considerably since the early days of ‘crop dusting,’ and much has been done to promote both safety and efficiency in aerial applications.

New aircraft and dispersal systems have been designed. There has also been considerable research into spray drift management and spray efficacy, and a continuing emphasis on the critical issue of safety as it applies to applicators, their equipment and the environment.

Safety has been and will continue to be the number one priority in aerial application. There are few occupations where an act of carelessness or neglect can have such serious results. Pilots must develop a heightened awareness of hazardous situations, and must always conduct operations in a safe and professional manner. Mixers, loaders, flaggers and other ground personnel must also be constantly aware of the potential hazards in working around and with aircraft.

Three questions must always be asked prior to the aerial application of any material. “Will the applicator and crew be safe?,” “Have bystander and environmental safety been considered?” and “Will the application be effective?” Operations should commence only when the answer to all questions is a very definite “yes.”

The CAAA is the national association that represents aerial applicators in Canada. They support high standards of professionalism in their industry and provide a coordinated approach for aerial applicators to communicate with government regulating agencies, pesticide producers, training agencies and the general public. There are similar provincial organizations in some provinces.

Through co-operative efforts such as the development of this training manual, aerial applicators and regulators hope to ensure the safe use of aerial application for pest control in Canada.