

## FARM PRACTICES

## PESTICIDES

### Description

Pests are capable of causing damage to crops and livestock. The range of commodities, which can be negatively impacted by pests, is extensive. When pest populations rise to an unacceptable level, pests need to be controlled so that farmers can effectively and efficiently produce agricultural products that are of good quality and are competitively priced. Farmers use a variety of methods to manage pests. Pesticides are one of the methods of managing pests. Increasingly, pesticides are being used in combination with other pest management techniques in an integrated pest management strategy.

Pesticide use is strictly regulated by both the federal and provincial governments. Since pesticides have the potential to harm the environment, people and other organisms, they must be used according to strict safety guidelines. Pesticide safety practices vary, depending on the potential hazard associated with the pesticide being used and the application method. Safety guidelines apply to the whole time a farmer possesses the pesticide – from the time it is purchased until the empty containers or unwanted chemicals are safely disposed of.

Farmers must strive to prevent pesticide movement to non-target areas and must strive to ensure pesticides are contained within the boundaries of the properties they are farming. Various types of equipment and management techniques can be used to minimize pesticide movement onto sensitive areas. Buffer zones on both the farming and non-farming side of the agriculture – urban boundary are an effective management tool.

Pesticides must be registered by Health Canada for their specific use. Both the crop and the pest they are to be used on must appear on the pesticide label. Newly registered minor uses are an exception.

**Pest** is defined under the *Pesticide Control Act* as “an injurious, noxious or troublesome living organism but does not include a virus, bacteria, fungus or internal parasite that exists on man or animal.” Therefore, pest includes insects, disease organisms, weeds, rodents, birds, and wildlife.

**Pesticide** is defined under the *Pesticide Control Act* as “micro-organism or material that is represented, sold, used or intended to be used to prevent, destroy, repel or mitigate a pest and includes (a) a plant growth regulator, plant defoliator or plant desiccant; and (b) a control product under the *Pest Control Products Act* other than a device that is a control product.” (c) a substance that is classified as a pesticide by regulation. Therefore pesticides include insecticides, fungicides, herbicides and rodenticides.

**Integrated Pest Management**, as defined under the *Pesticide Control Act*, is a decision-making process that uses a combination of techniques to suppress pests and that must include but is not limited to the following elements:

- planning and managing ecosystems to prevent organisms from becoming pests;
- identifying potential pest problems;

- monitoring populations of pests and beneficial organisms, pest damage and environmental conditions;
- using injury thresholds in making treatment decisions;
- reducing pest populations to acceptable levels using strategies that may include a combination of biological, physical, cultural, mechanical, behavioural and chemical controls;
- evaluating the effectiveness of treatments;

## Nuisance Concerns

The three main disturbances mentioned in the *Farm Practices Protection (Right to Farm) Act* are odour, noise and dust. Any of the three may be of concern if spray aerosols are included in the dust category.

### Odour

Farmers engage in a variety of activities that produce odours. Pesticides often give off some odour, which may be the pesticide carrier volatilizing well after spraying is complete. Odour is the human response to chemicals in the air. How people perceive the odour (nuisance or not) will depend on the frequency, intensity, duration and offensiveness of the odour, how well they smell and personal experiences associated with the odour.

See Nuisance Reference: [Odour](#)

### Noise

Farmers engage in a variety of activities that generate noise. Most equipment generates some noise. Noise is defined as any sound that is audible but judged to be an unwanted, irregular or erratic disturbance. Noise levels vary and may rise when equipment is run at high RPMs. Noise may be generated continuously or intermittently.

See Nuisance Reference: [Noise](#)

### Dust

Farmers that work the soil, engage in a variety of activities that require the use of equipment or practices that create dust. Dust may also be generated as 'fugitive dust' when fine particulate is lifted from fields, roads, buildings and yards by the stirring action of air. Pesticide sprays are also treated as a 'dust'. Dust in the air is defined as fine-grained suspended particulate. How people perceive dust (nuisance or not) will depend on the frequency, intensity and duration of the dust generating event.

See Nuisance Reference: [Dust](#)

## Activities and Operations

### Aerial Application

Farmers may only have pesticides applied by aerial application if the pesticide label has use instructions for aerial application. A pesticide may only be applied by air for the specific aerial uses indicated on the label. Details are explained in the Federal Regulatory Directive 96-04.

### Chemigation

Farmers can apply pesticides via chemigation, provided the pesticide label indicates the product can be applied by chemigation and the BC Guidelines for Chemigation are followed.

See Farm Practice: [Irrigation](#)

## **Pesticide Application to Ditches**

Pesticides can be applied to ditches, provided they are registered for that use and all legal requirements are met.

## **Pesticide Use**

Pesticides must be registered by Health Canada for their specific use. Both the crop and the pest they are to be used on must appear on the pesticide label. Newly registered minor uses are an exception. Farmers must strive to prevent pesticide movement to non-target areas and must strive to ensure pesticides are contained within the boundaries of the properties they are farming. Various types of equipment and management techniques such as buffer zones can be used to minimize pesticide movement onto sensitive areas.

## **Timing of Applications**

Pesticides may be applied during any season (subject to the label). Pesticide application may be done during the day or night. Applications may be done early in the morning or late in the evening to help minimize drift (due to wind) and protect beneficial organisms.

See Farm Practice: [Mobile Equipment](#)

## **Related Farm Practices**

Other farm practices that pertain to pesticides include, but are not limited to, the following:

### [Cultivation](#)

Pesticide application may be combined with cultivation operations.

### [Storage of Hazardous Material](#)

Pesticides are commonly stored on farm.

### [Transportation](#)

Pesticide transportation is subject to special regulations.

### [Weed Control](#)

One method of weed control is the application of pesticides.

### [Wildlife Damage Control – South Coastal BC](#)

### [Wildlife Damage Control – Interior BC](#)

One method to control wildlife damage is to repel, deter or kill “problem” wildlife with pesticides.

## **Legislation**

Information on federal and provincial legislation can be found in Appendices B and C. Acts, regulations and bylaws that regulate or may affect pesticide use practices include, but are not limited to, the following:

### **Federal**

*Fisheries Act* – protects fish and fish habitat and prohibits the discharge of deleterious substances (i.e. pesticides) into waters frequented by fish

*Pest Control Products Act and Regulation* – ensures the safety, merit, and value of pest control products used in Canada

*Migratory Birds Convention Act* – Although migratory birds may damage crops, it is an offence under the convention to release substances which may harm them

*Transportation of Dangerous Goods Act* - regulates the transport of all dangerous goods

## **Provincial**

*Pesticide Control Act* – regulates all aspects of pesticide sale, transport, storage and use

*Transport of Dangerous Goods Act* – regulates the transport of all dangerous goods

*Waste Management Act* – protects environment (soil, water & air) from pollution

*Spill Reporting Regulation* – spills of more than 5 kg must be reported

*Weed Control Act* – occupiers of land are responsible for the control of noxious weeds

*Workers Compensation Act*

*Regulation for Occupational Health and Safety in Agricultural Operations* – addresses worker hazards specific to agriculture

## **Publications**

Publications that provide further information on pesticide use include, but are not limited to, the following (refer to Appendix D for details):

*Chemigation Guidelines for British Columbia*

*British Columbia Environmental Farm Plan Reference Guide*

*Handbook for Pesticide Applicators and Dispensers*

*Production Guides - for various commodities*

*Pesticide Applicator Course for Agricultural Producers*

*Standard for Pesticide Education, Training, and Certification in Canada*

*Standard Practices for Pesticide Applicators – A Manual of Health Information and Safe Practices for Workers Who Apply Chemicals*