APPENDIX D:

GLOSSARY

Glossary

Acetyl cholinesterase	An enzyme in the blood. It breaks down acetylcholine in a nerve gap. This leaves it ready for the next message to be transmitted across the nerve gap.
Action threshold	The point at which treatment should take place to prevent a pest from causing harm. Timing depends on the type of treatment selected.
Active ingredient	The substance in the pesticide that controls the pest.
Acute toxicity	An adverse effect or response. It is seen in a person within a few hours to several days after exposure.
Aerosol pesticides	Small, pressurized contains a pesticide. It releases the pesticide through small holes. Spray is pushed out by an inert gas under pressure. When the nozzle is triggered, it makes a very fine spray, mist or fog of tiny particles (droplets) in the air.
Annual plant	A plant that germinates from seed, flowers, produces seed, and dies in the same year. It has a one-year life cycle.

Application rate	The amount of pesticide product or active ingredient applied to control a pest. It is often expressed as amount per area (e.g., 30 ml per $10m^2$), per length of crop row (e.g., 40 g per 10 m length of row) or as a dilution (e.g., mix 50 ml in 4 L of water and spray to thoroughly wet foliage).
Bacteria	One-celled microorganisms. Some cause disease in plants, insects or animals. They can only be seen with a microscope. Singular = bacterium
Basal treatment	An application of a pesticide to stems of plants from the ground to a short distance up the stem.
Behavioural control	Use of a pest's natural behaviour to help suppress population.
Beneficial	Useful or helpful to people (i.e. beneficial insect that feeds on aphids).
Biological control	The use of beneficial species to suppress populations of pests. These include predatory and parasitic insects, birds, nematodes, or disease organisms.
Broadcast application	An even application of pesticide over a whole area.
Broadleaf plant	An annual or perennial plant, shrub or tree with wide leaves. It differs from grasses, conifers and plants with needles or grass-like leaves.

Broad-spectrum pesticide	A pesticide that will kill, or affect, a range of organisms as well as the target pests. This is **not** a selective pesticide.
Buffer zone	Areas or strips of land left untreated to protect a nearby area (e.g. a sensitive water body, habitation).
Calibrate	1. To determine the amount of pesticide being applied through a sprayer nozzle, duster or granular applicator over a given area. 2. To mark a container or tank to indicate volume at certain levels.
Calibrated sprayer application rate	The amount of spray mix applied per unit area. This is determined from calibration procedure in field conditions (L/ha).
Calibration	Checking and adjusting the delivery rate of a pesticide by application equipment.
Carrier	Material that is added to a pesticide product to dilute it. It can then be evenly applied. This is often water.
Cartridge	The part of a respirator that absorbs fumes and vapours from the air before it is breathed in.
Cartridge filter (in a respirator mask)	A metal or plastic container filled with absorbent materials. This filters fumes and vapours out of the air before being breathed by the wearer.

Caterpillar	The larval, or immature, stage of moths and butterflies. (Lepidoptera).
Caustic	A corrosive chemical that may burn the skin.
Chemical degradation	The breakdown of pesticides by chemical reactions with other materials in the soil (e.g. water).
Chemical name	The name of the chemical structure of the active ingredient.
Chronic toxicity	Illnesses, disease, or adverse health effects that occur and persist over time after exposure(s). Chronic effects are often permanent. These may result from a single or repeated exposure to a pesticide.
Coleoptile	The first leaf of a grassy plant.
Commercial class (Agricultural or Industrial) pesticide	A pesticide meant for use in commercial agriculture, forestry, or industry (not the general public). They have low to medium toxicity.
Concentrate	The opposite of dilute. Concentrated pesticide formulations need to be diluted, often with water, before use.
Contact pesticide	A compound that causes the death of an organism that comes in contact with it. The pesticide does not need to be eaten or inhaled by the organism for it to work.
Contaminate	When a chemical alters or renders a material or food unfit to use.

Cotyledons	The first, or seed leaves, of a broad leaf plant.
Deciduous plant	A plant that loses its leaves in the fall and has bare branches in winter.
Defoliation	The loss of leaves from trees, shrubs or other plants (e.g., caused by feeding from leaf-chewing pests or by injury from herbicides).
Degradation	A complex chemical is reduced into a less complex form. This may be the result of microbes, water, air, sunlight or other agents.
Diluent	A substance, often water, mixed with a pesticide to make the proper concentration for application.
Dilute	To weaken the strength of a mixture make it (less concentrated), for example, by adding more water to a pesticide mixture.
Domestic class pesticide	Intended for home use. They contain active ingredients with low toxicity. They are usually sold in smaller volume containers then commercial class pesticides.
Dormant/dormancy	The yearly halt of visible growth in plants or activity in animals. This is usually the winter season.
Drift	Movement of pesticide droplets or dust, by wind or air currents, from the target area. Drift is a major hazard of pesticide application.

Drift retardants/thickener	A substance used to increase droplet size of spray material and reduce particle drift.
Ecosystem	A community of organisms that interact with one another and their environment.
Emulsifiable concentrate	A liquid pesticide concentrate that is made with an emulsifier. This mixes well with water to make a spray.
Exoskeleton	Layers of tissues that form the skeleton on the exterior of insects and mites. In immature stages the exoskeleton is often thin and soft. In adults it is often very hard or leathery.
Exposure	When someone or something comes in contact with a substance through the skin, by mouth or by breathing.
Fatty acids	Organic (containing carbon and hydrogen) chemical acid that occurs naturally in waxes, fats and essential oils. It is a component of some low toxicity pesticides.
Formulation	A mixture of active ingredient(s) with carriers, spreaders or other materials. These improve the storing, mixing and/or application of a pesticide.

Fungi	(Singular: fungus) A group of organisms lacking chlorophyll (green colouring). They grow from microscopic spores. Many fungi cause plant diseases, such as rots, rusts, mildews and blights; some species of fungi attack wood or cause decay in buildings. Others cause disease in insects. Many are microscopic.
Fungicide	A pesticide used to control fungi.
Geotextile	Synthetic fabric used in landscapes as soil coverings to smother weeds or prevent them from germinating.
Granular pesticide	A pesticide mixed onto tiny beads of clay or other materials to make coarse particles. They are applied dry using a spreader, seeder or special applicator.
Grub	The larval stage of some beetles.
Habitat	An environment in which organisms live.
Hazard	The danger of exposure and toxicity of a pesticide.
Herbaceous plant	A plant with soft, non-woody stems.
Herbicide	A pesticide used to kill plants and control vegetation.

Honeydew	Sticky liquid excreted by aphids as they feed on plants.
Host	A living plant or animal that a pest depends on for survival.
Hypha	Filament or strand of vegetative fungal growth. plural = hyphae
Incompatible	When pesticides cannot be mixed or used together. When incompatible pesticides are mixed together, one or more may come out of the mixture. The effectiveness of one or more may be reduced. Injury to plants or animals may result.
Ingestion or Oral exposure	The intake of a substance by mouth (accidental ingestion, suicide attempts, or eating of contaminated food).
Inhalation exposure	The breathing in of airborne particles of a substance. Fine powders, spray droplets, vapours, or gases may be inhaled into the lungs.
Injury threshold	The level at which pest numbers are high enough to cause unacceptable injury or damage.
Insecticide	A pesticide used to kill or repel insects.
Insect	An organism with a hard exterior skeleton. Adult insects have a body divided into three segments (head, thorax and abdomen), three pairs of legs, and 1-2 pairs of wings (if present) attached to the thorax..

Instar	Each stage between moults of an immature insect as it grows.
Integrated pest management (IPM)	A decision-making process based on preventing pest problems. All available information and treatment methods are considered in order to act in an economically and environmentally sound manner.
IPM	see: Integrated Pest Management.
Larva	(Plural: larvae) The immature, second life stage of an insect. A larva hatches from an egg. Most are wormlike, such as caterpillars, maggots and grubs. Many pest insects cause the most damage in the larval stage, particularly those that eat plants.
LC_{50}: (lethal concentration 50%)	The concentration (in parts per million) of a pesticide in the air or water needed to kill half of the test animals or organisms exposed to it.
LD_{50}: (lethal dose 50%)	The amount of substance (in mg of pesticide/kg of body weight) that will kill half of the test animals exposed to the pesticide.
Leaching	The movement of chemicals through soil in water.
Maggot	The larval stage of flies and midges (Order Diptera). Maggots are legless.

Material Safety Data Sheet (MSDS)	Legislated under Workplace Hazardous Materials Information System (WHMIS). Provides information on health hazards, personal safety, and environmental protection for hazardous products. MSDS is not a legal document. It may not be available for all pesticides.
Maximum Residue Limit (MRL)	The maximum amount of pesticide residue that may safely reside in food products.
Metamorphosis	The complete change in shape and form of an insect during development from the immature to the adult stage.
Microbe	Tiny organisms (e.g. bacteria, fungi, and viruses) usually unable to be seen without a microscope.
Microbial insecticide	A biological pesticide that contains microorganisms, such as bacteria, viruses or fungi. These attack insects.
Micro-organism	A living organism, including a fungus, virus, and bacterium that can only be seen with a microscope.
Mite	Minute animal having eight legs in the adult stage. Some species are harmful. Some are beneficial. Closely related to spiders.
Miticide	A pesticide used to kill or repel mites.

Mode of action	The way a pesticide works to kill pests. For example, a poison that works on contact or as a stomach poison.
Molluscicide	A pesticide used to control snails and slugs.
Mollusc	A soft-bodied animal, which usually, but not always lives in water and has a shell, such as a clam, oyster or mussel. Some (snails and slugs) live on land, and move by means of a single "foot." Slugs are molluscs with no shells.
Moult	The process of shedding a skin or, in the case of insects, shedding the exoskeleton, to allow continued growth.
Nematode	One of a group of elongated, cylindrical worms, also called a threadworm or an eel-worm. Some species attack roots or leaves of plants. Others are parasites on animals or insects.
Non-persistent pesticide	A pesticide that breaks down soon after application into non-toxic compounds. It is only effective for a few days before it breaks down.
Non-selective herbicide	A herbicide that affects all plants that it contacts.
Nozzle output	The volume of spray produced by each nozzle per minute.
Nozzle spacing	The spacing between two or more nozzles.

Ocular exposure	The intake of a substance through the eyes. Eyes absorb pesticides easily through their many blood vessels.
Parasite	An organism that lives in or on the body of another and obtains nourishment from it.
Particle drift	Pesticide droplets or particles that move away from the treatment site and remain in the air after application.
Perennial	A plant that has a life span of more than two years. The top may die back in winter or during a drought. The roots or rhizomes persist to resume growing when conditions improve.
Persistence	The ability of a pesticide to remain in the environment for a long time without changing.
Persistent pesticide	A pesticide that takes a long time to degrade into simple compounds after being released into the environment; particularly those applied to soil that last more that one growing season (see: Residual pesticide).
Personal protective equipment or clothing (PPE)	Clothes, materials, or devices that offer protection from pesticides. These are important when handling or applying toxic pesticides (e.g. gloves, apron, boots, coveralls, hat, respirator, splash apron, goggles, and face shield).

Pest	Any harmful, noxious, or troubling organism that may cause an undesirable effect. Pests include: fungi, bacteria, viruses, weeds, insects, mites, rodents, and birds. Wildlife (raccoons, wolves, deer) may be considered pests.
Pesticide	Designed to kill, control, repel, attract, or manage pests. Any product that claims to do this is a pesticide under the Pest Control Product Act (P.C.P. Act) and Regulations. Chemicals that regulate plant growth, defoliants, and plant desiccants are also considered to be pesticides.
Pesticide label	As defined in the P.C.P. Act: "Any legend, word, mark, symbol, or design applied or attached to, included in, belonging to, or accompanying any control product." A pesticide label is a legal document.
Pesticide rate	The amount of pesticide applied per unit of area (or per plant) during a given time. It is stated on the pesticide label (mL/ha, g/ha or ml/L).
Pesticide residue	A deposit that remains in or on a crop or other substance after the application of a pesticide.
Pesticide resistance	Occurs when a pest population is exposed to the same, or a similar, pesticide for a number of times. A few individuals may have a genetic difference that enables them to survive a pesticide application.

	These reproduce and generate a new population that is resistant to the pesticide.
Phenology	The relation between climate and biological events (e.g. flowering or leafing out in plants, or emergence of an insect pest).
Pheromone	A chemical produced by insects to communicate to other insects. These are used as signals, alarms, or to attract mates.
Photo degradation	The breakdown of pesticides by sunlight into simpler compounds.
Phytotoxic	Poisonous or injurious to plants.
Post-emergence	The stage in a plant life cycle after seedlings emerge from the soil.
Power hose sprayer	A boomless sprayer that uses a power-driven pump to provide pressure to the hose (e.g. spray gun).
Predator	An organism that preys on another. A predator kills its prey to feed on it.
Pre-emergence	The stage in a plant life cycle before seedlings emerge from the soil.
Pupa	(Plural: pupae) The life stage between the larva and adult in insects that undergoes complete metamorphosis. It does not feed. A pupa is usually inactive.

Pyrethrins	The group of active ingredients found in chrysanthemum flowers. They are unstable when exposed to sunlight.
Pyrethroids	A synthetic compound made to resemble pyrethrins in chemical structure. They are more toxic to insects and more stable in sunlight than pyrethrins. They may last for a week or longer when applied.
Quantitative measurement	Information in terms of numbers, fractions or other quantities.
Random sampling	Collecting samples based on chance. This ensures that samples collected are likely to give a good, unbiased estimate of the situation.
Ready-to-use pesticide	Pre-mixed or pre-diluted pesticides. It may be used straight out of the container.
Recommended sprayer application rate	The amount of spray mix applied per unit of area (per unit of time) as stated on a pesticide label (e.g. L/ha).
Repellent	A compound that drives pests away from a treated object, area or individual.
Residual effect	The length of time a pesticide remains effective after it is applied.
Residual pesticide	A pesticide that continues to kill or repel for some time (e.g., weeks or months) after application.
Residue	An amount of pesticide that remains on or in the crop (or other substance).

Respiration	Breathing. This is also the physical and chemical process by which an organism supplies cells and tissues with oxygen. It is the use of oxygen to produce energy to sustain life.
Respirator	A device to protect the wearer from breathing hazardous air.
Restricted class pesticide	A pesticide with safety concerns for humans, plants, animals, or the environment. They often have special detailed labels to show how to handle them safely.
Rhizome	An underground plant stem that sends shoots above the soil surface and roots below it.
Risk	The chance that someone or something will be harmed by the toxicity of a pesticide and one's exposure to it.
Rodenticide	A pesticide used to control rodents (rats or mice).
Runoff	Movement of water down a sloping surface.
Seed bank	Seeds (mostly weed seeds) that have built up over the years in the top layer of soil.
Selective pesticide	A material that destroys or repels a certain group(s) of organisms. For example, a selective herbicide may kill broadleaf weeds in a lawn without harming the grass.

Selectivity	The tendency of a pesticide to harm (or not harm) a broad range of organisms.
Semiochemical	A "message chemical" that is used by insects as a signal. Some are produced by plants to attract or repel insects. Others are produced by insects to cause alarm or attract mates.
Spot treatment	A pesticide application to a small area (e.g., individual plants).
Spray drift	The airborne movement of spray or particles from a treatment site during the application of a pesticide.
Spray width	The actual width of spray.
Spreader	A material added to a pesticide formulation that allows the pesticide to form a uniform coating over a treated surface.
Sterilant	A non-selective chemical that kills all organisms. These stop the germination of seeds and the growth of plants, often for a long time after application.
Sticker	A material added to a pesticide formulation that allows the pesticide to stay on the treated surface.
Stolon	A horizontal branch or runner from the base of a plant. It produces new plants.

Strainer	A device for screening out solids while liquids pass through.
Surface runoff	Movement of pesticide from the spray area over the soil surface.
Surfactant	A substance used in a pesticide to make mixing easier. It reduces surface tension of a liquid to spread it out over a surface (rather than "beading-up" in small droplets). This allows it to adhere to the surface being treated. Examples include: emulsifiers, soaps, wetting agents, detergents and spreader-stickers.
Systemic pesticide	A pesticide that is absorbed into the plant and moves through the plant tissues; e.g., a systemic insecticide may move through a plant to kill sucking insects.
Tank mix	The blending of pesticides in the same spray tank. Pesticides should not be "tank mixed" unless approved on the label of each pesticide to be mixed.
Thatch	A layer of dead plant material on lawns at the base of grass leaves. A certain amount helps to protect roots from heat, cold and drought. A thick layer smothers roots and blocks fertilizer and water from reaching the soil.
Tiller	A secondary shoot of a grass plant.
Toxic	Able to poison a living organism; poisonous.

Toxicity	The harm a particular pesticide may cause to an organism. Toxic effects may vary with sex, health, age, weight, or prior exposure to other pesticides.
Travel speed	The speed that application equipment is driven or walked (with a hand held sprayer).
Vapour	Gas produced by a substance that is solid or liquid at room temperature. A gas or vapour is not an aerosol or mist (composed of tiny droplets of liquid suspended in air).
Vapour drift	Movement of vapours (fumigant or volatile pesticide) from the area of application. It usually occurs after an application.
Virus	A protein body that may infect and multiply within a host plant or animal. It often causes disease.
Volume of spray mix	The total volume (litres) of pesticide(s), diluent, (e.g. water), and other additives such as adjuvants. This is prepared in the spray tank for application.
Wettable powder	A powder with a wetting agent. This allows it to be readily mixed into water to form a suspension.
WHMIS	Workplace Hazardous Materials Information System.