

Glossary

Backflow: The flow of a liquid by siphon pressure or gravity back to its source.

Backflow Prevention Device: A mechanical device that prevents the return flow of water and any dissolved chemicals back into the water supply.

Beneficial Organisms: Organisms used to control a pest population. These include:

Competitors: Individuals that need to utilize the same limiting resource. Competition generally has negative effects on one or both competitors.

Microbials: Microscopic organisms that are predators of greenhouse pests. These may include mites, fungi, nematodes and other organisms that feed on or disrupt pests.

Parasites: Small organisms that live and feed in or on a larger host organism.

Parasitoids: Parasitic insects that live in or on, and eventually kill, a larger host insect.

Pathogens: Microorganisms that live and feed (parasitically) on or in a larger host organism, and thereby cause injury to the host.

Predators: Animal that feed upon other animals.

Biological Control: The use of beneficial organisms to manage pest populations.

Composting: Managed aerobic decay of organic matter to produce a humus-like product that can be used as a plant growth medium or soil amendment.

Cross-connection: Interconnection between a potable water supply and a water supply intended for plant care which may contain fertilizer or other agricultural chemicals.

Cultural Control: Manipulation of growth factors such as genetics, the environment, or production timing to achieve an objective such as disease, pest, or growth control.

Curbed Concrete Pad: A containment method using concrete flooring constructed to restrict the movement of spilled materials within raised edges.

Decontamination/Clean Area: Designated area to don or store clean PPE, and perform personal decontamination (i.e., shower or sink).

Disinfectant: An antimicrobial intended to destroy or irreversibly inactivate infectious or other undesirable bacteria, pathogenic fungi, or viruses on surfaces or inanimate objects.

Electrical Conductivity (EC): A property of a nutrient solution used as a measure of nutrient concentration.

Eyewash: A piece of safety equipment that provides for quick flushing of the eyes; provided within a work area where the eyes of any person may be exposed to corrosive materials (such as some pesticides); installed and maintained according to regulations; for immediate emergency use.

Environmentally Persistent: A chemical compound that does not rapidly break down but remains in the environment for a prolonged period.

Evaporative Cooling: Evaporation of water by an air stream to reduce the air temperature.

Fertigation: Irrigation of plants with water containing fertilizer.

Fire Suppression System: A system designed to respond to smoke, heat, or spark with water or a chemical fire retardant.

Fumigants: A pesticide in the form of a poisonous gas that will kill destructive microorganisms, animals, or plants when absorbed or inhaled.

Glazing: Light-transmitting materials used to cover a greenhouse.

Growing mix: A material formulated to provide structural support, water, nutrients and air for roots to grow; a soil substitute.

Growth Regulator: Synthetic or naturally occurring plant substances that are effective in minute amounts to regulate or modify plant growth.

Hazard Class: A classification system designating the toxicity level of pesticides to humans, including: Danger/Poison, Danger, Warning, Caution – Slightly Toxic, Caution – Relatively Non-toxic. The classification is directly related to the suggested precautions for handling and use.

Herbicide: A pesticide formulated to inhibit growth of or kill plants. Non-selective herbicides work on many different types of plants, while selective herbicides are specific to a selected group of plant species.

Injector: Device that injects fertilizer stock solution into the irrigation line at a known dilution ratio.

Insect Growth Regulators (IGRs): Hormones or hormone-like substances that affect the ability of insects to grow and mature normally.

Integrated Pest Management (IPM): A pest control strategy based on knowledge of the crop and its pests using multiple management techniques, including cultural, biological, and chemical control.

Inventory Control: Detailed monitoring and recording of product identifications and quantities to ensure proper planning, use, distribution and disposal.

LC₅₀: “Lethal Concentration” of a substance suspended in the air or dispersed in water.

LD₅₀: “Lethal Dose” of a substance that will kill 50% of a population of organisms; this is generally expressed as milligrams of toxin per kilogram of body weight.

Leaching: Applying excess water or nutrient solution to wash chemicals and excess nutrients out of the root zone.

Material Safety Data Sheet (MSDS): an OSHA mandated collection of information provided by the manufacturer for the proper storage and use of a chemical, including toxicity and safety information.

Mode of Action: The mechanism by which a pesticide kills or controls the target organism (i.e., systemic, contact, etc.).

Natural Enemies: see **Beneficial Organisms**

Non-compost: Material not subject to aerobic decay, or excluded from composting for phytosanitary reasons, including: plastic coated paper; plastic stakes, labels, pots, bag, twist ties, gloves or any plastic material; large woody material; rock wool or manufactured soil media substitutes; transgenic, diseased or insect infested material unless it has been adequately autoclaved; wooden labels or stakes.

Nutrient: A mineral used by plants for growth or development.

Nutrient Analysis: Testing of growing mixes, water or plant material to determine actual nutrient content, pH, and/or electrical conductivity (saltiness).

Nutrient Deficiency: The lack of one or more mineral nutrients, which prevents optimum growth.

NY State Certified Pesticide Applicator: A commercial or private pesticide applicator who is certified by the NYS DEC to use, supervise the use of, or train another individual in the use of any pesticide in any category of use covered by the individual's certification. Applicators at Cornell must have commercial certification.

NY State DEC: Department of Environmental Conservation; the Pesticide Management Program within NYS DEC is the lead New York agency responsible for regulation of pesticides, compliance assistance and public outreach activities to ensure enforcement of State pesticide laws.

NY State Registered Pesticide Product: A DEC approved substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any insects, rodents, fungi, weeds, or other forms of plant or animal life or viruses (except viruses on or in living humans / or other animals); and any substance or mixture of substances intended as a plant regulator, defoliant (causes plants to drop leaves) or desiccant (promotes death of plants by drying).

Passive Temperature Control: Using non-motorized shutters, vents, shading and other systems to moderate indoor temperature without benefit of mechanical coolers or heaters; indoor temperature patterns tend to follow outdoor temperature trends.

Passive Ventilation: Non-automated ventilation such as opened windows and shutters that allow airflow in and out of the greenhouse without relying on motorized fans and vents.

Personal Protective Equipment (PPE): Clothing and accessories such as goggles and rubber boots worn for protection from exposure to or injury from chemicals during handling activities.

Personal Protective Equipment Area: An area designated for storage and donning of personal protective equipment.

Pest: Any organism causing an undesired effect on the health, growth or development of a plant, including weeds, rodents, insects and pathogens.

Pest Exclusion: The use of exclusion methods, such as caulking crevices or screening air vents, to limit or prevent pest access.

Pest Reservoir: An area or host population that supports pests.

Pesticide: Any substance or mixture of substances intended to prevent, destroy, repel, or mitigate any pest, or intended for use as a plant regulator, defoliant, or desiccant.

Pesticide Formulation: A classification of the physical form of pesticide products, including but not limited to: EC = emulsifiable concentrate, F = flowable microencapsulated, FP = flowable powder, G = granular, L = liquid, ME = microencapsulated, SP = soluble powder, W = wettable powder.

pH: The measure of the acidity or basicity of a solution.

Precipitate: Solids that have separated out of solution.

Proportioner: A device that injects fertilizer stock solution into the irrigation line at a known dilution ratio.

Residual: Leaving a residue that remains effective for an extended period.

Rogueing: The prompt removal, by bagging and carrying out of the greenhouse, of infested or infected plants.

Sanitizer: An antimicrobial intended to reduce the number of living bacteria or viable virus particles on inanimate surfaces, in water, or in air.

Scouting: The systematic checking of plants for insect and disease problems. Scouting records are kept and used in making predictions and decisions concerning pest and disease control.

Secondary Containment: A container or structural barrier placed under or around a vessel to contain the contents of the vessel in the event of an accidental spill or leak. The secondary containment should have at least 110% of the primary vessel's capacity.

Selectivity: Refers to the range of organisms or life stages of organisms affected by a pesticide; a selective pesticide is toxic to a narrow range of pests species or life stages.

Shading: The use of fabric or coatings applied to glazing to reduce the indoor light level or solar heat gain in a greenhouse.

Worker Protection Standard: A federal regulation administered by the US Environmental Protection Agency (EPA) intended to reduce the risk of pesticide poisonings and injuries among agricultural workers who are exposed to pesticide residues on plants. The WPS requires greenhouse owners to assure that workers receive basic pesticide safety information before they work with treated plants.