

# Horticultural Glossary

**Aeration** Water and air penetration can be increased in a compacted soil by slicing or removing cores from the soil or sod.

**Amendment** Refers to the addition of a material to improve the soil (tilth) for plant growth. The material is dug into the existing soil to improve aeration, drainage, fertility, pH, and water retention. Organic matter (O.M.), compost, manure, alfalfa pellets, peatmoss and horticultural lime are the most commonly used soil amending products.

**Annual** A plant that completes its whole life span from germination, flowering, to producing seed, then dies in one year (growing season).

**Aphid** A small tear-drop shaped soft bodied insect that sucks the sap from the tender growing tips, damaging them and transmitting plant virus diseases. Aphids are members of the family Aphididae, which is in the order Hemiptera.

**Bacteria** A single celled, organism that does not have chlorophyll. Compost is created by breakdown of Organic matter (O.M.) by bacteria and fungi. Many plants have symbiotic (mutualistic) relationships with Nitrogen fixing bacteria: they supply Nitrogen to the plants in return for sugar created during photosynthesis. Some bacteria cause disease: these are referred to as pathogens.

**Balanced Fertilizer** A fertilizer that has equal portions of Nitrogen, Phosphate and Potassium.

**Biological Control** The use of an organism to kill a pest organism. For example nematodes are used to kill grubs, or *Bacillus thuringiensis* (B.t.) to kill certain caterpillar species.

**Botanical Insecticide** An organic pesticide derived from another plant, such as pyrethrum or rotenone.

**Casting** The soil-like excretions created by earthworms digesting soil, microbes and organic matter. They are a very nutrient rich material for plants.

**Chlorosis** A plant that is suffering from disease or environmental stress such as poor drainage or mineral shortages may exhibit a yellowing of the veins or the flat blade part of the leaf. This loss of green colour is due to chlorophyll either being destroyed or not being made. The different chlorotic patterns are symptomatic of the different problems.

**Clay** Clay is a mineral soil separate, produced through chemical weathering of rock. It is less than 0.002mm in size. Clay refers to the soil texture class containing >40% clay, <45% sand and <40% silt. The clay soil texture class in Ottawa is highly cohesive, plastic and elastic making it difficult to work with, but it holds nutrients extremely well making it a fertile soil once it is loosened with organic matter.

**Compost** A soil amender or mulch material produced by the decomposition of organic matter in particular garden waste and kitchen scraps.

**Cultural Control** Controlling disease, insect or weed problems by changing the cultural practices such as watering, fertilizing, topdressing, etc.

**Disease** Diseases may be caused by microorganisms or by environmental factors such as a lack of available iron in the soil or excess water.

**Dormancy** Many plants have a naturally occurring period when the growth rate slows or stops, (leaves drop and the upper portion dies back). Kentucky Blue grass goes dormant during extended hot, dry periods.

**Drainage** This refers to the rate water moves freely through a soil, a compacted soil has poor drainage whereas a sandy soil (can't be compacted) has rapid drainage.

**Fertility** The soils ability to supply enough nutrients, water and air for healthy plant growth. A fertile soil will have at least 5% organic matter and humus in it, and be crumbly.

**Germination** The sprouting of a seed, spore or pollen grain. The seed needs moisture, warmth, air, and may need exposure to light or be buried under the soil, to germinate.

**Groundcover** These are low growing plants that form a dense mat over the soil, protecting it from erosion. Many are decorative and are used to replace lawns where a play surface is not required.

**Grub** The pale coma shaped larvae of many different beetle species found feeding on grass roots.

**Herbicide** A pesticide that kills plants. Some are selective such as 2,4-D, which is used to kill broadleaf (dicot) weeds in turf areas and others are used to kill all the plants in a given area.

**Integrated Pest Management (IPM)** A system of controlling insect and diseases by a thorough understanding of the life cycle of the pests and the plants. Chemical controls are used as a last resort.

**LD<sub>50</sub>** This indicates the toxicity of a substance, the higher the number the lower the toxicity. It is an abbreviation for "lethal dose that will kill 50% of a population it was tested on". It is measured in mg/kg of body weight.

**Microorganism** Organisms too small to see without a microscope, most are beneficial bacteria, fungi, protzoa and many others. They keep the garden ecosystem healthy by decomposing organic matter and many assist the uptake of water and nutrients by plants.

**Monoculture** The maintenance of large areas with only one species of plant, for example corn and wheat fields, or lawns. Monoculture areas are susceptible to insect and disease problems.

**Mulch** A mulch is any material, either organic or inorganic, spread over the soil to protect it from temperature changes, water loss and weeds.

**Nematodes** These are Unsegmented, roundworms that live in the soil. Some species are beneficial attacking grubs and some attack plants.

**Organic** 1) A chemical compound with carbon atoms in it. 2) A fertilizer or pesticide derived from a naturally occurring material, plant or animal. The organic pesticides also have LD<sub>50</sub> numbers.

**Pathogen** A disease causing organism.

**Peat Moss** Partially decomposed bog plants such as sphagnum peat, that are harvested, dried, and sold as a soil amender.

**Perennial** This is a plant that has a life span greater than two years. Normally this term is used for herbaceous plants used in the flower border.

**Pesticide** A substance used to control or eradicate an undesirable organism either a weed or disease.

**Rhizome** An underground stem that grows horizontally. It may be fleshy like a hybrid Iris rhizome or thin like a quack grass rhizome.

**Scale** A sucking insect pest that is pressed against a stem and has a domed shell covering it. There are many species affecting many different plants.

**Sidedressing** Refers to the process of applying a band of fertilizer on either side of a plant.

**Solarization** Weeds and pathogens can be killed if an amended soil is covered with clear plastic and left exposed to sunlight for approximately a month.

**Stolon** A horizontal above ground stem from which new plants grow. White clover has spreads vegetatively by stolons.

**Stomata** Plants allow gases and water vapor to enter and exit through structures on the leaf surface, which can open and close.

**Stress** Growing conditions that are harmful to the plant are considered stressful, these include too much or too little water, excess heat or cold, insufficient or excess sunlight, and improper soil fertility.

**Thatch** This refers to a layer of both dead and living stems, clippings and roots that accumulates above the soil around the base of the grass plants in a turf area.

**Tillers** New grass plants growing from the crown of a mature grass plant.

**Topsoil** The upper layer of soil, containing organic matter and nutrients.

**Transpiration** The controlled loss of water by plants, through the stomata.

**Xeriscaping** Landscaping with drought resistant plants.