

Glossary

absorb: to draw or take in: Rootlets absorb water and nutrients.

AC (alternating current): an electric current that reverses its direction at regularly occurring intervals: Homes have AC.

acid: a sour substance: An acid or sour soil has a low pH.

active: a hydroponic system that actively moves the nutrient solution.

adobe: heavy clay soil that drains slowly: Adobe is not suitable for container gardening.

aeration: to supply soil and roots with air or oxygen.

adventitious roots: roots that grow from unusual spots, as on the (stem) pericycle or endodermis of an older root. Auxin level may influence this type of root growth.

aeroponics: growing plants by misting roots suspended in air.

aggregate: a substrate that is of nearly uniform size and used for the inert hydroponic medium.

agronomically: having to do with the economics of agriculture.

alkaline: refers to soil, or any substance, with a pH over 7.

alkylation: a process in which an alkyl group is substituted or added to a compound.

amendments: can be either organic or mineral based: Amendments change the texture of a growing medium.

ampere (amp): the unit used to measure the strength of an electric current: A 20-ampere circuit is overloaded when drawing more than 16 amps.

annual: a plant that normally completes its entire life cycle in one year or less.

arc tube: container for luminous gases; houses the arc in an HID lamp.

asexual propagation: reproducing using non-sexual means such as taking cuttings from a parent plant: will produce exact genetic replicas of the parent plant.

auxin: classification of plant hormones: Auxins are responsible for foliage and root elongation.

bacteria: very small, one-celled plants that have no chlorophyll.

ballast: a stabilizing unit that regulates the flow of electricity and starts an HID lamp: A ballast consists of a transformer and a capacitor.

beneficial insect: a good insect that eats bad, plant-munching insects.

biodegradable: to decompose through natural bacterial action. Substances made of organic matter can be broken down naturally.

biosynthesis: the production of a chemical compound by a plant.

bleach: household laundry bleach is used in a mild water solution to sterilize indoor gardens and as soil fungicide.

blood meal: high-nitrogen organic fertilizer made from dried blood: Dogs love blood meal!

bloom: to yield flowers blossom booster: fertilizer high in phosphorus and potassium that increases flower yield and weight.

bonsai: a very short or dwarfed plant.

breaker box: electrical circuit box having on/off switches rather than fuses: The main breaker box is also called a "service panel."

breed: to sexually propagate plants under controlled circumstances.

bud: 1. a small, undeveloped stem or shoot.

bud blight: a withering condition that attacks flower buds.

buffer: a substance that reduces the shock and cushions against fluctuations: Many fertilizers contain buffer agents.

bulb: outer glass envelope or jacket that protects the arc tube of an HID lamp callus: tissue made of undifferentiated cells produced by rooting hormones on plant cuttings.

cambium: layer of cells which divides and differentiates into xylem and phloem and is responsible for growth.

carbohydrate: neutral compound of carbon, hydrogen, and oxygen, mostly formed by green plants: Sugar, starch, and cellulose are carbohydrates.

carbon dioxide (CO₂): a colorless, odorless, tasteless gas in the air; necessary for plant life.

caustic: a substance that destroys, kills, or eats away by chemical activity cell: the base struc-

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tural unit of plants: cells contain a nucleus, membrane, and chloroplasts.

cellulose: a complex carbohydrate that stiffens a plant: Outdoor stems contain more stiff.

cellulose than plants grown indoors.

centigrade: a scale for measuring temperature where 100 degrees is the boiling point of water, and 0 degrees is the freezing point of water.

cfm: cubic feet per minute; measures air velocity. Ventilation or extraction fans are measured in the cfm of air they can move.

chelate: combining nutrients in an atomic ring that is easy for plant to absorb.

chlorophyll: the green photosynthetic matter of plants: Chlorophyll is found in the chloroplasts of a cell and is necessary to photosynthesis.

chlorosis: the condition of a sick plant with yellowing leaves due to inadequate formation of chlorophyll: Chlorosis is caused by a nutrient deficiency, often iron or imbalanced pH.

chromosomes: microscopically small, dark staining bodies visible in the nucleus of a cell at the time of nuclear cell division; the number in any species is usually constant. Chromosomes contain the genetic material of a species.

circuit: a circular route travelled by electricity from a power source, through an outlet, and back to ground.

clay: soil made of very fine organic and mineral particles: Clay drains slowly and is not suitable for container gardening.

climate: the average condition of the weather in an indoor garden or outdoors.

cutting: 1. a rooted cutting of a plant 2. asexual propagation.

CO₂ enrichment: used to augment indoor garden or greenhouse atmosphere to speed growth.

cold: for warm-season annual flowers and vegetables, air temperatures below 50°F (10°C)
cold frame: an unheated outdoor structure usually clad in glass or clear plastic, used to protect and acclimatize seedlings and plants.

color spectrum: the band of colors (measured in nm) emitted by a light source.

color tracer: a coloring agent that is added to

many commercial fertilizers so the horticulturist knows there is fertilizer in the solution: Peters has a blue color tracer.

compaction: soil condition that results from tightly packed soil which limits aeration and root penetration.

companion planting: planting garlic, marigolds, etc., along with garden plants to discourage pests.

compost: mixture of decayed organic matter, high in nutrients: Compost must be well-rotted before use. When too young, decomposition uses nitrogen; after sufficient decomposition, compost releases nitrogen.

core: the transformer in the ballast is often referred to as a core.

cotyledon: seed leaves, first leaves that appear on a plant.

critical daylength: maximum daylength which will bring about flowering in warm-season annuals.

cross-pollination: fertilizing a plant with pollen from an unrelated individual of the same species.

crystal: fertilizers often come in soluble crystals.

cubic foot: volume measurement in feet: width × length × height = cubic feet.

cultivar: a contraction of "cultivated variety" a variety of plant that has been intentionally created or selected; not naturally occurring.

cure: 1. slow plant drying process 2. to make a sick plant healthy.

cuticle: thin layer of plant wax (cutin) on the surface of the aboveground parts of plants.

cutting: 1. growing-tip cut from a parent plant for asexual propagation 2. clone 3. slip.

cytokinins: plant hormones that promote cell division and growth and delay the aging of leaves.

damping-off: fungus disease that attacks young seedlings and cuttings causing stem to rot at base: Overwatering is the main cause of damping-off.

DC (direct current): a continuous electric current that only flows in one direction.

decompose: to rot or decay, etc., through organic chemical change.

dehumidify: to remove moisture from air

dehydrate: to remove water from foliage.

deplete: to exhaust soil of nutrients, making it infertile: Once a soil is used to grow a container crop, it is depleted.

desiccate: to cause to dry up: Insecticidal soap desiccates its victims.

detergent: liquid soap concentrate used: 1. as a wetting agent for sprays and water 2. pesticide, Note: detergent must be totally organic to be safe for plants.

diapause: A period of plant dormancy during which growth or development is suspended or diminished

dioecy: a condition where separate sexes occur on separate individuals; each plant displays a single gender

dioecious: a population consisting of gynoeceous and roecious plants.

disease: sickness of any kind.

dose: amount of fertilizer, insecticide, etc., given to a plant, usually in a water solution.

double potting: a two-pot transplanting technique that minimizes root disturbance.

drainage: to empty soil of excess water. Good drainage: water passes through soil, evenly promoting plant growth. Bad drainage: drainage water stands in soil, actually drowning roots.

drip (irrigation) system: efficient watering system that employs a main hose with small water emitters (tiny holes) which meter out water one drop at a time at regular, frequent intervals.

drip line: a line around a plant directly under its outermost branch tips: Roots seldom grow beyond the drip line.

dry ice: cold, white, solid substance formed when CO₂ is compressed and cooled: Dry ice changes into CO₂ gas at room temperatures.

dry soil pocket: small portion of soil that remains dry after watering: Dry soil pockets may be remedied by adding a wetting agent (soap) to water and/or waiting 15 minutes between waterings.

dry well: drain hole filled with rocks, to receive drainage water.

electrode: a solid electric conductor used to establish electrical arc between contacts at either end of an HID lamp.

elongate: to grow in length: embolism: bubble of air in the transpiration stream of a cutting; blocks uptake of water and nutrients.

emit: to give off, send out (as light or sound, etc.).

embryo: a young plant, developing within the seed.

Encarsia formosa: a parasitic wasp that preys on whiteflies.

envelope: outer protective bulb or jacket of a lamp.

Epsom salts: hydrated magnesium sulfate in the form of white crystalline salt: Epsom salts add magnesium to soil.

equinox: when sun crosses the equator and day and night are each 12 hours long: The equinox happens twice a year.

essential oils: volatile oils that give plants their characteristic odor or flavor; contained in the secreted resins of plants.

ethane methyl sulfonate: a mutagenic chemical that causes changes at the DNA level; induces genetic mutations.

etiolation: growth of a plant in total darkness to increase the chances of root initiation F1: first filial generation, the off spring of two P1 (parent) plants.

F1 hybrid: heterozygous first filial generation F2: second filial generation, resulting from a cross between two F1 plants.

fan leaves: large, fan-like leaves female: pistillate, ovule, seed producing.

fertilize: 1. to apply fertilizer (nutrients) to roots and foliage 2. to impregnate (unite) male pollen with female plant ovary.

fertilizer burn: overfertilization; first, leaf tips burn (turn brown), then leaves curl flat: a shallow container used to start seedlings or cuttings.

flower: blossom, a mass of calyxes on a stem, top, or bud.

foliage: the leaves, or more generally, the green part of a plant.

foliar feed: misting fertilizer solution, which is absorbed by the foliage.

foot-candle (fc): one fc is equal to the amount of light that falls on one square foot of surface located one foot away from one candle.

fritted: to fuse or embed nutrients with a glass

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compound: Fritted Trace Elements (FTE) are long lasting and do not easily leach out of substrate.

fungicide: product that destroys or inhibits fungus.

fungistat: product that inhibits fungus.

fungus: a lower plant (lacking chlorophyll) that may attack green plants: Mold, rust, mildew, mushrooms, and bacteria are fungi.

fuse: an electrical safety device made of a metal that melts and interrupts the circuit when overloaded.

fuse box: electrical circuit box containing circuits controlled by fuses.

gene: part of a chromosome that influences the development of a plant: Genes are inherited through sexual propagation.

gene pool: collection of possible gene combinations in an available population.

genetic makeup: the genes inherited from parent plants: Genetic makeup is the most important factor dictating vigor.

gibberellin: a class of plant growth hormone used to promote stem elongation: Gibberellic acid is a form of gibberellin.

gpm: gallons per minute green lacewing: insect that preys on aphids, thrips, whiteflies, etc., and their larva and off spring.

greenhouse: a heated structure with transparent/translucent walls and ceiling which offer some environmental control to promote plant growth.

guano: dung from birds, high in organic nutrients: Seabird guano is noted for being high in nitrogen, and bat guano is high in phosphorus.

gynoecious: an individual plant having all pistillate flowers: in reference to a population, all-female.

halide: binary chemical compound of a halogen(s) with an electropositive element(s).

halogen: any of the non-metallic elements fluorine, chlorine, bromine, iodine, and astatine existing in a free state: Halogens are enclosed within the arc tube of a metal halide lamp.

hardening-off: gradual adaptation of indoor or greenhouse plants to an outside environment.

hermaphrodite: an individual having flowers of both sexes on the same plant. Hermaphrodites are more correctly referred to as "intersex."

Hertz (Hz): a unit of a frequency that cycles one time each second: A home with a 60 hertz AC current cycles 60 times per second.

HID: High Intensity Discharge lamp: This is the type of lamp used in many indoor indoor gardens.

honeydew: a sticky honey-like substance secreted onto foliage by aphids, scale, and mealy bugs.

hood: the reflective cover of a lamp.

HOR: the abbreviation stamped on some HID bulbs meaning they may be burned in a horizontal position.

hormone: chemical substance that controls the growth and development of a plant: Root inducing hormones help cuttings root.

horticulture: the science and art of cultivating plants.

hose bib: water outlet usually found outdoors that contains an on/off valve.

hostile environment: environment that is unfriendly and inhospitable to pests and diseases.

humidity, relative: ratio between the amount of moisture in the air and the greatest amount of moisture the air could hold at the same temperature.

humus: dark, fertile, partially decomposed plant or animal matter: Humus forms the organic portion of the soil.

hybrid: an off spring from two plants of different breeds, variety, or genetic make-up.

hybrid vigor: greater strength and health or faster rate of growth in the off spring resulting from the cross-breeding of two gene pools.

hybridizing: see cross-pollination.

hydrogen: light, colorless, odorless, highly flammable gas: Hydrogen combines with oxygen to form water.

hydroponics: growing plants in nutrient solutions without soil, usually in an inert soilless mix.

hygrometer: instrument for measuring relative humidity in the atmosphere: A hygrometer will save time, frustration, and money.