

# Cannabis Cultivation Words And Definitions

## CANNABIS CULTIVATION WORDS AND DEFINITIONS:

**Abiotic stress:** Non-living environmental factors such as frost, drought, excessive heat, etc. that can have harmful effects on plants.

**Abscisic acid:** mediates stress tolerance responses in higher plants, is a key signal compound that regulates stomatal aperture and, in concert with other plant signaling compounds, is implicated in mediating responses to pathogens and wounding.

In seeds, ABA promotes seed development, embryo maturation, synthesis of storage products (proteins and lipids), desiccation tolerance, is involved in maintenance of dormancy (inhibition of germination), and apoptosis. As well, ABA affects plant architecture, including root growth and morphology, and root-to-shoot ratios.

**Aeroponics:** is the growing of plants in a container in which the roots are suspended in a nutrient mist rather than in a solution. The most popular container for aeroponics is an enclosed A-frame constructed of Styrofoam boards. The plants are placed in holes along the sloped sides of the frame. The nutrient mist is delivered to the roots by a vaporizer or by special attachments available with drip irrigation kits. The mist clings to the roots. Any excess runs down the inside of the frame, is collected at the bottom, and is recycled back to the nutrient reservoir.

**Alternating leaf:** as the plant grows, in the beginning, every leaf(that is not damaged) will have another leaf growing from exactly 180 degrees on around the stem. they grow in pairs. when the plants mature, the leaves will grow one at a time. that is a leaf will pop out on one side, then, up the stem/ branch, another will grow. i.e. alternating.

**Auxins:** are plant hormones governing many biological processes in higher plants such as cell enlargement and division, differentiation of vascular tissue, apical dominance, root initiation and signaling.

**Ballast:** Provides current and power to a high intensity light bulb.

**Blood Meal:** This organic fertilizer is very high in nitrogen and is very soluble in water (unlike most other dry organic fertilizers). It also contains plant growth regulators. All this together means that its effect is strong and quick, but its power will only last a short while, especially in wet weather. When applying blood meal, take care, as it will easily burn a plant's leaves.

**Buds:** The part of the flowering female plant that contains high concentrations of THC and other psychoactive ingredients.

**Bud Leaves:** the small leaves that grow in the buds of the plant, usually covered in trichomes when harvested.

**Calyxes:** "the usually green outer whorl of a flower consisting of sepals"

**Canopy:** The top branches of a plant, usually shading the lower branches, except when branch training methods are used, such as LST, SCROG, and SOG).

**CFM - Cubic Feet per Minute:** This describes the volume of air that is displaced in 1 minute (see ventilation).

**Chlorophyll:** the green pigment in leaves. Chlorophyll pigment is produced in the chloroplasts of leaf, stem and flower cells. Chlorophyll pigment dominates all other pigments present including the xanthophylls and carotenes. Chlorophyll captures the sun's energy which is used to manufacture sugar from carbon dioxide and water. Chlorophylls are constantly being "used up" and thus are continually manufactured by the plant, provided environmental conditions are appropriate.

**Cloning:** the process of replicating female plants without sexual reproduction.

**Colas :** Female flowering tops developing tightly together forming dense clusters, buds, cones, or colas.

**Composting :** The process by which organic materials mixed together in specific conditions create a nutrient-rich medium.

**Cotyledons :** small round leaves first to appear on a small seedling; not considered true leaves, they usually fall off plant early in the vegetative growth stage.

**Cuttings :** A form of asexual reproduction, the precursor to rooting a clone. Cuttings are encouraged to regenerate by providing ideal growing conditions and rooting hormones. Unlike plants started from seed, a plant grown from a cutting will have exactly the same characteristics of the parent plant.

**Decarboxylation :** This occurs after buds are harvested and during the curing process. The THC loses a CO<sub>2</sub> molecule, which then makes the THC psychoactive. This process is why drying and curing buds after harvest is crucial to the high that the bud produces.

**Fish emulsion :** This is a liquid organic fertilizer with a NPK ratio of about 4-1-1 to 7-2-2. It is water soluble and thus immediately available to plants. It is valued for its high nitrogen content.

**Fluorescent light:** Not as potent as HID lighting, usually used for clones or vertical, auxiliary side lighting.

**FLIR :** Acronym for Forward-Looking Infrared Radar, it is a thermal imaging process whereby differences in heat emission are measured and reflected on a videotape. Heat concentration is indicated on a videotape on a spectrum of light to dark, with bright white showing intense heat. Increasingly, law enforcement personnel are using FLIR thermal imaging to detect indoor marijuana growing operations. They can use FLIR via helicopters and hand-held devices.

**Flush :** the act of cleansing a plant's roots of nutrients and contaminants by giving the plant large amounts of water.

**Foliar Feeding :** The act of giving water and/or nutrients to the plant through the leaves instead of through the roots.

**Force Flowering :** Giving a female plant a photoperiod of 12/12 to force the plant into producing buds.

**Garlic:** (Apologies to any vamps out there) Planted in the same pot/area as your plants will act as a natural systemic insecticide to greenfly and black fly the plants absorb it from the growing garlic it DOES NOT affect the plants scent or taste, can also be used for same reason with other plants.

**Germinate:** To begin to sprout or grow.

**Gibberellic Acid:** A hormone used to promote plant growth, especially that of seedlings, and obtained from the fungus *Gibberella fujikuroi* (GA) is used to reduce flowering and fruiting which maximizes growth and minimizes pollen transmitted. GA is also used in mature plants to increase the fruiting capacity by stimulating the development of lateral shoots and spurs.

**HID:** High Intensity Discharge, the most popular type of lighting for marijuana growing.

**HPS:** The best light available today for growing Marijuana. High Pressure Sodium lights are very bright and very efficient. This light has a red/orange spectrum that is ideal for the flowering phase. With enough of these kind of lights you too can grow those centerfold buds. HPS comes in a wide variety of wattages from 70 watts up to 1000 watts.

**Hormone:** A biochemical product of a specific cell or tissue that causes a change or activity in a cell or tissue located elsewhere in an organism.

**Hydroponics:** the growing of plants without soil, instead using a medium like clay pebbles, rockwool perlite, vermiculite.

**Humus:** a complicated material formed during the breakdown of organic matter. One of its components, humic acid, provides many binding sites for plant nutrients, such as calcium, iron, potassium, sulfur and phosphorus. These nutrients are stored in the humic acid molecule in a form readily available to plants, and are released when plants require them.

**Hybrid:** Often refers to a plant or variety that has been developed by interbreeding two or more varieties, species, or genera.

**Indica:** One of three main varieties of marijuana, the others being Sativa and Ruderalis. Indica is good to grow indoors due to tight internode spacing, resistance to fungus and pests, early maturation tendencies, short height, and dense flower production. Their stout stature and extremely wide leaflets make them easy to

identify. An Indica generally produces a hard hitting, sedative stone, and will take around 45 to 60 days to finish flowering.

**Leggy:** If seedlings and plants do not get enough sunlight, they grow tall and thin stalks as they seek sunlight. These "leggy" plants have a difficult time supporting the weight of the plant and is easily damaged.

**Light-burn:** When the heat from a light burns the plant.

**Lumens:** one lumen is equal to the amount of light emitted by one candle that falls on one square foot of surface one foot away.

**LST:** Acronym for Low-Stress Training, the technique of manipulating the branches in order to reduce plant height, expose certain branches to light, and/or distribute hormones to lower branches of the plant to encourage larger buds.

**Medium:** A soil or soil-less mix used to start or re-plant houseplants, flowers, vegetables, and other plants.

**Mottling of Leaves:** Discoloration or spotting of leaves.

**MH:** The Metal Halide is a very good source of the white/blue spectrum of light that is ideal for vegetative growth. Many growers use MH during the vegetative phase. MH is bright and cost efficient to operate, but not as efficient as HPS lights. Most commonly used sizes are 400 watt and 1000 watt. Works best when used in combination with HPS lights.

**Necrosis:** Death of parts of the plant, usually refers specifically to the leaves.

**Node:** The point on a stem where a leaf is attached or has been attached; a joint.

**Peat moss:** The partially decomposed remains of mosses. Though difficult to wet initially, peat moss can absorb up to 25 times its own weight in water and is therefore valued as a an organic soil amendment. Peat moss is acidic with a pH of about 3 or 4.0 and should only be used around acid-loving plants or to help lower the pH of alkaline soils.

**Perlite:** a unique volcanic mineral which expands from four to twenty times its original volume when it is quickly heated to a temperature of approximately 1600-1700 degrees F. This expansion is due to the presence of two to six percent combined water in the crude perlite rock which causes the perlite to pop in a manner similar to that of popcorn.

When expanded, each granular, snow-white particle of perlite is sterile with a neutral pH and contains many tiny, closed cells or bubbles. The surface of each particle is covered with tiny cavities which provide an extremely large surface area. These surfaces hold moisture and nutrients and make them available to plant roots. In addition, because of the physical shape of each particle, air passages are formed which provide optimum aeration and drainage. Because perlite is sterile, it is free of disease, seeds, and insects. Has been used throughout the world for soil conditioning

and as a component of growing mixes with materials such as peat moss or bark. Extensive studies have shown that the unique capillary action of perlite makes it a superior growing media for hydroponic cultures.

**PH:** the measure of soil's acidity or alkalinity, measured on a scale of 1 to 14. Water is considered neutral at PH 7. PH levels below 7 are classified as acidic, or "sour". Levels above 7 are basic, alkaline or "sweet". Most plants prefer a slightly acidic soil pH of 6.0 to 6.5.

**Phloem:** Nutrient conducting tissue.

**Photoperiod:** The on and off cycle of light, the number of hours of light and darkness the plant is exposed to. Usually expressed as a fraction. Ex: 18/6 = 18 hours of light, and 6 hours of darkness.

**Photosynthesis:** Biochemical process in which light energy is absorbed by chlorophyll, and is used to fuel the building of sugar molecules.

**Pistil:** a hair-like protrusion from the nodes/buds of a female plant, also a precursor to the buds themselves. Pistils turn from white to brown as the buds mature.

**PPM:** Acronym for Parts Per Million, this term is used most in hydroponics to measure the amount of nutrients given to a plant.

**Rock Wool:** Mineral or rock wool has been used extensively in Europe and North America. Like perlite and vermiculite, it originates from a natural mineral (aluminum silicates with some calcium and magnesium) that is heated to form fibers that are used to make blocks or cubes as a finished product. Blocks or slabs of rock wool are used extensively by hydroponic growers of greenhouse vegetables. Rock wool typically has an alkaline pH, is sterile and chemically inert. Be careful when handling rockwool, it can get into your lungs and skin.

**Regenerate:** Involves not killing a plant when harvesting it, but leaving the roots and about 30% of the stalk and growth to regrow. The plant is heavily fertilized and given Vitamin B<sub>1</sub> and then is put back into the 18 hour vegetative growth light cycle. Used to get plant to bud again, or to make a motherplant for cloning off of.

**Root Bound:** A condition where a plant or seedling's roots have grown compacted and entwined in the pot and has no room to grow. This condition stunts plant's growth and potential.

**Ruderalis:** Ruderalis is one of three marijuana varieties. Not a very good choice for flower production, indoors or out. Despite maintaining a short stature, growing only one to five feet tall, and maturing rather quickly, Ruderalis just doesn't produce the yield or quality one looks for in their flowers. A slight light cycle reduction can trigger a sprout with as little as 2 to 3 leaf sets to flower. Ruderalis spontaneously initiates flowering a few weeks after sprouting, and will not produce decent flowers unless the photoperiod provides around 18 to 19 hours of light. Even then, the yield and quality are far less than with Sativa or Indica.

**Sativa:** Sativa is a hard plant to grow indoors due to high lighting requirements, tall stature, and late flowering traits. Sativas come from equatorial regions, thus the necessity for high amounts of lighting and a warmer tropic-subtropical climate. Sativas have long, slender leaves. A Sativa will typically produce a euphoric, energetic, cerebral high. Despite the Sativa's climatic limitations, they are truly a reward to obtain, grow, and smoke. A pure Sativa will take 2 to 4 months to finish flowering.

**ScrOG/ SOG:** "Screen Of Green" method. The purpose of ScrOG is to maximize your usage of the available space and lighting by training the new growth of a plant into a screen or mesh.

**Sensimilla:** Spanish for "without seed." Occurs when a female plant is grown to harvest without exposing the plant to male pollen. This increases THC percentages and overall yield.

**Stamen:** This is the male reproductive organ of a plant, located in the androecium of the flower. It has two components: the filament and the anther.

**Stigma:** The sticky tip of a pistil.

**Strain:** refers to the specific genetics of the plant. Example: Hashplant, Silver Haze.

**Stomata:** Opening in the epidermis of a leaf which permit gas exchange with the air.

**Stress:** Any unhealthy stimuli the plant receives. Examples: Light-burn, over watering, nute burn. Stress can cause slow growth, mutations, or death.

**Sun Leaves/Fan leaves:** Are largest leaves on plant. They don't contain much cannabinoid percentage, but are a storehouse of sugars and important to late growth.

**THC:** The most sought after cannabinoid: tetrahydocannabinol. The main psychoactive ingredient in marijuana.

**Topping:** Method used to increase yield and maximize space, by trimming off the top bud. Traditionally, topping your plant causes two shoots to grow back in place of the one pruned off, thus increasing the number of top/main buds.

**Transplant Shock:** When transplanting seedlings from one place to another, the roots are often disturbed and occasionally the change in climate can cause the plant to slow down or appear to stop growing. This is transplant shock. It is really redirecting it's energy to re-grow lost roots and to get accustomed to a change in temperature that it hadn't experienced before.

**Trichomes:** AKA crystals or sugar, they are tiny, mushroom-shaped capitate glands full of THC that form on the flowering buds and bud leaves of cannabis.

**Vascular:** Refers to the xylem and phloem tissues, which conduct water and nutrients through the plant body.

**Vermiculite:** is sterile and light in weight (5 to 8 lbs/ft<sup>3</sup>). The pH of vermiculite will vary depending on where it is mined. Most U.S. sources are neutral to slightly alkaline, whereas vermiculite from Africa can be quite alkaline (pH = 9). Vermiculite is used extensively in the greenhouse industry as a component of mixes or in propagation. It is usually sold in four size grades: #1 is the coarsest and #4 the smallest. The finer grades are used extensively for seed germination or to top dress seed flats. Expanded vermiculite should not be pressed or compacted, especially when wet, as this will destroy the desirable physical properties.

**Ventilation:** Circulating air in order to provide the plant with fresh air and/or to reduce the temperature in the grow area. Air movement also encourages strong stems that can hold lots of flowers.

**Watering Schedule:** term referring to how often and how much water a plant is given, usually measured in days and gallons. Ex: 1 gallon every 4 days.

**Watts:** A measure of the amount of electricity flowing through a wire. Watt hours measure the amount of watts used in one hour. A kilowatt/hour (KWH) is 1000 watt/hours.

**Worm Casting:** (Vermiconversion) or using earthworms to convert waste into soil additives, is a biologically active mound containing thousands of bacteria, enzymes, and remnants of plant materials and animal manures that were not digested by the earthworm. The composting process continues after a worm casting has been deposited. In fact, the bacterial population of a cast is much greater than the bacterial population of either ingested soil, or the earthworm's gut. An important component of this dark mass is humus.

**Xylem:** Water-conducting tissue.

## **CANNABIS VOCABULARY (A)**

**Abaxial** - oriented away from the stem meristem; the lower surface of a leaf.

**Accessory Pigment** - pigment other than the primary pigment (chlorophyll) which collects solar energy.

**Acclimatize** - become adapted to new environmental conditions.

**Achene** - a hard-shelled seed encased by a simple thin closed shell, such as a cannabis seed.

**Adaxial** - oriented toward the shoot's meristem.

**Adnate** - attached at the margin.

**Adventitious Roots** - roots that appear spontaneously from stems and old roots.

**Alternate Phyllotaxy** - leaves appear singly in a loose staggered spiral along the stem.

**Aneuploid** - an organism with an unbalanced set of chromosomes (i.e.,  $2n-1$  or  $2n+1$ ).

**Anthesis** - the time of maturation of a flower.

**Anthocyanin Pigment** - an accessory pigment, usually red or purple, seen in some cannabis varieties, especially during late floral stage.

**Anticlinal** - perpendicular to the surface.

**Apical** - tip or top position.

**Arborescent** - tree-like.

**Asexual Propagation** - vegetative reproduction by cloning, which produces offspring genotype identical to that of the parent plant.

**Auxins** - a class of plant hormones used to stimulate growth and flowering.

## **CANNABIS VOCABULARY (B)**

**Back crossing** - crossing of an offspring with one of the parents to reinforce a parental trait.

**Bract** - small reduced leaflet in Cannabis that appears below a pair of calyxes.

**Bulbous Trichome** - small stalkless glandular trichome.

## **CANNABIS VOCABULARY (C)**

**Callus** - undifferentiated group of cells, which under proper conditions will differentiate to produce roots and stems.

**Calyx** - five-part carpel structure of the staminate (male) flower; or, five-part fused tubular sheath surrounding the ovule and pistils of the pistillate (female) flower.

**Cambium** - layer of cells which divides and differentiates into xylem and phloem.

**Cannabaceae** - family to which only Cannabis (marijuana) and Humulus (hops) belong.

**Cannabinoid** - a cyclic hydrocarbon which is found only in Cannabis, derived from a terpene molecule and a cyclic acid molecule. Examples are THC, CBD, CBN.

**Cannabinoid Profile** - ratio and levels of cannabinoids found in a particular individual or strain of Cannabis.



**Cannabis** - genus name of marijuana or hemp.

**Capitate-sessile Trichome** - resin-producing glandular trichome with a stalk.

**Capitate-stalked Trichome** - resin-producing glandular trichome without a stalk.

**Carotenoid Pigment** - an accessory pigment, usually yellow, orange, red or brown.

**Carrier** - a plant infected with a virus but exhibiting no symptoms due to its high resistance.

**CBC** - the cannabinoid "cannabichromene".

**CBD** - cannabidiol; has moderating effects on THC and is a medical cannabinoid when used in isolation.

**CBDV** - a cannabinoid: cannabidiverol.

**CBG** - a cannabinoid: cannabigerol.

**CBN** - a cannabinoid: cannabinol.

**CBNV** - a cannabinoid: cannabiverol.

**CBT** - a cannabinoid: cannabitriol.

**CCY** - cannabicyclol.

**Cellular Cloning** - asexual propagation of new individuals from small groups of single cells, as distinct from layers or cuttings.

**Centripetally** - outward from the center.

**Cerebral** - pertaining to the mind.

**Chemotype** - a specific chemical phenotype which is based on unique and predictable ratios of cannabinoids.

**Chemovars** - cultivars or races of Cannabis defined by their particular chemical composition.

**Chlorosis** - yellowing of plant tissues resulting from the breakdown of chlorophyll, often caused by nutrient deficiencies.

**Chromosome** - strain of DNA-protein complex in the nucleus of a cell along which genes are found.

**Clone** - an asexually produced offspring preserving parental genotype.

**Colchicine** - a dangerous chemical used to induce polyploid mutations in plants.

**Cotyledons** - seed leaves which are present in the embryo and first appear upon germination.

**Critical Daylength** - maximum daylength which will induce flowering.

**Crossing** - mating of two organisms.

**Crossing Over** - switching entire pieces of genetic material between two chromosomes.

**Cultivar** - a variety of plant found only in commercial cultivation.

**Cuticle** - covering of plant wax on the surface of the epidermis.

**Cuttage** - rooting a piece of stem (cutting) removed from a parent plant.

**Cytokinins** - a class of plant growth substances (hormones).

## **CANNABIS VOCABULARY (D)**

**Dagga** - African Cannabis.

**Damping-off** - a dangerous soil-borne fungus disease which attacks seedlings and young plants.

**Decarboxylation** - loss of a carboxyl (COOH) group from a molecule.

**Decussate Phyllotaxy** - leaves appear in opposite pairs along the stem.

**Dehiscence** - release of pollen from the stamens upon opening of the staminate flower.

**Differentiation** - (1) process of mixing heterozygous gene pools by crossing to promote variation in the offspring. (2) development by a plant of specialized tissues, e.g., roots, calyxes, pistils.

**Dihybrid Cross** - a hybrid cross for two traits.

**Dioecious** - staminate and pistillate organs develop on separate plants.

**Diploid** - the  $2n$  or vegetative condition where each cell has the usual two sets of homologous chromosomes( in Cannabis  $2n=20$ ).

**Disinfectant** - a treatment that kills disease organisms on the exterior of the seed or plant.

**Distal** - oriented away from another surface.

**Domesticated** - cultivated or spontaneously appearing in a cultivated area.

**Dominant Trait** - the trait which is expressed in the phenotype of a heterozygous gene pair, indicated by a capital letter, i.e., "W" is dominant; "w" is recessive.

**Drip Irrigation** - irrigation system that delivers water to individual plants in small amounts at regular, frequent intervals.

## **CANNABIS VOCABULARY (E)**

**Ecosystem** - community of organisms living interdependently in the physical environment.

**Ecotype** - a strain of plant adapted to a specific niche in the ecosystem.

**Embolism** - bubble of air in the transpiration stream of a cutting, will usually prevent cutting from becoming an active clone.

**Endosperm** - nutrient tissue contained within the seed.

**Endothecium** - subepidermal layer of the pollen sack wall.

**Endozoic** - internal.

**Epicotyl** - stem between the cotyledons and the first pair of true leaves.

**Epidermal Layer** - outer layer of plant tissue.

**Epinasty** - downward curling of cotyledons and leaves at night.

**Essential Oils** - compounds with strong aromas contained in the secreted resins of plants.

**Etiolation** - growth of a plant in total darkness to increase the chances of root initiation.

## **CANNABIS VOCABULARY (F)**

**F1 Generation** - first filial generation: the offspring of two P1 (parent) plants.

**F2 Generation** - second filial generation, resulting from a cross between two F1 plants.

**F1 hybrid** - heterozygous first filial generation.

**Fertilization** - the union of genetic material from the pollen (1n) with genetic material from the ovule (1n), restoring the diploid condition (2n).

**Fixed Trait** - a homozygous trait.

**Floral Cluster** - group of flowers growing together on one stem.

## **CANNABIS VOCABULARY (G)**

**GA3** - gibberellic acid, sometimes used to influence sexual expression in cannabis.

**Gamete** - haploid (1n) sex cell of the ovule or pollen, capable of initiating the formation of a new individual by combining with another gamete of the opposite sex.

**Ganja** - Indian word for marijuana derived from pistillate floral clusters of Cannabis.

**Gene** - element of the germ plasm controlling the transmission of a hereditary characteristic.

**Gene Interaction** - the control of a trait by two or more genes.

**Gene Linkage** - transfer of gene pairs for separate traits together in associated groups instead of assorting independently.

**Gene Pool** - collection of possible gene combinations.

**Genotype** - combination of genes present on chromosomes in the nucleus of each cell, which through environmental influences determines the outwardly observable phenotype.

**Germ Plasm** - genetic material contained within seeds or pollen.

**Gibberellin** - a class of plant growth hormone.

**Girdling** - removing a strip of bark or crushing the stem of a plant to restrict the flow of water, nutrients, and plant products.

**Glandular Trichome** - plant feature that has a secretory function.

**GLS** - gas liquid chromatography, used to determine cannabinoid ratios by reading plant samples at the molecular level.

**Globoids** - drops of oil or resin in the cytoplasm.

**Greenhouse** - a structure which offers some environmental control to promote plant growth.

**Gross Morphology** - general growth form of an organism.

**Gross Phenotype** - composite phenotype of an organism.

## **CANNABIS VOCABULARY (H)**

**Haploid** - condition, as in gametes, when each cell has one-half the usual number of chromosomes found in vegetative cells; abbreviated 1n (in Cannabis 1n=10).

**Hardening-off** - slow adaptation of indoor or greenhouse plants to an outside environment.

**Hashish** - a drug formed of resin heads of glandular trichomes shaken or rubbed from floral clusters, pressed together, and shaped.

**Heliotropic** - sun-loving, turning toward the sun.

**Hemp** - Cannabis fibers or fiber-producing type of Cannabis.

**Herbivory** - feeding on plants by animals.

**Hermaphrodite** - an individual from a dioecious strain of predominantly one sex which develops floral organs of the other sex.

**Heteroblastic** - variously shaped.

**Heterozygous** - the condition when the two genes for a trait are not the same on each member of a pair of homologous chromosomes; individuals heterozygous for a trait are indicated by an "Aa" or "aA" notation and are not true-breeding.

**Homologous Chromosomes** - members of the same chromosome pair.

**Homologs** - similarly structured chemical compounds.

**Homozygous** - the condition existing when the genes for a trait are the same on both chromosomes of a homologous pair; individuals homozygous for a trait are indicated by "AA" or "aa" and are true-breeding.

**Hormone** - plant hormones or growth substances are chemicals produced by the plants in very small quantities which control the growth and development of the plant  
five or more classes of hormones are recognized and they appear to interact in almost all phases of development.

**Hybrid** - a heterozygous individual resulting from crossing two separate strains.

**Hybrid Vigor** - increased vigor in the offspring resulting from the hybridization of two gene pools.

**Hybridization** - process of mixing differing gene pools by crossing to produce offspring of combined parental characteristics.

**Hypocotyl** - section of stem arising from the embryo below the cotyledons.

**Hypodermal Layer** - middle layer of plant tissue.

## **CANNABIS VOCABULARY (I)**

**Incomplete Dominance** - neither gene of a pair is dominant.

**Indexing** - detecting of a virus carrier by grafting tissues or injecting vascular fluids into an uninfected clone.

**Inductive Photoperiod** - daylength required to induce flowering.

**Inflorescence** - group of flowers.

**Intrusive Growth** - growth through a medium.

**Isodiametric** - having equal diameters.

## **CANNABIS VOCABULARY (K)**

**Kif** - Moroccan word for Hashish and Cannabis. In Morocco, kif is a weak mixture of chopped cannabis and tobacco.

## **CANNABIS VOCABULARY (L)**

**Layerage** - development of roots on a stem (layer) while it is still attached to and supported nutritionally by the parent plant.

**Leach** - wash from the soil.

**Leafing** - removal of leaves.

**Lignification** - hardening of the stem by the formation of lignin, a tough polymer.

**Limbing** - removal of lower limbs.

**Lipophilic** - a chemical environment in which fat-like components are easily soluble.

**Lumina** - inner cell spaces enclosed by the cell walls.

## **CANNABIS VOCABULARY (M)**

**Manicuring** - removing leaves from floral clusters.

**Marijuana** - Cannabis, originally a Spanish word.

**Megaspore** - seed.

**Meiosis** - reduction division of a diploid (2n) cell resulting in two haploid (1n) daughter cells as in pollen and ovule formation.

**Meristem** - area of a cell division and growth, i.e., shoot tip, root tip, and cambium.

**Meristem Pruning** - removal of shoot tip to limit height and promote branching.

**Methyl** - a 1-carbon group.

**Micron** - one-millionth of a meter.

**Microspore** - pollen.

**Mil** - one-thousandth of an inch.

**Mitosis** - division of a diploid (2n) cell resulting in two diploid (2n) daughter cells as in normal vegetative growth.

**Monoecious** - staminate and pistillate organs develop on the same plant.

**Monohybrid Cross** - a hybrid cross for only one trait.

**Mutation** - an inheritable change in a gene.

### **CANNABIS VOCABULARY (N)**

**Necrosis** - death and discoloration of tissue.

**Nitrification** - conversion by soil organisms of atmospheric nitrogen to a form which can be used by the plant.

**Nucellus** - tissue within the ovule.

### **CANNABIS VOCABULARY (O)**

**Ontogeny** - course of development.

**Organelles** - structures within a single cell.

**Ovule** - section of the female flower containing the haploid (1n) gamete which will form a seed upon fertilization.

### **CANNABIS VOCABULARY (P)**

**P1 Generation** - first parental generation, the parents crossed to form F1 or F1 hybrid offspring.

**Parthenocarpy** - the production of seeds without fertilization.

**Pathogen** - an organism causing a specific disease.

**Pedicel** - point of attachment of staminate or pistillate calyx.

**Pentyl** - a 5-carbon group.

**Perianth** - outer seed coat, displaying seed color and pattern.

**Pericarp** - protective outer seed covering or shell.

**Periclinal** - parallel to the surface.

**Perisperm** - nutrient region of the seed.

**pH** - a measurement of acidity-alkalinity : 1 is most acid, 14 is most alkaline, and 7 is neutral.

**Phenotype** - outwardly measurable characteristics of an organism determined by the interaction of the individual genotype with the environment.

**Phloem** - vascular tissue of the root, stem, and leaf through which water and biosynthetic plant products such as sugars, carbohydrates, and growth substances are translocated.

**Photoperiod** - lighted portion of daily light cycle.

**Photosynthates** - products of photosynthesis.

**Photosynthesis** - formation of carbohydrates by green plants from sunlight, CO<sub>2</sub>, and H<sub>2</sub>O.

**Phyllotaxy** - the pattern of growth and form of leaves along a stem.

**Phytotron** - an indoor area with extensive environmental controls for the experimental growth of plants.

**Pistil** - paired female organs for pollen reception made up of a fused stigma and style.

**Pistillate** - female.

**Plasmodesmata** - pores in the cell walls between adjoining cells.

**Pollination** - pollen from a stamen landing on the pistil of a flower.

**Polyembryony** - the presence of more than one embryo in an ovule.

**Polyhybrid Cross** - a hybrid cross for more than one trait.

**Polymerization** - linking of small molecules together into a chain or network.

**Polymorphous** - variously shaped.

**Polypliod** - the condition of multiple sets of chromosomes within one cell (e.g., 3n or 4n).

**Primordia** - tiny shoots (usually floral) which first appear behind the stipules along the main stalk and limbs.

**Propyl** - a 3-carbon group.



**Protectant** - a long-term treatment to kill disease organisms present in the soil around the seed or plant.

**Protoplast** - cell contents.

**Pruning** - removal of living tissues such as meristems or small limbs from plants.

**Psychoactive** - affecting the consciousness or psyche.

**Purebred** - a homozygous individual resulting from the inbreeding of a strain.

## **CANNABIS VOCABULARY (R)**

**Radicle** - embryonic root tip.

**Recessive Trait** - the trait which is not expressed in the phenotype of a heterozygous recessive gene pair but only expressed in a homozygous recessive gene pair.

**Recombination** - formation in offspring of a new gene pair different from those pairs found in either parent.

**Rejuvenation** - growth on a mature, flowered plant such that the new growth is juvenile, prefloral limbs.

**Retting** - the breakdown of tissues and epidermal layer that join fibers into bundles so that the individual fibers are freed.

**Roguing** - removal of undesirable plants from the population.

## **CANNABIS VOCABULARY (S)**

**Scion** - stem shoot tip used in a graft.

**Selection** - choosing of favorable offspring as parents for future generations.

**Senescence** - the decline towards death of an organism.

**Sessile** - attached flush with the surface.

**Sex Limited** - a trait expressed by only one sex.

**Sex Linkage** - genes occurring on the sex chromosomes.

**Sexual Propagation** - reproduction by recombination of genetic material from two parents through the union of two gametes.

**Sinsemilla** - the phrase sin semilla is Spanish, originating from Mexico, and means literally "without seed"; the English word sinsemilla means mature seedless pistillate marijuana grown by removing male plants to prevent pollination.

**Soil Atmosphere** - gaseous portion of the soil.

**Soil Solution** - liquid portion of the soil.

**Somatic** - pertaining to the physical body.

**Sporogenous Tissue** - tissue related to the development of spores (pollen).

**Sport** - plant or portion of a plant which carries and expresses a spontaneous mutation.

**Stamen** - male pollen-producing organs consisting of two parts: anther and filament.

**Stamenoia** - excessive and premature concern on the part of a cultivator that staminate plants might pollinate the precious sinsemilla crop.

**Staminate** - male, possessing stamens.

**Stipule** - reduced bractlet on either side of the petiole at the stem and subtending each calyx.

**Stock** - stem section with roots attached used in a graft.

**Stomate** - pore on the epidermal surface of a plant which allows the interchange of air and water vapor.

**Strain** - a line of offspring derived from common ancestors.

**Subtends** - situated below.

**Symplast** - continuous cytoplasm shared by several cells.

**Symplastic Growth** - growth accompanied by the growth of surrounding tissues.

**Systemic Roots** - roots that appear along the developing root system originating in the embryo.

## **CANNABIS VOCABULARY (T)**

**Tapetum** - inner nourishing layer of the pollen sac wall.

**Terpene** - organic molecule of strong aroma.

**Testa** - covering surrounding the embryo of the seed.

**Tetrahedral** - grouped in four or with four sides.

**Tetralocular** - having four sections as in an anther.

**Tetraploid** - having four sets of chromosomes (4n) in contrast to the usual diploid

(2n) condition.

**THC** - tetrahydrocannabinol.

**THCV** - tetrahydrocannabivrol.

**TLC** - thin-layer chromatography.

**Top Mulching** - surface dressing of soil with compost or other organic material to supply nutrients, add root space, and reduce water loss by evaporation.

**Trace** - small area of vascular tissue connecting two like protions of the vascular system such as stem xylem and leaf xylem.

**Trellising** - method of shape and size alteration through physical restriction of growth (i.e.; tying plant down to a wire frame).

**Trichome** - plant hair.

**Triploid** - having three sets of chromosomes (3n) in contrast to the usual diploid (2n) condition.

**True-breeding** - homozygous for the particular trait or traits.

## **CANNABIS VOCABULARY (V)**

**Vacuole** - space within a cell separate from the cytoplasm.

## **CANNABIS VOCABULARY (W)**

**Whorled Phyllotaxy** - three or more limbs appear per node.

**Wild** - weedy, escaped, naturalized, or indigenous.

## **CANNABIS VOCABULARY (X)**

**Xylem** - vascular tissue of the roots, stems, and leaves through which water and nutrients flow upward from the roots.