



## Glossary



**A-frame:** Three poles lashed together in the form of an "A", which is used to mark the contours on a hillside for terrace farming.

**Agroforestry:** The combination of forestry technologies with agriculture and livestock to create more integrated, diverse, productive, profitable, healthy and sustainable land-use systems.

**Agroforestry tree:** A tree that is purposefully grown to provide more than one significant contribution to the environment or people's livelihoods. Also called a 'multipurpose tree'.

**Allelopathic effects:** The retarding, growth-suppressing, or reproduction-suppressing effects of substances or chemicals naturally-occurring or secreted by plants or trees.

**Alley cropping:** An agroforestry technique in which trees are planted in rows to form alleys of crops within agricultural fields. The trees provide numerous benefits including soil conservation, organic (green) fertilizer, and water conservation to the agricultural system. Also known as hedgerow intercropping.

**Antagonists:** In the context of Forest Gardens, any plant or substance that could diminish, retard, or reduce plant growth, yield, or production.

**Berm:** A long, low mound of earth or stone laid out level on the up- or down-slope of a swale, usually built with the soil dug out to form the swale.

**Biophysical characteristics:** The biotic and abiotic surroundings of an organism that influence its growth and survival. For a plant this includes factors such as elevation, sunlight, soil, and rainfall.

**Budding:** A common form of propagation in which the bud of one tree is fused to a rootstock to develop into a new tree. Also called 'bud grafting'.

**Budwood:** A portion of a stem or branch with vegetative buds, used for budding. The buds along the stem of the cutting should be yellowish in color and ready to push (grow) but not yet pushing.

**Cambium:** The living layer of a woody plant species along its stem and branches, located between the bark and the wood. The cambium transfers water and nutrients from the

roots to the rest of the tree, and must be closely aligned between the rootstock and scion for a graft to be successful.

**Canopy:** The cover (above the understory) formed by the leafy upper branches of the trees in a forest or agroforestry system.

**Carbon sequestration:** The removal and storage of carbon from the atmosphere.

**Clayey soils:** a soil composed of tiny, hard, and easily-compacted particles.

**Companion plants:** Plants that grow more successfully or with greater yields when cultivated in the same location than separately.

**Compost:** Organic fertilizer or soil amendment that is produced when bacteria in soil breaks down organic matter through decomposition.

**Conservation:** The preservation and protection of trees and forests for the benefit of the environment and the health of the community.

**Contour planting:** The planting of trees along the natural slope of land to decrease soil erosion and to increase water infiltration and groundwater supply.

**Coppice:** A method of encouraging regrowth in certain tree species by cutting the stem close to the ground.

**Crop rotation:** Alternating the types of crops grown on a piece of land over time, usually to reduce specialist pest prevalence or environmental footprint.

**Cutting:** An easy and popular form of propagating trees in which the branch, stem, or leaf of a tree is planted directly into the ground to grow into a new tree.

**Deforestation:** The loss of forests due to extensive cutting of trees.

**Double digging:** The process of separately digging-up the topsoil and subsoil layers of a cultivated space to add and mix soil amendments at what will be the root level, followed by re-burying the space with the removed top soil and then subsoil. The process improves soil fertility and aeration.

**Earthworks:** Physical barriers that you can construct from soil and stones within your Forest Garden site to control, slow, and/or stop the movement of water and soil.

**Environmental services:** The benefits that trees and other plants bring to the local and global environment. They include services such as erosion control, water and air filtration and purification, carbon sequestration, habitat for biodiversity, and pest and disease control.

**Erosion:** The loss of precious topsoil as a result of wind, moving water or ice, and by such processes as landslides or slow movement of soil over time.

**Exotic:** Commonly used to refer to a plant or other organism introduced from a foreign country or region. For example, *Grevillea robusta*, which comes from Australia, is an exotic tree species in Ethiopia.

**Firebreak:** Wide strips of land where all vegetation has been removed, to prevent fires from damaging fields and homes.

**Fodder:** Leaves, flowers or pods that are used as food by livestock.

**Forest Garden:** A multi-layered, integrated agricultural system, designed to resemble a forest ecosystem, which combines diverse plants and animals into one area to sustainably produce a variety of products and environmental services.

**Fuelbreak:** A wide strip of land around a protected area where dense, existing vegetation is thinned or replaced by other trees.

**Grafting:** A common method of tree propagation in which a scion from a desirable species is fused to the rootstock of another species.

**Graft union:** The portion of a grafted tree where the rootstock and the scion bind together through the fusion and healing processes of the two.

**Grafting compound:** Material that protects graft unions and open cuts from water, air, and pests. Tar and beeswax are commonly used, effective grafting compounds.

**Greenbreak:** A fire suppression measure formed from a wide strip of densely-planted trees that are specifically chosen for their high moisture content and lack of flammable biomass they produce.

**Green fertilizer:** The incorporation of nutrient-rich leaves into the soil to improve soil structure and fertility. Green fertilizers perform multiple functions that include soil improvement, moisture retention, and soil protection. Also called 'green manure'.

**Green wall:** An enhanced living fence technology formed by three layers of trees or shrubs.

**Guild:** A permaculture concept that seeks to mimic the way plants grow in healthy, natural environment by maximizing the various functions that different plants provide.

**Hardpan:** A hardened, impervious layer of soil, typically of clay, occurring in or below the soil and impairing drainage and plant growth.

**Humus:** the organic component of soil, formed by the decomposition of leaves and other plant material by soil microorganisms.

**Indigenous:** A plant or animal species that originates naturally from a given country or region. Also called 'native'.

**Integrated Pest Management (IPM):** A process of managing and reducing the prevalence of pests through integrating physical, biological, natural, and chemical control methods in tandem.

**Intercropping:** The cultivation of two or more plants in the same space to increase the growth or yield of both plants.

**Invasive:** A non-indigenous species (e.g. plant or animal) that adversely affect the habitats they invade economically, environmentally or ecologically.

**Living fence:** An animal-proof barrier composed of trees and shrubs that are densely planted around the perimeter of a field. Living fences protect the land and soil, reduce the need (and cost) for standard fencing, and produce tangible benefits such as food, fuelwood, fodder, and other raw materials. Also called a 'live fence'.

**Loamy soil:** a soil made up of a mixture of sand, silt, and clay. Loamy soil is especially able to retain nutrients and water and is ideal for most agricultural purposes.

**Lopping:** Cutting all lower and secondary branches to encourage a tree to grow straighter.

**MPFG:** Multi-Purpose, Fast-Growing trees which, in addition to growing quickly, provide numerous environmental services including carbon sequestration, soil improvement, and erosion control as well as tangible products including fuelwood, food, fodder, and medicine.

**Naturalized:** A plant that is not originally native to an area, but has been introduced and planted to such an extent that it occurs plentifully on a grand scale.

**Nitrogen fixing:** The process by which plants convert nitrogen in the atmosphere into nitrogen compounds in the soil that can be consumed by other plants to promote healthy growth.

**Outplanting:** The process of removing seedlings from a nursery and planting them in the field.

**Permaculture:** A contraction of 'permanent' and 'agriculture', it refers to the development of agricultural ecosystems intended to be sustainable and self-sufficient.

**Permagarden:** A garden that is built and maintained using permaculture practices and concepts to increase sustainability and self-sufficiency.

**Perennial:** A plant that lives for more than two years, often differentiated from an annual plant, which are shorter-lived.

**Pioneer trees:** Hardy species of trees that are either planted or colonize naturally on previously disrupted or damaged ecosystems. Pioneer trees improve growing conditions to allow for the succession of other trees and plants.

**Pollarding:** Cutting the branches at the top of the tree to prevent the tree from growing beyond a certain height.

**Pruning:** The removal of branches or sections of plants or trees.

**Reforestation:** Planting trees to create new forests on lands where trees are depleted or have been deforested.

**Root collar:** The zone of a plant where the root system ends and the shoot system or stem begins.

**Rootstock:** The lower portion of a tree used for grafting, including the stem and root system, which is selected for adaptability to the local environment.

**Sandy soil:** Granular soils containing small rock and mineral particles, usually gritty and coarse.

**Scarification:** A method of seed pretreatment that nicks the protective seed coat to promote faster seed germination.

**Scion:** The branch of a tree which is selected for its flowers, fruits, leaves or stems. It is grafted to the rootstock to develop into a new tree.

**Seed germination:** The first stage of growth for a seed, which happens under the right environmental conditions and the protective seed coat breaks.

**Seed pretreatment:** Action taken prior to planting a seed, for instance by scarification, soaking in water, or acid treatment, to terminate the seed's dormancy and encourage faster germination.

**Silty soil:** a soil mixture with coarse grains and fine grains.

**Slash-and-burn agriculture:** A kind of shifting cultivation in which existing vegetation is cut, stacked and burned to provide some nutrients to the soil and clear fields for future farming; also called 'swidden cultivation' and 'shifting cultivation'.

**Soil amendment:** A material or substance added to the soil with the end goal of improving agricultural yields.

**Soil crust:** A thin, hard layer that forms over the surface of the soil when the soil surface is watered and then dries out repeatedly.

**Soil pH:** The acidity or alkalinity of soil, expressed on a scale of 1-6.9 for acids (1 being the most acidic), and 7.1-14 for bases (14 being the most basic), and 7 being absolute neutral.

**Sustainable land use:** Land use that achieves production to meet the needs of present and future populations while conserving or enhancing the land resources on which that production depends.

**Swale:** A long, shallow trench laid out level along the contour of land to trap and slow moving water and debris.

**Symbiotic relationships:** A relationship or arrangement between two organisms where each has a process or byproduct that benefits the other.

**Taproot:** The largest, most central, and most dominant root of a primary root system, growing vertically downward.

**Terminal bud:** The growth apex of a plant or tree where new wood, shoots, or stems emanate.

**Terrace:** A broad, natural or man-made surface running along the contour of sloped land. Terraces reduce soil erosion, conserve moisture, and improve agricultural conditions and sustainability on sloped land and mountainsides.

**Thinning:** The removal of a plant or tree, or of branches of a plant or tree, to allow for the healthier growth of fewer plants, trees, or branches.

**Transplanting:** The process of removing or thinning a germinant or young seedling from a germination bed and replanting it in another bed, space, or tree sack.

**Understory:** The various plants that fill in the space beneath the canopy trees in a Forest Garden.

**Windbreak:** In agroforestry this refers to a long line of tall and short trees and shrubs planted in multiple rows along a field or garden to block the wind from disturbing crops and eroding topsoil and moisture.

**Zero-grazing:** A method of raising animals that involves bringing fodder to them rather than letting the animals graze freely.