

Encyclopedia pratensis

Glossary

A

Alfalfa: Perennial forage legume, cultivated all over the world and producing protein rich forage, harvested as hay, haylage or for production of dehydrated pellets.

Agroforestry: The interplanting of crops and trees. In semiarid regions and on denuded hillsides, agroforestry helps control erosion and restores soil fertility, as well as supplying valuable food and commodities at the same time.

Analysis: Examination or determination.

Animal health: A conceptual framework that encompasses both animal diseases and their management. The issues related to animal health impact food security, agricultural economics, and the broader array of economic activities that stem from it. Additional concerns include public health (zoonoses, xenobiotics, antibiotic resistance), environmental, and animal welfare issues.

Antibiotic: A chemical substance, produced by microorganisms and synthetically, that has the capacity to inhibit the growth of, and even to destroy, bacteria and other microorganisms.

Arable farming: Growing crops as opposed to dairy farming, cattle farming, etc.

B

Biodiversity: The variety of all native living organisms and their various forms and interrelationships.

Biodiversity conservation: Planned management (i.e. preservation, maintenance, sustainable use, recovery, enhancement) of a natural resource or of a particular ecosystem to halt, reverse or slow-down the loss of biodiversity from impacts of exploitation, pollution etc. to ensure the future usability of the resource, resilience of communities, and ecosystem integrity.

Bird: Any of the warm-blooded vertebrates which make up the class Aves.

Building: Something built with a roof and walls, such as a house or factory.



C

Cattle: Domesticated bovine animals, including cows, steers and bulls, raised and bred on a ranch or farm.

Chemical: Any substance used in or resulting from a reaction involving changes to atoms or molecules.

Chemical fertiliser: Fertilizer manufactured from chemicals. It mainly includes nitrogen, phosphorus and potassium fertilisers; excessive use of them can cause pollution, when all the chemicals are not taken up by the plants and the excess is leached out of the soil into rivers and may cause algal bloom.

Climate: The average weather condition in a region of the world. Many aspects of the Earth's geography affect the climate. Equatorial, or low, latitudes are hotter than the polar latitudes because of the angle at which the rays of sunlight arrive at the Earth's surface. The difference in temperature at the equator and at the poles has an influence on the global circulation of huge masses of air. Cool air at the poles sinks and spreads along the surface of the Earth towards the equator. Cool air forces its way under the lower density warmer air in the lower regions, pushing the lighter air up and toward the poles, where it will cool and descend.

Clover: A very large family of legumes, annual or perennial, some species of which are used as a source of fodder and for sowing grassland.

Competition: a) active demand by two or more organisms for a material or condition, so that both are inhibited by the demand, e.g. plants competing for light and water; b) active demand by two or more substances for the same binding site on an enzyme or receptor. alt. competitive binding.

Concentrate: Feed that supplements fodder, with a high content of at least one nutrient: energy (UFL), protein (PDI and MAT), minerals.

Cost: In economics, the value of the factors of production used by a firm in producing or distributing goods and services or engaging in both activities.

Creek: A narrow inlet or bay, especially of the sea.

Crop rotation: An agricultural technique in which, season after season, each field is sown with crop plants in a regular rotation, each crop being repeated at intervals of several years. Crop rotation minimizes the risks of depleting the soil of particular nutrients and avoids pest proliferation.



D

Decision support system: A coordinated assemblage of people, devices or other resources that analyzes, typically, business data and presents it so that users can make business decisions more easily.

Direct seeding: An agricultural technique that involves planting a crop directly into plant cover without first tilling the soil. There are two types: one where the cover is destroyed and its biomass is left on the soil surface, and one where the cover is kept alive.

Dung: Excrement from the intestines, containing unabsorbed solids, waste products, secretions, and bacteria of the digestive system.

E

Environment: A concept which includes all aspects of the surroundings of humanity, affecting individuals and social groupings. The European Union has defined the environment as "the combination of elements whose complex interrelationships make up the settings, the surroundings and the conditions of life of the individual and of society, as they are or as they are felt". The environment thus includes the built environment, the natural environment and all natural resources, including air, land and water. It also includes the surroundings of the workplace.

Environment protection: Measures and controls to prevent damage and degradation of the environment, including the sustainability of its living resources.

Equipment: Any collection of materials, supplies or apparatuses stored, furnished or provided for an undertaking or activity.

Extensive farming: A system of raising crops and animals, usually on large parcels of land, where a comparatively small amount of production inputs or labor are used per acre. Compare intensive farming.

F

Farm management: The administration or handling of a farm, considering the productive, economic, environmental and social dimensions. It includes the management of soil, crops and livestock.

Fertilisation: The application of any organic or inorganic material of natural or synthetic origins to a soil to supply one or more elements essential to the growth of plants.

Fertiliser: Substance added to soil for the purpose of promoting plant life, usually containing nitrogen, potassium and phosphorus, e.g. manure, guano, rock phosphates.



Field: A limited area of land with grass or crops growing on it, which is usually surrounded by fences or closely planted bushes when it is part of a farm.

Flora: The sum total of the kinds of plants in an area at one time.

Flowering: The process involved in transforming a meristem that produces vegetative structures, such as leaves, into a meristem that produces reproductive structures, such as a flower or an inflorescence.

Flowers: The reproductive structure of angiosperm plants, consisting of stamens and carpels surrounded by petals and sepals all borne on the receptacle.

Forage crop: Cultivation of crops for consumption by livestock.

Forest: Generally, an ecosystem characterized by a more or less dense and extensive tree cover. More particularly, a plant community predominantly of trees and other woody vegetation, growing more or less closely together.

Frequency: The number of occurrences of a periodic phenomenon within a specific amount of time.

G

Genetics: The science that is concerned with the study of biological inheritance.

Grasses: A very large and widespread family of Monocotyledoneae, with more than 10.000 species, most of which are herbaceous, but a few are woody. The stems are jointed, the long, narrow leaves originating at the nodes. The flowers are inconspicuous, with a much reduced perianth, and are wind-pollinated or cleistogamous. The fruit is single-seeded, usually a caryopsis. Grasses are the most important of all species for food and feed.

Grassland: biome found in regions where the average annual precipitation (ca. 25–76 cm) is sufficient to support the growth of grasses and other herbaceous plants but generally insufficient to support continuous tree cover. In wetter regions grassland is maintained as a result of grazing by herbivores.

Grazing: Feeding on standing vegetation, as by livestock or wild animals.

Grazing management: Organisation of grazing by the farmer on an annual, seasonal or daily basis, including the allocation of plots to the different groups of animals that make up the herd.

Ground: The top layer of the land surface of the earth that is composed of disintegrated rock particles, humus, water and air.



H

Habitat connectivity: Landscape connectivity is defined as the degree to which the spatial configuration of the landscape facilitates or disturbs movement, dispersal, and gene flow between habitat patches.

Habitat preservation: The preservation, maintenance, protection, restoration and enhancement of habitats for wild species.

Harvest: The amount or measure of the crop gathered in a season, and collecting thanks to the harvesting.

Heat stress: condition in which crop performance or survival is compromised by periods of exposure to high temperatures.

Hedgerow: A line of closely planted bushes or shrubs, marking the boundaries of a field. The type of hedge varies between parts of the country, and its age can be dated from the number of species of tree and shrub present. Over the last thirty years hedge-row removal has had a marked visual effect on lowland agricultural landscapes. From the farmer's point of view, in areas of predominant arable or intensively managed grazing, there is little or no economic justification for retaining hedges.

Herbicide: A substance used to destroy plant pests.

Horse: A large plant-eating domesticated mammal with solid hoofs and a flowing mane and tail, used for riding, racing, and to carry and pull loads.

Housing: a) Dwelling-houses collectively and the provision of these. b) Shelter, lodging.

I

Income: The gain derived from capital, from labour or effort, or both combined, including profit or gain through sale or conversion of capital.

Infrastructure: The basic network or foundation of capital facilities or community investments which are necessary to support economic and community activities.

Injury: A stress upon an organism that disrupts the structure or function and results in a pathological process.

Insect: A class of the Arthropoda typically having a segmented body with an external, chitinous covering, a pair of compound eyes, a pair of antennae, three pairs of mouthparts, and two pairs of wings.

Investment: Any item of value purchased for profitable return, as income, interest or capital appreciation.



L

Land use change: Changing the purpose and modalities of land use, such as turning a forest into a grassland. Land use change is a main driver of biodiversity erosion, especially in agricultural landscapes. Land use is one of the 9 planetary boundaries. Incentive-based agri-environmental policies aim at influencing land-use pattern.

Landscape elements: In visual assessment work, landscapes can be divided into four major elements: a) Form is the perceived mass or shape of an object that appears unified, and which provides a consciousness of its distinction and relation of a whole to the component parts. b) Line is the real or imagined path, border, boundary, or intersection of two planes, such as a silhouette, that the eye follows when perceiving abrupt differences in form, colour or texture. c) Colour is a visual perception that enables the eye to differentiate otherwise identical objects based on the wavelengths of reflected light. d) Texture is the visual feel of a landscape.

Lease: Any agreement which gives rise to relationship of landlord and tenant (real property) or lessor and lessee (real or personal property). Contract for exclusive possession of lands or tenements for determinate period. Contract for possession and profits of lands and tenements either for life, or for certain period of time, or during the pleasure of the parties.

Leather: The dressed or tanned hide of an animal, usually with the hair removed.

Legume: Annual or perennial, herbaceous or shrubby species whose fruit is a pod. Many legumes have the ability to fix atmospheric nitrogen, which means that nitrogen fertilisers are not needed for their cultivation. Their seeds are particularly rich in protein (20 to 40% in dry seeds, depending on the species), fibre and micronutrients. They are used for seed production, fodder or ecosystem services.

Liming: Application of lime or calcareous materials (marl, limestone, chalk, tangle, defecation scum) to an agricultural plot as a basic calcium amendment to correct the soil pH and thus improve its physical and chemical characteristics.

Livestock: Domestic or farmed animals raised for food and fibre such as hogs, sheep, cattle, and horses for production of food and fibre.

Lucerne: Perennial forage legume, cultivated all over the world and producing protein rich forage, harvested as hay, haylage or for production of dehydrated pellets.

M

Machinery: A group of parts or machines arranged to perform a useful function.



Management: Government, control, superintendence, physical or manual handling or guidance; act of managing by direction or regulation, or administration, as management of family, or of household, etc.

Manure: Animal excreta collected from stables and barnyards with or without litter; used to enrich the soil.

Marketing: A related group of business activities whose purpose is to satisfy the demands for goods and services of consumers, businesses and government. The marketing process includes estimating the demand, producing the product, pricing the product to satisfy profit criteria, and promoting and distributing the product.

Meadows: Agricultural land with permanent vegetation used for the production of fodder for harvesting and/or for grazing livestock.

Meat: The edible flesh of animals, especially that of mammals as opposed to that of fish or a nut.

Milk: The whitish fluid secreted by the mammary gland for the nourishment of the young; composed of carbohydrates, proteins, fats, mineral salts, vitamins, and antibodies.

Monitoring: To check regularly in order to perceive change in some quality or quantity.

Mortality: The number of deaths occurring in a given population for a given period of time.

Mowing: The cutting down of grass, crops or grain with a scythe or a mechanical device.

N

Nematode: A group of unsegmented worms which have been variously recognized as an order, class, and phylum. They may cause damages on crops through damages on roots or tubers. But some nematodes are beneficial and used as biocontrol.

Nesting: The building of nests for egg laying and rearing of offspring.

Nitrogen: The atmosphere is composed at 79% by nitrogen, with a triple link between the two N atoms. It is a very stable gas, used for inerting. There are many forms of reactive nitrogen when a single atom is linked to other atoms (C, H, O,...). Some of these reactive forms are essential in agriculture (ammonia, nitrate) and food (proteins, amino acids). As a consequence, N is essential nutrient in the food supply of plants and the diets of animals. Animals obtain it in nitrogen-containing compounds, particularly amino acids. Although the atmosphere is nearly 80% gaseous nitrogen, very few organisms have the ability to use it in this form, through the symbiosis with some bacteria. Most higher plants normally obtain it from ammonia or nitrates available in the soil, which they can absorb.



No-till: A system of sowing crops without tilling the soil with a plow, disk, chisel, or other tillage implement.

Nutrient: Chemical elements which are involved in the construction of living tissue and which are needed by both plant and animal. The most important in terms of bulk are carbon, hydrogen and oxygen, with other essential ones including nitrogen, potassium, calcium, sulphur and phosphorus.

Nutrient management: Managing the amount, source, placement, form, and timing of the application of nutrients and soil amendments to ensure adequate soil fertility for plant production and to minimize the potential for environmental degradation, particularly water quality impairment.

Nutrition: A process in animals and plants involving the intake of nutrient materials and their subsequent assimilation into the tissues.

P

Parasite: Organism which lives and obtains food at the expense of another organism, the host.

Pasture: Land covered with grass or herbage and grazed by or suitable for grazing by livestock.

Pasture management: The application of practices to keep pasture plants growing actively over as long a period as possible so that they will provide palatable feed of high nutritive value; to encourage the growth of desirable grasses and legumes while crowding out weeds, brush, and inferior grasses.

Path: A route or track between one place to another.

Permanent grassland: Land used for five years or more to grow grasses or herbaceous forage species, usually characterised by a high species richness in ecological equilibrium under the effect of the environment and agricultural practices, including animal perturbations.

Pest control: Keeping down the number of pests by killing them or preventing them from attacking.

Pesticide: A pesticide is an active substance or mixture of active substances, either synthetic or natural, intended for killing pests in order to protect crops.

pH: A measure of the hydrogen-ion activity in solution, expressed on a scale 0 (highly acid) to 14 (highly basic); 7.0 pH is a neutral solution, that is the most suitable for agronomic performances.



Plant: The plant kingdom, which contains multicellular eukaryotic photosynthetic organisms and, in some classifications, the algae (unicellular and multicellular). It includes the bryophytes (mosses and liverworts), seedless vascular plants (ferns, club mosses, horsetails) and the seed plants (gymnosperms and angiosperms). The algae are sometimes placed in the Protoctista.

Planting: The establishment of trees by planting seedlings, transplants, or cuttings.

Ploughing: Agricultural technique for working the soil, or more precisely the topsoil of a cultivated field, which consists of opening the soil to a certain depth, turning it over, before sowing or planting.

Pond: Inland bodies of standing freshwater usually smaller than lakes. They can be man-made or natural but there is no universal agreement as to their exact size. Some consider a pond to be a small body of water that is shallow enough for sunlight to reach the bottom.

Precision farming: A set of techniques and practices that take into account intra-plot heterogeneity in order to adjust the amount, timing and location of inputs to improve the economic, agronomic and environmental performance of farms.

Protection of natural area: Active management of nature areas in order to ensure that wildlife is protected and the quality of its environment is maintained.

Protein: Organic macromolecule composed of amino acids.

Pruning: The cutting off or removal of dead or living parts or branches of a plant to improve shape or growth.

R

Rain: Precipitation in the form of liquid water drops with diameters greater than 0.5 millimetres.

Redclover: Perennial fodder legume used as fodder for creating artificial and temporary grasslands. Red clover is also used as a service plant because it improves soil structure (cover crop) and enriches the soil with organic matter (green manure).

Region: A designated area or an administrative division of a city, county or larger geographical territory that is formulated according to some biological, political, economic or demographic criteria.

Resilience: The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.



Resource: Any component of the environment that can be utilized by an organism.

Riparian: Frequenting, growing on, or living on the banks of streams or rivers.

Risk: The expected number of lives lost, persons injured, damage to property and disruption of economic activity due to a particular natural phenomenon, and consequently the product of the probability of occurrence and the expected magnitude of damage.

Risk management: The process of evaluating and selecting alternative regulatory and non-regulatory responses to prepare for the probability of an accidental occurrence and its expected magnitude of damage, including the consideration of legal, economic and behavioral factors.

S

Size: The magnitude of a quantity, such as length or mass, relative to a unit of measurement.

Slurry: A liquid mixture of animal faeces and urine and straw collected from stables and spread on agricultural land.

Soil compaction: An increase in bulk density (mass per unit volume) and a decrease in soil porosity resulting from applied loads, vibration, or pressure. More compacted soils (or other materials) can support greater loads (load-bearing capacity). Bulk density can be increased by controlling the moisture content, compaction forces and treatment procedures, as well as by manipulating the type of material being compacted.

Soil fertility: The status of a soil with respect to the amount and availability to plants of elements necessary for plant growth.

Soil health: The capacity of a specific kind of soil to function, within natural or managed ecosystem boundaries, to sustain plant and animal productivity, maintain or enhance water and air quality, and support human health and habitation. In short, the capacity of the soil to function.

Soil organic matter: Any measurable characteristic related to the organic matter compounds of the soil.

Soil test: A set of analyses carried out on a soil sample with the aim of better understanding the physical, chemical and biological characteristics and properties of soils.

Sowing: A major operation in crop establishment that involves creating a soil profile conducive to crop establishment, planting seeds, and various other operations aimed at



promoting the establishment of the crop by modifying the various components of its physical or biological environment.

Species: In sexually reproducing organisms, a group of interbreeding individuals not normally able to interbreed with other such groups. A species is given two names in binomial nomenclature (e.g. *Homo sapiens*), the generic name and specific epithet (italicized in the scientific literature), similar and related species being grouped into genera. Species can be sub-divided into subspecies, geographic races, and varieties.

Storage: A series of actions undertaken to deposit or hold goods, materials or waste in some physical location, as in a facility, container, tank or dumping site.

Streamside vegetation: Plants growing in areas adjacent to rivers and streams.

Sustainable farming: A type of agriculture that applies the principles of sustainable development to the agricultural world: its goal is to enable farms to be autonomous, economically viable, ecologically sound, transferable, socially acceptable and active players in their local area. By adopting these principles, sustainable agriculture aims to enable farmers to make a decent living from their work while reducing their environmental impact and playing an active role in their local area.

T

Temporary pasture: Grassland sown and composed of forage grasses, either alone or mixed with forage legumes. Grassland used for grazing or mowing to produce hay and silage. Grassland with a lifespan of 0 to 5 years. Artificial grasslands, sown exclusively with perennial forage legumes, are sometimes counted as temporary grasslands.

Transhumance: The seasonal migration of livestock to suitable grazing grounds.

Treatment: A process in which the act is intended to modify or alter some other material entity.

Tree: Any large woody perennial plant with a distinct trunk giving rise to branches or leaves at some distance from the ground.

V

Vegetation: The plant cover of an area, considered generally, and not taxonomically.

Vegetation coverage: Number of plants growing on a certain area of land.

W

Water resource: Water in any of its forms, wherever located - atmosphere, surface or ground - which is or can be of value to man.



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Waterway: A river, canal, or other navigable channel used as a means of travel or transport.

Weed control: Freeing an area of land from weeds in order to limit or avoid their competition with crops. This is achieved by several means, such as herbicides, tillage, burning, mowing, and crop competition.

Wetland: Area habitually saturated with water. It may be partly or wholly covered permanently, occasionally or periodically, by fresh or salt water up to a depth of 6 metres. Wetlands include bogs, fens, wood meadows, marshland and salt marshes, shallow ponds, river estuaries, and intertidal mudflats, but exclude rivers, streams, lakes and oceans.

Wetland conservation: Strategy and processes to preserve an area that is saturated by surface or ground water with vegetation adapted for life under those soil conditions.

Wildlife conservation: A series of measures required to maintain or restore the natural habitats and the populations of species of wild fauna and flora at a favourable status.



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