

GLOSSARY of TERMS

Acid Soil: Another name for "sour" in which the factor of chemical reaction (referred to as PH) is less than 7.0. Extreme acidity renders a soil unfavorable for plant growth. Slight acidity makes growing legumes difficult. An application of limestone is the most practical way of correcting acidity.

Acre: A measurement of land surface containing 43,560 square feet. This is equal in area to a square approximately 209 feet on each side. Most crops are grown, and most farms are managed in terms of acres of land.

Adapt: To alter or adjust to fit new conditions and uses. Animals often adapt themselves to changes in weather and climate.

Aerate: To expose to the air. We aerate soil by cultivation, which helps crops grow. Plants need air for growth.

Aesthetic: Something which is pleasant or beautiful in color, texture, or general appearance. Many people appreciate well managed fields or forests, the beauty of nature, and will promote conservation for this reason.

Agricultural Extension Adviser: A technically trained person who distributes technical information of interest and importance in rural areas. The Agricultural Extension Adviser is a staff member of the Cooperative Extension Service of a land-grant college.

Agriculture: The care and use of soils through production of crops and animals on the farm. Conservation is a part of the agricultural program.

Farm Service Agency: A local subdivision of the Federal Agricultural program which fixes acreage allotments for farm crops. It makes payments to farmers for approved conservation practices and improvements.

Alkaline Soil: Another name for a "sweet" soil. Alkaline soils have a factor of chemical reaction (referred to as PH) greater than 7.0. Alkaline soils are high in calcium, magnesium, or sodium which helps to keep soils "sweet" and makes the raising of legumes possible. (See acid soil, alkali.)

Alluvium: Usually fine textured sediments deposited by water. (See soil texture, silty clay.)

Assistant State Conservationist: A technically-trained person in areas of soil, water, and conservation who supervises the personnel of several counties. They are employed by the Natural Resource Conservation Service of the United States Department of Agriculture and carry out a sound program of soil and water conservation. (See Soil Conservationist, Soil and Water Conservation District, District Conservationist, Soil and Water Conservation District Board.)

Atmosphere: Mixture of gases which surround the earth. It is essential to plants and animals. Some industrial areas have polluted their air to the point where it may be dangerous to plant and animal life.

Barren Land: Land which is unable to produce plant life and may be subject to heavy erosion. Some barren land can be made productive by irrigation.

Bottom Load: Particles carried along the bottom of a stream by moving water. These particles are larger and heavier than the materials carried in suspension by water.

Board Foot: The amount of wood in a board measuring 12" x 12" x 1". Lumber and even growing trees are sold by the board foot. Ordinarily, large diameter and tall trees have more board feet in them, and are, therefore, more valuable.

Browsing Line: Animals such as deer eat foliage from trees and bushes as high as they can reach. This leaves a distinct level in many forests which is called a "browsing line."

Brush: Heavy growth of bushes and small trees without commercial value. Wildlife, such as rabbits and quail, often live very well in areas of brush.

Buffer Strip: Strips of close growing crops planted on the contour between strips of row crops. Buffer strips are used to control water loss and soil erosion. Buffer strips of grasses and legumes may be used to advantage wherever it is desirable to have the cultivated strips uniform in width. (See contour farming, strip cropping, inter-tilled crops.)

Bulldozer: Heavy tractor with a blade in front used in filling washes, digging ponds, burying garbage, and so forth. (See land leveling, terrace, pond)

Catch Crop: Crop sown into another crop being grown for harvest. Clover or legumes are often sown into wheat as a catch crop and plowed under before the next season. A catch crop-protects the land and improves the soil structure. (See cover crops)

Check Dam: A small dam across a gully or water course to arrest the flow of water and decrease erosion or further down-cutting by the water. (See erosion, gully, structure)

Clay: Small mineral particles of soil less than 002 mm in diameter. Clay soils are fairly impermeable. (See texture, clay pan, permeability)

Clay Pan: A layer of accumulated impervious clay below the surface. Clay pan is natural in many soils and decreases the permeability of the soil. This causes the soil to have less soak-in and causes more run-off of surface water.

Compost: Organic matter, such as grass and leaves, which when decayed is used to condition soil. Compost adds humus and is often combined with fertilizer to enrich the soil. (See humus, tilth.)

Conservation: Wise use of our natural resources, such as soil, water, wildlife, forests, and minerals, in terms of present and future expected economic factors. Nations that do not use their resources wisely have, throughout history, suffered economic loss, weakened, and fallen to their rivals.

Conservation District: A conservation district which is formed by the voters of a county and is supported by a tax levied upon the citizens of the county. A director or administrator is employed by the Board for recreational and educational purposes. The Board has authority to acquire land and construct facilities.

Conservation Technician: A civil service employee with some background in agriculture who assists the local Soil Conservationist in his work. (See Soil Conservationist, Soil and Water Conservation District.)

Conservation Tillage: The minimum number of tillage operations necessary to produce a crop. Leaving crop residue mulch or seeding of cover crops makes conservation tillage an effective practice for erosion control.

Contour Farming: Method of working the soil whereby crops are planted on the level, or across the slopes, instead of up and down the slope. Farming on the contour often increases yields and almost always decreases soil loss from erosion.

Contour Furrow: A furrow plowed on the contour to prevent soil loss and increase soak-in on pasture or range.

Cultivate: To prepare land for raising crops or to remove undesirable weeds from a growing crop; to loosen the soil about the growing plants to conserve moisture and kill weeds.

Dam: A wall built to hold back or regulate flowing water to control gullying.

Deciduous: A plant, including the trees, which sheds all of its leaves every year at a certain season.

Department of Agriculture, U.S.: A department of the federal government devoted to a study of the problems of agriculture, scientific investigations, encouragement of sound agricultural practice, and the spreading of information of interest to agricultural persons.

Depletion: Lowering the fertility of the soil either by erosion or taking off crops without keeping the soil in condition. Depletion may be prevented by crop rotations and the addition of fertilizer.

Ditch: A long, narrow place dug or washed in the earth which carries off water.

Diversion Ditch: A man-made waterway used to change the route of running water. Diversion ditches are often used to prevent excessive water from running down slope or causing rapid sheet erosion or gullyng.

Drainage Tile: A series of loosely fitted clay tiles buried on a determined grade to drain off excessive water from farm land. Drainage tile can be used in permeable soils in place of surface ditches to make farming possible on land which otherwise would be too wet to cultivate.

Drainage District: A legal, cooperative public corporation to finance, construct, operate, and maintain a drainage system.

Dust: Fine earth which is easily blown by the wind. Strong winds, dry weather, and little cover on the ground may produce dust storms and leave desolate areas called "dust bowls". (See dust bowl.)

Dust Bowl: An area of land which has been seriously damaged by wind erosion. It is caused by drought and poor land use. Large areas of the western United States became dust bowls because of over cropping or overgrazing during dry years.

Ecology: Total relationship of living and nonliving things, including dependence and/or interdependence of all things.

Environment: Often considered as local surroundings, living and nonliving, but more properly regarded as national or worldwide because of the modern concept of the community; only a part of a total existence on this planet.

Envirothon: An educational program for high school students.

Erosion: The carrying away of soil particles mainly by water or wind. Erosion each year removes large quantities of our soil. (See sheet erosion, gully.)

Evergreens: (Conifers) Trees which do not shed all their leaves and therefore, remain green throughout the year. Evergreens are the source of most of our lumber and usually can be planted and grown on land which has been severely eroded.

Extension Service: A division of work of land-grant colleges which informs rural persons of approved practices in agriculture and homemaking.

Fallow Land: Land which is worked but not planted. This is done primarily to allow the land to absorb moisture which helps the crops in the following year. Land in dry areas, where crops are grown in alternate years, requires fallowing.

Farm Forester: A technically trained employee of the state, who is available to help landowners in rural areas plan and carry out wise forestry practices.

Farm Wood Lot: A portion of a farm not used for cultivated crops in which trees grow naturally or are planted. Many acres of land are in farm wood lots, and most of these wood lots are not producing as much as they should because of poor species, burning, pasturing, and other unwise practices.

Fertilizer: Manufactured mineral matter or animal waste which will increase the productivity of the soil. The production of any field plus the nutritional value of the crops produced depends upon the kinds and amounts of fertilizer available for the crops. (See potash, nitrogen, phosphate, green manure.)

Filter Strip: A strip or area of permanent herbaceous vegetation situated between cropland, grazing land, or disturbed land and environmentally sensitive areas.

Fish Hatchery: A place where fish eggs are collected and hatched; the young fish are used to stock or restock ponds.

Flushing Bar: A pole or rod-like attachment ahead of a mowing machine or other cutting tool to frighten birds and animals so they will not be injured by the machine.

Flyway: A route followed by migratory birds between their nesting place and their winter homes. There are four major flyways in the United States: along the Pacific and Atlantic Oceans, along the Mississippi River and through the Central U.S. across the Great Plains. These flyways provide food, shelter, and water.

Forest: A dense growth of trees covering a large area. When man uses wise forest management practices, he will have greater profits from the trees.

Forest Litter: The surface layer of the forest floor in which the leaves are slightly decomposed and leave a protective covering. It provides humus which improves the water-holding capacity of the soil and general soil conditions.

Forest Service, U.S.: An agency of the U.S. Department of Agriculture concerned with scientific studies of forestry and the management of forested federal lands.

Furrow: A depression left in the earth's surface when the ground is turned over or moved by a plow. It is important in soil management and some farming practices; sometimes used in constructing terraces and waterways. (See contour farming, contour furrow.)

Game: Wild animals, birds, and fish that are hunted for food and sport. Game needs proper living conditions and other protection if it is to survive. (See habitat, wildlife refuge.)

Game Birds: Birds which are hunted for food and sport. Hunting is part of the American tradition. Education, legislation, and proper wildlife management are necessary to maintain this resource.

Game Refuge: A natural gathering area for wildlife where they find food, water, and shelter. Wildlife refuges are often used as controlled hunting areas during certain seasons. (See wildlife preserve.)

Grade: The natural slope of ground or man-constructed slopes, such as inroads, and waterways.

Grass: A plant with blade-like leaves, often used for pasture, cover crops and erosion control.

Grass Waterways: The channel where water is allowed to run off the land. It is protected from excessive water damage by a heavy cover of grass. Grass waterways are constructed to carry excess water run-off safely on sloping land and minimize erosion damage.

Green Manure Crop: Any crop grown for the purpose of being plowed under before it ripens; to improve the general condition of the soil.

Ground Water: Surface water which soaks into the ground. Below the water table, all the pore spaces in the ground are filled with water and the ground is said to be saturated. Ground water is the source for springs and wells.

Gully: A steep-sided channel cut in the surface of the earth caused by concentration of moving water. Water usually flows in a gully only during and after a rain, or with the melting of snow. Gullies which cause greater soil losses sometimes can be controlled by structures or grass waterways, or can be prevented by proper land management. (See erosion, structure, grass waterways.)

Habitat: The total environment of specific plants or animals. Plants and animals cannot survive without their required habitat. Modern practices often destroy these habitats.

Hibernation: A condition in which body processes are slowed, as in sleep, so that the animal may survive winter conditions with a minimum need for food and shelter. (See habitat.)

Humus: The dark rich part of the earth formed by the decay of roots, stems, leaves of plants, as well as the decay of animal matter.

Hydroponics: The growing of plants in a liquid solution that contains the necessary minerals used for plant food. Heavy population pressure and little available productive soil may make us more dependent upon hydroponic farming in the future.

Impervious Soil: A soil which has little or no open pore space and so restricts the movement of air, water, and sometimes roots.

Inorganic Soil Material: Mineral matter usually the parent rock from which the soil was formed. Inorganic matter is the foundation of all soil.

Intensive Farming: Growing more annual crops than perennial crops. Soil which does not easily erode can be intensively farmed with use of proper farming practices. (See fertilizer, potash, humus, minerals.)

Interdependence: Man, all other living things, and the physical elements of the earth are all highly interrelated. Whatever affects one thing in nature generally affects many other things as well. Conservation measures help nature keep a favorable balance.

Intertilled Crops: Crops grown in rows so that all weeds or other vegetation can be removed from the area between the desired plants. Intertilled crops leave the soil little protection from wind and water erosion.

Irrigation: The practice of applying water artificially to land inadequately supplied with rainfall. Some land which was formerly barren can be made productive by this practice.

Land Capability Map: A survey map showing the capability of land, depending upon soil, slope, erosion, and so forth. For best production, each farmer should have a conservation farm plan based upon the land use map. (See Soil Conservationist, land capability, soil type.)

Land Leveling: The changing of the surface of the earth to make it easier to surface irrigate.

Land Use Capability: A summary of land conditions which determine its suitability for various uses, from intensive cropping through grazing and forests. Without excessive difficulty and expense in its use or excessive danger of its being destroyed by the usage through erosion or other destructive processes.

Land Use Map: A map showing various uses, such as row crops, forests, pasture, or other activities, being carried out in specific areas. By use of these maps, it is possible to determine how much of any area is being used for any particular purpose and to plan accordingly. Aerial photos are especially helpful in land use mapping.

Leaching: The water movement of minerals downward through the soil. Nutrients are removed by leaching and must be replaced in order that plants may have the minerals essential for growth. (See percolation, permeability.)

Leaves: Green parts that grow on the stems of plants and aid in the manufacturing of food for the plant. They slow down rainfall, help hold moisture, and add to the richness of the soil through decomposition. Leaves supply material to make humus in the soil. (See humus, compost.)

Legumes: Pod-bearing plants, such as clover, alfalfa, beans, and peas. They are commonly used for hay pastures or grain crops. They may be used as cover crop on sloping land, in a rotation as a green-manure crop, and as source of nitrogen in the soil. Their thick foliage protects the soil surface against baking and washing. They often have deep tap roots which penetrate lower layers and add humus as the roots die and decay. Nodules on their roots aid in restoring nitrogen to the soil under proper conditions. (See nodules, manure, cover crop.)

Levee: Strong wide walls or embankments built to prevent the flooding of the surrounding country where rivers, if left unchecked, would overflow.

Limestone: A rock containing a great amount of calcium carbonate which can be ground up for application on land to make it "sweet". Limestone is necessary on acid soils for growing legumes. Calcium is needed for good bone structure in animals. Milk and dairy products are rich in calcium. (See acid soil, alkaline soil.)

Listing: An effective way to till the soil so that it has a ridged and cloddy surface that will resist wind erosion and rapid water runoff.

Living Fence: A fence made of growing plants, such as multiflora rose or Osage Orange. Living fences provide food and shelter for wildlife. (See multiflora rose.)

Loam Soil: A medium textured soil composed of a mixture of clay, sand, silt particles, decayed leaves, and organic life. Loams are easily worked and are counted among the most valuable types of soil for farming. They feel rather smooth to the fingers and are moderately sticky. (See texture, soil particles, clay, sand, tilth.)

Loess: A fine soil whose parent material was deposited by the wind. Much loess is of glacial origin.

Lumbering: An industry in which trees are selected, cut, and marketed in order to supply the many products that come from trees (See woodlot, farm forester.)

Manure: A fertilizer, especially animal waste from stables and barnyards. A green manure crop consists of green plants, such as clover, which are plowed under to furnish plant nutrients in soil. (See green manure.)

Meadow: Land on which grasses and legumes are grown for hay and grazing. (See pasture, erosion.)

Migratory Birds: Birds which move periodically from place to place, generally with the seasons, in order to reproduce and have sufficient food and shelter. (See migratory wildlife.)

Migratory Wildlife: Birds, and some other animals, which move in regular patterns from one place to another for food, shelter, and breeding. Wildlife generally needs some protection from human and other predators when migrating from one place to another. (See wildlife preserve, flyway, wildlife, migratory birds.)

Minerals: Naturally occurring, inorganic substances having definite physical and chemical properties. Minerals from the soil are removed by humans when they eat plant food or animal products. Minerals must be replaced if the soil is to remain highly fertile. Some minerals are also important for the resource base in our economy.

Mulch: Organic or other matter added to the upper layer of a soil to keep in moisture, control weeds, or generally improve the soil conditions for plant growth.

Mulching: The addition of organic materials, such as plant residue or other matter, left on the soil or mixed into the upper most layers to increase the permeability, conserve moisture, control weeds, and generally improve its tilth.

Multiflora Rose: A shrub which makes a thick, "living fence" containing food and shelter for wildlife. (See living fence.)

Natural Resources: All naturally occurring sources of energy and materials used by man, such as soil, water, plants, animals and even man himself.

Natural Resource Conservation Service: An agency of the United States Department of Agriculture, especially interested in issues of soil and water conservation.

Nitrogen: A plant nutrient which tends primarily to encourage above ground vegetative growth. It is a colorless, odorless gas found in abundance in the atmosphere, but rarely in the soil. Plants, other than legumes, cannot use pure nitrogen. It improves the quality of plants giving leaves a deep green color, and it increases plumpness of grain. Pure nitrogen must be combined with other elements, such as oxygen or hydrogen, before it can be put into fertilizer. (See plant food, fertilizer.)

NO Till: A conservation tillage application that plants crops without using tillage equipment before planting.

Nodules: Small growths on the roots of legumes that contain bacteria which make nitrogen available for plant growth. It is wise to include legumes in our rotation plans because these plants produce many nodules and help restore nitrogen in the soil. (See legumes, nitrogen.)

Outdoor Education: Experience outside the school building planned to provide an application of all the five senses in learning; arouse curiosity, stimulate investigative techniques, aid in perceptual learning, and create a desire to learn.

Outlet: A waterway or ditch constructed or altered to carry water from natural drainage areas or man-made structures. The outlet ditch must be large enough to carry all the water from the area drained in order to prevent it from flooding or depositing sediment. (See structure.)

Overgrazing: Pasturing an excessive number of animals for too long a period of time so that the grasses are destroyed, and both the animals and pasture suffer. When pastures are overgrazed, desirable grasses are destroyed and losses from erosion are apt to become more serious. Animal life suffers through shortage of sufficient and desirable foods. (See pasture.)

Parasite: A plant or animal which lives by attaching itself to another plant or animal, thus obtaining its livelihood. Many parasites, such as mistletoe, ticks, and bittersweet, do considerable damage in our forests and to wildlife before man is aware of their presence.

Parent Material: The original substance from which soil is formed. Parent materials contribute different mineral content to our soils. When the soils are eroded to the parent materials, productivity of land is decreased.

Pasture: Vegetation upon which animals are allowed to graze. Pastures require careful management if animals are to be well fed. Some land not suitable for row crops may be made to produce good pasture.

Pasture Improvement: Any management practice which improves a pasture for grazing.

Percolation: The movement of water downward through the soil.

Permeability: The condition of any soil which allows water or air to pass through it. If a soil is permeable, there is greater soak-in and, consequently, less danger from run-off water erosion. Also, water which soaks in is often available for plant growth and aids in replenishing ground water as a source for wells and springs. Proper soil management can usually increase a soil's permeability.

Phosphate: A mineral plant nutrient which can be removed from soil by erosion or plant uptake. Man must replace the phosphate in order that plants can attain proper growth. (See fertilizer.)

Phosphorous: An essential element which controls cell division and the formation of fat and albumen. Flowering and fruiting or formation of seeds depends upon its availability. It encourages root development, speeds maturity, and counteracts excess nitrogen in plant growth. (See plant food, fertilizer.)

Plant Food: Those nutrients which are essential for plant growth; obtained either through natural breakdown or through application of commercial fertilizer.

Plow Sole: A somewhat impervious layer immediately below the plow depth caused by compacting the soil with machinery and consistent depth of cultivation. Proper management, such as alternating the depth of plowing, could eliminate this condition.

Pollution: The contamination of water or air by sewage, industrial waste, or soil erosion which make it unusable for people or wildlife. Polluted streams often carry diseases.

Pond: A natural or man-made depression, smaller than a lake, filled with water. Ponds are a source of water for animals, household use, irrigation, and recreation. They help prevent flood damage, erosion, and tend to raise the water table.

Potash: (Potassium) A plant nutrient which gives vigor and stem strength to plants by increasing resistance to disease, encourages root system development, and exerts a balancing effect to nitrogen and phosphorus. It is very necessary for chlorophyll development. Potash is mined from deposits of potash salts found in many places on the earth. (See plant food, fertilizer.)

Predator: Any animal which lives by preying upon other animals. Predators are essential to maintaining a desirable balance of natural wildlife. (See balance in nature, wildlife.)

Public Hunting Grounds: Areas managed by local, state, or federal governments in which wildlife is protected much of the time and harvested in season under controlled conditions.

P.L. 566: Public Law 566 is the federal law under which an entire watershed may be cooperatively organized and practices carried out with technical help and financial support from both local and federal levels.

Rainfall: Atmospheric moisture which falls to the earth over a period of time. The amount of rainfall in a given area is a controlling factor governing sound uses of conservation practices. Proper agricultural practices and conservation measures can determine the amount of benefit we will receive from rainfall.

Range Management: The wide and scientific control of farm and grazing practices on grazing land so that a maximum return will be had for the greatest length of time.

Renewable Resources: Sources of energy or material, such as hydroelectric, solar or wind power, and plant and animal products used by man which are periodically replaced by nature and thereby not essentially exhausted by wise use. These contrast with materials, such as coal or petroleum, which, once used, are not available again in the same form.

Rill: A tiny channel caused by running water which could start in a small depression and develop into a gully. Rill erosion can remove much of the surface of a sloping field with a single heavy downfall.

Rill Erosion: The development of small, shallow channels in the surface of the earth by water erosion. (See Gully, sheet erosion.)

Rotation: To grow in turn, first one crop and then another in a more or less regular order. A well-planned rotation helps to control insects and weed and helps to improve the physical characteristics of the soils.

Sand: Soil particles 0.05 to 2.00 mm. in diameter.

Sheet Erosion: The erosion or carrying away of a fairly uniform layer of soil by water. Sheet erosion reduces the level of the whole field and is not as noticeable as gullying. Strip cropping and contour farming can greatly reduce damage from sheet erosion. (See contour farming, gully, strip cropping.)

Silt: (Texture) Fine soil particles which larger than clay and smaller than sand. Silt is easily eroded by water and wind if not protected by wise agricultural practices. (See soil texture, loess, alluvium.)

Slick Spots: Alkali soil that is high in sodium; soil feels slick.

Slope: "The lay of the land" or the rise and fall of the earth's surface in a given horizontal distance. The percentage of slope is determined by the number of feet of rise or fall in one hundred horizontal feet. Slope is extremely important in determining all conservation measures needed for proper land use.

Sod: A dense growth of grasses with a tight root system which protects the soil from water and wind erosion. Sod pastures can be reconditioned with fertilizer applications. (See grass waterway, pasture, structure, flumes.)

Soil: Usually weathered rock particles combined with decayed plant and animal matter, living organisms, air, and moisture. Some soils, such as peat and muck, are termed organic soil and composed principally of decayed plants and animal matter. (See topsoil, subsoil, humus, soil texture.)

Soil Conservationist: A technically trained person in matters relating to soil and water conservation. He is available to help farmers in an organized Soil and Water Conservation District with their problems. A Soil Conservationist is employed by the United States Natural Resource Conservation Service, but works with the local Soil and Water Conservation District Board. (See Soil and Water Conservation District, Soil and Water Conservation District Board.)

Soil Conservation District: A locally controlled area organized under state law to promote sound conservation, soil and water practices, and proper land use.

Soil and Water Conservation District Board: The controlling officers of a soil and water conservation district, elected by the members of the district to supervise the soil and water conservation program within the district. Soil and water conservation districts are legally created by the state government. (See Soil and Water Conservation District.)

Soil Horizons: Layers of soil lying approximately parallel to the earth's surface which reflect conditions under which the soil formed. Most soils have topsoil, subsoil, and parent material. Soil horizons form a basis for soil identification, good soil management and use.

Soil Profile: A vertical section of soil showing the soil surface down through all its layers into the parent material. A soil profile is usually studied to learn the physical characteristics of the soil and to help determine its capability.

Soil Structure: The arrangement of soil particles into clusters which leaves the soil more or less open for the passage of water and air. Texture, organic matter, and methods of farming may greatly influence soil structure. Soil with good structure responds well to seasonal changes and good farming practices. (See permeability, soil particles.)

Soil Survey Map: A map which classifies the soil of a particular area.

Soil Type: A further subdivision of soil series based on the surface texture. For example, a silt loam and a clay loam could both be part of a soil series called by a specific name, such as "Drummer" or "Miami".

Stocking: The condition of a forest in regard to the number of tree stems 12" or more in diameter per acre of ground. Stocking also is used in range management to describe the number of animals which can properly graze on a particular area in any season.

Strip Cropping: Growing crops in a systematic arrangement of strips or bands to serve as vegetative barriers to wind and water erosion. Strip cropping is used on long, moderately sloping fields subject to severe erosion. (See contour farming, rotation, buffer strip.)

Strip Tillage: A conservation system that uses minimum tillage. It combines the soil drying and warming benefits of conventional tillage with the soil-protecting advantages of no-till by disturbing only the portion of the soil that is to contain the seed row. This type of tillage is performed with special equipment and can require the farmer to make multiple trips, depending on the strip-till implement used, and field conditions. Each row that has been strip-tilled is usually about eight to ten inches wide.

Stubble Mulch: Plant residues and soil-improving crops which are often chopped up and allowed to remain on the surface of the soil instead of being plowed under.

Sub Tillage: Loosening the soil by running the cutting blade of a subsoiler below the surface a foot or more. This method of loosening the hardpan, clay pan, or plow sole is used in areas of shallow topsoil to increase water infiltration.

Subsoil: The layer of soil which develops beneath the surface where the natural processes of water movement and soil formation result in an accumulation of finer soil particles. Subsoils affect the permeability and water-holding capacity of the land. (See clay pan, topsoil, leaching, soil horizons, soil profile.)

Terrace: A ridge of soil built across a slope to keep water from running downhill and causing erosion. Steeper slopes can be farmed when terraces are used.

Texture: The size and combination of the particles which make up a soil. These particles vary from coarse sand, to silt, to fine clay, and may be mixed together in varying amounts. Loam is a combination of sand, silt, and clay. Clay is .002mm or less in diameter. Silt is .002 - .05mm. Sand is .05 - 2.00 mm. Texture affects how easily a soil will erode, its permeability, and the practices which should be used in growing various crops.

Tilth: The general physical condition of soil which determines how it holds together, absorbs, retains moisture and air, and lends itself to cultivation. Conservation practices, especially of grasses and legumes, tend to improve the tilth, thereby producing a more favorable environment for plant growth.

Timber: Growing trees in a forest, sometimes called "timber". The roots from a good stand of timber are useful in preventing a loss of soil by erosion.

Top Soil: The uppermost layer of a natural soil profile which contains the greatest amount of humus. Most farm crops are grown in this topsoil layer. Unwise practices may destroy or remove this valuable layer.

Trace Elements: Secondary soil components essential for normal plant or animal growth. Trace elements are recent discoveries and are only partially understood. Some trace elements are barium, boron, cobalt, sodium, chlorine, and chromium.

Underplanting: Sowing seeds, such as acorns, or planting small shade-tolerant trees beneath existing trees to improve the species or the number of trees in a forested area.

Vocational Agriculture: A series of high school courses devoted to training a student for agricultural work.

Watershed: All the area draining into a stream. Water drainage and its problems can generally be solved best by working with all the people in a watershed.

Watershed Organization: Interested persons working cooperatively in a legal organization under state law to investigate, plan, and carry out needed practices for the entire watershed area.

Water Table: The top of the uppermost earth layer, found at or below the earth's surface, which is saturated with water. Proper conservation practices will help maintain a favorable water table for plant growth, wells, springs, and lakes.

Waterway: A natural or man-made course through which water can flow.

Wildlife: Animals and plants which have not been domesticated by man and which ordinarily require only a small amount of protection to survive and reproduce. Wildlife is necessary for a balance of nature and provides man with a source of food, clothing, and recreation.

Wildlife Preserve: An area, with food and protective cover, where wildlife can rest, feed, and reproduce without being hunted or otherwise molested by man or domesticated animals. These areas may be set aside by private or public (government) groups to maintain or increase wildlife protection.