

USDA Terms & Definitions

A

Acre Foot: A unit of volume of water equal to the volume of a prism 1 foot high with a base one acre in area: 43,560 cubic feet.

Acid Soil: A soil with an acid reaction, a pH less than 7.0.

Acre: A parcel of land, containing 4,840 square yards or 43,560 square feet.

Agricultural Commissioner: An agricultural employee responsible for the enforcement of the State agriculture code supported by the public and responsible to the public, both producer and consumer.

Agriculture: The utilization of biological processes on farms to produce food and other products useful and necessary to man. Both a “way of life” and a “means of life” for the people involved in this industry.

Agriculture Extension Service: Cooperative (Federal, State, and County) agency doing research and education for rural and urban producer and consumer groups, located in each county with specialist personnel for each particular area.

Agronomy: The science of crop production and soil management.

Alfalfa: A valuable leguminous crop for forage or hay used in livestock.

Animal Unit: A unit of measurement of livestock, the equivalent of one mature cow weighing 1,000 lbs. The measure is used in making comparisons of feed consumption. Five mature ewes are also considered an animal unit.

Annual: A plant that completes its life cycle from seed to plant, flower, and new seed in 1 year or less.

Antibiotic: A product of a living organism which, when present in low concentrations, destroys or inhibits the growth or action of another microorganism. Very effective against pathogenic bacteria, non effective against virus organisms.

Apiary: Colonies of bees in hives and other beekeeping equipment for the production of honey.

Aquatic Plant: A plant that lives in water.

Artificial Insemination: The mechanical injection of male semen into the womb of the female with a special syringe-like apparatus. The process begins with the collection of semen from the male. This method is used extensively in dairy husbandry.

Auger: Spiral device on a shaft used to move grain through a tube.

Available Nutrients In The Soil: The part (%) of the supply of the required plant nutrients that can be taken up by the plant at rates and amounts required for optimum plant growth.

Avian: Pertaining to poultry and/or fowl.

B

Baby Beef: Steers, 15 months old or under, that have been force-fed from birth. They usually are well bred and weigh not over 1,000 pounds.

Back Hoe: A shovel mounted on the rear of a tractor, hydraulically operated to dig trenches or pits in soil.

Balance Ration: A ration which furnishes all the necessary nutrients in the proportions and amounts needed by the animal for normal functioning and growth.

Bed: 1) A narrow flat-topped ridge on which crops are grown, bordered by a furrow on each side for irrigation or drainage of excess water.
2) An area in which seedlings or sprouts are grown before transplanting.

Bloating: Abnormal swelling of the abdomen of livestock, caused by excessive gas formation which can result in death.

Boar: A breeding male hog, any age.

Breed: A group of animals descended from common ancestry and possessing certain inherited characteristics which distinguish it from any other group. When matings within the breed are made, these characteristics are transmitted to the offspring in a uniform and predictable manner.

Breeds of Beef Cattle:

English Origin:	Aberdeen Angus, Hereford, Shorthorn
European Origin:	Charolais, Chianina, Gelbvieh, Limousin, Maine Anjou, Simmental
Asian Origin:	Brahma.
United States Developed:	Brangus, Beefmaster, Santa Gertrudis, Red Angus.

Broadcasting: Random scattering of seeds over the surface of the ground. If the seed is to be covered, this is done as a separate operation, usually with a spike-tooth harrow.

Broiler: A chicken of either sex about 7 weeks of age.

Bronco: Any wild or untamed western horse, unbroken mustang.

Budding: The process of inserting a single bud of a specified variety in the stem of another plant so that a permanent union is effected.

Bushel: A unit of dry measure (1 cubic foot) for grain, fruit, etc., equivalent to 8 gallons of liquid. Weight varies with the density/bulk of the commodity. Example: Oats weigh 32 lbs. Per bu.; barley, 46 lbs. Per bu.; and corn, 56 lbs.,. Per bu.

C

Calf: Young (up to yearling or sexual maturity) animal of the bovine species.

Capillary Water: The water retained in the fine pores in soil by surface tension that moves as a result of capillary forces.

Cash Crop: Any crop that is sold off the farm to yield ready cash.

Certified Seed: Seed grown from pure stock which meets the standards of certifying agency (usually a state government agency). Certification is based on germination, freedom from weeds and disease, and trueness to variety.

Checks: Eggs that have cracked shells.

Chisel Plow: A tool carrier, with one or more heavy standards (shanks) with metal points, pulled behind a tractor for primary tillage and used to break up hardpan (poor soil condition).

Chlorophyll: The green coloring matter of plants which takes part in the process of photosynthesis.

Chopper:

A. Rotary-Horizontal rotating blade (covered) to cut forage, weeds, brush, limbs, etc., into fine material

B. Flail-Rotating “barrel” of individual knives that swing out with centrifugal force to cut forage, etc., into fine material

Chromosome: A structural unit of the cell nucleus which carries genes, the units of heredity.

Colors: The genetics governing colors of horses are more complicated and variable than for other livestock. Major colors: Major, Bay, Black, Brown, Chestnut (Sorrel), and White.

Variations are: Dun and Buckskin, Gray, Palomino, Piebald, Pinto, Calico, Paint, Roan, and Skewbald.

Combine: A self-propelled machine for harvesting grain and other seed crops. In one operation, it cuts, threshes, separates and cleans the grain and scatters the straw.

Complete Fertilizer: A fertilizer containing the three macro nutrients (Nitrogen, Phosphorous, and Potassium) in sufficient amounts to sustain plant growth.

Compost: Organic residues, or a mixture of organic residues and soil which have been piled, moistened, and allowed to undergo biological decomposition. Mineral fertilizers are sometimes added.

Confinement: Livestock kept in “dry-lot” for maximum year-round production. Facilities may be partial or complete solid floored and enclosed/covered.

Contour Furrows: Furrows plowed at right angles to the slope, at the same level or grade, to intercept and retain runoff water.

Contract Farming: The growing and marketing of farm products under such circumstances that selective terms of the market-quantity, grade, size, inspection, timing, or pricing are specified to both the grower and the processor or shipper before production is undertaken. Contract farming is one method of vertical integration.

Controlled Lighting: Artificial lighting of poultry housing. Increasing or decreasing the number of hours of light during the day will control sexual maturity, fertility, and molt.

Cooperative: An organization formed for the purpose of production and marketing of goods or products owned collectively by members who share in the benefits. Most common examples in agriculture are canneries and creameries.

Crop Rotation: More or less regular recurrent succession of different crops on the same land for the purpose of maintaining good yields.

Cross fertilization: Fertilization accomplished by movement of pollen from one plant to another.

CWT: Hundredweight or 100 pounds.

D

Debeaking: Removal of portion of beak to prevent cannibalism.

DHIA: The Dairy Herd Improvement Association is a cooperative association of milk producers organized for the primary purpose of cow testing to provide each member with milk and butterfat production records on individual cows in the herd. Many associations are now conducting monthly mastitis tests for members, and several are considering providing solids- not-fat testing services.

Disk Plow: A tool with a series of concave disk blades all throwing the soil in the same direction (in contrast with a disk harrow, which moves soil in both directions). On a standard disk plow, the blades are individually mounted.

Dormancy: An internal condition of a seed or bud that prevents its prompt germination or sprouting under normal growth conditions.

Double Crop: Two different crops grown on the same area in one growing season.

Drainage: The removal of excess surface water or excess water from within the soil by means of surface or sub-surface drains.

Drilling: The process of opening the soil to receive the seed, planting the seed and covering it in a single operation.

Draw Down: The difference, measured in feet, between the static head as standing water level and the head during pumping or pumping water level. If depth of standing ground water is 175 feet and depth of water when pumping is 145 feet, then the draw down is 30 feet.

Dry Cow: A cow that is not producing milk, the period before the next calving and lactation.

Dry Land Farming: The practice of crop production without irrigation.

E

Erosion: The wearing away of the land surface, usually by running water or wind.

Exotics: Different, unusual, new. Term being used to designate the cattle breeds that have recently been introduced into the beef cattle industry of the United States. Actually, these breeds are “old” established breeds in their country of origin. Presently called “Continental” since most come from the European Continent.

F

Feed Lots:

1. Dry Lot Feeding: Feeding process wherein cattle are confined in a small area and fed carefully mixed, high-concentrate feed to fatten them.
2. Farm Feed Lot: Where cattle feeding is complementary with other farming enterprises.
3. Commercial Feed Lot: Where cattle are fed for others on a custom basis. Feed usually is purchased, labor is hired.

Fertilization: The union of pollen with an egg to form an embryo.

FFA: Future Farmers of America—an organization for high school students studying vocational agriculture.

4-H: Club for boys and girls sponsored by the Agricultural Extension Service to foster better agriculture and homemaking. The 4-H’s stand for Head, Heart, Hands, and Health. Members are 9 to 19 years of age.

Field Capacity: The moisture content of soil in the field as measured two or three days after a thorough wetting of a well-drained soil by rain or irrigation water.

Flash Candling: Mechanized candling of eggs permitting one operator to candle up to 35 cases of eggs per hour.

Forage: Vegetable matter, fresh or preserved, which is gathered and fed to animals as roughage (e.g., alfalfa hay, corn silage, or other hay crops).

G

Gelding: A male horse that has been castrated before having reached sexual maturity.

Genetics: The science of heredity, variation, sex determination and related phenomena.

Goats:

Angora Breed:	Kept for meat and mohair products and grazing brushy areas of range.
Dairy Breeds:	Kept for milk products primarily, also meat. American Lamoncha, French Alpine, Nubian, Saanen, and Toggenburg.
Buck:	Male Goat.
Chevon:	Meat from young goats.
Doe:	female goat.
Kid:	Young, immature goat, either sex.
Kidding:	Parturition of the pregnant female goat.

Grade: An animal of common or mixed breeding; and animal which is not a purebred. Such an animal is ineligible for registration though it usually exhibits some purebred characteristics.

1. Quality Grades for Beef-based on conformation, finish, and quality:

US Prime	US Commercial
US Choice	US Utility
US Good	US Cutter
US Standard	US Canner

2. Yield Grades for Beef- based on the expected yield (curability) of trimmed, boneless major retail cuts:

YG 1 (best)	YG 4
YG 2	YG 5 (poorest)
YG 3	

3. Quality Grades for lamb are US Prime, US Choice, US Good, US Utility and US Cull. Yield Grades for lamb are the same as for beef.

4. Yield Grades for lamb are the same as for beef.

5. USDA Grades for slaughter hogs and pork carcasses combine Quality and Yield into one designated grade. These are US 1, US 2, US 3, US 4 and Utility.

Grade A Dairy: A dairy that produces market milk (for human drinking purposes) under state-approved sanitation conditions according to state controlled pooling laws. Milking barn and milk-handling equipment must meet certain State regulations.

Grade B Dairy: A dairy that produces milk for use in making cheese, ice cream and condensed and powdered milk. Sanitation requirements are not as strict as for Grade A production. The milk cannot be sold for fresh market consumption.

Gravitational Water: Water that either runs off or percolates through a soil. Not available for use by plants.

Green Manure: Any crop or plant grown and plowed under to improve the soil, by addition of organic matter and the subsequent release of plant nutrients, especially nitrogen.

Ground Water: Water that fills all the unblocked pores of underlying material below the water table, which is the upper limit of saturation.

H

Hardpan: A hardened or cemented soil horizon or layer. The soil material may be sandy or clay-like and may be cemented by iron oxide, silica, calcium carbonate, or other substances.

Heifer: Young (less than 3 years) female of the cattle species that has not borne a calf.

Herbivore: Animals that eat plant origin feeds only.

Homogenization: Process in which fat particles of the milk are broken up into such small divisions that they will not rise. They stay evenly spread throughout the milk.

Horizontal Integration: The combining of two or more similar functions under one decision making body. A farmer who acquires and manages another farm as a separate unit and a canner that builds or acquires a cannery in another area are examples of horizontal integration.

Humus: The well decomposed, relatively stable portion of the organic matter in a soil.

Hydroponics: Growing of plants in water containing the essential growth elements. This process is being used in “glass” houses for intensive “off-season” production of vegetables.

Hygroscopic Water: Moisture that is so closely held by the soil particles that it is unavailable to plants.

I

Incubation: A process of holding eggs under controlled conditions of heat and moisture permitting the fertile eggs to hatch. Chicks require 21 days and turkeys 28 days to hatch.

Integration: Control by a single organization of all or some of the various stages of production.

J

Jersey: Breed of dairy cattle developed on Jersey, one of the Channel Islands. It is one of the smallest dairy breeds. Colors range from fawn through shades of mouse-gray, brown, with some approaching black. Milk has a high average butterfat content.

L

Lactation Period: The length of time a female gives milk following birth of offspring-usually with reference to dairy cows and milk goats.

Land Classification: The classification of units of land for the purpose of grouping soil of similar characteristics, in some cases showing their relative suitability for some specific use.

Layer: A female chicken producing eggs regularly. A good layer should produce between 19 and 20 dozen eggs in 12 months.

Leaching: The process of removal of soluble materials by the passage of water through soil.

Legumes: A type of plant which has nodules formed by bacteria on its roots. The bacteria that compose these nodules take nitrogen from the air and pass it on into the plant for the plant to use. Some legumes are alfalfa, soybeans, sweet clover and peanuts.

Light Soil: A soil easy to cultivate. Usually contains a predominance of sand or silt particles.

Litter: A group of offspring born at the same time by one sow.

Livestock : Any domestic animal produced or kept primarily for farm, ranch, or market purposes, including beef and dairy cattle, hogs, sheep, goats, and horses.

M

Manure: Generally, the refuse from stables and barnyards including both animal excreta and straw or other litter.

Mare: Mature female horse.

Marginal Land: Land almost too unproductive to be farmed profitably.

Mastitis: A disease of the cow's udder resulting from infection by microorganisms. The infection may be caused by improper milking procedures.

Milk (average composition): Milk contains on the average, the following: Fat-3.9%; Albumin-.7%; Casin-2.5%; Lactose-5.1%; Mineral matter-.7%; and Water-87.1%.

N

Nematode: Soil worms of microscopic size. These organisms may attack the root or other structures of plants and cause extensive damage.

Nitrogen Cycle: The sequence of transformations undergone by nitrogen in its movement from the free atmosphere into and through soils, into the plants, and eventually back. These biochemical reactions are largely involved in the growth and metabolism of plants and microorganisms.

Nutrient: A chemical element or compound that is essential for normal body metabolism, growth and production. Includes: carbohydrates fats, proteins, vitamins, minerals and water.

O

Offspring: The progeny of parents.

Omnivore: Animals that eat both animal and plant origin feeds.

Organic Fertilizer: Any fertilizer material containing plant nutrients in combination with carbon.

P

Parity: Equality in the present purchasing power of a unit (bushel, cwt) of a product compared with its

purchasing power during a specified base period. For example, in order for wheat to have the same purchasing power it had in the base period 1910-14, it would have to be selling for \$2.38 per bushel.

Pasteurization: A process of treatment of milk through heat that kills all harmful bacteria, without changing its physical or chemical composition.

Permanent Wilting Point: That point at which a plant is dried so badly that even though put into a humid atmosphere and watered, it will no longer recover.

Pest: Any organism injuring plants or plant products.

pH: A scale of measurement by which the acidity or alkalinity of soil or water is rated. A pH of 6 to 7.5 is considered “ideal” for most agricultural crops. Each plant (specie-type), however, has its own “ideal” pH range.

1 2 3 4 5 6	7	8 9 10 11 12 13
Acid Range	Neutral	Alkali Range

Photosynthesis: A complex physiological process of plant life in which an organic substance (sugar) is made from the carbon dioxide of the air combined with water. This process utilizes energy of light through the agency of chlorophyll.

Pig: A young swine weighing less than 120 pounds.

Plow Pan: A compacted layer at a depth usually six to eight inches below the surface; caused by compression at the bottom of a plow or other tillage implements.

Pollen: The male germ cells.

Pollination: The transfer of pollen from the anther to the stigma.

Pomology: the science or study of growing fruit.

Poult: A young turkey.

Poultry: Domestic birds raised for eggs and meat.

Power Take-Off: A shaft on a tractor that transmits power to an implement, usually through a connecting shaft that has two or more universal joints and a telescoping reaction. PTO shaft speeds are standardized at either 540 or 1,000 rpm.

Precooling: The process in which loads of fruit or vegetables are rapidly cooled prior to loading for shipment.

Productive Soil: A soil in which the chemical, physical, and biological conditions are favorable for the economic production of the crops suited to a particular area.

Pullet: A female chicken less than 1 year old.

R

Razorback: A “poor” quality type of swine-long legged, sharp, narrow back, lean body; usually a half-wild mongrel breed.

Rhizobium: Bacteria living in nodules on the roots of leguminous plants that are capable of removing nitrogen from the air and soil “fixing” it into forms that plants utilize for growth.

Rhizome: A subterranean stem, usually rooting at the nodes and rising at the apex; a rootstock.

Roaster: A young meat bird, 12 to 16 weeks old weighing 4 to 6 pounds, used for pan roasting.

Roasting Pig: A milk-fat pig weighing from 60 to 100 pounds.

Rooster: A mature male chicken.

Rotary Tiller: A power-driven implement used for broadcast or strip tillage. It is equipped with curved knives that slice through the soil, chop surface residue, and mix all materials in the disturbed layer.

Roughage: Feeds high in fiber, low in total digestible nutrients as hay and silage; the complete forage plant, including the stalk, stem, leaf, and (if mature) the seed.

Ruminants: Animals having a stomach with four compartments (rumen, reticulum, omasum and abomasum). Their digestive process is more complex, therefore, than that of animals having a true stomach. Some commonly known ruminants are cattle, sheep and goats; an example of a true stomach animal is the pig.

S

Saline-Alkali Soil: A soil having a combination of a harmful quantity of salts and either a high degree

of alkalinity or a high amount of exchangeable sodium, or both, so distributed in the soil profile that the growth of most crop plants is less than normal.

Saline Soil: A soil containing enough soluble salts to impair its productivity for plants but not containing an excess of exchangeable sodium.

Saturate: To fill all of the openings among soil particles with liquid.

Sheet Erosion: The gradual, uniform removal by water of the earth's surface, without the formation of hills or gullies.

Shelf Life: The length of time fresh dressed, iced, packed poultry can be held without freezing.

Shorthorn: Breed of beef cattle originating along the Tees River in Northeast England. Shorthorns are considered the largest of the three English breeds and may be red, white or roan. Shorthorn cows are good mothers and heavy milkers. Sometimes called "Durhams."

Silage: Prepared by chopping green forage (grass, legumes, field corn, etc.) into an airtight chamber, where it is compressed to exclude air and undergoes acid fermentation that retards spoilage. Contains about 65 percent moisture; 3 lbs. of silage is equal to 1 lb. of hay nutritionally.

Slaughterhouse: A place where animals marketed for meat are killed humanely.

Soil Auger: A tool for boring into the soil and withdrawing a small sample for field or laboratory observations. Augers are of two general types—those shaped like twisted metal straps which hold soil between the twists into which the soil is scraped by cutting front edges, and those with a hollow cylinder.

Soil Horizon: A layer of soil material approximately parallel to the land surface which differs from adjacent genetically related layers in color, structure, texture, or consistence. It also differs in biological and chemical characteristics.

Soil Map: A map designed to show the distribution of soil types or other soil-mapping units in relation to the prominent physical and cultural features of the earth's surface.

Soil-Moisture Tensiometer: An instrument which measures the tension with which water is held by soil. The instrument can be used for estimating when to irrigate land and for detecting drainage problems.

Soil Reaction: The degree of acidity or alkalinity of a soil usually expressed in terms of pH value.

Soil Series: A grouping of soils which have developed from a particular kind of parent material and which are similar in all characteristics except texture of the surface layer. The soil series is one of the principal units of soil classification.

Soil Structure: Refers to bonding together of soil particles and the resulting configuration of solid and voids.

Soil Survey: The systematic examination, description, classification, and mapping of soils in an area.

Soil Texture: Refers to the coarseness or fineness of a soil. It is determined by the relative proportion of various sized particles (sand, silt, and clay) in a soil.

Soil Type: A finer subdivision of a soil series. It includes all soils of a series which are similar in all characteristics, including texture of the surface layer.

Species: One kind of plant.

Sow: Mature female hog.

Standard of Perfection: A book, published by the American Poultry Association, listing all the recognized breeds and varieties of poultry and their characteristics.

Strain: A group of plants derived from a variety.

Stress: Factors of discomfort, heat, cold, overcrowding, dirty pens, minor diseases, etc., that combine to reduce production, and affect well-being of an animal.

Strip Cropping: Growing crops in long narrow strips across a slope approximately on a line of contour, alternating dense-growing intertilled crops. This is sometimes done with crops grown under government acreage allotments in order to increase yields per acre, since the intertilled area is not included in the allotment. It is also done in some dryland areas to conserve moisture and reduce the hazards of wind erosion.

Stubble: The basal portion of the stems of plants left standing after cutting.

Stubble mulch: The stubble of crops or crop residues left essentially in place on the land as a surface cover before and during the preparation of the seed bed, and at least partly, during the growing of a succeeding crop.

Subsoiling: Breaking of compact subsoils without inverting them. This is done with a special narrow cultivator shovel or chisel, which is pulled through the soil at a depth from 12 to 24 inches and at spacings from 2 to 5 feet.

Summer Fallow: Land plowed up (usually in spring) and left unseeded through the summer. This is done to let the land air out and rest until fall, when it is worked up and planted to a crop of grain. May also be done to break down organic matter or kill weeds.

T

Tattoo: Means of permanent identification, usually in the ear. Use of “Dies” (sharp needles) in the form of letters-numbers and indelible ink.

Tensiometer: A measuring device to determine the amount of soil moisture used in irrigation management, as to how much and when to irrigate.

Terminal Market: A metropolitan market which handles all agricultural commodities. The San Francisco Wholesale Produce and Fruit Market is an example.

Toolbar: Bar mounted on wheels or a tractor, used to carry various tools for tillage of the soil and/ or crops.

Top Dressing: Lime, fertilizer, or manure applied after the seedbed is ready, or after the plants are up.

Topsoil: The layer of soil used for cultivation, which usually contains more organic matter than underlying materials.

Total Digestible Nutrients (TDN): The sum of all nutrients in a feed that are digested by the animal.

Tractor: Heavy duty vehicle, low geared, used to carry, push, and/or pull implements for tillage, planting, and harvesting crops.

1. Wheel-type, rubber tired.
2. Crawler-type, uses tracks for propulsion, also called tracklayer, cat, etc.

Transportation: The loss of water vapor from the leaves and stems of living plants to the atmosphere.

Tuber: A short, thickened branch bearing minute scale leaves with buds or “eyes” in their axils, as potatoes.

V

Vaccination: The process of artificially immunizing an individual with a biologic material to establish immunity against an infectious disease.

Variety: A group of individuals within a species that differs from the rest of the species.

Vertical Integration: The combining of two or more successive steps in the production, processing and distributing processes under a single decision making body. A canner that produces some of his

own raw product, a group of farmers which acquires a cannery or a cotton gin, or a feed company that owns the poultry are all examples of vertical integration.

Viticulture: The science and practice of vine growing: grape growing.

W

Water Rights (Riparian Rights): The rights of a person owning land containing or bordering on a water course or other body of water in or to its banks, bed, or waters.

Water Table: The upper limit of the part of the soil or underlying rock material that is wholly saturated with water. In some places an upper or perched water table may be separated from a lower one by a dry zone.

Well Casing: The pipe placed in the well hole to transmit water from the intake zone to the surface.

Windbreak: A strip of trees or shrubs serving to reduce the force of wind; any protective shelter from the wind.