

CHAPTER 12 VOCABULARY - Food, Soil, and Pest Management

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agroforestry	Planting trees and crops together.
alley cropping	Planting of crops in strips with rows of trees or shrubs on each side.
animal manure	Dung and urine of animals used as a form of organic fertilizer. Compare <i>green manure</i> .
aquaculture	Growing and harvesting of fish and shellfish for human use in freshwater ponds, irrigation ditches, and lakes, or in cages or fenced-in areas of coastal lagoons and estuaries or in the open ocean. See <i>fish farming</i> , <i>fish ranching</i> .
arable land	Land that can be cultivated to grow crops.
bioaccumulation	An increase in the concentration of a chemical in specific organs or tissues at a level higher than would normally be expected. Compare <i>biomagnification</i> .
biological amplification	See <i>biomagnification</i> .
biological pest control	Control of pest populations by natural predators, parasites, or disease-causing bacteria and viruses (pathogens).
biomagnification	Increase in concentration of DDT, PCBs, and other slowly degradable, fat-soluble chemicals in organisms at successively higher trophic levels of a food chain or web. Compare <i>bioaccumulation</i> .
chronic malnutrition	Faulty nutrition, caused by a diet that does not supply an individual with enough protein, essential fats, vitamins, minerals, and other nutrients needed for good health. Compare <i>overnutrition</i> , <i>chronic undernutrition</i> .
chronic undernutrition	Condition suffered by people who cannot grow or buy enough food to meet their basic energy needs. Most chronically undernourished children live in developing countries and are likely to suffer from mental retardation and stunted growth and to die from infectious diseases. Compare <i>chronic malnutrition</i> , <i>overnutrition</i> .
commercial inorganic fertilizer	Commercially prepared mixture of inorganic plant nutrients such as nitrates, phosphates, and potassium applied to the soil to restore fertility and increase crop yields. Compare <i>organic fertilizer</i> .
compost	Partially decomposed organic plant and animal matter used as a soil conditioner or fertilizer.
conservation-tillage farming	Crop cultivation in which the soil is disturbed little (minimum-tillage farming) or not at all (no-till farming) in an effort to reduce soil erosion, lower labor costs, and save energy. Compare conventional-tillage farming.
contour farming	Plowing and planting across the changing slope of land, rather than in straight lines, to help retain water and reduce soil erosion.
conventional-tillage farming	Crop cultivation method in which a planting surface is made by plowing land, breaking up the exposed soil, and then smoothing the surface. Compare <i>conservation-tillage farming</i> .
DDT	Dichlorodiphenyltrichloroethane, a chlorinated hydrocarbon that has been widely used as an insecticide but is now banned in some countries.

desertification	Conversion of rangeland, rain-fed cropland, or irrigated cropland to desertlike land, with a drop in agricultural productivity of 10% or more. It usually is caused by a combination of overgrazing, soil erosion, prolonged drought, and climate change.
domesticated species	Wild species tamed or genetically altered by crossbreeding for use by humans for food (cattle, sheep, and food crops), as pets (dogs and cats), or for enjoyment (animals in zoos and plants in botanical gardens). Compare <i>wild species</i> .
famine	Widespread malnutrition and starvation in a particular area because of a shortage of food, usually caused by drought, war, flood, earthquake, or other catastrophic events that disrupt food production and distribution.
feedlot	Confined outdoor or indoor space used to raise hundreds to thousands of domesticated livestock.
fertilizer	Substance that adds inorganic or organic plant nutrients to soil and improves its ability to grow crops, trees, or other vegetation. See <i>commercial inorganic fertilizer</i> , <i>organic fertilizer</i> .
fish farming	See <i>aquaculture</i> .
fishery	Concentration of particular aquatic species suitable for commercial harvesting in a given ocean area or inland body of water.
food insecurity	Condition under which people live with chronic hunger and malnutrition that threatens their ability to lead healthy and productive lives. Compare <i>food security</i> .
food security	Condition under which every person in a given area has daily access to enough nutritious food to have an active and healthy life. Compare <i>food insecurity</i> .
fungicide	Chemical that kills fungi.
genetically modified organism (GMO)	Organism whose genetic makeup has been altered by genetic engineering.
GMO	See <i>genetically modified organism</i> .
green manure	Freshly cut or still-growing green vegetation that is plowed into the soil to increase the organic matter and humus available to support crop growth. Compare <i>animal manure</i> .
green revolution	Popular term for the introduction of scientifically bred or selected varieties of grain (rice, wheat, maize) that, with adequate inputs of fertilizer and water, can greatly increase crop yields.
herbicide	Chemical that kills a plant or inhibits its growth.
high-input agriculture	See <i>industrialized agriculture</i> .
humus	Slightly soluble residue of undigested or partially decomposed organic material in topsoil. This material helps retain water and water-soluble nutrients, which can be taken up by plant roots.
hunger	See <i>chronic undernutrition</i> .
hydroponics	Form of agriculture in which farmers grow plants by exposing their roots to a nutrient-rich water solution instead of soil.

industrialized agriculture	Production of large quantities of crops and livestock for domestic and foreign sale; involves use of large inputs of energy from fossil fuels (especially oil and natural gas), water, fertilizer, and pesticides. Compare <i>subsistence farming</i> .
inorganic fertilizer	See <i>commercial inorganic fertilizer</i> .
insecticide	Chemical that kills insects.
integrated pest management (IPM)	Combined use of biological, chemical, and cultivation methods in proper sequence and timing to keep the size of a pest population below the level that causes economically unacceptable loss of a crop or livestock animal.
intercropping	Growing two or more different crops at the same time on a plot. For example, a carbohydrate-rich grain that depletes soil nitrogen and a protein-rich legume that adds nitrogen to the soil may be intercropped. Compare <i>monoculture, polyculture</i> .
IPM	See <i>integrated pest management</i> .
leaching	Process in which various chemicals in upper layers of soil are dissolved and carried to lower layers and, in some cases, to groundwater.
low-input agriculture	See <i>sustainable agriculture</i> .
malnutrition	See <i>chronic malnutrition</i> .
manufactured inorganic fertilizer	See <i>comercial inorganic fertilizer</i> .
manure	See <i>animal manure, green manure</i> .
metabolism	Ability of a living cell or organism to capture and transform matter and energy from its environment to supply its needs for survival, growth, and reproduction.
minimum-tillage farming	See <i>conservation-tillage farming</i> .
monoculture	Cultivation of a single crop, usually on a large area of land. Compare <i>polyculture</i> .
no-till farming	See <i>conservation-tillage farming</i> .
organic agriculture	Growing crops with limited or no use of synthetic pesticides and synthetic fertilizers; genetically modified crops, raising livestock without use of synthetic growth regulators and feed additives; and using organic fertilizer (manure, legumes, compost) and natural pest controls (bugs that eat harmful bugs, plants that repel bugs and environmental controls such as crop rotation). See <i>sustainable agriculture</i> .
organic farming	See <i>organic agriculture</i> and <i>sustainable agriculture</i> .
organic fertilizer	Organic material such as animal manure, green manure, and compost applied to cropland as a source of plant nutrients. Compare <i>commercial inorganic fertilizer</i> .
overnutrition	Diet so high in calories, saturated (animal) fats, salt, sugar, and processed foods, and so low in vegetables and fruits that the consumer runs a high risk of developing diabetes, hypertension, heart disease, and other health hazards. Compare <i>malnutrition, undernutrition</i> .
PCBs	See <i>polychlorinated biphenyls</i> .
percolation	Passage of a liquid through the spaces of a porous material such as soil.

pest	Unwanted organism that directly or indirectly interferes with human activities.
pesticide	Any chemical designed to kill or inhibit the growth of an organism that people consider undesirable. See <i>fungicide, herbicide, insecticide</i> .
plantation agriculture	Growing specialized crops such as bananas, coffee, and cacao in tropical developing countries, primarily for sale to developed countries.
polychlorinated biphenyls (PCBs)	Group of 209 toxic, oily, synthetic chlorinated hydrocarbon compounds that can be biologically amplified in food chains and webs.
polyculture	Complex form of intercropping in which a large number of different plants maturing at different times are planted together. See also <i>intercropping</i> . Compare <i>monoculture</i> .
salinization	Accumulation of salts in soil that can eventually make the soil unable to support plant growth.
shelterbelt	See <i>windbreak</i> .
slash-and-burn agriculture	Cutting down trees and other vegetation in a patch of forest, leaving the cut vegetation on the ground to dry, and then burning it. The ashes that are left add nutrients to the nutrient-poor soils found in most tropical forest areas. Crops are planted between tree stumps. Plots must be abandoned after a few years (typically 2–5 years) because of loss of soil fertility or invasion of vegetation from the surrounding forest.
soil	Complex mixture of inorganic minerals (clay, silt, pebbles, and sand), decaying organic matter, water, air, and living organisms.
soil conservation	Methods used to reduce soil erosion, prevent depletion of soil nutrients, and restore nutrients previously lost by erosion, leaching, and excessive crop harvesting.
soil erosion	Movement of soil components, especially topsoil, from one place to another, usually by wind, flowing water, or both. This natural process can be greatly accelerated by human activities that remove vegetation from soil. Compare <i>soil conservation</i> .
soil horizons	Horizontal zones, or layers, that make up a particular mature soil. Each horizon has a distinct texture and composition that vary with different types of soils. See <i>soil profile</i> .
soil profile	Cross-sectional view of the horizons in a soil. See <i>soil horizon</i> .
strip-cropping	Planting regular crops and close-growing plants, such as hay or nitrogen-fixing legumes, in alternating rows or bands to help reduce depletion of soil nutrients.
subsistence farming	See <i>traditional subsistence agriculture</i> .
sustainable agriculture	Method of growing crops and raising livestock based on organic fertilizers, soil conservation, water conservation, biological pest control, and minimal use of nonrenewable fossil-fuel energy.
terracing	Planting crops on a long, steep slope that has been converted into a series of broad, nearly level terraces with short vertical drops from one to another that run along the contour of the land to retain water and reduce soil erosion.
traditional intensive agriculture	Production of enough food for a farm family's survival and a surplus that can be sold. This type of agriculture uses higher inputs of labor, fertilizer, and water than traditional subsistence agriculture. See <i>traditional subsistence agriculture</i> . Compare <i>industrialized agriculture</i> .

traditional subsistence agriculture	Production of enough crops or livestock for a farm family's survival and. Compare <i>industrialized agriculture</i> , <i>traditional intensive agriculture</i> .
transgenic organisms	See <i>genetically modified organisms</i> .
undernutrition	See <i>chronic undernutrition</i> .
waterlogging	Saturation of soil with irrigation water or excessive precipitation so that the water table rises close to the surface.
windbreak	Row of trees or hedges planted to partially block wind flow and reduce soil erosion on cultivated land.