

Organic Agriculture

A Glossary of Terms for Farmers and Gardeners

Agroecology: the study of the interrelationships of living organisms with each other and with their environment in an agricultural system.

Biodiversity: a measure of the variety of species comprising a community.

Biodynamic: a type of organic farming system developed by Austrian scientist and philosopher Rudolf Steiner in the early 1900's. Biodynamic farming takes into consideration both biological cycles and also “dynamic”—metaphysical or spiritual—aspects of the farm, with the intention of achieving balance between physical and non-physical realms.

Bio-Intensive: a combination of biodynamics and the French-intensive method of farming, which involves the use of raised beds, with crops planted very close together and in combination with other crops.

Biological control: the practice of using beneficial organisms—such as insect predators or parasites of pest insects, pest disease agents, insect-eating birds and bats—to keep pest populations at a tolerable level.

Biotechnology: the science of gene modification, in which DNA is transferred from one organism to another, altering the molecular makeup of the recipient and resulting in the expression of new characteristics.

Catch Crop: a crop grown to hold on to, or catch, excess nutrients still in the soil following an economic crop. Rather than being leached from the soil, the nutrients are taken up by the catch crop and then returned to the soil when the plants decompose.

Certified Farmers' Market: a marketplace in which farmers sell their produce directly to consumers. In a certified farmers' market, farmers are exempt from packing, sizing, and labeling requirements, however, they can only sell products that they have produced.

Certified Organic: referring to a product that has been produced in accordance with specific regulations and that has been inspected and approved by an accredited certifying agent. The USDA Federal Rule governing organic certification requires that an organic production system is managed “to respond to site-specific conditions by integrating cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity.”

Community Supported Agriculture (CSA): a farm that is funded by a group of community members. In exchange for a membership fee, members are entitled to an assortment of fresh-picked produce every week throughout the growing season.

Companion Crops: Crops that are planted close to one another to achieve some mutual benefit such as repelling insect pests or attracting beneficial insects, shade, wind protection, support, or nutrient enrichment.

Conservation Tillage (CT): a production system in which at least 30% of the soil surface is covered by residues from previous crops. Conservation tillage is practiced to reduce erosion and to conserve soil carbon. Surface organic mulches are heavily used in CT systems.

Conventional (Agriculture): an industrialized agricultural system characterized by mechanization, monocultures, and the use of synthetic inputs such as chemical fertilizers and pesticides, with an emphasis on maximizing productivity and profitability. Industrialized agriculture has become “conventional” only within the last 60 or so years (since World War II).

Cover Crop: a crop grown to prevent soil erosion by covering the soil with living vegetation and roots that hold on to the soil. Cover crops are also grown to help maintain soil organic matter and increase nitrogen availability (green manure crop), and to “hold on” to excess nutrients (a catch crop) still in the soil following an economic crop. Other benefits of cover crops include weed suppression and attraction of beneficial insects.

Crop Rotation: the practice of planting a sequence of different crops and cover crops on a specific field. Crop rotations can be used to help build soil fertility, reduce insect pest pressure, and suppress weeds.

Farmscaping: the practice of designing and maintaining habitats that attract and support beneficial organisms, used to improve crop pollination and to control pest species.

Flame-Weeding: the practice of using heat to kill weeds. Typically a flame torch is used to sear weed species in a manner that does not affect the crop species or at a time when the crop species is not present.

Genetically Modified Organism (GMO): an organism that has been genetically altered through the transfer of DNA from another organism, resulting in the expression of new characteristics in the recipient.

Green Manure: a cover crop grown to help maintain soil organic matter and increase nitrogen availability. Legumes are often used because they have rhizobial bacteria living in their root nodules that are able to fix nitrogen from the air and add it to the soil. Grasses grow quickly, providing biomass good for increasing organic matter.

Humus: Well-decomposed organic matter which is resistant to further decomposition and which may persist for hundreds of years. Humus holds on to some nutrients, storing them for slow release to plants.

Integrated Pest Management (IPM): a strategy of pest management that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticides are used only after monitoring indicates they are needed according to established guidelines, and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and non-target organisms, and the environment.

Intercropping: the practice of planting two or more mutually beneficial crops in close proximity, typically as alternating rows or numbers of rows. (On a small scale, this is often called companion planting). Benefits can include insect or weed suppression, structural support, or shade.

Mulching: the practice of spreading organic materials—such as straw, compost, or wood chips—over otherwise bare soil between and among crop plants. Mulching helps to conserve moisture, suppress weeds, and build soil organic matter.

Organic (Agriculture): referring to a type of agriculture that promotes the use of renewable resources and management of biological cycles to enhance biological diversity, without the use of genetically modified organisms, or synthetic pesticides, herbicides, or fertilizers. Organic livestock production promotes concern for animal welfare, without the use of synthetic foodstuffs, growth hormones, or antibiotics.

Organic (Chemistry): 1) referring to compounds containing the element carbon. 2) referring to a living organism or materials derived from living organisms (All living organisms contain carbon).

Permaculture: a term coined in 1978 by Bill Mollison, Australian ecologist, and one of his students, David Holmgren. “Permaculture” stands for “permanent agriculture” and it is a land use concept that refers to the design of ecological human habitats and food production systems, with goal of harmonious integration of human dwellings, annual and perennial plants, animals, soil, and water, into stable, productive communities.

Soil Organic Matter (SOM): Soil organic matter has three parts: living organisms, fresh residues, and well-decomposed residues (the living, the dead, and the very dead). Fresh residues are a primary source of food for living organisms. Decomposition of fresh residues releases nutrients needed by plants. Well-decomposed matter, also called “humus,” holds on to some nutrients, storing them for slow release to plants

Sustainable (Agriculture): referring to an agricultural system that is ecologically sound, economically viable, and socially just—a system capable of maintaining productivity indefinitely.

Tilth: the physical structure of soil as it influences plant growth. A soil with good tilth is porous, allowing water to infiltrate easily, and permitting roots to grow without obstruction.

Transitional: referring to a production system which follows organic management practices, but has not yet fulfilled time requirements to be certified organic (land must be free from prohibited materials for a minimum of three years to be certified).

Trap Crop: a crop that is planted to lure pest insects away from an economic crop.