

The Advantages and Techniques of Organic Farming

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Commentary

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DESCRIPTION

Organic farming is a method of farming that doesn't use synthetic pesticides, growth hormones, or antibiotics and instead raises crops and livestock using environmentally friendly methods. Typically, fertilizers and pesticides made from minerals, plant matter, and animal waste are used by organic farmers. To help with pest control, they employ biological techniques like using one organism to suppress another. Organic farming practices decrease pollution of the air, soil, and water while balancing insect populations and improving soil fertility. In the US, organic farming is a tiny but quickly expanding area of agriculture.

From \$1 billion in 1990 to \$3.5 billion in 1996, organic food sales grew. Sales of organic food currently make up 2 to 5 percent of retail food sales, but by 2000, sales are expected to rise to 10 percent. Organic farming is usually conducted using organic methods in Europe and Japan, where exports of organic products are also increasing.

Several techniques are combined in organic farming to keep the soil healthy, stop soil erosion, and manage pests with little to no synthetic pesticide use. To a lesser extent, conventional farmers also employ some of these techniques.

Fertilizers are used to replenish the minerals that crops take from the soil as they grow and to supply the minerals that some soils lack. Concentrated chemical fertilizers that are quickly absorbed by plants are used by many conventional farmers. While these fertilizers speed up growth, they also run the risk of eliminating beneficial soil organisms like bacteria and earthworms. Manure, compost, and other natural materials are used by organic farmers as fertilizer to support soil organisms, which gradually release minerals into the soil for plant uptake.

Crop rotation is a practice that replenishes soil nutrients without the use of synthetic fertilizers, and it is more common among organic farmers than conventional farmers. Crop rotation is the practice of growing one type of crop, like corn or wheat, on a field for one to several years, and then planting a legume, like alfalfa or soybean, in the following season. Beneficial bacteria found in legume roots absorb nitrogen from the soil, improving the soil and lowering the need for fertilizers that contain nitrogen.

Because the roots of the second crop may be deeper and the roots of the first crop may be closer to the surface, crop rotation also conserves nutrients by allowing the roots of the two crops to draw from different soil depths. Compared to bare soil, soil stabilized by plant roots is less likely to blow away, wash away, or erode. By using covers crops—short-lived plants, typically legumes or grasses—organic farmers reduce soil erosion and preserve the soil between harvesting one crop and planting another.

In addition, many organic farmers practice no-till or low-till farming, forego using plows to turn the soil, or cover the soil in the field with a crop's portion to prevent soil erosion from wind or rain.

Conventional farmers use a variety of synthetic pesticides to eradicate hazardous insects, weeds, and fungi that cause disease. Chemical processing is used to create these pesticides from a variety of raw materials, including ammonia, natural gas, and petroleum. They contain both long-lasting and highly toxic active and inactive ingredients. Pesticides used by organic farmers are generally made from chemically unaltered plant, animal, or mineral extracts, in which the crop is treated with a toxic active ingredient that quickly degrades into a nontoxic form.

Organic farmers use a variety of insecticides, including neem oil, soaps, and pyrethrum, a material taken from chrysanthemums. Organic farmers employ a number of techniques to control insects and fungi that cause disease, such as Bordeaux mix, a calcium carbonate and copper mixture.