

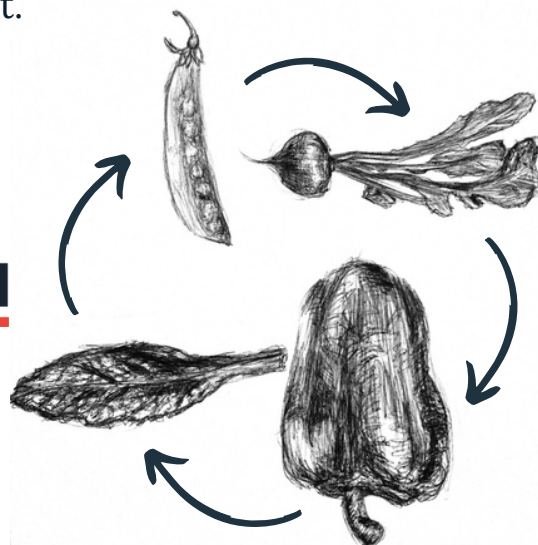
SUSTAINABLE GARDENING

Sustainable gardening is a broad term for food production techniques that help meet the needs of current and future generations. Sustainable gardening techniques can be used across your garden to strengthen its environmental and social benefits.

SOIL SYSTEMS

Healthy soil promotes healthy plants. The following soil care techniques nourish both your plants and the environment.

- **CROP ROTATION:** Rotate crops so you do not plant crops from the same scientific family in the same areas of your garden from season to season. This helps to balance the nutrient content of your soil and reduces pest damage, minimizing the need for synthetic pesticides and fertilizers.
- **COVER CROPS:** Use cover crops to protect and replenish soil when land is not in use. The benefits of cover cropping include erosion prevention, increased organic matter, weed suppression, nitrogen fixation, and more. Cover crops often come in a mix of different species. Some of the most common cover crops are crimson clover, buckwheat, oats, and hairy vetch.
- **COMPOST & ORGANIC FERTILIZER:** While synthetic fertilizers stimulate quick growth, they often disrupt the naturally occurring soil food web and lead to the pollution of water ways. Compost and organic fertilizers contain nutrients in much smaller amounts that are often released slowly over time, which minimizes pollution from fertilizers. Additionally, compost adds fungi, bacteria and invertebrates to your soil, which nurtures the soil ecosystem rather than harming it.



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WATER SYSTEMS

The health of food and water systems are tightly linked. Here are several actions that you can take within your garden to conserve water and reduce water pollution:

- **DRIP IRRIGATION:** Consider using drip irrigation or soaker hoses as opposed to rotating sprinklers. Drip irrigation releases water slowly, which reduces water loss that comes with evaporation.
- **RAINWATER HARVESTING:** Set up a rainwater catchment system to harvest water that would otherwise go unused in the garden. This reduces stormwater runoff and reduces the need for additional water inputs.
- **RAIN GARDENS:** Plant a rain garden that contains plants, such as dogwood, witch hazel, swamp milkweed, and switch grass that help capture and filter any remaining stormwater runoff. Rain gardens also slow the release of stormwater, which helps prevent sewer systems from becoming overwhelmed.



PLANT SYSTEMS

- **POLLINATOR HABITAT:** Install plants that are known to attract beneficial pollinators and insects, such as milkweed, native grasses, and wildflowers. Planting a variety of flowers that bloom throughout the season will benefit a range of native species. Pollinator habitat is beneficial for the productivity of gardens and is important for supporting biodiversity of insects.
- **COMPANION PLANTING:** Use companion planting strategies to reduce the need for fertilizer and pesticide inputs. Companion plants are crops that grow well together because they have complementary properties and needs, such as nutrient contributions, pest mitigation, and pollinator attraction. Tomatoes and basil, corn and beans, and onions and potatoes are three pairs of companion plants.



Sources: Missouri Botanical Garden, University of Wisconsin-Madison Horticulture Extension, The New York Botanical Garden, UMass Center for Agriculture, Food, and The Environment. Illustrations by Olivia Golden.