

The Art of Dry Gardening: Grow Vegetables With Little or No Irrigation

With a combination of cover, timing, drought-tolerant crops and creative water sources, you can grow food without irrigation.

Whether by necessity—a lack of access to water—or personal initiative, many growers throughout history have gotten creative and been able to grow vegetables without irrigation. This style is called dry gardening, or dry farming on a grander scale. It's as much an art as a type of agriculture, and it demonstrates that food can be grown without irrigation. The process does, however, take some creativity and forethought.

Preserving Moisture

One thing that will devour the water content of soil is weeds. Weeds compete with crops for moisture and sunlight and can devastate a dry garden. A proper cultivation program is a must when considering dry gardening so that weeds can't establish themselves.

Cultivating is one of many ways to manage existing water. If prepared ground gets wet, but not cultivated, not only can weed seeds establish themselves but the soil will lose moisture into the air through evaporation. A light harrowing helps stop or slow the leaching of water.

Cover

Cover the ground with an organic mulch—hay, leaves, wood chips or straw—either after cultivating or in place of it. This can do a lot to help preserve moisture. The mulch protects the bare soil from the sun, preventing evaporation, but it also blankets the ground, providing a barrier from heat and wind, which can both contribute evaporation and dry soil.

Mulches will also break down into organic matter, which itself is important in retaining moisture. Loamy and silty soils are generally the best all-around soils. Clay soil retains water well and might work well in dry gardening situations but can compact easily providing little room for air and water movement. Sandy soils drain quickly and might be more difficult to fully amend for a dry garden. According to the USDA, 1 percent of organic matter in the top 6 inches of soil will hold approximately 27,000 gallons of water per acre. If your soil is low in organic matter, it might take a lot of compost or additional organic matter such as leaves to prepare it for dry gardening. If you hope to dry garden, it's perfectly OK to spend some years building your organic matter before eliminating irrigation. You won't regret it.

Another effective way to build organic matter is through cover cropping. Fast-growing annual grasses and plants can be sowed between vegetable crops to add to the soil organic matter when worked in at the end of the season. Some gardeners will establish clovers and transplant crops directly into gardens for nutrition and moisture retention.

Timing

Another factor in dry gardening is to time the planting of vegetables when soil moisture is right.

Tomatoes, for instance, are a fairly drought-tolerant crop, but they need moisture in the first few weeks after transplanting to get established. If not timed well, it can result in weak plants that might become susceptible to disease and pest damage. If planted when the soil has adequate moisture, tomatoes will thrive throughout the summer.

Because fruiting phases of vegetables, such as tomatoes, require water, dry gardening often produces lower yields compared with irrigated gardens. Preserving original soil moisture is key to having a good yield. However, less yield isn't necessarily a bad thing, especially for quality. Less fruit means more intense flavor and can result in nutritionally dense and delightful vegetables.

Minimum Irrigation

Of course, sometimes dry gardening refers to those who simply don't use municipal water sources. ***In areas where the law permits***, collecting some amount of water and using it strategically throughout the growing season can dramatically increase success.

These sorts of "off grid" sources might include wells, rain catchment tanks under buildings, ponds or cisterns. If you hope to dry garden but the soil is perhaps not right for it, there is no shame in collecting water when it is abundant and spreading it throughout the season. In the same way that mulch preserves rain below ground, a water tank can preserve the rains from above.

Before setting up a rain water catchment system do your homework and check with your local city and/or county for specific regulations and permitting requirements in your area.

Seasonal Swap

One consideration for dry gardeners: Focus on growing when the moisture is most abundant. Winter and spring, for instance is a great time to dry farm. In the summer, you can grow drought-tolerant crops such as tomatoes and sweet potatoes, then return to the more water-reliant, shallow-rooted crops such as greens and lettuce in the fall. Or you can take the summer off, choosing instead to grow cover crops and build your organic matter for a three-season garden—fall, winter and spring.

Whatever you decide, know that dry gardening takes planning and thought to execute. However, it can be done. History proves this, as do the thousands of farmers worldwide who feed their communities on whatever rain the skies provide.

Drought-Resistant Crops

When dry gardening, consider the variety of vegetables you hope to grow. Plant breeders and seed purveyors often indicate in their plant descriptions whether a particular vegetable is drought-resistant. This can be vital to a dry garden, especially in our area where we get little to no rain during the summer months.

By definition dry gardening/farming is non-irrigated agriculture in a climate where there is 20 inches of rain or less a year. Dry vegetable gardening is not gardening with no water; it is gardening with limited water and making the most of the water you have.

Developed from an article created by Jesse Frost, story originally appeared in the March/April 2018 issue of Hobby Farms.