

# The Future of Food: How Dry Farming Could Save The World

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*A dry vineyard in its early stages.*

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You've heard the line: [water](#), it's everywhere, not a drop to drink. Only 3 percent of the world's water is fresh, 75 percent of which is stored in glaciers. Much of the drops accessible for drinking are often diverted to the roots of thirsty plants. Currently, more than two-thirds of available potable water is used for [agriculture](#), yet the global demand for water is soaring. In a water-scarce world, innovative growers are incorporating modern and ancient methods of dry farming into their practices to conserve water and provide healthy food to a growing population.

According to the [United Nations](#), up to two-thirds of the world population, which will rise to nearly 10 billion, may suffer from water scarcity by 2025. This makes the adoption of less water intensive farming techniques all the more urgent. In [urban](#) areas, where the vast majority of people live, some growers have switched to a soil-free growing system in which plants are watered via mist rather than traditional irrigation. This can result in water savings of up to 95 percent.

However, dry farming also has its roots in more holistic, historic practices of cultivating plants directly in the ground. In-ground dry farming involves the preparation of [soil](#) to retain as much

moisture as possible, through mulching, ground cover plants, and other practices. Dry farms also benefit from geographic features such as [mountains](#) and hills, at the bottom of which runoff water accumulates.



*A California farm extends nearly to the ocean.*

Dry farming has proven to be particularly suited for [vineyards](#). “In [France](#) irrigation is forbidden — you cannot irrigate grape vines,” says Tod Mostero, viticulturist at Dominus Estate in California’s Napa Valley. “There’s a reason for that. It makes sense that you plant crops where they belong, and not in places where they don’t.” While dry farming serves a practical and environmental purpose, this practice also enhances the final product. “We don’t believe you can make a wine that has true character, or at least the character of your vineyard, unless it’s dry farmed. Because only if it’s dry farmed will it have that connection with the soil.”

Another form of dry farming that is more applicable over a variety of climates is known as partial root drying. Designed by University of Lancaster professor and crop scientist Bill Davies, this method involves splitting a plant’s [roots](#) into two sections, which are alternatively watered while the other remains dry. This process is particularly adept for rice growing. “Rice uses a ridiculous amount of water,” says Davies. “Probably about a third of fresh water on the planet. We have to grow rice with less water... As the [climate changes](#), it’s getting hotter and drier in many food-growing areas. Our systems have to change. Farming has to respond now.”

Via [CNN](#)

Images via [Ed Clayton](#) and [Alex Lines](#)

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