



Drip Irrigation

Globally 70 percent of freshwater is used for agriculture, to grow the food we eat and the cotton we wear. But the amount of water it takes to grow crops depends on the different practices used on farms.

A lot of farmers use sprinklers to irrigate crops, and this kind of irrigation wastes a great deal of water. If you've ever watered your garden or yard with a sprinkler on a sunny day, you can see water evaporate above the sprinkler—that's water that won't make it to the soil where it's needed.

There are different ways to irrigate crops that can save water. 'Drip irrigation' delivers small amounts of water directly to the soil where the plant is grown and is more efficient than conventional sprinklers. A drip irrigation system can be a series of water hoses with small holes in them that deliver small amounts of water where it is needed. Drip irrigation minimizes water loss from evaporation and runoff, and uses 20 to 50 percent less water than conventional sprinklers.¹

Drip irrigation systems can cost a lot of money upfront, but also have the potential to increase crop yields², which benefits farmers in the long run. Some farmers have been using drip irrigation technology with sensors that tell the farmer where there are dry spots. Farmers can use these sensors to water fields precisely where water is needed.

To learn about other solutions to global water issues, read more at [Fresh Solutions](#).

¹[U.S. EPA Water Sense](#) (Accessed November 11, 2015)

²[Fishman, Charles \(August, 2015\)](#)





Weighing the Benefits and Drawbacks of Drip Irrigation

For a complex problem, we need to evaluate how a solution fares across multiple dimensions:

Benefits

Drawbacks

**Environmental
Factors**

**Social & Cultural
Factors**

**Economic
Factors**





Supplementary Materials

Weighing the Benefits and Drawbacks of Drip Irrigation

For a complex problem, we need to evaluate how a solution fares across multiple dimensions:	Benefits	Drawbacks
Environmental Factors	<ul style="list-style-type: none">• Reduces groundwater use for agriculture.• Leaves more surface water for other animals and ecosystems.	<ul style="list-style-type: none">• Irrigation uses a lot of groundwater, which takes many years to replenish.
Social & Cultural Factors	<ul style="list-style-type: none">• Drip irrigation with remote sensors can save farmers time by telling them precisely where water is needed.	
Economic Factors	<ul style="list-style-type: none">• Reduce the water costs of irrigation.• Better crop yields means more income for farmers.	<ul style="list-style-type: none">• Large upfront cost to drip irrigation infrastructure.

Additional Resources

Check out how much water it takes to produce different kinds of food at Waterfootpring.org

U.S. Environmental Protection Agency Water Sense: [Water-Saving Technologies](#)

New York Times Opinion: [How California Is Winning the Drought](#)

ENSIA: [How to grow more food with less water](#)

