

Earth911

Soil Solarization for Weed Control | Earth911.com

September 14, 2019

Tuesday, March 12 2019, 12:23 PM

Soil Solarization for Weed Control

 Gemma Alexander  March 12, 2019



0 SHARES |      

The habits of home gardeners develop mostly by trial and error influenced by old wives' tales. Too often, there isn't any science available to confirm or deny the value of a gardening practice, since most scientific studies are focused on commercial agricultural practices that don't necessarily scale to the home gardener.

Solarization Works

Now there is new science that validates one old-fashioned, chemical-free weed suppression method. Soil solarization is not a new weed control practice for organic gardeners, who have practiced "tarping" for years, especially in hot climates. But Dr. Sonja Birthisel studied it as part of her postdoctoral research last year, confirming that mulching prepared beds with plastic for several weeks prior to planting can decrease weed pressure in the subsequent crop — even in cooler climates like the American Northeast.

What Is Solarization?

For scientific purposes, solarization refers to covering the soil with clear plastic. Tarping refers to the use of black plastic, which, perhaps counterintuitively, is less effective in suppressing weeds. Both practices can raise soil temperatures enough to kill dormant weed seeds. Even at lower temperatures, research found a weed-suppressing effect. It's possible that the warmer temperatures encourage "suicidal germination" whereby seeds germinate but fail to grow under the plastic.

