



Site Prep Guidelines

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*Note: If there are any [FLEPPC Cat. I or II exotic invasive species](#) within a site, or any Cat. I invasives within the vicinity of the planting site, planting is not recommended until said invasives have been **completely eradicated**. Invasives are classified as such for a reason, and the concern is that seed from an invasive could compromise the site. Establishing natives on a site with invasives is a restoration project that will take at least a few years of diligent weed management and are not recommended for this program.*

Non-chemical methods of site preparation

If done properly, the most effective non-chemical method is **soil solarization**. An article detailing the process is included at the end of this document.

Another effective but expensive nonchemical method is:

1. removal of at least top 3 to 6 inches of topsoil and replacing it with weed-free soil (not compost), and
2. turn plowing (aka soil inversion). Turn plowing essentially flips the soil profile upside down, so that subsoil is on top and topsoil with weed seeds, etc. is buried a foot or more.

Chemical method of site preparation

It is strongly suggested that weedy sites be avoided due to significant risk of failure, especially if establishing from seed.

1. About 4 weeks before planting/seeding, apply glyphosate per label directions.
 - Avoid products that provide residual, extended, or pre-emergent weed control.
 - Apply only to non-stressed vegetation. For example, if vegetation is suffering from drought, do not apply.
2. Repeat application of glyphosate 10-14 days later, per label directions
3. 10-14 days after second application (and no more than a day before seeding/planting):
 - mow/string trim dead vegetation so as to leave stubble of 1 inch or less, with clippings being discharged off the site to be seeded if using a mower.
 - remove all dead vegetation, thatch, and clippings by any method that minimizes soil disturbance and exposes bare soil; if using a rake, use a leaf rake.



Let the sun shine in to eliminate weed problems before you plant

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Have a small area where you want to plant wildflowers? Concerned about weeds? You should be, even in planting sites where weeds don't seem like they will interfere with establishing and managing your wildflower garden. An abundance of weed seeds can lurk in the top few inches of soil just waiting for some sort of disturbance. And from the weeds' point of view, disturbance can range from tilling the soil to eradicating existing vegetation with an herbicide.

For small wildflower gardens, soil solarization is a very effective means of obtaining a weed-free planting site. But it takes time and patience. Solarization is most effective when done from June to mid-August. The sun is high in the sky, days are long, and the temperature is highest. (Although desired results may be achieved with soil solarization at other times during the year, it is not recommended.) The method works by heating slightly moistened soil to as much as 140°F near the surface, according to a University of California publication. Moist heat is every effective at killing seeds and even tubers and rhizomes of noxious weeds, like nutgrasses (*Cyperus* spp), that are close to the surface.

Use clear plastic for soil solarization, which allows the sun to heat up the soil via the greenhouse effect (the same reason cars get so hot in the sun). Black plastic is not recommended, as it prohibits UV and infrared light penetration, which is necessary for killing vegetation beyond the first couple of inches of soil. Don't be concerned if you initially see some green plants emerge after you lay down the plastic. They will die after a few sunny days.

Basic solarization steps

1. Eradicate vegetation and debris from the area to be solarized.
2. Till the soil 12-18 inches deep. Break up clods of soil, the finer the texture the better. Remove any sticks, roots, stones, and other debris brought up to the surface a result of tilling.
3. Rake the area so that the surface of the tilled area is smooth.
4. Irrigate so that the entire soil profile is slightly moist (but not soggy). Moist soil is much better than dry soil at conducting heat. Also, moist heat is very effective at killing seeds.
5. Cover the site with 3 to 6 ml clear plastic. Bury the edges of the plastic about 8 to 12 inches so the plastic cover is snug; the plastic needs to be snug and buried around the perimeter to prevent wind from lifting it up. Edges may also be weighted down rather than buried.
6. The soil solarization process takes 6 to 8 weeks. You can leave the plastic in place until you are ready to plant.

For more information

- Robert McSorley and K.G. Harsimran. *Introduction to soil solarization*. ENY-062, Entomology and Nematology Department, Florida Cooperative Extension Service, IFAS, University of Florida, Gainesville, FL.
- Stapleton, J.J., A. Wilen, and R. H. Molinar. 2008. *Pest notes: Soil solarization for gardens & landscapes management*. UC Statewide IPM Program, University of California, Davis, CA 95616.