

Twelve Steps for Successful Soil Solarization

1. Plan to solarize a portion of your garden when solar radiation is optimal (June through August).
2. Avoid areas with shadows or north-facing slopes.
3. Rototill the soil to incorporate current weeds, crop residues, compost, fertilizers, etc.
4. Remove any sharp sticks, stalks, etc. that could puncture the plastic.
5. Thoroughly moisten the soil (or wait for a good soaking rain).
6. Cover the moist soil with clear, polyethylene plastic sheeting.
7. Bury the edges of the sheeting with soil, landscape timbers, etc. to prevent wind from getting underneath the plastic or hot air from escaping.
8. To achieve the highest solarization temperatures, cover the first sheet with another sheet of clear, polyethylene sheeting. (The first sheet may be black if the second sheet is clear.)
9. If you use two layers, create an air “gap” between the layers of sheeting with strips of insulation, small blocks of wood, bricks, etc. Avoid materials with sharp edges. Bury the edges of the second sheet.
10. Keep the top surface free of dust and water during the solarization period.
11. Remove the plastic after 4 or 5 weeks (perhaps sooner if hot, sunny clear days have been common).
12. When planting your garden, avoid the outer edge (1-2 ft) of the solarized area. Avoid rototilling soil deeper than two inches or digging deep holes.

Enjoy your healthier garden with fewer weeds and disease problems!

Craig H. Canaday, University of Tennessee, Dept. of Entomology & Plant Pathology, WTREC, Jackson, TN 38301, tele: 731-425-4746; ccanaday@utk.edu.