SOIL SOLARIZATION

- **Websites with description of soil solarization:**
  http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn74145.html
  http://ucanr.edu/sites/Solarization/files/198766.pdf
  http://vric.ucdavis.edu/pdf/soil_solarization.pdf

- **Sources of plastic in California (Stapleton, James, 2006):**
  3. MIP-Co Ag Plastics
  Hank Monahan or Mark Lauman
  P. O. Box 12097, Palm Desert, CA 92255
  Phone: (760) 779-9401/889-0449, FAX: (760) 773-0744, Email: rozhank@msn.com
  or
  Pieter de Groot
  P. O. Box 3156, San Luis Obispo, CA 93401
  Tel: (805) 549-9540, Fax: (805) 549-0384, Cell: (805) 431-3119
  E-mail: cpdegroot@earthlink.net, Website: www.mipcoagplastics.com

- **UC-IPM PLASTIC TARP (http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn74145.html)**
  "3. Plastic Tarp Choice
  Plastic material: In general, transparent or clear plastic is most effective for solarization, as the heating rays from the sun will pass through the sheet and be trapped to heat the soil below. Usually, black plastic is less effective because it absorbs and deflects part of the heat rather than trapping as clear plastic does. However, in cooler or coastal areas, black plastic is sometimes better than clear, because weeds won't grow beneath it, as they will under clear plastic when the air temperatures are too low to kill them. In this case, the black plastic should be left in place for several weeks during the hottest part of the year.
  Several thicknesses of plastic tarp are available.
    - Thin plastic provides greater heating, but is also more susceptible to tearing from wind or animals walking on it (1 mil).
    - Slightly thicker plastic is better in windy areas (1.5 to 2 mils).
    - Thicker plastic can be used if the treated area is small (4 mil, for example).
      (Note: 1 mil = 0.001 inch or 0.025 mm)

  Plastics designed for large-scale solarization are usually treated with an ultraviolet (UV) inhibitor so they will not break down as quickly in sunlight. **For use in gardens, the rolls of 1 to 4 mil "painter's" plastic are available at larger hardware stores and are easier to obtain.** They will last just about long enough for the 3 to 5 week period of solarization, before beginning to break down. The plastic sheets should be watched closely so they can be removed before deteriorating to the point where removal and disposal are difficult. If a longer solarization period is desired, small areas can be covered again with fresh plastic. Any holes or tears should be patched with durable patching tape.
  For small treated areas in a small garden or on a lawn in cooler climates, it may be helpful to use a double layer of plastic with air space created by objects such as plastic bottles or PVC pipe between the layers. This has been shown to raise soil temperatures an additional 2° to 10°F over temperatures obtained a single layer of clear plastic."

So it seems like the easiest solution for the home gardener is to get non-UV resistant "painters plastic" from a retail home improvement store and just watch it so that you can remove it and throw it away when it starts to degrade. This is probably the cheapest and easiest solution.

Notice two other suggestions. First, black plastic can be better if conditions are not full sun and hot since blocking the sunlight kills some of the weeds. Second, there is mention of double layer of plastic with an air pocket to further raise the temperature.