



UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources
UC Master Gardeners of Napa County

Healthy Garden Tips

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SOIL SOLARIZATION

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SOLARIZING CAN HELP CORRECT SOME SOIL PROBLEMS

If your garden has: NEMATODES, WILT, FUNGUS or WEEDS, then solarizing can work for you. Make solarizing a regular part of your 4-year crop rotation.

The solarizing process kills common disease-causing fungi, plant eating nematodes and many weed seeds. High soil temperatures activate minerals and make plant nutrients available. Follow this step by step 'natural' process to improve your soil.

MATERIALS NEEDED

- CLEAR plastic tarp (1 to 4 mils thick)
- Water
- 6 to 8 weeks of sun at the hottest time of the year

HOW TO SOLARIZE YOUR SOIL

Step #1:

Dig, turn and smooth soil. Remove sticks and clods that may puncture the plastic cover.

Solarizing works best when the clear plastic cover is very close to the soil.

IRRIGATE

Step #2:

Water the area to be covered. Wet soils heat faster and deeper.

USE CLEAR PLASTIC – NO HOLES!

Step #3:

Place the clear plastic cover over the entire area. Minimize the air space under the cover. Anchor the four corners so the cover will not move during the next step.

MAKE A TIGHT AIR SEAL

Step #4:

Bury all edges of the plastic cover with soil to hold it in place and to trap the air inside. Use your shovel to dig a small ditch under the cover 3-4 inches inside the outer edge and place the soil from this ditch on top of the cover so the outer edge of the cover remains exposed beyond the soil band. You should make a complete soil band all around the cover.

LET THE HOT SUN WORK FOR YOU

Step #5:

Leave the clear plastic cover in place 6 to 8 weeks and allow the sun to work for you. The sun heats up the wet soil. Soil heating continues to about 120°F and is called solarizing. Solarizing KILLS many fungi, nematodes, weeds and other pests. Keep the animals and children off the cover.

Step #6:

Remove the cover. Covers may be washed and reused until they become clouded or brittle.

Step #7:

Now you are ready to plant. Expect a BIG improvement in plant growth.

Additional Reading:

Pests of the Garden and Small Farm, UC ANR Publication #3332.