

## OL 305 Assignment Three Discussion

Online Learning: OL 305

The Urban Garden: A Small Vegetable Garden for Family Food & Nutrition  
Center for Sustainable Development

<https://nonprofit.csd-i.org/urban-garden-vegetable-garden-family-food-nutrition/>

**How to Grow Food in the City.** How your nonprofit can start a small space vegetable garden program: Fresh vegetables for at-risk urban families.

### This week's resources:

OL 305 Assignment Three Homework Instructions

OL 305 Assignment Three Discussion

How-To Build a Small Batch, No Cost/Low-Cost Soil Solarization System

Background Research and Development of Magee Soil Solarization System

Scientific Study: Time and Temperature Requirements for Weed Seed Thermal Death

**Discussion 3.** Soil Part One: Select healthy soil. What kind of soil? Where to get it? How to weed-proof it.


Start small. Try to focus on 4 to 6 containers maximum. This way if you need to buy soil, or sterilize soil, you only need to do a little bit per season. You can add 4 to 6 containers each year as your garden grows and as you learn how to make it grow well.

**This Week's Goal:** Choose the soil that you want to use and get enough to fill at least 2 containers.

Each one of you will come with a different set of resources available. Some of you will be able to run down to your local nursery and buy potting soil for your containers—or ready-made and bagged compost for your containers.

Others (like me!) don't have access to store-bought soil. So you have to make decisions about where to get your soil from.

Over time, my container soil was just gathered from flowerbeds or wherever. I just found soil as I needed it when I got a new container. That was a little naive. I discovered that this led to problems that developed over time.

	<p>Recently weeds in my containers hit some kind of a threshold point where within a couple of weeks—after planting say three of rows of carrot seeds—I would suddenly have an entire container full of weeds and could no longer see/protect the new carrot seedlings during weeding—and I was spending an unusual amount of time weeding.</p> <p>All of my containers had become equally choked with weeds. I'm not certain where all of these weeds suddenly came from. Possibly from some manure that I used. Perhaps they had just been developing over the past 15 years and hit a peak. I was spending hours weeding.</p> <p>Photo to the left. Non-Solarized Soil Weed Test After Four Weeks. Beneath the weeds are small, just germinated carrot seedlings. Impossible to weed without uprooting the carrots.</p>
---	--

**Weed and pathogen free soil.** So my suggestion to you if you have access to and can afford to purchase sterilize soil: do it. I would even go so far as to test it. Here are a couple of photographs of 1) some soil, 2) some chicken manure, and 3) some worm compost that I stuck in some pots and watered for three weeks to see if any weeds came out of them. The chicken manure had been sterilized and so had no weeds after three weeks. The worm compost had no indication of sterilization—but after three weeks it also had no weeds. The soil, which I sterilized using my soil solarization system also had virtually no weeds (3!) after three weeks.

<p><b>Photo Left:</b> Chicken Manure (l) and Worm Compost (r) Weed Test Day 1.</p> <p><b>Photo Right:</b> Chicken Manure (l) and Worm Compost (r) Weed Test after Three Weeks – No Weeds.</p>		
---	--	---

**Photo Left:** Solarized Soil Weed Test Day One

**Photo Right:** Solarized Soil Weed Test After 3 Weeks: No Weeds

This soil came from the small batch soil solarization trial. The soil was in the system for four days during which time it was at or above 140° F (60° C) for 14 hours and was also at or above 158° F (70° C) for four hours. No weeds!



If you planted seeds in some seed trays in week two, you will have at least six weeks before they've germinated and grown enough plant into a container. That's six weeks will give you a three-week window to test your soil for weeds.

If your soil shows weeds after three weeks—and you have started small with a few containers—go ahead and use the soil—just to get started. But either look for some weed free soil or use my soil solarization technique to sterilize your next batch of soil for your next group of seeds. You should be able use this small batch soil solarization technique to solarize soil for three or four containers in the six weeks while the seeds you have planted in this course are germinating and growing.

I will provide two links for you to download information on how this small batch soil sterilization system works in this week's resource page.

If you know somebody with a compost bin, they might be willing to give you enough compost for your first few containers of soil. This will give you some wonderful soil full of organic matter and hopefully some worms. But it still may have weed seeds and it. So test that too.

**In summary, here are several ideas:**

1. If you can afford it and have access to it purchase weed free potting soil or compost.
2. Test it for three weeks to see if it is indeed weed free.
3. Try and find a kind person who will give you enough compost to fill your first three or four containers. This will give you healthy, organic material rich soil to get started with—but you will need to test that for three weeks for weeds as well.
4. If you don't have access to the soil described above, just use whatever garden soil you can secure. Test it for weeds—but use it just to get started with your first few containers even if it does show signs of weeds. Then you can use the small batch soil solarization system for sterilizing your next batch of soil for your next group of containers.