

Dear Dr. Fill

I spent a lot of money a few years ago on buying some beautiful kits to make raised garden beds that were almost waist high, and I've loved them. They are so easy to plant in and harvest from with no need to bend over. There was no fear of rabbits or raccoons nibbling my produce and there were very few weeds. At the time we built it, we filled it with a good triple mix and lots of nice compost, and because they are waist high, it was quite expensive. My veggies still grew well this summer, but I'm wondering if I should replace the soil this fall and start off new next spring. I'm thinking that the soil that is in there has likely lost all the nutrients by now. I've always heard that I need to throw out the soil in my urns that I grew flowers in and buy new soil each spring, but it would be extremely expensive to fill large raised bed with new soil each year, or even every 2 or 3 years. I'd appreciate any tips you can share.

Sincerely
A concerned vegetable gardener

Dear Concerned Vegetable Gardener

You do not need to replace all of the soil in your raised garden beds. Amending the existing soil is typically sufficient to restore nutrients to allow for better plant growth. It is true that both flowers and vegetables take nutrients from your soil and that this will change

the structure of your soil. It can make it lose its ability to hold water and even make it easier for pests and diseases to take hold. But adding some soil amendments should be all you need to do for a good healthy harvest next year.

The first thing you should do each fall is stir in compost. It is full of nutrients, microbes and living organisms which can easily be absorbed by the roots of plants when mixed into the soil. A good rule of thumb is to **replace or add 15 to 20% of compost** to the existing soil in a raised bed. That is more than enough to help recharge and improve tired soils. In some cases this means you'll be needing to remove some old soil to make room. Add it to your compost pile where it will be "recharged" with nutrients in the pile and since it will probably be quite dry, it can help absorb any excess moisture in your pile. (If your compost is dry in the pile, then add water when you add the old soil!) And if you have a small compost pile, topping it up with your old soil replaces the amount that you removed over the planting season, so you'll always have lots left for the following year.

For the lower type beds (18" or so deep) that are a typical size of 3' X 6', most successful gardeners recommend adding **2 full wheelbarrows of compost** each year and stirring it in well. When you have higher raised beds like you seem to have, it can be a bit trickier to shovel down

deeply to stir it in – if that's the case, you can **add the compost to the surface in the fall**, rake it in lightly, and over the winter it will work its way down into the soil to root level.

Whether you amend soil in fall or spring is really up to you, but there are some benefits to doing this job in fall so that new amendments can break down over the entire winter. This is especially true if you are adding homemade compost or chopped leaves from your yard, since they can work into the soil for several months and be turned over again in spring. You can also add seaweed in the fall if you have access to it as it provides a wealth of micronutrients.

There is one ingredient that too many gardeners don't think of adding to raised beds for vegetables, and that's perlite. We often add it to our soil mixes for flowers, but for some reason, don't often add it to the soil when we're growing vegetables. I think you'll find it will help to create a healthier, more productive garden. Perlite is a naturally occurring mineral that has been heated at very high temperatures until it almost pops like popcorn and produces the white fluffy product that looks a lot like Styrofoam that we see in bags of potting soil. It helps incredibly in the soil to keep it from becoming compacted and it creates air channels for water and nutrients to find their way to the roots of your plants. You can add it now or in the spring. Most gardeners wait until planting time

and work about a cupful or so in the planting hole for each of your transplants so that it's down at root level, loosening the soil where the plants need it loose. But the good thing about perlite is that it doesn't break down so that you won't need to be adding more and more of it each year. And then in the future, when you're adding your old removed soil to your compost bin, you'll be adding perlite to the compost bin too, where it helps keep the compost aerated.

You can also add some well-aged manure in the fall. If you remove some of your old soil and replace it with compost which gets stirred in, just put a few inches of manure on top and lightly rake it in. By spring, it will be breaking down and spreading throughout your soil, releasing its nutrients.

Even with compost and manure in your soil, some of your crops will still benefit from fertilizer. But that doesn't mean just any fertilizer. Many commercial fertilizers can actually harm the soil in your raised beds over time. They can alter the pH and increase the salt levels.

Using natural fertilizers will give a boost of nutrients to your plants, but can also improve the actual health of your soil. Worm castings are just one example of a great product that improves your soil health and provides a wealth of nutrients your plants will love.

And one final note, chop up some of your raked leaves and place them on the surface of the soil in your raised beds as a nice winter mulch. If you plant garlic in the fall in your raised bed, chopped dead leaves also makes a perfect mulch over it in the fall to prevent huge changes in temperature, and keep them around the stalks next summer where they regulate soil temperature and hold in moisture.

Thanks for the great question.

**Sincerely,
Dr. Fill**