

Raised Beds, Container Gardens Can Thrive With These Tips

Leimone Waite, Master Gardener, Feb. 16, 2019

Q: I have a garden area with raised beds. For the past couple of years I've had problems with my tomatoes getting late blight. Is there something I can do to prevent this from happening this year? Do I need to remove all the soil from the planters and start over?

A: Raised beds have many advantages, especially when soil on your property is heavy clay, shallow, or in some cases nonexistent — such as a paved area. Raised beds have other advantages, too, such as accessibility and ease of frost and pest protection.

A major disadvantage in most raised-bed gardens is limited space. This makes it difficult to rotate crops and you get more disease and pest problems because of this.



Planter boxes within planting containers provide dimension to the garden. (Photo: Brad Garbutt/Special to the Record Searchlight)

For a good integrated pest-management program in your garden, crop rotation is critical in maintaining productive, disease-free garden plants. Crop rotation is the practice of rotating the plantings in garden beds, usually every three-years. Gardeners follow one crop with another one from a completely different plant family. This can be a challenge in raised beds as most gardeners want to grow tomatoes and

peppers, both in the Nightshade Family (Solanaceae), year after year. Because many disease organisms are soil-borne and can persist in the soil, disease problems usually increase when the same plant family is planted in the same area in successive years. Similarly, insect problems can become more severe when crop rotation is not practiced.

Try rotating beds so that you're not growing any plants from the Solanaceae family in beds that had tomatoes, pepper or eggplant last year. If your raised beds are filled with potting soil, such as that which is sold for potted plants and seed starting, you may need to replace part of this every year as it breaks down quickly. There's an advantage to replacing this type of soil each year: Typically there's a build up of disease organisms and fertility declines when soil is used for more than one season. Container gardeners are always more successful when their artificial soil medium is replaced each year. Spent media can be composted where beneficial microorganisms in the compost pile can colonize it and break it down further.

If you do end up having to replace your soil. I recommend using a combination of mineral soils and compost or other organic material. Local mineral topsoil should also contain locally-adapted beneficial soil microbes including mycorrhizae (beneficial fungi), bacteria and protozoa. By adding compost, alfalfa meal/pellets and other organic amendments you can create a productive resilient garden soil.

If you're buying pre-amended top soils check to make contain they don't contain coarse woody debris. These are resistant to decomposition, as these can tie up the nitrogen in your soil for part of the growing season.

You should also avoid mixes with horse/steer manures which contain concentrated salts from saturation with animal urine. It's best to use non-amended topsoil, preferably with a loamy soil texture a balanced mixture of sand, silt and clay.

Before replacing soil in existing beds you may consider building additional beds if space is too limited to rotate crops. This will allow you to rotate them in future years.

Late blight usually overwinters in living tomato or potato tissues, including roots or potato tubers. Cleaning the garden early in the season and disposing of plant materials somewhere other than the compost pile or garden area is a good way to control the disease.

The Shasta Master Gardeners Program can be reached by phone at 242-2219 or email mastergardener@shastacollege.edu. The gardener office is staffed by volunteers trained by the University of California to answer gardeners' questions using information based on scientific research.