

Step #2: Keep the soil well-rooted.

Never leave soil without something growing in it. Roots are the main source of food for your microbial workforce.

Produced through photosynthesis, roots secrete sugars and other nutrients directly into the soil. They use these foods to attract bacteria and fungi, your basic core underground workforce. Without these roots, your workforce can shrink and disappear, victims of starvation. When well fed, soil organisms will return the favour by feeding your plants and protecting them from disease and pests.

Here are some tips for keeping your roots in the ground.

- Leave your annuals in place over winter. Although they may not look as nice as clean dark bare soil, your spent annuals (vegetables or flowers) will keep feeding your workforce and even when they expire, they will contribute the carbon and nutrients in their roots for the organisms to consume slowly over the winter.
- If you simply can't abide the look of dead plants in your garden, simply snip them off at ground level (putting the tops in your compost pile). Your workforce will get to munch on the remaining roots and later gets the rest of the plant to eat via the compost. Do not pull the plants out by the roots! This disturbs the soil and starves your workforce – a double whammy.
- Plant cover crops when your crop is finished. Farmers are adopting the use of cover crops to improve their soil and you can too. This tip applies primarily to vegetable gardens, where a dead crop of bush beans can be snipped off at ground level and a cover crop like annual ryegrass can then be planted, even as late as early October. Leave the cover crop in place over winter. They will feed the workforce, both as living roots and then as dead organic matter.
- You can plant right into any residue the following spring. If you don't like the way the residue looks, you can cover it with straw or some other organic mulch. If you decide to remove it, don't remove the roots. You can put the aboveground residue in your compost bin (or put it in the municipal organics collection program), giving it back to the soil the following season as mature compost.
- Many garden centres are now selling cover crop seeds for home gardeners. For more information on what types of plants to use as covers, check with your local garden centre or seed supplier, or visit compost.org or growarow.org.

