



# Crop Rotation

## What is crop rotation, and why is it important?

Crop rotation is an easy way to control diseases and insects at no cost. For example, tomatoes, cauliflower or cabbage planted in the same location each year will actually encourage buildup of certain diseases in the soil. By rotating crops, you are removing the host plant and preventing the spread of disease. Also, as overwintering insects emerge from the soil in the spring, they expect to find the same plant in the same place. By moving garden plants around, insect pests will have a harder time finding their target.

## How does crop rotation affect the soil?

Each crop has different fertilizer requirements. By changing the location of your crops you can avoid the risk of depleting the soil of specific nutrients. Some crops will actually add essential elements to the soil. By using crop rotation, you can actually build up the soil over the years.

## How do I do this?

It's easy! Plants are often grouped by families that share similar growth habits and cultural requirements. By knowing your plant families (and their garden companions) you can create a plan for your own garden rotation. The following example divides the garden into four sections. As you can see, each year, the vegetable groups are planted in a different section of the garden.

<b>Year 1</b>	<b><u>Tomato / Potato</u></b> Peppers, Tomato Eggplant, Potato	<b><u>Greens</u></b> Cauliflower Cabbage, Broccoli Lettuces	<b><u>Legumes</u></b> Peas Beans Pole beans	<b><u>Squash / Corn</u></b> Cucumbers Squash, Corn Pumpkins
	<b>Year 2</b>	<b><u>Squash / Corn</u></b> Cucumbers Squash, Corn Pumpkins	<b><u>Tomato / Potato</u></b> Peppers, Tomato Eggplant, Potato	<b><u>Greens</u></b> Cauliflower Cabbage, Broccoli Lettuces

<b>Year 3</b>	<u><b>Legumes</b></u> Peas Beans Pole beans	<u><b>Squash /Corn</b></u> Cucumbers Squash, Corn Pumpkins	<u><b>Tomato / Potato</b></u> Peppers, Tomato Eggplant, Potato	<u><b>Greens</b></u> Cauliflower Cabbage, Broccoli Lettuces
<b>Year 4</b>	<u><b>Greens</b></u> Cauliflower Cabbage, Broccoli Lettuces	<u><b>Legumes</b></u> Peas Beans Pole beans	<u><b>Squash /Corn</b></u> Cucumbers Squash, Corn Pumpkins	<u><b>Tomato / Potato</b></u> Peppers, Tomato Eggplant, Potato

**There are a few simple rules for crop rotation:**

- Don't follow tomato, peppers or eggplant with potatoes, or each other.
- Allow 3 years before replanting the same group in any given bed.
- Onions may be planted throughout all groups.
- Beets, carrots and radishes may be planted among any group, and replanted as early crops are removed.
- Don't forget to interplant with companion plants to minimize pesticide use. See the Companion Plants handout for some ideas on this practice.
- Keep good notes so you can duplicate successes.

**Another interesting idea—"Green Manure"**

To help build organic matter, you might also consider using a "green manure" sometimes called a cover crop. There are both summer and winter cover crops. Buckwheat makes a great summer cover, and would be used in conjunction with your garden rotation plan. Cereal rye is a good choice for fall planting. Sow it after your fall garden cleanup and then till it under in the spring.

By adding organic matter in this way, you will increase aeration and water holding capacity of your soil, prevent weed growth and soil erosion, and support the beneficial organisms necessary for a healthy, living soil.

**Where can I get more information?** We've only touched on the basics of crop rotation, but as you can see, it is a great way to reduce, or even eliminate the use of extra fertilizers in your garden. In addition, you are also building the soil. It is a proven, no cost method of vegetable production. Organic gardeners have been using these practices for years. Check your local library, the internet or organic gardening books and magazines for more information. Your local cooperative extension office is also a great resource.

<p><b>Compliments of:</b></p>	<p><b>For reorders contact:</b>          Franklin County Cooperative Extension          191 Franklin Farm Lane          Chamberaburg, PA 17201          (717) 263-9226          Fax (717) 263-9228          FranklinExt@psu.edu</p>	<p>This publication was made possible by funding from the U.S EPA, PA Dept. of Ag. Penn State, IPM, Penn State Cooperative Extension.          PSU does not discriminate against any person because of age, ancestry, color, disability of handicap, national origin, race, religious creed, sex, and sexual orientation or veteran status.          Prepared by Chris Maver, July 2003</p>
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