



Washington State University

Snohomish County Extension Fact Sheet



Connecting People, Resources, & Knowledge

Crop Rotation in Home Gardens

What is crop rotation?

Crop rotation is one of agriculture's oldest cultural practices. In a vegetable garden, crop rotation involves changing the planting location of vegetables within the site each season. Crop rotation is used to reduce damage from insect pests, to limit the development of vegetable diseases, and to manage soil fertility.

Why is crop rotation important?

Each vegetable can be classified into a particular plant family. Plants belonging to the same family are often susceptible to similar insect pests and diseases, and also have similar nutrient requirements.

When vegetables in the same plant family are grown year after year in the same area of a garden, they provide insect pests with a reliable food source and disease-causing organisms (i.e., pathogens) with a continual source of host plants that they can infect.

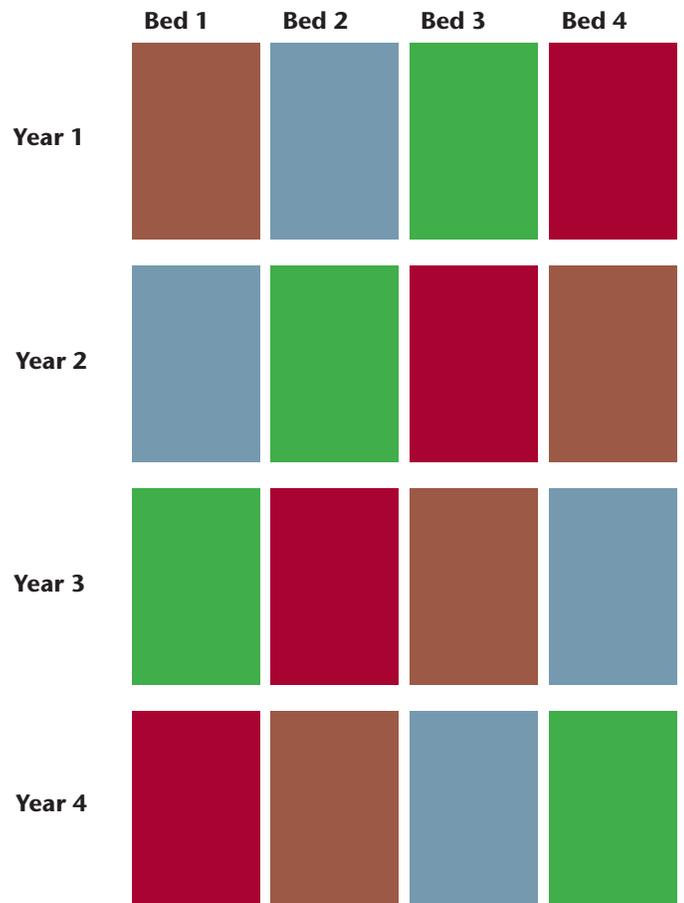
Over time, insect pest and pathogen numbers build in the area and damage to vegetable crops increases.

Using crop rotation can help keep insect pest and pathogen numbers at lower levels.

In addition, the type of vegetable grown in a particular area in a garden has a direct effect on the fertility of the soil in that area.

Each vegetable is unique in the type and amount of nutrients it extracts from the soil. Crop rotation can even out the loss of different soil nutrients and allow time for nutrients to replenish.

Four Bed/Four Year Crop Rotation	
Potatoes	Solanaceous Family
Kale	Brassica Family
Peas	Legume Family
Beets	Chenopod Family



Crop Rotation in Home Gardens, cont.

How do I plan a crop rotation?

Plan the crop rotation for your vegetable garden based on the types of vegetables that you grow. Vegetable crops in the same plant family should NOT be planted in the same area of a garden year after year. See diagram page 1.

For example, if tomatoes are planted in a bed or area of a garden one year, vegetable crops such as peppers, eggplant, potatoes, or tomatoes should not be planted in the same bed or area the following year because all of these plants belong to the nightshade family (*Solanaceae*). The table provides a guide to common garden vegetables and their plant families.

Crop rotations vary in complexity. They can be as simple as changing vegetable locations annually, or can

be extremely involved, using cover crops/green manures, and/or leaving parts of a garden fallow (i.e., planting nothing in an area) for a season.

Cover crops/green manures are planted before, after, or in place of a vegetable crop to improve soil fertility and drainage, prevent erosion, and hold nutrients. See WSU Extension Fact Sheet FS111E, *Cover Crops for Home Gardens West of the Cascades* for more details.

Fallow or not?

Leaving an area fallow is often less desirable than planting a cover crop/green manure because an area without a planted crop tends to be more prone to erosion and can end up with a soil that does not drain properly. Alternatively, the area may become filled with weeds that will cause problems for future vegetable production.

For crop rotation to be most effective, DO NOT plant an area with vegetables or cover crops/green manures from the same plant family more than once every three to four years. This length of crop rotation can be difficult to achieve in small gardens, but even changing plant families grown in an area of a garden from year to year is helpful in managing insect pests and diseases.

To help in planning crop rotations, keep a garden log or map as a reminder of where vegetables are planted each year.

For more information

Home Vegetable Gardening in Washington, WSU pub #EM057E

Cover Crops for Home Gardens West of the Cascades, WSU pub #FS111E

Market Vegetable Gardens: Planning for Success, WSU pub #EM032E

Common Name	Botanical Family	Vegetables
Carrot Family	<i>Apiaceae</i>	carrot, celery, cilantro, dill, fennel, parsley, parsnip
Goosefoot Family	<i>Chenopodiaceae</i>	beets, spinach, Swiss chard
Gourd Family	<i>Cucurbitaceae</i>	cucumber, muskmelon, pumpkin, summer squash, watermelon, winter squash
Grass Family	<i>Poaceae</i>	barley, corn, wheat, rye, rice
Broccoli Family	<i>Brassicaceae</i>	arugula, broccoli, Brussels sprouts, cabbage, cauliflower, Chinese cabbage, collards, kale, kohlrabi, mizuna, mustard greens, pak choi, radish, rutabaga, turnip
Nightshade Family	<i>Solanaceae</i>	eggplant, pepper, potato, tomatillo, tomato
Onion Family	<i>Alliaceae</i>	chives, garlic, leek, onion, shallot
Pea/Bean Family	<i>Fabaceae</i>	alfalfa, bush bean, kidney bean, lima bean, pea, pole bean, soybean
Sunflower Family	<i>Asteraceae</i>	endive, lettuce, Jerusalem artichoke, sunflower
Mallow Family	<i>Malvaceae</i>	okra



Snohomish
County

WASHINGTON STATE UNIVERSITY
EXTENSION



Snohomish County

snohomish.wsu.edu

600 128th St SE Everett, WA 98208 (425) 338-2400

Extension programs and employment are available to all without discrimination. Evidence of noncompliance may be reported through your local Extension office.