ASK A MASTER GARDENER

Crop Rotation

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PIXABAY

Crop rotation helps to prevent the depletion of soil nutrients and the buildup of soil-borne diseases and pests.

Question: I have a tendency to plant the same vegetables in the same spot year after year. My neighbor told me that if I start implementing crop rotation, I can improve the health and yield of my vegetable garden. I am willing to change the location of my plants this next gardening season, but I am not really sure what to do. Any advice?

Answer: Crop rotation has been used in agriculture for centuries. It is the practice of planting different crops in succession in a particular area for several years. This method helps to prevent the depletion of soil nutrients and the buildup of soil-borne diseases and pests that can occur when the same crops are grown in the same area year after year.

The first step in implementing crop rotation is to divide your garden into sections. You can do this by drawing a map of your garden and dividing it into equal sections. Each section should be large enough to accommodate a single crop.

You can also use raised beds or containers to create separate planting areas.

The next step is to decide which crops you want to grow in each section. It's important to choose crops that are different from the ones grown in the previous year. For example, if you grew tomatoes in one section last year, you should choose a different crop, like lettuce or beans, to grow in that section this year.

Depending on the size of your garden, you will plan rotations that cover three, four, five, six or more years.

Another important factor to consider when implementing crop rotation is the family of each crop. Plants in the same family tend to have similar nutrient requirements and are susceptible to the same pests and diseases. Therefore, it's important to avoid planting crops from the same family in the same section in consecutive years.

There are seven major family groups:

1. Alliums: Onions, shallots, leeks, and garlic.
2. Legumes: Green beans, green peas, southern peas, peanuts, soybeans. All legumes are soil "fixers" and share the benefit of adding nitrogen back to the soil.
3. Brassicas: Broccoli, cauliflower, cabbage, kale, Brussels sprouts, turnip greens, radishes, collards, Chinese cabbage, mustard greens. These need nitrogen-rich soil. Plant after the legume family.
4. Nightshades: Tomatoes, eggplant, peppers, and potatoes. All are heavy feeders which need rich soil. They are affected by the same diseases. Never follow tomatoes after potatoes.
5. Umbellifers: Carrots parsnips, fennel, parsley, and dill.
6. Cucurbits: Zucchini and summer squash, cucumbers, pumpkins and winter squash, melons (watermelon, cantaloupe), and gourds.
7. Chenopodiaceae: Swiss chard, spinach, beets
8. Vegetables in families one and two can be planted in the same bed and vegetables in families six and seven can be planted in the same bed.

Perennial vegetables such as artichoke, asparagus, strawberries and rhubarb and any herbs will not be part of your crop rotation plan. These plants are typically grown in the same spot for several years and are not rotated like annual vegetables.

The concept of crop rotation is not complicated, but it's a good idea to sketch out your garden and write down what is planted in each bed each year.

By planting different crops in different sections of the garden each year, the soil is given a chance to recover and renew itself. Healthier soil leads to greater yields. Crop rotation also can help reduce pest and disease problems. Many pests and diseases are specific to certain crops, and by planting crops in different sections of the garden each year, these pests and diseases are less likely to become established.

Do you have a gardening or insect question? Contact the Douglas County Master Gardeners at douglasmg@oregonstate.edu or 541-672-4461 or visit 1134 SE Douglas Ave., Roseburg. Douglas County Master Gardeners are trained volunteers who help the OSU Extension Service serve the people of Douglas County.