Plant Rotation

It is time to prepare the backyard garden for warm weather plants and seeds. Plan for plant rotation or leave some spots fallow. Crop rotation is a cultural practice of growing different (dissimilar) crops in succession in the same spot to improve crop productivity. Crop rotation deters pathogens and diseases in the soil from previously planted plants. It's an age-old plan that decreases pests in the site while increasing essential nutrients by rotating plants with different nutrient needs. Consideration is given to which garden plants are compatible and which plants repel one another. Also, plant rotation considers alternating short roots with long roots.

Plant rotation can be accomplished in any sized garden but, notably, a small garden spot is more challenging for rotating crops than a larger one. A small garden can be divided into 4 sections, rotating crops in each section. Make notes for the following years.

Pathogens like fungi, bacteria, and nematodes build up to a dangerous level without practicing crop rotation and soil becomes clumped without rotation. Rule of thumb - do not to plant the same crop in the same area for 2-3 years. This would include plants from the same family, as are listed below.

Performing a soil sample is step one. The Tulsa County Extension Office can obtain results for you from OSU which usually takes a couple of weeks. Nitrogen is commonly deficient because it readily leaches through the soil and is sapped by previous plants grown. For instance, corn is a heavy feeder and consumes lots of nitrogen; it is best planted where nitrogen-fixing plants like beans and peas have been previously planted. On the other hand, light nitrogen feeders include squash, carrots, lettuce and onions.

Various tips, tricks and methods to consider:

- Make sure the garden is cleaned of weeds and debris and tilled two weeks before planting.
- Use only certified and disease resistant plants. Use cultural, mechanical, and biological measures before using artificial fertilizers.
- Avoid planting crucifer plants (cabbage, cauliflower, broccoli, and radish) for two years and replace by corn (a grass plant).
- Rotate crops in the <u>same crop</u> but also crops in the <u>same family</u>.
    - Tomato, peppers, potatoes and eggplant are in the tomato family
    - Beans and peas are in the legume family
    - Beets, spinach and Swiss chard are in the beet family
    - Cucumber, melons, pumpkins, and squash are in the cucurbit family
    - Chive, garlic, leek, and onions are in the onion family

    - Broccoli, Brussel sprouts, cabbage, kale and turnips are in the Cole crop family
    - Plant asparagus next to basil, parsley, and tomato
    - Corn and radishes go together like birds of a feather
    - Beans, cauliflower, potatoes and carrots go together.
- Avoid planting together:
    - Carrots with onions
    - Corn with kohlrabi
    - Radishes with sunflowers
    - Beans with cucumbers
    - Cabbage with pumpkin
    - Peas with tomatoes
    - Corn with potatoes
    - Carrots with potatoes
- A few plants that enhance others in the vegetable garden are:
    - Dill with cabbage family
    - Rosemary with beans
    - Tarragon with most vegetables
    - Thyme with eggplant, potato, strawberry, and tomatoes
    - Sage with tomatoes and strawberries
    - Bee balm with tomatoes.

Flowers can also be rotated for better production. When planning a flower garden, rotate annual flowers with perennial and bi-annual varieties.

When plant rotation practices are practiced in the home gardens, production increases, plants are healthier, and the gardener is more satisfied.

Related OSU Fact Sheets: EPP-7652, EPP-7666, EPP-7626, EPP-7640, HLA-6431, HLA-6013, HLA-6032, HLA-6007.

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