

# Who's Your Buddy – Crop Rotation

Crop rotation is the practice of growing different crops in the same area over successive growing seasons. In other words, it means alternating what is grown each year and where it is grown. This is key to successful vegetable gardening for a number of reasons.

- Reducing nutrient deficiencies
  - Different vegetables have different nutrient requirements. Planting the same crop year after year in the same spot can deplete the nutrients in the soil. Plants like beans, peas and clover actually fix nitrogen in the soil, making soils more productive for the next year's crops.
- Reducing pests and diseases
  - Crop rotation reduces the recurrence of pests and pathogens by disrupting their life cycles. Many pests and diseases overwinter in the garden's soils. If what the pest ate last year isn't here this year, they'll move on to greener pastures and away from the new vegetable crops. Likewise, diseases mostly caused by fungi, won't be able to reproduce if their usual host isn't present.
- Improving soil structure
  - Planting crops with varying root systems benefits the soils by improving aeration and water retention, and reducing soil erosion. Many farmers and gardeners plant cover crops for just this purpose. Winter wheat and clovers, planted in the fall, are turned under in the spring, improving soils by adding 'fiber' into the diet as well as nutrients.
- Reduce need for chemical fertilizers and pesticides
  - Using crop rotation decreases overwintering pests reducing the need for pesticide use. Rotating in nitrogen fixing plants lowers the need for synthetic fertilizers and herbicides. Not only does this make the garden vegetables healthier but these methods save time and money!

## Practicing crop rotation

- Crop rotation is generally practiced by a 3–4-year rotation. Rotation is based on vegetable families. Once a family is planted, that family should be avoided for 3-4 years. Botanical families include:
  - Alliums – onion, garlic, leeks
  - Brassicas – cabbage, broccoli, kale
  - Cucurbits – squash, cucumbers, melons
  - Legumes – beans, peas
  - Nightshades – tomatoes, peppers, potatoes
  - Umbellifers – carrots, parsley, dill

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- Planting ideas
  - Keep a log of what was planted and when. A picture can say a thousand words, especially if the user's cell phone has the 'date taken' imbedded in the photo.
  - Using multiple beds, raised or otherwise, can allow planting sooner than the 3-4-year moratorium, if they are far enough apart. Keep in mind, while this may

prevent overwintering fungal pathogens in the soil, those nasty bug-a-boos fly and crawl.

Crop rotation is the key to a healthy vegetable garden. Diversifying the vegetables planted not only improves the garden soil, reducing the need for chemicals, but also produces healthier fruits and vegetables. An added bonus, crop rotation gives the gardener a chance to explore all the wonderful fruits and vegetables that exist and stimulates the culinary palate. Who knew growing vegetables could be so much fun! Bon Appetit!

Alaine Bush, Advanced Master Gardener

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