

**Saturday, May 26, 2012 column by Vijai Pandian**

### **Companion Plants for the Vegetable Garden**

In natural systems, plants have evolved various ways to interact with other plants, and their influence can result in a mutual benefit or can aid another plant in protection from pests or improve its vigor. These gangs of friendly plants that utilize the positive attributes of each other for their growth and development are called companions. A classic example of companion plants is beans, corn, and squash where the stalk of the corn act like a trellis for climbing beans, and the beans in turn fixes the nutrient nitrogen in the soil for corn. The squash smothers out the competing weeds. This companion planting system is called the “Three Sisters Garden” and was developed by our Native Americans to create a community of a balanced ecosystem and food diet in their life style.

Some companion plants act like an ally in protecting plants from pest and weeds by reducing the use of pesticides in the garden. These ally plants can be inter-planted with the main crop or can be used as a border plant. For instance, use of collards in the perimeter of the garden lures the diamond black moth insect away from the cabbage plants. In contrast, certain ally plants like garlic, basil, chives, and onions are known to repel pesky insects by the scents emitted from leaves and flowers and can be selectively inter-planted with other vegetable crops. Flowering marigolds are believed to repel the Colorado potato beetle, cucumber beetle, flea beetle, and squash bug. Also, certain ally plants are known to release toxic chemicals either from their roots or shoots to deter pests and weeds. The roots of African and French marigold emits thiopene, a bio chemical that kills certain nematodes (microscopic roundworms) which attack garden plants. Seeding winter rye as a cover crop in fall and tilling it back in spring can suppress weeds from germination.

But not all plants get along well with others and are grouped as enemies, as they can have a negative influence on certain neighboring plants. An excellent example is black walnut which releases the juglone chemical in the soil and suppresses the growth of many vegetable crops.

Here’s the compiled list of companion plants, allies, and enemies for common vegetable crops published by Todd Weinmann, Horticulture Extension, from North Dakota Cooperative Extension.

#### **Asparagus:**

*Companion:* Basil, parsley, tomato.

*Ally:* Pot marigold deters beetles.

#### **Beans:**

*Companions:* Beet (to bush beans only), cabbage family, carrot, celery, chard, corn, cucumber, eggplant, pea, potatoes, radish, strawberry.

*Allies:* Marigold, nasturtium, and rosemary deter bean beetles. Summer savory deters bean beetles, improves growth and flavor.

*Enemies:* Garlic, onion, and shallot stunt the growth of beans.

**Cabbage Family:**

*Companions:* Beet, celery, chard, cucumber, lettuce, onion, potato, spinach.

*Allies:* Chamomile and garlic improve growth and flavor. Catnip, hyssop, rosemary and sage deter cabbage moth. Dill improves growth and health. Mint deters cabbage moth and ants, improves health and flavor.

*Enemies:* Kohlrabi and tomato stunt each other's growth.

**Cucumber:**

*Companions:* Bean, cabbage family, corn, pea, radish, tomato.

*Allies:* Marigold deters beetles. Nasturtium deters aphids, beetles and bugs, improves growth and flavor. Oregano deters pests in general. Tansy deters ants, beetles, bugs, flying insects.

*Enemy:* Sage is generally injurious to cucumber.

**Onions:**

*Companions:* Beet, cabbage family, carrot, chard, lettuce, pepper, strawberry, tomato.

*Allies:* Chamomile and summer savory improve growth and flavor.

*Enemies:* Onions stunt bean, pea.

**Pumpkins:**

*Companions:* Corn, melon, squash.

*Allies:* Marigold and nasturtium deters bugs, beetles. Oregano provides general pest protection.

**Tomatoes:**

*Companions:* Asparagus, carrot, celery, cucumber, onion, parsley, pepper.

*Allies:* Basil repels flies and mosquitoes, improves growth and flavor. Bee balm, chives, and mint improve health and flavor. Borage deters tomato worm, improves growth and flavor. Dill, until mature, improves growth and health. Once mature, it stunts tomato growth. Marigold deters nematodes. Pot marigold deters tomato worm and general garden pests.

*Enemies:* Corn and tomato are attacked by the same worm. Mature dill retards tomato growth. Kohlrabi stunts tomato growth. Potatoes and tomatoes are attacked by the same blight.