

Companion Planting

In nature, plants are ALWAYS found in groups with each other. One provides nutrients to the other, one gives the other needed shade, or they just don't care if they are growing together. Because so few plants dislike each other, use them to maximize your growing beds!

The primary crop in this field is tomatoes, but with companion planting we also get parsley, basil, onions, cut flowers, and few weeds!

Flowers such as zinnias are grown to attract pollinators, and they double as cut flowers.

Rocks are piled next to heat-loving plants. Sun heats them during the day, and they release heat at night.



Parsley is lined up south of tomatoes. Plants get all the sun they need. They take up extra space that weeds might otherwise inhabit.

Onions were planted during the cool spring. These ones were left to grow large and/or go to seed for next year's crop.

Pest insects don't like aromatic herbs like purple basil.

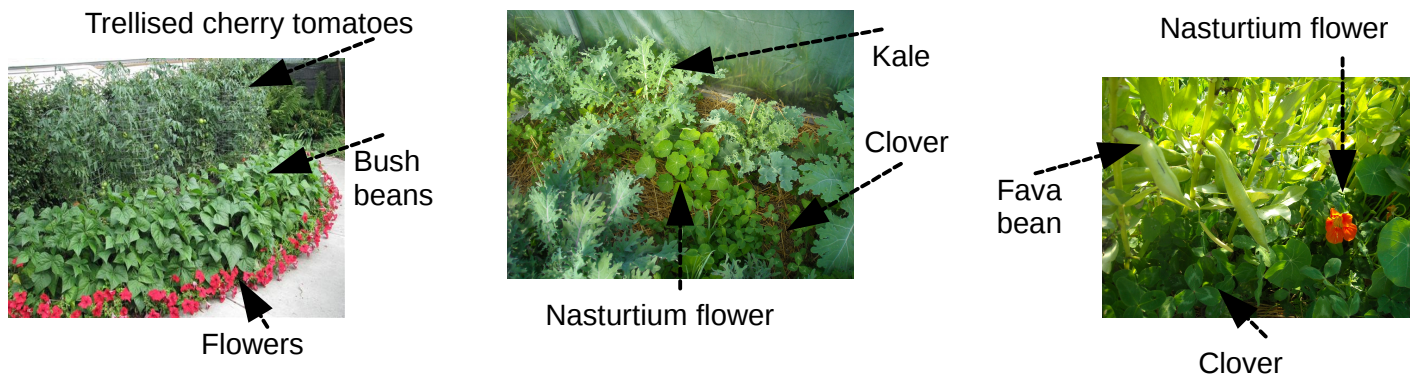
Marigolds repel nematodes in the soil, and deer don't like them either.

General Guidelines for Planting:

- **Structure.** Tall, short, bushy, slender, thin leaves, fat leaves - plant structure often tells you what to put together. We want all incoming sunlight to go to our crops (shading out weeds). A classic combo is pole beans (horizontal leaved plant) climbing on corn (vertical leaved plant).
- **South-facing.** The sun cycles away from and then back toward the south throughout the growing season. We can site cooler-season crops in the shadow of hot-season crops. We can put heat-lovers south of taller darker plants, creating a heat trap.
- **Fertility.** Some plants suck up heavy amounts of nutrients from the soil (feeders). Others provide nutrients (givers). The classic corn and beans combo are grown because corn is a heavy feeder and beans give nitrogen. **ALWAYS include givers** in your plant combinations or the soil will eventually become depleted.
- **Pest Control.** Most annual plants and fruit trees are susceptible to at least 1 pest. Many flowers and herbs repel pests. **ALWAYS include pest control** in your plant combinations.
- **Germination.** Plants germinate in varying conditions of temperature, moisture, and time needed. Plants with like-needs can be seeded as a mix. For example, carrots, beets, and turnips, all need cool wet weather, and can be seeded in rows or broadcast together.
- **Water.** Some plants need to be high and dry to thrive, while others like it wet. Place plants in the conditions they prefer, along with other plants with those preferences.

Guidelines Cont'd

- **Diversity.** Put together plants in different families. Plants within the same family attract similar pests and disease. Mix it up to grow healthy crops! There are only a handful of common annual families to learn if you haven't yet – cabbage family, tomato, bean, squash/melon, onion, lettuce/sunflower
- **Weeds.** Let some weeds go. You don't want your garden beds overrun with weeds, but some weeds are beneficial. Clover fixes nitrogen in the soil, plantain and dandelion are wonderful medicines, chickweed is extremely nutritious, most blooms attract good insects. Learn the use for the weeds in your garden before you decide to pull them.
- **Perennials.** Don't be afraid to mix perennials and annuals together. If you keep a heavy mulch on your beds, you don't have to till. Perennial plants will come back each year, and annuals will be newly planted next to them. Just part the mulch wherever you want to plant.
- Most importantly, **EXPERIMENT!** It is our job as farmers to be creative!



Soil Matters

Companion planting is just as much about feeding the microbiology of the soil in-ground as it is about arranging plants above-ground. If we mimic nature's patterns, we will be successful!

- **Keep soil covered.** There is no bare dirt in nature. Microbiology thrives in the fluffy humus layer that forms when plant matter decomposes. 2 main methods of soil coverage:
 1. Mulch – any dead plant matter can be used as mulch. Grass clippings, straw, hay, shredded newspaper, wood chips, leaves, sawdust, pine needles, dead crops. It's even better if you mix it up! Diverse mulch means diverse soil as plant matter breaks down. (mimics the forest)
 2. Dense planting – whether direct seeding or transplanting, plant tightly. Do consider how big plants get when adult-size. If you plant *too* dense none of the plants will mature. The goal is to plant so mature plants will shade out the soil-level. (mimics the prairie)
- **Plant in successions.** In nature, plants thrive then die so other plants can thrive - sometimes turning over many times in one season, sometimes taking more time. In your garden, replace plants as they finish up.
- **Change it up.** Nothing in nature is static. Over your lifetime of gardening, constantly try new things. If you get sick of demanding annual plants, transition into all perennials. All plants – including trees, shrubs, mosses, lichens, and mushrooms - have products to give to us.

To learn more, see what **Workshops** we are offering at Red Beet Row, as well as the **How To** section of our website www.redbeetrow.com