

## Companion Planning

What is companion planting and is there any scientific evidence that demonstrates that it is beneficial?

### Answer

Companion planting is the close pairing of two or more plant species for the purpose of enhancing growth and production. While companion planting has a long history among gardeners, it is a history filled with folklore, pseudoscience, and conjecture, often at the expense of sound science. Research does not validate many of these beliefs, but is pointing us toward a whole new way to “companion plant”, or maybe the better term is intercropping or plant associations.

Because plants are immobile, they must either adapt to their environment or alter it, if needed, for their survival. A single plant will alter soil temperature, acidity, and moisture content, as well as the availability of sunlight nearby. We know things like fungal associations, resource competition, chemical messaging, plant diversity and nutrient absorption have impacts on how well one plant grows alongside another. These changes to the environment by one plant may be detrimental or beneficial. A good example of helpful intercropping comes from Native Americans, who historically planted corn, beans and squash together. The corn provided a structure for the beans to climb. The beans provided a constant supply of nutrients through nitrogen fixation, and the large leaves of the squash plant reduced evaporation from and shaded the soil.

Documented benefits of intercropping include reduction in pest, weed, and disease pressure as well as improvement of soil fertility or structure, pollination and biological control. For more information, check out the references, below.

<https://s3.wp.wsu.edu/uploads/sites/2056/2018/10/Cool-Season-Planting-Chart-for-Companion.pdf>

Plant Partners by Jessica Walters, Storey Publishing

The Ecology of Intercropping by J.H. Vandermeer. Cambridge University Press

The Myth of Companion Plantings by Linda Chalker-Scott Puyallup Research and Extension Center, Washington State University. <https://s3.wp.wsu.edu/uploads/sites/403/2015/03/companion-plantings.pdf>