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Is Your Plant Lonely? Try Companion Planting.

Companion planting is the act of putting two different plants close to each other for certain benefits. These benefits could be insect damage control, nutrient management, or microclimate adjustment. Most of the time, when you see gardeners talking or asking about companion planting, it will be to prevent insect damage. However, outside of one small study by Iowa State University, there is little research to determine if certain plants do have insect-repelling properties, or if the praise for companion planting is instead caused by other variables. The Iowa State study investigated five popular companion crops – marigold, onion, nasturtium, basil, and thyme – planted among five common garden vegetables – tomato, lettuce, broccoli, zucchini, and cabbage, and tracked the relative damage in each plot.

In every vegetable, the control plots always showed the most damage relative to companion plant plots, which provides evidence that planting multiple species together will always invite less pest pressure than one single crop. The reasons for this will likely vary from pest to pest, but could include smells, visual distractions, less of a sustainable food source for the insects, or better habitats for pest predators. The 5 companion plant species each had a different relative effectiveness when observing across crops and pests, but one specific result will be of interest to gardeners in our area is squash bugs and the striped cucumber beetle on zucchini. Planting marigolds around zucchini plants significantly reduced the damage from both pests, and nasturtiums had a similar effect on reducing the population of squash bugs. If you struggle at growing zucchini from year to year, putting some marigolds or nasturtiums nearby may give your plants the edge they need to pull through high insect pressures.

Planting legumes in your garden among other vegetables is a way to replace any nitrogen that is used by your other plants. Legumes have roots that house beneficial bacteria. These bacteria will pull nitrogen out of the air and put it back into the soil for plants to use. Nitrogen is the plant nutrient responsible for growth of leaves and stems, so having enough nitrogen in the soil is important for leaf crops like lettuce, spinach, and cabbage. Unfortunately, most soils in our area will not have enough nitrogen to sustain a vegetable garden over multiple years without consistent fertilization. Planting legumes like beans or peas will not only keep your plants healthier, but will also cut down on your need to fertilize and give you some produce in return. Just keep in mind that the nitrogen added by legumes will often be secondary unless plantings

are exceedingly thick, and at the size of backyard vegetable gardens, legumes should be considered a supplemental source of nitrogen instead of your primary source.

The final type of companion plant is one that provides microclimate or structure benefits. One good example of this is the Three Sisters. Pastoral Native American tribes like the Mandan, Hidatsa, and Arikara would often plant corn, beans, and squash together. The corn would provide a natural trellis for the beans to climb up, the beans – being legumes – would add nitrogen back into the soil, and the squash would sprawl across the ground, increasing water retention by keeping sunlight from hitting the bare earth and speeding up evaporation. You can use sprawling or spreading plants like creeping thyme to give your garden most of the same benefits mulching would. Creeping thyme is also effective as an insect repellent and as an herb, making it one of the most efficient companion plants you can add to your garden.

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