



# J&L Garden Center

*The All Season Gift  
and Garden Center*

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## Companion Planting

Many of us have heard that marigolds help keep insects out the vegetable garden; that garlic keeps aphids out of rose gardens, and that nothing will grow near a black walnut tree. Some of these claims hold true, others do not. Just where do these horticultural maxims come from?

Companion planting is a mixture of folklore and scientific fact; you must experiment to find out what works for you. Even those who use companion planting do not always know why some planting combinations work, while others do not. You will probably find that the most aromatic plants are the best companion plants for eliminating insects.

For centuries it was common practice to plant two or more crops simultaneously in the same area to help increase the yield of one or more of the crops. American Indians used to plant corn, beans, and squash to their advantage. Squash leaves would shade the soil and reduce weed growth. Their prickly stems would make raccoons think twice about entering the corn patch. The corn provided shade for the squash in the heat of the summer and didn't mind if the vines wandered up their stalks. Beans were a nitrogen fixing plant. They provided the corn and squash with extra nutrients. In modern times single crop cultivation has become the most popular way of gardening because it is easier to plan and take care of.



In nature, where plants grow without cultivation, there is always a mixture of plant types growing in an area. With few exceptions, the plants that grow together in the wild are mutually beneficial, in that they allow for maximum utilization of light, moisture and soil. Plants that need less light live in the shade of those which must have full light. The roots of some plants live close to the surface and others send their roots far down into the subsoil. Companion planting should maximize the use of sun, soil, moisture, and nutrients, to grow several crops in one area.



### Benefits

Not all crops respond to companion planting in the same way. In fact, some plants may do worse when combined with other crops than if they are grown by themselves. In many cases, however, the positive effects of interplanting usually outweigh any negative results.

### Odoriferous Plants

Some plants have a beneficial effect on the garden just because of the odor they emit. Many of these aromatic plants are herbs. You can mix and match herbs with most other plants as long as you are careful to meet the growth requirements of all the plants involved.



Be sure to choose plants that have the same requirements for water, sunlight, temperature, soil conditions.

Avoid using invasive herbs, such as horseradish or mint as companion plants, unless you are diligent in keeping them in bounds. Try planting invasive herbs in pots and just setting the pots in the garden.

Make sure the companion herbs do not attract the same problems and pests as the plants you are using them with.

**Herbs that repel.** Try planting garlic with bush beans to repel aphids. Plant catnip with eggplant to repel flea beetles. A ring of chives under an apple tree is said to discourage apple scab. Other herbs used to repel pests include anise, borage, calendula, cilantro, dill, scented geranium, mint, rosemary, sage, and tansy.

**Herbs that help.** Some herbs seem to enhance the growth of other plants. Plant borage with strawberries, chervil with radishes, sage with cabbage-family crops and summer or winter savory with onions. Try basil or thyme around tomatoes. Tarragon is said to enhance the growth of most garden vegetables.



**Herbs that Hinder.** Dill seems to slow the growth of tomatoes, and sage hinders the growth of onions. Garlic harms neighboring beans and peas. Marigold, sunflower, and wormwood also hinder the growth of many plants if they are too close.

**Herbs as trap crops.** You can use herbs as traps that lure pests away from your crops. Dill and lovage have been used to lure hornworms from tomatoes.

**Herbs to Lure Beneficial insects.** Many herbs attract assassin bugs, honeybees, hover flies, lacewings, lady bugs, and parasitic wasps. Golden rod, chamomile,

coreopsis, marigold, sunflower, tansy, and yarrow are some of the common daisy-family herbs that attract beneficial insects. Mint-family herbs have aromatic foliage and attract these same insects. Other herbs used to attract beneficial insects are bee balm, catnip, hyssop, lavender, sweet marjoram, oregano, sage, thyme, anise, caraway, dill, and fennel, just to name a few.



## The Right Combination

Selecting the right combinations and arrangements can be very tricky. You must be able to balance the benefits of mixing plants with the possibility of incompatibility in use of space, sunlight water, and nutrients.



Every garden is different. What works in one garden may not work in another; soil, available light, and many other factors will affect the outcome of any given planting. The results of companion planting between two gardens may be identical, but your outlook may not see it that way: A "high yield" to you may be a "moderate yield" to your neighbor.

Many planting combinations have been tried and tested. The following combinations have worked for many gardeners and are worth trying in your garden. You may even have other combinations that work well together. Try out new combinations and use some of the old ones too.

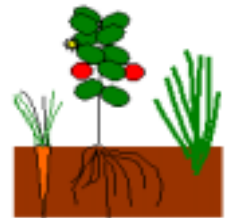
Crop	Companion
Asparagus	Tomatoes, parsley, basil
Basil	Tomatoes, also repels flies and mosquitoes.
Bean	Potatoes, carrots, cucumbers, cauliflower, cabbage, summer savory, most other herbs and vegetables. Dislike onions and fennel.
Bee Balm	Tomatoes
Beet	Onions, kohlrabi, Bush beans, lettuce, onions, kohlrabi, and most members of the cabbage family are companion plants. Keep the pole beans and mustard away from them
Cabbage family	Potatoes, celery, dill, chamomile, sage, thyme, mint, pennyroyal, rosemary, beets, lavender, onions. They dislike strawberries, tomatoes, and pole beans.
Carrot	Peas, lettuce, chives, onions, leeks, sage, rosemary, tomatoes
Celery	Leeks, tomatoes, bush beans, cauliflower, cabbage
Chamomile	Cabbage, Onions
Chervil	Radishes
Chive	Carrots,
Corn	Potatoes, beans, peas, radishes, sunflowers, pumpkin, cucumber.
Cucumber	Beans, corn, peas, radishes, sunflowers.
Dill	Cabbage
Eggplant	Beans
Garlic	Roses, raspberries, many herbs and vegetables, plant liberally



Horseradish	throughout garden
Leek	Potatoes
Lettuce	Onions, celery, carrots It grows especially well with onions, Strawberries, carrots, radishes and cucumbers.
Marigolds	Plant throughout the flower & vegetable gardens
Mints	Cabbage family, tomatoes
Nasturtium	Tomatoes, radishes, cabbage, cucumbers, under fruit trees
Onions	Beets, strawberries, tomato, lettuce, beans repels slugs and ants. Keep away from peas.
Parsley	Tomato, asparagus
Pea	Squash, most all vegetables. Carrots, cucumbers, corn, turnips, radishes, beans, potatoes and aromatic herbs. Keep the peas away from onions, garlic, leek, and shallots.
Petunia	Beans
Pigweed	Potatoes, onions, corn (it is a weed!)
Potato	Horseradish, beans, corn, cabbage, marigold, lima beans, eggplant.
Pumpkin	Corn
Radish	Peas, nasturtium, lettuce, cucumber, beets, carrots, spinach and parsnips, beans. Avoid planting radishes near cabbage, cauliflower, brussels sprouts, broccoli, kohlrabi or turnips. It's said that summer planting near leaf lettuce makes the radishes more tender.
Rosemary	Carrots, beans, cabbage, sage, repels bean beetles, cabbage moth,
Rue	Roses, Raspberries
Sage	Rosemary, carrots, cabbage, peas, beans
Spinach	Strawberries
Squash	Nasturtium, corn, Icicle radishes, cucumbers
Strawberry	Bush beans, spinach, lettuce
Summer Savory	Beans, onions
Sunflower	Cucumber
Tansy	Roses, raspberries, fruit trees Deters ants, cucumber beetles, squash bugs, many flying insects
Thyme	Deters cabbage worm
Tomato	Chives, onion, parsley, asparagus, marigold nasturtium, carrots, lima beans.
Turnip	Peas



Another important benefit of companion planting is that one plant may help protect another plant from certain insect problems. The following insects do not like the plants listed next to them. Try planting a few.



### ***Insect Problem*   *Plants that Discourage Insect***

<i>Aphids</i>	<i>Mints, garlic, chives, coriander, anise, petunias, nasturtium</i>
<i>Cabbage maggot</i>	<i>Mints, hyssop, rosemary, thyme, sage, celery, catnip, nasturtium</i>
<i>Cabbage moth</i>	<i>Mints, hyssop, rosemary, thyme, sage, celery, catnip, nasturtium</i>
<i>Potato Beetle</i>	<i>Snap beans, horseradish</i>
<i>Cucumber Beetle</i>	<i>Tansy, radish</i>
<i>Cutworms</i>	<i>Tansy</i>
<i>Flea Beetles</i>	<i>Mints, tomato, cole crops</i>
<i>Leafhoppers</i>	<i>Petunias, geranium</i>
<i>Bean Beetle</i>	<i>Marigold, potato, rosemary, summer savory, petunia</i>
<i>Mites</i>	<i>Onion, Garlic, chives</i>
<i>Slugs &amp; Snails</i>	<i>Rosemary, wormwood</i>
<i>Squash bug</i>	<i>Tansy, nasturtium</i>
<i>Hornworm</i>	<i>Borage, marigold</i>
<i>White flies</i>	<i>Nasturtium, Marigold</i>

## **The Three Sisters**

The term '**The Three Sisters**' was used by the Iroquois when they planted Corn, Beans, and Squash together. Corn, beans and squash are considered by the Iroquois to be special gifts from the Great Spirit. The well-being of each crop is



believed to be protected by one of the Three Sisters, spirits that are collectively called ***De-o-ha-ko***. This word means "our sustainers" or "those who support us".

The three sisters system refers to the planting of corn, pole beans, and squash together in hills. The practice of planting more than one type of crop together is called interplanting. Although this planting system is not common in the United States, it is a well-thought-out growing process in other countries. Interplanting is beneficial because some small farmers are finding that large plantings of one crop can have some major disadvantages.

In the Three Sister planting system, raised areas are made about three feet apart, both between and within the rows. Several seeds of corn are planted in small holes and covered. As the emerging corn plants are weeded, the soil is gently mounded, or hilled, around the corn plants. When the corn is about four to six inches high, bean and squash seeds are planted in the hills, Bean seeds are placed in each hill, and squash is planted in about every seventh hill. The three crops grow together for the remainder of the season.

Interplanting has many advantages. Iroquois farmers adapted this ecological planting method to meet the needs of their crops. Several crops planted together are not as attractive to pests, while large plantings of one crop tend to have more pest problems. The hills provide support

around the base of the plants, so they are not as prone to damage from the wind. Also, interplanting helps create a uniform stand of corn. The corn forms a support for the beans, and the squash covers the soil, helping to control weeds.

Beans are in the legume family and legumes take nitrogen from the air and converts it into a form that plants can use. This is important because corn demands a fairly high amount of nitrogen. The nitrogen "left" in the hill by the beans is available for next year's corn crop. This is one reason the Iroquois planted in the same hills for several years.

The planting of corn, beans, and squash was more than a gardening activity for the Iroquois. The Three Sisters system also provided a varied diet, keeping the people healthy for hundreds of years.

Sometimes plant friendships are one-sided. Carrots are said to help beans, but beans don't reciprocate. Though beans will help nearby cucumbers.

Other plants have bad companions and you'll be doing them a favor to keep them apart. Beans and onions are natural enemies so keep them at opposite sides of the garden.

If you have a patio you might try mint to repel ants, and basil to keep the flies and mosquitoes away. Both herbs have pretty flowers and are fragrant too.

### ***Additional resources:***

<http://www.ghorganics.com/page2.html>

<http://www.companionplanting.net/>

<http://www.companionplanting.net/ListofCompanionPlants.html>

<http://www.ext.nodak.edu/county/cass/horticulture/vegetables/companion.htm>

<http://www.no-dig-vegetablegarden.com/companion-planting.html>

<http://www.organicgardening.com/pdf/companion.pdf>

