

# Companion Planting Three Sisters

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## What it is:

- It is a sustainable system that provides long-term soil fertility. Growing a Three Sisters garden is a wonderful way to feel more connected to the history of this land, regardless of our ancestry.

-Three sisters garden consist of corn, beans, and squash that are inter-planted. This type of garden planting is the most popular example of companion planting and has been used by Native Americans since before Europeans arrived on this continent.

-You will need to buy seeds of your favorite corn, some kind of climbing beans and squash. If you want to keep with tradition, chose seeds that are heirloom and are open pollinated for your three sisters garden.

- Native Americans first practiced the three sisters companion planting and did it by looking for signs in their environment that indicated the right soil temperature and weather. For example they knew when to plant corn when the Canada geese returned or the dogwood leaves reached the size of a squirrels ear.

-You may record such signs as you observe your garden and neighborhood so that you can watch for those signs again for next season and know when to plant. This is a great way to connect to your garden.



### **Benefits of it/and How does it work?:**

- The corn provides a natural pole for bean vines to climb. Beans fix nitrogen on their roots, improving the overall fertility of the plot by providing nitrogen to the following years corn. Bean vines also help stabilize the corn plants, making them less vulnerable to blowing over in the wind. Shallow-rooted squash vines become a living mulch, shading emerging weeds and preventing soil moisture from evaporating, therefore improving the overall crops chances of survival in dry years. Spiny squash plants also help discourage predators from approaching the corn and beans.

-The large amount of crop residue from this planting combination can be incorporated back into the soil at the end of the season, to build up the organic matter and improve its structure.

-Corn, beans and squash also complement each other nutritionally. Corn provides carbohydrates, the dried beans are rich in protein, balancing the lack of necessary amino acids found in corn. Finally, squash yields both vitamins from the fruit and healthy, delicious oil from the seeds.

-Success with a Three Sisters garden involves careful attention to timing, seed spacing and varieties. In many areas, if you simply plant all three in the same hole at the same time, the result will be a snarl of vines in which the corn gets overwhelmed.

-This ancient method of companion planting works because all three plants grow and support each other in some way. Corn the oldest sister provides support. Beans are the nurturing sister. Beans take up nitrogen from the air and hold it in the soil the plants are growing in. Squash provides protection. She mulches and cools the soil mound they grow in by acting as a living mulch and her prickly vines and leaves keep pests away from the tender bean sprouts and corn. As these three sisters grow and intertwine together they create a strong barrier that is hard for the elements and pests to bring down, just like a supportive family.



## Instructions for Planting Your Own Three Sisters Garden in a 10 x 10 square

### When to plant:

Sow seeds any time after spring night temperatures are in the 50 degree range, up through June.

### What to plant:

Corn must be planted in several rows rather than one long row to ensure adequate pollination. Choose pole beans or runner beans and a squash variety with trailing vines, rather than a compact bush.

**Note: A 10 x 10 foot square of space for your Three Sisters garden is the minimum area needed to ensure good corn pollination. If you have a small garden, you can plant fewer mounds, but be aware that you may not get good full corn ears as a result.**

### How to plant:

Please refer to the diagrams below and to individual seed packets for additional growing information.

1. Choose a site in full sun (minimum 6-8 hours/day of direct sunlight throughout the growing season). Amend the soil with plenty of compost or aged manure, since corn is a heavy feeder and the nitrogen from your beans will not be available to the corn during the first year. With string, mark off three ten-foot rows, five feet apart.
2. In each row, make your corn/bean mounds. The center of each mound should be 5 feet apart from the center of the next. Each mound should be 18 across with flattened tops. The mounds should be staggered in adjacent rows. **See Diagram #1**

**Note: Adjust the design of your bed according to your climate and soil type.**

3. Plant 4 corn seeds in each mound in a 6 in square. **See Diagram #2**
4. When the corn is 4 inches tall, it's time to plant the beans and squash. First, weed the entire patch. Then plant 4 bean seeds in each corn mound. They should be 3 in apart from the corn plants, completing the square as shown in **Diagram #3**.
5. Build your squash mounds in each row between each corn/bean mound. Make them the same size as the corn/bean mounds. Plant 3 squash seeds, 4 in. apart in a triangle in the middle of each mound as shown in **Diagram #4**.
6. When the squash seedlings emerge, thin them to 2 plants per mound. You may have to weed the area several times until the squash take over and shade new weeds.

Diagram of 10' x10' Square Of Corn, Beans, and Squash Showing Spacing Of Mounds

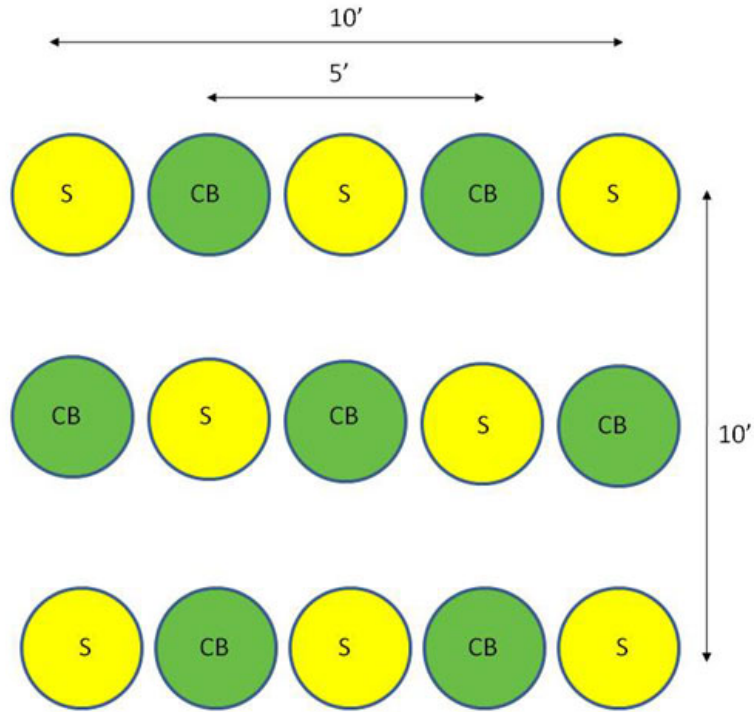


Diagram 2

Spacing of corn plants within corn/bean mounds

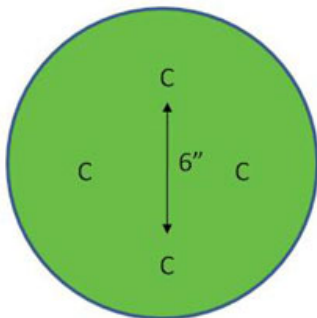


Diagram 3

Planting beans in corn/bean mounds

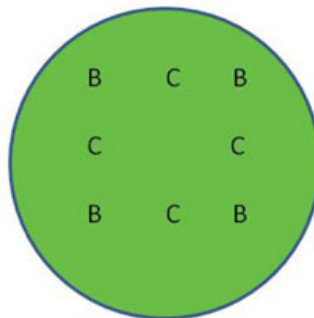


Diagram 4

Planting squash in squash mounds

