

The Essentialist

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Three Sisters Garden & Stew

This interesting story about Native American agriculture came with a recipe for Three Sisters Stew (recipe included at the end of this article):

"Much of Native American agriculture and cuisine was based on corn, beans, and squash, which the Indians called "three sisters of life." They planted seeds for these three vegetables all together in a 'hill' rather than in a row. Lescarbot, a French explorer, noted in 1608 that the Indians of Maine, like those of Virginia and Florida, plant their corn in hills, 'and between the kernels of corn they plant beans marked with various colors, which are very delicate: these because they are not so high as the corn, grow very well among it.'

The reason corn and beans grow so well together is that legumes, such as beans, have nitrogen-fixing bacteria on their root nodules. These bacteria form a symbiotic relationship with legumes and together they enrich the soil and act as a natural fertilizer. The 'fixed' nitrogen then becomes available for other plants (the corn and squash) to absorb and use to form proteins, which can then be spread throughout the food chain and to us in this simple delicious recipe for stew."

To this I would add that in turn, the squash adds ground-hugging shade, to cool the roots of the corn and beans, and keep weeds at bay. Thus the three plants grow harmoniously together, each supporting the needs of the other two. In other words, "companion planting," a key principle of permaculture.

NOTE: The "hill" is not necessarily a raised area or mound (unless needed for proper drainage). Rather, it is an older use of the word meaning "planted together."

Information Sources

- [iVillage Garden Web](http://faq.gardenweb.com/faq/lists/teach/2003045238014436.html): (<http://faq.gardenweb.com/faq/lists/teach/2003045238014436.html>)
- [Desertification](http://desertification.wordpress.com/2008/02/21/three-sisters-gardens-kitchen-gardeners-int/) (excellent!): (<http://desertification.wordpress.com/2008/02/21/three-sisters-gardens-kitchen-gardeners-int/>)
- [Kids Gardening.com](http://www.kidsgardening.com/growingideas/PROJECTS/MARCH02/mar02-pg1.htm) (<http://www.kidsgardening.com/growingideas/PROJECTS/MARCH02/mar02-pg1.htm>)
- [Native Tech: Native American Technology and Art](http://www.nativetech.org/cornhusk/threesisters.html): (<http://www.nativetech.org/cornhusk/threesisters.html>)
- [LMRisk's webpage on Three Sisters](http://www.imrisk.com/threesisters/threesisters.htm) has great photos showing progress of his garden: <http://www.imrisk.com/threesisters/threesisters.htm>

Create your Hill or Mound

Choose an open, sunny spot for a container or planting area at least 18" in diameter, which will support 1 corn stalk. If using a raised bed, it should be about 12" high. Separate multiple mounds by at least 3 feet.

Ideally, you prepare the soil the previous fall, by breaking it up, working in a straw or alfalfa mulch and perlite (a natural, siliceous rock), then raking. As soon as the soil can be worked in the spring, mix in compost, and manure.

If you live in an arid region, mound the soil up around the outside, and depress it slightly toward the center, to help retain water.

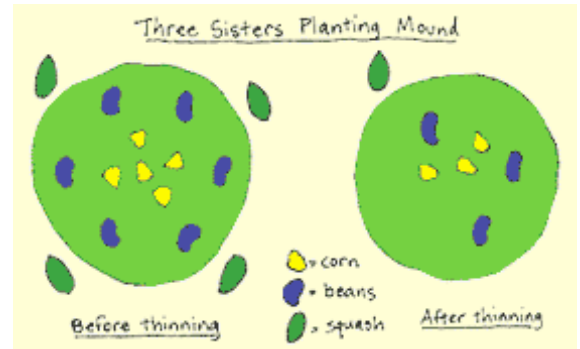


diagram from KidsGardening.com

How & When to Plant

Here in the Flathead you may want to start the seeds indoors, especially the corn (about March 1), to maximize the growing season. The corn should be about 6 - 10 inches high when transplanted.

- ▶ Start with 4 - 7 corn seeds in the center (space about 6" apart in a ring); they take the longest to bear fruit, and need to have some height & strength to support the beans. Water. When the corn is about 4 - 10" high, lift and mound the soil around the base of the stem. The roots will grow into this area and provide stability for the stalk.
- ▶ After creating this mound around the corn, add 6 - 12 pole bean (or pea) seeds in a ring around the corn, and about 6" away from the corn, and 1" deep into the soil. Water.
- ▶ Add 6 - 7 squash (or cucumber) seeds about 12" outside the beans. Sow with the beans, or wait until after the beans have sprouted (about 1 - 2 weeks after planting beans).

After your seedlings are up and growing, thin to 1 - 3 corn, 1 - 3 bean, and 1 squash (or cuc) per hill. To give the corn and beans space to grow, encourage your squash vines to trail outside the garden space (into walkways, the garden edge, or between mounds), but allow some of its leaves to shade the roots in the mound.

Maintaining your Traditional Garden

From Kid'sGardening.com: "As corn plants grow, weed gently around them and mound soil around the base of each stem for support. When the corn is knee-high and again when silks appear on the husks, "side-dress" by putting a high nitrogen fertilizer (such as aged manure or fish emulsion) on the soil surface near each plant. If beans aren't winding their way around the corn, youngsters can help by moving tendrils to the stalks. (Keen observers may notice a pattern in the direction in which the bean vines wind.) To allow room for corn and beans to grow, gently direct squash vines into walkways, garden edges, or between mounds. Once students observe young fruits, side-dress the squash plants with aged manure or compost. If you pinch off the tips of squash runners after several fruits have started to form, the plants will devote more energy to producing squash."

And, don't forget to water if there has been little to no rain.

Three Sisters Stew Recipe

Ingredients & Equipment:

Beans

- 1/2 pound dried beans (any kind)
- warm filtered water
- lemon juice (1 Tbsp per quart water)
- about 2 cups filtered water or chicken stock
- 1/2 medium onion, chopped

Stew

- 3 pounds carnival or butternut squash (approximately)
- 1/2 medium onion, chopped
- 2 cups fresh tomatoes, chopped (or 14-oz can)
- 1 1/2 cups fresh or frozen corn kernels
- 1 Tbsp olive oil
- 1 Tbsp chili powder
- 2 - 3 cloves of garlic, minced
- 1 tsp cumin seeds (whole or ground)
- 1/2 tsp cinnamon
- 1 1/2 tsp Celtic sea salt
- 2 tsp dried oregano (or 4 tsp fresh oregano leaves)
- 3-quart saucier
- stock pot

Process:

Beans

1. Cover beans with warm water. Stir in lemon juice and leave in a warm place overnight (24 hours). The longer they soak, the shorter the cooking time. Check after a few hours and add more water as necessary.
2. Drain beans, rinse and put in saucier or stock pot along fresh water (or chicken stock) to cover by 2 inches. **Boil for 10 minutes** (very important, to ensure soft beans) and skim.
3. Add chopped onion. Simmer gently until beans are tender, 1 - 3 hours. Add more water as needed to keep beans covered.

Stew

4. While beans are cooking, remove skin from squash, scoop out seeds, and discard. Cut the squash meat into chunks.
5. Chop onion and mince garlic.
6. In large stock pot, quickly toast oregano, cumin and cinnamon for 30 seconds. Add oil, onion, salt and garlic; saute until onions are soft, about 5 minutes.
7. Add cooked beans and their liquid, squash pieces, tomatoes, corn and chili powder.
8. Cook until squash is soft, about 20 minutes. Add a little water if stew is too dry.