



Gardening Wisdom



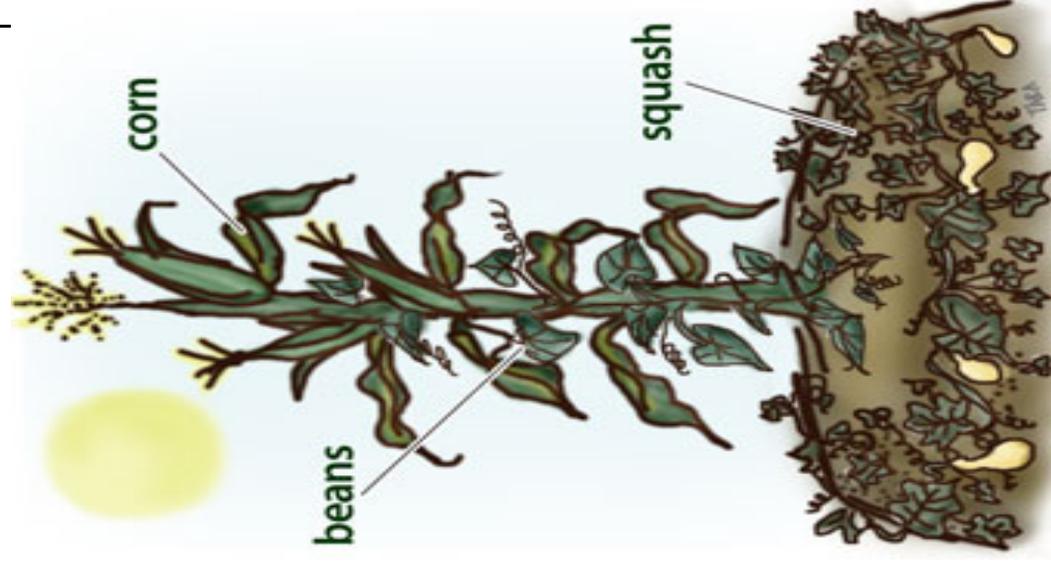
THREE SISTERS

**AN ANCIENT METHOD OF GARDENING USING AN
INTERCROPPING SYSTEM WHICH GROWS CORN,
BEANS, AND SQUASH CROPS**

Celebrate the Three Sisters: Corn, Beans and Squash

by guest author Alice Formiga

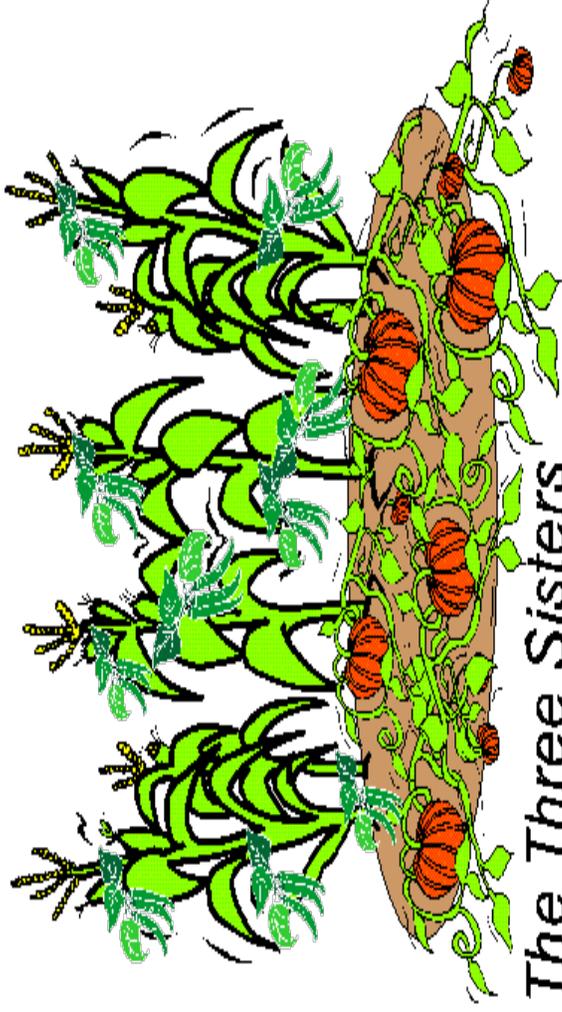
According to Iroquois legend, corn, beans, and squash are three inseparable sisters who only grow and thrive together. This tradition of interplanting corn, beans and squash in the same mounds, widespread among Native American farming societies, it is a sophisticated, sustainable system that provided long-term soil fertility and a healthy diet to generations. Growing a Three Sisters garden is a wonderful way to feel more connected to the history of the land.



*Direct-Sow, Easy-to-Grow:
The Ancient **Three Sisters** Method*



Many believe corn, beans and squash are precious gifts from the Great Spirit, each watched over by one of three sisters spirits, called the De-o-ha-ko, or Our Sustainers". The planting season is marked by ceremonies to honor them, and a festival commemorates the first harvest of green corn on the cob. By retelling the stories and performing annual rituals, Native Americans passed down the knowledge of growing, using and preserving the Three Sisters through generations.



The Three Sisters **Corn** ☀️ **Beans** ☀️ **Squash**

Corn is the oldest sister. She stands tall in the center.
Squash is the next sister. She grows over the mound, protecting her sisters from weeds and shades the soil from the sun with her leaves, keeping it cool and moist.
Beans are the third sister. She climbs through squash and then up corn to bind all together as she reaches for the sun. Beans help keep the soil fertile by converting the sun's energy into nitrogen filled nodules that grow on its roots. As beans grow they use the stored nitrogen as food.



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 healthful, delicious oil from the seeds.



Many have planted the three sisters in raised mounds about 4 inches high, in order to improve drainage and soil warmth; to help conserve water, you can make a small crater at the top of your mounds so the water doesn't drain off the plants quickly. Raised mounds were not built in dry, sandy areas where soil moisture conservation was a priority, for example in parts of the southwest. There, the three sisters were planted in beds with soil raised around the edges, so that water would collect in the beds. In other words, adjust the design of your bed according to your climate and soil type.

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!



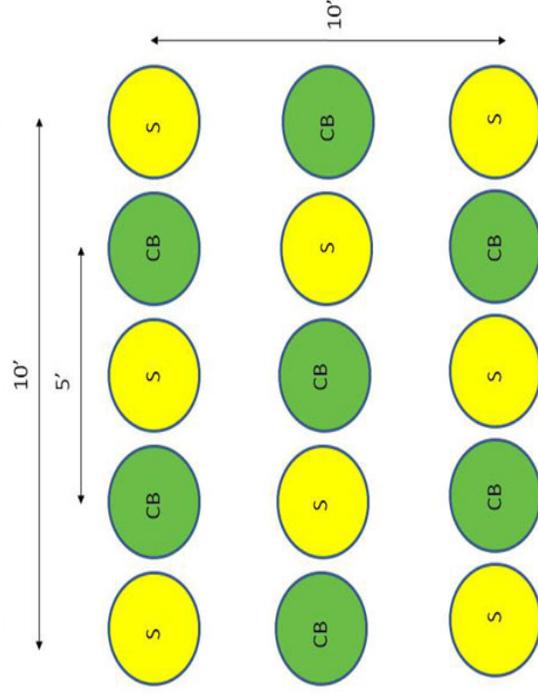
So how do you grow a Three Sisters Garden?

1.) In mid-Spring clear a sunny garden area of grasses, weeds, and large stones. The area should be at least eight to ten feet across. Cover the area with a few inches of compost or well rotted manure. Turn the compost in to loosen the ground and create a moisture retaining growing medium with increased fertility. Water it well.

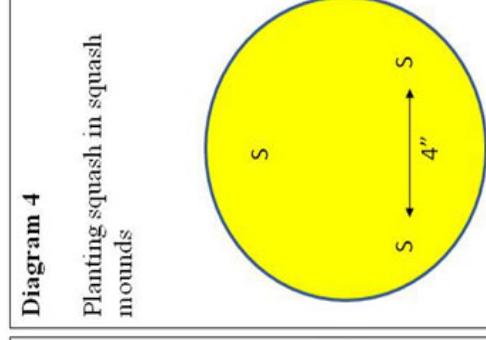
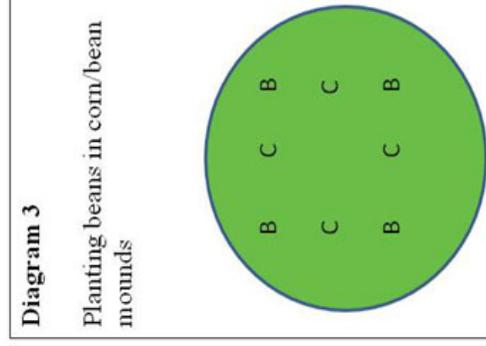
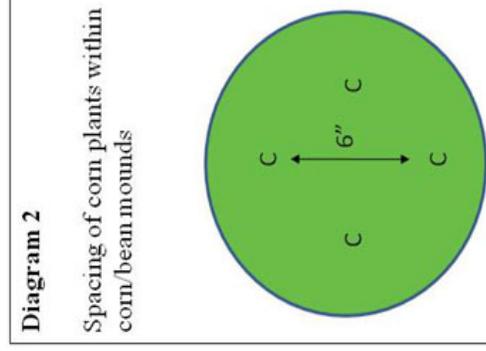
Now begin

2. with a string, mark off three ten-foot rows, five feet apart
3. 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.

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



4. Plant 4 corn seeds in each mound in a 6 in square. See *Diagram #2*
5. When the corn is 4 inches tall, its 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*.
6. 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*.
7. 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.



Starting Seeds Indoors

Why Start Early Inside?

It's fun to experience the whole growing cycle as you watch seedlings grow into sturdy plants that bear delicious fruit. We often need to give plants a critical head start by germinating and growing seedlings in the warm indoors in early spring. Then when it warms up outdoors in late spring, we can plant out sturdy, well-established seedlings to bear fruit before cold weather sets in .

Getting Started

Your planting containers should be at least three inches deep, with small holes for drainage. You can use plastic yogurt or cottage cheese containers, 3 or 4 inch plastic plant pots or half-gallon milk cartons cut lengthwise, all with drainage holes punched in the bottoms., egg cartons or nursery packs . Buy and use a good quality seed starting mix, available from any good nursery or garden center. (Ordinary garden soil is not a good choice, as it often contains weed seeds and fungus organisms and it compacts far too easily.) Seed starting mixes are sterile and blended to be light and porous so your fragile seedlings get both the moisture and oxygen they need to thrive.



In a big bucket or can, add water slowly to the seed starting mix and combine well. You want it to be thoroughly moistened but not soggy - about the consistency of a wrung-out sponge throughout before you fill your containers. Fill each container to an inch below the top and tap it on the tabletop to settle the mix. Use a plastic or wooden marker with the variety name and sowing date and slide it into the container. With the side of a pencil or chopstick, make a seed furrow about 1/4 inch deep and carefully drop in individual seeds about an inch apart. Sift some more starting mix between your hands to fill the furrows and firm gently to be sure the seeds have good contact. Use a spray bottle to water the seeds in with a fine mist.



Germinating and Growing

Many warm weather plants like peppers and tomatoes need 80 to 85 degree conditions to start germinating. Keep the container moist, but not soggy. You can cover it with plastic wrap or an old piece of rigid clear plastic to conserve moisture if you like, but be sure to pull it up to check daily to be sure they aren't drying out. Water as necessary with a very gentle spray of water. If container should get too dry, you'll need to set it in a pan of water so it can soak up water again from below. Expect germination to take 5 to 10 days for tomatoes and 5 to 14 days for peppers.



With warm conditions and enough light, seedlings will grow rapidly. Their first two oval leaves will soon be succeeded by sets of true leaves. At this point, it's okay to let the top 1/2 inch of soil dry out between watering. Check soil moisture by putting your index finger into the soil - if it's dry below your first joint, it's time to water carefully with a gentle trickle from a faucet or watering can.

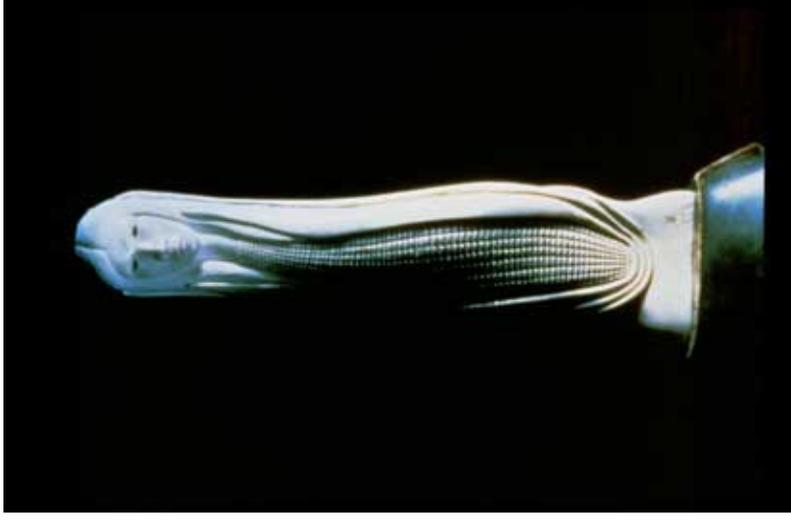


Planting Seedlings in the Garden

In 3 or 4 weeks, or when the weather outdoors has warmed into the 50 degree range at night, its time to harden off or gradually acclimate your seedlings to outdoor conditions. Put them outside in a protected shady spot for a half day at first, then 2 or 3 full days, then gradually move them into full sun, starting with mornings then all day long. Plan to transplant into the garden in the late afternoon or on a hazy or cloudy day to minimize stress. Firm the soil around the plants and water well. Keep your young plants moist but not soggy. I like to mulch them with a good thick layer of compost, well-aged manure, straw or other organic material. This will provide the even moisture .

CORN

Corn was first domesticated over 6,000 years ago, in that part of North America today called Mexico. The job of growing the corn and other crops was carried out mainly by women. Today flint corn continues to be grown in many communities, mainly for uses within the community. Corn exists today, not just as a plant, but also as a symbol. It stands for life. And it stands for spirit.



*"Corn Spirit",
moose antler
by Stanley Hill, Mohawk*

BEANS

Beans were as highly regarded as corn by Native Americans. Cooking with a combination of corn, beans, and squash provided many of the nutrients needed for a healthy life. Many varieties and colors of beans were cultivated and they were prepared in a number of ways. They were soaked, flattened, fried into cakes, used in salads, stews and soups and ground into flour. Beans are often used in combination with white corn to make cornbread and corn soup.



by Stanley Hill, Mohawk

SQUASH

Squash was also very important to because it is very nourishing and can be cooked and eaten in a variety of ways. The winter squash such as acorn or butternut were often baked whole and flavored with maple syrup or honey. Squash is also important to the Iroquois ceremonially. Rattles used by the Medicine Societies were sometimes crafted from gourds.



by Stanley Hill, Mohawk



There are hundreds of varieties of corn .

Those original farmers shared their knowledge as well as seeds with other Native peoples, and corn-based agriculture spread as far south as Peru, and as far north as New York and Ontario.

In New York State corn began to be planted starting around 500 A.D. It was just one of several plants cultivated here.

The women were the original farmers and the

men helped prepare the fields for planting by cutting trees and clearing brush.

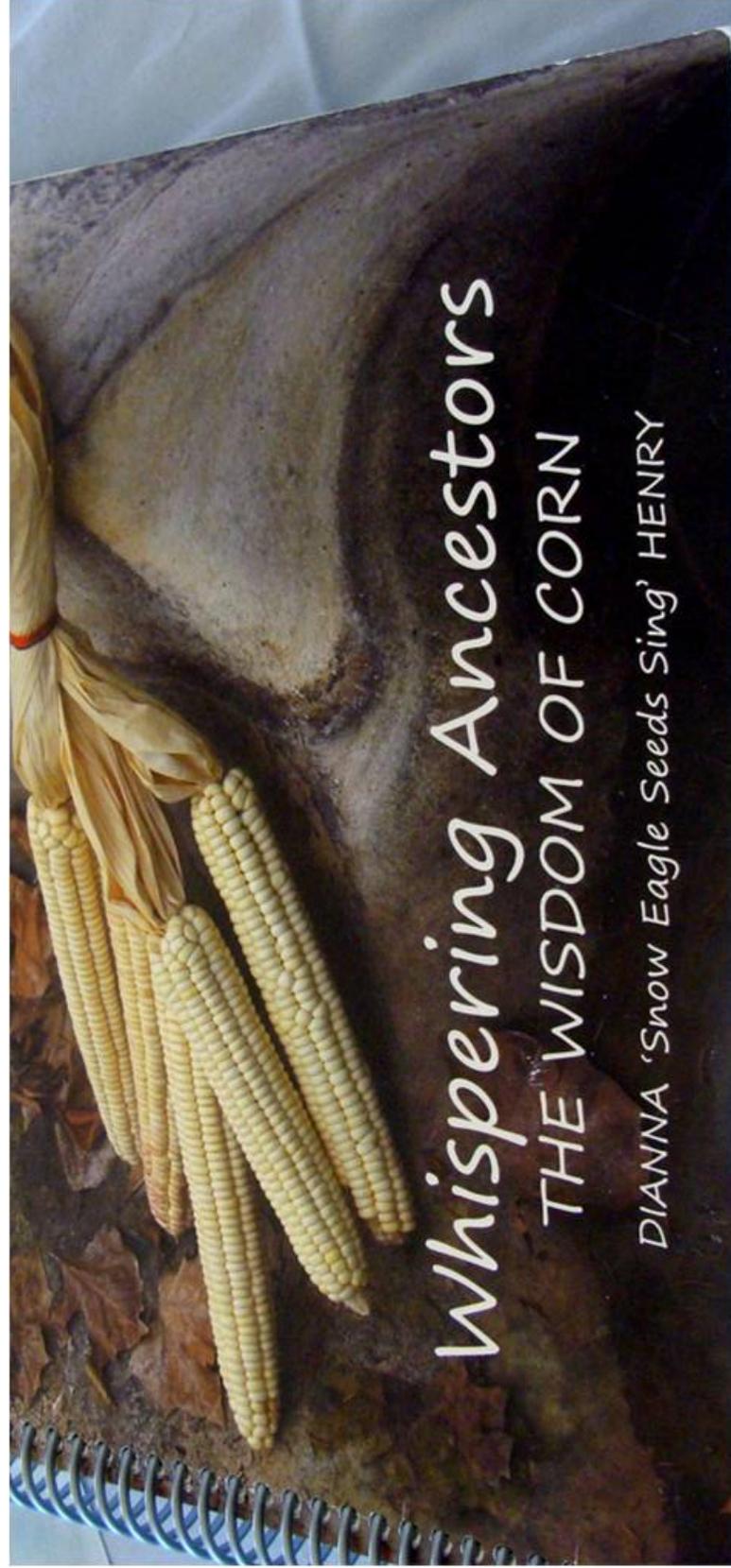
Today, flint corn also referred to as white corn continues to be grown in many communities. It is used to make traditional cornbread, corn soup and mush.

Corn is food, but also a symbol for cultural pride.

Corn, together with Beans, and Squash are referred to as the Three Sisters who grow from Mother Earth. The Three Sisters are the staples of the traditional diet.



The Corn, that was carried generation after generation by our Ancient Ancestors.....could be all lost in one Generation



Whispering Ancestors

THE WISDOM OF CORN

DIANNA 'Snow Eagle Seeds Sing' HENRY

And always, the peoples have declared--

"The corn is our blood!"

"This is our language!"

"The corn is our life!"

And so many more things,

Not spoken.